



**HYDRAULIC
CYLINDERS**



FITTINGS



HOSES



SEALS

TIE ROD HYDRAULIC CYLINDERS

Technical Specifications

Standard & Non-Standard	Stroke: Up to 6000 mm
Single or Double acting	Mounting: 6 standard mounting
Bore: 25 to 600 mm diameter	Working pressure: Up to 400 kg/cm ²
Testing Facility : 700 bar	

Tie-rod Cylinders Include:

- series PTMT medium duty hydraulic service to 150 bar, 24 mounting styles, 40mm to 600 mm bore sizes
- series PTMT heavy-duty hydraulic. Service to 200 bar and beyond, 22 mounting styles, 40 mm through 600 mm bore sizes
- series PTMT large bore, heavy-duty hydraulic pressure rated at 350 bar, seven mounting styles

Application:

- Machine tools
- Plastic and molding machines
- Earth moving machines
- Food processing
- General engineering



WELDED CONSTRUCTION

Technical Specifications

Working Pressure: Up to 500 kg/cm²

Bore: 40 to 400 mm diameter

Stroke: Up to 6000 mm

Mounting: 5 standard mounting

Application:

- Industrial machines
- Steel plant machines
- Press application
- Earth moving machine applications



HEAVY DUTY

Technical Specifications

Working Pressure: Up to 400 kg/cm²

Bore: 40 to 600 mm diameter

Stroke: Up to 6000 mm

Mounting: 3 Standard Series

Application:

- Industrial machines
- Steel plant machines
- Press application



MILL-TYPE CYLINDERS

SERIES PT MT MILL-TYPE CYLINDERS

Technical Specifications

Working Pressure: 350 bar

Bore: 40 to 600 mm diameter

Application:

- 350 bar service
- Specific application requirements



MILL DUTY TYPE VARIOUS TYPE OF CYLINDERS

Technical Specifications

Working Pressure:

Bore: 40 to 600 mm diameter

Application:

- 350 bar service
- Specific application requirements



SPECIAL APPLICATION CYLINDERS

TURN-OVER PLOUGH CYLINDER

Technical Specifications

Working Pressure: 400 bar

Bore: 40 to 400 mm diameter

Stroke: 150 to 6000 mm

Application:

- Large saw blade clamp
- Bandsaw
- Buffer application



HYDRAULIC TOP LINK

Technical Specifications

Working Pressure: 400 bar

Bore: 40 to 400 mm diameter

Stroke: 150 to 6000 mm

Application:

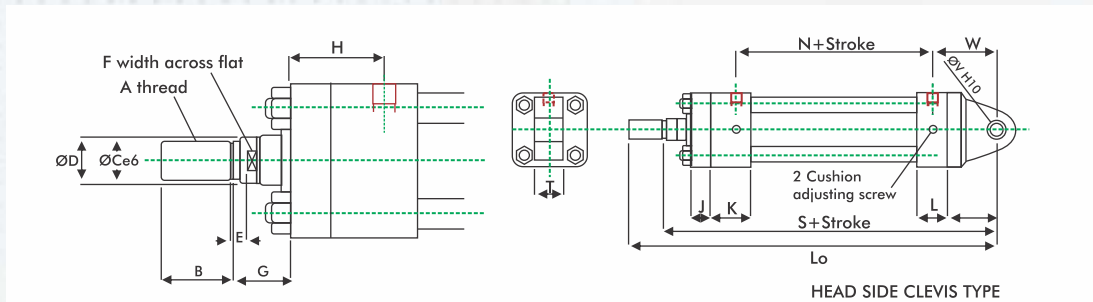
- Large saw blade clamp
- Bandsaw
- Buffer application



PRODUCT RANGE

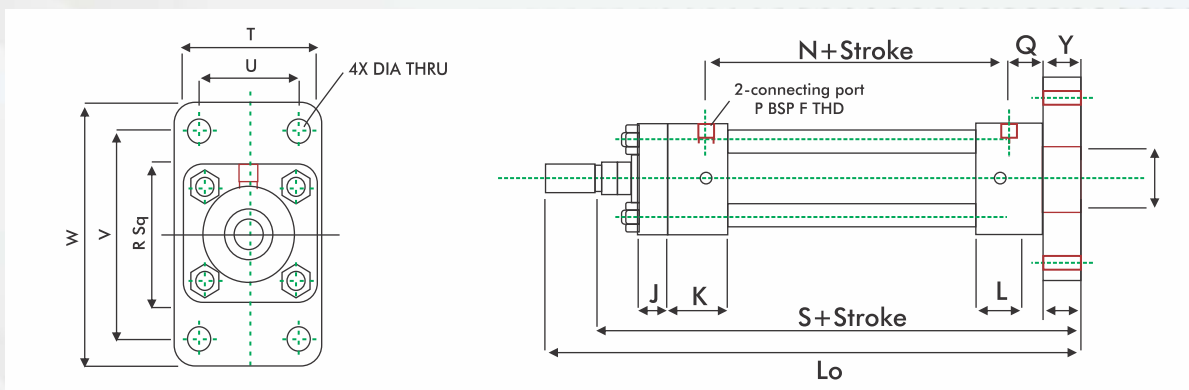
HEAD SIDE CLEVIS TYPE

Model	K	L	N	P	Q	R	S	T	U	V	W
PTHC 40	40	30	94	3/8	22.4	65	231.5	27.5	25	16	62.5
PTHC 50	45	34	116	1/2	26.5	80	267.7	28	31.5	20	67
PTHC 63	45	34	114	1/2	37.5	95	294	45	40	31.5	88
PTHC 80	56	45	132	3/4	40	115	337.5	45	40	31.5	97.5
PTHC 100	56	45	144	3/4	48	136	378.5	55	50	40	112.5
PTHC 125	71	70	168	1	58	165	443	65	63	50	135
PTHC 150	71	70	178	1	80	200	491.5	84	80	63	158
PTHC 175	71	80	178	1	80	225	491.5	84	80	63	158
PTHC 200	71	80	178	1	80	250	491.5	84	80	63	158
PTHC 225	71	80	178	1	80	275	491.5	84	80	63	158
PTHC 250	71	100	178	1	80	300	491.5	84	80	63	158



HEAD SIDE FLANGE TYPE (PTHF)

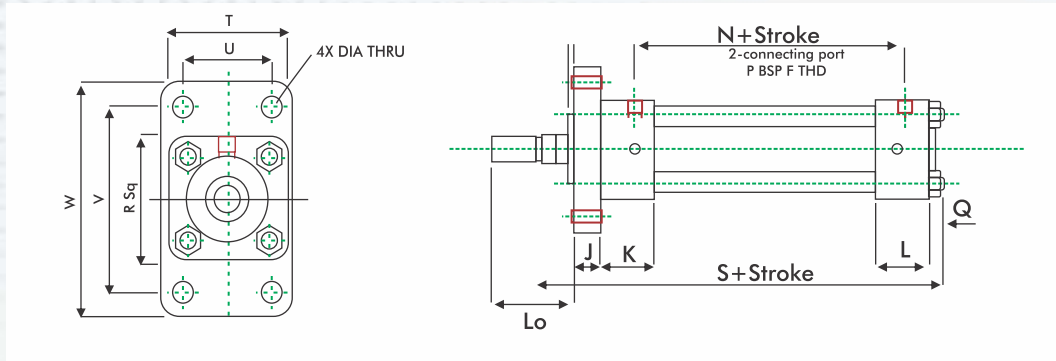
Model	K	L	M	N	P	Q	R	S	T	U	V	W	X	Y	Z
PTHF 40	40	30	20	94	3/8	15	65	204	79	46	95	118	11	15	42.5
PTHF 50	45	34	21.2	116	1/2	17	80	239.2	85	58	115	145	13	16.2	50
PTHF 63	45	34	24	114	1/2	17	95	247	98	69	132	165	15	19	63
PTHF 80	56	45	27	132	3/4	22.5	115	239.5	118	87	155	190	18	22	75
PTHF 100	56	45	35.5	144	3/4	22.5	136	324	145	109	185	224	20	30	85
PTHF 125	71	70	39	168	1	30	165	277	175	132	224	272	24	34	106
PTHF 150	71	70	47.5	178	1	30	200	411	206	155	265	315	28	42.5	118
PTHF 175	71	80	47.5	178	1	30	225	319.5	231	270	290	340	28	8	118
PTHF 200	71	80	47.5	178	1	30	250	319.5	256	295	315	365	28	8	135
PTHF 225	71	80	47.5	178	1	30	275	319.5	281	320	340	390	28	8	145
PTHF 250	71	100	47.5	178	1	30	300	319.5	306	345	365	415	28	8	165



