



HEAVY DUTY
MILL TYPE
CYLINDERS(METRIC)



SPECIFICATIONS

Bore sizes:	40 to 500 mm
Working Pressure:	10 bar, 63 bar, 100 bar, 160 bar and 250 bar.
Piston Rod Diameters:	18 to 360 mm.
Standard Construction:	Heads bolted to heavy steel flanges.
Mounting Styles:	Trunnion Mounting, Base Mounting, Front Flange Mounting, Rear Flange Mounting, Male Clevis Mounting, Female Clevis Mounting, Side Log Mounting as well as CETOP Mounting.
Rod Ends:	Male/Female ISO or CETOP metric fine threads.
Standard Fluids:	Hydraulic Mineral Oil with the following Option: <ul style="list-style-type: none">- Phosphate Ester.- Water Glycol.- Water-in-oil Emulsion.- Oil in Water Emulsion.- Water.
Normal Working Temperatures:	-30° to 120° C
Cushioning:	Optional at both ends.

DESIGN FEATURES & MATERIALS

Piston Rods: Manufactured from precision ground steel of 7,000 kgf/cm² ultimate tensile strength. All standard piston rods are hard chrome plated.

Cylinder Barrels: The bore of the barrel has a 5° chamfer at both ends. This feature facilitates piston installation, prevents seal damage and gives a zero clearance fit between head and tube. For 40 to 300 mm bore sizes, the cylinder barrels are manufactured from heavy wall cold drawn seamless mechanical tubing. For 300 to 500 mm bore sizes the cylinder barrels are manufactured either from centrifugally cast steel or from hot rolled seamless tubing. All cylinder barrels are honed to a 0.2 to 0.4 µm finish to give maximum life expectancy to piston seals.

Flanges: Manufactured from steel. Each flange is fitted to the cylinder barrel by means of threading and / or welding.

Piston Head: Precision machined from steel, with three different designs:

- (a) a single piece incorporating a two-element U-cup seal made exclusively for air cylinders;
- (b) two pieces clad with bronze incorporating a four-element piston seal.
- (c) two pieces incorporating chevron type seals and heavy bronze bearing.

Piston Rod Seals:

Piston rod seals are of the chevron type. They are situated within the front head and are retained by bolted (or screwed) bronze gland bushings. The gland bushings are attached to the front head by cap screws drilled and wired to prevent loosening.

An A. N. (Army and Navy) rod wiper is placed within the gland bushing.

Cushioning:

Cushioning is optional and may be provided on both ends.

Both the flooding cushion sleeve and the cushion spear are manufactured with progressive tapers to ensure a more uniform deceleration.

The cushion spear is an integral part of the piston rod. A bronze floating cushion together with a reverse check valve are used in conjunction with the cushion spear.

**Front And Rear
Heads:**

Manufactured from Hot Rolled steel plate with standard imperial port sizes.

Testing Pressure:

Each and every cylinder is tested to its double working pressure before leaving the plant.

Drawings:

Certified drawings showing a longitudinal cross section of all parts will be shipped upon request, at no extra cost.

PISTON ROD SELECTOR CHART

THE PISTON ROD in a cylinder acts as a column and, as such, is subjected not only to compressive stresses, but also buckling stresses which are a function of the moment of inertia for a constant modulus of elasticity. The "column strength" of a piston rod cannot be increased by using higher tensile strength or heat treated materials. For this reason, it is sometimes necessary to use an oversize piston rod strictly for the purpose of achieving the necessary "column strength."

The data shown in chart form is based on Culer's equation for a vertical column with both ends rounded (See Case I illustration). The values of "L" shown in the chart are one-half of the theoretical limit of "L" as determined by this equation. Factors such as vertical or horizontal mounting, shock or non-shock loading, frequency of operation, etc., should be taken into consideration in selecting a permissible value of "L". The values shown indicate our recommended maximum "column lengths" for the various piston rods under specified compressive loads and may be considered safe for most normal cylinder applications, both horizontal and vertical. Deviations from these recommendations are, of course, a matter of engineering judgment based on a knowledge of the application. In some vertical application, it may be possible to use values of "L" one-third greater than those on the chart shown. On the other hand, for a long stroke, horizontally mounted cylinder subjected to shock loading, it may be desirable to decrease the value of "L" by one-third.

To determine the proper piston rod diameter for your application, proceed as follows:

1. Determine the maximum thrust required from the force table in your application.
2. Identify your installation with one of those illustrated as Case I, II, III or IV.
3. Determine the recommended stop tube length, if one is required. (See stop tubes.)

4. Determine the value of "L" for your installation with the piston rod in the fully extended position.
5. Now, referring to the chart, select the thrust figure that equals or exceeds your requirements.
6. Scan to the right on the chart until the value of "L" equals or exceeds the "L" dimension on your cylinder installation.
7. In some cases the recommended piston rod diameter may exceed that of the largest piston rod available for the cylinder under consideration. If this happens, it may be necessary to use a larger bore cylinder, operating at a reduced pressure, in order to obtain the required column strength.

STOP TUBES

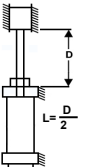
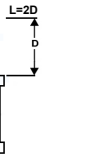
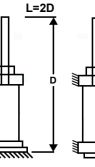
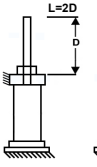
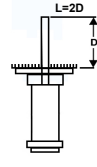
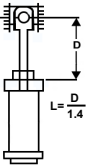
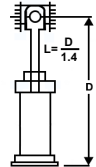
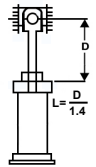
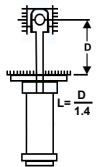
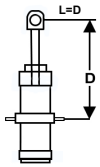
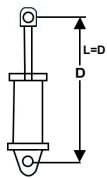
The function of a stop tube is to act as a spacer to increase the distance between the piston and piston rod bearing when the piston rod is in its fully extended position. This increase in spacing serves to reduce bearing loads and, at the same time, increases the structural rigidity of the assembly to prevent bucking and jack-knifing.

A stop tube is recommended for cylinder mounted as shown in Cases I and II! whenever "L" exceeds 1 metre. Use 25 mm of stop tube for every 250 mm over the basic 1 metre value of "L". Cylinders mounted as those shown in Case II and IV do not normally require stop tubes, but the decision should be based on the factors involved in the particular application under consideration.

Air Cylinders which require both a stop tube and a cushion at the rod end of the cylinder are handled as special items at the factory.

CYLINDER FORCES

CYC. BORE	ROD DIA.	EFFECTIVE WORKING AREA	THEORETICAL FORCES AT VARIOUS PRESSURES											
			10 BAR (1 MPa)		50 BAR (5 MPa)		100 BAR (10 MPa)		150 BAR (15 MPa)		200 BAR (20 MPa)		250 BAR (25 MPa)	
mm	mm	mm ²	kgf	lbf	kgf	lbf	kgf	lbf	kgf	lbf	kgf	lbf	kgf	lbf
40	-	1257	128	282	641	1413	1282	2827	1923	4240	2564	5653	3205	7067
	20	943	96	212	481	1060	962	2121	1443	3181	1924	4241	2405	5301
	28	641	65	143	327	721	654	1441	981	2162	1308	2883	1635	3604
50	-	1963	200	441	1001	2207	2002	4414	3003	6621	4005	8828	5007	11035
	28	1347	137	302	687	1514	1374	3029	2061	4543	2748	6058	3435	7572
	36	946	96	212	482	1064	965	2127	1447	3191	1930	4255	2412	5318
63	-	3117	318	679	1590	3505	3179	7009	4769	10514	6359	14018	7948	17523
	36	2099	214	472	1070	2360	2141	4720	3211	7080	4282	9440	5352	11800
	45	1527	156	344	779	1717	1558	3434	2336	5151	3115	6868	3894	8584
80	-	5027	513	1131	2563	5651	5127	11302	7690	16953	10253	22604	12816	28255
	45	3437	383	844	1753	3864	3506	7229	5259	11593	7011	15458	8764	19322
	56	2564	261	575	1308	2883	2615	5766	3923	8648	5231	11531	6538	14414
100	-	7854	801	1766	4006	8831	8011	17661	12017	26492	16022	35322	20028	44153
	56	5391	550	1213	2749	6061	5499	12123	8248	18184	10998	24245	13747	30307
	70	4006	409	902	2043	4504	4086	9008	6129	13512	8172	18017	10215	22521
125	-	12272	1252	2760	6259	13798	12517	27596	18776	41394	25035	55192	31294	68990
	70	8424	859	1894	4296	9471	8592	18943	12889	28414	12185	37886	21481	47357
	90	5910	603	1329	3014	6645	6028	13290	9042	19935	12056	26580	15070	33224
160	-	20106	2051	4522	10254	22606	20508	45212	30762	67816	41016	90424	51270	113030
	90	13744	1402	3091	7009	15453	14019	30906	21028	46359	28038	61812	35047	77265
	110	10603	1081	2383	5407	11921	10815	23843	16223	35764	21603	47686	27038	59607
200	-	31416	3204	7064	16022	35322	32044	70645	48066	105967	64089	141290	80111	176612
	110	21913	2235	4927	11176	24638	22351	49276	33527	73913	44703	98551	55878	123189
	140	16022	1634	3602	8171	18014	16342	36029	24514	54043	32685	72057	40856	90071
250	-	49087	5007	11038	25034	55191	50069	110381	75103	165572	100137	220763	125172	275954
	140	33693	3437	7577	17183	37883	34367	75765	51550	113648	68734	157530	85917	189413
	180	23640	2411	5315	12056	26580	24113	53159	36169	79739	48226	106318	60282	132898
320	-	80425	8203	18084	41017	90426	82033	180851	123050	271277	164067	361702	205084	452128
	180	54978	5608	12363	28039	61814	56078	123629	84116	185443	112155	247257	140194	309071
	220	42412	4326	9537	21630	47686	43260	95372	64890	143057	86520	190743	180151	238429
400	-	125664	12818	28259	64089	141290	128177	282580	192266	423869	256355	565159	320443	706449
	220	87651	8940	19709	44702	98550	89404	197100	134106	295650	178808	394200	223510	492750
	280	64089	6537	14411	32685	72058	65371	144116	98056	216175	130742	288233	163427	360291
500	-	196350	20028	44154	100138	220765	200277	441531	300415	662296	400514	883061	500692	1103827
	280	134775	13747	30307	68735	151534	137470	303067	206206	454601	274941	606135	343676	757669
	360	94562	9645	21263	48227	106321	96453	212440	144680	318961	192906	425281	241133	531602



Case I-Both ends pivoted

Case II- one end fixed, one end free but guided

Case III- one end fixed, one end free

Case IV Both ends fixed (Both ends rigidly coupled and guided)

VALUE OF "L" (metres)

PISTON ROD DIAMETERS (m m)

THRUST (kg)	18	20	22	25	28	32	36	40	45	50	56	63	70	80	90	100	110	125	140	160	180	200	220	250	280	320	360									
100	1.65	2.04	2.46	3.18	3.99	5.21	6.60																					w								
200	1.17	1.44	1.74	2.25	2.82	3.69	4.66	5.76	7.29																											
300	0.95	1.18	1.42	1.86	2.30	3.01	3.81	4.70	5.95	7.35																										
400	0.82	1.02	1.23	1.59	2.00	2.61	3.30	4.07	5.15	6.36	7.98	10.10																								
500	0.74	0.91	1.30	1.42	1.78	2.33	2.95	3.64	4.61	5.69	7.14	9.03																								
600	0.67	0.83	1.00	1.30	1.63	2.13	2.69	3.32	4.21	5.19	6.52	8.25	10.18																							
800	0.58	0.72	0.87	1.17	1.61	1.84	3.33	2.88	3.64	4.50	5.64	7.14	0.02																							
1,000	0.52	0.64	0.78	1.00	1.26	1.65	2.09	2.58	3.26	4.02	5.05	6.39	7.89	10.30	13.04																					
1,200	0.48	0.59	0.71	0.92	1.15	1.50	1.90	2.35	2.98	3.67	4.61	5.83	7.20	9.40	11.90																					
1,400	0.44	0.54	0.66	0.85	1.07	1.39	1.76	2.18	2.75	3.40	4.27	5.40	6.67	8.71	11.02																					
1,600	0.41	0.51	0.62	0.80	1.00	1.30	1.65	2.04	2.58	3.18	3.99	5.05	6.24	8.14	10.31																					
1,800	0.39	0.48	0.58	0.75	0.94	1.23	1.55	1.92	2.43	3.00	3.76	4.76	5.88	7.68	9.72	12.00																				
2,000	0.37	0.46	0.55	0.71	0.89	1.17	1.47	1.82	2.30	2.85	3.57	4.52	5.58	7.28	9.22	11.38																				
2,200	0.35	0.43	0.53	0.68	0.85	1.11	1.41	1.74	2.20	2.71	3.40	4.31	5.32	6.95	8.79	10.85																				
2,500	0.33	0.41	0.49	0.64	0.80	1.04	1.32	1.63	2.06	2.55	3.19	4.04	4.99	6.52	8.25	10.18																				
3,000	0.30	0.37	0.45	0.58	0.73	0.95	1.20	1.49	1.88	2.32	2.91	3.69	4.55	5.95	7.53	9.29	11.24																			
4,000		0.32	0.39	0.50	0.63	0.82	1.04	1.29	1.63	2.01	2.52	3.19	3.94	5.15	6.52	8.05	9.74																			
5,000		0.29	0.35	0.45	0.56	0.74	0.93	1.15	1.46	1.80	2.26	2.86	3.53	4.61	5.83	7.20	8.71	11.25																		
6,000			0.32	0.41	0.52	0.67	0.85	1.05	1.33	1.64	2.06	2.61	3.22	4.21	5.32	6.57	7.95	10.27																		
7,000				0.38	0.48	0.62	0.79	0.97	1.23	1.52	1.91	2.41	2.98	3.89	4.93	6.08	7.36	9.51	11.92																	
8,000				0.36	0.45	0.58	0.74	0.91	1.15	1.42	1.78	2.26	2.79	3.64	4.61	5.69	6.89	8.89	11.15																	
9,000				0.34	0.42	0.55	0.70	0.86	1.09	1.34	1.68	2.13	2.63	3.43	4.35	5.37	6.49	8.38	10.52																	
10,000				0.32	0.40	0.52	0.66	0.81	1.03	1.27	1.60	2.02	2.49	3.26	4.12	5.09	6.16	7.95	9.98																	
12,000							0.60	0.74	0.94	1.16	1.46	1.84	2.28	2.92	3.76	4.65	5.62	7.26	9.11																	
14,000							0.56	0.69	0.87	1.08	1.35	1.71	2.11	2.75	3.48	4.30	5.21	6.72	8.43																	
18,000									0.77	0.95	1.19	1.51	1.86	2.43	3.07	3.79	4.59	5.93	7.44	9.71	12.25															
20,000									0.73	0.90	1.13	1.43	1.76	2.30	2.92	3.60	4.35	5.62	7.05	9.21	11.66															
25,000									0.65	0.80	1.01	1.28	1.58	2.06	2.61	3.22	3.90	5.03	6.31	8.24	10.42															
30,000										0.70	0.92	1.17	1.44	1.88	2.38	2.94	3.56	4.59	5.76	7.52	9.52															
35,000										0.68	0.85	1.08	1.33	1.74	2.20	2.72	3.29	4.25	5.33	6.96	8.82															
40,000										0.64	0.80	1.01	1.25	1.63	2.06	2.54	3.08	3.98	4.99	6.52	8.25	10.18	12.32	15.91												
45,000										0.60	0.75	0.95	1.18	1.54	1.94	2.40	2.90	3.75	4.70	6.14	7.77	9.60	11.61	15.00												
50,000											0.90	1.12	1.46	1.84	2.28	2.75	3.56	4.46	5.83	7.38	9.11	11.02	14.23													
60,000												0.82	1.02	1.33	1.68	2.08	2.51	3.25	4.07	5.32	6.73	8.31	10.06	12.99												
80,000													1.15	1.46	1.80	2.18	2.81	3.53	4.61	5.83	7.20	8.71	11.25	14.11												
100,000																1.61	1.95	2.51	3.15	4.12	5.22	6.44	7.29	10.06	12.62											
120,000																	1.47	1.78	2.30	2.88	3.76	4.76	5.88	7.11	9.18	11.52										
140,000																		2.13	2.67	3.48	4.41	5.44	6.58	8.50	10.67											
160,000																			1.99	2.49	3.26	4.12	5.09	6.16	7.95	9.98										
200,000																				2.23	2.91	3.69	4.55	5.51	7.11	8.92	11.65									
250,000																						3.30	4.07	4.93	6.36	7.98	10.42	13.19								
300,000																							3.01	3.72	4.50	5.81	7.29	9.52	12.04							
350,000																								3.44	4.16	5.38	6.75	8.81	11.15							
400,000																									3.22	3.90	5.03	6.31	8.24	10.43						
450,000																										3.67	4.74	5.95	7.77	9.83						
500,000																											3.48	4.50	5.64	7.37	9.33					

ORDERING INFORMATION

1- **Quality**

2- **Series**

3- **Mounting Style**

4- **Bore Size**

5- **Stroke Length**

6- **Cushions** (i.e. non-cushioned, cushioned head end, cushioned rear end or cushioned both ends.)

7- **Rod Diameter**

a- Standard (as shown in this catalogue) will be furnished unless otherwise specified.

b- For optional rod specs specify desired piston rod diameter.

8- **Rod End Thread**

Male rod ends (as shown in this catalogue) are furnished unless otherwise specified. Female rod ends are available at no extra cost.

9- **Trunnion Location**

10- **Stop Tube** (When required)

11- **Special Operating Conditions** (Such as very high or very low temperatures, corrosive atmosphere, etc.)

12- **Accessories**

a- Rod Eyes

b- Clevises

c- Brackets

d- Pins

The styles of these accessories must be specified by code letters.

13- **Replacement Parts**

To insure correct identification and prompt service, please specify cylinder serial number.

SPECIAL CYLINDERS

Pneumatic & Hydraulic Co. has over the past years gained a reputation of being able to produce special designs to meet specific requirements. Below is a list of the alternative features included in P & H cylinder designs:

- (a) Special mounting styles;
 - (b) Higher pressure rating;
 - (c) Larger cylinder bore sizes; (up to 1300 mm bore size already treated by P & H);
 - (d) Alternative rod sizes;
 - (e) Special protection on piston rods;
 - (f) Porting arrangements;
 - (g) Cushion extension;
 - (h) Alternative sealing arrangements.
-

GENERAL

A- All cylinders manufactured according to the specifications given in this catalogue are of the heavy-duty mill type.

B- The inside of all cylinders is coated with oil and ports are plugged prior to shipment to protect the bore from rust and foreign materials.

C- Name plates are furnished for all cylinders showing bore, stroke working pressure, model and serial numbers.

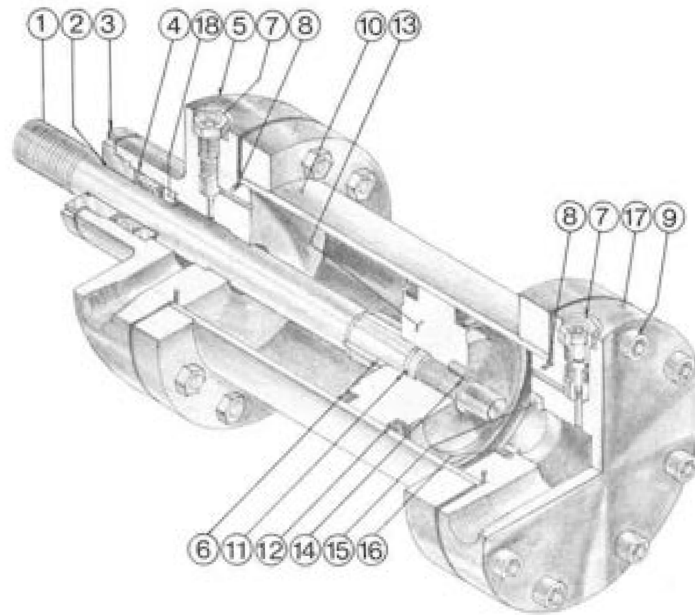
D- When extreme strokes are required, hollow rods may be used. (Consult P & H for additional information).

WARRANTY

Pneumatic & Hydraulic Company Ltd. warrants its product to be free of defects in workmanship and material for a period of one year from the date of shipment. During the guarantee period our obligation under this warranty shall be limited to the repair or replacement of any defective part or parts f.o.b. factory, St. Eustache, Quebec, Canada, subject to our inspection. Any purchaser shall give written notice of such defect. Thus warranty shall not apply to damage in transit, accident, alteration, contingent liability, labour or costs for removal and installation of the part or parts.

MILL TYPE METRIC AIR CYLINDERS SERIES MA 30

10 Bar Pressure



PART LIST

ITEM	QTY.	DESCRIPTION
1	1 only	Cylinder Rod (chrome plated)
2	*1 only	Rod Wiper
3	**1 only	Gland Bushing
4	*1 set	Gland Seal - Chevron "V" Ring
5	1 only	Front Head
6	1 only	Front Cushion
7	2 only	Adjustable Cushion Assembly
8	*2 only	Head Static Seal - "O" Ring
9	2 sets	Head Securing Cap Screws and Nuts

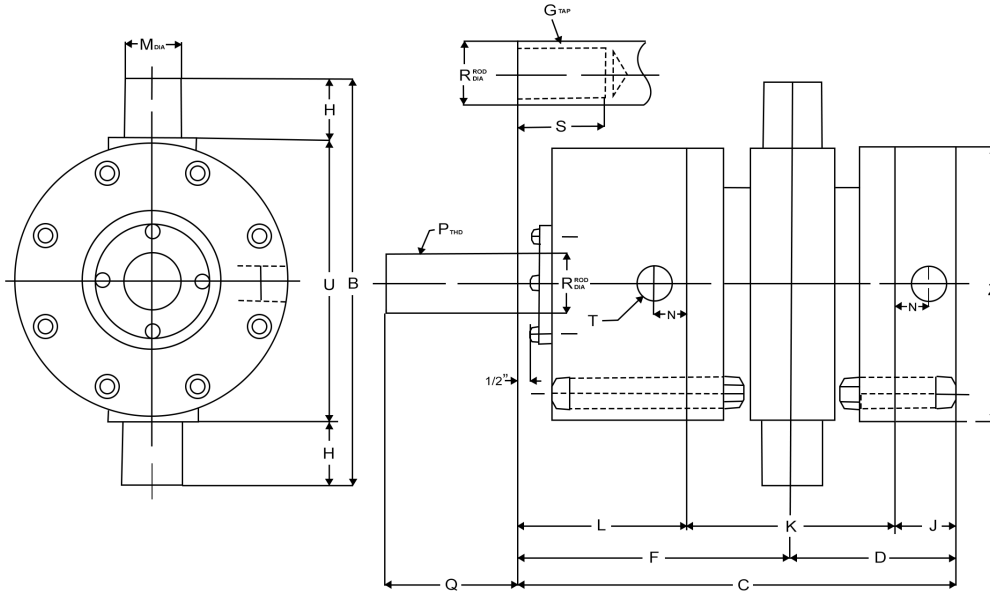
ITEM	QTY.	DESCRIPTION
10	1 only	Cylinder Barrel Assembly
11	*1 only	Piston Rod Seal - "O" Ring
12	*2 only	Piston Dynamic Seal - "U" Rings
13	1 only	Piston
14	1 only	Piston Securing Screw
15	1 only	Rear Cushion
16	2 only	Rear Cushion Securing Screw
17	1 only	Rear Head
18	1 only	Lower Gland Bearing

* Spare Parts
** Optional Spare Parts

AIR CYLINDERS SERIES MA 30

10 Bar Pressure

Trunnion Mtg.

