

# وادي سونة WADI SONA







وادي سونة  
WADI SONA

منظومة متكاملة من المستودعات النموذجية



اهم الموردين





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For more than twenty years, **WADI SONA** Establishment has been established after thorough study of local market in Saudi Arabia and of the growing needs of Hydraulics industry and services to cope with the renaissance accelerating in the Kingdom in various fields of development.

From the very beginning, our goal was to set a firm base in this field which is closely related to various economic sectors and through our excellent services we gained the trust of major companies in the kingdom both in governmental and private sector, which has led us to continue to improve our performance and product quality working with international companies in the (hydraulic industries and services such as TECHMAFLEX (French company which produces machines for assembling hoses in various shapes and sizes.

Since the beginning of its establishment, Wadi Sona has been keen on its multiple departments to have complementary character in their work so that they meet the needs of its customers in various services in the field of hydraulics with the quality and competitive prices that each customer aspires to.

- Our wholesale department it is one of the main departments Which focuses on suppling hose crimping, cutting, skiving and high pressure hose testing machines in addition to supplying all types of hydraulic hose fittings and adaptors. We also can setup a workshop for hose assembling for our customers and we provide full technical support to them through our training programme.

- Hydraulic pumps repair and maintenance centre.
- Cylinder repair and maintenance centre with seals kit.
- Hydraulic hose assembling centre.

We are still striving to keep pace with the latest global technology in the field of manufacturing and servicing of hydraulic and maintain credibility of **WADI SONA** as a pioneer in this field, attests to this our customers who have shared our success from the beginning.

منذ ما يزيد عن عشرين عاماً تم إنشاء مؤسسة **وادي سونة** للهيدروليكي بعد دراسة مستفيضة لمتطلبات السوق المحلية في المملكة العربية السعودية من احتياجات متنامية في مجال صناعة وخدمات الهيدروليكي لتواكب النهضة المتسارعة التي تشهدها المملكة في مختلف المجالات الانمائية منذ البداية كان هدفنا أن نضع قدماً راسخاً في هذا المجال الحيوي والذي يتصل اتصالاً وثيقاً بمختلف القطاعات الاقتصادية.. و عبر خدماتنا المتميزة استطعنا أن نكسب ثقة كبرى الشركات العاملة في المملكة سواء في القطاع الحكومي أو الخاص، مما دفعنا للاهتمام المتواصل لتحسين أدائنا و نوعية منتجاتنا و خدماتنا عبر التواصل مع أفضل الشركات العالمية العاملة في هذا المجال والحصول على وكالات لأهم الماركات العالمية في مجال صناعة وخدمات الهيدروليكي كشركة تكمافلكس الفرنسية والتي تنتج مكائن تجميع الليات بأشكال و مقاسات متعددة لقد حرصت مؤسسة وادي سونة منذ بداية تأسيسها و من خلال أقسامها المتعددة على صفة التكاملية في عملها بحيث تلبى احتياجات عملائها من مختلف الخدمات في مجال الهيدروليكي بالجودة والأسعار التنافسية التي يطمح لها كل عميل و من أبرز هذه الأقسام:

- قسم الجملة: ويتم من خلاله توريد مكائن تجميع وقص وتتشير الليات و مكائن فحصها اضافة الى توريد جميع أنواع الليات و تواصل الهيدروليكي و تجهيز و تموين ورش كبس الليات و مستلزماتها مع الدعم الفني من خلال الدورات التدريبية

- قسم صيانة السلندرات

- مركز تجميع الليات

- منظومة متكاملة من ورش الهيدروليكي المتخصصة

اننا ما زلنا في سعينا الدؤوب لمواكبة أحدث التقنيات العالمية في مجال صناعة وخدمات الهيدروليكي والحفاظ على مصداقية اسم **وادي سونة** كمؤسسة رائدة في هذا المجال يشهد لنا بذلك

عملاؤنا الذين شاركونا النجاح منذ البداية





### 1SN – ONE WIRE BRAID HOSE



Part No.	Hose I.D	Hose O.D	Working Pressure	Burst Pressure	Min Bend Radius
	mm	mm	Bar	Bar	mm
1SN-03	4.8	11.8	250	1000	90
1SN-04	6.4	13.4	225	900	100
1SN-05	7.9	15.0	215	850	115
1SN-06	9.5	17.4	180	720	130
1SN-08	12.7	20.6	160	640	180
1SN-10	16.0	23.7	130	520	200
1SN-12	19.0	27.7	105	420	240
1SN-16	25.4	35.6	88	350	300
1SN-20	31.8	43.5	63	250	420
1SN-24	38.1	50.6	50	200	500
1SN-32	50.8	64.0	40	160	630

### 2SN – TWO WIRE BRAID HOSE



Part No.	Hose I.D	Hose O.D	Working Pressure	Burst Pressure	Min Bend Radius
	mm	mm	Bar	Bar	mm
2SN-03	4.8	13.4	415	1650	90
2SN-04	6.4	15.0	400	1600	100
2SN-05	7.9	16.6	350	1400	115
2SN-06	9.5	19.0	330	1320	130
2SN-08	12.7	22.2	275	1110	180
2SN-10	16.0	25.4	250	1000	205
2SN-12	19.0	29.3	215	850	240
2SN-16	25.4	38.1	165	650	300
2SN-20	31.8	48.3	125	500	420
2SN-24	38.1	54.6	90	360	500
2SN-32	50.8	67.0	78	310	630

### 4SP – FOUR WIRE SPIRALS HOSE



Part No.	Hose I.D	Hose O.D	Working Pressure	Burst Pressure	Min Bend Radius
	mm	mm	Bar	Bar	mm
4SP-06	9.5	21.3	445	1780	180
4SP-08	12.7	24.4	415	1660	230
4SP-10	16.0	28.0	350	1400	250
4SP-12	19.0	32.0	350	1400	300
4SP-16	25.4	39.2	280	1120	340

### 4SH – FOUR WIRE SPIRALS HOSE



Part No.	Hose I.D	Hose O.D	Working Pressure	Burst Pressure	Min Bend Radius
	mm	mm	Bar	Bar	mm
4SH-12	19.0	32.2	420	1680	280
4SH-16	25.4	38.4	380	1520	340
4SH-20	31.8	45.2	325	1300	460
4SH-24	38.1	53.5	290	1160	560
4SH-32	50.8	68.0	250	1000	700

### R13 – FOUR OR SIX WIRE SPIRALS HOSE



Part No.	Hose I.D	Hose O.D	Working Pressure	Burst Pressure	Min Bend Radius
	mm	mm	Bar	Bar	mm
R13-16	25.4	39.2	345	1380	300
R13-20	31.8	49.8	345	1380	420
R13-24	38.1	57.3	345	1380	510
R13-32	50.8	71.9	345	1380	635

### R15 – FOUR OR SIX WIRE SPIRALS HOSE

Part No.	Hose I.D	Hose O.D	Working Pressure	Burst Pressure	Min Bend Radius
	mm	mm	Bar	Bar	mm
R15-16	25.4	42.9	420	1655	267
R15-20	31.8	51.5	420	1655	330
R15-24	38.1	58.2	420	1655	445



### R5 – ONE WIRE BRAID, ONE TEXTILE BRAID HOSE

Part No.	Hose I.D	Hose O.D	Working Pressure	Burst Pressure	Min Bend Radius
	Mm	mm	Bar	Bar	mm
R5-04	6.4	14.8	207	828	86
R5-05	7.9	17.2	155	620	102
R5-06	10.3	19.5	138	552	117
R5-08	12.7	23.4	121	484	140
R5-10	15.9	27.4	103	412	165
R5-14	22.2	31.4	55	220	187
R5-18	28.6	38.1	43	172	229
R5-22	34.9	44.5	34	136	267
R5-29	46.0	56.4	24	96	337
R5-38	60.3	73.0	24	96	610



### R6 – ONE TEXTILE BRAIDS HOSE

Part No.	Hose I.D	Hose O.D	Working Pressure	Burst Pressure	Min Bend Radius
	mm	mm	Bar	Bar	mm
R6-04	6.4	12.3	28	112	65
R6-05	7.9	13.9	28	112	80
R6-06	9.5	15.5	28	112	80
R6-08	12.7	19.0	28	112	100
R6-10	15.9	22.6	24	96	125
R6-12	19.0	25.8	21	83	150
R6-16	25.4	33.2	9	36	170





### R3 – TWO TEXTILE BRAIDS HOSE



Part No.	Hose I.D	Hose O.D	Working Pressure	Burst Pressure	Min Bend Radius
	mm	mm	Bar	Bar	mm
R3-06	9.5	19.1	78	312	100
R3-08	12.7	23.8	69	276	125

### R7SH 200 Bar – SEWER JETTING



Part No.	Hose I.D	Hose O.D	Working Pressure	Burst Pressure	Min Bend Radius
	mm	mm	Bar	Bar	mm
R7SH-12-200	19.2	29.6	200	500	220
R7SH-16-200	25.4	38	200	500	300

### R7SH 250 Bar – SEWER JETTING



Part No.	Hose I.D	Hose O.D	Working Pressure	Burst Pressure	Min Bend Radius
	mm	mm	Bar	Bar	mm
R7SH-12-250	19.2	29.6	250	625	220
R7SH-16-250	25.4	38	250	625	300

### R7F – THERMOPLASTIC HOSE TWO POLYESTER FIBER BRAIDS

Part No.	Hose I.D	Hose O.D	Working Pressure	Burst Pressure	Min Bend Radius
	mm	mm	Bar	Bar	mm
R7F-04	6.5	11.8	200	800	40
R7F-05	8.0	14.0	190	760	50
R7F-06	9.7	16.2	175	700	60
R7F-08	13.0	20.0	150	600	80
R7F-10	16.5	24.0	125	500	120



### Also Available In Twin Version (R7TF)



### R7TW – THERMOPLASTIC HOSE TWO STEEL BRAIDS WIRE

Part No.	Hose I.D	Hose O.D	Working Pressure	Burst Pressure	Min Bend Radius
	mm	mm	Bar	Bar	mm
R7TW-04	6.5	13.0	390	1560	40
R7TW-05	8.0	15.0	330	1320	50
R7TW-06	9.7	17.0	315	1260	60



### ACB – AIR CONDITIONNING HOSE



Part No.	Hose I.D mm		Hose O.D	Working Pressure	Burst Pressure	Min Bend Radius
	Min	Max	mm	Bar	Bar	mm
ACB-05	7.8	8.6	19.8	24	121	102
ACB-06	10.2	11.1	23.8	24	121	114
ACB-08	12.4	13.6	26.2	24	121	127
ACB-10	15.6	16.8	29.4	17	86	165

### AH20 – MEDIUM DUTY AIR HOSE




Part No.	Hose I.D	Hose O.D	Working Pressure	Burst Pressure	Min Bend Radius
	mm	mm	Bar	Bar	mm
AH20-04	6.0	14	20	64	60
AH20-05	8.0	15	20	64	80
AH20-06	10.0	18	20	64	100
AH20-08	12.7	23	20	64	127
AH20-10	16.0	26	20	64	160
AH20-12	19.0	30	20	64	190
AH20-16	25.4	37	20	64	254
AH20-20	32.0	45	20	64	320
AH20-24	38.1	52	20	64	380
AH20-28	44.5	60	20	64	445
AH20-32	51.0	65	20	64	510
AH20-40	63.5	80	20	64	635
AH20-48	76.2	92	20	64	762
AH20-64	101.6	118	20	64	1016




HOSES

RF – TEXTILE BRAID OIL HOSE

	Part No.	Hose I.D	Hose O.D	Working Pressure	Burst Pressure	Min Bend Radius
		mm	mm	Bar	Bar	mm
	RF-04	6.5	11.0	10	30	60
	RF-05	8.0	13.0	10	30	65
	RF-06	9.5	14.5	10	30	70
	RF-08	12.5	19.0	10	30	95
	RF-10	16.0	23.0	10	30	-

RS – GALVANIZED WIRE BRAID OIL HOSE

	Part No.	Hose I.D	Hose O.D	Working Pressure	Burst Pressure	Min Bend Radius
		mm	mm	Bar	Bar	mm
	RS-04	6.0	10.0	25	75	30
	RS-05	8.0	13.0	25	75	40
	RS-06	10.0	15.0	25	75	50
	RS-08	13.0	19.0	20	60	65
	RS-10	16.0	22.0	20	60	80



### OSDH – OIL SECTION AND DISCHARGE HOSE



Part No.	Hose I.D	Hose O.D	Working Pressure	Burst Pressure	Min Bend Radius
	mm	mm	Bar	Bar	mm
OSDH-12	19	29	10	30	-
OSDH-16	25.4	36	10	30	152
OSDH-20	32.0	43	10	30	192
OSDH-24	38.1	49	10	30	228
OSDH-28	44.5	56	10	30	267
OSDH-32	50.8	63	10	30	306
OSDH-40	63.5	76	10	30	381
OSDH-48	76.2	89	10	30	457
OSDH-56	90.0	105	10	30	540
OSDH-64	101.6	117	10	30	610
OSDH-96	152.4	170	10	30	915

### WSDH – WATER SECTION AND DISCHARGE HOSE



Part No.	Hose I.D	Hose O.D	Working Pressure	Burst Pressure	Min Bend Radius
	mm	mm	Bar	Bar	mm
WSDH-12	19	29	10	30	-
WSDH-16	25.4	36	10	30	152
WSDH-20	32.0	43	10	30	192
WSDH-24	38.1	49	10	30	228
WSDH-28	44.5	56	10	30	267
WSDH-32	50.8	63	10	30	306
WSDH-40	63.5	76	10	30	381
WSDH-48	76.2	89	10	30	457
WSDH-56	90.0	105	10	30	540
WSDH-64	101.6	117	10	30	610
WSDH-96	152.4	170	10	30	915

### P – NON-TOXIC STEEL SPIRAL PVC HOSE

Part No.	Hose I.D	Working Pressure	Burst Pressure	Min Bend Radius
	mm	Bar	Bar	mm
P-12	12	10	21	25
P-20	20	7	15	50
P-25	25	7	15	60
P-32	32	5	13	75
P-35	35	5	12	80
P-38	38	5	12	90
P-40	40	4.5	9	95
P-51	51	4.5	9	125
P-63	63	4	7	150
P-76	76	3	6	195

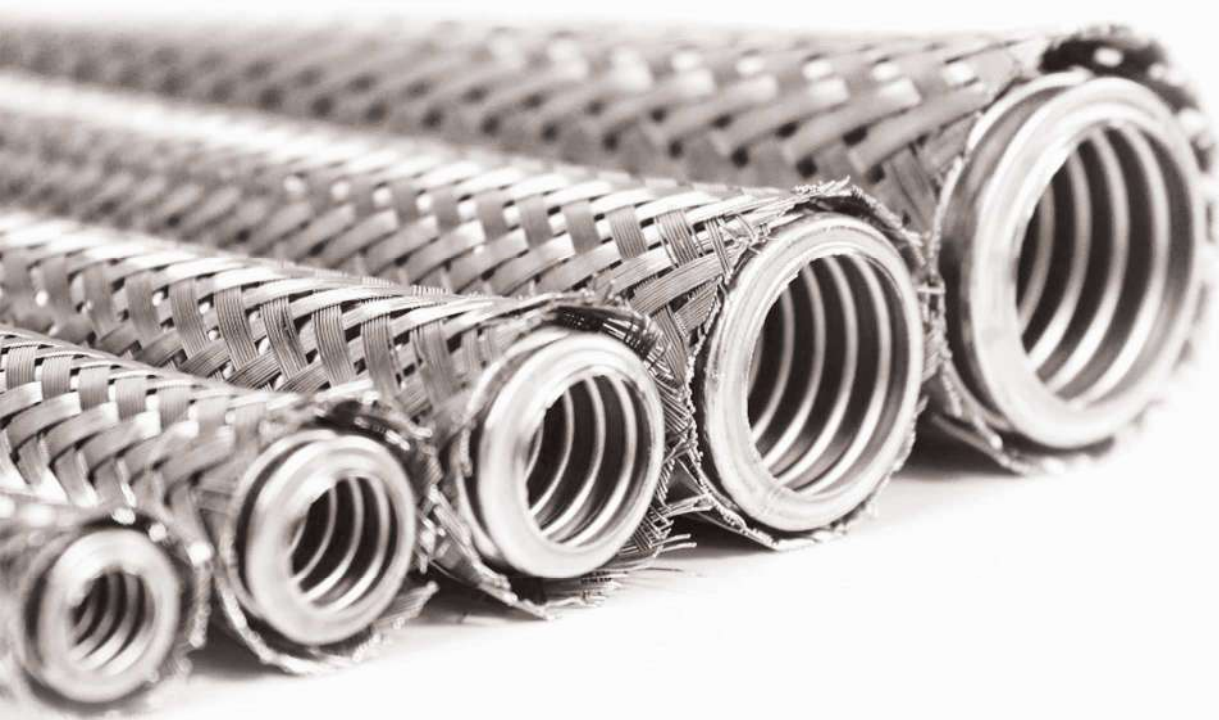
### T9L – TEFLON HOSE

Part No.	Hose I.D	Hose O.D	Thickness	Working Pressure	Burst Pressure
	mm	mm	mm	Bar	Bar
T9L-04	6.4	9	0.7	200	675
T9L-06	10	12.5	0.7	180	540
T9L-08	12.7	15.7	0.8	120	380
T9L-10	16	19.3	1	95	370
T9L-12	19.18	22.86	1.15	85	320
T9L-16	25.5	29.46	1.2	70	280



### SS1 – STAINLESS STEEL HOSE

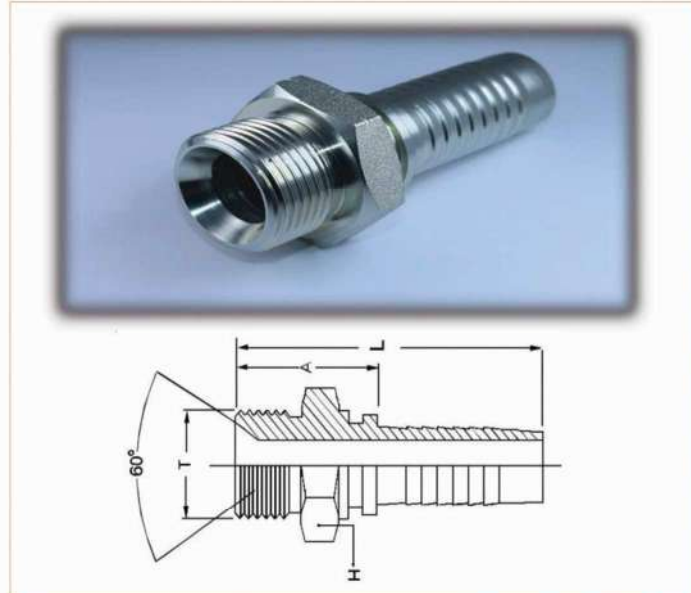
Part No.	Hose I.D	Hose O.D	Working Pressure
	mm	mm	kgf/cm <sup>2</sup>
SS1- 04	6	14	100
SS1- 06	10	19	90
SS1- 08	12	22	80
SS1- 12	20	29	64
SS1- 16	25	36	50
SS1- 20	32	45	40
SS1- 24	38	55	30
SS1- 32	50	68	28
SS1- 40	65	84	24
SS1- 48	80	97	18
SS1- 64	100	126	16
SS1- 80	125	152	12
SS1- 96	150	178	10
SS1- 128	200	225	8