PRODUCT RANGE

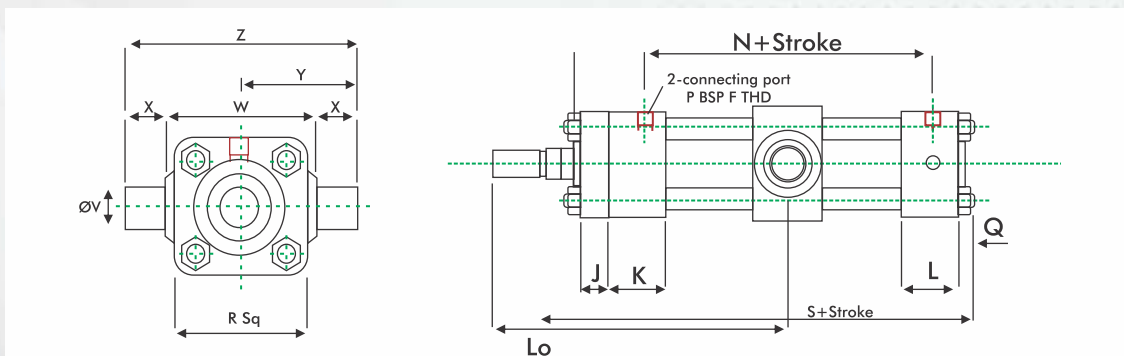
ROD SLIDE FLANGE TYPE

Model	K	L	N	P	Q	R	S	T	U	V	W	X	Y	Z
PTRF 40	40	30	94	3/8	11	65	165	69	46	95	118	11	6	42.5
PTRF 50	45	34	116	1/2	13	80	195.2	85	58	115	145	13	6	50
PTRF 63	45	34	116	1/2	14	95	197	98	69	132	165	15	8	63
PTRF 80	56	45	132	3/4	16	115	231	118	87	155	190	18	8	75
PTRF 100	56	45	144	3/4	19	136	254.5	145	109	185	224	20	8	85
PTRF 125	71	70	168	1	21	165	299	175	132	224	272	24	8	106
PTRF 150	71	70	178	1	23	200	319.5	206	155	265	315	28	8	118
PTRF 175	71	80	178	1	23	225	319.5	231	270	290	340	38	8	118
PTRF 200	71	80	178	1	23	250	319.5	256	295	315	365	28	8	135
PTRF 225	71	80	178	1	23	275	319.5	281	320	340	390	28	8	145
PTRF 250	71	80	178	1	23	300	319.5	306	345	365	415	28	8	165



INTERMEDIATE TRUNNION TYPE

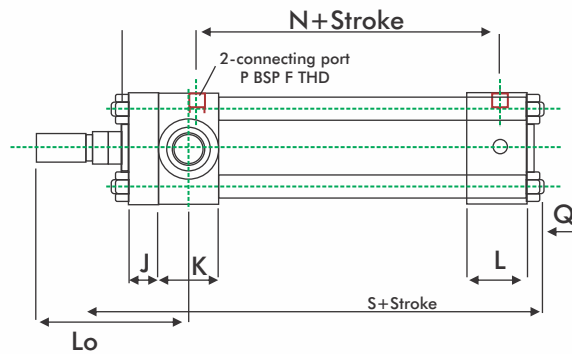
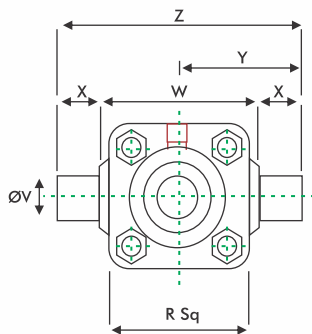
Model	K	L	M	N	P	Q	R	S	T	U	V	W	X	Y	Z
PTIT 40	40	30	122	94	3/8	40	65	195	32.5	11	20	75	20	57.5	115
PTIT 50	45	34	142.7	116	1/2	45	80	235	40	13	25	90	25	70	140
PTIT 63	45	34	149	114	1/2	45	95	237	47.5	14	31.5	105	31.5	84	168
PTIT 80	56	45	174	132	3/4	56	115	278.5	57.5	16	31.5	125	31.5	94	188
PTIT 100	56	45	194	144	3/4	56	136	307.5	68	19	40	146	40	113	226
PTIT 125	71	60	224	168	1	71	165	359	82.5	21	50	175	50	137.5	275
PTIT 150	71	60	244.5	178	1	71	200	386.5	100	23	63	168	63	168	336
PTIT 175	71	60	244.5	178	1	71	225	386.5	115.5	23	63	235	63	168	361
PTIT 200	71	60	244.5	178	1	71	250	386.5	125	23	63	260	63	168	386
PTIT 225	71	60	244.5	178	1	71	275	386.5	137.5	23	63	285	63	168	411
PTIT 250	71	60	244.5	178	1	71	300	386.5	150	23	63	310	63	168	436



PRODUCT RANGE

ROD SIDE TRUNNION TYPE (PTHF)

Model	K	L	M	N	P	Q	R	S	T	U	V	W	X	Y	Z
PTHF 40	40	30	122	94	3/8	40	65	195	32.5	11	20	75	20	57.5	115
PTHF 50	45	34	142.7	116	1/2	45	80	235	40	13	25	90	25	70	140
PTHF 63	45	34	149	114	1/2	45	95	237	47.5	14	31.5	105	31.5	84	168
PTHF 80	56	45	174	132	3/4	56	115	278.5	57.5	16	31.5	125	31.5	94	188
PTHF 100	56	45	194	144	3/4	56	136	307.5	68	19	40	146	40	113	226
PTHF 125	71	60	224	168	1	71	165	359	82.5	21	50	175	50	137.5	275
PTHF 150	71	60	244.5	178	1	71	200	386.5	100	23	63	168	63	168	336
PTHF 175	71	60	244.5	178	1	71	225	386.5	115.5	23	63	235	63	168	361
PTHF 200	71	60	244.5	178	1	71	250	386.5	125	23	63	260	63	168	386
PTHF 225	71	60	244.5	178	1	71	275	386.5	137.5	23	63	285	63	168	411
PTHF 250	71	60	244.5	178	1	71	300	386.5	150	23	63	310	63	168	436