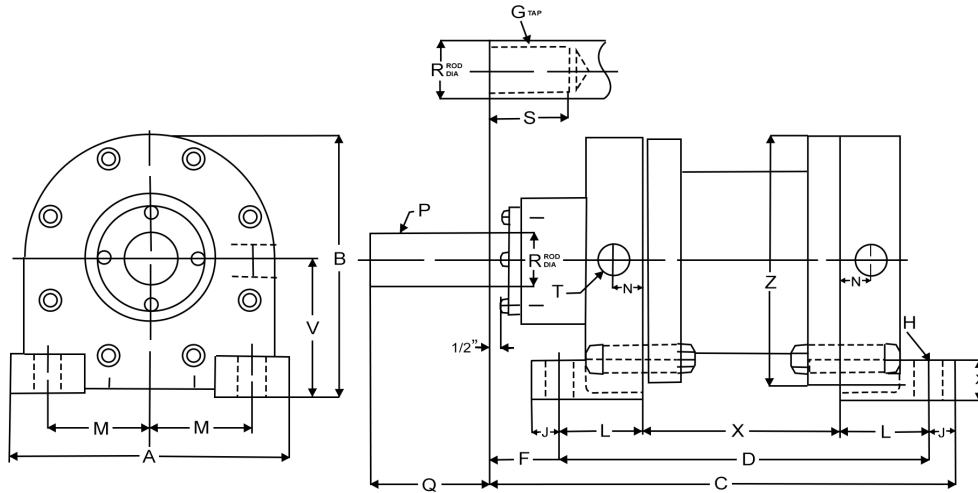


MODEL NO.	BORE (mm)	B	C	D	F	G=P	H	J	K	L	M	N	Q _{st} =S _{st}	Q _g =S _g	R	T	U	Z _{max.}
MA - 01004030 - T	40	122	145	50	112	M 12 x 1.25	16	25	45	75	20	12	16	24	18	¼"	90	90
MA - 01005030 - T	50	145	155	53	117	M 16 x 1.5	20	25	50	80	20	12	22	32	22	¼"	105	110
MA - 01006330 - T	63	170	170	66	130	M 16 x 1.5	25	38	50	82	25	19	22	32	22	⅜"	120	125
MA - 01008030 - T	80	197	190	66	141	M 20 x 1.5	32	38	55	97	40	19	28	40	28	⅜"	135	150
MA - 01010030 - T	100	222	205	73	165	M 20 x 1.5	32	38	60	107	40	19	28	40	28	½"	160	165
MA - 01012530 - T	125	257	245	85	173	M 24 x 2	32	50	70	125	40	25	32	48	32	½"	195	203
MA - 01016030 - T	160	302	280	90	190	M 36 x 2	32	50	80	150	40	25	50	75	50	¾"	240	240
MA - 01020030 - T	200	395	300	105	196	M 36 x 2	50	63	85	152	63	30	50	75	50	¾"	295	300
MA - 01025030 - T	250	435	330	118	212	M 42 x 2	50	63	110	157	63	30	56	84	56	1"	335	330
MA - 01032030 - T	320	510	370	134	236	M 48 x 2	50	63	142	165	63	30	63	96	63	1"	410	400
MA - 01040030 - T	400	571	393	146	247	M 56 x 2	63	63	165	165	80	30	75	112	80	1"	545	535
MA - 01050030 - T	500	661	408	146	262	M 64 x 3	63	63	165	180	80	30	85	128	90	1-¼"	635	625

AIR CYLINDERS SERIES MA 30

10 Bar Pressure

Base Mtg.

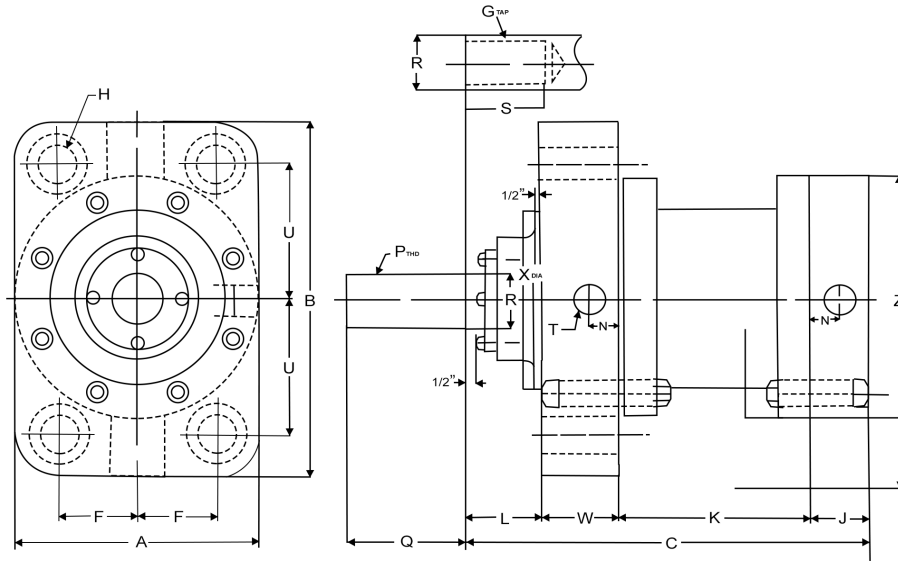


MODEL NO.	BORE (mm)	A	B	C	D	F	G=P	H	J	K	L	M	N	Q _{st} =S _{st}	Q _{lg} =S _{lg}	R	T	V	X	Z _{max}
MA - 01004030 - B	40	110	102	163	113	41	M 12 x 1.25	9	9	45	34	45	12	16	24	18	¼"	57	14	90
MA - 01005030 - B	50	130	122	175	120	46	M 16 x 1.5	9	9	50	35	51	12	22	32	22	¼"	67	14	110
MA - 01006330 - B	63	145	137	190	146	35	M 16 x 1.5	9	9	50	48	59	19	22	32	22	⅜"	74	16	125
MA - 01008030 - B	80	170	162	215	156	47	M 20 x 1.5	12	12	55	50	67	19	28	40	28	⅜"	87	20	150
MA - 01010030 - B	100	185	177	230	162	54	M 20 x 1.5	14	14	60	53	75	19	28	40	28	½"	94	20	165
MA - 01012530 - B	125	223	215	270	188	66	M 24 x 2	16	16	70	59	90	25	32	48	32	½"	113	30	203
MA - 01016030 - B	160	260	252	320	224	78	M 36 x 2	18	18	80	72	105	25	50	75	50	¾"	132	40	240
MA - 01020030 - B	200	320	312	345	255	68	M 36 x 2	22	22	85	85	130	30	50	75	50	¾"	162	46	300
MA - 01025030 - B	250	350	354	380	284	70	M 42 x 2	26	26	110	87	145	30	56	84	56	1"	189	46	330
MA - 01032030 - B	320	420	424	425	312	80	M 48 x 2	33	33	142	85	180	30	63	96	63	1"	224	46	400
MA - 01040030 - B	400	555	559	459	357	69	M 56 x 2	33	33	165	96	245	30	75	112	80	1"	292	50	535
MA - 01050030 - B	500	645	649	488	371	77	M 64 x 3	40	40	165	103	283	30	85	128	90	1-¼"	337	50	625

AIR CYLINDERS SERIES MA 30

10 Bar Pressure

Front Flange Mtg.

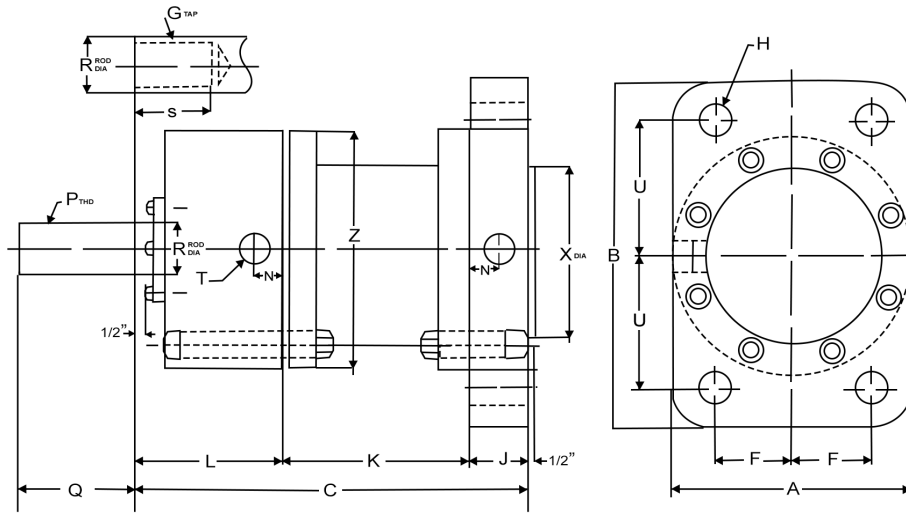


MODEL NO.	BORE (mm)	A	B	C	F	G=P	H	J	K	L	N	Q _{st} =S _{st}	Q _{lg} =S _{lg}	R	T	U	W	X	Z _{max.}
MA - 01004030 - FF	40	90	154	145	26	M 12 x 1.25	14	25	45	37	12	16	24	18	¼"	58	38	14	90
MA - 01005030 - FF	50	110	168	155	36	M 16 x 1.5	14	25	50	36	12	22	32	22	¼"	65	44	14	110
MA - 01006330 - FF	63	125	176	170	44	M 16 x 1.5	14	38	50	38	19	22	32	22	⅜"	69	44	16	125
MA - 01008030 - FF	80	150	228	190	49	M 20 x 1.5	22	38	55	53	19	28	40	28	⅜"	88	44	20	150
MA - 01010030 - FF	100	165	236	205	57	M 20 x 1.5	22	38	60	63	19	28	40	28	½"	92	44	20	165
MA - 01012530 - FF	125	203	320	245	65	M 24 x 2	26	50	70	75	25	32	48	32	½"	123	50	30	203
MA - 01016030 - FF	160	240	374	280	77	M 36 x 2	33	50	80	100	25	50	75	50	¾"	144	50	40	240
MA - 01020030 - FF	200	300	446	300	100	M 36 x 2	40	63	85	95	30	50	75	50	¾"	173	57	46	300
MA - 01025030 - FF	250	330	452	330	115	M 42 x 2	40	63	110	100	30	56	84	56	1"	176	57	46	330
MA - 01032030 - FF	320	400	500	370	150	M 48 x 2	40	63	142	108	30	63	96	63	1"	200	57	46	400
MA - 01040030 - FF	400	535	602	393	212	M 56 x 2	46	63	165	108	30	75	112	80	1"	245	57	50	535
MA - 01050030 - FF	500	625	682	408	250	M 64 x 3	52	63	165	117	30	85	128	90	1-¼"	279	63	50	625

AIR CYLINDERS SERIES MA 30

10 Bar Pressure

Rear Flange Mtg.

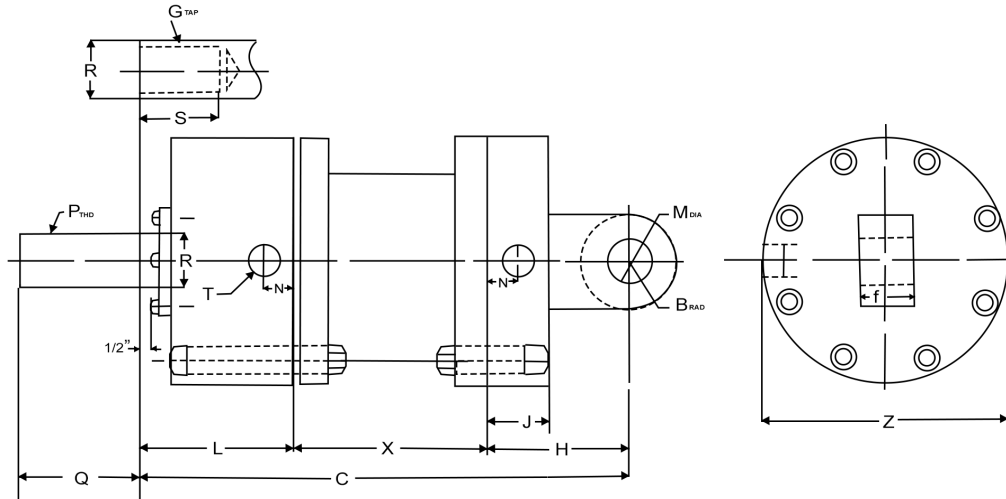


MODEL NO.	BORE (mm)	A	B	C	F	G=P	H	J	K	L	N	Q _{st} =S _{st}	Q _{lg} =S _{lg}	R	T	U	X	Z _{max.}
MA - 01004030 - RF	40	90	154	145	26	M 12 x 1.25	14	25	45	75	12	16	24	18	¼"	58	14	90
MA - 01005030 - RF	50	110	168	155	36	M 16 x 1.5	14	25	50	80	12	22	32	22	¼"	65	14	110
MA - 01006330 - RF	63	125	176	170	44	M 16 x 1.5	14	38	50	82	19	22	32	22	⅜"	69	16	125
MA - 01008030 - RF	80	150	228	190	49	M 20 x 1.5	22	38	55	97	19	28	40	28	⅜"	88	20	150
MA - 01010030 - RF	100	165	236	205	57	M 20 x 1.5	22	38	60	107	19	28	40	28	½"	92	20	165
MA - 01012530 - RF	125	203	320	245	65	M 24 x 2	26	50	70	125	25	32	48	32	½"	123	30	203
MA - 01016030 - RF	160	240	374	280	77	M 36 x 2	33	50	80	150	25	50	75	50	¾"	144	40	240
MA - 01020030 - RF	200	300	446	300	100	M 36 x 2	40	63	85	152	30	50	75	50	¾"	173	46	300
MA - 01025030 - RF	250	330	452	330	115	M 42 x 2	40	63	110	157	30	56	84	56	1"	176	46	330
MA - 01032030 - RF	320	400	500	370	150	M 48 x 2	40	63	142	165	30	63	96	63	1"	200	46	400
MA - 01040030 - RF	400	535	602	393	212	M 56 x 2	46	63	165	165	30	75	112	80	1"	245	50	535
MA - 01050030 - RF	500	625	682	408	250	M 64 x 3	52	63	165	180	30	85	128	90	1-¼"	279	50	625

AIR CYLINDERS SERIES MA 30

10 Bar Pressure

Male Clevis Mtg.

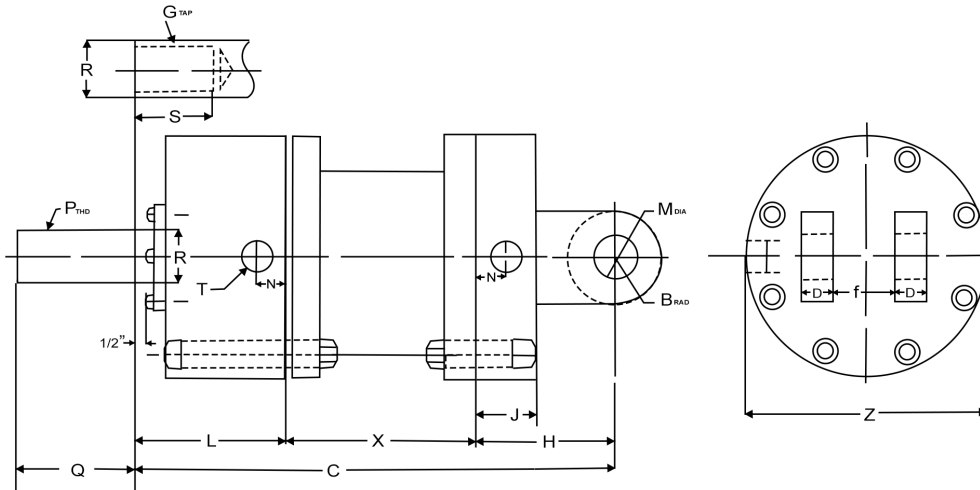


MODEL NO.	BORE (mm)	B	C	F	G=P	H	J	K	L	M	N	Q _{st} =S _{st}	Q _{lg} =S _{lg}	R	T	Z _{max.}
MA - 01004030 - MC	40	20	160	16	M 12 x 1.25	40	25	45	75	12	12	16	24	18	¼"	90
MA - 01005030 - MC	50	25	170	20	M 16 x 1.5	40	25	50	80	12	12	22	32	22	¼"	110
MA - 01006330 - MC	63	30	190	25	M 16 x 1.5	58	38	50	82	16	19	22	32	22	⅜"	125
MA - 01008030 - MC	80	40	210	32	M 20 x 1.5	58	38	55	97	16	19	28	40	28	⅜"	150
MA - 01010030 - MC	100	40	230	32	M 20 x 1.5	63	38	60	107	20	19	28	40	28	½"	165
MA - 01012530 - MC	125	45	275	40	M 24 x 2	80	50	70	125	25	25	32	48	32	½"	203
MA - 01016030 - MC	160	59	315	50	M 36 x 2	85	50	80	150	30	25	50	75	50	¾"	240
MA - 01020030 - MC	200	59	335	50	M 36 x 2	98	63	85	152	30	30	50	75	50	¾"	300
MA - 01025030 - MC	250	63	375	50	M 42 x 2	108	63	110	157	40	30	56	84	56	1"	330
MA - 01032030 - MC	320	63	420	50	M 48 x 2	113	63	142	165	45	30	63	96	63	1"	400
MA - 01040030 - MC	400	90	453	80	M 56 x 2	123	63	165	165	50	30	75	112	80	1"	535
MA - 01050030 - MC	500	90	488	80	M 64 x 3	143	63	165	180	80	30	85	128	90	1-¼"	625

AIR CYLINDERS SERIES MA 30

10 Bar Pressure

Female Clevis Mtg.

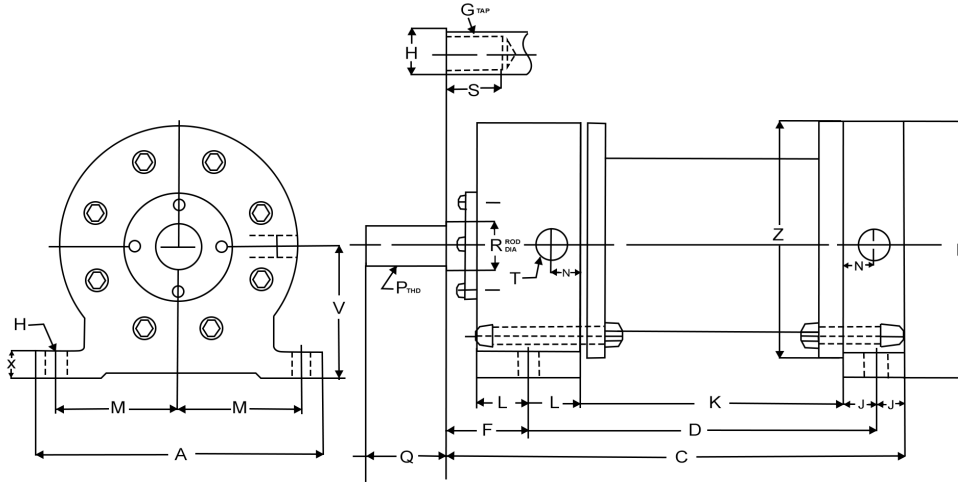


MODEL NO.	BORE (mm)	B	C	D	F	G=P	H	J	K	L	M	N	Q _{st} =S _{st}	Q _{lg} =S _{lg}	R	T	Z _{max.}
MA - 01004030 - FC	40	15	160	20	17	M 12 x 1.25	40	25	45	75	12	12	16	24	18	¼"	90
MA - 01005030 - FC	50	15	170	20	21	M 16 x 1.5	40	25	50	80	12	12	22	32	22	¼"	110
MA - 01006330 - FC	63	18	190	20	26	M 16 x 1.5	58	38	50	82	16	19	22	32	22	⅜"	125
MA - 01008030 - FC	80	18	210	25	33	M 20 x 1.5	58	38	55	97	16	19	28	40	28	⅜"	150
MA - 01010030 - FC	100	20	230	25	33	M 20 x 1.5	63	38	60	107	20	19	28	40	28	½"	165
MA - 01012530 - FC	125	25	275	30	41	M 24 x 2	80	50	70	125	25	25	32	48	32	½"	203
MA - 01016030 - FC	160	32	315	35	51	M 36 x 2	85	50	80	150	30	25	50	75	50	¾"	240
MA - 01020030 - FC	200	32	335	35	51	M 36 x 2	98	63	85	152	30	30	50	75	50	¾"	300
MA - 01025030 - FC	250	40	375	35	51	M 42 x 2	108	63	110	157	40	30	56	84	56	1"	330
MA - 01032030 - FC	320	47	420	35	51	M 48 x 2	113	63	142	165	45	30	63	96	63	1"	400
MA - 01040030 - FC	400	59	453	45	81	M 56 x 2	123	63	165	165	50	30	75	112	80	1"	535
MA - 01050030 - FC	500	90	488	45	81	M 64 x 3	143	63	165	180	80	30	85	128	90	1-¼"	625

AIR CYLINDERS SERIES MA 30

10 Bar Pressure

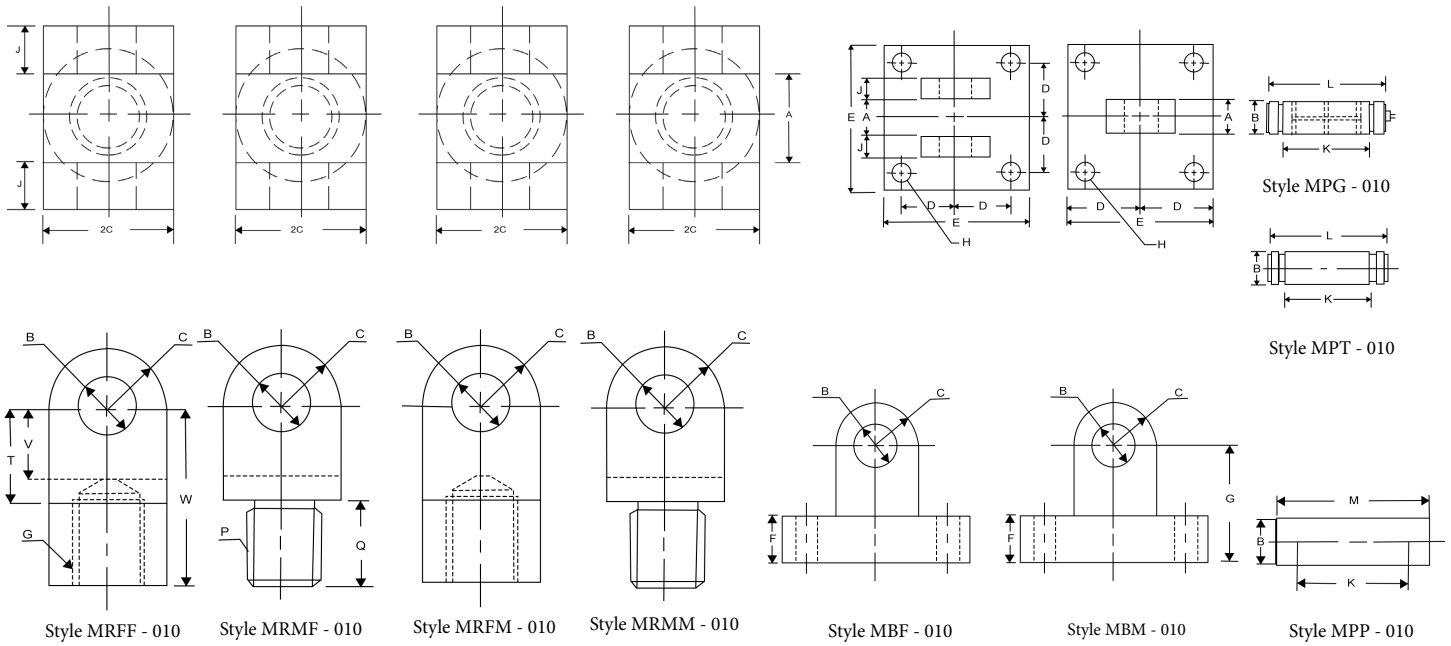
Side Log Mtg.



