Hollow Rod

NEW

Manifold Mount
Single Acting

Single And Double Acting

- Three capacities from 4,600 lb. to 11,700 lb. clamp force at rated pressure.
- Also called "Power Nuts," hollow cylinders will draw or tighten an appropriately sized bolt to clamp or actuate remote mechanisms.
- Keyhole shaped bodies make maximum use of space, sized to piston diameter with additional bulk added for the ports only, not the entire body.
- Easily used to add hydraulics to existing strap clamps or pull against "C" washers.
- Double acting models push and pull with equal force because both sides of the piston have identical areas.

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Bolt size threads in piston ends allow the use of standard bolts or threaded rods for remote actuators.

Vent port with bronze filter gives the cylinder a place to "breathe" and helps keep chips and coolants from drawing past wipers (double acting unclamp port or for single acting breather line installation).

Pistons are retained by a specially designed end cap which reduces spring stresses allowing them to run longer and require less maintenance.

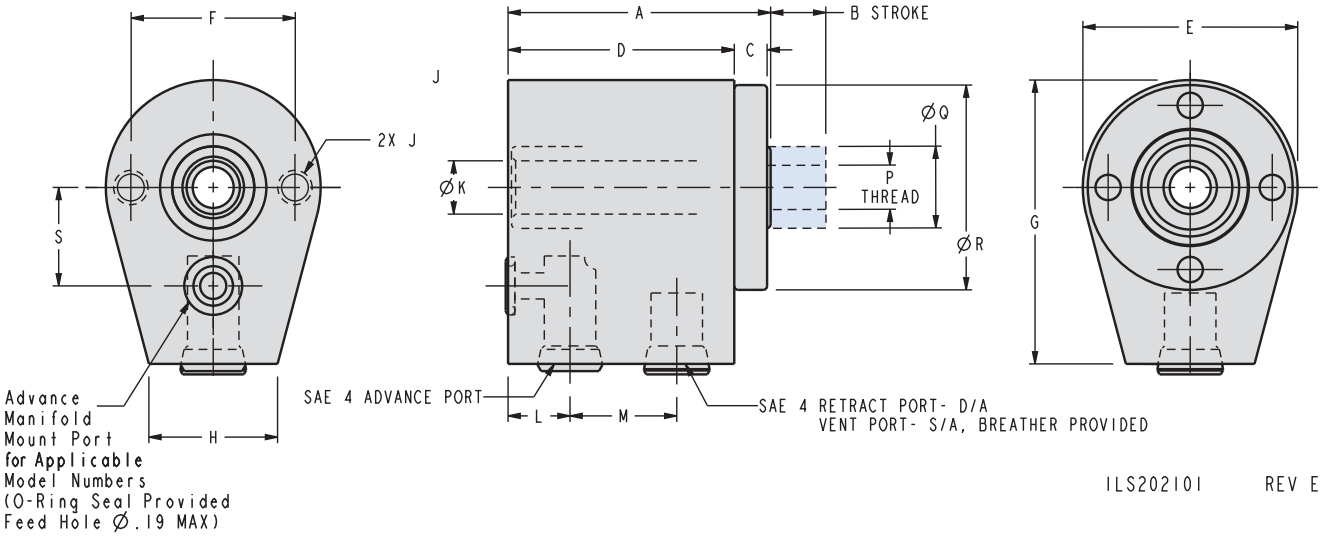
Model No.	Cylinder Capacity (lb.)**	Hydraulic Connection	Stroke (in.)	Body Size	Minimum Length (in)	Piston Area (sq. in.)	Oil Capacity (cu. in.)
Single Acting (S/A)				**Cylinders, actuated hydraulically 1 direction, spring returned.**			
20-2113-03 21-2113-03	4600	SAE SAE and MM	0.25	1.63 x 2.16	2.00	0.920	0.230
20-2115-04 21-2115-04	6600	SAE SAE and MM	0.38	1.95 x 2.44	2.50	1.325	0.500
20-2120-05 21-2120-05	11700	SAE SAE and MM	0.50	2.54 x 2.99	3.00	2.356	1.178
Double Acting (D/A)				**Cylinders, actuated hydraulically both directions.**			
20-2213-03	4600	SAE	0.25	1.63 x 2.16	2.00	0.920	0.230
20-2215-04	6600	SAE	0.38	1.95 x 2.44	2.50	1.325	0.500
20-2220-05	11700	SAE	0.50	2.54 x 2.99	3.00	2.356	1.178

** Cylinder capacities are listed at 5,000 psi maximum operating pressure. The output force is adjustable by varying hydraulic pressure. To determine approximate output force, use the following formula: effective piston area times input pressure equals the clamping force (Actual force may vary slightly due to friction and/or return springs.)

Dimensions

Model No.	A	B	C	D	E	F	G	H
Single Acting (S/A)								
20-2113-03 21-2113-03	2.00	0.25	0.25	1.72	1.63	1.25	2.16	0.97
20-2115-04 21-2115-04	2.50	0.38	0.25	2.22	1.95	1.44	2.44	0.94
20-2120-05 21-2120-05	3.00	0.50	0.38	2.59	2.54	2.00	2.99	1.13
Double Acting (D/A)								
20-2213-03	2.00	0.25	0.25	1.72	1.63	1.25	2.16	0.97
20-2215-04	2.50	0.38	0.25	2.22	1.95	1.44	2.44	0.94
20-2220-05	3.00	0.50	0.38	2.59	2.54	2.00	2.99	1.13

Hollow Rod



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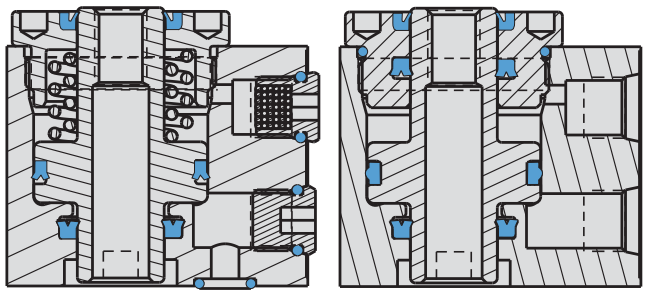

Single Acting Double Acting

ILS202100 REV E

	J	K	L	M	P	Q	R	S
					Cylinders, actuated hydraulically 1 direction, spring returned.			
	1/4-20 X 0.25	0.41	0.47	0.81	3/8-16 x 0.59	0.63	1.56	N/A 0.750
	5/16-18 X 0.31	0.53	0.72	1.00	1/2-13 x 0.59	0.75	1.88	N/A 0.875
	3/8-16 X 0.50	0.66	0.91	1.19	5/8-11 x 0.72	1.00	2.50	N/A 1.000
					Cylinders, actuated hydraulically both directions.			
	1/4-20 X 0.25	0.41	0.47	0.81	3/8-16 x 0.59	0.63	1.56	N/A
	5/16-18 X 0.31	0.53	0.72	1.00	1/2-13 x 0.59	0.75	1.88	N/A
	3/8-16 X 0.50	0.66	0.91	1.19	5/8-11 x 0.72	1.00	2.50	N/A

All dimensions are in inches.