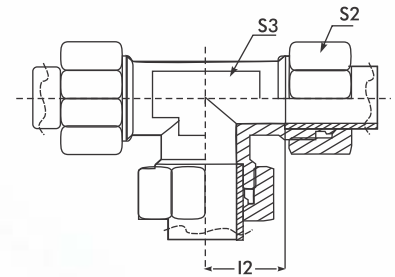


COMMON DIMENSIONS

Model Number	A	B	C	D	E	F	G	H	J	Lo (RSF)	Lo (HSF)+ Stroke	Lo (RST)	Lo (ITT) + 1/25 tr.	Lo (HSC) + Str.
40C	M16 X 1.5P	22	18	22	6	17	30	45	20	58	232	98	150	259.5
40B	M20 X 1.5P	28	24	28	6	22	30	45	20	61.5	235.5	101.5	153.5	263
50C	M20 X 1.5P	28	24	28	6	22	35.5	49.2	21.2	67	270.7	110.7	174.2	299.2
50B	M27 X 2P	36	32	36	8	28	35.5	49.2	21.2	71	274.7	114.7	178.2	303.2
63C	M27 X 2P	36	32	36	8	28	40	52	24	75.6	282.5	122	184.5	329.5
63B	M33 X 2P	45	36	45	8	36	40	52	24	80	287	126.5	189	334
80C	M33 X 2P	45	36	45	8	36	47.5	60.5	27	87.5	329.5	142.5	214	377.5
80B	M42 X 2P	56	48	56	10	46	47.5	60.5	27	95	337	150	221.5	385
100C	M42 X 2P	56	52	56	10	46	53	69	35.5	100.5	371.5	164	241.5	426
100B	M48 X 2P	63	52	70	10	60	53	69	35.5	109	380	172.5	250	434.5
125C	M48 X 2P	63	52	70	10	60	60	80	39	116	433	190.5	280	499
125B	M64 X 3P	85	80	90	12	75	60	80	39	127	444	201.5	291	510
150	M64 X 3P	85	80	90	12	75	67	88.5	47.5	130	474	213	307.5	554.5
180	M80 X 3P	95	100	110	12	90	67	88.5	47.5	147	491	230	324.5	571.5
200C	M80 X 3P	95	100	110	12	90	67	88.5	47.5	147	491	230	324.5	571.5
200B	M100 X 3P	112	130	140	14	120	37	88.5	47.5	162	506	245	339.5	586.5
225	M100 X 3P	112	130	140	14	120	37	88.5	47.5	162	506	245	339.5	586.5
250	M130 X 4P	150	145	160	14	140	67	88.5	47.5	177	526	465	359.5	606.5

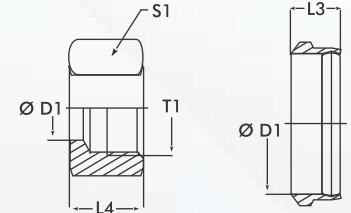
1) T- EQUAL TEE

Part No.	T 06-L to T 42-L	T 06-S to T 38-S
Series	Light-100 bar to Light-250 bar	Heavy-250 bar to Heavy-630 bar
Tube OD	6 to 42	6 to 38
S2	14 to 60	17 to 60
S3	12 to 50	12 to 50
I2	14 to 40	16 to 41



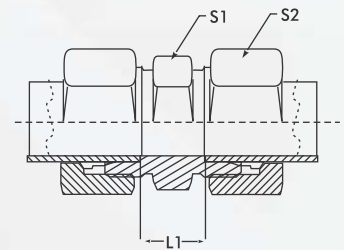
2) N - NUT / F - FERRULE

Part No.	N 06-L to N 42-L	N 06-S to N 16-S
Series	F 06-L to F 42-L	F 06-S to F 16-S
PN	100 to 250	400 to 630
D1	6 to 42	6 to 16
T1	M12 X 15 to M52 X 2.0	M14 X 1.5 to M24 X 1.5
L4	14.5 to 24	16.5 to 20.5
S1	14 to 60	17 to 30
L3	9 to 13.5	9 to 10.5



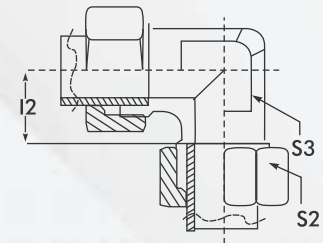
3) G - STRAIGHT COUPLING

Part No.	G 06-L to G 42-L	G 06-S to G 38-S
Series	Light-100 bar to Light-250 bar	Heavy-250 bar to Heavy-630 bar
Tube OD	6 to 42	6 to 38
S1	12 to 55	14 to 55
S2	14 to 60	17 to 60
I1	10 to 21	16 to 29



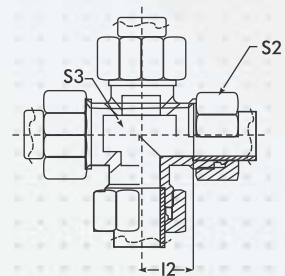
4) E - EQUAL ELBOW

Part No.	E 06-L to E 42-L	E 06-S to E 38-S
Series	Light-100 bar to Light-250 bar	Heavy-250 bar to Heavy-630 bar
Tube OD	6 to 42	6 to 38
S2	14 to 60	17 to 60
S3	12 to 50	12 to 50
I2	14 to 40	16 to 41



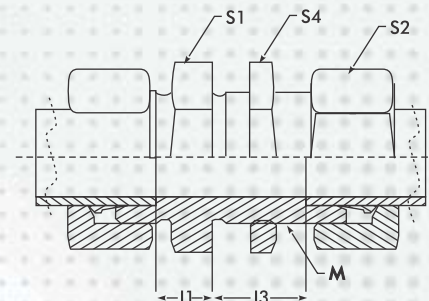
5) K - EQUAL CROSS

Part No.	K 06-L to K 42-L	K 06-S to K 38-S
Series	Light-100 bar to Light-250 bar	Heavy-250 bar to Heavy-630 bar
Tube OD	6 to 42	6 to 38
S2	14 to 60	17 to 60
S3	12 to 55	14 to 55
I3	27 to 63	31 to 72



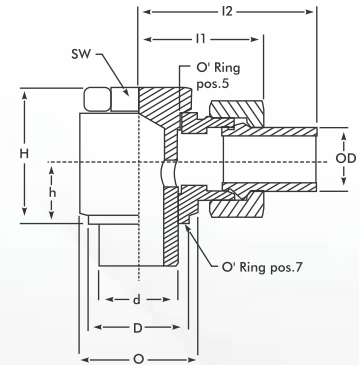
6) SB - STRAIGHT BULKHEAD COUPLING

Part No.	SB 06-L to SB 42-L	SB 06-S to SB 30-S
Series	Light-100 bar to Light-250 bar	Heavy-250 bar to Heavy-630 bar
Tube OD	6 to 42	6 to
M	M12 X 1.5 to M52 X 2.0	M14 X 1.5 to M42 X 2.0
S1	17 to 60	19 to 50
S2	14 to 60	60 to 50
S4	17 to 65	19 to 60
I1	7 to 19	12 to 21.5
L2	27 to 36	29 to 37.5



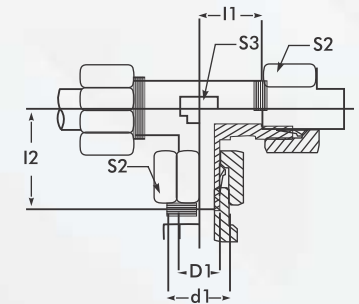
7) WH-R-ED HIGH PRESSURE BANJO COUPLING

Part No.	WH 10-HR to WH 50-HR	WH 10-HM to WH 50-HM
Series	250 to 630	250 to 630
Tube OD	10 to 50	10 to 50
d	1/4 to 2	M14 X 1.5 to M60 X 2.0
D	22 to 75	22 to 75
i	12 to 24	12 to 24
H	31 to 119	31 to 119
h	13 to 54.5	13 to 54.5
L1	34 to 94	34 to 94
I2	50 to 123	50 to 123
L2	25 to 100	25 to 100
SW	19 to 70	19 to 70
O' Ring pos.5	9.5 X 2.0 to 55.0 X 3.0	9.5 X 2.0 to 55.0 X 3.0
O' Ring pos.7	16.0 X 1.5 to 64.0 X 3.0	16.0 X 1.5 to 64.0 X 3.0