MODEL NO.	BORE (mm)	A	B	C	D	F	G=P	H	J	K	L	M	N	Q _{st} =S _{st}	Q _{lg} =S _{lg}	R	T	V	X	Z _{max.}
MA - 01004030 - SL	40	120	97	145	82	50	M 12 x 1.25	9	13	45	25	51	12	16	24	18	¼"	57	14	90
MA - 01005030 - SL	50	130	117	155	89	53	M 16 x 1.5	9	13	50	26	56	12	22	32	22	¼"	67	14	110
MA - 01006330 - SL	63	150	134	170	95	56	M 16 x 1.5	9	19	50	26	66	19	22	32	22	⅜"	74	16	125
MA - 01008030 - SL	80	184	157	190	108	63	M 20 x 1.5	12	19	55	34	80	19	28	40	28	⅜"	87	20	150
MA - 01010030 - SL	100	204	172	205	117	69	M 20 x 1.5	14	19	60	38	88	19	28	40	28	½"	94	20	165
MA - 01012530 - SL	125	236	207	245	142	78	M 24 x 2	16	25	70	47	102	25	32	48	32	½"	113	30	203
MA - 01016030 - SL	160	312	254	280	160	95	M 36 x 2	18	25	80	55	138	25	50	75	50	¾"	132	40	240
MA - 01020030 - SL	200	336	314	300	172	96	M 36 x 2	22	32	85	56	146	30	50	75	50	¾"	162	46	300
MA - 01025030 - SL	250	384	356	330	198	100	M 42 x 2	26	32	110	56	166	30	56	84	56	1"	189	46	330
MA - 01032030 - SL	320	478	426	370	132	106	M 48 x 2	33	32	142	58	206	30	63	96	63	1"	224	46	400
MA - 01040030 - SL	400	592	559	393	255	106	M 56 x 2	33	32	165	58	263	30	75	112	80	1"	292	50	535
MA - 01050030 - SL	500	722	649	408	262	114	M 64 x 3	40	32	165	65	321	30	85	128	90	1-¼"	337	50	625

AIR CYLINDERS SERIES MA 30

10 Bar Pressure

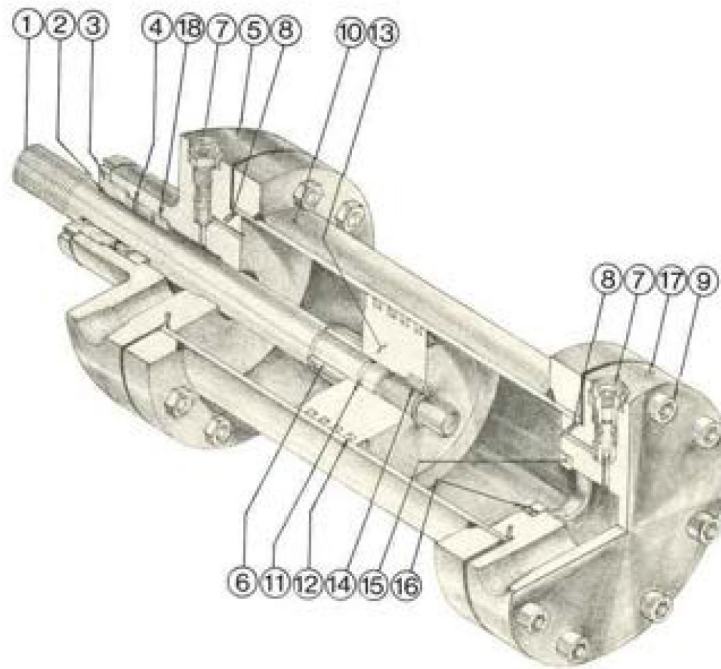


BORE (mm)	A	B	C	G=P	J	Q=S	T	U	V	W
40	16	16	20	M 8 x 1.25	20	12	35	56	25	47
50	20	20	25	M 8 x 1.25	20	12	45	60	32	57
63	25	25	30	M 8 x 1.25	20	12	50	65	40	62
80	32	32	40	M 10 x 1.25	25	14	55	82	45	69
100	32	32	40	M 12 x 1.25	25	16	60	82	50	76
125	40	40	45	M 14 x 1.5	30	18	70	100	60	88
160	50	50	59	M 18 x 1.5	35	25	85	120	75	110
200	50	50	59	M 20 x 1.5	35	28	100	120	85	128
250	50	50	63	M 27 x 2	35	36	115	120	100	156
320	50	50	63	M 33 x 2	35	45	130	120	115	175

BORE (mm)	A	B	C	D	E	F	G	H	J	K	L	M
40	16	16	20	45	118	19	44	14	20	59	66	80
50	20	20	25	47	122	19	54	14	20	63	70	84
63	25	25	30	50	128	19	63	14	20	68	75	89
80	32	32	40	63	168	25	71	21	25	85	95	110
100	32	32	40	63	168	25	71	21	25	85	95	110
125	40	40	45	76	206	38	100	27	30	110	120	134
160	50	50	59	90	246	38	108	33	35	130	143	171
200	50	50	59	95	270	44	114	40	35	130	143	171
250	50	50	63	95	270	44	116	40	35	130	143	171
320	50	50	63	95	270	44	116	40	35	130	143	171

MILL TYPE METRIC HYDRAULIC CYLINDERS SERIES MH 31

63 Bar Pressure



PART LIST

ITEM	QTY.	DESCRIPTION
1	1 only	Cylinder Rod (chrome plated)
2	*1 only	Rod Wiper
3	**1 only	Gland Bushing
4	*1 set	Gland Seal - Chevron "V" Ring
5	1 only	Front Head
6	1 only	Front Cushion
7	2 only	Adjustable Cushion Assembly
8	*2 only	Head Static Seal - "O" Ring
9	2 sets	Head Securing Cap Screws and Nuts

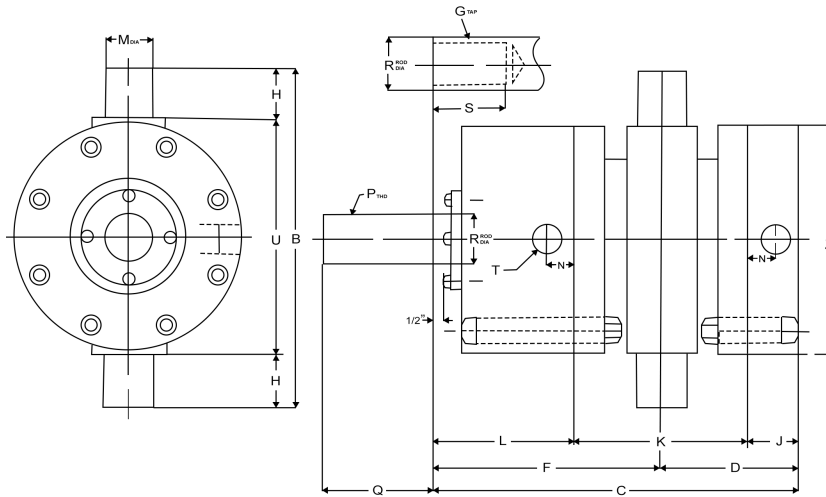
ITEM	QTY.	DESCRIPTION
10	1 only	Cylinder Barrel Assembly
11	*1 only	Piston Rod Seal - "O" Ring
12	*1 set	Piston Dynamic Seal - Piston Rings
13	1 only	Piston
14	1 only	Piston Securing Screw
15	1 only	Rear Cushion
16	2 only	Rear Cushion Securing Screw
17	1 only	Rear Head
18	1 only	Lower Gland Bearing

* Spare Parts
** Optional Spare Parts

HYDRAULIC CYLINDERS SERIES MH 31

63 Bar Pressure

Trunnion Mtg.

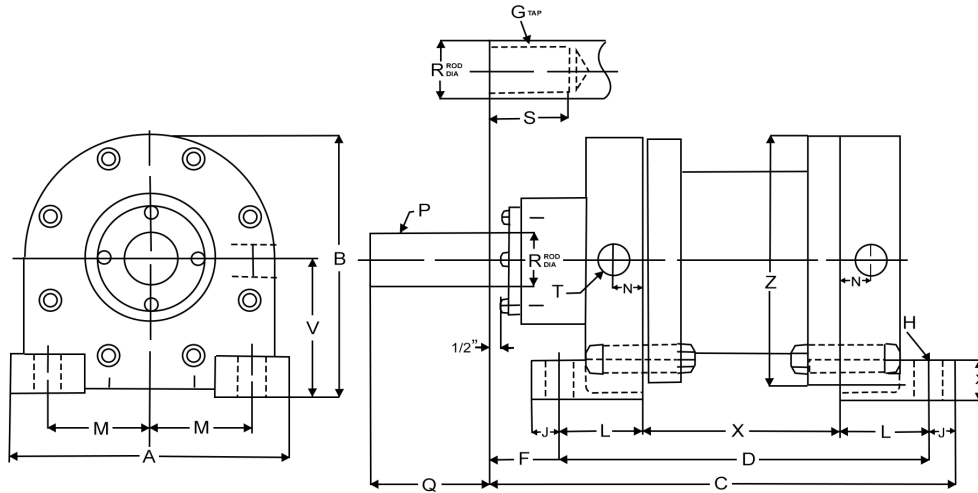


MODEL NO.	BORE (mm)	B	C	D	F	G _{1:1} =P _{1:1}	G _{2:1} =P _{2:1}	H	J	K	L	M	N	Q _{st} =S _{st}	Q _{lg} =S _{lg}	R	T	U	R2:1	Z _{max}
MH - 06304031 - T	40	122	177	65	112	M 12 x 1.25	M 20 x 1.5	16	40	50	87	20	19	16	24	18	½"	90	28	90
MH - 06305031 - T	50	145	185	67	118	M 16 x 1.25	M 27 x 1.5	20	40	55	90	25	19	22	32	22	½"	105	36	110
MH - 06306331 - T	63	170	198	67	131	M 18 x 1.5	M 33 x 2	25	40	55	103	32	22	25	36	25	¾"	120	45	125
MH - 06308031 - T	80	199	213	71	142	M 20 x 1.5	M 42 x 2	32	44	55	114	40	25	30	44	28	¾"	135	56	150
MH - 06310031 - T	100	240	257	92	165	M 27 x 2	M 48 x 2	40	57	70	130	40	30	36	54	36	1"	160	70	165
MH - 06312531 - T	125	295	265	92	173	M 33 x 2	M 64 x 3	50	57	70	138	50	30	45	66	45	1"	195	90	203
MH - 06316031 - T	160	366	315	117	198	M 42 x 2	M 80 x 3	63	70	95	150	50	35	56	84	56	1-¼"	240	110	240
MH - 06320031 - T	200	421	336	123	213	M 48 x 2	M 100 x 3	63	76	95	165	63	35	63	96	63	1-¼"	295	140	300
MH - 06325031 - T	250	530	443	150	293	M 56 x 2	M 125 x 4	80	88	125	230	70	45	75	112	80	1-½"	370	180	395
MH - 06332031 - T	320	630	465	172	293	M 72 x 3	M 160 x 4	80	110	125	230	80	55	85	128	100	2"	470	220	455
MH - 06340031 - T	400	770	515	192	323	M 90 x 3	M 200 x 4	100	110	165	240	125	55	106	140	125	2"	570	280	560
MH - 06350031 - T	500	950	648	214	434	M 110 x 3	M 250 x 6	125	125	178	345	160	65	112	160	160	2-½"	700	350	686

HYDRAULIC CYLINDERS SERIES MH 31

63 Bar Pressure

Base Mtg.

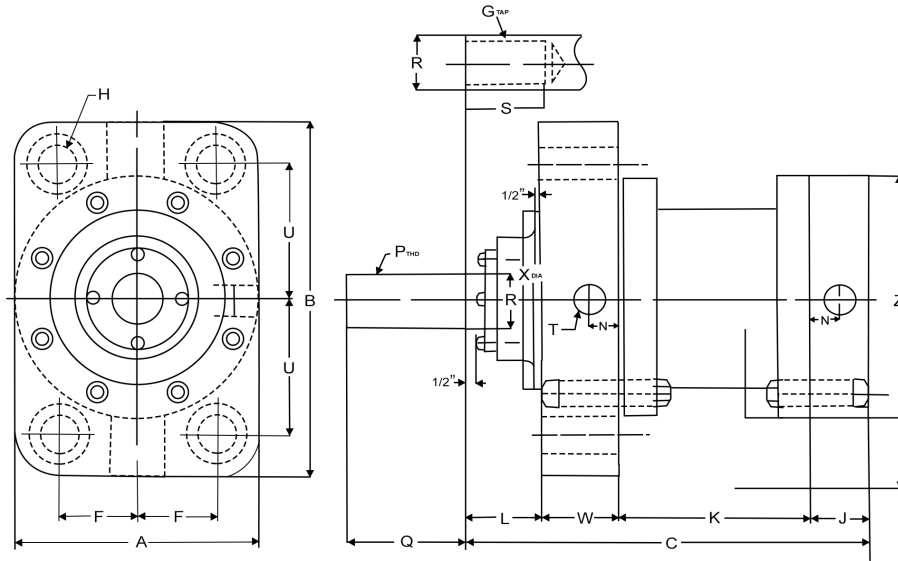


MODEL NO.	BORE (mm)	A	B	C	D	F	$G_{1:1}=P_{1:1}$	$G_{2:1}=P_{2:1}$	H	J	K	L	M	N	$Q_{st}=S_{st}$	$Q_{lg}=S_{lg}$	R	T	R2:1	V	X	Z _{max.}
MH = 06304031 - B	40	110	102	205	158	33	M 12 x 1.25	M 20 x 1.5	14	14	50	54	41	19	16	24	18	½"	28	57	22	90
MH = 06305031 - B	50	130	122	213	163	36	M 16 x 1.25	M 27 x 1.5	14	14	55	54	51	19	22	32	22	½"	36	67	22	110
MH = 06306331 - B	63	145	137	230	171	45	M 18 x 1.5	M 33 x 2	14	14	55	58	59	22	25	36	25	¾"	45	74	22	125
MH = 06308031 - B	80	170	162	249	179	52	M 22 x 1.5	M 42 x 2	18	18	55	62	67	25	30	44	28	¾"	56	87	25	150
MH = 06310031 - B	100	185	177	301	228	51	M 27 x 2	M 48 x 2	22	22	70	79	71	30	36	54	36	1"	70	94	25	165
MH = 06312531 - B	125	223	215	319	238	54	M 33 x 2	M 64 x 3	27	27	70	84	85	30	45	66	45	1"	90	113	38	203
MH = 06316031 - B	160	260	252	369	289	53	M 42 x 2	M 80 x 3	27	27	95	97	103	35	56	84	56	1-¼"	110	132	38	240
MH = 06320031 - B	200	320	312	396	307	59	M 48 x 2	M 100 x 3	30	30	95	106	130	35	63	96	63	1-¼"	140	162	44	300
MH = 06325031 - B	250	415	420	504	363	111	M 56 x 2	M 125 x 4	30	30	125	119	178	45	75	112	80	1-½"	180	222	44	395
MH = 06332031 - B	320	475	480	525	405	90	M 72 x 3	M 160 x 4	30	30	125	140	208	55	85	128	100	2"	220	252	44	455
MH = 06340031 - B	400	580	585	581	451	97	M 90 x 3	M 200 x 4	33	33	165	143	257	55	106	140	125	2"	280	305	50	560
MH = 06350031 - B	500	706	710	740	520	174	M 110 x 3	M 250 x 6	46	46	178	171	312	65	112	160	160	2-½"	350	367	70	686

HYDRAULIC CYLINDERS SERIES MH 31

63 Bar Pressure

Front Flange Mtg.

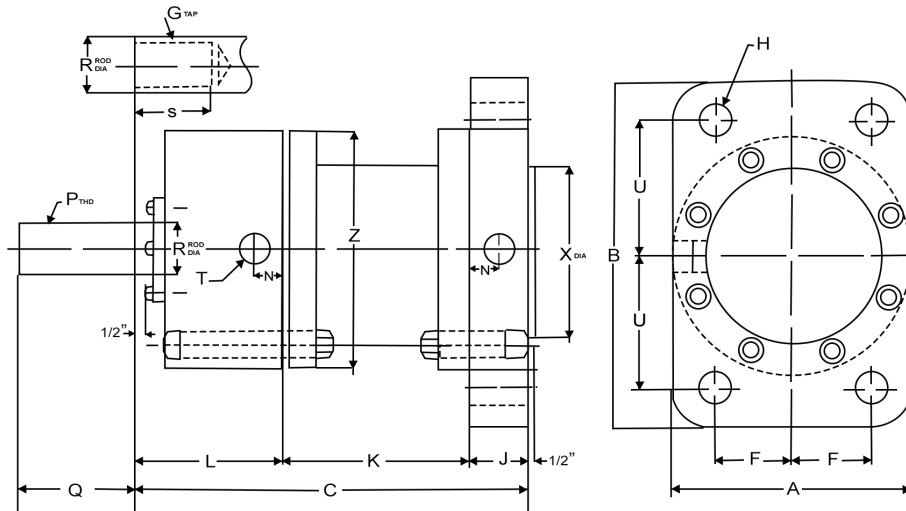


MODEL NO.	BORE (mm)	A	B	C	F	G _{1:1} =P _{1:1}	G _{2:1} =P _{2:1}	H	J	K	L	N	Q _{st} =S _{st}	Q _{lg} =S _{lg}	R	T	R2:1	U	W	X	Z _{max}
MH = 06304031 - FF	40	90	154	177	26	M 12 x 1.25	M 20 x 1.5	14	40	50	49	19	16	24	18	½"	28	58	38	78	90
MH = 06305031 - FF	50	110	168	185	36	M 16 x 1.25	M 27 x 1.5	14	40	55	46	19	22	32	22	½"	36	65	44	84	110
MH = 06306331 - FF	63	125	198	198	40	M 18 x 1.5	M 33 x 2	18	40	55	59	22	25	36	25	¾"	45	76	44	90	125
MH = 06308031 - FF	80	150	228	213	49	M 22 x 1.5	M 42 x 2	21	44	55	70	25	30	44	28	¾"	56	88	44	113	150
MH = 06310031 - FF	100	165	238	257	57	M 27 x 2	M 48 x 2	21	57	70	86	30	36	54	36	1"	70	93	44	128	165
MH = 06312531 - FF	125	203	320	265	65	M 33 x 2	M 64 x 3	27	57	70	88	30	45	66	45	1"	90	123	50	178	203
MH = 06316031 - FF	160	240	374	315	77	M 42 x 2	M 80 x 3	33	70	95	93	35	56	84	56	1-¼"	110	144	57	178	240
MH = 06320031 - FF	200	300	446	336	100	M 48 x 2	M 100 x 3	40	76	95	89	35	63	96	63	1-¼"	140	173	76	229	300
MH = 06325031 - FF	250	395	486	443	148	M 56 x 2	M 125 x 4	40	88	125	141	45	75	112	80	1-½"	180	193	89	267	395
MH = 06332031 - FF	320	455	528	465	178	M 72 x 3	M 160 x 4	40	110	125	141	55	85	128	100	2"	220	214	89	305	455
MH = 06340031 - FF	400	560	612	515	224	M 90 x 3	M 200 x 4	46	110	165	138	55	106	140	125	2"	280	250	102	375	560
MH = 06350031 - FF	500	*	*	648	*	M 110 x 3	M 250 x 6	*	125	178	*	65	112	160	160	2-½"	350	*	*	*	686

HYDRAULIC CYLINDERS SERIES MH 31

63 Bar Pressure

Rear Flange Mtg.

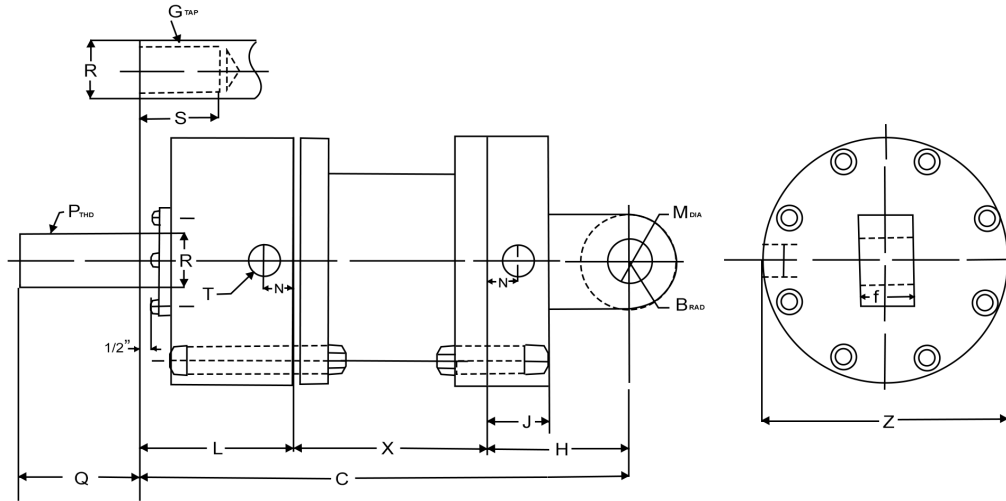


MODEL NO.	BORE (mm)	A	B	C	F	$G_{1:1}=P_{1:1}$	$G_{2:1}=P_{2:1}$	H	J	K	L	N	$Q_{st}=S_{st}$	$Q_{lg}=S_{lg}$	R	T	R2:1	U	X	Z_{max}
MH = 06304031 - RF	40	90	154	177	26	M 12 x 1.25	M 20 x 1.5	14	40	50	87	19	16	24	18	1/2"	28	58	78	90
MH = 06305031 - RF	50	110	168	185	36	M 16 x 1.25	M 27 x 1.5	14	40	55	90	19	22	32	22	1/2"	36	65	84	110
MH = 06306331 - RF	63	125	198	198	40	M 18 x 1.5	M 33 x 2	18	40	55	103	22	25	36	25	3/4"	45	76	90	125
MH = 06308031 - RF	80	150	228	213	49	M 22 x 1.5	M 42 x 2	21	44	55	114	25	30	44	28	3/4"	56	88	113	150
MH = 06310031 - RF	100	165	238	257	57	M 27 x 2	M 48 x 2	21	57	70	130	30	36	54	36	1"	70	93	128	165
MH = 06312531 - RF	125	203	320	265	65	M 33 x 2	M 64 x 3	27	57	70	138	30	45	66	45	1"	90	123	178	203
MH = 06316031 - RF	160	240	374	315	77	M 42 x 2	M 80 x 3	33	70	95	150	35	56	84	56	1-1/4"	110	144	178	240
MH = 06320031 - RF	200	300	446	336	100	M 48 x 2	M 100 x 3	40	76	95	165	35	63	96	63	1-1/4"	140	173	229	300
MH = 06325031 - RF	250	395	486	443	148	M 56 x 2	M 125 x 4	40	88	125	230	45	75	112	80	1-1/2"	180	193	267	395
MH = 06332031 - RF	320	455	528	465	178	M 72 x 3	M 160 x 4	40	110	125	230	55	85	128	100	2"	220	214	305	455
MH = 06340031 - RF	400	560	612	515	224	M 90 x 3	M 200 x 4	46	110	165	240	55	106	140	125	2"	280	250	375	560
MH = 06350031 - RF	500	*	*	648	*	M 110 x 3	M 250 x 6	*	125	178	345	65	112	160	160	2-1/2"	350	*	*	686

HYDRAULIC CYLINDERS SERIES MH 31

63 Bar Pressure

Male Clevis Mtg.

