



尚府貿易股份有限公司
<https://www.sunflexhose.com.tw/>



HYDRAULIC FITTINGS

Manuli Hydraulics is globally respected for the breadth and versatility of our hydraulic fittings range. Comprising over 6,000 references, we have fittings to suit most of the common international standards as well as the specific requirements of several of our important OEM customers.

The Manuli Hydraulics fittings range is made up of 3 families: MF2000, MF3000 and Smart Connectors.

The **MF2000** range comprises our core range of two-piece fitting solutions and has over 4,000 references:

Multifit (MF) - Simple and cost effective universal solution for wire spiral and wire braid hoses

Minifit (MN) - Extremely compact fittings for braided hose (DN6 to DN10)

Interlock Plus (IP) - Maximum reliability for very high pressure wire spiral hoses in heavy-duty applications

Interlock Super (IS) - High-tech swaged fittings for very large bore wire spiral hose

Spiralfit (SP) - No-skive insert for wire spiral hoses and large bore hose

Spiral it GX (SPGX) - No-skive insert for wire spiral hoses and large bore hoses

Pushlock (PL) - Insert solution for low pressure applications without the need for a swaged ferrule

The **MF3000** range is made up of one-piece fittings for hoses at medium/high pressures:

One-Piece Flat (OPF) - No-skive, compact and flat-crimp fittings for wire braid hoses up to 1½"

One-Piece Kompact (OPK) - No-skive, compact and flat-crimp fittings for wire spiral and wire braid high pressure hoses up to 2½"

There are also several types of **Smart Connectors** available:

RotoFit - A well-known and patented Manuli Hydraulics solution designed to eliminate hose twist under external torques, which can be a major contributor to premature hose failure. The additional advantage of RotoFit is that it is a "Direct-to-Hose" and "Direct-to-Port" solution. By eliminating the need for adaptors, the number of possible leak points is reduced.







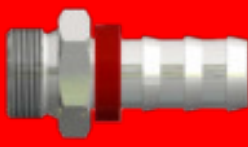
EasyFit - The Manuli "threadless" fittings solution for quick and easy installation of assemblies.

This innovative termination end is fitted with a simple axial push, allowing the hose to self-align and thus improve service life. Maintenance and repair time is also drastically reduced and installation / disconnection in restricted spaces is far easier. Moreover the "Direct-to-Port" concept eliminates the need for adaptors and the possibility of related leakages. All EasyFit fittings have an eco-friendly coating treatment for superior corrosion performance.



FastFit / FastFit Disconnectable - A "one plug" connection consisting of a male half integrated onto the hose and then inserted into the female cartridge. This easy and safe operation does not require any tools for assembly and allows easy installation in restricted areas or in complex configurations. FastFit comes in a wide range of cartridges with direct connection on most standard ports, including BSP, SAE METRIC and NPTF. In addition, the new FastFit Disconnectable range offers all the benefits of standard FastFit technology, but with the ability to disconnect the plug from the cartridge if required.

Adjustable Flange - A new and innovative product which allows the body of the flange fitting to rotate even after being installed and tightened, making installation simpler and also ensuring that the hose is oriented in its most natural way, reducing the likelihood of premature fatigue failures due to poor hose orientation.




OVERVIEW

<p>MINIFIT</p>  <p>p107 - p112</p>	<p>MULTIFIT</p>  <p>p113 - p175</p>	<p>INTERLOCK PLUS</p>  <p>p176 - p221</p>	<p>INTERLOCK SUPER</p>  <p>p222 - p225</p>
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OVERVIEW

<p>OPK</p>  <p>p256 - p280</p>	<p>OPF</p>  <p>p281 - p307</p>
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OVERVIEW

<p>EASYFIT</p>  <p>p308 - p311</p>	<p>FASTFIT</p>  <p>p312 - p321</p>	<p>ROTOFIT</p>  <p>p322 - p332</p>
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Fitting	Maximum Working Pressure (bar)														
	Hose Size / Dash														
	3/16"	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	3 1/2"	4"
	03	04	05	06	08	10	12	16	20	24	32	40	48	56	64
BSP 60° CONE BS5200 / ISO 8434-6	1/8"-28 350	1/4"-19 500		3/8"-19 460	1/2"-14 430	5/8"-14 350	3/4"-14 350	1"-11 350	1 1/4"-11 350	1 1/2"-11 300	2"-11 300	2 1/2"-11 140	3"-11 105		
BSP 60° CONE DOUBLE THRUST-WIRE NUT BS5200 / ISO 8434-6							3/4"-14 650	1"-11 650	1 1/4"-11 650	1 1/2"-11 560					
JIC 37° CONE ISO 8434-2 / SAE J514		7/16"-20 350	1/2"-20 350	9/16"-18 350	3/4"-16 350	7/8"-14 350	1 1/16"-12 350	1 5/16"-12 280	1 5/8"-12 210	1 7/8"-12 160	2 1/2"-12 125				
JIC 37° CONE DOUBLE THRUST-WIRE NUT ISO 8434-2 / SAE J514							1 1/16"-12 420	1 5/16"-12 420	1 5/8"-12 420	1 7/8"-12 420	2 1/2"-12 420				
ORFS ISO 8434-3 / SAE J1453		9/16"-18 460		1 1/16"-16 460	1 3/16"-16 420	1"-14 420	1 3/16"-12 420	1 7/16"-12 420	1 11/16"-12 420	2"-12 350					
NPTF MALE SAE J514 / ASME B1.20.3	1/8"-27 350	1/4"-18 350		3/8"-18 280	1/2"-14 245		3/4"-14 210	1"-11.5 175	1 1/4"-11.5 145	1 1/2"-11.5 145	2"-11.5 145				
NPSM FEMALE SAE J514	1/8"-27 350	1/4"-18 350		3/8"-18 280	1/2"-14 245		3/4"-14 210	1"-11.5 175	1 1/4"-11.5 145	1 1/2"-11.5 145	2"-11.5 145				
SAE 45° CONE SAE J512		7/16"-20 350	1/2"-20 350	5/8"-18 350	3/4"-16 310	7/8"-14 240	1 1/16"-14 240	1 3/8"-12 210							
ISO/SAE CODE 61 FLANGE ISO 6162-1 / SAE J518-1					1/2" 350		3/4" 350	1" 350	1-1/4" 280	1-1/2" 210	2" 210	2-1/2" 175	3" 160	3-1/2" 35	4" 35
ISO/SAE CODE 62 FLANGE ISO 6162-2 / SAE J518-2					1/2" 420		3/4" 420	1" 420	1-1/4" 420	1-1/2" 420	2" 420	2-1/2" 420	3" 420		
XTRAF LANGE/61 ISO 6162-1 / SAE J518-1 PORT COMPATIBLE								1" 420	1-1/4" 420	1-1/2" 420	2" 420	2-1/2" 420			
XTRAF LANGE/62 ISO 6162-2 / SAE J518-2 PORT COMPATIBLE							3/4" 560	1" 560	1-1/4" 560	1-1/2" 560	2" 450	2-1/2" 420	3" 420		
FLANGE/PLUS ISO 6162-2 / SAE J518-2 PORT COMPATIBLE							3/4" 420	1" 420	1-1/4" 420						
CAT FLANGE ISO 6162-2 / SAE J518-2 PORT COMPATIBLE							3/4" 420	1" 420	1-1/4" 420	1-1/2" 420	2" 420				
METRIC CONE 24° L SERIES ISO 8434-1 / DIN 3865	M12x1.5 415	M14x1.5 400	M16x1.5 350	M18x1.5 330	M22x1.5 275	M26x1.5 250	M30x2 245	M36x2 245	M45x2 220	M52x2 100					
METRIC CONE 24° S SERIES ISO 8434-1 / DIN 3865	M16x1.5 630	M18x1.5 630	M20x1.5 630	M20x1.5 630	M24x1.5 450	M30x2 420	M36x2 420	M42x2 420	M52x2 420						
METRIC CONE 60° LL SERIES DIN 20066							M30x2 63	M38x1.5 63	M45x1.5 63	M52x1.5 63	M65x2 40				
METRIC MULTISEAL DIN 20066	M12x1.5 250	M14x1.5 250	M16x1.5 250	M18x1.5 250	M22x1.5 250	M26x1.5 160									
FRENCH METRIC MILLIMETRIC NF E48-064						M27x1.5 420	M30x1.5 420	M33x1.5 420							
FRENCH GAZ MILLIMETRIC NF E48-064				M20x1.5 630	M24x1.5 630	M30x1.5 420	M36x1.5 420	M45x1.5 420							
JIS METRIC FEMALE 60° CONE (KOMATSU) JIS B8363		M14x1.5 350	M16x1.5 350	M18x1.5 350	M22x1.5 350	M24x1.5 280	M30x1.5 280	M33x1.5 280	M36x1.5 175	M42x2 105					
JIS GAS FEMALE 60° CONE (TOYOTA) JIS B8363		1/4"-19 350		3/8"-19 350	1/2"-14 350		3/4"-14 280	1"-11 280	1 1/4"-11 175	1 1/2"-11 105	2"-11 105				
SAE MALE O-RING BOSS TYPE SAE J516 / ISO 11926		7/16"-20 420		9/16"-18 420	3/4"-16 350	7/8"-14 280	1 1/16"-12 280	1 5/16"-12 210	1 5/8"-12 210						
METRIC STANDPIPE LIGHT DUTY DIN 2353 / ISO 8434-1	6 mm 250	8 mm 250	10 mm 250	12 mm 250	15 mm 250	18 mm 160	22 mm 160	28 mm 100	35 mm 100	42 mm 100					
METRIC STANDPIPE HEAVY DUTY DIN 2353 / ISO 8434-1	8 mm 630	10 mm 630	12 mm 630	14 mm 400	16 mm 400	20 mm 400	25 mm 400	30 mm 250	38 mm 250						
BSP BANJO		1/4"-19 210	3/8"-19 210	3/8"-19 210	1/2"-14 210	5/8"-14 210	3/4"-14 210	1"-11 210							
METRIC BANJO DIN 7642		M12x1.5 210	M14x1.5 210	M16x1.5 210	M22x1.5 210	M22x1.5 210	M26x1.5 210								
WASHCLEANER				M22x1.5 420											

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DN	5	6	8	10	12	16	19	25	31	38	51	60	63	76
Inch	3/16"	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"	1"	1 1/4"	1 1/2"	2"	2 3/8"	2 1/2"	3"
Size	-03	-04	-05	-06	-08	-10	-12	-16	-20	-24	-32	-38	-40	-48

FERRULES

M02400														
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FITTINGS

BSP														
DIN METRIC 24° CONE LIGHT TYPE														

DN	5	6	8	10	12	16	19	25	31	38	51	60	63	76	89	102
Inch	3/16"	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"	1"	1 1/4"	1 1/2"	2"	2 3/8"	2 1/2"	3"	3 1/2"	4"
Size	-03	-04	-05	-06	-08	-10	-12	-16	-20	-24	-32	-38	-40	-48	-56	-64

FERRULES

M00110 / M00120 / M00130																
M00910 / M00920																
M03300																
M03400																
M03500																
M00310 / M00320																
M00820 / M00830																

FITTINGS

BSP																
SAE (JIC)																
SAE (ORFS)																
SAE (O-RING BOSS)																
SAE (NPTF-NPSM)																
SAE FLANGE CODE 61																
SAE FLANGE CODE 62																
DIN STANDPIPE																
DIN METRIC 60° CONE																
DIN METRIC MULTISEAL																
DIN METRIC 24° CONE LIGHT TYPE																
DIN METRIC 24° CONE HEAVY TYPE																
NF (FRENCH MILLIMERIC TYPE)																
NF (FRENCH GAZ TYPE)																
JIS																
ORIGINAL EQUIPMENT CONNECTIONS																
BANJO CONNECTIONS																
SAE (45° CONE)																



DN	5	6	8	10	12	16	19	25	31	38	51	60	63	76	89	102
Inch	3/16"	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"	1"	1 1/4"	1 1/2"	2"	2 3/8"	2 1/2"	3"	3 1/2"	4"
Size	-03	-04	-05	-06	-08	-10	-12	-16	-20	-24	-32	-38	-40	-48	-56	-64

FERRULES

M01500																	
M01600																	
M01800 / M01810 / M01850																	
M01900																	

FITTINGS

BSP																	
SAE (JIC)																	
SAE (ORFS)																	
SAE (O-RING COSS)																	
SAE (NPTF-NPSM)																	
SAE FLANGE CODE 61																	
SAE FLANGE CODE 62																	
DIN METRIC 24° CONE HEAVY TYPE																	
ORIGINAL EQUIPMENT CONNECTIONS																	
XTRAFLLANGE/61																	
XTRAFLLANGE/62																	

DN	5	6	8	10	12	16	19	25	31	38	51	60	63	76	89	102
Inch	3/16"	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"	1"	1 1/4"	1 1/2"	2"	2 3/8"	2 1/2"	3"	3 1/2"	4"
Size	-03	-04	-05	-06	-08	-10	-12	-16	-20	-24	-32	-38	-40	-48	-56	-64

FERRULES

IM01500																	
IM01600																	
IM01800 / IM01810																	
IM01900																	

FITTINGS

BSP																	
SAE (JIC)																	
SAE (ORFS)																	
SAE (NPTF)																	
SAE FLANGE CODE 61																	
SAE FLANGE CODE 62																	
DIN METRIC 24° CONE HEAVY TYPE																	
ORIGINAL EQUIPMENT CONNECTIONS																	

DN	5	6	8	10	12	16	19	25	31	38	51	60	63	76	89	102
Inch	3/16"	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"	1"	1 1/4"	1 1/2"	2"	2 3/8"	2 1/2"	3"	3 1/2"	4"
Size	-03	-04	-05	-06	-08	-10	-12	-16	-20	-24	-32	-38	-40	-48	-56	-64

FERRULES

M02700																	
M02800																	

FITTINGS

SAE FLANGE CODE 62																	
XTRAFRANGE/62																	
BSP																	
ORIGINAL EQUIPMENT CONNECTIONS																	

DN	5	6	8	10	12	16	19	25	31	38	51	60	63	76	89	102
Inch	3/16"	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"	1"	1 1/4"	1 1/2"	2"	2 3/8"	2 1/2"	3"	3 1/2"	4"
Size	-03	-04	-05	-06	-08	-10	-12	-16	-20	-24	-32	-38	-40	-48	-56	-64

FERRULES

M05400																	
M05500																	

FITTINGS

BSP																	
SAE (JIC)																	
SAE (ORFS)																	
SAE (O-RING BOSS)																	
SAE (NPTF-NPSM)																	
SAE FLANGE CODE 61																	
SAE FLANGE CODE 62																	
DIN METRIC 24° CONE HEAVY TYPE																	
ORIGINAL EQUIPMENT CONNECTIONS																	
XTRAFRANGE/62																	

DN	5	6	8	10	12	16	19	25	31	38	51	60	63	76	89	102
Inch	3/16"	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"	1"	1 1/4"	1 1/2"	2"	2 3/8"	2 1/2"	3"	3 1/2"	4"
Size	-03	-04	-05	-06	-08	-10	-12	-16	-20	-24	-32	-38	-40	-48	-56	-64

FERRULES

M05500-GX																	
-----------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

FITTINGS

SAE FLANGE CODE 62																	
--------------------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--



DN	5	6	8	10	12	16	19	25	31	38	51	60	63	76	89	102
Inch	3/16"	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"	1"	1 1/4"	1 1/2"	2"	2 3/8"	2 1/2"	3"	3 1/2"	4"
Size	-03	-04	-05	-06	-08	-10	-12	-16	-20	-24	-32	-38	-40	-48	-56	-64

FITTINGS

BSP																	
-----	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

DN	5	6	8	10	12	16	19	25	31	38	51
Inch	3/16"	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"	1"	1 1/4"	1 1/2"	2"
Size	-03	-04	-05	-06	-08	-10	-12	-16	-20	-24	-32

FITTINGS

BSP																	
SAE (JIC)																	
SAE (ORFS)																	
SAE (O-RING BOSS)																	
SAE (NPTF-NPSM)																	
SAE FLANGE CODE 61																	
DIN STANDPIPE																	
DIN METRIC MULTISEAL																	
DIN METRIC 24° CONE LIGHT TYPE																	
DIN METRIC 24° CONE HEAVY TYPE																	
JIS																	
ORIGINAL EQUIPMENT CONNECTIONS																	

DN	5	6	8	10	12	16	19	25	31	38	51
Inch	$\frac{3}{16}''$	$\frac{1}{4}''$	$\frac{5}{16}''$	$\frac{3}{8}''$	$\frac{1}{2}''$	$\frac{5}{8}''$	$\frac{3}{4}''$	1"	$1\frac{1}{4}''$	$1\frac{1}{2}''$	2"
Size	-03	-04	-05	-06	-08	-10	-12	-16	-20	-24	-32

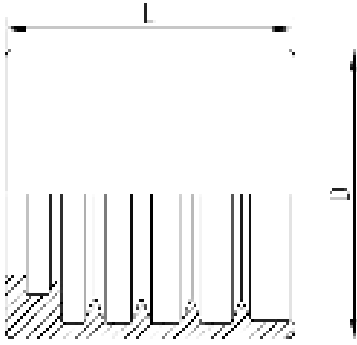
FITTINGS

BSP											
SAE (JIC)											
SAE (ORFS)											
SAE (O-RING BOSS)											
SAE (NPTF-NPSM)											
SAE FLANGE CODE 61											
SAE FLANGE CODE 62											
DIN METRIC 24° CONE LIGHT TYPE											
DIN METRIC 24° CONE HEAVY TYPE											
NF (FRENCH MILLIMETRIC TYPE)											
NF (FRENCH GAZ TYPE)											
JIS											
ORIGINAL EQUIPMENT CONNECTIONS											



FERRULE

M02400



NO-SKIVE FERRULE FOR COMPACT HOSES

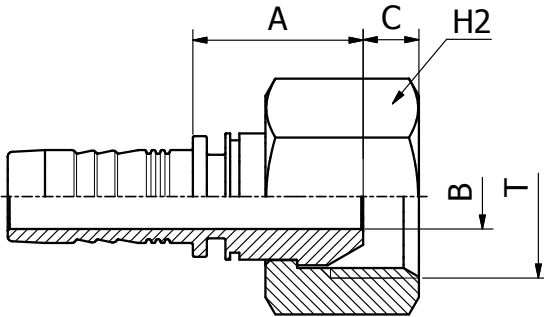
PART. REF.	HOSE BORE			DIMENSIONS mm							
	DN	Dash	inch			D	L				
M02400-04	6	- 4	1/4"			18.5	18.5				
M02400-05	8	- 5	5/16"			21.3	19.6				
M02400-06	10	- 6	3/8"			23.8	21.2				

107 FITTINGS

BS STANDARD CONNECTIONS

MS0513

BSP
FEMALE 60° CONE
BS5200 / ISO 8434-6

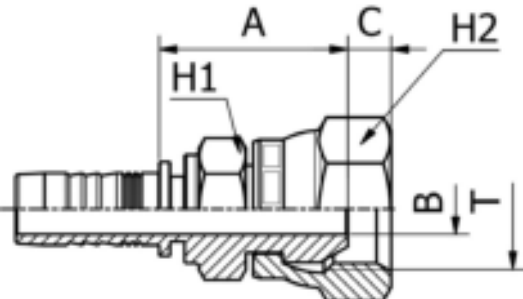


PART. REF.	HOSE BORE			Thread	DIMENSIONS mm							
	DN	Dash	inch	T		B	A	C	H2			
MS0513-04-04	6	- 4	1/4"	1/4" - 19		4.0	15.7	5.4	19.0			
MS0513-06-06	10	- 6	3/8"	3/8" - 19		7.0	18.3	6.0	22.0			

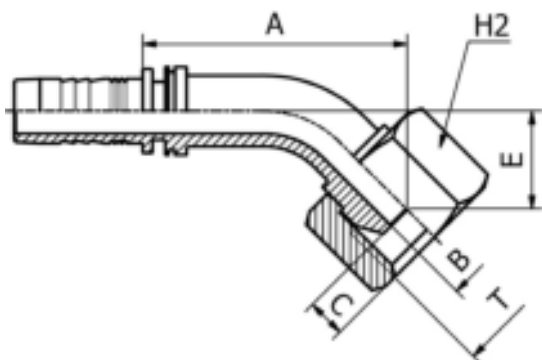
BS STANDARD CONNECTIONS

MS0511KR

BSP FEMALE 60° CONE
BS5200 / ISO 8434-6



PART. REF.	HOSE BORE			Thread	DIMENSIONS mm							
	DN	Dash	inch	T		B	A	C	H2			
MS0511-04-04H12KR	6	- 4	1/4"	1/4" - 19		4.0	23.5	5.2	19.0			
MS0511-06-06H17KR	10	- 6	3/8"	3/8" - 19		7.0	26.0	6.0	22.0			



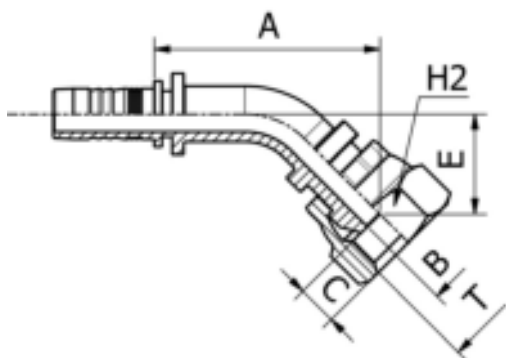
BS STANDARD CONNECTIONS

MS0543

45° BSP
 FEMALE 60° CONE
 BS5200 / ISO 8434-6

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	E	H2	
MS0543-04-04	6	- 4	1/4"	1/4" - 19	4.0	34.7	5.4	14.7	19.0		
MS0543-06-06	10	- 6	3/8"	3/8" - 19	7.0	41.0	6.0	15.3	22.0		

FITTINGS 108

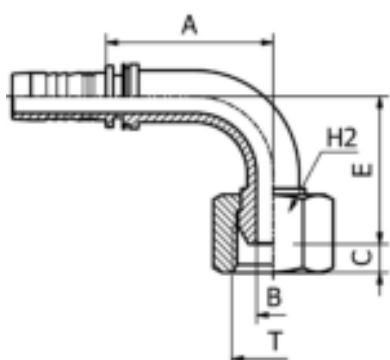


BS STANDARD CONNECTIONS

MS0541KR

BSP
 FEMALE 60° CONE
 BS5200 / ISO 8434-6

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	E	H2	
MS0541-04-04KR	6	- 4	1/4"	1/4" - 19	4.2	36.5	5.2	16.6	19.0		
MS0541-06-06KR	10	- 6	3/8"	3/8" - 19	7.0	44.5	6.0	20.0	22.0		



BS STANDARD CONNECTIONS

MS0593

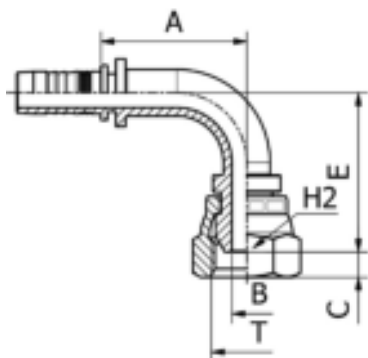
90° BSP
 FEMALE 60° CONE
 BS5200 / ISO 8434-6

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	E	H2	
MS0593-04-04	6	- 4	1/4"	1/4" - 19	4.0	28.2	5.4	29.0	19.0		
MS0593-06-06	10	- 6	3/8"	3/8" - 19	7.0	35.3	6.0	31.5	22.0		

BS STANDARD CONNECTIONS

MS0591KR

90° BSP
 FEMALE SWEPT ELBOW 60° CONE
 BS5200 / ISO 8434-6

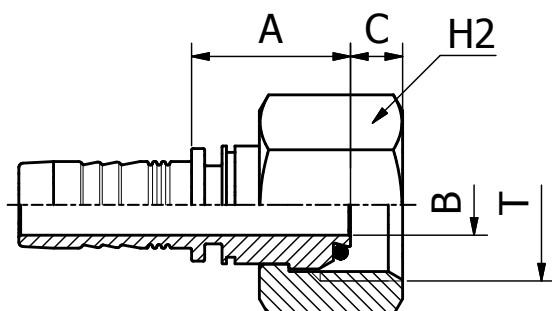


PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	H2		
MS0591-04-04KR	6	- 4	1/4"	1/4" - 19	4.2	27.0	5.2	30.5	19.0		
MS0591-06-06KR	10	- 6	3/8"	3/8" - 19	7.0	34.5	6.0	37.5	22.0		

BS STANDARD CONNECTIONS

MS0813

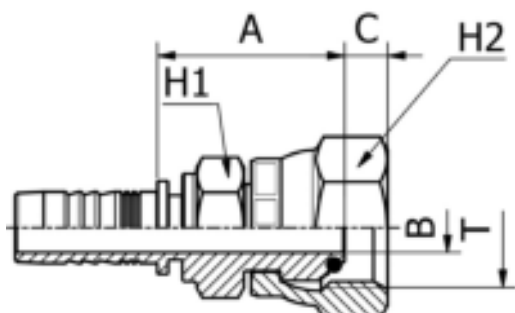
BSP
 O-RING FEMALE 60° CONE
 BS5200 / ISO 8434-6



PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	H2			
MS0813-04-04	6	- 4	1/4"	1/4" - 19	4.0	15.7	5.4	19.0			
MS0813-05-06	8	- 5	5/16"	3/8" - 19	7.0	18.0	6.0	22.0			
MS0813-06-06	10	- 6	3/8"	3/8" - 19	7.0	18.3	6.0	22.0			

BS STANDARD CONNECTIONS

MS0811HKR

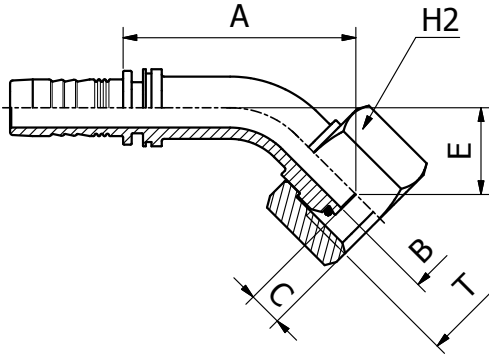


PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	H1	H2		
MS0811-04-04H12KR	6	- 4	1/4"	1/4" - 19	4.0	23.5	5.2	12.0	19.0		
MS0811-06-06H17KR	10	- 6	3/8"	3/8" - 19	7.0	26.0	6.0	17.0	22.0		

BS STANDARD CONNECTIONS

MS0843

45° BSP
 O-RING FEMALE 60° CONE
 BS5200 / ISO 8434-6



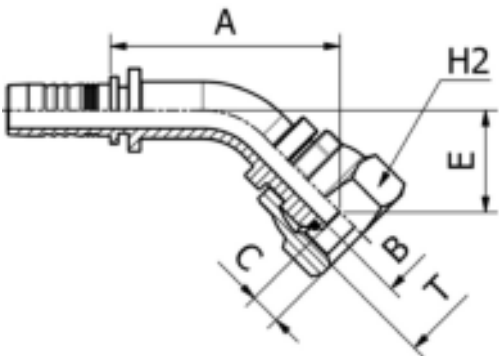
PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	E	H2	
MS0843-04-04	6	- 4	1/4"	1/4" - 19	4.0	34.7	5.4	14.7	19.0		
MS0843-05-06	8	- 5	5/16"	3/8" - 19	7.0	40.5	6.0	17.0	22.0		
MS0843-06-06	10	- 6	3/8"	3/8" - 19	7.0	41.0	6.0	15.3	22.0		

FITTINGS
110

BS STANDARD CONNECTIONS

MS0841KR

45° BSP
 O-RING FEMALE 60° CONE
 BS5200 / ISO 8434-6

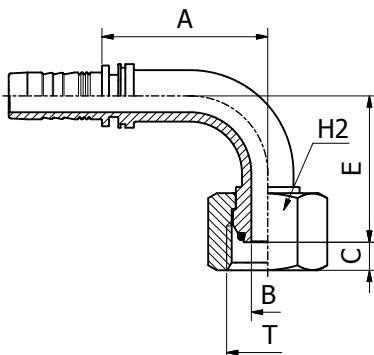


PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	E	H2	
MS0841-04-04KR	6	- 4	1/4"	1/4" - 19	4.2	36.5	5.2	16.5	19.0		
MS0841-06-06KR	10	- 6	3/8"	3/8" - 19	7.0	44.5	6.0	20.0	22.0		

BS STANDARD CONNECTIONS

MS0893

90° BSP
 O-RING FEMALE 60° CONE
 BS5200 / ISO 8434-6



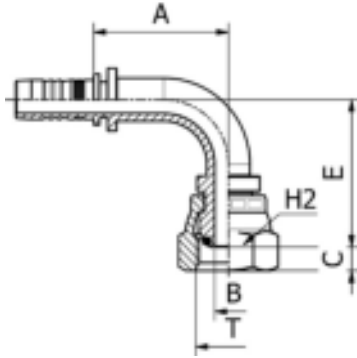
PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	E	H2	
MS0893-04-04	6	- 4	1/4"	1/4" - 19	4.0	28.2	5.4	29.0	19.0		
MS0893-05-06	8	- 5	5/16"	3/8" - 19	7.0	31.0	6.0	32.5	22.0		
MS0893-06-06	10	- 6	3/8"	3/8" - 19	7.0	35.3	6.0	31.5	22.0		



BS STANDARD CONNECTIONS

MS0891KR

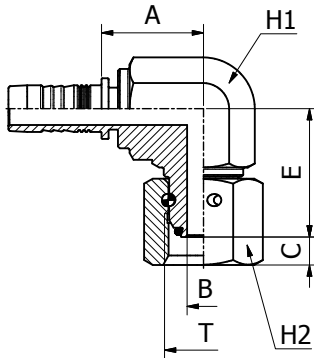
90° BSP
O-RING FEMALE 60° CONE
BS5200 / ISO 8434-6



PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	H2		
MS0891-04-04KR	6	-4	1/4"	1/4" - 19	4.2	27.0	5.2	30.5	19.0		
MS0891-06-06KR	10	-6	3/8"	3/8" - 19	7.0	34.5	6.0	37.5	22.0		

BS STANDARD CONNECTIONS

MS0882F

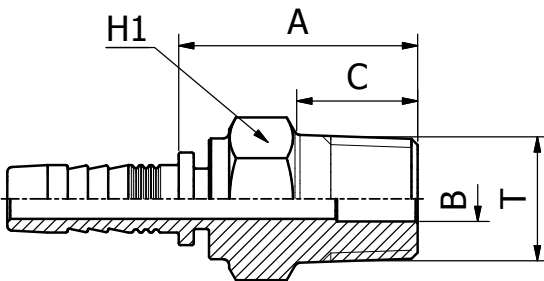


PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	H1	H2	
MS0882-04-04F	6	-4	1/4"	1/4" - 19	4	18.7	4.1	22	14	19	
MS0882-06-06F	10	-6	3/8"	3/8" - 19	7	21.8	6	27.5	19	22	

BS STANDARD CONNECTIONS

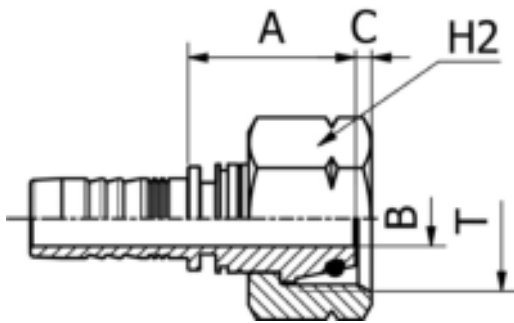
MT0710

BSP MALE TAPERED



PART. REF.	HOSE BORE			Thread	DIMENSIONS mm				
	DN	Dash	inch	T	B	A	C	H1	
MT0710-04-04	6	-4	1/4"	1/4" - 19	4.5	23.5	12.0	14.0	

DIN STANDARD CONNECTIONS

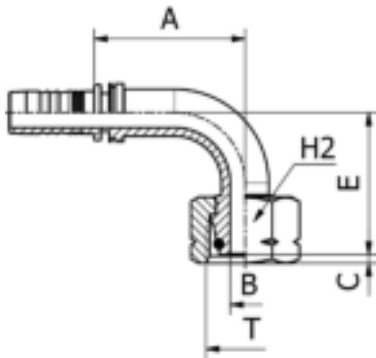


MS1513

METRIC
 O-RING FEMALE 24° CONE LIGHT DUTY
 ISO 8434-1 / DIN 3865

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm					
	DN	Dash	inch		T	B	A	C	H2	
MS1513-04-14	6	- 4	1/4"	M14 X 1.5	4.0	21.0	1.3	17.0		
MS1513-05-16	8	- 5	5/16"	M16 X 1.5	6.0	21.5	1.8	19.0		
MS1513-05-18	8	- 5	5/16"	M18 X 1.5	7.0	20.9	2.0	22.0		
MS1513-06-18	10	- 6	3/8"	M18 X 1.5	7.0	21.1	2.0	22.0		

FITTINGS 112



DIN STANDARD CONNECTIONS

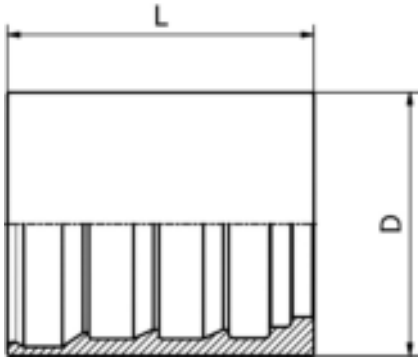
MS1593

90° METRIC
 O-RING FEMALE 24° CONE LIGHT DUTY
 ISO 8434-1 / DIN 3865

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm					
	DN	Dash	inch		T	B	A	C	E	H2
MS1593-04-14	6	- 4	1/4"	M14 X 1.5	4.0	28.0	1.3	31.5	17.0	
MS1593-05-16	8	- 5	5/16"	M16 X 1.5	6.0	31.0	1.8	32.5	19.0	
MS1593-06-18	10	- 6	3/8"	M18 X 1.5	7.0	35.5	2.5	33.5	22.0	



FERRULE



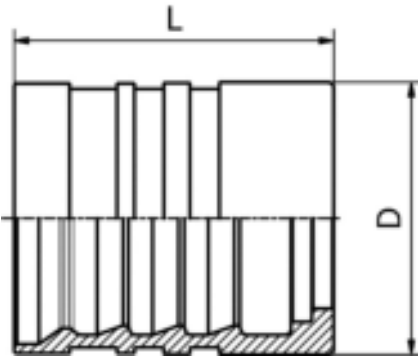
M00110/M00120/M00130

**SKIVE FERRULE
FOR WIRE BRAID HOSES**

PART. REF.	HOSE BORE			DIMENSIONS mm							
	DN	Dash	inch			D	L				
M00120-03	5	- 3	3/16"			17.0	23.9				
M00120-04	6	- 4	1/4"			19.5	28.0				
M00120-05	8	- 5	5/16"			20.0	28.6				
M00120-06	10	- 6	3/8"			23.0	30.0				
M00120-08	12	- 8	1/2"			26.7	32.0				
M00120-10	16	- 10	5/8"			32.0	38.0				
M00120-12	19	- 12	3/4"			35.8	41.7				
M00130-16	25	- 16	1"			43.0	47.0				
M00110-20	31	- 20	1.1/4"			50.5	59.0				
M00110-24	38	- 24	1.1/2"			57.0	70.0				
M00110-32	51	- 32	2"			70.0	72.0				

113 FITTINGS

FERRULE

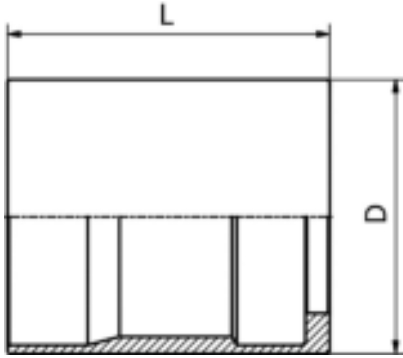


M00910/M00920/M00930

**SKIVE FERRULE
FOR WIRE BRAID
AND SPIRAL HOSES**

PART. REF.	HOSE BORE			DIMENSIONS mm							
	DN	Dash	inch			D	L				
M00910-03	5	- 3	3/16"			20.6	26.0				
M00910-04	6	- 4	1/4"			22.0	30.0				
M00910-05	8	- 5	5/16"			24.0	31.0				
M00910-06	10	- 6	3/8"			26.0	33.0				
M00920-06	10	- 6	3/8"			26.7	33.0				
M00910-08	12	- 8	1/2"			30.0	34.0				
M00910-10	16	- 10	5/8"			33.0	39.0				
M00920-12	19	- 12	3/4"			38.0	40.0				
M00930-16	25	- 16	1"			46.0	54.0				
M00920-20	31	- 20	1.1/4"			57.0	60.0				
M00910-24	38	- 24	1.1/2"			65.0	70.0				
M00910-32	51	- 32	2"			79.0	72.0				

FERRULE



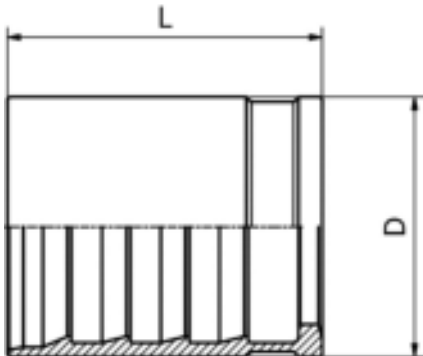
M00310/M00321

**NO-SKIVE FERRULE
 FOR TEXTILE BRAID HOSES**

FITTINGS 114

PART. REF.	HOSE BORE			DIMENSIONS mm							
	DN	Dash	inch			D	L				
M00310-03	5	- 3	3/16"			17.5	27.0				
M00310-04	6	- 4	1/4"			19.3	30.0				
M00310-05	8	- 5	5/16"			21.0	32.0				
M00310-06	10	- 6	3/8"			24.0	32.0				
M00310-08	12	- 8	1/2"			28.4	34.0				
M00310-10	16	- 10	5/8"			33.0	37.0				
M00321-12	19	- 12	3/4"			37.0	43.0				
M00310-16	25	- 16	1"			43.5	51.0				
M00310-20	31	- 20	1.1/4"			50.0	59.0				

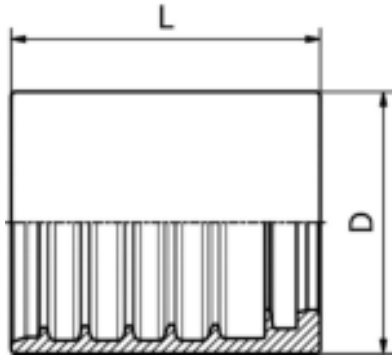
FERRULE



M00820/M00830

**NO-SKIVE FERRULE
 FOR COMPACT HOSES**

PART. REF.	HOSE BORE			DIMENSIONS mm							
	DN	Dash	inch			D	L				
M00820-03	5	- 3	3/16"			14.0	26.4				
M00830-04	6	- 4	1/4"			18.0	29.6				
M00830-05	8	- 5	5/16"			19.0	31.9				
M00820-06	10	- 6	3/8"			22.0	32.9				
M00820-08	12	- 8	1/2"			26.0	33.9				
M00820-10	16	- 10	5/8"			29.0	35.9				
M00820-12	19	- 12	3/4"			33.0	41.7				
M00820-16	25	- 16	1"			41.0	49.7				
M00820-20	31	- 20	1.1/4"			48.0	57.0				
M00820-24	38	- 24	1.1/2"			55.5	66.0				
M00820-32	51	- 32	2"			68.6	70.0				

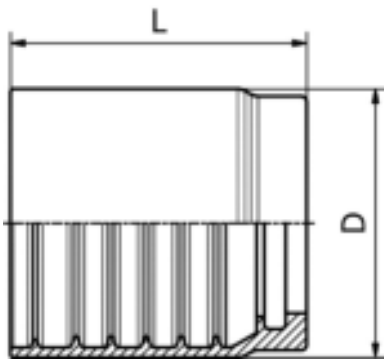


FERRULE

M03300

**NO-SKIVE FERRULE
 FOR WIRE BRAID HOSES**

PART. REF.	HOSE BORE			DIMENSIONS mm							
	DN	Dash	inch			D	L				
M03300-03	5	- 3	3/16"			19.2	22.0				
M03300-04	6	- 4	1/4"			20.5	27.5				
M03300-05	8	- 5	5/16"			22.8	28.5				
M03300-06	10	- 6	3/8"			25.0	30.0				
M03300-08	12	- 8	1/2"			28.0	33.0				

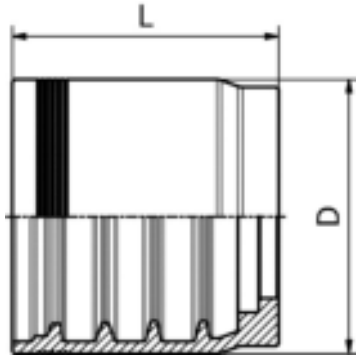


FERRULE

M03400/M03450

**NO-SKIVE FERRULE
 FOR WIRE BRAID HOSES**

PART. REF.	HOSE BORE			DIMENSIONS mm							
	DN	Dash	inch			D	L				
M03400-03	5	- 3	3/16"			21.0	23.0				
M03400-04	6	- 4	1/4"			23.0	30.1				
M03400-05	8	- 5	5/16"			24.0	30.0				
M03400-06	10	- 6	3/8"			26.0	31.1				
M03400-08	12	- 8	1/2"			29.0	34.0				
M03450-08	12	- 8	1/2"			30.3	31.0				
M03400-10	16	- 10	5/8"			33.0	37.0				
M03400-12	19	- 12	3/4"			37.0	42.0				
M03400-16	25	- 16	1"			46.0	50.7				
M03400-20	31	- 20	1.1/4"			59.0	57.2				
M03400-24	38	- 24	1.1/2"			67.0	64.8				
M03400-32	51	- 32	2"			80.0	68.3				
M03400-38	60	- 38	2.3/8"			82.5	69.0				
M03400-40	63	- 40	2.1/2"			88.2	68.8				
M03400-48	76	- 48	3"			103.0	75.0				
M03400-56	89	- 56	3.1/2"			123.4	91.0				



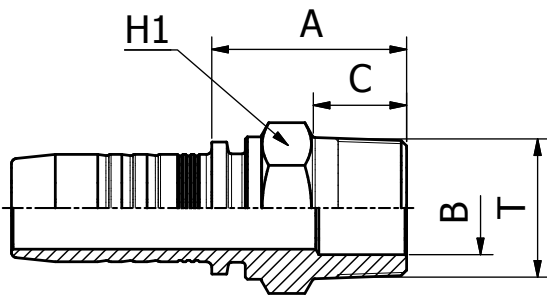
FERRULE

M03500

**NO SKIVE FERRULE
 FOR WIRE SPIRAL HOSES**

PART. REF.	HOSE BORE			DIMENSIONS mm							
	DN	Dash	inch			D	L				
M03500-06	10	- 6	3/8"			29.5	30.7				
M03500-08	12	- 8	1/2"			33.4	32.0				
M03500-10	16	- 10	5/8"			37.2	34.8				
M03500-12	19	- 12	3/4"			41.3	40.0				
M03500-16	25	- 16	1"			49.1	51.0				
M03500-20	31	- 20	1.1/4"			59.3	54.5				

FITTINGS 116



BS STANDARD CONNECTIONS

M10710

BSP MALE TAPERED - ISO 7

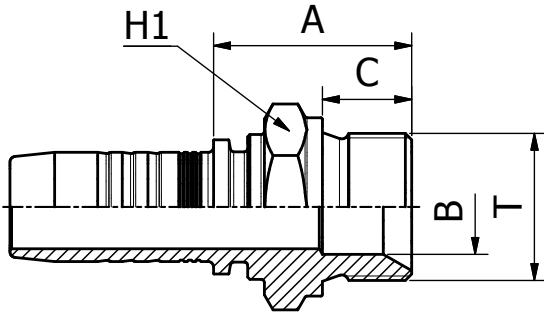
PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	H1			
M10710-03-02	5	- 3	3/16"	1/8" - 28	4.5	20.5	8.0	12.0			
M10710-03-04	5	- 3	3/16"	1/4" - 19	4.5	24.5	12.0	14.0			
M10710-04-02	6	- 4	1/4"	1/8" - 28	4.5	21.0	8.0	12.0			
M10710-04-04	6	- 4	1/4"	1/4" - 19	4.5	25.0	12.0	14.0			
M10710-04-06	6	- 4	1/4"	3/8" - 19	7.0	26.0	12.0	19.0			
M10710-04-08	6	- 4	1/4"	1/2" - 14	10.0	29.5	15.0	22.0			
M10710-05-04	8	- 5	5/16"	1/4" - 19	5.5	25.0	12.0	14.0			
M10710-05-06	8	- 5	5/16"	3/8" - 19	7.0	26.5	12.0	19.0			
M10710-05-08	8	- 5	5/16"	1/2" - 14	10.0	30.0	15.0	22.0			
M10710-06-06	10	- 6	3/8"	3/8" - 19	7.0	27.0	12.0	19.0			
M10710-06-08	10	- 6	3/8"	1/2" - 14	10.0	30.5	15.0	22.0			
M10710-08-04	12	- 8	1/2"	1/4" - 19	4.5	26.0	12.0	19.0			
M10710-08-08	12	- 8	1/2"	1/2" - 14	10.0	31.0	15.0	22.0			
M10710-10-08	16	- 10	5/8"	1/2" - 14	10.0	31.0	15.0	22.0			
M10710-10-12	16	- 10	5/8"	3/4" - 14	17.0	34.0	17.0	27.0			
M10710-12-12	19	- 12	3/4"	3/4" - 14	17.0	35.5	17.0	27.0			
M10710-16-12	25	- 16	1"	3/4" - 14	17.0	38.0	17.0	32.0			
M10710-16-16	25	- 16	1"	1" - 11	22.5	42.0	21.0	36.0			
M10710-20-20	31	- 20	1.1/4"	1.1/4" - 11	28.5	47.5	23.0	46.0			
M10710-24-24	38	- 24	1.1/2"	1.1/2" - 11	32.0	50.0	23.0	50.0			
M10710-32-32	51	- 32	2"	2" - 11	44.0	55.5	27.0	65.0			



BS STANDARD CONNECTIONS

M10510

**BSP MALE PARALLEL 60° CONE SEAT
BS5200 / ISO 8434-6**

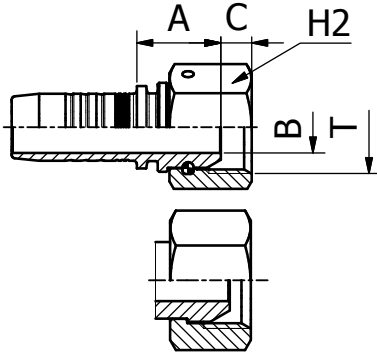


PART. REF.	HOSE BORE			Thread	T	DIMENSIONS mm			
	DN	Dash	inch			B	A	C	H1
M10510-03-02	5	- 3	3/16"	1/8" - 28		3.5	22.5	10.0	14.0
M10510-03-04	5	- 3	3/16"	1/4" - 19		5.0	25.0	11.0	19.0
M10510-04-02	6	- 4	1/4"	1/8" - 28		3.5	22.5	10.0	14.0
M10510-04-04	6	- 4	1/4"	1/4" - 19		5.0	25.5	11.0	19.0
M10510-04-06	6	- 4	1/4"	3/8" - 19		8.0	27.0	12.0	22.0
M10510-04-08	6	- 4	1/4"	1/2" - 14		11.0	30.0	14.0	27.0
M10510-05-04	8	- 5	5/16"	1/4" - 19		5.0	26.0	11.0	19.0
M10510-05-06	8	- 5	5/16"	3/8" - 19		8.0	27.5	12.0	22.0
M10510-06-04	10	- 6	3/8"	1/4" - 19		5.0	26.0	11.0	19.0
M10510-06-06	10	- 6	3/8"	3/8" - 19		8.0	28.0	12.0	22.0
M10510-06-08	10	- 6	3/8"	1/2" - 14		11.0	30.5	14.0	27.0
M10510-08-06	12	- 8	1/2"	3/8" - 19		8.0	28.0	12.0	22.0
M10510-08-08	12	- 8	1/2"	1/2" - 14		11.0	31.0	14.0	27.0
M10510-08-10	12	- 8	1/2"	5/8" - 14		14.5	33.0	16.0	30.0
M10510-08-12	12	- 8	1/2"	3/4" - 14		17.0	34.0	16.0	32.0
M10510-10-10	16	- 10	5/8"	5/8" - 14		14.5	33.0	16.0	30.0
M10510-10-12	16	- 10	5/8"	3/4" - 14		17.0	35.5	16.0	32.0
M10510-12-08	19	- 12	3/4"	1/2" - 14		11.0	32.0	14.0	27.0
M10510-12-12	19	- 12	3/4"	3/4" - 14		17.0	35.5	16.0	32.0
M10510-12-16	19	- 12	3/4"	1" - 11		22.5	39.5	19.0	41.0
M10510-16-12	25	- 16	1"	3/4" - 14		17.0	36.5	16.0	32.0
M10510-16-16	25	- 16	1"	1" - 11		22.5	41.0	19.0	41.0
M10510-16-20	25	- 16	1"	1.1/4" - 11		28.5	45.0	20.0	50.0
M10510-20-20	31	- 20	1.1/4"	1.1/4" - 11		28.5	46.5	20.0	50.0
M10510-20-24	31	- 20	1.1/4"	1.1/2" - 11		33.5	48.5	22.0	55.0
M10510-24-24	38	- 24	1.1/2"	1.1/2" - 11		33.5	49.5	22.0	55.0
M10510-32-32	51	- 32	2"	2" - 11		46.0	54.0	25.0	70.0

BS STANDARD CONNECTIONS

M20512/M20513

BSP FEMALE 60° CONE
BS5200 / ISO 12151-6

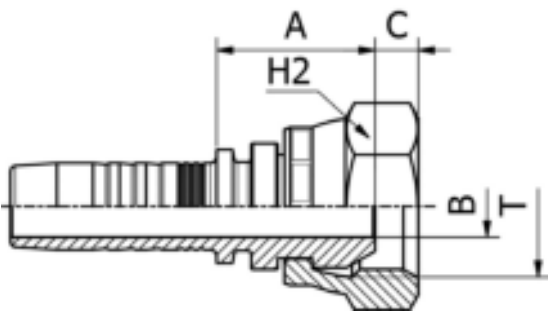


PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	H2		
M20512-03-02	5	- 3	3/16"	1/8" - 28	3.0	16.0	4.4	14.0			
M20512-04-02	6	- 4	1/4"	1/8" - 28	3.1	16.5	4.4	14.0			
M20512-05-04	8	- 5	5/16"	1/4" - 19	4.1	17.5	4.2	19.0			
M20512-06-04	10	- 6	3/8"	1/4" - 19	4.1	18.0	4.2	19.0			
M20512-08-06	12	- 8	1/2"	3/8" - 19	7.1	21.0	6.0	22.0			
M20512-08-10	12	- 8	1/2"	5/8" - 14	12.1	22.0	10.2	28.0			
M20512-08-12	12	- 8	1/2"	3/4" - 14	15.0	24.5	9.0	32.0			
M20512-10-08	16	- 10	5/8"	1/2" - 14	9.8	24.0	6.5	27.0			
M20512-10-10	16	- 10	5/8"	5/8" - 14	12.5	21.5	10.2	28.0			
M20512-10-12	16	- 10	5/8"	3/4" - 14	15.0	23.0	9.0	32.0			
M20512-12-08	19	- 12	3/4"	1/2" - 14	9.8	25.0	6.5	27.0			
M20512-12-12	19	- 12	3/4"	3/4" - 14	15.0	24.5	9.0	32.0			
M20512-12-16	19	- 12	3/4"	1" - 11	19.8	26.0	10.5	38.0			
M20512-16-12	25	- 16	1"	3/4" - 14	15.0	25.5	9.0	32.0			
M20512-16-16	25	- 16	1"	1" - 11	19.8	27.5	10.5	38.0			
M20513-03-04	5	- 3	3/16"	1/4" - 19	4.0	16.5	5.4	19.0			
M20513-04-04	6	- 4	1/4"	1/4" - 19	4.0	17.0	5.4	19.0			
M20513-04-06	6	- 4	1/4"	3/8" - 19	7.0	19.0	6.0	22.0			
M20513-04-08	6	- 4	1/4"	1/2" - 14	9.5	19.5	6.3	27.0			
M20513-05-06	8	- 5	5/16"	3/8" - 19	7.0	19.0	6.0	22.0			
M20513-05-08	8	- 5	5/16"	1/2" - 14	9.3	20.5	6.3	27.0			
M20513-06-06	10	- 6	3/8"	3/8" - 19	7.0	19.5	6.0	22.0			
M20513-06-08	10	- 6	3/8"	1/2" - 14	9.3	20.0	6.3	27.0			
M20513-08-08	12	- 8	1/2"	1/2" - 14	9.3	20.5	6.3	27.0			

BS STANDARD CONNECTIONS

M20511KR

BSP FEMALE 60° CONE
BS5200 / ISO 12151-6



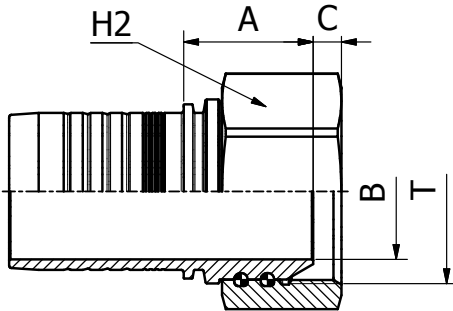
PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	H2		
M20511-04-04KR	6	- 4	1/4"	1/4" - 19	4.0	20.0	5.2	19.0			
M20511-06-06KR	10	- 6	3/8"	3/8" - 19	7.0	22.0	6.0	22.0			
M20511-08-08KR	12	- 8	1/2"	1/2" - 14	9.3	24.0	6.5	27.0			



BS STANDARD CONNECTIONS

M20514

**BSP FEMALE 60° CONE
BS5200 / ISO 12151-6**

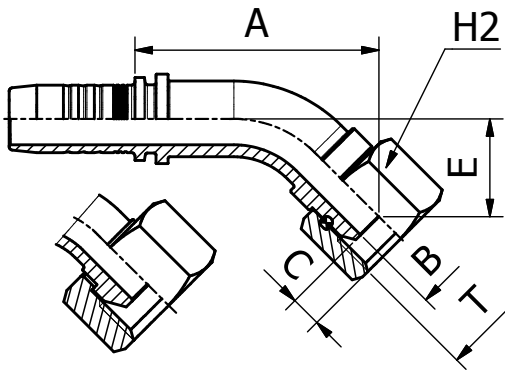


PART. REF.	HOSE BORE			Thread	T	DIMENSIONS mm					
	DN	Dash	inch			B	A	C	H2		
M20514-40-40	63	- 40	2.1/2"	2.1/2"		55.4	52.5	11.5	85.0		
M20514-48-48	76	- 48	3"	3"		65.0	57.0	10.9	100.0		

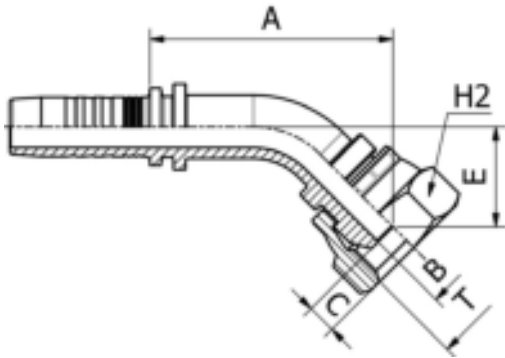
BS STANDARD CONNECTIONS

M20542/M20543

**45° BSP FEMALE SWEPT ELBOW 60° CONE
BS5200 / ISO 12151-6**



PART. REF.	HOSE BORE			Thread	T	DIMENSIONS mm				
	DN	Dash	inch			B	A	C	E	H2
M20542-03-02	5	- 3	3/16"	1/8" - 28		3.0	31.0	4.4	15.0	14.0
M20542-04-02	6	- 4	1/4"	1/8" - 28		3.1	35.5	4.4	14.5	14.0
M20542-05-04	8	- 5	5/16"	1/4" - 19		4.0	35.5	4.1	16.0	19.0
M20542-08-06	12	- 8	1/2"	3/8" - 19		7.1	52.0	6.0	20.0	22.0
M20542-08-10	12	- 8	1/2"	5/8" - 14		12.1	54.5	10.2	22.5	28.0
M20542-08-12	12	- 8	1/2"	3/4" - 14		15.0	57.0	9.0	25.0	32.0
M20542-10-08	16	- 10	5/8"	1/2" - 14		9.3	63.5	6.5	26.5	27.0
M20542-10-10	16	- 10	5/8"	5/8" - 14		12.5	63.0	10.2	26.0	28.0
M20542-10-12	16	- 10	5/8"	3/4" - 14		15.0	64.0	9.0	27.0	32.0
M20542-12-08	19	- 12	3/4"	1/2" - 14		9.3	55.5	6.5	22.5	27.0
M20542-12-12	19	- 12	3/4"	3/4" - 14		15.0	70.5	9.0	28.5	32.0
M20542-12-16	19	- 12	3/4"	1" - 11		19.8	72.5	10.5	30.0	38.0
M20542-16-16	25	- 16	1"	1" - 11		19.8	91.0	10.5	36.5	38.0
M20543-03-04	5	- 3	3/16"	1/4" - 19		4.0	35.5	5.4	14.5	19.0
M20543-04-04	6	- 4	1/4"	1/4" - 19		4.0	36.0	5.4	15.0	19.0
M20543-04-06	6	- 4	1/4"	3/8" - 19		7.0	37.5	6.0	16.0	22.0
M20543-05-06	8	- 5	5/16"	3/8" - 19		7.0	38.0	6.0	13.5	22.0
M20543-06-06	10	- 6	3/8"	3/8" - 19		7.0	42.0	6.0	15.5	22.0
M20543-06-08	10	- 6	3/8"	1/2" - 14		9.3	42.5	6.3	16.0	27.0
M20543-08-08	12	- 8	1/2"	1/2" - 14		9.3	49.5	6.3	17.0	27.0



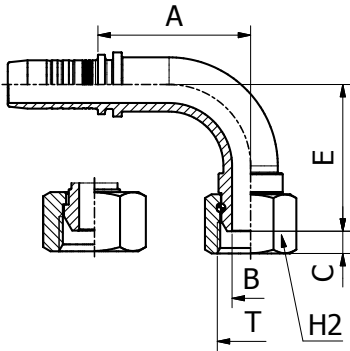
BS STANDARD CONNECTIONS

M20541KR

45° BSP FEMALE SWEPT ELBOW 60° CONE
 BS5200 / ISO 12151-6

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	E	H2	
M20541-04-04KR	6	- 4	1/4"	1/4" - 19	4.2	38.0	5.2	16.6	19.0		
M20541-06-06KR	10	- 6	3/8"	3/8" - 19	7.0	45.5	6.0	20.0	22.0		
M20541-08-08KR	12	- 8	1/2"	1/2" - 14	9.3	54.0	6.5	22.0	27.0		

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BS STANDARD CONNECTIONS

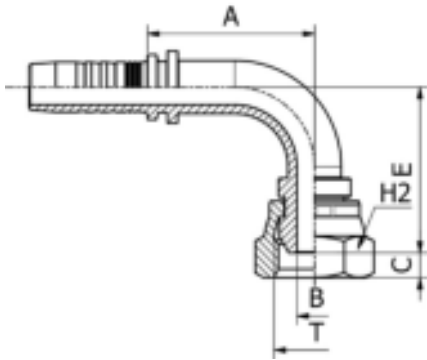
M20592/M20593

90° BSP FEMALE SWEPT ELBOW
 60° CONE - BS5200 / ISO 12151-6

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	E	H2	
M20592-03-02	5	- 3	3/16"	1/8" - 28	3.0	21.5	4.4	26.0	14.0		
M20592-04-02	6	- 4	1/4"	1/8" - 28	3.1	28.5	4.4	27.0	14.0		
M20592-05-04	8	- 5	5/16"	1/4" - 19	4.0	26.5	4.1	29.5	19.0		
M20592-06-04	10	- 6	3/8"	1/4" - 19	4.0	27.0	4.1	29.5	19.0		
M20592-08-06	12	- 8	1/2"	3/8" - 19	7.1	45.0	6.0	41.0	22.0		
M20592-08-10	12	- 8	1/2"	5/8" - 14	12.1	44.0	10.2	44.0	28.0		
M20592-08-12	12	- 8	1/2"	3/4" - 14	15.0	44.0	9.0	45.5	32.0		
M20592-10-08	16	- 10	5/8"	1/2" - 14	9.3	53.5	6.5	54.5	27.0		
M20592-10-10	16	- 10	5/8"	5/8" - 14	12.5	53.5	10.2	53.5	28.0		
M20592-10-12	16	- 10	5/8"	3/4" - 14	15.0	53.5	9.0	55.0	32.0		
M20592-12-08	19	- 12	3/4"	1/2" - 14	9.3	45.5	6.5	44.0	27.0		
M20592-12-12	19	- 12	3/4"	3/4" - 14	15.0	61.5	9.0	59.5	32.0		
M20592-12-16	19	- 12	3/4"	1" - 11	19.8	61.5	10.5	62.0	38.0		
M20592-16-12	25	- 16	1"	3/4" - 14	15.0	64.5	9.0	59.5	32.0		
M20592-16-16	25	- 16	1"	1" - 11	19.8	79.5	10.5	76.0	38.0		
M20593-03-04	5	- 3	3/16"	1/4" - 19	4.0	29.0	5.4	29.0	19.0		
M20593-04-04	6	- 4	1/4"	1/4" - 19	4.0	29.5	5.4	29.0	19.0		
M20593-04-06	6	- 4	1/4"	3/8" - 19	7.0	29.5	6.0	31.0	22.0		
M20593-05-06	8	- 5	5/16"	3/8" - 19	7.0	32.0	6.0	27.5	22.0		
M20593-05-08	8	- 5	5/16"	1/2" - 14	9.3	36.5	6.3	32.0	27.0		
M20593-06-06	10	- 6	3/8"	3/8" - 19	7.0	36.5	6.0	31.5	22.0		
M20593-06-08	10	- 6	3/8"	1/2" - 14	9.3	36.5	6.3	32.0	27.0		
M20593-08-08	12	- 8	1/2"	1/2" - 14	9.3	45.0	6.3	36.5	27.0		



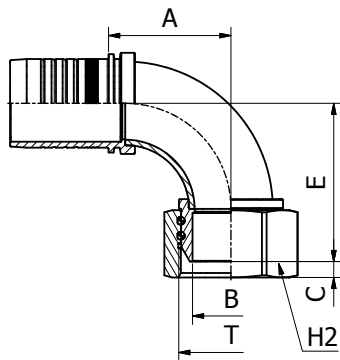
BS STANDARD CONNECTIONS



M20591KR

90° BSP FEMALE SWEPT ELBOW 60° CONE
 BS5200 / ISO 12151-6

PART. REF.	HOSE BORE			Thread		DIMENSIONS mm						
	DN	Dash	inch			T	B	A	C	E	H2	
M20591-04-04KR	6	- 4	1/4"	1/4" - 19		4.2	28.5	5.2	30.5	19.0		
M20591-04-06KR	6	- 4	1/4"	3/8" - 19		7.0	28.5	6.0	32.0	22.0		
M20591-06-06KR	10	- 6	3/8"	3/8" - 19		7.0	35.5	6.0	37.5	22.0		
M20591-06-08KR	10	- 6	3/8"	1/2" - 14		9.3	35.5	6.5	39.0	27.0		
M20591-08-06KR	12	- 8	1/2"	3/8" - 19		7.0	44.0	6.0	42.0	22.0		
M20591-08-08KR	12	- 8	1/2"	1/2" - 14		9.3	44.0	6.5	43.5	27.0		



BS STANDARD CONNECTIONS

M20594

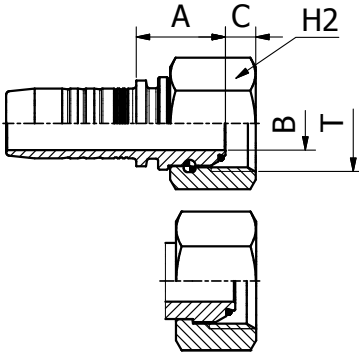
90° BSP FEMALE SWEPT ELBOW 60° CONE
 BS5200 / ISO 12151-6

PART. REF.	HOSE BORE			Thread		DIMENSIONS mm						
	DN	Dash	inch			T	B	A	C	E	H2	
M20594-40-40	63	- 40	2 1/2"	2 1/2"		55.4	88.0	11.5	114.0	85.0		
M20594-48-48	76	- 48	3"	3"		65.0	123.0	10.9	135.0	100.0		

BS STANDARD CONNECTIONS

M20812/M20813

BSP O-RING FEMALE 60° CONE
 BS5200 / ISO 12151-6

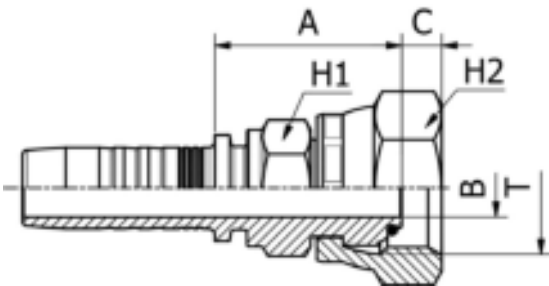


PART. REF.	HOSE BORE			Thread	T	DIMENSIONS mm				
	DN	Dash	inch			B	A	C	H2	
M20812-06-04	10	- 6	3/8"	1/4" - 19	4.1	18.0	4.1	19.0		
M20812-10-10	16	- 10	5/8"	5/8" - 14	12.5	22.0	9.7	28.0		
M20812-12-12	19	- 12	3/4"	3/4" - 14	15.0	25.0	8.5	32.0		
M20812-16-12	25	- 16	1"	3/4" - 14	15.0	26.0	8.5	32.0		
M20812-16-16	25	- 16	1"	1" - 11	19.8	27.5	10.6	38.0		
M20812-16-20	25	- 16	1"	1.1/4" - 11	26.1	31.0	10.5	50.0		
M20812-20-16	31	- 20	1.1/4"	1" - 11	19.8	29.0	10.5	38.0		
M20812-20-20	31	- 20	1.1/4"	1.1/4" - 11	26.0	31.5	10.5	50.0		
M20812-20-24	31	- 20	1.1/4"	1.1/2" - 11	32.1	29.5	12.5	60.0		
M20812-24-20	38	- 24	1.1/2"	1.1/4" - 11	26.0	31.5	10.5	50.0		
M20812-24-24	38	- 24	1.1/2"	1.1/2" - 11	32.0	30.5	12.5	60.0		
M20812-24-32	38	- 24	1.1/2"	2" - 11	42.1	30.0	16.1	70.0		
M20812-32-32	51	- 32	2"	2" - 11	42.0	32.0	16.1	70.0		
M20813-03-04	5	- 3	3/16"	1/4" - 19	4.0	16.5	5.4	19.0		
M20813-04-04	6	- 4	1/4"	1/4" - 19	4.0	17.0	5.4	19.0		
M20813-04-06	6	- 4	1/4"	3/8" - 19	7.0	19.0	6.0	22.0		
M20813-06-06	10	- 6	3/8"	3/8" - 19	7.0	19.5	6.0	22.0		
M20813-06-08	10	- 6	3/8"	1/2" - 14	9.3	21.0	6.3	27.0		
M20813-08-08	12	- 8	1/2"	1/2" - 14	9.3	20.5	6.3	27.0		

BS STANDARD CONNECTIONS

M20811HKR

BSP O-RING FEMALE 60° CONE
 BS5200 / ISO 12151-6



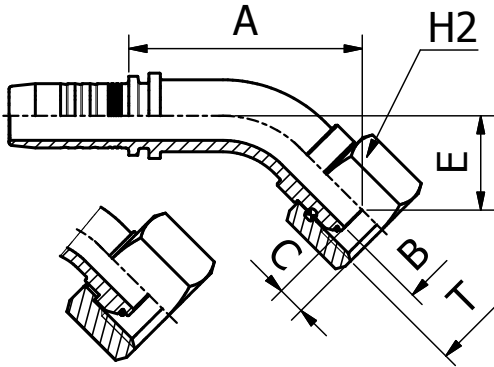
PART. REF.	HOSE BORE			Thread	T	DIMENSIONS mm				
	DN	Dash	inch			B	A	C	H1	H2
M20811-04-04H12KR	6	- 4	1/4"	1/4" - 19	4.0	25.0	5.2	12.0	19.0	
M20811-04-06H17KR	6	- 4	1/4"	3/8" - 19	7.0	27.0	6.0	17.0	22.0	
M20811-06-04H17KR	10	- 6	3/8"	1/4" - 19	4.0	26.0	5.2	17.0	19.0	
M20811-06-06H17KR	10	- 6	3/8"	3/8" - 19	7.0	27.5	6.0	17.0	22.0	
M20811-06-08H19KR	10	- 6	3/8"	1/2" - 14	9.3	29.5	6.5	19.0	27.0	
M20811-08-06H19KR	12	- 8	1/2"	3/8" - 19	7.0	29.5	6.0	19.0	22.0	
M20811-08-08H19KR	12	- 8	1/2"	1/2" - 14	9.3	30.0	5.5	19.0	22.0	



BS STANDARD CONNECTIONS

M20842/M20843

45° BSP O-RING FEMALE SWEPT ELBOW 60° CONE
BS5200 / ISO 12151-6



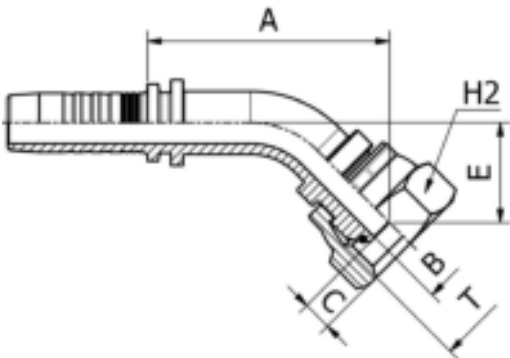
PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	H2		
M20842-10-10	16	- 10	5/8"	5/8" - 14	12.5	63.5	9.7	27.5	28.0		
M20842-12-12	19	- 12	3/4"	3/4" - 14	15.0	71.0	8.5	29.0	32.0		
M20842-16-12	25	- 16	1"	3/4" - 14	15.0	79.5	8.5	29.0	32.0		
M20842-16-16	25	- 16	1"	1" - 11	19.8	90.5	10.6	35.5	38.0		
M20842-16-20	25	- 16	1"	1 1/4" - 11	26.1	93.0	10.5	38.0	50.0		
M20842-20-20	31	- 20	1 1/4"	1 1/4" - 11	26.0	101.5	10.5	39.0	50.0		
M20842-20-24	31	- 20	1 1/4"	1 1/2" - 11	32.1	118.5	12.5	40.5	60.0		
M20842-24-20	38	- 24	1 1/2"	1 1/4" - 11	26.0	106.0	10.5	42.0	50.0		
M20842-24-24	38	- 24	1 1/2"	1 1/2" - 11	32.0	118.0	12.5	45.0	60.0		
M20842-24-32	38	- 24	1 1/2"	2" - 11	42.1	117.5	16.1	44.5	70.0		
M20842-32-32	51	- 32	2"	2" - 11	42.0	134.0	16.1	47.0	70.0		
M20843-04-04	6	- 4	1/4"	1/4" - 19	4.0	36.0	5.4	14.5	19.0		
M20843-06-06	10	- 6	3/8"	3/8" - 19	7.0	42.0	6.0	15.5	22.0		
M20843-08-08	12	- 8	1/2"	1/2" - 14	9.3	49.5	6.3	17.0	27.0		

123 FITTINGS

BS STANDARD CONNECTIONS

M20841KR

45° BSP O-RING FEMALE 60° CONE
BS5200 / ISO 12151-6

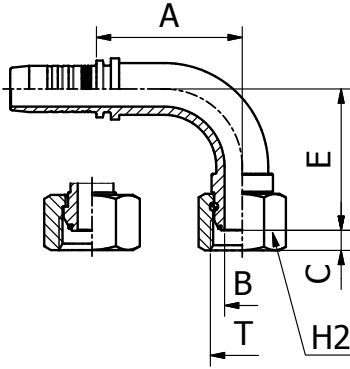


PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	H2		
M20841-04-04KR	6	- 4	1/4"	1/4" - 19	4.2	38.0	5.2	16.6	19.0		
M20841-06-06KR	10	- 6	3/8"	3/8" - 19	7.0	45.5	6.0	16.5	22.0		
M20841-08-08KR	12	- 8	1/2"	1/2" - 14	9.3	54.0	6.5	22.0	27.0		

BS STANDARD CONNECTIONS

M20892/M20893

90° BSP O-RING FEMALE SWEPT ELBOW 60° CONE
 BS5200 / ISO 12151-6



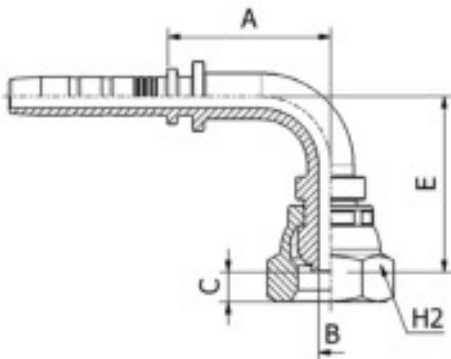
PART. REF.	HOSE BORE			Thread	DIMENSIONS mm					
	DN	Dash	inch		T	B	A	C	E	H2
M20892-06-04	10	- 6	3/8"	1/4" - 19	4.1	35.5	4.1	33.0	19.0	
M20892-10-10	16	- 10	5/8"	5/8" - 14	12.5	53.0	9.7	55.0	28.0	
M20892-12-12	19	- 12	3/4"	3/4" - 14	15.0	61.5	8.5	60.0	32.0	
M20892-12-16	19	- 12	3/4"	1" - 11	19.8	61.5	10.6	62.0	38.0	
M20892-16-12	25	- 16	1"	3/4" - 14	15.0	79.5	8.5	60.0	32.0	
M20892-16-16	25	- 16	1"	1" - 11	19.8	79.5	10.6	76.0	38.0	
M20892-16-20	25	- 16	1"	1.1/4" - 11	26.1	79.5	10.5	78.5	50.0	
M20892-20-16	31	- 20	1.1/4"	1" - 11	19.8	79.5	10.6	76.0	38.0	
M20892-20-20	31	- 20	1.1/4"	1.1/4" - 11	26.0	90.5	10.5	83.5	50.0	
M20892-20-24	31	- 20	1.1/4"	1.1/2" - 11	32.1	90.5	12.5	84.5	60.0	
M20892-24-20	38	- 24	1.1/2"	1.1/4" - 11	26.0	95.0	10.5	90.5	50.0	
M20892-24-24	38	- 24	1.1/2"	1.1/2" - 11	32.0	108.0	12.5	98.5	60.0	
M20892-24-32	38	- 24	1.1/2"	2" - 11	42.1	108.0	16.1	98.0	70.0	
M20892-32-32	51	- 32	2"	2" - 11	42.0	131.0	16.1	110.5	70.0	
M20893-03-04	5	- 3	3/16"	1/4" - 19	4.0	29.0	5.4	29.0	19.0	
M20893-04-04	6	- 4	1/4"	1/4" - 19	4.0	29.5	5.4	29.0	19.0	
M20893-06-06	10	- 6	3/8"	3/8" - 19	7.0	36.5	6.0	31.5	22.0	
M20893-08-08	12	- 8	1/2"	1/2" - 14	9.3	45.0	6.3	36.5	27.0	

FITTINGS 124

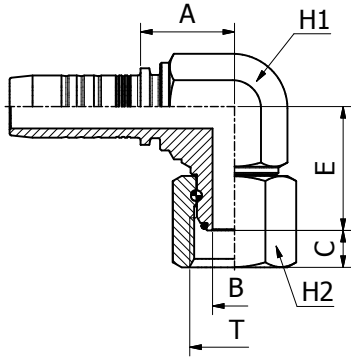
BS STANDARD CONNECTIONS

M20891KR

90° BSP O-RING FEMALE 60° CONE
 BS5200 / ISO 12151-6



PART. REF.	HOSE BORE			Thread	DIMENSIONS mm					
	DN	Dash	inch		T	B	A	C	E	H2
M20891-04-04KR	6	- 4	1/4"	1/4" - 19	4.2	28.5	5.2	30.5	19.0	
M20891-04-06KR	6	- 4	1/4"	3/8" - 19	7.0	28.5	6.0	32.0	22.0	
M20891-06-04KR	10	- 6	3/8"	1/4" - 19	4.0	37.5	5.2	36.0	19.0	
M20891-06-06KR	10	- 6	3/8"	3/8" - 19	7.0	35.5	6.0	37.5	22.0	
M20891-06-08KR	10	- 6	3/8"	1/2" - 14	9.3	35.5	6.5	39.0	27.0	
M20891-08-06KR	12	- 8	1/2"	3/8" - 19	7.0	44.0	6.0	42.0	22.0	
M20891-08-08KR	12	- 8	1/2"	1/2" - 14	9.3	44.0	5.5	43.5	22.0	



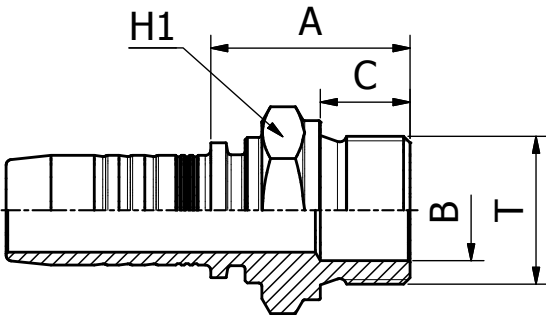
BS STANDARD CONNECTIONS

M20882F

90° BSP O-RING FEMALE
 COMPACT ELBOW 60° CONE
 BS5200 / ISO 12151-6 (THRUST-WIRE NUT)

PART. REF.	HOSE BORE			Thread	T	DIMENSIONS mm					
	DN	Dash	inch			B	A	C	E	H1	H2
M20882-04-04F	6	- 4	1/4"	1/4" - 19	4.0	20.0	4.1	22.0	14.0	19.0	
M20882-06-06F	10	- 6	3/8"	3/8" - 19	7.0	23.0	6.0	27.5	19.0	22.0	
M20882-08-08F	12	- 8	1/2"	1/2" - 14	9.3	25.0	6.5	31.0	22.0	27.0	
M20882-10-10F	16	- 10	5/8"	5/8" - 14	12.5	24.5	9.7	32.5	24.0	28.0	
M20882-12-12F	19	- 12	3/4"	3/4" - 14	15.0	37.5	8.5	36.0	27.0	32.0	
M20882-16-16F	25	- 16	1"	1" - 11	20.0	52.0	10.6	44.0	36.0	38.0	

125 FITTINGS

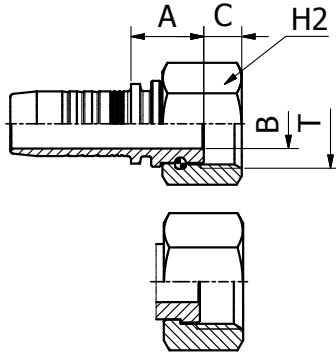


BS STANDARD CONNECTIONS

M10610

BSP MALE FLAT SEAT

PART. REF.	HOSE BORE			Thread	T	DIMENSIONS mm			
	DN	Dash	inch			B	A	C	H1
M10610-04-04	6	- 4	1/4"	1/4" - 19	6.0	25.5	11.0	19.0	
M10610-06-06	10	- 6	3/8"	3/8" - 19	9.5	28.0	12.0	22.0	
M10610-06-08	10	- 6	3/8"	1/2" - 14	13.0	30.5	14.0	27.0	
M10610-08-08	12	- 8	1/2"	1/2" - 14	13.0	31.0	14.0	27.0	
M10610-10-08	16	- 10	5/8"	1/2" - 14	13.0	31.0	14.0	27.0	
M10610-12-12	19	- 12	3/4"	3/4" - 14	18.0	35.5	16.0	32.0	

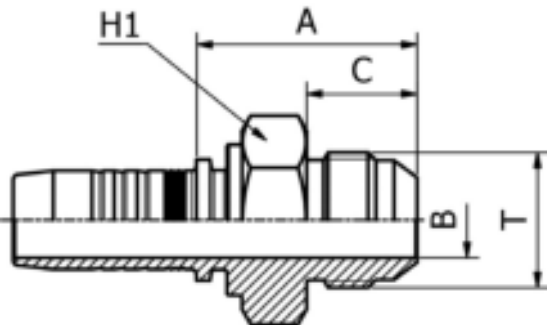


BS STANDARD CONNECTIONS

M20612/M20613

BSP FEMALE FLAT SEAT

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	H2			
M20612-08-12	12	- 8	1/2"	3/4" - 14	15.0	21.0	11.5	32.0			
M20612-10-12	16	- 10	5/8"	3/4" - 14	15.0	20.5	11.5	32.0			
M20612-12-12	19	- 12	3/4"	3/4" - 14	15.0	22.0	11.5	32.0			
M20612-12-16	19	- 12	3/4"	1" - 11	19.8	23.5	13.0	38.0			
M20612-16-16	25	- 16	1"	1" - 11	19.8	25.0	13.0	38.0			
M20612-20-20	31	- 20	1.1/4"	1.1/4" - 11	26.0	26.0	15.0	50.0			
M20613-04-04	6	- 4	1/4"	1/4" - 19	4.0	14.5	7.9	19.0			
M20613-05-06	8	- 5	5/16"	3/8" - 19	7.0	16.0	9.0	22.0			
M20613-06-06	10	- 6	3/8"	3/8" - 19	7.0	16.5	9.0	22.0			
M20613-06-08	10	- 6	3/8"	1/2" - 14	9.3	17.5	9.8	27.0			
M20613-08-08	12	- 8	1/2"	1/2" - 14	9.3	18.0	9.8	27.0			

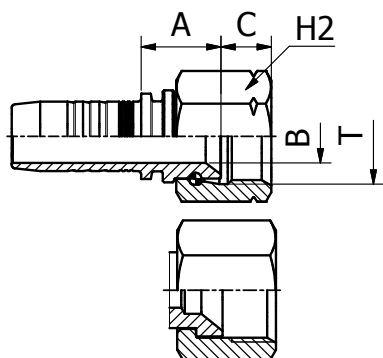


SAE STANDARD CONNECTIONS

M12510

JIC MALE 37° CONE
 SAE J516 / ISO 12151-5

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	H1			
M12510-04-04	6	- 4	1/4"	7/16" - 20	4.0	28.0	14.0	12.0			
M12510-04-05	6	- 4	1/4"	1/2" - 20	5.5	29.0	14.0	14.0			
M12510-04-06	6	- 4	1/4"	9/16" - 18	7.0	29.0	14.0	17.0			
M12510-05-04	8	- 5	5/16"	7/16" - 20	4.0	29.0	14.0	14.0			
M12510-05-05	8	- 5	5/16"	1/2" - 20	5.5	29.0	14.0	14.0			
M12510-05-06	8	- 5	5/16"	9/16" - 18	7.0	29.0	14.0	17.0			
M12510-06-05	10	- 6	3/8"	1/2" - 20	5.5	29.5	14.0	17.0			
M12510-06-06	10	- 6	3/8"	9/16" - 18	7.0	29.5	14.0	17.0			
M12510-06-08	10	- 6	3/8"	3/4" - 16	9.3	34.0	16.5	19.0			
M12510-06-10	10	- 6	3/8"	7/8" - 14	12.5	38.5	19.5	24.0			
M12510-08-06	12	- 8	1/2"	9/16" - 18	7.0	32.0	14.0	19.0			
M12510-08-08	12	- 8	1/2"	3/4" - 16	9.3	34.5	16.5	19.0			
M12510-08-10	12	- 8	1/2"	7/8" - 14	12.5	39.0	19.5	24.0			
M12510-08-12	12	- 8	1/2"	1.1/16" - 12	15.0	43.0	22.0	27.0			
M12510-10-10	16	- 10	5/8"	7/8" - 14	12.5	39.0	19.5	24.0			
M12510-10-12	16	- 10	5/8"	1.1/16" - 12	15.0	42.5	22.0	27.0			
M12510-12-10	19	- 12	3/4"	7/8" - 14	12.5	41.5	19.5	27.0			
M12510-12-12	19	- 12	3/4"	1.1/16" - 12	15.0	44.0	22.0	27.0			
M12510-12-14	19	- 12	3/4"	1.3/16" - 12	15.0	44.5	22.5	32.0			
M12510-12-16	19	- 12	3/4"	1.5/16" - 12	19.8	47.0	23.0	34.0			
M12510-16-12	25	- 16	1"	1.1/16" - 12	15.0	45.0	22.0	32.0			
M12510-16-16	25	- 16	1"	1.5/16" - 12	19.8	48.0	23.0	34.0			
M12510-16-20	25	- 16	1"	1.5/8" - 12	26.0	53.0	24.3	42.0			
M12510-20-20	31	- 20	1.1/4"	1.5/8" - 12	26.0	53.5	24.3	42.0			
M12510-20-24	31	- 20	1.1/4"	1.7/8" - 12	32.0	60.5	27.5	50.0			
M12510-24-24	38	- 24	1.1/2"	1.7/8" - 12	32.0	60.5	27.5	50.0			
M12510-32-32	51	- 32	2"	2.1/2" - 12	42.0	72.0	34.0	65.0			



SAE STANDARD CONNECTIONS

M22512/M22513

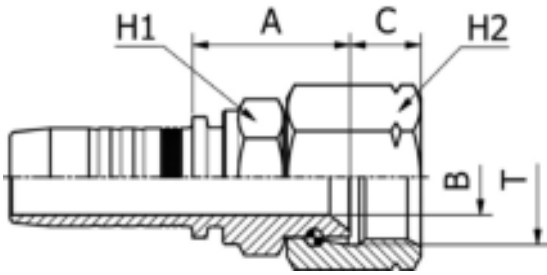
JIC FEMALE 37° CONE SEAT
SAE J516 / ISO 12151-5

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	H2			
M22512-03-05	5	- 3	3/16"	1/2" - 20	4.0	15.5	9.1	17.0			
M22512-04-04	6	- 4	1/4"	7/16" - 20	4.0	15.5	8.7	17.0			
M22512-04-05	6	- 4	1/4"	1/2" - 20	4.0	16.0	9.1	17.0			
M22512-05-04	8	- 5	5/16"	7/16" - 20	4.0	15.5	8.7	17.0			
M22512-05-05	8	- 5	5/16"	1/2" - 20	5.5	16.0	9.1	17.0			
M22512-05-06	8	- 5	5/16"	9/16" - 18	7.0	15.5	9.2	19.0			
M22512-06-05	10	- 6	3/8"	1/2" - 20	5.5	16.5	9.1	17.0			
M22512-06-06	10	- 6	3/8"	9/16" - 18	7.0	16.0	9.2	19.0			
M22512-08-08	12	- 8	1/2"	3/4" - 16	9.3	20.0	10.2	22.0			
M22512-10-10	16	- 10	5/8"	7/8" - 14	12.5	20.0	12.3	27.0			
M22512-12-08	19	- 12	3/4"	3/4" - 16	9.3	21.5	10.2	22.0			
M22512-12-10	19	- 12	3/4"	7/8" - 14	12.5	21.5	12.3	27.0			
M22512-12-12	19	- 12	3/4"	1.1/16" - 12	15.0	22.5	14.2	32.0			
M22512-12-14	19	- 12	3/4"	1.3/16" - 12	15.0	23.0	14.3	36.0			
M22512-12-16	19	- 12	3/4"	1.5/16" - 12	19.8	23.0	15.0	38.0			
M22512-16-12	25	- 16	1"	1.1/16" - 12	15.0	23.5	14.2	32.0			
M22512-16-16	25	- 16	1"	1.5/16" - 12	19.8	24.0	15.0	38.0			
M22512-16-20	25	- 16	1"	1.5/8" - 12	26.0	30.0	16.2	50.0			
M22512-20-20	31	- 20	1.1/4"	1.5/8" - 12	26.0	30.0	16.2	50.0			
M22512-20-24	31	- 20	1.1/4"	1.7/8" - 12	32.0	35.0	18.8	60.0			
M22512-24-24	38	- 24	1.1/2"	1.7/8" - 12	32.0	35.0	18.8	60.0			
M22512-32-24	51	- 32	2"	1.7/8" - 12	32.0	37.0	18.8	60.0			
M22512-32-32	51	- 32	2"	2.1/2" - 12	44.0	35.5	24.0	75.0			
M22513-03-04	5	- 3	3/16"	7/16" - 20	3.0	15.0	8.0	15.0			
M22513-04-06	6	- 4	1/4"	9/16" - 18	4.0	16.5	9.8	19.0			
M22513-05-08	8	- 5	5/16"	3/4" - 16	5.5	17.0	10.1	22.0			
M22513-06-08	10	- 6	3/8"	3/4" - 16	7.0	17.5	10.1	22.0			
M22513-06-10	10	- 6	3/8"	7/8" - 14	9.3	18.0	12.4	27.0			
M22513-08-10	12	- 8	1/2"	7/8" - 14	9.3	18.5	12.4	27.0			
M22513-08-12	12	- 8	1/2"	1.1/16" - 12	12.5	22.0	14.1	32.0			
M22513-10-12	16	- 10	5/8"	1.1/16" - 12	12.5	21.5	14.1	32.0			

SAE STANDARD CONNECTIONS

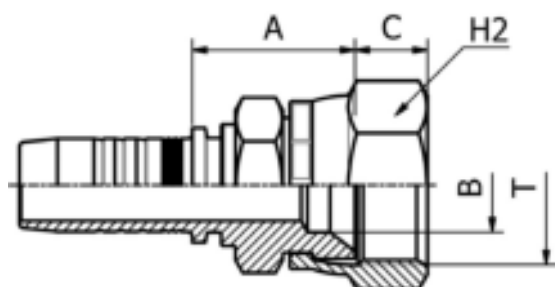
M22712

**JIC FEMALE 37° CONE SEAT DOUBLE HEXAGON
 SAE J516 / ISO 12151-5 (THRUST-WIRE NUT)**



PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	H1	H2	
M22712-03-04	5	- 3	3/16"	7/16" - 20	4.0	20.5	8.7	12.0	17.0		
M22712-04-04	6	- 4	1/4"	7/16" - 20	4.0	21.0	8.7	12.0	17.0		
M22712-04-05	6	- 4	1/4"	1/2" - 20	4.0	21.5	9.1	12.0	17.0		
M22712-04-06	6	- 4	1/4"	9/16" - 18	7.0	24.0	9.2	14.0	19.0		
M22712-05-05	8	- 5	5/16"	1/2" - 20	5.5	21.5	9.1	14.0	17.0		
M22712-05-06	8	- 5	5/16"	9/16" - 18	7.0	24.0	9.2	14.0	19.0		
M22712-05-08	8	- 5	5/16"	3/4" - 16	9.3	26.0	10.2	19.0	22.0		
M22712-06-04	10	- 6	3/8"	7/16" - 20	4.0	24.5	8.7	17.0	17.0		
M22712-06-05	10	- 6	3/8"	1/2" - 20	5.5	25.0	9.1	17.0	17.0		
M22712-06-06	10	- 6	3/8"	9/16" - 18	7.0	24.5	9.2	17.0	19.0		
M22712-06-08	10	- 6	3/8"	3/4" - 16	9.3	27.0	10.2	19.0	22.0		
M22712-06-10	10	- 6	3/8"	7/8" - 14	12.5	28.0	12.3	22.0	27.0		
M22712-08-06	12	- 8	1/2"	9/16" - 18	7.0	24.5	9.2	19.0	19.0		
M22712-08-08	12	- 8	1/2"	3/4" - 16	9.3	27.5	10.2	19.0	22.0		
M22712-08-10	12	- 8	1/2"	7/8" - 14	12.5	28.5	12.3	22.0	27.0		
M22712-08-12	12	- 8	1/2"	1.1/16" - 12	14.0	30.0	14.2	27.0	32.0		
M22712-10-08	16	- 10	5/8"	3/4" - 16	9.3	28.5	10.2	22.0	22.0		
M22712-10-10	16	- 10	5/8"	7/8" - 14	12.5	28.5	12.3	22.0	27.0		
M22712-10-12	16	- 10	5/8"	1.1/16" - 12	15.0	30.0	14.2	27.0	32.0		
M22712-12-08	19	- 12	3/4"	3/4" - 16	9.3	30.0	10.2	27.0	22.0		
M22712-12-10	19	- 12	3/4"	7/8" - 14	12.5	30.0	12.3	27.0	27.0		
M22712-12-12	19	- 12	3/4"	1.1/16" - 12	15.0	31.5	14.2	27.0	32.0		
M22712-12-14	19	- 12	3/4"	1.3/16" - 12	15.0	33.0	14.3	30.0	36.0		
M22712-12-16	19	- 12	3/4"	1.5/16" - 12	19.8	32.5	15.0	32.0	38.0		
M22712-16-12	25	- 16	1"	1.1/16" - 12	12.5	34.0	14.2	32.0	32.0		
M22712-16-16	25	- 16	1"	1.5/16" - 12	19.8	34.5	15.0	32.0	38.0		
M22712-16-20	25	- 16	1"	1.5/8" - 12	26.0	43.0	16.2	41.0	50.0		
M22712-20-16	31	- 20	1.1/4"	1.5/16" - 12	19.8	36.0	15.0	38.0	38.0		
M22712-20-20	31	- 20	1.1/4"	1.5/8" - 12	26.0	43.5	16.2	41.0	50.0		
M22712-24-24	38	- 24	1.1/2"	1.7/8" - 12	32.0	51.0	18.8	50.0	60.0		
M22712-32-32	51	- 32	2"	2.1/2" - 12	44.0	51.5	24.0	65.0	75.0		

SAE STANDARD CONNECTIONS



M22711/M22711KR

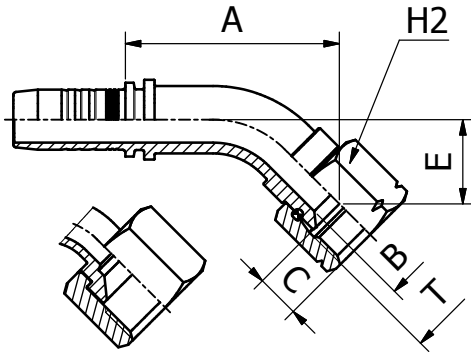
JIC FEMALE
37° CONE SEAT DOUBLE HEXAGON
SAE J516 / ISO 12151-5

PART. REF.	HOSE BORE			Thread	T	DIMENSIONS mm						
	DN	Dash	inch			B	A	C	H1	H2		
M22711-12-16	19	- 12	3/4"	1.5/16" - 12		19.8	34.5	15.3	32.0	38.0		
M22711-16-16	25	- 16	1"	1.5/16" - 12		19.8	35.5	15.3	32.0	38.0		
M22711-20-20	31	- 20	1.1/4"	1.5/8" - 12		26.0	42.0	16.1	41.0	50.0		
M22711-24-24	38	- 24	1.1/2"	1.7/8" - 12		32.0	46.5	18.6	50.0	60.0		
M22711-32-32	51	- 32	2"	2.1/2" - 12		42.0	50.5	23.5	65.0	75.0		
M22711-04-04KR	6	- 4	1/4"	7/16" - 20		4.0	20.5	8.9	12.0	15.0		
M22711-04-05KR	6	- 4	1/4"	1/2" - 20		4.0	21.0	9.4	14.0	17.0		
M22711-04-06KR	6	- 4	1/4"	9/16" - 18		7.0	21.5	9.5	14.0	17.0		
M22711-06-04KR	10	- 6	3/8"	7/16" - 20		4.0	21.5	8.9	17.0	15.0		
M22711-06-05KR	10	- 6	3/8"	1/2" - 20		4.0	22.0	9.4	17.0	17.0		
M22711-06-06KR	10	- 6	3/8"	9/16" - 18		7.0	22.0	9.5	17.0	17.0		
M22711-06-08KR	10	- 6	3/8"	3/4" - 16		9.3	26.5	10.7	19.0	22.0		
M22711-08-08KR	12	- 8	1/2"	3/4" - 16		9.3	27.0	10.7	19.0	22.0		
M22711-08-10KR	12	- 8	1/2"	7/8" - 14		9.3	29.5	12.5	22.0	25.0		
M22711-08-12KR	12	- 8	1/2"	1.1/16" - 12		15.0	28.5	14.1	27.0	32.0		
M22711-10-08KR	16	- 10	5/8"	3/4" - 16		9.3	28.5	10.7	22.0	22.0		
M22711-10-10KR	16	- 10	5/8"	7/8" - 14		12.5	29.5	12.5	22.0	25.0		
M22711-10-12KR	16	- 10	5/8"	1.1/16" - 12		15.0	29.0	14.1	27.0	32.0		
M22711-12-08KR	19	- 12	3/4"	3/4" - 16		9.3	29.5	10.7	27.0	22.0		
M22711-12-10KR	19	- 12	3/4"	7/8" - 14		12.5	30.5	12.5	27.0	25.0		
M22711-12-12KR	19	- 12	3/4"	1.1/16" - 12		15.0	30.0	14.1	27.0	32.0		
M22711-16-12KR	25	- 16	1"	1.1/16" - 12		15.0	32.5	14.1	32.0	32.0		

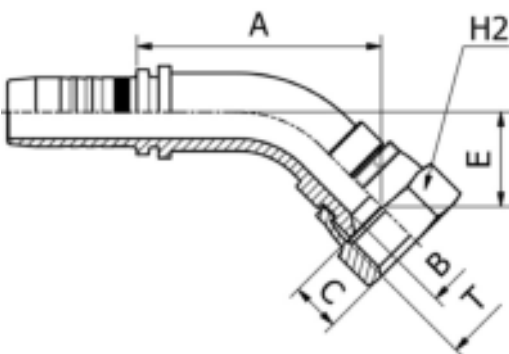
SAE STANDARD CONNECTIONS

M22542/M22543

45° JIC FEMALE SWEPT ELBOW
 37° CONE SEAT
 SAE J516 / ISO 12151-5



PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	H2		
M22542-03-04	5	- 3	3/16"	7/16" - 20	4.0	35.0	8.7	14.5	17.0		
M22542-04-04	6	- 4	1/4"	7/16" - 20	4.0	35.5	8.7	14.5	17.0		
M22542-04-05	6	- 4	1/4"	1/2" - 20	4.0	35.5	9.1	14.5	17.0		
M22542-05-05	8	- 5	5/16"	1/2" - 20	5.5	37.5	9.1	14.0	17.0		
M22542-05-06	8	- 5	5/16"	9/16" - 18	7.0	38.0	9.2	14.5	19.0		
M22542-06-06	10	- 6	3/8"	9/16" - 18	7.0	42.0	9.2	16.5	19.0		
M22542-08-06	12	- 8	1/2"	9/16" - 18	7.0	43.0	9.2	16.5	19.0		
M22542-08-08	12	- 8	1/2"	3/4" - 16	9.3	52.0	10.2	20.0	22.0		
M22542-10-10	16	- 10	5/8"	7/8" - 14	12.5	62.0	12.3	25.5	27.0		
M22542-12-08	19	- 12	3/4"	3/4" - 16	9.3	53.5	10.2	20.0	22.0		
M22542-12-10	19	- 12	3/4"	7/8" - 14	12.5	63.5	12.3	25.0	27.0		
M22542-12-12	19	- 12	3/4"	1.1/16" - 12	15.0	70.0	14.2	27.5	32.0		
M22542-12-14	19	- 12	3/4"	1.3/16" - 12	15.0	69.5	14.3	27.5	36.0		
M22542-12-16	19	- 12	3/4"	1.5/16" - 12	19.8	70.0	15.0	27.5	38.0		
M22542-16-12	25	- 16	1"	1.1/16" - 12	15.0	72.5	14.2	27.5	32.0		
M22542-16-16	25	- 16	1"	1.5/16" - 12	19.8	84.0	15.0	32.0	38.0		
M22542-16-20	25	- 16	1"	1.5/8" - 12	26.0	90.0	16.2	36.0	50.0		
M22542-20-20	31	- 20	1.1/4"	1.5/8" - 12	26.0	103.5	16.2	41.5	50.0		
M22542-20-24	31	- 20	1.1/4"	1.7/8" - 12	32.0	106.5	18.8	44.5	60.0		
M22542-24-24	38	- 24	1.1/2"	1.7/8" - 12	32.0	119.0	18.8	46.5	60.0		
M22542-32-32	51	- 32	2"	2.1/2" - 12	44.0	163.0	24.0	68.0	75.0		
M22543-04-06	6	- 4	1/4"	9/16" - 18	4.0	35.5	9.8	14.0	19.0		
M22543-06-08	10	- 6	3/8"	3/4" - 16	7.0	41.0	10.1	14.0	22.0		
M22543-06-10	10	- 6	3/8"	7/8" - 14	9.3	42.5	12.4	15.5	27.0		
M22543-08-10	12	- 8	1/2"	7/8" - 14	9.3	49.5	12.4	17.0	27.0		
M22543-08-12	12	- 8	1/2"	1.1/16" - 12	12.5	49.5	14.1	17.0	32.0		
M22543-10-12	16	- 10	5/8"	1.1/16" - 12	12.5	60.0	14.1	24.0	32.0		