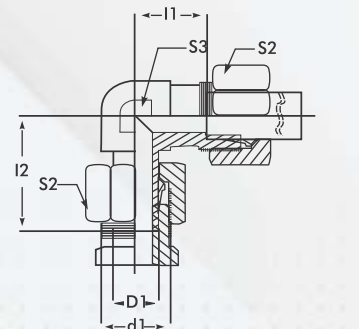
8) SBT - SWIVEL BRANCH TEE

Part No.	SBT 06-LR to SRT 42-LR	SBT 06-SR to SRT 38-SR
Series	Light-100 bar to Light-250 bar	Heavy-250 bar to Heavy-630 bar
Tube OD D1	6 to 42	6 to 38
D1	M12 X 15 to M52 X 2.0	M14 X 1.5 to M52 X 2.0
I1	12 to 40	16 to 41
I2	26 to 60	27 to 67.5
S2	14 to 60	17 to 60
S3	12 to 50	12 to 50



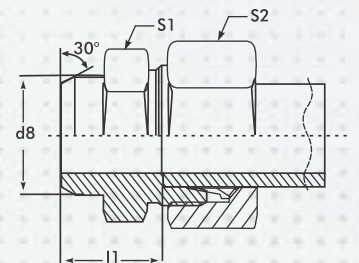
9) SE - SWIVEL ELBOW

Part No.	SE 06-LR to SE 42-LR	SE 06-SR to SE 16-SR
Series	Light-100 bar to Light-250 bar	Heavy-250 bar to Heavy-630 bar
Tube OD D1	6 to 42	6 to 16
D1	M12 X 15 to M52 X 2.0	M14 X 1.5 to M24 X 1.5
I1	12 to 40	16 to 24.5
I2	26 to 60	27 to 37.5
S2	14 to 60	17 to 30
S3	12 to 50	12 to 24



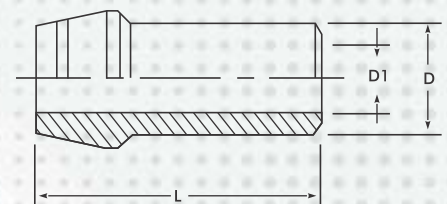
10) WC - WELD COUPLING

Part No.	WC 06-L to WC 42-L	WC 06-S to WC 14-S
Series	Light-100 bar to Light-250 bar	Heavy-250 bar to Heavy-630 bar
Tube OD	6 to 42	6 to 14
S1	12 to 55	14 to 24
S2	14 to 60	17 to 27
I1	14 to 35	19 to 27
D8	10 to 46	11 to 19



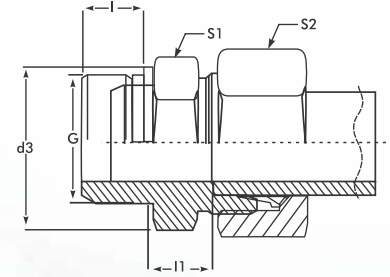
11) WN - WELDABLE NIPPLE

Part No.	WN 10 X 1.0 to WN 25 X 3.0
Working Pressure NP of Fitting	400 TO 650 bar
Max. Pressure PB for WN & Tube	234 to 476 bar
O Ring	7.5 X 1.5 to 20.3 X 2.4
L	32.5 to 49.5
D	10 to 25
D1	8 to 19



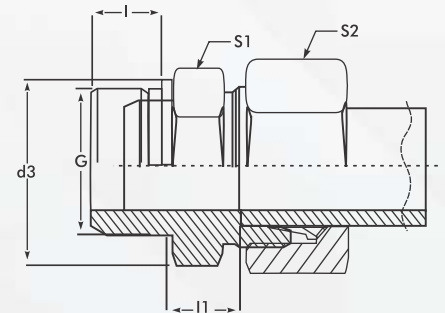
12) GE-M-ED - STRAIGHT MALE STUD COUPLING

Part No.	GE 06-LM-ED to GE 42-LM-ED	GE 06-SM-ED to GE 38-SM-ED
Series	Light-100 bar to Light-315 Bar	Heavy-250 Bar to Heavy-630 bar
Tube OD	6 to 42	6 to 38
I1	8.5 to 19	13 to 26
I	8 to 22	19 to 50
S2	14 to 60	17 to 60
S1	14 to 55	17 to 55
D3	14 to 55	17 to 55
G	M10 X 1.0 to M48 X 2.0	M12 X 1.5 to M48 X 2.0



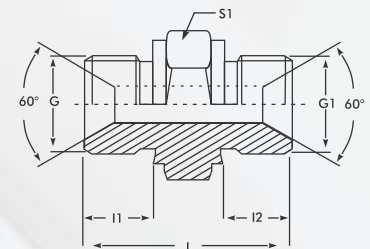
13) GE-SR-ED - STRAIGHT MALE STUD COUPLING

Part No.	GE 06 -SR-ED to GE 38 -SR-ED
Series	Heavy-250 Bar to Heavy-630 bar
Tube OD	6 to 38
I1	13 to 26
I	12 to 22
S2	17 to 60
S1	19 to 55
D3	19 to 55
G	G 1/4 to G 1.1/2



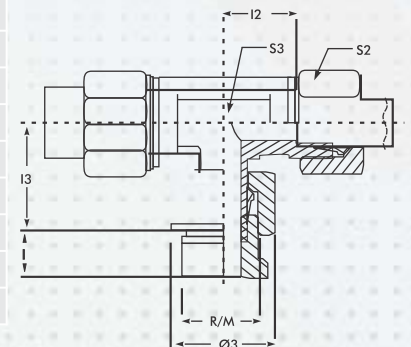
14) HA - HOSE ADAPTOR

Part No.	HA 1/8 X 1/8 to HA 2 X 11/2
Male Stud G	1/8 to 2
Male Stud G1	1/8 to 11/2
L	27 to 70
I1	8 to 24
I2	8 to 22
S1	14 to 70



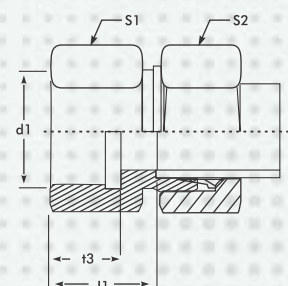
15) MBT-R/M- MALE STUD BRANCH

R-Part no.	GE 06-LM-ED to GE 42-LM-ED	GE 06-SM-ED to GE 38-SM-ED
M - Part No.	GE 06-LM-ED to GE 42-LM-ED	GE 06-SM-ED to GE 38-SM-ED
Series	Light-100 bar to Light-315 Bar	Heavy-250 Bar to Heavy-630 bar
Tube OD	6 to 42	6 to 38
D3	14 to 55	18.9 to 55
G	1/8 to 11/2	1/4 to 11/2
M	M26 X 1.5 to M48 X 2.0	M27 X 2.0 to M48 X 2.0
I	8 to 22	12 to 22
I2	12 to 40	16 to 41
I3	12 to 39	14 to 39
S3	14 to 55	19 to 55
S2	14 to 60	17 to 60