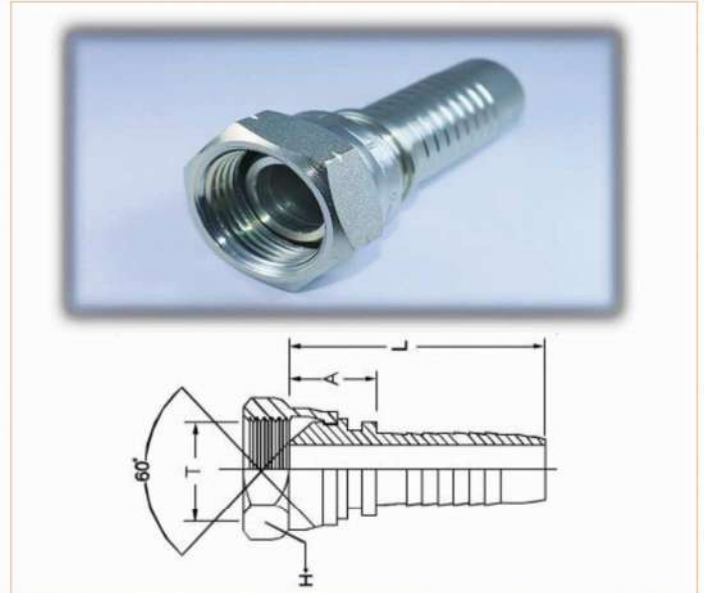


### BSP MALE PARALLEL 60° CONE SEAT



Part No.	Thread	Dimension (mm)		
		A	L	H
MM04A02MU	G <sup>1</sup> / <sub>8</sub> -28			15
MM04A04MU	G <sup>1</sup> / <sub>4</sub> -19			19
MM04A06MU	G <sup>3</sup> / <sub>8</sub> -19			22
MM05A04MU	G <sup>1</sup> / <sub>4</sub> -19			19
MM05A06MU	G <sup>3</sup> / <sub>8</sub> -19			22
MM06A04MU	G <sup>1</sup> / <sub>4</sub> -19			19
MM06A06MU	G <sup>3</sup> / <sub>8</sub> -19			22
MM06A08MU	G <sup>1</sup> / <sub>2</sub> -14			27
MM08A06MU	G <sup>3</sup> / <sub>8</sub> -19			22
MM08A08MU	G <sup>1</sup> / <sub>2</sub> -14			27
MM08A12MU	G <sup>3</sup> / <sub>4</sub> -14			32
MM10A10MU	G <sup>5</sup> / <sub>8</sub> -14			28
MM10A12MU	G <sup>3</sup> / <sub>4</sub> -14			32
MM12A12MU	G <sup>3</sup> / <sub>4</sub> -14			32
MM12A16MU	G1 -11			38
MM16A16MU	G1 -11			38
MM16A16MUH	G1 -11			41
MM20A20MU	G <sup>1</sup> / <sub>4</sub> -11			50
MM24A24MU	G <sup>1</sup> / <sub>2</sub> -11			55
MM32A32MU	G2 -11			70

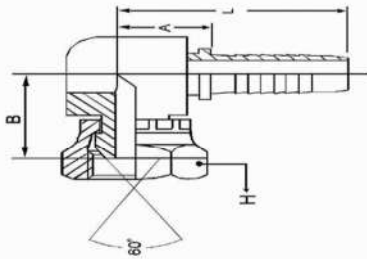
### BSP FEMALE 60° CONE



Part No.	Thread	Dimension (mm)		
		A	L	H
MM04A02NU	G <sup>1</sup> / <sub>8</sub> -28			15
MM04A04NU	G <sup>1</sup> / <sub>4</sub> -19			19
MM04A06NU	G <sup>3</sup> / <sub>8</sub> -19			22
MM05A04NU	G <sup>1</sup> / <sub>4</sub> -19			19
MM05A06NU	G <sup>3</sup> / <sub>8</sub> -19			22
MM06A04NU	G <sup>1</sup> / <sub>4</sub> -19			19
MM06A06NU	G <sup>3</sup> / <sub>8</sub> -19			22
MM06A08NU	G <sup>1</sup> / <sub>2</sub> -14			27
MM08A06NU	G <sup>3</sup> / <sub>8</sub> -19			22
MM08A08NU	G <sup>1</sup> / <sub>2</sub> -14			27
MM08A10NU	G <sup>5</sup> / <sub>8</sub> -14			28
MM08A12NU	G <sup>3</sup> / <sub>4</sub> -14			32
MM10A10NU	G <sup>5</sup> / <sub>8</sub> -14			28
MM10A12NU	G <sup>3</sup> / <sub>4</sub> -14			32
MM12A12NU	G <sup>3</sup> / <sub>4</sub> -14			32
MM12A16NU	G1 -11			38
MM16A12NU	G <sup>3</sup> / <sub>4</sub> -14			32
MM16A16NU	G1 -11			38
MM16A20NU	G <sup>1</sup> / <sub>4</sub> -11			50
MM20A20NU	G <sup>1</sup> / <sub>4</sub> -11			50
MM24A24NU	G <sup>1</sup> / <sub>2</sub> -11			55
MM32A32NU	G2 -11			70

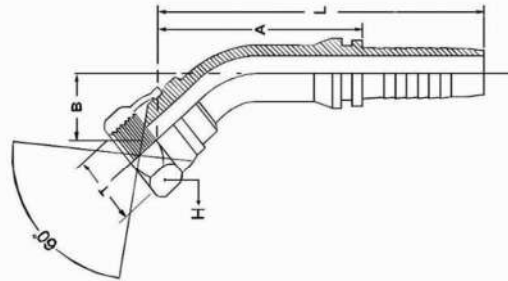
FITTING

90° COMPACT ELBOW BSP FEMALE 60° CONE



Part No.	Thread	Dimension (mm)		
		A	L	H
MM04A04NU-90S	G <sup>1</sup> / <sub>4</sub> -19			19
MM06A06NU-90S	G <sup>3</sup> / <sub>8</sub> -19			22
MM08A08NU-90S	G <sup>1</sup> / <sub>2</sub> -14			27
MM10A10NU-90S	G <sup>5</sup> / <sub>8</sub> -14			28
MM12A12NU-90S	G <sup>3</sup> / <sub>4</sub> -14			32
MM16A16NU-90S	G1-11			38

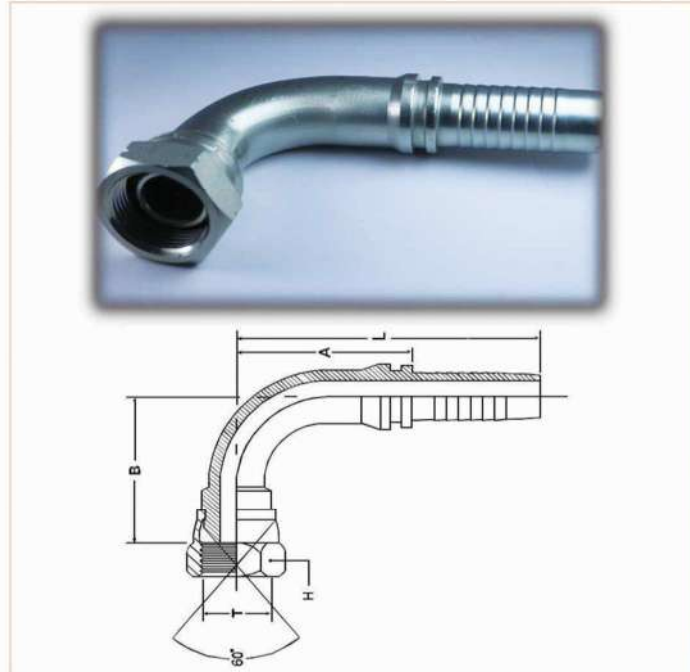
45° SWEPT ELBOW BSP FEMALE 60° CONE



Part No.	Thread	Dimension (mm)		
		A	L	H
MM04A04NU-45	G <sup>1</sup> / <sub>4</sub> -19			19
MM04A06NU-45	G <sup>3</sup> / <sub>8</sub> -19			22
MM05A06NU-45	G <sup>3</sup> / <sub>8</sub> -19			22
MM06A06NU-45	G <sup>3</sup> / <sub>8</sub> -19			22
MM06A08NU-45	G <sup>1</sup> / <sub>2</sub> -14			27
MM08A08NU-45	G <sup>1</sup> / <sub>2</sub> -14			27
MM08A10NU-45	G <sup>5</sup> / <sub>8</sub> -14			28
MM10A10NU-45	G <sup>5</sup> / <sub>8</sub> -14			28
MM10A12NU-45	G <sup>3</sup> / <sub>4</sub> -14			32
MM12A12NU-45	G <sup>3</sup> / <sub>4</sub> -14			32
MM12A16NU-45	G1-11			38
MM16A16NU-45	G1-11			38
MM20A20NU-45	G <sup>1</sup> / <sub>4</sub> -11			50
MM24A24NU-45	G <sup>1</sup> / <sub>2</sub> -11			55
MM32A32NU-45	G2-11			70

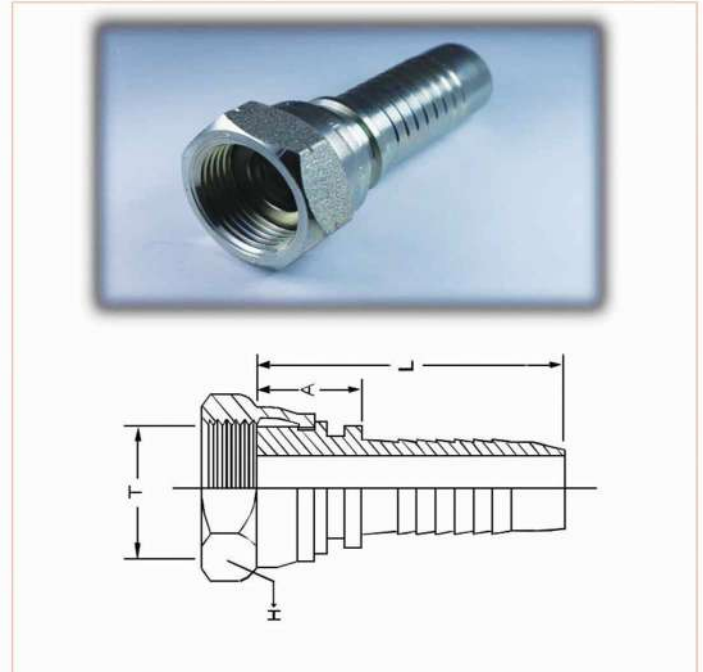


90° SWEPT ELBOW BSP FEMALE 60° CONE



Part No.	Thread	Dimension (mm)		
		A	L	H
MM04A04NU-90	G1/4 -19			19
MM04A06NU-90	G3/8 -19			22
MM05A06NU-90	G3/8 -19			22
MM06A06NU-90	G3/8 -19			22
MM06A08NU-90	G1/2 -14			27
MM08A06NU-90	G3/8 -19			22
MM08A08NU-90	G1/2 -14			27
MM08A10NU-90	G5/8 -14			28
MM10A10NU-90	G5/8 -14			28
MM10A12NU-90	G3/4 -14			32
MM12A12NU-90	G3/4 -14			32
MM12A16NU-90	G1 -11			38
MM16A16NU-90	G1 -11			38
MM20A20NU-90	G1 <sup>1</sup> / <sub>4</sub> -11			50
MM24A24NU-90	G1 <sup>1</sup> / <sub>2</sub> -11			55
MM32A32NU-90	G2 -11			70

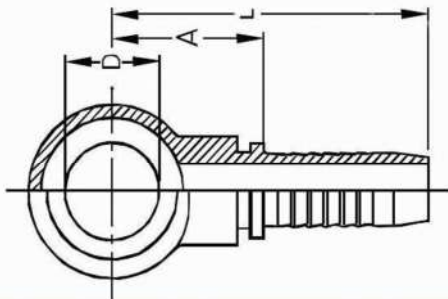
BSP FEMALE FLAT SEAT



Part No.	Thread	Dimension (mm)		
		A	L	H
MM04A04NUF	G1/4 -19			19
MM04A06NUF	G3/8 -19			22
MM06A04NUF	G1/4 -19			22
MM06A06NUF	G3/8 -19			22
MM06A08NUF	G1/2 -14			27
MM08A08NUF	G1/2 -14			27
MM08A12NUF	G3/4 -14			32
MM10A12NUF	G3/4 -14			32
MM12A12NUF	G3/4 -14			32
MM16A16NUF	G1 -11			38

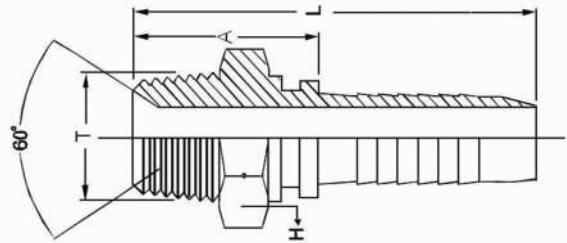
FITTING

BSP BANJO



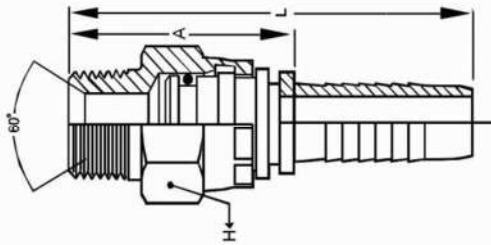
Part No.	Bolt Thread	Dimension (mm)	
		D	L
MM04A02BB	1/8-28	10.1	
MM04A04BB	1/4-19	13.3	
MM04A06BB	3/8-19	16.9	
MM05A05BB	5/16-19	18	
MM06A04BB	1/4-19	13.3	
MM06A06BB	3/8-19	16.9	
MM08A08BB	1/2-19	21	
MM10A10BB	5/8-14	23.3	
MM12A12BB	3/4-14	26	

NPTF MALE 60° CONE SEAT



Part No.	Thread	Dimension (mm)		
		A	L	H
MM04A02MB	1/8-27			12
MM04A04MB	1/4-18			15
MM04A06MB	3/8-18			19
MM04A08MB	1/2-14			22
MM05A04MB	1/4-18			15
MM05A06MB	3/8-18			19
MM06A04MB	1/4-18			15
MM06A06MB	3/8-18			19
MM06A08MB	1/2-14			22
MM08A06MB	3/8-18			19
MM08A08MB	1/2-14			22
MM08A10MB	5/8-14			24
MM08A12MB	3/4-14			27
MM10A10MB	5/8-14			24
MM10A12MB	3/4-14			27
MM12A12MB	3/4-14			27
MM12A16MB	1-11.5			36
MM16A16MB	1-11.5			36
MM20A20MB	1 1/4-11.5			46
MM24A24MB	1 1/2-11.5			50
MM32A32MB	2-11.5			65

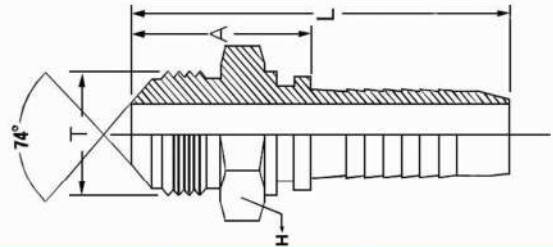
### PTESWIVEL MALE 60° CONE SEAT



Part No.	Thread	Dimension (mm)		
		A	L	H
MM04A04MC	1/4-18			17
MM06A06MC	3/8-18			22
MM08A08MC	1/2-14			25
MM12A12MC	3/4-14			32
MM16A16MC	1-11.5			41



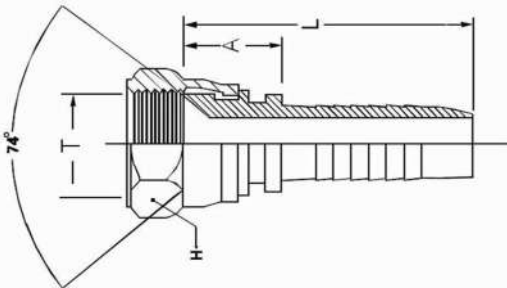
### JIC MALE 74° CONE



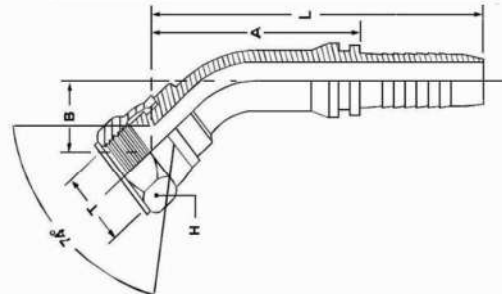
Part No.	Thread	Dimension (mm)		
		A	L	H
MM04A04MJ	7/16-20UNF			12
MM04A05MJ	1/2-20UNF			14
MM04A06MJ	9/16-18UNF			15
MM05A05MJ	1/2-20UNF			14
MM05A06MJ	9/16-18UNF			15
MM06A06MJ	9/16-18UNF			15
MM06A7MJ	7/8-19 UNF			17
MM06A08MJ	3/4-16UNF			19
MM06A10MJ	7/8-14UNF			24
MM08A08MJ	3/4-16UNF			19
MM08A10MJ	7/8-14UNF			24
MM08A12MJ	1 1/16-12UN			27
MM10A10MJ	7/8-14UNF			24
MM10A12MJ	1 1/16-12UN			27
MM12A10MJ	7/8-14UNF			24
MM12A12MJ	1 1/16-12UN			27
MM12A14MJ	1 3/16-12UN			32
MM12A16MJ	1 5/16-12UN			34
MM16A16MJ	1 5/16-12UN			34
MM20A20MJ	1 5/8-12NU			42
MM24A24MJ	1 7/8-12NU			50
MM32A32MJ	2 1/2-12NU			65

FITTING

JIC FEMALE 74° CONE SEAT



45° SWEPT ELBOW JIC FEMALE 74° CONE SEAT



Part No.	Thread	Dimension (mm)		
		A	L	H
MM04A04NJ	7/16-20UNF			15
MM04A05NJ	1/2-20UNF			17
MM04A06NJ	9/16-18UNF			19
MM05A05NJ	1/2-20UNF			17
MM05A06NJ	9/16-18UNF			19
MM06A06NJ	9/16-18UNF			19
MM06A07NJ	7/8-19			22
MM06A08NJ	3/4-16UNF			24
MM06A10NJ	7/8-14UNF			27
MM08A08NJ	3/4-16UNF			24
MM08A10NJ	7/8-14UNF			27
MM08A12NJ	1 1/16-12UN			32
MM10A10NJ	7/8-14UNF			27
MM10A12NJ	1 1/16-12UN			32
MM12A10NJ	7/8-14UNF			27
MM12A12NJ	1 1/16-12UN			32
MM12A14NJ	1 3/16-12UN			36
MM12A16NJ	1 5/16-12UN			41
MM16A12NJ	1 1/16-12UN			32
MM16A16NJ	1 5/16-12UN			41
MM16A20NJ	1 5/8-12NU			50
MM20A20NJ	1 5/8-12NU			50
MM24A24NJ	1 7/8-12NU			55
MM32A32NJ	2 1/2-12NU			70

