

Hydraulic Rotary Actuator



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210Bar

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Technical Info. & Index

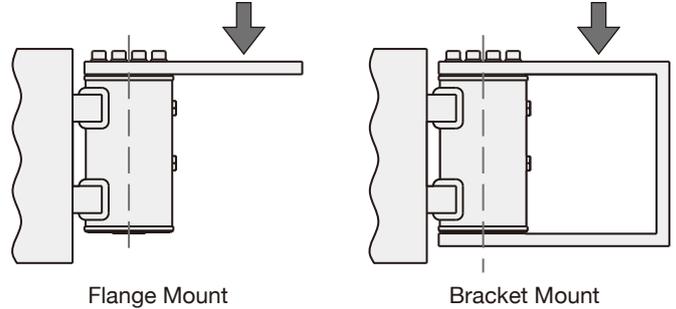
MOUNT TYPE

1. Flange Mount :

Only one end of the load supports the cantilever on the flange, not suitable for high-altitude operations and safety-related projects.

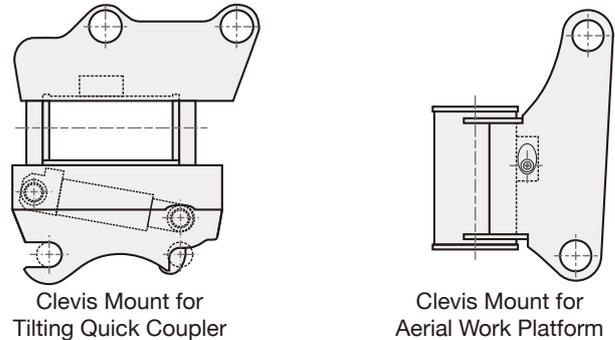
2. Bracket Mount :

The load is supported by both ends, and fixed with bolts and nuts after the connecting rod passes through the center hole of the shaft.



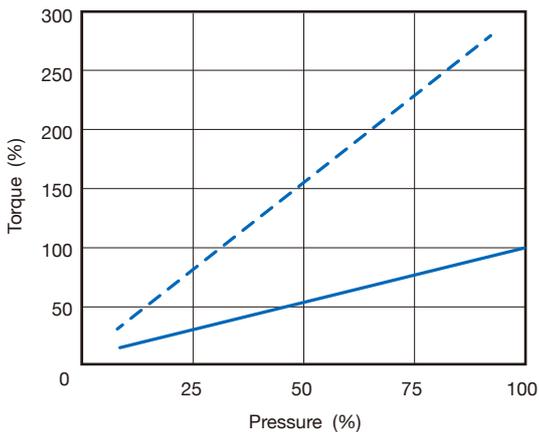
CUSTOMIZED MOUNTING

We offers customized mounting solutions for our rotary actuators, designed to meet the unique requirements of diverse applications.



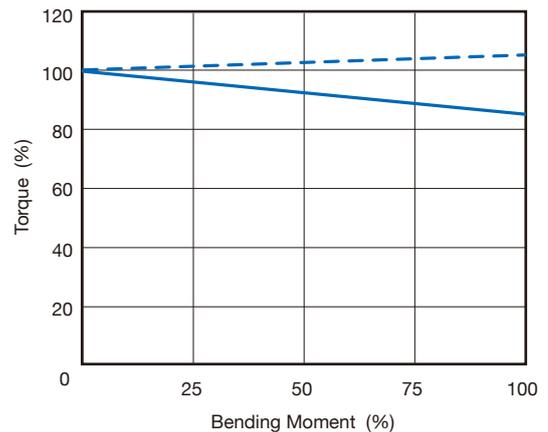
Curve

Torque and Pressure



* The driving torque and holding torque are almost linear with the hydraulic pressure.

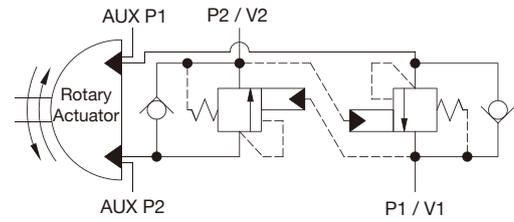
Torque and Bending Moment



* As load increases, drive torque may decrease by as much as 15%.