SAE STANDARD CONNECTIONS

M22541KR

45° JIC FEMALE SWEPT ELBOW
 37° CONE SEAT
 SAE J516 / ISO 12151-5

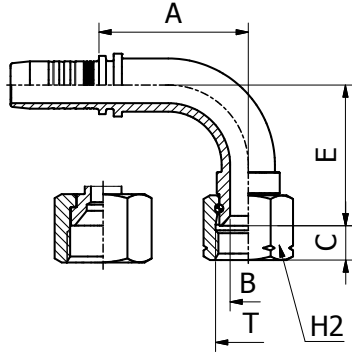
PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	H2		
M22541-04-04KR	6	- 4	1/4"	7/16" - 20	4.2	34.5	8.9	13.5	15.0		
M22541-04-05KR	6	- 4	1/4"	1/2" - 20	4.0	35.0	9.4	14.0	17.0		
M22541-06-06KR	10	- 6	3/8"	9/16" - 18	7.0	42.0	9.5	16.0	17.0		
M22541-08-08KR	12	- 8	1/2"	3/4" - 16	9.3	52.0	10.7	20.0	22.0		
M22541-10-10KR	16	- 10	5/8"	7/8" - 14	12.5	61.0	12.5	22.5	25.0		
M22541-12-12KR	19	- 12	3/4"	1.1/16" - 12	15.0	69.0	14.1	26.5	32.0		



SAE STANDARD CONNECTIONS

M22592/M22593

90° JIC FEMALE SWEPT ELBOW 37° CONE SEAT
SAE J516 / ISO 12151-5



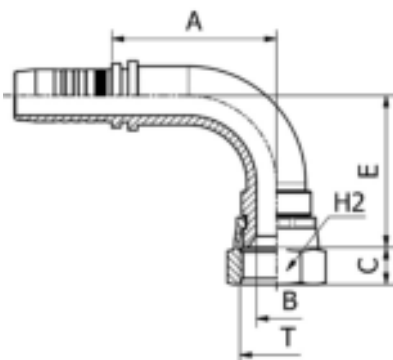
PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	H2		
M22592-04-04	6	- 4	1/4"	7/16" - 20	4.0	28.5	8.7	27.0	17.0		
M22592-04-05	6	- 4	1/4"	1/2" - 20	4.0	28.5	9.1	27.5	17.0		
M22592-05-05	8	- 5	5/16"	1/2" - 20	5.5	31.0	9.1	28.0	17.0		
M22592-05-06	8	- 5	5/16"	9/16" - 18	7.0	31.0	9.2	28.5	19.0		
M22592-06-05	10	- 6	3/8"	1/2" - 20	5.5	30.0	9.1	26.5	17.0		
M22592-06-06	10	- 6	3/8"	9/16" - 18	7.0	35.5	9.2	32.5	19.0		
M22592-08-06	12	- 8	1/2"	9/16" - 18	7.0	37.0	9.2	33.0	19.0		
M22592-08-08	12	- 8	1/2"	3/4" - 16	9.3	44.0	10.2	41.0	22.0		
M22592-10-10	16	- 10	5/8"	7/8" - 14	12.5	53.5	12.3	52.5	27.0		
M22592-12-10	19	- 12	3/4"	7/8" - 14	12.5	55.0	12.3	52.5	27.0		
M22592-12-12	19	- 12	3/4"	1.1/16" - 12	15.0	62.0	14.2	58.0	32.0		
M22592-12-14	19	- 12	3/4"	1.3/16" - 12	15.0	63.0	14.3	58.0	36.0		
M22592-12-16	19	- 12	3/4"	1.5/16" - 12	19.8	63.0	15.0	57.5	38.0		
M22592-16-16	25	- 16	1"	1.5/16" - 12	19.8	77.0	15.0	68.5	38.0		
M22592-16-20	25	- 16	1"	1.5/8" - 12	26.0	77.5	16.2	74.5	50.0		
M22592-20-20	31	- 20	1.1/4"	1.5/8" - 12	26.0	90.5	16.2	86.5	50.0		
M22592-20-24	31	- 20	1.1/4"	1.7/8" - 12	32.0	90.5	18.8	90.5	60.0		
M22592-24-24	38	- 24	1.1/2"	1.7/8" - 12	32.0	108.0	18.8	100.5	60.0		
M22592-32-32	51	- 32	2"	2.1/2" - 12	44.0	142.0	24.0	137.0	75.0		
M22593-03-04	5	- 3	3/16"	7/16" - 20	3.0	26.0	8.5	23.5	15.0		
M22593-04-06	6	- 4	1/4"	9/16" - 18	4.0	29.5	9.8	28.0	19.0		
M22593-04-08	6	- 4	1/4"	3/4" - 16	7.0	29.5	10.0	30.5	22.0		
M22593-06-08	10	- 6	3/8"	3/4" - 16	7.0	36.5	10.1	29.5	22.0		
M22593-06-10	10	- 6	3/8"	7/8" - 14	9.3	36.5	12.4	31.5	27.0		
M22593-08-10	12	- 8	1/2"	7/8" - 14	9.3	45.0	12.4	36.0	27.0		
M22593-08-12	12	- 8	1/2"	1.1/16" - 12	12.5	45.0	14.1	36.0	32.0		
M22593-10-12	16	- 10	5/8"	1.1/16" - 12	12.5	51.5	14.1	50.0	32.0		

131 FITTINGS

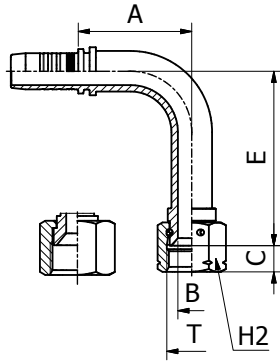
SAE STANDARD CONNECTIONS

M22591KR

90° JIC FEMALE SWEPT ELBOW 37° CONE SEAT
SAE J516 / ISO 12151-5



PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	H2		
M22591-04-04KR	6	- 4	1/4"	7/16" - 20	4.2	28.5	8.9	26.0	15.0		
M22591-04-05KR	6	- 4	1/4"	1/2" - 20	4.0	28.5	9.4	26.5	17.0		
M22591-06-06KR	10	- 6	3/8"	9/16" - 18	7.0	35.5	9.5	32.0	17.0		
M22591-08-08KR	12	- 8	1/2"	3/4" - 16	9.3	44.0	10.7	40.5	22.0		
M22591-10-10KR	16	- 10	5/8"	7/8" - 14	12.5	53.5	12.5	47.0	25.0		
M22591-12-12KR	19	- 12	3/4"	1.1/16" - 12	15.0	62.0	14.1	57.0	32.0		
M22591-16-12KR	25	- 16	1"	1.1/16" - 12	15.0	62.0	14.1	57.0	32.0		

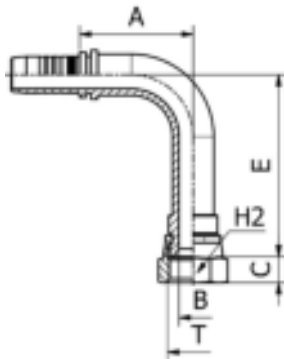


SAE STANDARD CONNECTIONS

M24792/M24793

90° JIC FEMALE LONG DROP ELBOW
 37° CONE SEAT
 SAE J516 / ISO 12151-5

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm					
	DN	Dash	inch		T	B	A	C	E	H2
M24792-04-04	6	- 4	1/4"	7/16" - 20	4.0	28.5	8.7	45.0	17.0	
M24792-04-05	6	- 4	1/4"	1/2" - 20	4.0	28.5	9.1	45.0	17.0	
M24792-06-06	10	- 6	3/8"	9/16" - 18	7.0	35.5	9.2	55.0	19.0	
M24792-08-08	12	- 8	1/2"	3/4" - 16	9.3	44.0	10.2	61.0	22.0	
M24792-10-10	16	- 10	5/8"	7/8" - 14	12.5	53.5	12.3	65.5	27.0	
M24792-12-12	19	- 12	3/4"	1.1/16" - 12	15.0	62.0	14.2	94.5	32.0	
M24792-16-16	25	- 16	1"	1.5/16" - 12	19.8	77.5	15.0	110.0	38.0	
M24792-20-20	31	- 20	1.1/4"	1.5/8" - 12	26.0	90.5	16.2	129.0	50.0	
M24793-04-06	6	- 4	1/4"	9/16" - 18	4.0	29.5	9.8	55.5	19.0	
M24793-06-08	10	- 6	3/8"	3/4" - 16	7.0	36.5	10.1	61.5	22.0	
M24793-08-10	12	- 8	1/2"	7/8" - 14	9.3	45.0	12.4	65.0	27.0	

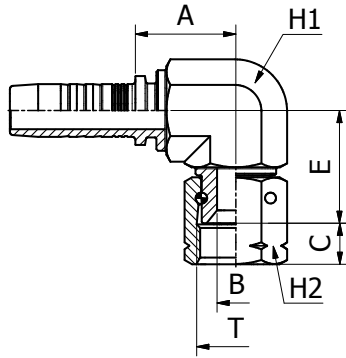


SAE STANDARD CONNECTIONS

M24791KR

90° JIC FEMALE LONG DROP ELBOW
 37° CONE SEAT
 SAE J516 / ISO 12151-5

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm					
	DN	Dash	inch		T	B	A	C	E	H2
M24791-04-04KR	6	- 4	1/4"	7/16" - 20	4.2	28.5	8.9	45.0	15.0	
M24791-06-06KR	10	- 6	3/8"	9/16" - 18	7.0	35.5	9.5	55.0	17.0	
M24791-08-08KR	12	- 8	1/2"	3/4" - 16	9.3	44.0	10.7	64.0	22.0	
M24791-10-10KR	16	- 10	5/8"	7/8" - 14	12.5	53.5	12.5	70.0	25.0	
M24791-12-12KR	19	- 12	3/4"	1.1/16" - 12	15.0	62.0	14.1	96.0	32.0	



SAE STANDARD CONNECTIONS

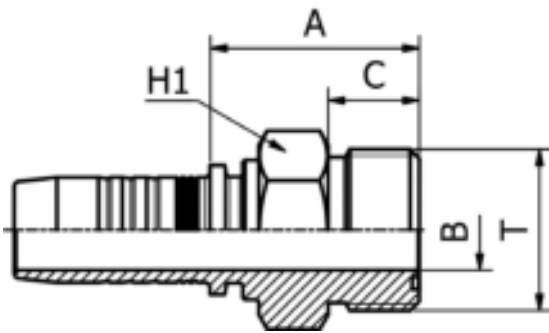
M22582F

90° JIC FEMALE COMPACT ELBOW
37° CONE SEAT

SAE J516 / ISO 12151-5 (THRUST-WIRE NUT)

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	H1	H2	
M22582-04-04F	6	- 4	1/4"	7/16" - 20	4.0	20.0	8.7	20.5	14.0	17.0	
M22582-04-06F	6	- 4	1/4"	9/16" - 18	7.0	20.0	9.2	21.5	14.0	19.0	
M22582-06-06F	10	- 6	3/8"	9/16" - 18	7.0	23.0	9.2	24.0	19.0	19.0	
M22582-06-08F	10	- 6	3/8"	3/4" - 16	9.3	26.5	10.2	28.0	22.0	22.0	
M22582-08-08F	12	- 8	1/2"	3/4" - 16	9.3	25.0	10.2	28.0	22.0	22.0	
M22582-08-10F	12	- 8	1/2"	7/8" - 14	12.5	25.0	12.3	29.0	22.0	27.0	
M22582-12-12F	19	- 12	3/4"	1.1/16" - 12	15.0	37.5	14.2	33.0	27.0	32.0	
M22582-16-16F	25	- 16	1"	1.5/16" - 12	20.0	52.0	15.0	40.0	36.0	38.0	

SAE STANDARD CONNECTIONS

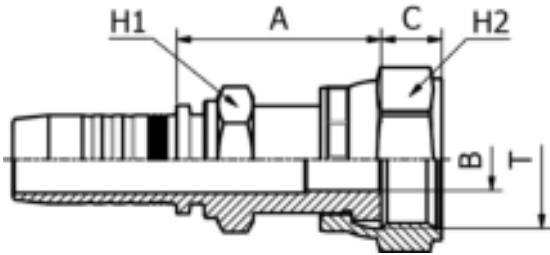


M12410

ORFS MALE
SAE J516 / ISO 12151-1

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	H1			
M12410-04-04	6	- 4	1/4"	9/16" - 18	4.0	24.0	9.8	16.0			
M12410-04-06	6	- 4	1/4"	11/16" - 16	6.7	26.5	11.2	19.0			
M12410-05-06	8	- 5	5/16"	11/16" - 16	6.7	27.0	11.2	19.0			
M12410-06-06	10	- 6	3/8"	11/16" - 16	6.7	27.5	11.2	19.0			
M12410-06-08	10	- 6	3/8"	13/16" - 16	9.3	30.0	12.8	22.0			
M12410-08-06	12	- 8	1/2"	11/16" - 16	6.7	29.0	11.2	22.0			
M12410-08-08	12	- 8	1/2"	13/16" - 16	9.3	30.5	12.8	22.0			
M12410-08-10	12	- 8	1/2"	1" - 14	12.5	35.0	15.5	27.0			
M12410-08-12	12	- 8	1/2"	1.3/16" - 12	15.0	37.5	17.0	32.0			
M12410-10-08	16	- 10	5/8"	13/16" - 16	9.3	30.5	12.8	22.0			
M12410-10-10	16	- 10	5/8"	1" - 14	12.5	34.5	15.5	27.0			
M12410-10-12	16	- 10	5/8"	1.3/16" - 12	15.0	37.5	17.0	32.0			
M12410-12-12	19	- 12	3/4"	1.3/16" - 12	15.0	39.0	17.0	32.0			
M12410-12-16	19	- 12	3/4"	1.7/16" - 12	19.8	40.5	17.5	38.0			
M12410-16-16	25	- 16	1"	1.7/16" - 12	19.8	42.0	17.5	38.0			
M12410-16-20	25	- 16	1"	1.11/16" - 12	26.0	44.0	17.5	46.0			
M12410-20-20	31	- 20	1.1/4"	1.11/16" - 12	26.0	46.5	17.5	46.0			
M12410-24-24	38	- 24	1.1/2"	2" - 12	32.0	48.5	17.5	55.0			

SAE STANDARD CONNECTIONS

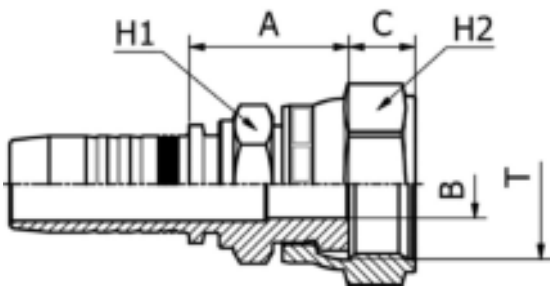


M22411

**ORFS FEMALE
 SAE J516 / ISO 12151-1 PULLBACK TYPE
 (CRIMPED BACK-NUT)**

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm					
	DN	Dash	inch		T	B	A	C	H1	H2
M22411-04-04	6	- 4	1/4"	9/16" - 18	4.0	27.5	8.0	13.0	19.0	
M22411-04-06	6	- 4	1/4"	11/16" - 16	7.0	30.0	9.5	16.0	22.0	
M22411-04-08	6	- 4	1/4"	13/16" - 16	9.3	35.5	11.0	19.0	24.0	
M22411-05-04	8	- 5	5/16"	9/16" - 18	4.0	28.5	8.0	16.0	19.0	
M22411-05-06	8	- 5	5/16"	11/16" - 16	7.0	30.5	9.5	16.0	22.0	
M22411-06-04	10	- 6	3/8"	9/16" - 18	4.0	29.0	8.0	16.0	19.0	
M22411-06-06	10	- 6	3/8"	11/16" - 16	7.0	31.0	9.5	16.0	22.0	
M22411-06-08	10	- 6	3/8"	13/16" - 16	9.3	36.5	11.0	19.0	24.0	
M22411-08-06	12	- 8	1/2"	11/16" - 16	7.0	32.0	9.5	19.0	22.0	
M22411-08-08	12	- 8	1/2"	13/16" - 16	9.3	37.0	11.0	19.0	24.0	
M22411-08-10	12	- 8	1/2"	1" - 14	11.5	39.0	13.5	24.0	30.0	
M22411-08-12	12	- 8	1/2"	1.3/16" - 12	13.9	44.0	14.5	28.0	36.0	
M22411-10-08	16	- 10	5/8"	13/16" - 16	9.3	37.0	11.0	24.0	24.0	
M22411-10-10	16	- 10	5/8"	1" - 14	11.5	39.0	13.5	24.0	30.0	
M22411-10-12	16	- 10	5/8"	1.3/16" - 12	13.9	44.0	14.5	28.0	36.0	
M22411-12-10	19	- 12	3/4"	1" - 14	11.5	41.5	13.5	28.0	30.0	
M22411-12-12	19	- 12	3/4"	1.3/16" - 12	13.9	45.5	14.5	28.0	36.0	
M22411-12-16	19	- 12	3/4"	1.7/16" - 12	19.8	48.5	15.0	36.0	41.0	
M22411-16-12	25	- 16	1"	1.3/16" - 12	13.9	48.0	13.5	36.0	36.0	
M22411-16-16	25	- 16	1"	1.7/16" - 12	19.8	49.5	15.0	36.0	41.0	
M22411-16-20	25	- 16	1"	1.11/16" - 12	26.0	52.0	13.6	41.0	50.0	
M22411-20-20	31	- 20	1.1/4"	1.11/16" - 12	26.0	52.0	14.8	41.0	50.0	
M22411-20-24	31	- 20	1.1/4"	2" - 12	32.0	56.5	14.2	50.0	60.0	
M22411-24-24	38	- 24	1.1/2"	2" - 12	32.0	56.5	14.2	50.0	60.0	

SAE STANDARD CONNECTIONS

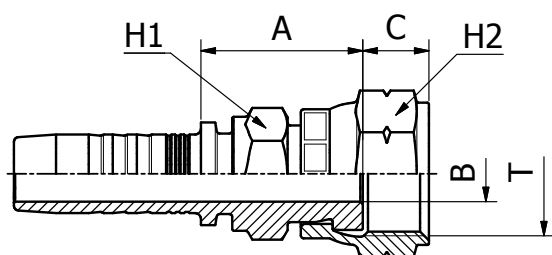


M27411

**ORFS FEMALE
 SAE J516 / ISO 12151-1 SHORT TYPE
 (CRIMPED BACK-NUT)**

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm					
	DN	Dash	inch		T	B	A	C	H1	H2
M27411-04-04	6	- 4	1/4"	9/16" - 18	4.0	20.5	8.0	13.0	19.0	
M27411-04-06	6	- 4	1/4"	11/16" - 16	7.0	22.0	9.5	16.0	22.0	
M27411-05-06	8	- 5	5/16"	11/16" - 16	7.0	25.5	9.5	16.0	22.0	
M27411-06-06	10	- 6	3/8"	11/16" - 16	7.0	26.0	9.5	16.0	22.0	
M27411-06-08	10	- 6	3/8"	13/16" - 16	9.3	26.5	11.0	19.0	24.0	
M27411-08-08	12	- 8	1/2"	13/16" - 16	9.3	26.5	11.0	19.0	24.0	
M27411-08-10	12	- 8	1/2"	1" - 14	11.5	27.5	12.5	24.0	30.0	
M27411-08-12	12	- 8	1/2"	1.3/16" - 12	13.9	31.0	13.5	28.0	36.0	
M27411-10-10	16	- 10	5/8"	1" - 14	11.5	28.0	12.5	24.0	30.0	
M27411-10-12	16	- 10	5/8"	1.3/16" - 12	13.9	31.0	13.5	28.0	36.0	
M27411-12-12	19	- 12	3/4"	1.3/16" - 12	13.9	32.5	13.5	28.0	36.0	
M27411-16-16	25	- 16	1"	1.7/16" - 12	19.8	36.5	13.5	36.0	41.0	

SAE STANDARD CONNECTIONS

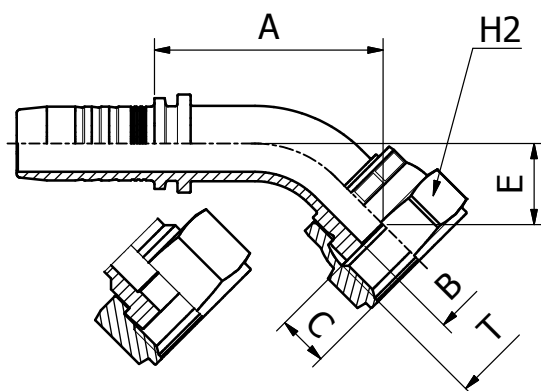


M27411KR

**ORFS FEMALE
 SAE J516 / ISO 12151-1 SHORT TYPE
 (CRIMPED BACK-NUT)**

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	H1	H2	
M27411-04-04KR	6	- 4	1/4"	9/16" - 18	4.0	20.5	8.0	14.0	17.0		
M27411-06-06KR	10	- 6	3/8"	11/16" - 16	7.0	23.0	9.5	17.0	22.0		
M27411-08-08KR	12	- 8	1/2"	13/16" - 16	9.3	27.0	11.0	19.0	24.0		

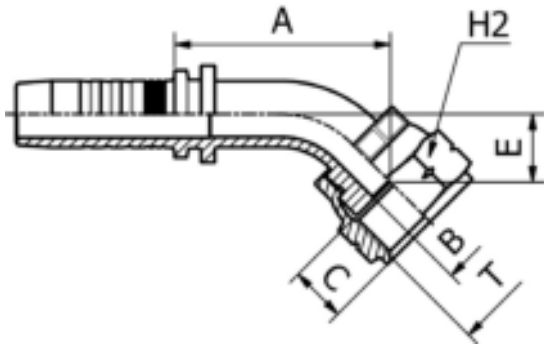
SAE STANDARD CONNECTIONS



M22441/M22443

**45° ORFS FEMALE SWEPT ELBOW
 SAE J516 / ISO 12151-1**

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	E	H2	
M22441-08-06	12	- 8	1/2"	11/16" - 16	7.0	32.5	9.5	11.0	22.0		
M22441-12-10	19	- 12	3/4"	1" - 14	11.5	51.0	12.5	16.5	30.0		
M22441-16-12	25	- 16	1"	1.3/16" - 12	13.9	66.0	13.5	21.5	36.0		
M22443-04-04	6	- 4	1/4"	9/16" - 18	4.0	31.0	8.2	10.5	17.0		
M22443-04-06	6	- 4	1/4"	11/16" - 16	7.0	31.0	9.5	10.5	22.0		
M22443-05-06	8	- 5	5/16"	11/16" - 16	7.0	34.0	9.5	10.5	22.0		
M22443-06-06	10	- 6	3/8"	11/16" - 16	6.0	32.5	9.5	11.0	22.0		
M22443-06-08	10	- 6	3/8"	13/16" - 16	9.3	34.0	11.0	12.5	24.0		
M22443-08-08	12	- 8	1/2"	13/16" - 16	9.0	42.0	11.0	13.0	24.0		
M22443-08-10	12	- 8	1/2"	1" - 14	11.5	42.0	13.5	13.5	30.0		
M22443-08-12	12	- 8	1/2"	1.3/16" - 12	13.9	46.5	14.5	18.5	36.0		
M22443-10-10	16	- 10	5/8"	1" - 14	11.5	49.0	13.5	16.0	30.0		
M22443-10-12	16	- 10	5/8"	1.3/16" - 12	13.9	51.5	14.5	18.5	36.0		
M22443-12-12	19	- 12	3/4"	1.3/16" - 12	13.9	60.5	14.5	21.5	36.0		
M22443-12-16	19	- 12	3/4"	1.7/16" - 12	19.8	60.0	14.8	21.0	41.0		
M22443-16-16	25	- 16	1"	1.7/16" - 12	19.8	72.0	14.8	23.5	41.0		
M22443-16-20	25	- 16	1"	1.11/16" - 12	26.0	74.0	14.8	25.0	50.0		
M22443-20-20	31	- 20	1.1/4"	1.11/16" - 12	26.0	82.0	14.8	27.0	50.0		
M22443-24-24	38	- 24	1.1/2"	2" - 12	32.0	98.0	14.8	31.5	60.0		

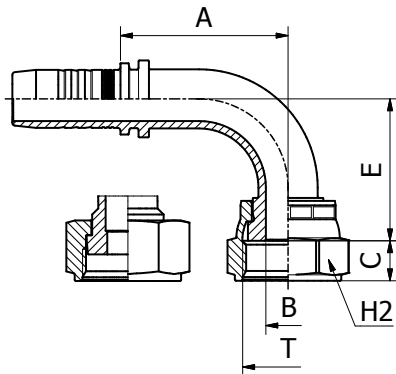


SAE STANDARD CONNECTIONS

M22441KR

45° ORFS FEMALE SWEPT ELBOW
 SAE J516 / ISO 12151-1

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	E	H2	
M22441-04-04KR	6	- 4	1/4"	9/16" - 18	4.2	30.0	8.0	10.5	17.0		
M22441-06-06KR	10	- 6	3/8"	11/16" - 16	6.0	31.5	9.5	11.0	22.0		
M22441-08-08KR	12	- 8	1/2"	13/16" - 16	9.0	42.5	11.0	13.5	24.0		



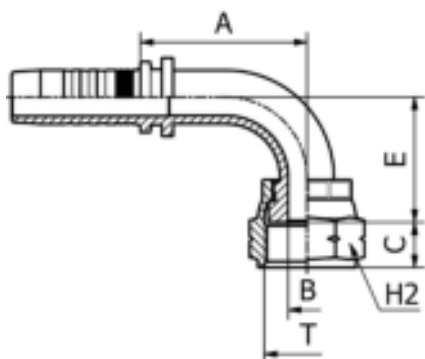
SAE STANDARD CONNECTIONS

M22491/M22493

90° ORFS FEMALE SWEPT ELBOW
 SAE J516 / ISO 12151-1

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	E	H2	
M22491-10-10032	16	- 10	5/8"	1" - 14	11.0	42.0	7.5	32.0	30.0		
M22491-06-04	10	- 6	3/8"	9/16" - 18	4.0	28.0	8.0	23.0	19.0		
M22491-08-06	12	- 8	1/2"	11/16" - 16	7.0	30.0	9.5	24.5	22.0		
M22491-10-08	16	- 10	5/8"	13/16" - 16	9.3	41.0	11.0	34.0	24.0		
M22491-12-10	19	- 12	3/4"	1" - 14	11.5	49.0	12.5	38.5	30.0		
M22491-16-12	25	- 16	1"	1.3/16" - 12	13.9	57.5	13.5	48.0	36.0		
M22493-04-04	6	- 4	1/4"	9/16" - 18	4.0	27.5	8.2	22.0	17.0		
M22493-04-06	6	- 4	1/4"	11/16" - 16	7.0	27.5	9.5	22.0	22.0		
M22493-05-06	8	- 5	5/16"	11/16" - 16	7.0	32.0	9.5	23.0	22.0		
M22493-06-06	10	- 6	3/8"	11/16" - 16	6.0	30.0	9.5	24.0	22.0		
M22493-06-08	10	- 6	3/8"	13/16" - 16	9.3	30.0	11.0	26.5	24.0		
M22493-08-08	12	- 8	1/2"	13/16" - 16	9.0	40.5	11.0	30.0	24.0		
M22493-08-10	12	- 8	1/2"	1" - 14	11.5	40.0	13.5	30.5	30.0		
M22493-08-12	12	- 8	1/2"	1.3/16" - 12	13.9	39.5	14.5	37.5	36.0		
M22493-10-10	16	- 10	5/8"	1" - 14	11.5	48.0	13.5	37.5	30.0		
M22493-10-12	16	- 10	5/8"	1.3/16" - 12	13.9	48.0	14.5	41.0	36.0		
M22493-12-12	19	- 12	3/4"	1.3/16" - 12	13.9	56.5	14.5	48.0	36.0		
M22493-12-16	19	- 12	3/4"	1.7/16" - 12	19.8	56.5	14.8	47.5	41.0		
M22493-16-16	25	- 16	1"	1.7/16" - 12	19.8	71.5	14.8	56.0	41.0		
M22493-16-20	25	- 16	1"	1.11/16" - 12	26.0	71.5	14.8	58.5	50.0		
M22493-20-20	31	- 20	1.1/4"	1.11/16" - 12	26.0	83.0	14.8	66.0	50.0		
M22493-24-24	38	- 24	1.1/2"	2" - 12	32.0	102.0	14.8	79.5	60.0		

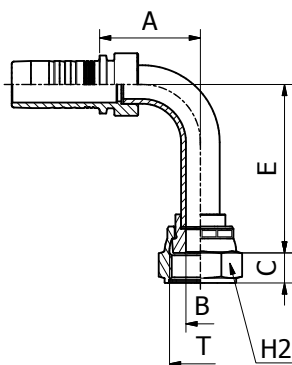
SAE STANDARD CONNECTIONS



M22491KR

90° ORFS FEMALE SWEPT ELBOW
 SAE J516 / ISO 12151-1

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	E	H2	
M22491-04-04KR	6	- 4	1/4"	9/16" - 18	4.2	26.5	8.0	22.0	17.0		
M22491-04-06KR	6	- 4	1/4"	11/16" - 16	6.0	26.3	9.5	22.0	22.0		
M22491-06-06KR	10	- 6	3/8"	11/16" - 16	6.0	29.0	9.5	24.0	22.0		
M22491-06-08KR	10	- 6	3/8"	13/16" - 16	9.0	35.5	11.0	28.5	24.0		
M22491-08-08KR	12	- 8	1/2"	13/16" - 16	9.0	40.5	11.0	30.5	24.0		



SAE STANDARD CONNECTIONS

M24491 LONG DROP

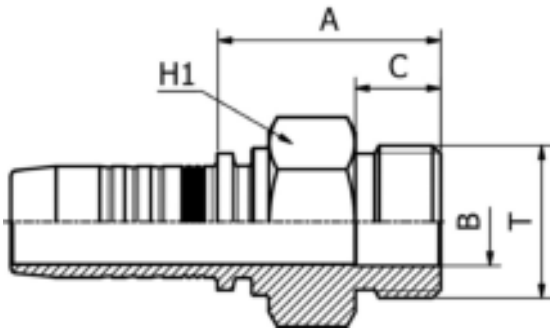
90° ORFS FEMALE LONG DROP ELBOW
 SAE J516 / ISO 12151-1
 (CRIMPED-BACK NUT)

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	E	H2	
M24491-04-04	6	- 4	1/4"	9/16" - 18	4.4	25.0	8.0	46.0	17.0		
M24491-04-06	6	- 4	1/4"	11/16" - 16	7.0	26.5	9.5	53.5	22.0		
M24491-05-06	8	- 5	5/16"	11/16" - 16	6.7	31.5	9.5	54.0	22.0		
M24491-06-06	10	- 6	3/8"	11/16" - 16	6.7	32.0	9.5	54.0	22.0		
M24491-06-08	10	- 6	3/8"	13/16" - 16	6.7	32.0	11.0	54.0	24.0		
M24491-08-08	12	- 8	1/2"	13/16" - 16	9.6	37.0	11.0	64.0	24.0		
M24491-08-10	12	- 8	1/2"	1" - 14	9.6	37.0	12.5	64.5	30.0		
M24491-10-10	16	- 10	5/8"	1" - 14	12.0	41.0	13.0	70.0	30.0		
M24491-10-12	16	- 10	5/8"	1.3/16" - 12	12.7	41.0	13.5	73.0	36.0		
M24491-12-12	19	- 12	3/4"	1.3/16" - 12	15.0	58.5	13.5	96.0	36.0		
M24491-16-16	25	- 16	1"	1.7/16" - 12	19.8	71.5	13.5	114.0	41.0		
M24491-20-20	31	- 20	1.1/4"	1.11/16" - 12	26.0	82.5	13.6	129.0	50.0		

SAE STANDARD CONNECTIONS

M13010

SAE MALE O-RING BOSS TYPE
 SAE J516 / ISO 11926

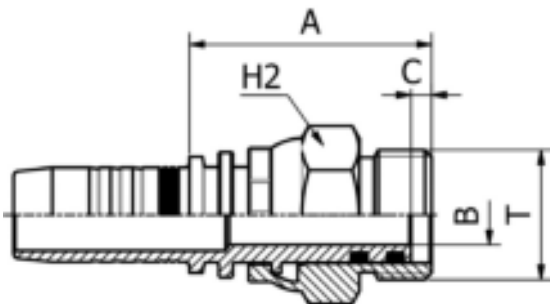


PART. REF.	HOSE BORE			Thread	DIMENSIONS mm					
	DN	Dash	inch		T	B	A	C	H1	
M13010-04-04	6	- 4	1/4"	7/16" - 20	4.4	24.0	9.1	14.0		
M13010-04-06	6	- 4	1/4"	9/16" - 18	7.5	24.5	9.9	17.0		
M13010-06-06	10	- 6	3/8"	9/16" - 18	7.5	25.5	9.9	17.0		
M13010-06-08	10	- 6	3/8"	3/4" - 16	9.9	28.5	11.1	22.0		
M13010-06-10	10	- 6	3/8"	7/8" - 14	12.3	31.5	12.7	25.0		
M13010-08-08	12	- 8	1/2"	3/4" - 16	9.9	29.0	11.1	22.0		
M13010-08-10	12	- 8	1/2"	7/8" - 14	12.3	32.0	12.7	25.0		
M13010-08-12	12	- 8	1/2"	1.1/16" - 12	15.5	38.5	15.1	32.0		
M13010-10-10	16	- 10	5/8"	7/8" - 14	12.5	32.0	12.7	25.0		
M13010-10-12	16	- 10	5/8"	1.1/16" - 12	15.5	37.5	15.1	32.0		
M13010-12-12	19	- 12	3/4"	1.1/16" - 12	15.5	39.5	15.1	32.0		
M13010-12-16	19	- 12	3/4"	1.5/16" - 12	21.5	40.0	15.1	38.0		
M13010-16-16	25	- 16	1"	1.5/16" - 12	21.5	41.0	15.1	38.0		
M13010-20-20	31	- 20	1.1/4"	1.5/8" - 12	27.5	43.5	15.1	46.0		

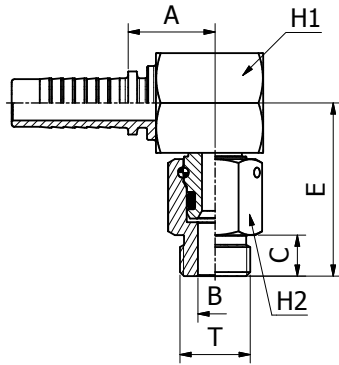
SAE STANDARD CONNECTIONS

M14310

SAE SWIVEL MALE O-RING BOSS TYPE
 SAE J516 / ISO 11926



PART. REF.	HOSE BORE			Thread	DIMENSIONS mm					
	DN	Dash	inch		T	B	A	C	H2	
M14310-04-04	6	- 4	1/4"	7/16" - 20	4.0	43.0	9.1	17.0		
M14310-04-06	6	- 4	1/4"	9/16" - 18	7.0	44.0	9.9	22.0		
M14310-06-06	10	- 6	3/8"	9/16" - 18	7.0	48.0	9.9	22.0		
M14310-06-08	10	- 6	3/8"	3/4" - 16	9.3	47.0	11.1	22.0		
M14310-08-08	12	- 8	1/2"	3/4" - 16	9.3	53.0	11.1	27.0		
M14310-08-10	12	- 8	1/2"	7/8" - 14	9.3	41.5	13.0	27.0		
M14310-08-12	12	- 8	1/2"	1.1/16" - 12	12.5	49.5	15.0	32.0		
M14310-10-10	16	- 10	5/8"	7/8" - 14	9.3	41.5	13.0	27.0		
M14310-12-12	19	- 12	3/4"	1.1/16" - 12	12.5	50.5	15.0	32.0		



SAE STANDARD CONNECTIONS

M14390

90° SAE SWIVEL MALE O-RING BOSS TYPE
 SAE J516 / ISO 11926

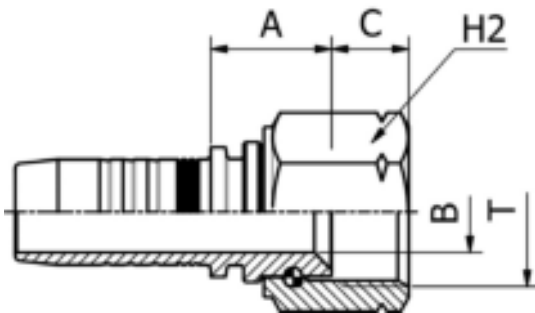
PART. REF.	HOSE BORE			Thread	T	DIMENSIONS mm					
	DN	Dash	inch			B	A	C	E	H1	H2
M14390-06-06	10	- 6	3/8"	9/16" - 18	5.7	20.0	9.9	40.0	22.0	17.0	
M14390-06-08	10	- 6	3/8"	3/4" - 16	9.3	20.0	11.1	44.5	22.0	22.0	
M14390-08-08	12	- 8	1/2"	3/4" - 16	9.3	23.5	11.1	47.0	27.0	22.0	
M14390-08-10	12	- 8	1/2"	7/8" - 14	9.8	23.5	13.0	47.0	27.0	27.0	
M14390-10-10	16	- 10	5/8"	7/8" - 14	9.8	23.5	13.0	47.0	27.0	27.0	
M14390-12-12	19	- 12	3/4"	1.1/16" - 12	13.0	28.0	15.0	58.5	34.0	32.0	

139 FITTINGS

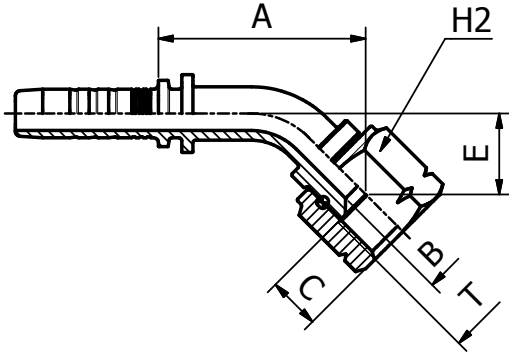
SAE STANDARD CONNECTIONS

M22612

SAE FEMALE 45° CONE SEAT
 SAE J516/J512
 (THRUST-WIRE NUT)



PART. REF.	HOSE BORE			Thread	T	DIMENSIONS mm			
	DN	Dash	inch			B	A	C	H2
M22612-04-04	6	- 4	1/4"	7/16" - 20	4.0	15.5	8.7	17.0	
M22612-05-06	8	- 5	5/16"	5/8" - 18	7.0	16.0	10.8	22.0	
M22612-06-06	10	- 6	3/8"	5/8" - 18	7.0	16.5	10.8	22.0	
M22612-12-12	19	- 12	3/4"	1.1/16" - 14	15.0	22.5	14.4	32.0	

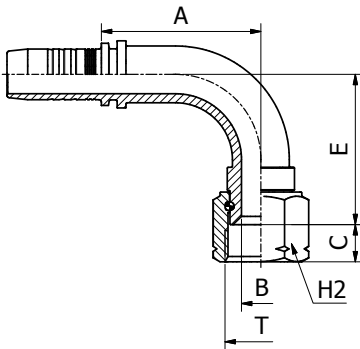


SAE STANDARD CONNECTIONS

M22642

**45° SAE FEMALE SWEPT ELBOW 45° CONE SEAT
 SAE J516/J512
 (THRUST-WIRE NUT)**

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	E	H2	
M22642-06-06	10	- 6	3/8"	5/8" - 18	7.0	42.5	10.8	16.5	22.0		



SAE STANDARD CONNECTIONS

M22692

**90° SAE FEMALE SWEPT ELBOW 45° CONE SEAT
 SAE J516/J512
 (THRUST-WIRE NUT)**

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	E	H2	
M22692-04-04	6	- 4	1/4"	7/16" - 20	4.0	28.5	8.7	27.0	17.0		
M22692-06-06	10	- 6	3/8"	5/8" - 18	7.0	35.5	10.8	33.0	22.0		
M22692-12-12	19	- 12	3/4"	1 1/16" - 14	15.0	62.0	14.4	58.0	32.0		

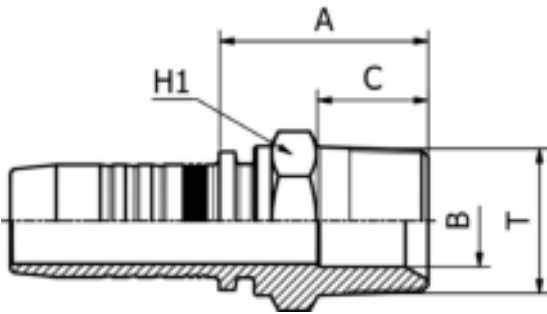
FITTINGS 140



SAE STANDARD CONNECTIONS

M12810

**NPTF MALE 60° CONE SEAT
SAE J516/J514**



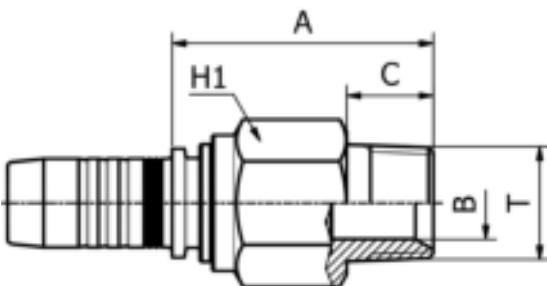
PART. REF.	HOSE BORE			Thread	DIMENSIONS mm					
	DN	Dash	inch		T	B	A	C	H1	
M12810-03-02	5	- 3	3/16"	1/8" - 27	3.0	23.5	10.0	12.0		
M12810-03-04	5	- 3	3/16"	1/4" - 18	5.5	29.0	14.5	14.0		
M12810-04-02	6	- 4	1/4"	1/8" - 27	4.0	24.0	10.0	12.0		
M12810-04-04	6	- 4	1/4"	1/4" - 18	5.5	29.0	14.5	14.0		
M12810-04-06	6	- 4	1/4"	3/8" - 18	9.3	27.5	14.5	19.0		
M12810-04-08	6	- 4	1/4"	1/2" - 14	9.3	33.5	19.2	24.0		
M12810-05-04	8	- 5	5/16"	1/4" - 18	5.5	29.5	14.5	14.0		
M12810-05-06	8	- 5	5/16"	3/8" - 18	9.3	32.0	14.5	19.0		
M12810-06-04	10	- 6	3/8"	1/4" - 18	5.5	30.0	14.5	14.0		
M12810-06-06	10	- 6	3/8"	3/8" - 18	9.3	28.5	14.5	19.0		
M12810-06-08	10	- 6	3/8"	1/2" - 14	12.5	34.5	19.2	24.0		
M12810-08-06	12	- 8	1/2"	3/8" - 18	9.3	29.0	14.5	19.0		
M12810-08-08	12	- 8	1/2"	1/2" - 14	12.5	35.0	19.2	24.0		
M12810-08-12	12	- 8	1/2"	3/4" - 14	15.5	35.5	19.2	27.0		
M12810-10-08	16	- 10	5/8"	1/2" - 14	12.5	38.5	19.2	24.0		
M12810-10-12	16	- 10	5/8"	3/4" - 14	16.0	40.0	19.2	27.0		
M12810-12-08	19	- 12	3/4"	1/2" - 14	12.5	36.5	19.2	27.0		
M12810-12-12	19	- 12	3/4"	3/4" - 14	16.0	36.5	19.2	27.0		
M12810-12-16	19	- 12	3/4"	1" - 11.5	19.8	46.0	24.2	36.0		
M12810-16-12	25	- 16	1"	3/4" - 14	15.5	39.0	19.2	32.0		
M12810-16-16	25	- 16	1"	1" - 11.5	19.8	44.0	24.2	36.0		
M12810-16-20	25	- 16	1"	1.1/4" - 11.5	26.0	56.5	25.0	46.0		
M12810-20-20	31	- 20	1.1/4"	1.1/4" - 11.5	26.0	56.5	25.0	46.0		
M12810-24-24	38	- 24	1.1/2"	1.1/2" - 11.5	32.0	57.5	26.0	50.0		
M12810-32-32	51	- 32	2"	2" - 11.5	45.0	64.5	26.5	65.0		
M12810-40-40	63	- 40	2.1/2"	2.1/2" - 8	55.4	78.0	39.9	80.0		
M12810-48-48	76	- 48	3"	3" - 8	68.9	86.0	41.5	100.0		

141 FITTINGS

SAE STANDARD CONNECTIONS

M14110R

**NPTF SWIVEL MALE 60° CONE SEAT
SAE J516/J514**

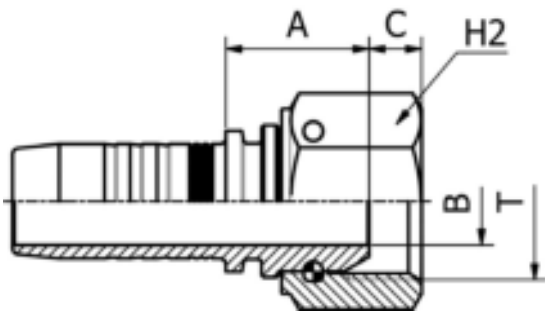


PART. REF.	HOSE BORE			Thread	DIMENSIONS mm					
	DN	Dash	inch		T	B	A	C	H1	
M14110-04-02R	6	- 4	1/4"	1/8" - 27	3.0	42.0	10.0	17.0		
M14110-04-04R	6	- 4	1/4"	1/4" - 18	4.0	46.5	14.5	17.0		
M14110-04-06R	6	- 4	1/4"	3/8" - 18	7.0	46.5	14.5	19.0		
M14110-06-04R	10	- 6	3/8"	1/4" - 18	4.0	50.5	14.5	22.0		
M14110-06-06R	10	- 6	3/8"	3/8" - 18	7.0	50.5	14.5	22.0		
M14110-06-08R	10	- 6	3/8"	1/2" - 14	9.3	55.0	19.2	24.0		
M14110-08-06R	12	- 8	1/2"	3/8" - 18	7.0	54.5	14.5	27.0		
M14110-08-08R	12	- 8	1/2"	1/2" - 14	9.3	59.0	19.2	27.0		
M14110-12-12R	19	- 12	3/4"	3/4" - 14	16.0	58.0	19.2	32.0		
M14110-16-16R	25	- 16	1"	1" - 11.5	19.8	66.0	24.2	38.0		

SAE STANDARD CONNECTIONS

M22812

**NPSM FEMALE 60° CONE
 SAE J516/J514
 (THRUST-WIRE NUT)**

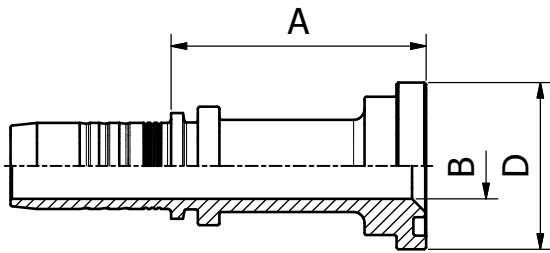


PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	H2		
M22812-04-04	6	- 4	1/4"	1/4" - 18	4.0	17.5	4.2	19.0			
M22812-06-04	10	- 6	3/8"	1/4" - 18	4.1	18.0	4.2	19.0			
M22812-06-06	10	- 6	3/8"	3/8" - 18	7.0	21.0	6.0	22.0			
M22812-08-08	12	- 8	1/2"	1/2" - 14	9.3	23.0	6.5	27.0			
M22812-12-12	19	- 12	3/4"	3/4" - 14	15.0	24.5	9.0	32.0			
M22812-16-16	25	- 16	1"	1" - 11.5	19.8	27.5	10.5	38.0			

SAE STANDARD CONNECTIONS

M23311

**ISO/SAE CODE 61 FLANGE
 SAE J516 / ISO 12151-3**

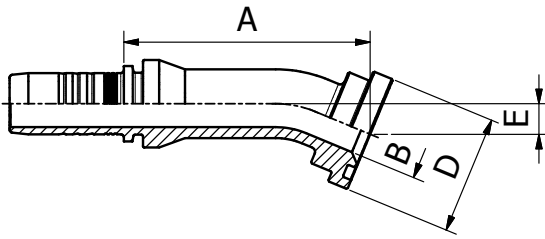


PART. REF.	HOSE BORE			FLANGE	DIMENSIONS mm					
	DN	Dash	inch		inch	B	A	D		
M23311-08-08	12	-8	1/2"	1/2"	9.3	51.0	30.3			
M23311-08-12	12	-8	1/2"	3/4"	15.1	58.0	38.0			
M23311-10-08	16	-10	5/8"	1/2"	9.3	51.0	30.3			
M23311-10-12	16	-10	5/8"	3/4"	15.0	65.5	38.0			
M23311-10-24	16	-10	5/8"	1.1/2"	32.0	69.5	60.5			
M23311-12-12	19	-12	3/4"	3/4"	15.0	58.0	38.0			
M23311-12-16	19	-12	3/4"	1"	20.0	58.0	44.6			
M23311-12-20	19	-12	3/4"	1.1/4"	26.0	69.5	51.0			
M23311-16-12	25	-16	1"	3/4"	15.0	60.5	38.0			
M23311-16-16	25	-16	1"	1"	19.8	64.5	44.6			
M23311-16-20	25	-16	1"	1.1/4"	26.0	70.5	51.0			
M23311-20-12	31	-20	1.1/4"	3/4"	15.0	61.0	38.0			
M23311-20-16	31	-20	1.1/4"	1"	19.8	64.5	44.6			
M23311-20-20	31	-20	1.1/4"	1.1/4"	26.0	70.5	51.0			
M23311-20-24	31	-20	1.1/4"	1.1/2"	32.0	72.5	60.5			
M23311-20-32	31	-20	1.1/4"	2"	42.0	75.5	71.6			
M23311-24-24	38	-24	1.1/2"	1.1/2"	32.0	75.5	60.5			
M23311-24-32	38	-24	1.1/2"	2"	42.0	75.5	71.6			
M23311-32-32	51	-32	2"	2"	42.0	79.0	71.6			
M23311-32-40	51	-32	2"	2.1/2"	56.0	81.0	84.3			
M23311-38-40	60	-38	2.3/8"	2.1/2"	50.5	84.0	84.3			
M23311-40-32	63	-40	2.1/2"	2"	42.0	78.5	71.6			
M23311-40-40	63	-40	2.1/2"	2.1/2"	55.4	84.0	84.3			
M23311-40-48	63	-40	2.1/2"	3"	68.9	79.0	101.6			
M23311-40-56	63	-40	2.1/2"	3.1/2"	79.0	90.5	114.3			
M23311-40-64	63	-40	2.1/2"	4"	90.0	96.5	127.0			
M23311-48-48	76	-48	3"	3"	68.9	85.5	101.6			
M23311-56-56	89	-56	3.1/2"	3.1/2"	79.0	94.5	114.3			
M23311-64-64	102	-64	4"	4"	90.0	100.5	127.0			



SAE STANDARD CONNECTIONS

M23321



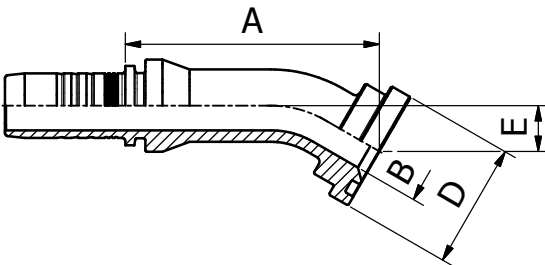
**22.5° ISO/SAE CODE 61 FLANGE
SAE J516 / ISO 12151-3**

PART. REF.	HOSE BORE			FLANGE		DIMENSIONS mm						
	DN	Dash	inch	inch		B	A	D	E			
M23321-08-08	12	-8	1/2"	1/2"		9.3	64.0	30.3	8.0			
M23321-12-12	19	-12	3/4"	3/4"		15.0	74.5	38.0	10.0			
M23321-12-16	19	-12	3/4"	1"		20.0	74.5	44.6	10.0			
M23321-16-16	25	-16	1"	1"		19.8	89.0	44.6	11.5			
M23321-16-20	25	-16	1"	1.1/4"		26.0	88.5	51.0	11.5			
M23321-16-24	25	-16	1"	1.1/2"		32.0	88.5	60.5	12.0			
M23321-20-20	31	-20	1.1/4"	1.1/4"		26.0	100.0	51.0	12.0			
M23321-20-20018	31	-20	1.1/4"	1.1/4"		26.0	99.0	51.0	18.0			
M23321-20-24	31	-20	1.1/4"	1.1/2"		32.0	102.0	60.5	13.0			
M23321-24-24	38	-24	1.1/2"	1.1/2"		32.0	116.5	60.5	14.0			
M23321-24-24023	38	-24	1.1/2"	1.1/2"		32.0	115.0	60.5	23.0			
M23321-24-32	38	-24	1.1/2"	2"		42.0	116.5	71.6	14.0			
M23321-32-32	51	-32	2"	2"		42.0	134.5	71.6	15.0			
M23321-40-40	63	-40	2.1/2"	2.1/2"		52.0	80.0	84.3	16.5			
M23321-40-48	63	-40	2.1/2"	3"		61.0	107.5	101.6	20.5			
M23321-48-48	76	-48	3"	3"		61.0	111.0	101.6	20.5			

All items are made from solid with the exception of M23321-40-40, M23321-40-48, M23321-48-48

SAE STANDARD CONNECTIONS

M23331



**30° ISO/SAE CODE 61 FLANGE
SAE J516 / ISO 12151-3**

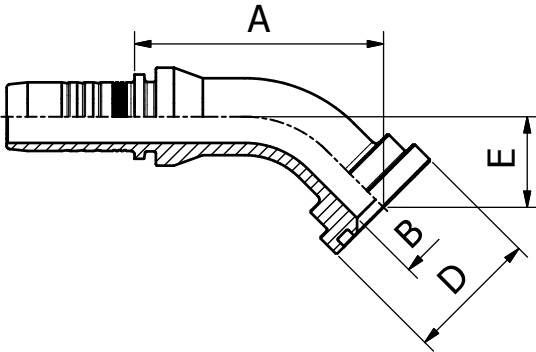
PART. REF.	HOSE BORE			FLANGE		DIMENSIONS mm						
	DN	Dash	inch	inch		B	A	D	E			
M23331-08-08	12	-8	1/2"	1/2"		9.3	62.5	30.3	11.0			
M23331-08-12	12	-8	1/2"	3/4"		15.0	63.5	38.0	11.5			
M23331-12-12	19	-12	3/4"	3/4"		15.0	73.0	38.0	14.0			
M23331-12-16	19	-12	3/4"	1"		20.0	73.0	44.6	14.0			
M23331-16-16	25	-16	1"	1"		19.8	87.0	44.6	16.5			
M23331-16-20	25	-16	1"	1.1/4"		26.0	87.0	51.0	16.5			
M23331-20-20	31	-20	1.1/4"	1.1/4"		26.0	98.0	51.0	17.5			
M23331-20-24	31	-20	1.1/4"	1.1/2"		32.0	100.0	60.5	18.5			
M23331-20-24044	31	-20	1.1/4"	1.1/2"		32.0	131.5	60.5	44.0			
M23331-24-24	38	-24	1.1/2"	1.1/2"		32.0	114.5	60.5	20.0			
M23331-24-32	38	-24	1.1/2"	2"		42.0	114.5	71.6	20.0			
M23331-32-32	51	-32	2"	2"		42.0	132.0	71.6	22.0			
M23331-40-40	63	-40	2.1/2"	2.1/2"		52.0	87.5	84.3	24.0			
M23331-40-48	63	-40	2.1/2"	3"		52.0	85.0	101.6	24.5			
M23331-48-48	76	-48	3"	3"		61.0	117.5	101.6	31.5			

All items are made from solid with the exception of M23331-40-40, M23331-40-48, M23331-48-48

SAE STANDARD CONNECTIONS

M23341

45° ISO/SAE CODE 61 FLANGE
SAE J516 / ISO 12151-3



PART. REF.	HOSE BORE			FLANGE		DIMENSIONS mm						
	DN	Dash	inch	inch		B	A	D	E			
M23341-06-08	10	-6	3/8"	1/2"		9.3	52.5	30.0	17.5			
M23341-08-08	12	-8	1/2"	1/2"		9.3	58.5	30.3	18.5			
M23341-08-12	12	-8	1/2"	3/4"		15.0	59.5	38.0	19.0			
M23341-08-16	12	-8	1/2"	1"		19.8	59.5	44.6	19.0			
M23341-10-12	16	-10	5/8"	3/4"		15.0	61.0	38.0	22.0			
M23341-12-12	19	-12	3/4"	3/4"		15.0	71.0	38.0	26.0			
M23341-12-16	19	-12	3/4"	1"		20.0	68.5	44.6	23.0			
M23341-16-12	25	-16	1"	3/4"		15.0	74.5	38.0	23.0			
M23341-16-16	25	-16	1"	1"		19.8	81.5	44.6	27.5			
M23341-16-16032	25	-16	1"	1"		19.8	86.0	44.5	32.0			
M23341-16-20	25	-16	1"	1.1/4"		26.0	81.5	51.0	27.5			
M23341-20-16	31	-20	1.1/4"	1"		19.8	84.5	44.6	29.5			
M23341-20-20	31	-20	1.1/4"	1.1/4"		26.0	92.0	51.0	29.5			
M23341-20-20038	31	-20	1.1/4"	1.1/4"		26.0	100.5	50.9	38.0			
M23341-20-24	31	-20	1.1/4"	1.1/2"		32.0	93.5	60.5	31.0			
M23341-24-24	38	-24	1.1/2"	1.1/2"		32.0	107.5	60.5	34.5			
M23341-24-24044	38	-24	1.1/2"	1.1/2"		32.0	117.0	60.5	44.0			
M23341-24-32	38	-24	1.1/2"	2"		42.0	107.5	71.6	34.5			
M23341-32-20	51	-32	2"	1.1/4"		26.0	128.5	51.0	32.0			
M23341-32-32	51	-32	2"	2"		42.0	124.0	71.6	39.0			
M23341-32-32056	51	-32	2"	2"		42.0	141.0	71.5	56.0			
M23341-32-40	51	-32	2"	2.1/2"		56.0	136.5	84.3	49.5			
M23341-40-32	63	-40	2.1/2"	2"		42.0	152.0	71.6	48.5			
M23341-40-40	63	-40	2.1/2"	2.1/2"		52.0	95.0	84.3	48.5			
M23341-40-48	63	-40	2.1/2"	3"		61.0	117.5	101.6	53.5			
M23341-48-48	76	-48	3"	3"		58.0	125.5	101.6	53.5			
M23341-56-56	89	-56	3.1/2"	3.1/2"		79.0	139.0	114.3	68.0			
M23341-56-64	89	-56	3.1/2"	4"		79.0	124.5	127.0	53.5			
M23341-64-64	102	-64	4"	4"		90.0	132.0	127.0	56.5			

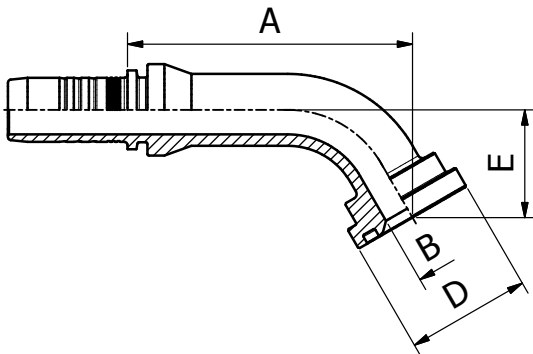
All items are made from solid with the exception of M23341-40-40, M23341-40-48, M23341-48-48, M23341-56-56, M23341-56-64, M23341-64-64.

FITTINGS 144



SAE STANDARD CONNECTIONS

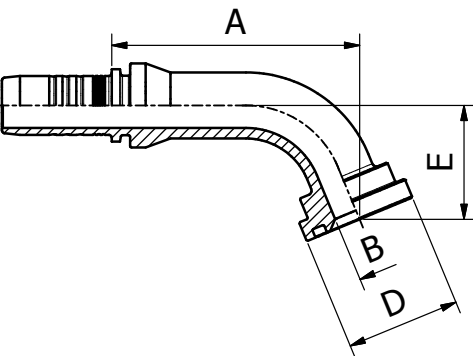
M23361



60° ISO/SAE CODE 61 FLANGE
SAE J516 / ISO 12151-3

PART. REF.	HOSE BORE			FLANGE		DIMENSIONS mm						
	DN	Dash	inch	inch		B	A	D	E			
M23361-08-08	12	-8	1/2"	1/2"		9.3	71.5	30.3	26.0			
M23361-08-12	12	-8	1/2"	3/4"		15.0	72.0	38.0	26.5			
M23361-12-12	19	-12	3/4"	3/4"		15.0	87.0	38.0	33.0			
M23361-12-16	19	-12	3/4"	1"		20.0	87.0	44.6	33.0			
M23361-16-16	25	-16	1"	1"		19.8	104.0	44.6	39.0			
M23361-16-20	25	-16	1"	1.1/4"		26.0	104.0	51.0	39.0			
M23361-20-20	31	-20	1.1/4"	1.1/4"		26.0	120.0	51.0	43.0			
M23361-20-20065	31	-20	1.1/4"	1.1/4"		26.0	107.5	51.0	65.0			
M23361-20-24	31	-20	1.1/4"	1.1/2"		32.0	121.0	60.5	44.5			
M23361-24-20	38	-24	1.1/2"	1.1/4"		26.0	136.5	51.0	46.5			
M23361-24-24	38	-24	1.1/2"	1.1/2"		32.0	143.5	60.5	50.5			
M23361-24-32	38	-24	1.1/2"	2"		42.0	143.5	71.6	51.0			
M23361-32-32	51	-32	2"	2"		42.0	129.0	71.6	58.0			
M23361-40-40	63	-40	2.1/2"	2.1/2"		52.0	94.5	84.3	67.0			
M23361-40-48	63	-40	2.1/2"	3"		52.0	87.5	101.6	54.5			
M23361-48-48	76	-48	3"	3"		61.0	128.5	101.6	79.0			

All items are made from solid with the exception of M23361-40-40, M23361-40-48, M23361-48-48.



SAE STANDARD CONNECTIONS

M23371

67.5° ISO/SAE CODE 61 FLANGE
SAE J516 / ISO 12151-3

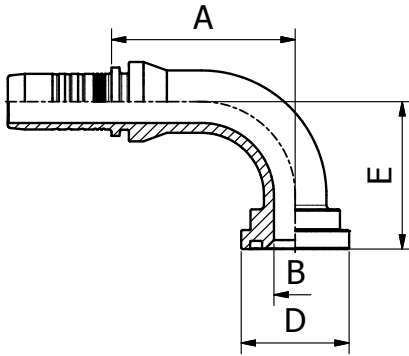
PART. REF.	HOSE BORE			FLANGE		DIMENSIONS mm						
	DN	Dash	inch	inch		B	A	D	E			
M23371-08-08	12	-8	1/2"	1/2"		9.3	68.0	30.3	29.5			
M23371-08-12	12	-8	1/2"	3/4"		15.0	68.5	38.0	30.5			
M23371-08-16	12	-8	1/2"	1"		19.8	68.5	44.6	30.5			
M23371-12-12	19	-12	3/4"	3/4"		15.0	82.0	38.0	38.0			
M23371-12-16	19	-12	3/4"	1"		20.0	82.0	44.6	38.0			
M23371-12-20	19	-12	3/4"	1.1/4"		26.0	82.0	51.0	38.0			
M23371-16-16	25	-16	1"	1"		19.8	98.5	44.6	45.0			
M23371-16-20	25	-16	1"	1.1/4"		26.0	98.5	51.0	45.0			
M23371-20-20	31	-20	1.1/4"	1.1/4"		26.0	114.0	51.0	50.0			
M23371-20-24	31	-20	1.1/4"	1.1/2"		32.0	115.0	60.5	52.0			
M23371-24-24	38	-24	1.1/2"	1.1/2"		32.0	136.5	60.5	59.0			
M23371-24-32	38	-24	1.1/2"	2"		42.0	136.5	71.6	59.0			
M23371-32-32	51	-32	2"	2"		42.0	162.0	71.6	68.5			
M23371-32-32085	51	-32	2"	2"		42.0	150.5	71.6	85.0			
M23371-32-40	51	-32	2"	2.1/2"		56.0	171.5	84.3	83.5			
M23371-40-40	63	-40	2.1/2"	2.1/2"		52.0	95.0	84.3	78.0			
M23371-40-48	63	-40	2.1/2"	3"		52.0	90.5	101.6	64.5			

All items are made from solid with the exception of M23371-40-40, M23371-40-48.

SAE STANDARD CONNECTIONS

M23391

90° ISO/SAE CODE 61 FLANGE
 SAE J516 / ISO 12151-3



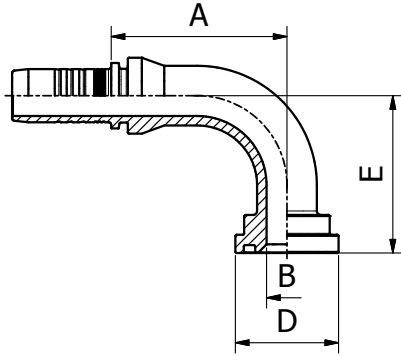
PART. REF.	HOSE BORE			FLANGE		DIMENSIONS mm						
	DN	Dash	inch	inch		B	A	D	E			
M23391-06-08	10	-6	3/8"	1/2"		9.3	44.5	30.0	34.5			
M23391-08-08	12	-8	1/2"	1/2"		9.3	54.5	30.3	40.0			
M23391-08-12	12	-8	1/2"	3/4"		15.0	54.5	38.0	41.0			
M23391-08-16	12	-8	1/2"	1"		19.8	54.5	44.6	66.0			
M23391-10-08	16	-10	5/8"	1/2"		9.3	56.0	30.3	46.5			
M23391-10-12	16	-10	5/8"	3/4"		15.0	56.0	38.0	47.5			
M23391-12-12	19	-12	3/4"	3/4"		15.0	64.5	38.0	52.0			
M23391-12-16	19	-12	3/4"	1"		20.0	64.5	44.6	52.0			
M23391-12-20	19	-12	3/4"	1.1/4"		26.0	64.5	51.0	52.0			
M23391-16-12	25	-16	1"	3/4"		15.0	71.0	38.0	52.0			
M23391-16-16	25	-16	1"	1"		19.8	77.5	44.6	62.0			
M23391-16-20	25	-16	1"	1.1/4"		26.0	77.5	51.0	62.0			
M23391-16-24	25	-16	1"	1.1/2"		32.0	77.0	60.5	64.0			
M23391-20-16	31	-20	1.1/4"	1"		19.8	80.0	44.6	66.0			
M23391-20-20	31	-20	1.1/4"	1.1/4"		26.0	90.5	51.0	70.0			
M23391-20-24	31	-20	1.1/4"	1.1/2"		32.0	90.5	60.5	72.0			
M23391-20-32	31	-20	1.1/4"	2"		42.0	93.5	71.6	76.0			
M23391-24-24	38	-24	1.1/2"	1.1/4"		26.0	104.5	51.0	75.0			
M23391-24-24	38	-24	1.1/2"	1.1/2"		32.0	108.0	60.5	84.0			
M23391-24-32	38	-24	1.1/2"	2"		42.0	108.0	71.6	84.0			
M23391-32-24	51	-32	2"	1.1/2"		32.0	136.0	60.5	89.0			
M23391-32-32	51	-32	2"	2"		42.0	129.0	71.6	99.0			
M23391-32-40	51	-32	2"	2.1/2"		56.0	132.5	84.3	116.0			
M23391-40-32	63	-40	2.1/2"	2"		42.0	149.5	71.6	114.0			
M23391-40-40	63	-40	2.1/2"	2.1/2"		52.0	88.0	84.3	119.0			
M23391-40-48	63	-40	2.1/2"	3"		61.0	120.0	101.6	140.0			
M23391-48-48	76	-48	3"	3"		58.0	123.0	101.6	140.0			
M23391-48-56	76	-48	3"	3.1/2"		61.0	123.0	114.3	115.0			
M23391-56-56	89	-56	3.1/2"	3.1/2"		79.0	134.5	114.3	160.0			
M23391-64-64	102	-64	4"	4"		90.0	153.5	127.0	158.5			

All items are made from solid with the exception of M23391-40-40, M23391-40-48, M23391-48-48, M23391-48-56, M23391-56-56, M23391-64-64.



SAE STANDARD CONNECTIONS

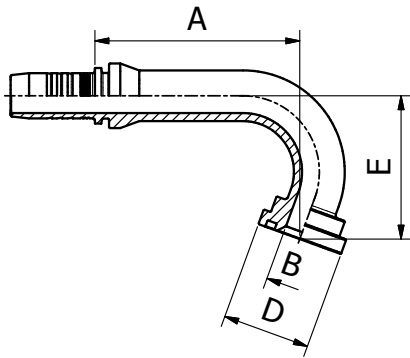
M23391 LONG DROP



90° LONG DROP ISO/SAE CODE 61 FLANGE
SAE J516 / ISO 12151-3

PART. REF.	HOSE BORE			FLANGE		DIMENSIONS mm						
	DN	Dash	inch	inch		B	A	D	E			
M23391-06-08041	10	-6	3/8"	1/2"		9.3	44.5	30.0	41.0			
M23391-12-12058	19	-12	3/4"	3/4"		15.0	64.5	38.0	58.0			
M23391-16-16070	25	-16	1"	1"		19.8	77.5	44.5	70.0			
M23391-16-20117	25	-16	1"	1.1/4"		26.0	77.5	51.0	117.0			
M23391-16-24107	25	-16	1"	1.1/2"		32.0	77.0	60.5	107.0			
M23391-20-20091	31	-20	1.1/4"	1.1/4"		26.0	90.5	51.0	91.0			
M23391-20-20100	31	-20	1.1/4"	1.1/4"		26.0	90.5	51.0	100.0			
M23391-20-20112	31	-20	1.1/4"	1.1/4"		26.0	90.5	51.0	112.0			
M23391-20-20130	31	-20	1.1/4"	1.1/4"		26.0	90.5	51.0	130.0			
M23391-20-20168	31	-20	1.1/4"	1.1/4"		26.0	90.5	51.0	168.0			
M23391-20-24118	31	-20	1.1/4"	1.1/2"		32.0	90.5	60.5	118.0			
M23391-20-24130	31	-20	1.1/4"	1.1/2"		32.0	90.5	60.5	130.0			
M23391-24-24104	38	-24	1.1/2"	1.1/2"		32.0	108.0	60.5	104.0			
M23391-24-24148	38	-24	1.1/2"	1.1/2"		32.0	108.0	60.5	148.0			
M23391-24-24172	38	-24	1.1/2"	1.1/2"		32.0	108.0	60.5	172.0			
M23391-24-32115	38	-24	1.1/2"	2"		42.0	108.0	71.6	115.0			
M23391-24-32172	38	-24	1.1/2"	2"		42.0	108.0	71.6	172.0			
M23391-32-32138	51	-32	2"	2"		42.0	129.0	71.5	138.0			
M23391-32-32203	51	-32	2"	2"		42.0	129.0	71.6	203.0			

147 FITTINGS

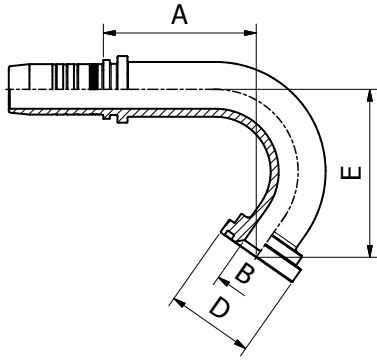


SAE STANDARD CONNECTIONS

M23301P

110° ISO/SAE CODE 61 FLANGE
SAE J516 / ISO 12151-3

PART. REF.	HOSE BORE			FLANGE		DIMENSIONS mm						
	DN	Dash	inch	inch		B	A	D	E			
M23301-08-12P	12	-8	1/2"	3/4"		15.0	53.0	38.0	48.0			
M23301-12-12P	19	-12	3/4"	3/4"		15.0	89.0	38.0	62.0			
M23301-12-16P	19	-12	3/4"	1"		20.0	89.0	44.6	62.0			
M23301-16-16P	25	-16	1"	1"		19.8	88.5	44.6	79.0			
M23301-16-20133P	25	-16	1"	1.1/4"		26.0	69.0	51.0	133.0			
M23301-20-20P	31	-20	1.1/4"	1.1/4"		26.0	102.0	51.0	91.0			
M23301-20-24P	31	-20	1.1/4"	1.1/2"		32.0	96.5	60.5	93.0			
M23301-24-24119P	38	-24	1.1/2"	1.1/2"		32.0	105.5	60.5	119.0			
M23301-32-32P	51	-32	2"	2"		42.0	142.0	71.6	123.0			

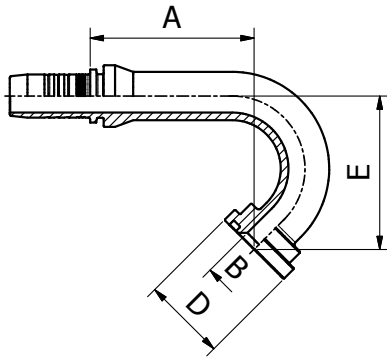


SAE STANDARD CONNECTIONS

M23301S

125° ISO/SAE CODE 61 FLANGE
 SAE J516 / ISO 12151-3

PART. REF.	HOSE BORE			FLANGE		DIMENSIONS mm						
	DN	Dash	inch	inch		B	A	D	E			
M23301-32-32151S	51	-32	2"	2"		42.0	118.5	71.6	151.0			



SAE STANDARD CONNECTIONS

M23301T

135° ISO/SAE CODE 61 FLANGE
 SAE J516 / ISO 12151-3

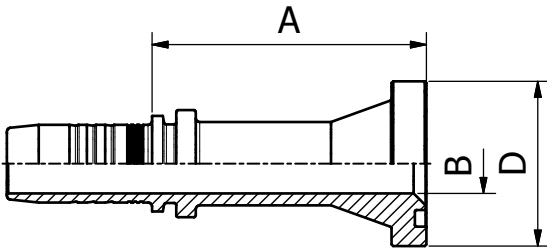
PART. REF.	HOSE BORE			FLANGE		DIMENSIONS mm						
	DN	Dash	inch	inch		B	A	D	E			
M23301-12-12T	19	-12	3/4"	3/4"		15.0	74.5	38.0	70.0			
M23301-12-16T	19	-12	3/4"	1"		20.0	74.5	44.6	70.0			
M23301-16-16T	25	-16	1"	1"		19.8	70.0	44.6	88.5			



SAE STANDARD CONNECTIONS

M23611

ISO/SAE CODE 62 FLANGE
SAE J516 / ISO 12151-3



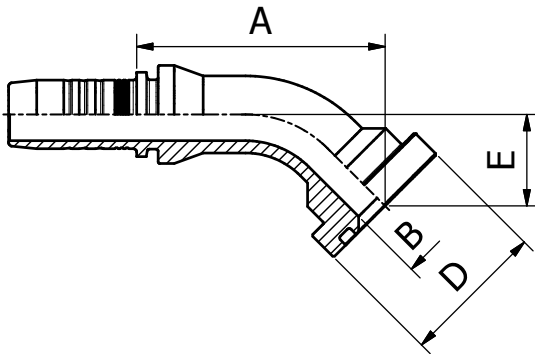
PART. REF.	HOSE BORE			FLANGE		DIMENSIONS mm						
	DN	Dash	inch	inch		B	A	D				
M23611-08-08	12	-8	1/2"	1/2"		9.3	52.0	31.8				
M23611-08-12	12	-8	1/2"	3/4"		15.0	68.5	41.5				
M23611-10-08	16	-10	5/8"	1/2"		9.3	52.0	31.8				
M23611-10-12	16	-10	5/8"	3/4"		15.0	70.0	41.5				
M23611-10-16	16	-10	5/8"	1"		20.0	80.0	47.7				
M23611-12-12	19	-12	3/4"	3/4"		15.0	69.0	41.5				
M23611-12-16	19	-12	3/4"	1"		20.0	81.0	47.7				
M23611-16-16	25	-16	1"	1"		19.8	82.5	47.7				
M23611-16-20	25	-16	1"	1.1/4"		26.0	90.0	54.2				
M23611-20-16	31	-20	1.1/4"	1"		19.8	82.5	47.7				
M23611-20-20	31	-20	1.1/4"	1.1/4"		26.0	84.5	54.2				
M23611-20-24	31	-20	1.1/4"	1.1/2"		32.0	90.5	63.7				
M23611-24-24	38	-24	1.1/2"	1.1/2"		32.0	92.5	63.6				
M23611-32-32	51	-32	2"	2"		42.0	109.0	79.5				

149 FITTINGS

SAE STANDARD CONNECTIONS

M23641

45° ISO/SAE CODE 62 FLANGE
SAE J516 / ISO 12151-3

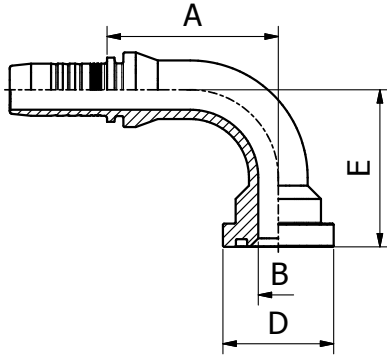


PART. REF.	HOSE BORE			FLANGE		DIMENSIONS mm						
	DN	Dash	inch	inch		B	A	D	E			
M23641-08-08	12	-8	1/2"	1/2"		9.3	59.0	31.7	19.0			
M23641-08-12	12	-8	1/2"	3/4"		15.0	68.0	41.5	27.5			
M23641-10-08	16	-10	5/8"	1/2"		9.3	62.5	31.8	23.5			
M23641-10-12	16	-10	5/8"	3/4"		15.0	67.5	41.5	31.0			
M23641-12-12	19	-12	3/4"	3/4"		15.0	72.5	41.5	28.0			
M23641-12-16	19	-12	3/4"	1"		20.0	77.0	47.7	32.5			
M23641-16-12	25	-16	1"	3/4"		15.0	80.0	41.5	30.0			
M23641-16-16	25	-16	1"	1"		19.8	83.5	47.7	32.5			
M23641-16-20	25	-16	1"	1.1/4"		26.0	88.5	54.2	37.5			
M23641-20-20	31	-20	1.1/4"	1.1/4"		26.0	95.0	54.2	37.5			
M23641-20-24	31	-20	1.1/4"	1.1/2"		32.0	102.5	63.7	45.0			
M23641-24-24	38	-24	1.1/2"	1.1/2"		32.0	118.0	63.7	44.0			
M23641-24-32	38	-24	1.1/2"	2"		42.0	129.0	79.6	55.5			
M23641-32-32	51	-32	2"	2"		42.0	151.5	79.6	60.5			
M23641-32-32056	51	-32	2"	2"		42.0	147.5	79.6	56.5			

SAE STANDARD CONNECTIONS

M23691

90° ISO/SAE CODE 62 FLANGE
 SAE J516 / ISO 12151-3



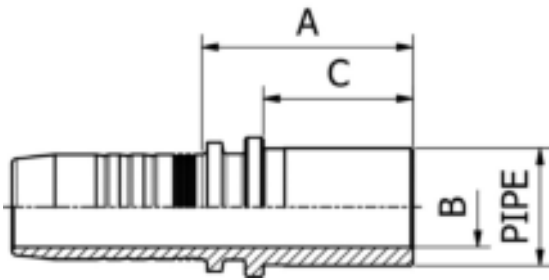
PART. REF.	HOSE BORE			FLANGE		DIMENSIONS mm						
	DN	Dash	inch	inch		B	A	C	H2			
M23691-08-08	12	-8	1/2"	1/2"		9.3	54.5	31.8	45.0			
M23691-08-08040	12	-8	1/2"	1/2"		9.3	54.5	31.7	41.0			
M23691-08-12	12	-8	1/2"	3/4"		15.0	54.5	41.5	53.0			
M23691-10-08	16	-10	5/8"	1/2"		9.3	57.5	31.8	45.0			
M23691-10-12	16	-10	5/8"	3/4"		15.0	53.5	41.5	60.5			
M23691-10-16	16	-10	5/8"	1"		19.8	56.0	47.7	64.0			
M23691-12-08	19	-12	3/4"	1/2"		9.3	60.6	31.8	57.5			
M23691-12-12	19	-12	3/4"	3/4"		15.0	64.0	41.5	59.0			
M23691-12-16	19	-12	3/4"	1"		20.0	64.5	47.7	65.0			
M23691-16-12	25	-16	1"	3/4"		15.0	74.5	41.5	67.0			
M23691-16-16	25	-16	1"	1"		19.8	73.5	47.7	68.0			
M23691-16-20	25	-16	1"	1.1/4"		26.0	73.5	54.2	75.0			
M23691-20-16	31	-20	1.1/4"	1"		19.8	82.5	47.7	68.0			
M23691-20-20	31	-20	1.1/4"	1.1/4"		26.0	85.5	54.2	81.0			
M23691-20-20090	31	-20	1.1/4"	1.1/4"		26.0	85.5	54.1	90.0			
M23691-20-24	31	-20	1.1/4"	1.1/2"		32.0	85.5	63.7	91.5			
M23691-24-20	38	-24	1.1/2"	1.1/4"		26.0	105.0	54.2	91.0			
M23691-24-24	38	-24	1.1/2"	1.1/2"		32.0	106.0	63.7	94.5			
M23691-24-24104	38	-24	1.1/2"	1.1/2"		32.0	106.0	63.7	104.0			
M23691-24-32	38	-24	1.1/2"	2"		42.0	106.0	79.6	110.5			
M23691-32-32	51	-32	2"	2"		42.0	138.0	79.6	132.0			
M23691-32-32138	51	-32	2"	2"		42.0	138.0	79.6	138.0			



DIN STANDARD CONNECTIONS

M22010

**METRIC STANDPIPE LIGHT DUTY
DIN 2353 / ISO 8434-1**



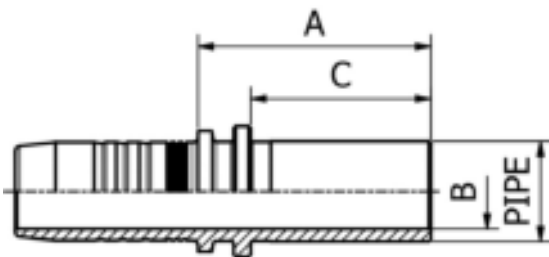
PART. REF.	HOSE BORE			Pipe	DIMENSIONS mm								
	DN	Dash	inch		mm	B	A	C					
M22010-03-04	5	- 3	3/16"	4.0		2.0	29.5	22.0					
M22010-03-06	5	- 3	3/16"	6.0		3.0	29.5	22.0					
M22010-04-06	6	- 4	1/4"	6.0		3.0	30.0	22.0					
M22010-05-08	8	- 5	5/16"	8.0		5.5	30.0	22.0					
M22010-05-10	8	- 5	5/16"	10.0		7.0	31.0	23.0					
M22010-06-10	10	- 6	3/8"	10.0		7.0	31.5	23.0					
M22010-06-12	10	- 6	3/8"	12.0		8.0	31.5	23.0					
M22010-06-15	10	- 6	3/8"	15.0		10.5	33.5	25.0					
M22010-08-12	12	- 8	1/2"	12.0		8.0	32.0	23.0					
M22010-08-15	12	- 8	1/2"	15.0		10.5	34.0	25.0					
M22010-08-18	12	- 8	1/2"	18.0		12.5	35.0	26.0					
M22010-10-18	16	- 10	5/8"	18.0		12.5	35.0	26.0					
M22010-10-22	16	- 10	5/8"	22.0		15.0	37.0	28.0					
M22010-12-18	19	- 12	3/4"	18.0		12.5	36.5	26.0					
M22010-12-22	19	- 12	3/4"	22.0		15.0	38.5	28.0					
M22010-16-28	25	- 16	1"	28.0		19.8	41.5	30.0					
M22010-20-35	31	- 20	1.1/4"	35.0		26.0	48.5	36.0					
M22010-24-42	38	- 24	1.1/2"	42.0		32.0	52.5	40.0					

151 FITTINGS

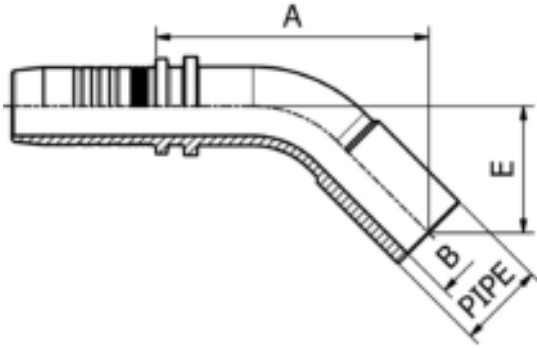
DIN STANDARD CONNECTIONS

M22110

**METRIC STANDPIPE HEAVY DUTY
DIN 2353 / ISO 8434-1**



PART. REF.	HOSE BORE			Pipe	DIMENSIONS mm								
	DN	Dash	inch		mm	B	A	C					
M22110-03-08	5	- 3	3/16"	8.0		3.0	31.0	24.0					
M22110-03-10	5	- 3	3/16"	10.0		3.0	29.5	22.0					
M22110-04-08	6	- 4	1/4"	8.0		4.0	32.0	24.0					
M22110-04-10	6	- 4	1/4"	10.0		4.0	34.0	26.0					
M22110-04-12	6	- 4	1/4"	12.0		7.0	34.0	26.0					
M22110-05-12	8	- 5	5/16"	12.0		7.0	34.0	26.0					
M22110-06-14	10	- 6	3/8"	14.0		8.0	37.5	29.0					
M22110-08-14	12	- 8	1/2"	14.0		9.3	38.0	29.0					
M22110-08-16	12	- 8	1/2"	16.0		10.5	39.0	30.0					
M22110-10-20	16	- 10	5/8"	20.0		12.5	45.0	36.0					
M22110-12-20	19	- 12	3/4"	20.0		15.0	46.5	36.0					
M22110-12-25	19	- 12	3/4"	25.0		15.0	50.5	40.0					
M22110-16-25	25	- 16	1"	25.0		15.0	51.5	40.0					
M22110-16-30	25	- 16	1"	30.0		19.8	55.5	44.0					
M22110-16-38	25	- 16	1"	38.0		26.0	61.5	50.0					
M22110-20-30	31	- 20	1.1/4"	30.0		20.5	56.5	44.0					
M22110-20-38	31	- 20	1.1/4"	38.0		26.0	62.5	50.0					
M22110-24-38	38	- 24	1.1/2"	38.0		26.0	62.5	50.0					

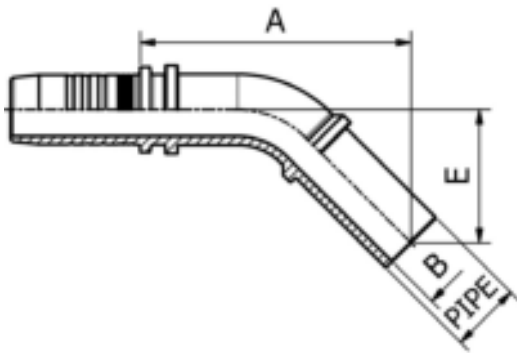


DIN STANDARD CONNECTIONS

M22040

45° METRIC STANDPIPE LIGHT DUTY
 DIN 2353 / ISO 8434-1

PART. REF.	HOSE BORE			Pipe	DIMENSIONS mm						
	DN	Dash	inch		mm	B	A	E			
M22040-03-06	5	- 3	3/16"	6.0	3.0	37.5	20.5				
M22040-04-06	6	- 4	1/4"	6.0	3.0	38.0	20.5				
M22040-05-10	8	- 5	5/16"	10.0	7.0	44.5	22.5				
M22040-06-10	10	- 6	3/8"	10.0	7.0	47.5	23.0				
M22040-06-12	10	- 6	3/8"	12.0	8.0	49.5	25.0				
M22040-08-15	12	- 8	1/2"	15.0	10.5	58.0	28.0				
M22040-10-18	16	- 10	5/8"	18.0	12.5	63.5	30.5				
M22040-12-22	19	- 12	3/4"	22.0	15.0	69.0	32.0				
M22040-16-28	25	- 16	1"	28.0	19.8	81.5	37.0				

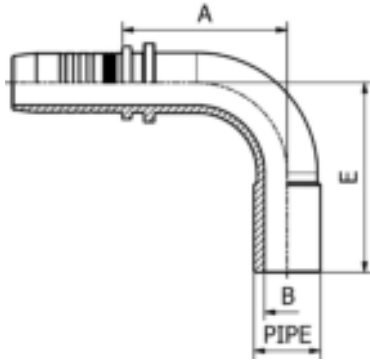


DIN STANDARD CONNECTIONS

M22140

45° METRIC STANDPIPE HEAVY DUTY
 DIN 2353 / ISO 8434-1

PART. REF.	HOSE BORE			Pipe	DIMENSIONS mm						
	DN	Dash	inch		mm	B	A	E			
M22140-04-08	6	- 4	1/4"	8.0	4.0	42.0	22.0				
M22140-04-10	6	- 4	1/4"	10.0	6.0	44.0	24.0				
M22140-06-14	10	- 6	3/8"	14.0	9.3	54.5	29.0				
M22140-08-16	12	- 8	1/2"	16.0	10.5	61.0	30.0				
M22140-10-20	16	- 10	5/8"	20.0	12.5	69.0	36.0				
M22140-12-25	19	- 12	3/4"	25.0	15.0	80.5	40.5				
M22140-16-25	25	- 16	1"	25.0	15.0	82.0	41.0				

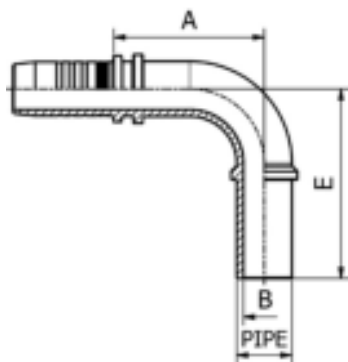


DIN STANDARD CONNECTIONS

M22090

90° METRIC STANDPIPE LIGHT DUTY
DIN 2353 / ISO 8434-1

PART. REF.	HOSE BORE			Pipe	DIMENSIONS mm							
	DN	Dash	inch		mm	B	A	E				
M22090-03-06	5	- 3	3/16"	6.0		3.0	22.5	34.0				
M22090-04-06	6	- 4	1/4"	6.0		3.0	23.0	34.0				
M22090-05-10	8	- 5	5/16"	10.0		7.0	29.5	40.0				
M22090-06-10	10	- 6	3/8"	10.0		7.0	33.0	42.5				
M22090-06-12	10	- 6	3/8"	12.0		8.0	34.0	45.0				
M22090-08-12	12	- 8	1/2"	12.0		8.0	34.5	45.0				
M22090-08-15	12	- 8	1/2"	15.0		10.5	42.0	52.0				
M22090-08-18	12	- 8	1/2"	18.0		12.5	42.0	55.0				
M22090-10-18	16	- 10	5/8"	18.0		12.5	49.0	59.0				
M22090-10-22	16	- 10	5/8"	22.0		15.0	53.5	63.0				
M22090-12-22	19	- 12	3/4"	22.0		15.0	54.5	63.0				
M22090-16-28	25	- 16	1"	28.0		19.8	67.5	75.0				
M22090-20-35	31	- 20	1.1/4"	35.0		26.0	80.5	94.0				



DIN STANDARD CONNECTIONS

M22190

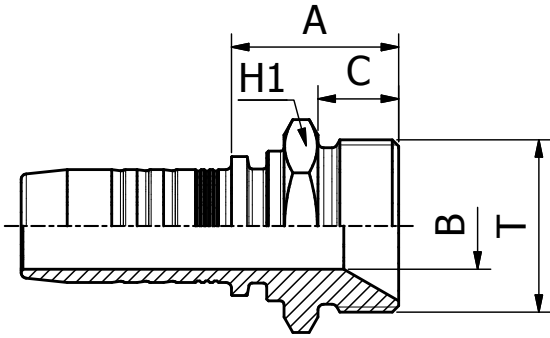
90° METRIC STANDPIPE HEAVY DUTY
DIN 2353 / ISO 8434-1

PART. REF.	HOSE BORE			Pipe	DIMENSIONS mm							
	DN	Dash	inch		mm	B	A	E				
M22190-04-08	6	- 4	1/4"	8.0		4.0	27.0	38.0				
M22190-04-10	6	- 4	1/4"	10.0		6.0	27.0	41.0				
M22190-04-12	6	- 4	1/4"	12.0		7.0	27.0	44.0				
M22190-05-12	8	- 5	5/16"	12.0		7.0	30.5	44.0				
M22190-06-14	10	- 6	3/8"	14.0		9.3	35.0	51.0				
M22190-08-14	12	- 8	1/2"	14.0		9.3	42.0	53.5				
M22190-08-16	12	- 8	1/2"	16.0		10.5	43.0	55.0				
M22190-10-20	16	- 10	5/8"	20.0		12.5	49.0	66.5				
M22190-12-20	19	- 12	3/4"	20.0		15.0	54.5	69.0				
M22190-12-25	19	- 12	3/4"	25.0		15.0	57.5	75.0				
M22190-16-25	25	- 16	1"	25.0		15.0	61.5	76.5				
M22190-16-30	25	- 16	1"	30.0		19.8	69.5	87.0				

DIN STANDARD CONNECTIONS

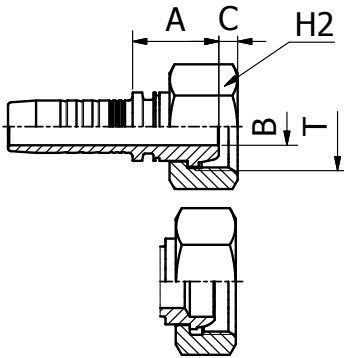
M11010

**METRIC MALE 60° CONE SEAT
 SUPER LIGHT - DIN 3863**



PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	H1		
M11010-04-12	6	- 4	1/4"	M12 X 1.5	4.0	19.5	8.0	14.0			
M11010-04-16	6	- 4	1/4"	M16 X 1.5	4.0	23.5	11.0	19.0			
M11010-05-16	8	- 5	5/16"	M16 X 1.5	5.5	23.5	11.0	19.0			
M11010-10-26	16	- 10	5/8"	M26 X 1.5	12.5	25.5	12.0	27.0			

FITTINGS
154



DIN STANDARD CONNECTIONS

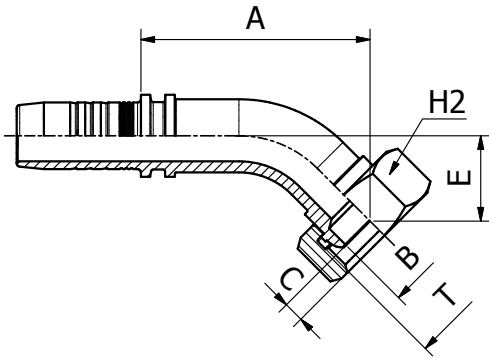
M21012/M21013

**METRIC FEMALE 60° CONE
 DIN 20078/3863**

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	H2		
M21012-03-10	5	-3	3/16"	M10 X1	3.0	18.5	1.8	14.0			
M21012-04-12	6	-4	1/4"	M12 X 1.5	4.0	19.5	3.9	17.0			
M21012-06-14	10	-6	3/8"	M14 X 1.5	6.0	19.5	3.9	17.0			
M21012-06-16	10	-6	3/8"	M16 X 1.5	8.0	21.5	3.8	19.0			
M21013-06-18	10	-6	3/8"	M18 X 1.5	10.0	19.5	4.5	22.0			
M21013-10-26	16	-10	5/8"	M26 X 1.5	12.5	22.0	2.0	32.0			
M21013-10-30	16	-10	5/8"	M30 X 1.5	20.0	20.0	6.0	36.0			
M21013-12-30	19	-12	3/4"	M30 X 1.5	20.0	21.0	6.0	36.0			
M21013-16-38	25	-16	1"	M38 X 1.5	26.0	23.0	7.5	46.0			
M21013-20-45	31	-20	1.1/4"	M45 X 1.5	33.0	23.5	8.0	50.0			
M21013-24-52	38	-24	1.1/2"	M52 X 1.5	40.0	25.0	8.0	60.0			
M21013-32-65	51	-32	2"	M65 X 2	42.0	35.0	5.2	75.0			



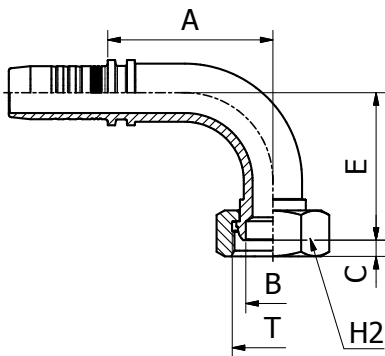
DIN STANDARD CONNECTIONS



M21043

**45° METRIC FEMALE SWEPT ELBOW 60° CONE
 DIN 20078/3863**

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	E	H2	
M21043-12-30	19	- 12	3/4"	M30 X 1.5	20.0	67.5	7.0	25.0	36.0		
M21043-16-38	25	- 16	1"	M38 X 1.5	26.0	81.0	7.5	28.0	46.0		



DIN STANDARD CONNECTIONS

M21093

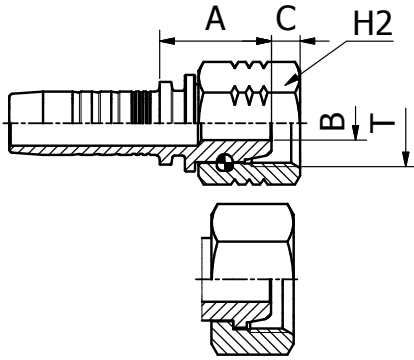
**90° METRIC FEMALE SWEPT ELBOW 60° CONE
 DIN 20078/3863**

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	E	H2	
M21093-12-30	19	- 12	3/4"	M 30X1.5	20.0	61.0	6.0	54.5	36.0		
M21093-16-38	25	- 16	1"	M 38X1.5	26.0	76.5	7.5	63.0	46.0		
M21093-20-45	31	- 20	1.1/4"	M 45X1.5	33.0	92.0	8.0	81.0	50.0		

DIN STANDARD CONNECTIONS

M21312/M21313

METRIC FEMALE MULTISEAL
 DIN 20078/3868



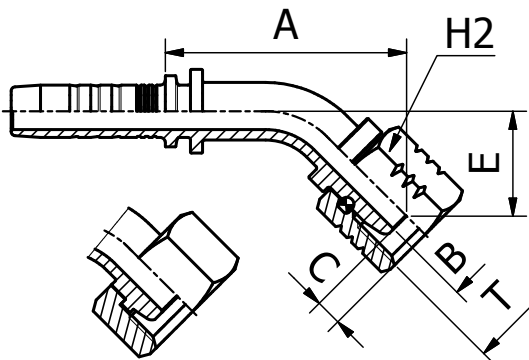
PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm					
	DN	Dash	inch			T	B	A	C	H2	
M21312-04-12	6	- 4	1/4"	M 12X1.5	6.0	4.0	19.5	4.0	17.0		
M21312-06-14	10	- 6	3/8"	M 14X1.5	8.0	4.0	19.5	3.9	17.0		
M21312-06-16	10	- 6	3/8"	M 16X1.5	10.0	7.0	21.5	5.0	19.0		
M21312-08-18	12	- 8	1/2"	M 18X1.5	12.0	7.0	23.0	5.9	22.0		
M21312-10-22	16	- 10	5/8"	M 22X1.5	15.0	9.3	23.5	5.5	27.0		
M21313-03-12	5	- 3	3/16"	M 12X1.5	6.0	3.0	18.5	3.2	14.0		
M21313-04-14	6	- 4	1/4"	M 14X1.5	8.0	4.0	19.5	3.0	17.0		
M21313-04-16	6	- 4	1/4"	M 16X1.5	10.0	4.0	19.5	4.0	19.0		
M21313-05-16	8	- 5	5/16"	M 16X1.5	10.0	5.5	19.5	4.0	19.0		
M21313-05-18	8	- 5	5/16"	M 18X1.5	12.0	5.5	19.5	4.0	22.0		
M21313-06-18	10	- 6	3/8"	M 18X1.5	12.0	7.0	20.0	4.0	22.0		
M21313-06-22	10	- 6	3/8"	M 22X1.5	15.0	7.0	21.0	4.7	27.0		
M21313-08-22	12	- 8	1/2"	M 22X1.5	15.0	9.3	21.5	4.7	27.0		
M21313-10-26	16	- 10	5/8"	M 26X1.5	18.0	12.5	22.0	5.0	32.0		

FITTINGS 156

DIN STANDARD CONNECTIONS

M21342/M21343

45° METRIC FEMALE SWEPT ELBOW MULTISEAL
 DIN 20078/3868



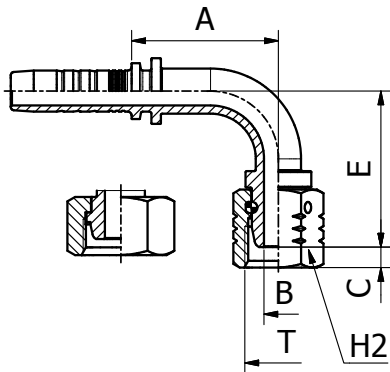
PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm					
	DN	Dash	inch			T	B	A	C	E	H2
M21342-05-14	8	- 5	5/16"	M 14X1.5	8.0	4.0	40.0	3.9	19.5	17.0	
M21342-06-16	10	- 6	3/8"	M 16X1.5	10.0	7.0	46.0	5.0	20.0	19.0	
M21343-04-14	6	- 4	1/4"	M 14X1.5	8.0	4.0	36.5	3.0	15.0	17.0	
M21343-04-16	6	- 4	1/4"	M 16X1.5	10.0	4.0	36.5	4.0	15.0	19.0	
M21343-05-16	8	- 5	5/16"	M 16X1.5	10.0	5.5	39.0	4.0	15.0	19.0	
M21343-06-18	10	- 6	3/8"	M 18X1.5	12.0	7.0	42.0	4.0	15.5	22.0	
M21343-06-22	10	- 6	3/8"	M 22X1.5	15.0	7.0	42.5	4.7	15.5	27.0	
M21343-08-22	12	- 8	1/2"	M 22X1.5	15.0	9.3	49.5	4.7	17.0	27.0	
M21343-10-26	16	- 10	5/8"	M 26X1.5	18.0	12.5	60.0	5.0	24.0	32.0	