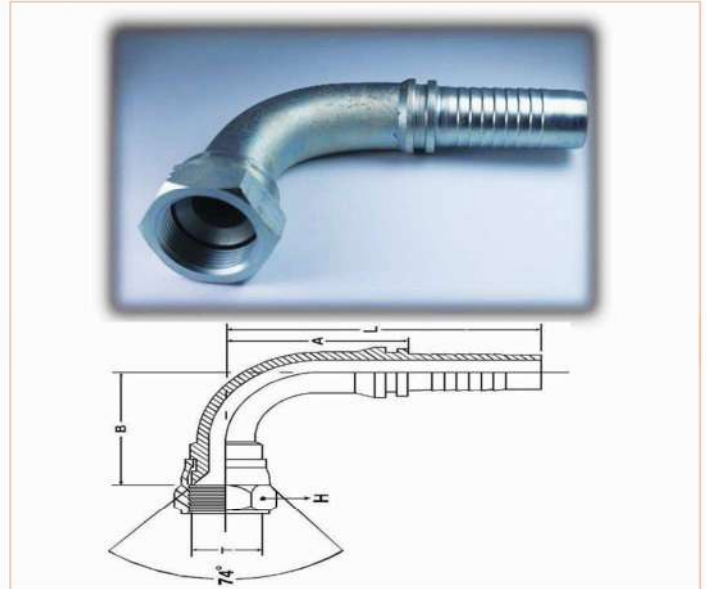
Part No.	Thread	Dimension (mm)		
		A	L	H
MM04A04NJ-45	7/16-20UN			15
MM04A05NJ-45	1/2-20UNF			17
MM04A06NJ-45	9/16-18UNF			19
MM05A05NJ-45	1/2-20UNF			17
MM05A06NJ-45	9/16-18UNF			19
MM06A06NJ-45	9/16-18UNF			19
MM06A07NJ-45	7/8-19			22
MM06A08NJ-45	3/4-16UNF			24
MM08A08NJ-45	3/4-16UNF			24
MM08A10NJ-45	7/8-14UNF			27
MM08A12NJ-45	1 1/16-12UN			32
MM10A10NJ-45	7/8-14UNF			27
MM10A12NJ-45	1 1/16-12UN			32
MM12A12NJ-45	1 1/16-12UN			32
MM12A14NJ-45	7/8-14UNF			36
MM12A16NJ-45	1 5/16-12UN			41
MM16A16NJ-45	1 5/16-12UN			41
MM16A20NJ-45	1 5/8-12NU			50
MM20A20NJ-45	1 5/8-12NU			50
MM24A24NJ-45	1 7/8-12NU			55
MM32A32NJ-45	2 1/2-12NU			70

90° LONG DROPELBOW JIC FEMALE 74° CONE SEAT



Part No.	Thread	Dimension (mm)		
		A	L	H
MM06A06NJ-90L	9/16-18UNF			19
MM08A08NJ-90L	3/4-16UNF			24
MM12A12NJ-90L	1 1/16-12UN			32
MM16A16NJ-90L	1 5/16-12UN			41

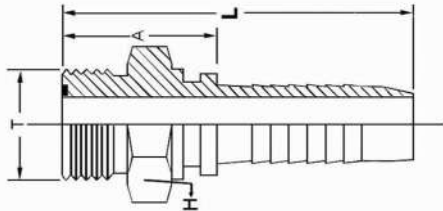
90° SWEPT ELBOW JIC FEMALE 74° CONE SEAT



Part No.	Thread	Dimension (mm)		
		A	L	H
MM04A04NJ-90	7/16-20UNF			15
MM04A05NJ-90	1/2-20UNF			17
MM04A06NJ-90	9/16-18UNF			19
MM05A05NJ-90	1/2-20UNF			17
MM05A06NJ-90	9/16-18UNF			19
MM06A06NJ-90	9/16-18UNF			19
MM06A07NJ-90	7/8-19			22
MM06A08NJ-90	3/4-16UNF			24
MM08A08NJ-90	3/4-16UNF			24
MM08A10NJ-90	7/8-14UNF			27
MM08A12NJ-90	1 1/16-12UN			32
MM10A10NJ-90	7/8-14UNF			27
MM10A12NJ-90	1 1/16-12UN			32
MM12A12NJ-90	1 1/16-12UN			32
MM12A14NJ-90	1 3/16-12UN			36
MM12A16NJ-90	1 5/16-12UN			41
MM16A16NJ-90	1 5/16-12UN			41
MM16A20NJ-90	1 5/8-12UN			50
MM20A20NJ-90	1 5/8-12UN			50
MM24A24NJ-90	1 7/8-12UN			55
MM32A32NJ-90	2 1/2-12UN			70

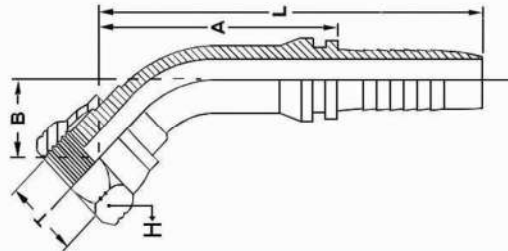
FITTING

ORFS MALE-SAE J1453



Part No.	Thread	Dimension (mm)		
		A	L	H
MM04A04FMO	9/16-18UNF			17
MM06A06FMO	11/16-16UN			19
MM08A08FMO	13/16-16UN			22
MM10A10FMO	1-14UNS			27
MM12A12FMO	1 3/16-12UN			32
MM16A16FMO	1 7/16-12UN			41

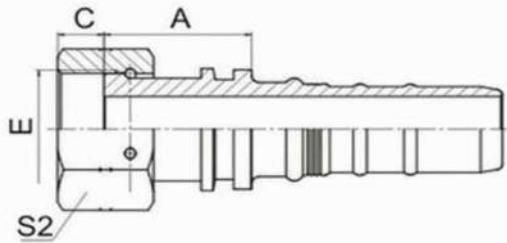
45° SWEPT ELBOW ORFS FEMALE-SAE J1453



Part No.	Thread	Dimension (mm)		
		A	L	H
MM04A04FF-45	9/16-18UNF			19
MM04A06FF-45	11/16-16UN			22
MM05A06FF-45	11/16-16UN			22
MM06A06FF-45	11/16-16UN			22
MM06A08FF-45	13/16-16UN			24
MM08A08FF-45	13/16-16UN			24
MM08A10FF-45	1-14UNS			30
MM08A12FF-45	1 3/16-12UN			36
MM10A10FF-45	1-14UNS			30
MM10A12FF-45	1 3/16-12UN			36
MM12A12FF-45	1 3/16-12UN			36
MM12A16FF-45	1 7/16-12UN			41
MM16A16FF-45	1 7/16-12UN			41
MM20A20FF-45	1 11/16-12UN			50
MM24A24FF-45	2-12UN			60

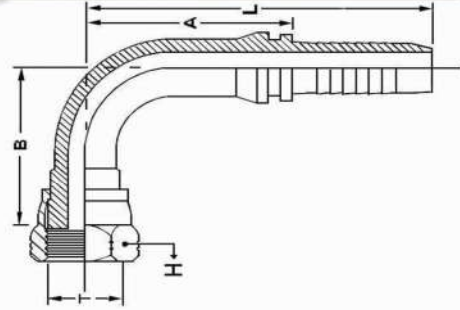


ORFS FEMALE-SAE-J1453



Part No.	Thread	Dimension (mm)		
		A	L	S2
MM04A04FF	9/16-18UNF			19
MM04A06FF	11/16-16UN			22
MM05A06FF	11/16-16UN			22
MM06A06FF	11/16-16UN			22
MM06A08FF	13/16-16UN			24
MM08A08FF	13/16-16UN			24
MM08A10FF	1-14UNS			30
MM08A12FF	1 3/16-12UN			36
MM10A10FF	1-14UNS			30
MM10A12FF	1 3/16-12UN			36
MM12A12FF	1 3/16-12UN			36
MM12A16FF	1 7/16-12UN			41
MM16A16FF	1 7/16-12UN			41
MM16A20FF	1 11/16-12UN			50
MM20A20FF	1 11/16-12UN			50
MM24A24FF	2-12UN			60

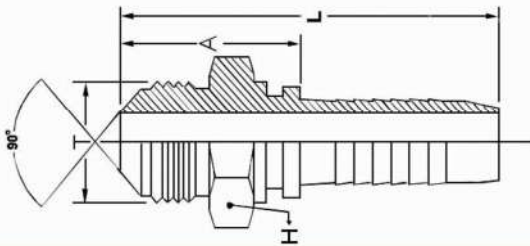
90° SWEEP ELBOW ORFS FEMALE-SAE J1453



Part No.	Thread	Dimension (mm)		
		A	L	H
MM04A04FF-90	9/16-18UNF			19
MM04A06FF-90	11/16-16UN			22
MM05A06FF-90	11/16-16UN			22
MM06A06FF-90	11/16-16UN			22
MM06A08FF-90	13/16-16UN			24
MM08A08FF-90	13/16-16UN			24
MM08A10FF-90	1-14UNS			30
MM08A12FF-90	1 3/16-12UN			36
MM10A10FF-90	1-14UNS			30
MM10A12FF-90	1 3/16-12UN			36
MM12A12FF-90	1 3/16-12UN			36
MM12A16FF-90	1 7/16-12UN			41
MM16A16FF-90	1 7/16-12UN			41
MM20A20FF-90	1 11/16-12UN			50
MM24A24FF-90	2-12UN			60

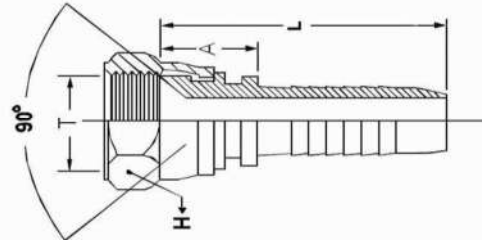
FITTING

SAE MALE 90° CONE SAE-J512



Part No.	Thread	Dimension (mm)		
		A	L	H
MM04A04MS	7/16-20UNF			13
MM06A06MS	5/8-18UNF			19
MM08A08MS	3/4-16UNF			22
MM12A12MS	1 1/16-14UNS			29

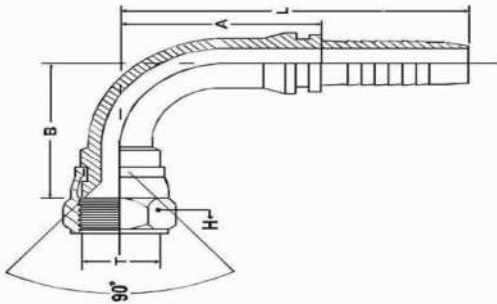
SAE FEMALE 90° CONE SAET-SAE J512



Part No.	Thread	Dimension (mm)		
		A	L	H
MM04A04NS	7/16-20UNF			15
MM06A06NS	5/8-18UNF			22
MM08A08NS	3/4-16UNF			24
MM12A12NS	1 1/16-14UNS			32

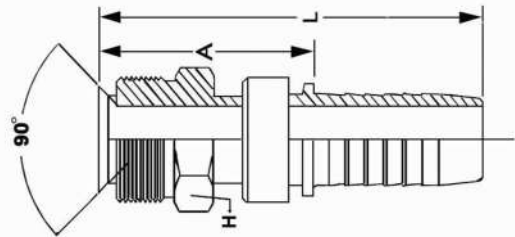


90° SWEPT ELBOW SAE FEMALE 90°  
CONE-SAE J512



Part No.	Thread	Dimension (mm)		
		A	L	H
MM04A04NS-90	7/16-20UNF			15
MM06A06NS-90	5/8-18UNF			22
MM08A08NS-90	3/4-16UNF			24
MM12A12NS-90	1 1/16-14UNS			32

STRAIGHT SAE 90° INVERTED FLARE MALE  
SWIVEL-SAE J512

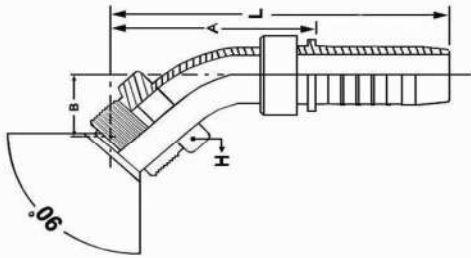


Part No.	Thread	Dimension (mm)		
		A	L	H
MM04A04MF	7/16-24UNS			11
MM04A05MF	1/2-20UNS			13
MM05A05MF	1/2-20UNF			13
MM05A06MF	5/8-18UNF			16
MM06A05MF	1/2-20UNF			13
MM06A06MF	5/8-18UNF			16
MM06A08MF	3/4-18UNS			19
MM08A08MF	3/4-18UNS			19
MM08A10MF	7/8-18UNS			22
MM10A10MF	7/8-18UNS			22

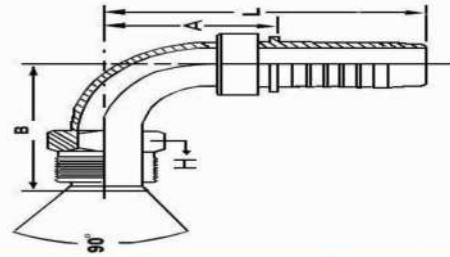


FITTING

45° SWEPT ELBOW 90° INVERTED FLARE MALE SWIVEL-SAE J512



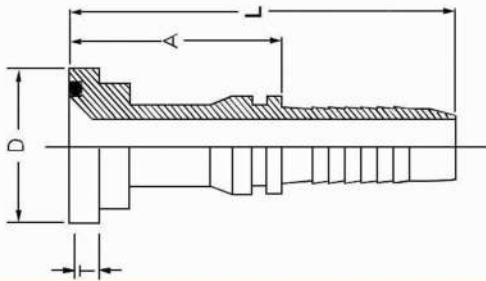
90° SWEPT ELBOW 90° INVERTED FLARE MALE SWIVEL-SAE J512



Part No.	Thread	Dimension (mm)		
		A	L	H
MM04A04MF-45	7/16-24UNS			11
MM04A05MF-45	1/2-20UNS			13
MM05A05MF-45	1/2-20UNF			13
MM05A06MF-45	5/8-18UNF			16
MM06A05MF-45	1/2-20UNF			13
MM06A06MF-45	5/8-18UNF			16
MM06A08MF-45	3/4-18UNS			19
MM08A08MF-45	3/4-18UNS			19
MM08A10MF-45	7/8-18UNS			22
MM10A10MF-45	7/8-18UNS			22

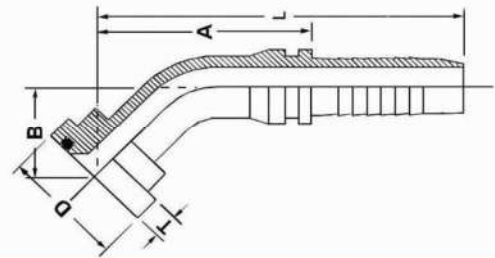
Part No.	Thread	Dimension (mm)		
		A	L	H
MM04A04MF-90	7/16-24UNS			11
MM04A05MF-90	1/2-20UNS			13
MM05A05MF-90	1/2-20UNF			13
MM05A06MF-90	5/8-18UNF			16
MM06A05MF-90	1/2-20UNF			13
MM06A06MF-90	5/8-18UNF			16
MM06A08MF-90	3/4-18UNS			19
MM08A08MF-90	3/4-18UNS			19
MM08A10MF-90	7/8-18UNS			22
MM10A10MF-90	7/8-18UNS			22

**STRAIGHT SAE FLANGE 3000 PSI-CODE  
61-SAE J518**



Part No.	Flange	Dimension (mm)			
		D	T	A	L
MM08A08PA	1/2	30.2	6.7		
MM08A12PA	3/4	38.1	6.7		
MM10A10PAK	5/8	34	6.7		
MM12A12PA	3/4	38.1	6.7		
MM12A16PA	1	44.5	8.1		
MM16A16PA	1	44.5	8.1		
MM16A20PA	1 1/4	50.8	8.1		
MM16A24PA	1 1/2	60.3	8.1		
MM20A20PA	1 1/4	50.8	8.1		
MM20A24PA	1 1/2	60.3	8.1		
MM24A24PA	1 1/2	60.5	8.1		
MM24A32PA	2	71.4	9.6		
MM32A32PA	2	71.4	9.6		

**45° SWEPT ELBOW SAE FLANFGE 3000 PSI-CODE  
61-SAE J518**

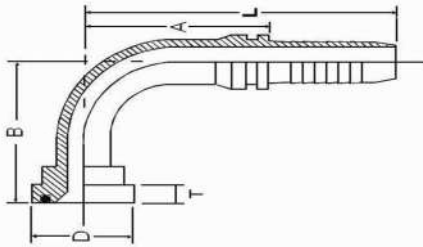


Part No.	Flange	Dimension (mm)			
		D	T	A	L
MM08A08PA-45	1/2	30.2	6.7		
MM08A12PA-45	1/2	38.1	6.7		
MM10A10PAK-45	5/8	34	6.7		
MM10A12PA-45	3/4	38.1	6.7		
MM12A12PA-45	3/4	38.1	6.7		
MM12A16PA-45	3/4	44.5	8.1		
MM16A16PA-45	1	44.5	8.1		
MM16A20PA-45	1	50.8	8.1		
MM16A24PA-45	1	60.3	8.1		
MM20A20PA-45	1 1/4	50.8	8.1		
MM20A24PA-45	1 1/4	60.3	8.1		
MM24A24PA-45	1 1/2	60.5	8.1		
MM24A32PA-45	1 1/2	71.4	9.6		
MM32A32PA-45	2	71.4	9.6		

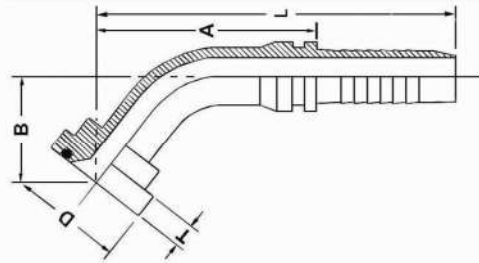


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90° SWEPT ELBOW SAE FLANGE 3000 PSI-CODE  
61-SAE J518



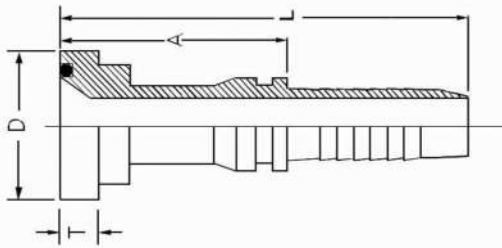
60° SWEPT ELBOW SAE FLANGE 3000 PSI-CODE  
61-SAE J518



Part No.	Flange	Dimension (mm)			
		D	T	A	L
MM08A08PA-90	1/2	30.2	6.7		
MM08A12PA-90	3/4	38.1	6.7		
MM10A10PAK-90	5/8	34	6.7		
MM10A12PA-90	3/4	38.1	6.7		
MM12A12PA-90	3/4	38.1	6.7		
MM12A16PA-90	1	44.5	8.1		
MM16A12PA-90	3/4	38.1	6.7		
MM16A16PA-90	1	44.5	8.1		
MM16A20PA-90	1 1/4	50.8	8.1		
MM16A24PA-90	1 1/2	60.3	8.1		
MM20A20PA-90	1 1/4	50.8	8.1		
MM20A24PA-90	1 1/2	60.3	8.1		
MM24A24PA-90	1 1/2	60.3	8.1		
MM24A32PA-90	2	71.4	9.6		
MM32A32PA-90	2	71.4	9.6		