SAFETY VALVE

1. Safety valve installed to prevent further rotation in case of hydraulic line failure.
2. Protects rotary actuators from excessive torque loads in the event of load overpressure.
3. Please refer to the specification page for installation dimensions. Pilot pressure ratio 3:1. The set pressure is 200~245 bar.



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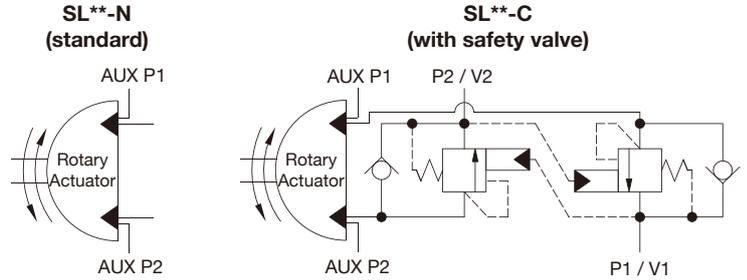
Model	Pressure (Bar)	Mounting			Drive Torque	Angle Rotation		Mounting Hole in Both Rod and End Cap Flange
		RF Rear Flange	FA Front Flange	LA Fixed Feet		180°	360°	
SL10	210	✓			5500 ~ 25000 in-lb 620 ~ 2820 Nm	✓	✓	
SL20	210			✓	4500 ~ 39000 in-lb 500 ~ 4400 Nm	✓		
SL30	210		✓	✓	25000 ~ 125000 in-lb 2820 ~ 14100 Nm	✓	✓	✓

* Please contact us for special requirements.

SL10



SYMBOLS



ORDER CODES

SL10 - **RF** - **5.5** - **N** - **360** - **B** - **M**

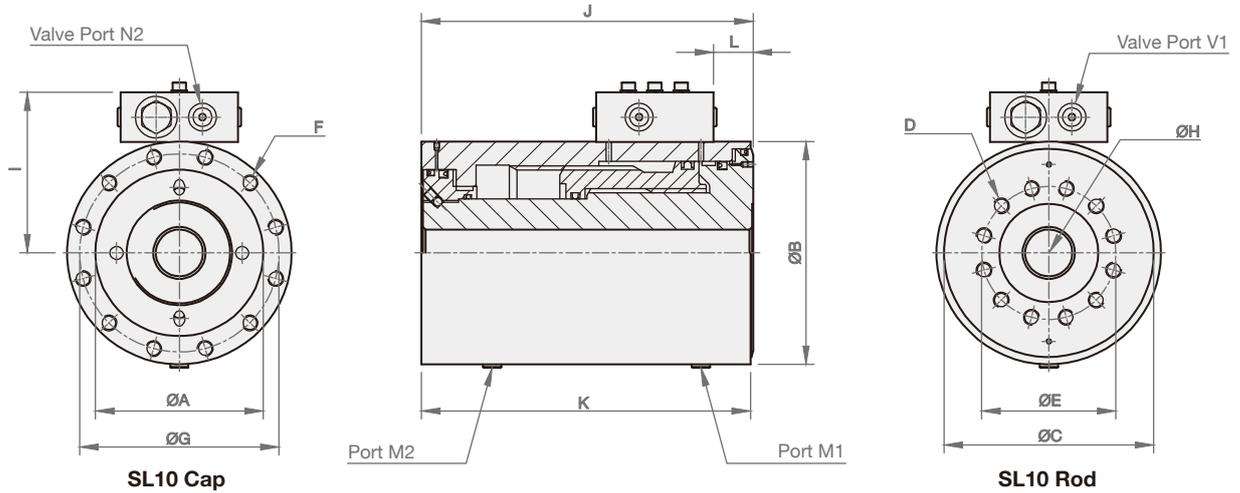
1 2 3 4 5 6 7

1	Model Name	SL10	210Bar
2	Mounting	RF	rear flange
3	Drive Torque	5.5	5500 in-lb (620 Nm)
		9.5	9500 in-lb (1070 Nm)
		15	15000 in-lb (1690 Nm)
		25	25000 in-lb (2820 Nm)