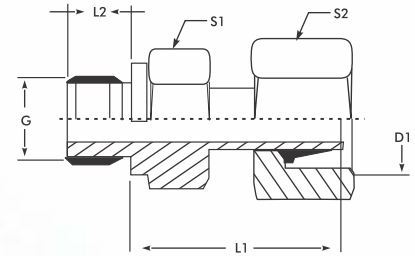
16) FSC-M - STRAIGHT FEMALE STUD COUPLING

Part No.	FSC 06 LM to FSC 42 LM	FSC 06 SM to FSC 38 SM
Series	Light-100 bar to Light-315 Bar	Heavy-250 Bar to Heavy-630 bar
Tube OD	6 to 42	6 to 38
Conn. Metric Thread d1	M10 X 1 to M48 X 2.0	M12 X 1.5 to M48 X 2.0
I1	19.5 to 42	12.5 to 28
T3	14 to 60	17 to 28
S1	14 to 60	17 to 60
S2	14 to 60	17 to 60



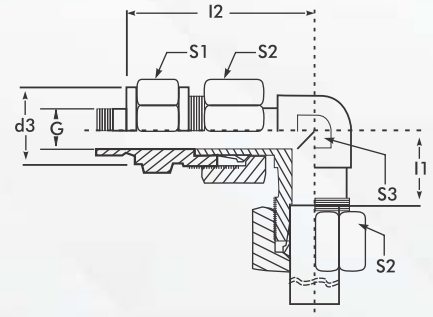
17) SP-R- STAND PIPE ADAPTOR

Part No.	SP 06-LR to SP 42-LR	SP 06-SR to SP 38-SR
Series	Light-250 Bar to Light-100 Bar	Heavy-630 Bar to Heavy-250 Bar
Tube OD	6 to 42	6 to 38
D1	M12 X 15 to M52 X 2.0	M14 X 1.5 to M52 X 2.0
L1	26.5 to 46.5	28 to 54
L2	8 to 22	11 to 22
S1	14 to 55	19 to 55
S2	14 to 60	17 to 60
S2	1/8 to 11/2	1/4 to 11/2



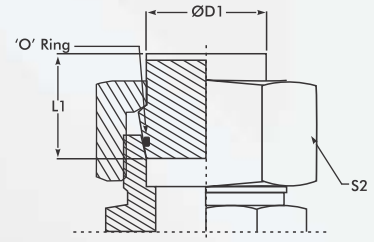
18) SEC R/M - SWIVEL ELBOW CONNECTOR

Part No.	SEC 06-LR to SEC 42-LR	SEC 06-SR to SEC 30-SR
M - Part No.	SEC 06-LM to SEC 42-LM	SEC 06-SM to SEC 30-SM
Series	Light-100 Bar to Light-250 Bar	Heavy-250 Bar to Heavy-630 Bar
Tube OD	6 to 42	6 to 30
BSP Thread G	1/8 to 11/2	1/4 to 11/4
L1	26.5 to 46.5	28 to 54
L2	8 to 22	11 to 22
S1	14 to 55	19 to 55
S2	14 to 60	17 to 60
S2	1/8 to 11/2	1/4 to 11/2



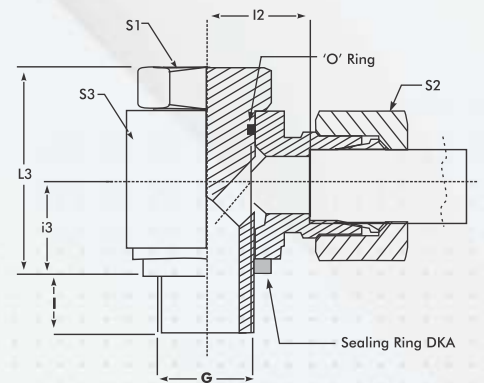
19) VKA - BLANKING PLUG WITH NUT

Part No.	VKA 06-L to VKA 42-L	VKA 06-S to VKA 16-S
D1	6 to 42	6 to 16
L1	18.5 to 30	18.5 to 23.5
S2	14 to 60	17 to 30
'O' Ring	4 X 1.5 to 38 X 2.5	4 X 1.5 to 12 X 2



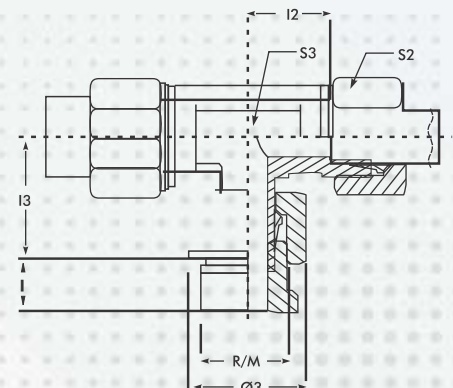
20) WH-R - HIGH PRESSURE BANJO COUPLING

R-Part no.	WH 06-LR to WH 42-LR	WH 06-SR to WH 38-SR
Series	Light-100 bar to Light-250 Bar	Heavy-250 Bar to Heavy-630 bar
Tube OD	6 to 42	6 to 38
G	1/8 to 11/2	1/4 to 11/2
i	8 to 22	12 to 22
I2	12 to 40.5	16.5 to 41.5
I3	10.5 to 40.5	14 to 40.5
L3	24 to 87	30 to 87
S1	17 to 60	19 to 60
S2	14 to 60	17 to 60
S3	17 to 70	22 to 70
h	2.5 to 3.5	3 to 3.5



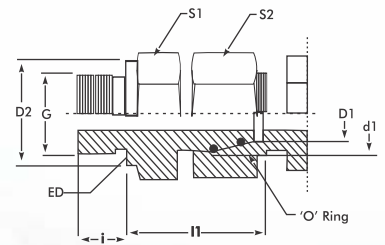
21) MBT -R/M - MALE STUD BRANCH TEE

R - Part No.	MBT 06 LR to MBT 42 LR	MBT 06 SR to MBT 12 SR
M - Part No.	MBT 22 LM to MBT 42 LM	
Series	Light-100 Bar to Light-250 Bar	Heavy-630 Bar
Tube OD	6 to 42	6 to 12
d3	14 to 55	18.9 to 22
G	1/8 to 11/2	1/4 to 3/8
M	M26 X 1.5 to M48 X 2.0	
i	8 to 22	12
I2	12 to 40	16 to 21.5
I3	12 to 39	14 to 18
S3	14 to 55	19 to 22
S2	14 to 60	17 to 24



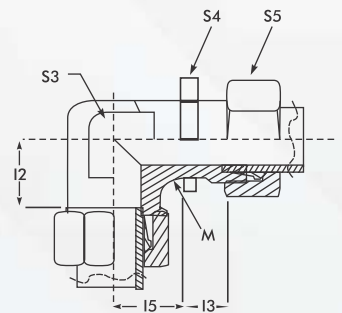
22) EGE-M-ED - STRAIGHT STUD ADAPTOR WITH SWIVEL NUT

Part No.	EGE 06-LM-ED to EGE 42-LM-ED	EGE 06-SM-ED to EGE 16-SM-ED
Series	Light-100 Bar to Light-250 Bar	Heavy-400 Bar to Heavy-630 Bar
Tube OD D1	6 to 42	6 to 16
D1	M12 X 15 to M52 X 2.0	M14 X 1.5 to M24 X 1.5
I1	24.5 to 46.5	27 to 37
i	8 to 22	12 to 14
S1	14 to 55	19 to 27
S2	14 to 60	17 to 30
d2	14 to 55	19 to 27
G	M10 X 1 to M48 X 2.0	M12 X 1.5 to M22 X 1.5
O' Ring	4 X 1.5 to 38 X 2.5	4 X 1.5 to 12 X 2