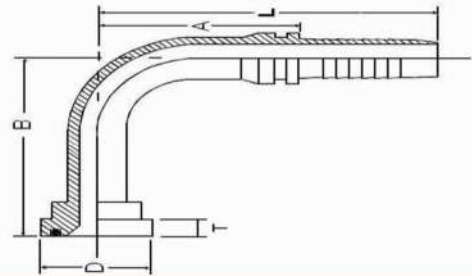
Part No.	Flange	Dimension (mm)			
		D	T	A	L
MM12A16PA-60	1	44.5	8.1		
MM16A16PA-60	1	44.5	8.1		
MM16A20PA-60	1 1/4	50.8	8.1		
MM20A20PA-60	1 1/4	50.8	8.1		

**STRAIGHT SAE FLANGE 6000PSI-CODE  
62-SAE J518**



Part No.	Flange	Dimension (mm)			
		D	T	A	L
MM12A12PH	3/4	41.3	8.9		
MM12A16PH	1	47.6	9.6		
MM16A16PH	1	47.6	9.6		
MM16A20PH	1 1/4	54	10.3		
MM20A16PH	1	47.6	9.6		
MM20A20PH	1 1/4	54	10.3		
MM20A24PH	1 1/2	63.5	12.6		
MM24A24PH	1 1/2	63.5	12.6		
MM24A32PH	2	79.4	12.6		
MM32A32PH	2	79.4	12.6		

**90° LONG DROP SAE FLANGE 3000PSI-CODE  
61-SAE J518**

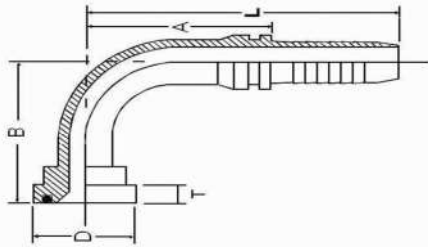


Part No.	Flange	Dimension (mm)			
		D	T	A	L
MM12A12PA-90L	3/4	38.1	6.7		
MM16A16PA-90L	1	44.5	8.1		
MM20A20PA-90L	1 1/4	50.8	8.1		



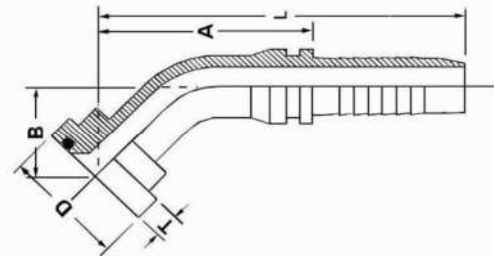
FITTING

90°SWEPT ELBOW SAE FLANGE 6000 PSI-CODE  
62-SAE J518



Part No.	Flange	Dimension (mm)			
		D	T	A	L
MM12A12PH-90	3/4	41.3	8.9		
MM12A16PH-90	1	47.6	9.6		
MM16A16PH-90	1	47.6	9.6		
MM16A20PH-90	1 1/4	54	10.3		
MM20A20PH-90	1 1/4	54	10.3		
MM20A24PH-90	1 1/2	63.5	12.6		
MM24A24PH-90	1 1/2	63.5	12.6		
MM24A32PH-90	2	79.4	12.6		
MM32A32PH-90	2	79.4	12.6		

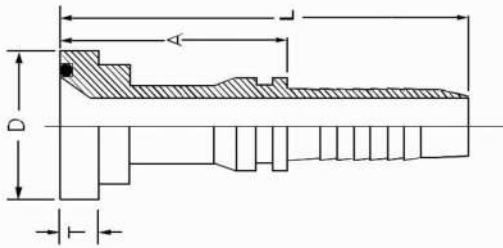
45°SWEPT ELBOW SAE FLANGE 6000 PSI-CODE  
62-SAE J518



Part No.	Flange	Dimension (mm)			
		D	T	A	L
MM12A12PH-45	3/4	41.3	8.9		
MM12A16PH-45	1	47.6	9.6		
MM16A16PH-45	1	47.6	9.6		
MM16A20PH-45	1 1/4	54	10.3		
MM20A20PH-45	1 1/4	54	10.3		
MM20A24PH-45	1 1/2	63.5	12.6		
MM24A24PH-45	1 1/2	63.5	12.6		
MM24A32PH-45	2	79.4	12.6		
MM32A32PH-45	2	79.4	12.6		

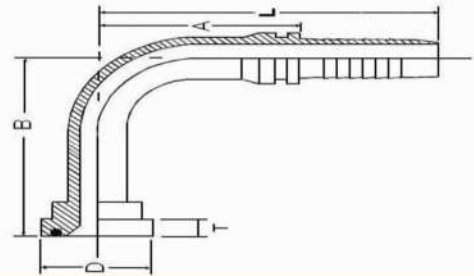


**STRAIGHT SUPERCAT FLANGE**



Part No.	Flange	Dimension (mm)			
		D	T	A	L
MM10A12SC	3/4	41.3	14.3		
MM12A12SC	3/4	41.3	14.3		
MM12A16SC	1	47.6	14.3		
MM16A16SC	1	47.6	14.3		
MM16A20SC	1 1/4	54.0	14.3		
MM20A20SC	1 1/4	54.0	14.3		
MM20A24SC	1 1/2	63.5	14.3		
MM24A24SC	1 1/2	63.5	14.3		
MM32A32SC	2	79.5	14.3		

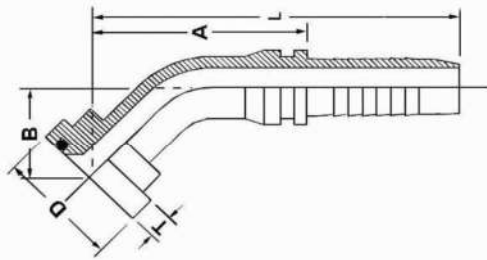
**90° LONG DROP SAE FLANGE 6000 PSI-CODE 62 SAEJ518**



Part No.	Flange	Dimension (mm)			
		D	T	A	L
MM12A12PH-90L	3/4	41.3	8.9		
MM16A16PH-90L	1	47.6	9.6		

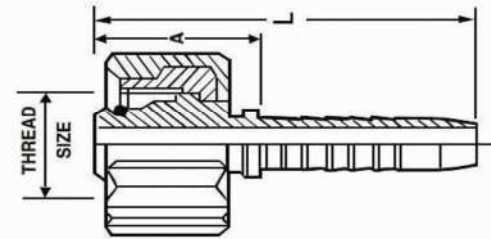
FITTING

45° SWEPT ELBOW SUPER CAT FLANGE



Part No.	Flange	Dimension (mm)			
		D	T	A	L
MM12A12SC-45	¾	41.3	14.3		
MM16A16SC-45	1	47.6	14.3		
MM16A20SC-45	1 ¼	54.0	14.3		
MM20A20SC-45	1 ¼	54.0	14.3		
MM24A24SC-45	1 ½	63.5	14.3		

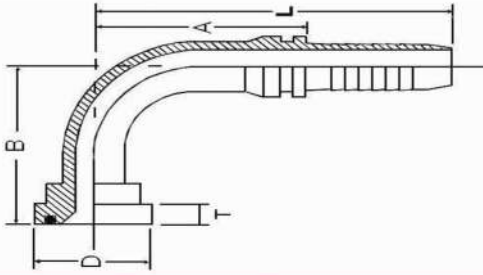
WASH CLEANER (RUBBER COVER NUT)



Part No.	Thread	Dimension (mm)		
		A	L	H
MM04A22KR	M22 × 1.5			27
MM05A22KR	M22 × 1.5			27
MM06A22KR	M22 × 1.5			27

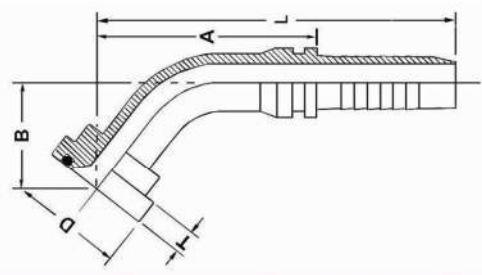


45° SWEPT ELBOW SUPERCAT FLANGE 9000 PSI



Part No.	Flange	Dimension (mm)			
		D	T	A	L
MM12A12SC-90	¾	41.3	14.3		
MM16A16SC-90	1	47.6	14.3		
MM16A20SC-90	1 ¼	54.0	14.3		
MM20A20SC-90	1 ¼	54.0	14.3		
MM20A24SC-90	1 ½	63.5	14.3		
MM24A24SC-90	1 ½	63.5	14.3		

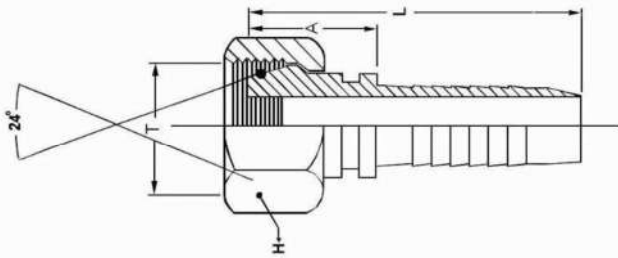
60° SWEPT ELBOW SUPERCAT FLANGE 9000 PSI



Part No.	Flange	Dimension (mm)			
		D	T	A	L
MM16A16SC-60	1	47.6	14.3		

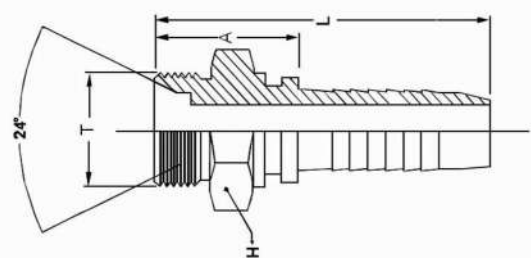
FITTING

METRIC FEMALE 'O' RING 24° CONE LIGHT-DIN 24° L



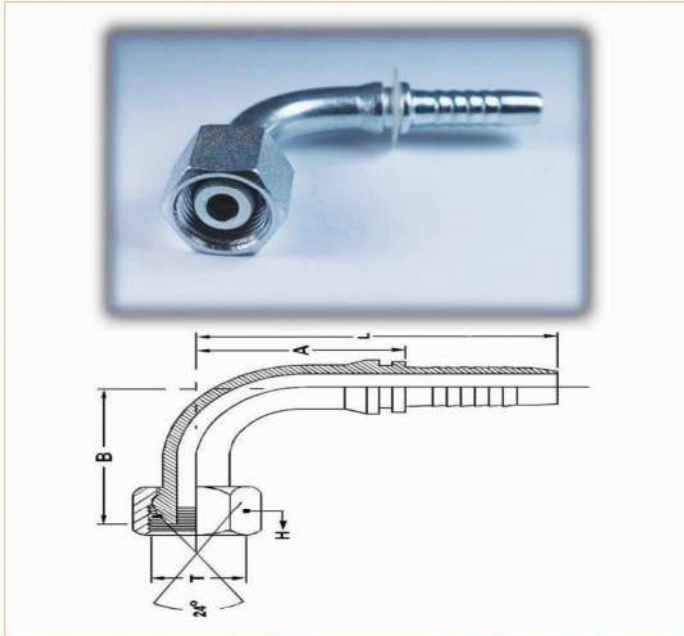
Part No.	Thread	Dimension (mm)		
		A	L	H
MM04A12ROL	M12 × 1.5			14
MM04A14ROL	M14 × 1.5			17
MM04A16ROL	M16 × 1.5			19
MM04A18ROL	M18 × 1.5			22
MM05A16ROL	M16 × 1.5			19
MM05A18ROL	M18 × 1.5			22
MM06A16ROL	M16 × 1.5			19
MM06A18ROL	M18 × 1.5			22
MM06A22ROL	M22 × 1.5			27
MM08A22ROL	M22 × 1.5			27
MM08A26ROL	M26 × 1.5			32
MM10A26ROL	M26 × 1.5			32
MM10A30ROL	M30 × 2			36
MM12A30ROL	M30 × 2			36
MM12A36ROL	M36 × 2			41
MM16A36ROL	M36 × 2			41
MM20A45ROL	M45 × 2			50
MM24A52ROL	M52 × 2			60

METRIC MALE 24° CONE SEAT LIGHT-DIN 24° L



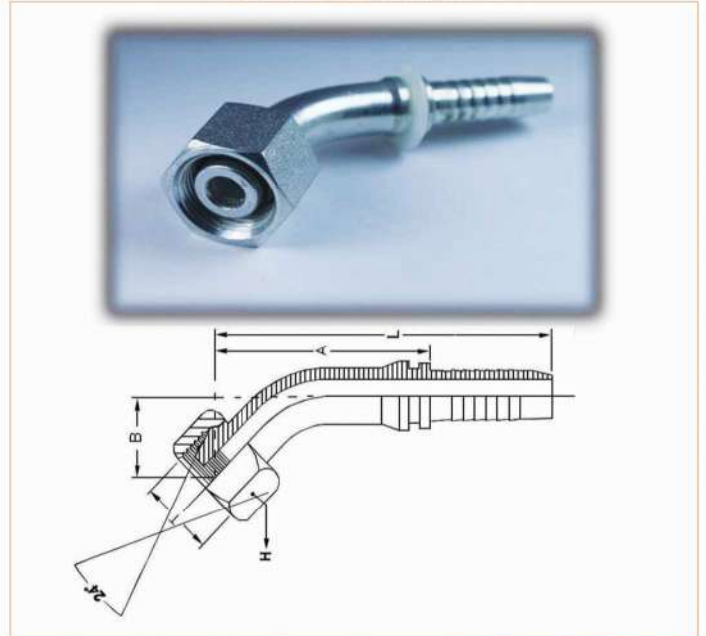
Part No.	Thread	Dimension (mm)		
		A	L	H
MM04A12MZL	M12 × 1.5			15
MM04A14MZL	M14 × 1.5			15
MM04A16MZL	M16 × 1.5			17
MM04A18MZL	M18 × 1.5			19
MM05A16MZL	M16 × 1.5			17
MM05A18MZL	M18 × 1.5			19
MM06A16MZL	M16 × 1.5			17
MM06A18MZL	M18 × 1.5			19
MM06A22MZL	M22 × 1.5			24
MM08A22MZL	M22 × 1.5			24
MM08A26MZL	M26 × 1.5			27
MM10A26MZL	M26 × 1.5			27
MM10A30MZL	M30 × 2			32
MM12A30MZL	M30 × 2			32
MM16A36MZL	M36 × 2			38
MM20A45MZL	M45 × 2			46
MM24A52MZL	M52 × 2			55

90°SWEPT ELBOW METRIC FEMALE 'O' RING 24°  
CONE LIGH-DIN 24°L



Part No.	Thread	Dimension (mm)		
		A	L	H
MM04A12ROL-90	M12 × 1.5			14
MM04A14ROL-90	M14 × 1.5			17
MM04A16ROL-90	M16 × 1.5			19
MM04A18ROL-90	M18 × 1.5			22
MM05A16ROL-90	M16 × 1.5			19
MM05A18ROL-90	M18 × 1.5			22
MM06A16ROL-90	M16 × 1.5			19
MM06A18ROL-90	M18 × 1.5			22
MM06A22ROL-90	M22 × 1.5			27
MM08A22ROL-90	M22 × 1.5			27
MM08A26ROL-90	M26 × 1.5			32
MM10A26ROL-90	M26 × 1.5			32
MM10A30ROL-90	M30 × 2			36
MM12A30ROL-90	M30 × 2			36
MM16A36ROL-90	M36 × 2			41
MM20A45ROL-90	M45 × 2			50
MM24A52ROL-90	M52 × 2			60

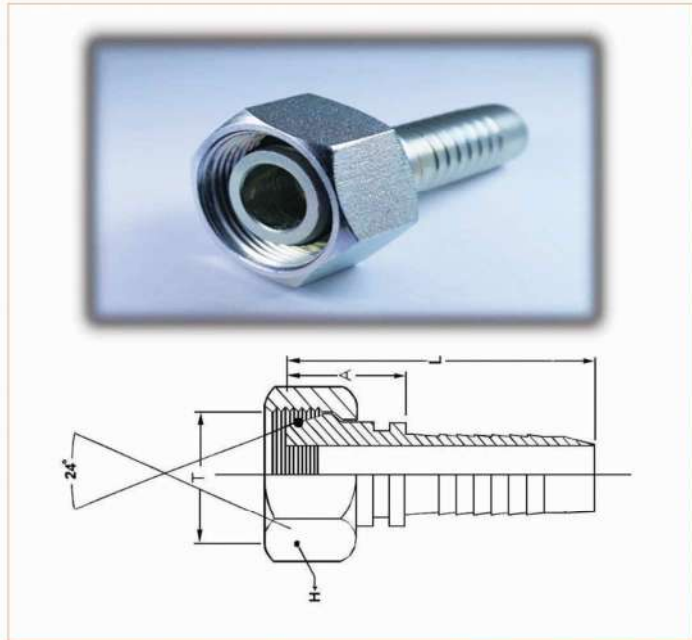
45°SWEPT ELBOW METRIC FEMALE 'O' RING 24°  
CONE LIGH-DIN 24°L



Part No.	Thread	Dimension (mm)		
		A	L	H
MM04A12ROL-45	M12 × 1.5			14
MM04A14ROL-45	M14 × 1.5			17
MM04A16ROL-45	M16 × 1.5			19
MM04A18ROL-45	M18 × 1.5			22
MM05A16ROL-45	M16 × 1.5			19
MM05A18ROL-45	M18 × 1.5			22
MM06A16ROL-45	M16 × 1.5			19
MM06A18ROL-45	M18 × 1.5			22
MM06A22ROL-45	M22 × 1.5			27
MM08A22ROL-45	M22 × 1.5			27
MM08A26ROL-45	M26 × 1.5			32
MM10A26ROL-45	M26 × 1.5			32
MM10A30ROL-45	M30 × 2			36
MM12A30ROL-45	M30 × 2			36
MM16A36ROL-45	M36 × 2			41
MM20A45ROL-45	M45 × 2			50
MM24A52ROL-45	M52 × 2			60

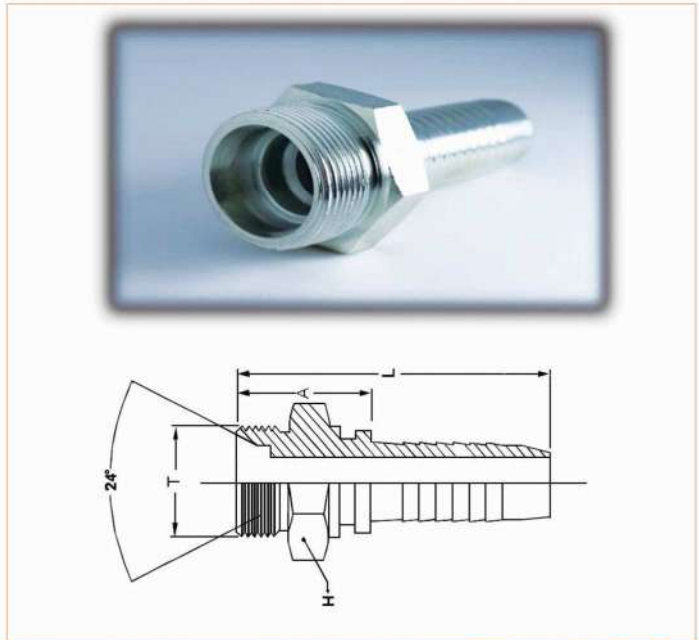
FITTING

METRIC FEMALE 'O'RING 24° CONE HEAVY-DIN 24° S



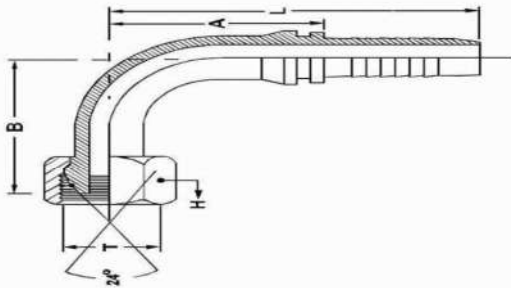
Part No.	Thread	Dimension (mm)		
		A	L	H
MM04A14ROS	M14 × 1.5			17
MM04A16ROS	M16 × 1.5			19
MM04A18ROS	M18 × 1.5			22
MM05A20ROS	M20 × 1.5			24
MM06A20ROS	M20 × 1.5			24
MM06A22ROS	M22 × 1.5			27
MM08A24ROS	M24 × 1.5			30
MM10A30ROS	M30 × 2			36
MM12A36ROS	M36 × 2			41
MM16A36ROS	M36 × 2			41
MM16A42ROS	M42 × 2			50
MM20A52ROS	M52 × 2			60