DIN STANDARD CONNECTIONS

M21392/M21393

90° METRIC FEMALE SWEPT ELBOW MULTISEAL
DIN 20078/3868

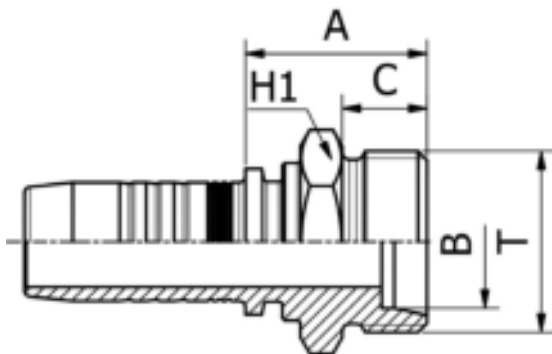


PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm				
	DN	Dash	inch	T	mm	B	A	C	E	H2
M21392-04-12	6	- 4	1/4"	M 12X1.5	6.0	4.0	28.0	4.0	30.5	17.0
M21392-06-16	10	- 6	3/8"	M 16X1.5	10.0	7.0	35.5	5.0	38.0	19.0
M21392-12-26	19	- 12	3/4"	M 26X1.5	18.0	15.0	61.5	2.3	63.0	32.0
M21393-03-12	5	- 3	3/16"	M 12X1.5	6.0	3.0	26.0	3.2	27.0	14.0
M21393-04-14	6	- 4	1/4"	M 14X1.5	8.0	4.0	29.5	3.0	29.5	17.0
M21393-04-16	6	- 4	1/4"	M 16X1.5	10.0	4.0	29.5	4.0	29.5	19.0
M21393-05-16	8	- 5	5/16"	M 16X1.5	10.0	5.5	32.0	4.0	29.0	19.0
M21393-05-18	8	- 5	5/16"	M 18X1.5	12.0	7.0	32.0	4.0	30.5	22.0
M21393-06-18	10	- 6	3/8"	M 18X1.5	12.0	7.0	36.5	4.0	31.5	22.0
M21393-06-22	10	- 6	3/8"	M 22X1.5	15.0	7.0	36.5	4.7	32.0	27.0
M21393-08-22	12	- 8	1/2"	M 22X1.5	15.0	9.3	45.0	4.7	36.5	27.0
M21393-10-26	16	- 10	5/8"	M 26X1.5	18.0	12.5	51.5	5.0	50.0	32.0

DIN STANDARD CONNECTIONS

M11110

METRIC MALE 24° CONE SEAT LIGHT DUTY
DIN 20066 / ISO 12151-2

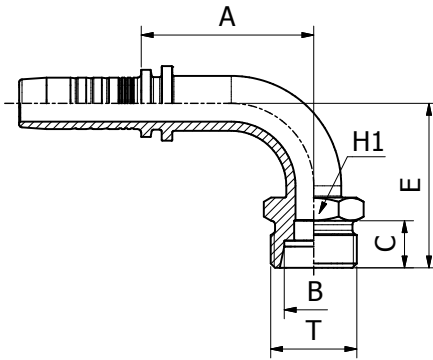


PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm				
	DN	Dash	inch	T	mm	B	A	C	H1	
M11110-03-12	5	- 3	3/16"	M 12X1.5	6.0	3.0	21.0	10.0	14.0	
M11110-04-12	6	- 4	1/4"	M 12X1.5	6.0	4.0	21.5	10.0	14.0	
M11110-04-14	6	- 4	1/4"	M 14X1.5	8.0	4.0	21.5	10.0	14.0	
M11110-04-16	6	- 4	1/4"	M 16X1.5	10.0	7.0	23.5	11.0	17.0	
M11110-04-18	6	- 4	1/4"	M 18X1.5	12.0	9.0	23.5	11.0	19.0	
M11110-05-16	8	- 5	5/16"	M 16X1.5	10.0	7.0	24.0	11.0	17.0	
M11110-05-18	8	- 5	5/16"	M 18X1.5	12.0	9.0	24.0	11.0	19.0	
M11110-06-16	10	- 6	3/8"	M 16X1.5	10.0	7.0	24.0	11.0	17.0	
M11110-06-18	10	- 6	3/8"	M 18X1.5	12.0	9.0	24.5	11.0	19.0	
M11110-06-22	10	- 6	3/8"	M 22X1.5	15.0	10.0	25.5	12.0	22.0	
M11110-06-26	10	- 6	3/8"	M 26X1.5	18.0	12.5	26.5	12.0	27.0	
M11110-08-16	12	- 8	1/2"	M 16X1.5	10.0	7.0	24.5	11.0	22.0	
M11110-08-18	12	- 8	1/2"	M 18X1.5	12.0	9.3	24.5	11.0	22.0	
M11110-08-22	12	- 8	1/2"	M 22X1.5	15.0	10.0	25.5	12.0	22.0	
M11110-08-26	12	- 8	1/2"	M 26X1.5	18.0	12.5	26.5	12.0	27.0	
M11110-10-22	16	- 10	5/8"	M 22X1.5	15.0	10.0	25.5	12.0	22.0	
M11110-10-26	16	- 10	5/8"	M 26X1.5	18.0	12.5	26.5	12.0	27.0	
M11110-10-30	16	- 10	5/8"	M 30X2	22.0	15.0	28.5	14.0	30.0	
M11110-12-26	19	- 12	3/4"	M 26X1.5	18.0	15.0	28.0	12.0	27.0	
M11110-12-30	19	- 12	3/4"	M 30X2	22.0	15.0	30.0	14.0	30.0	
M11110-12-36	19	- 12	3/4"	M 36X2	28.0	19.8	31.0	14.0	36.0	
M11110-16-36	25	- 16	1"	M 36X2	28.0	19.8	32.5	14.0	36.0	
M11110-20-45	31	- 20	1.1/4"	M 45X2	35.0	26.0	40.5	16.0	46.0	
M11110-24-52	38	- 24	1.1/2"	M 52X2	42.0	32.0	43.0	16.0	55.0	

DIN STANDARD CONNECTIONS

M11190

90° METRIC MALE 24° CONE SEAT LIGHT DUTY
 DIN 20066 / ISO 12151-2



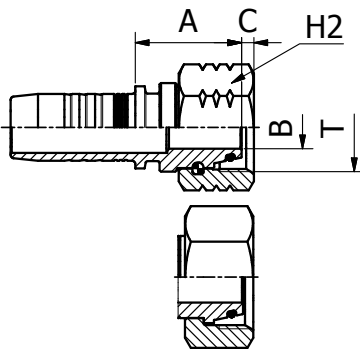
PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm				
	DN	Dash	inch			T	B	A	C	E
M11190-04-14	6	- 4	1/4"	M 14X1.5	8.0	4.0	27.0	10.0	33.0	14.0
M11190-06-18	10	- 6	3/8"	M 18X1.5	12.0	9.0	32.0	11.0	35.5	19.0

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DIN STANDARD CONNECTIONS

M21512/M21513

METRIC O-RING FEMALE
 24° CONE LIGHT DUTY
 DIN 20066 / ISO 12151-2



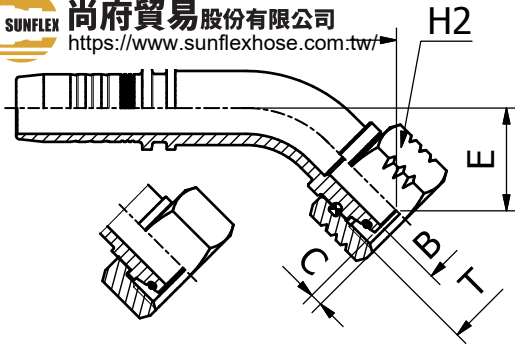
PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm				
	DN	Dash	inch			T	B	A	C	H2
M21512-04-12	6	- 4	1/4"	M 12X1.5	6.0	3.0	21.0	2.2	17.0	
M21512-05-14	8	- 5	5/16"	M 14X1.5	8.0	4.0	20.0	2.9	17.0	
M21512-06-16	10	- 6	3/8"	M 16X1.5	10.0	6.0	23.0	3.0	19.0	
M21512-08-18	12	- 8	1/2"	M 18X1.5	12.0	7.0	29.0	2.9	22.0	
M21512-10-18	16	- 10	5/8"	M 18X1.5	12.0	7.0	29.0	2.9	22.0	
M21512-10-22	16	- 10	5/8"	M 22X1.5	15.0	9.5	26.5	2.4	27.0	
M21512-12-22	19	- 12	3/4"	M 22X1.5	15.0	9.5	31.0	2.4	27.0	
M21512-12-26	19	- 12	3/4"	M 26X1.5	18.0	12.5	31.0	2.3	32.0	
M21512-16-30	25	- 16	1"	M 30X2	22.0	15.0	34.0	4.2	36.0	
M21512-20-36	31	- 20	1.1/4"	M 36X2	28.0	19.8	35.5	5.0	41.0	
M21512-24-45	38	- 24	1.1/2"	M 45X2	35.0	26.0	42.5	5.8	50.0	
M21512-32-52	51	- 32	2"	M 52X2	42.0	32.0	50.5	5.6	60.0	
M21513-03-12	5	- 3	3/16"	M 12X1.5	6.0	3.0	22.0	0.7	14.0	
M21513-03-14	5	- 3	3/16"	M 14X1.5	8.0	4.0	24.5	1.3	17.0	
M21513-04-14	6	- 4	1/4"	M 14X1.5	8.0	4.0	22.0	1.3	17.0	
M21513-04-16	6	- 4	1/4"	M 16X1.5	10.0	6.0	22.5	1.8	19.0	
M21513-04-18	6	- 4	1/4"	M 18X1.5	12.0	7.0	22.0	2.0	22.0	
M21513-05-16	8	- 5	5/16"	M 16X1.5	10.0	6.0	22.5	1.8	19.0	
M21513-05-18	8	- 5	5/16"	M 18X1.5	12.0	7.0	22.0	2.0	22.0	
M21513-06-18	10	- 6	3/8"	M 18X1.5	12.0	7.0	22.5	2.0	22.0	
M21513-06-22	10	- 6	3/8"	M 22X1.5	15.0	9.3	25.0	1.5	27.0	
M21513-08-22	12	- 8	1/2"	M 22X1.5	15.0	9.3	25.5	1.5	27.0	
M21513-08-26	12	- 8	1/2"	M 26X1.5	18.0	12.5	26.0	2.0	32.0	
M21513-10-26	16	- 10	5/8"	M 26X1.5	18.0	12.5	26.0	2.0	32.0	
M21513-10-30	16	- 10	5/8"	M 30X2	22.0	15.0	34.0	3.0	36.0	
M21513-10-36	16	- 10	5/8"	M 36X2	28.0	20.0	30.5	3.7	41.0	
M21513-12-30	19	- 12	3/4"	M 30X2	22.0	15.0	28.0	3.0	36.0	
M21513-12-36	19	- 12	3/4"	M 36X2	28.0	20.0	28.5	3.7	41.0	
M21513-16-36	25	- 16	1"	M 36X2	28.0	19.8	29.5	3.7	41.0	
M21513-16-45	25	- 16	1"	M 45X2	35.0	26.0	39.0	4.0	50.0	
M21513-20-45	31	- 20	1.1/4"	M 45X2	35.0	26.0	33.0	4.0	50.0	
M21513-20-52	31	- 20	1.1/4"	M 52X2	42.0	32.0	32.5	4.5	60.0	
M21513-24-52	38	- 24	1.1/2"	M 52X2	42.0	32.0	33.0	4.5	60.0	



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DIN STANDARD CONNECTIONS



M21542/M21543

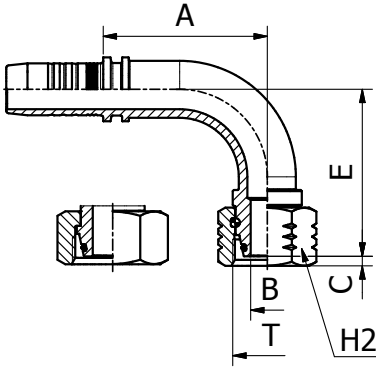
**45° METRIC O-RING FEMALE SWEPT ELBOW
 24° CONE LIGHT DUTY
 DIN 20066 / ISO 12151-2**

PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm					
	DN	Dash	inch	T	mm	B	A	C	E	H2	
M21542-04-12	6	- 4	1/4"	M 12X1.5	6.0	3.0	39.0	2.2	18.0	17.0	
M21542-06-16	10	- 6	3/8"	M 16X1.5	10.0	6.0	47.5	3.0	21.5	19.0	
M21542-08-18	12	- 8	1/2"	M 18X1.5	12.0	7.0	56.5	2.9	25.0	22.0	
M21542-10-22	16	- 10	5/8"	M 22X1.5	15.0	9.3	65.5	3.0	29.0	27.0	
M21542-12-26	19	- 12	3/4"	M 26X1.5	18.0	12.5	73.0	2.3	31.0	32.0	
M21542-20-36	31	- 20	1.1/4"	M 36X2	28.0	19.8	107.5	5.0	44.0	41.0	
M21542-24-36	38	- 24	1.1/2"	M 36X2	28.0	19.8	113.0	5.0	34.5	41.0	
M21543-03-12	5	- 3	3/16"	M 12X1.5	6.0	3.0	35.0	0.7	16.0	14.0	
M21543-04-14	6	- 4	1/4"	M 14X1.5	8.0	4.0	38.0	1.3	16.5	17.0	
M21543-04-16	6	- 4	1/4"	M 16X1.5	10.0	6.0	38.0	1.8	17.0	19.0	
M21543-04-18	6	- 4	1/4"	M 18X1.5	12.0	7.0	38.5	2.0	17.5	22.0	
M21543-05-16	8	- 5	5/16"	M 16X1.5	10.0	6.0	41.5	1.8	17.5	19.0	
M21543-05-18	8	- 5	5/16"	M 18X1.5	12.0	7.0	41.5	2.0	17.0	22.0	
M21543-06-18	10	- 6	3/8"	M 18X1.5	12.0	7.0	43.5	2.0	16.5	22.0	
M21543-06-22	10	- 6	3/8"	M 22X1.5	15.0	9.3	45.0	1.5	18.0	27.0	
M21543-08-22	12	- 8	1/2"	M 22X1.5	15.0	9.3	52.0	1.5	19.0	27.0	
M21543-08-26	12	- 8	1/2"	M 26X1.5	18.0	12.5	52.5	2.0	19.5	32.0	
M21543-10-26	16	- 10	5/8"	M 26X1.5	18.0	12.5	62.0	2.0	26.5	32.0	
M21543-12-30	19	- 12	3/4"	M 30X2	22.0	15.0	71.0	3.0	28.5	36.0	
M21543-12-36	19	- 12	3/4"	M 36X2	28.0	19.8	72.0	3.7	30.0	41.0	
M21543-16-36	25	- 16	1"	M 36X2	28.0	19.8	85.0	3.7	32.0	41.0	
M21543-20-45	31	- 20	1.1/4"	M 45X2	35.0	26.0	100.0	4.0	36.0	50.0	
M21543-20-52	31	- 20	1.1/4"	M 52X2	42.0	32.0	100.0	4.5	42.0	60.0	
M21543-24-52	38	- 24	1.1/2"	M 52X2	42.0	32.0	117.0	4.5	44.5	60.0	

DIN STANDARD CONNECTIONS

M21592/M21593

**90° METRIC O-RING FEMALE SWEPT ELBOW
 24° CONE LIGHT DUTY
 DIN 20066 / ISO 12151-2**



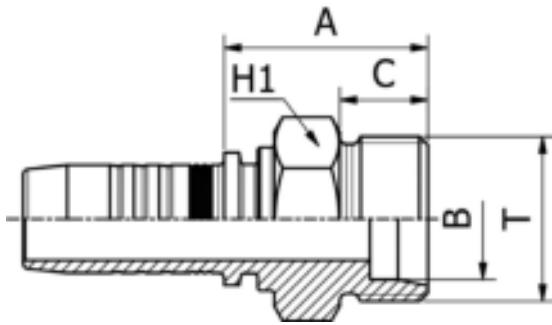
PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm						
	DN	Dash	inch	T	mm	B	A	C	E	H2		
M21592-04-12	6	- 4	1/4"	M 12X1.5	6.0	3.0	28.5	2.2	32.5	17.0		
M21592-05-14	8	- 5	5/16"	M 14X1.5	8.0	4.0	31.0	2.9	33.0	17.0		
M21592-06-16	10	- 6	3/8"	M 16X1.5	10.0	6.0	35.5	3.0	40.0	19.0		
M21592-08-18	12	- 8	1/2"	M 18X1.5	12.0	7.0	44.0	2.9	48.0	22.0		
M21592-10-22	16	- 10	5/8"	M 22X1.5	15.0	9.3	53.5	3.0	57.5	27.0		
M21592-12-26	19	- 12	3/4"	M 26X1.5	18.0	12.5	61.5	2.3	63.0	32.0		
M21592-16-30	25	- 16	1"	M 30X2	22.0	15.0	79.5	4.2	80.5	36.0		
M21592-20-36	31	- 20	1.1/4"	M 36X2	28.0	19.8	93.5	5.0	92.0	41.0		
M21592-24-36	38	- 24	1.1/2"	M 36X2	28.0	19.8	97.0	5.0	68.0	41.0		
M21592-32-52	51	- 32	2"	M 52X2	42.0	32.0	131.0	5.6	119.0	60.0		
M21593-03-12	5	- 3	3/16"	M 12X1.5	6.0	3.0	26.0	0.7	30.0	14.0		
M21593-03-14	5	- 3	3/16"	M 14X1.5	8.0	4.0	29.0	1.3	31.5	17.0		
M21593-04-14	6	- 4	1/4"	M 14X1.5	8.0	4.0	29.5	1.3	31.5	17.0		
M21593-04-16	6	- 4	1/4"	M 16X1.5	10.0	6.0	29.5	1.8	32.0	19.0		
M21593-04-18	6	- 4	1/4"	M 18X1.5	12.0	7.0	29.5	2.0	33.0	22.0		
M21593-05-16	8	- 5	5/16"	M 16X1.5	10.0	6.0	32.0	1.8	32.5	19.0		
M21593-05-18	8	- 5	5/16"	M 18X1.5	12.0	7.0	32.0	2.0	32.5	22.0		
M21593-05-22	8	- 5	5/16"	M 22X1.5	15.0	9.3	36.0	1.5	35.0	27.0		
M21593-06-18	10	- 6	3/8"	M 18X1.5	12.0	7.0	36.5	2.0	33.5	22.0		
M21593-06-22	10	- 6	3/8"	M 22X1.5	15.0	9.3	36.5	1.5	35.0	27.0		
M21593-08-22	12	- 8	1/2"	M 22X1.5	15.0	9.3	45.0	1.5	39.5	27.0		
M21593-08-26	12	- 8	1/2"	M 26X1.5	18.0	12.5	45.0	2.0	40.0	32.0		
M21593-10-26	16	- 10	5/8"	M 26X1.5	18.0	12.5	51.5	2.0	53.0	32.0		
M21593-10-30	16	- 10	5/8"	M 30X2	22.0	15.0	51.5	3.0	54.0	36.0		
M21593-12-30	19	- 12	3/4"	M 30X2	22.0	15.0	61.5	3.0	59.5	36.0		
M21593-12-36	19	- 12	3/4"	M 36X2	28.0	19.8	61.5	3.7	61.0	41.0		
M21593-16-36	25	- 16	1"	M 36X2	28.0	19.8	76.5	3.7	69.5	41.0		
M21593-16-45	25	- 16	1"	M 45X2	35.0	26.0	79.0	4.0	72.0	50.0		
M21593-20-45	31	- 20	1.1/4"	M 45X2	35.0	26.0	93.5	4.0	81.0	50.0		
M21593-24-52	38	- 24	1.1/2"	M 52X2	42.0	32.0	107.5	4.5	98.0	60.0		

FITTINGS 160



DIN STANDARD CONNECTIONS

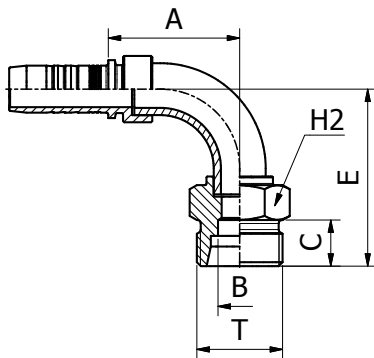
M11210



**METRIC MALE 24° CONE SEAT HEAVY DUTY
DIN 20066 / ISO 12151-2**

PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm						
	DN	Dash	inch			T	mm	B	A	C	H1	
M11210-04-16	6	- 4	1/4"	M 16X1.5	8.0	5.5	25.5	12.0	17.0			
M11210-04-18	6	- 4	1/4"	M 18X1.5	10.0	6.0	26.5	12.0	19.0			
M11210-04-20	6	- 4	1/4"	M 20X1.5	12.0	7.0	29.0	12.0	22.0			
M11210-05-16	8	- 5	5/16"	M 16X1.5	8.0	5.5	26.0	12.0	17.0			
M11210-05-18	8	- 5	5/16"	M 18X1.5	10.0	7.0	26.5	12.0	19.0			
M11210-05-20	8	- 5	5/16"	M 20X1.5	12.0	7.0	29.0	12.0	22.0			
M11210-06-18	10	- 6	3/8"	M 18X1.5	10.0	7.0	27.0	12.0	19.0			
M11210-06-20	10	- 6	3/8"	M 20X1.5	12.0	7.0	29.0	12.0	22.0			
M11210-06-22	10	- 6	3/8"	M 22X1.5	14.0	8.0	31.0	14.0	22.0			
M11210-08-20	12	- 8	1/2"	M 20X1.5	12.0	9.3	29.5	12.0	22.0			
M11210-08-22	12	- 8	1/2"	M 22X1.5	14.0	9.3	31.5	14.0	22.0			
M11210-08-24	12	- 8	1/2"	M 24X1.5	16.0	9.3	31.5	14.0	24.0			
M11210-10-30	16	- 10	5/8"	M 30X2	20.0	15.0	35.5	16.0	30.0			
M11210-10-36	16	- 10	5/8"	M 36X2	25.0	19.8	40.0	18.0	36.0			
M11210-12-30	19	- 12	3/4"	M 30X2	20.0	15.0	37.0	16.0	30.0			
M11210-12-36	19	- 12	3/4"	M 36X2	25.0	19.8	41.0	18.0	36.0			
M11210-16-36	25	- 16	1"	M 36X2	25.0	19.8	42.5	18.0	36.0			
M11210-16-42	25	- 16	1"	M 42X2	30.0	25.0	44.5	20.0	46.0			
M11210-20-52	31	- 20	1.1/4"	M 52X2	38.0	30.0	51.0	22.0	55.0			

161 FITTINGS



DIN STANDARD CONNECTIONS

M11290

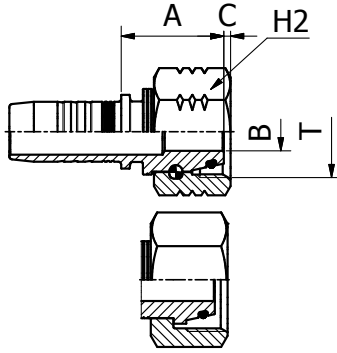
**90° METRIC MALE 24° CONE SEAT HEAVY DUTY
DIN 20066 / ISO 12151-2**

PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm						
	DN	Dash	inch			T	mm	B	A	C	E	H1
M11290-05-20	8	- 5	5/16"	M 20X1.5	12.0	7.0	29.0	12.0	36.5	22.0		
M11290-10-30	16	- 10	5/8"	M 30X2	20.0	15.0	45.5	16.0	61.5	30.0		

DIN STANDARD CONNECTIONS

M21612/M21613

**METRIC O-RING FEMALE
 24° CONE HEAVY DUTY
 DIN 20066 / ISO 12151-2**



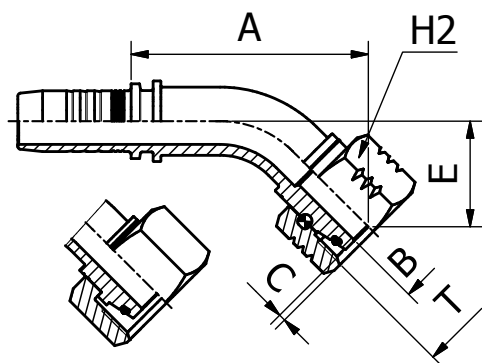
PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm						
	DN	Dash	inch	T	mm	B	A	C	H2			
M21612-08-20	12	- 8	1/2"	M 20X1.5	12.0	7.0	29.0	2.5	24.0			
M21612-08-22	12	- 8	1/2"	M 22X1.5	14.0	7.0	27.0	2.5	27.0			
M21612-10-24	16	- 10	5/8"	M 24X1.5	16.0	9.3	29.5	4.0	30.0			
M21612-12-24	19	- 12	3/4"	M 24X1.5	16.0	9.3	30.5	4.0	30.0			
M21612-12-30	19	- 12	3/4"	M 30X2	20.0	12.5	33.5	2.2	36.0			
M21612-16-30	25	- 16	1"	M 30X2	20.0	12.5	34.5	2.2	36.0			
M21612-16-36	25	- 16	1"	M 36X2	25.0	15.0	35.5	1.7	41.0			
M21613-03-14	5	- 3	3/16"	M 14X1.5	6.0	2.5	25.5	3.5	17.0			
M21613-03-16	5	- 3	3/16"	M 16X1.5	8.0	3.0	21.5	3.4	19.0			
M21613-04-14	6	- 4	1/4"	M 14X1.5	6.0	3.0	23.5	1.9	17.0			
M21613-04-16	6	- 4	1/4"	M 16X1.5	8.0	4.0	22.0	3.4	19.0			
M21613-04-18	6	- 4	1/4"	M 18X1.5	10.0	4.0	28.0	2.5	22.0			
M21613-04-20	6	- 4	1/4"	M 20X1.5	12.0	7.0	26.0	2.0	24.0			
M21613-05-18	8	- 5	5/16"	M 18X1.5	10.0	5.5	28.0	2.5	22.0			
M21613-05-20	8	- 5	5/16"	M 20X1.5	12.0	5.5	25.0	2.0	24.0			
M21613-06-18	10	- 6	3/8"	M 18X1.5	10.0	7.0	28.5	2.5	22.0			
M21613-06-20	10	- 6	3/8"	M 20X1.5	12.0	7.0	25.5	2.0	24.0			
M21613-06-22	10	- 6	3/8"	M 22X1.5	14.0	7.0	32.5	3.0	27.0			
M21613-06-24	10	- 6	3/8"	M 24X1.5	16.0	7.0	32.0	4.0	30.0			
M21613-08-24	12	- 8	1/2"	M 24X1.5	16.0	9.3	26.5	4.0	30.0			
M21613-08-30	12	- 8	1/2"	M 30X2	20.0	12.5	37.0	3.5	36.0			
M21613-10-30	16	- 10	5/8"	M 30X2	20.0	12.5	30.5	3.5	36.0			
M21613-10-36	16	- 10	5/8"	M 36X2	25.0	15.0	40.0	4.5	41.0			
M21613-12-36	19	- 12	3/4"	M 36X2	25.0	15.0	34.0	4.5	41.0			
M21613-16-42	25	- 16	1"	M 42X2	30.0	19.8	35.5	6.3	50.0			
M21613-20-52	31	- 20	1.1/4"	M 52X2	38.0	26.0	37.5	8.0	60.0			
M21613-24-52	38	- 24	1.1/2"	M 52X2	38.0	26.0	49.5	8.0	60.0			

FITTINGS
162

DIN STANDARD CONNECTIONS

M21642/M21643

45° METRIC O-RING FEMALE SWEPT ELBOW
 24° CONE HEAVY DUTY
 DIN 20066 / ISO 12151-2

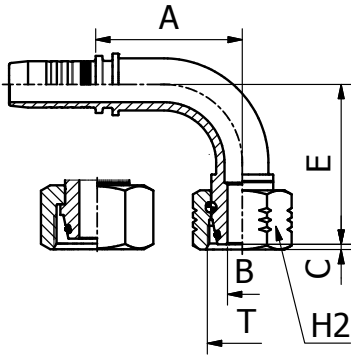


PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm						
	DN	Dash	inch			T	mm	B	A	C	E	H2
M21642-06-18	10	- 6	3/8"	M 18X1.5	10.0	4.0	49.0	3.9	23.0	22.0		
M21642-08-22	12	- 8	1/2"	M 22X1.5	14.0	7.0	57.5	2.5	25.5	27.0		
M21642-12-30	19	- 12	3/4"	M 30X2	20.0	12.5	76.5	2.2	34.0	36.0		
M21642-16-36	25	- 16	1"	M 36X2	25.0	15.0	98.0	1.7	43.5	41.0		
M21642-24-52	38	- 24	1 1/2"	M 52X2	38.0	24.7	111.0	8.8	48.0	60.0		
M21643-04-14	6	- 4	1/4"	M 14X1.5	6.0	3.0	38.5	1.9	17.5	17.0		
M21643-04-16	6	- 4	1/4"	M 16X1.5	8.0	4.0	36.5	3.4	15.0	19.0		
M21643-04-18	6	- 4	1/4"	M 18X1.5	10.0	4.0	37.5	2.5	16.5	22.0		
M21643-05-18	8	- 5	5/16"	M 18X1.5	10.0	4.0	42.5	2.5	18.0	22.0		
M21643-05-20	8	- 5	5/16"	M 20X1.5	12.0	5.5	42.0	2.0	18.5	24.0		
M21643-06-20	10	- 6	3/8"	M 20X1.5	12.0	7.0	45.0	2.5	18.0	24.0		
M21643-06-22	10	- 6	3/8"	M 22X1.5	14.0	7.0	45.5	3.0	18.5	27.0		
M21643-08-24	12	- 8	1/2"	M 24X1.5	16.0	9.3	52.5	4.0	20.0	30.0		
M21643-10-30	16	- 10	5/8"	M 30X2	20.0	12.5	65.5	3.5	29.5	36.0		
M21643-12-36	19	- 12	3/4"	M 36X2	25.0	15.0	75.0	4.5	32.5	41.0		
M21643-16-42	25	- 16	1"	M 42X2	30.0	19.8	90.0	6.3	35.5	50.0		
M21643-20-52	31	- 20	1 1/4"	M 52X2	38.0	26.0	103.0	8.0	39.5	60.0		

DIN STANDARD CONNECTIONS

M21692/M21693

**90° METRIC O-RING FEMALE SWEPT ELBOW
 24° CONE HEAVY DUTY
 DIN 20066 / ISO 12151-2**

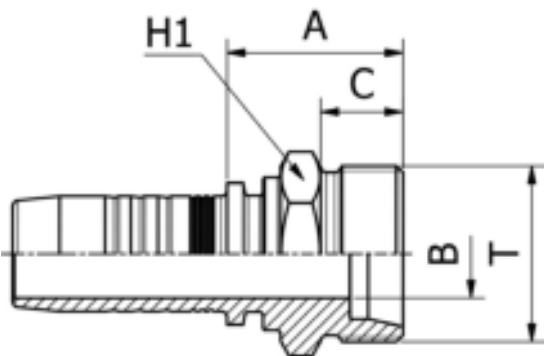


PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm				
	DN	Dash	inch	T	mm	B	A	C	E	H2
M21692-06-18	10	- 6	3/8"	M 18X1.5	10.0	4.0	35.5	3.9	42.5	22.0
M21692-08-22	12	- 8	1/2"	M 22X1.5	14.0	7.0	44.0	2.5	48.5	27.0
M21692-10-24	16	- 10	5/8"	M 24X1.5	16.0	9.3	53.5	4.0	58.5	30.0
M21692-12-30	19	- 12	3/4"	M 30X2	20.0	12.5	61.5	2.2	67.5	36.0
M21692-16-36	25	- 16	1"	M 36X2	25.0	15.0	79.5	1.7	86.0	41.0
M21692-24-52	38	- 24	1.1/2"	M 52X2	38.0	24.7	91.5	8.8	95.5	60.0
M21693-03-14	5	- 3	3/16"	M 14X1.5	6.0	3.0	26.0	3.5	30.0	17.0
M21693-03-16	5	- 3	3/16"	M 16X1.5	8.0	3.0	26.0	3.4	29.5	19.0
M21693-04-14	6	- 4	1/4"	M 14X1.5	6.0	3.0	29.5	1.9	32.5	17.0
M21693-04-16	6	- 4	1/4"	M 16X1.5	8.0	4.0	29.5	3.4	29.5	19.0
M21693-04-18	6	- 4	1/4"	M 18X1.5	10.0	4.0	29.5	2.5	31.0	22.0
M21693-04-20	6	- 4	1/4"	M 20X1.5	12.0	5.5	29.5	2.0	34.5	24.0
M21693-05-18	8	- 5	5/16"	M 18X1.5	10.0	4.0	32.0	2.5	33.5	22.0
M21693-05-20	8	- 5	5/16"	M 20X1.5	12.0	5.5	32.0	2.0	34.0	24.0
M21693-06-20	10	- 6	3/8"	M 20X1.5	12.0	7.0	36.5	2.0	35.0	24.0
M21693-06-22	10	- 6	3/8"	M 22X1.5	14.0	7.0	36.5	3.0	37.0	27.0
M21693-06-24	10	- 6	3/8"	M 24X1.5	16.0	9.3	36.5	4.0	36.0	30.0
M21693-08-24	12	- 8	1/2"	M 24X1.5	16.0	9.3	45.0	4.0	40.5	30.0
M21693-08-30	12	- 8	1/2"	M 30X2	20.0	12.5	45.0	3.5	44.5	36.0
M21693-10-30	16	- 10	5/8"	M 30X2	20.0	12.5	51.5	3.5	57.5	36.0
M21693-12-36	19	- 12	3/4"	M 36X2	25.0	15.0	61.5	4.5	64.5	41.0
M21693-16-42	25	- 16	1"	M 42X2	30.0	19.8	79.0	6.3	74.5	50.0
M21693-20-52	31	- 20	1.1/4"	M 52X2	38.0	26.0	93.5	8.0	85.5	60.0

NF STANDARD CONNECTIONS

M11710

**FRENCH METRIC MALE
 24° CONE SEAT MILLIMETRIC TYPE**



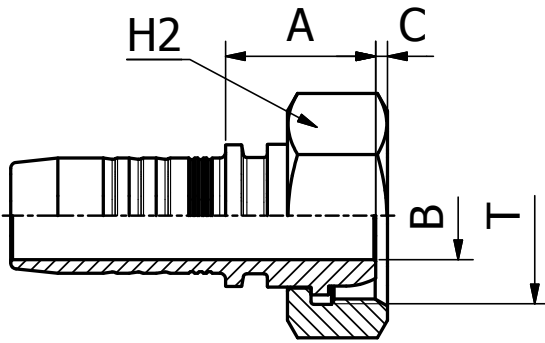
PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm			
	DN	Dash	inch	T	mm	B	A	C	H1
M11710-10-2718	16	- 10	5/8"	M 27X1.5	18.0	12.5	28.5	14.0	28.0
M11710-10-2720	16	- 10	5/8"	M 27X1.5	20.0	12.5	28.5	14.0	28.0
M11710-12-30	19	- 12	3/4"	M 30X1.5	22.0	15.0	30.0	14.0	30.0
M11710-12-33	19	- 12	3/4"	M 33X1.5	25.0	15.0	31.0	14.0	34.0



NF STANDARD CONNECTIONS

M21713

**FRENCH METRIC FEMALE
MILLIMETRIC TYPE (SLIP-ON NUT)**

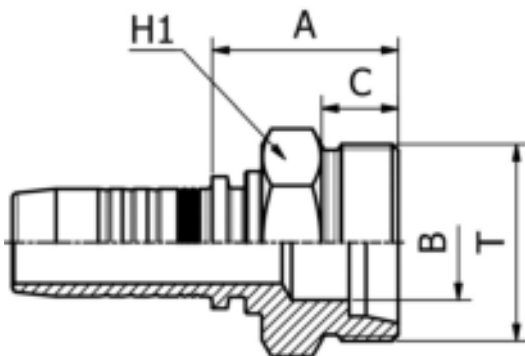


PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm						
	DN	Dash	inch			T	B	A	C	H2		
M21713-10-2718	16	-10	5/8"	M 27X1.5	18	12.5	21.5	5.0	32.0			
M21713-10-2720	16	-10	5/8"	M 27X1.5	20	12.5	21.5	5.0	32.0			
M21713-12-30	19	-12	3/4"	M 30X1.5	22	15.0	25.5	2.0	36.0			
M21713-12-33	19	-12	3/4"	M 33X1.5	25	15.0	25.5	2.0	38.0			
M21713-16-36	25	-16	1"	M 36X1.5	28	19.8	28.0	4.7	41.0			
M21713-16-39	25	-16	1"	M 39X1.5	30	19.8	28.5	4.2	46.0			

NF STANDARD CONNECTIONS

M11810

**FRENCH METRIC MALE
24° CONE SEAT GAZ TYPE**

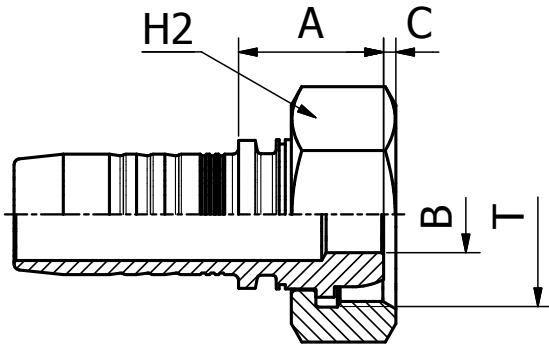


PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm						
	DN	Dash	inch			T	B	A	C	H1		
M11810-05-20	8	- 5	5/16"	M 20X1.5	13.25	8.0	27.0	12.0	22.0			
M11810-06-20	10	- 6	3/8"	M 20X1.5	13.25	8.0	27.5	12.0	22.0			
M11810-06-24	10	- 6	3/8"	M 24X1.5	16.75	12.0	28.0	12.0	24.0			
M11810-08-24	12	- 8	1/2"	M 24X1.5	16.75	12.0	28.5	12.0	24.0			
M11810-10-30	16	- 10	5/8"	M 30X1.5	21.25	15.0	31.5	14.0	30.0			
M11810-12-36	19	- 12	3/4"	M 36X1.5	26.75	21.0	34.0	14.0	36.0			
M11810-16-45	25	- 16	1"	M 45X1.5	33.5	26.0	39.5	16.0	46.0			

NF STANDARD CONNECTIONS

M21813

**FRENCH METRIC FEMALE
 GAZ TYPE (SLIP-ON NUT)**

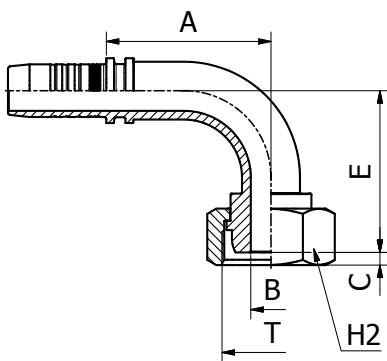


PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm					
	DN	Dash	inch			T	B	A	C	H2	
M21813-04-20	6	-4	1/4"	M 20X1.5	13.25	7.0	22.0	4.0	24.0		
M21813-05-20	8	-5	5/16"	M 20X1.5	13.25	7.0	22.0	4.0	24.0		
M21813-06-20	10	-6	3/8"	M 20X1.5	13.25	7.0	22.5	4.0	24.0		
M21813-06-24	10	-6	3/8"	M 24X1.5	16.75	9.3	25.5	3.5	30.0		
M21813-08-24	12	-8	1/2"	M 24X1.5	16.75	9.3	26.0	3.5	30.0		
M21813-08-30	12	-8	1/2"	M 30X1.5	21.25	12.5	23.5	2.0	36.0		
M21813-10-30	16	-10	5/8"	M 30X1.5	21.25	12.5	23.5	2.0	36.0		
M21813-12-36	19	-12	3/4"	M 36X1.5	26.75	15.0	27.0	4.7	41.0		
M21813-16-45	25	-16	1"	M 45X1.5	33.5	19.8	27.0	4.5	50.0		

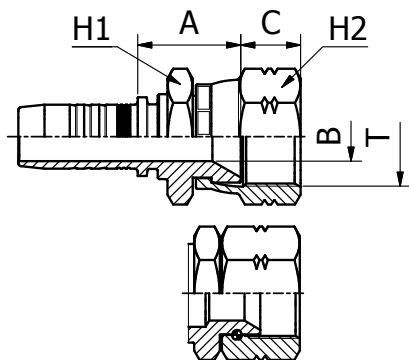
NF STANDARD CONNECTIONS

M21893

**90° FRENCH METRIC FEMALE
 GAZ TYPE (SLIP-ON NUT)**



PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm					
	DN	Dash	inch			T	B	A	C	E	H2
M21893-05-20	8	-5	5/16"	M 20X1.5	13.25	7.0	32.0	4.0	29.5	24.0	
M21893-06-20	10	-6	3/8"	M 20X1.5	13.25	7.0	36.5	4.0	33.5	24.0	
M21893-08-24	12	-8	1/2"	M 24X1.5	16.75	12.0	45.0	3.5	41.0	30.0	
M21893-10-30	16	-10	5/8"	M 30X1.5	21.25	12.5	51.5	2.0	53.5	36.0	
M21893-12-36	19	-12	3/4"	M 36X1.5	26.75	15.0	61.5	4.7	60.0	41.0	

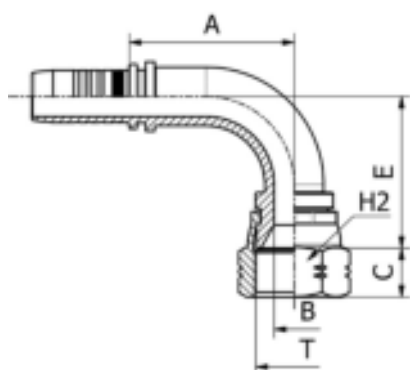


JIS STANDARD CONNECTIONS

M24011/M24012

**JIS METRIC FEMALE 60° CONE SEAT
 (KOMATSU) JIS B 8363**

PART. REF.	HOSE BORE			Thread	T	DIMENSIONS mm					
	DN	Dash	inch			B	A	C	H1	H2	
M24011-04-14	6	- 4	1/4"	M 14X1.5		4.0	23.0	10.5	19.0	19.0	
M24011-04-18	6	- 4	1/4"	M 18X1.5		7.0	22.5	11.5	24.0	24.0	
M24011-05-16	8	- 5	5/16"	M 16X1.5		5.5	22.5	9.3	21.0	21.0	
M24011-06-14	10	- 6	3/8"	M 14X1.5		4.0	23.5	10.5	19.0	19.0	
M24011-06-18	10	- 6	3/8"	M 18X1.5		7.0	23.5	11.5	24.0	24.0	
M24011-08-22	12	- 8	1/2"	M 22X1.5		9.3	25.0	13.0	27.0	27.0	
M24011-10-24	16	- 10	5/8"	M 24X1.5		12.5	26.5	15.1	32.0	32.0	
M24011-12-30	19	- 12	3/4"	M 30X1.5		15.0	31.5	18.3	36.0	36.0	
M24011-16-33	25	- 16	1"	M 33X1.5		19.8	33.5	21.3	41.0	41.0	
M24011-20-36	31	- 20	1.1/4"	M 36X1.5		19.8	41.0	20.0	46.0	46.0	
M24012-24-42	38	- 24	1.1/2"	M 42X1.5		26.0	44.0	18.8	55.0	55.0	



JIS STANDARD CONNECTIONS

M24091

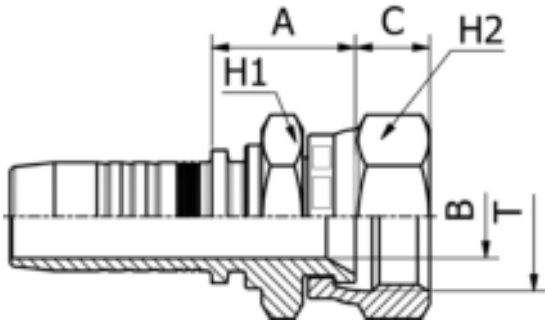
90° JIS METRIC FEMALE 60° CONE SEAT

PART. REF.	HOSE BORE			Thread	T	DIMENSIONS mm				
	DN	Dash	inch			B	A	C	E	H2
M24091-04-14	6	- 4	1/4"	M 14X1.5		4.0	29.0	10.5	28.5	19.0
M24091-06-18	10	- 6	3/8"	M 18X1.5		7.0	35.5	11.5	34.0	24.0
M24091-08-22	12	- 8	1/2"	M 22X1.5		9.3	44.0	13.0	40.0	27.0
M24091-10-24	16	- 10	5/8"	M 24X1.5		12.5	53.5	15.2	47.0	32.0
M24091-12-30	19	- 12	3/4"	M 30X1.5		15.0	61.5	18.3	56.5	36.0

JIS STANDARD CONNECTIONS

M23811

JIS BSP FEMALE 60° CONE SEAT
 (TOYOTA) - JIS B 8363
 (CRIMPED-BACK NUT)



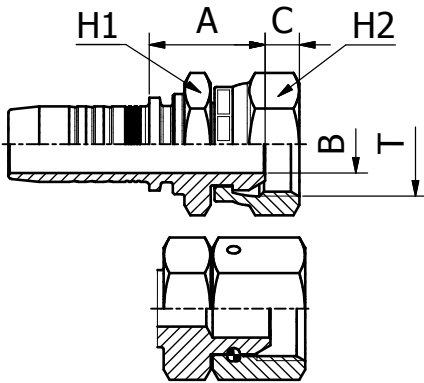
PART. REF.	HOSE BORE			Thread	DIMENSIONS mm					
	DN	Dash	inch		T	B	A	C	H1	H2
M23811-04-04	6	- 4	1/4"	1/4" - 19	4.0	18.5	8.3	19.0	19.0	
M23811-06-06	10	- 6	3/8"	3/8" - 19	7.0	23.0	10.0	22.0	22.0	
M23811-08-08	12	- 8	1/2"	1/2" - 14	9.3	22.0	11.5	27.0	27.0	
M23811-12-12	19	- 12	3/4"	3/4" - 14	15.0	26.0	13.5	32.0	32.0	
M23811-16-16	25	- 16	1"	1" - 11	19.8	30.5	14.5	38.0	38.0	

FITTINGS 168

JIS STANDARD CONNECTIONS

M20711/M20712

JIS BSP FEMALE 60° CONE
 (NISSAN) - JIS B 8363



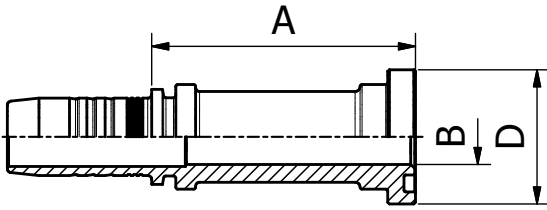
PART. REF.	HOSE BORE			Thread	DIMENSIONS mm					
	DN	Dash	inch		T	B	A	C	H1	H2
M20711-04-04	6	- 4	1/4"	1/4" - 19	4.0	22.5	4.5	19.0	19.0	
M20711-06-06	10	- 6	3/8"	3/8" - 19	7.0	24.5	6.4	22.0	22.0	
M20711-08-08	12	- 8	1/2"	1/2" - 14	9.3	26.5	6.7	27.0	27.0	
M20711-12-12	19	- 12	3/4"	3/4" - 14	15.0	30.0	8.9	32.0	32.0	
M20712-10-08	16	- 10	5/8"	1/2" - 14	9.3	29.0	6.5	27.0	27.0	
M20712-10-12	16	- 10	5/8"	3/4" - 14	15.0	30.5	9.0	32.0	32.0	
M20712-16-16	25	- 16	1"	1" - 11	19.8	35.5	10.5	38.0	38.0	
M20712-20-20	31	- 20	1.1/4"	1.1/4" - 11	26.0	44.5	12.5	50.0	50.0	



ORIGINAL EQUIPMENT CONNECTIONS

M24111

STRAIGHT KOMATSU FLANGE

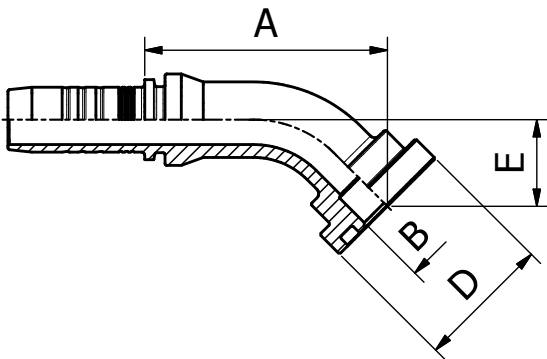


PART. REF.	HOSE BORE			FLANGE		DIMENSIONS mm						
	DN	Dash	inch			inch	B	A	D			
M24111-08-10	12	-8	1/2"	5/8"		14.0	66.0	34.0				
M24111-10-10	16	-10	5/8"	5/8"		14.0	65.5	34.0				
M24111-12-10	19	-12	3/4"	5/8"		14.0	66.5	34.0				

ORIGINAL EQUIPMENT CONNECTIONS

M24141

45° KOMATSU FLANGE

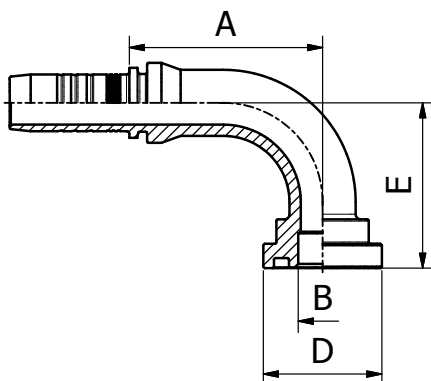


PART. REF.	HOSE BORE			FLANGE		DIMENSIONS mm						
	DN	Dash	inch			inch	B	A	C	H1	H2	
M24141-10-10	16	-10	5/8"	5/8"		14.0	61.0	34.0	22.0			

ORIGINAL EQUIPMENT CONNECTIONS

M24191

90° KOMATSU FLANGE

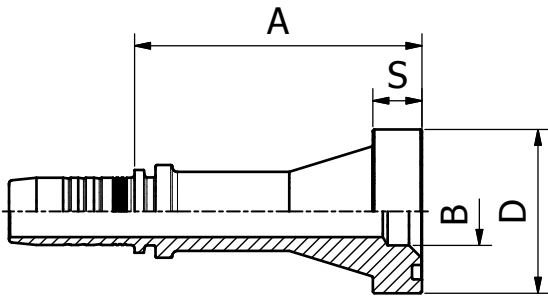


PART. REF.	HOSE BORE			FLANGE		DIMENSIONS mm						
	DN	Dash	inch			inch	B	A	C	H1	H2	
M24191-10-10	16	-10	5/8"	5/8"		14.0	56.0	34.0	47.5			
M24191-12-10	19	-12	3/4"	5/8"		14.0	56.0	34.0	47.5			

ORIGINAL EQUIPMENT CONNECTIONS

M23911

STRAIGHT SUPERCAT FLANGE

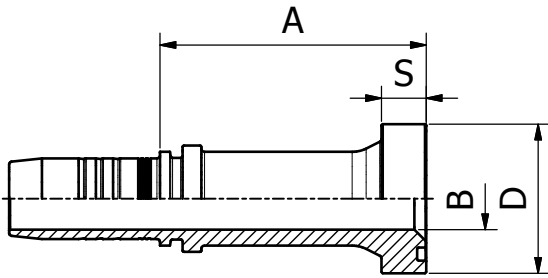


PART. REF.	HOSE BORE			FLANGE	DIMENSIONS mm						
	DN	Dash	inch	inch	B	A	D	S			
M23911-12-12	19	-12	3/4"	3/4"	15.0	74.5	41.5	14.3			
M23911-12-16	19	-12	3/4"	1"	19.8	83.5	47.7	14.3			
M23911-16-16	25	-16	1"	1"	19.8	87.0	47.7	14.3			
M23911-16-20	25	-16	1"	1.1/4"	26.0	92.5	54.0	14.3			
M23911-20-20	31	-20	1.1/4"	1.1/4"	26.0	86.0	54.0	14.3			
M23911-24-24	38	-24	1.1/2"	1.1/2"	32.0	94.0	63.6	14.3			

ORIGINAL EQUIPMENT CONNECTIONS

M23911CT

STRAIGHT REALCAT FLANGE



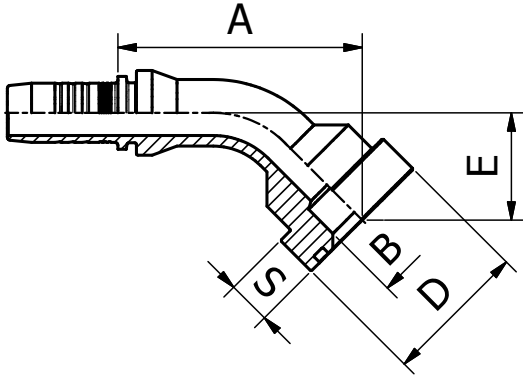
PART. REF.	HOSE BORE			FLANGE	DIMENSIONS mm						
	DN	Dash	inch	inch	B	A	D	S			
M23911-16-16CT	25	-16	1"	1"	19.8	85.0	47.7	14.3			
M23911-20-20CT	31	-20	1.1/4"	1.1/4"	26.0	88.5	54.0	14.3			
M23911-24-24CT	38	-24	1.1/2"	1.1/2"	32.0	93.0	63.6	14.3			



ORIGINAL EQUIPMENT CONNECTIONS

M23941

45° SUPERCAT FLANGE

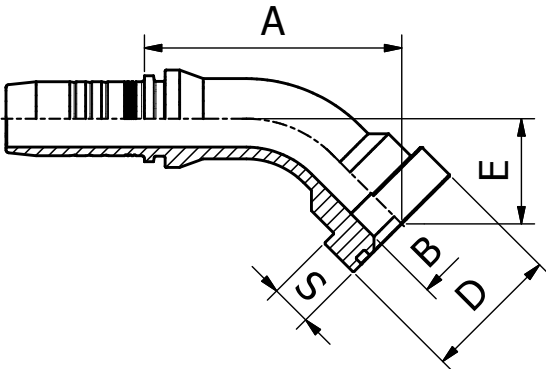


PART. REF.	HOSE BORE			FLANGE	DIMENSIONS mm						
	DN	Dash	inch	inch	B	A	D	E	S		
M23941-12-12	19	-12	3/4"	3/4"	15.0	77.0	41.5	32.0	14.3		
M23941-16-16	25	-16	1"	1"	19.8	89.5	47.7	36.5	14.3		
M23941-16-20	25	-16	1"	1"	26.0	92.5	54.0	40.5	14.3		
M23941-20-20	31	-20	1.1/4"	1.1/4"	26.0	99.0	54.0	41.5	14.3		
M23941-24-24	38	-24	1.1/2"	1.1/2"	32.0	119.0	63.6	45.5	14.3		

ORIGINAL EQUIPMENT CONNECTIONS

M23941CT

45° REALCAT FLANGE

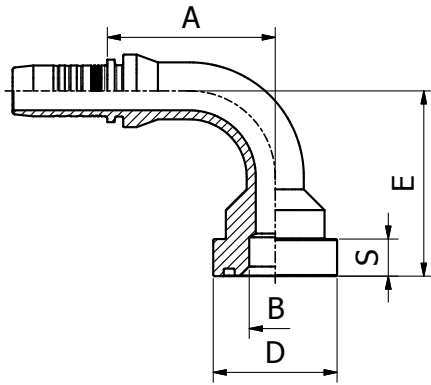


PART. REF.	HOSE BORE			FLANGE	DIMENSIONS mm						
	DN	Dash	inch	inch	B	A	D	E	S		
M23941-16-16CT	25	-16	1"	1"	19.8	89.5	47.7	36.5	14.3		
M23941-16-20CT	25	-16	1"	1.1/4"	26.0	93.0	54.0	40.5	14.3		
M23941-20-20CT	31	-20	1.1/4"	1.1/4"	26.0	99.0	54.0	41.5	14.3		
M23941-24-24CT	38	-24	1.1/2"	1.1/2"	32.0	119.0	63.7	45.0	14.3		

ORIGINAL EQUIPMENT CONNECTIONS

M23991

90° SUPERCAT FLANGE

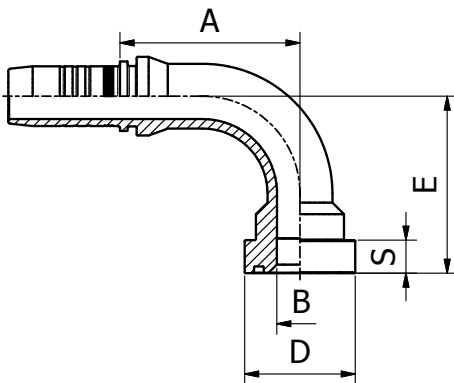


PART. REF.	HOSE BORE			FLANGE	DIMENSIONS mm						
	DN	Dash	inch	inch	B	A	D	E	S		
M23991-12-12	19	-12	3/4"	3/4"	15.0	64.5	41.5	64.5	14.3		
M23991-16-16	25	-16	1"	1"	19.8	77.5	47.7	76.5	14.3		
M23991-16-20	25	-16	1"	1.1/4"	26.0	75.5	54.0	80.5	14.3		
M23991-20-20	31	-20	1.1/4"	1.1/4"	26.0	85.5	54.0	87.0	14.3		
M23991-20-24	31	-20	1.1/4"	1.1/2"	32.0	85.5	63.7	93.0	14.3		

ORIGINAL EQUIPMENT CONNECTIONS

M23991CT

90° REALCAT FLANGE



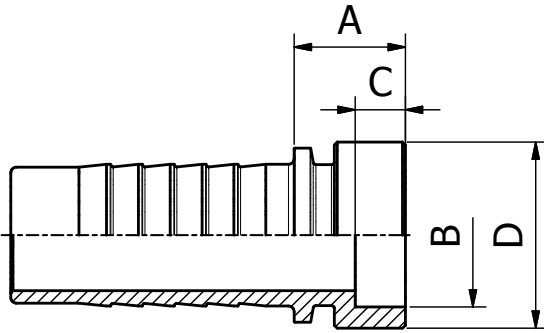
PART. REF.	HOSE BORE			FLANGE	DIMENSIONS mm						
	DN	Dash	inch	inch	B	A	D	E	S		
M23991-16-16CT	25	-16	1"	1"	19.8	77.5	47.7	76.5	14.3		
M23991-16-20CT	25	-16	1"	1.1/4"	26.0	75.5	54.0	80.5	14.3		
M23991-20-20CT	31	-20	1.1/4"	1.1/4"	26.0	85.5	54.0	87.0	14.3		
M23991-24-24CT	38	-24	1.1/2"	1.1/2"	32.0	106.0	63.7	96.0	14.3		



TAIL

M..IP..

BRAZING TAIL



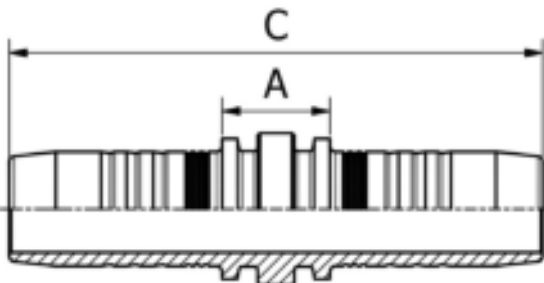
PART. REF.	HOSE BORE			DIMENSIONS mm							
	DN	Dash	inch	B	A	C	D				
M03IP06	5	- 3	3/16"	6.0	11.5	5.0	10.0				
M04IP08	6	- 4	1/4"	8.0	13.0	5.0	12.0				
M05IP10	8	- 5	5/16"	10.0	13.5	6.0	14.0				
M06IP12	10	- 6	3/8"	12.0	13.5	6.0	16.0				
M06IP14	10	- 6	3/8"	14.0	13.5	6.0	18.0				
M08IP15	12	- 8	1/2"	15.0	14.0	6.0	20.0				
M08IP16	12	- 8	1/2"	16.0	14.0	6.0	20.0				
M10IP18	16	- 10	5/8"	18.0	15.0	7.0	23.0				
M12IP22	19	- 12	3/4"	22.0	16.0	7.0	26.0				
M16IP28	25	- 16	1"	28.0	18.5	8.0	34.0				
M20IP35	31	- 20	1.1/4"	35.0	20.5	9.0	40.0				
M24IP40	38	- 24	1.1/2"	40.0	21.5	9.0	50.0				
M32IP50	51	- 32	2"	50.0	23.0	10.0	60.0				
M40IP60	63	- 40	2.1/2"	61.0	19.0	7.0	73.0				
M48IP70	76	- 48	3"	70.0	38.0	10.0	89.0				

173 FITTINGS

DOUBLE CONNECTOR

M10050

DOUBLE CONNECTOR

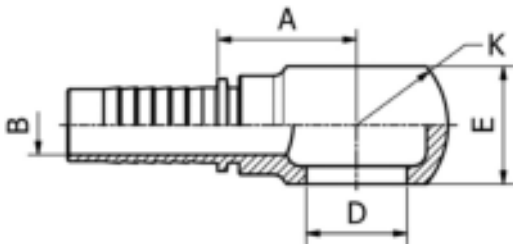


PART. REF.	HOSE BORE			DIMENSIONS mm							
	DN	Dash	inch	B	A	C					
M10050-03-03	5	- 3	3/16"	3.0	15.5	58.2					
M10050-04-04	6	- 4	1/4"	4.0	14.0	69.0					
M10050-05-05	8	- 5	5/16"	5.5	14.0	70.0					
M10050-06-06	10	- 6	3/8"	7.0	14.5	73.5					
M10050-08-08	12	- 8	1/2"	9.3	15.5	77.9					
M10050-10-10	16	- 10	5/8"	12.5	15.5	84.0					
M10050-12-12	19	- 12	3/4"	15.0	18.5	91.5					
M10050-16-16	25	- 16	1"	19.8	22.5	119.0					
M10050-20-20	31	- 20	1.1/4"	26.0	23.0	128.1					
M10050-24-24	38	- 24	1.1/2"	32.0	23.5	147.5					

BANJO CONNECTIONS

020310

BSP BANJO

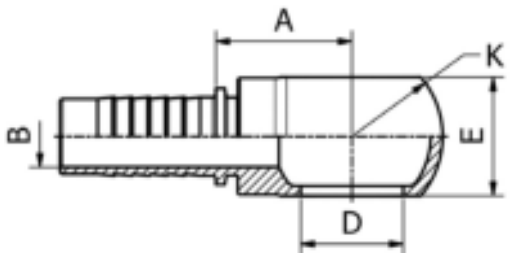


PART. REF.	HOSE BORE			Thread	DIMENSIONS mm					
	DN	Dash	inch		T	B	A	D	E	K
O20310-04-04	6	- 4	1/4"	1/4" - 19	4.4	22.0	13.25	15.0	24.0	
O20310-04-06	6	- 4	1/4"	3/8" - 19	4.4	23.5	16.7	18.0	28.0	
O20310-05-04	8	- 5	5/16"	1/4" - 19	5.0	23.0	13.2	14.0	24.0	
O20310-05-06	8	- 5	5/16"	3/8" - 19	5.6	23.0	16.7	20.0	29.0	
O20310-06-06	10	- 6	3/8"	3/8" - 19	7.0	24.5	16.7	20.0	29.0	
O20310-06-08	10	- 6	3/8"	1/2" - 19	7.1	27.0	21.0	25.0	38.0	
O20310-08-08	12	- 8	1/2"	1/2" - 14	9.8	27.5	21.0	25.0	38.0	
O20310-10-10	16	- 10	5/8"	5/8" - 14	12.7	29.5	23.0	27.0	40.0	
O20310-12-12	19	- 12	3/4"	3/4" - 14	15.5	36.5	26.5	31.0	48.0	
O20310-16-16	25	- 16	1"	1" - 11	20.5	40.5	33.3	42.0	60.0	

BANJO CONNECTIONS

020910

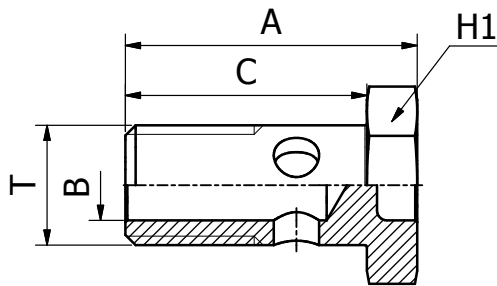
**METRIC BANJO
 DIN 7642**



PART. REF.	HOSE BORE			Thread	DIMENSIONS mm					
	DN	Dash	inch		T	B	A	D	E	K
O20910-04-12	6	- 4	1/4"	M 12X1.5	4.4	22.5	12.0	12.0	20.0	
O20910-04-14	6	- 4	1/4"	M 14X1.5	4.4	23.5	14.0	14.0	24.0	
O20910-05-14	8	- 5	5/16"	M 14X1.5	5.6	23.5	14.0	14.0	24.0	
O20910-06-14	10	- 6	3/8"	M 14X1.5	7.1	25.0	14.0	14.0	24.0	
O20910-06-16	10	- 6	3/8"	M 16X1.5	7.1	25.0	16.0	16.0	28.0	
O20910-06-18	10	- 6	3/8"	M 18X1.5	7.1	27.0	18.0	20.0	32.0	
O20910-08-18	12	- 8	1/2"	M 18X1.5	9.8	28.0	18.0	20.0	32.0	
O20910-08-22	12	- 8	1/2"	M 22X1.5	9.8	31.0	22.0	25.0	39.0	
O20910-10-22	16	- 10	5/8"	M 22X1.5	12.7	31.0	22.0	25.0	39.0	
O20910-12-26	19	- 12	3/4"	M 26X1.5	15.5	34.5	26.0	30.0	46.0	



BOLT



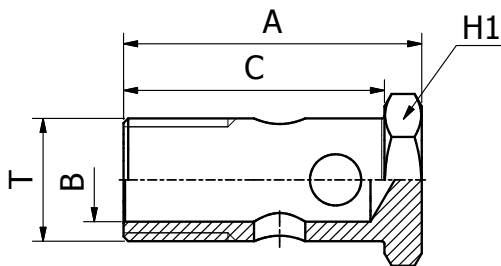
080810

METRIC BOLT - DIN 7643

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm							
	DN	Dash	inch		T	B	A	C	H1			
O80810-12				M 12X1.5	7.0	29.0	24.0	17.0				
O80810-14				M 14X1.5	9.0	31.0	26.0	19.0				
O80810-16				M 16X1.5	11.0	33.0	28.0	22.0				
O80810-18				M 18X1.5	13.0	37.0	32.0	24.0				
O80810-22				M 22X1.5	16.0	45.0	39.0	27.0				
O80810-26				M 26X1.5	20.0	51.0	45.0	32.0				

175 FITTINGS

BOLT



080210

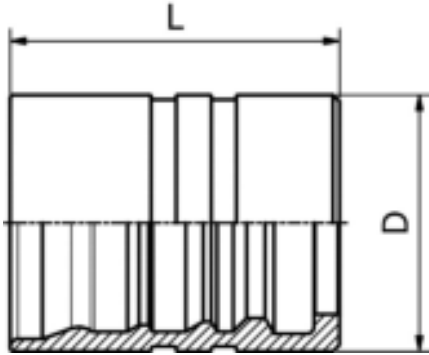
BSP BOLT

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm							
	DN	Dash	inch		T	B	A	C	H1			
O80210-04				1/4" - 19	6.0	34.5	28.5	17.0				
O80210-06				3/8" - 19	9.0	45.5	38.5	22.0				
O80210-08				1/2" - 14	13.0	52.0	44.0	27.0				
O80210-10				5/8" - 14	15.0	56.5	48.5	30.0				
O80210-12				3/4" - 14	18.0	64.0	54.0	32.0				
O80210-16				1" - 11	24.0	77.5	68.5	41.0				

FERRULE

M01500

**DOUBLE SKIVE FERRULE
 FOR HEAVY DUTY SPIRAL HOSES (4 PLY)**



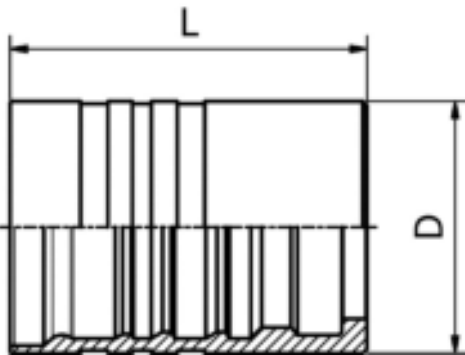
PART. REF.	HOSE BORE			DIMENSIONS mm							
	DN	Dash	inch			D	L				
M01500-10	16	- 10	5/8"			35.0	40.9				
M01500-12	19	- 12	3/4"			40.0	51.4				
M01500-16	25	- 16	1"			48.0	64.5				
M01500-20	31	- 20	1.1/4"			57.0	84.0				
M01500-24	38	- 24	1.1/2"			64.3	94.0				
M01500-32	51	- 32	2"			83.5	107.0				
M01500-40	63	- 40	2.1/2"			100.0	135.0				
M01500-48	76	- 48	3"			107.0	125.0				

FITTINGS 176

FERRULE

M01600

**DOUBLE SKIVE FERRULE
 FOR HEAVY DUTY SPIRAL HOSES (6 PLY)**

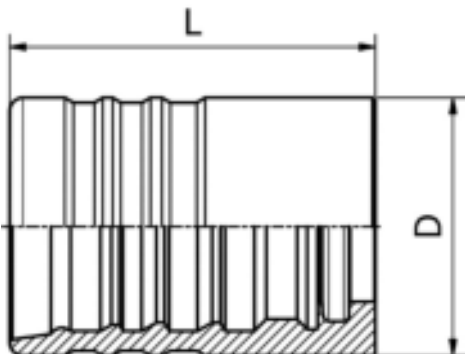


PART. REF.	HOSE BORE			DIMENSIONS mm							
	DN	Dash	inch			D	L				
M01600-20	31	- 20	1.1/4"			60.0	85.0				
M01600-24	38	- 24	1.1/2"			69.0	96.0				

FERRULE

M01800/M01810/M01850

**DOUBLE SKIVE FERRULE FOR
 EXTRA DUTY SPIRAL HOSES (6 PLY)**



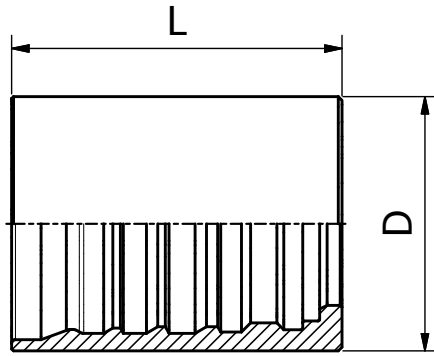
PART. REF.	HOSE BORE			DIMENSIONS mm							
	DN	Dash	inch			D	L				
M01850-12	19	-12	3/4"			45.1	51.4				
M01850-16	25	-16	1"			53.5	64.5				
M01850-20	31	- 20	1.1/4"			65.0	88.2				
M01800-32	51	- 32	2"			86.5	108.0				
M01810-40	63	- 40	2.1/2"			103.0	135.0				
M01810-48	76	- 48	3"			113.5	125.0				



FERRULE

M01900

DOUBLE SKIVE FERRULE

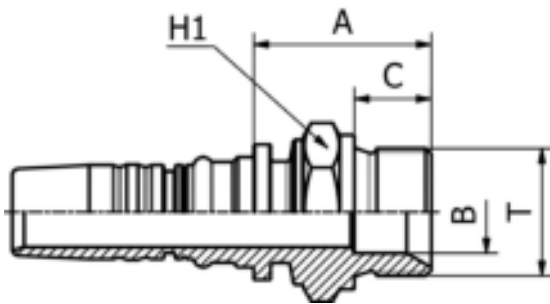


PART. REF.	HOSE BORE			DIMENSIONS mm							
	DN	Dash	inch			D	L				
M01900-20	31	-20	1.1/4"			68	88.2				
M01900-40	63	-40	2.1/2"			109	135				

BS STANDARD CONNECTIONS

M30510

BSP MALE
PARALLEL 60° CONE SEAT
BS5200 / ISO 8434-6

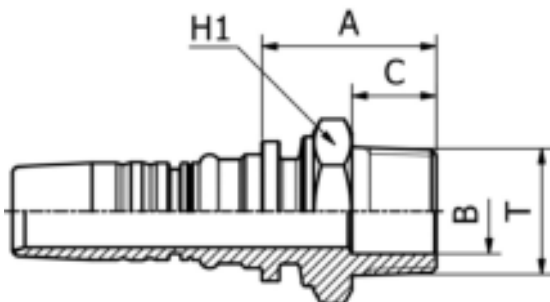


PART. REF.	HOSE BORE			Thread	DIMENSIONS mm							
	DN	Dash	inch	T	B	A	C	H1				
M30510-12-12	19	-12	3/4"	3/4" - 14	17.0	37.0	16.0	32.0				
M30510-12-16	19	-12	3/4"	1" - 11	22.5	43.0	19.0	41.0				
M30510-16-16	25	-16	1"	1" - 11	22.5	43.0	19.0	41.0				
M30510-16-20	25	-16	1"	1.1/4" - 11	28.5	48.0	20.0	50.0				
M30510-20-20	31	-20	1.1/4"	1.1/4" - 11	28.5	50.5	20.0	50.0				
M30510-24-24	38	-24	1.1/2"	1.1/2" - 11	33.5	54.5	22.0	55.0				
M30510-32-32	51	-32	2"	2" - 11	42.0	58.0	25.0	70.0				

BS STANDARD CONNECTIONS

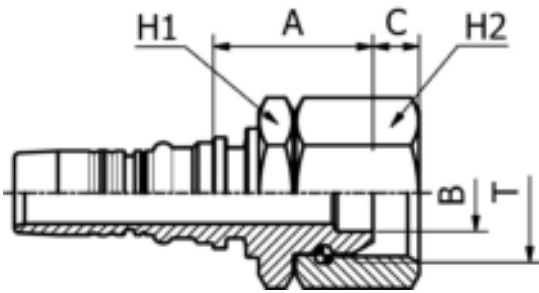
M30710

BSP
MALE (TAPERED)



PART. REF.	HOSE BORE			Thread	DIMENSIONS mm							
	DN	Dash	inch	T	B	A	C	H1				
M30710-12-12	19	-12	3/4"	3/4" BSPT	17.0	35.0	17.0	32.0				
M30710-16-16	25	-16	1"	1" BSPT	22.5	41.5	21.0	41.0				
M30710-20-20	31	-20	1.1/4"	1.1/4" BSPT	28.5	82.0	23.0	46.0				
M30710-24-24	38	-24	1.1/2"	1.1/2" - 11	33.5	52.0	23.0	55.0				
M30710-32-32	51	-32	2"	2" - 11	42.0	56.1	27.0	70.0				

BS STANDARD CONNECTIONS

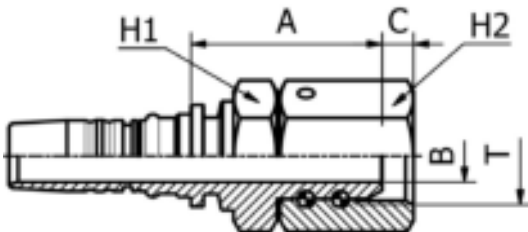


M40512

**BSP
 FEMALE 60° CONE
 BS5200 / ISO 12151-6
 (THRUST-WIRE NUT)**

PART. REF.	HOSE BORE			Thread	T	DIMENSIONS mm					
	DN	Dash	inch			B	A	C	H1	H2	
M40512-10-12H32	16	- 10	5/8"	3/4" - 14	15.0	31.0	9.0	32.0	32.0		

BS STANDARD CONNECTIONS

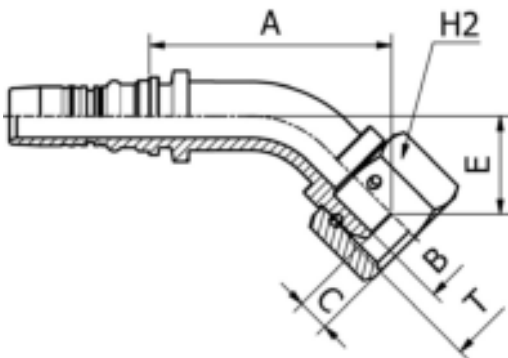


M40514

**BSP
 FEMALE 60° CONE
 BS5200 / ISO 12151-6
 (DOUBLE THRUST-WIRE)**

PART. REF.	HOSE BORE			Thread	T	DIMENSIONS mm					
	DN	Dash	inch			B	A	C	H1	H2	
M40514-12-12	19	- 12	3/4"	3/4" - 14	14.5	53.0	8.7	36.0	36.0		
M40514-16-16	25	- 16	1"	1" - 11	18.0	58.0	11.1	41.0	41.0		
M40514-20-20	31	- 20	1.1/4"	1.1/4" - 11	23.0	75.0	10.1	50.0	55.0		
M40514-24-24	38	- 24	1.1/2"	1.1/2" - 11	27.0	76.0	12.5	55.0	60.0		

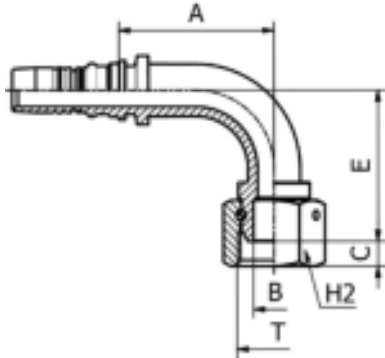
BS STANDARD CONNECTIONS



M40542

**45° BSP
 FEMALE SWEPT ELBOW 60° CONE
 BS5200 / ISO 12151-6
 (THRUST-WIRE NUT)**

PART. REF.	HOSE BORE			Thread	T	DIMENSIONS mm					
	DN	Dash	inch			B	A	C	E	H2	
M40542-10-12	16	- 10	5/8"	3/4" - 14	15.0	67.0	9.0	27.0	32.0		



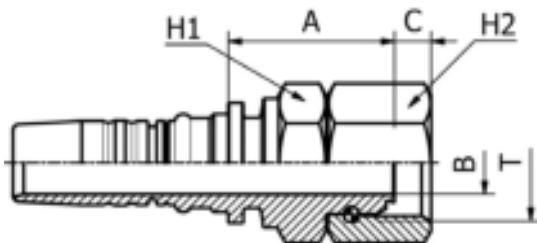
BS STANDARD CONNECTIONS

M40592

90° BSP
 FEMALE SWEPT ELBOW 60° CONE
 BS5200 / ISO 12151-6
 (THRUST-WIRE NUT)

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	H2		
M40592-10-12	16	- 10	5/8"	3/4" - 14	15.0	56.5	9.0	55.0	32.0		

BS STANDARD CONNECTIONS

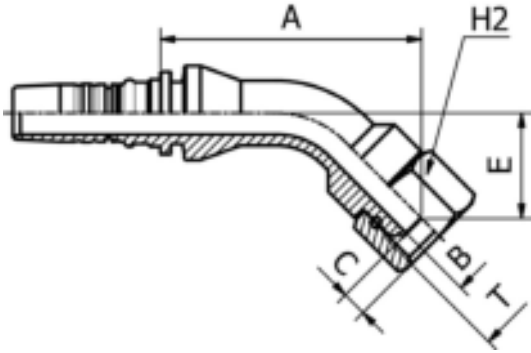


M40812

BSP O-RING
 FEMALE 60° CONE
 BS5200 / ISO 12151-6
 (THRUST-WIRE NUT)

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	H1	H2		
M40812-12-12	19	- 12	3/4"	3/4" - 14	14.5	39.0	8.5	32.0	32.0		
M40812-12-16	19	- 12	3/4"	1" - 11	19.0	36.5	10.6	32.0	41.0		
M40812-16-12	25	- 16	1"	3/4" - 14	15.0	35.0	8.5	41.0	32.0		
M40812-16-16	25	- 16	1"	1" - 11	19.5	44.5	10.6	41.0	41.0		
M40812-16-20	25	- 16	1"	1.1/4" - 11	26.1	41.0	10.5	41.0	50.0		
M40812-20-16	31	- 20	1.1/4"	1" - 11	19.0	44.5	10.6	50.0	41.0		
M40812-20-20	31	- 20	1.1/4"	1.1/4" - 11	26.1	52.5	10.5	50.0	50.0		
M40812-20-24	31	- 20	1.1/4"	1.1/2" - 11	32.1	46.0	12.5	50.0	60.0		
M40812-24-20	38	- 24	1.1/2"	1.1/4" - 11	26.1	48.5	10.5	60.0	50.0		
M40812-24-24	38	- 24	1.1/2"	1.1/2" - 11	32.1	51.5	12.5	60.0	60.0		
M40812-32-32	51	- 32	2"	2" - 11	42.0	51.5	16.1	70.0	70.0		

BS STANDARD CONNECTIONS

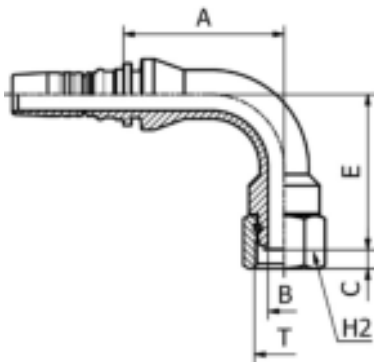


M40842

45° BSP
 O-RING FEMALE SWEPT ELBOW 60° CONE
 BS5200 / ISO 12151-6
 (THRUST-WIRE NUT)

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm					
	DN	Dash	inch		T	B	A	C	E	H2
M40842-12-12	19	- 12	3/4"	3/4" - 14	14.5	88.0	8.5	35.0	32.0	
M40842-12-16	19	- 12	3/4"	1" - 11	19.0	89.5	10.6	36.5	41.0	
M40842-16-12	25	- 16	1"	3/4" - 14	15.0	105.5	8.5	36.0	32.0	
M40842-16-16	25	- 16	1"	1" - 11	19.5	97.0	10.6	40.0	41.0	
M40842-16-20	25	- 16	1"	1.1/4" - 11	26.1	108.5	10.5	38.0	50.0	
M40842-20-16	31	- 20	1.1/4"	1" - 11	19.0	118.0	10.6	47.5	41.0	
M40842-20-20	31	- 20	1.1/4"	1.1/4" - 11	26.1	120.0	10.5	49.5	50.0	
M40842-20-24	31	- 20	1.1/4"	1.1/2" - 11	32.1	114.5	12.5	40.0	60.0	
M40842-24-24	38	- 24	1.1/2"	1.1/2" - 11	32.1	126.5	12.5	50.0	60.0	
M40842-32-32	51	- 32	2"	2" - 11	42.0	162.5	16.1	66.5	70.0	

FITTINGS 180



BS STANDARD CONNECTIONS

M40892

90° BSP
 O-RING FEMALE SWEPT ELBOW 60° CONE
 BS5200 / ISO 12151-6
 (THRUST-WIRE NUT)

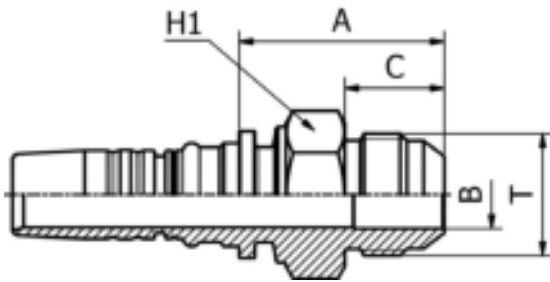
PART. REF.	HOSE BORE			Thread	DIMENSIONS mm					
	DN	Dash	inch		T	B	A	C	E	H2
M40892-12-12	19	- 12	3/4"	3/4" - 14	14.5	72.5	8.5	70.0	32.0	
M40892-12-16	19	- 12	3/4"	1" - 11	19.0	72.5	10.6	71.0	41.0	
M40892-16-16	25	- 16	1"	1" - 11	19.5	82.0	10.6	80.5	41.0	
M40892-16-20	25	- 16	1"	1.1/4" - 11	26.1	95.0	10.5	78.5	50.0	
M40892-20-20	31	- 20	1.1/4"	1.1/4" - 11	26.1	98.5	10.5	98.0	50.0	
M40892-20-24	31	- 20	1.1/4"	1.1/2" - 11	32.1	98.5	12.5	84.5	60.0	
M40892-24-24	38	- 24	1.1/2"	1.1/2" - 11	32.1	111.5	12.5	109.0	60.0	
M40892-32-32	51	- 32	2"	2" - 11	42.0	143.0	16.1	140.5	70.0	



SAE STANDARD CONNECTIONS

M32510

JIC
 MALE 37° CONE
 SAE J516 / ISO 12151-5

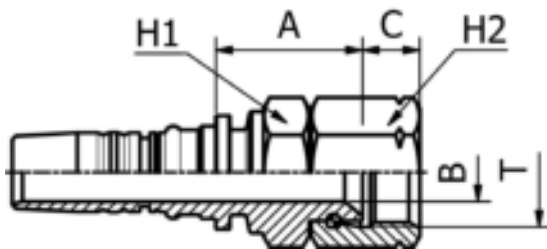


PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	H1			
M32510-10-10	16	- 10	5/8"	7/8" - 14	12.0	41.0	19.5	27.0			
M32510-12-12	19	- 12	3/4"	1.1/16" - 12	15.0	45.5	22.0	32.0			
M32510-16-16	25	- 16	1"	1.5/16" - 12	20.0	50.5	23.0	38.0			
M32510-16-20	25	- 16	1"	1.5/8" - 12	26.0	57.0	24.3	42.0			
M32510-20-20	31	- 20	1.1/4"	1.5/8" - 12	26.1	66.0	24.3	46.0			
M32510-24-24	38	- 24	1.1/2"	1.7/8" - 12	32.1	64.0	27.5	50.0			
M32510-32-32	51	- 32	2"	2.1/2" - 12	42.0	81.0	34.0	70.0			

SAE STANDARD CONNECTIONS

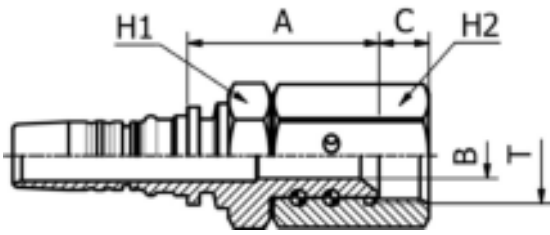
M42512

JIC
 FEMALE 37° CONE SEAT
 SAE J516 / ISO 12151-5
 (THRUST-WIRE NUT)



PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	H1	H2		
M42512-12-12	19	- 12	3/4"	1.1/16" - 12	15.0	36.0	14.2	32.0	32.0		
M42512-12-16	19	- 12	3/4"	1.5/16" - 12	21.7	32.5	15.2	41.0	41.0		
M42512-16-16	25	- 16	1"	1.5/16" - 12	21.7	40.5	15.2	41.0	41.0		
M42512-16-20	25	- 16	1"	1.5/8" - 12	26.1	44.0	16.2	50.0	50.0		
M42512-20-20	31	- 20	1.1/4"	1.5/8" - 12	26.1	51.5	16.2	50.0	50.0		
M42512-20-24	31	- 20	1.1/4"	1.7/8" - 12	30.5	51.0	18.8	55.0	60.0		
M42512-24-24	38	- 24	1.1/2"	1.7/8" - 12	31.0	54.5	18.8	55.0	60.0		
M42512-32-32	51	- 32	2"	2.1/2" - 12	42.0	54.0	24.0	70.0	75.0		

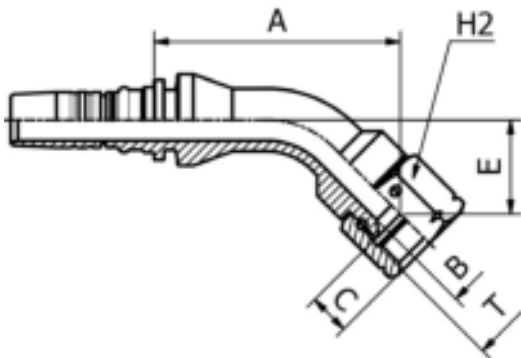
SAE STANDARD CONNECTIONS



M42714

JIC
 FEMALE 37° CONE SEAT
 SAE J516 / ISO 12151-5
 (DOUBLE THRUST-WIRE NUT)

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	H1	H2	
M42714-12-12	19	- 12	3/4"	1.1/16" - 12	13.0	55.0	14.4	36.0	36.0		
M42714-16-16	25	- 16	1"	1.5/16" - 12	18.0	60.5	15.1	41.0	41.0		
M42714-20-20	31	- 20	1.1/4"	1.5/8" - 12	23.0	71.0	15.9	50.0	55.0		
M42714-24-24	38	- 24	1.1/2"	1.7/8" - 12	27.0	71.0	18.6	55.0	60.0		
M42714-32-32	51	- 32	2"	2.1/2" - 12	37.0	77.5	23.8	70.0	75.0		



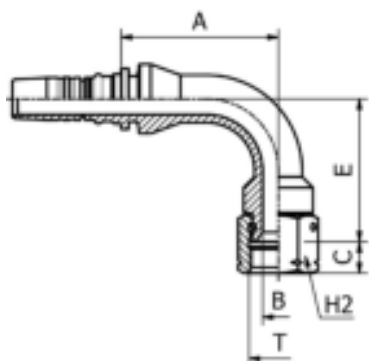
SAE STANDARD CONNECTIONS

M42542

45° JIC
 FEMALE SWEPT ELBOW 37° CONE SEAT
 SAE J516 / ISO 12151-5
 (THRUST-WIRE NUT)

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm					
	DN	Dash	inch		T	B	A	C	E	H2
M42542-12-12	19	- 12	3/4"	1.1/16" - 12	15.0	86.0	14.2	33.0	32.0	
M42542-16-16	25	- 16	1"	1.5/16" - 12	21.7	95.0	15.2	37.0	41.0	
M42542-16-20	25	- 16	1"	1.5/8" - 12	26.1	102.5	16.2	36.5	50.0	
M42542-20-20	31	- 20	1.1/4"	1.5/8" - 12	26.1	115.5	16.2	45.0	50.0	
M42542-24-24	38	- 24	1.1/2"	1.7/8" - 12	32.1	126.5	18.8	50.0	60.0	
M42542-32-32	51	- 32	2"	2.1/2" - 12	42.0	161.5	24.0	63.5	75.0	

SAE STANDARD CONNECTIONS

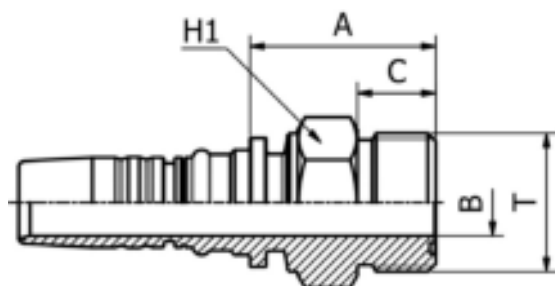


M42592

90° JIC
 FEMALE SWEPT ELBOW 37° CONE SEAT
 SAE J516 / ISO 12151-5
 (THRUST-WIRE NUT)

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	H2		
M42592-12-12	19	- 12	3/4"	1.1/16" - 12	15.0	72.5	14.2	66.0	32.0		
M42592-12-16	19	- 12	3/4"	1.5/16" - 12	21.7	72.5	15.2	71.5	41.0		
M42592-16-16	25	- 16	1"	1.5/16" - 12	21.7	82.5	15.2	77.5	41.0		
M42592-16-20	25	- 16	1"	1.5/8" - 12	26.1	90.5	16.2	76.5	50.0		
M42592-20-20	31	- 20	1.1/4"	1.5/8" - 12	26.1	98.5	16.2	92.0	50.0		
M42592-20-24	31	- 20	1.1/4"	1.7/8" - 12	32.1	101.5	18.8	108.0	60.0		
M42592-24-24	38	- 24	1.1/2"	1.7/8" - 12	32.1	111.5	18.8	106.0	60.0		
M42592-32-32	51	- 32	2"	2.1/2" - 12	42.0	144.5	24.0	137.0	75.0		

SAE STANDARD CONNECTIONS

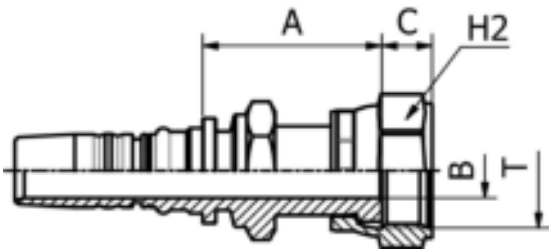


M32410

ORFS
 MALE
 SAE J516 / ISO 12151-1

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	H1			
M32410-10-08	16	- 10	5/8"	13/16" - 16	9.3	33.0	12.8	27.0			
M32410-10-10	16	- 10	5/8"	1" - 14	12.0	36.0	15.5	27.0			
M32410-10-12	16	- 10	5/8"	1.3/16" - 12	15.0	39.0	17.0	32.0			
M32410-12-12	19	- 12	3/4"	1.3/16" - 12	14.5	40.5	17.0	32.0			
M32410-12-16	19	- 12	3/4"	1.7/16" - 12	19.8	42.5	17.5	38.0			
M32410-16-16	25	- 16	1"	1.7/16" - 12	19.5	45.0	17.5	41.0			
M32410-16-20	25	- 16	1"	1.11/16" - 12	25.0	48.0	17.5	46.0			
M32410-20-16	31	- 20	1.1/4"	1.7/16" - 12	19.5	47.0	17.5	50.0			
M32410-20-20	31	- 20	1.1/4"	1.11/16" - 12	25.0	50.5	17.5	46.0			
M32410-24-24	38	- 24	1.1/2"	2" - 12	31.0	53.0	17.5	55.0			
M32410-32-24	51	- 32	2"	2" - 12	31.0	53.0	17.5	70.0			

SAE STANDARD CONNECTIONS

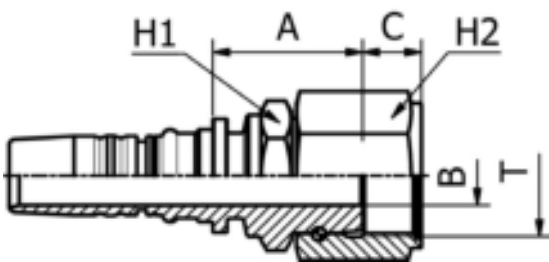


M42411

ORFS
 FEMALE
 SAE J516 / ISO 12151-1
 PULLBACK TYPE (CRIMPED BACK-NUT)

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	H1	H2		
M42411-10-10	16	- 10	5/8"	1" - 14	11.5	40.5	12.5	24.0	30.0		
M42411-12-12	19	- 12	3/4"	1.3/16" - 12	14.5	48.0	13.5	32.0	36.0		
M42411-12-16	19	- 12	3/4"	1.7/16" - 12	19.0	50.0	13.5	36.0	41.0		
M42411-16-12	25	- 16	1"	1.3/16" - 12	14.3	50.0	13.5	41.0	36.0		
M42411-16-16	25	- 16	1"	1.7/16" - 12	19.5	51.5	13.5	41.0	41.0		
M42411-16-20	25	- 16	1"	1.11/16" - 12	26.0	51.5	13.6	41.0	50.0		
M42411-20-20	31	- 20	1.1/4"	1.11/16" - 12	25.0	58.0	13.6	50.0	50.0		
M42411-24-24	38	- 24	1.1/2"	2" - 12	31.0	60.5	14.2	60.0	60.0		

SAE STANDARD CONNECTIONS



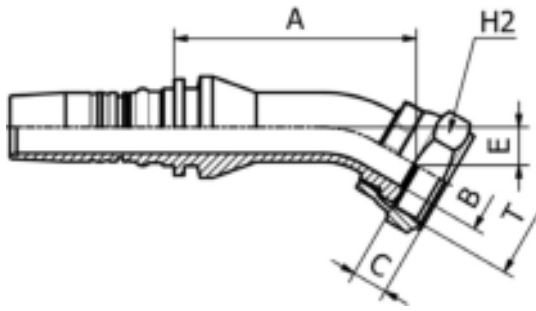
M42412

ORFS
 FEMALE
 SAE J516 / ISO 12151-1
 HEAVY TYPE (THRUST-WIRE NUT)

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	H1	H2		
M42412-12-12	19	- 12	3/4"	1.3/16" - 12	14.5	37.0	14.1	32.0	36.0		
M42412-12-16	19	- 12	3/4"	1.7/16" - 12	19.8	41.0	15.0	41.0	46.0		
M42412-16-16	25	- 16	1"	1.7/16" - 12	19.5	42.0	15.0	41.0	46.0		
M42412-16-20	25	- 16	1"	1.11/16" - 12	26.0	50.0	15.1	46.0	55.0		
M42412-20-20	31	- 20	1.1/4"	1.11/16" - 12	25.0	52.0	15.1	50.0	55.0		
M42412-20-24	31	- 20	1.1/4"	2" - 12	31.0	53.0	15.0	55.0	60.0		
M42412-24-24	38	- 24	1.1/2"	2" - 12	31.0	55.0	15.0	60.0	60.0		



SAE STANDARD CONNECTIONS

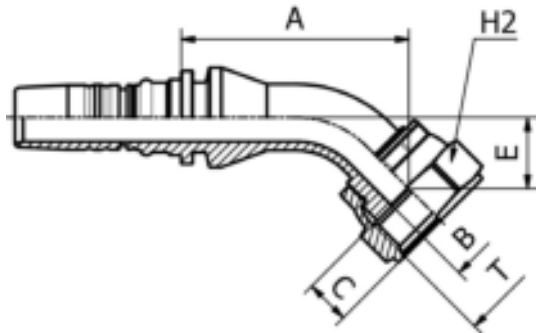


M42431

**30° ORFS
FEMALE SWEPT ELBOW
SAE J516 / ISO 12151-1
(CRIMPED BACK-NUT)**

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	H2		
M42431-16-16	25	- 16	1"	1.7/16", 25.4 MM, 1"	19.5	91.0	10.3	14.0	41.0		

SAE STANDARD CONNECTIONS

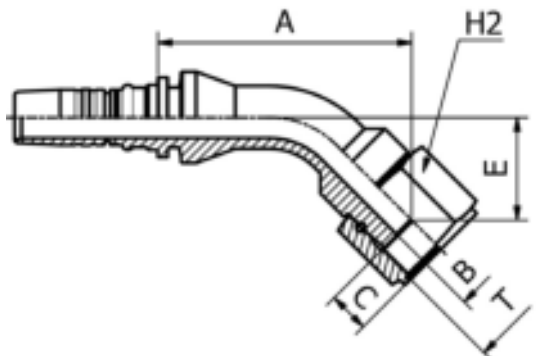


M42441

**45° ORFS
FEMALE SWEPT ELBOW
SAE J516 / ISO 12151-1
(CRIMPED BACK-NUT)**

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	H2		
M42441-10-12	16	- 10	5/8"	1.3/16" - 12	14.3	56.0	13.5	21.5	36.0		
M42441-12-12	19	- 12	3/4"	1.3/16" - 12	14.5	69.0	13.5	21.5	36.0		
M42441-12-16	19	- 12	3/4"	1.7/16" - 12	19.0	77.5	13.5	25.0	41.0		
M42441-16-16	25	- 16	1"	1.7/16" - 12	19.5	86.0	13.5	24.0	41.0		
M42441-20-20	31	- 20	1.1/4"	1.11/16" - 12	25.0	97.0	13.6	27.0	50.0		
M42441-24-24	38	- 24	1.1/2"	2" - 12	31.0	112.0	14.2	31.5	60.0		

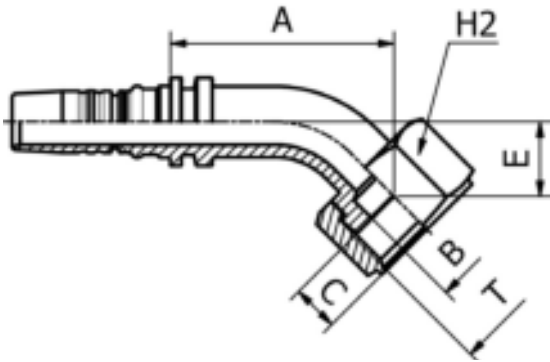
SAE STANDARD CONNECTIONS



M42442

**45° ORFS
FEMALE SWEPT ELBOW
SAE J516 / ISO 12151-1
HEAVY TYPE (THRUST-WIRE NUT)**

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	H2		
M42442-12-12	19	- 12	3/4"	1.3/16" - 12	14.5	89.0	14.0	36.0	36.0		
M42442-16-16	25	- 16	1"	1.7/16" - 12	19.5	100.0	15.0	42.5	46.0		
M42442-20-20	31	- 20	1.1/4"	1.11/16" - 12	25.0	119.5	15.1	49.5	55.0		
M42442-24-24	38	- 24	1.1/2"	2" - 12	31.0	128.5	15.0	52.0	60.0		