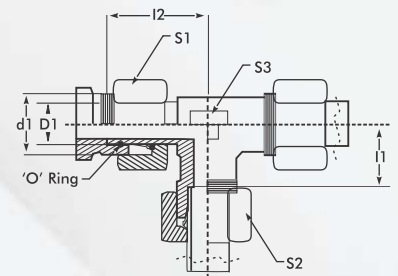
23) ESB - ELBOW BULKHEAD COUPLING

Part No.	ESB 06-L to ESB 42-L	ESB 06-S to ESB 16-S
Series	Light-100 Bar to Light-250 Bar	Heavy-400 Bar to Heavy-630 Bar
Tube OD	6 to 42	6 to 16
M	M12 X 1.5 to M52 X 2.0	M14 X 1.5 to M24 X 1.5
S3	17 to 60	19 to 30
S2	14 to 60	17 to 30
S4	17 to 65	19 to 32
I2	12 to 40	16 to 24.5
I3	27 to 36	29 to 31.5
I5	14 to 43	17 to 24



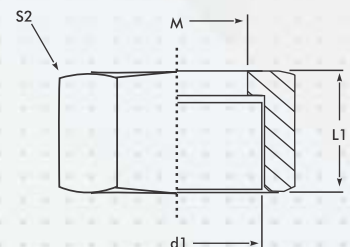
24) EL - ADJUSTABLE BARREL TEE WITH SWIVEL NUT

Part No.	EL 06-L to EL 42-L	EL 06-S to EL 16-S
Series	Light-100 Bar to Light-250 Bar	Heavy-400 Bar to Heavy-630 Bar
Tube OD D1	6 to 42	6 to 16
d1	M12 X 15 to M52 X 2.0	M14 X 1.5 to M24 X 1.5
I1	12 to 40	16 to 24.5
I2	26 to 56	27 to 36.5
S2	14 to 60	17 to 30
S3	12 to 50	12 to 24
O' Ring	4 X 1.5 to 38 X 2.5	4 X 1.5 to 12 X 2



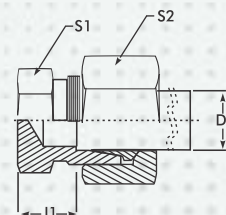
25) BO-M NUT

Part No.	BO-M 06-L to BO-M 42-L	BO-M 06-S to BO-M 14-S
Series	L	S
PN Bar	250 to 500	630
Tube OD	6 to 42	6 to 14
G	1/8 to 11/2	1/4 to 3/8
M	M12 X 1.5 to M52 X 2.0	M14 X 1.5 to M22 X 1.5
I	17 to 34	18 to 23
d1	7.8 to 45.3	7.8 to 17.7
S2	14 to 60	17 to 27



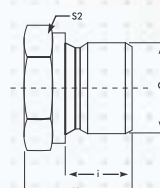
26) ROV - BLANKING END FOR TUBES

Part No.	ROV 06-L to ROV 42-L	ROV 06-S to ROV 38-S
D1	6 to 42	6 to 38
I1	7 to 16	11 to 23
S1	12 to 55	14 to 55
S2	14 to 60	17 to 60



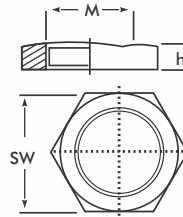
27) HP - HEX HEAD PLUG

Part No.	HP 1/8 to HP 2
G	1/8 to 2
I1	14.5 to 40
i	8 to 24
S1	14 to 70



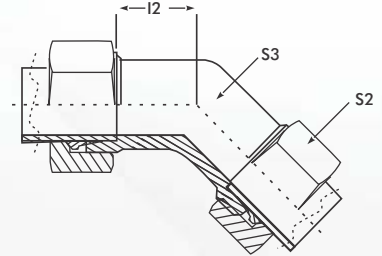
28) CN - BULKHEAD CHECK NUT

Part No.	CN 06 L to CN 35 L
Tube O.D L	6 to 35
Tube O.D S	6 to 30
SW	17 to 55
M	M12 X 1.5 to M45 X 2.0
h	6 to 9



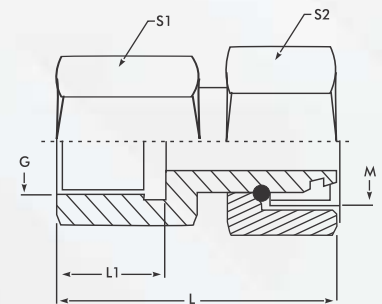
29) E 45° - EQUAL ELBOW 45

Part No.	E 12-L 45° to E 42-L 45°	E 16-S 45° to E 38-S 45°
Series	Light-100 Bar to Light-250 Bar	Heavy-250 Bar to Heavy-400 Bar
Tube OD(d)	12 to 42	16 to 38
S2	22 to 60	30 to 60
Y	19 to 55	27 to 55
A	24 to 51	31 to 51



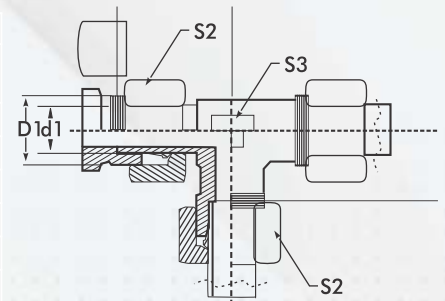
30) FEGE-R - FEMALE STUD ADAPTOR WITH SWIVEL NUT

Part No.	FEGE 06-LR to FEGE 42-LR	FEGE 06-SR to FEGE 16-SR
Series	Light-100 Bar to Light-250 Bar	Heavy-400 Bar to Heavy-630 Bar
Tube OD D1	6 to 42	6 to 16
G	1/8 to 1 1/2	1/4 to 1/2
L1	12 to 28.5	17 to 20
L	36 to 69.5	41 to 51
S1	14 to 60	19 to 30
S2	14 to 60	17 to 30
'O' Ring	4 X 1.5 to 38 X 2.5	4 X 1.5 to 12 X 2
M	M12 X 1.5 to M52 X 2.0	M14 X 1.5 to M24 X 1.5



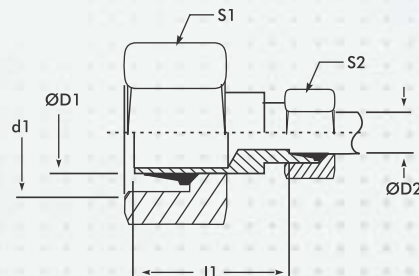
31) SRT - SWIVEL RUN TEE CONNECTOR

Part No.	SRT 06-LR to SRT 42-LR	SRT 06-SR to SRT 38-SR
Series	Light-100 bar to Light-250 bar	Heavy-250 bar to Heavy-630 bar
Tube OD D1	6 to 42	6 to 38
D1	M12 X 15 to M52 X 20	M14 X 1.5 to M52 X 2.0
I1	12 to 40	16 to 41
I2	26 to 56	27 to 63
S2	14 to 60	17 to 60
S3	12 to 50	12 to 50



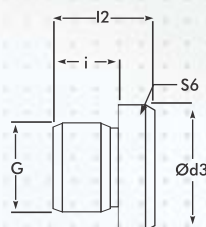
32) KOR-REDUCTION SLEEVE SERIES S

Part No.	KOR 08/06 S to KOR 16/06 S
PN	400 to 630
D1	8 to 16
D2	6 to 6
d1	M16 X 1.5 to M24 X 1.5
I2	27 to 32
S1	19 to 30
S2	17 to 17