METRIC MALE 24° CONE SEAT HEAVY-DIN 24° S



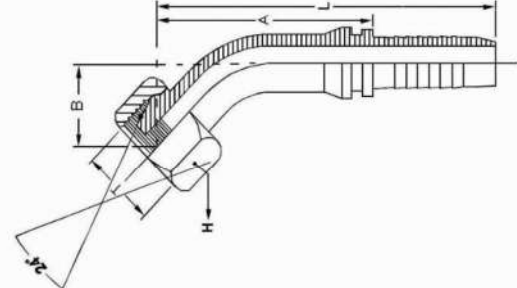
Part No.	Thread	Dimension (mm)		
		A	L	H
MM04A16MZS	M16 × 1.5			17
MM04A18MZS	M18 × 1.5			19
MM05A20MZS	M20 × 1.5			22
MM06A18MZS	M18 × 1.5			19
MM06A20MZS	M20 × 1.5			22
MM06A22MZS	M22 × 1.5			24
MM08A24MZS	M24 × 1.5			27
MM10A30MZS	M30 × 2			32
MM12A36MZS	M36 × 2			38
MM16A36MZS	M36 × 2			38
MM16A42MZS	M42 × 2			46
MM20A52MZS	M52 × 2			55

90°SWEPT ELBOW METRIC FEMALE 'O'RING 24°  
CONE HEAVY-DIN 24°S



Part No.	Thread	Dimension (mm)		
		A	L	H
MM04A14ROS-90	M14 × 1.5			17
MM04A16ROS-90	M16 × 1.5			19
MM04A18ROS-90	M18 × 1.5			22
MM05A20ROS-90	M20 × 1.5			24
MM06A20ROS-90	M20 × 1.5			24
MM06A22ROS-90	M22 × 1.5			27
MM08A24ROS-90	M24 × 1.5			30
MM10A30ROS-90	M30 × 2			36
MM12A36ROS-90	M36 × 2			41
MM16A36ROS-90	M36 × 2			41
MM16A42ROS-90	M42 × 2			50
MM20A52ROS-90	M52 × 2			60

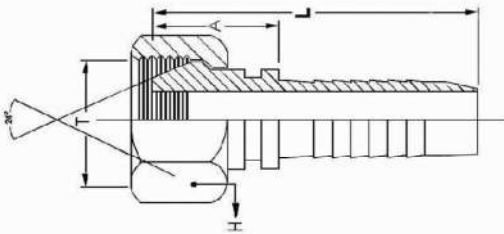
45°SWEPT ELBOW METRIC FEMALE 'O'RING 24°  
CONE HEAVY-DIN 24°S



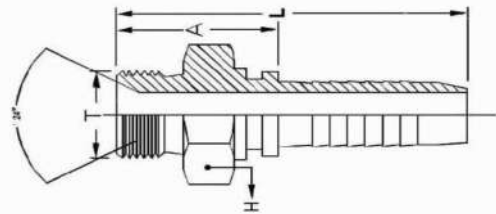
Part No.	Thread	Dimension (mm)		
		A	L	H
MM04A16ROS-45	M16 × 1.5			19
MM04A18ROS-45	M18 × 1.5			22
MM05A20ROS-45	M20 × 1.5			24
MM06A18ROS-45	M18 × 1.5			22
MM06A20ROS-45	M20 × 1.5			24
MM06A22ROS-45	M22 × 1.5			27
MM08A24ROS-45	M24 × 1.5			30
MM10A30ROS-45	M30 × 2			36
MM12A36ROS-45	M36 × 2			41
MM16A36ROS-45	M36 × 2			41
MM16A42ROS-45	M42 × 2			50
MM20A52ROS-45	M52 × 2			60

FRENCH METRIC FEMALE 24° CONE (GAZ TYPE)

FRENCH METRIC MALE 24° CONE SEAT (GAZ TYPE)



Part No.	Thread	Dimension (mm)		
		A	L	H
MM12A30RY	M30 × 1.5			36
MM16A45RY	M45 × 1.5			55

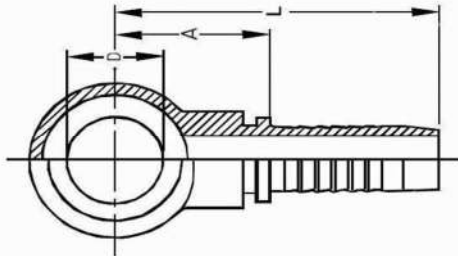


Part No.	Thread	Dimension (mm)		
		A	L	H
MM06A20MG	M20 × 1.5			22
MM08A24MG	M24 × 1.5			27
MM10A30MG	M30 × 1.5			32
MM12A30MG	M30 × 1.5			36
MM12A36MG	M36 × 1.5			41
MM16A45MG	M45 × 1.5			46



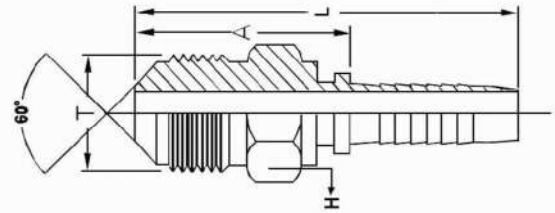


METRIC BANJO-DIN 7642



Part No.	Bolt	Dimension (mm)		
		A	L	D
MM04A10BM	M10 × 1.5			10.1
MM04A12BM	M12 × 1.5			12.1
MM04A14BM	M14 × 1.5			14.1
MM04A16BM	M16 × 1.5			16.1
MM06A14BM	M14 × 1.5			14.1
MM06A16BM	M16 × 1.5			16.1

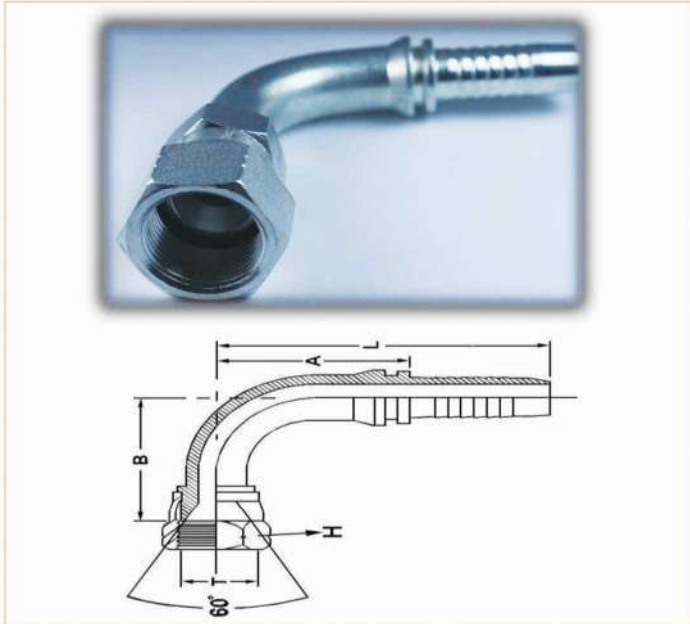
METRIC MALE 60° CONE (KOMATSU) JIS 8363



Part No.	Thread	Dimension (mm)		
		A	L	H
MM06A18MNM	M18 × 1.5			22
MM08A22MNM	M22 × 1.5			24
MM10A24MNM	M24 × 1.5			30
MM12A30MNM	M30 × 1.5			36
MM16A33MNM	M33 × 1.5			41

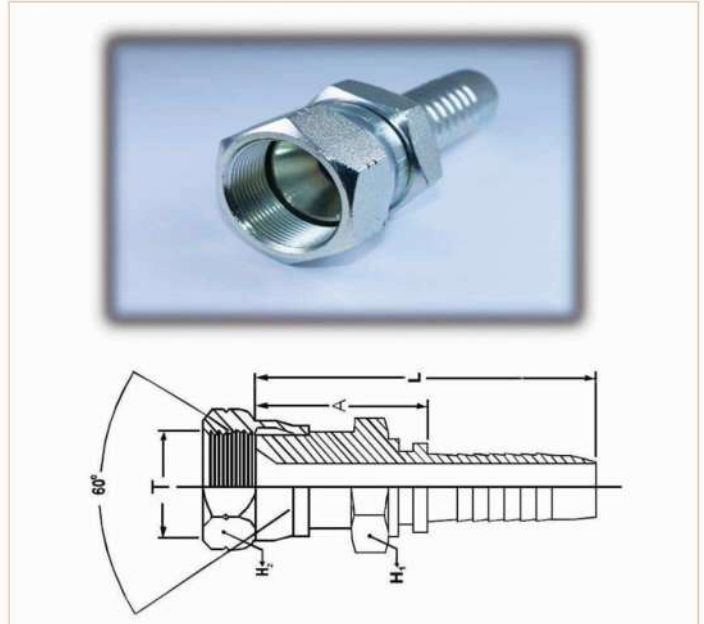
FITTING

90° SWEPT ELBOW ( KOMATSU ) METRIC FEMALE  
60° CONE SEAT-JIS 8363



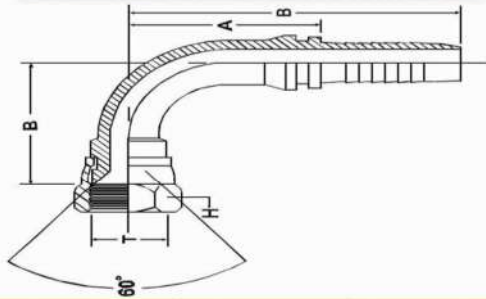
Part No.	Thread	Dimension (mm)		
		A	L	H
MM06A18NM-90	M18 × 1.5			24
MM08A22NM-90	M22 × 1.5			27

(KOMATSU ) METRIC FEMALE 60° CONE SEAT-  
JIS8363



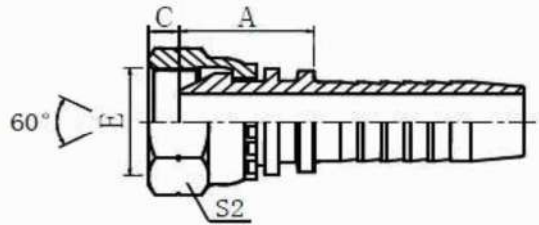
Part No.	Thread	Dimension (mm)		
		A	H1	H2
MM04A14NM	M14 × 1.5		19	19
MM06A18NM	M18 × 1.5		24	24
MM08A22NM	M22 × 1.5		27	24
MM10A24NM	M24 × 1.5		32	27
MM12A30NM	M30 × 1.5		36	32
MM16A33NM	M33 × 1.5		41	36
MM20A36NM	M36 × 1.5		46	41

90°SWEPT ELBOW JIS BSP FEMALE 60° CONE SEAT-JIS 8363



Part No.	Thread	Dimension (mm)		
		A	L	H
MM06A06NP-90	G <sup>3</sup> / <sub>8</sub> -19			22
MM12A12NP-90	G <sup>3</sup> / <sub>4</sub> -14			32

JIS BSP FEMALE 60° CONE SEAT-JIS8363

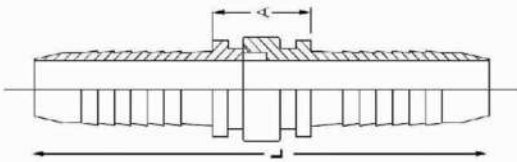


Part No.	Thread	Dimension (mm)		
		C	L	S2
MM04A04NP	G <sup>1</sup> / <sub>4</sub> -19			19
MM06A06NP	G <sup>3</sup> / <sub>8</sub> -19			22
MM08A08NP	G <sup>1</sup> / <sub>2</sub> -14			27
MM12A12NP	G <sup>3</sup> / <sub>4</sub> -14			32
MM16A16NP	G1-11			38



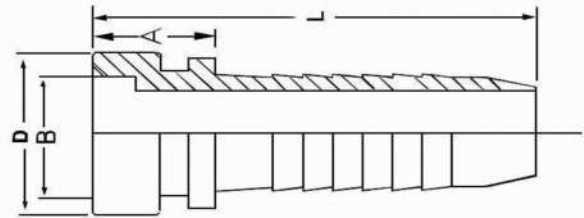
FITTING

HOSE JUNCTION(DUBLE CONNECTION)

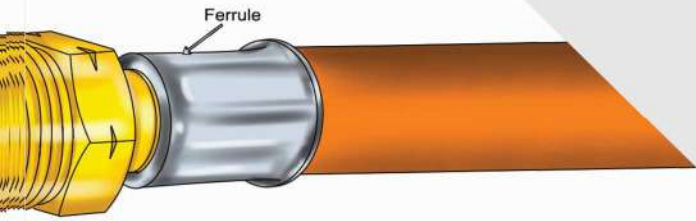


Part No.	mension (mm)	
	A	L
MM04A04HJ-C	14.0	69.0
MM05A05HJ-C	14.0	70.0
MM06A06HJ-C	14.7	73.5
MM08A08HJ-C	15.8	78.0
MM10A10HJ-C	15.4	84.0
MM12A12HJ-C	18.5	91.5
MM16A16HJ-C	22.6	119.0
MM20A20HJ-C	23.0	128.0
MM24A24HJ-C	23.0	147.0
MM32A32HJ-C	27.7	160.0

BRAZING TAILL (LIFE SAVER)



Part No.	Dimension (mm)			
	D	B	A	L
MM04BT	12	8		
MM05BT	14	10		
MM06BT	18	14		
MM08BT	20	15		
MM10BT	23	18		
MM12BT	26	22		
MM16BT	34	28		
MM20BT	40	35		
MM24BT	50	40		
MM32BT	60	50		

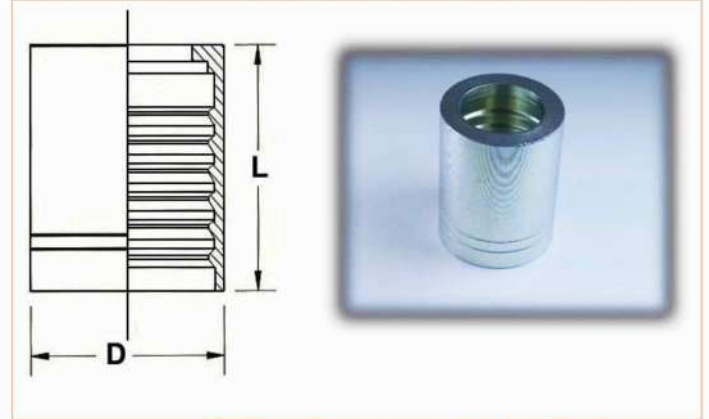
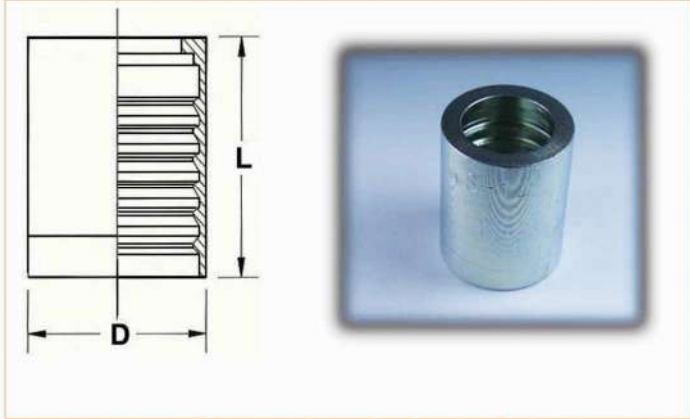




FERRULE

SWAGED FERRULE ( NONE SKIVE ) FOR 1SN/R1AT

SWAGED FERRULE ( NONE SKIVE ) FOR 2SN/R2AT

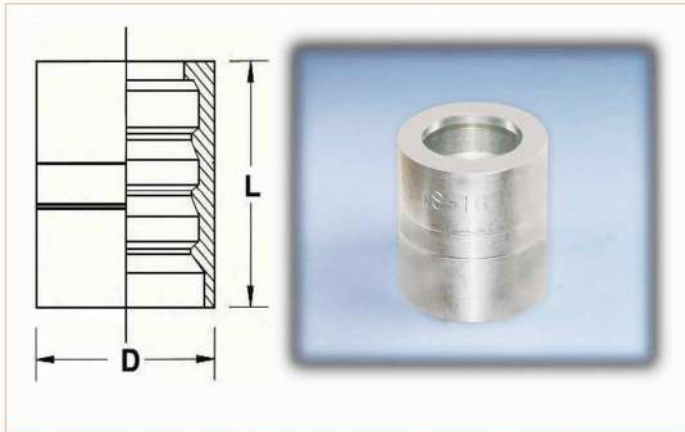


Part No.	Dimensions (mm)		Applications Hose Type
	D	L	
F011-04	20.0	30.5	EN 853 1SN
F011-05	22.0	30.5	EN 853 1SN
F011-06	24.0	31.5	EN 853 1SN
F011-08	28.5	34.0	EN 853 1SN
F011-10	32.0	37.0	EN 853 1SN
F011-12	36.0	42.5	EN 853 1SN
F011-16	43.0	50.5	EN 853 1SN
F011-20	53.0	59.0	EN 853 1SN
F011-24	60.0	63.0	EN 853 1SN
F011-32	73.5	77.0	EN 853 1SN

Part No.	Dimensions (mm)		Applications Hose Type
	D	L	
F022-04	22.0	30.5	EN 853 2SN
F022-05	24.0	30.5	EN 853 2SN
F022-06	25.5	31.5	EN 853 2SN
F022-08	30.0	34.0	EN 853 2SN
F022-10	34.0	37.0	EN 853 2SN
F022-12	38.0	42.5	EN 853 2SN
F022-16	46.0	50.0	EN 853 2SN
F022-20	56.0	59.0	EN 853 2SN
F022-24	64.0	63.0	EN 853 2SN
F022-32	76.0	78.0	EN 853 2SN