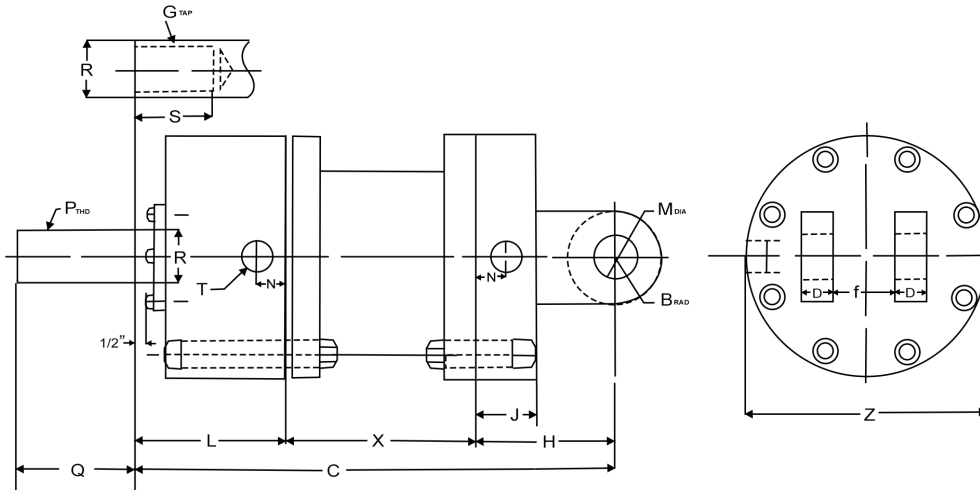


MODEL NO.	BORE (mm)	B	C	F	$G_{1:1}=P_{1:1}$	$G_{2:1}=P_{2:1}$	H	J	K	L	M	N	$Q_{st}=S_{st}$	$Q_{lg}=S_{lg}$	R	T	R2:1	Z _{max.}
MH = 06304031 - MC	40	20	202	16	M 12 x 1.25	M 20 x 1.5	65	40	50	87	16	19	16	24	18	1/2"	28	90
MH = 06305031 - MC	50	25	220	20	M 16 x 1.25	M 27 x 1.5	75	40	55	90	20	19	22	32	22	1/2"	36	110
MH = 06306331 - MC	63	32	243	25	M 18 x 1.5	M 33 x 2	85	40	55	103	25	22	25	36	25	3/4"	45	125
MH = 06308031 - MC	80	40	259	32	M 22 x 1.5	M 42 x 2	90	44	55	114	32	25	30	44	28	3/4"	56	150
MH = 06310031 - MC	100	40	295	32	M 27 x 2	M 48 x 2	95	57	70	130	32	30	36	54	36	1"	70	165
MH = 06312531 - MC	125	45	328	40	M 33 x 2	M 64 x 3	120	57	70	138	40	30	45	66	45	1"	90	203
MH = 06316031 - MC	160	59	380	50	M 42 x 2	M 80 x 3	135	70	95	150	50	35	56	84	56	1-1/4"	110	240
MH = 06320031 - MC	200	59	405	50	M 48 x 2	M 100 x 3	145	76	95	165	50	35	63	96	63	1-1/4"	140	300
MH = 06325031 - MC	250	71	520	63	M 56 x 2	M 125 x 4	170	88	125	230	63	45	75	112	80	1-1/2"	180	395
MH = 06332031 - MC	320	90	555	80	M 72 x 3	M 160 x 4	200	110	125	230	80	55	85	128	100	2"	220	455
MH = 06340031 - MC	400	112	630	100	M 90 x 3	M 200 x 4	225	110	165	240	100	55	106	140	125	2"	280	560
MH = 06350031 - MC	500	178	848	160	M 110 x 3	M 250 x 6	325	125	178	345	160	65	112	160	160	2-1/2"	350	686

HYDRAULIC CYLINDERS SERIES MH 31

63 Bar Pressure

Female Clevis Mtg.

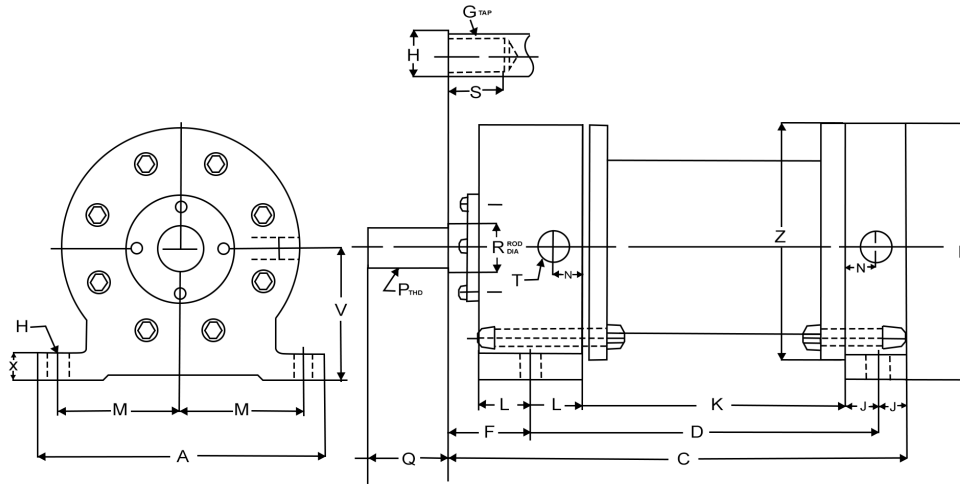


MODEL NO.	BORE (mm)	B	C	D	F	G _{1:1} =P _{1:1}	G _{2:1} =P _{2:1}	H	J	K	L	M	N	Q _{st} =S _{st}	Q _{lg} =S _{lg}	R	T	R2:1	Z _{max.}
MH = 06304031 - FC	40	20	202	20	16	M 12 x 1.25	M 20 x 1.5	65	40	50	87	16	19	16	24	18	½"	28	90
MH = 06305031 - FC	50	25	220	20	20	M 16 x 1.25	M 27 x 1.5	75	40	55	90	20	19	22	32	22	½"	36	110
MH = 06306331 - FC	63	32	243	20	25	M 18 x 1.5	M 33 x 2	85	40	55	103	25	22	25	36	25	¾"	45	125
MH = 06308031 - FC	80	40	259	25	32	M 22 x 1.5	M 42 x 2	90	44	55	114	32	25	30	44	28	¾"	56	150
MH = 06310031 - FC	100	40	295	25	32	M 27 x 2	M 48 x 2	95	57	70	130	32	30	36	54	36	1"	70	165
MH = 06312531 - FC	125	45	328	30	40	M 33 x 2	M 64 x 3	120	57	70	138	40	30	45	66	45	1"	90	203
MH = 06316031 - FC	160	59	380	35	50	M 42 x 2	M 80 x 3	135	70	95	150	50	35	56	84	56	1-¼"	110	240
MH = 06320031 - FC	200	59	405	35	50	M 48 x 2	M 100 x 3	145	76	95	165	50	35	63	96	63	1-¼"	140	300
MH = 06325031 - FC	250	71	520	40	63	M 56 x 2	M 125 x 4	170	88	125	230	63	45	75	112	80	1-½"	180	395
MH = 06332031 - FC	320	90	555	45	80	M 72 x 3	M 160 x 4	200	110	125	230	80	55	85	128	100	2"	220	455
MH = 06340031 - FC	400	112	630	55	100	M 90 x 3	M 200 x 4	225	110	165	240	100	55	106	140	125	2"	280	560
MH = 06350031 - FC	500	178	848	85	160	M 110 x 3	M 250 x 6	325	125	178	345	160	65	112	160	160	2-½"	350	686

HYDRAULIC CYLINDERS SERIES MH 31

63 Bar Pressure

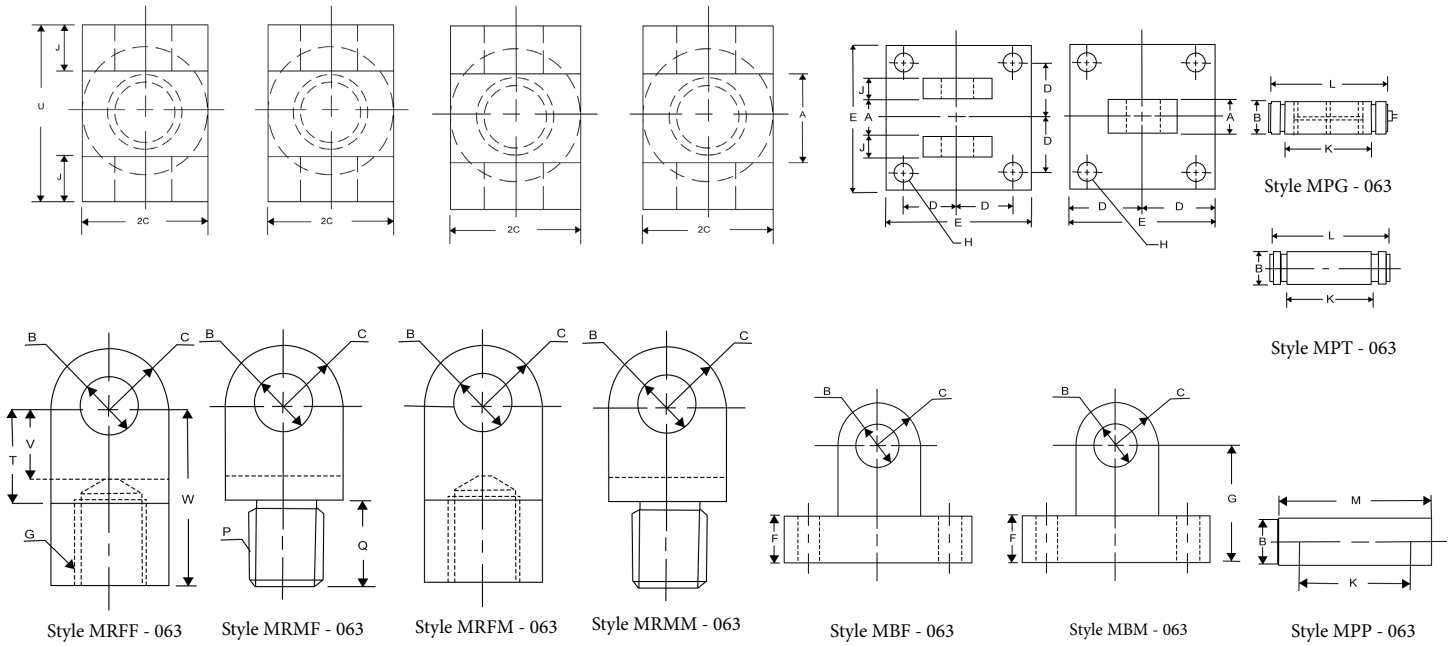
Side Log Mtg.



MODEL NO.	BORE (mm)	A	B	C	D	F	G _{1:1} =P _{1:1}	G _{2:1} =P _{2:1}	H	J	K	L	M	N	Q _{st} =S _{st}	Q _{lg} =S _{lg}	R	T	R2:1	V	X	Z _{max}
MH = 06304031 - SL	40	146	102	212	111	81	M 12 x 1.25	M 20 x 1.5	14	20	50	41	59	19	16	24	18	½"	28	57	22	90
MH = 06305031 - SL	50	171	122	217	116	81	M 16 x 1.25	M 27 x 1.5	14	20	55	41	72	19	22	32	22	½"	36	67	22	110
MH = 06306331 - SL	63	190	137	231	123	88	M 18 x 1.5	M 33 x 2	14	20	55	48	81	22	25	36	25	¾"	45	74	22	125
MH = 06308031 - SL	80	216	162	235	125	88	M 22 x 1.5	M 42 x 2	18	22	55	48	90	25	30	44	28	¾"	56	87	25	150
MH = 06310031 - SL	100	254	177	274	147	98	M 27 x 2	M 48 x 2	22	29	70	48	105	30	36	54	36	1"	70	94	25	165
MH = 06312531 - SL	125	311	215	286	153	104	M 33 x 2	M 64 x 3	27	29	70	54	129	30	45	66	45	1"	90	113	38	203
MH = 06316031 - SL	160	337	252	323	184	104	M 42 x 2	M 80 x 3	27	35	95	54	142	35	56	84	56	1-¼"	110	132	38	240
MH = 06320031 - SL	200	413	312	355	200	117	M 48 x 2	M 100 x 3	30	38	95	67	177	35	63	96	63	1-¼"	140	162	44	300
MH = 06325031 - SL	250	445	420	455	252	158	M 56 x 2	M 125 x 4	30	45	125	82	193	45	75	112	80	1-½"	180	222	44	395
MH = 06332031 - SL	320	508	480	489	269	165	M 72 x 3	M 160 x 4	30	55	125	89	224	55	85	128	100	2"	220	252	44	455
MH = 06340031 - SL	400	675	585	529	309	165	M 90 x 3	M 200 x 4	33	55	165	89	305	55	106	140	125	2"	280	305	50	560
MH = 06350031 - SL	500	875	710	584	336	185	M 110 x 3	M 250 x 6	46	63	178	95	392	65	112	160	160	2-½"	350	367	70	686

HYDRAULIC CYLINDERS SERIES MH 31

63 Bar Pressure

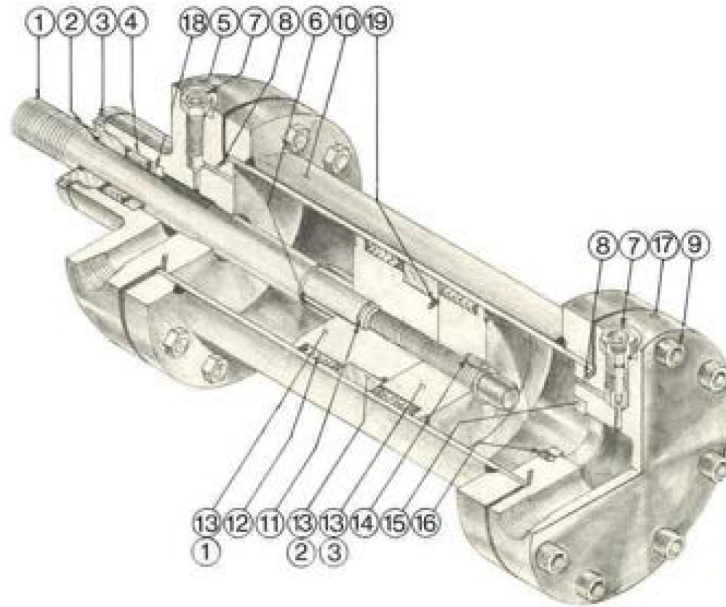


BORE (mm)	A	B	C	G=P	J	Q=S	T	U	V	W
40	16	16	20	M 20 x 1.25	20	16	35	56	25	51
50	20	20	25	M 14 x 1.25	20	18	45	60	35	63
63	25	25	30	M 18 x 1.5	20	25	50	65	40	75
80	32	32	40	M 22 x 1.5	25	30	55	82	45	85
100	32	32	40	M 27 x 2	25	36	60	82	50	96
125	40	40	45	M 33 x 2	30	45	70	100	60	115
160	50	50	59	M 42 x 2	35	56	85	120	75	141
200	50	50	59	M 48 x 2	35	63	100	120	85	163
250	63	63	71	M 56 x 2	40	75	115	143	100	190
320	80	80	90	M 72 x 3	45	85	130	170	115	215

BORE (mm)	A	B	C	D	E	F	G	H	J	K	L	M
40	16	16	20	45	118	22	47	14	20	59	66	80
50	20	20	25	47	122	22	57	14	20	63	70	84
63	25	25	32	52	140	22	67	18	20	68	75	89
80	32	32	40	63	168	25	71	21	25	85	95	110
100	32	32	40	63	168	25	71	21	25	85	95	110
125	40	40	45	76	206	38	100	27	30	110	120	134
160	50	50	59	90	246	38	108	33	35	130	143	171
200	50	50	59	95	270	44	114	40	35	130	143	171
250	63	63	71	107	294	44	127	40	40	153	169	210
320	80	80	90	120	320	44	144	40	45	180	196	237

MILL TYPE METRIC HYDRAULIC CYLINDERS SERIES MH 32

63 Bar Pressure



PART LIST

ITEM	QTY.	DESCRIPTION
1	1 only	Cylinder Rod (chrome plated)
2	*1 only	Rod Wiper
3	**1 only	Gland Bushing
4	*1 set	Gland Seal - Chevron "V" Ring
5	1 only	Front Head
6	1 only	Front Cushion
7	2 only	Adjustable Cushion Assembly
8	*2 only	Head Static Seal - "O" Ring
9	2 sets	Head Securing Cap Screws and Nuts
10	1 only	Cylinder Barrel Assembly
11	*1 only	Piston Rod Seal - "O" Ring

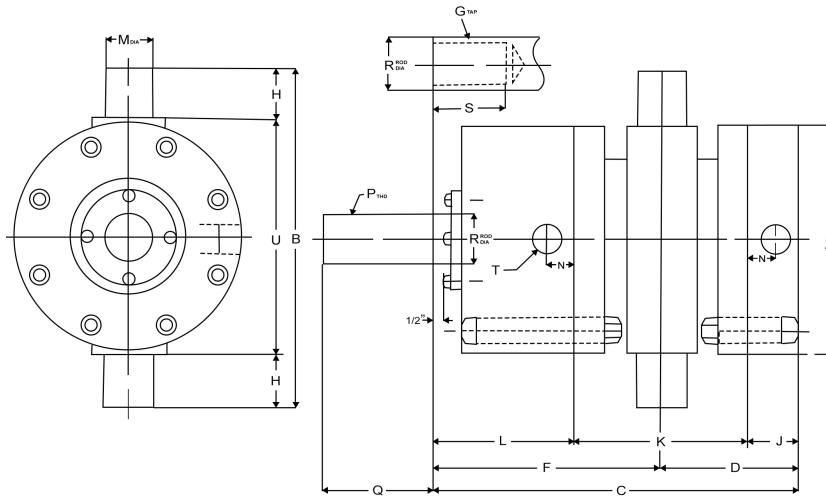
ITEM	QTY.	DESCRIPTION
12	*2 sets	Piston Dynamic Seal - Chevron "V" Rings
13/1	1 only	Piston - Front Section
13/2	1 only	Piston - Bushing
13\3	1 only	Piston - Rear Section
14	1 only	Piston Securing Screw
15	1 only	Rear Cushion
16	2 only	Rear Cushion Securing Screw
17	1 only	Rear Head
18	1 only	Lower Gland Bearing
19	*1 only	Piston Static Seal - "O" Ring

* Spare Parts
** Optional Spare Parts

HYDRAULIC CYLINDERS SERIES MH 32

63 Bar Pressure

Trunnion Mtg.

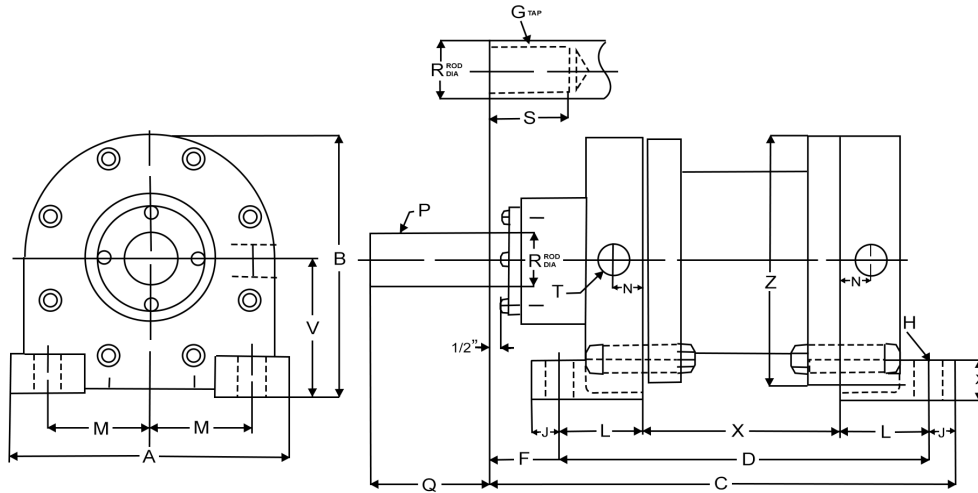


MODEL NO.	BORE (mm)	B	C	D	F	G _{1:1} =P _{1:1}	G _{2:1} =P _{2:1}	H	J	K	L	M	N	Q _{st} =S _{st}	Q _{lg} =S _{lg}	R	T	U	R2:1	Z _{max}
MH - 06304032 - T	40	122	190	72	118	M 12 x 1.25	M 20 x 1.5	16	40	63	87	20	19	16	24	18	½"	90	28	90
MH - 06305032 - T	50	145	201	76	125	M 16 x 1.25	M 27 x 1.5	20	40	71	90	25	19	22	32	22	½"	105	36	110
MH - 06306332 - T	63	170	220	79	141	M 18 x 1.5	M 33 x 2	25	40	77	103	32	22	25	36	25	¾"	120	45	125
MH - 06308032 - T	80	199	244	87	157	M 20 x 1.5	M 42 x 2	32	44	86	114	40	25	30	44	28	¾"	135	56	150
MH - 06310032 - T	100	240	300	114	186	M 27 x 2	M 48 x 2	40	57	113	130	40	30	36	54	36	1"	160	70	165
MH - 06312532 - T	125	295	325	122	203	M 33 x 2	M 64 x 3	50	57	130	138	50	30	45	66	45	1"	195	90	203
MH - 06316032 - T	160	366	366	143	223	M 42 x 2	M 80 x 3	63	70	146	150	50	35	56	84	56	1-¼"	240	110	240
MH - 06320032 - T	200	421	419	165	254	M 48 x 2	M 100 x 3	63	76	178	165	63	35	63	96	63	1-¼"	295	140	300
MH - 06325032 - T	250	530	508	183	325	M 56 x 2	M 125 x 4	80	88	190	230	70	45	75	112	80	1-½"	370	180	395
MH - 06332032 - T	320	630	556	218	338	M 72 x 3	M 160 x 4	80	110	216	230	80	55	85	128	100	2"	470	220	455
MH - 06340032 - T	400	770	566	218	348	M 90 x 3	M 200 x 4	100	110	216	240	125	55	106	140	125	2"	570	280	560
MH - 06350032 - T	500	950	720	250	470	M 110 x 3	M 250 x 6	125	125	250	345	160	65	112	160	160	2-½"	700	350	686

HYDRAULIC CYLINDERS SERIES MH 32

63 Bar Pressure

Base Mtg.