4	Safety Valve	N	standard
		C	with safety valve
5	Angle Rotation (°)	180, 360	
6	Seal	B	standard
		C	customized seals
7	Unit System	M	metric unit
		E	imperial unit

MODEL SPEC.

Model	5.5	9.5	15	25
Drive Torque (Nm)	620	1070	1690	2820
Holding Torque (Nm)	1900	3800	5600	9300
Moment Capacity Flange Mount (Nm)	2200	5600	9000	11300
Radial Capacity (kg)	1800	3600	4900	6800
Axial Capacity (kg)	1800	3600	4900	6800
Displacement 180° (cm³)	191	365	552	914
Displacement 360° (cm³)	383	732	1104	1828
Weigh 180° (kg)	14	26	43	57
Weight 360° (kg)	19	35	54.5	83

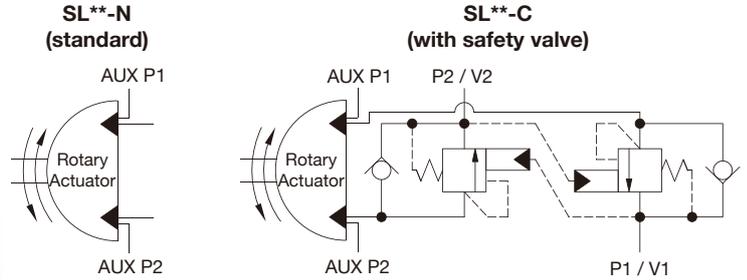


Model		5.5	9.5	15	25
End Cap Mounting Surface Diameter	ØA	101.6	127	148	185
Tube Diameter	ØB	135	170	198	226
Mounting Rod Flange Diameter	ØC	105	134	157	186
Rod Flange Threaded Mounting Hole (mm(inch))	D	12 - M10x1.5x15.2L (3/8-16x0.63L)	12 - M12x1.75x19.1L (1/2-13x0.75L)	12 - M12x1.75x19.1L (1/2-13x0.75L)	12 - M16x2x25.4L (5/8-11x1L)
Rod Flange Threaded Mounting Hole Pitch Circle Diameter	ØE	80	101.6	127	139.7
Tube Mounting Surface Threaded Hole (mm(inch))	F	12 - M10x1.5x18L (3/8-16x0.63L)	12 - M12x1.75x19.1L (1/2-13x0.75L)	12 - M12x1.75x19.1L (1/2-13x0.75L)	12 - M12x1.75x19.1L (1/2-13x0.75L)
Tube Mounting Surface Threaded Pitch Circle Diameter	ØG	117	151	175	203
Rod Through Hole	ØH	21.4	35.7	45.7	66.7
Height to Centerline	I	97.8	115	129	143
Total Length 180°	J	156	184	224	241
Total Length 360°	J	212	258	311	346
Tube Length 180°	K	154	182	221	239
Tube Length 360°	K	211	256	308	344
Rod Flange to Oil Block 180°	L	21.3	27.9	34	42.4
Rod Flange to Oil Block 360°	L	24.6	40.6	60.2	70.4
Mounting Ports	M1, M2	ISO - 11926 / SAE Series of ports - 7/16-20UNF ISO - 1179-1 / BSPP"G" Series of ports - 1/8 See drawings for details.			
Valve Ports	N1, N2				