33) SHP - SOCKET HEAD PLUG

Part No.	SHP 1/8 to SHP 2
G	1/8 to 2
d3	14 to 68
I2	12 to 25
i	8 to 20
S6	5 to 32



MEDIUM PRESSURE HOSES



Properties

Application area	Low and medium pressure circuits
Standard	SAE 100 R5
Inner layer	Oil resistant, synthetic rubber
Insert	One textile braided insert and one steel wire braid
Outer layer	One textile braided insert embedded in Synthetic rubber
Colour	Black
Temperature (min.) °C	-40
Temperature (max.) °C	100
Elongation	2% to -4%
Media	Mineral oil, poly-glycol based oil, water (0 °C to +70 °C), Water-oil-emulsions
Operating pressure	24 to 207 bar

LOW PRESSURE HOSES



Properties

Application area	Low pressure hose for general applications	
Standard	EN 854 R6 SAE 100 R6	EN 854 3TE EN 854 3TE
Inner layer	Oil resistant, synthetic rubber	
Insert	One braided textile insert	
Outer layer	Oil resistant and weatherproof synthetic rubber	
Colour	Black	
Temperature (min.) °C	-40	
Temperature (max.) °C	100	
Elongation	2% to -4%	
Media	Mineral oil, air, poly-glycol based oil water (0°C to +70°C), water-oil-emulsions	
Operating pressure	13 to 160 bar	

BRAIDED HOSES



Properties

Application area	Low and medium high pressure circuits return hoses																		
Standard	<table border="0"> <tr> <td>EN 856 4SP</td> <td>EN 854 1TE</td> <td>EN 857 1SC</td> </tr> <tr> <td>EN 856 4SH</td> <td>EN 854 2TE</td> <td>EN 857 2SC</td> </tr> <tr> <td>SAE 100 R15</td> <td>EN 854 3TE</td> <td>EN 856 4SP</td> </tr> <tr> <td>EN45545-2</td> <td>EN 856 R6</td> <td>SAE 100 R15</td> </tr> <tr> <td>EN 853 1SN</td> <td>EN 856 R13</td> <td>SAE 100 R5</td> </tr> <tr> <td>EN 853 2SN</td> <td>EN 856 R12</td> <td>SAE 100 R7</td> </tr> </table>	EN 856 4SP	EN 854 1TE	EN 857 1SC	EN 856 4SH	EN 854 2TE	EN 857 2SC	SAE 100 R15	EN 854 3TE	EN 856 4SP	EN45545-2	EN 856 R6	SAE 100 R15	EN 853 1SN	EN 856 R13	SAE 100 R5	EN 853 2SN	EN 856 R12	SAE 100 R7
EN 856 4SP	EN 854 1TE	EN 857 1SC																	
EN 856 4SH	EN 854 2TE	EN 857 2SC																	
SAE 100 R15	EN 854 3TE	EN 856 4SP																	
EN45545-2	EN 856 R6	SAE 100 R15																	
EN 853 1SN	EN 856 R13	SAE 100 R5																	
EN 853 2SN	EN 856 R12	SAE 100 R7																	
Inner layer	Oil resistant, synthetic rubber																		
Insert	One high-tensile steel wire braided insert																		
Outer layer	Synthetic rubber with high temperature, ozone and weather resistance, oil resistant, environmentally safe, synthetic rubber, rubber, flame retardant, abrasion and weather resistance																		
Colour	Black and blue																		
Temperature (min.) °C	-40, -55																		
Temperature (max.) °C	100, 135																		
Elongation	2% to -4%																		
Media	Glycol, water-oil-emulsions, water (0°C to +100°C), mineral oil, gear oil, poly-glycol, air-oil vapour																		
Operating pressure	40 to 450 bar																		

SUCTION HOSE



Properties

Application area	Hose for suction and return lines with restricted installation space
Standard	SAE 100 R4
Inner layer	Oil Resistant, synthetic rubber
Insert	Four (up to NW 25) or six (from NW 32) high-tensile steel wire spirals
Outer layer	Synthetic rubber with high ozone, abrasion, and weather resistance
Colour	Black
Temperature (min.) °C	-40
Temperature (max.) °C	100
Elongation	-
Media	Mineral oil, water-glycol emulsions, water-oil-emulsions
Operating pressure	30 to 63 bar

THERMOPLASTIC HOSES



Properties

Application area	Medium high pressure circuits, high pressure lubrication lines, agricultural machines, forklift trucks, chemical industries, hydraulic tools, compressors, lubrication line
Special features	High ozone and abrasion resistance, good chemical resistance, low volumetric expansion, high kink resistance, maximum flexibility
Standard	SAE 100 R7 SAE 100 R9 BS 4983 SAE J 517-100 R8 SAE 100 R10 ISO 3949 EN 853 SAE 100 R8
Inner layer	Polyester elastomer, Polyamide (PA)
Insert	Two high-tensile steel wire spiral inserts and one steel wire braid, NW 4 - 13: Polyester elastomer; from NW 16, Polyamide, one high-tensile steel wire braided insert, one aramid braided insert
Outer layer	Polyamide (PA), Polyurethane (PUR)
Colour	Black
Temperature (min.) °C	-40
Temperature (max.) °C	100
Elongation	-3% to +4%
Media	Mineral oil, poly-glycol based oil, water (0 °C to +60 °C), water-oil-emulsions (up to +60 °C), ASTM1ASTM3, poly-glycol based oil, synthetic oils, aggressive media
Operating pressure	95 to 700 bar

SPIRAL HOSE



Properties

Application area	High pressure circuits with high loads, hydrostatic gearboxes, shipbuilding, particularly suitable for restricted installation space and high abrasion, exceptionally flexible, narrow bending radius, abrasion and ozone resistant, weatherproof mining and opencast mining
Standard	SAE100R15 EN 856 SH ISO 18752-CC EN 856 4SP EN 856 4SP EN 856 4SH
Inner layer	Oil Resistant, synthetic rubber
Insert	Four (up to NW 25) or six (from NW 32) high-tensile steel wire spirals
Outer layer	Synthetic rubber with additional plastic cover with more than 300 times the abrasion values compared to standard external covers, six high steel wire, synthetic rubber with high ozone, abrasion, and weather resistance, flame-retardant according to MSHA
Colour	Black
Temperature (min.) °C	-40
Temperature (max.) °C	121
Elongation	2% to -4%
Media	Mineral oil, glycol, water (0 °C to +70 °C), water-oil-emulsions
Operating pressure	40 to 450 bar

WIPERS

PROFILE												
TYPE	PTWR12	PTWR13	PTWR13_E2	PTWR14	PTWR15	PTWR16	PTWR17	PTWR18	PTW50	PTW51	PTW53	PTW54
PROFILE												
TYPE	PTWR01	PTWR01A	PTWR02	PTWR02A	PTWR02B	PTWR02C	PTWR02D	PTWR03	PTWR04	PTWR07	PTWR08	PTWR11

ROD SEALS

PROFILE												
TYPE	PTRS02A	PTRS02B	PTRS02C	PTRS03	PTRS04	PTRS04A	PTRS05	PTRS05A	PTRS09	PTRS08	PTRS09A	PTRS09B
PROFILE												
TYPE	PTRS10-12B	PTRS91	PTRS91B	PTRS16	PTRS17	PTRS17A	PTRS17B	PTRS17C	PTRS17D	PTRS17E	PTRS19	PTRS19A