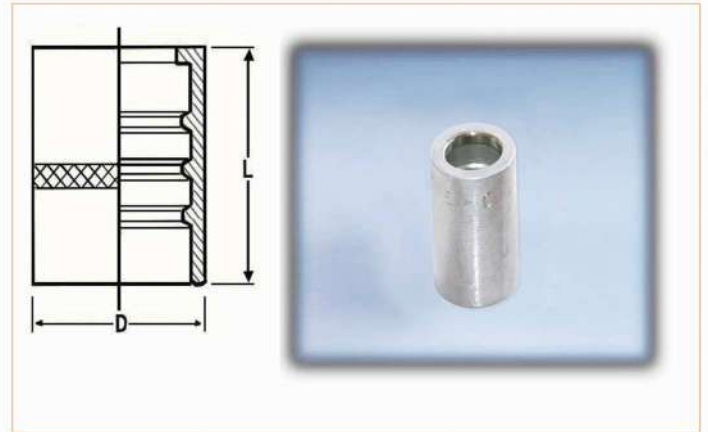


SWAGED FERRULE ( SKIVE ) FOR 4SP/R9R



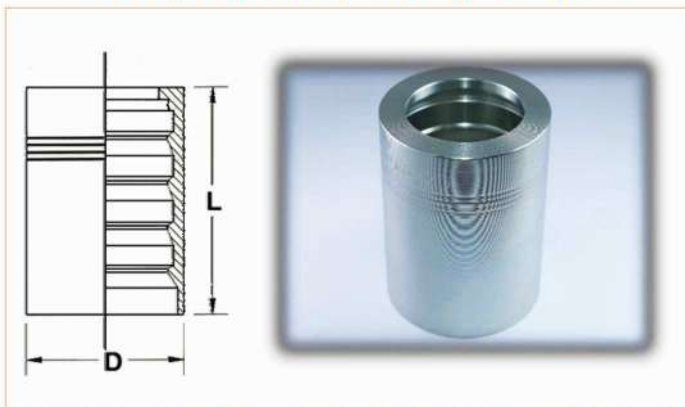
Part No.	Dimensions (mm)		Applications
	D	L	Hose Type
F041-06	26	32.4	EN 856 4SP
F041-08	30	34.0	EN 856 4SP
F041-10	34	37.5	EN 856 4SP
F041-12	38	43.2	EN 856 4SP
F041-16	46	50.0	EN 856 4SP

SWAGED FERRULE FOR R7/R6



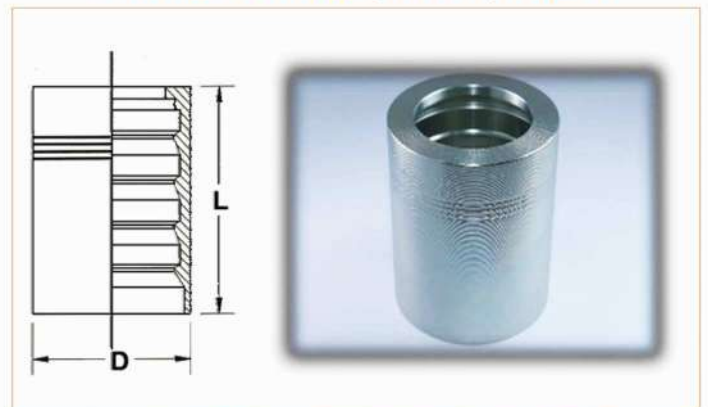
Part No.	Dimensions (mm)		Applications
	D	L	Hose Type
F0R7-03	14.0	27	SAE 100 R7/R6
F0R7-04	17.0	29	SAE 100 R7/R6
F0R7-05	19.0	30	SAE 100 R7/R6
F0R7-06	21.0	31	SAE 100 R7/R6
F0R7-08	25.5	34	SAE 100 R7/R6
F0R7-10	28.5	36	SAE 100 R7/R6

SWAGED FERRULE ( SKIVE )FOR4SP/4SH



Part No.	Dimensions (mm)		Applications
	D	L	Hose Type
F042-16	46	60	EN 856 4SP/4SH

SWAGED FERRULE ( SKIVE )FOR 4SH

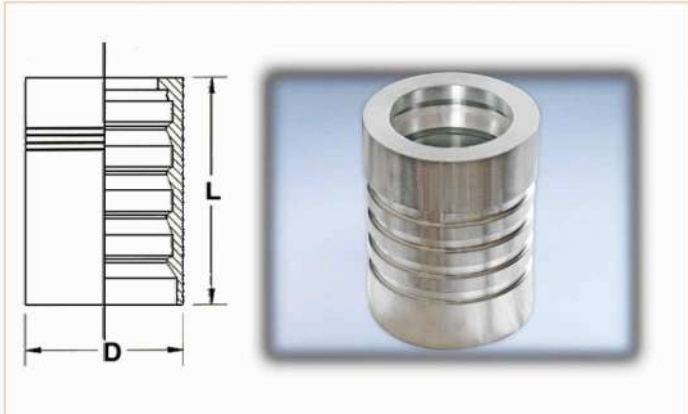


Part No.	Dimensions (mm)		Applications
	D	L	Hose Type
F043-20	52	66.0	EN 856 4SH
F043-24	62	76.5	EN 856 4SH
F043-32	75	80.0	EN 856 4SH



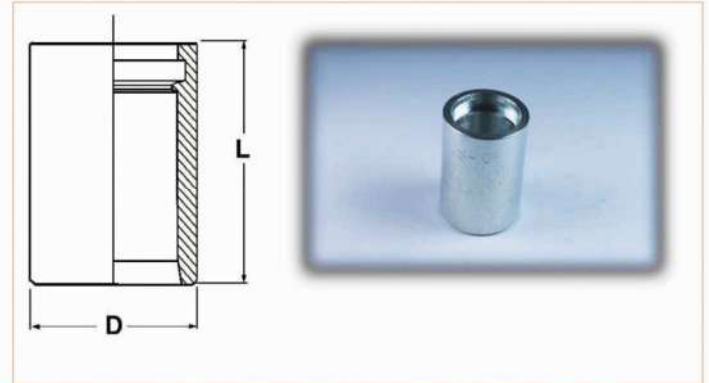
FERRULE

SWAGED FERRULE (SKIVE) FOR R15/R13



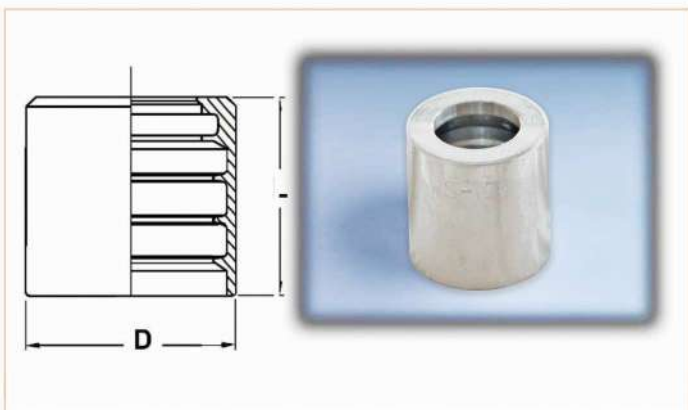
Part No.	Dimensions (mm)		Applications
	D	L	Hose Type
F044-12	37.0	60.0	4SH
F044-16	46.0	74.5	4SH
F044-20	56.0	87.8	4SH
F044-24	62.0	94.4	4SH
F044-32	79.5	99.0	4SH

SWAGED FERRULE FOR SMOOTH BORE PTFE HOSE



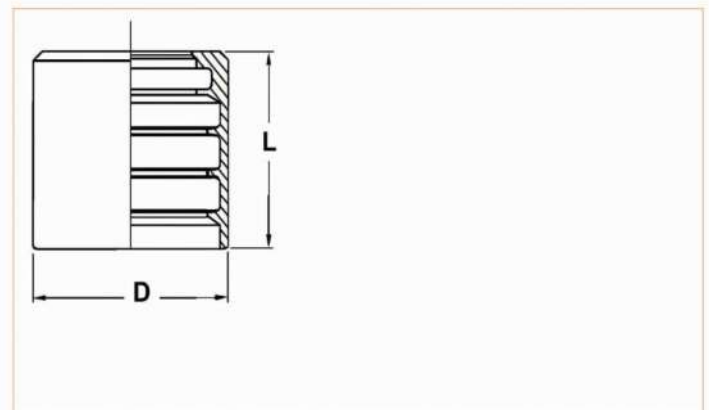
Part No.	Dimensions (mm)		Applications
	D	L	Hose Type
FST9-04	15.5	20.25	T9 (PTFE)
FST9-06	20.0	24.00	T9 (PTFE)
FST9-08	24.0	26.25	T9 (PTFE)
FST9-10	28.0	28.00	T9 (PTFE)
FST9-12	31.0	31.75	T9 (PTFE)
FST9-16	39.0	40.50	T9 (PTFE)

FERRULE (TYPE FHAC) FOR AIR CONDITIONING HOSE



Part No.	Dimensions (mm)		Applications
	D	L	Insert Type
FHAC-05	24.0	28.0	AC
FHAC-06	28.0	28.0	AC
FHAC-08	32.0	30.0	AC
FHAC-10	35.0	30.0	AC

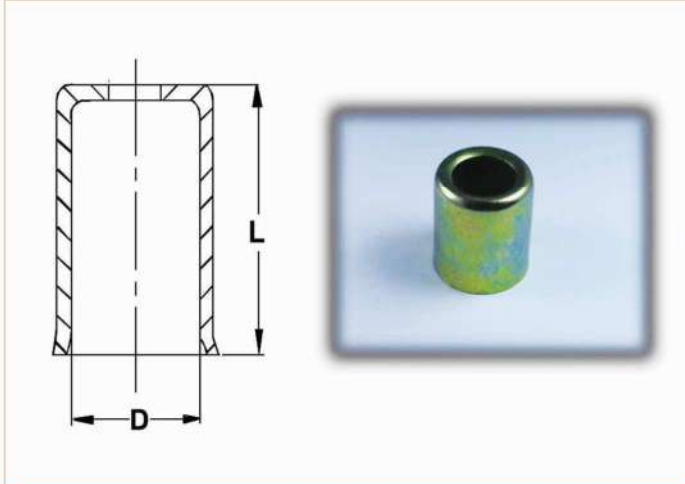
FERRULE (TYPE FLAC) FOR AIR CONDITIONING HOSE



Part No.	Dimensions (mm)		Applications
	D	L	Hose Type
FLAC-05	20.80	36	ACH
FLAC-06	24.75	36	ACH
FLAC-08	28.00	36	ACH
FLAC-10	31.00	36	ACH

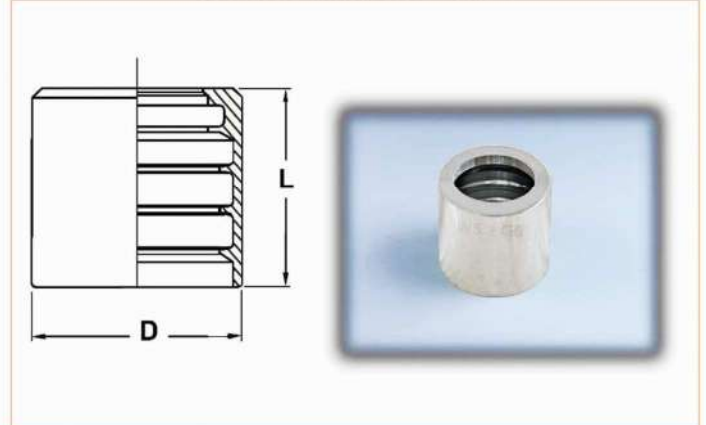


SLEEVES TYPE FF00

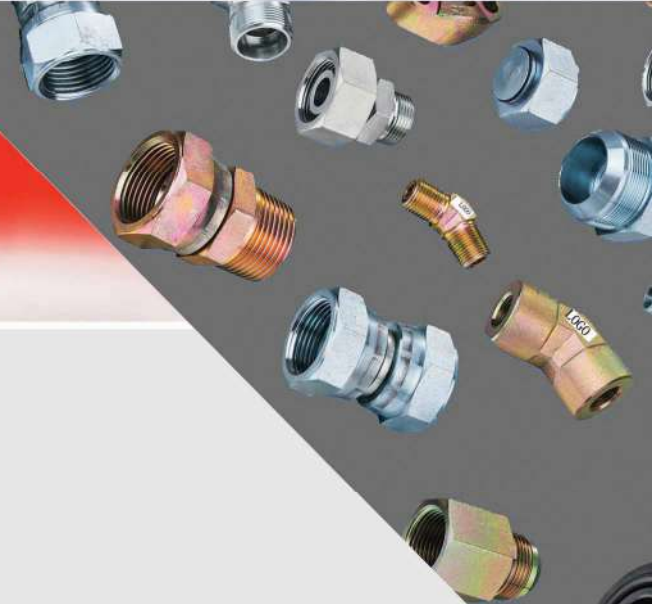


Part No.	Dimensions (mm)		Applications Hose Type
	D	L	
FF00-11	11.0	17.0	1/4
FF00-12	12.0	20.0	
FF00-13	13.0	20.0	
FF00-14	14.0	20.0	5/16
FF00-15	15.0	20.0	
FF00-16	16.0	20.0	3/8
FF00-17	17.0	21.0	
FF00-18	18.0	21.0	
FF00-19	19.0	26.0	
FF00-20	20.0	26.0	1/2
FF00-22	22.0	32.0	
FF00-23	23.0	32.0	
FF00-24	24.0	33.0	5/8
FF00-26	26.0	33.0	
FF00-28	28.0	34.0	3/4
FF00-30	30.0	34.0	
FF00-32	32.0	34.0	
FF00-33	33.0	34.0	
FF00-34	34.0	34.0	1"
FF00-36	36.0	35.0	
FF00-38	38.0	35.0	
FF00-40	40.0	40.0	

FERRULE (TYPE FHACB) FOR AIR  
CONDITIONING HOSE



Part No.	Dimensions (mm)		Applications Insert Type
	D	L	
FHACB-05	24.0	28.0	AC
FHACB-06	28.0	28.0	AC
FHACB-08	32.0	30.0	AC
FHACB-10	35.0	30.0	AC



**STRAIGHT UNION NPTF MALE × NPTF MALE**

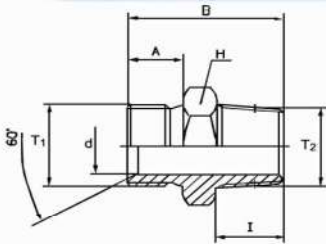
	Part No.	T-NPT	d	B	I	H
	02MB- 02MB	1/8	4.5	26.9	9.7	11
04MB-04MB	1/4	7.0	36.8	14.2	16	
06MB-06MB	3/8	10.0	36.8	14.2	19	
08MB-08MB	1/2	13.5	48.0	19.0	22	
12MB-12MB	3/4	18.0	49.8	19.0	30	
16MB-16MB	1	23.0	59.4	23.9	36	
20MB-20MB	1 1/4	31.0	63.0	24.6	46	
24MB-24MB	1 1/2	38.0	66.3	25.4	50	
32MB-32MB	2	49.0	71.6	26.2	65	

**STRAIGHT CONNECTOR (REDUCER) NPTF MALE × NPTF MALE**

	Part No.	T <sub>1</sub> -NPT	T <sub>2</sub> -NPT	d <sub>1</sub>	d <sub>2</sub>	I <sub>1</sub>	I <sub>2</sub>	B	H
	04MB- 02MB	1/4	1/8	7.0	4.5	14.2	9.7	32.3	16
06MB- 04MB	3/8	1/4	10.0	7.0	14.2	14.2	36.8	19	
08MB-06MB	1/2	3/8	13.5	10.0	19.0	14.2	43.2	22	
16MB- 12MB	1	3/4	23.0	18.0	23.9	19.0	54.4	36	
20MB-16MB	1 1/4	1	31.0	23.0	24.6	23.9	62.3	46	

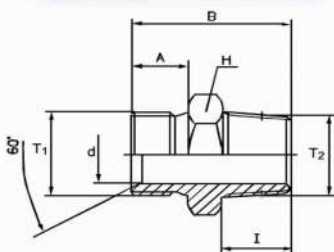
**STRAIGHT CONNECTOR BSP 60° MALE ×NPTF MALE**

Part No.	T <sub>1</sub> - BSP	T <sub>2</sub> - NPT	d	B	A	I	H
02MU- 02MB	1/8	1/8	4	25.7	10	9.7	12
04MU- 04MB	1/4	1/4	6	33.2	11	14.2	17
06MU-06MB	3/8	3/8	8	36.7	13	14.2	19
08MU- 08MB	1/2	1/2	11	43	14	19	24
12MU-12MB	3/4	3/4	17	46	17	19	32
16MU-16MB	1	1	23	55.9	20	23.9	41
20MU-20MB	1 1/4	1 1/4					



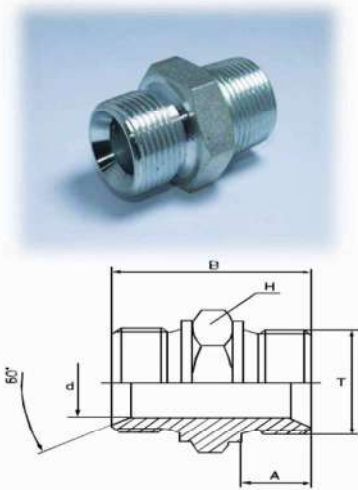
**STRAIGHT CONNECTOR (REDUCER) BSP 60° MALE× NPTF MALE**

Part No.	T <sub>1</sub> - BSP	T <sub>2</sub> - NPT	d <sub>1</sub>	d <sub>2</sub>	B	A	I	H
02MU- 04MB	1/8	1/4	4	4	32.2	10	14.2	17
04MU- 02MB	1/4	1/8	6	4	28.7	11	9.7	17
04MU- 06MB	1/4	3/8	6	6	34.7	11	14.2	19
06MU- 04MB	3/8	1/4	8	6	36.7	13	14.2	19
06MU- 08MB	3/8	1/2	8	8	42	13	19	24
08MU- 06MB	1/2	3/8	11	8	38.2	14	14.2	24
08MU- 12MB	1/2	3/4	11	11	43	14	19	32
12MU- 08MB	3/4	1/2	17	11	46	17	19	32
12MU- 16MB	3/4	1	17	17	52.9	17	23.9	41
16MU- 12MB	1	3/4	23	17	51	20	19	41



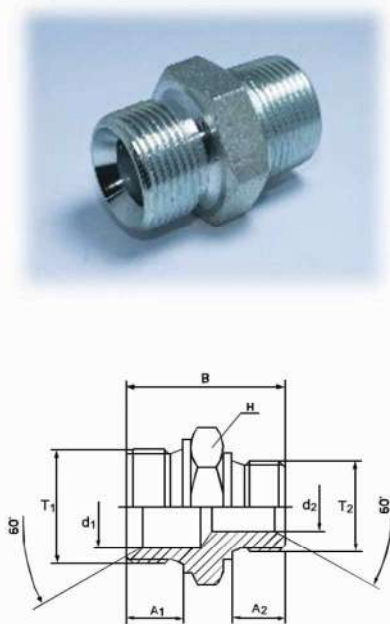
**STRAIGHT UNION BSP 60° MALE × MALE**

Part No.	T- BSP	d	B	A	H
02MU-02MU	1/8	4	26.5	9	14
04MU-04MU	1/4	6	32	11	19
06MU-06MU	3/8	8	35	12	22
08MU-08MU	1/2	11	40.5	14	27
10MU-10MU	5/8	14	44.5	16	30
12MU-12MU	3/4	17	45.5	16	32
16MU-16MU	1	23	52.5	19	41
20MU-20MU	1 1/4	30	57.5	20	50
24MU-24MU	1 1/2	35	61.5	22	55
32MU-32MU	2	46	68.5	25	70