SL20



SYMBOLS



ORDER CODES

SL20 - **LA** - **4.5** - **C** - **180** - **B** - **M**

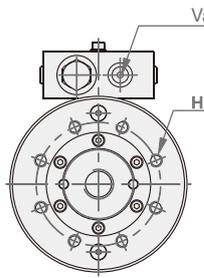
1 2 3 4 5 6 7

1	Model Name	SL20	210Bar
2	Mounting	LA	fixed feet
3	Drive Torque	4.5	4500 in-lb (500 Nm)
		8.2	8200 in-lb (920 Nm)
		15	15000 in-lb (1690 Nm)
		25	25000 in-lb (2820 Nm)
		39	39000 in-lb (4400 Nm)

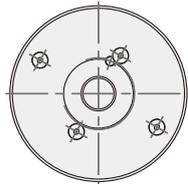
4	Safety Valve	N	standard
		C	with safety valve
5	Angle Rotation (°)	180	
6	Seal	B	standard
		C	customized seals
7	Unit System	M	metric unit
		E	imperial unit

MODEL SPEC.

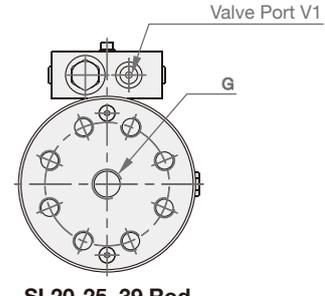
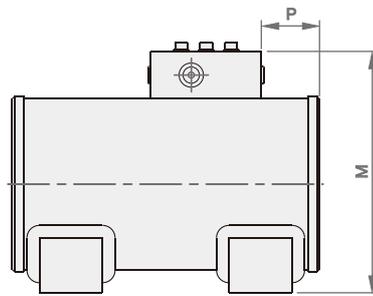
Model	4.5	8.2	15	25	39
Drive Torque (Nm)	500	920	1690	2820	4400
Holding Torque (Nm)	1330	2370	4370	7100	10530
Moment Capacity Bracket Type (Nm)	2500	4500	10100	22500	31600
Moment Capacity Flange Mount (Nm)	1300	2400	5400	11300	15800
Radial Capacity (kg)	1380	2130	4180	5570	9520
Axial Capacity (kg)	490	680	990	1400	1760
Displacement 180° (cm³)	131	234	435	725	1076
Weight (kg)	12.5	17.0	30.0	51.5	77.0



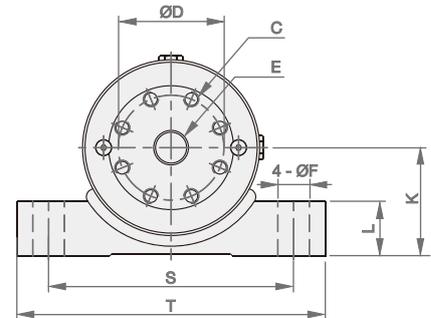
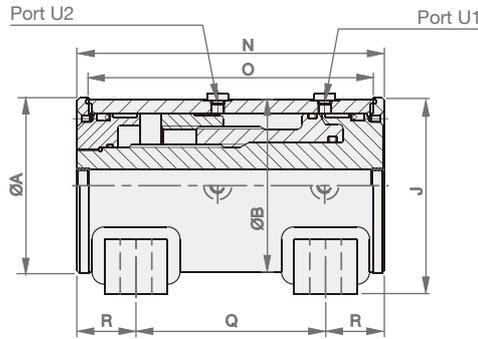
SL20-25, 39 Cap