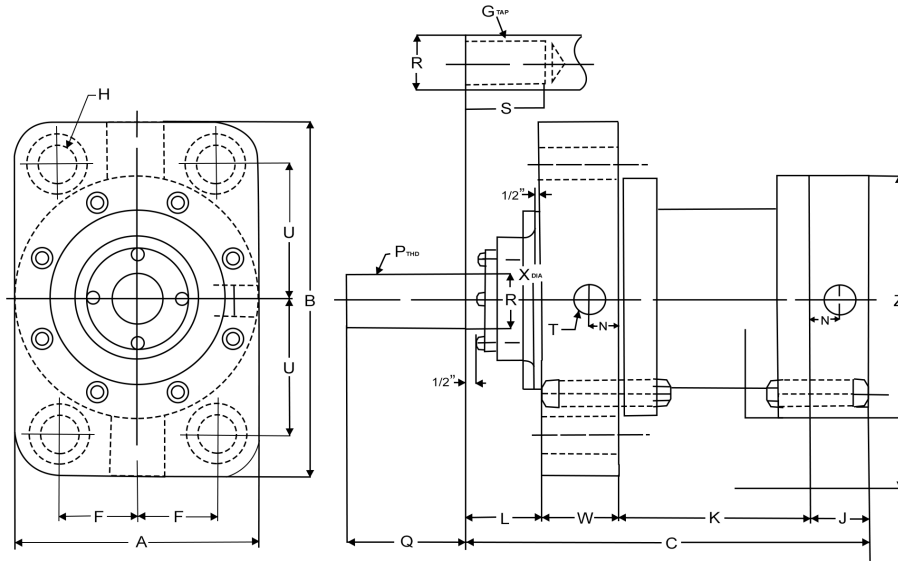


MODEL NO.	BORE (mm)	A	B	C	D	F	$G_{1:1}=P_{1:1}$	$G_{2:1}=P_{2:1}$	H	J	K	L	M	N	$Q_{st}=S_{st}$	$Q_{lg}=S_{lg}$	R	T	R2:1	V	X	Z _{max.}
MH = 06304032 - B	40	110	102	218	171	33	M 12 x 1.25	M 20 x 1.5	14	14	63	54	41	19	16	24	18	½"	28	57	22	90
MH = 06305032 - B	50	130	122	229	179	36	M 16 x 1.25	M 27 x 1.5	14	14	71	54	51	19	22	32	22	½"	36	67	22	110
MH = 06306332 - B	63	145	137	252	193	45	M 18 x 1.5	M 33 x 2	14	14	77	58	59	22	25	36	25	¾"	45	74	22	125
MH = 06308032 - B	80	170	162	280	210	52	M 22 x 1.5	M 42 x 2	18	18	86	62	67	25	30	44	28	¾"	56	87	25	150
MH = 06310032 - B	100	185	177	344	271	51	M 27 x 2	M 48 x 2	22	22	113	79	71	30	36	54	36	1"	70	94	25	165
MH = 06312532 - B	125	223	215	379	298	54	M 33 x 2	M 64 x 3	27	27	130	84	85	30	45	66	45	1"	90	113	38	203
MH = 06316032 - B	160	260	252	420	340	53	M 42 x 2	M 80 x 3	27	27	146	97	103	35	56	84	56	1-¼"	110	132	38	240
MH = 06320032 - B	200	320	312	479	390	59	M 48 x 2	M 100 x 3	30	30	178	106	130	35	63	96	63	1-¼"	140	162	44	300
MH = 06325032 - B	250	415	420	569	428	111	M 56 x 2	M 125 x 4	30	30	190	119	178	45	75	112	80	1-½"	180	222	44	395
MH = 06332032 - B	320	475	480	616	496	90	M 72 x 3	M 160 x 4	30	30	216	140	208	55	85	128	100	2"	220	252	44	455
MH = 06340032 - B	400	580	585	632	502	97	M 90 x 3	M 200 x 4	33	33	216	143	257	55	106	140	125	2"	280	305	50	560
MH = 06350032 - B	500	706	710	812	592	174	M 110 x 3	M 250 x 6	46	46	250	171	312	65	112	160	160	2-½"	350	367	70	686

HYDRAULIC CYLINDERS SERIES MH 32

63 Bar Pressure

Front Flange Mtg.

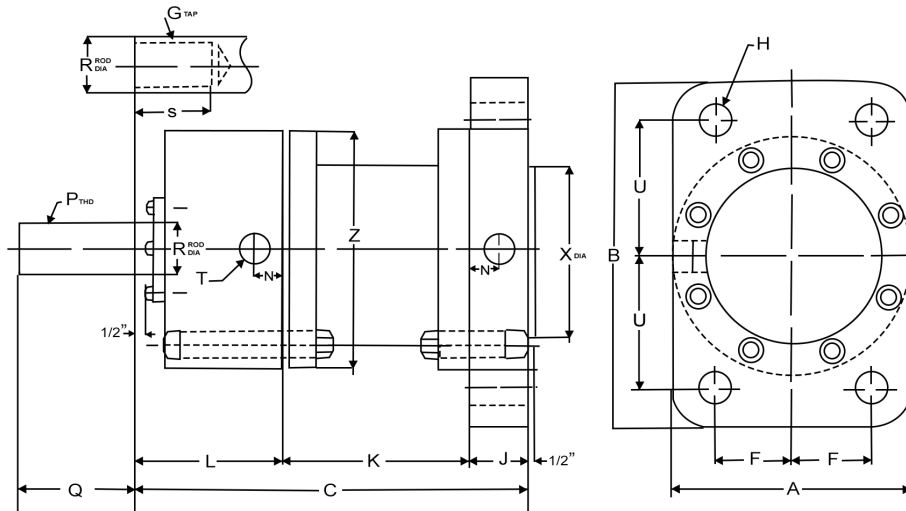


MODEL NO.	BORE (mm)	A	B	C	F	G _{1:1} =P _{1:1}	G _{2:1} =P _{2:1}	H	J	K	L	N	Q _{st} =S _{st}	Q _{lg} =S _{lg}	R	T	R2:1	U	W	X	Z _{max}
MH = 06304032 - FF	40	90	154	190	26	M 12 x 1.25	M 20 x 1.5	14	40	63	49	19	16	24	18	½"	28	58	38	78	90
MH = 06305032 - FF	50	110	168	201	36	M 16 x 1.25	M 27 x 1.5	14	40	71	46	19	22	32	22	½"	36	65	44	84	110
MH = 06306332 - FF	63	125	198	220	40	M 18 x 1.5	M 33 x 2	18	40	77	59	22	25	36	25	¾"	45	76	44	90	125
MH = 06308032 - FF	80	150	228	244	49	M 22 x 1.5	M 42 x 2	21	44	86	70	25	30	44	28	¾"	56	88	44	113	150
MH = 06310032 - FF	100	165	238	300	57	M 27 x 2	M 48 x 2	21	57	113	86	30	36	54	36	1"	70	93	44	128	165
MH = 06312532 - FF	125	203	320	325	65	M 33 x 2	M 64 x 3	27	57	130	88	30	45	66	45	1"	90	123	50	178	203
MH = 06316032 - FF	160	240	374	366	77	M 42 x 2	M 80 x 3	33	70	146	93	35	56	84	56	1-¼"	110	144	57	178	240
MH = 06320032 - FF	200	300	446	419	100	M 48 x 2	M 100 x 3	40	76	178	89	35	63	96	63	1-¼"	140	173	76	229	300
MH = 06325032 - FF	250	395	486	508	148	M 56 x 2	M 125 x 4	40	88	190	141	45	75	112	80	1-½"	180	193	89	267	395
MH = 06332032 - FF	320	455	528	556	178	M 72 x 3	M 160 x 4	40	110	216	141	55	85	128	100	2"	220	214	89	305	455
MH = 06340032 - FF	400	560	612	566	224	M 90 x 3	M 200 x 4	46	110	216	138	55	106	140	125	2"	280	250	102	375	560
MH = 06350032 - FF	500	*	*	720	*	M 110 x 3	M 250 x 6	*	125	250	*	65	112	160	160	2-½"	350	*	*	*	686

HYDRAULIC CYLINDERS SERIES MH 32

63 Bar Pressure

Rear Flange Mtg.

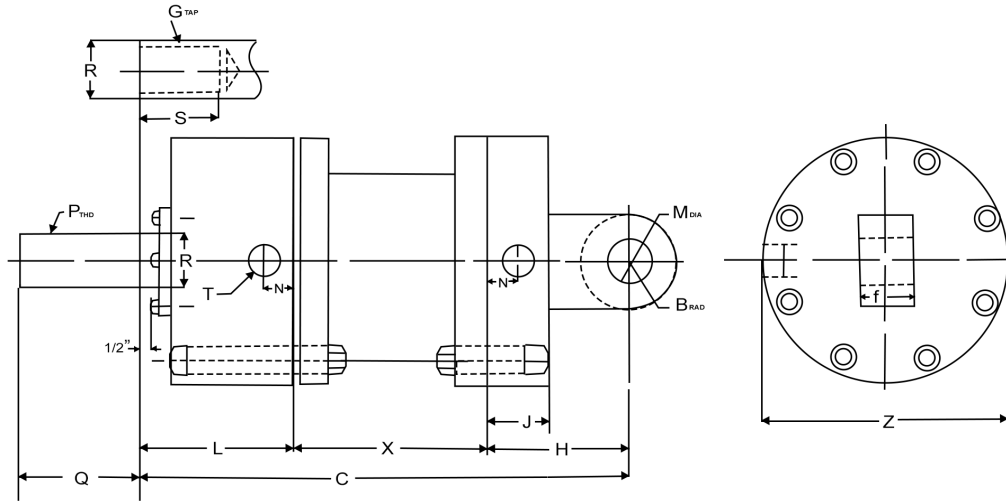


MODEL NO.	BORE (mm)	A	B	C	F	$G_{1:1}=P_{1:1}$	$G_{2:1}=P_{2:1}$	H	J	K	L	N	$Q_{st}=S_{st}$	$Q_{lg}=S_{lg}$	R	T	R2:1	U	X	Z _{max.}
MH = 06304032 - RF	40	90	154	190	26	M 12 x 1.25	M 20 x 1.5	14	40	63	87	19	16	24	18	1/2"	28	58	78	90
MH = 06305032 - RF	50	110	168	201	36	M 16 x 1.25	M 27 x 1.5	14	40	71	90	19	22	32	22	1/2"	36	65	84	110
MH = 06306332 - RF	63	125	198	220	40	M 18 x 1.5	M 33 x 2	18	40	77	103	22	25	36	25	3/4"	45	76	90	125
MH = 06308032 - RF	80	150	228	244	49	M 22 x 1.5	M 42 x 2	21	44	86	114	25	30	44	28	3/4"	56	88	113	150
MH = 06310032 - RF	100	165	238	300	57	M 27 x 2	M 48 x 2	21	57	113	130	30	36	54	36	1"	70	93	128	165
MH = 06312532 - RF	125	203	320	325	65	M 33 x 2	M 64 x 3	27	57	130	138	30	45	66	45	1"	90	123	178	203
MH = 06316032 - RF	160	240	374	366	77	M 42 x 2	M 80 x 3	33	70	146	150	35	56	84	56	1-1/4"	110	144	178	240
MH = 06320032 - RF	200	300	446	419	100	M 48 x 2	M 100 x 3	40	76	178	165	35	63	96	63	1-1/4"	140	173	229	300
MH = 06325032 - RF	250	395	486	508	148	M 56 x 2	M 125 x 4	40	88	190	230	45	75	112	80	1-1/2"	180	193	267	395
MH = 06332032 - RF	320	455	528	556	178	M 72 x 3	M 160 x 4	40	110	216	230	55	85	128	100	2"	220	214	305	455
MH = 06340032 - RF	400	560	612	566	224	M 90 x 3	M 200 x 4	46	110	216	240	55	106	140	125	2"	280	250	375	560
MH = 06350032 - RF	500	*	*	720	*	M 110 x 3	M 250 x 6	*	125	250	345	65	112	160	160	2-1/2"	350	*	*	686

HYDRAULIC CYLINDERS SERIES MH 32

63 Bar Pressure

Male Clevis Mtg.

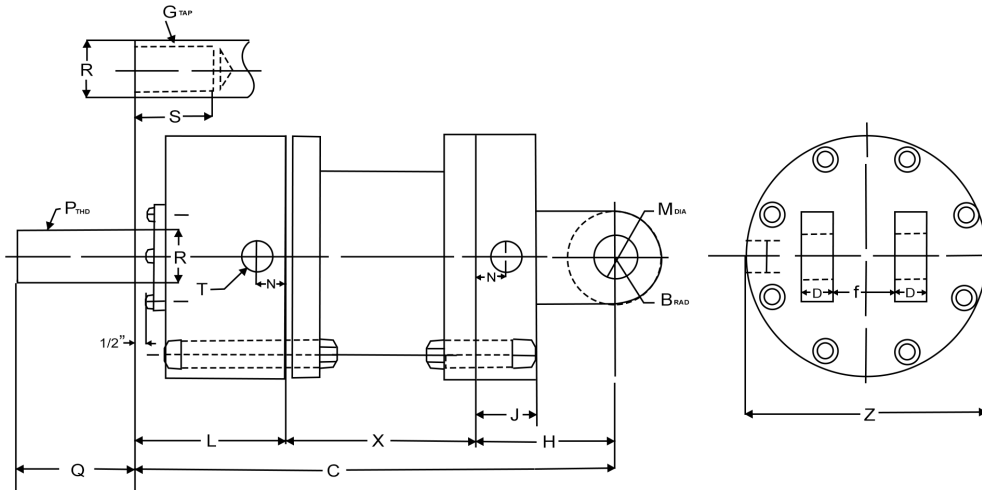


MODEL NO.	BORE (mm)	B	C	F	G _{1:1} =P _{1:1}	G _{2:1} =P _{2:1}	H	J	K	L	M	N	Q _{st} =S _{st}	Q _{lg} =S _{lg}	R	T	R2:1	Z _{max.}
MH = 06304032 - MC	40	20	215	16	M 12 x 1.25	M 20 x 1.5	65	40	63	87	16	19	16	24	18	½"	28	90
MH = 06305032 - MC	50	25	236	20	M 16 x 1.25	M 27 x 1.5	75	40	71	90	20	19	22	32	22	½"	36	110
MH = 06306332 - MC	63	32	265	25	M 18 x 1.5	M 33 x 2	85	40	77	103	25	22	25	36	25	¾"	45	125
MH = 06308032 - MC	80	40	290	32	M 22 x 1.5	M 42 x 2	90	44	86	114	32	25	30	44	28	¾"	56	150
MH = 06310032 - MC	100	40	338	32	M 27 x 2	M 48 x 2	95	57	113	130	32	30	36	54	36	1"	70	165
MH = 06312532 - MC	125	45	388	40	M 33 x 2	M 64 x 3	120	57	130	138	40	30	45	66	45	1"	90	203
MH = 06316032 - MC	160	59	431	50	M 42 x 2	M 80 x 3	135	70	146	150	50	35	56	84	56	1-¼"	110	240
MH = 06320032 - MC	200	59	488	50	M 48 x 2	M 100 x 3	145	76	178	165	50	35	63	96	63	1-¼"	140	300
MH = 06325032 - MC	250	71	585	63	M 56 x 2	M 125 x 4	170	88	190	230	63	45	75	112	80	1-½"	180	395
MH = 06332032 - MC	320	90	646	80	M 72 x 3	M 160 x 4	200	110	216	230	80	55	85	128	100	2"	220	455
MH = 06340032 - MC	400	112	681	100	M 90 x 3	M 200 x 4	225	110	216	240	100	55	106	140	125	2"	280	560
MH = 06350032 - MC	500	178	920	160	M 110 x 3	M 250 x 6	325	125	250	345	160	65	112	160	160	2-½"	350	686

HYDRAULIC CYLINDERS SERIES MH 32

63 Bar Pressure

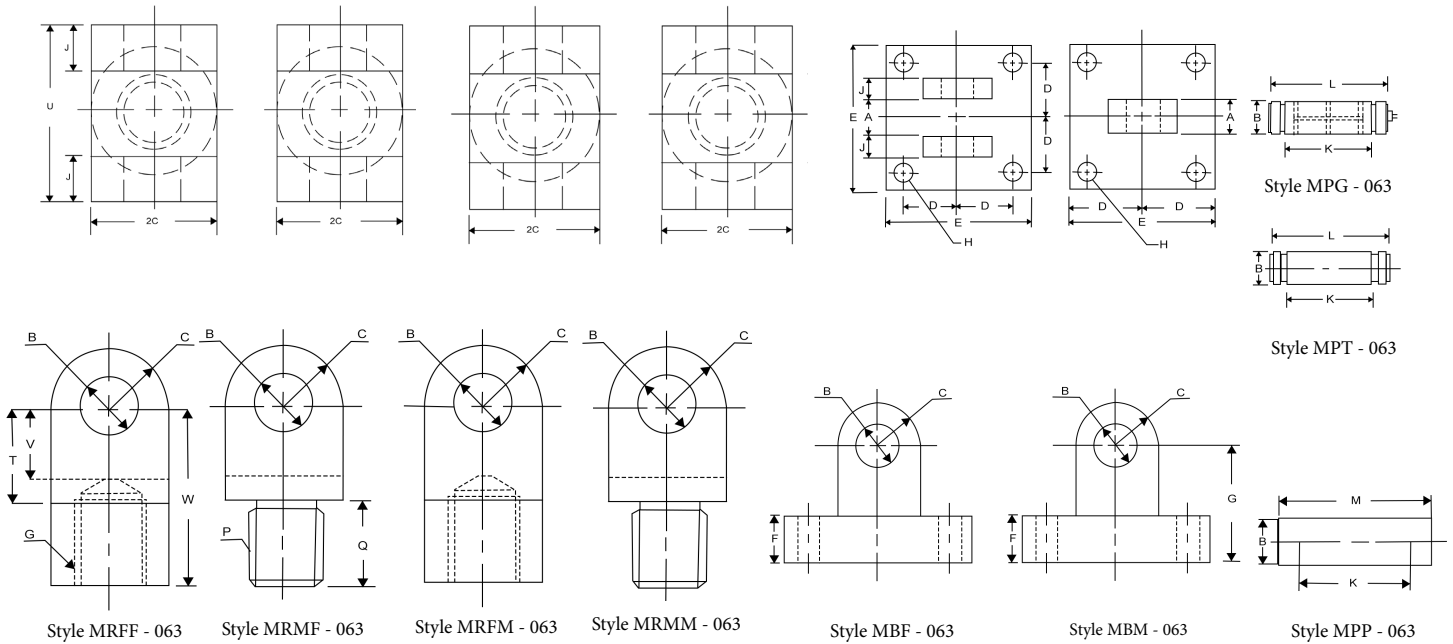
Female Clevis Mtg.



MODEL NO.	BORE (mm)	B	C	D	F	G _{1:1} =P _{1:1}	G _{2:1} =P _{2:1}	H	J	K	L	M	N	Q _{st} =S _{st}	Q _{lg} =S _{lg}	R	T	R2:1	Z _{max.}
MH = 06304032 - FC	40	20	215	20	17	M 12 x 1.25	M 20 x 1.5	65	40	63	87	16	19	16	24	18	½"	28	90
MH = 06305032 - FC	50	25	236	20	21	M 16 x 1.25	M 27 x 1.5	75	40	71	90	20	19	22	32	22	½"	36	110
MH = 06306332 - FC	63	32	265	20	26	M 18 x 1.5	M 33 x 2	85	40	77	103	25	22	25	36	25	¾"	45	125
MH = 06308032 - FC	80	40	290	25	33	M 22 x 1.5	M 42 x 2	90	44	86	114	32	25	30	44	28	¾"	56	150
MH = 06310032 - FC	100	40	338	25	33	M 27 x 2	M 48 x 2	95	57	113	130	32	30	36	54	36	1"	70	165
MH = 06312532 - FC	125	45	388	30	41	M 33 x 2	M 64 x 3	120	57	130	138	40	30	45	66	45	1"	90	203
MH = 06316032 - FC	160	59	431	35	51	M 42 x 2	M 80 x 3	135	70	146	150	50	35	56	84	56	1-¼"	110	240
MH = 06320032 - FC	200	59	488	35	51	M 48 x 2	M 100 x 3	145	76	178	165	50	35	63	96	63	1-¼"	140	300
MH = 06325032 - FC	250	71	585	40	64	M 56 x 2	M 125 x 4	170	88	190	230	63	45	75	112	80	1-½"	180	395
MH = 06332032 - FC	320	90	646	45	81	M 72 x 3	M 160 x 4	200	110	216	230	80	55	85	128	100	2"	220	455
MH = 06340032 - FC	400	112	681	55	101	M 90 x 3	M 200 x 4	225	110	216	240	100	55	106	140	125	2"	280	560
MH = 06350032 - FC	500	178	920	85	161	M 110 x 3	M 250 x 6	325	125	250	345	160	65	112	160	160	2-½"	350	686

HYDRAULIC CYLINDERS SERIES MH 32

63 Bar Pressure

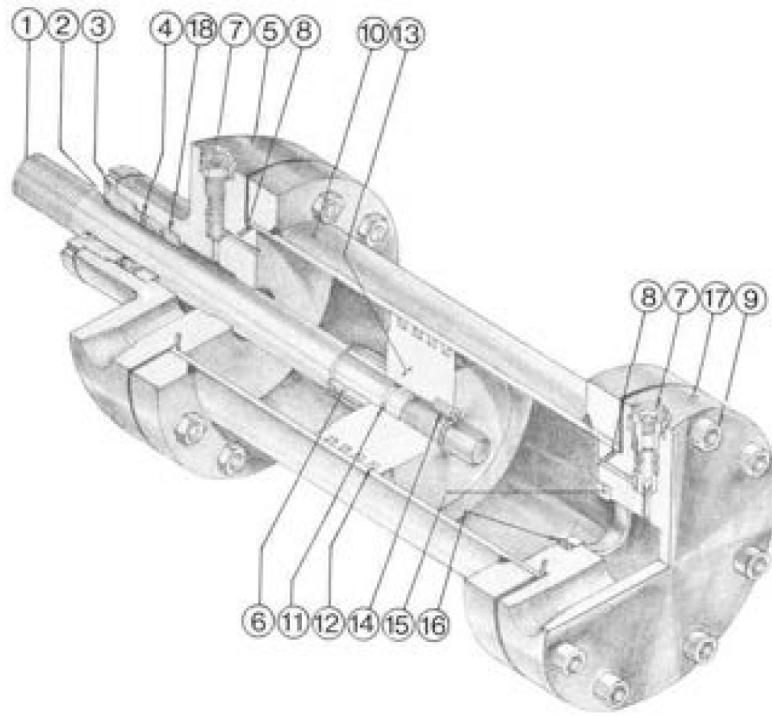


BORE (mm)	A	B	C	G=P	J	Q=S	T	U	V	W
40	16	16	20	M 20 x 1.25	20	16	35	56	25	51
50	20	20	25	M 14 x 1.25	20	18	45	60	35	63
63	25	25	30	M 18 x 1.5	20	25	50	65	40	75
80	32	32	40	M 22 x 1.5	25	30	55	82	45	85
100	32	32	40	M 27 x 2	25	36	60	82	50	96
125	40	40	45	M 33 x 2	30	45	70	100	60	115
160	50	50	59	M 42 x 2	35	56	85	120	75	141
200	50	50	59	M 48 x 2	35	63	100	120	85	163
250	63	63	71	M 56 x 2	40	75	115	143	100	190
320	80	80	90	M 72 x 3	45	85	130	170	115	215

BORE (mm)	A	B	C	D	E	F	G	H	J	K	L	M
40	16	16	20	45	118	22	47	14	20	59	66	80
50	20	20	25	47	122	22	57	14	20	63	70	84
63	25	25	32	52	140	22	67	18	20	68	75	89
80	32	32	40	63	168	25	71	21	25	85	95	110
100	32	32	40	63	168	25	71	21	25	85	95	110
125	40	40	45	76	206	38	100	27	30	110	120	134
160	50	50	59	90	246	38	108	33	35	130	143	171
200	50	50	59	95	270	44	114	40	35	130	143	171
250	63	63	71	107	294	44	127	40	40	153	169	210
320	80	80	90	120	320	44	144	40	45	180	196	237

MILL TYPE METRIC HYDRAULIC CYLINDERS SERIES MH 33

100 Bar Pressure



PART LIST

ITEM	QTY.	DESCRIPTION
1	1 only	Cylinder Rod (chrome plated)
2	*1 only	Rod Wiper
3	**1 only	Gland Bushing
4	1 set	Gland Seal - Chevron "V" Ring
5	1 only	Front Head
6	1 only	Front Cushion
7	2 only	Adjustable Cushion Assembly
8	*2 only	Head Static Seal - "O" Ring
9	2 sets	Head Securing Cap Screws and Nuts

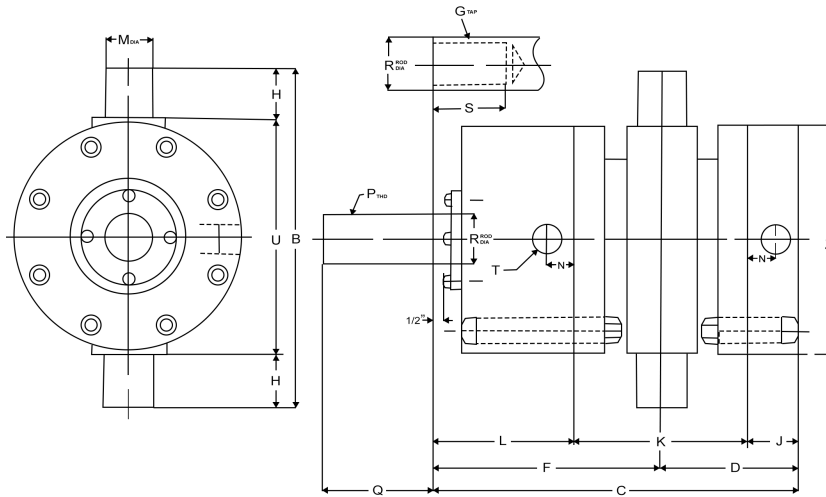
ITEM	QTY.	DESCRIPTION
10	1 only	Cylinder Barrel Assembly
11	*1 only	Piston Rod Seal - "O" Ring
12	*1 set	Piston Dynamic Seal - Piston Ring
13	1 only	Piston
14	1 only	Piston Securing Screw
15	1 only	Rear Cushion
16	2 only	Rear Cushion Securing Screw
17	1 only	Rear Head
18	1 only	Lower Gland Bearing

* Spare Parts
** Optional Spare Parts

HYDRAULIC CYLINDERS SERIES MH 33

100 Bar Pressure

Trunnion Mtg.