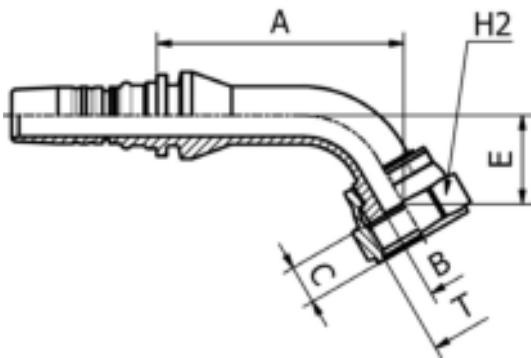


SAE STANDARD CONNECTIONS

M42443

45° ORFS
 FEMALE SWEPT ELBOW
 SAE J516 / ISO 12151-1
 (SLIP-ON NUT)

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	E	H2	
M42443-12-16	19	- 12	3/4"	1.7/16" - 12	19.8	71.0	14.8	23.5	41.0		
M42443-16-20	25	- 16	1"	1.11/16" - 12	26.0	81.0	14.8	24.0	50.0		
M42443-20-24	31	- 20	1.1/4"	2" - 12	32.0	99.0	14.8	29.0	60.0		

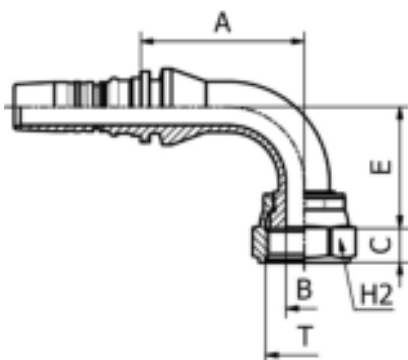


SAE STANDARD CONNECTIONS

M42461

60° ORFS
 FEMALE SWEPT ELBOW
 SAE J516 / ISO 12151-1
 (CRIMPED BACK-NUT)

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	E	H2	
M42461-12-12	19	- 12	3/4"	1.3/16" - 12	14.5	85.5	13.5	30.5	36.0		

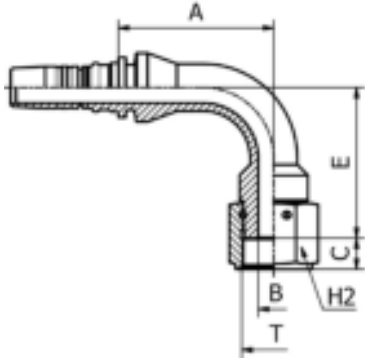


SAE STANDARD CONNECTIONS

M42491

90° ORFS
 FEMALE SWEPT ELBOW
 SAE J516 / ISO 12151-1
 (CRIMPED BACK-NUT)

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	E	H2	
M42491-10-12	16	- 10	5/8"	1.3/16" - 12	14.3	51.0	13.5	47.0	36.0		
M42491-12-12	19	- 12	3/4"	1.3/16" - 12	14.5	65.0	13.5	48.0	36.0		
M42491-12-12109	19	- 12	3/4"	1.3/16" - 12	14.5	65.0	13.5	109.0	36.0		
M42491-12-16	19	- 12	3/4"	1.7/16" - 12	19.0	70.0	13.5	53.0	41.0		
M42491-16-16	25	- 16	1"	1.7/16" - 12	19.5	85.0	13.5	57.0	41.0		
M42491-16-16128	25	- 16	1"	1.7/16" - 12	19.5	85.0	13.5	128.0	41.0		
M42491-16-20	25	- 16	1"	1.11/16" - 12	24.0	84.5	13.6	61.0	50.0		
M42491-20-20	31	- 20	1.1/4"	1.11/16" - 12	25.0	98.5	13.6	66.0	50.0		
M42491-24-24	38	- 24	1.1/2"	2" - 12	31.0	116.0	14.2	79.5	60.0		

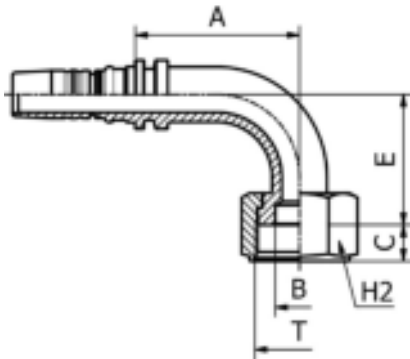


SAE STANDARD CONNECTIONS

M42492

90° ORFS
 FEMALE SWEPT ELBOW
 SAE J516 / ISO 12151-1
 HEAVY TYPE (THRUST-WIRE-NUT)

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	H2		
M42492-12-12	19	- 12	3/4"	1.3/16" - 12	14.5	72.5	14.1	70.5	36.0		
M42492-16-16	25	- 16	1"	1.7/16" - 12	19.5	82.5	15.0	84.5	46.0		
M42492-20-20	31	- 20	1.1/4"	1.11/16" - 12	25.0	98.5	15.1	98.0	55.0		
M42492-24-24	38	- 24	1.1/2"	2" - 12	31.0	111.5	15.0	109.0	60.0		

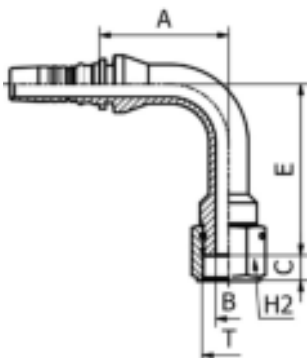


SAE STANDARD CONNECTIONS

M42493

90° ORFS FEMALE SWEPT ELBOW
 SAE J516 / ISO 12151-1
 (SLIP-ON NUT)

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	H2		
M42493-12-16	19	- 12	3/4"	1.7/16" - 12	19.8	67.0	14.8	53.0	41.0		
M42493-16-20	25	- 16	1"	1.11/16" - 12	26.0	81.5	14.8	58.5	50.0		
M42493-20-24	31	- 20	1.1/4"	2" - 12	32.0	100.0	14.8	70.5	60.0		



SAE STANDARD CONNECTIONS

M44492 LONG DROP

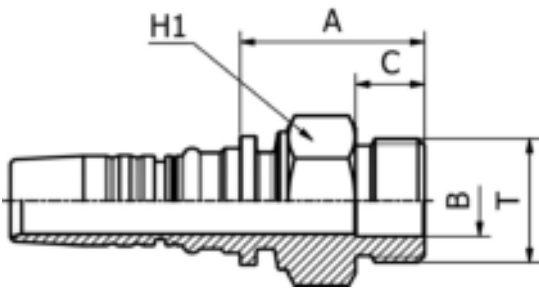
90° ORFS
 FEMALE LONG DROP ELBOW
 SAE J516 / ISO 12151-1
 (THRUST-WIRE NUT)

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	H2		
M44492-12-12	19	- 12	3/4"	1.3/16" - 12	14.5	72.5	14.1	96.0	36.0		
M44492-20-20	31	- 20	1.1/4"	1.11/16" - 12	25.0	98.5	15.1	129.0	55.0		

SAE STANDARD CONNECTIONS

M33010

SAE
 MALE O-RING BOSS TYPE
 SAE J516 / ISO 11926

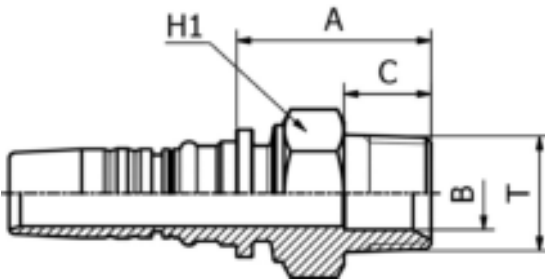


PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	H1		
M33010-12-12	19	- 12	3/4"	1.1/16" - 12		15.5	42.0	15.1	32.0		
M33010-16-16	25	- 16	1"	1.5/16" - 12		21.5	43.5	15.1	38.0		
M33010-20-20	31	- 20	1.1/4"	1.5/8" - 12		27.5	47.5	15.1	46.0		

SAE STANDARD CONNECTIONS

M32810

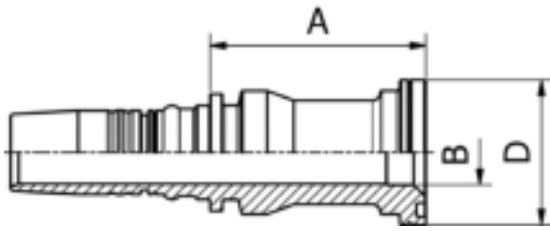
NPTF
 MALE 60° CONE SEAT
 SAE J516/J514



PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	H1		
M32810-10-12	16	- 10	5/8"	3/4" - 14		16.0	40.7	19.2	27.0		
M32810-12-12	19	- 12	3/4"	3/4" - 14		16.0	42.9	19.2	32.0		
M32810-16-16	25	- 16	1"	1" - 11.5		19.5	50.5	24.2	38.0		
M32810-20-20	31	- 20	1.1/4"	1.1/4" - 11.5		26.1	61.0	25.0	46.0		
M32810-24-24	38	- 24	1.1/2"	1.1/2" - 11.5		32.1	62.5	26.0	50.0		
M32810-24-32	38	- 24	1.1/2"	2" - 11.5		42.0	67.0	26.5	70.0		
M32810-32-32	51	- 32	2"	2" - 11.5		42.0	67.0	26.5	70.0		
M32810-40-40	63	- 40	2.1/2"	2.1/2" - 8		51.5	94.5	43.0	80.0		
M32810-48-48	76	- 48	3"	3" - 8		62.5	123.5	51.5	100.0		



SAE STANDARD CONNECTIONS



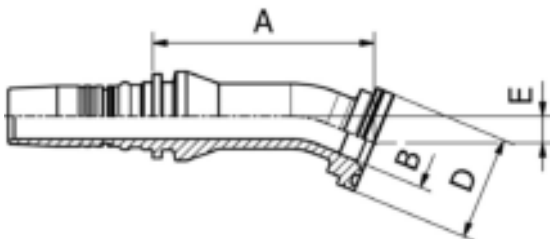
M43310

ISO / SAE
CODE 61 FLANGE
SAE J516 / ISO 12151-3

PART. REF.	HOSE BORE			Flange		DIMENSIONS mm						
	DN	Dash	inch	inch		B	A	D				
M43310-10-16	16	- 10	5/8"	1"		20.0	64.0	44.6				
M43310-12-12	19	- 12	3/4"	3/4"		16.0	60.0	38.0				
M43310-12-16	19	- 12	3/4"	1"		20.0	65.5	44.6				
M43310-16-12	25	- 16	1"	3/4"		16.0	67.0	38.0				
M43310-16-16	25	- 16	1"	1"		20.0	66.5	44.6				
M43310-16-20	25	- 16	1"	1.1/4"		26.1	73.0	51.0				
M43310-20-20	31	- 20	1.1/4"	1.1/4"		26.1	75.0	51.0				
M43310-20-24	31	- 20	1.1/4"	1.1/2"		32.1	80.0	60.5				
M43310-24-24	38	- 24	1.1/2"	1.1/2"		32.1	80.5	60.5				
M43310-24-32	38	- 24	1.1/2"	2"		42.0	88.5	71.6				
M43310-32-24	38	- 24	1.1/2"	2"		32.1	104.0	60.5				
M43310-32-32	51	- 32	2"	2"		42.0	82.5	71.6				
M43310-40-40	63	- 40	2.1/2"	2.1/2"		51.5	92.5	84.3				
M43310-48-48	76	- 48	3"	3"		62.5	101.0	101.6				

189 FITTINGS

SAE STANDARD CONNECTIONS

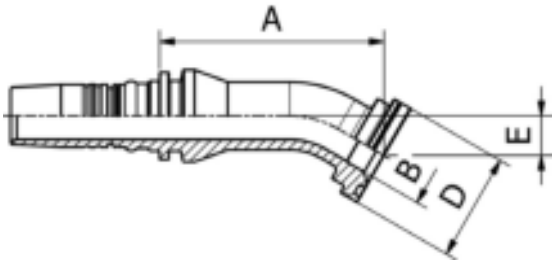


M43320

22,5° ISO / SAE
CODE 61 FLANGE
SAE J516 / ISO 12151-3

PART. REF.	HOSE BORE			Flange		DIMENSIONS mm						
	DN	Dash	inch	inch		B	A	D	E			
M43320-16-16	25	- 16	1"	1"		20.0	94.5	44.6	11.5			

SAE STANDARD CONNECTIONS

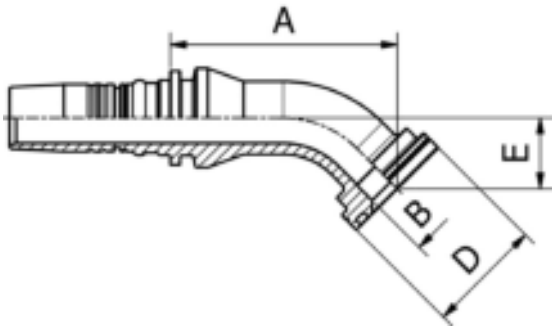


M43330

30° ISO / SAE
 CODE 61 FLANGE
 SAE J516 / ISO 12151-3

PART. REF.	HOSE BORE			Flange	inch	DIMENSIONS mm					
	DN	Dash	inch			B	A	D	E		
M43330-16-16	25	- 16	1"	1"	20.0	93.0	44.6	16.5			
M43330-20-20	31	- 20	1.1/4"	1.1/4"	26.1	106.5	51.0	17.5			
M43330-24-24	38	- 24	1.1/2"	1.1/2"	32.1	118.0	60.5	20.0			
M43330-32-32	51	- 32	2"	2"	42.0	137.0	71.6	22.0			

FITTINGS 190



SAE STANDARD CONNECTIONS

M43340

45° ISO / SAE
 CODE 61 FLANGE
 SAE J516 / ISO 12151-3

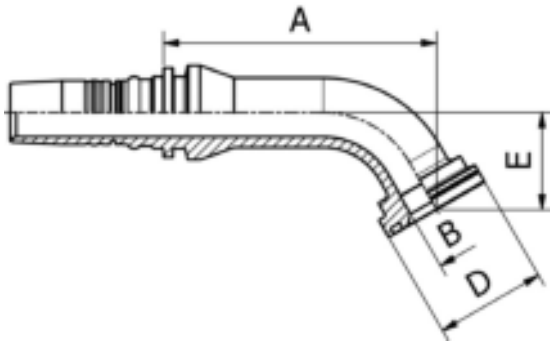
PART. REF.	HOSE BORE			Flange	inch	DIMENSIONS mm					
	DN	Dash	inch			B	A	D	E		
M43340-12-12	19	- 12	3/4"	3/4"	16.0	75.5	38.0	26.0			
M43340-12-16	19	- 12	3/4"	1"	20.0	76.0	44.6	23.0			
M43340-16-16	25	- 16	1"	1"	20.0	87.0	44.6	27.5			
M43340-16-16032	25	- 16	1"	1"	20.0	92.0	44.5	32.0			
M43340-16-20	25	- 16	1"	1.1/4"	26.0	87.5	51.0	27.5			
M43340-20-20	31	- 20	1.1/4"	1.1/4"	26.1	100.5	51.0	29.5			
M43340-20-20038	31	- 20	1.1/4"	1.1/4"	26.1	109.0	50.9	38.0			
M43340-20-24	31	- 20	1.1/4"	1.1/2"	32.1	101.5	60.5	31.0			
M43340-24-24	38	- 24	1.1/2"	1.1/2"	32.1	111.0	60.5	34.5			
M43340-24-24044	38	- 24	1.1/2"	1.1/2"	32.1	120.0	60.5	44.0			
M43340-24-32	38	- 24	1.1/2"	2"	42.0	113.0	71.6	34.5			
M43340-32-32	51	- 32	2"	2"	42.0	128.5	71.6	39.0			
M43340-32-32056	51	- 32	2"	2"	42.0	146.0	71.6	56.0			
M43340-48-48	76	- 48	3"	3"	59.0	147.5	101.6	53.0			



SAE STANDARD CONNECTIONS

M43360

60° ISO / SAE
 CODE 61 FLANGE
 SAE J516 / ISO 12151-3

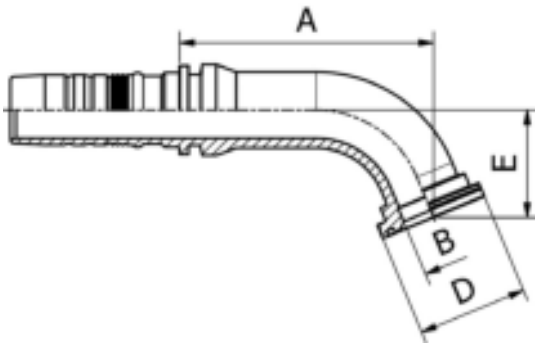


PART. REF.	HOSE BORE			Flange	DIMENSIONS mm							
	DN	Dash	inch		inch	B	A	D	E			
M43360-16-16	25	- 16	1"	1"	20.0	110.0	44.6	39.0				
M43360-20-24	31	- 20	1.1/4"	1.1/2"	32.1	219.0	60.6	45.0				
M43360-24-24	38	- 24	1.1/2"	1.1/2"	32.1	147.0	60.5	51.0				
M43360-24-32	38	- 24	1.1/2"	2"	42.0	147.0	71.6	51.0				
M43360-32-32	51	- 32	2"	2"	42.0	175.0	71.6	58.5				

SAE STANDARD CONNECTIONS

M43370

67.5° ISO / SAE
 FLANGE 3000 PSI
 SAE J516 / ISO 12151-3



PART. REF.	HOSE BORE			Flange	DIMENSIONS mm							
	DN	Dash	inch		inch	B	A	D	E			
M43370-24-24	38	- 24	1.1/2"	1.1/2"	32.1	139.5	60.5	59.0				
M43370-24-32	38	- 24	1.1/2"	2"	42.0	130.0	71.6	59.0				
M43370-32-32	51	- 32	2"	2"	42.0	167.0	71.5	68.5				

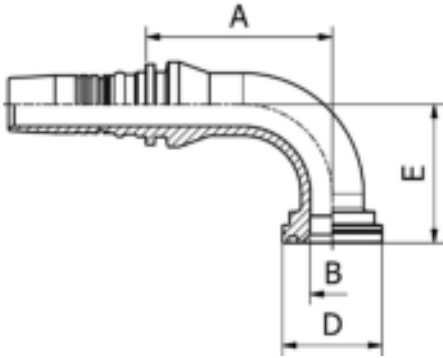
SAE STANDARD CONNECTIONS

M43390

90° ISO / SAE

CODE 61 FLANGE

SAE J516 / ISO 12151-3



PART. REF.	HOSE BORE			Flange	DIMENSIONS mm						
	DN	Dash	inch	inch	B	A	D	E			
M43390-10-16	16	- 10	5/8"	1"	20.0	71.0	44.6	52.0			
M43390-12-12	19	- 12	3/4"	3/4"	16.0	72.0	38.0	52.0			
M43390-12-12058	19	- 12	3/4"	3/4"	16.0	72.0	38.0	58.0			
M43390-12-16	19	- 12	3/4"	1"	20.0	72.5	44.6	52.0			
M43390-16-16	25	- 16	1"	1"	20.0	83.5	44.6	62.0			
M43390-16-16070	25	- 16	1"	1"	20.0	83.5	44.5	70.0			
M43390-16-20	25	- 16	1"	1.1/4"	26.0	83.5	51.0	62.0			
M43390-20-20	31	- 20	1.1/4"	1.1/4"	26.1	99.0	51.0	70.0			
M43390-20-20090	31	- 20	1.1/4"	1.1/4"	26.1	99.0	50.9	90.0			
M43390-20-16	31	- 20	1.1/4"	1"	19.8	96.5	44.6	66.0			
M43390-20-24	31	- 20	1.1/4"	1.1/2"	32.1	98.5	60.5	72.0			
M43390-24-24	38	- 24	1.1/2"	1.1/2"	32.1	111.5	60.5	84.0			
M43390-24-24104	38	- 24	1.1/2"	1.1/2"	32.1	111.5	60.5	104.0			
M43390-24-32	38	- 24	1.1/2"	2"	42.0	111.5	71.6	84.0			
M43390-32-32	51	- 32	2"	2"	42.0	133.5	71.6	99.0			
M43390-32-32138	51	- 32	2"	2"	42.0	133.5	71.5	138.0			
M43390-48-48	76	- 48	3"	3"	59.0	145.0	101.6	140.0			

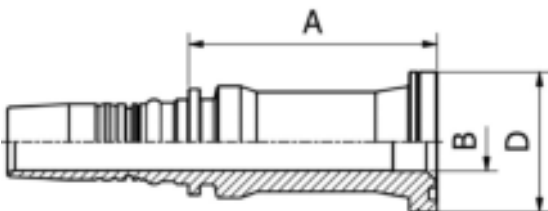
SAE STANDARD CONNECTIONS

M43610

ISO / SAE

CODE 62 FLANGE

SAE J516 / ISO 12151-3



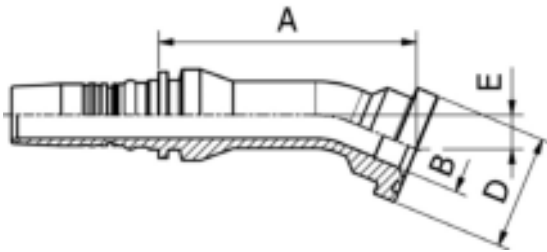
PART. REF.	HOSE BORE			Flange	DIMENSIONS mm						
	DN	Dash	inch	inch	B	A	D				
M43610-10-12	16	- 10	5/8"	3/4"	16.0	65.0	41.5				
M43610-10-16	16	- 10	5/8"	1"	20.0	81.5	47.7				
M43610-12-12	19	- 12	3/4"	3/4"	16.0	71.5	41.4				
M43610-12-16	19	- 12	3/4"	1"	20.0	83.5	47.7				
M43610-16-12	25	- 16	1"	3/4"	16.0	80.5	41.4				
M43610-16-16	25	- 16	1"	1"	20.0	84.5	47.7				
M43610-16-20	25	- 16	1"	1.1/4"	26.0	89.0	54.2				
M43610-20-16	31	- 20	1.1/4"	1"	20.0	87.0	47.7				
M43610-20-20	31	- 20	1.1/4"	1.1/4"	26.1	91.0	54.2				
M43610-20-24	31	- 20	1.1/4"	1.1/2"	32.1	97.0	63.7				
M43610-24-20	38	- 24	1.1/2"	1.1/4"	26.0	101.0	54.2				
M43610-24-24	38	- 24	1.1/2"	1.1/2"	32.1	97.5	63.7				
M43610-24-32	38	- 24	1.1/2"	2"	42.0	113.0	79.6				
M43610-32-24	51	- 32	2"	1.1/2"	32.1	117.0	63.7				
M43610-32-32	51	- 32	2"	2"	42.0	112.5	79.6				
M43610-40-40	63	- 40	2.1/2"	2.1/2"	51.5	126.5	107.9				
M43610-48-48	76	- 48	3"	3"	62.5	167.0	131.9				



SAE STANDARD CONNECTIONS

M43620

22.5° ISO / SAE
 FLANGE 6000 PSI
 SAE J516 / ISO 12151-3



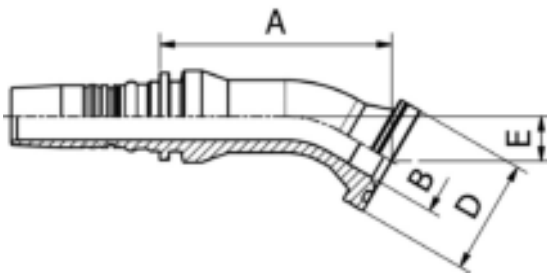
PART. REF.	HOSE BORE			Flange		DIMENSIONS mm						
	DN	Dash	inch			inch	B	A	D			
M43620-12-12	19	- 12	3/4"	3/4"		16.0	89.0	41.3	12.5			
M43620-16-16	25	- 16	1"	1"		20.0	100.5	47.7	14.5			
M43620-16-16023	25	- 16	1"	1"		20.0	106.5	47.7	23.0			
M43620-20-20	31	- 20	1.1/4"	1.1/4"		26.0	118.3	54.1	16.5			
M43620-20-20030	31	- 20	1.1/4"	1.1/4"		26.0	132.5	54.2	30.0			
M43620-24-24	38	- 24	1.1/2"	1.1/2"		32.0	136.5	63.7	19.0			
M43620-32-32	51	- 32	2"	2"		42.0	171.0	79.6	26.0			

193 FITTINGS

SAE STANDARD CONNECTIONS

M43630

30° ISO / SAE
 CODE 62 FLANGE
 SAE J516 / ISO 12151-3

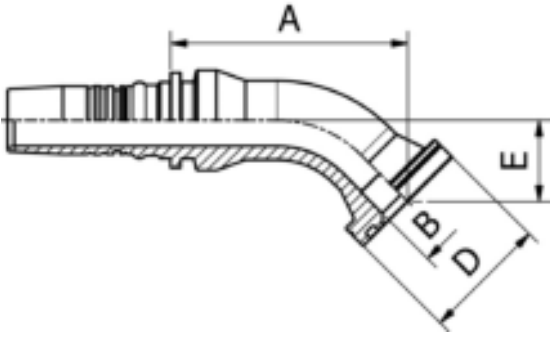


PART. REF.	HOSE BORE			Flange		DIMENSIONS mm						
	DN	Dash	inch			inch	B	A	D			
M43630-12-12	19	- 12	3/4"	3/4"		16.0	87.0	41.4	17.5			
M43630-16-12	25	- 16	1"	3/4"		16.0	93.0	41.4	17.0			
M43630-16-16	25	- 16	1"	1"		20.0	98.5	47.7	20.0			
M43630-20-20	31	- 20	1.1/4"	1.1/4"		26.1	115.5	54.2	23.0			
M43630-24-24	38	- 24	1.1/2"	1.1/2"		32.0	133.5	63.7	27.0			
M43630-32-32	51	- 32	2"	2"		42.0	167.0	79.6	36.5			

SAE STANDARD CONNECTIONS

M43640

45° ISO / SAE
 CODE 62 FLANGE
 SAE J516 / ISO 12151-3



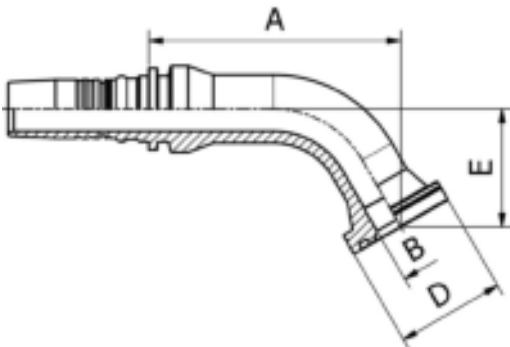
PART. REF.	HOSE BORE			Flange	DIMENSIONS mm						
	DN	Dash	inch		inch	B	A	D	E		
M43640-10-12	16	- 10	5/8"	3/4"	16.0	71.0	41.4	31.0			
M43640-10-16	16	- 10	5/8"	1"	20.0	83.5	47.7	32.5			
M43640-12-12	19	- 12	3/4"	3/4"	16.0	79.0	41.4	26.0			
M43640-12-16	19	- 12	3/4"	1"	20.0	85.5	47.7	32.5			
M43640-16-12	25	- 16	1"	3/4"	16.0	87.0	41.4	28.0			
M43640-16-16	25	- 16	1"	1"	20.0	91.5	47.7	32.5			
M43640-16-20	25	- 16	1"	1.1/4"	26.0	93.5	54.2	37.5			
M43640-20-16	31	- 20	1.1/4"	1"	20.0	106.5	47.7	36.0			
M43640-20-20	31	- 20	1.1/4"	1.1/4"	26.1	108.0	54.2	37.5			
M43640-20-24	31	- 20	1.1/4"	1.1/2"	32.1	115.0	63.7	45.0			
M43640-24-20	38	- 24	1.1/2"	1.1/4"	26.0	124.5	54.2	43.0			
M43640-24-24	38	- 24	1.1/2"	1.1/2"	32.0	124.5	63.7	44.0			
M43640-24-32	38	- 24	1.1/2"	2"	42.0	135.5	79.6	55.5			
M43640-32-32	51	- 32	2"	2"	42.0	154.0	79.6	60.5			
M43640-32-32056	51	- 32	2"	2"	42.0	150.0	79.6	56.5			

FITTINGS 194

SAE STANDARD CONNECTIONS

M43660

60° ISO / SAE
 CODE 62 FLANGE
 SAE J516 / ISO 12151-3



PART. REF.	HOSE BORE			Flange	DIMENSIONS mm						
	DN	Dash	inch		inch	B	A	D	E		
M43660-12-12	19	- 12	3/4"	3/4"	16.0	98.5	41.4	39.0			
M43660-12-16	19	- 12	3/4"	1"	20.0	101.0	47.7	44.0			
M43660-16-16	25	- 16	1"	1"	20.0	107.0	47.7	52.0			
M43660-20-20	31	- 20	1.1/4"	1.1/4"	26.1	130.0	54.2	59.0			
M43660-20-24	31	- 20	1.1/4"	1.1/2"	32.1	136.5	63.7	66.0			
M43660-24-24	38	- 24	1.1/2"	1.1/2"	32.0	154.0	63.7	61.5			
M43660-32-32	51	- 32	2"	2"	42.0	197.5	79.6	85.0			

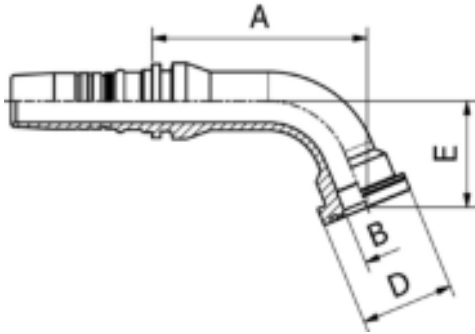


SAE STANDARD CONNECTIONS

M43670

67.5° ISO / SAE
CODE 62 FLANGE

SAE J516 / ISO 12151-3



PART. REF.	HOSE BORE			Flange		DIMENSIONS mm						
	DN	Dash	inch			inch	B	A	D			
M43670-16-20	25	- 16	1"	1.1/4"		26.0	105.0	54.1	58.5			
M43670-20-16T34	31	- 20	1.1/4"	1"		26.0	125.3	47.7	58.2			
M43670-20-20	31	- 20	1.1/4"	1.1/4"		26.1	125.5	54.2	62.0			
M43670-24-16	38	- 24	1.1/2"	1"		19.0	125.5	47.7	51.0			
M43670-24-20	38	- 24	1.1/2"	1.1/4"		26.0	142.5	54.1	54.1			
M43670-24-20T40	38	- 24	1.1/2"	1.1/4"		31.0	145.0	54.2	71.0			

FITTINGS

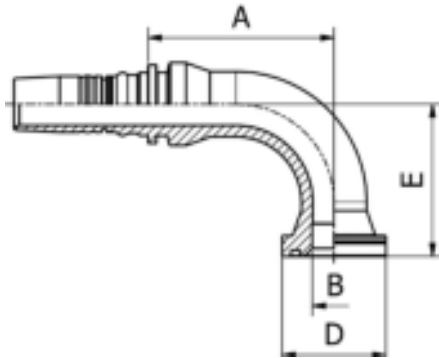
195

SAE STANDARD CONNECTIONS

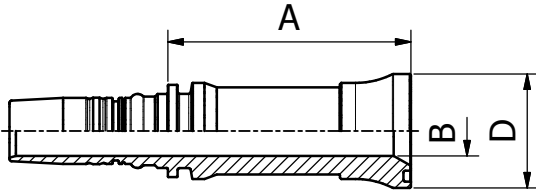
M43690

90° ISO / SAE
CODE 62 FLANGE

SAE J516 / ISO 12151-3



PART. REF.	HOSE BORE			Flange		DIMENSIONS mm						
	DN	Dash	inch			inch	B	A	D			
M43690-10-12	16	- 10	5/8"	3/4"		16.0	56.5	41.4	60.5			
M43690-12-12	19	- 12	3/4"	3/4"		16.0	72.5	41.4	59.0			
M43690-12-16	19	- 12	3/4"	1"		20.0	72.5	47.7	65.0			
M43690-16-12	25	- 16	1"	3/4"		16.0	81.5	41.4	62.0			
M43690-16-16	25	- 16	1"	1"		20.0	81.0	47.7	68.0			
M43690-16-20	25	- 16	1"	1.1/4"		26.0	78.5	54.2	76.0			
M43690-20-16	31	- 20	1.1/4"	1"		20.0	98.5	47.7	79.0			
M43690-20-20	31	- 20	1.1/4"	1.1/4"		26.1	98.5	54.2	81.0			
M43690-20-20090	31	- 20	1.1/4"	1.1/4"		26.1	98.5	54.1	90.0			
M43690-20-24	31	- 20	1.1/4"	1.1/2"		32.1	98.5	63.7	91.5			
M43690-24-20	38	- 24	1.1/2"	1.1/4"		26.0	111.0	54.2	91.0			
M43690-24-24	38	- 24	1.1/2"	1.1/2"		32.0	112.5	63.7	94.5			
M43690-24-24104	38	- 24	1.1/2"	1.1/2"		32.0	112.5	63.7	104.0			
M43690-24-32	38	- 24	1.1/2"	2"		42.0	112.5	79.6	110.5			
M43690-32-32	51	- 32	2"	2"		42.0	140.5	79.6	132.0			
M43690-32-32138	51	- 32	2"	2"		42.0	140.5	79.6	138.0			



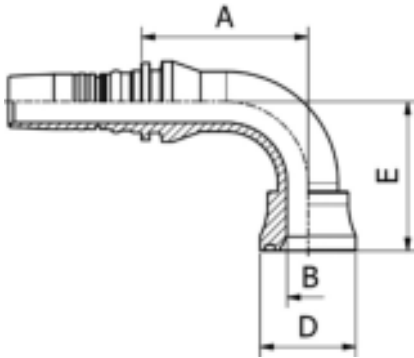
XTRAFRANGE

M48410

XTRAFRANGE/61
(ISO 6162-1/SAE J518 CODE 61
PORT COMPATIBLE)

PART. REF.	HOSE BORE			Flange	DIMENSIONS mm							
	DN	Dash	inch		inch	B	A	D				
M48410-16-16	25	- 16	1"	1"	19.5	94.5	44.5					
M48410-20-20	31	- 20	1.1/4"	1.1/4"	25.0	103.5	50.5					
M48410-24-24	38	- 24	1.1/2"	1.1/2"	31.0	116.0	60.5					
M48410-32-32	51	- 32	2"	2"	41.0	101.0	71.6					
M48410-40-40	63	- 40	2.1/2"	2.1/2"	51.5	103.0	84.4					

FITTINGS 196



XTRAFRANGE

M48490

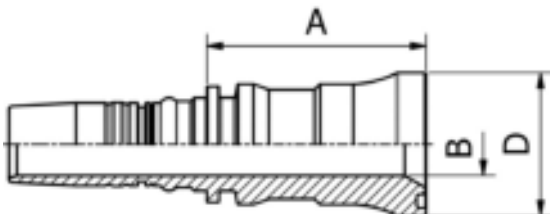
90° XTRAFRANGE/61
(ISO 6162-1/SAE J518 CODE 61
PORT COMPATIBLE)

PART. REF.	HOSE BORE			Flange	DIMENSIONS mm							
	DN	Dash	inch		inch	B	A	D	E			
M48490-16-16	25	- 16	1"	1"	19.5	77.5	44.5	69.5				
M48490-20-20	31	- 20	1.1/4"	1.1/4"	25.0	107.0	50.5	90.0				
M48490-24-24	38	- 24	1.1/2"	1.1/2"	31.0	112.0	60.5	104.0				
M48490-32-32	51	- 32	2"	2"	41.0	145.0	71.6	138.0				

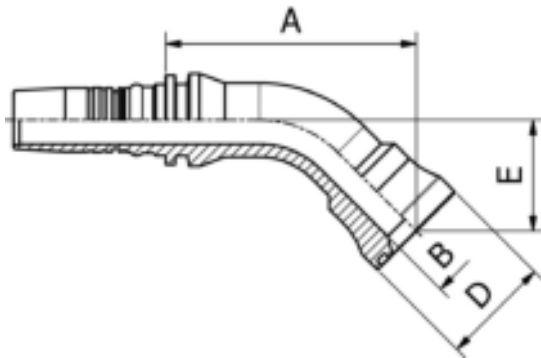
XTRAFRANGE

M48510

XTRAFRANGE/62
(SAE J518 CODE 62 - ISO 6162-2
PORT COMPATIBLE)



PART. REF.	HOSE BORE			Flange	DIMENSIONS mm							
	DN	Dash	inch		inch	B	A	D				
M48510-12-12	19	- 12	3/4"	3/4"	14.5	64.0	41.4					
M48510-16-16	25	- 16	1"	1"	19.5	68.5	47.7					
M48510-20-20	31	- 20	1.1/4"	1.1/4"	25.0	88.0	54.4					
M48510-24-24	38	- 24	1.1/2"	1.1/2"	31.0	102.0	63.7					
M48510-32-32	51	- 32	2"	2"	41.0	128.5	79.6					
M48510-40-40	63	- 40	2.1/2"	2.1/2"	51.5	148.5	99.2					

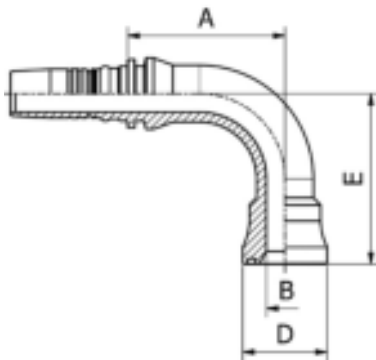


XTRAFLANGE

M48540

45° XTRAFLANGE/62
(SAE J518 CODE 62 - ISO 6162-2
PORT COMPATIBLE)

PART. REF.	HOSE BORE			Flange		DIMENSIONS mm						
	DN	Dash	inch			inch	B	A	D			
M48540-12-12	19	- 12	3/4"	3/4"		14.5	92.5	41.4	38.0			
M48540-16-16	25	- 16	1"	1"		19.5	101.5	47.7	45.0			
M48540-20-20	31	- 20	1.1/4"	1.1/4"		25.0	138.0	54.4	62.5			
M48540-24-24	38	- 24	1.1/2"	1.1/2"		31.0	155.0	63.7	71.5			
M48540-32-32	51	- 32	2"	2"		39.0	193.5	79.6	92.5			



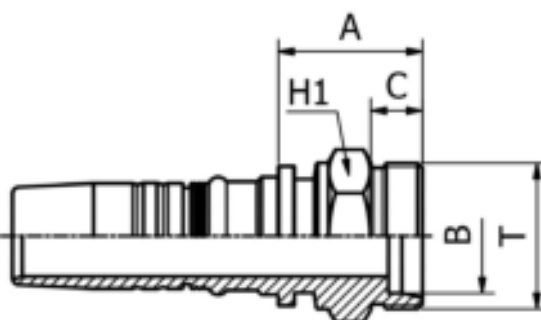
XTRAFLANGE

M48590

90° XTRAFLANGE/62
(SAE J518 CODE 62 - ISO 6162-2
PORT COMPATIBLE)

PART. REF.	HOSE BORE			Flange		DIMENSIONS mm						
	DN	Dash	inch			inch	B	A	D			
M48590-12-12	19	- 12	3/4"	3/4"		14.5	75.5	41.4	75.0			
M48590-16-16	25	- 16	1"	1"		19.5	83.5	47.7	90.0			
M48590-20-20	31	- 20	1.1/4"	1.1/4"		25.0	107.0	54.4	120.0			
M48590-24-24	38	- 24	1.1/2"	1.1/2"		31.0	122.0	63.7	140.0			
M48590-32-32	51	- 32	2"	2"		39.0	147.5	79.6	178.0			

DIN STANDARD CONNECTIONS



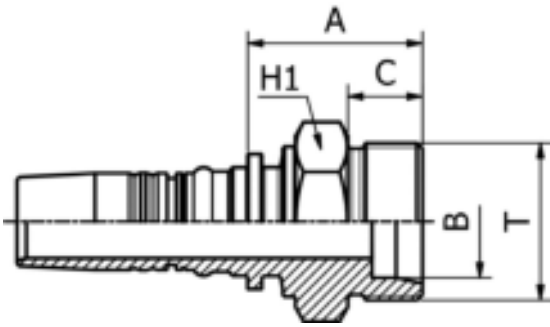
M31110

METRIC
MALE 24° CONE SEAT LIGHT DUTY
DIN 20066 / ISO 12151-2

PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm						
	DN	Dash	inch			T	mm	B	A			
M31110-20-45	31	- 20	1.1/4"	M 45X2	35.0	35.3	44.5	16.0	46.0			

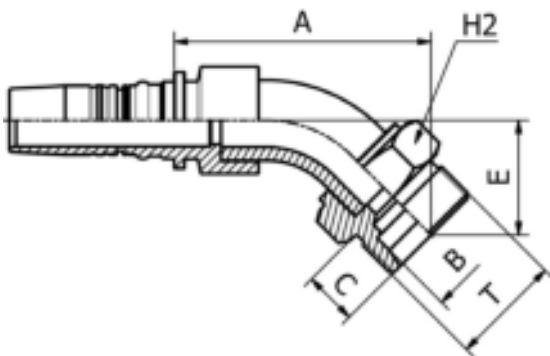
DIN STANDARD CONNECTIONS

M31210



METRIC
MALE 24° CONE SEAT HEAVY DUTY
DIN 20066 / ISO 12151-2

PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm					
	DN	Dash	inch			T	B	A	C	H1	
M31210-10-30	16	- 10	5/8"	M 30X2	20.0	12.0	37.0	16.0	30.0		
M31210-12-30	19	- 12	3/4"	M 30X2	20.0	14.5	38.5	16.0	32.0		
M31210-12-36	19	- 12	3/4"	M 36X2	25.0	14.5	43.5	18.0	36.0		
M31210-16-36	25	- 16	1"	M 36X2	25.0	19.5	45.0	18.0	36.0		
M31210-16-42	25	- 16	1"	M 42X2	30.0	19.5	47.0	20.0	46.0		
M31210-20-52	31	- 20	1.1/4"	M 52X2	38.0	25.0	55.0	22.0	55.0		
M31210-24-52	38	- 24	1.1/2"	M 52X2	38.0	31.0	55.5	22.0	55.0		



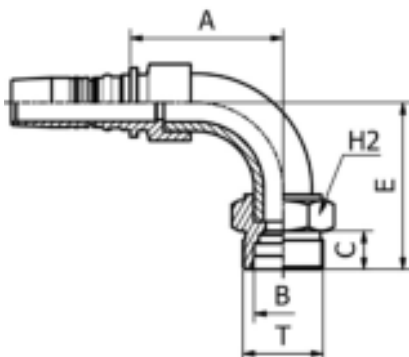
DIN STANDARD CONNECTIONS

M31240

45° METRIC
MALE 24° CONE SEAT HEAVY DUTY
DIN 20066 / ISO 12151-2

PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm					
	DN	Dash	inch			T	B	A	C	E	H2
M31240-16-42	25	- 16	1"	M 42X2	30.0	25.0	96.0	20.0	43.0	46.0	
M31240-20-52	31	- 20	1.1/4"	M 52X2	38.0	25.0	110.0	22.0	49.5	55.0	

*All items are made from brazing



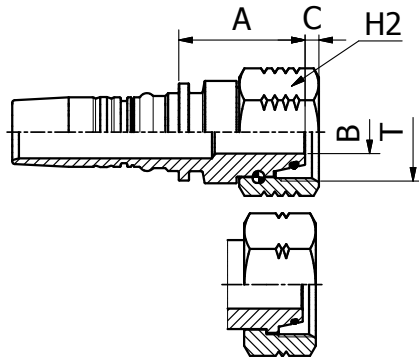
DIN STANDARD CONNECTIONS

M31290

90° METRIC
MALE 24° CONE SEAT HEAVY DUTY
DIN 20066 / ISO 12151-2

PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm					
	DN	Dash	inch			T	B	A	C	E	H2
M31290-10-30	16	- 10	5/8"	M 30X2	20.0	15.0	64.5	29.0	64.0	32.0	
M31290-16-42	25	- 16	1"	M 42X2	30.0	20.0	79.5	20.0	87.0	46.0	
M31290-20-52	31	- 20	1.1/4"	M 52X2	38.0	25.0	96.0	22.0	105.0	55.0	

*All items are made from brazing

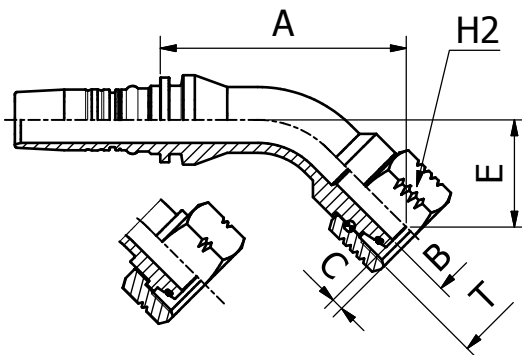


DIN STANDARD CONNECTIONS

M41612/M41613

METRIC
O-RING FEMALE 24° CONE HEAVY DUTY
DIN 20066 / ISO 12151-2

PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm						
	DN	Dash	inch	T	mm	B	A	C	H2			
M41612-10-24	16	- 10	5/8"	M 24X1,5	16.0	9.3	31.0	4.0	30.0			
M41613-10-30	16	- 10	5/8"	M 30X2	20.0	12.0	37.0	3.5	36.0			
M41612-12-30	19	- 12	3/4"	M 30X2	20.0	12.5	44.0	3.2	36.0			
M41613-12-36	19	- 12	3/4"	M 36X2	25.0	14.5	42.0	3.4	41.0			
M41613-12-42	19	- 12	3/4"	M 42X2	30.0	19.0	36.0	6.3	50.0			
M41612-16-36	25	- 16	1"	M 36X2	25.0	16.0	47.0	4.1	41.0			
M41613-16-42	25	- 16	1"	M 42X2	30.0	19.5	46.5	5.3	50.0			
M41613-16-52	25	- 16	1"	M 52X2	38.0	26.1	49.5	8.0	60.0			
M41612-20-42	31	- 20	1.1/4"	M 42X2	30.0	19.0	47.5	6.0	50.0			
M41613-20-52	31	- 20	1.1/4"	M 52X2	38.0	26.1	41.5	8.0	60.0			
M41612-24-52	38	- 24	1.1/2"	M 52X2	38.0	29.0	52.5	8.8	60.0			



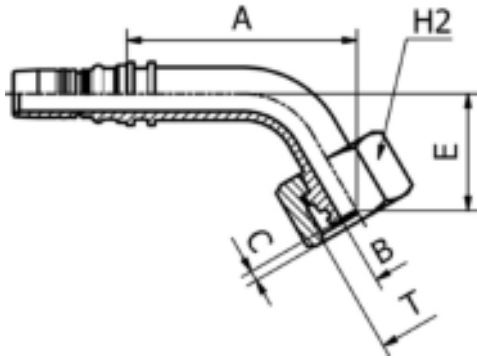
DIN STANDARD CONNECTIONS

M41642/M41643

45° METRIC
O-RING FEMALE SWEPT ELBOW 24° CONE
HEAVY DUTY
DIN 20066 / ISO 12151-2

PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm						
	DN	Dash	inch	T	mm	B	A	C	E	H2		
M41643-10-30	16	- 10	5/8"	M 30X2	20.0	12.0	66.5	3.5	29.5	36.0		
M41642-12-30	19	- 12	3/4"	M 30X2	20.0	12.5	79.0	3.2	35.0	36.0		
M41643-12-36	19	- 12	3/4"	M 36X2	25.0	14.5	81.0	3.4	33.5	41.0		
M41642-16-36	25	- 16	1"	M 36X2	25.0	16.0	103.0	4.1	45.5	41.0		
M41643-16-42	25	- 16	1"	M 42X2	30.0	19.5	93.0	5.3	36.0	50.0		
M41642-20-42	31	- 20	1.1/4"	M 42X2	30.0	19.1	116.5	6.0	44.5	50.0		
M41643-20-52	31	- 20	1.1/4"	M 52X2	38.0	26.1	110.0	8.0	40.0	60.0		
M41642-24-52	38	- 24	1.1/2"	M 52X2	38.0	29.0	128.0	8.8	51.5	60.0		

DIN STANDARD CONNECTIONS

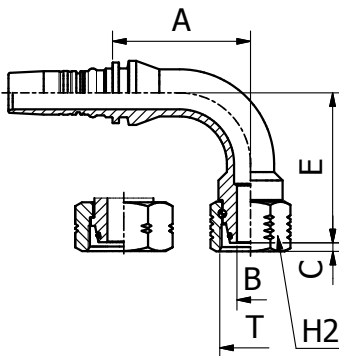


M41663

**60° METRIC
 O-RING FEMALE SWEPT ELBOW 24° CONE
 HEAVY DUTY
 DIN 20066 / ISO 12151-2**

PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm						
	DN	Dash	inch	T	mm	B	A	C	E	H2		
M41663-10-30	16	- 10	5/8"	M30X2	20.0	12.0	78.4	3.5	40.0	36		

FITTINGS 200



DIN STANDARD CONNECTIONS

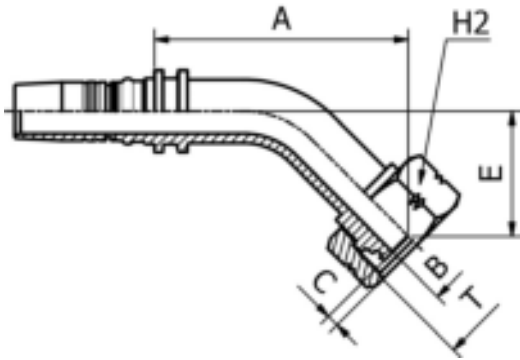
M41692/M41693

**90° METRIC
 O-RING FEMALE SWEPT ELBOW 24° CONE
 HEAVY DUTY
 DIN 20066 / ISO 12151-2**

PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm						
	DN	Dash	inch	T	mm	B	A	C	E	H2		
M41693-10-30	16	- 10	5/8"	M 30X2	20.0	12.0	52.5	3.5	57.5	36.0		
M41692-12-30	19	- 12	3/4"	M 30X2	25.0	12.5	64.0	3.2	68.5	36.0		
M41693-12-36	19	- 12	3/4"	M 36X2	25.0	14.5	67.0	3.4	67.5	41.0		
M41692-16-36	25	- 16	1"	M 36X2	25.0	16.0	81.5	4.1	89.0	41.0		
M41693-16-42	25	- 16	1"	M 42X2	30.0	19.5	81.5	5.3	75.5	50.0		
M41692-20-42	31	- 20	1.1/4"	M 42X2	30.0	19.1	103.5	6.0	90.0	50.0		
M41693-20-52	31	- 20	1.1/4"	M 52X2	38.0	26.1	100.0	8.0	86.5	60.0		



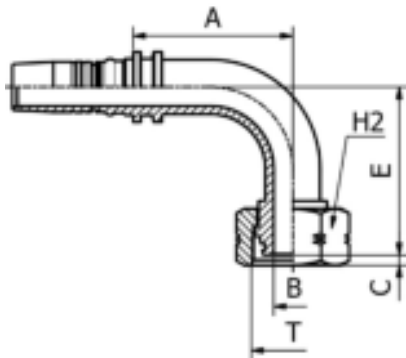
DIN STANDARD CONNECTIONS



M41243 LONG DROP

45° METRIC
 O-RING FEMALE
 MEDIUM/LONG DROP ELBOW 24° CONE
 HEAVY DUTY
 DIN 20066/ ISO 12151-2 (SLIP-ON NUT)

PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm						
	DN	Dash	inch	T	mm	B	A	C	E	H2		
M41243-10-30	16	- 10	5/8"	M 30X2	20.0	12.0	77.5	3.5	35.0	36.0		
M41243-12-36	19	- 12	3/4"	M 36X2	25.0	14.5	101.0	3.4	45.0	41.0		
M41243-16-42	25	- 16	1"	M 42X2	30.0	19.5	112.0	5.3	55.0	50.0		
M41243-20-52	31	- 20	1.1/4"	M 52X2	38.0	26.1	133.0	8.0	63.0	60.0		



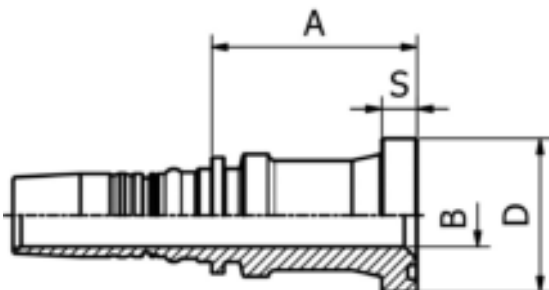
DIN STANDARD CONNECTIONS

M41293 LONG DROP

90° METRIC
 O-RING FEMALE
 MEDIUM/LONG DROP ELBOW 24° CONE
 HEAVY DUTY
 DIN 20066 / ISO 12151-2 (SLIP-ON NUT)

PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm						
	DN	Dash	inch	T	mm	B	A	C	E	H2		
M41293-10-30	16	- 10	5/8"	M 30X2	20.0	12.0	53.0	3.5	60.0	36.0		
M41293-12-36	19	- 12	3/4"	M 36X2	25.0	14.5	67.0	3.4	67.5	41.0		
M41293-16-42	25	- 16	1"	M 42X2	30.0	19.5	81.5	5.3	86.0	50.0		
M41293-20-52	31	- 20	1.1/4"	M 52X2	38.0	26.1	100.0	8.0	92.0	60.0		

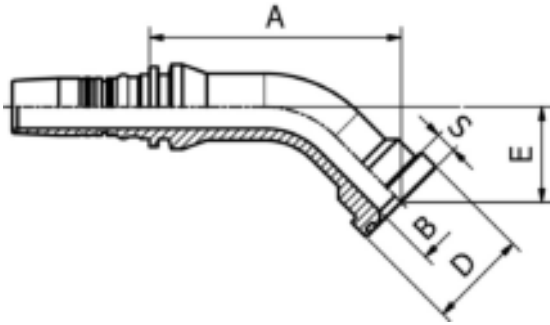
ORIGINAL EQUIPMENT CONNECTIONS



M43710

FLANGE PLUS
 (SAE J518 CODE 62 - ISO 6162-2
 PORT COMPATIBLE)

PART. REF.	HOSE BORE			Flange	DIMENSIONS mm						
	DN	Dash	inch	inch	B	A	D	S			
M43710-10-12	16	- 10	5/8"	3/4"	16.0	51.5	41.5	9.0			
M43710-12-12	19	- 12	3/4"	3/4"	14.5	71.5	41.4	10.0			
M43710-16-16	25	- 16	1"	1"	19.5	64.0	47.7	11.0			
M43710-20-20	31	- 20	1.1/4"	1.1/4"	25.0	81.0	54.2	12.0			

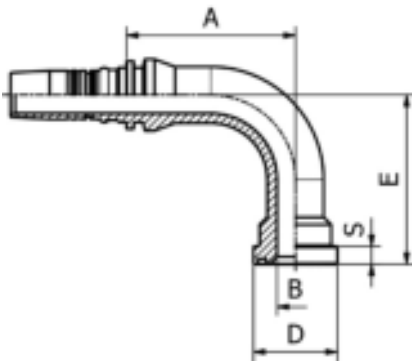


ORIGINAL EQUIPMENT CONNECTIONS

M43740

45° FLANGE PLUS
 (SAE J518 CODE 62 - ISO 6162-2
 PORT COMPATIBLE)

PART. REF.	HOSE BORE			Flange	DIMENSIONS mm						
	DN	Dash	inch		inch	B	A	D	E	S	
M43740-10-12	16	- 10	5/8"	3/4"	16.0	72.5	41.4	31.0	9.0		
M43740-12-12	19	- 12	3/4"	3/4"	14.5	113.0	41.4	40.0	10.0		
M43740-16-16	25	- 16	1"	1"	19.5	113.5	47.7	43.0	11.0		
M43740-20-20	31	- 20	1.1/4"	1.1/4"	25.0	133.5	54.2	50.0	12.0		



ORIGINAL EQUIPMENT CONNECTIONS

M43790

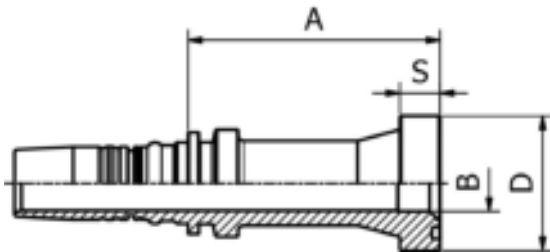
90° FLANGE PLUS
 (SAE J518 CODE 62 - ISO 6162-2
 PORT COMPATIBLE)

PART. REF.	HOSE BORE			Flange	DIMENSIONS mm						
	DN	Dash	inch		inch	B	A	D	E	S	
M43790-10-12	16	- 10	5/8"	3/4"	16.0	61.5	41.4	60.5	9.0		
M43790-12-12	19	- 12	3/4"	3/4"	14.5	93.0	41.4	75.0	10.0		
M43790-16-16	25	- 16	1"	1"	19.5	90.0	47.7	90.0	11.0		
M43790-20-20	31	- 20	1.1/4"	1.1/4"	25.0	115.0	54.2	110.0	12.0		



ORIGINAL EQUIPMENT CONNECTIONS

M43910



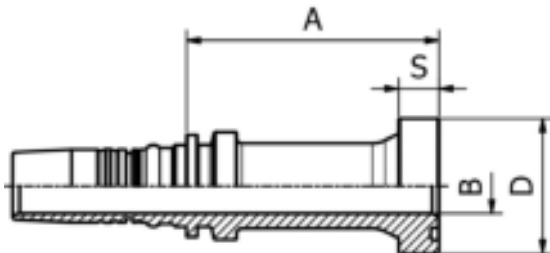
STRAIGHT SUPERCAT SERIES FLANGE

PART. REF.	HOSE BORE			Flange	DIMENSIONS mm							
	DN	Dash	inch		inch	B	A	D	S			
M43910-12-12	19	- 12	3/4"	3/4"	16.0	77.0	41.5	14.3				
M43910-12-16	19	- 12	3/4"	1"	20.0	88.5	47.7	14.3				
M43910-16-16	25	- 16	1"	1"	20.0	89.5	47.7	14.3				
M43910-16-20	25	- 16	1"	1.1/4"	26.0	93.5	54.0	14.3				
M43910-20-20	31	- 20	1.1/4"	1.1/4"	26.1	95.0	54.0	14.3				
M43910-20-24	31	- 20	1.1/4"	1.1/2"	32.1	98.5	63.6	14.3				
M43910-24-24	38	- 24	1.1/2"	1.1/2"	32.1	99.0	63.6	14.3				
M43910-24-32	38	- 24	1.1/2"	2"	42.0	115.0	79.3	14.3				
M43910-32-24	51	- 32	2"	1.1/2"	32.1	119.5	63.6	14.3				
M43910-32-32	51	- 32	2"	2"	42.0	114.5	79.3	14.3				

203 FITTINGS

ORIGINAL EQUIPMENT CONNECTIONS

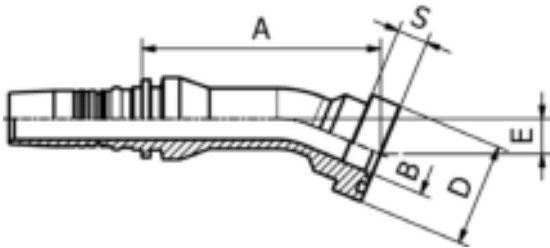
M43910CT



STRAIGHT REALCAT FLANGE

PART. REF.	HOSE BORE			Flange	DIMENSIONS mm							
	DN	Dash	inch		inch	B	A	D	S			
M43910-16-16CT	25	- 16	1"	1"	19.5	89.5	47.7	14.3				
M43910-20-20CT	31	- 20	1.1/4"	1.1/4"	25.0	95.0	54.0	14.3				
M43910-20-24CT	31	- 20	1.1/4"	1.1/2"	31.0	98.0	63.6	14.3				
M43910-24-24CT	38	- 24	1.1/2"	1.1/2"	31.0	99.0	63.6	14.3				

ORIGINAL EQUIPMENT CONNECTIONS

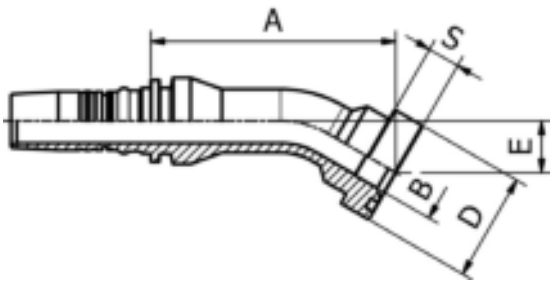


M43920

22,5° SUPERCAT SERIES FLANGE

PART. REF.	HOSE BORE			Flange	DIMENSIONS mm						
	DN	Dash	inch		inch	B	A	D	E	S	
M43920-12-12	19	- 12	3/4"	3/4"	16.0	94.0	41.5	14.5	14.3		
M43920-12-16	19	- 12	3/4"	1"	20.0	101.5	47.7	16.5	14.3		
M43920-16-16	25	- 16	1"	1"	20.0	110.5	47.7	16.5	14.3		
M43920-16-20	25	- 16	1"	1.1/4"	26.1	115.5	54.0	19.0	14.3		
M43920-20-20	31	- 20	1.1/4"	1.1/4"	26.1	122.0	54.0	18.0	14.3		
M43920-20-24	31	- 20	1.1/4"	1.1/2"	32.0	139.0	63.7	23.0	14.3		
M43920-24-24	38	- 24	1.1/2"	1.1/2"	32.0	138.0	63.7	20.0	14.3		

ORIGINAL EQUIPMENT CONNECTIONS



M43930

30° SUPERCAT SERIES FLANGE

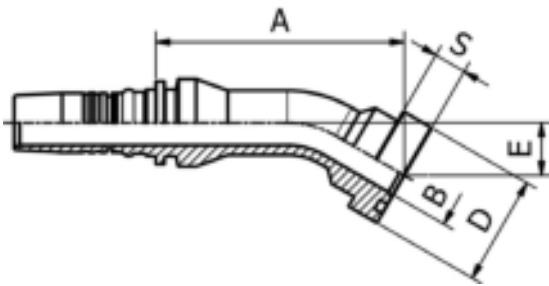
PART. REF.	HOSE BORE			Flange	DIMENSIONS mm						
	DN	Dash	inch		inch	B	A	D	E	S	
M43930-12-12	19	- 12	3/4"	3/4"	16.0	92.0	41.5	20.0	14.3		
M43930-12-16	19	- 12	3/4"	1"	20.0	99.0	47.7	22.5	14.3		
M43930-16-16	25	- 16	1"	1"	20.0	108.0	47.7	23.0	14.3		
M43930-16-20	25	- 16	1"	1.1/4"	26.1	112.5	54.0	26.0	14.3		
M43930-20-20	31	- 20	1.1/4"	1.1/4"	26.1	119.5	54.0	25.0	14.3		
M43930-20-24	31	- 20	1.1/4"	1.1/2"	32.0	135.5	63.7	32.0	14.3		
M43930-24-24	38	- 24	1.1/2"	1.1/2"	32.0	135.0	63.7	28.0	14.3		
M43930-24-32	38	- 24	1.1/2"	2"	42.0	151.5	79.3	36.0	14.3		
M43930-32-32	51	- 32	2"	2"	42.0	171.5	79.3	37.5	14.3		



ORIGINAL EQUIPMENT CONNECTIONS

M43930CT

30° REALCAT SERIES FLANGE

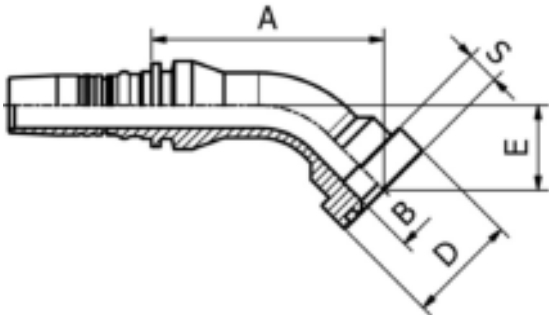


PART. REF.	HOSE BORE			Flange	DIMENSIONS mm					
	DN	Dash	inch		inch	B	A	D	E	S
M43930-12-12CT	19	- 12	3/4"	3/4"	14.5	92.0	41.5	20.0	14.3	
M43930-16-16CT	25	- 16	1"	1"	19.5	108.0	47.7	23.0	14.3	
M43930-20-20CT	31	- 20	1.1/4"	1.1/4"	25.0	119.5	54.0	25.0	14.3	
M43930-24-24CT	38	- 24	1.1/2"	1.1/2"	31.0	135.0	63.7	28.0	14.3	

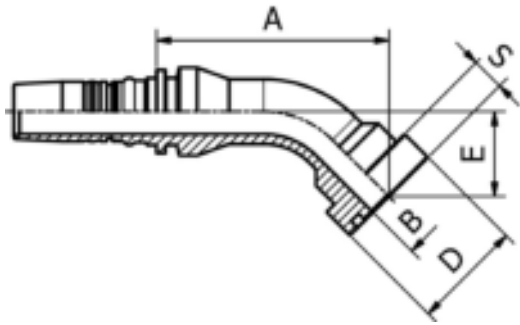
ORIGINAL EQUIPMENT CONNECTIONS

M43940

45° SUPERCAT SERIES FLANGE



PART. REF.	HOSE BORE			Flange	DIMENSIONS mm					
	DN	Dash	inch		inch	B	A	D	E	S
M43940-12-12	19	- 12	3/4"	3/4"	16.0	85.0	41.5	32.0	14.3	
M43940-12-16	19	- 12	3/4"	1"	20.0	91.5	47.7	35.5	14.3	
M43940-16-16	25	- 16	1"	1"	20.0	100.5	47.7	36.5	14.3	
M43940-16-20	25	- 16	1"	1.1/4"	26.1	103.5	54.0	40.5	14.3	
M43940-20-20	31	- 20	1.1/4"	1.1/4"	26.1	110.5	54.0	40.5	14.3	
M43940-20-24	31	- 20	1.1/4"	1.1/2"	32.0	124.5	63.7	50.5	14.3	
M43940-24-24	38	- 24	1.1/2"	1.1/2"	32.0	125.5	63.7	45.5	14.3	
M43940-24-32	38	- 24	1.1/2"	2"	42.0	139.5	79.3	56.5	14.3	
M43940-32-32	51	- 32	2"	2"	42.0	158.5	79.3	61.5	14.3	

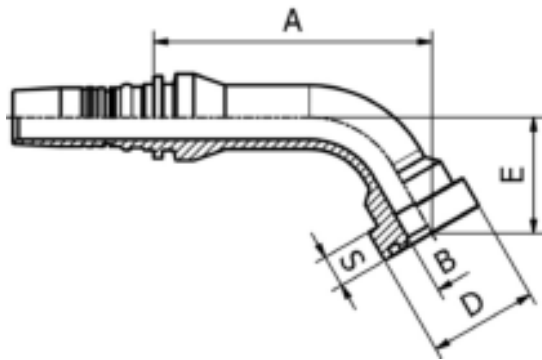


ORIGINAL EQUIPMENT CONNECTIONS

M43940CT

45° REALCAT FLANGE

PART. REF.	HOSE BORE			Flange	DIMENSIONS mm					
	DN	Dash	inch		inch	B	A	D	E	S
M43940-16-16CT	25	- 16	1"	1"	19.5	100.5	47.7	36.5	14.3	
M43940-16-20CT	25	- 16	1"	1.1/4"	25.0	103.5	54.0	40.5	14.3	
M43940-20-24CT	31	- 20	1.1/4"	1.1/2"	31.0	124.5	63.7	50.5	14.3	
M43940-20-20CT	31	- 20	1.1/4"	1.1/4"	25.0	110.5	54.0	40.5	14.3	
M43940-24-24CT	38	- 24	1.1/2"	1.1/2"	31.0	125.5	63.7	45.0	14.3	

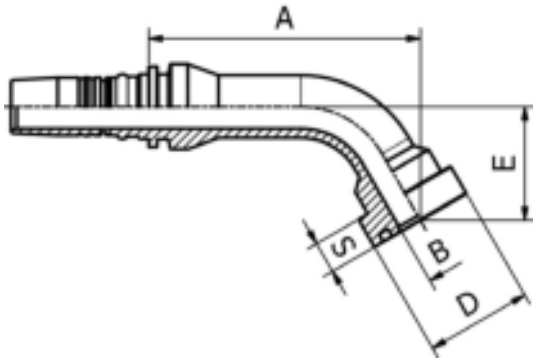


ORIGINAL EQUIPMENT CONNECTIONS

M43960

60° SUPERCAT SERIES FLANGE

PART. REF.	HOSE BORE			Flange	DIMENSIONS mm					
	DN	Dash	inch		inch	B	A	D	E	S
M43960-12-16	19	- 12	3/4"	1"	20.0	106.0	47.7	48.0	14.3	
M43960-12-12	19	- 12	3/4"	3/4"	16.0	101.0	41.5	44.0	14.3	
M43960-16-16	25	- 16	1"	1"	20.0	122.0	47.7	51.0	14.3	
M43960-16-16055	25	- 16	1"	1"	20.0	102.5	47.7	55.0	14.3	
M43960-16-20	25	- 16	1"	1.1/4"	26.1	122.0	54.0	55.0	14.3	
M43960-20-20	31	- 20	1.1/4"	1.1/4"	26.1	136.0	54.0	56.0	14.3	
M43960-20-24	31	- 20	1.1/4"	1.1/2"	32.0	149.0	63.7	69.0	14.3	
M43960-24-24	38	- 24	1.1/2"	1.1/2"	32.0	154.5	63.7	63.0	14.3	
M43960-32-32	51	- 32	2"	2"	42.0	202.0	79.3	86.5	14.3	
M43960-32-32150	51	- 32	2"	2"	42.0	196.5	79.3	150.0	14.3	

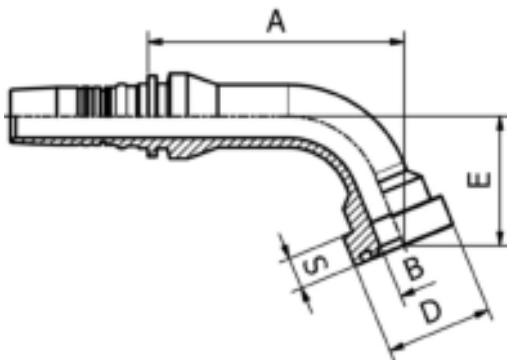


ORIGINAL EQUIPMENT CONNECTIONS

M43960CT

60° REALCAT SERIES FLANGE

PART. REF.	HOSE BORE			Flange	DIMENSIONS mm						
	DN	Dash	inch		inch	B	A	D	E	S	
M43960-16-16CT	25	- 16	1"	1"	19.5	122.0	47.7	51.0	14.3		
M43960-16-20CT	25	- 16	1"	1.1/4"	25.0	122.0	54.0	55.0	14.3		
M43960-24-24CT	38	- 24	1.1/2"	1.1/2"	31.0	154.5	63.7	63.5	14.3		

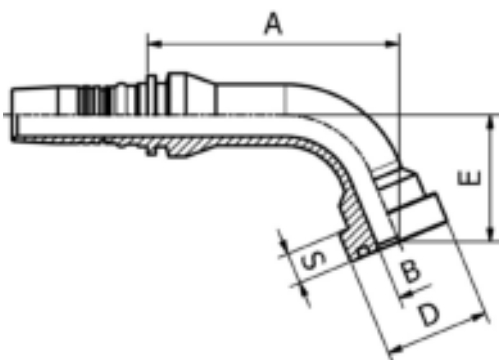


ORIGINAL EQUIPMENT CONNECTIONS

M43970

67,5° SUPERCAT SERIES FLANGE

PART. REF.	HOSE BORE			Flange	DIMENSIONS mm						
	DN	Dash	inch		inch	B	A	D	E	S	
M43970-12-12	19	- 12	3/4"	3/4"	16.0	95.0	41.5	49.5	14.3		
M43970-12-16	19	- 12	3/4"	1"	20.0	99.5	47.7	54.0	14.3		
M43970-16-16	25	- 16	1"	1"	20.0	115.0	47.7	58.0	14.3		
M43970-16-20	25	- 16	1"	1.1/4"	26.1	114.5	54.0	62.0	14.3		
M43970-20-20	31	- 20	1.1/4"	1.1/4"	26.1	128.0	54.0	64.0	14.3		
M43970-20-24	31	- 20	1.1/4"	1.1/2"	32.0	139.5	63.7	78.0	14.3		
M43970-24-24	38	- 24	1.1/2"	1.1/2"	32.0	146.0	63.7	72.0	14.3		
M43970-32-32	51	- 32	2"	2"	42.0	189.5	79.3	99.0	14.3		

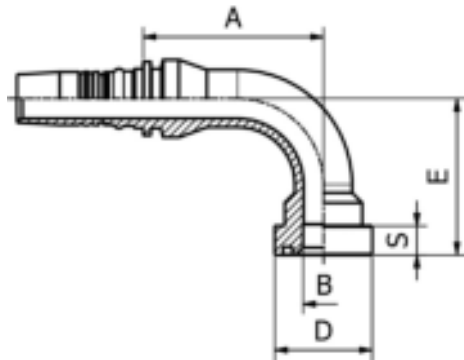


ORIGINAL EQUIPMENT CONNECTIONS

M43970CT

67,5° REALCAT SERIES FLANGE

PART. REF.	HOSE BORE			Flange	DIMENSIONS mm						
	DN	Dash	inch		inch	B	A	D	E	S	
M43970-16-16CT	25	- 16	1"	1"	19.5	115.0	47.7	58.0	14.3		
M43970-16-20CT	25	- 16	1"	1.1/4"	25.0	114.5	64.0	62.0	14.3		

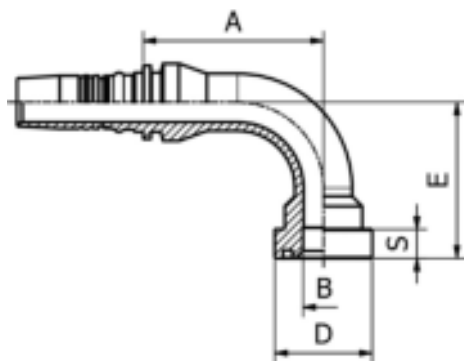


ORIGINAL EQUIPMENT CONNECTIONS

M43990

90° SUPERCAT SERIES FLANGE

PART. REF.	HOSE BORE			Flange	DIMENSIONS mm					
	DN	Dash	inch		inch	B	A	D	E	S
M43990-12-12	19	- 12	3/4"	3/4"	16.0	72.5	41.5	64.5	14.3	
M43990-12-16	19	- 12	3/4"	1"	20.0	75.0	47.7	69.5	14.3	
M43990-16-16	25	- 16	1"	1"	20.0	88.5	47.7	76.5	14.3	
M43990-16-20	25	- 16	1"	1.1/4"	26.1	86.5	54.0	80.5	14.3	
M43990-20-20	31	- 20	1.1/4"	1.1/4"	26.1	98.5	54.0	85.0	14.3	
M43990-20-24	31	- 20	1.1/4"	1.1/2"	32.0	104.0	63.7	101.0	14.3	
M43990-24-24	38	- 24	1.1/2"	1.1/2"	32.0	112.5	63.7	96.0	14.3	
M43990-24-32	38	- 24	1.1/2"	2"	42.0	115.0	79.3	112.0	14.3	
M43990-32-32	51	- 32	2"	2"	42.0	144.0	79.3	133.5	14.3	



ORIGINAL EQUIPMENT CONNECTIONS

M43990 LONG DROP

90° LONG DROP SUPERCAT SERIES FLANGE

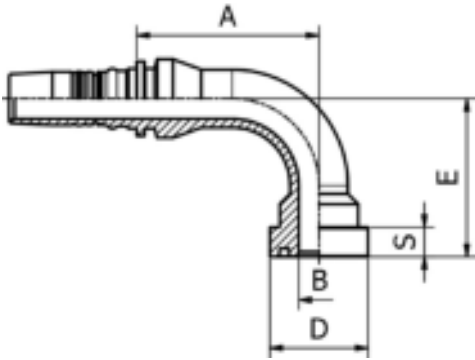
PART. REF.	HOSE BORE			Flange	DIMENSIONS mm					
	DN	Dash	inch		inch	B	A	D	E	S
M43990-16-16150	25	- 16	1"	1"	20.0	88.5	47.7	150.0	14.3	
M43990-16-16132	25	- 16	1"	1"	20.0	88.5	47.7	132.0	14.3	
M43990-16-20150	25	- 16	1"	1.1/4"	26.1	88.5	54.0	150.0	14.3	
M43990-20-24135	31	- 20	1.1/4"	1.1/2"	32.0	98.5	63.7	135.0	14.3	
M43990-20-20150	31	- 20	1.1/4"	1.1/4"	26.1	98.5	54.0	150.0	14.3	
M43990-20-20092	31	- 20	1.1/4"	1.1/4"	26.1	98.5	54.0	92.0	14.3	
M43990-24-24106	38	- 24	1.1/2"	1.1/2"	32.0	112.5	63.7	106.0	14.3	



ORIGINAL EQUIPMENT CONNECTIONS

M43990CT

90° REALCAT FLANGE

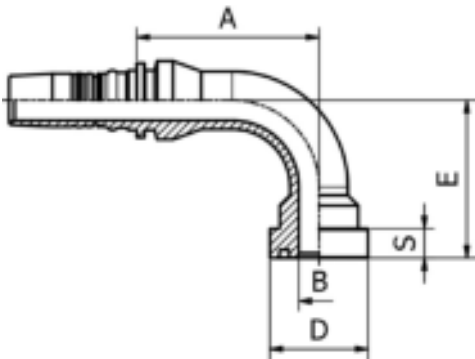


PART. REF.	HOSE BORE			Flange	DIMENSIONS mm						
	DN	Dash	inch		inch	B	A	D	E	S	
M43990-16-16CT	25	- 16	1"	1"	19.5	88.5	47.7	76.5	14.3		
M43990-16-20CT	25	- 16	1"	1.1/4"	25.0	86.5	54.0	80.5	14.3		
M43990-20-20CT	31	- 20	1.1/4"	1.1/4"	25.0	98.5	54.0	85.0	14.3		
M43990-24-24CT	38	- 24	1.1/2"	1.1/2"	31.0	112.5	63.7	96.0	14.3		

ORIGINAL EQUIPMENT CONNECTIONS

M43990CT LONG DROP

90° LONG DROP REALCAT FLANGE

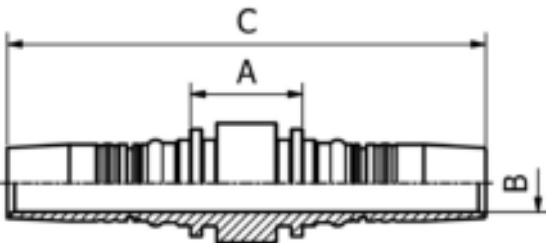


PART. REF.	HOSE BORE			Flange	DIMENSIONS mm						
	DN	Dash	inch		inch	B	A	D	E	S	
M43990-16-16132CT	25	- 16	1"	1"	19.5	88.5	47.7	132.0	14.3		
M43990-20-20150CT	25	- 16	1"	1.1/4"	25.0	98.5	54.0	150.0	14.3		
M43990-24-24106CT	31	- 20	1.1/4"	1.1/2"	31.0	112.5	63.7	106.0	14.3		

DOUBLE CONNECTOR

M30050

DOUBLE CONNECTOR

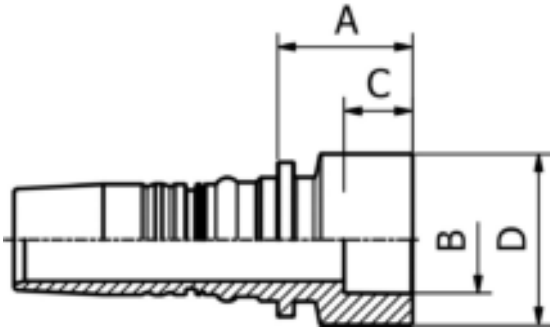


PART. REF.	HOSE BORE			DIMENSIONS mm					
	DN	Dash	inch	B	A	C			
M30050-20-20	31	- 20	1.1/4"	25.0	42.0	206.0			
M30050-24-24	38	- 24	1.1/2"	31.0	43.1	229.1			
M30050-32-32	51	- 32	2"	41.0	43.0	244.7			

TAIL

M49510WL

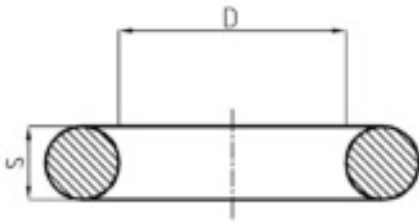
WELDING TAIL



PART. REF.	HOSE BORE			DIMENSIONS mm							
	DN	Dash	inch	B	A	C	D				
M49510-10-18WL	16	- 10	5/8"	18.1	20.5	10.0	26.0				
M49510-12-22WL	19	- 12	3/4"	22.1	27.5	12.0	34.0				
M49510-16-28WL	25	- 16	1"	28.1	31.5	14.0	40.0				
M49510-20-35WL	31	- 20	1.1/4"	35.1	33.0	14.0	49.0				

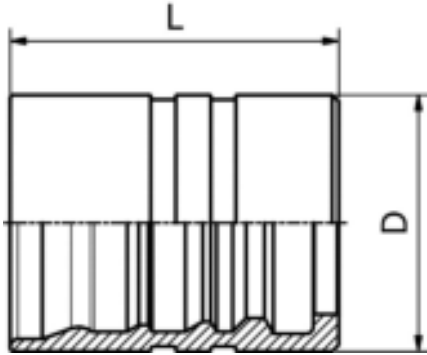
O-RING

JO29



OPTIONAL INTERLOCK PLUS O-RING

PART. REF.	HOSE BORE			DIMENSIONS mm							
	DN	Dash	inch	D	S						
JO29161218	16	- 10	5/8"	12.42	1.78						
JO29191618	19	- 12	3/4"	15.6	1.78						
JO29262218	25	- 16	1"	21.95	1.78						
JO29322818	31	- 20	1.1/4"	28.3	1.78						
JO29383518	38	- 24	1.1/2"	34.65	1.78						
JO29514718	51	- 32	2"	47.35	1.78						
JO29605718	63	- 40	2.1/2"	56.87	1.78						
JO29737018	76	- 48	3"	69.57	1.78						



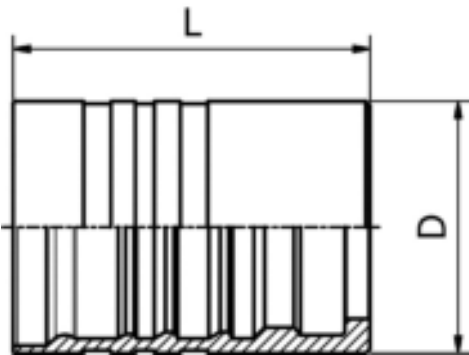
FERRULE

IM01500

**DOUBLE SKIVE FERRULE
 FOR HEAVY DUTY SPIRAL HOSES (4 PLY)
 STAINLESS STEEL**

PART. REF.	HOSE BORE			DIMENSIONS mm							
	DN	Dash	inch			D	L				
IM01500-10	16	- 10	5/8"			35.0	40.9				
IM01500-12	19	- 12	3/4"			40.0	51.4				
IM01500-16	25	- 16	1"			48.0	64.5				
IM01500-20	31	- 20	1.1/4"			57.0	84.0				
IM01500-24	38	- 24	1.1/2"			64.3	94.0				
IM01500-32	51	- 32	2"			83.5	107.0				
IM01500-40	63	- 40	2.1/2"			100.0	135.0				
IM01500-48	76	- 48	3"			107.0	125.0				

211 FITTINGS

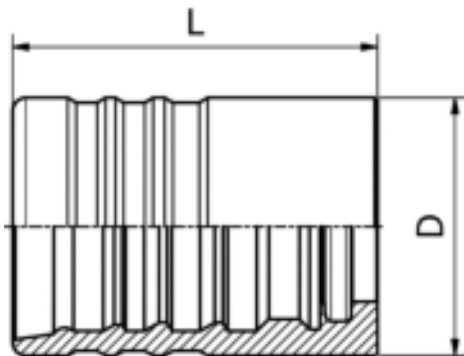


FERRULE

IM01600

**DOUBLE SKIVE FERRULE
 FOR HEAVY DUTY SPIRAL HOSES (6 PLY)
 STAINLESS STEEL**

PART. REF.	HOSE BORE			DIMENSIONS mm							
	DN	Dash	inch			D	L				
IM01600-20	31	- 20	1.1/4"			60.0	85.0				
IM01600-24	38	- 24	1.1/2"			69.0	96.0				



FERRULE

IM01800/IM01810

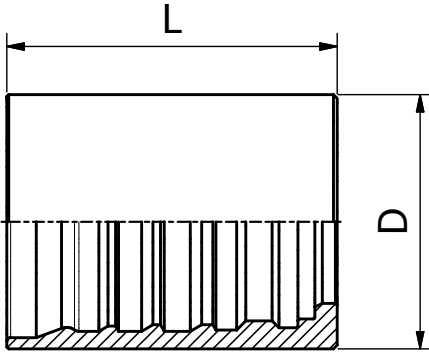
**DOUBLE SKIVE FERRULE
 FOR EXTRA DUTY SPIRAL HOSES (6 PLY)
 STAINLESS STEEL**

PART. REF.	HOSE BORE			DIMENSIONS mm							
	DN	Dash	inch			D	L				
IM01800-32	51	- 32	2"			86.5	108.0				
IM01810-40	63	- 40	2.1/2"			103.0	135.0				
IM01810-48	76	- 48	3"			113.5	125.0				

FERRULE

IM01900

DOUBLE SKIVE FERRULE



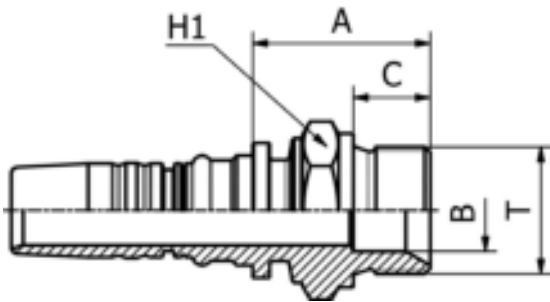
PART. REF.	HOSE BORE			DIMENSIONS mm							
	DN	Dash	inch			D	L				
IM01900-20	31	-20	1.1/4"			68	88,2				

FITTINGS 212

BS STANDARD CONNECTIONS

IM30510

BSP
 MALE PARALLEL 60° CONE SEAT
 BS5200 / ISO 8434-6
 (STAINLESS STEEL)

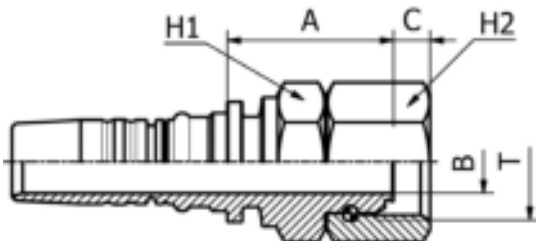


PART. REF.	HOSE BORE			Thread	DIMENSIONS mm							
	DN	Dash	inch	T		B	A	C	H1			
IM30510-12-12	19	-12	3/4"	3/4" - 14		17.0	37.0	16.0	32.0			
IM30510-16-16	25	-16	1"	1" - 11		22.5	43.0	19.0	41.0			
IM30510-20-20	31	-20	1.1/4"	1.1/4" - 11		28.5	50.5	20.0	50.0			
IM30510-24-24	38	-24	1.1/2"	1.1/2" - 11		33.5	54.5	22.0	55.0			
IM30510-32-32	51	-32	2"	2" - 11		42.0	58.0	25.0	70.0			

BS STANDARD CONNECTIONS

IM40812

BSP
 O-RING FEMALE 60° CONE
 BS5200 / ISO 12151-6
 (THRUST-WIRE NUT) STAINLESS STEEL



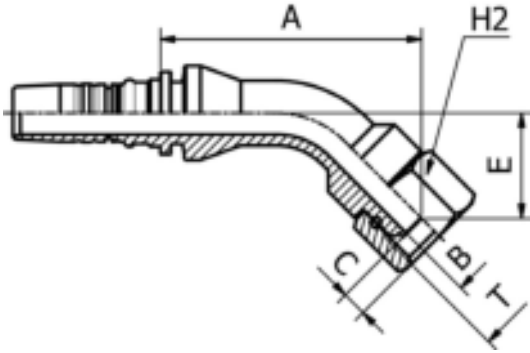
PART. REF.	HOSE BORE			Thread	DIMENSIONS mm							
	DN	Dash	inch	T		B	A	C	H1	H2		
IM40812-12-12	19	-12	3/4"	3/4" - 14		14.5	39.0	8.5	32.0	32.0		
IM40812-16-16	25	-16	1"	1" - 11		19.5	44.5	10.6	41.0	41.0		
IM40812-20-20	31	-20	1.1/4"	1.1/4" - 11		26.1	52.5	10.5	50.0	50.0		
IM40812-24-24	38	-24	1.1/2"	1.1/2" - 11		32.1	51.5	12.5	60.0	60.0		
IM40812-32-32	51	-32	2"	2" - 11		42.0	51.5	16.1	70.0	70.0		



BS STANDARD CONNECTIONS

IM40842

45° BSP
O-RING FEMALE SWEPT ELBOW 60° CONE
BS5200 / ISO 12151-6
(THRUST-WIRE NUT) STAINLESS STEEL

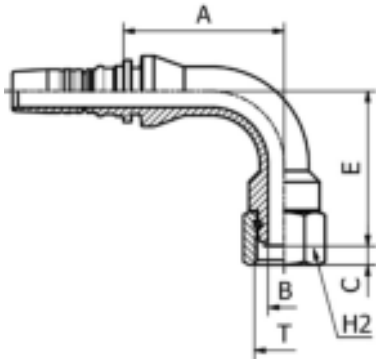


PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	H2		
IM40842-12-12	19	- 12	3/4"	3/4" - 14	14.5	88.0	8.5	35.0	32.0		
IM40842-16-16	25	- 16	1"	1" - 11	19.5	97.0	10.6	40.0	41.0		
IM40842-20-20	31	- 20	1.1/4"	1.1/4" - 11	26.1	120.0	10.5	49.5	50.0		
IM40842-24-24	38	- 24	1.1/2"	1.1/2" - 11	32.1	126.5	12.5	50.0	60.0		
IM40842-32-32	51	- 32	2"	2" - 11.5	42.0	162.5	16.1	66.5	70.0		

BS STANDARD CONNECTIONS

IM40892

90° BSP
O-RING FEMALE SWEPT ELBOW 60° CONE
BS5200 / ISO 12151-6
(THRUST-WIRE NUT) STAINLESS STEEL

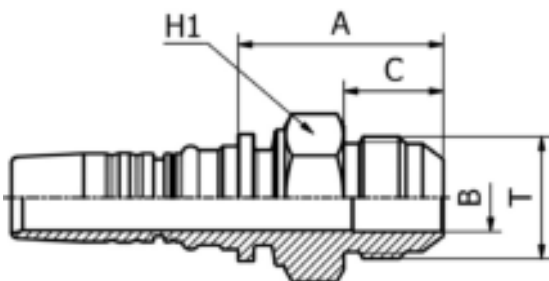


PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	H2		
IM40892-12-12	19	- 12	3/4"	3/4" - 14	14.5	72.5	8.5	70.0	32.0		
IM40892-16-16	25	- 16	1"	1" - 11	19.5	82.0	10.6	80.5	41.0		
IM40892-20-20	31	- 20	1.1/4"	1.1/4" - 11	26.1	98.5	10.5	98.0	50.0		
IM40892-24-24	38	- 24	1.1/2"	1.1/2" - 11	32.1	111.5	12.5	109.0	60.0		
IM40892-32-32	51	- 32	2"	2" - 11.5	42.0	143.0	16.1	140.5	70.0		

SAE STANDARD CONNECTIONS

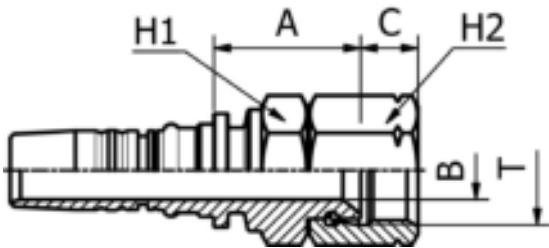
IM32510

JIC
MALE 37° CONE
SAE J516 / ISO 12151-5
STAINLESS STEEL



PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	H1			
IM32510-10-10	16	- 10	5/8"	7/8" - 14	12.0	41.0	19.5	27.0			
IM32510-12-12	19	- 12	3/4"	1.1/16" - 12	15.0	45.5	22.0	32.0			
IM32510-16-16	25	- 16	1"	1.5/16" - 12	20.0	50.5	23.0	38.0			
IM32510-20-20	31	- 20	1.1/4"	1.5/8" - 12	26.1	66.0	24.3	46.0			
IM32510-24-24	38	- 24	1.1/2"	1.7/8" - 12	32.1	64.0	27.5	50.0			
IM32510-32-32	51	- 32	2"	2.1/2" - 12	42.0	81.0	34.0	70.0			

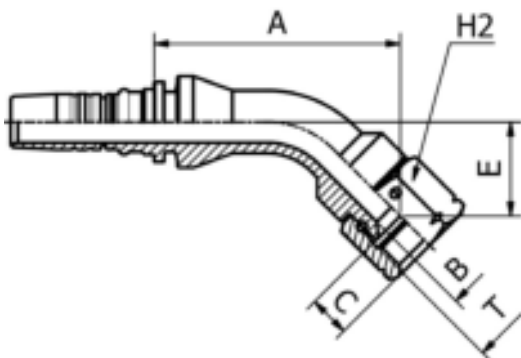
SAE STANDARD CONNECTIONS



IM42512

JIC
 FEMALE 37° CONE SEAT
 SAE J516 / ISO 12151-5
 (THRUST-WIRE NUT) STAINLESS STEEL

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	H1	H2	
IM42512-12-12	19	- 12	3/4"	1.1/16" - 12	15.0	36.0	16.0	32.0	32.0		
IM42512-16-16	25	- 16	1"	1.5/16" - 12	21.7	40.5	15.2	41.0	41.0		
IM42512-20-20	31	- 20	1.1/4"	1.5/8" - 12	26.1	51.5	16.2	50.0	50.0		
IM42512-24-24	38	- 24	1.1/2"	1.7/8" - 12	31.0	54.5	18.8	55.0	60.0		
IM42512-32-32	51	- 32	2"	2.1/2" - 8	42.0	54.0	24.0	70.0	75.0		



SAE STANDARD CONNECTIONS

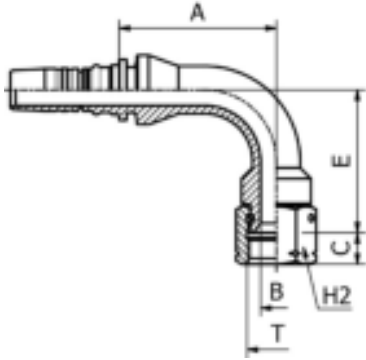
IM42542

45° JIC
 FEMALE SWEPT ELBOW 37° CONE SEAT
 SAE J516 / ISO 12151-5
 (THRUST-WIRE NUT) STAINLESS STEEL

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	E	H2	
IM42542-12-12	19	- 12	3/4"	1.1/16" - 12	15.0	86.0	16.0	33.0	32.0		
IM42542-16-16	25	- 16	1"	1.5/16" - 12	21.7	95.0	15.2	37.0	41.0		
IM42542-20-20	31	- 20	1.1/4"	1.5/8" - 12	26.1	115.5	16.2	45.0	50.0		
IM42542-24-24	38	- 24	1.1/2"	1.7/8" - 12	32.1	126.5	18.8	50.0	60.0		



SAE STANDARD CONNECTIONS

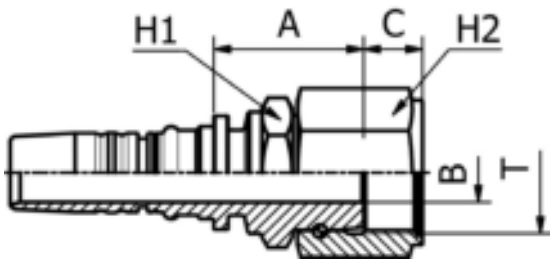


IM42592

90° JIC
FEMALE SWEPT ELBOW 37° CONE SEAT
SAE J516 / ISO 12151-5
(THRUST-WIRE NUT) STAINLESS STEEL

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	H2		
IM42592-12-12	19	- 12	3/4"	1.1/16" - 12	15.0	72.5	16.0	66.0	32.0		
IM42592-12-16	19	- 12	3/4"	1.5/16" - 12	21.7	72.5	15.2	71.5	41.0		
IM42592-16-16	25	- 16	1"	1.5/16" - 12	21.7	82.5	15.2	77.5	41.0		
IM42592-20-20	31	- 20	1.1/4"	1.5/8" - 12	26.1	98.5	16.2	92.0	50.0		
IM42592-24-24	38	- 24	1.1/2"	1.7/8" - 12	32.1	111.5	18.8	106.0	60.0		
IM42592-32-32	51	- 32	2"	2.1/2" - 8	42.0	144.5	24.0	137.0	75.0		

SAE STANDARD CONNECTIONS

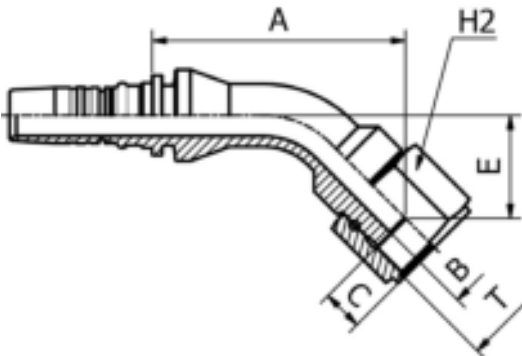


IM42412

ORFS
FEMALE
SAE J516 / ISO 12151-1 HEAVY TYPE
(THRUST-WIRE NUT) STAINLESS STEEL

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	H1	H2			
IM42412-12-12	19	- 12	3/4"	1.3/16" - 12	14.5	37.0	32.0	36.0			
IM42412-16-16	25	- 16	1"	1.7/16" - 12	19.5	42.0	15.0	41.0	46.0		
IM42412-20-20	31	- 20	1.1/4"	1.11/16" - 12	25.0	52.0	15.1	50.0	55.0		
IM42412-24-24	38	- 24	1.1/2"	2" - 12	31.0	55.0	15.0	60.0	60.0		

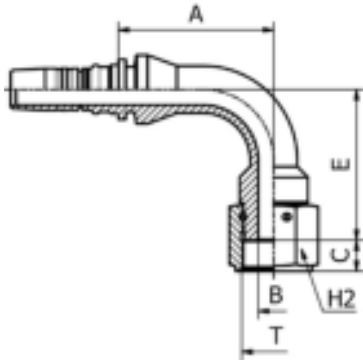
SAE STANDARD CONNECTIONS



IM42442

45° ORFS
FEMALE SWEPT ELBOW
SAE J516 / ISO 12151-1 HEAVY TYPE
(THRUST-WIRE-NUT) STAINLESS STEEL

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	H2		
IM42442-12-12	19	- 12	3/4"	1.3/16" - 12	14.5	89.0	13.9	36.0	36.0		
IM42442-16-16	25	- 16	1"	1.7/16" - 12	19.5	100.0	15.0	42.5	46.0		
IM42442-20-20	31	- 20	1.1/4"	1.11/16" - 12	25.0	119.5	15.1	49.5	55.0		
IM42442-24-24	38	- 24	1.1/2"	2" - 12	31.0	128.5	15.0	52.0	60.0		

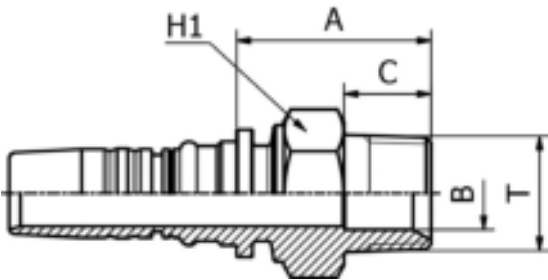


SAE STANDARD CONNECTIONS

IM42492

90° ORFS
 FEMALE SWEPT ELBOW
 SAE J516 / ISO 12151-1 HEAVY TYPE
 (THRUST-WIRE-NUT) STAINLESS STEEL

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	H2		
IM42492-12-12	19	- 12	3/4"	1.3/16" - 12	14.5	72.5	13.9	70.5	36.0		
IM42492-16-16	25	- 16	1"	1.7/16" - 12	19.5	82.5	15.0	84.5	46.0		
IM42492-20-20	31	- 20	1.1/4"	1.11/16" - 12	25.0	98.5	15.1	98.0	55.0		
IM42492-24-24	38	- 24	1.1/2"	2" - 12	31.0	111.5	15.0	109.0	60.0		



SAE STANDARD CONNECTIONS

IM32810

NPTF
 MALE 60° CONE SEAT
 SAE J516/J514
 (STAINLESS STEEL)

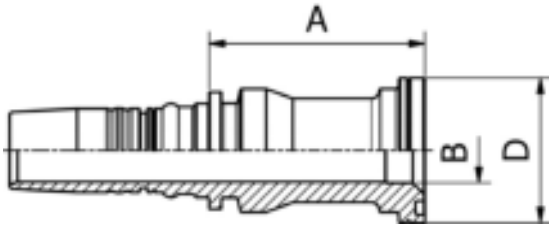
PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	H1			
IM32810-10-08	16	- 10	5/8"	1/2" - 14	12.0	39.5	19.2	24.0			
IM32810-10-12	16	- 10	5/8"	3/4" - 14	16.0	40.5	19.2	27.0			
IM32810-12-12	19	- 12	3/4"	3/4" - 14	16.0	43.0	19.2	32.0			
IM32810-16-16	25	- 16	1"	1" - 11,5	19.5	50.5	24.2	38.0			
IM32810-20-20	31	- 20	1.1/4"	1.1/4" - 11,5	26.1	61.0	25.0	46.0			
IM32810-24-24	38	- 24	1.1/2"	1.1/2" - 11,5	32.1	62.5	26.0	50.0			
IM32810-32-32	51	- 32	2"	2" - 11	42.0	67.0	26.5	70.0			
IM32810-40-40	63	- 40	2.1/2"	2.1/2" - 8	51.5	94.5	43.0	80.0			
IM32810-48-48	76	- 48	3"	3" - 8	62.5	123.5	51.5	100.0			