SL20-4.5, 8.2, 15 Cap



SL20-25, 39 Rod

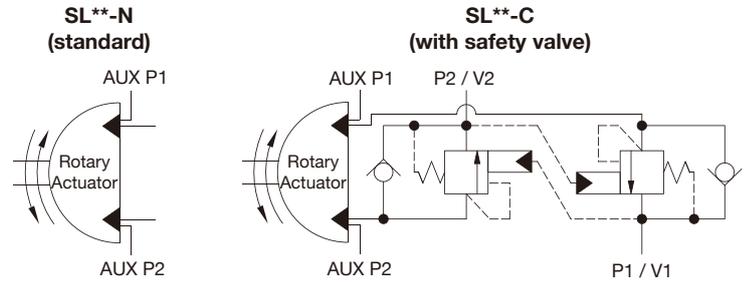


Model		4.5	8.2	15	25	39
Rod and End Cap Flange Diameter	ØA	104.2	117	142.4	170	196
Tube Diameter	ØB	101.6	114.3	139.7	165.1	190.5
Rod Flange Threaded Mounting Hole (mm(inch))	C	6 - M10x1.5x12.7L (3/8-16x0.54L)	8 - M10x1.5x15.2L (3/8-16x0.54L)	8 - M12x1.75x19.1L (8-1/2-13x0.75L)	8 - M20x2.5x30L (3/4-10x1.13L)	10 - M20x2.5x28L (3/4-10x1.25L)
Pitch Circle Diameter	ØD	54	65	85	101.6	121
Rod Through Hole	ØE	20	25	25	-	-
Foot Mounting Hole (mm(inch))	ØF	M16 (5/8)	M20 (3/4)	M24(1)	M24 (1)	M30 (1,1/4)
Rod Threaded Hole (mm(inch))	G	-	-	-	8 - M24 (1)	7 - M30 (1,1/4)
End Cap Flange Threaded Mounting (mm(inch))	H	-	-	-	8 - M12x18L (1/2-13-0.7L)	8 - M16x23L (5/8-11-0.9L)
Pitch Circle Diameter	ØI	-	-	-	108	121
Total Height (Excluding Valve)	J	118.1	134.7	158	193	218.5
Height to Centerline	K	66	76.2	88	108	120.5
Foot Mounting Height	L	34.3	38.1	44.5	63.5	70
Total Height (with Valve)	M	154	171	193	228	254
Total Length	N	188	216	247.5	298.5	337
Tube Length	O	172.7	197.1	229	276	314
Rod Flange to Oil Block	P	30	32	46	49	63
Foot Mounting Length	Q	111.2	139.7	152.4	184	216
Rod Flange to Foot Mounting Hole	R	37.7	37.7	47.3	57.15	59.5
Foot Mounting Width	S	145	152	197	222	267
Total Width	T	178	191	248	279	330
Mounting Ports	U, V	ISO - 11926 / SAE Series of ports - 7/16-20UNF				

SL30



SYMBOLS



ORDER CODES

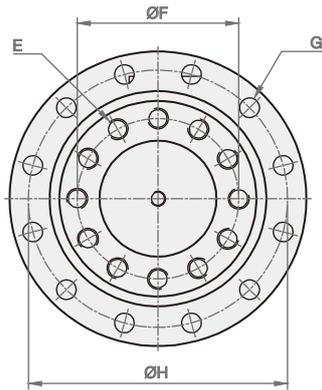
SL30 - **FA** - **42** - **C** - **360** - **C** - **M** - **B**

1	Model Name	SL30	210Bar	4	Safety Valve	N	standard
2	Mounting	FA	front flange			C	with safety valve
		LA	fixed feet	5	Angle Rotation (°)	180, 360	
3	Drive Torque	25	25000 in-lb (2820 Nm)	6	Seal	B	standard
		42	42000 in-lb (4740 Nm)			C	customized seals
		65	65000 in-lb (7340 Nm)	7	Unit System	M	metric unit
		95	95000 in-lb (10700 Nm)			E	imperial unit
		125	125000 in-lb (14100 Nm)	8	Mounting Hole	none	in rod flange only
						B	in both rod and end cap flange