PROFILE												
TYPE	PTRS20	PTRS31-33	PTRS35	PTRS35A	PTPRS06	PTPRS06A	PTPRS06B	PTPRS06C	PTPRS06D	PTPRS06E	PTPRS07	PTPRS10SP
PROFILE												
TYPE	PTPRS10-12	PTPRS10-12A	PTPRS13-15	PTPRS18	PTPRS19	PTPRS19B	PTPRS19C	PTPRS19D	PTPRS22	PTPRS25-27	PTPRS99	PTR50

PROFILE									
TYPE	PTR50A	PTR51	PTR52	PTR53	PTRS01	PTRS01A	PTRS01B	PTRS01C	PTRS02

PISTON SEALS

PROFILE												
TYPE	PTPS01	PTPRS06C	PTPRS06D	PTPRS06E	PTPRS07	PTPRS10SP	PTPS08	PS08A	PS08B	PS08C	PS08D	PS08E
PROFILE												
TYPE	PTPS08F	PTPS81	PTPS81B	PTPS81C	PTPS09	PTPRS10-12	PTPRS10-12A	PTPRS13-15	PTPRS18	PTPRS19	PTPRS19B	PTPRS19C

PROFILE												
TYPE	PTPRS19D	PTPRS22	PTPS01A	PTPS01B	PTPS01C	PTPS02	PTPS02A	PTPS03	PTPS04	PTPS04A	PTPS05	PTPS05A
PROFILE												
TYPE	PTPS35	PTPS35A	PTPRS06	PTPRS06A	PTPRS06B	PTPRS25-27	PTPRS99	PTPS09A	PTPS10-12B	PTPS16	PTPS16A	PTPS17

PROFILE												
TYPE	PTPS17A	PTPS17B	PTPS19	PTPS19A	PTPS20	PTPS23	PTP50	PTP50A	PTP51	PTP51A	PTP51G	PTP52

PROFILE				
TYPE	PTP53	PTP54	PTP54A	PTP55

ROTARY SEALS

PROFILE												
TYPE	PTOS01A	PTOS02A	PTOS03A	PTOS08	PTOS08A	PTR03	PTR04	PTR04A	PTR05	PTR05A	PTVR06	PTVR07
PROFILE												
TYPE	PTR08	PTR08D	PTR09	PTR09A	PTR10	PTR10A	PTR11	PTR11D	PTR35A	PTR35B		

SYMMETRICAL SEALS

PROFILE										
TYPE	PTPRS06D	PTPRS06E	PTPRS07	PTPRS10SP	PTPRS10-12	PTPRS10-12A	PTPRS13-15	PTPRS18	PTPRS19	PTPRS19B
PROFILE										
TYPE	PTPRS22	PTPRS25-27	PTPRS99	PTPRS06	PTPRS06A	PTPRS06B	PTPRS06C	PTPRS19C	PTPRS19D	

MINING SEALS

PROFILE								
TYPE	PTP50	PTP50A	PTP51	PTP51A	PTP51G	PTP52	PTBWR01-P	PTBWR01-R
PROFILE								
TYPE	PTR51	PTR52	PTR53	PTW50	PTW51	PTW53	PTW54	PTP58
PROFILE								
TYPE	PTP53	PTP54	PTP54A	PTP55	PTR50	PTR50A		

STATIC SEALS

PROFILE						
TYPE	PTFL07	PTFL08	PTOR	PTORH	PTORV	PTQR01
PROFILE						
TYPE	PTFL01A	PTFL02B	PTFL03	PTFL06	PTPS35	PTPS35A
PROFILE						
TYPE	PTQR02	PTSS01	PTRS35	PTRS35A		

BACK-UP RINGS

PROFILE						
TYPE	PTBUR08	PTBUR09	PTBUR10	PTBUR11	PTBUR12	PTBUR13

GUIDE RINGS

PROFILE						
TYPE	PTBWR01	PTBWR01A	PTBWR03	PTBWR04	PTBWR05	PTBWR06
PROFILE						
TYPE	PTBWR07	PTBWR08	PTBWR09			

TABLE OF MATERIALS

	Description	Colour	Application temp.	Hardness
POLYURETHANE	PU red, U500-R95		-30 to + 125°C	Shore A 95 +/-2
	PU petrol, U505-P79		-25 to + 100°C	Shore A 79 +/-3
	PU light green, U510-G88		-30 to + 115°C	Shore A 90 +/-2
	PU orange, U520-OR95-HT		-30 to + 135°C	Shore A 96 +/-2
	PU LT light blue, U530-B95-LT		-50 to + 105°C	Shore A 95 +/-2
	PU violet, U540-VI95-CR		-30 to + 115°C	Shore A 95 +/-2
	PU dark red, U550-GM95		-30 to + 125°C	Shore A 95 +/-2
	PU blue, U570-D57		-30 to + 125°C	Shore D 57 +/-3
	PU grey, U580-D57-G		-30 to + 125°C	Shore D 57 +/-3
	PU green, U203-G95		-30 to + 105°C	Shore A 95 +/-2
NBR	NBR black, N107-B85		-25 to + 100°C	Shore A 85 +/-5
	NBR 95 black, N109-B95		-25 to + 100°C	Shore A 95 +/-5
	NBR FDA white, N111-W85		-22 to + 100°C	Shore A 85 +/-3
H-NBR	H-NBR black, HN112-B85		-25 to + 150°C	Shore A 85 +/-5
	H-NBR RGD black, HN900-B85-RGD		-20 to + 150°C	Shore A 85 +/-5
	H-NBR RGD LT, HN901-B85-RGD		-40 to + 150°C	Shore A 85 +/-5
FPM	FPM brown, F109-BR85		-20 to + 210°C	Shore A 85 +/-5
	FPM FDA brown, F110-BR85		-25 to + 210°C	Shore A 85 +/-5
	FPM black, F111-B85		-25 to + 210°C	Shore A 85 +/-5
	FPM-RGD black, F800-B85-RGD		-30 to + 210°C	Shore A 85 +/-5
EPDM	EPDM black, E131-B85		-50 to + 130°C	Shore A 85 +/-5
	EPDM FDA white, E132-W85		-50 to + 100°C	Shore A 85 +/-3
	EPDM KTW black, E133-W270		-45 to + 120°C	Shore A 85 +/-5
MVQ	Silicone FDA red, S102-R85		-55 to + 210°C	Shore A 85 +/-5
	Silicone blue, S103-BL85		-55 to + 180°C	Shore A 85 +/-3
PTFE	TFE/P black, AF101-B85		-15 to + 210°C	Shore A 85 +/-5
	PTFE-F grey, T105-G		-200 to + 260°C	Shore D 55 - 64
	PTFE-P FDA white, T101-W		-200 to + 260°C	Shore D 51 - 60
	PTFE-40% bronze brown, T110-BR40		-200 to + 260°C	Shore D 62 - 67
	PTFE-25% carbon grey, T125-C25		-200 to + 260°C	Shore D 62 - 67
	POM FDA white, P101-WE		-50 to + 100°C	-
PA/POW/PEEK	PA FDA natural, A112-WC		-40 to + 90°C	-
	PEEK natural beige, PK100-CN		-50 to + 250°C	Shore D 90
	UHMW - PE white, PE1000-HD		-200 to + 80°C	Shore D 60 - 65

Perennial
turbo 

A GROUP OF

PERENNIAL 

Building Confidence

For more information contact:
Ashish Hole
9607932612
ashish.hole@perennial.co.in

Address: Perennial House, Plot No. 70, Pashan
Link Road, Bavdhan, Pune - 411 021, India

Website: www.perennialturbo.com