SAE STANDARD CONNECTIONS

IM43310

ISO / SAE
CODE 61 FLANGE
SAE J516 / ISO 12151-3
(STAINLESS STEEL)

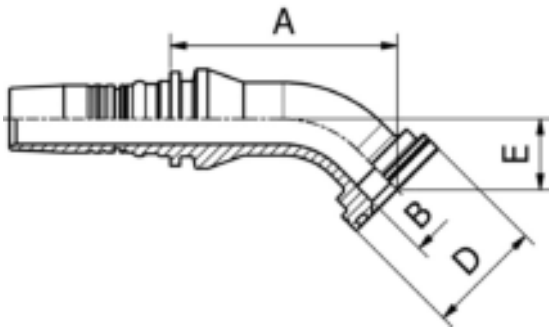


PART. REF.	HOSE BORE			Flange	DIMENSIONS mm							
	DN	Dash	inch		inch	B	A	D				
IM43310-12-12	19	- 12	3/4"	3/4"	16.0	60.0	38.0					
IM43310-16-16	25	- 16	1"	1"	20.0	66.5	44.6					
IM43310-20-20	31	- 20	1.1/4"	1.1/4"	26.1	75.0	51.0					
IM43310-24-24	38	- 24	1.1/2"	1.1/2"	32.1	80.5	60.5					
IM43310-32-32	51	- 32	2"	2"	42.0	83.0	71.6					

SAE STANDARD CONNECTIONS

IM43340

45° ISO / SAE
CODE 61 FLANGE
SAE J516 / ISO 12151-3
(STAINLESS STEEL)

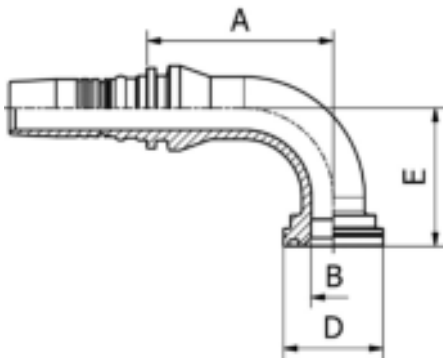


PART. REF.	HOSE BORE			Flange	DIMENSIONS mm							
	DN	Dash	inch		inch	B	A	D	E			
IM43340-12-12	19	- 12	3/4"	3/4"	16.0	75.5	38.0	23.0				
IM43340-16-16	25	- 16	1"	1"	20.0	87.0	44.6	27.3				
IM43340-20-20	31	- 20	1.1/4"	1.1/4"	26.1	100.5	51.0	29.5				
IM43340-24-24	38	- 24	1.1/2"	1.1/2"	32.1	111.0	60.5	34.5				
IM43340-32-32	51	- 32	2"	2"	42.0	128.5	71.6	39.0				

SAE STANDARD CONNECTIONS

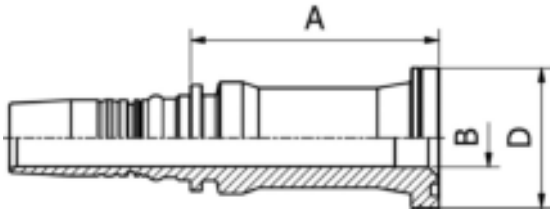
IM43390

90° ISO / SAE
CODE 61 FLANGE
SAE J516 / ISO 12151-3
(STAINLESS STEEL)



PART. REF.	HOSE BORE			Flange	DIMENSIONS mm							
	DN	Dash	inch		inch	B	A	D	E			
IM43390-12-12	19	- 12	3/4"	3/4"	16.0	72.0	38.0	52.0				
IM43390-16-16	25	- 16	1"	1"	20.0	83.5	44.6	62.0				
IM43390-20-20	31	- 20	1.1/4"	1.1/4"	26.1	99.0	51.0	70.0				
IM43390-24-24	38	- 24	1.1/2"	1.1/2"	32.1	111.5	60.5	84.0				
IM43390-32-32	51	- 32	2"	2"	42.0	133.5	71.6	99.0				

SAE STANDARD CONNECTIONS

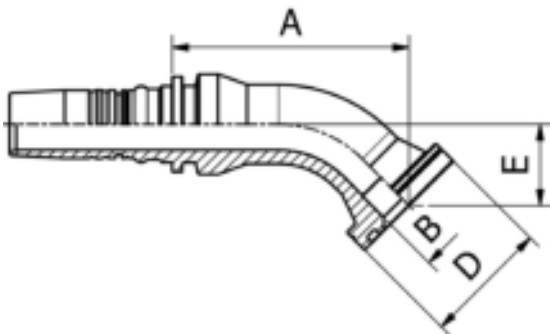


IM43610

ISO / SAE
 CODE 62 FLANGE
 SAE J516 / ISO 12151-3
 (STAINLESS STEEL)

PART. REF.	HOSE BORE			Flange	DIMENSIONS mm							
	DN	Dash	inch	inch	B	A	D					
IM43610-10-12	16	- 10	5/8"	3/4"	16.0	65.0	41.5					
IM43610-10-16	16	- 10	5/8"	1"	20.0	81.5	47.7					
IM43610-12-12	19	- 12	3/4"	3/4"	16.0	71.5	41.4					
IM43610-12-16	19	- 12	3/4"	1"	20.0	83.5	47.7					
IM43610-16-12	25	- 16	1"	3/4"	16.0	80.3	41.4					
IM43610-16-16	25	- 16	1"	1"	20.0	84.5	47.7					
IM43610-16-20	25	- 16	1"	1.1/4"	26.0	89.0	54.2					
IM43610-20-16	31	- 20	1.1/4"	1"	20.0	87.0	47.7					
IM43610-20-20	31	- 20	1.1/4"	1.1/4"	26.1	91.0	54.2					
IM43610-20-24	31	- 20	1.1/4"	1.1/2"	32.1	97.0	63.7					
IM43610-24-20	38	- 24	1.1/2"	1.1/4"	26.0	101.0	54.2					
IM43610-24-24	38	- 24	1.1/2"	1.1/2"	32.1	97.5	63.7					
IM43610-24-32	38	- 24	1.1/2"	2"	42.0	113.0	79.6					
IM43610-32-24	51	- 32	2"	1.1/2"	32.1	117.0	63.7					
IM43610-32-32	51	- 32	2"	2"	42.0	113.0	79.6					
IM43610-40-40	63	- 40	2.1/2"	2.1/2"	51.5	126.5	107.9					
IM43610-48-48	76	- 48	3"	3"	62.5	167.0	131.9					

FITTINGS 218



SAE STANDARD CONNECTIONS

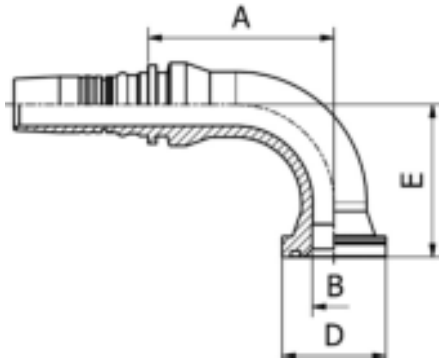
IM43640

45° ISO / SAE
 CODE 62 FLANGE
 SAE J516 / ISO 12151-3
 (STAINLESS STEEL)

PART. REF.	HOSE BORE			Flange	DIMENSIONS mm							
	DN	Dash	inch	inch	B	A	D	E				
IM43640-12-12	19	- 12	3/4"	3/4"	16.0	81.0	41.4	28.0				
IM43640-16-16	25	- 16	1"	1"	20.0	91.5	47.7	32.5				
IM43640-20-20	31	- 20	1.1/4"	1.1/4"	26.0	108.0	54.2	37.5				
IM43640-24-24	38	- 24	1.1/2"	1.1/2"	32.0	124.5	63.7	44.0				
IM43640-32-32	51	- 32	2"	2"	42.0	154.0	79.6	60.5				



SAE STANDARD CONNECTIONS

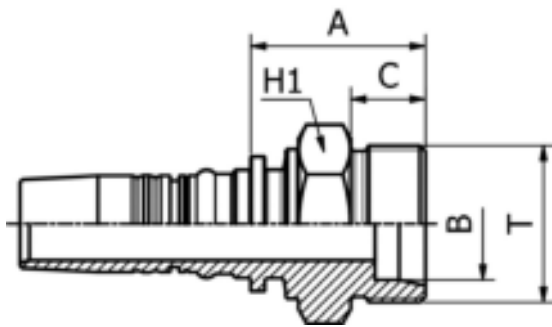


IM43690

90° ISO / SAE
CODE 62 FLANGE
SAE J516 / ISO 12151-3
(STAINLESS STEEL)

PART. REF.	HOSE BORE			Flange inch	Flange inch	DIMENSIONS mm			
	DN	Dash	inch			B	A	D	E
IM43690-10-12	16	- 10	5/8"	3/4"	16.0	57.5	41.4	60.5	
IM43690-12-12	19	- 12	3/4"	3/4"	16.0	72.4	41.4	59.0	
IM43690-16-16	25	- 16	1"	1"	20.0	81.0	47.7	68.0	
IM43690-20-20	31	- 20	1.1/4"	1.1/4"	26.0	98.5	54.2	81.0	
IM43690-24-24	38	- 24	1.1/2"	1.1/2"	32.0	112.5	63.7	94.5	
IM43690-32-32	51	- 32	2"	2"	42.0	140.5	79.6	132.0	

DIN STANDARD CONNECTIONS

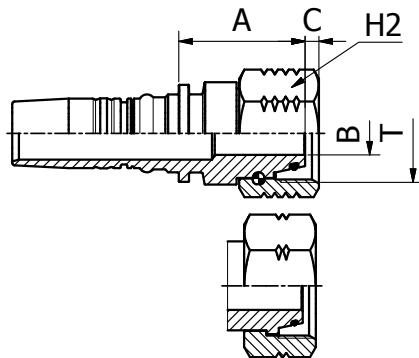


IM31210

METRIC
MALE 24° CONE SEAT HEAVY DUTY
DIN 20066 / ISO 12151-2
(STAINLESS STEEL)

PART. REF.	HOSE BORE			Thread T	Pipe mm	DIMENSIONS mm			
	DN	Dash	inch			B	A	C	H1
IM31210-10-30	16	- 10	5/8"	M 30X2	20.0	12.0	37.0	16.0	30.0
IM31210-12-36	19	- 12	3/4"	M 36X2	25.0	14.5	43.5	18.0	36.0
IM31210-16-42	25	- 16	1"	M 42X2	30.0	19.5	46.8	20.0	46.0
IM31210-20-52	31	- 20	1.1/4"	M 52X2	38.0	25.0	55.0	22.0	55.0

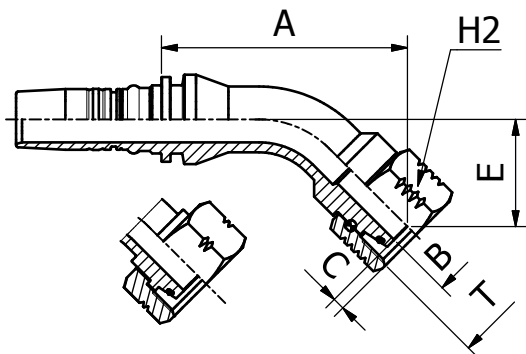
DIN STANDARD CONNECTIONS



IM41612/IM41613

METRIC
O-RING FEMALE 24° CONE HEAVY DUTY
DIN 20066 / ISO 12151-2
(STAINLESS STEEL)

PART. REF.	HOSE BORE			Thread T	Pipe mm	DIMENSIONS mm			
	DN	Dash	inch			B	A	C	H2
IM41613-10-30	16	- 10	5/8"	M 30X2	20.0	12.0	37.0	3.5	36.0
IM41613-12-36	19	- 12	3/4"	M 36X2	25.0	14.5	42.0	3.4	41.0
IM41613-16-42	25	- 16	1"	M 42X2	30.0	19.5	46.5	5.3	50.0
IM41613-20-52	31	- 20	1.1/4"	M 52X2	38.0	26.1	41.5	8.0	60.0



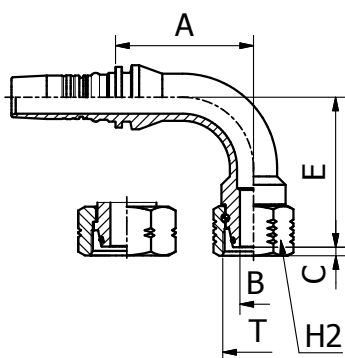
DIN STANDARD CONNECTIONS

IM41642/IM41643

45° METRIC
 O-RING FEMALE SWEEP ELBOW 24° CONE
 HEAVY DUTY
 DIN 20066 / ISO 12151-2 (STAINLESS STEEL)

PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm						
	DN	Dash	inch	T	mm	B	A	C	E	H2		
IM41643-10-30	16	- 10	5/8"	M 30X2	20.0	12.0	66.5	3.5	29.5	36.0		
IM41643-12-36	19	- 12	3/4"	M 36X2	25.0	14.5	81.0	3.4	33.5	41.0		
IM41643-16-42	25	- 16	1"	M 42X2	30.0	19.5	93.0	5.3	36.0	50.0		
IM41643-20-52	31	- 20	1.1/4"	M 52X2	38.0	26.1	110.0	8.0	40.0	60.0		

FITTINGS 220



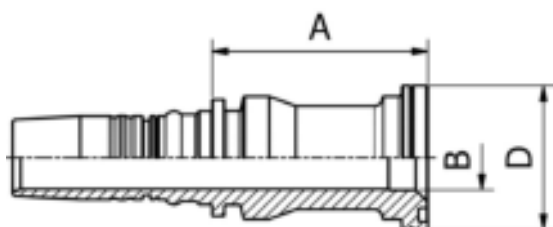
DIN STANDARD CONNECTIONS

IM41692/IM41693

90° METRIC
 O-RING FEMALE SWEEP ELBOW 24° CONE
 HEAVY DUTY
 DIN 20066 / ISO 12151-2 (STAINLESS STEEL)

PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm						
	DN	Dash	inch	T	mm	B	A	C	E	H2		
IM41693-10-30	16	- 10	5/8"	M 30X2	20.0	12.0	52.5	3.5	57.5	36.0		
IM41693-12-36	19	- 12	3/4"	M 36X2	25.0	14.5	67.0	3.4	67.5	41.0		
IM41693-16-42	25	- 16	1"	M 42X2	30.0	19.5	81.5	5.3	75.5	50.0		
IM41692-20-42	31	- 20	1.1/4"	M 42X2	30.0	19.1	103.5	6.1	90.0	50.0		
IM41693-20-52	31	- 20	1.1/4"	M 52X2	38.0	26.0	100.0	8.0	86.5	60.0		

SAE STANDARD CONNECTIONS



IM43310

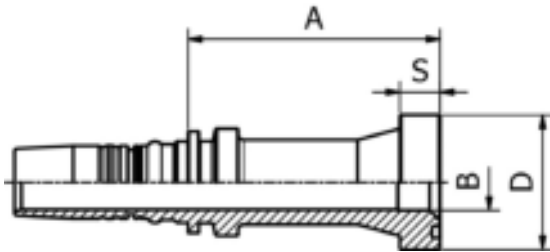
ISO / SAE
 CODE 61 FLANGE
 SAE J516 / ISO 12151-3
 (STAINLESS STEEL)

PART. REF.	HOSE BORE			Flange	DIMENSIONS mm					
	DN	Dash	inch	inch	B	A	D			
IM43310-12-12	19	- 12	3/4"	3/4"	16.0	60.0	38.0			
IM43310-16-16	25	- 16	1"	1"	20.0	66.5	44.6			
IM43310-20-20	31	- 20	1.1/4"	1.1/4"	26.1	75.0	51.0			
IM43310-24-24	38	- 24	1.1/2"	1.1/2"	32.1	80.5	60.5			
IM43310-32-32	51	- 32	2"	2"	42.0	83.0	71.6			



ORIGINAL EQUIPMENT CONNECTIONS

IM43910

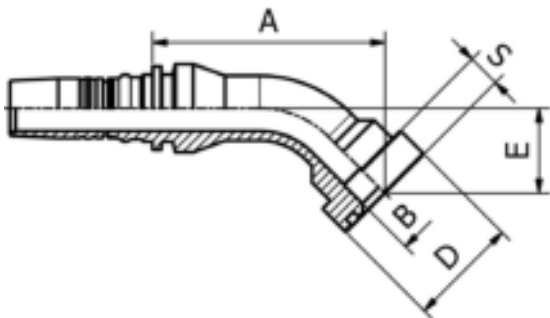


**STRAIGHT SUPERCAT SERIES FLANGE
 (STAINLESS STEEL)**

PART. REF.	HOSE BORE			Flange		DIMENSIONS mm				
	DN	Dash	inch			inch	B	A	D	S
IM43910-12-12	19	- 12	3/4"	3/4"		16.0	77.0	41.5	14.3	
IM43910-16-16	25	- 16	1"	1"		20.0	89.5	47.7	14.3	
IM43910-20-20	31	- 20	1.1/4"	1.1/4"		26.0	95.0	54.0	14.3	
IM43910-24-24	38	- 24	1.1/2"	1.1/2"		32.1	99.0	63.6	14.3	
IM43910-32-32	51	- 32	2"	2"		42.0	114.0	79.3	14.3	

ORIGINAL EQUIPMENT CONNECTIONS

IM43940

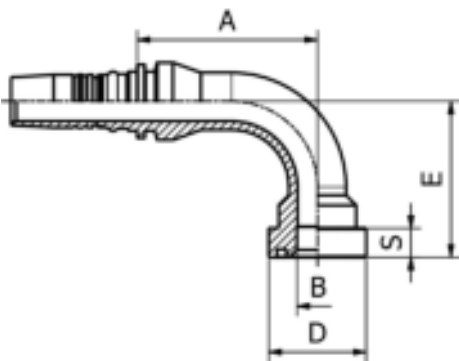


**45° SUPERCAT SERIES FLANGE
 (STAINLESS STEEL)**

PART. REF.	HOSE BORE			Flange		DIMENSIONS mm				
	DN	Dash	inch			inch	B	A	D	E
IM43940-12-12	19	- 12	3/4"	3/4"		16.0	85.0	41.5	32.0	14.3
IM43940-16-16	25	- 16	1"	1"		20.0	100.5	47.7	36.5	14.3
IM43940-20-20	31	- 20	1.1/4"	1.1/4"		26.1	110.5	54.0	40.5	14.3
IM43940-24-24	38	- 24	1.1/2"	1.1/2"		32.0	125.5	63.7	45.5	14.3
IM43940-32-32	51	- 32	2"	2"		42.0	158.5	79.3	61.5	14.3

ORIGINAL EQUIPMENT CONNECTIONS

IM43990



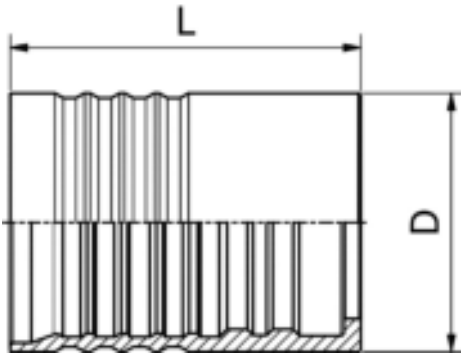
**90° SUPERCAT SERIES FLANGE
 (STAINLESS STEEL)**

PART. REF.	HOSE BORE			Flange		DIMENSIONS mm				
	DN	Dash	inch			inch	B	A	D	E
IM43990-12-12	19	- 12	3/4"	3/4"		16.0	72.5	41.5	64.5	14.3
IM43990-16-16	25	- 16	1"	1"		20.0	88.5	47.7	76.5	14.3
IM43990-20-20	31	- 20	1.1/4"	1.1/4"		26.1	98.5	54.0	85.0	14.3
IM43990-24-24	38	- 24	1.1/2"	1.1/2"		32.0	112.5	63.7	96.0	14.3
IM43990-32-32	51	- 32	2"	2"		42.0	144.0	79.3	133.5	14.3

FERRULE

M02700

**DOUBLE SKIVE FERRULE
 EXD.8WS**



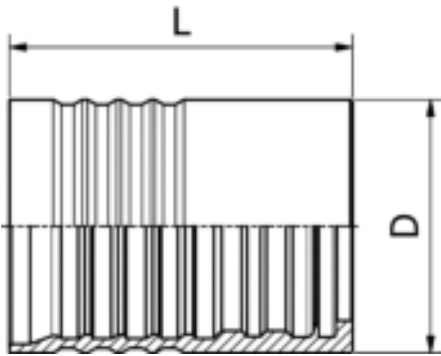
PART. REF.	HOSE BORE			DIMENSIONS mm							
	DN	Dash	inch			D	L				
M02700-24	38	- 24	1.1/2"			74.0	104.2				
M02700-32	51	- 32	2"			89.0	122.0				
M02700-48	76	- 48	3"			122.0	165.0				

FITTINGS 222

FERRULE

M02800

**DOUBLE SKIVE FERRULE
 FOR HEAVY DUTY SPIRAL HOSES (8 PLY)**

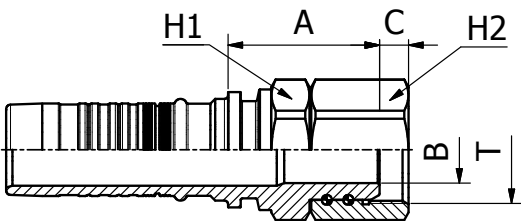


PART. REF.	HOSE BORE			DIMENSIONS mm							
	DN	Dash	inch			D	L				
M02800-48	76	- 48	3"			122.0	165.0				

BS STANDARD CONNECTIONS

MB0514

**BSP FEMALE 60° CONE
 BS5200 / ISO 12151-6**



PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	H1	H2		
MB0514-24-24	38	-24	1.1/2"	1.1/2" - 11	27	86	12.5	55	60		
MB0514-32-32	51	-32	2"	2" - 11	37	84	16.1	70	70		

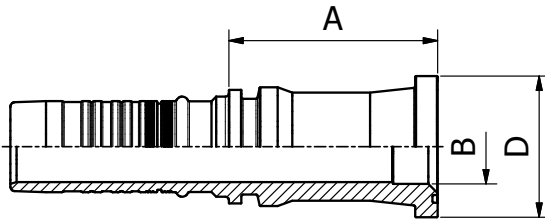


SAE STANDARD CONNECTIONS

MB3610

ISO / SAE
 CODE 62 FLANGE

SAE J516 / ISO 12151-3



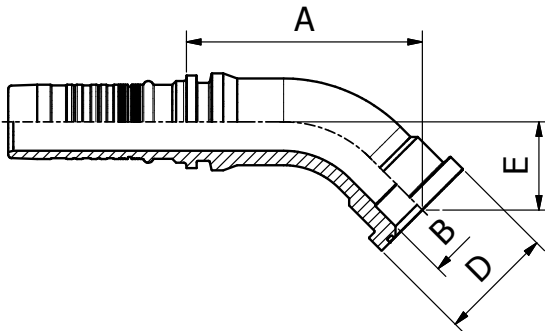
PART. REF.	HOSE BORE			Flange	DIMENSIONS mm							
	DN	Dash	inch		inch	B	A	D				
MB3610-24-24	38	-24	1.1/2"	1.1/2"	32,1	102,5	63,7					
MB3610-32-32	51	-32	2"	2"	42	117,5	79,6					
MB3610-48-48	76	-48	3"	3"	62,5	169	131,9					

SAE STANDARD CONNECTIONS

MB3640

ISO / SAE
 45° CODE 62 FLANGE

SAE J516 / ISO 12151-3



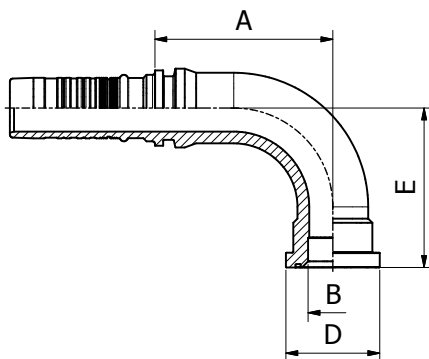
PART. REF.	HOSE BORE			Flange	DIMENSIONS mm							
	DN	Dash	inch		inch	B	A	D	E			
MB3640-24-24	38	-24	1.1/2"	1.1/2"	32,1	126,5	63,7	46				
MB3640-32-32	51	-32	2"	2"	42	163	79,6	61				

SAE STANDARD CONNECTIONS

MB3690

ISO / SAE
 90° CODE 62 FLANGE

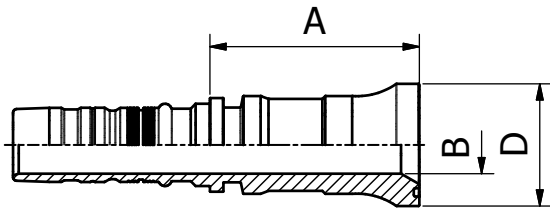
SAE J516 / ISO 12151-3



PART. REF.	HOSE BORE			Flange	DIMENSIONS mm							
	DN	Dash	inch		inch	B	A	D	E			
MB3690-24-24	38	-24	1.1/2"	1.1/2"	32,1	119	63,7	104				
MB3690-32-32	51	-32	2"	2"	42	151	79,6	135,5				

XTRAFLLANGE

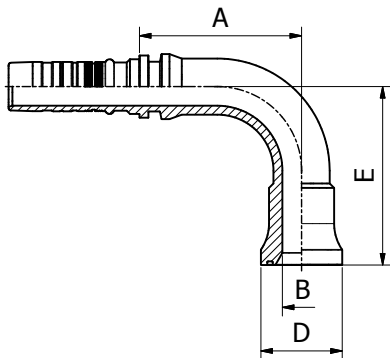
MB8510



XTRAFLLANGE/62
 (SAE J518 CODE 62 ISO 6162-2
 PORT COMPATIBLE)

PART. REF.	HOSE BORE			Flange	DIMENSIONS mm						
	DN	Dash	inch		inch	B	A	D			
MB8510-24-24	38	-24	1.1/2"	1.1/2"	30	109	63,7				
MB8510-32-32	51	-32	2"	2"	40	123	79,6				
MB8510-48-48	76	-48	3"	3"	62,5	152	128				

FITTINGS
224



XTRAFLLANGE

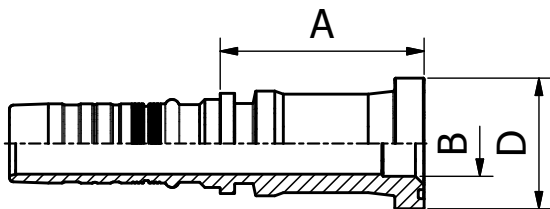
MB8590

90° XTRAFLLANGE/62
 (SAE J518 CODE 62 ISO 6162-2
 PORT COMPATIBLE)

PART. REF.	HOSE BORE			Flange	DIMENSIONS mm						
	DN	Dash	inch		inch	B	A	D	E		
MB8590-24-24	38	-24	1.1/2"	1.1/2"	30	127	63,7	140			
MB8590-32-32	51	-32	2"	2"	39	152	79,6	178			

ORIGINAL EQUIPMENT CONNECTIONS

MB3910



STRAIGHT SUPERCAT FLANGE

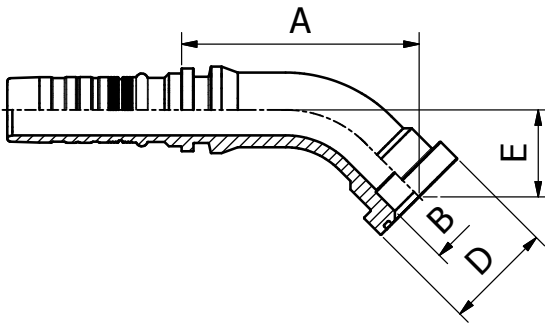
PART. REF.	HOSE BORE			Flange	DIMENSIONS mm						
	DN	Dash	inch		inch	B	A	D	S		
MB3910-24-24	38	-24	1.1/2"	1.1/2"	32,0	99,0	63,7	14,3			



ORIGINAL EQUIPMENT CONNECTIONS

MB3940

45° SUPERCAT FLANGE

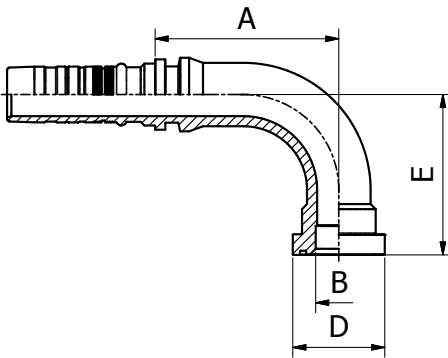


PART. REF.	HOSE BORE			Flange	DIMENSIONS mm							
	DN	Dash	inch		inch	B	A	D	E	S		
MB3940-24-24	38	-24	1.1/2"	1.1/2"	32.0	140.0	63.7	51.5	14.3			

ORIGINAL EQUIPMENT CONNECTIONS

MB3990

90° SUPERCAT FLANGE

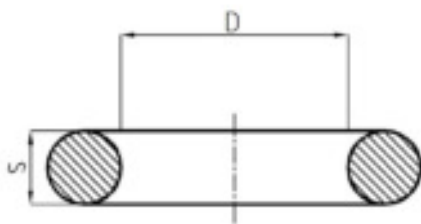


PART. REF.	HOSE BORE			Flange	DIMENSIONS mm							
	DN	Dash	inch		inch	B	A	D	E	S		
MB3990-24-24	38	-24	1.1/2"	1.1/2"	32.0	127.0	63.7	111.0	14.3			

O-RING

JO29

INTERLOCK SUPER O-RING



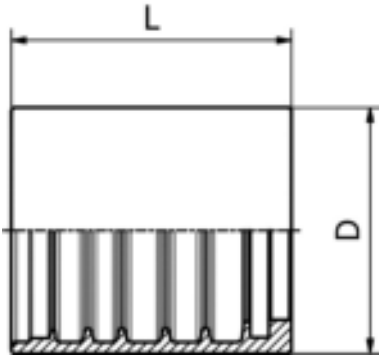
PART. REF.	HOSE BORE			Flange	DIMENSIONS mm							
	DN	Dash	inch		inch	D	S					
JO29757026	76	-48	3"		69.5	2.6						
JO29878226	89	-56	3.1/2"		82.2	2.6						
JO291029535	102	-64	4"		94.8	3.5						

225 FITTINGS

FERRULE

M05400

**NO-SKIVE FERRULE
 FOR HEAVY DUTY SPIRAL HOSES (4 PLY)**



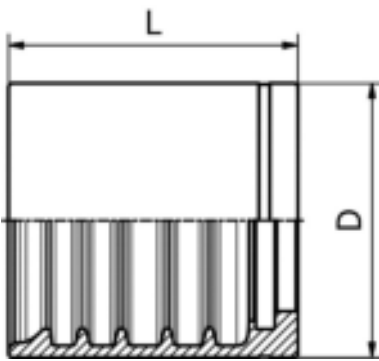
PART. REF.	HOSE BORE			DIMENSIONS mm							
	DN	Dash	inch			D	L				
M05400-10	16	- 10	5/8"			40.0	44.3				
M05400-12	19	- 12	3/4"			43.8	53.3				
M05400-16	25	- 16	1"			52.0	64.3				
M05400-20	31	- 20	1.1/4"			59.3	72.0				
M05400-24	38	- 24	1.1/2"			68.5	78.0				
M05400-32	51	- 32	2"			84.6	97.1				
M05400-40	63	- 40	2.1/2"			97.0	116.0				
M05400-48	76	- 48	3"			109.8	124.0				
M05400-56	89	- 56	3.1/2"			127.7	123.5				
M05400-64	102	- 64	4"			145.0	126.5				

FITTINGS 226

FERRULE

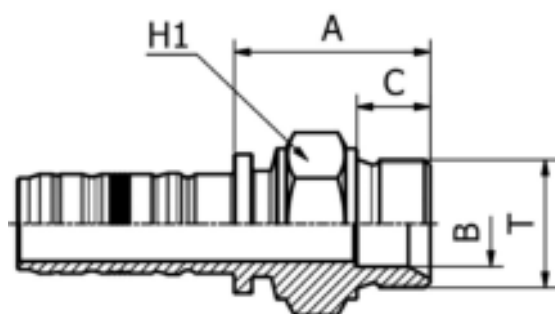
M05500

**NO-SKIVE FERRULE
 FOR HEAVY DUTY SPIRAL HOSES (4-6 PLY)**



PART. REF.	HOSE BORE			DIMENSIONS mm							
	DN	Dash	inch			D	L				
M05500-24	38	- 24	1.1/2"			75.0	79.0				
M05500-20	31	- 20	1.1/4"			66.0	70.0				
M05500-32	51	- 32	2"			90.0	98.1				

BS STANDARD CONNECTIONS

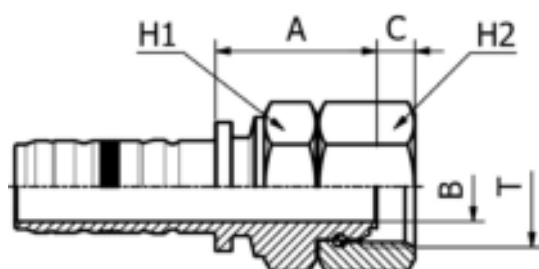


M70510

BSP
MALE PARALLEL 60° CONE SEAT
BS5200 / ISO 12151-6

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	H1			
M70510-12-12	19	- 12	3/4"	3/4" - 14	16.8	43.5	16.0	32.0			
M70510-12-16	19	- 12	3/4"	1" - 11	22.2	49.5	19.0	41.0			
M70510-16-16	25	- 16	1"	1" - 11	22.2	51.0	19.0	41.0			
M70510-16-20	25	- 16	1"	1.1/4" - 11	28.5	56.0	20.0	50.0			
M70510-20-20	31	- 20	1.1/4"	1.1/4" - 11	28.5	56.5	20.0	50.0			
M70510-24-24	38	- 24	1.1/2"	1.1/2" - 11	33.5	60.5	22.0	55.0			
M70510-32-32	51	- 32	2"	2" - 11	42.0	64.0	25.0	70.0			

BS STANDARD CONNECTIONS

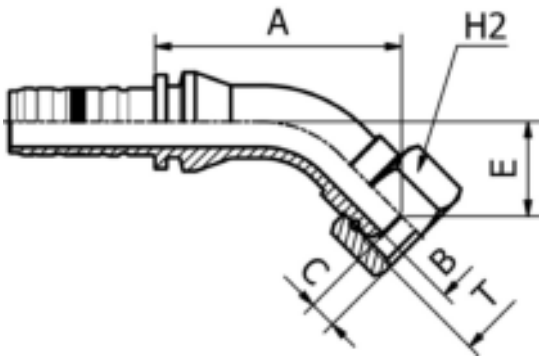


M80812

BSP
O-RING FEMALE 60° CONE
BS5200 / ISO 12151-6

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	H1	H2		
M80812-12-12	19	- 12	3/4"	3/4" - 14	14.5	39.5	8.5	32.0	32.0		
M80812-12-16	19	- 12	3/4"	1" - 11	19.5	44.0	10.6	41.0	41.0		
M80812-16-12	25	- 16	1"	3/4" - 14	15.0	44.5	8.5	41.0	32.0		
M80812-16-16	25	- 16	1"	1" - 11	19.5	45.5	10.6	41.0	41.0		
M80812-16-20	25	- 16	1"	1.1/4" - 11	26.1	50.5	10.5	50.0	50.0		
M80812-20-16	31	- 20	1.1/4"	1" - 11	19.0	48.0	10.6	50.0	41.0		
M80812-20-20	31	- 20	1.1/4"	1.1/4" - 11	26.1	50.5	10.5	50.0	50.0		
M80812-20-24	31	- 20	1.1/4"	1.1/2" - 11	32.1	50.0	12.5	50.0	60.0		
M80812-24-24	38	- 24	1.1/2"	1.1/2" - 11	32.1	52.0	12.5	60.0	60.0		
M80812-24-20	38	- 24	1.1/2"	1.1/4" - 11	26.1	52.0	10.5	55.0	50.0		
M80812-32-32	51	- 32	2"	2" - 11	42.0	53.5	16.1	70.0	70.0		

BS STANDARD CONNECTIONS

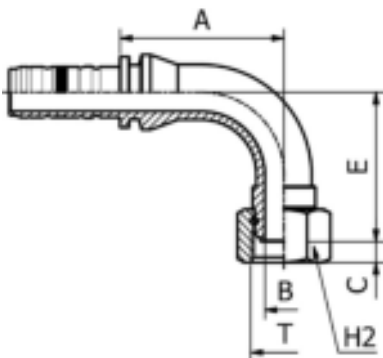


M80842

45° BSP
 O-RING FEMALE SWEEP ELBOW 60° CONE
 BS5200 / ISO 12151-6

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm					
	DN	Dash	inch		T	B	A	C	E	H2
M80842-12-12	19	- 12	3/4"	3/4" - 14	14.5	82.5	8.5	29.0	32.0	
M80842-12-16	19	- 12	3/4"	1" - 11	19.5	84.0	10.6	30.0	41.0	
M80842-16-12	25	- 16	1"	3/4" - 14	15.0	106.5	8.5	36.0	32.0	
M80842-16-16	25	- 16	1"	1" - 11	19.5	95.0	10.6	36.5	41.0	
M80842-16-16028	25	- 16	1"	1" - 11	19.5	84.0	10.6	28.0	41.0	
M80842-16-20	25	- 16	1"	1.1/4" - 11	26.1	109.5	10.5	38.0	50.0	
M80842-20-16	31	- 20	1.1/4"	1" - 11	19.5	102.0	10.6	36.5	41.0	
M80842-20-20	31	- 20	1.1/4"	1.1/4" - 11	26.0	99.0	10.5	39.0	50.0	
M80842-20-24	31	- 20	1.1/4"	1.1/2" - 11	32.0	114.0	12.5	54.0	60.0	
M80842-24-24	38	- 24	1.1/2"	1.1/2" - 11	32.0	122.5	12.5	45.0	60.0	
M80842-32-32	51	- 32	2"	2" - 11	42.0	155.0	16.1	66.0	70.0	

BS STANDARD CONNECTIONS

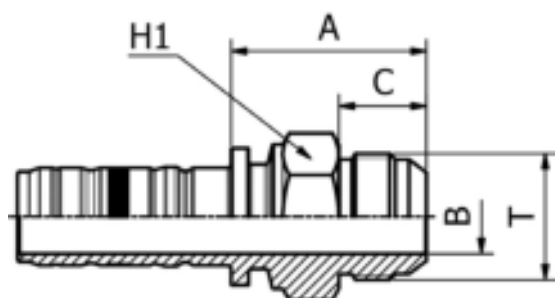


M80892

90° BSP
 O-RING FEMALE SWEEP ELBOW 60° CONE
 BS5200 / ISO 12151-6

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm					
	DN	Dash	inch		T	B	A	C	E	H2
M80892-12-12	19	- 12	3/4"	3/4" - 14	14.5	73.5	8.5	60.0	32.0	
M80892-12-12050	19	- 12	3/4"	3/4" - 14	14.5	67.5	8.5	50.0	32.0	
M80892-12-16	19	- 12	3/4"	1" - 11	19.5	73.5	10.6	62.0	41.0	
M80892-16-12	25	- 16	1"	3/4" - 14	15.0	90.0	8.5	70.0	32.0	
M80892-16-16	25	- 16	1"	1" - 11	19.5	83.0	10.6	76.0	41.0	
M80892-16-16058	25	- 16	1"	1" - 11	19.5	74.5	10.6	58.5	41.0	
M80892-16-20	25	- 16	1"	1.1/4" - 11	26.1	96.0	10.5	78.5	50.0	
M80892-20-16	31	- 20	1.1/4"	1" - 11	19.5	90.0	10.6	76.0	41.0	
M80892-20-20	31	- 20	1.1/4"	1.1/4" - 11	26.0	88.0	10.5	83.5	50.0	
M80892-20-24	31	- 20	1.1/4"	1.1/2" - 11	32.0	88.0	12.5	92.0	60.0	
M80892-24-24	38	- 24	1.1/2"	1.1/2" - 11	32.0	103.0	12.5	98.5	60.0	
M80892-32-32	51	- 32	2"	2" - 11	42.0	135.9	16.1	140.5	70.0	

SAE STANDARD CONNECTIONS

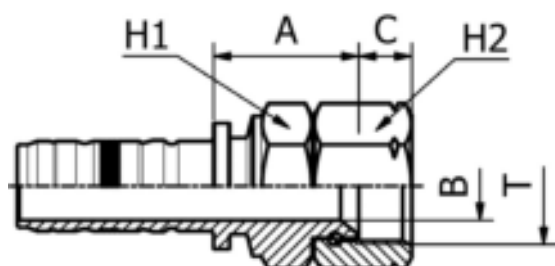


M72510

JIC
 MALE 37° CONE
 SAE J516 / ISO 12151-5

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	H1			
M72510-12-12	19	- 12	3/4"	1.1/16" - 12	14.5	44.5	22.0	30.0			
M72510-16-16	25	- 16	1"	1.5/16" - 12	19.5	51.5	23.0	38.0			
M72510-24-24	38	- 24	1.1/2"	1.7/8" - 12	32.1	60.0	27.5	50.0			
M72510-20-20	31	- 20	1.1/4"	1.5/8" - 12	26.1	56.0	24.3	46.0			
M72510-32-32	51	- 32	2"	2.1/2" - 12	42.0	75.5	34.0	65.0			

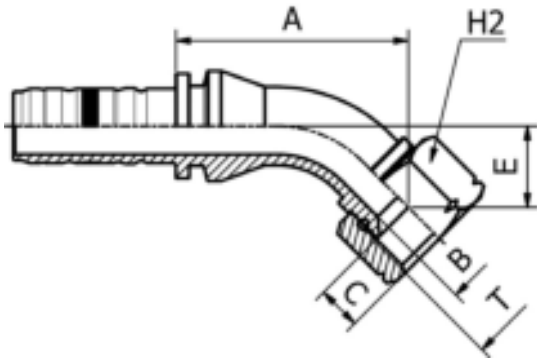
SAE STANDARD CONNECTIONS



M82712

JIC
 FEMALE 37° CONE SEAT DOUBLE HEXAGON
 SAE J516 / ISO 12151-5
 (THRUST-WIRE NUT)

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	H1	H2		
M82712-12-12	19	- 12	3/4"	1.1/16" - 12	14.5	36.5	14.2	32.0	32.0		
M82712-12-16	19	- 12	3/4"	1.5/16" - 12	19.5	36.5	15.2	32.0	41.0		
M82712-16-16	25	- 16	1"	1.5/16" - 12	19.5	41.5	15.2	41.0	41.0		
M82712-16-20	25	- 16	1"	1.5/8" - 12	26.1	46.5	16.2	41.0	50.0		
M82712-20-20	31	- 20	1.1/4"	1.5/8" - 12	26.1	51.5	16.2	50.0	50.0		
M82712-20-24	31	- 20	1.1/4"	1.7/8" - 12	32.0	54.5	18.8	55.0	60.0		
M82712-24-24	38	- 24	1.1/2"	1.7/8" - 12	32.1	54.5	18.8	55.0	60.0		
M82712-32-32	51	- 32	2"	2.1/2" - 12	42.0	56.0	24.0	65.0	75.0		

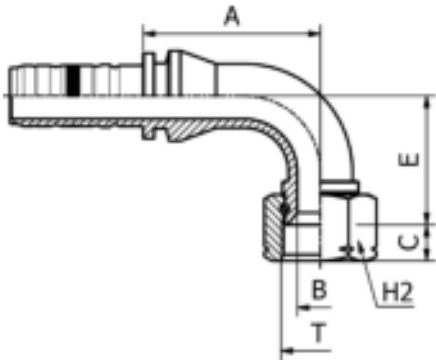


SAE STANDARD CONNECTIONS

M82542

45° JIC
 FEMALE SWEPT ELBOW 37° CONE SEAT
 SAE J516 / ISO 12151-5

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	E	H2	
M82542-12-12	19	- 12	3/4"	1.1/16" - 12	14.5	75.0	14.2	22.5	32.0		
M82542-16-16	25	- 16	1"	1.5/16" - 12	19.5	81.5	15.2	26.0	41.0		
M82542-20-20	31	- 20	1.1/4"	1.5/8" - 12	26.0	101.0	16.2	41.5	50.0		
M82542-24-24	38	- 24	1.1/2"	1.7/8" - 12	32.1	121.5	18.8	48.5	60.0		
M82542-32-32	51	- 32	2"	2.1/2" - 12	42.0	162.0	24.0	63.5	75.0		



SAE STANDARD CONNECTIONS

M82592

90° JIC
 FEMALE SWEPT ELBOW 37° CONE SEAT
 SAE J516 / ISO 12151-5

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	E	H2	
M82592-12-16	19	- 12	3/4"	1.5/16" - 12	19.8	73.5	15.2	57.5	41.0		
M82592-12-12	19	- 12	3/4"	1.1/16" - 12	14.5	67.5	14.2	47.5	32.0		
M82592-16-12	25	- 16	1"	1.1/16" - 12	14.5	76.5	14.2	47.5	32.0		
M82592-16-16	25	- 16	1"	1.5/16" - 12	19.5	74.5	15.2	55.5	41.0		
M82592-20-20	31	- 20	1.1/4"	1.5/8" - 12	26.0	88.0	16.2	86.5	50.0		
M82592-20-24	31	- 20	1.1/4"	1.7/8" - 12	32.0	88.0	18.8	90.5	60.0		
M82592-24-24	38	- 24	1.1/2"	1.7/8" - 12	32.1	105.0	18.8	101.0	60.0		
M82592-32-32	51	- 32	2"	2.1/2" - 12	42.0	145.0	24.0	139.0	75.0		

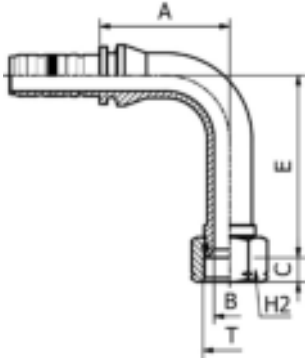


SAE STANDARD CONNECTIONS

M84792

90° JIC

FEMALE LONG DROP ELBOW 37° CONE SEAT
SAE J516 / ISO 12151-5



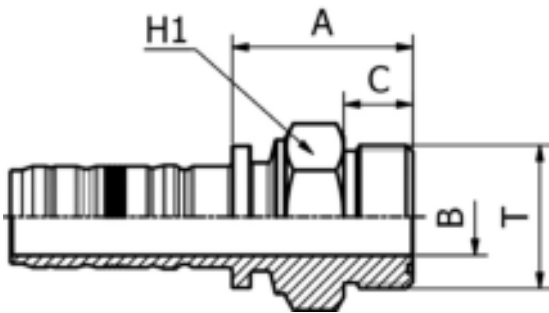
PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	H2		
M84792-12-12	19	- 12	3/4"	1.1/16" - 12	14.5	73.5	14.2	94.5	32.0		
M84792-16-16	25	- 16	1"	1.5/16" - 12	19.5	81.0	15.2	114.0	41.0		
M84792-20-20	31	- 20	1.1/4"	1.5/8" - 12	26.0	88.0	16.2	129.0	50.0		
M84792-24-24	38	- 24	1.1/2"	1.7/8" - 12	32.1	105.0	18.8	141.0	60.0		
M84792-32-32	38	- 24	1.1/2"	2.1/2" - 12	42.0	145.0	24.0	222.0	75.0		

SAE STANDARD CONNECTIONS

M72410

ORFS
MALE

SAE J516 / ISO 12151-1



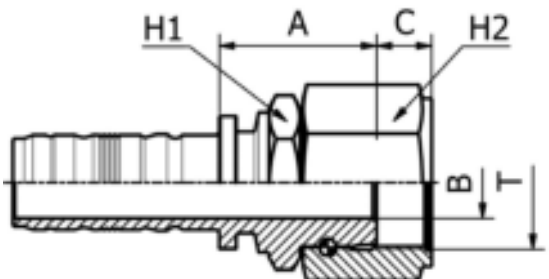
PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	H1			
M72410-12-12	19	- 12	3/4"	1.3/16" - 12	14.5	41.0	17.0	32.0			
M72410-16-16	25	- 16	1"	1.7/16" - 12	19.5	46.0	17.5	41.0			
M72410-20-20	31	- 20	1.1/4"	1.11/16" - 12	26.0	50.5	17.5	46.0			
M72410-24-24	38	- 24	1.1/2"	2" - 12	32.0	53.0	17.5	55.0			

SAE STANDARD CONNECTIONS

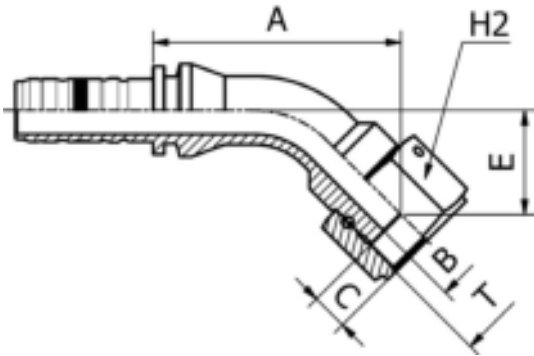
M82412

ORFS
FEMALE

SAE J516/ISO 12151.1



PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	H1	H2		
M82412-12-12	19	- 12	3/4"	1.3/16" - 12	14.5	38.0	14.1	32.0	36.0		
M82412-12-16	19	- 12	3/4"	1.7/16" - 12	19.5	42.0	15.0	41.0	46.0		
M82412-16-16	25	- 16	1"	1.7/16" - 12	19.5	43.0	15.0	41.0	46.0		
M82412-20-20	31	- 20	1.1/4"	1.11/16" - 12	25.0	52.5	15.1	50.0	55.0		
M82412-24-24	38	- 24	1.1/2"	2" - 12	30.5	55.0	15.0	60.0	60.0		



SAE STANDARD CONNECTIONS

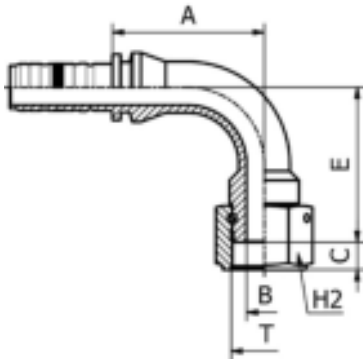
M82442

45° ORFS
 FEMALE SWEPT ELBOW SAE
 J516 / ISO 12151-1

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	H2		
M82442-12-12	19	- 12	3/4"	1.3/16" - 12	14.5	90.0	14.1	36.0	36.0		
M82442-12-16	19	- 12	3/4"	1.7/16" - 12	19.5	90.5	15.0	36.5	46.0		
M82442-16-16	25	- 16	1"	1.7/16" - 12	19.5	101.0	15.0	42.5	46.0		
M82442-20-20	31	- 20	1.1/4"	1.11/16" - 12	25.0	120.0	15.1	49.5	55.0		
M82442-24-24	38	- 24	1.1/2"	2" - 12	32.0	123.5	15.0	50.5	60.0		

FITTINGS

232

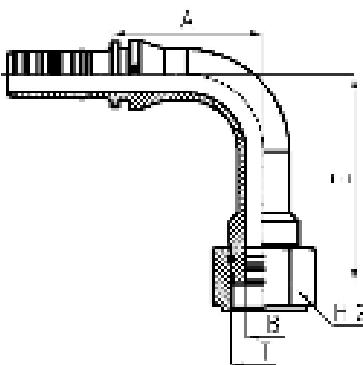


SAE STANDARD CONNECTIONS

M82492

90° ORFS
 FEMALE SWEPT ELBOW
 SAE J516 / ISO 12151-1

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	H2		
M82492-12-12	19	- 12	3/4"	1.3/16" - 12	14.5	73.5	14.1	70.5	36.0		
M82492-12-16	19	- 12	3/4"	1.7/16" - 12	19.5	86.0	15.0	71.0	46.0		
M82492-16-12	25	- 16	1"	1.3/16" - 12	14.5	89.5	14.1	70.5	36.0		
M82492-16-16	25	- 16	1"	1.7/16" - 12	19.5	83.0	15.0	84.5	46.0		
M82492-20-20	31	- 20	1.1/4"	1.11/16" - 12	25.0	99.0	15.1	98.0	55.0		
M82492-24-24	38	- 24	1.1/2"	2" - 12	32.0	105.0	15.0	104.0	60.0		



SAE STANDARD CONNECTIONS

M84492

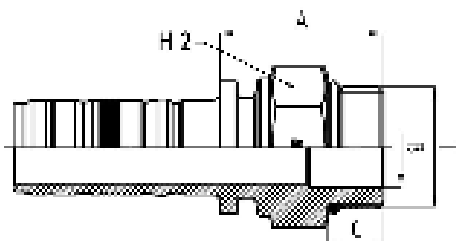
90° ORFS
 FEMALE LONG DROP ELBOW
 SAE J516 / ISO 12151-1
 (THURST- WIRE NUT)

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	H2		
M84492-12-12	19	- 12	3/4"	1.3/16" - 12	14.5	73.5	14.1	96.0	36.0		
M84492-16-16	25	- 16	1"	1.7/16" - 12	19.5	83.0	15.0	114.0	46.0		
M84492-20-20	31	- 20	1.1/4"	1.11/16" - 12	25.0	99.0	15.1	129.0	55.0		

SAE STANDARD CONNECTIONS

M73010

SAE
 MALE O-RING BOSS TYPE
 SAE J516 / ISO 11926

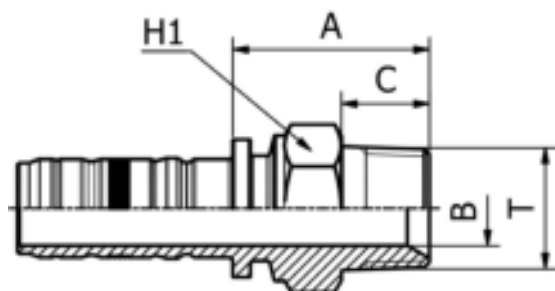


PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	H1			
M73010-12-12	19	- 12	3/4"	1.1/16" - 12	15.5	42.5	15.1	32.0			
M73010-16-16	25	- 16	1"	1.5/16" - 12	21.5	44.5	15.1	38.0			
M73010-20-20	31	- 20	1.1/4"	1.5/8" - 12	27.5	47.5	15.1	46.0			

SAE STANDARD CONNECTIONS

M72810

NPTF
 MALE 60° CONE SEAT
 SAE J516/J514

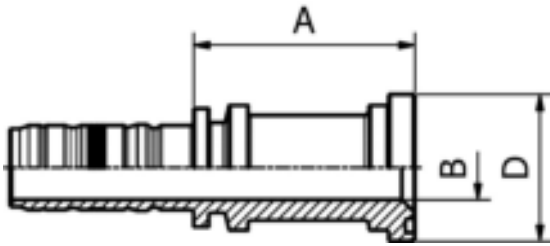


PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	H1			
M72810-12-12	19	- 12	3/4"	3/4" - 14	16.0	41.5	19.2	30.0			
M72810-16-16	25	- 16	1"	1" - 11,5	19.5	52.0	24.2	38.0			
M72810-20-20	31	- 20	1.1/4"	1.1/4" - 11,5	25.0	61.5	25.0	46.0			
M72810-24-24	38	- 24	1.1/2"	1.1/2" - 11,5	30.5	60.5	26.0	50.0			
M72810-32-32	51	- 32	2"	2" - 11,5	41.0	67.5	26.5	65.0			
M72810-48-48	76	- 48	3"	3" - 8	62.5	121.5	51.5	100.0			

SAE STANDARD CONNECTIONS

M83311

ISO / SAE
 CODE 61 FLANGE
 SAE J516 / ISO 12151-3



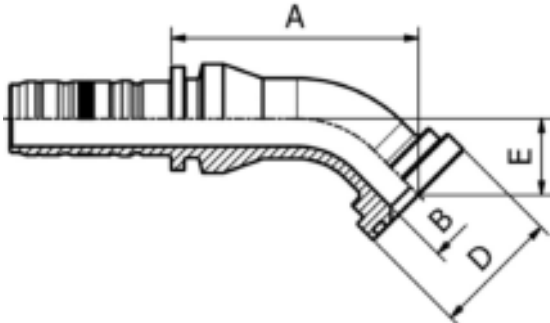
PART. REF.	HOSE BORE			Flange	DIMENSIONS mm							
	DN	Dash	inch	inch	B	A	D					
M83311-12-12	19	- 12	3/4"	3/4"	14.5	66.5	38.0					
M83311-12-16	19	- 12	3/4"	1"	19.5	52.5	44.6					
M83311-16-12	25	- 16	1"	3/4"	14.5	67.5	38.0					
M83311-16-16	25	- 16	1"	1"	19.5	67.5	44.6					
M83311-16-20	25	- 16	1"	1.1/4"	26.0	53.5	51.0					
M83311-20-16	31	- 20	1.1/4"	1"	19.5	69.0	44.6					
M83311-20-20	31	- 20	1.1/4"	1.1/4"	26.0	75.0	51.0					
M83311-20-24	31	- 20	1.1/4"	1.1/2"	32.0	60.0	60.5					
M83311-24-24	38	- 24	1.1/2"	1.1/2"	32.0	78.5	60.5					
M83311-24-32	38	- 24	1.1/2"	2"	42.0	60.5	71.6					
M83311-32-32	51	- 32	2"	2"	42.0	82.5	71.6					
M83311-40-40	63	- 40	2.1/2"	2.1/2"	51.5	93.0	84.3					
M83311-48-48	76	- 48	3"	3"	62.5	88.5	101.6					
M83311-56-56	89	- 56	3.1/2"	3.1/2"	76.0	98.5	114.3					
M83311-64-64	102	- 64	4"	4"	89.0	105.0	127.0					

FITTINGS 234

SAE STANDARD CONNECTIONS

M83341

45° ISO / SAE
 CODE 61 FLANGE
 SAE J516 / ISO 12151-3



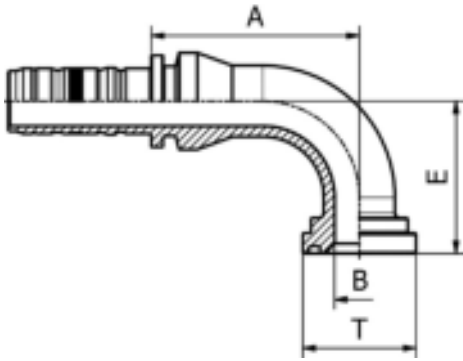
PART. REF.	HOSE BORE			Flange	DIMENSIONS mm							
	DN	Dash	inch	inch	B	A	D	E				
M83341-12-12	19	- 12	3/4"	3/4"	16.0	78.0	38.0	24.5				
M83341-12-16	19	- 12	3/4"	1"	19.5	78.0	44.6	24.5				
M83341-16-12	25	- 16	1"	3/4"	16.0	90.5	38.0	24.5				
M83341-16-16	25	- 16	1"	1"	19.5	86.5	44.6	26.5				
M83341-16-20	25	- 16	1"	1.1/4"	26.0	92.0	51.0	32.0				
M83341-20-16	31	- 20	1.1/4"	1"	19.5	90.5	44.6	26.5				
M83341-20-20	31	- 20	1.1/4"	1.1/4"	26.0	87.5	51.0	29.0				
M83341-20-24	31	- 20	1.1/4"	1.1/2"	32.0	88.5	60.5	30.0				
M83341-24-24	38	- 24	1.1/2"	1.1/2"	32.0	102.5	60.5	38.0				
M83341-24-32	38	- 24	1.1/2"	2"	42.0	102.5	71.6	38.0				
M83341-32-32	51	- 32	2"	2"	42.0	143.5	71.6	52.0				
M83341-40-40	63	- 40	2.1/2"	2.1/2"	49.2	131.0	84.3	44.5				
M83341-48-48	76	- 48	3"	3"	59.0	147.0	101.6	53.0				



SAE STANDARD CONNECTIONS

M83391

90° ISO / SAE
CODE 61 FLANGE
SAE J516 / ISO 12151-3



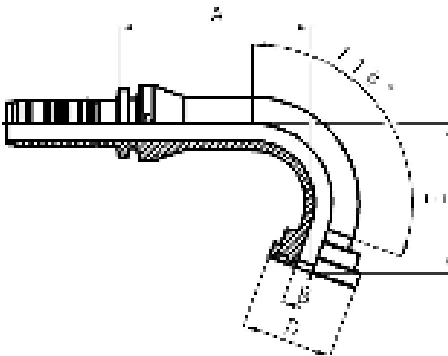
PART. REF.	HOSE BORE			Flange		DIMENSIONS mm					
	DN	Dash	inch			inch	B	A	D	E	
M83391-12-12	19	- 12	3/4"	3/4"		16.0	72.5	38.0	58.0		
M83391-12-16	19	- 12	3/4"	1"		19.5	72.5	44.6	70.0		
M83391-12-16054	19	- 12	3/4"	1"		19.5	72.5	44.6	54.0		
M83391-16-12	25	- 16	1"	3/4"		16.0	85.0	38.0	58.0		
M83391-16-16	25	- 16	1"	1"		19.5	82.0	44.6	60.0		
M83391-16-20	25	- 16	1"	1.1/4"		26.0	82.0	51.0	68.0		
M83391-20-24	31	- 20	1.1/4"	1.1/2"		32.0	85.0	60.5	69.0		
M83391-20-16	31	- 20	1.1/4"	1"		19.5	86.0	44.6	60.0		
M83391-20-20	31	- 20	1.1/4"	1.1/4"		26.0	85.0	51.0	67.0		
M83391-24-24	38	- 24	1.1/2"	1.1/2"		32.0	96.5	60.5	81.0		
M83391-24-32	38	- 24	1.1/2"	2"		42.0	101.5	71.6	84.0		
M83391-32-32	51	- 32	2"	2"		42.0	135.5	71.6	120.0		
M83391-40-40	63	- 40	2.1/2"	2.1/2"		49.2	128.0	84.3	118.0		
M83391-48-48	76	- 48	3"	3"		59.0	144.5	101.6	140.0		
M83391-56-56	89	- 56	3.1/2"	3.1/2"		73.7	164.0	114.3	160.0		

235 FITTINGS

SAE STANDARD CONNECTIONS

M83301...P

110° ISO / SAE
CODE 61 FLANGE

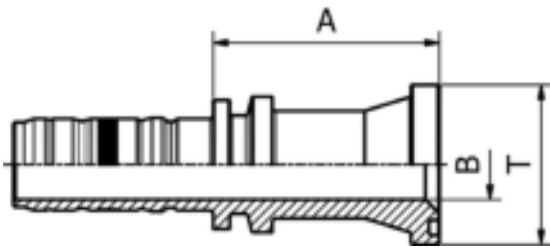


PART. REF.	HOSE BORE			Flange		DIMENSIONS mm					
	DN	Dash	inch			inch	B	A	D	E	
M83301-12-12P	19	- 12	3/4"	3/4"		16.0	80.0	38.0	62.0		
M83301-16-16P	25	- 16	1"	1"		19.5	91.5	44.6	79.0		
M83301-20-20P	31	- 20	1.1/4"	1.1/4"		26.0	121.5	51.0	91.0		
M83301-24-24P	38	- 24	1.1/2"	1.1/2"		32.0	124.8	60.5	109.0		
M83301-32-32P	51	- 32	2"	2"		42.0	146.5	71.6	140.0		

SAE STANDARD CONNECTIONS

M83611

ISO / SAE
 CODE 62 FLANGE
 SAE J516 / ISO 12151-3

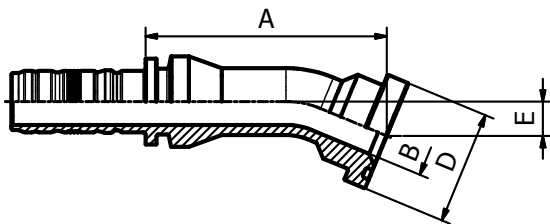


PART. REF.	HOSE BORE			Flange		DIMENSIONS mm						
	DN	Dash	inch			inch	B	A	D			
M83611-12-12	19	-12	3/4"	3/4"		14.5	53.5	41.4				
M83611-12-16	19	-12	3/4"	1"		19.5	59.5	47.7				
M83611-16-12	25	-16	1"	3/4"		16.0	62.5	41.4				
M83611-16-16	25	-16	1"	1"		19.5	63.5	47.7				
M83611-16-20	25	-16	1"	1.1/4"		26.0	70.0	54.2				
M83611-20-16	31	-20	1.1/4"	1"		19.5	62.0	47.7				
M83611-20-20	31	-20	1.1/4"	1.1/4"		26.0	66.0	54.2				
M83611-20-24	31	-20	1.1/4"	1.1/2"		32.0	74.5	63.7				
M83611-24-24	38	-24	1.1/2"	1.1/2"		32.0	74.5	63.7				
M83611-24-32	38	-24	1.1/2"	2"		42.0	88.5	79.6				
M83611-24-20	38	-24	1.1/2"	1.1/4"		26.0	66.5	54.2				
M83611-32-24	51	-32	2"	1.1/2"		32.0	91.5	63.7				

SAE STANDARD CONNECTIONS

M83621

22.5° ISO / SAE
 CODE 62 FLANGE
 SAE J516 / ISO 12151-3



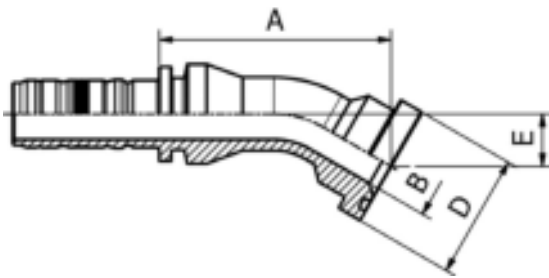
PART. REF.	HOSE BORE			Flange		DIMENSIONS mm						
	DN	Dash	inch			inch	B	A	D	E		
M83621-12-12	19	-12	3/4"	3/4"		16.0	89.5	41.4	12.0			
M83621-16-16	25	-16	1"	1"		19.5	101.0	47.7	14.5			
M83621-20-20	31	-20	1.1/4"	1.1/4"		26.0	107.0	54.2	17.0			
M83621-24-24	38	-24	1.1/2"	1.1/2"		32.0	122.0	63.7	19.5			
M83621-32-32	51	-32	2"	2"		42.0	164.0	79.5	25.0			



SAE STANDARD CONNECTIONS

M83631

30° ISO / SAE
CODE 62 FLANGE
SAE J516 / ISO 12151-3

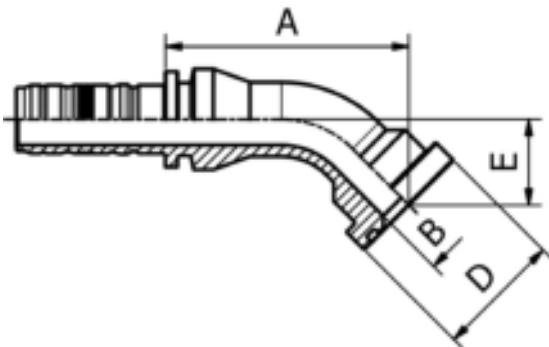


PART. REF.	HOSE BORE			Flange		DIMENSIONS mm						
	DN	Dash	inch			inch	B	A	D			
M83631-12-12	19	- 12	3/4"	3/4"		16.0	78.5	41.4	17.5			
M83631-16-16	25	- 16	1"	1"		19.5	89.0	47.7	20.0			
M83631-20-20	31	- 20	1.1/4"	1.1/4"		26.0	90.5	54.2	22.5			
M83631-24-24	38	- 24	1.1/2"	1.1/2"		32.0	104.5	63.7	27.0			

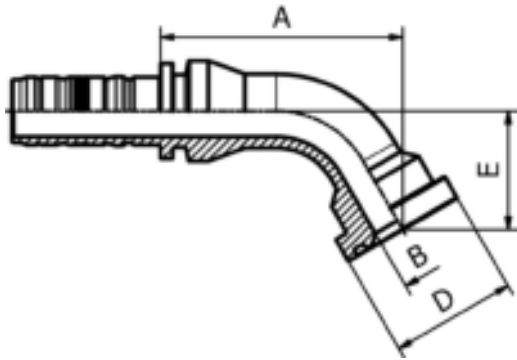
SAE STANDARD CONNECTIONS

M83641

45° ISO / SAE
CODE 62 FLANGE
SAE J516 / ISO 12151-3



PART. REF.	HOSE BORE			Flange		DIMENSIONS mm						
	DN	Dash	inch			inch	B	A	D			
M83641-12-12	19	- 12	3/4"	3/4"		16.0	81.5	41.4	28.0			
M83641-12-16	19	- 12	3/4"	1"		19.5	85.5	47.7	32.5			
M83641-16-12	25	- 16	1"	3/4"		16.0	87.5	41.4	28.0			
M83641-16-16	25	- 16	1"	1"		19.5	92.0	47.7	32.5			
M83641-16-20	25	- 16	1"	1.1/4"		26.0	97.0	54.2	37.0			
M83641-20-16	31	- 20	1.1/4"	1"		19.5	95.5	47.7	31.5			
M83641-20-20	31	- 20	1.1/4"	1.1/4"		26.0	96.5	54.2	38.0			
M83641-20-24	31	- 20	1.1/4"	1.1/2"		32.0	104.5	63.7	44.5			
M83641-24-20	38	- 24	1.1/2"	1.1/4"		26.0	110.5	54.2	38.0			
M83641-24-24	38	- 24	1.1/2"	1.1/2"		32.0	109.5	63.7	44.0			
M83641-24-32	38	- 24	1.1/2"	2"		42.0	121.5	79.6	56.0			
M83641-32-32	51	- 32	2"	2"		42.0	148.0	79.6	59.0			

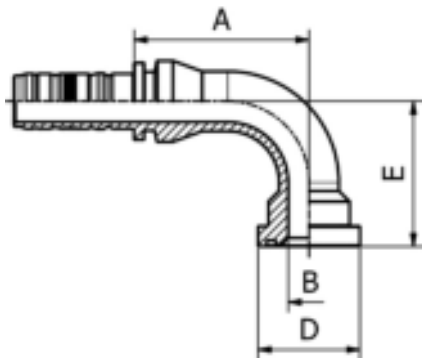


SAE STANDARD CONNECTIONS

M83661

60° ISO / SAE
 CODE 62 FLANGE
 SAE J516 / ISO 12151-3

PART. REF.	HOSE BORE			Flange	DIMENSIONS mm							
	DN	Dash	inch	inch	B	A	D	E				
M83661-12-12	19	- 12	3/4"	3/4"	16.0	81.0	41.4	39.0				
M83661-12-16	19	- 12	3/4"	1"	19.5	84.0	47.7	44.0				
M83661-16-16	25	- 16	1"	1"	19.5	92.0	47.7	45.0				
M83661-20-20	31	- 20	1.1/4"	1.1/4"	26.0	97.5	54.2	55.0				
M83661-20-24	31	- 20	1.1/4"	1.1/2"	32.0	101.5	63.7	62.0				
M83661-24-24	38	- 24	1.1/2"	1.1/2"	32.0	110.5	63.7	61.5				
M83661-32-32	51	- 32	2"	2"	42.0	151.0	79.6	85.0				



SAE STANDARD CONNECTIONS

M83691

90° ISO / SAE
 CODE 62 FLANGE
 SAE J516 / ISO 12151-3

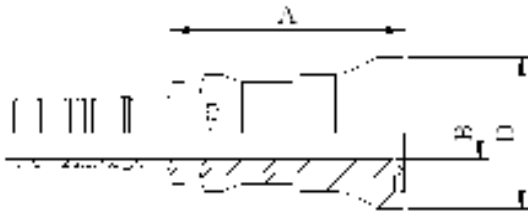
PART. REF.	HOSE BORE			Flange	DIMENSIONS mm							
	DN	Dash	inch	inch	B	A	D	E				
M83691-12-12	19	- 12	3/4"	3/4"	16.0	72.5	41.4	59.0				
M83691-12-16	19	- 12	3/4"	1"	19.5	72.6	47.7	65.0				
M83691-16-12	25	- 16	1"	3/4"	16.0	82.0	41.4	62.0				
M83691-16-16	25	- 16	1"	1"	19.5	82.0	47.7	68.0				
M83691-16-20	25	- 16	1"	1.1/4"	26.0	82.0	54.2	90.0				
M83691-16-20075	25	- 16	1"	1.1/4"	26.0	82.0	54.2	75.0				
M83691-20-16	31	- 20	1.1/4"	1"	19.5	86.0	47.7	68.0				
M83691-20-20	31	- 20	1.1/4"	1.1/4"	26.0	85.0	54.2	90.0				
M83691-20-24	31	- 20	1.1/4"	1.1/2"	32.0	85.0	63.7	104.0				
M83691-24-20	38	- 24	1.1/2"	1.1/4"	26.0	99.0	54.2	90.0				
M83691-24-24	38	- 24	1.1/2"	1.1/2"	32.0	98.0	63.7	104.0				
M83691-24-32	38	- 24	1.1/2"	2"	42.0	98.0	79.6	138.0				
M83691-32-32	51	- 32	2"	2"	42.0	136.0	79.6	138.0				



XTRAFUDGE

M88511

XTRAFUDGE/62
(SAE J518 -2/ ISO 6162-2
PORT COMPATIBLE)

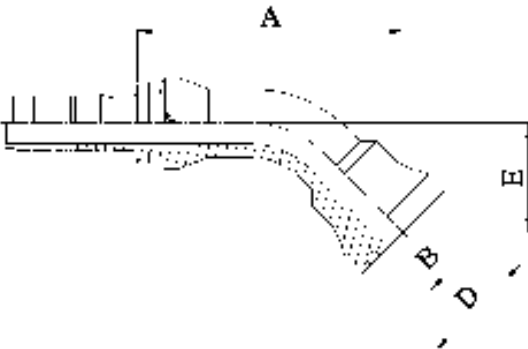


PART. REF.	HOSE BORE			Flange	DIMENSIONS mm							
	DN	Dash	inch	inch	B	A	D					
M88511-12-12	19	- 12	3/4"	3/4"	14.5	65.5	41.4					
M88511-16-16	25	- 16	1"	1"	19.5	69.0	47.7					
M88511-20-20	31	- 20	1.1/4"	1.1/4"	25.0	88.0	54.4					
M88511-24-24	38	- 24	1.1/2"	1.1/2"	30.5	102.0	63.7					
M88511-32-32	51	- 32	2"	2"	41.0	129.5	79.6					

XTRAFUDGE

M88541

45° XTRAFUDGE/62
(SAE J518 -2/ ISO 6162-2
PORT COMPATIBLE)

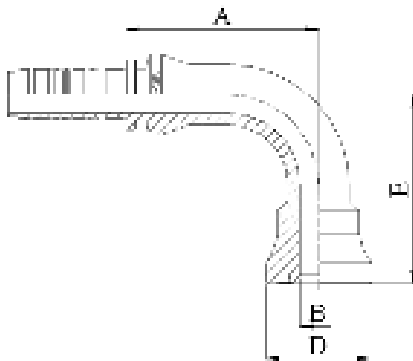


PART. REF.	HOSE BORE			Flange	DIMENSIONS mm							
	DN	Dash	inch	inch	B	A	D	E				
M88541-12-12	19	- 12	3/4"	3/4"	14.5	93.5	41.4	38.0				
M88541-16-16	25	- 16	1"	1"	19.5	103.5	47.7	45.0				
M88541-20-20	31	- 20	1.1/4"	1.1/4"	25.0	138.0	54.4	62.5				
M88541-24-24	38	- 24	1.1/2"	1.1/2"	30.5	155.0	63.7	71.5				
M88541-32-32	51	- 32	2"	2"	39.0	194.5	79.6	92.5				

XTRAFUDGE

M88591

90° XTRAFUDGE/62
(SAE J518 -2/ ISO 6162-2
PORT COMPATIBLE)

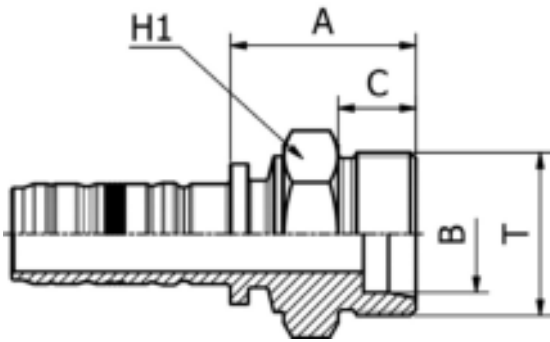


PART. REF.	HOSE BORE			Flange	DIMENSIONS mm							
	DN	Dash	inch	inch	B	A	D	E				
M88591-12-12	19	- 12	3/4"	3/4"	14.5	76.5	41.4	75.0				
M88591-16-16	25	- 16	1"	1"	19.5	84.5	47.7	90.0				
M88591-20-20	31	- 20	1.1/4"	1.1/4"	25.0	107.0	54.4	120.0				
M88591-24-24	38	- 24	1.1/2"	1.1/2"	30.5	122.0	63.7	140.0				
M88591-32-32	51	- 32	2"	2"	39.0	148.5	79.6	178.0				

DIN STANDARD CONNECTIONS

M71210

METRIC
 MALE 24° CONE SEAT HEAVY DUTY
 DIN 20066 / ISO 12151-2



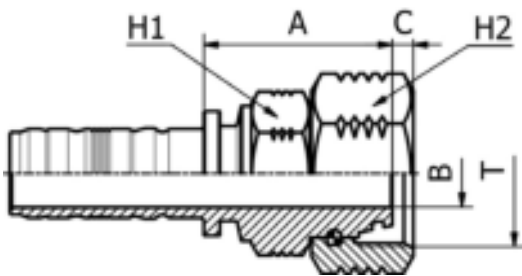
PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm						
	DN	Dash	inch			T	mm	B	A	C	H1	
M71210-12-30	19	- 12	3/4"	M 30X2	20.0	14.5	39.5	16.0	32.0			
M71210-12-36	19	- 12	3/4"	M 36X2	25.0	14.5	44.5	18.0	36.0			
M71210-16-36	25	- 16	1"	M 36X2	25.0	19.5	46.0	18.0	36.0			
M71210-16-42	25	- 16	1"	M 42X2	30.0	19.5	47.5	20.0	46.0			
M71210-20-52	31	- 20	1.1/4"	M 52X2	38.0	25.0	55.0	22.0	55.0			
M71210-24-52	38	- 24	1.1/2"	M 52X2	38.0	30.5	55.5	22.0	55.0			

FITTINGS 240

DIN STANDARD CONNECTIONS

M81612

METRIC
 O-RING FEMALE 24° CONE HEAVY DUTY
 DIN 20066 / ISO 12151-2



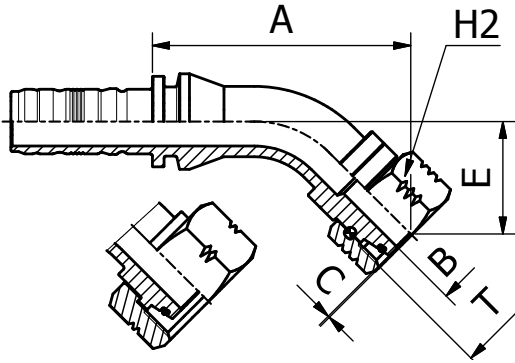
PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm						
	DN	Dash	inch			T	mm	B	A	C	H1	H2
M81612-16-42	25	- 16	1"	M 42X2	30.0	19.5	54.5	6.0	41.0	50.0		
M81612-12-36	19	- 12	3/4"	M 36X2	25.0	14.5	52.0	4.1	36.0	41.0		
M81612-24-52	38	- 24	1.1/2"	M 52X2	38.0	26.1	58.0	8.8	55.0	60.0		
M81612-12-42	19	- 12	3/4"	M 42X2	30.0	19.5	52.5	6.0	41.0	50.0		
M81612-16-52	25	- 16	1"	M 52X2	38.0	25.0	56.0	8.8	50.0	60.0		
M81612-12-30	19	- 12	3/4"	M 30X2	20.0	12.5	49.5	3.2	32.0	36.0		
M81612-16-36	25	- 16	1"	M 36X2	25.0	16.0	56.0	4.1	41.0	41.0		
M81612-20-52	31	- 20	1.1/4"	M 52X2	38.0	25.0	57.0	8.8	50.0	60.0		
M81612-20-42	31	- 20	1.1/4"	M 42X2	30.0	19.5	56.0	6.1	46.0	50.0		



DIN STANDARD CONNECTIONS

M81642/M81643

45° METRIC
O-RING FEMALE SWEPT ELBOW 24° CONE
HEAVY DUTY
DIN 20066 / ISO 12151-2

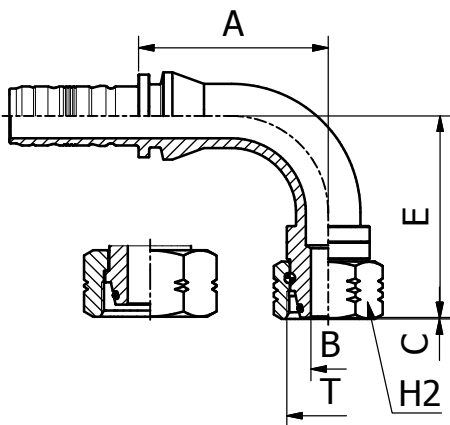


PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm						
	DN	Dash	inch	T	mm	B	A	C	E	H2		
M81642-12-30	19	- 12	3/4"	M 30X2	20.0	12.5	80.0	3.2	35.0	36.0		
M81643-12-36	19	- 12	3/4"	M 36X2	25.0	14.5	82.0	3.4	33.5	41.0		
M81642-16-36	25	- 16	1"	M 36X2	25.0	15.0	103.0	4.1	44.5	41.0		
M81643-16-42	25	- 16	1"	M 42X2	30.0	19.5	94.0	5.3	36.0	50.0		
M81642-20-42	31	- 20	1.1/4"	M 42X2	30.0	19.1	117.5	6.0	44.0	50.0		
M81643-20-52	31	- 20	1.1/4"	M 52X2	38.0	26.1	111.0	8.0	40.0	60.0		

DIN STANDARD CONNECTIONS

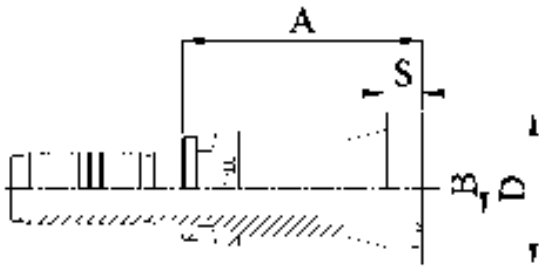
M81692/M81693

90° METRIC
O-RING FEMALE SWEPT ELBOW 24° CONE
HEAVY DUTY
DIN 20066 / ISO 12151-2



PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm						
	DN	Dash	inch	T	mm	B	A	C	E	H2		
M81692-12-30	19	- 12	3/4"	M 30X2	20.0	12.5	64.5	3.2	68.5	36.0		
M81693-12-36	19	- 12	3/4"	M 36X2	25.0	14.5	68.0	3.4	67.5	41.0		
M81692-16-36	25	- 16	1"	M 36X2	25.0	15.0	83.0	4.1	87.5	41.0		
M81693-16-42	25	- 16	1"	M 42X2	30.0	19.5	82.5	5.3	75.5	50.0		
M81692-20-42	31	- 20	1.1/4"	M 42X2	30.0	19.1	102.0	6.0	90.0	50.0		
M81693-20-52	31	- 20	1.1/4"	M 52X2	38.0	26.1	101.0	8.0	86.5	60.0		

ORIGINAL EQUIPMENT CONNECTIONS



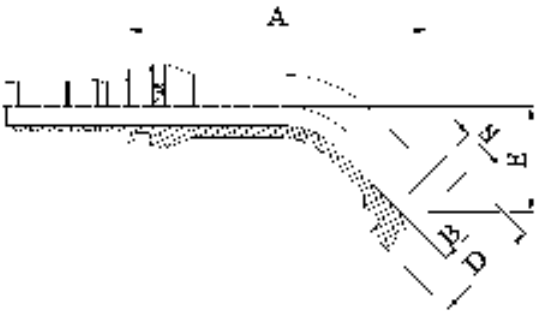
M83711

FLANGE PLUS
 (SAE J518 -2 /ISO 6162-2 P
 ORT COMPATIBLE)

PART. REF.	HOSE BORE			Flange	DIMENSIONS mm					
	DN	Dash	inch		B	A	D	S		
M83711-12-12	19	- 12	3/4"	3/4"	14.5	65.0	41.4	10.0		
M83711-16-16	25	- 16	1"	1"	19.5	65.0	47.7	11.0		
M83711-20-20	31	- 20	1.1/4"	1.1/4"	25.0	81.0	54.2	12.0		

FITTINGS 242

ORIGINAL EQUIPMENT CONNECTIONS



M83741

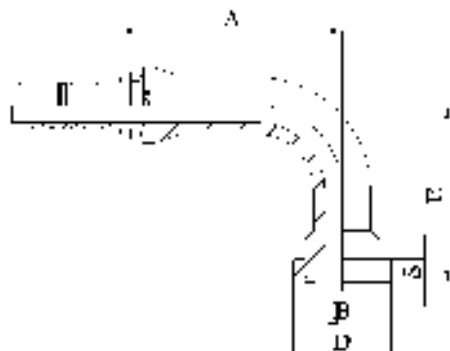
45° FLANGE PLUS
 (SAE J518-2/ISO 6162-2
 PORT COMPATIBLE)

PART. REF.	HOSE BORE			Flange	DIMENSIONS mm					
	DN	Dash	inch		B	A	D	E	S	
M83741-12-12	19	- 12	3/4"	3/4"	14.5	114.0	41.4	40.0	10.0	
M83741-16-16	25	- 16	1"	1"	19.5	107.5	47.7	43.0	11.0	
M83741-20-20	31	- 20	1.1/4"	1.1/4"	25.0	133.5	54.2	50.0	12.0	

ORIGINAL EQUIPMENT CONNECTIONS

M83791

**90° FLANGE PLUS
 (SAE J518 -2/ ISO 6162-2
 PORT COMPATIBLE)**

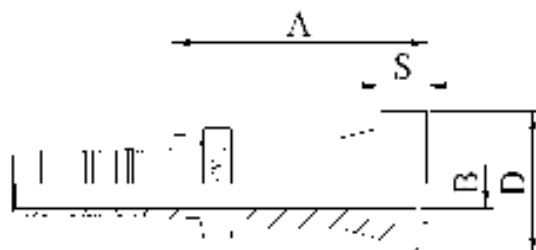


PART. REF.	HOSE BORE			Flange	Flange	DIMENSIONS mm				
	DN	Dash	inch			B	A	D	E	S
M83791-12-12	19	- 12	3/4"	3/4"		14.5	93.5	41.4	75.0	10.0
M83791-16-16	25	- 16	1"	1"		19.5	91.0	47.7	90.0	11.0
M83791-20-20	31	- 20	1.1/4"	1.1/4"		25.0	115.0	54.2	110.0	12.0

ORIGINAL EQUIPMENT CONNECTIONS

M83911

STRAIGHT SUPERCAT SERIES FLANGE

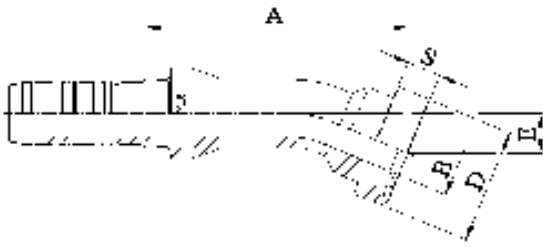


PART. REF.	HOSE BORE			Flange	Flange	DIMENSIONS mm			
	DN	Dash	inch			B	A	D	S
M83911-12-12	19	- 12	3/4"	3/4"		14.5	75.0	41.5	14.3
M83911-12-16	19	- 12	3/4"	1"		19.5	80.5	47.7	14.3
M83911-16-16	25	- 16	1"	1"		19.5	80.0	47.7	14.3
M83911-16-20	25	- 16	1"	1.1/4"		26.0	84.0	54.0	14.3
M83911-20-20	31	- 20	1.1/4"	1.1/4"		26.0	80.5	54.0	14.3
M83911-20-24	31	- 20	1.1/4"	1.1/2"		32.0	84.0	63.6	14.3
M83911-24-24	38	- 24	1.1/2"	1.1/2"		32.0	84.5	63.6	14.3
M83911-24-32	38	- 24	1.1/2"	2"		42.0	107.5	79.3	14.3
M83911-32-24	51	- 32	2"	1.1/2"		32.0	95.5	63.6	14.3
M83911-32-32	51	- 32	2"	2"		42.0	110.5	79.3	14.3

ORIGINAL EQUIPMENT CONNECTIONS

M83921

22,5° SUPERCAT SERIES FLANGE

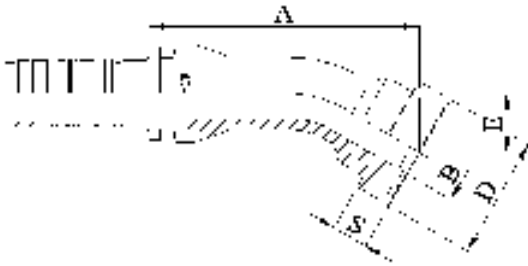


PART. REF.	HOSE BORE			Flange		DIMENSIONS mm						
	DN	Dash	inch			inch	B	A	D	E		
M83921-12-12	19	- 12	3/4"	3/4"		16.0	101.5	41.5	16.0	14.3		
M83921-12-16	19	- 12	3/4"	1"		19.5	98.0	47.7	16.5	14.3		
M83921-16-16	25	- 16	1"	1"		19.5	108.5	47.7	16.5	14.3		
M83921-16-20	25	- 16	1"	1.1/4"		26.0	113.0	54.0	18.5	14.3		
M83921-20-20	31	- 20	1.1/4"	1.1/4"		26.0	120.5	54.0	18.0	14.3		
M83921-20-24	31	- 20	1.1/4"	1.1/2"		32.0	119.0	63.7	21.0	14.3		
M83921-24-24	38	- 24	1.1/2"	1.1/2"		32.0	123.5	63.7	20.0	14.3		

ORIGINAL EQUIPMENT CONNECTIONS

M83931

30° SUPERCAT SERIES FLANGE



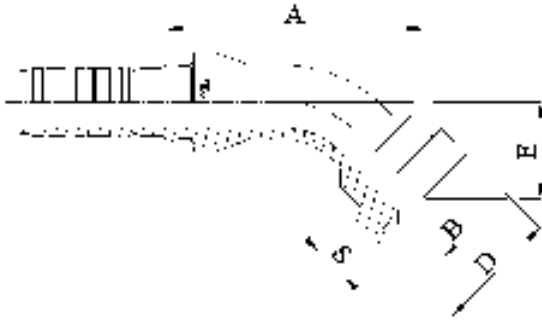
PART. REF.	HOSE BORE			Flange		DIMENSIONS mm						
	DN	Dash	inch			inch	B	A	D	E		
M83931-12-12	19	- 12	3/4"	3/4"		16.0	99.0	41.5	22.0	14.3		
M83931-12-16	19	- 12	3/4"	1"		19.5	99.5	47.7	22.5	14.3		
M83931-16-16	25	- 16	1"	1"		19.5	106.0	47.7	23.0	14.3		
M83931-16-20	25	- 16	1"	1.1/4"		26.0	110.0	54.0	26.0	14.3		
M83931-20-20	31	- 20	1.1/4"	1.1/4"		26.0	117.5	54.0	25.0	14.3		
M83931-20-24	31	- 20	1.1/4"	1.1/2"		32.0	115.5	63.7	29.0	14.3		
M83931-24-24	38	- 24	1.1/2"	1.1/2"		32.0	120.5	63.7	28.0	14.3		
M83931-24-32	38	- 24	1.1/2"	2"		42.0	134.5	79.3	36.0	14.3		
M83931-32-32	51	- 32	2"	2"		42.0	163.5	79.3	37.5	14.3		



ORIGINAL EQUIPMENT CONNECTIONS

M83941

45° SUPERCAT SERIES FLANGE

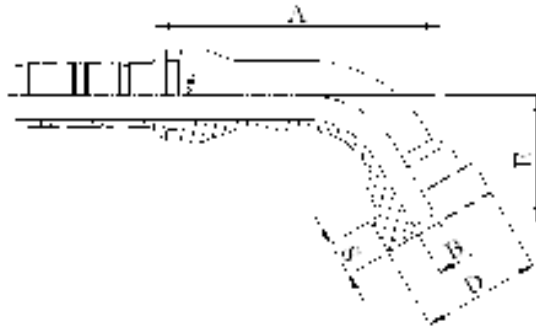


PART. REF.	HOSE BORE			Flange	inch	DIMENSIONS mm						
	DN	Dash	inch			B	A	D	E	S		
M83941-12-12	19	- 12	3/4"	3/4"		16.0	91.5	41.5	34.5	14.3		
M83941-12-16	19	- 12	3/4"	1"		19.5	92.0	47.7	35.5	14.3		
M83941-16-16	25	- 16	1"	1"		19.5	98.0	47.7	36.5	14.3		
M83941-16-20	25	- 16	1"	1.1/4"		26.0	101.0	54.0	40.5	14.3		
M83941-20-20	31	- 20	1.1/4"	1.1/4"		26.0	109.0	54.0	40.0	14.3		
M83941-20-24	31	- 20	1.1/4"	1.1/2"		32.0	106.0	63.7	46.0	14.3		
M83941-24-24	38	- 24	1.1/2"	1.1/2"		32.0	111.0	63.7	45.5	14.3		
M83941-24-32	38	- 24	1.1/2"	2"		42.0	122.0	79.3	56.5	14.3		
M83941-32-32	51	- 32	2"	2"		42.0	150.5	79.3	61.5	14.3		

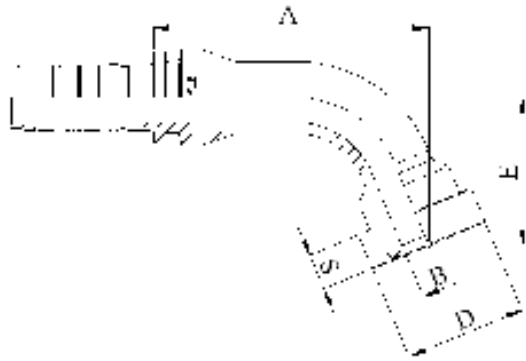
ORIGINAL EQUIPMENT CONNECTIONS

M83961

60° SUPERCAT SERIES FLANGE



PART. REF.	HOSE BORE			Flange	inch	DIMENSIONS mm						
	DN	Dash	inch			B	A	D	E	S		
M83961-12-12	19	- 12	3/4"	3/4"		16.0	106.5	41.5	47.0	14.3		
M83961-12-16	19	- 12	3/4"	1"		19.5	107.0	47.7	48.0	14.3		
M83961-16-16	25	- 16	1"	1"		19.5	114.0	47.7	51.0	14.3		
M83961-16-16055	25	- 16	1"	1"		19.5	100.0	47.7	55.0	14.3		
M83961-16-20	25	- 16	1"	1.1/4"		26.0	116.5	54.0	54.0	14.3		
M83961-20-20	31	- 20	1.1/4"	1.1/4"		26.0	130.0	54.0	54.5	14.3		
M83961-20-24	31	- 20	1.1/4"	1.1/2"		32.0	126.0	63.7	63.5	14.3		
M83961-24-24	38	- 24	1.1/2"	1.1/2"		32.0	140.0	63.7	63.0	14.3		
M83961-32-32	51	- 32	2"	2"		42.0	194.0	79.3	86.5	14.3		
M83961-32-32150	51	- 32	2"	2"		42.0	198.0	79.3	150.0	14.3		

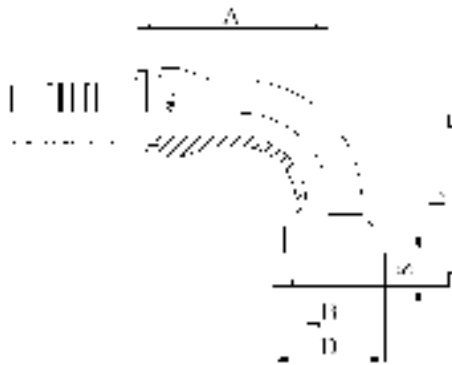


ORIGINAL EQUIPMENT CONNECTIONS

M83971

67,5° SUPERCAT SERIES FLANGE

PART. REF.	HOSE BORE			Flange		DIMENSIONS mm				
	DN	Dash	inch			inch	B	A	D	E
M83971-12-12	19	- 12	3/4"	3/4"		16.0	100.0	41.5	53.0	14.3
M83971-12-16	19	- 12	3/4"	1"		19.5	100.5	47.7	54.0	14.3
M83971-16-16	25	- 16	1"	1"		19.5	107.0	47.7	58.0	14.3
M83971-16-20	25	- 16	1"	1.1/4"		26.0	109.0	54.0	62.0	14.3
M83971-20-20	31	- 20	1.1/4"	1.1/4"		26.0	123.0	54.0	62.0	14.3
M83971-20-24	31	- 20	1.1/4"	1.1/2"		32.0	117.5	63.7	71.5	14.3
M83971-24-24	38	- 24	1.1/2"	1.1/2"		32.0	131.0	63.7	72.0	14.3
M83971-32-32	51	- 32	2"	2"		42.0	181.5	79.3	99.0	14.3



ORIGINAL EQUIPMENT CONNECTIONS

M83991

90° SUPERCAT SERIES FLANGE

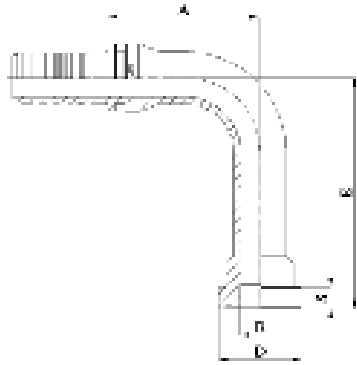
PART. REF.	HOSE BORE			Flange		DIMENSIONS mm				
	DN	Dash	inch			inch	B	A	D	E
M83991-12-12	19	- 12	3/4"	3/4"		16.0	76.0	41.5	68.5	14.3
M83991-12-16	19	- 12	3/4"	1"		19.5	76.0	47.7	69.5	14.3
M83991-16-16	25	- 16	1"	1"		19.5	82.0	47.7	73.5	14.3
M83991-16-20	25	- 16	1"	1.1/4"		26.0	82.0	54.0	78.5	14.3
M83991-20-20	31	- 20	1.1/4"	1.1/4"		26.0	94.0	54.0	82.0	14.3
M83991-20-24	31	- 20	1.1/4"	1.1/2"		32.0	85.0	63.7	92.0	14.3
M83991-24-24	38	- 24	1.1/2"	1.1/2"		32.0	98.0	63.7	96.0	14.3
M83991-24-32	38	- 24	1.1/2"	2"		42.0	98.0	79.3	112.0	14.3
M83991-32-32	51	- 32	2"	2"		42.0	136.0	79.3	133.5	14.3



ORIGINAL EQUIPMENT CONNECTIONS

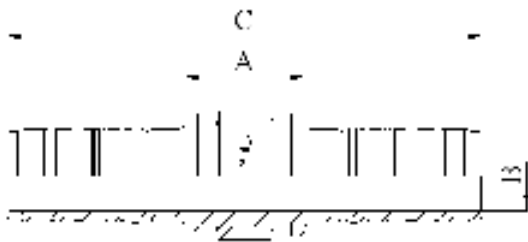
M83991 LONG DROP

90° LONG DROP SUPERCAT SERIES FLANGE



PART. REF.	HOSE BORE			Flange	DIMENSIONS mm							
	DN	Dash	inch		inch	B	A	D	E	S		
M83991-16-16132	25	- 16	1"	1"	19.5	86.0	47.7	132.0	14.3			
M83991-16-16150	25	- 16	1"	1"	19.5	86.0	47.7	150.0	14.3			
M83991-16-20150	25	- 16	1"	1 1/4"	26.0	82.0	54.0	150.0	14.3			
M83991-20-20092	31	- 20	1.1/4"	1.1/4"	26.1	99.0	54.0	92.0	14.3			
M83991-20-20150	31	- 20	1.1/4"	1.1/4"	26.1	99.0	54.0	150.0	14.3			
M83991-20-24135	31	- 20	1.1/4"	1.1/2"	32.0	98.5	63.7	135.0	14.3			
M83991-24-24106	38	- 24	1.1/2"	1.1/2"	32.0	112.5	63.7	106.0	14.3			

DOUBLE CONNECTOR



M70050

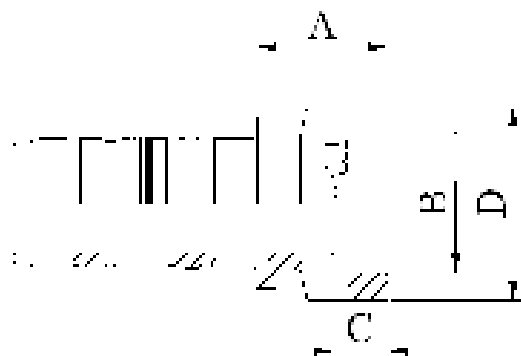
DOUBLE CONNECTOR

PART. REF.	HOSE BORE			DIMENSIONS mm						
	DN	Dash	inch	B	A	C				
M70050-20-20	31	- 20	1.1/4"	25.0	42.5	166.2				
M70050-24-24	38	- 24	1.1/2"	30.5	43.0	178.9				
M70050-32-32	51	- 32	2"	41.0	45.5	220.8				