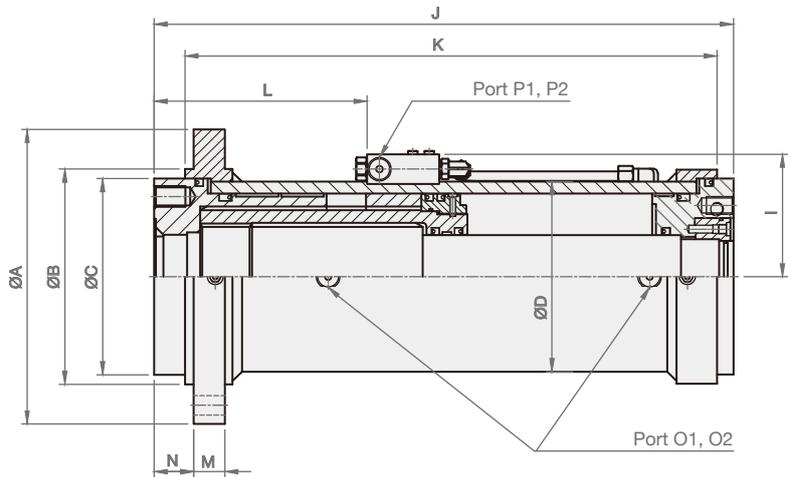
MODEL SPEC.

Model	25	42	65	95	125
Drive Torque (Nm)	2820	4740	7340	10700	14100
Holding Torque (Nm)	6820	11600	18300	26200	34500
Moment Capacity Bracket Type 180°	16900	30800	47700	75100	98800
Moment Capacity Bracket Type 360°	24600	45400	71100	111500	46300
Moment Capacity Flange Mount (Nm)	7060	11800	18300	29500	38800
Radial Capacity (kg)	2260	3620	4990	6800	8160
Axial Capacity (kg)	1810	2720	3620	4530	5890
Displacement 180° (cm³)	696	1180	1868	2679	3539
Displacement 360° (cm³)	1392	2360	3736	5358	7078
Weight 180° (kg)	50	72.5	109	163.5	222.5
Weight 360° (kg)	63.5	100	141	204	286