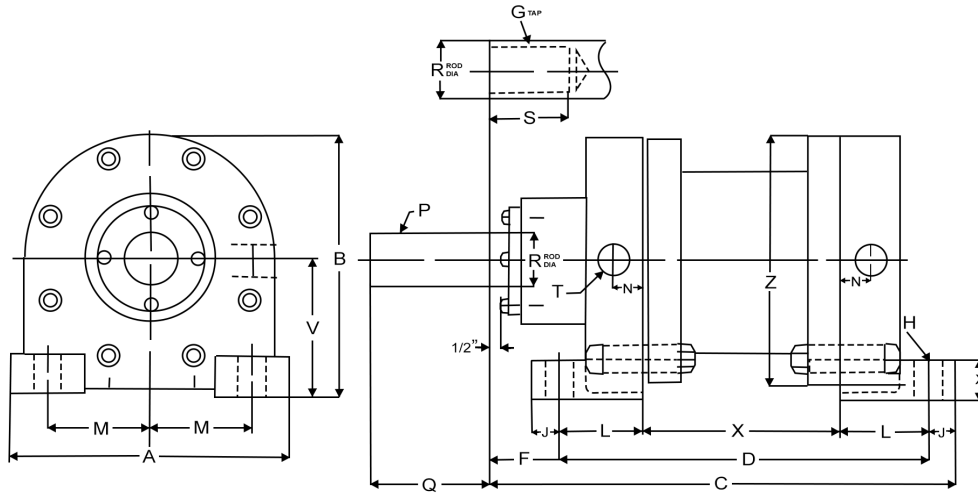


MODEL NO.	BORE (mm)	B	C	D	F	G _{1:1} =P _{1:1}	G _{2:1} =P _{2:1}	H	J	K	L	M	N	Q _{st} =S _{st}	Q _{lg} =S _{lg}	R	T	U	R2:1	Z _{max}
MH - 10004033 - T	40	122	183	68	115	M 14 x 1.25	M 20 x 1.5	16	40	56	87	20	19	18	28	20	½"	90	28	90
MH - 10005033 - T	50	145	194	74	120	M 20 x 1.5	M 27 x 1.5	20	44	60	90	25	19	28	40	25	½"	105	36	110
MH - 10006333 - T	63	170	213	77	136	M 20 x 1.5	M 33 x 2	25	44	66	103	32	22	28	40	32	¾"	120	45	125
MH - 10008033 - T	80	199	240	88	152	M 27 x 2	M 42 x 2	32	50	76	114	40	25	36	54	36	¾"	135	56	150
MH - 10010033 - T	100	240	277	102	175	M 33 x 2	M 48 x 2	40	57	90	130	50	30	45	66	45	1"	160	70	165
MH - 10012533 - T	125	295	295	107	188	M 36 x 2	M 64 x 3	50	57	100	138	63	30	50	72	50	1"	195	90	203
MH - 10016033 - T	160	366	344	130	214	M 48 x 2	M 80 x 3	63	70	120	154	80	35	63	96	63	1-¼"	240	110	240
MH - 10020033 - T	200	455	392	146	246	M 56 x 2	M 100 x 3	80	76	140	176	100	35	75	112	80	1-¼"	295	140	300
MH - 10025033 - T	250	570	507	166	341	M 72 x 3	M 125 x 4	100	88	156	263	125	45	85	128	100	1-½"	370	180	395
MH - 10032033 - T	320	720	598	195	403	M 90 x 3	M 160 x 4	125	110	170	318	160	55	106	140	125	2"	470	220	465
MH - 10040033 - T	400	890	675	214	461	M 110 x 3	M 200 x 4	160	114	200	361	200	55	112	160	160	2"	570	280	616
MH - 10050033 - T	500	1150	780	240	520	M 140 x 4	M 250 x 6	250	140	200	420	250	65	140	180	200	2-½"	700	350	756

HYDRAULIC CYLINDERS SERIES MH 33

100 Bar Pressure

Base Mtg.

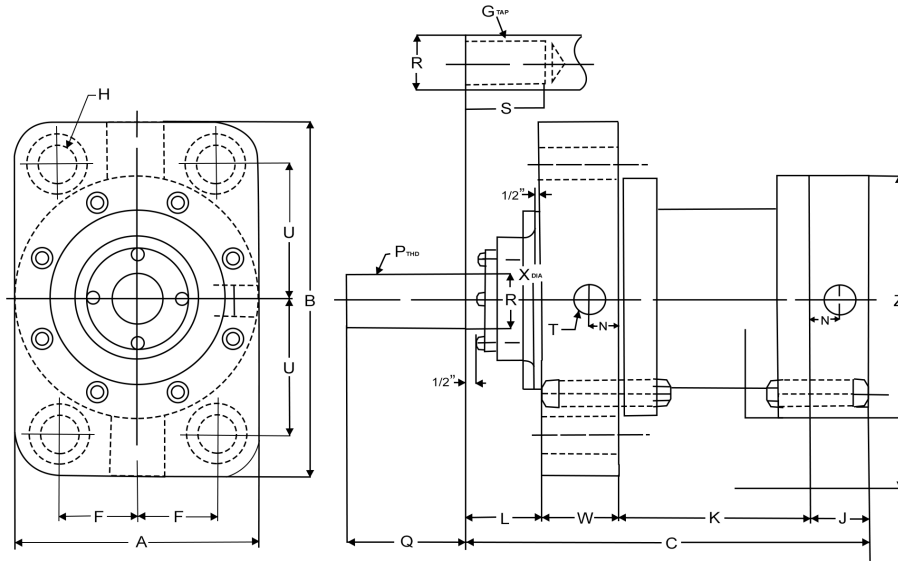


MODEL NO.	BORE (mm)	A	B	C	D	F	$G_{1:1}=P_{1:1}$	$G_{2:1}=P_{2:1}$	H	J	K	L	M	N	$Q_{st}=S_{st}$	$Q_{lg}=S_{lg}$	R	T	R2:1	v	X	Z _{max}
MH - 10004033 - B	40	110	102	211	164	33	M 14 x 1.25	M 20 x 1.5	14	14	56	54	41	19	18	28	20	½"	28	57	22	90
MH - 10005033 - B	50	130	122	218	168	36	M 20 x 1.5	M 27 x 1.5	14	14	60	54	51	19	28	40	25	½"	36	67	22	110
MH - 10006333 - B	63	145	137	241	182	45	M 20 x 1.5	M 33 x 2	14	14	66	58	59	22	28	40	32	¾"	45	74	22	125
MH - 10008033 - B	80	170	162	270	200	52	M 27 x 2	M 42 x 2	18	18	76	62	67	25	36	54	36	¾"	56	87	25	150
MH - 10010033 - B	100	185	177	321	248	51	M 33 x 2	M 48 x 2	22	22	90	79	71	30	45	66	45	1"	70	94	25	165
MH - 10012533 - B	125	223	215	349	268	54	M 36 x 2	M 64 x 3	27	27	100	84	85	30	50	72	50	1"	90	113	32	203
MH - 10016033 - B	160	260	252	398	272	57	M 48 x 2	M 80 x 3	27	27	120	97	103	35	63	96	63	1-¼"	110	132	38	240
MH - 10020033 - B	200	320	312	452	352	70	M 56 x 2	M 100 x 3	30	30	140	106	130	35	75	112	80	1-¼"	140	162	44	300
MH - 10025033 - B	250	415	420	568	394	144	M 72 x 3	M 125 x 4	30	30	156	119	178	45	85	128	100	1-½"	180	222	44	395
MH - 10032033 - B	320	485	490	658	450	178	M 90 x 3	M 160 x 4	30	30	170	140	213	55	106	140	125	2"	220	257	44	465
MH - 10040033 - B	400	636	640	757	506	218	M 110 x 3	M 200 x 4	33	33	200	143	285	55	112	160	160	2"	280	332	51	616
MH - 10050033 - B	500	776	780	837	542	249	M 140 x 4	M 250 x 6	46	46	200	171	342	65	140	180	200	2-½"	350	402	70	756

HYDRAULIC CYLINDERS SERIES MH 33

100 Bar Pressure

Front Flange Mtg.

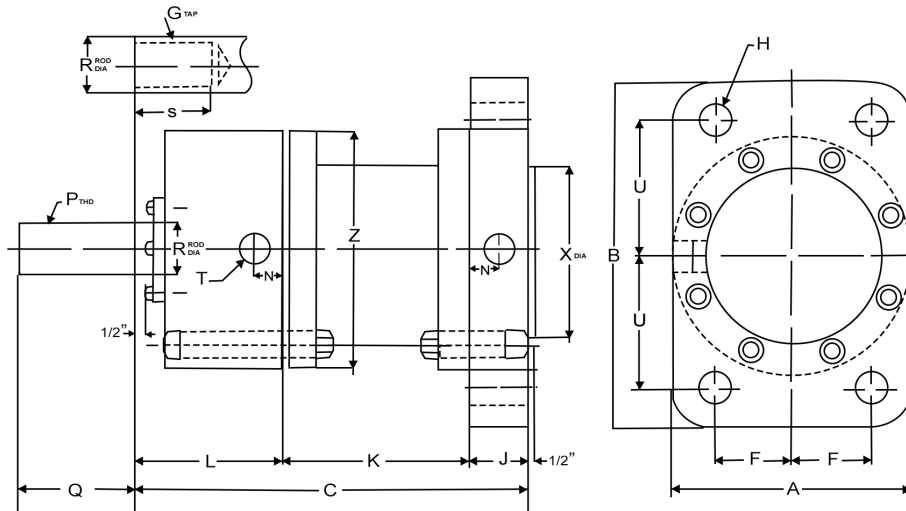


MODEL NO.	BORE (mm)	A	B	C	F	G _{1:1} =P _{1:1}	G _{2:1} =P _{2:1}	H	J	K	L	N	Q _{st} =S _{st}	Q _{lg} =S _{lg}	R	T	R2:1	U	W	X	Z _{max}
MH - 10004033 - FF	40	90	168	183	21	M 14 x 1.25	M 20 x 1.5	14	40	56	49	19	18	28	20	½"	28	60	38	78	90
MH - 10005033 - FF	50	110	182	194	31	M 20 x 1.5	M 27 x 1.5	14	44	60	46	19	28	40	25	½"	36	67	44	84	110
MH - 10006333 - FF	63	125	214	213	35	M 20 x 1.5	M 33 x 2	18	44	66	59	22	28	40	32	¾"	45	79	44	90	125
MH - 10008033 - FF	80	150	260	240	41	M 27 x 2	M 42 x 2	24	50	76	70	25	36	54	36	¾"	56	96	44	113	150
MH - 10010033 - FF	100	165	284	277	46	M 33 x 2	M 48 x 2	27	57	90	86	30	45	66	45	1"	70	105	44	128	165
MH - 10012533 - FF	125	203	340	295	59	M 36 x 2	M 64 x 3	33	57	100	88	30	50	72	50	1"	90	127	50	178	203
MH - 10016033 - FF	160	240	398	344	70	M 48 x 2	M 80 x 3	40	70	120	97	35	63	96	63	1-¼"	110	149	57	178	240
MH - 10020033 - FF	200	300	468	392	94	M 56 x 2	M 100 x 3	46	76	140	100	35	75	112	80	1-¼"	140	178	76	229	300
MH - 10025033 - FF	250	395	588	507	130	M 72 x 3	M 125 x 4	58	88	156	174	45	85	128	100	1-½"	180	226	89	267	395
MH - 10032033 - FF	320	465	666	598	158	M 90 x 3	M 160 x 4	65	110	170	229	55	106	140	125	2"	220	258	89	305	465
MH - 10040033 - FF	400	616	819	675	220	M 110 x 3	M 200 x 4	78	114	200	259	55	112	160	160	2"	280	323	102	375	616
MH - 10050033 - FF	500	*	*	741	*	M 140 x 4	M 250 x 6	*	140	200	*	65	140	180	200	2-½"	350	*	*	*	756

HYDRAULIC CYLINDERS SERIES MH 33

100 Bar Pressure

Rear Flange Mtg.

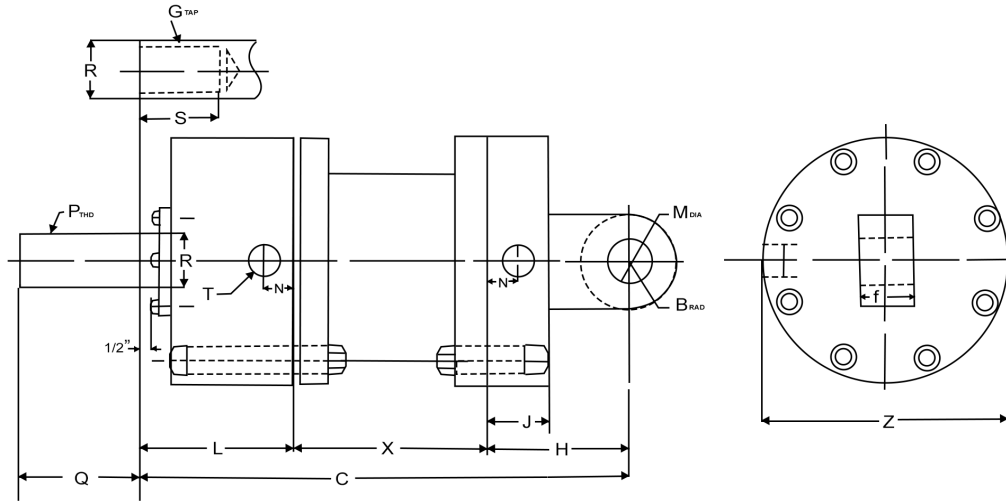


MODEL NO.	BORE (mm)	A	B	C	F	G _{1:1} =P _{1:1}	G _{2:1} =P _{2:1}	H	J	K	L	N	Q _{st} =S _{st}	Q _{lg} =S _{lg}	R	T	R2:1	U	X	Z _{max}
MH - 10004033 - RF	40	90	168	183	21	M 14 x 1.25	M 20 x 1.5	14	40	56	87	19	18	28	20	½"	28	60	78	90
MH - 10005033 - RF	50	110	182	194	31	M 20 x 1.5	M 27 x 1.5	14	44	60	90	19	28	40	25	½"	36	67	84	110
MH - 10006333 - RF	63	125	214	213	35	M 20 x 1.5	M 33 x 2	18	44	66	103	22	28	40	32	¾"	45	79	90	125
MH - 10008033 - RF	80	150	260	240	41	M 27 x 2	M 42 x 2	24	50	76	114	25	36	54	36	¾"	56	96	113	150
MH - 10010033 - RF	100	165	284	277	46	M 33 x 2	M 48 x 2	27	57	90	130	30	45	66	45	1"	70	105	128	165
MH - 10012533 - RF	125	203	340	295	59	M 36 x 2	M 64 x 3	33	57	100	138	30	50	72	50	1"	90	127	178	203
MH - 10016033 - RF	160	240	398	344	70	M 48 x 2	M 80 x 3	40	70	120	154	35	63	96	63	1-¼"	110	149	178	240
MH - 10020033 - RF	200	300	468	392	94	M 56 x 2	M 100 x 3	46	76	140	176	35	75	112	80	1-¼"	140	178	229	300
MH - 10025033 - RF	250	395	588	507	130	M 72 x 3	M 125 x 4	58	88	156	263	45	85	128	100	1-½"	180	226	267	395
MH - 10032033 - RF	320	465	666	598	158	M 90 x 3	M 160 x 4	65	110	170	318	55	106	140	125	2"	220	258	305	465
MH - 10040033 - RF	400	616	819	675	220	M 110 x 3	M 200 x 4	78	114	200	361	55	112	160	160	2"	280	323	375	616
MH - 10050033 - RF	500	*	*	741	*	M 140 x 4	M 250 x 6	*	140	200	420	65	140	180	200	2-½"	350	*	*	756

HYDRAULIC CYLINDERS SERIES MH 33

100 Bar Pressure

Male Clevis Mtg.

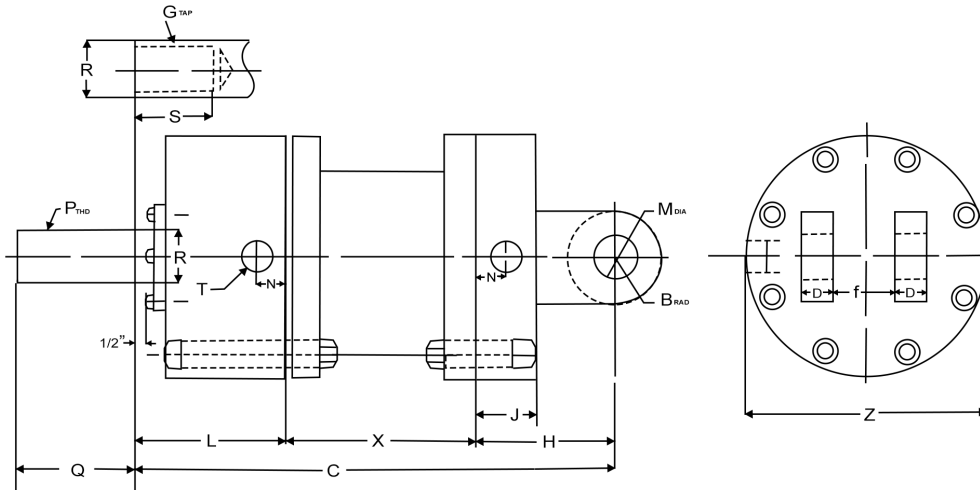


MODEL NO.	BORE (mm)	B	C	F	G _{1:1} =P _{1:1}	G _{2:1} =P _{2:1}	H	J	K	L	M	N	Q _{st} =S _{st}	Q _{ig} =S _{ig}	R	T	R2:1	Z _{max}
MH - 10004033 - MC	40	25	224	20	M 14 x 1.25	M 20 x 1.5	81	40	56	87	20	19	18	28	20	½"	28	90
MH - 10005033 - MC	50	32	246	25	M 20 x 1.5	M 27 x 1.5	96	44	60	90	25	19	28	40	25	½"	36	110
MH - 10006333 - MC	63	40	278	32	M 20 x 1.5	M 33 x 2	109	44	66	103	32	22	28	40	32	¾"	45	125
MH - 10008033 - MC	80	47	322	40	M 27 x 2	M 42 x 2	132	50	76	114	40	25	36	54	36	¾"	56	150
MH - 10010033 - MC	100	59	372	50	M 33 x 2	M 48 x 2	152	57	90	130	50	30	45	66	45	1"	70	165
MH - 10012533 - MC	125	71	398	63	M 36 x 2	M 64 x 3	160	57	100	138	63	30	50	72	50	1"	90	203
MH - 10016033 - MC	160	90	479	80	M 48 x 2	M 80 x 3	205	70	120	154	80	35	63	96	63	1-¼"	110	240
MH - 10020033 - MC	200	112	557	100	M 56 x 2	M 100 x 3	241	76	140	176	100	35	75	112	80	1-¼"	140	300
MH - 10025033 - MC	250	145	738	125	M 72 x 3	M 125 x 4	311	88	156	263	125	45	85	128	100	1-½"	180	395
MH - 10032033 - MC	320	178	868	160	M 90 x 3	M 160 x 4	380	110	170	318	160	55	106	140	125	2"	220	465
MH - 10040033 - MC	400	230	925	200	M 110 x 3	M 200 x 4	364	114	200	361	200	55	112	160	160	2"	280	616
MH - 10050033 - MC	500	320	1050	250	M 140 x 4	M 250 x 6	430	140	200	420	250	65	140	180	200	2-½"	350	756

HYDRAULIC CYLINDERS SERIES MH 33

100 Bar Pressure

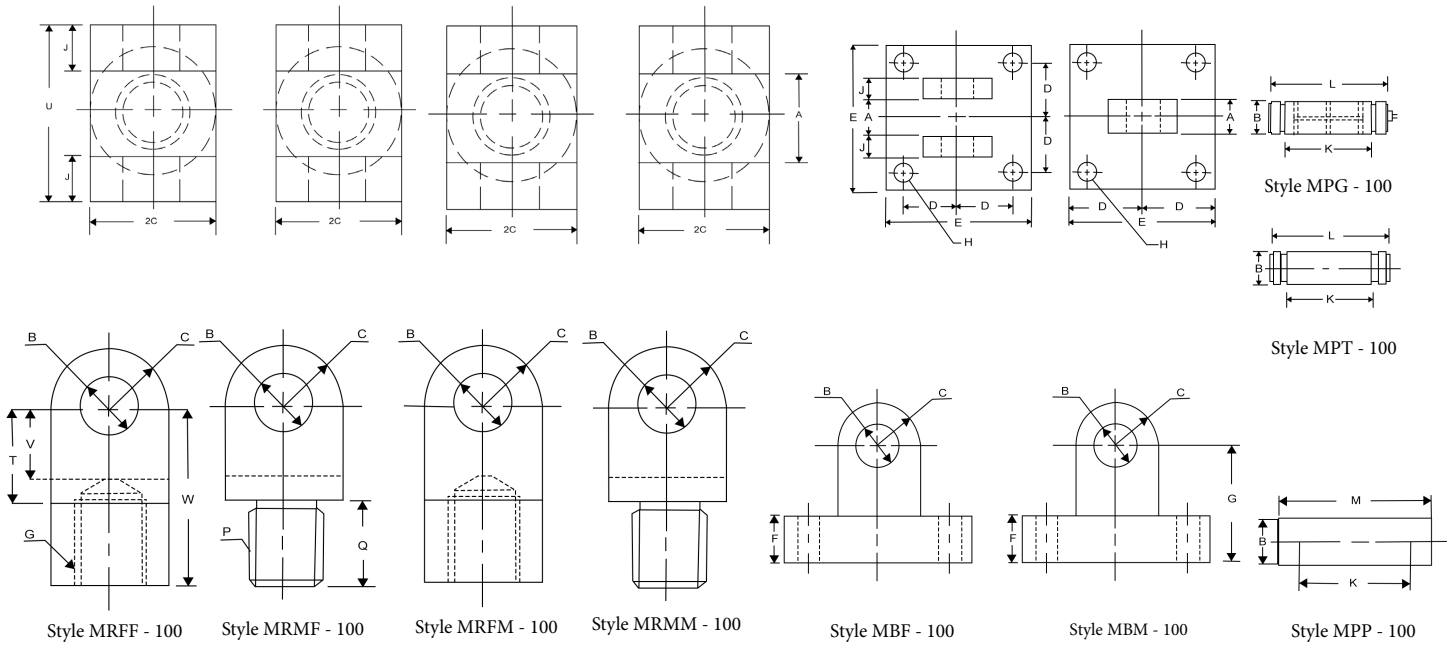
Female Clevis Mtg.