TAIL

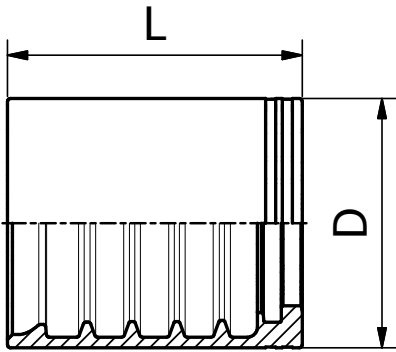
M89510WL

WELDING TAIL



PART. REF.	HOSE BORE			DIMENSIONS mm						
	DN	Dash	inch	B	A	C	D			
M89510-12-22WL	19	- 12	3/4"	22.1	28.5	12.0	34.0			
M89510-16-28WL	25	- 16	1"	28.1	32.5	14.0	40.0			
M89510-20-35WL	31	- 20	1.1/4"	35.1	33.0	14.0	49.0			

FERRULE

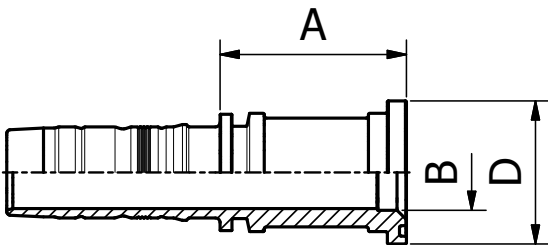


M05500-GX

**NO-SKIVE FERRULE FOR
 HEAVY DUTY SPIRAL HOSES
 (4-6 PLY)**

PART. REF.	HOSE BORE					DIMENSIONS mm						
	DN	Dash	inch			D	L					
M05500-24GX	38	- 24	1.1/2"			75.0	88.5					
M05500-32GX	51	- 32	2"			98.0	120.3					

SAE STANDARD CONNECTIONS

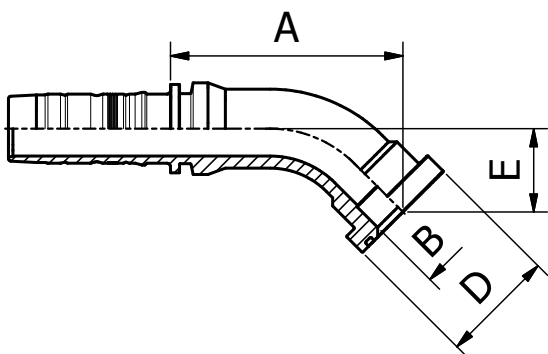


M83611-GX

**ISO/SAE CODE 62 FLANGE
 (ISO 6162-2 / SAE J518 CODE 62)**

PART. REF.	HOSE BORE			Flange		DIMENSIONS mm						
	DN	Dash	inch			inch	B	A	D			
M83611-24-24GX	38	- 24	1.1/2"	1.1/2"		32.0	79.0	63.7				
M83611-24-32GX	38	- 24	1.1/2"	2"		42.0	95.0	79.6				
M83611-32-32GX	51	- 32	2"	2"		42.0	98.5	79.6				

SAE STANDARD CONNECTIONS



M83641-GX

**45° ISO/SAE CODE 62 FLANGE
 (ISO 6162-2 / SAE J518 CODE 62)**

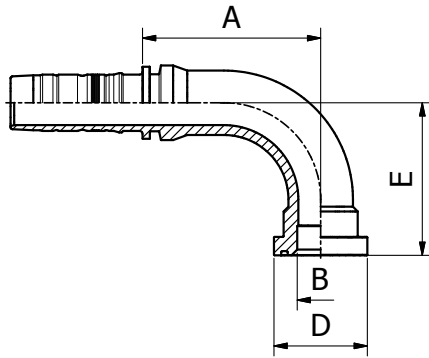
PART. REF.	HOSE BORE			Flange		DIMENSIONS mm						
	DN	Dash	inch			inch	B	A	D	E		
M83641-24-24GX	38	- 24	1.1/2"	1.1/2"		32.0	129.0	63.7	46.5			
M83641-24-32GX	38	- 24	1.1/2"	2"		32.0	138.0	79.6	57.5			
M83641-32-32GX	51	- 32	2"	2"		42.0	149.0	79.6	59.0			



SAE STANDARD CONNECTIONS

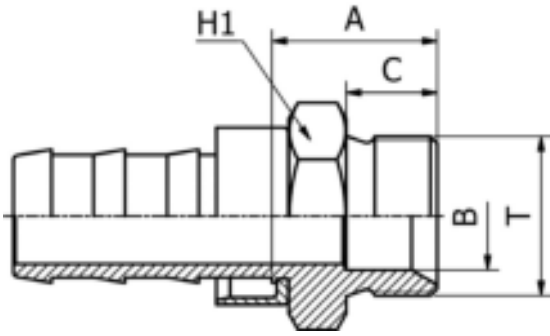
M83691-GX

90° ISO/SAE CODE 62 FLANGE
 (ISO 6162-2 / SAE J518 CODE 62)



PART. REF.	HOSE BORE			Flange	DIMENSIONS mm						
	DN	Dash	inch	inch	B	A	D	E			
M83691-24-24GX	38	- 24	1.1/2"	1.1/2"	32.0	121.5	63.7	104.5			
M83691-32-32GX	51	- 32	2"	2"	42.0	136.5	79.6	138.0			

BS STANDARD CONNECTIONS



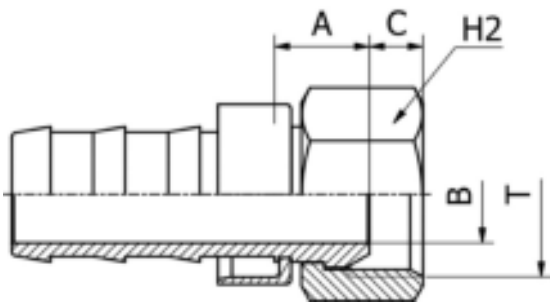
L10510

**BSP
 MALE PARALLEL 60° CONE SEAT
 BS5200 / ISO 8434-6**

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	H1		
L10510-04-04	6	- 4	1/4"	1/4" - 19	5.0	20.5	11.0	19.0			
L10510-04-06	6	- 4	1/4"	3/8" - 19	8.0	22.5	12.0	22.0			
L10510-06-06	10	- 6	3/8"	3/8" - 19	8.0	23.0	12.0	22.0			
L10510-08-08	12	- 8	1/2"	1/2" - 14	11.0	27.0	14.0	27.0			
L10510-10-10	16	- 10	5/8"	5/8" - 14	14.5	28.5	16.0	30.0			
L10510-12-12	19	- 12	3/4"	3/4" - 14	17.0	30.5	16.0	32.0			
L10510-16-16	25	- 16	1"	1" - 11	22.5	34.5	19.0	41.0			

FITTINGS 250

BS STANDARD CONNECTIONS



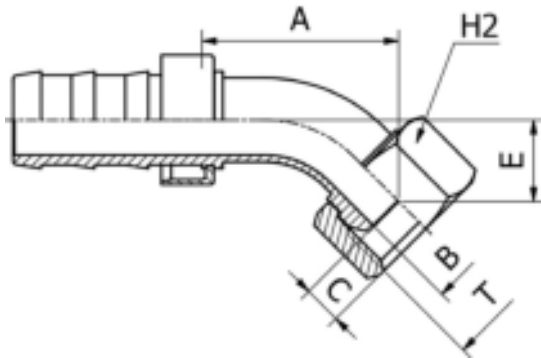
L20513

**BSP
 FEMALE 60° CONE
 BS5200 / ISO 12151-6
 (SLIP-ON NUT)**

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	H2		
L20513-04-04	6	- 4	1/4"	1/4" - 19	4.0	12.5	5.8	19.0			
L20513-04-06	6	- 4	1/4"	3/8" - 19	7.0	14.6	6.2	22.0			
L20513-06-06	10	- 6	3/8"	3/8" - 19	7.0	15.0	6.2	22.0			
L20513-08-08	12	- 8	1/2"	1/2" - 14	9.5	16.5	6.5	27.0			
L20513-10-10	16	- 10	5/8"	5/8" - 14	12.0	16.0	9.0	28.0			
L20513-12-12	19	- 12	3/4"	3/4" - 14	16.0	18.0	9.0	32.0			
L20513-12-16	19	- 12	3/4"	1" - 11	19.0	19.5	11.0	38.0			
L20513-16-16	25	- 16	1"	1" - 11	19.0	19.5	11.0	38.0			



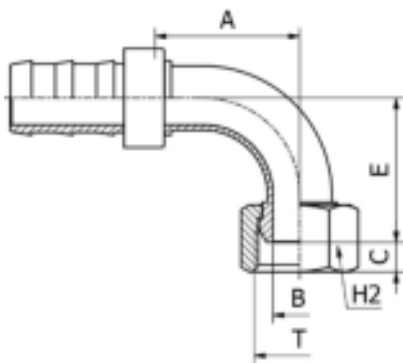
BS STANDARD CONNECTIONS



L20543

**45° BSP
FEMALE SWEPT ELBOW 60° CONE
BS5200/ISO 12151-6
(SLIP-ON NUT)**

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	H2		
L20543-04-04	6	- 4	1/4"	1/4" - 19	4.0	31.0	5.8	12.0	19.0		
L20543-06-06	10	- 6	3/8"	3/8" - 19	7.0	38.5	6.2	14.5	22.0		
L20543-08-08	12	- 8	1/2"	1/2" - 14	9.5	44.0	6.5	18.5	27.0		
L20543-10-10	16	- 10	5/8"	5/8" - 14	12.0	50.5	9.0	19.0	28.0		
L20543-12-12	19	- 12	3/4"	3/4" - 14	16.0	53.0	9.0	21.0	32.0		
L20543-16-16	25	- 16	1"	1" - 11	19.0	56.0	11.0	23.5	38.0		



BS STANDARD CONNECTIONS

L20593

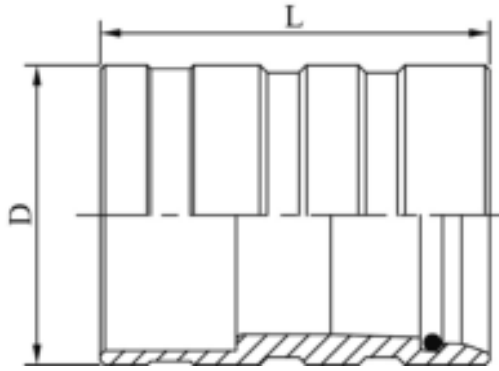
**90° BSP
FEMALE SWEPT ELBOW 60° CONE
BS5200/ISO 12151-6
(SLIP-ON NUT)**

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	H2		
L20593-04-04	6	- 4	1/4"	1/4" - 19	4.0	26.0	5.8	24.0	19.0		
L20593-06-06	10	- 6	3/8"	3/8" - 19	7.0	35.0	6.2	30.5	22.0		
L20593-08-08	12	- 8	1/2"	1/2" - 14	9.5	38.0	6.5	38.5	27.0		
L20593-10-10	16	- 10	5/8"	5/8" - 14	12.0	45.5	9.0	41.0	28.0		
L20593-12-16	19	- 12	3/4"	1" - 11	19.0	48.5	11.0	48.5	38.0		
L20593-12-12	19	- 12	3/4"	3/4" - 14	16.0	48.5	9.0	46.5	32.0		
L20593-16-16	25	- 16	1"	1" - 11	19.0	54.0	11.0	54.0	38.0		

ACCESSORIES

0820

ANTI-KINK SLEEVE



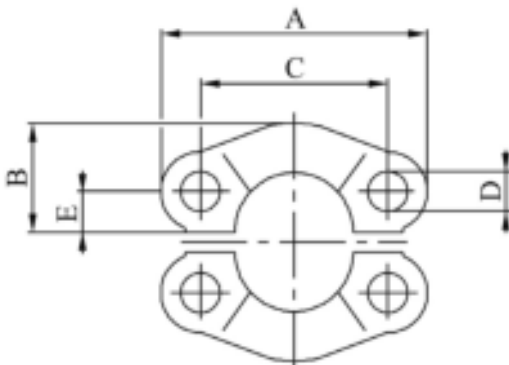
PART. REF.	HOSE BORE					DIMENSIONS mm						
	DN	Dash	inch			D	L					
O82040-12	19	- 12	3/4"			45.0	67.0					
O82040-16	25	- 16	1"			52.0	81.0					
O82068-16	25	- 16	1"			55.0	75.0					
O82062-20	31	- 20	1.1/4"			64.0	83.0					
O82060-20	31	- 20	1.1/4"			64.0	84.0					
O82068-20	31	- 20	1.1/4"			65.5	83.0					
O82060-24	38	- 24	1.1/2"			72.0	102.0					
O82068-24	38	- 24	1.1/2"			73.0	99.0					
O82068-32	51	- 32	2"			86.5	116.0					
O82068-40	63	- 40	2.1/2"			100.5	148.5					
O82068-48	76	- 48	3"			112.0	158.0					

FITTINGS 252

ACCESSORIES

083308

**ISO/SAE
 CODE 61 SPLIT FLANGE CLAMPS
 SAE J518 / ISO 6162-1**



PART. REF.	HOSE BORE					DIMENSIONS mm				
	DN	Dash	inch			B	A	C	D	E
O83308-08						22.8	54.0	38.1	8.75	8.7
O83308-12						25.9	65.0	47.6	10.75	11.1
O83308-16						29.2	70.0	52.4	10.75	13.1
O83308-20						36.3	79.0	58.7	12.0	15.1
O83308-24						41.1	94.0	69.8	13.5	17.9
O83308-32						48.2	102.0	77.8	13.5	21.4
O83308-40						54.1	114.0	88.9	13.5	25.4
O83308-48						65.3	135.0	106.4	16.75	31.0
O83308-56						70.0	152.0	120.65	17.0	34.85
O83308-64						75.0	160.0	130.18	17.0	38.9

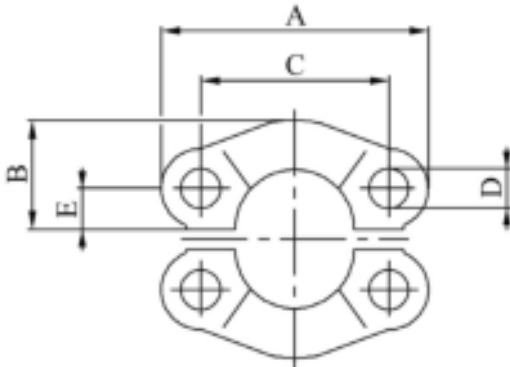


ACCESSORIES

083609

ISO/SAE

CODE 62 SPLIT FLANGE CLAMPS
 SAE J518 / ISO 6162-2



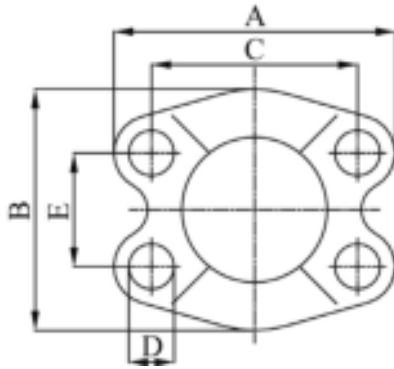
PART. REF.	HOSE BORE			DIMENSIONS mm								
	DN	Dash	inch			B	A	C	D	E		
O83609-08						23.6	56.0	40.5	8.75	9.1		
O83609-12						30.0	71.0	50.8	11.0	11.9		
O83609-16						34.8	81.0	57.1	13.0	13.9		
O83609-20						38.6	95.0	66.7	15.0	15.9		
O83609-24						47.5	113.0	79.4	17.0	18.3		
O83609-32						56.9	133.0	96.8	21.0	22.2		

FITTINGS
253

ACCESSORIES

083607

CODE 62 ONE-PIECE FLANGE CLAMP
 ISO 6162-2 / SAE J518

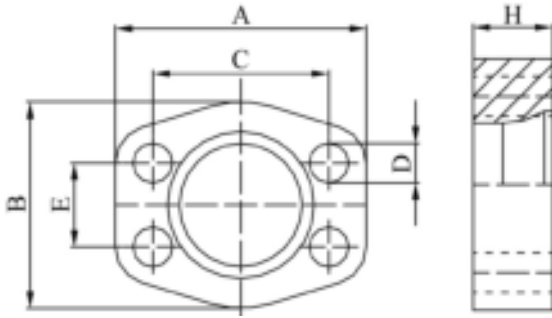


PART. REF.	HOSE BORE			DIMENSIONS mm								
	DN	Dash	inch			B	A	C	D	E		
O83607-12	19	- 12	3/4"			60.0	72.0	50.8	10.5	23.8		
O83607-16	25	- 16	1"			70.0	81.0	57.2	13.0	27.8		
O83607-20	31	- 20	1.1/4"			78.0	96.0	66.7	15.0	31.8		
O83607-24	38	- 24	1.1/2"			96.0	113.0	79.4	17.0	36.5		
O83607-32	51	- 32	2"			114.0	134.0	96.8	21.0	44.4		
O83607-40	63	- 40	2.1/2"			150.0	175.0	123.8	25.0	58.7		
O83607-48	76	- 48	3"			178.0	210.0	152.4	32.0	71.4		

ACCESSORIES

088507

**ONE-PIECE CODE 62 XTRAFRANGE CLAMP
 ISO 6162-2 / SAE J518
 PORT COMPATIBLE**



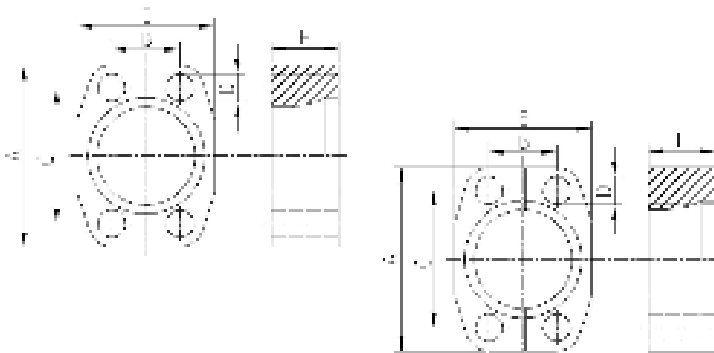
PART. REF.	HOSE BORE			DIMENSIONS mm							
	DN	Dash	inch	B	A	C	D	E	H		
O88507-12				60.0	71.5	50.8	11.0	23.8	21.5		
O88507-16				66.7	80.0	57.2	13.0	27.8	24.0		
O88507-20				78.0	95.0	66.7	15.0	31.7	30.0		
O88507-24				94.0	112.0	79.4	17.0	36.5	36.0		
O88507-32				114.0	133.0	96.8	21.0	44.5	47.0		
O88507-40				150.0	180.0	123.8	26.0	58.8	55.0		
O88507-48				176.0	210.3	152.4	31.0	71.4	60.0		

FITTINGS 254

ACCESSORIES

088407

**ONE-PIECE XTRAFRANGE 61 CLAMP /
 SPLIT XTRAFRANGE/61 CLAMP**



PART. REF.	HOSE BORE			Flange	DIMENSIONS mm						
	DN	Dash	inch	inch	B	A	C	D	E	H	
O88407-16				1"	26.2	70.5	52.4	10.6	53.0	25.7	
O88407-20				1.1/4"	30.2	80.0	58.7	12.0	64.0	26.8	
O88407-24				1.1/2"	35.7	94.0	69.9	13.3	77.0	33.6	
O88407-32				2"	42.9	102.0	77.8	13.3	88.0	35.0	
O88407-40				2.1/2"	50.8	114.0	88.9	13.3	102.0	44.3	

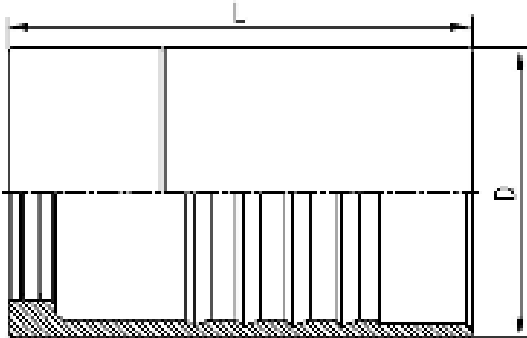
O88407-32 and O88407-40: Split XtraFlange/61 Clamp



ACCESSORIES

IO821GA

**METAL SLEEVE FOR ARMOUR
 (STAINLESS STEEL)**



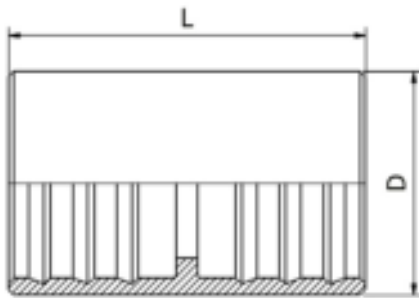
PART. REF.	HOSE BORE			DIMENSIONS mm							
	DN	Dash	inch			D	L				
IO82110-06GA	10	- 6	3/8"			40.5	60.0				
IO82110-08GA	12	- 8	1/2"			46.8	75.0				
IO82110-10GA	16	- 10	5/8"			53.2	90.0				
IO82110-12GA	19	- 12	3/4"			59.5	105.0				
IO82110-16GA	25	- 16	1"			66.0	120.0				
IO82110-20GA	31	- 20	1.1/4"			78.6	135.0				
IO82110-24GA	38	- 24	1.1/2"			91.5	150.0				
IO82110-32GA	51	- 32	2"			106.5	165.0				

255 FITTINGS

ACCESSORIES

IO84210

ARMOUR-JOINT

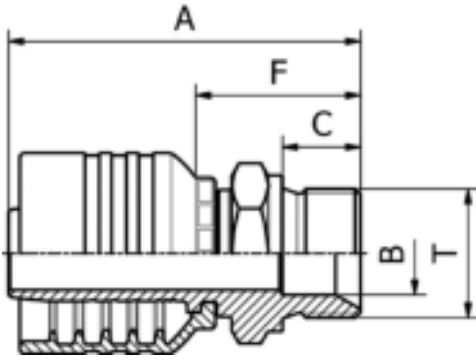


PART. REF.	HOSE BORE			DIMENSIONS mm							
	DN	Dash	inch			D	L				
IO84210-06	10	- 6	3/8"			40.5	65.0				
IO84210-08	12	- 8	1/2"			46.8	65.0				
IO84210-10	16	- 10	5/8"			53.2	65.0				
IO84210-12	19	- 12	3/4"			59.5	70.0				
IO84210-16	25	- 16	1"			66.0	75.0				
IO84210-20	31	- 20	1.1/4"			78.6	95.0				
IO84210-24	38	- 24	1.1/2"			91.5	105.0				
IO84210-32	51	- 32	2"			106.5	115.0				

BS STANDARD CONNECTIONS

OPK10510

**BSP
 MALE PARALLEL 60° CONE SEAT
 BS5200 / ISO 8434-6**



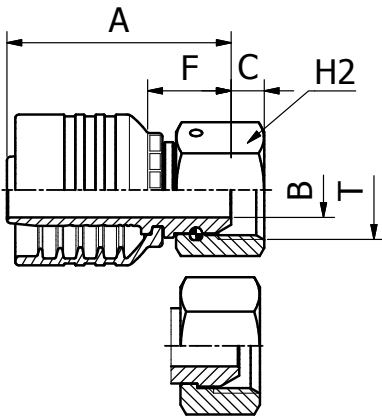
PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	F	H1		
OPK10510-06A04	10	- 6	3/8"	1/4" - 19	5.0	55.5	11.0	26.0	19.0		
OPK10510-06A06	10	- 6	3/8"	3/8" - 19	8.0	57.5	12.0	28.0	22.0		
OPK10510-06A08	10	- 6	3/8"	1/2" - 14	11.0	60.0	14.0	30.5	27.0		
OPK10510-08A06	12	- 8	1/2"	3/8" - 19	8.0	59.0	12.0	28.0	22.0		
OPK10510-08A08	12	- 8	1/2"	1/2" - 14	11.0	62.0	14.0	31.0	27.0		
OPK10510-08A10	12	- 8	1/2"	5/8" - 14	14.5	64.0	16.0	33.0	30.0		
OPK10510-08A12	12	- 8	1/2"	3/4" - 14	17.0	65.0	16.0	34.0	32.0		
OPK10510-10A10	16	- 10	5/8"	5/8" - 14	14.5	67.5	16.0	33.0	30.0		
OPK10510-10A12	16	- 10	5/8"	3/4" - 14	17.0	68.5	16.0	35.5	32.0		
OPK10510-12A12	19	- 12	3/4"	3/4" - 14	17.0	72.0	16.0	35.5	32.0		
OPK10510-12A16	19	- 12	3/4"	1" - 11	22.5	76.0	19.0	39.5	41.0		
OPK10510-16A16	25	- 16	1"	1" - 11	22.5	89.0	19.0	41.0	41.0		
OPK10510-16A20	25	- 16	1"	1.1/4" - 11	28.5	93.0	20.0	45.0	50.0		
OPK10510-20A20	31	- 20	1.1/4"	1.1/4" - 11	28.5	99.0	20.0	46.5	50.0		
OPK10510-24A24	38	- 24	1.1/2"	1.1/2" - 11	33.5	111.5	22.0	49.5	55.0		
OPK10510-32A32	51	- 32	2"	2" - 11	46.0	120.0	25.0	54.0	70.0		

FITTINGS 256

BS STANDARD CONNECTIONS

OPK20512/OPK20513

**BSP
 FEMALE 60° CONE
 BS5200 / ISO 12151-6**



PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	F	H2		
OPK20512-06A04	10	- 6	3/8"	1/4" - 19	4.1	47.5	4.2	18.0	19.0		
OPK20513-06A06	10	- 6	3/8"	3/8" - 19	7.0	49.0	6.0	19.5	22.0		
OPK20513-06A08	10	- 6	3/8"	1/2" - 14	9.3	49.5	6.3	20.0	27.0		
OPK20512-08A06	12	- 8	1/2"	3/8" - 19	7.1	52.0	6.0	21.0	22.0		
OPK20513-08A08	12	- 8	1/2"	1/2" - 14	9.3	51.5	6.3	20.5	27.0		
OPK20512-08A10	12	- 8	1/2"	5/8" - 14	12.1	53.0	10.2	22.0	28.0		
OPK20512-08A12	12	- 8	1/2"	3/4" - 14	15.0	56.0	9.0	24.5	32.0		
OPK20512-10A10	16	- 10	5/8"	5/8" - 14	12.5	56.0	10.2	21.5	28.0		
OPK20512-10A12	16	- 10	5/8"	3/4" - 14	15.0	57.5	9.0	23.0	32.0		
OPK20512-12A16	19	- 12	3/4"	1" - 11	19.8	62.5	10.5	26.0	38.0		
OPK20512-12A12	19	- 12	3/4"	3/4" - 14	15.0	61.0	9.0	24.5	32.0		
OPK20512-16A16	25	- 16	1"	1" - 11	19.8	75.5	10.5	27.5	38.0		

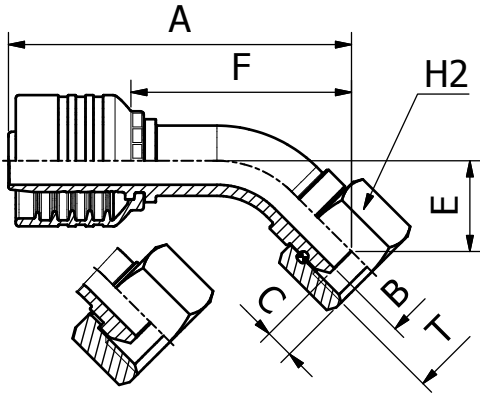
OPK20512: THRUST WIRE NUT / OPK20513: SLIP-ON NUT



BS STANDARD CONNECTIONS

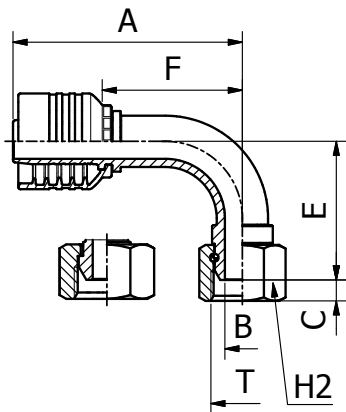
OPK20542/OPK20543

45° BSP
FEMALE ELBOW 60° CONE
BS5200 / ISO 12151-6



PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	F	H2	
OPK20543-06A06	10	- 6	3/8"	3/8" - 19	7.0	71.5	6.0	15.5	42.0	22.0	
OPK20543-06A08	10	- 6	3/8"	1/2" - 14	9.3	72.0	6.3	16.0	42.5	27.0	
OPK20543-08A08	12	- 8	1/2"	1/2" - 14	9.3	81.0	6.3	17.0	49.5	27.0	
OPK20542-08A10	12	- 8	1/2"	5/8" - 14	12.1	85.5	10.2	22.5	54.5	28.0	
OPK20542-10A10	16	- 10	5/8"	5/8" - 14	12.5	97.5	10.2	26.0	63.0	28.0	
OPK20542-10A12	16	- 10	5/8"	3/4" - 14	15.0	98.0	9.0	27.0	64.0	32.0	
OPK20542-12A12	19	- 12	3/4"	3/4" - 14	15.0	107.0	9.0	28.5	70.5	32.0	
OPK20542-12A16	19	- 12	3/4"	1" - 11	19.8	109.0	10.5	30.0	72.5	38.0	
OPK20542-16A16	25	- 16	1"	1" - 11	19.8	139.5	10.5	36.5	91.0	38.0	

OPK20542: THRUST WIRE NUT / OPK20543: SLIP-ON NUT



BS STANDARD CONNECTIONS

OPK20592/OPK20593

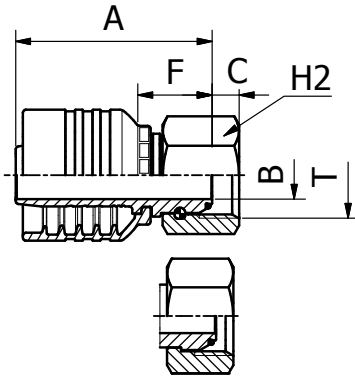
90° BSP
FEMALE ELBOW 60° CONE
BS5200

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	F	H2	
OPK20593-06A06	10	- 6	3/8"	3/8" - 19	7.0	66.0	6.0	31.5	36.5	22.0	
OPK20593-06A08	10	- 6	3/8"	1/2" - 14	9.3	66.0	6.3	32.0	36.5	27.0	
OPK20592-08A06	12	- 8	1/2"	3/8" - 19	7.1	76.0	6.0	41.0	45.0	22.0	
OPK20593-08A08	12	- 8	1/2"	1/2" - 14	9.3	76.0	6.3	36.5	45.0	27.0	
OPK20592-08A10	12	- 8	1/2"	5/8" - 14	12.1	75.5	10.2	44.0	44.0	28.0	
OPK20592-08A12	12	- 8	1/2"	3/4" - 14	15.0	75.5	9.0	45.5	44.0	32.0	
OPK20592-10A10	16	- 10	5/8"	5/8" - 14	12.5	88.0	10.2	53.5	53.5	28.0	
OPK20592-10A12	16	- 10	5/8"	3/4" - 14	15.0	88.0	9.0	55.0	53.5	32.0	
OPK20592-12A12	19	- 12	3/4"	3/4" - 14	15.0	98.0	9.0	59.5	61.5	32.0	
OPK20592-12A16	19	- 12	3/4"	1" - 11	19.8	98.0	10.5	62.0	61.5	38.0	
OPK20592-16A16	25	- 16	1"	1" - 11	19.8	127.5	10.5	76.0	79.5	38.0	

OPK20592: THRUST WIRE NUT / OPK20593: SLIP-ON NUT

BS STANDARD CONNECTIONS

OPK20812/OPK20813



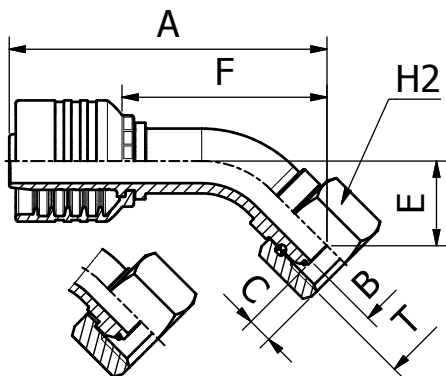
**BSP
 O-RING FEMALE 60° CONE
 BS5200 / ISO 12151-6**

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm					
	DN	Dash	inch		T	B	A	C	F	H2
OPK20812-06A04	10	- 6	3/8"	1/4" - 19	4.1	47.5	4.1	18.0	19.0	
OPK20813-06A06	10	- 6	3/8"	3/8" - 19	7.0	49.0	6.0	19.5	22.0	
OPK20813-08A08	12	- 8	1/2"	1/2" - 14	9.3	51.5	6.3	20.5	27.0	
OPK20812-10A10	16	- 10	5/8"	5/8" - 14	12.5	56.5	9.7	22.0	28.0	
OPK20812-12A12	19	- 12	3/4"	3/4" - 14	15.0	61.5	8.5	25.0	32.0	
OPK20812-16A16	25	- 16	1"	1" - 11	19.8	75.5	10.6	27.5	38.0	
OPK20812-16A20	25	- 16	1"	1.1/4" - 11	26.1	79.0	10.5	31.0	50.0	
OPK20812-20A20	31	- 20	1.1/4"	1.1/4" - 11	26.0	84.0	10.5	31.5	50.0	
OPK20812-20A24	31	- 20	1.1/4"	1.1/2" - 11	32.1	82.0	12.5	29.5	60.0	
OPK20812-24A24	38	- 24	1.1/2"	1.1/2" - 11	32.0	92.5	12.5	30.5	60.0	
OPK20812-24A32	38	- 24	1.1/2"	2"	42.1	92.0	16.1	30.0	70.0	
OPK20812-32A32	51	- 32	2"	2"	42.0	98.0	16.1	32.0	70.0	

OPK20812: THRUST WIRE NUT / OPK20813: SLIP-ON NUT

BS STANDARD CONNECTIONS

OPK20842/OPK20843

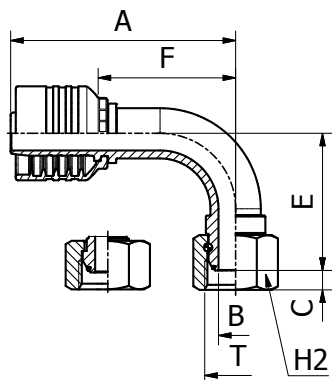


**45° BSP
 O-RING FEMALE SWEPT ELBOW 60° CONE
 BS5200 / ISO 12151-6**

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm					
	DN	Dash	inch		T	B	A	C	E	F
OPK20843-06A06	10	- 6	3/8"	3/8" - 19	7.0	71.5	6.0	15.5	42.0	22.0
OPK20843-08A08	12	- 8	1/2"	1/2" - 14	9.3	81.0	6.3	17.0	49.5	27.0
OPK20842-10A10	16	- 10	5/8"	5/8" - 14	12.5	98.0	9.7	27.5	63.5	28.0
OPK20842-12A12	19	- 12	3/4"	3/4" - 14	15.0	107.5	8.5	29.0	71.0	32.0
OPK20842-20A20	31	- 20	1.1/4"	1.1/4" - 11	26.0	154.0	10.5	39.0	101.5	50.0
OPK20842-24A24	38	- 24	1.1/2"	1.1/2" - 11	32.0	180.0	12.5	45.0	118.0	60.0
OPK20842-16A16	25	- 16	1"	1" - 11	19.8	138.5	10.6	35.5	90.5	38.0
OPK20842-32A32	51	- 32	2"	2" - 11	42.0	200.0	16.1	47.0	134.0	70.0

OPK20842: THRUST WIRE NUT / OPK20843: SLIP-ON NUT

BS STANDARD CONNECTIONS

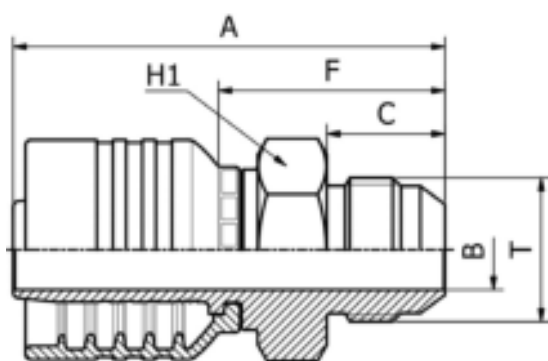


OPK20892/OPK20893

90° BSP
 O-RING FEMALE SWEPT ELBOW 60° CONE
 BS5200 / ISO 12151-6

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	E	F	H2
OPK20892-06A04	10	- 6	3/8"	1/4" - 19	4.1	65.0	4.1	33.0	35.5	19.0	
OPK20893-06A06	10	- 6	3/8"	3/8" - 19	7.0	66.0	6.0	31.5	36.5	22.0	
OPK20893-08A08	12	- 8	1/2"	1/2" - 14	9.3	76.0	6.3	36.5	45.0	27.0	
OPK20892-10A10	16	- 10	5/8"	5/8" - 14	12.5	87.5	9.7	55.0	53.0	28.0	
OPK20892-12A12	19	- 12	3/4"	3/4" - 14	15.0	98.0	8.5	60.0	61.5	32.0	
OPK20892-16A20	25	- 16	1"	1.1/4" - 11	26.1	127.5	10.5	78.5	79.5	50.0	
OPK20892-16A16	25	- 16	1"	1" - 11	19.8	127.5	10.6	76.0	79.5	38.0	
OPK20892-20A20	31	- 20	1.1/4"	1.1/4" - 11	26.0	143.0	10.5	83.5	90.5	50.0	
OPK20892-20A24	31	- 20	1.1/4"	1.1/2" - 11	32.1	143.0	12.5	84.5	90.5	60.0	
OPK20892-24A24	38	- 24	1.1/2"	1.1/2" - 11	32.0	170.0	12.5	98.5	108.0	60.0	
OPK20892-32A32	51	- 32	2"	2" - 11	42.0	197.0	16.1	110.5	131.0	70.0	

OPK20892: THRUST WIRE NUT / OPK20893: SLIP-ON NUT



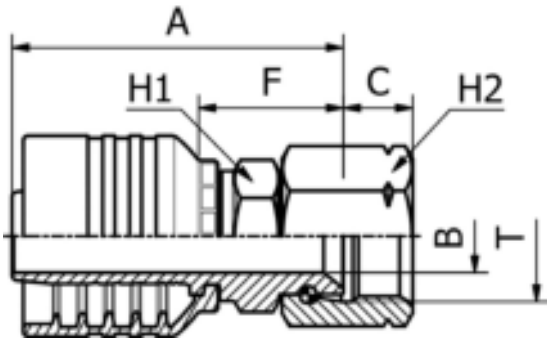
SAE STANDARD CONNECTIONS

OPK12510

JIC
 MALE 37° CONE
 SAE J516 / ISO 12151-5

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm					
	DN	Dash	inch		T	B	A	C	F	H1
OPK12510-06A06	10	- 6	3/8"	9/16" - 18	7.0	59.0	14.0	29.5	17.0	
OPK12510-06A08	10	- 6	3/8"	3/4" - 16	9.3	63.5	16.5	34.0	19.0	
OPK12510-06A10	10	- 6	3/8"	7/8" - 14	12.5	68.0	19.5	38.5	24.0	
OPK12510-08A06	12	- 8	1/2"	9/16" - 18	7.0	63.0	14.0	32.0	19.0	
OPK12510-08A08	12	- 8	1/2"	3/4" - 16	9.3	65.5	16.5	34.5	19.0	
OPK12510-08A10	12	- 8	1/2"	7/8" - 14	12.5	70.0	19.5	39.0	24.0	
OPK12510-08A12	12	- 8	1/2"	1.1/16" - 12	15.0	74.0	22.0	43.0	27.0	
OPK12510-10A10	16	- 10	5/8"	7/8" - 14	12.5	73.5	19.5	39.0	24.0	
OPK12510-10A12	16	- 10	5/8"	1.1/16" - 12	15.0	77.0	22.0	42.5	27.0	
OPK12510-12A10	19	- 12	3/4"	7/8" - 14	12.5	78.0	19.5	41.5	27.0	
OPK12510-12A12	19	- 12	3/4"	1.1/16" - 12	15.0	80.5	22.0	44.0	27.0	
OPK12510-12A14	19	- 12	3/4"	1.3/16" - 12	15.0	81.0	22.5	44.5	32.0	
OPK12510-12A16	19	- 12	3/4"	1.5/16" - 12	19.8	83.5	23.0	47.0	34.0	
OPK12510-16A12	25	- 16	1"	1.1/16" - 12	15.0	93.0	22.0	45.0	32.0	
OPK12510-16A16	25	- 16	1"	1.5/16" - 12	19.8	96.0	23.0	48.0	34.0	
OPK12510-16A20	25	- 16	1"	1.5/8" - 12	26.0	101.0	24.3	53.0	42.0	
OPK12510-20A20	31	- 20	1.1/4"	1.5/8" - 12	26.0	106.0	24.3	53.5	42.0	
OPK12510-20A24	31	- 20	1.1/4"	1.7/8" - 12	32.0	113.0	27.5	60.5	50.0	
OPK12510-24A24	38	- 24	1.1/2"	1.7/8" - 12	32.0	122.5	27.5	60.5	50.0	
OPK12510-32A32	51	- 32	2"	2.1/2" - 12	42.0	138.0	34.0	72.0	65.0	

SAE STANDARD CONNECTIONS

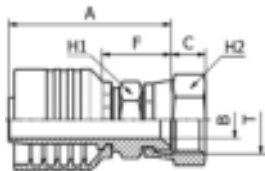


OPK22712

JIC
 FEMALE 37° CONE SEAT DOUBLE HEXAGON
 SAE J516 / ISO 12151-5
 (THRUST-WIRE NUT)

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	F	H1	H2
OPK22712-12A16	19	- 12	3/4"	1.5/16" - 12	19.8	69.0	15.0	32.5	32.0	38.0	
OPK22712-16A20	25	- 16	1"	1.5/8" - 12	26.0	91.0	16.2	43.0	41.0	50.0	
OPK22712-20A20	31	- 20	1.1/4"	1.5/8" - 12	26.0	96.0	16.2	43.5	41.0	50.0	

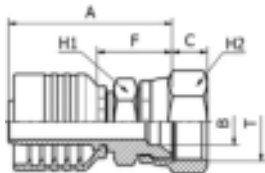
FITTINGS 260



SAE STANDARD CONNECTIONS

OPK22711/OPK22711KR

JIC
 FEMALE 37° CONE SEAT DOUBLE HEXAGON
 SAE J516 / ISO 12151-5



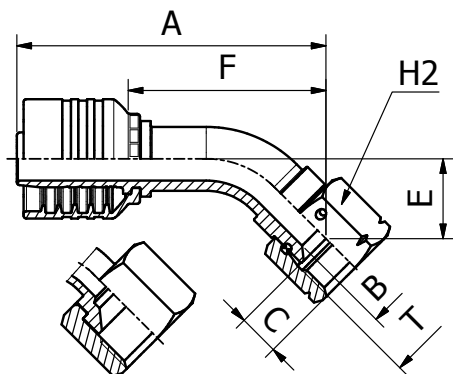
PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	F	H1	H2
OPK22711-06A06KR	10	- 6	3/8"	9/16" - 18	7.0	51.5	9.5	22.0	17.0	17.0	
OPK22711-06A08KR	10	- 6	3/8"	3/4" - 16	9.3	56.0	10.7	26.5	19.0	22.0	
OPK22711-08A08KR	12	- 8	1/2"	3/4" - 16	9.3	58.0	10.7	27.0	19.0	22.0	
OPK22711-08A10KR	12	- 8	1/2"	7/8" - 14	9.3	60.5	12.5	29.5	22.0	25.0	
OPK22711-08A12KR	12	- 8	1/2"	1.1/16" - 12	15.0	60.0	14.1	28.5	27.0	32.0	
OPK22711-10A08KR	16	- 10	5/8"	3/4" - 16	9.3	62.5	10.7	28.5	22.0	22.0	
OPK22711-10A10KR	16	- 10	5/8"	7/8" - 14	12.5	64.0	12.5	29.5	22.0	25.0	
OPK22711-16A12KR	25	- 16	1"	1.1/16" - 12	15.0	80.5	14.1	32.5	32.0	32.0	
OPK22711-12A08KR	19	- 12	3/4"	3/4" - 16	9.3	66.0	10.7	29.5	27.0	22.0	
OPK22711-12A10KR	19	- 12	3/4"	7/8" - 14	12.5	67.0	12.5	30.5	27.0	25.0	
OPK22711-12A12KR	19	- 12	3/4"	1.1/16" - 12	15.0	66.5	14.1	30.0	27.0	32.0	
OPK22711-12A16	19	- 12	3/4"	1.5/16" - 12	19.8	71.0	15.3	34.5	32.0	38.0	
OPK22711-16A16	25	- 16	1"	1.5/16" - 12	19.8	83.5	15.3	35.5	32.0	38.0	

KR: CRIMPED BACK COMPACT ROBUST NUT

SAE STANDARD CONNECTIONS

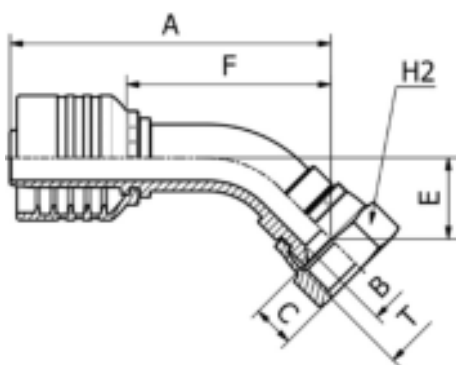
OPK22542/OPK22543

45° JIC
 FEMALE SWEPT ELBOW 37° CONE SEAT
 SAE J516 / ISO 12151-5



PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	E	F	H2
OPK22542-06A06	10	- 6	3/8"	9/16" - 18	7.0	71.5	9.2	16.5	42.0	19.0	
OPK22543-06A08	10	- 6	3/8"	3/4" - 16	7.0	70.5	10.1	14.0	41.0	22.0	
OPK22543-06A10	10	- 6	3/8"	7/8" - 14	9.3	72.0	12.4	15.5	42.5	27.0	
OPK22542-08A08	12	- 8	1/2"	3/4" - 16	9.3	83.0	10.2	20.0	52.0	22.0	
OPK22543-08A10	12	- 8	1/2"	7/8" - 14	9.3	80.5	12.4	17.0	49.5	27.0	
OPK22543-08A12	12	- 8	1/2"	1.1/16" - 12	12.5	80.5	14.1	17.0	49.5	32.0	
OPK22542-10A10	16	- 10	5/8"	7/8" - 14	12.5	96.5	12.3	25.5	62.0	27.0	
OPK22543-10A12	16	- 10	5/8"	1.1/16" - 12	12.5	94.5	14.1	24.0	60.0	32.0	
OPK22542-12A12	19	- 12	3/4"	1.1/16" - 12	15.0	106.0	14.2	27.5	70.0	32.0	
OPK22542-12A14	19	- 12	3/4"	1.3/16" - 12	15.0	106.0	14.3	27.5	69.5	36.0	
OPK22542-12A16	19	- 12	3/4"	1.5/16" - 12	19.8	106.5	15.0	27.5	70.0	38.0	
OPK22542-16A16	25	- 16	1"	1.5/16" - 12	19.8	132.5	15.0	32.0	84.0	38.0	
OPK22542-16A20	25	- 16	1"	1.5/8" - 12	26.0	138.0	16.2	36.0	90.0	50.0	
OPK22542-20A20	31	- 20	1.1/4"	1.5/8" - 12	26.0	156.0	16.2	41.5	103.5	50.0	
OPK22542-20A24	31	- 20	1.1/4"	1.7/8" - 12	32.0	159.0	18.8	44.5	106.5	60.0	
OPK22542-24A24	38	- 24	1.1/2"	1.7/8" - 12	32.0	181.0	18.8	46.5	119.0	60.0	
OPK22542-32A32	51	- 32	2"	2.1/2" - 12	44.0	229.0	24.0	68.0	163.0	75.0	

OPK22542: THRUST WIRE NUT / OPK22543: SLIP-ON NUT

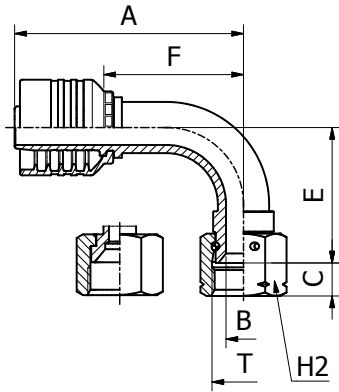


SAE STANDARD CONNECTIONS

OPK22541KR

45° ELBOW JIC
 FEMALE 37° CONE SEAT
 SAE J516 / ISO 12151-5
 (CRIMPED-BACK NUT)

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	E	F	H2
OPK22541-06A06KR	10	- 6	3/8"	9/16" - 18	7.0	71.5	9.5	16.0	42.0	17.0	
OPK22541-08A08KR	12	- 8	1/2"	3/4" - 16	9.3	83.0	10.7	20.0	52.0	22.0	
OPK22541-10A10KR	16	- 10	5/8"	7/8" - 14	12.5	95.5	12.5	22.5	61.0	25.0	
OPK22541-12A12KR	19	- 12	3/4"	1.1/16" - 12	15.0	105.5	14.1	26.5	69.0	32.0	



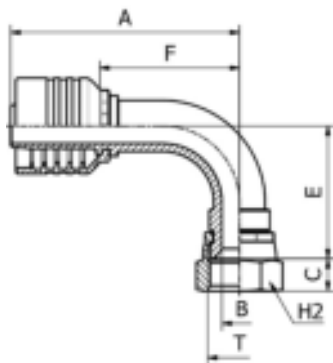
SAE STANDARD CONNECTIONS

OPK22592/OPK22593

90° JIC
 FEMALE SWEPT ELBOW 37° CONE SEAT
 SAE J516 / ISO 12151-5

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm							
	DN	Dash	inch		T	B	A	C	E	F	H2	
OPK22592-06A05	10	- 6	3/8"	1/2" - 20		5.5	59.5	9.1	26.5	30.0	17.0	
OPK22592-06A06	10	- 6	3/8"	9/16" - 18		7.0	65.0	9.2	32.5	35.5	19.0	
OPK22593-06A08	10	- 6	3/8"	3/4" - 16		7.0	66.0	10.1	29.5	36.5	22.0	
OPK22593-06A10	10	- 6	3/8"	7/8" - 14		9.3	66.0	12.4	31.5	36.5	27.0	
OPK22592-08A06	12	- 8	1/2"	9/16" - 18		7.0	68.0	9.2	33.0	37.0	19.0	
OPK22592-08A08	12	- 8	1/2"	3/4" - 16		9.3	75.5	10.2	41.0	44.0	22.0	
OPK22593-08A10	12	- 8	1/2"	7/8" - 14		9.3	76.0	12.4	36.0	45.0	27.0	
OPK22593-08A12	12	- 8	1/2"	1.1/16" - 12		12.5	76.0	14.1	36.0	45.0	32.0	
OPK22592-10A10	16	- 10	5/8"	7/8" - 14		12.5	88.0	12.3	52.5	53.5	27.0	
OPK22593-10A12	16	- 10	5/8"	1.1/16" - 12		12.5	86.0	14.1	50.0	51.5	32.0	
OPK22592-12A10	19	- 12	3/4"	7/8" - 14		12.5	91.5	12.3	52.5	55.0	27.0	
OPK22592-12A12	19	- 12	3/4"	1.1/16" - 12		15.0	98.0	14.2	58.0	62.0	32.0	
OPK22592-12A14	19	- 12	3/4"	1.3/16" - 12		15.0	99.0	14.3	58.0	63.0	36.0	
OPK22592-12A16	19	- 12	3/4"	1.5/16" - 12		19.8	99.0	15.0	57.5	63.0	38.0	
OPK22592-16A16	25	- 16	1"	1.5/16" - 12		19.8	124.0	15.0	68.5	76.0	38.0	
OPK22592-16A20	25	- 16	1"	1.5/8" - 12		26.0	125.5	16.2	74.5	77.5	50.0	
OPK22592-20A20	31	- 20	1.1/4"	1.5/8" - 12		26.0	143.0	16.2	86.5	90.5	50.0	
OPK22592-20A24	31	- 20	1.1/4"	1.7/8" - 12		32.0	143.0	18.8	90.5	90.5	60.0	
OPK22592-24A24	38	- 24	1.1/2"	1.7/8" - 12		32.0	170.0	18.8	100.5	108.0	60.0	
OPK22592-32A32	51	- 32	2"	2.1/2" - 12		44.0	208.0	24.0	137.0	142.0	75.0	

OPK22592: THRUST WIRE NUT / OPK22593: SLIP-ON NUT

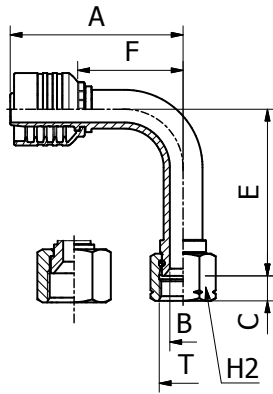


SAE STANDARD CONNECTIONS

OPK22591KR

90° ELBOW JIC
 FEMALE 37° CONE SEAT SAE
 J516 / ISO 12151-5
 (CRIMPED-BACK NUT)

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm							
	DN	Dash	inch		T	B	A	C	E	F	H2	
OPK22591-06A06KR	10	- 6	3/8"	9/16" - 18		7.0	65.0	9.5	32.0	35.5	17.0	
OPK22591-08A08KR	12	- 8	1/2"	3/4" - 16		9.3	75.5	10.7	40.5	44.0	22.0	
OPK22591-10A10KR	16	- 10	5/8"	7/8" - 14		12.5	88.0	12.5	47.0	53.5	25.0	
OPK22591-12A12KR	19	- 12	3/4"	1.1/16" - 12		15.0	98.0	14.1	57.0	62.0	32.0	



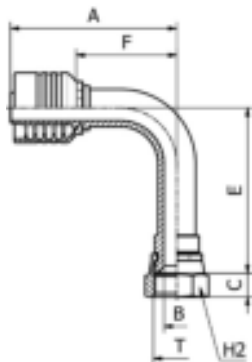
SAE STANDARD CONNECTIONS

OPK24792/OPK24793

90° JIC
FEMALE LONG DROP ELBOW 37° CONE SEAT
SAE J516 / ISO 12151-5

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	F	H2	
OPK24792-06A06	10	- 6	3/8"	9/16" - 18	7.0	65.0	9.2	55.0	35.5	19.0	
OPK24793-06A08	10	- 6	3/8"	3/4" - 16	7.0	66.0	10.1	61.5	36.5	22.0	
OPK24793-08A10	12	- 8	1/2"	7/8" - 14	9.3	76.0	12.4	65.0	45.0	27.0	
OPK24792-08A08	12	- 8	1/2"	3/4" - 16	9.3	75.5	10.2	61.0	44.0	22.0	
OPK24792-10A10	16	- 10	5/8"	7/8" - 14	12.5	88.0	12.3	65.5	53.5	27.0	
OPK24792-12A12	19	- 12	3/4"	1.1/16" - 12	15.0	98.0	14.2	94.5	62.0	32.0	
OPK24792-16A16	25	- 16	1"	1.5/16" - 12	19.8	125.5	15.0	110.0	77.5	38.0	

OPK24792: THRUST WIRE NUT / OPK24793: SLIP-ON NUT



SAE STANDARD CONNECTIONS

OPK24791KR

90° LONG DROP ELBOW JIC
FEMALE 37° CONE SEAT
SAE J516 / ISO 12151-5
(CRIMPED-BACK NUT)

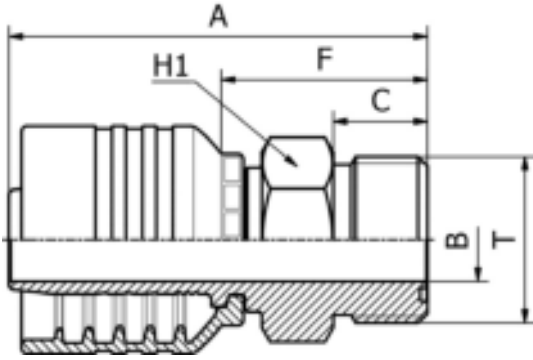
PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	F	H2	
OPK24791-06A06KR	10	- 6	3/8"	9/16" - 18	7.0	65.0	9.5	55.0	35.5	17.0	
OPK24791-08A08KR	12	- 8	1/2"	3/4" - 16	9.3	75.5	10.7	64.0	44.0	22.0	
OPK24791-10A10KR	16	- 10	5/8"	7/8" - 14	12.5	88.0	12.5	70.0	53.5	25.0	
OPK24791-12A12KR	19	- 12	3/4"	1.1/16" - 12	15.0	98.0	14.1	96.0	62.0	32.0	

SAE STANDARD CONNECTIONS

OPK12410

ORFS
 MALE

SAE J516 / ISO 12151-1



PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	F	H1		
OPK12410-06A06	10	- 6	3/8"	11/16" - 16	6.7	57.0	11.2	27.5	19.0		
OPK12410-06A08	10	- 6	3/8"	13/16" - 16	9.3	59.5	12.8	30.0	22.0		
OPK12410-08A08	12	- 8	1/2"	13/16" - 16	9.3	61.5	12.8	30.5	22.0		
OPK12410-08A10	12	- 8	1/2"	1" - 14	12.5	66.0	15.5	35.0	27.0		
OPK12410-10A10	16	- 10	5/8"	1" - 14	12.5	69.0	15.5	34.5	27.0		
OPK12410-10A12	16	- 10	5/8"	1.3/16" - 12	15.0	72.0	17.0	37.5	32.0		
OPK12410-12A12	19	- 12	3/4"	1.3/16" - 12	15.0	75.5	17.0	39.0	32.0		
OPK12410-12A16	19	- 12	3/4"	1.7/16" - 12	19.8	77.0	17.5	40.5	38.0		
OPK12410-16A16	25	- 16	1"	1.7/16" - 12	19.8	90.0	17.5	42.0	38.0		
OPK12410-20A20	31	- 20	1.1/4"	1.11/16" - 12	26.0	99.0	17.5	46.5	46.0		
OPK12410-24A24	38	- 24	1.1/2"	2" - 12	32.0	110.5	17.5	48.5	55.0		

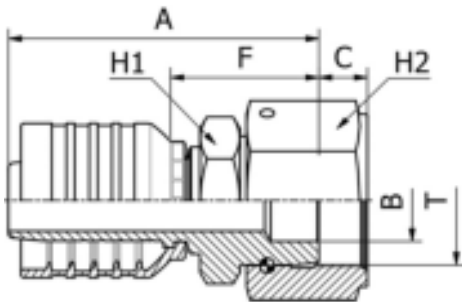
FITTINGS 264

SAE STANDARD CONNECTIONS

OPK22411

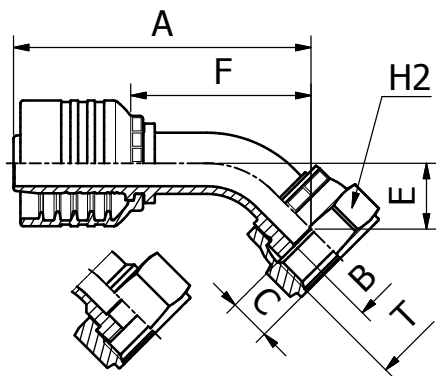
ORFS
 FEMALE

SAE J516 / ISO 12151-1
 PULLBACK TYPE



PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	F	H1	H2	
OPK22411-06A06	10	- 6	3/8"	11/16" - 16	7.0	60.5	9.5	31.0	16.0	22.0	
OPK22411-06A08	10	- 6	3/8"	13/16" - 16	9.3	65.0	11.0	35.5	19.0	24.0	
OPK22411-08A06	12	- 8	1/2"	11/16" - 16	7.0	63.0	9.5	32.0	19.0	22.0	
OPK22411-08A08	12	- 8	1/2"	13/16" - 16	9.3	67.0	11.0	36.0	19.0	24.0	
OPK22411-08A10	12	- 8	1/2"	1" - 14	11.5	69.5	13.5	38.5	24.0	30.0	
OPK22411-08A12	12	- 8	1/2"	1.3/16" - 12	13.9	73.0	14.5	42.0	28.0	36.0	
OPK22411-10A10	16	- 10	5/8"	1" - 14	11.5	73.0	13.5	38.5	24.0	30.0	
OPK22411-10A12	16	- 10	5/8"	1.3/16" - 12	13.9	76.5	14.5	42.0	28.0	36.0	
OPK22411-12A10	19	- 12	3/4"	1" - 14	11.5	77.5	13.5	41.0	28.0	30.0	
OPK22411-12A12	19	- 12	3/4"	1.3/16" - 12	13.9	80.0	14.5	43.5	28.0	36.0	
OPK22411-12A16	19	- 12	3/4"	1.7/16" - 12	19.8	82.0	15.0	45.5	36.0	41.0	
OPK22411-16A12	25	- 16	1"	1.3/16" - 12	13.9	94.0	13.5	48.0	36.0	36.0	
OPK22411-16A16	25	- 16	1"	1.7/16" - 12	19.8	94.5	15.0	46.5	36.0	41.0	
OPK22411-16A20	25	- 16	1"	1.11/16" - 12	26.0	97.5	14.8	49.5	41.0	50.0	
OPK22411-20A20	31	- 20	1.1/4"	1.11/16" - 12	26.0	101.5	14.8	49.0	41.0	50.0	
OPK22411-24A24	38	- 24	1.1/2"	2" - 12	32.0	116.0	15.8	54.0	50.0	60.0	

SAE STANDARD CONNECTIONS

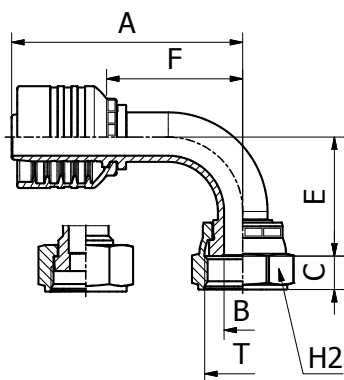


OPK22441/OPK22443

45° ORFS
 FEMALE ELBOW
 SAE J516 / ISO 12151-1

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	F	H2	
OPK22443-06A06	10	- 6	3/8"	11/16" - 16	6.0	61.5	9.5	11.0	32.5	22.0	
OPK22443-06A08	10	- 6	3/8"	13/16" - 16	9.3	63.0	11.0	12.5	34.0	24.0	
OPK22441-08A06	12	- 8	1/2"	11/16" - 16	7.0	63.5	9.5	11.0	32.5	22.0	
OPK22443-08A08	12	- 8	1/2"	13/16" - 16	9.0	73.0	11.0	13.0	42.0	24.0	
OPK22443-08A10	12	- 8	1/2"	1" - 14	11.5	73.0	13.5	13.5	42.0	30.0	
OPK22443-08A12	12	- 8	1/2"	1.3/16" - 12	13.9	78.0	14.5	18.5	46.5	36.0	
OPK22443-10A10	16	- 10	5/8"	1" - 14	11.5	83.5	13.5	16.0	49.0	30.0	
OPK22443-10A12	16	- 10	5/8"	1.3/16" - 12	13.9	86.0	14.5	18.5	51.5	36.0	
OPK22441-12A10	19	- 12	3/4"	1" - 14	11.5	87.0	13.5	16.5	50.5	30.0	
OPK22443-12A12	19	- 12	3/4"	1.3/16" - 12	13.9	97.0	14.5	21.5	60.5	36.0	
OPK22443-12A16	19	- 12	3/4"	1.7/16" - 12	19.8	96.5	14.8	21.0	60.0	41.0	
OPK22443-16A16	25	- 16	1"	1.7/16" - 12	19.8	120.0	14.8	23.5	72.0	41.0	
OPK22443-16A20	25	- 16	1"	1.11/16" - 12	26.0	122.0	14.8	25.0	74.0	50.0	
OPK22443-20A20	31	- 20	1.1/4"	1.11/16" - 12	26.0	134.5	14.8	27.0	82.0	50.0	

OPK22442: THRUST WIRE NUT / OPK22443: SLIP-ON NUT



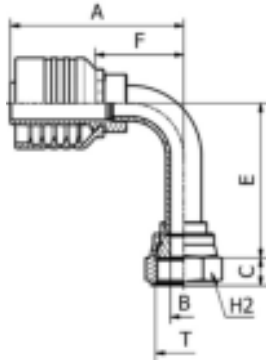
SAE STANDARD CONNECTIONS

OPK22491/OPK22493

90° ORFS
 FEMALE ELBOW
 SAE J516 / ISO 12151-1

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	F	H2	
OPK22493-06A06	10	- 6	3/8"	11/16" - 16	6.0	59.5	9.5	24.0	30.0	22.0	
OPK22493-06A08	10	- 6	3/8"	13/16" - 16	9.3	59.5	11.0	26.5	30.0	24.0	
OPK22491-08A06	12	- 8	1/2"	11/16" - 16	7.0	61.5	9.5	24.5	30.0	22.0	
OPK22493-08A08	12	- 8	1/2"	13/16" - 16	9.0	71.5	11.0	30.0	40.5	24.0	
OPK22493-08A10	12	- 8	1/2"	1" - 14	11.5	71.0	13.5	30.5	40.0	30.0	
OPK22493-08A12	12	- 8	1/2"	1.3/16" - 12	13.9	71.0	14.5	37.5	39.5	36.0	
OPK22493-10A10	16	- 10	5/8"	1" - 14	11.5	82.5	13.5	37.5	48.0	30.0	
OPK22493-10A12	16	- 10	5/8"	1.3/16" - 12	13.9	82.5	14.5	41.0	48.0	36.0	
OPK22491-12A10	19	- 12	3/4"	1" - 14	11.5	85.5	13.5	38.0	49.0	30.0	
OPK22493-12A12	19	- 12	3/4"	1.3/16" - 12	13.9	93.0	14.5	48.0	56.5	36.0	
OPK22493-12A16	19	- 12	3/4"	1.7/16" - 12	19.8	93.0	14.8	47.5	56.5	41.0	
OPK22491-16A12	25	- 16	1"	1.3/16" - 12	13.9	106.0	13.5	48.0	57.5	36.0	
OPK22493-16A16	25	- 16	1"	1.7/16" - 12	19.8	119.5	14.8	56.0	71.5	41.0	
OPK22493-16A20	25	- 16	1"	1.11/16" - 12	26.0	119.5	14.8	58.5	71.5	50.0	
OPK22493-20A20	31	- 20	1.1/4"	1.11/16" - 12	26.0	135.5	14.8	66.0	83.0	50.0	
OPK22493-24A24	38	- 24	1.1/2"	2" - 12	32.0	164.0	14.8	79.5	102.0	60.0	

OPK22492: THRUST WIRE NUT / OPK22493: SLIP-ON NUT



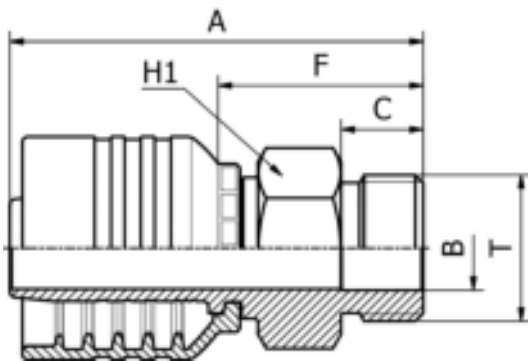
SAE STANDARD CONNECTIONS

OPK24491

90° ORFS
 FEMALE LONG DROP ELBOW
 SAE J516 / ISO 12151-1
 (CRIMPED-BACK NUT)

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	F	H2	
OPK24491-06A06	10	- 6	3/8"	11/16" - 16	6.7	61.5	9.5	54.0	32.0	22.0	
OPK24491-06A08	10	- 6	3/8"	13/16" - 16	6.7	61.5	11.0	54.0	32.0	24.0	
OPK24491-08A08	12	- 8	1/2"	13/16" - 16	9.6	68.0	11.0	64.0	37.0	24.0	
OPK24491-08A10	12	- 8	1/2"	1" - 14	9.6	68.0	12.5	64.5	37.0	30.0	
OPK24491-10A10	16	- 10	5/8"	1" - 14	12.0	75.5	13.0	70.0	41.0	30.0	
OPK24491-10A12	16	- 10	5/8"	1.3/16" - 12	12.7	75.5	13.5	73.0	41.0	36.0	
OPK24491-12A12	19	- 12	3/4"	1.3/16" - 12	15.0	95.0	13.5	96.0	58.5	36.0	
OPK24491-16A16	25	- 16	1"	1.7/16" - 12	19.8	119.5	13.5	114.0	71.5	41.0	

All items made by brazing with the exception of OPK24491-12-12 and OPK24491-16-16

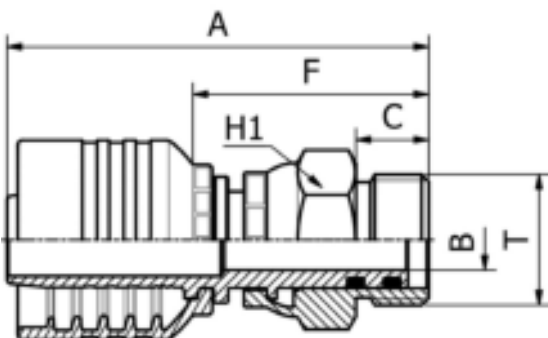


SAE STANDARD CONNECTIONS

OPK13010

SAE
 MALE O'RING BOSS TYPE

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm					
	DN	Dash	inch	T	B	A	C	F	H1	
OPK13010-08A08	12	- 8	1/2"	3/4" - 16	9.9	60.0	11.1	29.0	22.0	
OPK13010-12A12	19	- 12	3/4"	1.1/16" - 12	15.5	76.0	15.1	39.5	32.0	
OPK13010-16A16	25	- 16	1"	1.5/16" - 12	21.5	89.5	15.1	41.0	38.0	



SAE STANDARD CONNECTIONS

OPK14310

SAE
 SWIVEL MALE O'RING BOSS TYPE

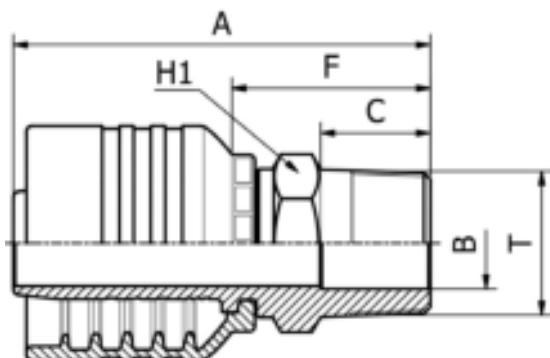
PART. REF.	HOSE BORE			Thread	DIMENSIONS mm					
	DN	Dash	inch	T	B	A	C	F	H2	
OPK14310-08A08	12	- 8	1/2"	3/4" - 16	9.3	84.0	11.1	53.0	27.0	

Not to be used as a live swivel

SAE STANDARD CONNECTIONS

OPK12810

NPTF
 MALE 60° CONE SEAT
 SAE J516/J514



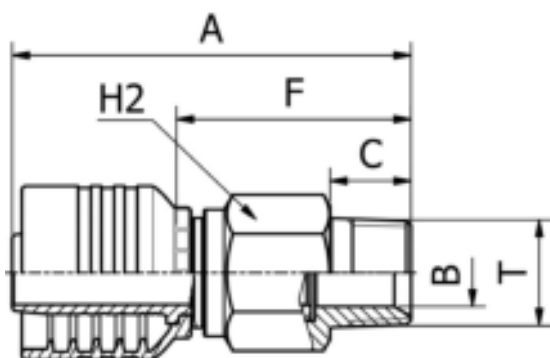
PART. REF.	HOSE BORE			Thread	DIMENSIONS mm					
	DN	Dash	inch	T	B	A	C	F	H1	
OPK12810-06A04	10	- 6	3/8"	1/4" - 18	5.5	59.5	14.5	30.0	14.0	
OPK12810-06A06	10	- 6	3/8"	3/8" - 18	9.3	58.0	14.5	28.5	19.0	
OPK12810-06A08	10	- 6	3/8"	1/2" - 14	12.5	64.0	19.2	34.5	24.0	
OPK12810-08A06	12	- 8	1/2"	3/8" - 18	9.3	60.0	14.5	29.0	19.0	
OPK12810-08A08	12	- 8	1/2"	1/2" - 14	12.5	66.0	19.2	35.0	24.0	
OPK12810-08A12	12	- 8	1/2"	3/4" - 14	15.5	66.5	19.2	35.5	27.0	
OPK12810-10A08	16	- 10	5/8"	1/2" - 14	12.5	73.0	19.2	38.5	24.0	
OPK12810-10A12	16	- 10	5/8"	3/4" - 14	16.0	74.5	19.2	40.0	27.0	
OPK12810-12A08	19	- 12	3/4"	1/2" - 14	12.5	73.0	19.2	36.5	27.0	
OPK12810-12A12	19	- 12	3/4"	3/4" - 14	16.0	73.0	19.2	36.5	27.0	
OPK12810-12A16	19	- 12	3/4"	1" - 11.5	19.8	82.5	24.2	46.0	36.0	
OPK12810-16A20	25	- 16	1"	1.1/4" - 11.5	26.0	104.5	25.0	56.5	46.0	
OPK12810-16A12	25	- 16	1"	3/4" - 14	15.5	87.0	19.2	39.0	32.0	
OPK12810-16A16	25	- 16	1"	1" - 11.5	19.8	92.0	24.2	44.0	36.0	
OPK12810-20A20	31	- 20	1.1/4"	1.1/4" - 11.5	26.0	109.0	25.0	56.5	46.0	
OPK12810-24A24	38	- 24	1.1/2"	1.1/2" - 11.5	32.0	119.5	26.0	57.5	50.0	
OPK12810-32A32	51	- 32	2"	2" - 11.5	45.0	130.5	26.5	64.5	65.0	

267 FITTINGS

SAE STANDARD CONNECTIONS

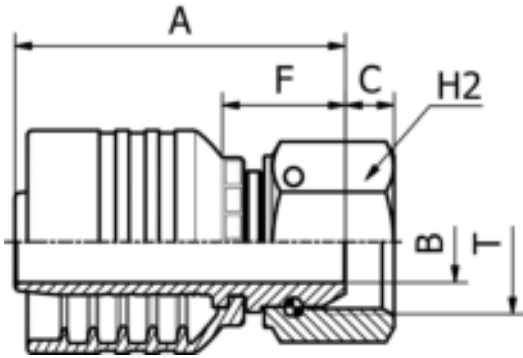
OPK14110R

NPTF
 SWIVEL MALE 60° CONE SEAT
 SAE J516/J514



PART. REF.	HOSE BORE			Thread	DIMENSIONS mm					
	DN	Dash	inch	T	B	A	C	F	H2	
OPK14110-06A04R	10	- 6	3/8"	1/4" - 18	4.0	80.0	14.5	50.5	22.0	
OPK14110-06A06R	10	- 6	3/8"	3/8" - 18	7.0	80.0	14.5	50.5	22.0	
OPK14110-08A08R	12	- 8	1/2"	1/2" - 14	9.3	90.0	19.2	59.0	27.0	
OPK14110-12A12R	19	- 12	3/4"	3/4" - 14	16.0	94.5	19.2	58.0	32.0	
OPK14110-16A16R	25	- 16	1"	1" - 11.5	19.8	114	24.2	66.0	38.0	

Not to be used as a live swivel



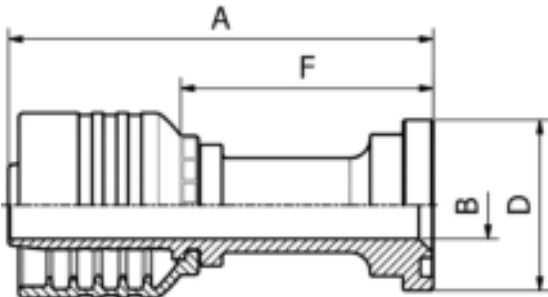
SAE STANDARD CONNECTIONS

OPK22812

NPSM
 FEMALE 60° CONE
 SAE J516/J514
 (THRUST-WIRE NUT)

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	F	H2		
OPK22812-06A06	10	- 6	3/8"	3/8" - 18	7.0	50.5	6.0	21.0	22.0		
OPK22812-08A08	12	- 8	1/2"	1/2" - 14	9.3	54.0	6.5	23.0	27.0		
OPK22812-12A12	19	- 12	3/4"	3/4" - 14	15.0	61.0	9.0	24.5	32.0		
OPK22812-16A16	25	- 16	1"	1" - 11,5	19.8	75.5	10.5	27.5	38.0		

FITTINGS 268



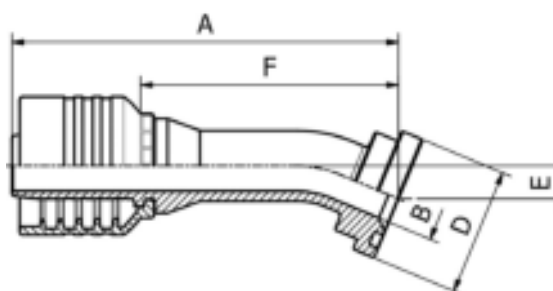
SAE STANDARD CONNECTIONS

OPK23311

ISO / SAE
 CODE 61 FLANGE
 SAE J516 / ISO 12151-3

PART. REF.	HOSE BORE			Flange	DIMENSIONS mm						
	DN	Dash	inch	inch	B	A	D	F			
OPK23311-08A08	12	- 8	1/2"	1/2"	9.3	82.0	30.3	51.0			
OPK23311-08A12	12	- 8	1/2"	3/4"	15.1	89.0	38.0	58.0			
OPK23311-10A12	16	- 10	5/8"	3/4"	15.0	100.0	38.0	65.5			
OPK23311-12A12	19	- 12	3/4"	3/4"	15.0	94.5	38.0	58.0			
OPK23311-12A16	19	- 12	3/4"	1"	20.0	94.5	44.6	58.0			
OPK23311-16A16	25	- 16	1"	1"	19.8	112.5	44.6	64.5			
OPK23311-16A20	25	- 16	1"	1.1/4"	26.0	118.5	51.0	70.5			
OPK23311-20A20	31	- 20	1.1/4"	1.1/4"	26.0	123.0	51.0	70.5			
OPK23311-20A24	31	- 20	1.1/4"	1.1/2"	32.0	125.0	60.5	72.5			
OPK23311-24A24	38	- 24	1.1/2"	1.1/2"	32.0	137.5	60.5	75.5			
OPK23311-24A32	38	- 24	1.1/2"	2"	42.0	137.5	71.6	75.5			
OPK23311-32A32	51	- 32	2"	2"	42.0	145.0	71.6	79.0			
OPK23311-32A40	51	- 32	2"	2.1/2"	56.0	147.0	84.3	81.0			

SAE STANDARD CONNECTIONS

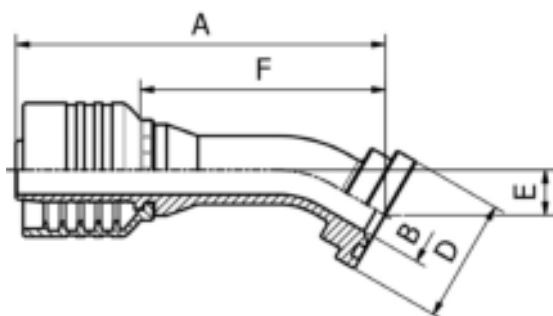


OPK23321

22,5° ISO / SAE
 CODE 61 FLANGE
 SAE J516 / ISO 12151-3

PART. REF.	HOSE BORE			Flange		DIMENSIONS mm						
	DN	Dash	inch	inch		B	A	D	E	F		
OPK23321-08A08	12	- 8	1/2"	1/2"		9.3	95.0	30.3	8.0	64.0		
OPK23321-12A12	19	- 12	3/4"	3/4"		15.0	111.0	38.0	10.0	74.5		
OPK23321-12A16	19	- 12	3/4"	1"		20.0	111.0	44.6	10.0	74.5		
OPK23321-16A16	25	- 16	1"	1"		19.8	137.0	44.6	11.5	89.0		
OPK23321-20A20	31	- 20	1.1/4"	1.1/4"		26.0	152.5	51.0	12.0	100.0		
OPK23321-20A24	31	- 20	1.1/4"	1.1/2"		32.0	154.5	60.5	13.0	102.0		

SAE STANDARD CONNECTIONS



OPK23331

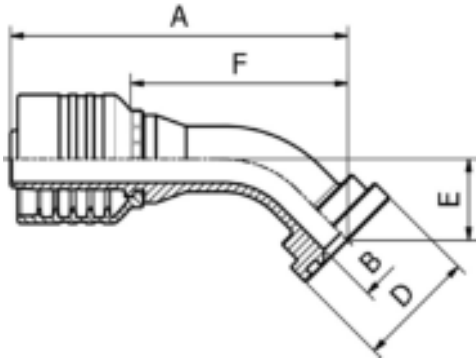
30° ISO / SAE
 CODE 61 FLANGE
 SAE J516 / ISO 12151-3

PART. REF.	HOSE BORE			Flange		DIMENSIONS mm						
	DN	Dash	inch	inch		B	A	D	E	F		
OPK23331-08A08	12	- 8	1/2"	1/2"		9.3	93.5	30.3	11.0	62.5		
OPK23331-12A12	19	- 12	3/4"	3/4"		15.0	109.5	38.0	14.0	73.0		
OPK23331-12A16	19	- 12	3/4"	1"		20.0	109.5	44.6	14.0	73.0		
OPK23331-16A16	25	- 16	1"	1"		19.8	135.0	44.6	16.5	87.0		
OPK23331-20A20	31	- 20	1.1/4"	1.1/4"		26.0	150.5	51.0	17.5	98.0		
OPK23331-24A24	38	- 24	1.1/2"	1.1/2"		32.0	176.5	60.5	20.0	114.5		

SAE STANDARD CONNECTIONS

OPK23341

45° ISO / SAE
 CODE 61 FLANGE
 SAE J516 / ISO 12151-3



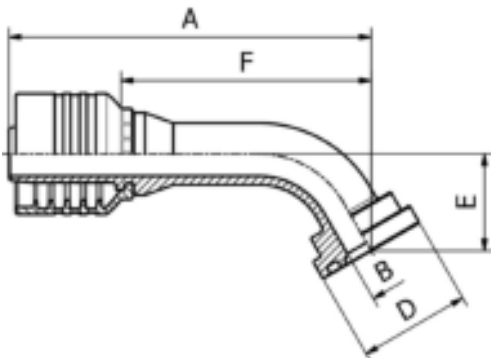
PART. REF.	HOSE BORE			Flange	DIMENSIONS mm					
	DN	Dash	inch		inch	B	A	D	E	F
OPK23341-08A08	12	- 8	1/2"	1/2"	9.3	90.0	30.3	18.5	58.5	
OPK23341-08A12	12	- 8	1/2"	3/4"	15.0	90.5	38.0	19.0	59.5	
OPK23341-10A12	16	- 10	5/8"	3/4"	15.0	95.0	38.0	22.0	61.0	
OPK23341-12A12	19	- 12	3/4"	3/4"	15.0	104.5	38.0	23.0	68.5	
OPK23341-12A16	19	- 12	3/4"	1"	20.0	104.5	44.6	23.0	68.5	
OPK23341-16A16	25	- 16	1"	1"	19.8	129.5	44.6	27.5	81.5	
OPK23341-16A20	25	- 16	1"	1.1/4"	26.0	129.5	51.0	27.5	81.5	
OPK23341-20A20	31	- 20	1.1/4"	1.1/4"	26.0	144.5	51.0	29.5	92.0	
OPK23341-20A24	31	- 20	1.1/4"	1.1/2"	32.0	146.0	60.5	31.0	93.5	
OPK23341-24A24	38	- 24	1.1/2"	1.1/2"	32.0	169.5	60.5	34.5	107.5	
OPK23341-24A32	38	- 24	1.1/2"	2"	42.0	169.5	71.6	34.5	107.5	
OPK23341-32A32	51	- 32	2"	2"	42.0	190.0	71.6	39.0	124.0	

FITTINGS 270

SAE STANDARD CONNECTIONS

OPK23361

60° ISO / SAE
 CODE 61 FLANGE
 SAE J516 / ISO 12151-3



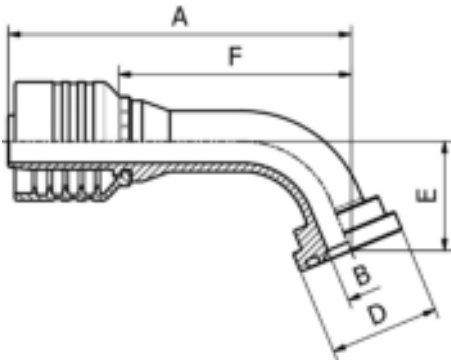
PART. REF.	HOSE BORE			Flange	DIMENSIONS mm					
	DN	Dash	inch		inch	B	A	D	E	F
OPK23361-08A08	12	- 8	1/2"	1/2"	9.3	102.5	30.3	26.0	71.5	
OPK23361-12A12	19	- 12	3/4"	3/4"	15.0	123.5	38.0	33.0	87.0	
OPK23361-16A16	25	- 16	1"	1"	19.8	152.0	44.6	39.0	104.0	
OPK23361-16A20	25	- 16	1"	1.1/4"	26.0	152.0	51.0	39.0	104.0	
OPK23361-20A24	31	- 20	1.1/4"	1.1/2"	32.0	173.5	60.5	44.5	121.0	
OPK23361-20A20	31	- 20	1.1/4"	1.1/4"	26.0	172.5	51.0	43.0	120.0	
OPK23361-24A24	38	- 24	1.1/2"	1.1/2"	32.0	205.5	60.5	50.5	143.5	



SAE STANDARD CONNECTIONS

OPK23371

67,5° ISO / SAE
CODE 61 FLANGE
SAE J516 / ISO 12151-3



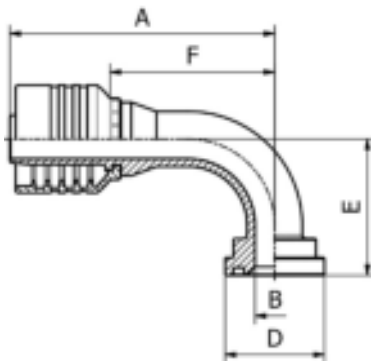
PART. REF.	HOSE BORE			Flange		DIMENSIONS mm						
	DN	Dash	inch	inch		B	A	D	E	F		
OPK23371-08A08	12	- 8	1/2"	1/2"		9.3	99.0	30.3	29.5	68.0		
OPK23371-12A12	19	- 12	3/4"	3/4"		15.0	118.5	38.0	38.0	82.0		
OPK23371-12A16	19	- 12	3/4"	1"		20.0	118.5	44.6	38.0	82.0		
OPK23371-16A16	25	- 16	1"	1"		19.8	147.0	44.6	45.0	98.5		
OPK23371-20A20	31	- 20	1.1/4"	1.1/4"		26.0	166.5	51.0	50.0	114.0		
OPK23371-24A24	38	- 24	1.1/2"	1.1/2"		32.0	198.5	60.5	59.0	136.5		

271 FITTINGS

SAE STANDARD CONNECTIONS

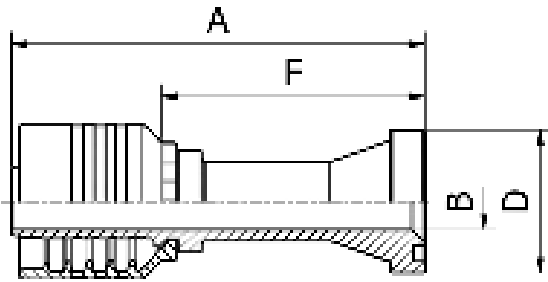
OPK23391

90° ISO / SAE
CODE 61 FLANGE
SAE J516 / ISO 12151-3



PART. REF.	HOSE BORE			Flange		DIMENSIONS mm						
	DN	Dash	inch	inch		B	A	D	E	F		
OPK23391-08A08	12	- 8	1/2"	1/2"		9.3	85.5	30.3	40.0	54.5		
OPK23391-08A12	12	- 8	1/2"	3/4"		15.0	85.5	38.0	41.0	54.5		
OPK23391-10A12	16	- 10	5/8"	3/4"		15.0	90.0	38.0	47.5	56.0		
OPK23391-12A12	19	- 12	3/4"	3/4"		15.0	101.0	38.0	52.0	64.5		
OPK23391-12A16	19	- 12	3/4"	1"		20.0	101.0	44.6	52.0	64.5		
OPK23391-16A16	25	- 16	1"	1"		19.8	125.5	44.6	62.0	77.5		
OPK23391-16A20	25	- 16	1"	1.1/4"		26.0	125.5	51.0	62.0	77.5		
OPK23391-20A20	31	- 20	1.1/4"	1.1/4"		26.0	143.0	51.0	70.0	90.5		
OPK23391-20A24	31	- 20	1.1/4"	1.1/2"		32.0	143.0	60.5	72.0	90.5		
OPK23391-24A24	38	- 24	1.1/2"	1.1/2"		32.0	170.0	60.5	84.0	108.0		
OPK23391-24A32	38	- 24	1.1/2"	2"		42.0	170.0	71.6	84.0	108.0		
OPK23391-32A32	51	- 32	2"	2"		42.0	195.0	71.6	99.0	129.0		

SAE STANDARD CONNECTIONS

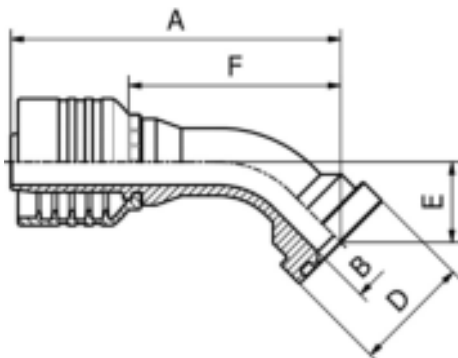


OPK23611

ISO / SAE
 CODE 62 FLANGE
 SAE J516 / ISO 12151-3

PART. REF.	HOSE BORE			Flange	DIMENSIONS mm						
	DN	Dash	inch	inch	B	A	D	F			
OPK23611-08A08	12	- 8	1/2"	1/2"	9.3	83.0	31.8	52.0			
OPK23611-08A12	12	- 8	1/2"	3/4"	15.0	99.5	41.5	68.5			
OPK23611-10A08	16	- 10	5/8"	1/2"	9.3	86.5	31.8	52.0			
OPK23611-10A12	16	- 10	5/8"	3/4"	15.0	104.5	41.5	70.0			
OPK23611-12A12	19	- 12	3/4"	3/4"	15.0	105.5	41.5	69.0			
OPK23611-12A16	19	- 12	3/4"	1"	20.0	117.5	47.7	81.0			
OPK23611-16A16	25	- 16	1"	1"	19.8	130.5	47.7	82.5			
OPK23611-16A20	25	- 16	1"	1.1/4"	26.0	138.0	54.2	90.0			
OPK23611-20A20	31	- 20	1.1/4"	1.1/4"	26.0	137.0	54.2	84.5			
OPK23611-20A24	31	- 20	1.1/4"	1.1/2"	32.0	143.0	63.7	90.5			
OPK23611-24A24	38	- 24	1.1/2"	1.1/2"	32.0	154.5	63.6	92.5			
OPK23611-32A32	51	- 32	2"	2"	42.0	175.0	79.5	109.0			

FITTINGS 272

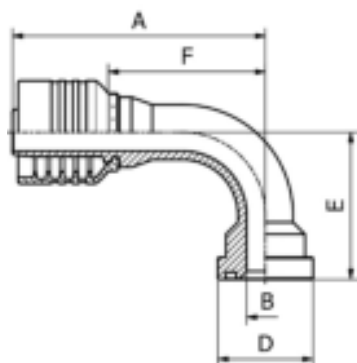


SAE STANDARD CONNECTIONS

OPK23641

45° ISO / SAE
 CODE 62 FLANGE
 SAE J516 / ISO 12151-3

PART. REF.	HOSE BORE			Flange	DIMENSIONS mm						
	DN	Dash	inch	inch	B	A	D	E	F		
OPK23641-08A08	12	- 8	1/2"	1/2"	9.3	93.5	31.8	22.0	62.0		
OPK23641-08A12	12	- 8	1/2"	3/4"	15.0	99.0	41.5	27.5	68.0		
OPK23641-10A12	16	- 10	5/8"	3/4"	15.0	102.0	41.5	31.0	67.5		
OPK23641-12A12	19	- 12	3/4"	3/4"	15.0	109.0	41.5	28.0	72.5		
OPK23641-12A16	19	- 12	3/4"	1"	20.0	114.0	47.7	32.5	77.0		
OPK23641-16A12	25	- 16	1"	3/4"	15.0	128.0	41.5	30.0	80.0		
OPK23641-16A16	25	- 16	1"	1"	19.8	132.0	47.7	32.5	83.5		
OPK23641-16A20	25	- 16	1"	1.1/4"	26.0	136.5	54.2	37.5	88.5		
OPK23641-20A20	31	- 20	1.1/4"	1.1/4"	26.0	147.5	54.2	37.5	95.0		
OPK23641-20A24	31	- 20	1.1/4"	1.1/2"	32.0	155.0	63.7	45.0	102.5		
OPK23641-24A24	38	- 24	1.1/2"	1.1/2"	32.0	180.0	63.7	44.0	118.0		
OPK23641-32A32	51	- 32	2"	2"	42.0	217.5	79.6	60.5	151.5		



SAE STANDARD CONNECTIONS

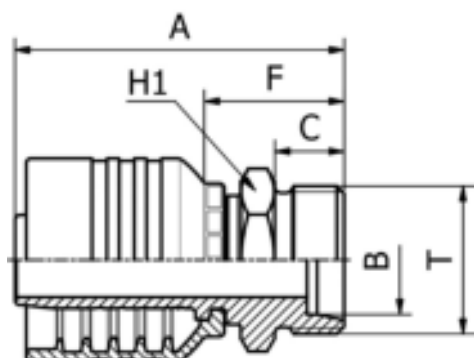
OPK23691

90° ISO / SAE
 CODE 62 FLANGE
 SAE J516 / ISO 12151-3

PART. REF.	HOSE BORE			Flange		DIMENSIONS mm						
	DN	Dash	inch	inch		B	A	D	E	F		
OPK23691-08A08	12	- 8	1/2"	1/2"		9.3	85.5	31.8	45.0	54.5		
OPK23691-08A12	12	- 8	1/2"	3/4"		15.0	85.5	41.5	53.0	54.5		
OPK23691-10A12	16	- 10	5/8"	3/4"		15.0	87.5	41.5	60.5	53.5		
OPK23691-10A16	16	- 10	5/8"	1"		19.8	90.0	47.7	64.0	56.0		
OPK23691-12A12	19	- 12	3/4"	3/4"		15.0	100.5	41.5	59.0	64.0		
OPK23691-12A16	19	- 12	3/4"	1"		20.0	101.0	47.7	65.0	64.5		
OPK23691-16A16	25	- 16	1"	1"		19.8	121.5	47.7	68.0	73.5		
OPK23691-16A20	25	- 16	1"	1.1/4"		26.0	121.5	54.2	75.0	73.5		
OPK23691-20A20	31	- 20	1.1/4"	1.1/4"		26.0	138.0	54.2	81.0	85.5		
OPK23691-20A24	31	- 20	1.1/4"	1.1/2"		32.0	138.0	63.7	91.5	85.5		
OPK23691-24A24	38	- 24	1.1/2"	1.1/2"		32.0	168.0	63.7	94.5	106.0		
OPK23691-32A32	51	- 32	2"	2"		42.0	204.0	79.6	132.0	138.0		

FITTINGS

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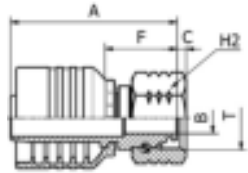
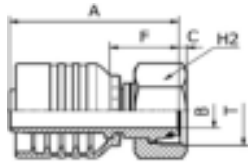


DIN STANDARD CONNECTIONS

OPK11110

METRIC
 MALE 24° CONE SEAT LIGHT DUTY
 DIN 20066 / ISO 12151-2

PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm						
	DN	Dash	inch	T	mm	B	A	C	F	H1		
OPK11110-06A16	10	- 6	3/8"	M 16X1,5	10.0	7.0	53.5	11.0	24.0	17.0		
OPK11110-06A18	10	- 6	3/8"	M 18X1,5	12.0	9.0	54.0	11.0	24.5	19.0		
OPK11110-06A22	10	- 6	3/8"	M 22X1,5	15.0	10.0	55.0	12.0	25.5	22.0		
OPK11110-08A22	12	- 8	1/2"	M 22X1,5	15.0	10.0	56.5	12.0	25.5	22.0		
OPK11110-08A26	12	- 8	1/2"	M 26X1,5	18.0	12.5	57.5	12.0	26.5	27.0		
OPK11110-10A22	16	- 10	5/8"	M 22X1,5	15.0	10.0	60.0	12.0	25.5	22.0		
OPK11110-10A26	16	- 10	5/8"	M 26X1,5	18.0	12.5	61.0	12.0	26.5	27.0		
OPK11110-12A30	19	- 12	3/4"	M 30X2	22.0	15.0	66.5	14.0	30.0	30.0		
OPK11110-16A36	25	- 16	1"	M 36X2	28.0	19.8	80.5	14.0	32.5	36.0		
OPK11110-20A45	31	- 20	1.1/4"	M 45X2	35.0	26.0	93.0	16.0	40.5	46.0		
OPK11110-24A52	38	- 24	1.1/2"	M 52X2	42.0	32.0	105.0	16.0	43.0	55.0		



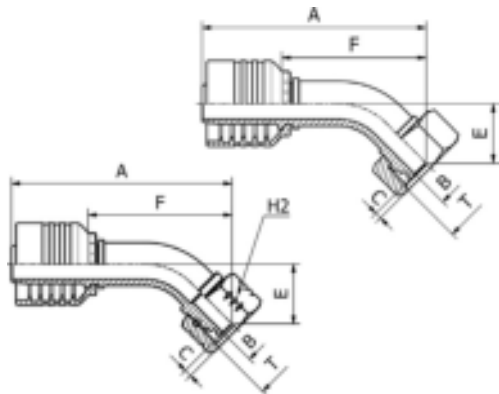
DIN STANDARD CONNECTIONS

OPK21512/OPK21513

METRIC
O-RING FEMALE 24° CONE LIGHT DUTY
DIN 20066 / ISO 12151-2

PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm						
	DN	Dash	inch			T	mm	B	A	C	F	H2
OPK21512-06A16	10	- 6	3/8"	M 16X1,5	10.0	6.0	52.5	3.0	23.0	19.0		
OPK21513-06A18	10	- 6	3/8"	M 18X1,5	12.0	7.0	52.0	2.0	22.5	22.0		
OPK21513-06A22	10	- 6	3/8"	M 22X1,5	15.0	9.3	54.5	1.5	25.0	27.0		
OPK21512-08A18	12	- 8	1/2"	M 18X1,5	12.0	7.0	60.0	2.9	29.0	22.0		
OPK21513-08A22	12	- 8	1/2"	M 22X1,5	15.0	9.3	56.5	1.5	25.5	27.0		
OPK21513-08A26	12	- 8	1/2"	M 26X1,5	18.0	12.5	57.0	2.0	26.0	32.0		
OPK21513-10A26	16	- 10	5/8"	M 26X1,5	18.0	12.5	60.5	2.0	26.0	32.0		
OPK21513-10A30	16	- 10	5/8"	M 30X2	22.0	15.0	68.5	3.0	34.0	36.0		
OPK21512-12A26	19	- 12	3/4"	M 26X1,5	18.0	12.5	67.5	2.3	31.0	32.0		
OPK21513-12A30	19	- 12	3/4"	M 30X2	22.0	15.0	64.5	3.0	28.0	36.0		
OPK21513-12A36	19	- 12	3/4"	M 36X2	28.0	20.0	65.0	3.7	28.5	41.0		
OPK21513-16A36	25	- 16	1"	M 36X2	28.0	19.8	77.5	3.7	29.5	41.0		
OPK21513-20A45	31	- 20	1.1/4"	M 45X2	35.0	26.0	85.5	4.0	33.0	50.0		
OPK21513-24A52	38	- 24	1.1/2"	M 52X2	42.0	32.0	95.0	4.5	33.0	60.0		