► SL30-FA

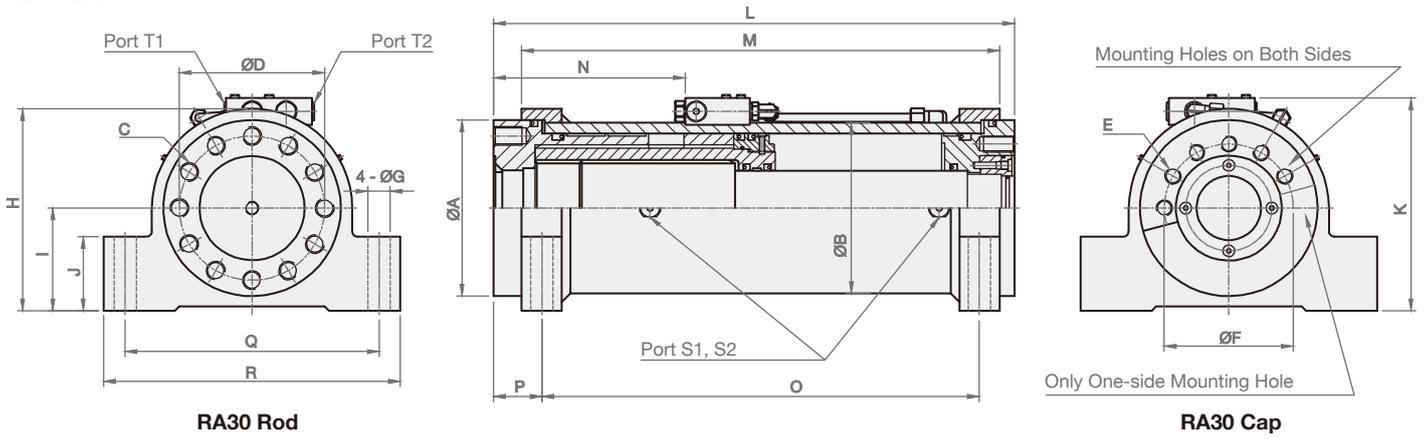


RA30 Rod and Mounting Flange



Model		25	42	65	95	125
Mounting Flange Diameter	ØA	235	280	315	355	396
Position Diameter	ØB	175	205	230	260	290
Rod and End Cap Flange Diameter	ØC	154.7	183.4	208.8	234.2	262.6
Tube Diameter	ØD	152.4	177.8	203.2	228.6	254
Rod Flange Threaded Mounting Hole (mm(inch))	E	12 - M16x2x24L (5/8-11x0.94L)	12 - M20x2.5x30L (3/4-10x1.13L)	12 - M22x2.5x33L (12-7/8-9x1.31L)	12 - M24x3x36L (1-8x1.38L)	12 - M27x3x41L (1 1/8-7x1.69L)
Pitch Circle Diameter	ØF	127	150	171.5	197 (7.75)	216
Mounting Flange Hole (Bolt Size)	ØG	M12	M16	M20	M22 (7/8)	M24
Pitch Circle Diameter	ØH	205	245	275	310	345
Centerline to Valve Top	I	106	118	131	144	156
Total Length 180°	J	323	365	412.5	475	524
Total Length 360°	J	470	538	615	705	776
Non-rotating Total Length 180°	K	283	323	363	431	463
Non-rotating Total Length 360°	K	430	496	565	661	715
Rod Flange to Oil Block 180°	L	134	143	130	152	185
Rod Flange to Oil Block 360°	L	157	197	232	267	308
Mounting Flange Width	M	25.9	30.9	33	40.1	41.9
Rod Flange to Mounting Flange Surface	N	32	35.1	41.9	40.1	53.1
Mounting Ports	O1, O2	ISO - 11926 / SAE Series of ports - 7/16-20UNF ISO - 1179-1 / BSPP"G" Series of ports - 1/8 See drawings for details.				
Valve Ports	P1, P2					

► SL30-LA



RA30 Rod

RA30 Cap

Model		25	42	65	95	125
Rod and End Cap Flange Diameter	ØA	154.7	183.4	208.8	234.2	262.6
Tube Diameter	ØB	152.4	177.8	203.2	228.6	254
Rod Flange Threaded Mounting Hole (mm(inch))	C	12 - M16x2x24L (5/8-11x0.94L)	12 - M20x2.5x30L (3/4-10x1.13L)	12 - M22x2.5x33L (7/8-9x1.31L)	12 - M24x3x36L (1-8x1.38L)	12 - M27x3x41L (1 1/8-7x1.69L)
Pitch Circle Diameter	ØD	127	150	171.5	197	216
End Cap Flange Threaded Mounting Hole (mm(inch))	ØE	12 - M12x1.75x18L (1/2-13x0.75L)	12 - M16x2x24L (5/8-11x0.94L)	12 - M20x2.5x30L (3/4-10x1.13L)	12 - M22x2.5x33L (7/8-9x1.31L)	12 - M24x3x36L (1-8x1.5L)
Pitch Circle Diameter	ØF	121	133	152.4	171.5	190.5
Foot Mounting Hole	ØG	M20	M22	M24	M27	M30
Total Height (Excluding Valve)	H	186	212	240	276	305
Height to Centerline	I	95	108	122	140	154
Foot Mounting Height	J	70	78	88	105	110
Total Height (With Valve)	K	201	226	271	283.5	310
Total Length 180°	L	323	365	412.5	475	524
Total Length 360°	L	470	538	615	705	776
Non-rotating Total Length 180°	M	286	323	363	431	463
Non-rotating Total Length 360°	M	433	496	565	661	715
Rod Flange to Oil Block 180°	N	134	143	130	152	185
Rod Flange to Oil Block 360°	N	157	197	232	267	308
Foot Mounting Length 180°	O	248	281	314	374	400
Foot Mounting Length 360°	O	395	454	516	604	652
Rod Flange to Foot Mounting Hole	P	43.9	50	56.9	59.9	74.2
Foot Mounting Width	Q	230	260	300	340	380
Total Width	R	268	310	350	400	447
Mounting Ports	S1, S2	ISO - 11926 / SAE Series of ports - 7/16-20UNF ISO - 1179-1 / BSPP"G" Series of ports - 1/8 See drawings for details.				
Valve Ports	T1, T2					

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