**STRAIGHT CONNECTOR (REDUCER) BSP 60° MALE × MALE**

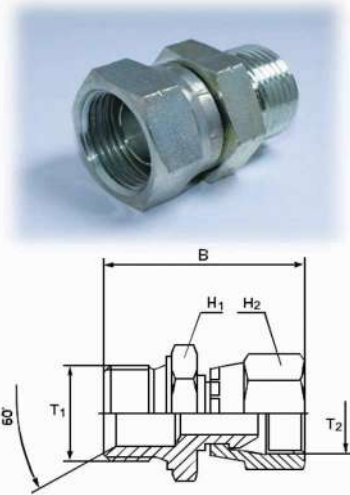
Part No.	T <sub>1</sub> - BSP	T <sub>2</sub> - BSP	d <sub>1</sub>	d <sub>2</sub>	B	A	I	H
04MU- 02MU	1/4	1/8	6	4	28.5	11	8	19
06MU- 04MU	3/8	1/4	8	6	33.5	12	11	22
08MU- 04MU	1/2	1/4	11	6	36.5	14	11	27
08MU- 06MU	1/2	3/8	11	8	38	14	12	27
10MU- 08MU	5/8	1/2	14	11	42	16	14	30
12MU- 08MU	3/4	1/2	17	11	43.5	16	14	32
12MU- 10MU	3/4	5/8	17	14	45.5	16	16	32
16MU- 12MU	1	3/4	23	17	49.5	19	16	41
20MU- 12MU	1 1/4	3/4	30	17	53.5	20	16	50
20MU- 16MU	1 1/4	1	30	23	56.5	20	19	50
24MU-16MU	1 1/2	1	35	23	58.5	22	19	55
24MU-20MU	1 1/2	1 1/4	35	30	59.5	22	20	55
32MU- 20MU	2	1 1/4	46	30	63	25	20	70
32MU- 24MU	2	1 1/2	46	35	65	25	22	70





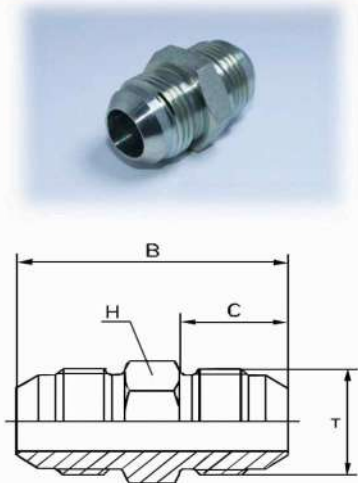
**STRAIGHT UNION BSP 60° MALE × BSP 60° SWIVEL FEMALE**

Part No.	T <sub>1</sub> -BSP	T <sub>2</sub> -BSP	B	H <sub>1</sub>	H <sub>2</sub>
04MU-04NU	1/4	1/4	36	19	19
06MU-06NU	3/8	3/8	41	22	22
08MU-08NU	1/2	1/2	46	27	27
10MU-10NU	5/8	5/8	50	28	30
12MU-12NU	3/4	3/4	52	32	32
16MU-16NU	1	1	60	41	41
20MU-20NU	1 1/4	1 1/4	69	50	50



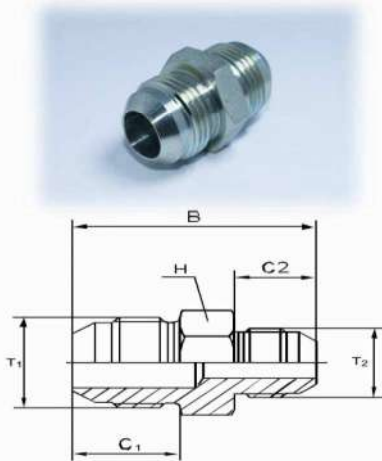
**STRAIGHT UNION JIC 37° MALE × JIC 37° MALE**

Part No.	T- BSP	B	C	H
04MJ-04MJ	7/16	34.8	14	13
05MJ-05MJ	1/2	34.8	14	14
06MJ-06MJ	9/16	35.8	14.1	16
08MJ-08MJ	3/4	41.1	16.7	19
10MJ-10MJ	7/8	47.8	19.3	24
12MJ-12MJ	1 1/16	54.9	21.9	27
16MJ-16MJ	1 5/16	57.2	23.1	36
20MJ-20MJ	1 5/8	61.7	24.3	46
24MJ-24MJ	1 7/8	69.8	27.5	50



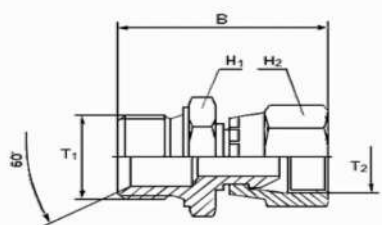
**STRAIGHT CONNECTOR (REDUCER) JIC 37° MALE × JIC 37° MALE**

Part No.	T <sub>1</sub> -JIC	T <sub>2</sub> -JIC	B	C <sub>1</sub>	C <sub>2</sub>	H
06MJ-04MJ	7/16	9/16	35.7	14.1	14.0	16
08MJ-06MJ	9/16	3/4	38.5	16.7	14.1	19
10MJ-08MJ	3/4	7/8	45.2	19.3	16.7	24
12MJ-08MJ	3/4	1 1/16	49.7	21.9	16.7	27
12MJ-10MJ	7/8	1 1/16	52.3	21.9	19.3	27
16MJ-12MJ	1 1/16	1 5/16	56.0	23.1	21.9	36




**STRAIGHT CONNECTOR (REDUCER) BSP 60° MALE × BSP 60° SWIVEL FEMALE**

Part No.	T <sub>1</sub> -BSP	T <sub>2</sub> -BSP	B	H <sub>1</sub>	H <sub>2</sub>
04MU-06NU	1/4	3/8	39.5	22	22
06MU-04NU	3/8	1/4	38.0	19	22
06MU-08NU	3/8	1/2	43.0	27	27
08MU-06NU	1/2	3/8	44.0	22	27
08MU-12NU	1/2	3/4	49.0	32	32
12MU-08NU	3/4	1/2	49.0	27	32
16MU-12NU	1	3/4	56.0	32	41






**STRAIGHT UNION BSP 60° MALE × STRAIGHT SAE FLANGE 300 PSI**

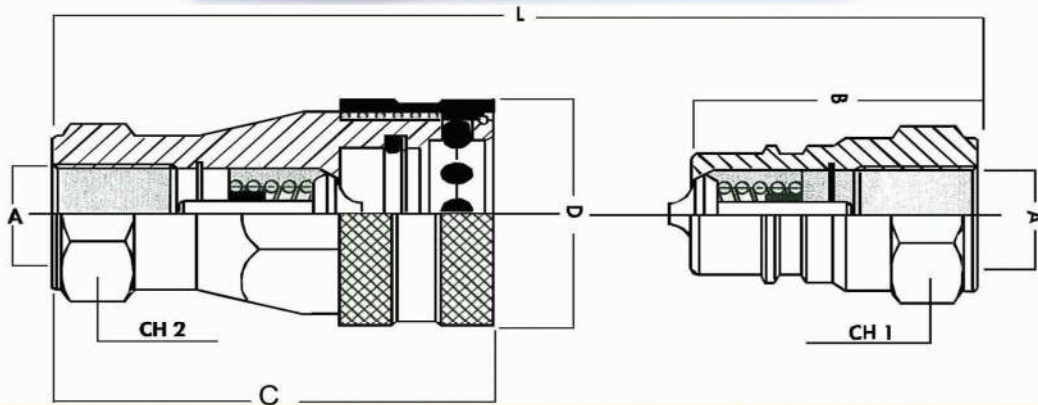
	<b>Part No.</b>				
	<b>16MU- 16PA</b>				

**STRAIGHT BSP FEMALE CAP**

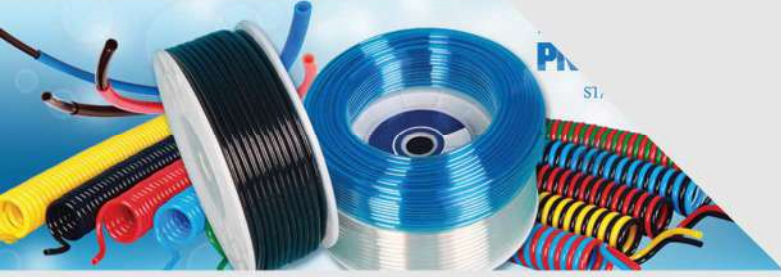
	<b>Part No.</b>				
	<b>16 NU - CAP</b>				



## QUICK RELEASE COUPLINGS ISO 7241-A



Code		ØA NPTF	B		C		ØD		L		CH1		CH2	
Male (plug)	Female (socket)		MM	IN	MM	IN	MM	IN	MM	IN	MM	IN	MM	IN
QRC-04		¼	35	1.38	47.0	1.85	25	0.98	71.0	2.80	19	0.75	19	0.75
QRC-06		3/8	39	1.54	58.0	2.28	31	1.22	79.5	3.13	22	0.87	24	0.94
QRC-08		½	46	1.81	67.5	2.66	38	1.50	92.0	3.62	27	1.06	30	1.18
QRC-12		¾	54	2.13	81.0	3.19	46	1.81	108	4.25	34	1.34	38	1.50
QRC-16		1	62	2.44	96.0	3.78	55	2.17	124	4.88	41	1.61	45	1.77
QRC-20		1 ¼	75	2.95	117	4.61	65	2.56	151	5.94	55	2.17	50	1.97
QRC-24		1 ½	85	3.35	135	5.31	80	3.15	171	6.73	60	2.36	60	2.36
QRC-32		2	100	3.94	160	6.30	100	3.94	201	7.91	75	2.95	75	2.95



## PNEUMATIC CYLINDERS

### FVBC



Bore Size (mm)	32	40	50	63	80	100
Acting Type	Double Acting					
Working Medium	Clean Air (25 μ filtration)					
Mounting Type	FFA FFB FCA FCB FLB FCR					
Rod End Fitting Type	FY FI FF FB					
Working Pressure (Bar)	1 ~ 10					
Guaranteed Pressure (Bar)	15					
Working Temperature (°C)	-5 ~ 70					
Speed Range (mm/s)	50 ~ 800					
Cushion Type	Adjustable Cushion					
Cushion Stroke (mm)	27		30		36	
Port Size	G1/8	G1/4		G3/8		G1/2

### VBC



Bore Size (mm)	32	40	63	100	125	160	200	250
Acting Type	Double Acting							
Working Medium	Clean Air (25 μ filtration)							
Mounting Type	VFA VFB VCA VCB VCR VLB							
Rod End Fitting Type	VY VI VF VB							
Working Pressure (Bar)	1 ~ 10							
Guaranteed Pressure (Bar)	15							
Working Temperature (°C)	-5 ~ 70							
Speed Range (mm/s)	50 ~ 800							
Cushion Type	Adjustable Cushion							
Cushion Stroke (mm)	27		30	36	40	50		
Port Size	G1/8	G1/4	G3/8	G1/2		G3/4		G1



PNEUMATIC FITTINGS



EMPB



EMPE



EMPL



EMPC



EMSC



EMPV



EMPU



EMM



EMCF



EPL



EPU



EPB



EPY



EPV



EPE



ESC



EPK



ESA



EPGJ



EPWT



EPC



PSU



V



A

## PNEUMATIC HOSE

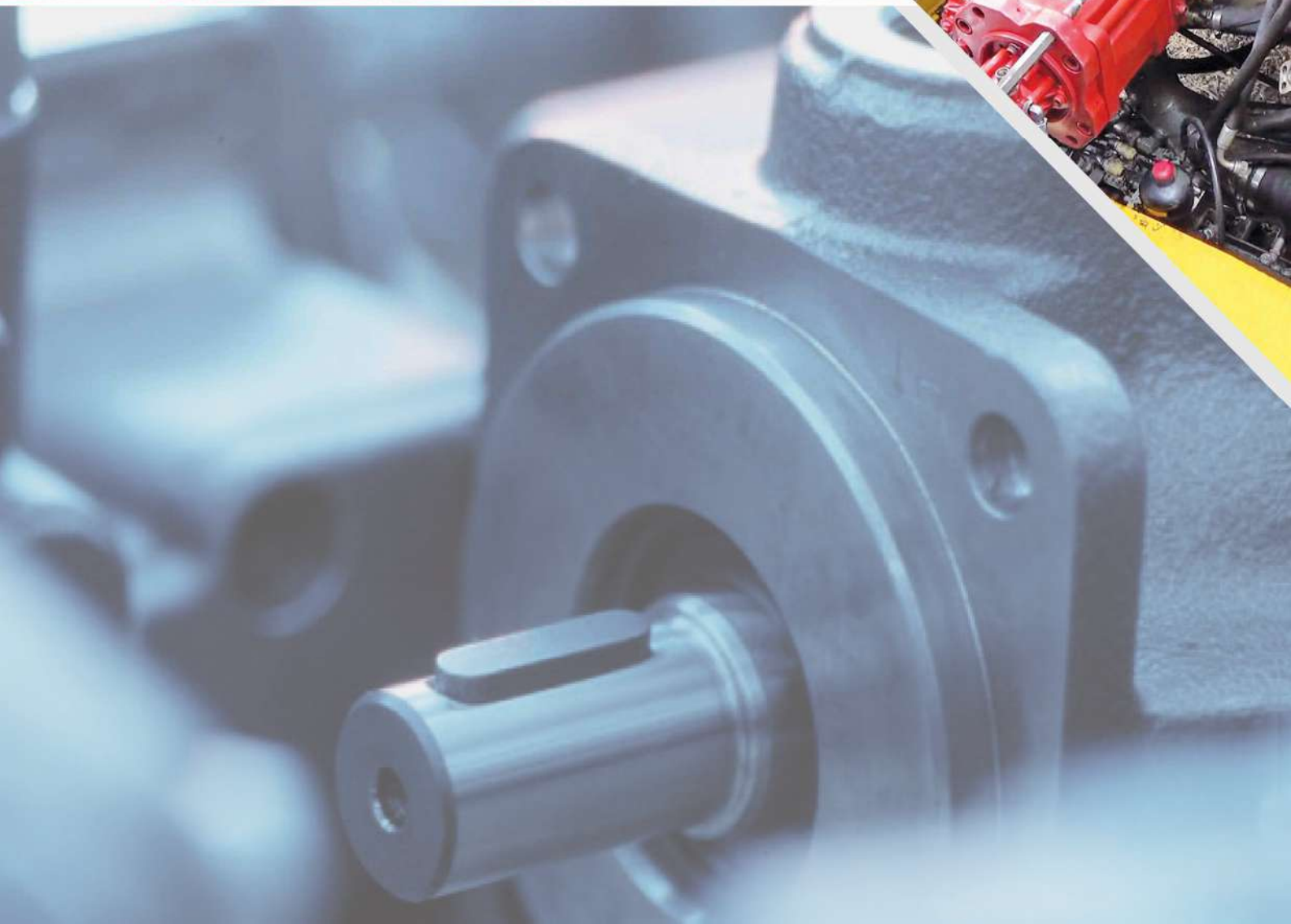


Part No.	I.D (mm)	O.D (mm)	Roll Length (m)
PU TUBE BLACK	2.5	4	200
PU TUBE BLUE	10	14	50
PU TUBE BLUE	2.5	4	200
PU TUBE BLUE	4	6	200
PU TUBE BLUE	5	8	100
PU TUBE BLUE	6	8	100
PU TUBE BLUE	6.5	10	100
PU TUBE BLUE	8	12	100
PU TUBE ORANGE	2.5	4	200
PU TUBE RED	2.5	4	200


## DIRECTIONAL SOLENOID VALVE




Part No.	Port Size (In)	Voltage
V5221-06E2	1/8	AC220V
V5221E2-08	1/4	AC220V
V5241-15E2	1/2	AC220V



### HYDRAULIC GEAR PUMPS

GROUP 00	Part No.	Displacement	Flow		Rated Pressure	Max Speed
			at 1500 RPM	at Max RPM		
		cm <sup>3</sup> /rev	L/min	L/min	Bar	RPM
	00C0.25X047	0.25	0.3	0.8	200	3500
	00C1.25X047	1.25	1.7	3.4	200	3000
	00C1X047	1	1.4	3.2	200	3500

GROUP 10	Part No.	Displacement	Flow		Rated Pressure	Max Speed
			at 1500 RPM	at Max RPM		
		cm <sup>3</sup> /rev	L/min	L/min	Bar	RPM
	10C2.1X0302	2.1	2.82	6.58	250	3500
	10C3.15X302	3.15	4.44	10.36	250	3500





GROUP 20	Part No.	Displacement	Flow		Rated Pressure	Max Speed
			at 1500 RPM	at Max RPM		
		cm <sup>3</sup> /rev	L/min	L/min	Bar	RPM
	20A10X006	10	13.95	32.55	250	3500
	20A11X006	11	15.76	36.78	250	3500
	20A12X006	12	16.92	39.48	250	3500
	20A14X006	14	19.95	46.55	250	3500
	20A15X006	15	21.60	36.00	250	2500
	20A16X006	16	23.04	38.40	250	2500
	20A19X006	19	27.36	45.60	200	2500
	20A22X006	22	31.68	42.24	180	2000
	20A25X006	25	36.00	48.00	160	2000
	20A28X006	28	40.32	67.20	130	2500
	20A4.5X006	4.5	6.14	14.33	250	3500
	20A6.3X006	6.3	8.69	20.29	250	3500
	20A8.2X006	8.2	11.32	26.40	250	3500
	20C10X006	10	13.95	32.55	250	3500
	20C11X006	11	15.76	36.78	250	3500
	20C12X006	12	16.92	39.48	250	3500
	20C14X006	14	19.95	46.55	250	3500
	20C15X006	15	21.60	36.00	250	2500
	20C16X006	16	23.04	38.40	250	2500
	20C19X006	19	27.36	45.60	200	2500
	20C22X006	22	31.68	42.24	180	2000
	20C25X006	25	36.00	48.00	160	2000
	20C28X006	28				
	20C4.5X006	4.5	6.14	14.33	250	3500
	20C6.3X006	6.3	8.69	20.29	250	3500
	20C8.2X006	8.2	11.32	26.40	250	3500







GROUP 20	Part No.	Displacement cm <sup>3</sup> /rev	Flow		Rated Pressure Bar	Max Speed RPM
			at 1500 RPM L/min	at Max RPM L/min		
			20A10X007	10		
20A11X007	11	15.76	36.78	250	3500	
20A12X007	12	16.92	39.48	250	3500	
20A14X007	14	19.95	46.55	250	3500	
20A15X007	15	21.60	36.00	250	2500	
20A16X007	16	23.04	38.40	250	2500	
20A19X007	19	27.36	45.60	200	2500	
20A22X007	22	31.68	42.24	180	2000	
20A25X007	25	36.00	48.00	160	2000	
20A4.5X007	4.5	6.14	14.33	250	3500	
20A6.3X007	6.3	8.69	20.29	250	3500	
20A8.2X007	8.2	11.32	26.40	250	3500	
20C10X007	10	13.95	32.55	250	3500	
20C11X007	11	15.76	36.78	250	3500	
20C12X007	12	16.92	39.48	250	3500	
20C14X007	14	19.95	46.55	250	3500	
20C15X007	15	21.60	36.00	250	2500	
20C16X007	16	23.04	38.40	250	2500	
20C19X007	19	27.36	45.60	200	2500	
20C22X007	22	31.68	42.24	180	2000	
20C25X007	25	36.00	48.00	160	2000	
20C4.5X007	4.5	6.14	14.33	250	3500	
20C6.3X007	6.3	8.69	20.29	250	3500	
20C8.2X007	8.2	11.32	26.40	250	3500	