MODEL NO.	BORE (mm)	B	C	D	F	G _{1:1} =P _{1:1}	G _{2:1} =P _{2:1}	H	J	K	L	M	N	Q _{st} =S _{st}	Q _{lg} =S _{lg}	R	T	R2:1	Z _{max}
MH - 10004033 - FC	40	25	224	20	21	M 14 x 1.25	M 20 x 1.5	81	40	56	87	20	19	18	28	20	½"	28	90
MH - 10005033 - FC	50	32	246	20	26	M 20 x 1.5	M 27 x 1.5	96	44	60	90	25	19	28	40	25	½"	36	110
MH - 10006333 - FC	63	40	278	25	33	M 20 x 1.5	M 33 x 2	109	44	66	103	32	22	28	40	32	¾"	45	125
MH - 10008033 - FC	80	47	322	30	41	M 27 x 2	M 42 x 2	132	50	76	114	40	25	36	54	36	¾"	56	150
MH - 10010033 - FC	100	59	372	35	51	M 33 x 2	M 48 x 2	152	57	90	130	50	30	45	66	45	1"	70	165
MH - 10012533 - FC	125	71	398	40	64	M 36 x 2	M 64 x 3	160	57	100	138	63	30	50	72	50	1"	90	203
MH - 10016033 - FC	160	90	479	45	81	M 48 x 2	M 80 x 3	205	70	120	154	80	35	63	96	63	1-¼"	110	240
MH - 10020033 - FC	200	112	557	55	101	M 56 x 2	M 100 x 3	241	76	140	176	100	35	75	112	80	1-¼"	140	300
MH - 10025033 - FC	250	145	738	70	126	M 72 x 3	M 125 x 4	311	88	156	263	125	45	85	128	100	1-½"	180	395
MH - 10032033 - FC	320	178	868	85	161	M 90 x 3	M 160 x 4	380	110	170	318	160	55	106	140	125	2"	220	465
MH - 10040033 - FC	400	230	925	95	201	M 110 x 3	M 200 x 4	364	114	200	361	200	55	112	160	160	2"	280	616
MH - 10050033 - FC	500	320	1050	115	251	M 140 x 4	M 250 x 6	430	140	200	420	250	65	140	180	200	2-½"	350	756

HYDRAULIC CYLINDERS SERIES MH 33

100 Bar Pressure

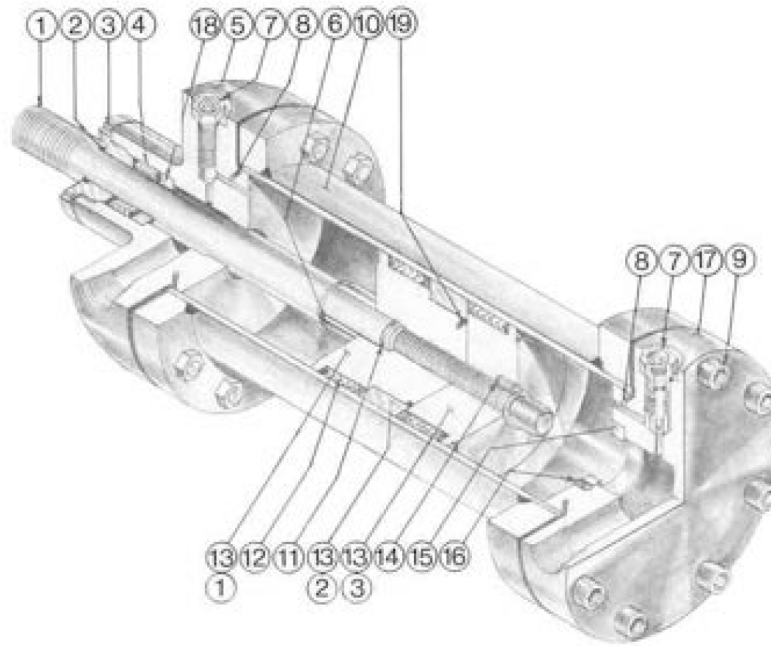


BORE (mm)	A	B	C	G=P	J	Q=S	T	U	V	W
40	20	20	25	M 14 x 1.25	20	18	51	60	41	69
50	25	25	32	M 20 x 1.5	20	28	62	65	52	90
63	32	32	40	M 20 x 1.5	25	28	75	82	65	103
80	40	40	47	M 27 x 2	30	36	92	100	82	128
100	50	50	59	M 33 x 2	35	45	110	120	95	155
125	63	63	71	M 36 x 2	40	50	118	143	103	168
160	80	80	90	M 48 x 2	45	63	150	170	135	213
200	100	100	112	M 56 x 2	55	75	180	210	165	255
250	125	125	145	M 72 x 3	70	85	243	265	223	336
320	160	160	178	M 90 x 3	85	106	290	330	270	396

BORE (mm)	A	B	C	D	E	F	G	H	J	K	L	M
40	20	20	25	47	122	22	53	14	20	63	70	84
50	25	25	32	52	132	22	62	14	20	68	75	89
63	32	32	40	58	144	22	72	14	25	85	95	110
80	40	40	47	70	176	25	88	18	30	110	120	134
100	50	50	59	83	210	25	96	22	35	130	143	171
125	63	63	71	98	250	32	122	27	40	153	169	210
160	80	80	90	111	276	38	150	27	45	180	196	237
200	100	100	112	133	326	44	204	30	55	225	245	288
250	125	125	145	161	382	44	244	30	70	280	300	343
320	160	160	178	193	446	51	301	30	85	350	370	413

MILL TYPE METRIC HYDRAULIC CYLINDERS SERIES MH 34

100 Bar Pressure



PART LIST

ITEM	QTY.	DESCRIPTION
1	1 only	Cylinder Rod (chrome plated)
2	*1 only	Rod Wiper
3	**1 only	Gland Bushing
4	*1 set	Gland Seal - Chevron "V" Ring
5	1 only	Front Head
6	1 only	Front Cushion
7	2 only	Adjustable Cushion Assembly
8	*2 only	Head Static Seal - "O" Ring
9	2 sets	Head Securing Cap Screws and Nuts
10	1 only	Cylinder Barrel Assembly
11	*1 only	Piston Rod Seal - "O" Ring

ITEM	QTY.	DESCRIPTION
12	*2 sets	Piston Dynamic Seal - Chevron "V" Rings
13/1	1 only	Piston - Front Section
13/2	1 only	Piston - Bushing
13/3	1 only	Piston - Rear Section
14	1 only	Piston Securing Screw
15	1 only	Rear Cushion
16	2 only	Rear Cushion Securing Screw
17	1 only	Rear Head
18	1 only	Lower Gland Bearing
19	*1 only	Piston Static Seal - "O" Ring

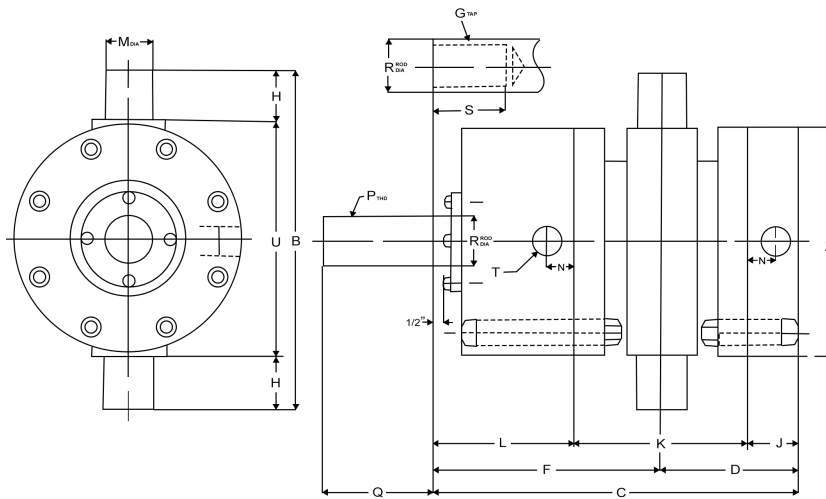
* Spare Parts

** Optional Spare Parts

HYDRAULIC CYLINDERS SERIES MH 34

100 Bar Pressure

Trunnion Mtg.

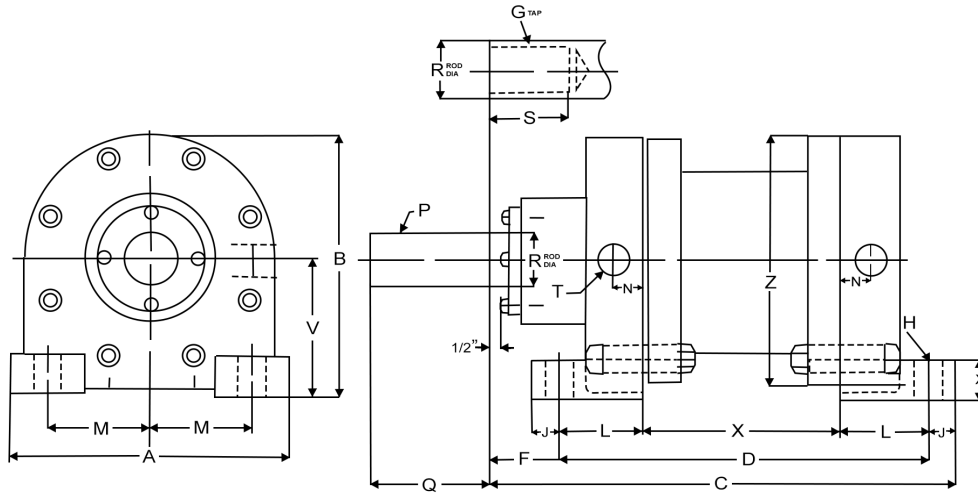


MODEL NO.	BORE (mm)	B	C	D	F	$G_{1:1}=P_{1:1}$	$G_{2:1}=P_{2:1}$	H	J	K	L	M	N	$Q_{st}=S_{st}$	$Q_{lg}=S_{lg}$	R	T	U	R2:1	Z _{max}
MH - 10004034 - T	40	122	190	71	119	M 14 x 1.25	M 20 x 1.5	16	40	63	87	20	19	18	28	20	½"	90	28	90
MH - 10005034 - T	50	145	205	79	126	M 20 x 1.5	M 27 x 1.5	20	44	71	90	25	19	28	40	25	½"	105	36	110
MH - 10006334 - T	63	170	224	82	142	M 20 x 1.5	M 33 x 2	25	44	77	103	32	22	28	40	32	¾"	120	45	125
MH - 10008034 - T	80	199	250	93	157	M 27 x 2	M 42 x 2	32	50	86	114	40	25	36	54	36	¾"	135	56	150
MH - 10010034 - T	100	240	300	113	187	M 33 x 2	M 48 x 2	40	57	113	130	50	30	45	66	45	1"	160	70	165
MH - 10012534 - T	125	295	325	122	203	M 36 x 2	M 64 x 3	50	57	130	138	63	30	50	72	50	1"	195	90	203
MH - 10016034 - T	160	366	370	143	227	M 48 x 2	M 80 x 3	63	70	146	154	80	35	63	96	63	1-¼"	240	110	240
MH - 10020034 - T	200	455	450	175	275	M 56 x 2	M 100 x 3	80	76	198	176	100	35	75	112	80	1-¼"	295	140	300
MH - 10025034 - T	250	570	550	187	363	M 72 x 3	M 125 x 4	100	88	199	263	125	45	85	128	100	1-½"	370	180	395
MH - 10032034 - T	320	720	660	226	434	M 90 x 3	M 160 x 4	125	110	232	318	160	55	106	140	125	2"	470	220	465
MH - 10040034 - T	400	890	740	246	494	M 110 x 3	M 200 x 4	160	114	265	361	200	55	112	160	160	2"	570	280	616
MH - 10050034 - T	500	1150	890	293	573	M 140 x 4	M 250 x 6	250	140	349	420	250	65	140	180	200	2-½"	700	350	756

HYDRAULIC CYLINDERS SERIES MH 34

100 Bar Pressure

Base Mtg.

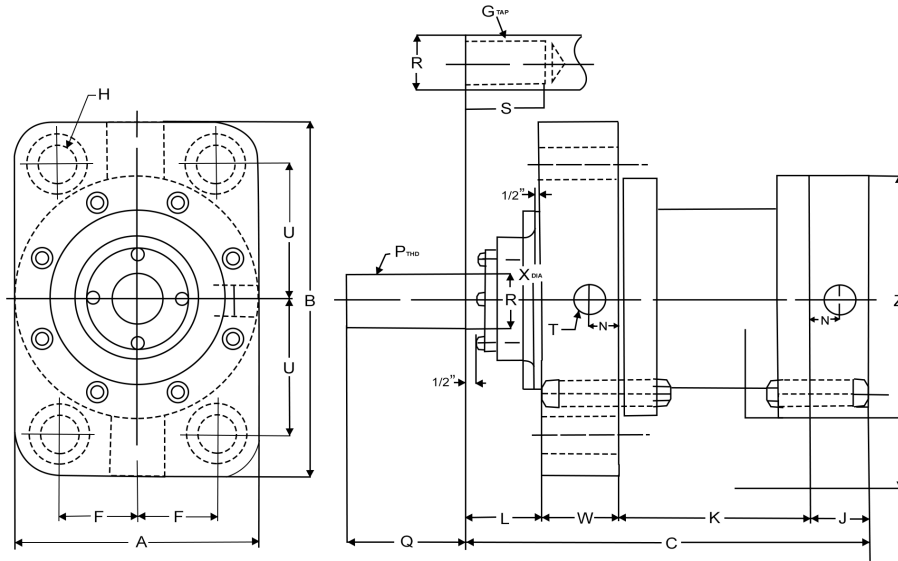


MODEL NO.	BORE (mm)	A	B	C	D	F	G _{1:1} =P _{1:1}	G _{2:1} =P _{2:1}	H	J	K	L	M	N	Q _{st} =S _{st}	Q _{lg} =S _{lg}	R	T	R2:1	v	X	Z _{max}
MH - 10004034 - B	40	110	102	218	171	33	M 14 x 1.25	M 20 x 1.5	14	14	63	54	41	19	18	28	20	½"	28	57	22	90
MH - 10005034 - B	50	130	122	229	179	36	M 20 x 1.5	M 27 x 1.5	14	14	71	54	51	19	28	40	25	½"	36	67	22	110
MH - 10006334 - B	63	145	137	252	193	45	M 20 x 1.5	M 33 x 2	14	14	77	58	59	22	28	40	32	¾"	45	74	22	125
MH - 10008034 - B	80	170	162	280	210	52	M 27 x 2	M 42 x 2	18	18	86	62	67	25	36	54	36	¾"	56	87	25	150
MH - 10010034 - B	100	185	177	344	271	51	M 33 x 2	M 48 x 2	22	22	113	79	71	30	45	66	45	1"	70	94	25	165
MH - 10012534 - B	125	223	215	379	298	54	M 36 x 2	M 64 x 3	27	27	130	84	85	30	50	72	50	1"	90	113	32	203
MH - 10016034 - B	160	260	252	424	340	57	M 48 x 2	M 80 x 3	27	27	146	97	103	35	63	96	63	1-¼"	110	132	38	240
MH - 10020034 - B	200	320	312	510	410	70	M 56 x 2	M 100 x 3	30	30	198	106	130	35	75	112	80	1-¼"	140	162	44	300
MH - 10025034 - B	250	415	420	611	437	144	M 72 x 3	M 125 x 4	30	30	199	119	178	45	85	128	100	1-½"	180	222	44	395
MH - 10032034 - B	320	485	490	720	512	178	M 90 x 3	M 160 x 4	30	30	232	140	213	55	106	140	125	2"	220	257	44	465
MH - 10040034 - B	400	636	640	802	551	218	M 110 x 3	M 200 x 4	33	33	265	143	285	55	112	160	160	2"	280	332	51	616
MH - 10050034 - B	500	776	780	942	647	249	M 140 x 4	M 250 x 6	46	46	305	171	342	65	140	180	200	2-½"	350	402	70	756

HYDRAULIC CYLINDERS SERIES MH 34

100 Bar Pressure

Front Flange Mtg.

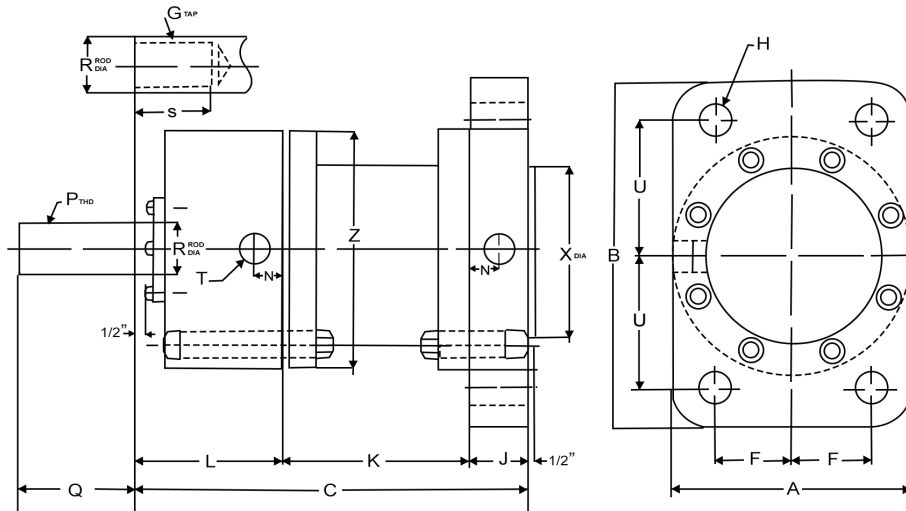


MODEL NO.	BORE (mm)	A	B	C	F	G _{1:1} =P _{1:1}	G _{2:1} =P _{2:1}	H	J	K	L	N	Q _{st} =S _{st}	Q _{lg} =S _{lg}	R	T	R2:1	U	W	X	Z _{max}
MH - 10004034 - FF	40	90	168	190	21	M 14 x 1.25	M 20 x 1.5	14	40	63	49	19	18	28	20	½"	28	60	38	78	90
MH - 10005034 - FF	50	110	182	205	31	M 20 x 1.5	M 27 x 1.5	14	44	71	46	19	28	40	25	½"	36	67	44	84	110
MH - 10006334 - FF	63	125	214	224	35	M 20 x 1.5	M 33 x 2	18	44	77	59	22	28	40	32	¾"	45	79	44	90	125
MH - 10008034 - FF	80	150	260	250	41	M 27 x 2	M 42 x 2	24	50	86	70	25	36	54	36	¾"	56	96	44	113	150
MH - 10010034 - FF	100	165	284	300	46	M 33 x 2	M 48 x 2	27	57	113	86	30	45	66	45	1"	70	105	44	128	165
MH - 10012534 - FF	125	203	340	325	59	M 36 x 2	M 64 x 3	33	57	130	88	30	50	72	50	1"	90	127	50	178	203
MH - 10016034 - FF	160	240	398	370	70	M 48 x 2	M 80 x 3	40	70	146	97	35	63	96	63	1-¼"	110	149	57	178	240
MH - 10020034 - FF	200	300	468	450	94	M 56 x 2	M 100 x 3	46	76	198	100	35	75	112	80	1-¼"	140	178	76	229	300
MH - 10025034 - FF	250	395	588	550	130	M 72 x 3	M 125 x 4	58	88	199	174	45	85	128	100	1-½"	180	226	89	267	395
MH - 10032034 - FF	320	465	666	660	158	M 90 x 3	M 160 x 4	65	110	232	229	55	106	140	125	2"	220	258	89	305	465
MH - 10040034 - FF	400	616	819	740	220	M 110 x 3	M 200 x 4	78	114	265	259	55	112	160	160	2"	280	323	102	375	616
MH - 10050034 - FF	500	*	*	890	*	M 140 x 4	M 250 x 6	*	140	305	*	65	140	180	200	2-½"	350	*	*	*	756

HYDRAULIC CYLINDERS SERIES MH 34

100 Bar Pressure

Rear Flange Mtg.

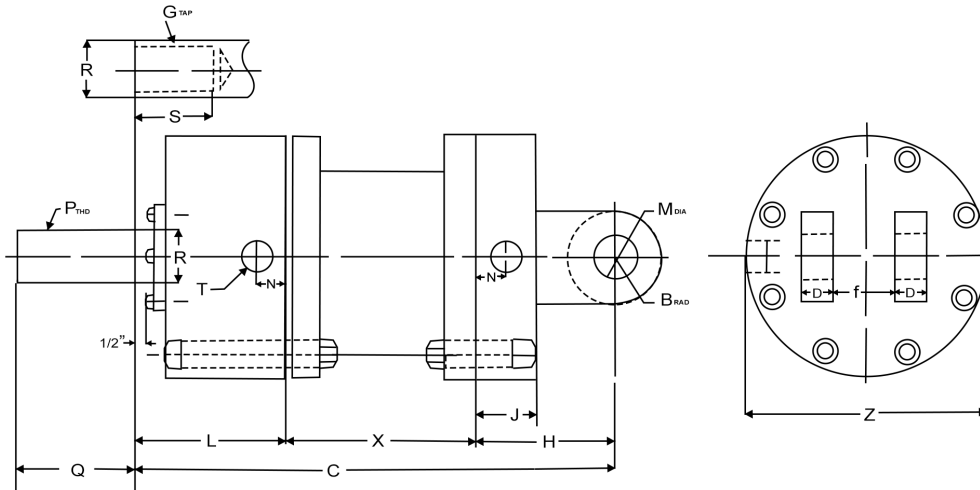


MODEL NO.	BORE (mm)	A	B	C	F	G _{1:1} =P _{1:1}	G _{2:1} =P _{2:1}	H	J	K	L	N	Q _{st} =S _{st}	Q _{lg} =S _{lg}	R	T	R2:1	U	X	Z _{max}
MH - 10004034 - RF	40	90	168	190	21	M 14 x 1.25	M 20 x 1.5	14	40	63	87	19	18	28	20	½"	28	60	78	90
MH - 10005034 - RF	50	110	182	205	31	M 20 x 1.5	M 27 x 1.5	14	44	71	90	19	28	40	25	½"	36	67	84	110
MH - 10006334 - RF	63	125	214	224	35	M 20 x 1.5	M 33 x 2	18	44	77	103	22	28	40	32	¾"	45	79	90	125
MH - 10008034 - RF	80	150	260	250	41	M 27 x 2	M 42 x 2	24	50	86	114	25	36	54	36	¾"	56	96	113	150
MH - 10010034 - RF	100	165	284	300	46	M 33 x 2	M 48 x 2	27	57	113	130	30	45	66	45	1"	70	105	128	165
MH - 10012534 - RF	125	203	340	325	59	M 36 x 2	M 64 x 3	33	57	130	138	30	50	72	50	1"	90	127	178	203
MH - 10016034 - RF	160	240	398	370	70	M 48 x 2	M 80 x 3	40	70	146	154	35	63	96	63	1-¼"	110	149	178	240
MH - 10020034 - RF	200	300	468	450	94	M 56 x 2	M 100 x 3	46	76	198	176	35	75	112	80	1-¼"	140	178	229	300
MH - 10025034 - RF	250	395	588	550	130	M 72 x 3	M 125 x 4	58	88	199	263	45	85	128	100	1-½"	180	226	267	395
MH - 10032034 - RF	320	465	666	660	158	M 90 x 3	M 160 x 4	65	110	232	318	55	106	140	125	2"	220	258	305	465
MH - 10040034 - RF	400	616	819	740	220	M 110 x 3	M 200 x 4	78	114	265	361	55	112	160	160	2"	280	323	375	616
MH - 10050034 - RF	500	*	*	890	*	M 140 x 4	M 250 x 6	*	140	305	420	65	140	180	200	2-½"	350	*	*	756

HYDRAULIC CYLINDERS SERIES MH 34

100 Bar Pressure

Female Clevis Mtg.