OPK21512: THRUST WIRE NUT / OPK21513: SLIP-ON NUT



DIN STANDARD CONNECTIONS

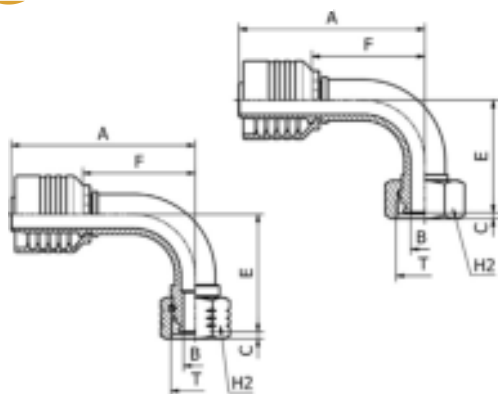
OPK21542/OPK21543

45° METRIC
O-RING FEMALE SWEPT ELBOW 24° CONE
LIGHT DUTY
DIN 20066 / ISO 12151-2

PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm						
	DN	Dash	inch			T	mm	B	A	C	E	F
OPK21542-06A16	10	- 6	3/8"	M 16X1,5	10.0	6.0	77.0	3.0	21.5	47.5	19.0	
OPK21543-06A18	10	- 6	3/8"	M 18X1,5	12.0	7.0	73.0	2.0	16.5	43.5	22.0	
OPK21543-06A22	10	- 6	3/8"	M 22X1,5	15.0	9.3	74.0	1.5	18.0	45.0	27.0	
OPK21543-08A22	12	- 8	1/2"	M 22X1,5	15.0	9.3	83.0	1.5	19.0	52.0	27.0	
OPK21543-10A26	16	- 10	5/8"	M 26X1,5	18.0	12.5	96.5	2.0	26.5	62.0	32.0	
OPK21543-12A30	19	- 12	3/4"	M 30X2	22.0	15.0	107.5	3.0	28.5	71.0	36.0	
OPK21543-16A36	25	- 16	1"	M 36X2	28.0	19.8	133.0	3.7	32.0	85.0	41.0	
OPK21543-20A45	31	- 20	1.1/4"	M 45X2	35.0	26.0	152.5	4.0	36.0	100.0	50.0	
OPK21543-24A52	38	- 24	1.1/2"	M 52X2	42.0	32.0	179.0	4.5	44.5	117.0	60.0	

OPK21542: THRUST WIRE NUT / OPK21543: SLIP-ON NUT

DIN STANDARD CONNECTIONS

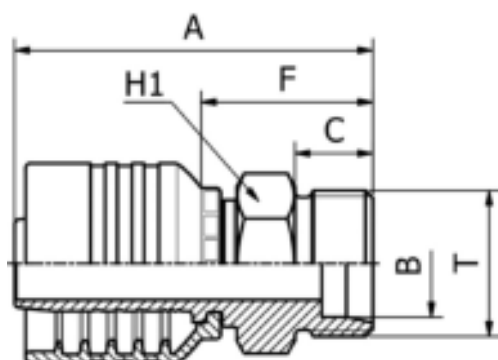


OPK21592/OPK21593

**90° METRIC
 O-RING FEMALE SWEPT ELBOW 24° CONE
 LIGHT DUTY
 DIN 20066 / ISO 12151-2**

PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm					
	DN	Dash	inch	T	mm	B	A	C	E	F	H2
OPK21592-06A16	10	- 6	3/8"	M 16X1,5	10.0	6.0	65.0	3.0	40.0	35.5	19.0
OPK21593-06A18	10	- 6	3/8"	M 18X1,5	12.0	7.0	66.0	2.0	33.5	36.5	22.0
OPK21593-06A22	10	- 6	3/8"	M 22X1,5	15.0	9.3	66.0	1.5	35.0	36.5	27.0
OPK21592-08A18	12	- 8	1/2"	M 18X1,5	12.0	7.0	75.0	2.9	48.0	44.0	22.0
OPK21593-08A22	12	- 8	1/2"	M 22X1,5	15.0	9.3	76.0	1.5	39.5	45.0	27.0
OPK21593-08A26	12	- 8	1/2"	M 26X1,5	18.0	12.5	76.0	2.0	40.0	45.0	32.0
OPK21593-10A26	16	- 10	5/8"	M 26X1,5	18.0	12.5	86.0	2.0	53.0	51.5	32.0
OPK21593-10A30	16	- 10	5/8"	M 30X2	22.0	15.0	86.0	3.0	54.0	51.5	36.0
OPK21593-12A30	19	- 12	3/4"	M 30X2	22.0	15.0	97.5	3.0	59.5	61.5	36.0
OPK21593-16A36	25	- 16	1"	M 36X2	28.0	19.8	125.0	3.7	69.5	76.5	41.0
OPK21593-20A45	31	- 20	1.1/4"	M 45X2	35.0	26.0	146.0	4.0	81.0	93.5	50.0
OPK21593-24A52	38	- 24	1.1/2"	M 52X2	42.0	32.0	169.5	4.5	98.0	107.5	60.0

OPK21592: THRUST WIRE NUT / OPK21593: SLIP-ON NUT



DIN STANDARD CONNECTIONS

OPK11210

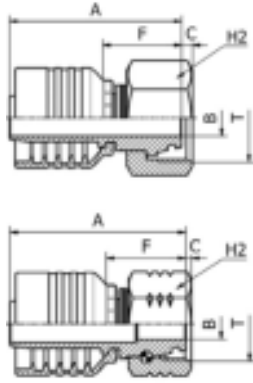
**METRIC
 MALE 24° CONE SEAT HEAVY DUTY
 DIN 20066 / ISO 12151-2**

PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm					
	DN	Dash	inch	T	mm	B	A	C	F	H1	
OPK11210-06A18	10	- 6	3/8"	M 18X1,5	10.0	7.0	56.5	12.0	27.0	19.0	
OPK11210-06A20	10	- 6	3/8"	M 20X1,5	12.0	7.0	58.5	12.0	29.0	22.0	
OPK11210-06A22	10	- 6	3/8"	M 22X1,5	14.0	8.0	60.5	14.0	31.0	22.0	
OPK11210-08A24	12	- 8	1/2"	M 24X1,5	16.0	9.3	62.5	14.0	31.5	24.0	
OPK11210-10A30	16	- 10	5/8"	M 30X2	20.0	15.0	70.0	16.0	35.5	30.0	
OPK11210-12A30	19	- 12	3/4"	M 30X2	20.0	15.0	73.5	16.0	37.0	30.0	
OPK11210-12A36	19	- 12	3/4"	M 36X2	25.0	19.8	77.5	18.0	41.0	36.0	
OPK11210-16A36	25	- 16	1"	M 36X2	25.0	19.8	90.5	18.0	42.5	36.0	
OPK11210-16A42	25	- 16	1"	M 42X2	30.0	25.0	92.5	20.0	44.5	46.0	
OPK11210-20A52	31	- 20	1.1/4"	M 52X2	38.0	30.0	103.5	22.0	51.0	55.0	

DIN STANDARD CONNECTIONS

OPK21612/OPK21613

METRIC
 O-RING FEMALE 24° CONE HEAVY DUTY
 DIN 20066 / ISO 12151-2



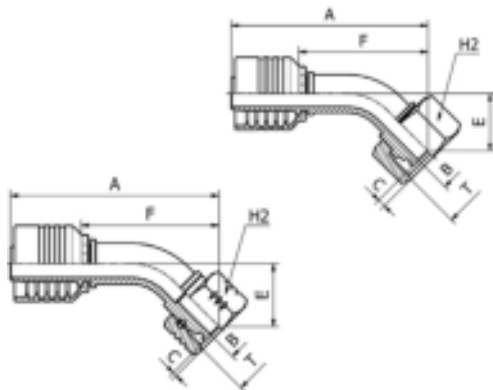
PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm						
	DN	Dash	inch			T	mm	B	A	C	F	H2
OPK21613-06A20	10	- 6	3/8"	M 20X1,5	12.0	7.0	54.5	2.0	25.5	24.0		
OPK21613-06A22	10	- 6	3/8"	M 22X1,5	14.0	7.0	62.0	3.0	32.5	27.0		
OPK21613-08A24	12	- 8	1/2"	M 24X1,5	16.0	9.3	58.0	4.0	26.5	30.0		
OPK21613-10A30	16	- 10	5/8"	M 30X2	20.0	12.5	65.0	3.5	30.5	36.0		
OPK21612-12A30	19	- 12	3/4"	M 30X2	20.0	12.5	70.0	2.2	33.5	36.0		
OPK21613-12A36	19	- 12	3/4"	M 36X2	25.0	15.0	70.5	4.5	34.0	41.0		
OPK21612-16A36	25	- 16	1"	M 36X2	25.0	15.0	83.5	1.7	35.5	41.0		
OPK21613-16A42	25	- 16	1"	M 42X2	30.0	19.8	83.5	6.3	35.5	50.0		
OPK21613-20A52	31	- 20	1.1/4"	M 52X2	38.0	26.0	90.0	8.0	37.5	60.0		
OPK21613-24A52	38	- 24	1.1/2"	M 52X2	38.0	26.0	111.5	8.0	49.5	60.0		

OPK21612: THRUST WIRE NUT / OPK21613: SLIP-ON NUT

DIN STANDARD CONNECTIONS

OPK21642/OPK21643

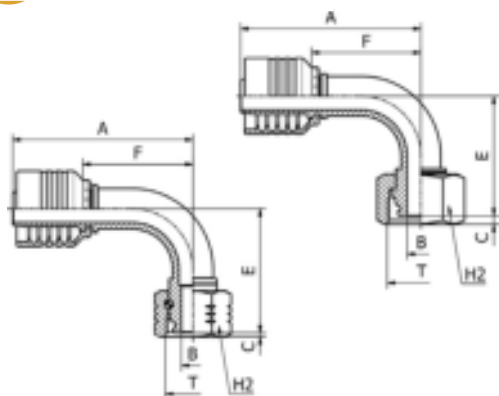
45° METRIC
 O-RING FEMALE SWEPT ELBOW 24° CONE
 HEAVY DUTY
 DIN 20066 / ISO 12151-2



PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm						
	DN	Dash	inch			T	mm	B	A	C	E	F
OPK21643-06A20	10	- 6	3/8"	M 20X1,5	12.0	7.0	73.5	2.0	17.0	44.0	24.0	
OPK21643-06A22	10	- 6	3/8"	M 22X1,5	14.0	7.0	75.0	3.0	18.5	45.5	27.0	
OPK21643-08A24	12	- 8	1/2"	M 24X1,5	16.0	9.3	83.5	4.0	20.0	52.5	30.0	
OPK21643-10A30	16	- 10	5/8"	M 30X2	20.0	12.5	99.5	3.5	29.5	65.5	36.0	
OPK21642-12A30	19	- 12	3/4"	M 30X2	20.0	12.5	113.0	2.2	34.0	76.5	36.0	
OPK21643-12A36	19	- 12	3/4"	M 36X2	25.0	15.0	111.5	4.5	32.5	75.0	41.0	
OPK21643-16A42	25	- 16	1"	M 42X2	30.0	19.8	138.0	6.3	35.5	90.0	50.0	
OPK21643-20A52	31	- 20	1.1/4"	M 52X2	38.0	26.0	155.5	8.0	39.5	103.0	60.0	

OPK21642: THRUST WIRE NUT / OPK21643: SLIP-ON NUT

DIN STANDARD CONNECTIONS



OPK21692/OPK21693

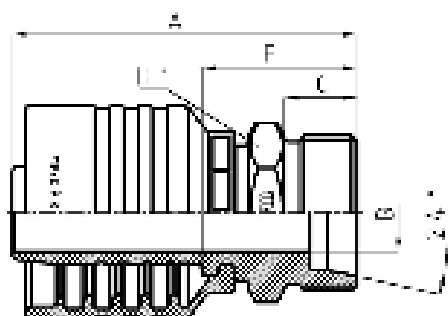
**90° METRIC
 O-RING FEMALE SWEPT ELBOW 24° CONE
 HEAVY DUTY
 DIN 20066 / ISO 12151-2**

PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm					
	DN	Dash	inch	T	mm	B	A	C	E	F	H2
OPK21693-06A20	10	- 6	3/8"	M 20X1,5	12.0	7.0	66.0	2.0	35.0	36.5	24.0
OPK21693-06A22	10	- 6	3/8"	M 22X1,5	14.0	7.0	66.0	3.0	37.0	36.5	27.0
OPK21693-06A24	10	- 6	3/8"	M 24X1,5	16.0	9.3	66.0	4.0	36.0	36.5	30.0
OPK21693-08A24	12	- 8	1/2"	M 24X1,5	16.0	9.3	76.0	4.0	40.5	45.0	30.0
OPK21693-10A30	16	- 10	5/8"	M 30X2	20.0	12.5	86.0	3.5	57.5	51.5	36.0
OPK21692-12A30	19	- 12	3/4"	M 30X2	20.0	12.5	98.0	2.2	67.5	61.5	36.0
OPK21693-12A36	19	- 12	3/4"	M 36X2	25.0	15.0	97.5	4.5	64.5	61.5	41.0
OPK21692-16A36	25	- 16	1"	M 36X2	25.0	15.0	127.5	1.7	86.0	79.5	41.0
OPK21693-16A42	25	- 16	1"	M 42X2	30.0	19.8	127.5	6.3	74.5	79.0	50.0
OPK21693-20A52	31	- 20	1.1/4"	M 52X2	38.0	26.0	146.0	8.0	85.5	93.5	60.0

OPK21692: THRUST WIRE NUT / OPK21693: SLIP-ON NUT

277 FITTINGS

NF STANDARD CONNECTIONS

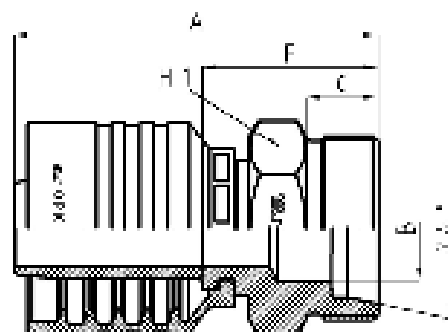


OPK11710

**FRENCH METRIC
 MALE 24° CONE SEAT
 MILLIMETRIC TYPE**

PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm				
	DN	Dash	inch	T	mm	B	A	C	F	H1
OPK11710-12A30	19	- 12	3/4"	M 30X1,5	22.0	15.0	66.5	14.0	30.0	30.0

NF STANDARD CONNECTIONS



OPK11810

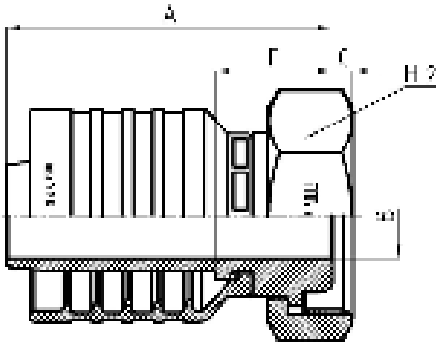
**FRENCH METRIC
 MALE 24° CONE SEAT
 GAZ TYPE**

PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm				
	DN	Dash	inch	T	mm	B	A	C	F	H1
OPK11810-12A36	19	- 12	3/4"	M 36X1,5	26.8	21.0	70.5	14.0	34.0	36.0

NF STANDARD CONNECTIONS

OPK21813

FRENCH METRIC
 FEMALE
 GAZ TYPE



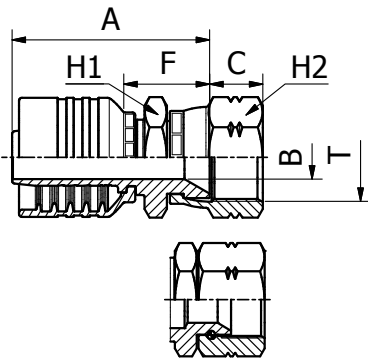
PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm						
	DN	Dash	inch	T	mm	B	A	C	F	H2		
OPK21813-16A45	25	- 16	1"	M 45X1,5	33,5	19,8	75,0	4,5	27,0	50,0		

FITTINGS 278

JIS STANDARD CONNECTIONS

OPK24011/OPK24012

JIS METRIC
 FEMALE (KOMATSU)



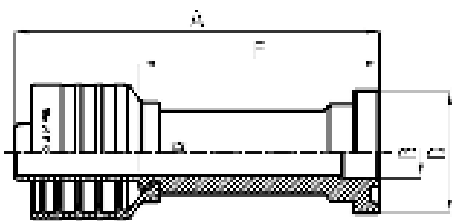
PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	F	H1	H2	
OPK24011-06A18	10	- 6	3/8"	M 18X1,5	7,0	53,0	11,5	23,5	24,0	24,0	
OPK24011-08A22	12	- 8	1/2"	M 22X1,5	9,3	56,0	13,0	25,0	27,0	27,0	
OPK24011-10A24	16	- 10	5/8"	M 24X1,5	12,5	61,0	15,1	26,5	32,0	32,0	
OPK24011-12A30	19	- 12	3/4"	M 30X1,5	15,0	68,0	18,3	31,5	36,0	36,0	
OPK24011-16A33	25	- 16	1"	M 33X1,5	19,8	81,5	21,3	33,5	41,0	41,0	
OPK24012-24A42	38	- 24	1.1/2"	M 42X1,5	26,0	106,0	18,8	44,0	55,0	55,0	

OPK24011: CRIMPED BACK-NUT / OPK24012: THRUST WIRE NUT

ORIGINAL EQUIPMENT CONNECTIONS

OPK24111

STRAIGHT KOMATSU FLANGE



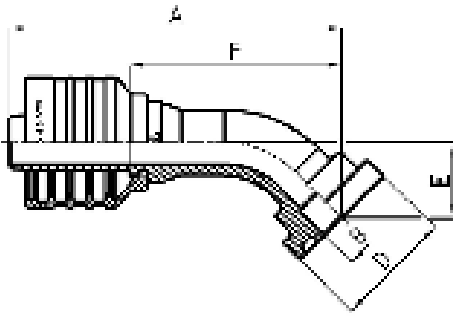
PART. REF.	HOSE BORE			Flange	DIMENSIONS mm						
	DN	Dash	inch	inch	B	A	D	F			
OPK24111-10A10	16	- 10	5/8"	5/8"	14,0	100,0	34,0	65,5			



ORIGINAL EQUIPMENT CONNECTIONS

OPK24141

45° KOMATSU FLANGE

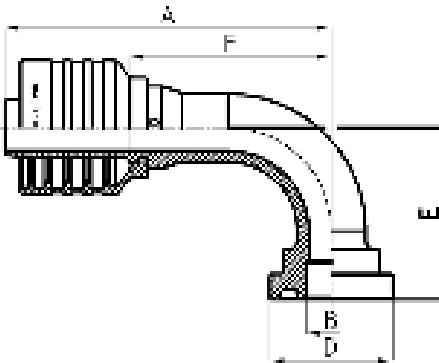


PART. REF.	HOSE BORE			Flange	inch	DIMENSIONS mm						
	DN	Dash	inch			B	A	D	E	F		
OPK24141-10A10	16	- 10	5/8"	5/8"		14.0	95.0	34.0	22.0	61.0		

ORIGINAL EQUIPMENT CONNECTIONS

OPK24191

90° KOMATSU FLANGE

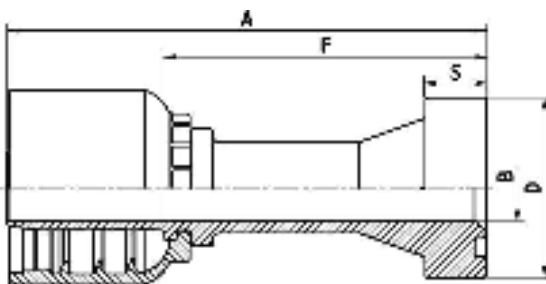


PART. REF.	HOSE BORE			Flange	inch	DIMENSIONS mm						
	DN	Dash	inch			B	A	D	E	F		
OPK24191-10A10	16	- 10	5/8"	5/8"		14.0	90.0	34.0	47.5	56.0		

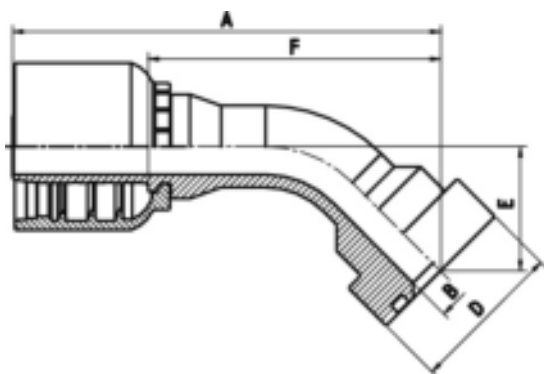
ORIGINAL EQUIPMENT CONNECTIONS

OPK23911

STRAIGHT SUPERCAT FLANGE



PART. REF.	HOSE BORE			Flange	inch	DIMENSIONS mm						
	DN	Dash	inch			B	A	D	F	S		
OPK23911-12A12	19	- 12	3/4"	3/4"		15.0	111.0	41.5	74.5	14.3		
OPK23911-16A16	25	- 16	1"	1"		19.8	135.0	47.7	87.0	14.3		
OPK23911-16A20	25	- 16	1"	1 1/4"		26.0	140.5	54.0	92.5	14.3		
OPK23911-20A20	31	- 20	1 1/4"	1 1/4"		26.0	138.5	54.0	86.0	14.3		
OPK23911-24A24	38	- 24	1 1/2"	1 1/2"		32.0	156.0	63.6	94.0	14.3		



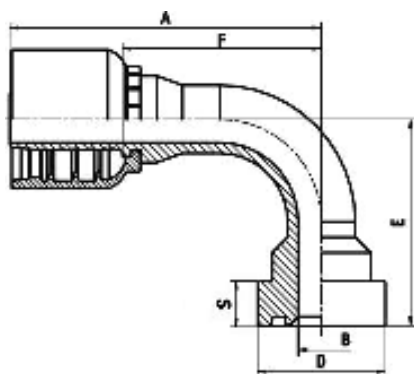
ORIGINAL EQUIPMENT CONNECTIONS

OPK23941

45° SUPERCAT FLANGE

PART. REF.	HOSE BORE			Flange	DIMENSIONS mm						
	DN	Dash	inch		B	A	D	E	F	S	
OPK23941-12A12	19	- 12	3/4"	3/4"	15.0	114.0	41.5	32.0	77.0	14.3	
OPK23941-16A16	25	- 16	1"	1"	19.8	138.0	47.7	36.5	89.5	14.3	
OPK23941-16A20	25	- 16	1"	1.1/4"	26.0	140.5	54.0	40.5	92.5	14.3	
OPK23941-20A20	31	- 20	1.1/4"	1.1/4"	26.0	151.5	54.0	41.5	99.0	14.3	

FITTINGS 280



ORIGINAL EQUIPMENT CONNECTIONS

OPK23991

90° SUPERCAT FLANGE

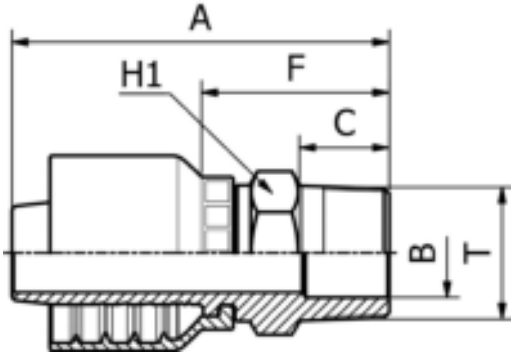
PART. REF.	HOSE BORE			Flange	DIMENSIONS mm						
	DN	Dash	inch		B	A	D	E	F	S	
OPK23991-12A12	19	- 12	3/4"	3/4"	15.0	101.0	41.5	64.5	64.5	14.3	
OPK23991-16A16	25	- 16	1"	1"	19.8	125.5	47.7	76.5	77.5	14.3	
OPK23991-16A20	25	- 16	1"	1.1/4"	26.0	123.5	54.0	80.5	75.5	14.3	
OPK23991-20A20	31	- 20	1.1/4"	1.1/4"	26.0	138.0	54.0	87.0	85.5	14.3	



BS STANDARD CONNECTIONS

OPF10710

**BSP
MALE TAPERED**

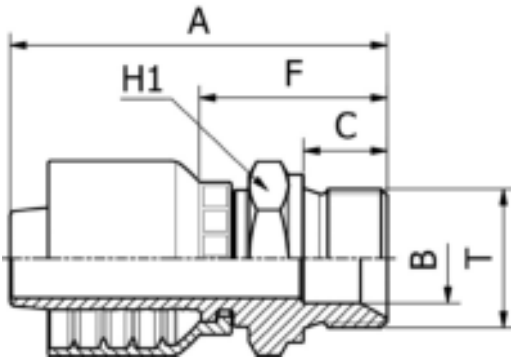


PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	F	H1	
OPF10710-08A08	12	- 8	1/2"	1/2" - 14	10.0	62.0	15.0	31.0	22.0		
OPF10710-10A12	16	- 10	5/8"	3/4" - 14	17.0	68.5	17.0	34.0	27.0		

BS STANDARD CONNECTIONS

OPF10510

**BSP
MALE PARALLEL 60° CONE SEAT
BS5200 / ISO 8434-6**

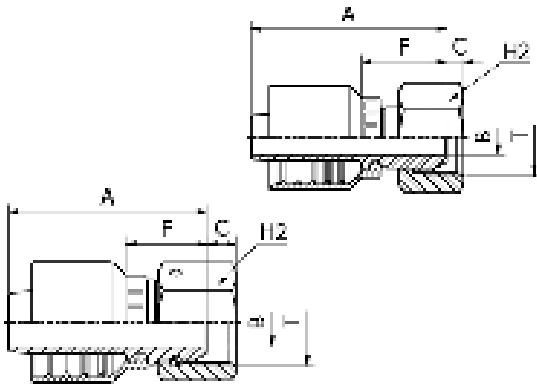


PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	F	H1	
OPF10510-03A02	5	- 3	3/16"	1/8" - 28	3.5	44.0	10.0	22.5	14.0		
OPF10510-04A02	6	- 4	1/4"	1/8" - 28	3.5	50.0	10.0	22.5	14.0		
OPF10510-04A04	6	- 4	1/4"	1/4" - 19	5.0	53.0	11.0	25.5	19.0		
OPF10510-04A06	6	- 4	1/4"	3/8" - 19	8.0	54.5	12.0	27.0	22.0		
OPF10510-05A04	8	- 5	5/16"	1/4" - 19	5.0	54.0	11.0	26.0	19.0		
OPF10510-05A06	8	- 5	5/16"	3/8" - 19	8.0	55.5	12.0	27.5	22.0		
OPF10510-06A04	10	- 6	3/8"	1/4" - 19	5.0	55.5	11.0	26.0	19.0		
OPF10510-06A06	10	- 6	3/8"	3/8" - 19	8.0	57.5	12.0	28.0	22.0		
OPF10510-06A08	10	- 6	3/8"	1/2" - 14	11.0	60.0	14.0	30.5	27.0		
OPF10510-08A06	12	- 8	1/2"	3/8" - 19	8.0	59.0	12.0	28.0	22.0		
OPF10510-08A08	12	- 8	1/2"	1/2" - 14	11.0	62.0	14.0	31.0	27.0		
OPF10510-08A10	12	- 8	1/2"	5/8" - 14	14.5	64.0	16.0	33.0	30.0		
OPF10510-08A12	12	- 8	1/2"	3/4" - 14	17.0	65.0	16.0	34.0	32.0		
OPF10510-10A10	16	- 10	5/8"	5/8" - 14	14.5	67.5	16.0	33.0	30.0		
OPF10510-10A12	16	- 10	5/8"	3/4" - 14	17.0	68.5	16.0	34.0	32.0		
OPF10510-12A12	19	- 12	3/4"	3/4" - 14	17.0	72.0	16.0	35.5	32.0		
OPF10510-12A16	19	- 12	3/4"	1" - 11	22.5	76.0	19.0	39.5	41.0		
OPF10510-16A16	25	- 16	1"	1" - 11	22.5	89.0	19.0	41.0	41.0		
OPF10510-16A20	25	- 16	1"	1 1/4" - 11	28.5	93.0	20.0	45.0	50.0		

BS STANDARD CONNECTIONS

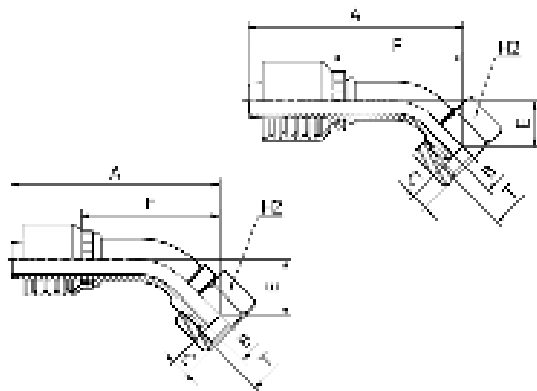
OPF20512/OPF20513

**BSP
 FEMALE 60° CONE
 BS5200 / ISO 12151-6**



PART. REF.	HOSE BORE			Thread	DIMENSIONS mm					
	DN	Dash	inch		T	B	A	C	F	H2
OPF20512-03A02	5	- 3	3/16"	1/8" - 28	3.0	37.0	4.4	16.0	14.0	
OPF20513-03A04	5	- 3	3/16"	1/4" - 19	4.0	38.0	5.4	16.5	19.0	
OPF20512-04A02	6	- 4	1/4"	1/8" - 28	3.1	44.0	4.4	16.5	14.0	
OPF20513-04A04	6	- 4	1/4"	1/4" - 19	4.0	44.5	5.4	17.0	19.0	
OPF20513-04A06	6	- 4	1/4"	3/8" - 19	7.0	45.5	6.0	19.0	22.0	
OPF20512-05A04	8	- 5	5/16"	1/4" - 19	4.1	45.5	4.2	17.5	19.0	
OPF20513-05A06	8	- 5	5/16"	3/8" - 19	7.0	47.0	6.0	19.0	22.0	
OPF20512-06A04	10	- 6	3/8"	1/4" - 19	4.1	47.5	4.2	18.0	19.0	
OPF20513-06A06	10	- 6	3/8"	3/8" - 19	7.0	49.0	6.0	19.5	22.0	
OPF20513-06A08	10	- 6	3/8"	1/2" - 14	9.3	49.5	6.3	20.0	27.0	
OPF20512-08A06	12	- 8	1/2"	3/8" - 19	7.1	52.0	6.0	21.0	22.0	
OPF20513-08A08	12	- 8	1/2"	1/2" - 14	9.3	51.5	6.3	20.5	27.0	
OPF20512-08A10	12	- 8	1/2"	5/8" - 14	12.1	53.0	10.2	22.0	28.0	
OPF20512-08A12	12	- 8	1/2"	3/4" - 14	15.0	56.0	9.0	24.5	32.0	
OPF20512-10A10	16	- 10	5/8"	5/8" - 14	12.5	56.0	10.2	21.5	28.0	
OPF20512-10A12	16	- 10	5/8"	3/4" - 14	15.0	57.5	9.0	23.0	32.0	
OPF20512-12A12	19	- 12	3/4"	3/4" - 14	15.0	61.0	9.0	24.5	32.0	
OPF20512-12A16	19	- 12	3/4"	1" - 11	19.8	62.5	10.5	26.0	38.0	
OPF20512-16A16	25	- 16	1"	1" - 11	19.8	75.5	10.5	27.5	38.0	

OPF20512: THRUST WIRE NUT / OPF20513: SLIP-ON NUT



BS STANDARD CONNECTIONS

OPF20542/OPF20543

**45° BSP
 FEMALE ELBOW 60° CONE
 BS5200 / ISO 12151-6**

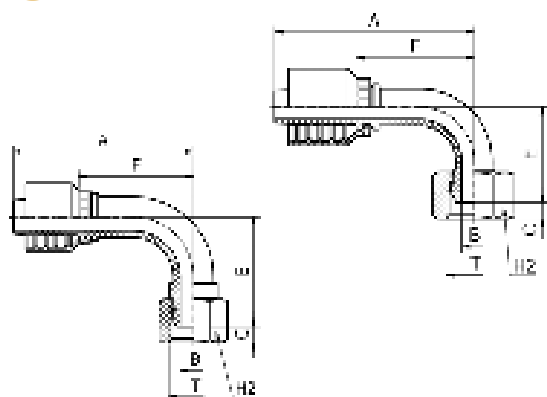
PART. REF.	HOSE BORE			Thread	DIMENSIONS mm					
	DN	Dash	inch		T	B	A	C	E	F
OPF20543-04A04	6	- 4	1/4"	1/4" - 19	4.0	63.5	5.4	15.0	36.0	19.0
OPF20543-04A06	6	- 4	1/4"	3/8" - 19	7.0	65.0	6.0	16.0	37.5	22.0
OPF20543-05A06	8	- 5	5/16"	3/8" - 19	7.0	66.0	6.0	13.5	38.0	22.0
OPF20543-06A06	10	- 6	3/8"	3/8" - 19	7.0	71.5	6.0	15.5	42.0	22.0
OPF20543-06A08	10	- 6	3/8"	1/2" - 14	9.3	72.0	6.3	16.0	42.5	27.0
OPF20543-08A08	12	- 8	1/2"	1/2" - 14	9.3	81.0	6.3	17.0	49.5	27.0
OPF20542-08A10	12	- 8	1/2"	5/8" - 14	12.1	85.5	10.2	22.5	54.5	28.0
OPF20542-10A10	16	- 10	5/8"	5/8" - 14	12.5	97.5	10.2	26.0	63.0	28.0
OPF20542-10A12	16	- 10	5/8"	3/4" - 14	15.0	98.0	9.0	27.0	64.0	32.0
OPF20542-12A12	19	- 12	3/4"	3/4" - 14	15.0	107.0	9.0	28.5	70.5	32.0
OPF20542-12A16	19	- 12	3/4"	1" - 11	19.8	109.0	10.5	30.0	72.5	38.0
OPF20542-16A16	25	- 16	1"	1" - 11	19.8	139.5	10.5	36.5	91.0	38.0

OPF20542: THRUST WIRE NUT / OPF20543: SLIP-ON NUT

BS STANDARD CONNECTIONS

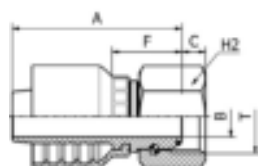
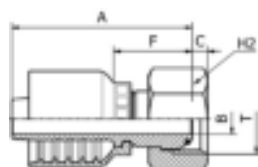
OPF20592/OPF20593

90° BSP
 FEMALE ELBOW 60° CONE
 BS5200 / ISO 12151-6



PART. REF.	HOSE BORE			Thread	DIMENSIONS mm							
	DN	Dash	inch		T	B	A	C	E	F	H2	
OPF20592-03A02	5	- 3	3/16"	1/8" - 28		3.0	43.0	4.4	26.0	21.5	14.0	
OPF20592-04A02	6	- 4	1/4"	1/8" - 28		3.1	56.0	4.4	27.0	28.5	14.0	
OPF20593-04A04	6	- 4	1/4"	1/4" - 19		4.0	57.0	5.4	29.0	29.5	19.0	
OPF20593-04A06	6	- 4	1/4"	3/8" - 19		7.0	57.0	6.0	31.0	29.5	22.0	
OPF20593-05A06	8	- 5	5/16"	3/8" - 19		7.0	60.0	6.0	27.5	32.0	22.0	
OPF20592-05A04	8	- 5	5/16"	1/4" - 19		4.0	54.5	4.1	29.5	26.5	19.0	
OPF20593-06A08	10	- 6	3/8"	1/2" - 14		9.3	66.0	6.3	32.0	36.5	27.0	
OPF20593-06A06	10	- 6	3/8"	3/8" - 19		7.0	66.0	6.0	31.5	36.5	22.0	
OPF20592-08A06	12	- 8	1/2"	3/8" - 19		7.1	76.0	6.0	41.0	45.0	22.0	
OPF20593-08A08	12	- 8	1/2"	1/2" - 14		9.3	76.0	6.3	36.5	45.0	27.0	
OPF20592-08A10	12	- 8	1/2"	5/8" - 14		12.1	75.5	10.2	44.0	44.0	28.0	
OPF20592-08A12	12	- 8	1/2"	3/4" - 14		15.0	75.5	9.0	45.5	44.0	32.0	
OPF20592-10A10	16	- 10	5/8"	5/8" - 14		12.5	88.0	10.2	53.5	53.5	28.0	
OPF20592-10A12	16	- 10	5/8"	3/4" - 14		15.0	88.0	9.0	55.0	53.5	32.0	
OPF20592-12A12	19	- 12	3/4"	3/4" - 14		15.0	98.0	9.0	59.5	61.5	32.0	
OPF20592-12A16	19	- 12	3/4"	1" - 11		19.8	98.0	10.5	62.0	61.5	38.0	
OPF20592-16A16	25	- 16	1"	1" - 11		19.8	127.5	10.5	76.0	79.5	38.0	

OPF20592: THRUST WIRE NUT / OPF20593: SLIP-ON NUT



BS STANDARD CONNECTIONS

OPF20812/OPF20813

BSP
 O-RING FEMALE 60° CONE
 BS5200 / ISO 12151-6

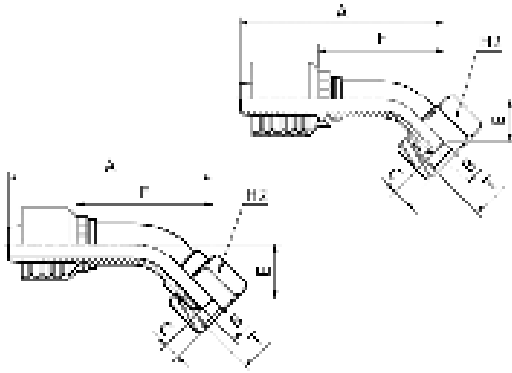
PART. REF.	HOSE BORE			Thread	DIMENSIONS mm							
	DN	Dash	inch		T	B	A	C	F	H2		
OPF20813-04A04	6	- 4	1/4"	1/4" - 19		4.0	44.5	5.4	17.0	19.0		
OPF20812-06A04	10	- 6	3/8"	1/4" - 19		4.1	47.5	4.1	18.0	19.0		
OPF20813-06A06	10	- 6	3/8"	3/8" - 19		7.0	49.0	6.0	19.5	22.0		
OPF20813-08A08	12	- 8	1/2"	1/2" - 14		9.3	51.5	6.3	20.5	27.0		
OPF20812-10A10	16	- 10	5/8"	5/8" - 14		12.5	56.5	9.7	22.0	28.0		
OPF20812-12A12	19	- 12	3/4"	3/4" - 14		15.0	61.5	8.5	25.0	32.0		
OPF20812-16A16	25	- 16	1"	1" - 11		19.8	75.5	10.6	27.5	38.0		
OPF20812-16A20	25	- 16	1"	1.1/4" - 11		26.1	79.0	10.5	31.0	50.0		

OPF20812: THRUST WIRE NUT / OPF20813: SLIP-ON NUT

BS STANDARD CONNECTIONS

OPF20842/OPF20843

45° BSP
 O-RING FEMALE ELBOW 60° CONE
 BS5200 / ISO 12151-6



PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	F	H2	
OPF20843-04A04	6	- 4	1/4"	1/4" - 19	4.0	63.5	5.4	14.5	36.0	19.0	
OPF20843-06A06	10	- 6	3/8"	3/8" - 19	7.0	71.5	6.0	15.5	42.0	22.0	
OPF20843-08A08	12	- 8	1/2"	1/2" - 14	9.3	81.0	6.3	17.0	49.5	27.0	
OPF20842-10A10	16	- 10	5/8"	5/8" - 14	12.5	98.0	9.7	27.5	63.5	28.0	
OPF20842-12A12	19	- 12	3/4"	3/4" - 14	15.0	107.5	8.5	29.0	71.0	32.0	
OPF20842-16A16	25	- 16	1"	1" - 11	19.8	138.5	10.6	35.5	90.5	38.0	

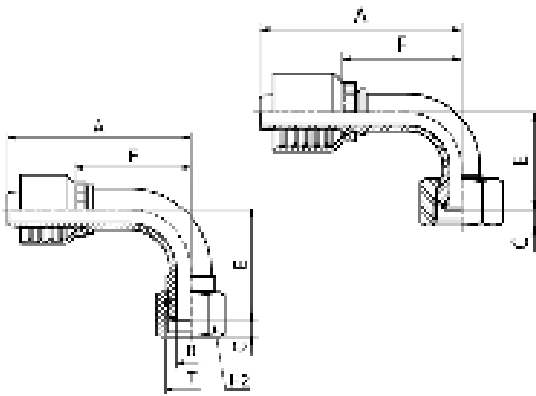
OPF20842: THRUST WIRE NUT / OPF20843: SLIP-ON NUT

FITTINGS 284

BS STANDARD CONNECTIONS

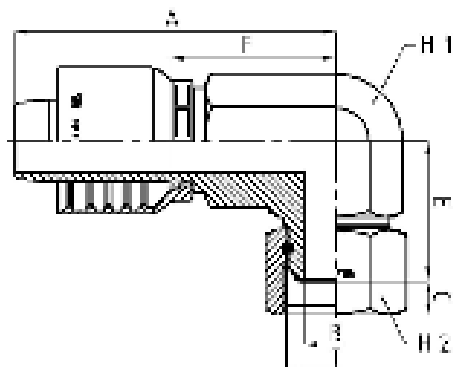
OPF20892/OPF20893

90° BSP
 O-RING FEMALE SWEPT ELBOW 60° CONE
 BS5200 / ISO 12151-6



PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	F	H2	
OPF20893-04A04	6	- 4	1/4"	1/4" - 19	4.0	57.0	5.4	29.0	29.5	19.0	
OPF20892-06A04	10	- 6	3/8"	1/4" - 19	4.1	65.0	4.1	33.0	35.5	19.0	
OPF20893-06A06	10	- 6	3/8"	3/8" - 19	7.0	66.0	6.0	31.5	36.5	22.0	
OPF20893-08A08	12	- 8	1/2"	1/2" - 14	9.3	76.0	6.3	36.5	45.0	27.0	
OPF20892-10A10	16	- 10	5/8"	5/8" - 14	12.5	87.5	9.7	55.0	53.0	28.0	
OPF20892-12A12	19	- 12	3/4"	3/4" - 14	15.0	98.0	8.5	60.0	61.5	32.0	
OPF20892-16A16	25	- 16	1"	1" - 11	19.8	127.5	10.6	76.0	79.5	38.0	
OPF20892-16A20	25	- 16	1"	1.1/4" - 11	26.1	127.5	10.5	78.5	79.5	50.0	

OPF20892: THRUST WIRE NUT / OPF20893: SLIP-ON NUT

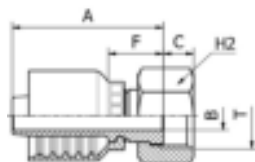


BS STANDARD CONNECTIONS

OPF20882F

90° BSP
O-RING FEMALE COMPACT ELBOW 60° CONE
BS5200 / ISO 12151-6
(THRUST-WIRE NUT)

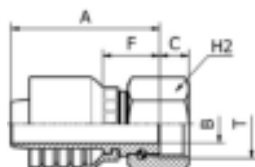
PART. REF.	HOSE BORE			Thread	DIMENSIONS mm							
	DN	Dash	inch		T	B	A	C	E	F	H1	H2
OPF20882-04A04F	6	- 4	1/4"	1/4" - 19	4.0	47.5	4.1	22.0	20.0	14.0	19.0	
OPF20882-06A06F	10	- 6	3/8"	3/8" - 19	7.0	52.5	6.0	27.5	23.0	19.0	22.0	
OPF20882-08A08F	12	- 8	1/2"	1/2" - 14	9.3	56.0	6.5	31.0	25.0	22.0	27.0	
OPF20882-10A10F	16	- 10	5/8"	5/8" - 14	12.5	59.0	9.7	32.5	24.5	24.0	28.0	
OPF20882-12A12F	19	- 12	3/4"	3/4" - 14	15.0	74.0	8.5	36.0	37.5	27.0	32.0	
OPF20882-16A16F	25	- 16	1"	1" - 11	20.0	100.0	10.6	44.0	52.0	36.0	38.0	



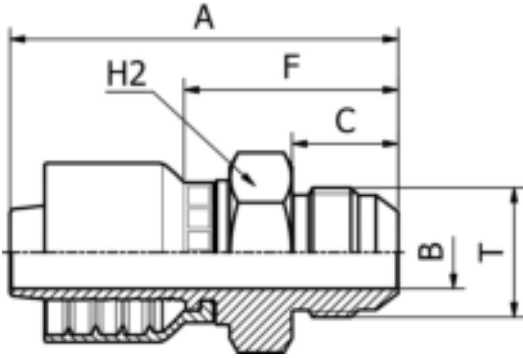
BS STANDARD CONNECTIONS

OPF20612/OPF20613

BSP
FEMALE FLAT SEAT
(SLIP-ON NUT)



PART. REF.	HOSE BORE			Thread	DIMENSIONS mm							
	DN	Dash	inch		T	B	A	C	F	H2		
OPF20613-06A06	10	- 6	3/8"	3/8" - 19	7.0	46.0	9.0	16.5	22.0			
OPF20613-06A08	10	- 6	3/8"	1/2" - 14	9.3	47.0	9.8	17.5	27.0			
OPF20613-08A08	12	- 8	1/2"	1/2" - 14	9.3	49.0	9.8	18.0	27.0			
OPF20612-08A12	12	- 8	1/2"	3/4" - 14	15.0	52.0	11.5	21.0	32.0			



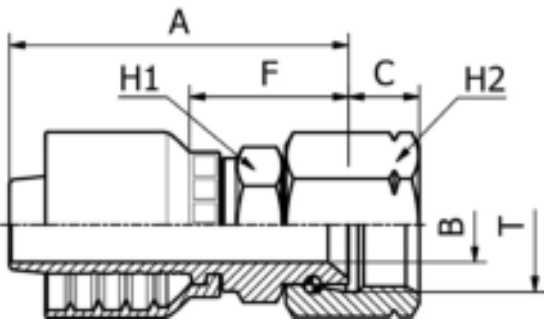
SAE STANDARD CONNECTIONS

OPF12510

JIC
 MALE 37° CONE
 SAE J516 / ISO 12151-5

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	F	H1		
OPF12510-04A04	6	- 4	1/4"	7/16" - 20	4.0	55.5	14.0	28.0	12.0		
OPF12510-04A05	6	- 4	1/4"	1/2" - 20	5.5	56.5	14.0	29.0	14.0		
OPF12510-04A06	6	- 4	1/4"	9/16" - 18	7.0	56.5	14.0	29.0	17.0		
OPF12510-05A05	8	- 5	5/16"	1/2" - 20	5.5	57.0	14.0	29.0	14.0		
OPF12510-05A06	8	- 5	5/16"	9/16" - 18	7.0	57.0	14.0	29.0	17.0		
OPF12510-06A06	10	- 6	3/8"	9/16" - 18	7.0	59.0	14.0	29.5	17.0		
OPF12510-06A08	10	- 6	3/8"	3/4" - 16	9.3	63.5	16.5	34.0	19.0		
OPF12510-06A10	10	- 6	3/8"	7/8" - 14	12.5	68.0	19.5	38.5	24.0		
OPF12510-08A06	12	- 8	1/2"	9/16" - 18	7.0	63.0	14.0	32.0	19.0		
OPF12510-08A08	12	- 8	1/2"	3/4" - 16	9.3	65.5	16.5	34.5	19.0		
OPF12510-08A10	12	- 8	1/2"	7/8" - 14	12.5	70.0	19.5	39.0	24.0		
OPF12510-08A12	12	- 8	1/2"	1.1/16" - 12	15.0	74.0	22.0	43.0	27.0		
OPF12510-10A10	16	- 10	5/8"	7/8" - 14	12.5	73.5	19.5	39.0	24.0		
OPF12510-10A12	16	- 10	5/8"	1.1/16" - 12	15.0	77.0	22.0	42.5	27.0		
OPF12510-12A10	19	- 12	3/4"	7/8" - 14	12.5	78.0	19.5	41.5	27.0		
OPF12510-12A12	19	- 12	3/4"	1.1/16" - 12	15.0	80.5	22.0	44.0	27.0		
OPF12510-12A14	19	- 12	3/4"	1.3/16" - 12	15.0	81.0	22.5	44.5	32.0		
OPF12510-12A16	19	- 12	3/4"	1.5/16" - 12	19.8	83.5	23.0	47.0	34.0		
OPF12510-16A12	25	- 16	1"	1.1/16" - 12	15.0	93.0	22.0	45.0	32.0		
OPF12510-16A16	25	- 16	1"	1.5/16" - 12	19.8	96.0	23.0	48.0	34.0		
OPF12510-16A20	25	- 16	1"	1.5/8" - 12	26.0	101.0	24.3	53.0	42.0		

FITTINGS 286

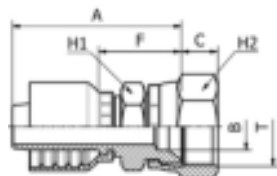
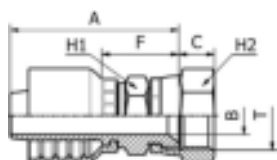


SAE STANDARD CONNECTIONS

OPF22712

JIC
 FEMALE 37° CONE SEAT DOUBLE HEXAGON
 SAE J516 / ISO 12151-5
 (THRUST-WIRE NUT)

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	F	H1	H2	
OPF22712-12A14	19	- 12	3/4"	1.3/16" - 12	15.0	69.5	14.3	33.0	30.0	36.0	
OPF22712-16A20	25	- 16	1"	1.5/8" - 12	26.0	91.0	16.2	43.0	41.0	50.0	



SAE STANDARD CONNECTIONS

OPF22711/OPF22711KR/ OPF22711K

JIC
FEMALE 37° CONE SEAT DOUBLE HEXAGON
SAE J516 / ISO 12151-5
(CRIMPED-BACK NUT)

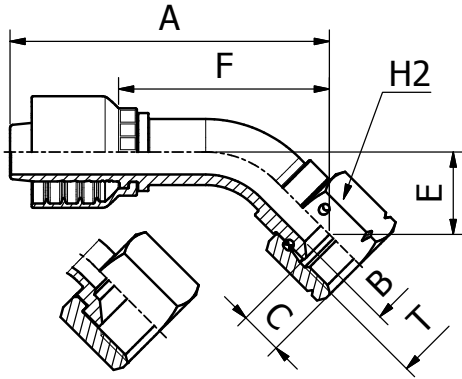
PART. REF.	HOSE BORE			Thread	DIMENSIONS mm							
	DN	Dash	inch		T	B	A	C	F	H1	H2	
OPF22711-03A04K	5	- 3	3/16"	7/16" - 20		4.0	41.5	8.9	20.0	12.0	15.0	
OPF22711-04A04KR	6	- 4	1/4"	7/16" - 20		4.0	48.0	8.9	20.5	12.0	15.0	
OPF22711-04A05KR	6	- 4	1/4"	1/2" - 20		4.0	48.5	9.4	21.0	14.0	17.0	
OPF22711-04A06KR	6	- 4	1/4"	9/16" - 18		7.0	49.0	9.5	21.5	14.0	17.0	
OPF22711-05A05KR	8	- 5	5/16"	1/2" - 20		4.0	49.5	9.4	21.5	17.0	17.0	
OPF22711-06A06KR	10	- 6	3/8"	9/16" - 18		7.0	51.5	9.5	22.0	17.0	17.0	
OPF22711-06A08KR	10	- 6	3/8"	3/4" - 16		9.3	56.0	10.7	26.5	19.0	22.0	
OPF22711-08A12KR	12	- 8	1/2"	1.1/16" - 12		15.0	60.0	14.1	28.5	27.0	32.0	
OPF22711-08A06KR	12	- 8	1/2"	9/16" - 18		7.0	55.5	9.5	24.0	19.0	17.0	
OPF22711-08A08KR	12	- 8	1/2"	3/4" - 16		9.3	58.0	10.7	27.0	19.0	22.0	
OPF22711-08A10KR	12	- 8	1/2"	7/8" - 14		9.3	60.5	12.5	29.5	22.0	25.0	
OPF22711-10A08KR	16	- 10	5/8"	3/4" - 16		9.3	62.5	10.7	28.5	22.0	22.0	
OPF22711-10A10KR	16	- 10	5/8"	7/8" - 14		9.3	64.0	12.5	29.5	22.0	25.0	
OPF22711-10A12KR	16	- 10	5/8"	1.1/16" - 12		15.0	63.5	14.1	29.0	27.0	32.0	
OPF22711-12A08KR	19	- 12	3/4"	3/4" - 16		9.3	66.0	10.7	29.5	27.0	22.0	
OPF22711-12A10KR	19	- 12	3/4"	7/8" - 14		12.5	67.0	12.5	30.5	27.0	25.0	
OPF22711-12A12KR	19	- 12	3/4"	1.1/16" - 12		15.0	66.5	14.1	30.0	27.0	32.0	
OPF22711-12A16	19	- 12	3/4"	1.5/16" - 12		19.8	71.0	15.3	34.5	32.0	38.0	
OPF22711-16A12KR	25	- 16	1"	1.1/16" - 12		15.0	80.5	14.1	32.5	32.0	32.0	
OPF22711-16A16	25	- 16	1"	1.5/16" - 12		19.8	83.5	15.3	35.5	32.0	38.0	

KR: CRIMPED KOMPACT ROBUST BACK-NUT

SAE STANDARD CONNECTIONS

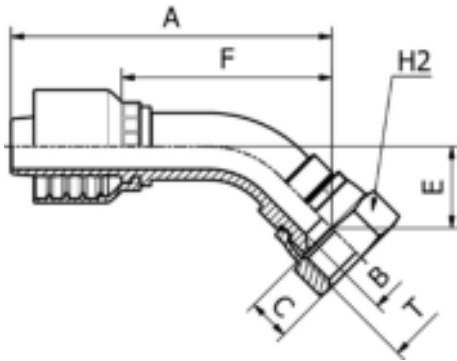
OPF22542/OPF22543

45° JIC
 FEMALE SWEPT ELBOW 37° CONE SEAT
 SAE J516 / ISO 12151-5



PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	E	F	H2
OPF22542-04A04	6	- 4	1/4"	7/16" - 20	4.0	63.0	8.7	14.5	35.5	17.0	
OPF22542-04A05	6	- 4	1/4"	1/2" - 20	4.0	63.0	9.1	14.5	35.5	17.0	
OPF22543-04A06	6	- 4	1/4"	9/16" - 18	4.0	63.0	9.8	14.0	35.5	19.0	
OPF22542-05A05	8	- 5	5/16"	1/2" - 20	5.5	65.5	9.1	14.0	37.5	17.0	
OPF22542-05A06	8	- 5	5/16"	9/16" - 18	7.0	66.0	9.2	14.5	38.0	19.0	
OPF22542-06A06	10	- 6	3/8"	9/16" - 18	7.0	71.5	9.2	16.5	42.0	19.0	
OPF22543-06A08	10	- 6	3/8"	3/4" - 16	7.0	70.5	10.1	14.0	41.0	22.0	
OPF22543-06A10	10	- 6	3/8"	7/8" - 14	9.3	72.0	12.4	15.5	42.5	27.0	
OPF22542-08A08	12	- 8	1/2"	3/4" - 16	9.3	83.0	10.2	20.0	52.0	22.0	
OPF22543-08A10	12	- 8	1/2"	7/8" - 14	9.3	80.5	12.4	17.0	49.5	27.0	
OPF22543-08A12	12	- 8	1/2"	1.1/16" - 12	12.5	80.5	14.1	17.0	49.5	32.0	
OPF22542-10A10	16	- 10	5/8"	7/8" - 14	12.5	96.5	12.3	25.5	62.0	27.0	
OPF22543-10A12	16	- 10	5/8"	1.1/16" - 12	12.5	94.5	14.1	24.0	60.0	32.0	
OPF22542-12A12	19	- 12	3/4"	1.1/16" - 12	15.0	106.0	14.2	27.5	70.0	32.0	
OPF22542-12A14	19	- 12	3/4"	1.3/16" - 12	15.0	106.0	14.3	27.5	69.5	36.0	
OPF22542-12A16	19	- 12	3/4"	1.5/16" - 12	19.8	106.5	15.0	27.5	70.0	38.0	
OPF22542-16A12	25	- 16	1"	1.1/16" - 12	15.0	120.5	14.2	27.5	72.5	32.0	
OPF22542-16A16	25	- 16	1"	1.5/16" - 12	19.8	132.5	15.0	32.0	84.0	38.0	
OPF22542-16A20	25	- 16	1"	1.5/8" - 12	26.0	138.0	16.2	36.0	90.0	50.0	

OPF22542: THRUST WIRE NUT / OPF22543: SLIP-ON NUT



SAE STANDARD CONNECTIONS

OPF22541KR

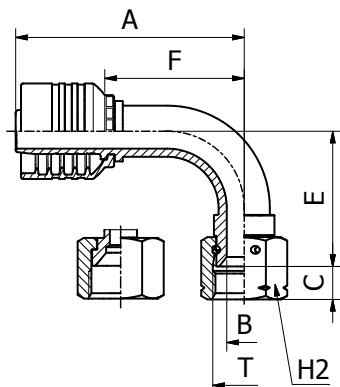
45° ELBOW JIC
 FEMALE 37° CONE SEAT
 SAE J516 / ISO 12151-5
 (CRIMPED-BACK NUT)

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	E	F	H2
OPF22541-04A04KR	6	- 4	1/4"	7/16" - 20	4.2	62.0	8.9	13.5	34.5	15.0	
OPF22541-04A05KR	6	- 4	1/4"	1/2" - 20	4.0	62.5	9.4	14.0	35.0	17.0	
OPF22541-06A06KR	10	- 6	3/8"	9/16" - 18	7.0	71.5	9.5	16.0	42.0	17.0	
OPF22541-08A08KR	12	- 8	1/2"	3/4" - 16	9.3	83.0	10.7	20.0	52.0	22.0	
OPF22541-10A10KR	16	- 10	5/8"	7/8" - 14	12.5	95.5	12.5	22.5	61.0	25.0	
OPF22541-12A12KR	19	- 12	3/4"	1.1/16" - 12	15.0	105.5	14.1	26.5	69.0	32.0	

SAE STANDARD CONNECTIONS

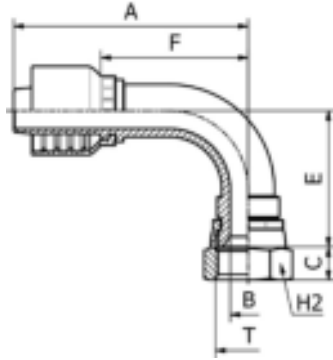
OPF22592/OPF22593

90° JIC
 FEMALE ELBOW 37° CONE SEAT
 SAE J516 / ISO 12151-5



PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	F	H2	
OPF22593-03A04	5	- 3	3/16"	7/16" - 20	3.0	47.5	8.5	23.5	26.0	15.0	
OPF22592-04A04	6	- 4	1/4"	7/16" - 20	4.0	56.0	8.7	27.0	28.5	17.0	
OPF22592-04A05	6	- 4	1/4"	1/2" - 20	4.0	56.0	9.1	27.5	28.5	17.0	
OPF22593-04A06	6	- 4	1/4"	9/16" - 18	4.0	57.0	9.8	28.0	29.5	19.0	
OPF22593-04A08	6	- 4	1/4"	3/4" - 16	7.0	57.0	10.0	30.5	29.5	22.0	
OPF22592-05A05	8	- 5	5/16"	1/2" - 20	5.5	59.0	9.1	28.0	31.0	17.0	
OPF22592-05A06	8	- 5	5/16"	9/16" - 18	7.0	59.0	9.2	28.5	31.0	19.0	
OPF22592-06A05	10	- 6	3/8"	1/2" - 20	5.5	59.5	9.1	26.5	30.0	17.0	
OPF22592-06A06	10	- 6	3/8"	9/16" - 18	7.0	65.0	9.2	32.5	35.5	19.0	
OPF22593-06A08	10	- 6	3/8"	3/4" - 16	7.0	66.0	10.1	29.5	36.5	22.0	
OPF22593-06A10	10	- 6	3/8"	7/8" - 14	9.3	66.0	12.4	31.5	36.5	27.0	
OPF22592-08A06	12	- 8	1/2"	9/16" - 18	7.0	68.0	9.2	33.0	37.0	19.0	
OPF22592-08A08	12	- 8	1/2"	3/4" - 16	9.3	75.5	10.2	41.0	44.0	22.0	
OPF22593-08A10	12	- 8	1/2"	7/8" - 14	9.3	76.0	12.4	36.0	45.0	27.0	
OPF22593-08A12	12	- 8	1/2"	1.1/16" - 12	12.5	76.0	14.1	36.0	45.0	32.0	
OPF22592-10A10	16	- 10	5/8"	7/8" - 14	12.5	88.0	12.3	52.5	53.5	27.0	
OPF22593-10A12	16	- 10	5/8"	1.1/16" - 12	12.5	86.0	14.1	50.0	51.5	32.0	
OPF22592-12A10	19	- 12	3/4"	7/8" - 14	12.5	91.5	12.3	52.5	55.0	27.0	
OPF22592-12A12	19	- 12	3/4"	1.1/16" - 12	15.0	98.0	14.2	58.0	62.0	32.0	
OPF22592-12A14	19	- 12	3/4"	1.3/16" - 12	15.0	99.0	14.3	58.0	63.0	36.0	
OPF22592-12A16	19	- 12	3/4"	1.5/16" - 12	19.8	99.0	15.0	57.5	63.0	38.0	
OPF22592-16A16	25	- 16	1"	1.5/16" - 12	19.8	124.0	15.0	68.5	76.0	38.0	
OPF22592-16A20	25	- 16	1"	1.5/8" - 12	26.0	125.5	16.2	74.5	77.5	50.0	

OPF22592: THRUST WIRE NUT / OPF22593: SLIP-ON NUT



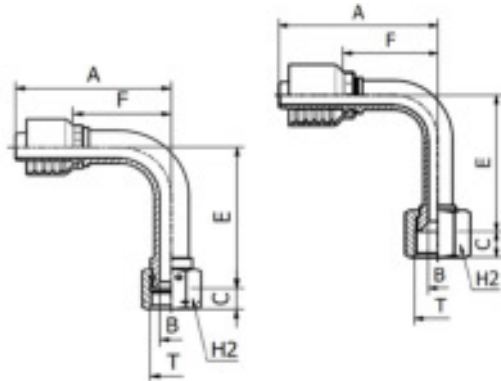
SAE STANDARD CONNECTIONS

OPF22591KR

90° ELBOW JIC
 FEMALE 37° CONE SEAT
 SAE J516 / ISO 12151-5
 (CRIMPED-BACK NUT)

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	F	H2	
OPF22591-04A04KR	6	- 4	1/4"	7/16" - 20	4.2	56.0	8.9	26.0	28.5	15.0	
OPF22591-04A05KR	6	- 4	1/4"	1/2" - 20	4.0	56.0	9.4	26.5	28.5	17.0	
OPF22591-06A06KR	10	- 6	3/8"	9/16" - 18	7.0	65.0	9.5	32.0	35.5	17.0	
OPF22591-08A08KR	12	- 8	1/2"	3/4" - 16	9.3	75.5	10.7	40.5	44.0	22.0	
OPF22591-10A10KR	16	- 10	5/8"	7/8" - 14	12.5	88.0	12.5	47.0	53.5	25.0	
OPF22591-12A12KR	19	- 12	3/4"	1.1/16" - 12	15.0	98.0	14.1	57.0	62.0	32.0	

FITTINGS 290



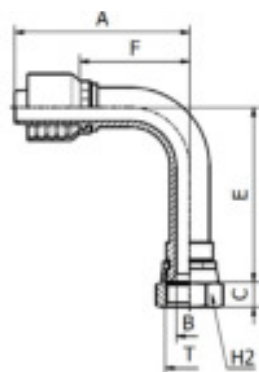
SAE STANDARD CONNECTIONS

OPF24792/OPF24793

90° JIC
 FEMALE LONG DROP ELBOW 37° CONE SEAT
 SAE J516 / ISO 12151-5

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	F	H2	
OPF24792-04A04	6	- 4	1/4"	7/16" - 20	4.0	56.0	8.7	45.0	28.5	17.0	
OPF24792-04A05	6	- 4	1/4"	1/2" - 20	4.0	56.0	9.1	45.0	28.5	17.0	
OPF24793-04A06	6	- 4	1/4"	9/16" - 18	4.0	57.0	9.8	55.5	29.5	19.0	
OPF24792-08A08	12	- 8	1/2"	3/4" - 16	9.3	75.5	10.2	61.0	44.0	22.0	
OPF24792-06A06	10	- 6	3/8"	9/16" - 18	7.0	65.0	9.2	55.0	35.5	19.0	
OPF24793-06A08	10	- 6	3/8"	3/4" - 16	7.0	66.0	10.1	61.5	36.5	22.0	
OPF24793-08A10	12	- 8	1/2"	7/8" - 14	9.3	76.0	12.4	65.0	45.0	27.0	
OPF24792-10A10	16	- 10	5/8"	7/8" - 14	12.5	88.0	12.3	65.5	53.5	27.0	
OPF24792-12A12	19	- 12	3/4"	1.1/16" - 12	15.0	98.0	14.2	94.5	62.0	32.0	
OPF24792-16A16	25	- 16	1"	1.5/16" - 12	19.8	125.5	15.0	110.0	77.5	38.0	

OPF24792: THRUST WIRE NUT / OPF24793: SLIP-ON NUT

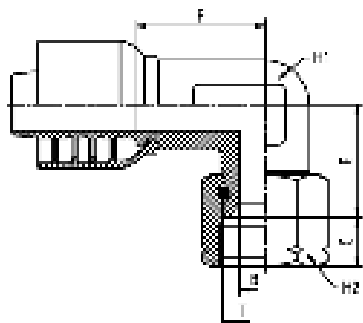


SAE STANDARD CONNECTIONS

OPF24791KR

**90° LONG DROP ELBOW JIC
 FEMALE 37° CONE SEAT
 SAE J516 / ISO 12151-5
 (CRIMPED-BACK NUT)**

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	F	H2	
OPF24791-04A04KR	6	- 4	1/4"	7/16" - 20	4.2	56.0	8.9	45.0	28.5	15.0	
OPF24791-06A06KR	10	- 6	3/8"	9/16" - 18	7.0	65.0	9.5	55.0	35.5	17.0	
OPF24791-08A08KR	12	- 8	1/2"	3/4" - 16	9.3	75.5	10.7	64.0	44.0	22.0	
OPF24791-10A10KR	16	- 10	5/8"	7/8" - 14	12.5	88.0	12.5	70.0	53.5	25.0	
OPF24791-12A12KR	19	- 12	3/4"	1.1/16" - 12	15.0	98.0	14.1	96.0	62.0	32.0	



SAE STANDARD CONNECTIONS

OPF22582F

**90° JIC
 FEMALE COMPACT ELBOW 37° CONE SEAT
 SAE J516 / ISO 12151-5
 (THRUST-WIRE NUT)**

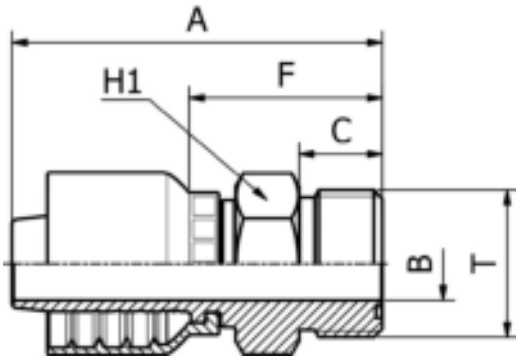
PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	F	H1	H2
OPF22582-04A04F	6	- 4	1/4"	7/16" - 20	4.0	47.5	8.7	20.5	20.0	14.0	17.0
OPF22582-04A06F	6	- 4	1/4"	9/16" - 18	7.0	47.5	9.2	21.5	20.0	14.0	19.0
OPF22582-06A06F	10	- 6	3/8"	9/16" - 18	7.0	52.5	9.2	24.0	23.0	19.0	19.0
OPF22582-06A08F	10	- 6	3/8"	3/4" - 16	9.3	56.0	10.2	28.0	26.5	22.0	22.0
OPF22582-08A08F	12	- 8	1/2"	3/4" - 16	9.3	56.0	10.2	28.0	25.0	22.0	22.0
OPF22582-08A10F	12	- 8	1/2"	7/8" - 14	12.5	56.0	12.3	29.0	25.0	22.0	27.0
OPF22582-12A12F	19	- 12	3/4"	1.1/16" - 12	15.0	74.0	14.2	33.0	37.5	27.0	32.0
OPF22582-16A16F	25	- 16	1"	1.5/16" - 12	20.0	100.0	15.0	40.0	52.0	36.0	38.0

SAE STANDARD CONNECTIONS

OPF12410

ORFS
 MALE

SAE J516 / ISO 12151-1



PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	F	H1		
OPF12410-04A04	6	- 4	1/4"	9/16" - 18	4.0	51.5	9.8	24.0	16.0		
OPF12410-04A06	6	- 4	1/4"	11/16" - 16	6.7	54.0	11.2	26.5	19.0		
OPF12410-05A06	8	- 5	5/16"	11/16" - 16	6.7	55.0	11.2	27.0	19.0		
OPF12410-06A06	10	- 6	3/8"	11/16" - 16	6.7	57.0	11.2	27.5	19.0		
OPF12410-06A08	10	- 6	3/8"	13/16" - 16	9.3	59.5	12.8	30.0	22.0		
OPF12410-08A08	12	- 8	1/2"	13/16" - 16	9.3	61.5	12.8	30.5	22.0		
OPF12410-08A10	12	- 8	1/2"	1" - 14	12.5	66.0	15.5	35.0	27.0		
OPF12410-10A10	16	- 10	5/8"	1" - 14	12.5	69.0	15.5	34.5	27.0		
OPF12410-10A12	16	- 10	5/8"	1.3/16" - 12	15.0	72.0	17.0	37.5	32.0		
OPF12410-12A12	19	- 12	3/4"	1.3/16" - 12	15.0	75.5	17.0	39.0	32.0		
OPF12410-12A16	19	- 12	3/4"	1.7/16" - 12	19.8	77.0	17.5	40.5	38.0		
OPF12410-16A16	25	- 16	1"	1.7/16" - 12	19.8	90.0	17.5	42.0	38.0		

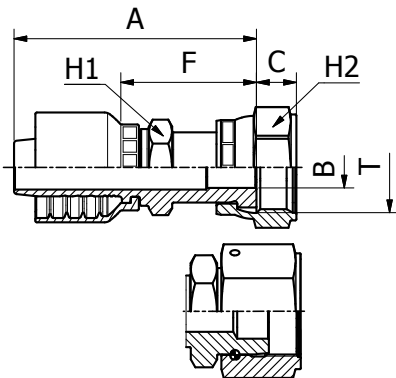
FITTINGS 292

SAE STANDARD CONNECTIONS

OPF22411 / OPF22412

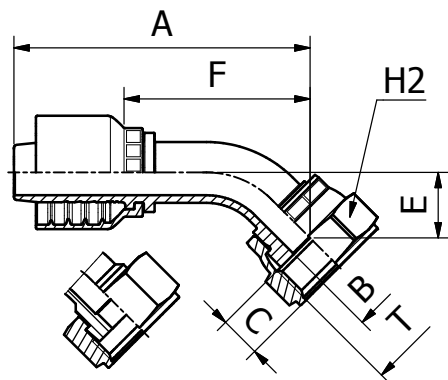
ORFS
 FEMALE

SAE J516 / ISO 12151-1
 PULL-BACK TYPE



PART. REF.	HOSE BORE			Thread	DIMENSIONS mm					
	DN	Dash	inch	T	B	A	C	F	H1	H2
OPF22411-04A04	6	- 4	1/4"	9/16" - 18	4.0	55.0	8.0	27.5	13.0	19.0
OPF22411-04A06	6	- 4	1/4"	11/16" - 16	7.0	57.5	9.5	30.0	16.0	22.0
OPF22411-05A06	8	- 5	5/16"	11/16" - 16	7.0	58.5	9.5	30.5	16.0	22.0
OPF22411-06A06	10	- 6	3/8"	11/16" - 16	7.0	60.5	9.5	31.0	16.0	22.0
OPF22411-06A08	10	- 6	3/8"	13/16" - 16	9.3	65.0	11.0	35.5	19.0	24.0
OPF22411-08A06	12	- 8	1/2"	11/16" - 16	7.0	63.0	9.5	32.0	19.0	22.0
OPF22411-08A08	12	- 8	1/2"	13/16" - 16	9.3	67.0	11.0	36.0	19.0	24.0
OPF22411-08A10	12	- 8	1/2"	1" - 14	11.5	69.5	13.5	38.5	24.0	30.0
OPF22411-08A12	12	- 8	1/2"	1.3/16" - 12	13.9	73.0	14.5	42.0	28.0	36.0
OPF22411-10A10	16	- 10	5/8"	1" - 14	11.5	73.0	13.5	38.5	24.0	30.0
OPF22411-10A12	16	- 10	5/8"	1.3/16" - 12	13.9	76.5	14.5	42.0	28.0	36.0
OPF22411-12A10	19	- 12	3/4"	1" - 14	11.5	77.5	13.5	41.0	28.0	30.0
OPF22411-12A12	19	- 12	3/4"	1.3/16" - 12	13.9	80.0	14.5	43.5	28.0	36.0
OPF22411-12A16	19	- 12	3/4"	1.7/16" - 12	19.8	82.0	15.0	45.5	36.0	41.0
OPF22411-16A12	25	- 16	1"	1.3/16" - 12	13.9	94.0	13.5	48.0	36.0	36.0
OPF22411-16A16	25	- 16	1"	1.7/16" - 12	19.8	94.5	15.0	46.5	36.0	41.0

SAE STANDARD CONNECTIONS

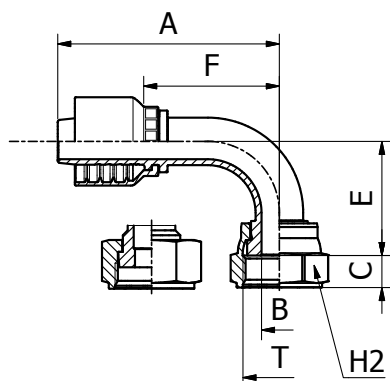


OPF22441 / OPF22443

**45° ORFS
 FEMALE ELBOW
 SAE J516 / ISO 12151-1**

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm							
	DN	Dash	inch		T	B	A	C	E	F	H2	
OPF22443-04A04	6	- 4	1/4"	9/16" - 18		4.0	58.5	8.2	10.5	31.0	17.0	
OPF22443-04A06	6	- 4	1/4"	11/16" - 16		7.0	58.5	9.5	10.5	31.0	22.0	
OPF22443-05A06	8	- 5	5/16"	11/16" - 16		7.0	62.0	9.5	10.5	34.0	22.0	
OPF22443-06A06	10	- 6	3/8"	11/16" - 16		6.0	61.5	9.5	11.0	32.5	22.0	
OPF22443-06A08	10	- 6	3/8"	13/16" - 16		9.3	63.0	11.0	12.5	34.0	24.0	
OPF22441-08A06	12	- 8	1/2"	11/16" - 16		7.0	63.5	9.5	11.0	32.5	22.0	
OPF22443-08A08	12	- 8	1/2"	13/16" - 16		9.0	73.0	11.0	13.0	42.0	24.0	
OPF22443-08A10	12	- 8	1/2"	1" - 14		11.5	73.0	13.5	13.5	42.0	30.0	
OPF22443-08A12	12	- 8	1/2"	1.3/16" - 12		13.9	78.0	14.5	18.5	46.5	36.0	
OPF22443-10A10	16	- 10	5/8"	1" - 14		11.5	83.5	13.5	16.0	49.0	30.0	
OPF22443-10A12	16	- 10	5/8"	1.3/16" - 12		13.9	86.0	14.5	18.5	51.5	36.0	
OPF22441-12A10	19	- 12	3/4"	1" - 14		11.5	87.0	13.5	16.5	50.5	30.0	
OPF22443-12A12	19	- 12	3/4"	1.3/16" - 12		13.9	97.0	14.5	21.5	60.5	36.0	
OPF22443-12A16	19	- 12	3/4"	1.7/16" - 12		19.8	96.5	14.8	21.0	60.0	41.0	
OPF22443-16A16	25	- 16	1"	1.7/16" - 12		19.8	120.0	14.8	23.5	72.0	41.0	
OPF22443-16A20	25	- 16	1"	1.11/16" - 12		26.0	122.0	14.8	25.0	74.0	50.0	

OPF22441: CRIMPED BACK-NUT / OPF22443: SLIP-ON NUT



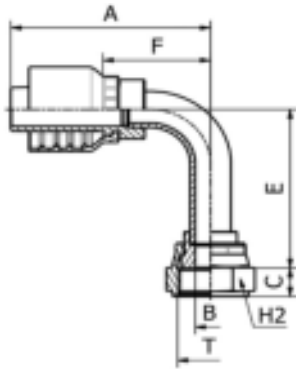
SAE STANDARD CONNECTIONS

OPF22491 / OPF22493

**90° ORFS
 FEMALE SWEPT ELBOW
 SAE J516 / ISO 12151-1**

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm							
	DN	Dash	inch		T	B	A	C	E	F	H2	
OPF22493-04A04	6	- 4	1/4"	9/16" - 18		4.0	55.0	8.2	22.0	27.5	17.0	
OPF22493-04A06	6	- 4	1/4"	11/16" - 16		7.0	55.0	9.5	22.0	27.5	22.0	
OPF22493-05A06	8	- 5	5/16"	11/16" - 16		7.0	60.0	9.5	23.0	32.0	22.0	
OPF22493-06A06	10	- 6	3/8"	11/16" - 16		6.0	59.5	9.5	24.0	30.0	22.0	
OPF22493-06A08	10	- 6	3/8"	13/16" - 16		9.3	59.5	11.0	26.5	30.0	24.0	
OPF22491-08A06	12	- 8	1/2"	11/16" - 16		7.0	61.5	9.5	24.5	30.0	22.0	
OPF22493-08A08	12	- 8	1/2"	13/16" - 16		9.0	71.5	11.0	30.0	40.5	24.0	
OPF22493-08A10	12	- 8	1/2"	1" - 14		11.5	71.0	13.5	30.5	40.0	30.0	
OPF22493-08A12	12	- 8	1/2"	1.3/16" - 12		13.9	71.0	14.5	37.5	39.5	36.0	
OPF22493-10A10	16	- 10	5/8"	1" - 14		11.5	82.5	13.5	37.5	48.0	30.0	
OPF22493-10A12	16	- 10	5/8"	1.3/16" - 12		13.9	82.5	14.5	41.0	48.0	36.0	
OPF22491-12A10	19	- 12	3/4"	1" - 14		11.5	85.5	13.5	38.0	49.0	30.0	
OPF22493-12A12	19	- 12	3/4"	1.3/16" - 12		13.9	93.0	14.5	48.0	56.5	36.0	
OPF22493-12A16	19	- 12	3/4"	1.7/16" - 12		19.8	93.0	14.8	47.5	56.5	41.0	
OPF22491-16A12	25	- 16	1"	1.3/16" - 12		13.9	106.0	13.5	48.0	57.5	36.0	
OPF22493-16A16	25	- 16	1"	1.7/16" - 12		19.8	119.5	14.8	56.0	71.5	41.0	
OPF22493-16A20	25	- 16	1"	1.11/16" - 12		26.0	119.5	14.8	58.5	71.5	50.0	

OPF22491: CRIMPED BACK-NUT / OPF22493: SLIP-ON NUT



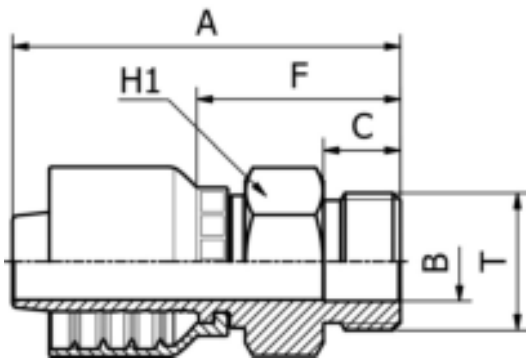
SAE STANDARD CONNECTIONS

OPF24491

90° ORFS
 FEMALE LONG DROP ELBOW
 SAE J516 / ISO 12151-1
 (CRIMPED-BACK NUT)

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	F	H2	
OPF24491-04A04	6	- 4	1/4"	9/16" - 18	4.4	52.5	8.0	46.0	25.0	17.0	
OPF24491-06A06	10	- 6	3/8"	11/16" - 16	6.7	61.5	9.5	54.0	32.0	22.0	
OPF24491-06A08	10	- 6	3/8"	13/16" - 16	6.7	61.5	11.0	54.0	32.0	24.0	
OPF24491-08A08	12	- 8	1/2"	13/16" - 16	9.6	68.0	11.0	64.0	37.0	24.0	
OPF24491-08A10	12	- 8	1/2"	1" - 14	9.6	68.0	12.5	64.5	37.0	30.0	
OPF24491-10A10	16	- 10	5/8"	1" - 14	12.0	75.5	13.0	70.0	41.0	30.0	
OPF24491-10A12	16	- 10	5/8"	1.3/16" - 12	12.7	75.5	13.5	73.0	41.0	36.0	
OPF24491-12A12	19	- 12	3/4"	1.3/16" - 12	15.0	95.0	13.5	96.0	58.5	36.0	
OPF24491-16A16	25	- 16	1"	1.7/16" - 12	19.8	119.5	13.5	114.0	71.5	41.0	

All items made by brazing with the exception of OPF24491-12A12 and OPF24491-16A16



SAE STANDARD CONNECTIONS

OPF13010

SAE MALE
 O-RING BOSS TYPE
 SAE J516 / ISO 11926

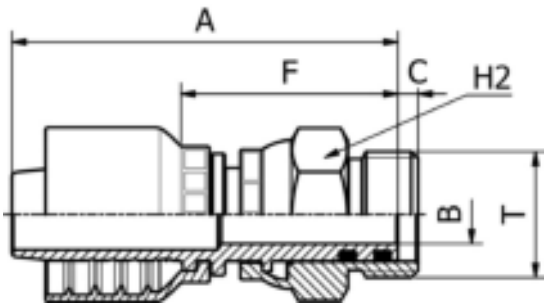
PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	F	H1		
OPF13010-04A04	6	- 4	1/4"	7/16" - 20	4.4	51.5	9.1	24.0	14.0		
OPF13010-04A06	6	- 4	1/4"	9/16" - 18	7.5	52.0	9.9	24.5	17.0		
OPF13010-06A06	10	- 6	3/8"	9/16" - 18	7.5	55.0	9.9	25.5	17.0		
OPF13010-06A08	10	- 6	3/8"	3/4" - 16	9.9	58.0	11.1	28.5	22.0		
OPF13010-08A08	12	- 8	1/2"	3/4" - 16	9.9	60.0	11.1	29.0	22.0		
OPF13010-08A10	12	- 8	1/2"	7/8" - 14	12.3	63.0	12.7	32.0	25.0		
OPF13010-10A10	16	- 10	5/8"	7/8" - 14	12.5	63.0	12.7	32.0	25.0		
OPF13010-10A12	16	- 10	5/8"	1.1/16" - 12	15.5	72.0	15.1	37.5	32.0		
OPF13010-12A12	19	- 12	3/4"	1.1/16" - 12	15.5	76.0	15.1	39.5	32.0		
OPF13010-12A16	19	- 12	3/4"	1.5/16" - 12	21.5	76.5	15.1	40.0	38.0		
OPF13010-16A16	25	- 16	1"	1.5/16" - 12	21.5	89.5	15.1	41.0	38.0		



SAE STANDARD CONNECTIONS

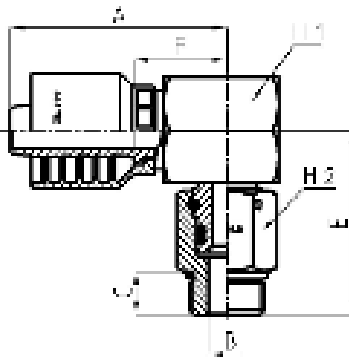
OPF14310

SAE
SWIVEL MALE OR. BOSS TYPE



PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	F	H2		
OPF14310-04A04	6	- 4	1/4"	7/16" - 20	4.0	70.5	9.1	43.0	17.0		
OPF14310-04A06	6	- 4	1/4"	9/16" - 18	7.0	71.5	9.9	44.0	22.0		
OPF14310-06A06	10	- 6	3/8"	9/16" - 18	7.0	77.5	9.9	48.0	22.0		
OPF14310-06A08	10	- 6	3/8"	3/4" - 16	9.3	76.5	11.1	47.0	22.0		
OPF14310-08A08	12	- 8	1/2"	3/4" - 16	9.3	84.0	11.1	53.0	27.0		
OPF14310-08A10	12	- 8	1/2"	7/8" - 14	9.3	72.4	13.0	41.5	27.0		
OPF14310-12A12	19	- 12	3/4"	1.1/16" - 12	12.5	87.0	15.0	50.5	32.0		

Not to be used as a live swivel



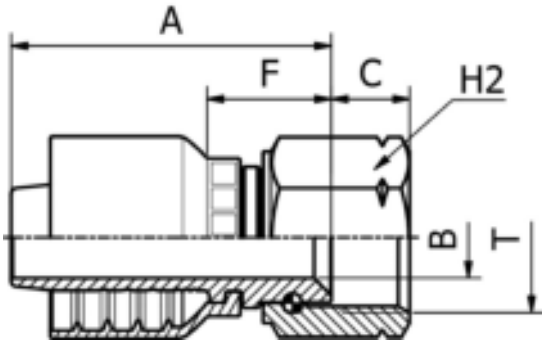
SAE STANDARD CONNECTIONS

OPF14390

90° SAE
SWIVEL MALE OR. BOSS

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	F	H1	H2
OPF14390-06A06	10	- 6	3/8"	9/16" - 18	5.7	49.5	9.9	40.0	20.0	22.0	17.0
OPF14390-06A08	10	- 6	3/8"	3/4" - 16	9.3	49.5	11.1	44.5	20.0	22.0	22.0
OPF14390-08A08	12	- 8	1/2"	3/4" - 16	9.3	54.5	11.1	47.0	23.5	27.0	22.0
OPF14390-08A10	12	- 8	1/2"	7/8" - 14	9.8	54.5	13.0	47.0	23.5	27.0	27.0
OPF14390-10A10	16	- 10	5/8"	7/8" - 14	9.8	58.0	13.0	47.0	23.5	27.0	27.0
OPF14390-12A12	19	- 12	3/4"	1.1/16" - 12	13.0	64.5	15.0	58.5	28.0	34.0	32.0

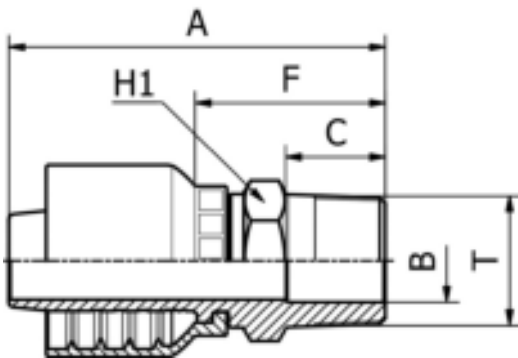
SAE STANDARD CONNECTIONS



OPF22612

SAE FEMALE
 45° CONE SEAT
 SAE J516 / J512
 (THRUST-WIRE NUT)

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	F	H2		
OPF22612-06A06	10	- 6	3/8"	9/16" - 18	7.0	46.0	10.8	16.5	22.0		



SAE STANDARD CONNECTIONS

OPF12810

NPTF
 MALE 60° CONE SEAT
 SAE J516 / J514

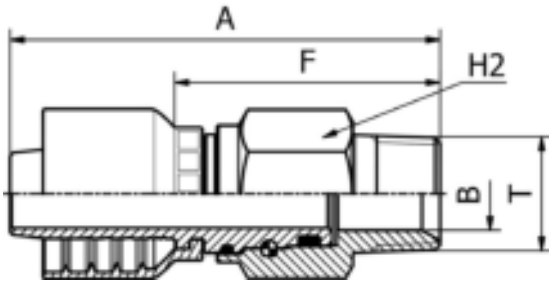
PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	F	H1		
OPF12810-03A02	5	- 3	3/16"	1/8" - 27	3.0	45.0	10.0	23.5	12.0		
OPF12810-03A04	5	- 3	3/16"	1/4" - 18	5.5	50.5	14.5	29.0	14.0		
OPF12810-04A02	6	- 4	1/4"	1/8" - 27	4.0	51.5	10.0	24.0	12.0		
OPF12810-04A04	6	- 4	1/4"	1/4" - 18	5.5	56.5	14.5	29.0	14.0		
OPF12810-04A06	6	- 4	1/4"	3/8" - 18	9.3	55.0	14.5	27.5	19.0		
OPF12810-04A08	6	- 4	1/4"	1/2" - 14	9.3	61.0	19.2	33.5	24.0		
OPF12810-05A04	8	- 5	5/16"	1/4" - 18	5.5	57.5	14.5	29.5	14.0		
OPF12810-05A06	8	- 5	5/16"	3/8" - 18	9.3	60.0	14.5	32.0	19.0		
OPF12810-06A04	10	- 6	3/8"	1/4" - 18	5.5	59.5	14.5	30.0	14.0		
OPF12810-06A06	10	- 6	3/8"	3/8" - 18	9.3	58.0	14.5	28.5	19.0		
OPF12810-06A08	10	- 6	3/8"	1/2" - 14	12.5	64.0	19.2	34.5	24.0		
OPF12810-08A06	12	- 8	1/2"	3/8" - 18	9.3	60.0	14.5	29.0	19.0		
OPF12810-08A08	12	- 8	1/2"	1/2" - 14	12.5	66.0	19.2	35.0	24.0		
OPF12810-08A12	12	- 8	1/2"	3/4" - 14	15.5	66.5	19.2	35.5	27.0		
OPF12810-10A08	16	- 10	5/8"	1/2" - 14	12.5	73.0	19.2	38.5	24.0		
OPF12810-10A12	16	- 10	5/8"	3/4" - 14	16.0	74.5	19.2	40.0	27.0		
OPF12810-12A08	19	- 12	3/4"	1/2" - 14	12.5	73.0	19.2	36.5	27.0		
OPF12810-12A12	19	- 12	3/4"	3/4" - 14	16.0	73.0	19.2	36.5	27.0		
OPF12810-12A16	19	- 12	3/4"	1" - 11.5	19.8	82.5	24.2	46.0	36.0		
OPF12810-16A12	25	- 16	1"	3/4" - 14	15.5	87.0	19.2	39.0	32.0		
OPF12810-16A16	25	- 16	1"	1" - 11.5	19.8	92.0	24.2	44.0	36.0		
OPF12810-16A20	25	- 16	1"	1.1/4" - 11.5	26.0	104.5	25.0	56.5	46.0		



SAE STANDARD CONNECTIONS

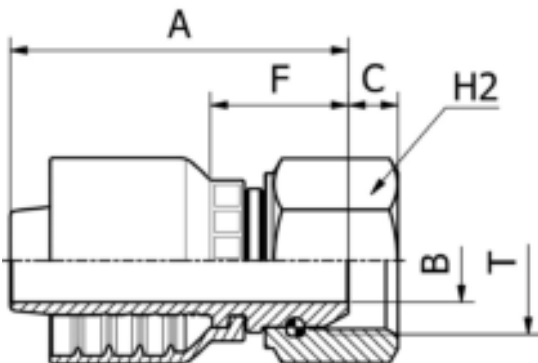
OPF14110R

**NPTF
 SWIVEL MALE**



PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	F	H1		
OPF14110-04A02R	6	- 4	1/4"	1/8" - 28	3.0	69.5	10.0	42.0	17.0		
OPF14110-04A04R	6	- 4	1/4"	1/4" - 18	4.0	74.0	14.5	46.5	17.0		
OPF14110-04A06R	6	- 4	1/4"	3/8" - 18	7.0	74.0	14.5	46.5	19.0		
OPF14110-06A04R	10	- 6	3/8"	1/4" - 18	4.0	80.0	14.5	50.5	22.0		
OPF14110-06A06R	10	- 6	3/8"	3/8" - 18	7.0	80.0	14.5	50.5	22.0		
OPF14110-06A08R	10	- 6	3/8"	1/2" - 14	9.3	84.5	19.2	55.0	24.0		
OPF14110-08A08R	12	- 8	1/2"	1/2" - 14	9.3	90.0	19.2	59.0	27.0		
OPF14110-12A12R	19	- 12	3/4"	3/4" - 14	16.0	94.5	19.2	58.0	32.0		
OPF14110-16A16R	25	- 16	1"	1" - 11	19.8	114.0	24.2	66.0	38.0		

Not to be used as a live swivel



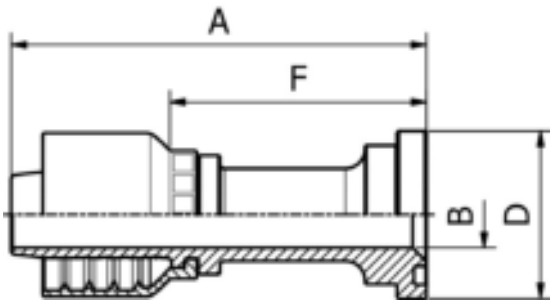
SAE STANDARD CONNECTIONS

OPF22812

**NPSM
 FEMALE 60° CONE
 SAE J516 / J514
 (THRUST-WIRE NUT)**

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	F	H2		
OPF22812-04A04	6	- 4	1/4"	1/4" - 18	4.0	45.0	4.2	17.5	19.0		
OPF22812-06A06	10	- 6	3/8"	3/8" - 18	7.0	50.5	6.0	21.0	22.0		
OPF22812-08A08	12	- 8	1/2"	1/2" - 14	9.3	54.0	6.5	23.0	27.0		
OPF22812-12A12	19	- 12	3/4"	3/4" - 14	15.0	61.0	9.0	24.5	32.0		
OPF22812-16A16	25	- 16	1"	1" - 11.5	19.8	75.5	10.5	27.5	38.0		

SAE STANDARD CONNECTIONS



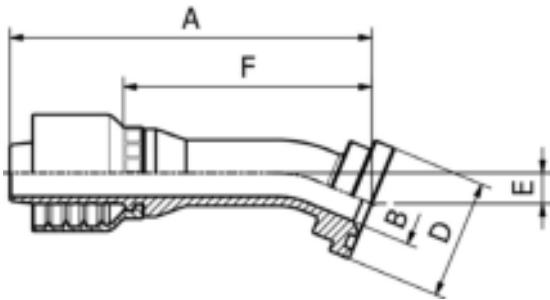
OPF23311

ISO / SAE
 CODE 61 FLANGE
 SAE J516 / ISO 12151-3

PART. REF.	HOSE BORE			Flange	DIMENSIONS mm					
	DN	Dash	inch		inch	B	A	D	F	
OPF23311-08A08	12	- 8	1/2"	1/2"	9.3	82.0	30.3	51.0		
OPF23311-08A12	12	- 8	1/2"	3/4"	15.1	89.0	38.0	58.0		
OPF23311-10A12	16	- 10	5/8"	3/4"	15.0	100.0	38.0	65.5		
OPF23311-12A12	19	- 12	3/4"	3/4"	15.0	94.5	38.0	58.0		
OPF23311-12A16	19	- 12	3/4"	1"	20.0	94.5	44.6	58.0		
OPF23311-16A16	25	- 16	1"	1"	19.8	112.5	44.6	64.5		
OPF23311-16A20	25	- 16	1"	1 1/4"	26.0	118.5	51.0	70.5		

FITTINGS 298

SAE STANDARD CONNECTIONS

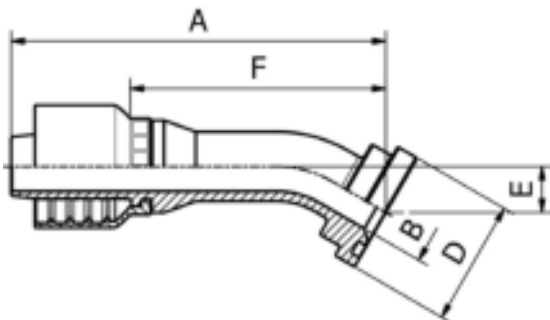


OPF23321

22,5° ISO / SAE
 CODE 61 FLANGE
 SAE J516 / ISO 12151-3

PART. REF.	HOSE BORE			Flange	DIMENSIONS mm					
	DN	Dash	inch		inch	B	A	D	E	F
OPF23321-08A08	12	- 8	1/2"	1/2"	9.3	95.0	30.3	8.0	64.0	
OPF23321-12A12	19	- 12	3/4"	3/4"	15.0	111.0	38.0	10.0	74.5	
OPF23321-12A16	19	- 12	3/4"	1"	20.0	111.0	44.6	10.0	74.5	
OPF23321-16A16	25	- 16	1"	1"	19.8	137.0	44.6	11.5	89.0	

SAE STANDARD CONNECTIONS



OPF23331

30° ISO / SAE
 CODE 61 FLANGE
 SAE J516 / ISO 12151-3

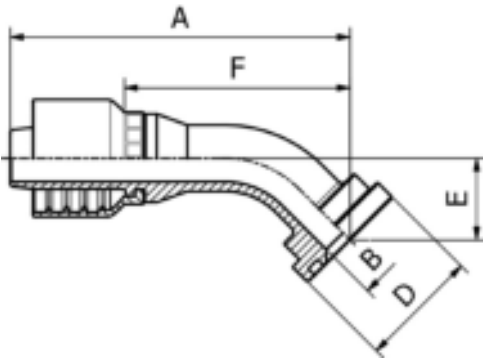
PART. REF.	HOSE BORE			Flange	DIMENSIONS mm					
	DN	Dash	inch		inch	B	A	D	E	F
OPF23331-08A08	12	- 8	1/2"	1/2"	9.3	93.5	30.3	11.0	62.5	
OPF23331-12A12	19	- 12	3/4"	3/4"	15.0	109.5	38.0	14.0	73.0	
OPF23331-12A16	19	- 12	3/4"	1"	20.0	109.5	44.6	14.0	73.0	
OPF23331-16A16	25	- 16	1"	1"	19.8	135.0	44.6	16.5	87.0	



SAE STANDARD CONNECTIONS

OPF23341

45° ISO / SAE
CODE 61 FLANGE
SAE J516 / ISO 12151-3

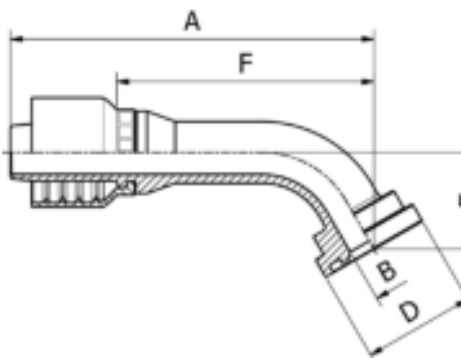


PART. REF.	HOSE BORE			Flange		DIMENSIONS mm						
	DN	Dash	inch	inch		B	A	D	E	F		
OPF23341-08A08	12	- 8	1/2"	1/2"		9.3	90.0	30.3	18.5	58.5		
OPF23341-08A12	12	- 8	1/2"	3/4"		15.0	90.5	38.0	19.0	59.5		
OPF23341-10A12	16	- 10	5/8"	3/4"		15.0	95.0	38.0	22.0	61.0		
OPF23341-12A12	19	- 12	3/4"	3/4"		15.0	104.5	38.0	23.0	68.5		
OPF23341-12A16	19	- 12	3/4"	1"		20.0	104.5	44.6	23.0	68.5		
OPF23341-16A16	25	- 16	1"	1"		19.8	129.5	44.6	27.5	81.5		
OPF23341-16A20	25	- 16	1"	1.1/4"		26.0	129.5	51.0	27.5	81.5		

SAE STANDARD CONNECTIONS

OPF23361

60° ISO / SAE
CODE 61 FLANGE
SAE J516 / ISO 12151-3

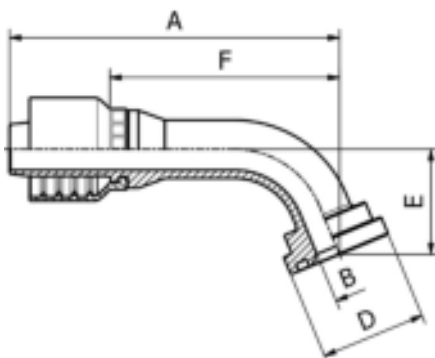


PART. REF.	HOSE BORE			Flange		DIMENSIONS mm						
	DN	Dash	inch	inch		B	A	D	E	F		
OPF23361-08A08	12	- 8	1/2"	1/2"		9.3	102.5	30.3	26.0	71.5		
OPF23361-12A12	19	- 12	3/4"	3/4"		15.0	123.5	38.0	33.0	87.0		
OPF23361-16A16	25	- 16	1"	1"		19.8	152.0	44.6	39.0	104.0		
OPF23361-16A20	25	- 16	1"	1.1/4"		26.0	152.0	51.0	39.0	104.0		

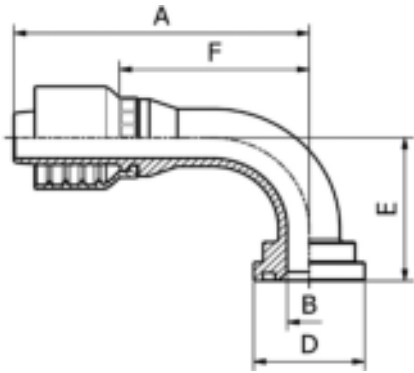
SAE STANDARD CONNECTIONS

OPF23371

67,5° ISO / SAE
CODE 61 FLANGE
SAE J516 / ISO 12151-3



PART. REF.	HOSE BORE			Flange		DIMENSIONS mm						
	DN	Dash	inch	inch		B	A	D	E	F		
OPF23371-08A08	12	- 8	1/2"	1/2"		9.3	99.0	30.3	29.5	68.0		
OPF23371-12A12	19	- 12	3/4"	3/4"		15.0	118.5	38.0	38.0	82.0		
OPF23371-12A16	19	- 12	3/4"	1"		20.0	118.5	44.6	38.0	82.0		
OPF23371-16A16	25	- 16	1"	1"		19.8	147.0	44.6	45.0	98.5		



SAE STANDARD CONNECTIONS

OPF23391

90° ISO / SAE
 CODE 61 FLANGE
 SAE J516 / ISO 12151-3

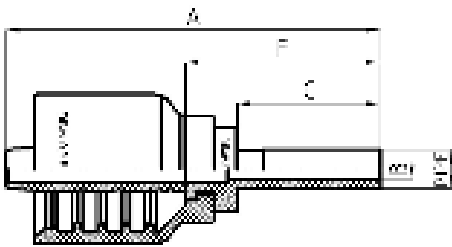
PART. REF.	HOSE BORE			Flange	DIMENSIONS mm							
	DN	Dash	inch		inch	B	A	D	E	F		
OPF23391-08A08	12	- 8	1/2"	1/2"	9.3	85.5	30.3	40.0	54.5			
OPF23391-08A12	12	- 8	1/2"	3/4"	15.0	85.5	38.0	41.0	54.5			
OPF23391-10A12	16	- 10	5/8"	3/4"	15.0	90.0	38.0	47.5	56.0			
OPF23391-12A12	19	- 12	3/4"	3/4"	15.0	101.0	38.0	52.0	64.5			
OPF23391-12A16	19	- 12	3/4"	1"	20.0	101.0	44.6	52.0	64.5			
OPF23391-16A16	25	- 16	1"	1"	19.8	125.5	44.6	62.0	77.5			
OPF23391-16A20	25	- 16	1"	1 1/4"	26.0	125.5	51.0	62.0	77.5			

FITTINGS 300

DIN STANDARD CONNECTIONS

OPF22010

METRIC
 STANDPIPE STRAIGHT L.T.