PUMPS

GROUP 20	Part No.	Displacement cm <sup>3</sup> /rev	Flow		Rated Pressure Bar	Max Speed RPM
			at 1500 RPM L/min	at Max RPM L/min		
	20A10X008	10	13.95	32.55	250	3500
	20A11X008	11	15.76	36.78	250	3500
	20A15X008	15	21.60	36.00	250	2500
	20A16X008	16	23.04	38.40	250	2500
	20A19X008	19	27.36	45.60	200	2500
	20A22X008	22	31.68	42.24	180	2000
	20A25X008	25	36.00	48.00	160	2000
	20A4.5X008	4.5	6.14	14.33	250	3500
	20A8.2X008	8.2	11.32	26.40	250	3500
	20C10X008	10	13.95	32.55	250	3500
	20C16X008	16	23.04	38.40	250	2500
	20C19X008	19	27.36	45.60	200	2500
	20C22X008	22	31.68	42.24	180	2000
	20C25X008	25	36.00	48.00	160	2000
	20C4.5X008	4.5	6.14	14.33	250	3500
	20C8.2X008	8.2	11.32	26.40	250	3500


GROUP 20	Part No.	Displacement cm <sup>3</sup> /rev	Flow		Rated Pressure Bar	Max Speed RPM
			at 1500 RPM L/min	at Max RPM L/min		
	20A10X155	10	13.95	32.55	250	3500
	20A15X155	15	21.60	36.00	250	2500


GROUP 20	Part No.	Displacement cm <sup>3</sup> /rev	Flow		Rated Pressure Bar	Max Speed RPM
			at 1500 RPM L/min	at Max RPM L/min		
				20A10X104		
	20A12X104	12	16.92	39.48	250	3500
	20A15X104	15	21.60	36.00	250	2500
	20A19X104	19	27.36	45.60	200	2500
	20A22X104	22	31.68	42.24	180	2000
	20A25X104	25	36.00	48.00	160	2000
	20C10X104	10	13.95	32.55	250	3500
	20C12X104	12	16.92	39.48	250	3500
	20C15X104	15	21.60	36.00	250	2500
	20C19X104	19	27.36	45.60	200	2500
	20C22X104	22	31.68	42.24	180	2000
	20C6.3X104	6.3	8.69	20.29	250	3500


GROUP 20	Part No.	Displacement cm <sup>3</sup> /rev	Flow		Rated Pressure Bar	Max Speed RPM
			at 1500 RPM L/min	at Max RPM L/min		
				20A16X067/A16X066		
	20A22X067/A14X066	22	31.68	42.24	180	2000





PUMPS

GROUP 20	Part No.	Displacement cm <sup>3</sup> /rev	Flow		Rated Pressure Bar	Max Speed RPM
			at 1500 RPM L/min	at Max RPM L/min		
				20A25X464H		
	20A28X464H	28	40.32	67.20	130	2500
	20A32X464H	32	46.08	76.80	120	2500


GROUP 25	Part No.	Displacement cm <sup>3</sup> /rev	Flow		Rated Pressure Bar	Max Speed RPM
			at 1500 RPM L/min	at Max RPM L/min		
				25A32X810		
	25A36X812	36				
	25C28X850	28				


GROUP 30	Part No.	Displacement cm <sup>3</sup> /rev	Flow		Rated Pressure Bar	Max Speed RPM
			at 1500 RPM L/min	at Max RPM L/min		
				30C22X241/A/C22X242		


GROUP 30	Part No.	Displacement cm <sup>3</sup> /rev	Flow		Rated Pressure Bar	Max Speed RPM
			at 1500 RPM L/min	at Max RPM L/min		
				30A20X146		
	30A25X146	25	35.3	70.5	250	3000
	30A36X146	36	50.8	84.6	250	2500
	30A42X146	42	59.9	91.8	230	2300
	30A46X146	46	65.6	100.5	230	2300
	30A50X146	50	71.3	99.8	200	2100
	30A60X146	60	85.5	99.8	180	1750
	30C20X146	20	28.2	56.4	250	3000
	30C22.5X146	22.5	31.7	63.5	250	3000
	30C25X146	25	35.3	70.5	250	3000
	30C36X146	36	50.8	84.6	250	2500
	30C42X146	42	59.9	91.8	230	2300
	30C46X146	46	65.6	100.5	230	2300
	30C50X146	50	71.3	99.8	200	2100
	30C60X146	60	85.5	99.8	180	1750

GROUP 30	Part No.	Displacement cm <sup>3</sup> /rev	Flow		Rated Pressure Bar	Max Speed RPM
			at 1500 RPM L/min	at Max RPM L/min		
				30A36X236		
	30A46X236	46	65.6	100.5	230	2300
	30A50X236	50	71.3	99.8	200	2100
	30A60X236	60	85.5	99.8	180	1750
	30C36X236	36	50.8	84.6	250	2500
	30C46X236	46	65.6	100.5	230	2300
	30C50X236	50	71.3	99.8	200	2100
	30C60X236	60	85.5	99.8	180	1750



	Part No.	Displacement	Max. Speed	Rated Pressure
		cm <sup>3</sup>	RPM	Bar
	ISO EHASS-100 BD	100		
	ISO EHASS-61 BD	61.95	1900	225
	ISO EHASS-82 BD	82.13	1700	200

	Part No.	Displacement	Max. Speed	Rated Pressure
		cm <sup>3</sup>	RPM	Bar
	UNI EHASS-100 BD	100		
	UNI EHASS-61 BD	61.95	1900	225
	UNI EHASS-82 BD	82.13	1700	200

	Part No.	Displacement	Max. Speed	Peak Pressure
		cm <sup>3</sup>	RPM	Bar
	ISO-GANI 63 R	63.20	2600	280
	ISO-GANI 73 R	73.10	2600	275

## PISTON PUMPS

	Part No.	Displacement	Max. Speed	Peak Pressure
		cm <sup>3</sup>	RPM	Bar
	ISO-FEYZ 107	106.7	1850	350
	ISO-FEYZ 45	45.6	2550	350
	ISO-FEYZ 56			350
	ISO-FEYZ 65	64.5	2300	350
	ISO-FEYZ 80	80.4	2135	350


## Hydraulic Cylinders





Code Number	Diameter (mm)	Length (feet)	Weight (KG)
4CYL-165D	165	4	165
5CYL-175D	175	5	270
5CYL-245D	245	5	460




### Hydrostatic Steering Units


	Part No.	Port Size	Displacement	Rated Flow	Rated Pressure
		In	cm <sup>3</sup>	Lt	Bar
	HKU100/4/3	½	99	9	175
	HKU160/4/3	½	158.4	12	175
	HKU200/4/3	½	198	17	175

	Part No.	Port Size	Displacement	Rated Flow	Rated Pressure
		In	cm <sup>3</sup>	Lt	Bar
	HKU500/5T/3	½	495	50	175

	Part No.	Port Size	Displacement	Rated Flow	Rated Pressure
		In	cm <sup>3</sup>	Lt	Bar
	HKUS100/4-100/3	½	99	10	160
	HKUS125/4-100/3	½	123.8	13	160
	HKUS160/4-100/3	½	158.4	16	160
	HKUS200/4-100/3	½	198	20	160
	HKUS250/4-100/3	½	247.5	25	160



	Part No.	Port Size	Displacement	Rated Flow	Rated Pressure
		In	cm <sup>3</sup>	Lt	Bar
	HKUS100/5T-100/3	½	99	10	160
	HKUS160/5T-100/3	½	158.4	16	160
	HKUS200/5T-100/3	½	198	20	160

	Part No.	Port Size	Displacement	Rated Flow	Rated Pressure
		In	cm <sup>3</sup>	Lt	Bar
	HKU100/7/3	½	99	9	175
	HKU160/7/3	½	158.4	12	175
	HKU200/7/3	½	198	17	175
	HKU250/7/3	½	247.5	24	175

### POWER TAKE-OFF UNIT (PTO)





Part No.	Rotating Moment (kg.m)	Effort (KW)	RPM
PTO-L	48.9	25.7	513
PTO-S	48.9	25.7	513





Part No.	Rotating Moment (kg.m)	Effort (KW)	RPM
PTO-ZF2	22.5	15.6	650


## HYDRAULIC MOTORS

	Part No.	Shaft Diameter	Displacement	Max. Flow	Max. Speed	Max. Torque	Max. Pressure
		mm	cm <sup>3</sup> /rev	Lt	RPM	Nm	Bar
	MH250C/3	32	252	75	295	70	200
	MH315C/3	32	314.9	75	235	82	200
	MH400C/3	32	396.8	75	185	98	190

	Part No.	Shaft Diameter	Displacement	Max. Flow	Max. Speed	Max. Torque	Max. Pressure
		mm	cm <sup>3</sup> /rev	Lt	RPM	Nm	Bar
	MP80C/4	25	79.2	60	755	19.5	175
	MP100C/4	25	99	60	605	23.7	175
	MP125C/4	25	123.8	60	486	29.8	175
	MP160C/4	25	158.4	60	378	37.8	175
	MP200C/4	25	198	60	303	45.6	175
	MP250C/4	25	247.5	60	242	58.3	175
	MP315C/4	25	36.8	60	190	56	140

	Part No.	Shaft Diameter	Displacement	Max. Flow	Max. Speed	Max. Torque	Max. Pressure
		mm	cm <sup>3</sup> /rev	Lt	RPM	Nm	Bar
	MT200C	40	201.4	125	625	71	240
	MT250C	40	251.8	125	500	88	240
	MT500C	40	523.6	125	240	137	180

	Part No.	Shaft Diameter	Displacement	Max. Flow	Max. Speed	Max. Torque	Max. Pressure
		mm		Lt	RPM	Nm	Bar
	MR80C/4	25	80.3	60	750	22	200
	MR100C/4	25	99.8	60	600	28	200
	MR125C/4	25	125.7	60	475	34	200
	MR160C/4	25	159.6	60	375	43	200
	MR200C/4	25	199.8	60	300	46	175
	MR250C/4	25	250.1	60	240	58	175
	MR315C/4	25	315.7	60	190	57	140

	Part No.	Shaft Diameter	Displacement	Max. Flow	Max. Speed	Max. Torque	Max. Pressure
		mm		Lt	RPM	Nm	Bar
	MS125C/4	32	125.7	75	600	38	210
	MS160C/4	32	159.7	75	470	48	210
	MS200C/4	32	200	75	375	50	175
	MS250C/4	32	250	75	300	54	155
	MS315C/4	32	314.9	75	240	63	140
	MS400C/4	32	397	75	185	69	120

### MINI POWER PACKS



Part No.	Motor	Pump	Tank
HPP/A5-3561	AC380V 1.5KW KMP 24V	10C1.3X302	6 lt.D
HPP/D5-4006	DC 12V 1.6KW KMP 12V	10C2.1X302	8 lt.plst





P40 GKZ1 1/2



02P40 GKZ1 1/2



03P40 GKZ1 1/2



04P40 GKZ1 1/2



05P40 GKZ1 1/2



06P40 GKZ1 1/2



07P40 GKZ1 1/2



P120 GKZ1



2P120 GKZ1



3P120 GKZ1



4P120 GKZ1



P80 GKZ1



2P80 GKZ1



3P80 GKZ1



4P80 GKZ1



5P80 GKZ1



VALVES



6P80 GKZ1



PC70 T1 GKZ1



2PC70 T1-GKZ1



3PC70 T1-GKZ1



4PC70 N1 GKZ1



7PC70 N1



8PC70 N1



PC100 T1-G2KZ1



2PC100 T1-G2KZ1



3PC100 T1-G2KZ1



4PC100 T1-G2KZ1



5PC100 T1-G2KZ1



6PC100 T1-G2KZ1



7PC100 T1-G2KZ1



8PC100 T1-G2KZ1



3PF40 GKZ1



Code Number	Description
S291 RV180	Single
S292 PV180	Two fold
S293 RV180	Three fold
S294 RV180	Four fold
S296 RV250	Six fold

### Solenoid and Modular Valves



Code Number	Description
RH06 101 12V, 24V, 220V	Single Coil
RH06 011 12V, 24V, 220V	Close Center
RH06 021 12V, 24V, 220V	Open Center
RH06 041 12V, 24V, 220V	J Center
RH06 001 12V, 24V, 220V	H Center



Code Number	Description
RH10 101 12V, 24V, 220V	Single Coil
RH10 011 12V, 24V, 220V	Close Center
RH10 021 12V, 24V, 220V	Open Center
RH10 041 12V, 24V, 220V	J Center
RH10 001 12V, 24V, 220V	H Center

### Hydraulic Directional Check Valve



Code Number	Valve Type	Efficiency (L/min)	Working Pressure (Bar)	Max. Pressure (Bar)
DCV-12	22-25 HDV 3/4"	110	180	230

### Manual Crimpers

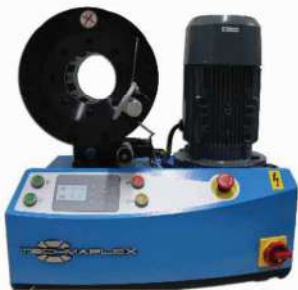


Code Number	Capacity	Crimp Range (mm)	Master-die length (mm)
PMH-25	¼" - 1" 4SP	4 - 70	75

### Electrical Crimpers



Code Number	Capacity	Crimp Range (mm)	Master-die length (mm)
SE-28	¼" - 1" 4SP	4 - 70	75



Code Number	Capacity	Crimp Range (mm)	Master-die length (mm)
PE-38-1ph	¼" - 2" 4SP	4 - 76	100
PE-38-12V	¼" - 2" 4SP	4 - 76	100
PE-38-220V	¼" - 2" 4SP	4 - 76	100
PE-38-380V	¼" - 2" 4SP	4 - 76	100
PE-58	2" 6SP - 4" Industrial	4 - 130	115



### Manual Skiver



Code Number	Capacity	Tool Selection
HST-50	2"	External: ESE Internal: IS

### Electrical Skiver



Code Number	Capacity	Tool Selection
DE-50	2"	External: ESE or ESP Internal: IS

### Cutting & Skiving Machine



Code Number	Capacity	Max. hose OD(mm)	Cutting Disc	Tool Selection
TE-50	2" 4SP	85	scalped disc Ø300 mm	External: ESE or ESP Internal: IS

### Cutting Machine



Code Number	Capacity	Max. hose OD(mm)	Cutting Disc
FC-32	1 ¼" 4SP	50	scalped disc Ø254 mm
FC-32-12V	1 ¼" 4SP	50	scalped disc Ø254 mm



SEALS

SEALS AND O-RINGS



Rod Seals  
PVM-V PACK

Piston Seals  
TPM/TDE/PDE  
Double Acting

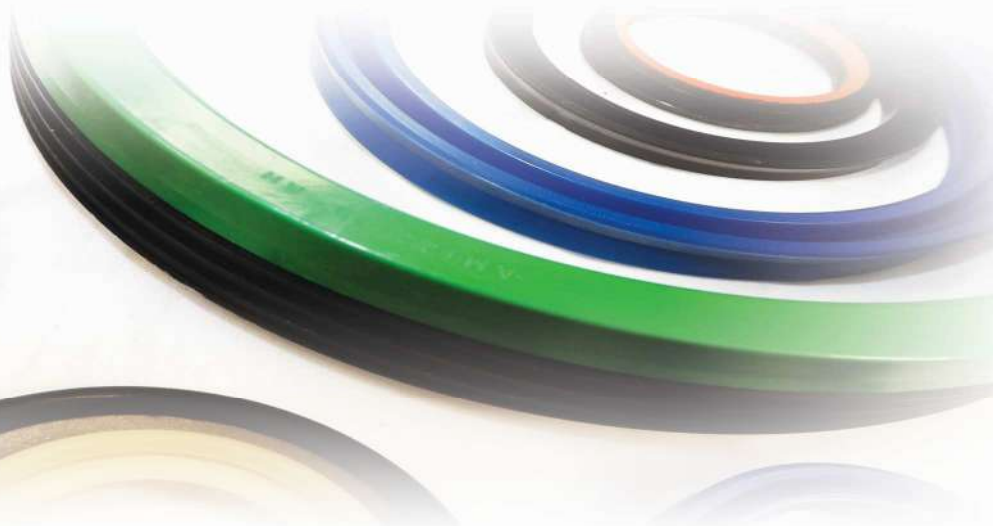
Steel Wiper Seals  
RM-PW

Wiper Seals  
GHK-WRM

Teflon Seals  
GR/IBTS/IPGW/IYT  
Single Acting  
Double Acting

Rod and Piston Seals  
TTU-RSS

O-RINGS





# الورش و خدماتها



## خدمات الورش



تعتبر الورش من أكبر وأقدم الورش الموجودة على مستوى المملكة حيث تقدم العديد من الخدمات المتميزة في المجال الصناعي وتضم نخبة من الفنيين المتخصصين في مجال تجميع الليات و الخراطة و تشكيل المعادن وصيانة وتصنيع السلندرات.

وقد قدم القسم خلال السنوات الماضية العديد من الخدمات للدوائر الحكومية والعسكرية والخدمية والعديد من الشركات الكبرى في المملكة.

- قسم تجميع الليات: يقوم القسم بتجميع ليات الهيدروليك بجميع مقاساتها وكذلك تجميع الليات الصناعية ولحام الاستانلس استيل وكذلك تكسيح المواسير وإيجاد الحلول و البدائل لليات الخاصة ويقوم بتوفير تلك الخدمات من مقاس ١/٤ بوصة و حتى ١٢ بوصة عبر مجموعة متطورة من المكائن و المعدات. بالإضافة لوجود ورشة متنقلة تخدم المشاريع الكبيرة في الموقع

- قسم الخراطة و تشكيل المعادن : ويقوم بالخراطة وتشكيل المعادن بكافة أنواعها ويتميز بتصنيع التروس بكافة أنواعها مدعومة بمجموعة من المكائن الحديثة.

- قسم السلندرات و الصيانة: يقدم جميع خدمات صيانة السلندرات و أيضا التصنيع بالإضافة إلى خدمة الكشف و صيانة السلندرات في الموقع.

وادي سونة  
WADI SONA



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فرع جدة



فرع الرياض

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هاتف : ٠٠٩٦٦-١١-٢٠٤٤٧٥٥ / ٠٠٩٦٦-١١-٢٠٤٤٧٧٢ / ٠٠٩٦٦-١١-٢٠٤٤٧٧١ / فاكس : ٠٠٩٦٦-١١-٢٠٤٤٧٣٤

جدة - طريق مكة كيلو ٦ - ص.ب: ٣٠٩٥٨ جدة ٢١٤٨٧

هاتف : ٠٠٩٦٦-١٢-٦٨٧٨٦٩٩ / ٠٠٩٦٦-١٢-٦٨٩٤٥٢١ / فاكس : ٠٠٩٦٦-١٢-٦٨٧١٥٢٨

جدة - الورشة : هاتف : ٠٠٩٦٦-١٢-٦٨٧٩٤٣٩ / ٠٠٩٦٦-١٢-٦٨٠٠٣٧٢ / فاكس : ٠٠٩٦٦-١٢-٦٨١٥٦١١

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