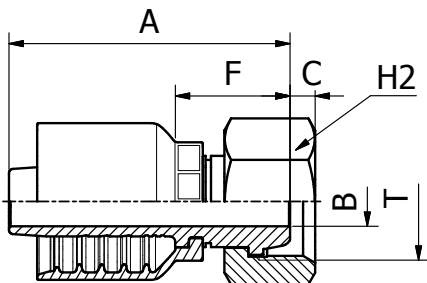


PART. REF.	HOSE BORE			Pipe	DIMENSIONS mm							
	DN	Dash	inch		mm	B	A	C	F			
OPF22010-04A06	6	- 4	1/4"	6.0	3.0	57.5	22.0	30.0				
OPF22010-06A10	10	- 6	3/8"	10.0	7.0	61.0	23.0	31.5				

DIN STANDARD CONNECTIONS

OPF21312/OPF21313

METRIC
 FEMALE
 MULTISEAL



PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm						
	DN	Dash	inch			T	mm	B	A	C	F	H2
OPF21312-06A16	10	- 6	3/8"	M 16X1.5	10.0	7.0	51.0	5.0	21.5	19.0		
OPF21313-06A18	10	- 6	3/8"	M 18X1.5	12.0	7.0	49.5	4.0	20.0	22.0		
OPF21313-08A22	12	- 8	1/2"	M 22X1.5	15.0	9.3	52.5	4.7	21.5	27.0		

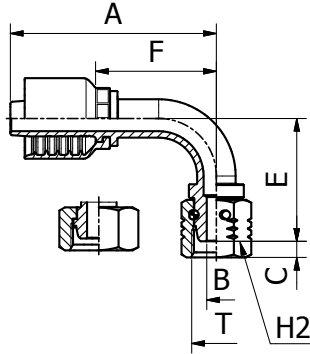
OPF21312: THRUST WIRE NUT / OPF21313: SLIP-ON NUT



DIN STANDARD CONNECTIONS

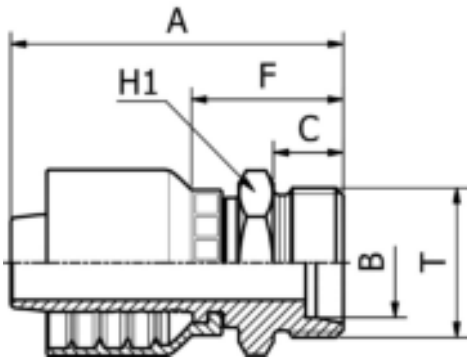
OPF21392/OPF21393

90° METRIC
FEMALE
MULTISEAL



PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm					
	DN	Dash	inch	T	mm	B	A	C	E	F	H2
OPF21392-06A16	10	- 6	3/8"	M 16X1,5	10.0	7.0	65.0	5.0	38.0	35.5	19.0
OPF21393-06A18	10	- 6	3/8"	M 18X1,5	12.0	7.0	66.0	4.0	31.5	36.5	22.0

OPF21392: THRUST WIRE NUT / OPF21393: SLIP-ON NUT



DIN STANDARD CONNECTIONS

OPF11110

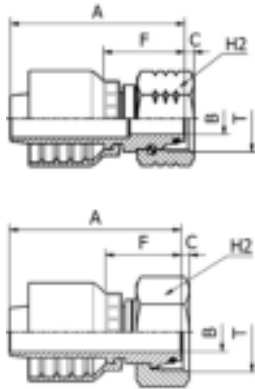
METRIC
MALE 24° CONE SEAT LIGHT DUTY
DIN 20066 / ISO 12151-2

PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm					
	DN	Dash	inch	T	mm	B	A	C	F	H1	
OPF11110-04A12	6	- 4	1/4"	M 12X1,5	6.0	4.0	49.0	10.0	21.5	14.0	
OPF11110-04A14	6	- 4	1/4"	M 14X1,5	8.0	4.0	49.0	10.0	21.5	14.0	
OPF11110-04A16	6	- 4	1/4"	M 16X1,5	10.0	7.0	51.0	11.0	23.5	17.0	
OPF11110-04A18	6	- 4	1/4"	M 18X1,5	12.0	9.0	51.0	11.0	23.5	19.0	
OPF11110-05A16	8	- 5	5/16"	M 16X1,5	10.0	7.0	52.0	11.0	24.0	17.0	
OPF11110-05A18	8	- 5	5/16"	M 18X1,5	12.0	9.0	52.0	11.0	24.0	19.0	
OPF11110-06A16	10	- 6	3/8"	M 16X1,5	10.0	7.0	53.5	11.0	24.0	17.0	
OPF11110-06A18	10	- 6	3/8"	M 18X1,5	12.0	9.0	54.0	11.0	24.5	19.0	
OPF11110-06A22	10	- 6	3/8"	M 22X1,5	15.0	10.0	55.0	12.0	25.5	22.0	
OPF11110-08A22	12	- 8	1/2"	M 22X1,5	15.0	10.0	56.5	12.0	25.5	22.0	
OPF11110-08A26	12	- 8	1/2"	M 26X1,5	18.0	12.5	57.5	12.0	26.5	27.0	
OPF11110-10A22	16	- 10	5/8"	M 22X1,5	15.0	10.0	60.0	12.0	25.5	22.0	
OPF11110-10A26	16	- 10	5/8"	M 26X1,5	18.0	12.5	61.0	12.0	26.5	27.0	
OPF11110-12A30	19	- 12	3/4"	M 30X2	22.0	15.0	66.5	14.0	30.0	30.0	

DIN STANDARD CONNECTIONS

OPF21512/OPF21513

METRIC
O-RING FEMALE 24° CONE LIGHT DUTY
DIN 20066 / ISO 12151-2



PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm						
	DN	Dash	inch			T	mm	B	A	C	F	H2
OPF21512-04A12	6	- 4	1/4"	M 12X1,5	6.0	3.0	48.5	2.2	21.0	17.0		
OPF21513-04A14	6	- 4	1/4"	M 14X1,5	8.0	4.0	49.5	1.3	22.0	17.0		
OPF21513-04A16	6	- 4	1/4"	M 16X1,5	10.0	6.0	50.0	1.8	22.5	19.0		
OPF21513-04A18	6	- 4	1/4"	M 18X1,5	12.0	7.0	49.5	2.0	22.0	22.0		
OPF21512-05A14	8	- 5	5/16"	M 14X1,5	8.0	4.0	48.0	2.9	20.0	17.0		
OPF21513-05A16	8	- 5	5/16"	M 16X1,5	10.0	6.0	50.5	1.8	22.5	19.0		
OPF21513-05A18	8	- 5	5/16"	M 18X1,5	12.0	7.0	50.0	2.0	22.0	22.0		
OPF21512-06A16	10	- 6	3/8"	M 16X1,5	10.0	6.0	52.5	3.0	23.0	19.0		
OPF21513-06A18	10	- 6	3/8"	M 18X1,5	12.0	7.0	52.0	2.0	22.5	22.0		
OPF21513-06A22	10	- 6	3/8"	M 22X1,5	15.0	9.3	54.5	1.5	25.0	27.0		
OPF21512-08A18	12	- 8	1/2"	M 18X1,5	12.0	7.0	60.0	2.9	29.0	22.0		
OPF21513-08A22	12	- 8	1/2"	M 22X1,5	15.0	9.3	56.5	1.5	25.5	27.0		
OPF21513-08A26	12	- 8	1/2"	M 26X1,5	18.0	12.5	57.0	2.0	26.0	32.0		
OPF21513-10A26	16	- 10	5/8"	M 26X1,5	18.0	12.5	60.5	2.0	26.0	32.0		
OPF21513-10A30	16	- 10	5/8"	M 30X2	22.0	15.0	68.5	3.0	34.0	36.0		
OPF21512-12A26	19	- 12	3/4"	M 26X1,5	18.0	12.5	67.5	2.3	31.0	32.0		
OPF21513-12A30	19	- 12	3/4"	M 30X2	22.0	15.0	64.5	3.0	28.0	36.0		
OPF21513-12A36	19	- 12	3/4"	M 36X2	28.0	20.0	65.0	3.7	28.5	41.0		
OPF21513-16A36	25	- 16	1"	M 36X2	28.0	19.8	77.5	3.7	29.5	41.0		

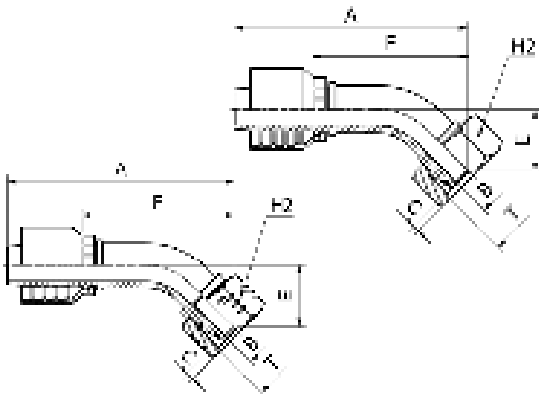
OPF21512: THRUST WIRE NUT / OPF21513: SLIP-ON NUT

FITTINGS 302

DIN STANDARD CONNECTIONS

OPF21542/OPF21543

45° METRIC
O-RING FEMALE SWEEP ELBOW 24° CONE
LIGHT DUTY
DIN 20066 / ISO 12151-2



PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm						
	DN	Dash	inch			T	mm	B	A	C	E	F
OPF21543-04A14	6	- 4	1/4"	M 14X1,5	8.0	4.0	65.5	1.3	16.5	38.0	17.0	
OPF21543-04A16	6	- 4	1/4"	M 16X1,5	10.0	6.0	65.5	1.8	17.0	38.0	19.0	
OPF21543-05A16	8	- 5	5/16"	M 16X1,5	10.0	6.0	69.5	1.8	17.5	41.5	19.0	
OPF21543-05A18	8	- 5	5/16"	M 18X1,5	12.0	7.0	69.5	2.0	17.0	41.5	22.0	
OPF21542-06A16	10	- 6	3/8"	M 16X1,5	10.0	6.0	77.0	3.0	21.5	47.5	19.0	
OPF21543-06A18	10	- 6	3/8"	M 18X1,5	12.0	7.0	73.0	2.0	16.5	43.5	22.0	
OPF21543-06A22	10	- 6	3/8"	M 22X1,5	15.0	9.3	74.0	1.5	18.0	45.0	27.0	
OPF21543-08A22	12	- 8	1/2"	M 22X1,5	15.0	9.3	83.0	1.5	19.0	52.0	27.0	
OPF21543-10A26	16	- 10	5/8"	M 26X1,5	18.0	12.5	96.5	2.0	26.5	62.0	32.0	
OPF21543-12A30	19	- 12	3/4"	M 30X2	22.0	15.0	107.5	3.0	28.5	71.0	36.0	
OPF21543-16A36	25	- 16	1"	M 36X2	28.0	19.8	133.0	3.7	32.0	85.0	41.0	

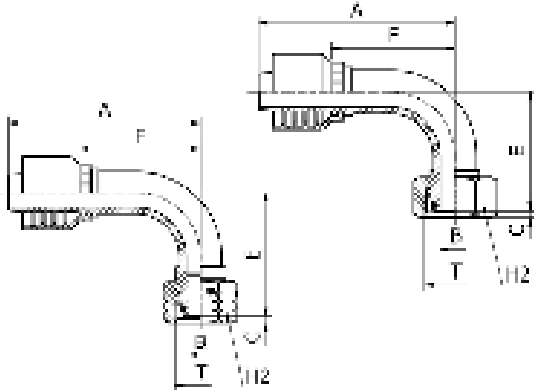
OPF21542: THRUST WIRE NUT / OPF21543: SLIP-ON NUT



DIN STANDARD CONNECTIONS

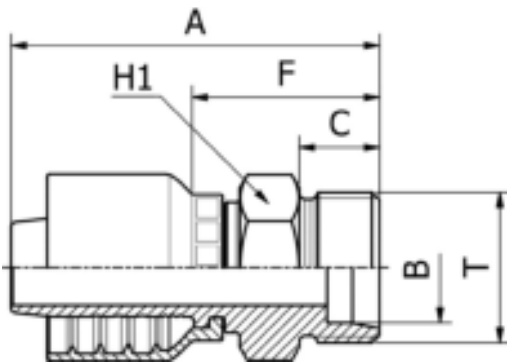
OPF21592/OPF21593

**90° METRIC
O-RING FEMALE SWEPT ELBOW 24° CONE
LIGHT DUTY
DIN 20066 / ISO 12151-2**



PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm					
	DN	Dash	inch	T	mm	B	A	C	E	F	H2
OPF21593-03A12	5	- 3	3/16"	M 12X1,5	6.0	3.0	47.5	0.7	30.0	26.0	14.0
OPF21592-04A12	6	- 4	1/4"	M 12X1,5	6.0	3.0	56.0	2.2	32.5	28.5	17.0
OPF21593-04A14	6	- 4	1/4"	M 14X1,5	8.0	4.0	57.0	1.3	31.5	29.5	17.0
OPF21593-04A16	6	- 4	1/4"	M 16X1,5	10.0	6.0	57.0	1.8	32.0	29.5	19.0
OPF21593-04A18	6	- 4	1/4"	M 18X1,5	12.0	7.0	57.0	2.0	33.0	29.5	22.0
OPF21593-05A16	8	- 5	5/16"	M 16X1,5	10.0	6.0	60.0	1.8	32.5	32.0	19.0
OPF21593-05A18	8	- 5	5/16"	M 18X1,5	12.0	7.0	60.0	2.0	32.5	32.0	22.0
OPF21592-06A16	10	- 6	3/8"	M 16X1,5	10.0	6.0	65.0	3.0	40.0	35.5	19.0
OPF21593-06A18	10	- 6	3/8"	M 18X1,5	12.0	7.0	66.0	2.0	33.5	36.5	22.0
OPF21593-06A22	10	- 6	3/8"	M 22X1,5	15.0	9.3	66.0	1.5	35.0	36.5	27.0
OPF21592-08A18	12	- 8	1/2"	M 18X1,5	12.0	7.0	75.0	2.9	48.0	44.0	22.0
OPF21593-08A26	12	- 8	1/2"	M 26X1,5	18.0	12.5	76.0	2.0	40.0	45.0	32.0
OPF21593-08A22	12	- 8	1/2"	M 22X1,5	15.0	9.3	76.0	1.5	39.5	45.0	27.0
OPF21593-10A26	16	- 10	5/8"	M 26X1,5	18.0	12.5	86.0	2.0	53.0	51.5	32.0
OPF21593-10A30	16	- 10	5/8"	M 30X2	22.0	15.0	86.0	3.0	54.0	51.5	36.0
OPF21593-12A30	19	- 12	3/4"	M 30X2	22.0	15.0	97.5	3.0	59.5	61.5	36.0
OPF21593-16A36	25	- 16	1"	M 36X2	28.0	19.8	125.0	3.7	69.5	76.5	41.0

OPF21592: THRUST WIRE NUT / OPF21593: SLIP-ON NUT



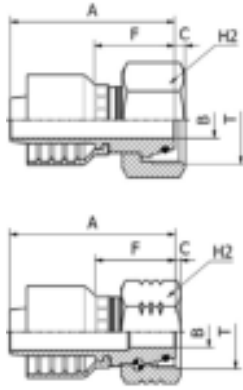
DIN STANDARD CONNECTIONS

OPF11210

**METRIC
MALE 24° CONE SEAT HEAVY DUTY
DIN 20066 / ISO 12151-2**

PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm					
	DN	Dash	inch	T	mm	B	A	C	F	H1	
OPF11210-04A16	6	- 4	1/4"	M 16X1,5	8.0	5.5	53.0	12.0	25.5	17.0	
OPF11210-04A18	6	- 4	1/4"	M 18X1,5	10.0	6.0	54.0	12.0	26.5	19.0	
OPF11210-04A20	6	- 4	1/4"	M 20X1,5	12.0	7.0	56.5	12.0	29.0	22.0	
OPF11210-05A20	8	- 5	5/16"	M 20X1,5	12.0	7.0	57.0	12.0	29.0	22.0	
OPF11210-06A18	10	- 6	3/8"	M 18X1,5	10.0	7.0	56.5	12.0	27.0	19.0	
OPF11210-06A20	10	- 6	3/8"	M 20X1,5	12.0	7.0	58.5	12.0	29.0	22.0	
OPF11210-06A22	10	- 6	3/8"	M 22X1,5	14.0	8.0	60.5	14.0	31.0	22.0	
OPF11210-08A24	12	- 8	1/2"	M 24X1,5	16.0	9.3	62.5	14.0	31.5	24.0	
OPF11210-10A30	16	- 10	5/8"	M 30X2	20.0	15.0	70.0	16.0	35.5	30.0	
OPF11210-12A30	19	- 12	3/4"	M 30X2	20.0	15.0	73.5	16.0	37.0	30.0	
OPF11210-12A36	19	- 12	3/4"	M 36X2	25.0	19.8	77.5	18.0	41.0	36.0	
OPF11210-16A36	25	- 16	1"	M 36X2	25.0	19.8	90.5	18.0	42.5	36.0	
OPF11210-16A42	25	- 16	1"	M 42X2	30.0	25.0	92.5	20.0	44.5	46.0	

303 FITTINGS



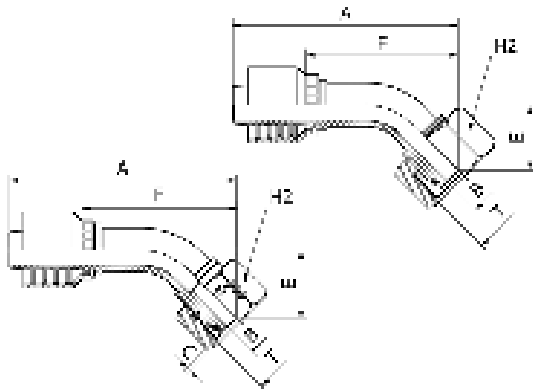
DIN STANDARD CONNECTIONS

OPF21612/OPF21613

METRIC
O-RING FEMALE 24° CONE HEAVY DUTY
DIN 20066 / ISO 12151-2

PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm						
	DN	Dash	inch			T	mm	B	A	C	F	H2
OPF21613-03A16	5	- 3	3/16"	M 16X1,5	8.0	3.0	43.0	3.4	21.5	19.0		
OPF21613-04A14	6	- 4	1/4"	M 14X1,5	6.0	3.0	51.0	1.9	23.5	17.0		
OPF21613-04A16	6	- 4	1/4"	M 16X1,5	8.0	4.0	49.5	3.4	22.0	19.0		
OPF21613-04A18	6	- 4	1/4"	M 18X1,5	10.0	4.0	55.5	2.5	28.0	22.0		
OPF21613-04A20	6	- 4	1/4"	M 20X1,5	12.0	7.0	53.5	2.0	26.0	24.0		
OPF21613-05A18	8	- 5	5/16"	M 18X1,5	10.0	5.5	56.0	2.5	28.0	22.0		
OPF21613-05A20	8	- 5	5/16"	M 20X1,5	12.0	5.5	53.0	2.0	25.0	24.0		
OPF21613-06A20	10	- 6	3/8"	M 20X1,5	12.0	7.0	54.5	2.0	25.5	24.0		
OPF21613-06A22	10	- 6	3/8"	M 22X1,5	14.0	7.0	62.0	3.0	32.5	27.0		
OPF21613-08A24	12	- 8	1/2"	M 24X1,5	16.0	9.3	58.0	4.0	26.5	30.0		
OPF21613-10A30	16	- 10	5/8"	M 30X2	20.0	12.5	65.0	3.5	30.5	36.0		
OPF21612-12A30	19	- 12	3/4"	M 30X2	20.0	12.5	70.0	2.2	33.5	36.0		
OPF21613-12A36	19	- 12	3/4"	M 36X2	25.0	15.0	70.5	4.5	34.0	41.0		
OPF21612-16A36	25	- 16	1"	M 36X2	25.0	15.0	83.5	1.7	35.5	41.0		
OPF21613-16A42	25	- 16	1"	M 42X2	30.0	19.8	83.5	6.3	35.5	50.0		

OPF21612: THRUST WIRE NUT / OPF21613: SLIP-ON NUT



DIN STANDARD CONNECTIONS

OPF21642/OPF21643

45° METRIC
O-RING FEMALE SWEPT ELBOW 24° CONE
HEAVY DUTY
DIN 20066 / ISO 12151-2

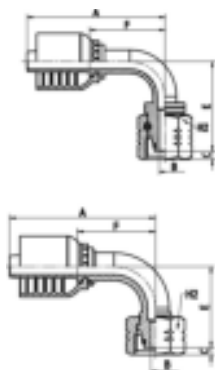
PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm						
	DN	Dash	inch			T	mm	B	A	C	E	F
OPF21643-04A16	6	- 4	1/4"	M 16X1,5	8.0	4.0	64.0	3.4	15.0	36.5	19.0	
OPF21643-04A18	6	- 4	1/4"	M 18X1,5	10.0	4.0	65.0	2.5	16.5	37.5	22.0	
OPF21643-05A20	8	- 5	5/16"	M 20X1,5	12.0	5.5	70.0	2.0	18.5	42.0	24.0	
OPF21643-06A20	10	- 6	3/8"	M 20X1,5	12.0	7.0	73.5	2.0	17.0	44.0	24.0	
OPF21643-06A22	10	- 6	3/8"	M 22X1,5	14.0	7.0	75.0	3.0	18.5	45.5	27.0	
OPF21643-08A24	12	- 8	1/2"	M 24X1,5	16.0	9.3	83.5	4.0	20.0	52.5	30.0	
OPF21643-10A30	16	- 10	5/8"	M 30X2	20.0	12.5	99.5	3.5	29.5	65.5	36.0	
OPF21642-12A30	19	- 12	3/4"	M 30X2	20.0	12.5	113.0	2.2	34.0	76.5	36.0	
OPF21643-12A36	19	- 12	3/4"	M 36X2	25.0	15.0	111.5	4.5	32.5	75.0	41.0	
OPF21643-16A42	25	- 16	1"	M 42X2	30.0	19.8	138.0	6.3	35.5	90.0	50.0	

OPF21642: THRUST WIRE NUT / OPF21643: SLIP-ON NUT

DIN STANDARD CONNECTIONS

OPF21692/OPF21693

90° METRIC
 O-RING FEMALE SWEPT ELBOW 24° CONE
 HEAVY DUTY
 DIN 20066 / ISO 12151-2



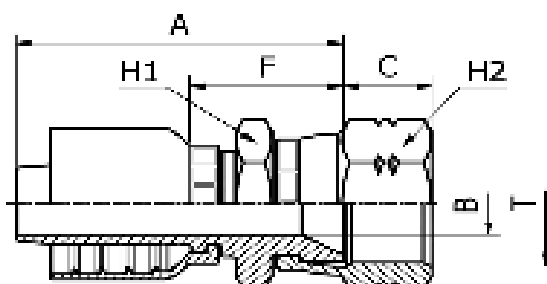
PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm						
	DN	Dash	inch			T	mm	B	A	C	E	F
OPF21693-04A16	6	- 4	1/4"	M 16X1,5	8.0	4.0	57.0	3.4	29.5	29.5	19.0	
OPF21693-04A18	6	- 4	1/4"	M 18X1,5	10.0	4.0	57.0	2.5	31.0	29.5	22.0	
OPF21693-04A20	6	- 4	1/4"	M 20X1,5	12.0	5.5	57.0	2.0	34.5	29.5	24.0	
OPF21693-05A20	8	- 5	5/16"	M 20X1,5	12.0	5.5	60.0	2.0	34.0	32.0	24.0	
OPF21693-06A20	10	- 6	3/8"	M 20X1,5	12.0	7.0	66.0	2.0	35.0	36.5	24.0	
OPF21693-06A22	10	- 6	3/8"	M 22X1,5	14.0	7.0	66.0	3.0	37.0	36.5	27.0	
OPF21693-06A24	10	- 6	3/8"	M 24X1,5	16.0	9.3	66.0	4.0	36.0	36.5	30.0	
OPF21693-08A24	12	- 8	1/2"	M 24X1,5	16.0	9.3	76.0	4.0	40.5	45.0	30.0	
OPF21693-10A30	16	- 10	5/8"	M 30X2	20.0	12.5	86.0	3.5	57.5	51.5	36.0	
OPF21693-12A30	19	- 12	3/4"	M 30X2	20.0	12.5	98.0	2.2	67.5	61.5	36.0	
OPF21693-12A36	19	- 12	3/4"	M 36X2	25.0	15.0	97.5	4.5	64.5	61.5	41.0	
OPF21692-16A36	25	- 16	1"	M 36X2	25.0	15.0	127.5	1.7	86.0	79.5	41.0	
OPF21693-16A42	25	- 16	1"	M 42X2	30.0	19.8	127.5	6.3	74.5	79.0	50.0	

OPF21692: THRUST WIRE NUT / OPF21693: SLIP-ON NUT

JIS STANDARD CONNECTIONS

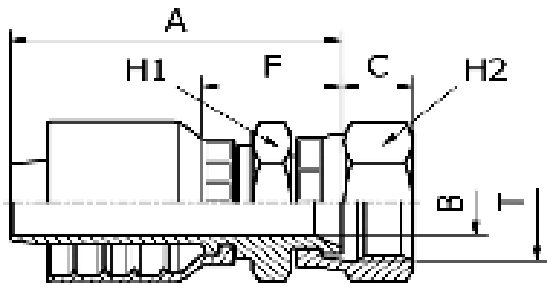
OPF24011

JIS METRIC
 FEMALE (KOMATSU)



PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm						
	DN	Dash	inch			T	mm	B	A	C	F	H1
OPF24011-04A14	6	- 4	1/4"	M 14X1,5	8.0	4.0	50.5	10.5	23.0	19.0	19.0	
OPF24011-06A14	10	- 6	3/8"	M 14X1,5	10.0	4.0	53.0	10.5	23.5	19.0	19.0	
OPF24011-06A18	10	- 6	3/8"	M 18X1,5	12.0	7.0	53.0	11.5	23.5	24.0	24.0	
OPF24011-08A22	12	- 8	1/2"	M 22X1,5	12.0	9.3	56.0	13.0	25.0	27.0	27.0	
OPF24011-10A24	16	- 10	5/8"	M 24X1,5	14.0	12.5	61.0	15.1	26.5	32.0	32.0	
OPF24011-12A30	19	- 12	3/4"	M 30X1,5	16.0	15.0	68.0	18.3	31.5	36.0	36.0	
OPF24011-16A33	25	- 16	1"	M 33X1,5	18.0	19.8	81.5	21.3	33.5	41.0	41.0	

JIS STANDARD CONNECTIONS



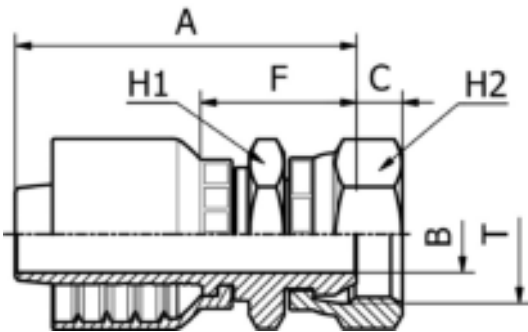
OPF23811

JIS BSP
 FEMALE 60° CONE SEAT (TOYOTA)
 JIS B 8363
 (CRIMPED-BACK NUT)

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	F	H1	H2
OPF23811-04A04	6	- 4	1/4"	1/4" - 19	4.0	46.0	8.3	18.5	19.0	19.0	
OPF23811-06A06	10	- 6	3/8"	3/8" - 19	7.0	52.5	10.0	23.0	22.0	22.0	
OPF23811-08A08	12	- 8	1/2"	1/2" - 14	9.3	53.0	11.5	22.0	27.0	27.0	
OPF23811-12A12	19	- 12	3/4"	3/4" - 14	15.0	62.5	13.5	26.0	32.0	32.0	
OPF23811-16A16	25	- 16	1"	1" - 11	19.8	78.5	14.5	30.5	38.0	38.0	

FITTINGS 306

JIS STANDARD CONNECTIONS

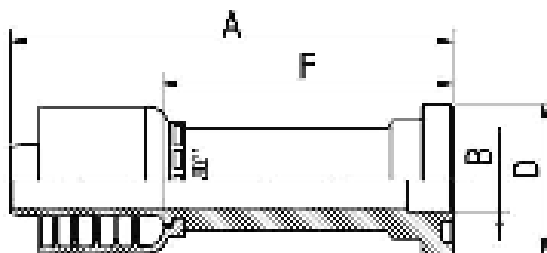


OPF20711

JIS BSP
 FEMALE 60° CONE (NISSAN)
 JIS B 8363

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	F	H1	H2
OPF20711-12A12	19	- 12	3/4"	3/4" - 14	15.0	66.5	8.9	30.0	32.0	32.0	

ORIGINAL EQUIPMENT CONNECTIONS



OPF24111

STRAIGHT KOMATSU FLANGE

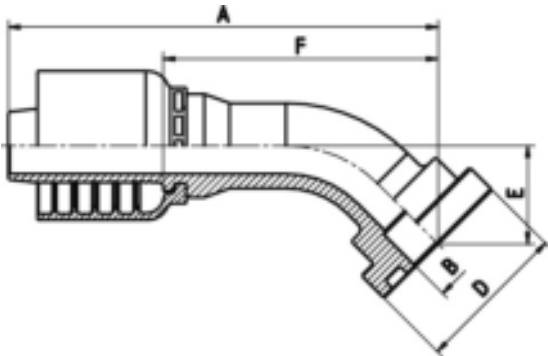
PART. REF.	HOSE BORE			Flange	DIMENSIONS mm						
	DN	Dash	inch		inch	B	A	D	F		
OPF24111-10A10	16	- 10	5/8"	5/8"	14.0	100.0	34.0	65.5			



ORIGINAL EQUIPMENT CONNECTIONS

OPF24141

45° KOMATSU FLANGE

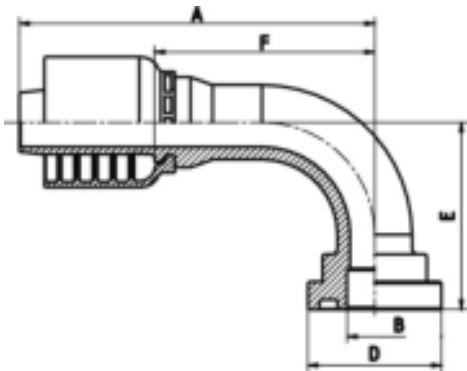


PART. REF.	HOSE BORE			Flange		DIMENSIONS mm						
	DN	Dash	inch	inch		B	A	D	E	F		
OPF24141-10A10	16	- 10	5/8"	5/8"		14.0	95.0	34.0	22.0	61.0		

ORIGINAL EQUIPMENT CONNECTIONS

OPF24191

90° KOMATSU FLANGE

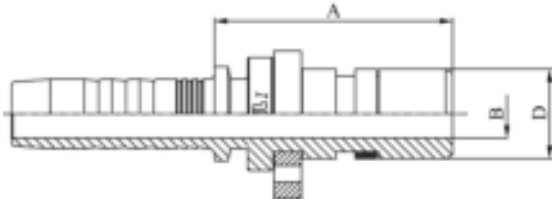


PART. REF.	HOSE BORE			Flange		DIMENSIONS mm						
	DN	Dash	inch	inch		B	A	D	E	F		
OPF24191-10A10	16	- 10	5/8"	5/8"		14.0	90.0	34.0	47.5	56.0		

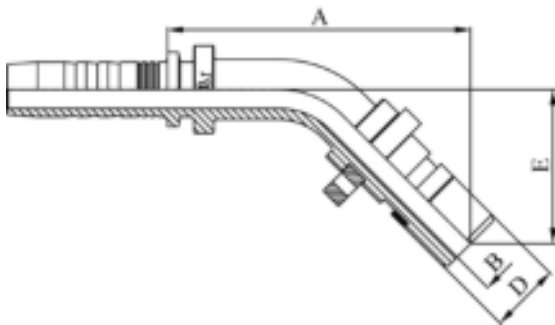
MULTIFIT INSERT

M12H10

EF STRAIGHT
 MALE INSERT



PART. REF.	HOSE BORE			Bar	DIMENSIONS mm					
	DN	Dash	inch		B	A	D			
M12H10-04-04	6	- 4	1/4"	350.0	4.0	30.0	10.0			
M12H10-04-06	6	- 4	1/4"	350.0	7.0	34.0	13.0			
M12H10-05-06	8	- 5	5/16"	350.0	7.0	34.0	13.0			
M12H10-06-04	10	- 6	3/8"	350.0	4.0	30.5	10.0			
M12H10-06-06	10	- 6	3/8"	350.0	7.0	34.5	13.0			
M12H10-06-08	10	- 6	3/8"	350.0	9.3	34.5	16.0			
M12H10-08-06	12	- 8	1/2"	350.0	7.0	35.0	13.0			
M12H10-08-08	12	- 8	1/2"	350.0	9.3	35.0	16.0			
M12H10-10-08	16	- 10	5/8"	350.0	9.3	35.0	16.0			
M12H10-10-12	16	- 10	5/8"	280.0	15.0	44.5	23.0			
M12H10-12-12	19	- 12	3/4"	280.0	15.0	44.5	23.0			

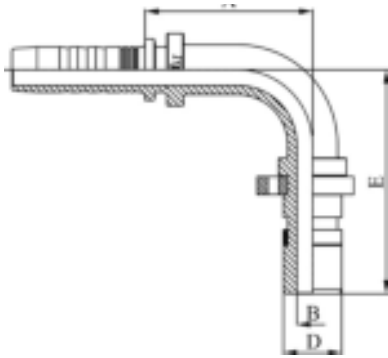


MULTIFIT INSERT

M12H40

EF 45° ELBOW
 MALE INSERT

PART. REF.	HOSE BORE			Bar	DIMENSIONS mm					
	DN	Dash	inch		B	A	D	E		
M12H40-04-04	6	- 4	1/4"	350.0	4.0	46.0	10.0	23.5		
M12H40-04-06	6	- 4	1/4"	350.0	7.0	52.0	13.0	27.0		
M12H40-05-06	8	- 5	5/16"	350.0	7.0	53.0	13.0	27.5		
M12H40-06-04	10	- 6	3/8"	350.0	4.0	47.0	10.0	23.5		
M12H40-06-06	10	- 6	3/8"	350.0	7.0	55.5	13.0	28.0		
M12H40-08-08	12	- 8	1/2"	350.0	9.3	61.5	16.0	30.0		
M12H40-10-12	16	- 10	5/8"	280.0	15.0	79.0	23.0	41.0		
M12H40-10-08	16	- 10	5/8"	350.0	9.3	65.0	16.0	30.0		
M12H40-12-12	19	- 12	3/4"	280.0	15.0	85.5	23.0	42.5		



MULTIFIT INSERT

M12H90

EF 90° ELBOW
 MALE INSERT

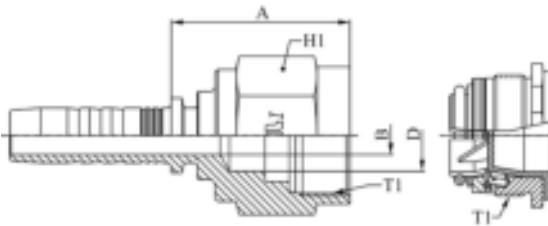
PART. REF.	HOSE BORE			Bar	DIMENSIONS mm							
	DN	Dash	inch		B	A	D	E				
M12H90-04-04	6	- 4	1/4"	350.0	4.0	30.0	10.0	40.0				
M12H90-04-06	6	- 4	1/4"	350.0	7.0	32.0	13.0	45.0				
M12H90-05-06	8	- 5	5/16"	350.0	7.0	33.5	13.0	46.5				
M12H90-06-04	10	- 6	3/8"	350.0	4.0	30.5	10.0	40.0				
M12H90-06-06	10	- 6	3/8"	350.0	7.0	37.0	13.0	49.5				
M12H90-08-06	12	- 8	1/2"	350.0	7.0	37.5	13.0	49.5				
M12H90-08-08	12	- 8	1/2"	350.0	9.3	44.0	16.0	55.0				
M12H90-10-08	16	- 10	5/8"	350.0	9.3	47.0	16.0	55.0				
M12H90-10-12	16	- 10	5/8"	280.0	15.0	55.0	23.0	74.5				
M12H90-12-12	19	- 12	3/4"	280.0	15.0	62.5	23.0	79.0				

309 FITTINGS

MULTIFIT INSERT

M22H10

EF STRAIGHT
 FEMALE INSERT

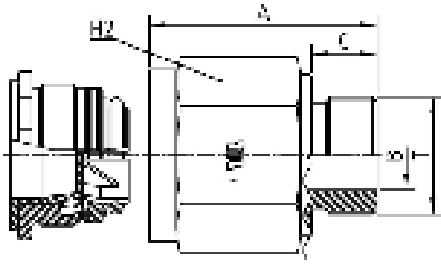


PART. REF.	HOSE BORE			Thread	W.P.	DIMENSIONS mm							
	DN	Dash	inch	T	Bar	B	A	D	H1				
M22H10-04-04	6	- 4	1/4"	M 18X1	350.0	4.0	30.0	10.0	22.0				
M22H10-06-06	10	- 6	3/8"	M 22X1	350.0	7.0	33.5	13.0	25.0				
M22H10-08-08	12	- 8	1/2"	M 25X1	350.0	9.3	34.0	16.0	28.0				
M22H10-10-08	16	- 10	5/8"	M 25X1	350.0	12.5	34.0	23.0	28.0				
M22H10-10-12	16	- 10	5/8"	M 33X1,5	280.0	12.5	45.5	23.0	38.0				
M22H10-12-12	19	- 12	3/4"	M 33X1,5	280.0	15.0	46.5	23.0	38.0				

ADAPTORS

A52032H

ADAPTOR BSP
 MALE O-RING BOSS TYPE
 ISO 1179
 EF FEMALE



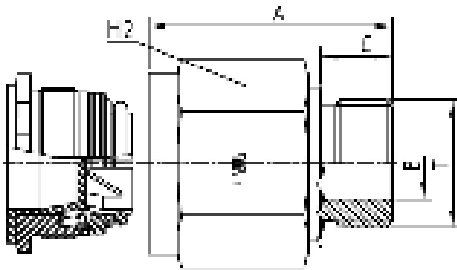
PART. REF.	HOSE BORE			Thread	W.P.	DIMENSIONS mm						
	DN	Dash	inch	T	Bar	B	A	C	D	H2		
A52032H-04-04	6	- 4	1/4"	1/4" - 19	350.0	7.5	34.0	11.2	10.0	22.0		
A52032H-06-04	6	- 4	1/4"	3/8" - 19	350.0	9.0	34.0	11.2	10.0	22.0		
A52032H-06-06	10	- 6	3/8"	3/8" - 19	350.0	9.9	36.5	11.2	13.0	25.0		
A52032H-08-06	10	- 6	3/8"	1/2" - 14	350.0	12.3	39.5	14.5	13.0	27.0		
A52032H-08-08	12	- 8	1/2"	1/2" - 14	350.0	12.3	40.0	14.5	16.0	28.0		
A52032H-12-12	19	- 12	3/4"	3/4" - 14	280.0	15.5	50.5	14.5	23.0	38.0		
A52032H-16-12	19	- 12	3/4"	1" - 11	280.0	20.0	53.5	18.6	23.0	46.0		

FITTINGS 310

ADAPTORS

A52302H

ADAPTOR SAE
 O-RING BOSS MALE
 ISO 11926
 EF FEMALE



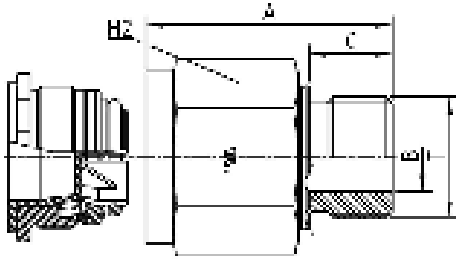
PART. REF.	HOSE BORE			Thread	W.P.	DIMENSIONS mm						
	DN	Dash	inch	T	Bar	B	A	C	D	H2		
A52302H-06-04	6	- 4	1/4"	9/16" - 18	350.0	7.0	32.5	9.9	10.0	22.0		
A52302H-06-06	10	- 6	3/8"	9/16" - 18	350.0	7.0	36.0	9.9	13.0	25.0		
A52302H-08-06	10	- 6	3/8"	3/4" - 16	350.0	9.3	37.0	11.1	13.0	25.0		
A52302H-08-08	12	- 8	1/2"	3/4" - 16	350.0	9.3	37.0	11.1	16.0	28.0		
A52302H-10-08	12	- 8	1/2"	7/8" - 14	350.0	12.5	38.5	12.7	16.0	28.0		
A52302H-10-12	19	- 12	3/4"	7/8" - 14	280.0	12.5	49.5	12.7	23.0	38.0		
A52302H-12-12	19	- 12	3/4"	1,1/16" - 12	280.0	15.0	51.0	15.1	23.0	38.0		



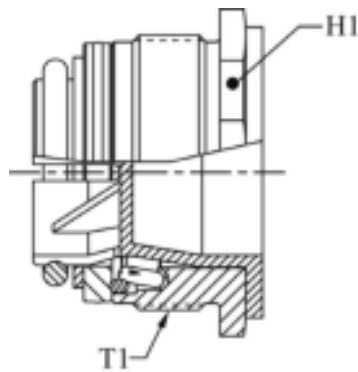
ADAPTORS

A52192H

ADAPTOR METRIC
 MALE
 ISO 6149
 EF FEMALE



PART. REF.	HOSE BORE			Thread	W.P.	DIMENSIONS mm						
	DN	Dash	inch			T	Bar	B	A	C	D	H2
A52192H-14-04	6	- 4	1/4"	M 14X1,5	350.0	6.0	34.0	11.0	10.0	22.0		
A52192H-16-04	6	- 4	1/4"	M 16X1,5	350.0	7.0	35.0	12.5	10.0	22.0		
A52192H-18-06	10	- 6	3/8"	M 18X1,5	350.0	9.0	40.0	14.0	13.0	25.0		
A52192H-22-06	10	- 6	3/8"	M 22X1,5	350.0	12.0	40.0	15.0	13.0	27.0		
A52192H-22-08	12	- 8	1/2"	M 22X1,5	350.0	12.0	40.0	15.0	16.0	28.0		
A52192H-27-08	12	- 8	1/2"	M 27X2	350.0	15.0	43.0	18.5	16.0	32.0		
A52192H-27-12	19	- 12	3/4"	M 27X2	280.0	15.0	55.0	18.5	23.0	38.0		
A52192H-33-12	19	- 12	3/4"	M 33X2	280.0	20.0	54.0	18.5	23.0	41.0		



ADAPTORS

O82H10

CARTRIDGE
 EF

PART. REF.	HOSE BORE			Thread	W.P.	DIMENSIONS mm						
	DN	Dash	inch			T	Bar	D	H1			
O82H10-04	6	- 4	1/4"	M 18X1	350.0	10.0	19.0					
O82H10-06	10	- 6	3/8"	M 22X1	350.0	13.0	23.0					
O82H10-08	12	- 8	1/2"	M 25X1	350.0	16.0	26.0					
O82H10-12	19	- 12	3/4"	M 33X1,5	280.0	23.0	34.0					



FASTFIT TYPE PUSH-TO-CONNECT

TECHNICAL DATA

SIZE			WORKING PRESSURE (Dynamic)	
DN	Dash	inch	MPa	PSI
10	-06	3/8"	42	6,090
12	-08	1/2"	42	6,090
16	-10	5/8"	42	6,090
19	-12	3/4"	42	6,090
25	-16	1"	42	6,090
31	-20	1.1/4"	42	6,090

PRODUCT DESCRIPTION

- Push-to-connect design
- No assembly tools required
- Low connection effort
- Reduced assembly time even in hard-to-reach areas
- Disconnection by unscrewing adaptor

MATERIAL

Adaptor and Insert in steel, with some hardened areas in correspondence to the most stressed points. Seals in NBR. Other materials (VITON, EPDM or any others) on request

WORKING TEMPERATURE

-22°F up to +230°F (-30°C up to +110°C)
 For different temperature range, the coupling can be assembled with specific seals

SAFETY FACTOR

4:1 for dynamic pressures

IMPULSE PRESSURES

500,000 cycles at 120% of the rated one (freq. 1Hz)

TEST SPECIFICATIONS

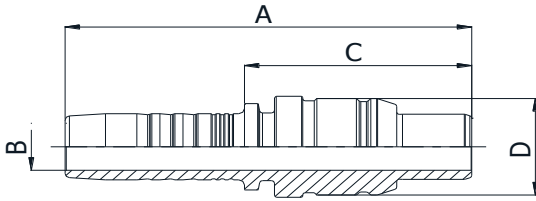
ISO 18879



MULTIFIT INSERT

M13H10

FAST-FIT STRAIGHT MALE INSERT

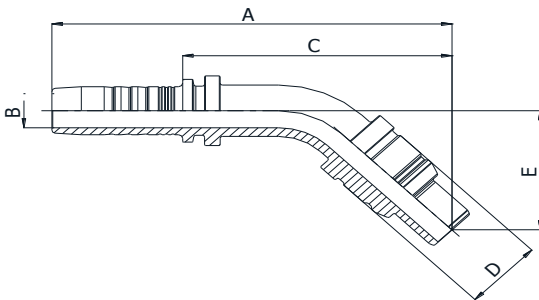


SIZE			PART REF.	SIZE			W.P	DIMENSIONS mm						
DN	Dash	inch		DN	Dash	inch	MPa	A	B	C	D			
10	-06	3/8"	M13H10-04-06	6	-04	1/4"	42	63.0	4.0	35.5	14.8			
10	-06	3/8"	M13H10-06-06	10	-06	3/8"	42	66.5	7.0	37.1	14.8			
12	-08	1/2"	M13H10-08-08	12	-08	1/2"	42	70.5	9.3	39.4	19.1			
16	-10	5/8"	M13H10-10-10	16	-10	5/8"	38	74.8	12.5	40.5	21.5			
19	-12	3/4"	M13H10-12-12	19	-12	3/4"	38	80.5	15.0	44.0	26.1			
25	-16	1"	M13H10-16-16	25	-16	1"	32	96.0	19.8	47.8	31.3			

MULTIFIT INSERT

M13H40

FAST-FIT 45° ELBOW MALE INSERT

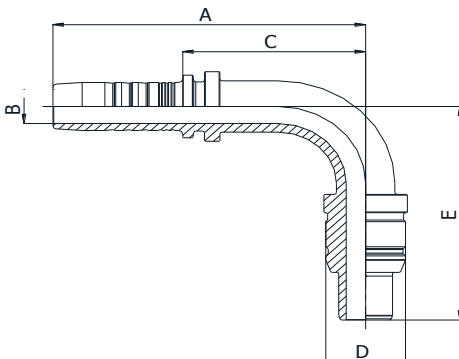


SIZE			PART REF.	SIZE			W.P	DIMENSIONS mm						
DN	Dash	inch		DN	Dash	inch	MPa	A	B	C	D	E		
10	-06	3/8"	M13H40-04-06	6	-04	1/4"	42	77.6	4.0	50.1	14.8	27.0		
10	-06	3/8"	M13H40-06-06	10	-06	3/8"	42	86.1	7.0	56.7	14.8	29.4		
12	-08	1/2"	M13H40-08-08	12	-08	1/2"	42	95.1	9.3	64.0	19.1	32.5		
19	-12	3/4"	M13H40-12-12	19	-12	3/4"	38	120.4	15.0	83.9	26.1	40.7		
25	-16	1"	M13H40-16-16	25	-16	1"	32	152.3	19.8	104.1	31.3	50.2		

MULTIFIT INSERT

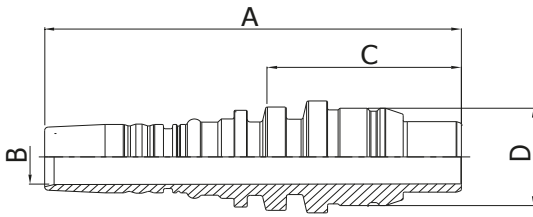
M13H90

FAST-FIT 90° ELBOW MALE INSERT



SIZE			PART REF.	SIZE			W.P	DIMENSIONS mm						
DN	Dash	inch		DN	Dash	inch	MPa	A	B	C	D	E		
10	-06	3/8"	M13H90-04-06	6	-04	1/4"	42	57.6	4.0	30.1	14.8	45.2		
10	-06	3/8"	M13H90-06-06	10	-06	3/8"	42	66.4	7.0	37.0	14.8	51.2		
12	-08	1/2"	M13H90-08-08	12	-08	1/2"	42	74.9	9.3	43.8	19.1	58.3		
19	-12	3/4"	M13H90-12-12	19	-12	3/4"	38	99.0	15.0	62.5	26.1	76.9		
25	-16	1"	M13H90-16-16	25	-16	1"	32	125.5	19.8	77.3	31.3	94.4		

INTERLOCK PLUS INSERT



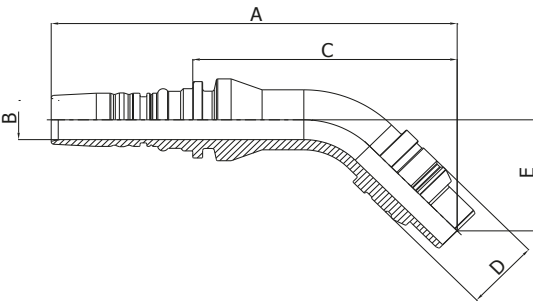
M33H10

**FAST-FIT STRAIGHT
 MALE INSERT**

SIZE			PART REF.	SIZE			W.P	DIMENSIONS mm					
DN	Dash	inch		DN	Dash	inch	MPa	A	B	C	D		
19	-12	3/4"	M33H10-12-12	19	-12	3/4"	42	96.6	14.5	46.4	26.1		
25	-16	1"	M33H10-16-16	25	-16	1"	42	112.0	19.5	50.3	31.3		

FITTINGS 314

INTERLOCK PLUS INSERT

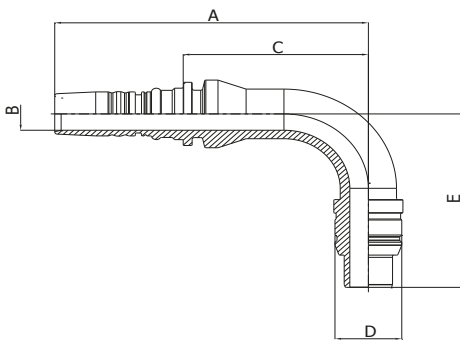


M33H40

**FAST-FIT 45° ELBOW
 MALE INSERT**

SIZE			PART REF.	SIZE			W.P	DIMENSIONS mm					
DN	Dash	inch		DN	Dash	inch	MPa	A	B	C	D	E	
19	-12	3/4"	M33H40-12-12	19	-12	3/4"	42	143.9	14.5	93.8	26.1	40.7	
25	-16	1"	M33H40-16-16	25	-16	1"	42	174.8	19.5	113.1	31.3	50.2	

INTERLOCK PLUS INSERT



M33H90

**FAST-FIT 90° ELBOW
 MALE INSERT**

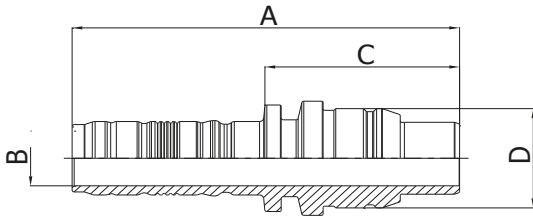
SIZE			PART REF.	SIZE			W.P	DIMENSIONS mm					
DN	Dash	inch		DN	Dash	inch	MPa	A	B	C	D	E	
19	-12	3/4"	M33H90-12-12	19	-12	3/4"	42	122.6	14.5	72.4	26.1	76.9	
25	-16	1"	M33H90-16-16	25	-16	1"	42	148.0	19.5	86.3	31.3	94.4	



SPIRALFIT INSERT

M73H10

**FAST-FIT STRAIGHT
MALE INSERT**

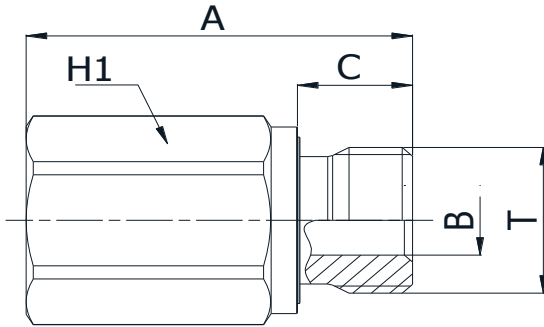


SIZE			PART REF.	SIZE			W.P	DIMENSIONS mm					
DN	Dash	inch		DN	Dash	inch	MPa	A	B	C	D		
19	-12	3/4"	M73H10-12-12	19	-12	3/4"	42	93.4	14.5	46.9	26.1		
25	-16	1"	M73H10-16-16	25	-16	1"	42	107.5	19.5	51.3	31.3		

ADAPTORS

A52013H

**BSP MALE
OR BOSS TYPE
TO ISO 1179- 2**

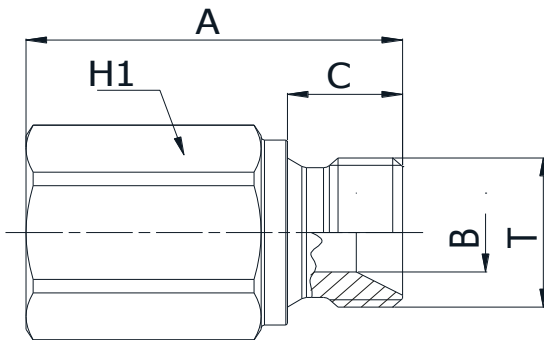


SIZE			PART. REF.	Thread	W.P	DIMENSIONS mm					
DN	Dash	inch		T	MPa	A	B	C	H1		
10	-06	3/8"	A52013H-04-06	1/4"-19	42	45.0	5.0	12.0	19		
10	-06	3/8"	A52013H-06-06	3/8"-19	42	44.5	8.0	12.0	22		
12	-08	1/2"	A52013H-08-08	1/2"-14	42	47.0	10.0	14.0	27		
19	-12	3/4"	A52013H-12-12	3/4"-14	42	53.0	16.0	16.0	32		
25	-16	1"	A52013H-16-16	1"-11	42	60.0	20.0	18.0	41		

ADAPTORS

A52053H

**BSP MALE 60° CONE
(ISO 8434-6 / BS5200)**

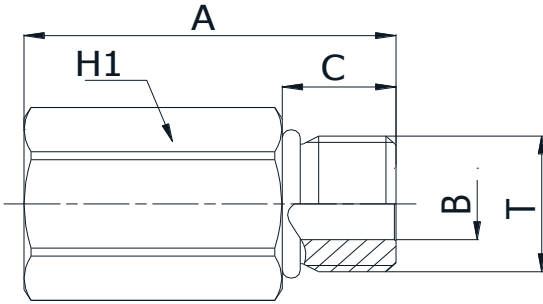


SIZE			PART. REF.	Thread	W.P	DIMENSIONS mm					
DN	Dash	inch		T	MPa	A	B	C	H1		
12	-08	1/2"	A52053H-08-08	1/2"-14	42	45.8	11.0	14.0	27		

ADAPTORS

A52323H

SAE MALE
 OR BOSS TYPE
 TO SAE J1926-2



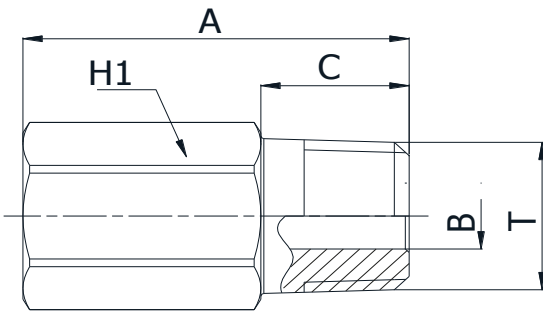
SIZE			PART. REF.	Thread	W.P	DIMENSIONS mm						
DN	Dash	inch		T	MPa	A	B	C	H1			
10	-06	3/8"	A52323H-04-06	7/16"-20	42	42.2	4.5	11.0	19			
10	-06	3/8"	A52323H-06-06	9/16"-18	42	42.4	7.5	12.0	19			
12	-08	1/2"	A52323H-08-08	3/4"-16	42	45.8	10.0	14.0	24			
16	-10	5/8"	A52323H-10-10	7/8"-14	42	49.2	12.5	16.0	27			
19	-12	3/4"	A52323H-12-12	1.1/16"-12	42	53.5	15.5	18.5	32			
25	-16	1"	A52323H-16-16	1.5/16"-12	42	56.0	20.5	18.5	38			

FITTINGS 316

ADAPTORS

A52283H

STRAIGHT ADAPTOR
 NPTF MALE
 TO ASME B1.20.3

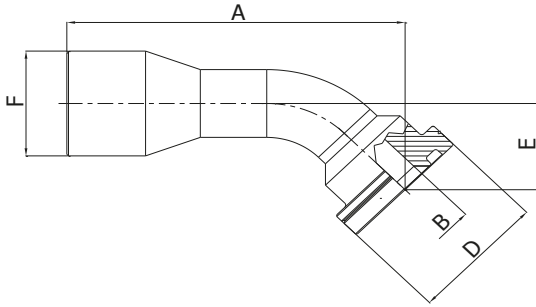


SIZE			PART. REF.	Thread	W.P	DIMENSIONS mm						
DN	Dash	inch		T	MPa	A	B	C	H1			
10	-06	3/8"	A52283H-04-06	1/4"-18	42	44.7	6.0	14.5	19			
10	-06	3/8"	A52283H-06-06	3/8"-18	42	43.7	8.0	14.5	19			
12	-08	1/2"	A52283H-08-08	1/2"-14	42	50.0	9.5	19.2	24			
19	-12	3/4"	A52283H-12-12	3/4"-14	42	54.5	15.0	19.2	32			
25	-16	1"	A52283H-16-16	1"-11.5	42	62.0	19.5	24.2	38			



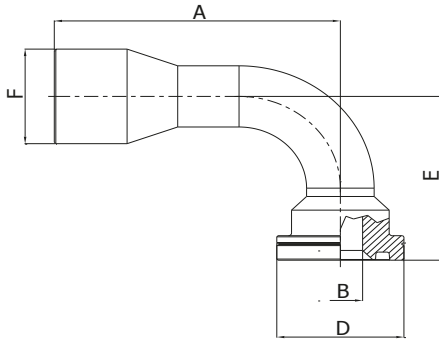
ADAPTORS

A54363H



45° ISO / SAE CODE 62 FLANGE
SAE J516 / ISO 12151-3

SIZE			PART. REF.	FLANGE	W.P	DIMENSIONS mm						
DN	Dash	inch		inch	MPa	A	B	D	E	F		
12	-08	1/2"	A54363H-08-08	1/2"	42	82.0	9.3	31.8	21.9	25.0		
19	-12	3/4"	A54363H-12-12	3/4"	42	101.8	14.5	41.4	28.0	34.0		
25	-16	1"	A54363H-16-16	1"	42	125.2	19.5	47.7	37.9	41.0		
31	-20	1-1/4"	A54363H-20-20	1-1/4"	42	136.1	25.0	54.2	35.6	55.0		



ADAPTORS

A57363H

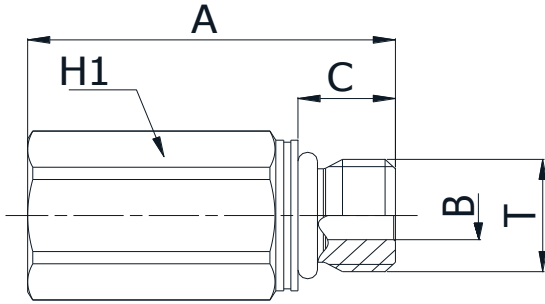
90° ISO / SAE CODE 62 FLANGE
SAE J516 / ISO 12151-3

SIZE			PART. REF.	FLANGE	W.P	DIMENSIONS mm						
DN	Dash	inch		inch	MPa	A	B	D	E	F		
12	-08	1/2"	A57363H-08-08	1/2"	42	74.2	9.3	31.8	45.0	25.0		
19	-12	3/4"	A57363H-12-12	3/4"	42	93.2	14.5	41.4	58.9	34.0		
25	-16	1"	A57363H-16-16	1"	42	113.6	19.5	47.7	80.0	41.0		
31	-20	1-1/4"	A57363H-20-20	1-1/4"	42	132.1	25.0	54.2	82.0	55.0		

ADAPTORS

A52193H

STRAIGHT ADAPTOR
 METRIC MALE
 ISO 6149-2



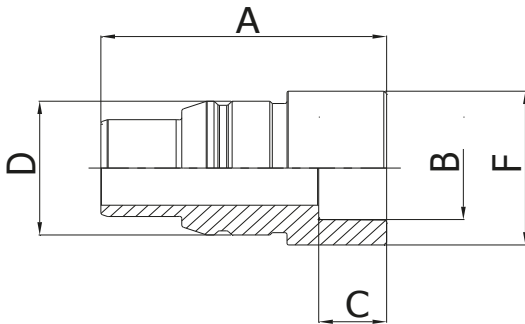
SIZE			PART. REF.	Thread	W.P	DIMENSIONS mm					
DN	Dash	inch		T	MPa	A	B	C	H1		
10	-06	3/8"	A52193H-14-06	M14X1.5	42	41.5	6.0	11.0	19		
10	-06	3/8"	A52193H-18-06	M18X1.5	42	43.5	8.0	14.0	24		
12	-08	1/2"	A52193H-22-08	M22X1.5	42	45.0	10.0	15.0	27		
19	-12	3/4"	A52193H-27-12	M27X2	42	53.5	15.0	18.5	32		
25	-16	1"	A52193H-33-16	M33X2	42	57.0	20.0	18.5	41		

FITTINGS 318

ADAPTORS

A523H95

BRAZING SOCKET



SIZE			PART. REF.		W.P	DIMENSIONS mm					
DN	Dash	inch			MPa	A	B	C	D	F	
19	- 12	3/4"	A523H95-12-20		42	50.5	20.1	12.0	26.1	30.0	
25	- 16	1"	A523H95-16-26		42	58.0	26.1	16.0	31.3	38.0	



DISCONNECTABLE FASTFIT TYPE PUSH-TO-CONNECT

TECHNICAL DATA				
SIZE			WORKING PRESSURE (Dynamic)	
DN	Dash	inch	MPa	PSI
12	-08	1/2"	42	6,090

PRODUCT DESCRIPTION

- Push-to-connect design
- No assembly tools required
- Low connection effort
- Reduced assembly time even in hard-to-reach areas
- Disconnection by unlocking male insert by means of a standard tool

MATERIAL

Adaptor and Insert in steel, with some hardened areas in correspondence to the most stressed points. Seals in NBR. Other materials (VITON, EPDM or any others) on request

WORKING TEMPERATURE

-22°F up to +230°F (-30°C up to +110°C)
 For different temperature range, the coupling can be assembled with specific seals

SAFETY FACTOR

4:1 for dynamic pressures

IMPULSE PRESSURES

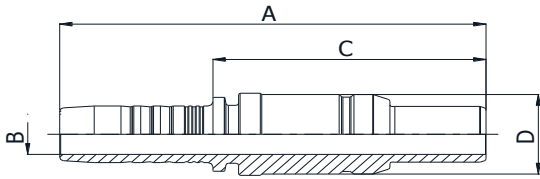
500,000 cycles at 120% of the rated one (freq. 1Hz)

TEST SPECIFICATIONS

ISO 18879

MULTIFIT INSERT

M14H10



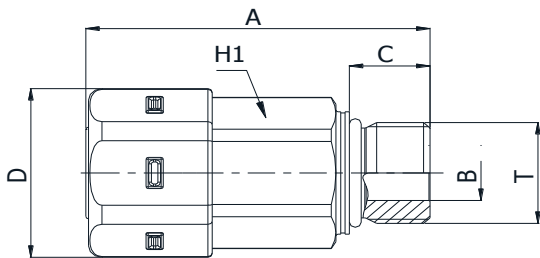
**DISCONNECTABLE FAST-FIT
 STRAIGHT MALE INSERT**

SIZE			PART. REF.	SIZE			W.P	DIMENSIONS mm					
DN	Dash	inch		DN	Dash	inch	MPa	A	B	C	D		
12	-08	1/2"	M14H10-08-08	12	-08	1/2"	42	86.5	9.3	55.4	18.4		

FITTINGS
320

ADAPTORS

A52194H

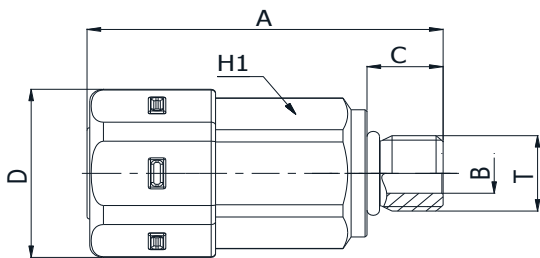


**STRAIGHT ADAPTOR
 METRIC MALE ISO 6149-2**

SIZE			PART. REF.	Thread	W.P	DIMENSIONS mm						
DN	Dash	inch		T	MPa	A	B	C	D	H1		
12	-08	1/2"	A52194H-22-08	M22X1.5	42	64.0	12.0	15.0	37.0	30.0		

ADAPTORS

A52324H



**SAE MALE
 OR BOSS TYPE
 TO SAE J1926-2**

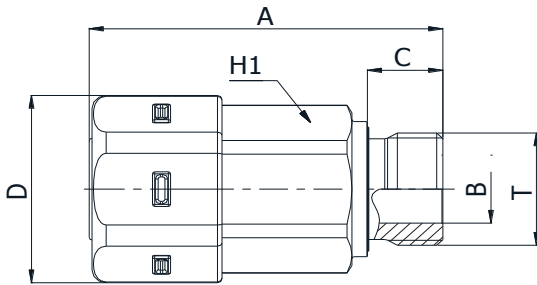
SIZE			PART. REF.	Thread	W.P	DIMENSIONS mm						
DN	Dash	inch		T	MPa	A	B	C	D	H1		
12	-08	1/2"	A52324H-08-08	3/4"-16	42	64.8	10.0	14.0	37.0	30.0		



ADAPTORS

A52014H

**BSP MALE
 OR BOSS TYPE
 TO ISO 1179-2**



SIZE			PART. REF.	Thread	W.P	DIMENSIONS mm						
DN	Dash	inch		T	MPa	A	B	C	D	H1		
12	-08	1/2"	A52014H-08-08	1/2"-14	42	66.0	12.0	14.0	37.0	30.0		

ROTOFIT TYPE SWIVEL JOINT



TECHNICAL DATA

SIZE			WORKING PRESSURE (Dynamic)							
			MULTIFIT		INTERLOCK PLUS		SPIRALFIT		ADAPTOR	
DN	Dash	inch	MPa	PSI	MPa	PSI	MPa	PSI	MPa	PSI
6	-04	1/4"	42	6,090	-	-	-	-	-	-
10	-06	3/8"	42	6,090	-	-	-	-	42	6,090
12	-08	1/2"	42	6,090	-	-	-	-	-	-
16	-10	5/8"	42	6,090	-	-	-	-	35	5,075
19	-12	3/4"	35	5,075	42	6,090	42	6,090	35	5,075
25	-16	1"	35	5,075	42	6,090	42	6,090	35	5,075
31	-20	1.1/4"	35	5,075	42	6,090	42	6,090	35	5,075
38	-24	1.1/2"	28	4,060	42	6,090	42	6,090	35	5,075
51	-32	2"	21	3,045	-	-	-	-	-	-
63	-40	2.1/2"	14	2,030	-	-	-	-	-	-

PRODUCT DESCRIPTION

- Swivel joint purposely designed to eliminate torsional stresses due to hose twist under external torque
- Prevents connection unscrewing
- Full flow design to minimize pressure drops
- High number of balls to minimize friction

ROTATION ANGLE

Up to 40°

ROTATION FREQUENCY

Up to 15 alternative RPM

MATERIAL

Body in steel, with some hardened areas in correspondence to the most stressed points. Balls in 100Cr6 quenched and seals in NBR or Polyurethane. Other materials (VITON, EPDM or any others) on request

WORKING TEMPERATURE

-22°F up to +230°F (-30°C up to +110°C)

For different temperature range, the coupling can be assembled with specific seals

SAFETY FACTOR

4:1 for dynamic pressures

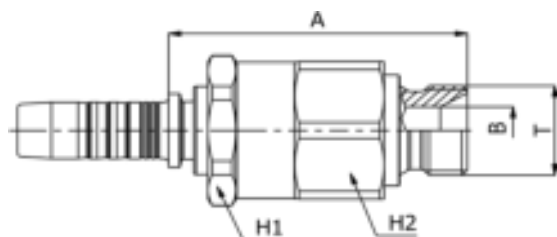
IMPULSE PRESSURES

500,000 cycles at 120% of the rated one (freq. 1Hz)

TEST SPECIFICATIONS

ISO 18879

BS STANDARD CONNECTIONS



MR10510

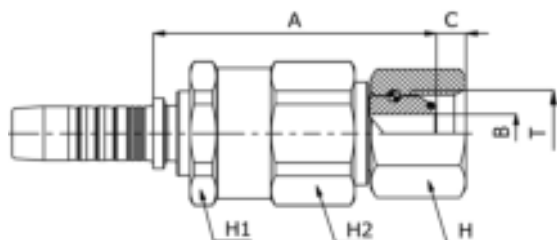
**BSP MALE
 PARALLEL 60° CONE SEAT
 BS5200 / ISO 8434-6**

PART. REF.	SIZE			THREAD	W.P.	DIMENSIONS mm						
	DN	Dash	inch			T	MPa	A	B	H1	H2	
MR10510-04-04	6	-04	1/4"	1/4"-19	42	57.7	4.7	24	24			
MR10510-06-06	10	-06	3/8"	3/8"-19	42	58.2	8.0	27	27			
MR10510-08-08	12	-08	1/2"	1/2"-14	42	61.6	11.0	32	32			
MR10510-10-10	16	-10	5/8"	5/8"-14	35	69.3	14.3	36	36			
MR10510-12-12	19	-12	3/4"	3/4"-14	35	71.0	16.7	41	41			
MR10510-16-16	25	-16	1"	1"-11	35	83.0	22.2	50	50			
MR10510-20-20	31	-20	1.1/4"	1.1/4"-11	35	91.9	28.6	60	60			
MR10510-24-24	38	-24	1.1/2"	1.1/2"-11	28	105.1	33.3	70	70			

FITTINGS

323

BS STANDARD CONNECTIONS

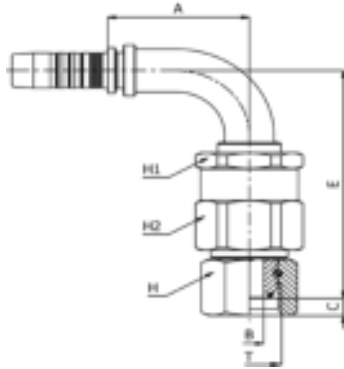


MR20812

**BSP O-RING
 FEMALE 60° CONE
 BS5200 / ISO 12151-6**

PART. REF.	SIZE			THREAD	W.P.	DIMENSIONS mm						
	DN	Dash	inch			T	MPa	A	B	C	H	H1
MR20812-04-04	6	-04	1/4"	1/4"-19	42	58.0	4.3	4.1	19	24	24	
MR20812-06-06	10	-06	3/8"	3/8"-19	42	59.4	7.0	5.9	22	27	27	
MR20812-08-08	12	-08	1/2"	1/2"-14	42	62.4	9.3	6.5	27	32	32	
MR20812-10-10	16	-10	5/8"	5/8"-14	35	68.0	12.5	9.7	28	36	36	
MR20812-12-12	19	-12	3/4"	3/4"-14	35	70.8	15.0	8.5	32	41	41	
MR20812-16-16	25	-16	1"	1"-11	35	81.0	19.8	10.6	38	50	50	

BS STANDARD CONNECTIONS

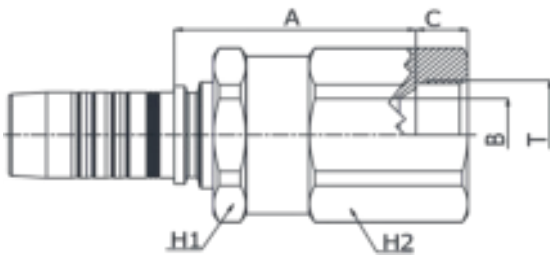


MR20892RT

**90° BSP O-RING FEMALE SWEPT ELBOW
 60° CONE BS5200 / ISO 12151-6**

PART. REF.	SIZE			THREAD	W.P.	DIMENSIONS mm						
	DN	Dash	inch			T	MPa	A	B	C	E	H
MR20892-08-08RT	12	-08	1/2"	1/2"-14	42	45.9	9.3	6.5	85.3	27	32	32

SAE STANDARD CONNECTIONS

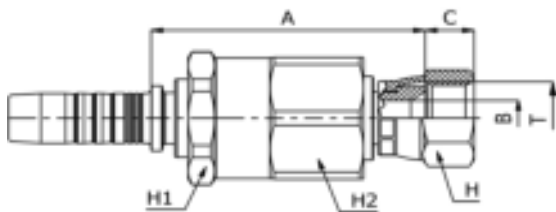


MR22510

**SWIVEL JOINT JIC
 FEMALE 37° CONE SEAT
 SAE J516 / ISO 12151-5**

PART. REF.	SIZE			THREAD	W.P.	DIMENSIONS mm						
	DN	Dash	inch			T	MPa	A	B	C	H1	H2
MR22510-20-20	31	-20	1 1/4"	1 5/8"-12	21	76.7	27.5	16.5	60	60		
MR22510-24-24	38	-24	1 1/2"	1 7/8"-12	16	87.5	33.5	19.5	70	70		

SAE STANDARD CONNECTIONS



MR22711

**JIC
 FEMALE DOUBLE HEXAGON 37° CONE SEAT**

PART. REF.	SIZE			THREAD	W.P.	DIMENSIONS mm						
	DN	Dash	inch			T	MPa	A	B	C	H	H1
MR22711-06-06	10	-06	3/8"	9/16"-18	35	56.0	7.0	9.5	17	27	27	
MR22711-08-08	12	-08	1/2"	3/4"-16	35	59.9	9.3	10.7	22	32	32	
MR22711-08-10	12	-08	1/2"	7/8"-14	35	61.9	11.3	12.5	25	32	32	
MR22711-10-10	16	-10	5/8"	7/8"-14	35	66.8	11.3	12.5	25	36	36	
MR22711-12-12	19	-12	3/4"	1 1/16"-12	35	68.3	15.0	14.1	32	41	41	
MR22711-16-16	25	-16	1"	1 5/16"-12	28	79.8	19.8	15.3	38	50	50	

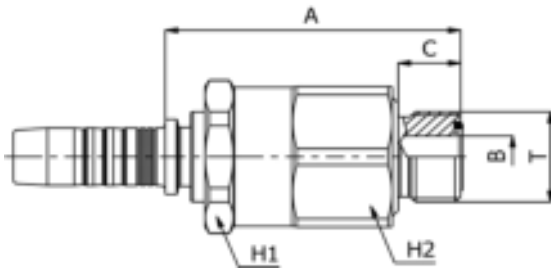


SAE STANDARD CONNECTIONS

MR12410

ORFS
MALE

SAE J516 / ISO 12151-1



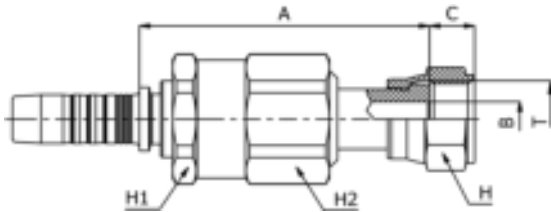
PART. REF.	SIZE			THREAD	W.P.	DIMENSIONS mm						
	DN	Dash	inch			T	MPa	A	B	C	H1	H2
MR12410-08-08	12	-08	1/2"	13/16"-16	42	60.4	9.5	12.8	32	32		
MR12410-10-10	16	-10	5/8"	1"-14	42	68.8	12.5	15.5	36	36		

SAE STANDARD CONNECTIONS

MR22411

ORFS
FEMALE

SAE J516 / ISO 12151-1
PULL BACK TYPE (CRIMPED BACK-NUT)

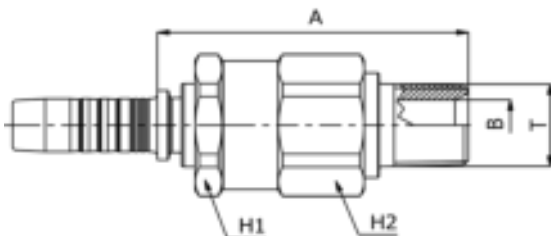


PART. REF.	SIZE			THREAD	W.P.	DIMENSIONS mm						
	DN	Dash	inch			T	MPa	A	B	C	H	H1
MR22411-06-06	10	-06	3/8"	11/16"-16	42	64.5	7.0	9.5	22	27	27	
MR22411-08-08	12	-08	1/2"	13/16"-16	42	70.9	9.3	11.0	24	32	32	
MR22411-10-10	16	-10	5/8"	1"-14	42	77.8	11.5	13.5	30	36	36	
MR22411-12-12	19	-12	3/4"	1.3/16"-12	35	83.8	14.0	14.5	36	41	41	
MR22411-16-16	25	-16	1"	1.7/16"-12	35	93.4	19.8	15.0	41	50	50	

SAE STANDARD CONNECTIONS

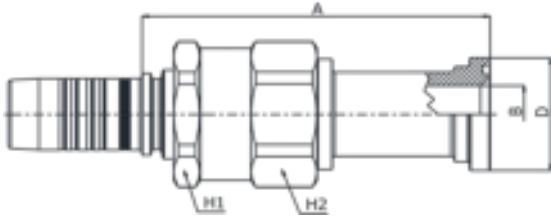
MR12810

NPTF MALE 60° CONE SEAT - SAE J516/J514



PART. REF.	SIZE			THREAD	W.P.	DIMENSIONS mm						
	DN	Dash	inch			T	MPa	A	B	H1	H2	
MR12810-04-04	6	-04	1/4"	1/4"-18	35	61.2	5.5	24	24			
MR12810-06-06	10	-06	3/8"	3/8"-18	28	60.7	9.3	27	27			
MR12810-08-08	12	-08	1/2"	1/2"-14	24.5	66.8	12.5	32	32			
MR12810-12-12	19	-12	3/4"	3/4"-14	21	74.2	16.0	41	41			
MR12810-16-16	25	-16	1"	1"-11.5	17.5	88.2	19.5	50	50			

SAE STANDARD CONNECTIONS



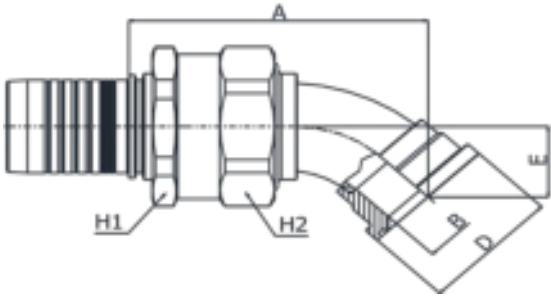
MR23311FK

ISO / SAE CODE 61 FLANGE
 SAE J516 / ISO 12151-3
 (VITON)

PART. REF.	SIZE			FLANGE	W.P.	DIMENSIONS mm						
	DN	Dash	inch			inch	MPa	A	B	D	H1	H2
MR23311-20-20FK	31	-20	1.1/4"	1.1/4"	28	136.7	26.0	51.0	60	60		
MR23311-20-24FK	31	-20	1.1/4"	1.1/2"	21	134.7	32.0	60.5	60	60		
MR23311-24-24FK	38	-24	1.1/2"	1.1/2"	21	147.9	32.0	60.5	70	70		
MR23311-32-32FK	51	-32	2"	2"	21	154.4	42.0	71.6	90	90		

FITTINGS 326

SAE STANDARD CONNECTIONS

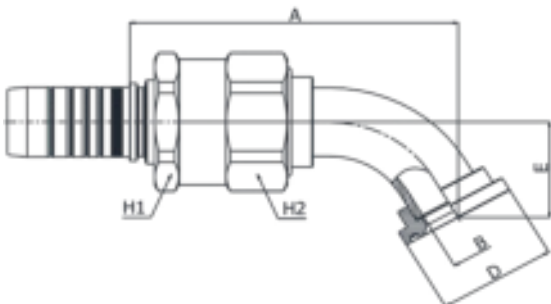


MR23341FK

45° ISO / SAE CODE 61 FLANGE
 SAE J516 / ISO 12151-3
 (VITON)

PART. REF.	SIZE			FLANGE	W.P.	DIMENSIONS mm						
	DN	Dash	inch			inch	MPa	A	B	D	E	H1
MR23341-40-40FK	63	-40	2.1/2"	2.1/2"	14	174.5	52.0	84.3	48.5	100	100	

SAE STANDARD CONNECTIONS



MR23361FK

60° ISO / SAE CODE 61 FLANGE
 SAE J516 / ISO 12151-3
 (VITON)

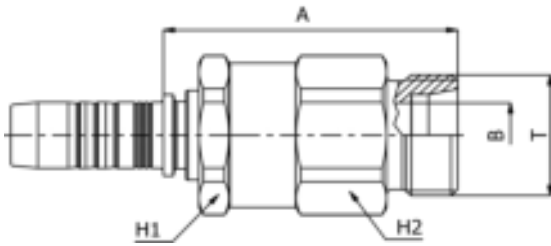
PART. REF.	SIZE			FLANGE	W.P.	DIMENSIONS mm						
	DN	Dash	inch			inch	MPa	A	B	D	E	H1
MR23361-24-24FK	38	-24	1.1/2"	1.1/2"	21	166.6	32.0	60.5	52.9	70	70	
MR23361-24-32FK	38	-24	1.1/2"	2"	21	170.1	42.0	71.6	59.0	70	70	



DIN STANDARD CONNECTIONS

MR11210

METRIC
MALE 24° CONE SEAT HEAVY DUTY
DIN 20066 / ISO 12151-2

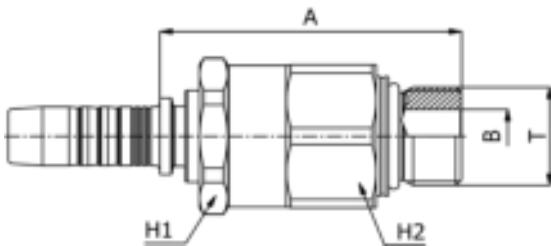


PART. REF.	SIZE			THREAD	PIPE	W.P.	DIMENSIONS mm						
	DN	Dash	inch				T	mm	MPa	A	B	H1	H2
MR11210-10-30	16	-10	5/8"	M30X2	20	42	66.3	16.0	36	36			

DIN STANDARD CONNECTIONS

MR11910

METRIC
MALE HEAVY DUTY SERIES
ISO 6149-2

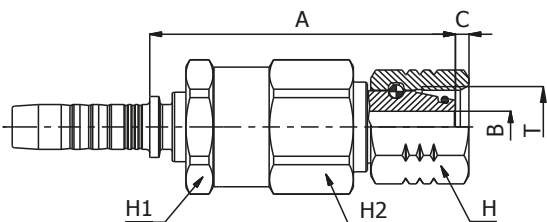


PART. REF.	SIZE			THREAD	W.P.	DIMENSIONS mm						
	DN	Dash	inch			T	MPa	A	B	H1	H2	
MR11910-06-18	10	-06	3/8"	M18X1.5	42	60.5	9.0	27	27			
MR11910-08-22	12	-8	1/2"	M22X1.5	42	61.9	12.0	32	32			

DIN STANDARD CONNECTIONS

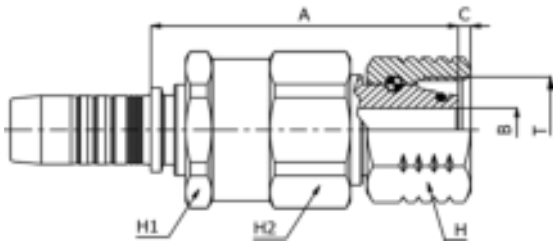
MR21512

METRIC
O-RING FEMALE 24° CONE LIGHT DUTY
DIN 20066 / ISO 12151-2
(THRUST-WIRE NUT)



PART. REF.	SIZE			THREAD	PIPE	W.P.	DIMENSIONS mm					
	DN	Dash	inch				T	mm	MPa	A	B	C
MR21512-04-16	6	-04	1/4"	M16X1.5	10	35	63.2	6.0	3.0	19	24	24
MR21512-06-18	10	-06	3/8"	M18X1.5	12	33	65.3	7.0	2.9	22	27	27
MR21512-10-26	16	-10	5/8"	M26X1.5	18	25	72.3	12.5	2.3	32	36	36

DIN STANDARD CONNECTIONS



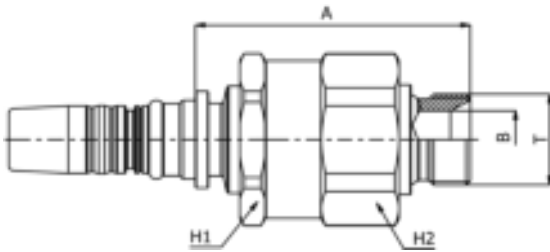
MR21612

**METRIC O-RING FEMALE 24° CONE HEAVY DUTY
 DIN 20066 / ISO 12151-2 (THRUST-WIRE NUT)**

PART. REF.	SIZE			THREAD	PIPE	W.P.	DIMENSIONS mm						
	DN	Dash	inch				T	mm	MPa	A	B	C	H
MR21612-12-30	19	-12	3/4"	M30X2	20	35	79.8	12.5	3.2	36	41	41	

FITTINGS 328

BS STANDARD CONNECTIONS

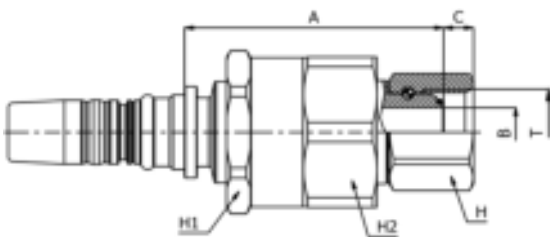


MR30510

**BSP
 MALE 60° CONE SEAT
 BS5200**

PART. REF.	SIZE			THREAD	W.P.	DIMENSIONS mm						
	DN	Dash	inch			T	MPa	A	B	H1	H2	
MR30510-12-12	19	-12	3/4"	3/4"-14	35	73.9	16.7	46	46			
MR30510-16-16	25	-16	1"	1"-11	35	85.7	22.2	55	55			
MR30510-20-20	31	-20	1.1/4"	1.1/4"-11	35	95.8	28.6	65	65			
MR30510-24-24	38	-24	1.1/2"	1.1/2"-11	30	109.6	33.3	75	75			

BS STANDARD CONNECTIONS

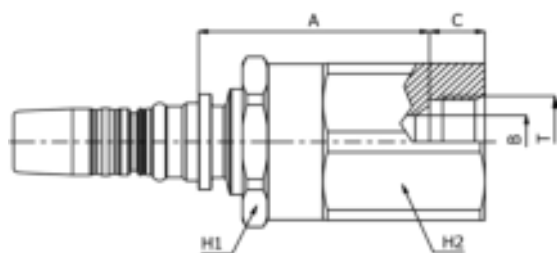


MR40812

**BSP
 O-RING FEMALE 60° CONE
 BS5200/ ISO 8434-6**

PART. REF.	SIZE			THREAD	W.P.	DIMENSIONS mm						
	DN	Dash	inch			T	MPa	A	B	C	H	H1
MR40812-12-12	19	-12	3/4"	3/4"-14	35	73.7	15.0	8.5	32	46	46	
MR40812-16-16	25	-16	1"	1"-11	35	83.7	19.8	10.6	41	55	55	

SAE STANDARD CONNECTIONS

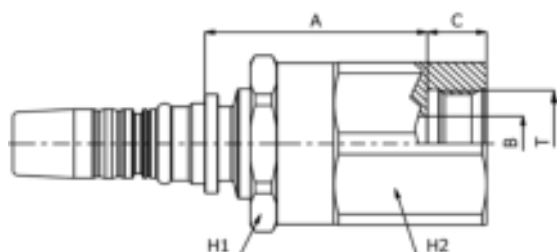


MR42510

JIC
 FEMALE 37 °CONE SEAT
 SAE J514

PART. REF.	SIZE			THREAD	W.P.	DIMENSIONS mm						
	DN	Dash	inch			T	MPa	A	B	C	H1	H2
MR42510-12-12	19	-12	3/4"	1.1/16"-12	35	62.7	15.5	15.0	46	46		
MR42510-16-16	25	-16	1"	1.5/16"-12	28	70.0	21.5	16.5	55	55		

SAE STANDARD CONNECTIONS

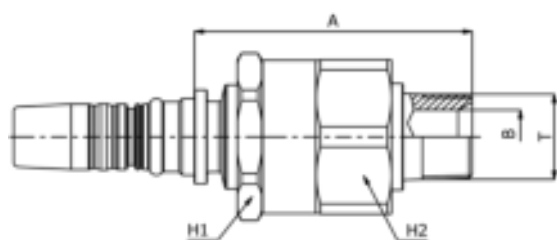


MR42410

ORFS
 FEMALE
 ISO 8434-3 / SAE J1453

PART. REF.	SIZE			THREAD	W.P.	DIMENSIONS mm						
	DN	Dash	inch			T	MPa	A	B	C	H1	H2
MR42410-12-12	19	-12	3/4"	1.3/16"-12	42	58.2	15.5	15.5	46	46		
MR42410-16-16	25	-16	1"	1.7/16"-12	42	66.0	20.5	16.0	55	55		

SAE STANDARD CONNECTIONS

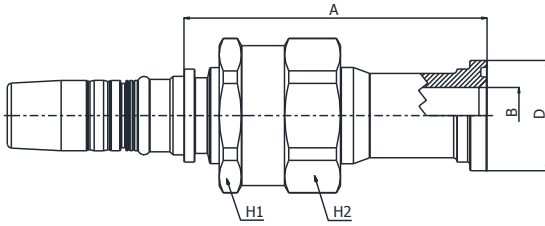


MR32810

NPTF
 MALE 60° CONE SEAT
 SAE J476A

PART. REF.	SIZE			THREAD	W.P.	DIMENSIONS mm					
	DN	Dash	inch			T	MPa	A	B	H1	H2
MR32810-12-12	19	-12	3/4"	3/4"-14	21	77.1	16.0	46	46		
MR32810-16-16	25	-16	1"	1"-11.5	17.5	90.9	19.5	55	55		

SAE STANDARD CONNECTIONS

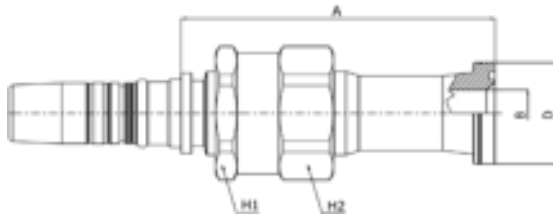


MR43310

ISO / SAE CODE 61 FLANGE
 SAE J516 / ISO 12151-3

PART. REF.	SIZE			FLANGE	W.P.	DIMENSIONS mm						
	DN	Dash	inch			inch	MPa	A	B	D	H1	H2
MR43310-20-20	31	-20	1.1/4"	1.1/4"	28	140.6	26.0	51.0	65	65		

SAE STANDARD CONNECTIONS

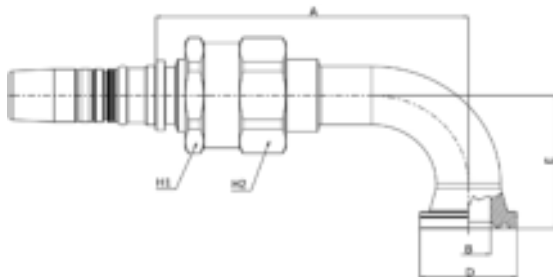


MR43610

ISO / SAE CODE 62 FLANGE
 SAE J516 / ISO 12151-3

PART. REF.	SIZE			FLANGE	W.P.	DIMENSIONS mm						
	DN	Dash	inch			inch	MPa	A	B	D	H1	H2
MR43610-20-20	31	-20	1.1/4"	1.1/4"	42	149.8	25.0	54.2	65	65		

SAE STANDARD CONNECTIONS

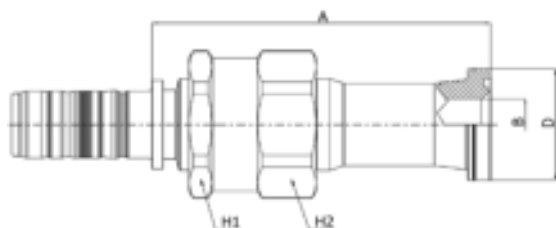


MR43690

90° ISO / SAE CODE 62 FLANGE
 SAE J516 / ISO 12151-3

PART. REF.	SIZE			FLANGE	W.P.	DIMENSIONS mm						
	DN	Dash	inch			inch	MPa	A	B	D	E	H1
MR43690-20-20	31	-20	1.1/4"	1.1/4"	42	174.6	25.0	54.2	82.0	65	65	

SAE STANDARD CONNECTIONS

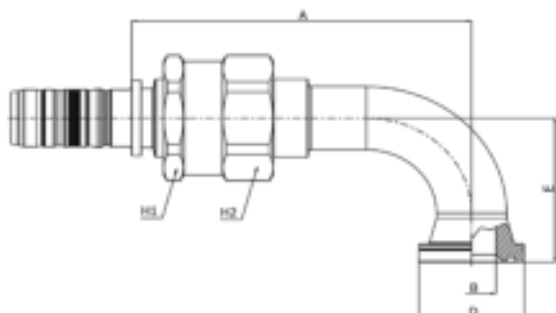


MR83611

ISO / SAE CODE 62 FLANGE
 SAE J516 / ISO 12151-3

PART. REF.	SIZE			FLANGE	W.P.	DIMENSIONS mm						
	DN	Dash	inch			inch	MPa	A	B	D	H1	H2
MR83611-20-20	31	-20	1.1/4"	1.1/4"	42	149.9	25.0	54.2	65	65		

SAE STANDARD CONNECTIONS

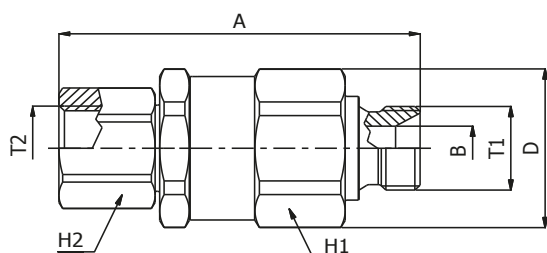


MR83691

90° ISO / SAE CODE 62 FLANGE
 SAE J516 / ISO 12151-3

PART. REF.	SIZE			FLANGE	W.P.	DIMENSIONS mm						
	DN	Dash	inch			inch	MPa	A	B	D	E	H1
MR83691-20-20	31	-20	1.1/4"	1.1/4"	42	174.6	25.0	54.2	82.0	65	65	

BS STANDARD CONNECTIONS



AR520504

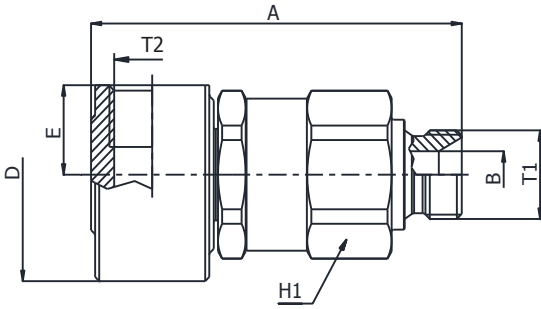
SWIVEL JOINT STRAIGHT
 MALE BSP - FEMALE BSP

PART. REF.	SIZE			THREAD		W.P.	DIMENSIONS mm					
	DN	Dash	inch	T1	T2		MPa	A	B	D	H1	H2
AR520504-04-04	10	-06	3/8"	1/4"-19	1/4"-19	42	69.9	4.7	30.0	27.0	19.0	
AR520504-06-06	10	-06	3/8"	3/8"-19	3/8"-19	42	69.9	8.0	30.0	27.0	22.0	
AR520504-08-08	16	-10	5/8"	1/2"-14	1/2"-14	35	82.9	11.0	39.5	36.0	27.0	
AR520504-12-12	19	-12	3/4"	3/4"-14	3/4"-14	35	87.6	16.7	45.0	41.0	34.0	
AR520504-16-16	25	-16	1"	1"-11	1"-11	35	101.8	22.2	55.0	50.0	41.0	
AR520504-20-20	31	-20	1.1/4"	1.1/4"-11	1.1/4"-11	35	112.1	28.6	66.0	60.0	55.0	
AR520504-24-24	38	-24	1.1/2"	1.1/2"-11	1.1/2"-11	30	128.3	33.3	77.0	70.0	65.0	

BS STANDARD CONNECTIONS

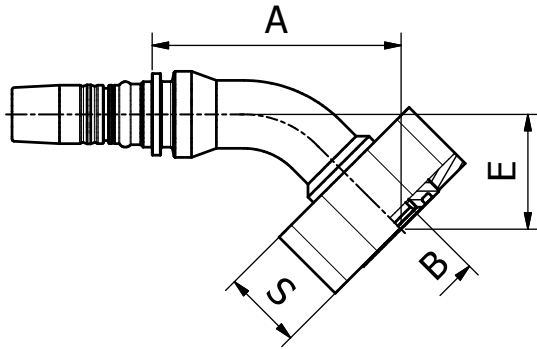
AR580504

SWIVEL JOINT 90°
 MALE BSP - FEMALE BSP



PART. REF.	SIZE			THREAD		W.P.	DIMENSIONS mm						
	DN	Dash	inch	T1	T2		A	B	D	E	H1		
AR580504-04-04	10	-06	3/8"	1/4"-19	1/4"-19	42	70.4	4.7	36.0	16.0	27.0		
AR580504-06-06	10	-06	3/8"	3/8"-19	3/8"-19	42	75.4	8.0	39.0	16.0	27.0		
AR580504-08-08	16	-10	5/8"	1/2"-14	1/2"-14	35	90.9	11.0	50.0	21.0	36.0		
AR580504-12-12	19	-12	3/4"	3/4"-14	3/4"-14	35	100.1	16.7	60.0	24.0	41.0		
AR580504-16-16	25	-16	1"	1"-11	1"-11	35	117.3	22.2	70.0	28.0	50.0		

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SAE STANDARD CONNECTIONS

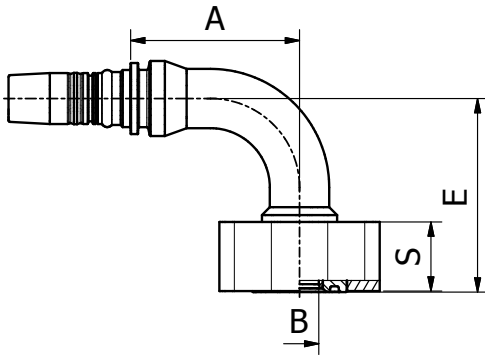
M4364A

45° ADJUSTABLE FLANGE

PART. REF.	HOSE BORE			FLANGE	DIMENSIONS mm			
	DN	Dash	inch	inch	A	B	E	S
M4364A-12-12	19	- 12	3/4"	3/4"	90.5	14.5	37.5	27.4
M4364A-16-16	25	- 16	1"	1"	109.5	19.5	50.5	35
M4364A-20-20	31	- 20	1.1/4"	1.1/4"	136.5	25	56.5	35

FITTINGS

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SAE STANDARD CONNECTIONS

M4369A

90° ADJUSTABLE FLANGE

PART. REF.	HOSE BORE			FLANGE	DIMENSIONS mm			
	DN	Dash	inch	inch	A	B	E	S
M4369A-12-12	19	- 12	3/4"	3/4"	72.5	14.5	73	27.4
M4369A-16-16	25	- 16	1"	1"	85.5	19.5	98	35
M4369A-20-20	31	- 20	1.1/4"	1.1/4"	112	25	111.5	35