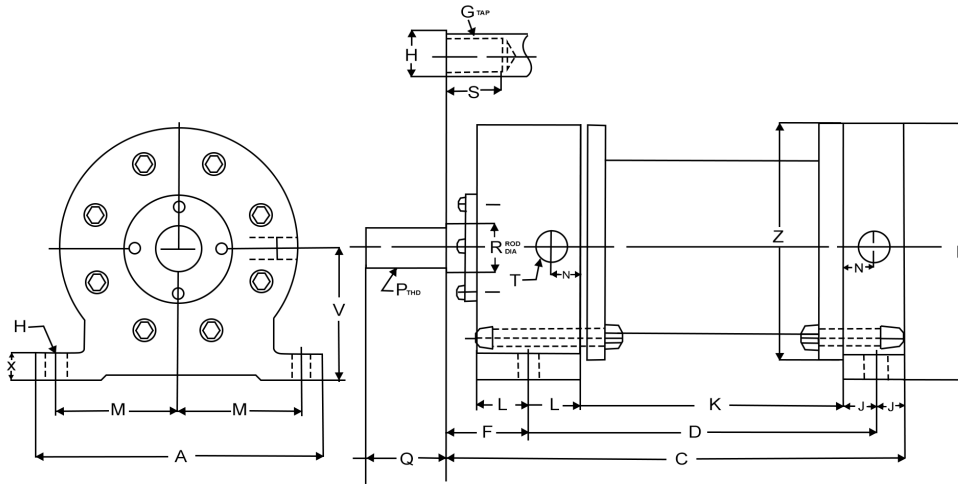


MODEL NO.	BORE (mm)	B	C	D	F	G _{1:1} =P _{1:1}	G _{2:1} =P _{2:1}	H	J	K	L	M	N	Q _{st} =S _{st}	Q _{lg} =S _{lg}	R	T	R2:1	Z _{max}
MH - 10004034 - FC	40	25	245	20	21	M 14 x 1.25	M 20 x 1.5	81	40	63	87	20	19	18	28	20	½"	28	90
MH - 10005034 - FC	50	32	269	20	26	M 20 x 1.5	M 27 x 1.5	96	44	71	90	25	19	28	40	25	½"	36	110
MH - 10006334 - FC	63	40	309	25	33	M 20 x 1.5	M 33 x 2	109	44	77	103	32	22	28	40	32	¾"	45	125
MH - 10008034 - FC	80	47	345	30	41	M 27 x 2	M 42 x 2	132	50	86	114	40	25	36	54	36	¾"	56	150
MH - 10010034 - FC	100	59	375	35	51	M 33 x 2	M 48 x 2	152	57	113	130	50	30	45	66	45	1"	70	165
MH - 10012534 - FC	125	71	455	40	64	M 36 x 2	M 64 x 3	160	57	130	138	63	30	50	72	50	1"	90	203
MH - 10016034 - FC	160	90	515	45	81	M 48 x 2	M 80 x 3	205	70	146	154	80	35	63	96	63	1-¼"	110	240
MH - 10020034 - FC	200	112	615	55	101	M 56 x 2	M 100 x 3	241	76	198	176	100	35	75	112	80	1-¼"	140	300
MH - 10025034 - FC	250	145	722	70	126	M 72 x 3	M 125 x 4	311	88	199	263	125	45	85	128	100	1-½"	180	395
MH - 10032034 - FC	320	178	800	85	161	M 90 x 3	M 160 x 4	380	110	232	318	160	55	106	140	125	2"	220	465
MH - 10040034 - FC	400	230	880	95	201	M 110 x 3	M 200 x 4	364	114	265	361	200	55	112	160	160	2"	280	616
MH - 10050034 - FC	500	320	1075	115	251	M 140 x 4	M 250 x 6	430	140	305	420	250	65	140	180	200	2-½"	350	756

HYDRAULIC CYLINDERS SERIES MH 34

100 Bar Pressure

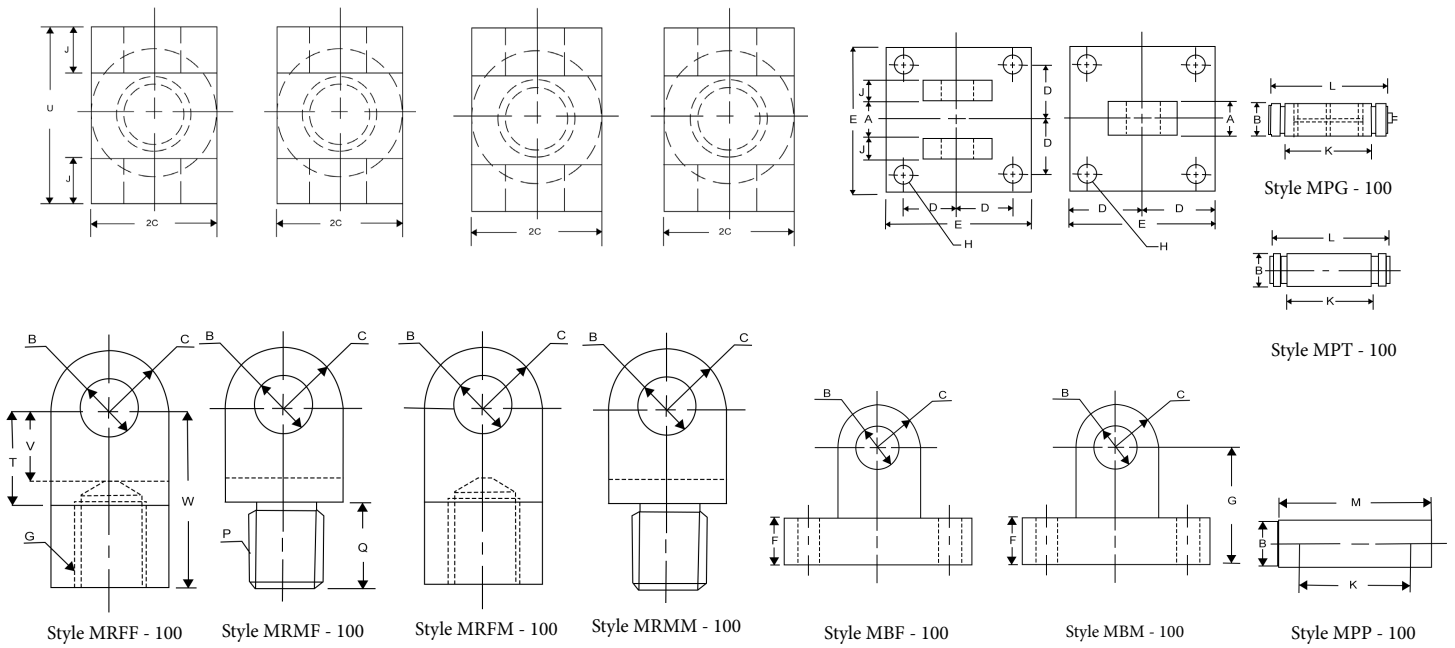
Side Log Mtg.



MODEL NO.	BORE (mm)	A	B	C	D	F	$G_{1:1}=P_{1:1}$	$G_{2:1}=P_{2:1}$	H	J	K	L	M	N	$Q_{st}=S_{st}$	$Q_{lg}=S_{lg}$	R	T	R2:1	V	X	Z _{max.}
MH - 10004034 - SL	40	152	102	242	124	81	M 14 x 1.25	M 20 x 1.5	14	20	63	41	62	19	18	28	20	½"	28	57	22	90
MH - 10005034 - SL	50	178	122	246	132	81	M 20 x 1.5	M 27 x 1.5	14	20	71	41	75	19	28	40	25	½"	36	67	22	110
MH - 10006334 - SL	63	190	137	279	147	88	M 20 x 1.5	M 33 x 2	14	22	77	48	81	22	28	40	32	¾"	45	74	22	125
MH - 10008034 - SL	80	240	162	295	156	88	M 27 x 2	M 42 x 2	18	22	86	48	102	25	36	54	36	¾"	56	87	25	150
MH - 10010034 - SL	100	279	177	324	190	98	M 33 x 2	M 48 x 2	22	29	113	48	118	30	45	66	45	1"	70	94	25	165
MH - 10012534 - SL	125	337	215	376	104	104	M 36 x 2	M 64 x 3	27	29	130	54	142	30	50	72	50	1"	90	113	32	203
MH - 10016034 - SL	160	356	252	408	104	104	M 48 x 2	M 80 x 3	27	35	146	54	151	35	63	96	63	1-¼"	110	132	38	240
MH - 10020034 - SL	200	445	312	460	117	117	M 56 x 2	M 100 x 3	30	38	198	67	193	35	75	112	80	1-¼"	140	162	44	300
MH - 10025034 - SL	250	508	420	575	158	158	M 72 x 3	M 125 x 4	30	45	199	82	224	45	85	128	100	1-½"	180	222	44	395
MH - 10032034 - SL	320	590	490	614	165	165	M 90 x 3	M 160 x 4	30	55	232	89	265	55	106	140	125	2"	220	257	44	465
MH - 10040034 - SL	400	775	640	614	165	165	M 110 x 3	M 200 x 4	33	55	265	89	355	55	112	160	160	2"	280	332	51	616
MH - 10050034 - SL	500	975	780	711	185	185	M 140 x 4	M 250 x 6	46	63	305	95	442	65	140	180	200	2-½"	350	402	70	756

HYDRAULIC CYLINDERS SERIES MH 34

100 Bar Pressure

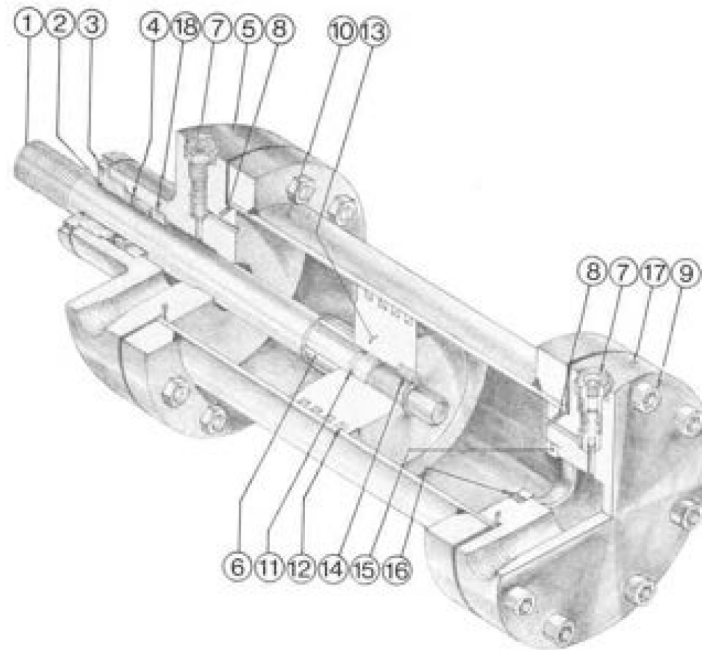


BORE (mm)	A	B	C	G=P	J	Q=S	T	U	V	W
40	20	20	25	M 14 x 1.25	20	18	51	60	41	69
50	25	25	32	M 20 x 1.5	20	28	62	65	52	90
63	32	32	40	M 20 x 1.5	25	28	75	82	65	103
80	40	40	47	M 27 x 2	30	36	92	100	82	128
100	50	50	59	M 33 x 2	35	45	110	120	95	155
125	63	63	71	M 36 x 2	40	50	118	143	103	168
160	80	80	90	M 48 x 2	45	63	150	170	135	213
200	100	100	112	M 56 x 2	55	75	180	210	165	255
250	125	125	145	M 72 x 3	70	85	243	265	223	336
320	160	160	178	M 90 x 3	85	106	290	330	270	396

BORE (mm)	A	B	C	D	E	F	G	H	J	K	L	M
40	20	20	25	47	122	22	53	14	20	63	70	84
50	25	25	32	52	132	22	62	14	20	68	75	89
63	32	32	40	58	144	22	72	14	25	85	95	110
80	40	40	47	70	176	25	88	18	30	110	120	134
100	50	50	59	83	210	25	96	22	35	130	143	171
125	63	63	71	98	250	32	122	27	40	153	169	210
160	80	80	90	111	276	38	150	27	45	180	196	237
200	100	100	112	133	326	44	204	30	55	225	245	288
250	125	125	145	161	382	44	244	30	70	280	300	343
320	160	160	178	193	446	51	301	30	85	350	370	413

MILL TYPE METRIC HYDRAULIC CYLINDERS SERIES MH 35

160 Bar Pressure



PART LIST

ITEM	QTY.	DESCRIPTION
1	1 only	Cylinder Rod (chrome plated)
2	*1 only	Rod Wiper
3	**1 only	Gland Bushing
4	1 set	Gland Seal - Chevron "V" Ring
5	1 only	Front Head
6	1 only	Front Cushion
7	2 only	Adjustable Cushion Assembly
8	*2 only	Head Static Seal - "O" Ring
9	2 sets	Head Securing Cap Screws and Nuts

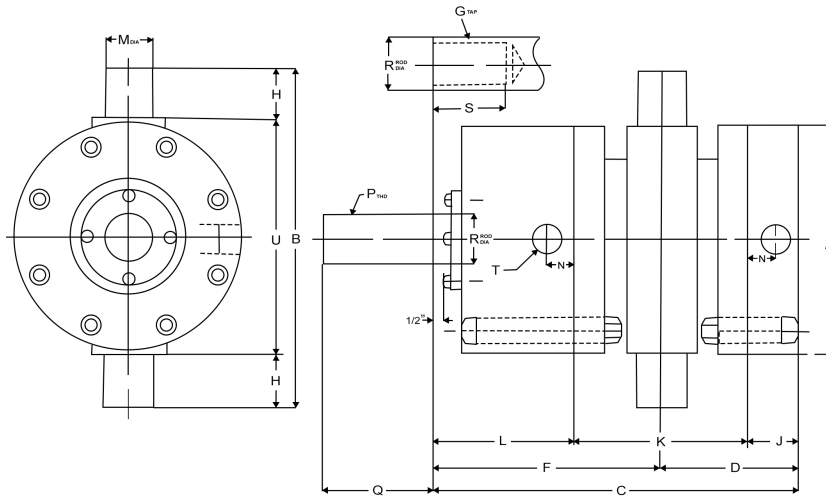
ITEM	QTY.	DESCRIPTION
10	1 only	Cylinder Barrel Assembly
11	*1 only	Piston Rod Seal - "O" Ring
12	*1 set	Piston Dynamic Seal - Piston Ring
13	1 only	Piston
14	1 only	Piston Securing Screw
15	1 only	Rear Cushion
16	2 only	Rear Cushion Securing Screw
17	1 only	Rear Head
18	1 only	Lower Gland Bearing

* Spare Parts
** Optional Spare Parts

HYDRAULIC CYLINDERS SERIES MH 35

160 Bar Pressure

Trunnion Mtg.

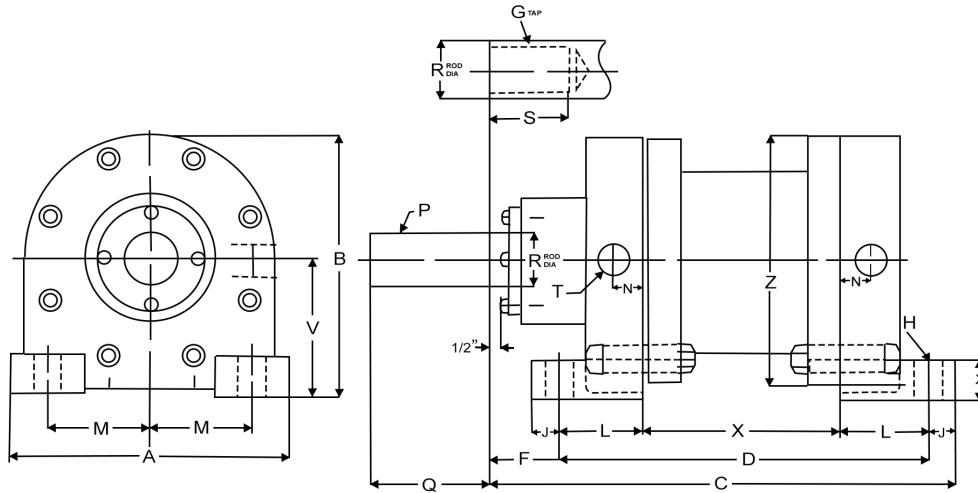


MODEL NO.	BORE (mm)	B	C	D	F	G _{1:1} =P _{1:1}	G _{2:1} =P _{2:1}	H	J	K	L	M	N	Q _{st} =S _{st}	Q _{lg} =S _{lg}	R	T	U	R2:1	Z _{max}
MH - 16004035 - T	40	122	190	71	119	M 16 x 1.5	M 20 x 1.5	16	40	63	87	20	19	22	32	28	½"	90	28	98
MH - 16005035 - T	50	145	205	79	126	M 20 x 1.5	M 27 x 1.5	20	44	71	90	25	19	28	40	28	½"	105	36	110
MH - 16006335 - T	63	170	224	82	142	M 27 x 2	M 33 x 2	25	44	77	103	32	22	36	54	36	¾"	120	45	128
MH - 16008035 - T	80	199	250	93	157	M 33 x 2	M 42 x 2	32	50	86	114	40	25	45	66	45	¾"	135	56	152
MH - 16010035 - T	100	240	300	113	187	M 42 x 2	M 48 x 2	40	57	113	130	50	30	56	84	56	1"	160	70	178
MH - 16012535 - T	125	295	325	122	203	M 48 x 2	M 64 x 3	50	57	130	138	63	30	63	96	70	1"	195	90	216
MH - 16016035 - T	160	366	370	143	227	M 64 x 3	M 80 x 3	63	70	146	154	80	35	85	128	90	1-¼"	240	110	250
MH - 16020035 - T	200	455	450	175	275	M 80 x 3	M 100 x 3	80	76	198	176	100	35	95	140	110	1-¼"	295	140	330
MH - 16025035 - T	250	570	550	187	363	M 100 x 3	M 125 x 4	100	88	199	263	125	45	112	160	140	1-½"	370	180	395
MH - 16032035 - T	320	720	660	226	434	M 125 x 4	M 160 x 4	125	110	232	318	160	55	125	180	180	2"	470	220	500
MH - 16040035 - T	400	890	740	246	494	M 160 x 4	M 200 x 4	160	114	265	361	200	55	160	220	220	2"	570	280	640
MH - 16050035 - T	500	1150	890	293	573	M 180 x 4	M 250 x 6	250	140	349	420	250	65	180	250	280	2-½"	700	350	780

HYDRAULIC CYLINDERS SERIES MH 35

160 Bar Pressure

Base Mtg.

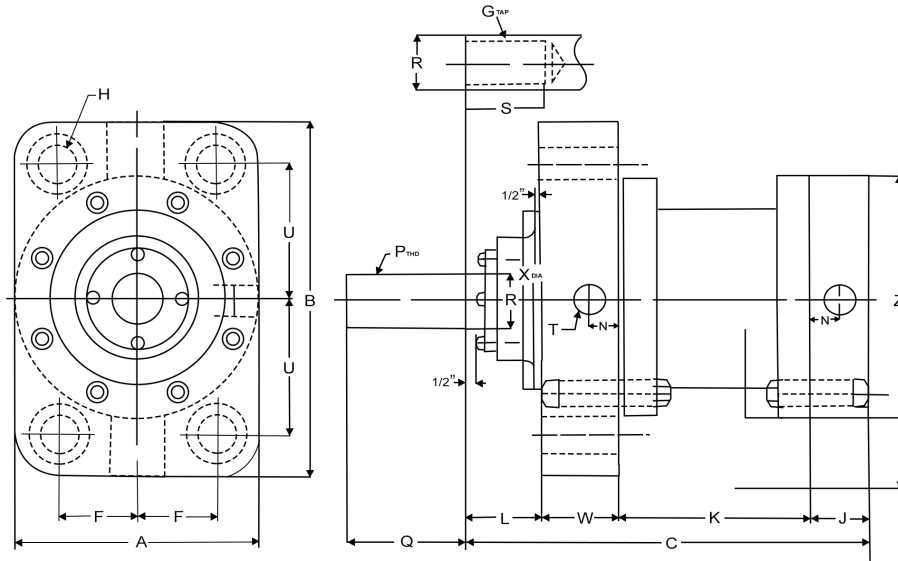


MODEL NO.	BORE (mm)	A	B	C	D	F	$G_{1:1}=P_{1:1}$	$G_{2:1}=P_{2:1}$	H	J	K	L	M	N	$Q_{st}=S_{st}$	$Q_g=S_g$	R	T	R2:1	V	X	Z _{max}
MH - 16004035 - B	40	118	102	218	171	33	M 16 x 1.5	M 20 x 1.5	14	14	63	54	45	19	22	32	28	½"	28	57	22	98
MH - 16005035 - B	50	130	122	233	187	32	M 20 x 1.5	M 27 x 1.5	14	14	71	58	51	19	28	40	28	½"	36	67	22	110
MH - 16006335 - B	63	148	138	252	193	45	M 27 x 2	M 33 x 2	14	14	77	58	60	22	36	54	36	¾"	45	75	22	128
MH - 16008035 - B	80	172	162	286	222	46	M 33 x 2	M 42 x 2	18	18	86	68	68	25	45	66	45	¾"	56	87	25	152
MH - 16010035 - B	100	198	178	344	271	51	M 42 x 2	M 48 x 2	22	22	113	79	77	30	56	84	56	1"	70	95	25	178
MH - 16012535 - B	125	236	216	379	298	54	M 48 x 2	M 64 x 3	27	27	130	84	91	30	63	96	70	1"	90	114	32	216
MH - 16016035 - B	160	270	252	424	340	57	M 64 x 3	M 80 x 3	27	27	146	97	108	35	85	128	90	1-¼"	110	132	38	250
MH - 16020035 - B	200	350	312	510	410	70	M 80 x 3	M 100 x 3	30	30	198	106	145	35	95	140	110	1-¼"	140	162	44	330
MH - 16025035 - B	250	415	420	616	441	142	M 100 x 3	M 125 x 4	33	33	199	121	174	45	112	160	140	1-½"	180	222	51	395
MH - 16032035 - B	320	520	480	726	518	175	M 125 x 4	M 160 x 4	33	33	232	143	227	55	125	180	180	2"	220	252	51	500
MH - 16040035 - B	400	660	584	832	585	201	M 160 x 4	M 200 x 4	46	46	265	160	284	55	160	220	220	2"	280	304	57	640
MH - 16050035 - B	500	810	710	1013	689	228	M 180 x 4	M 250 x 6	52	52	305	192	353	65	180	250	280	2-½"	350	367	76	780

HYDRAULIC CYLINDERS SERIES MH 35

160 Bar Pressure

Front Flange Mtg.

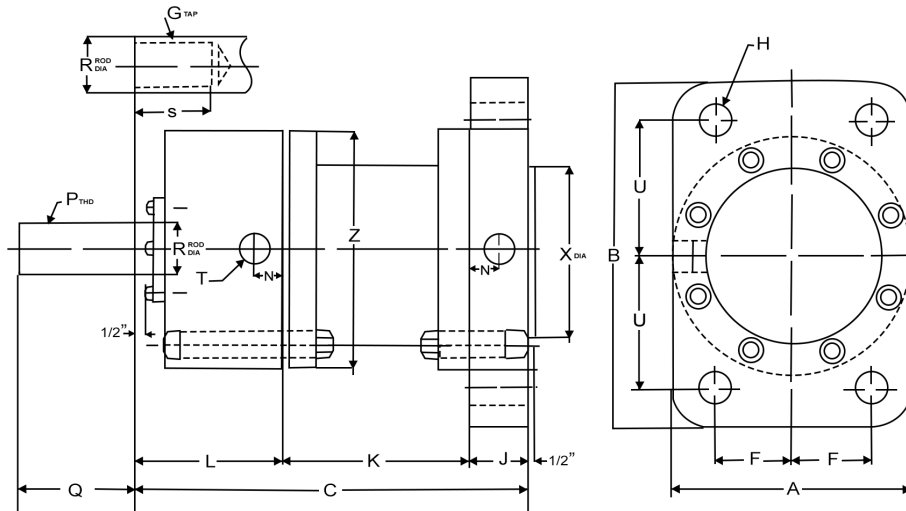


MODEL NO.	BORE (mm)	A	B	C	F	G _{1:1} =P _{1:1}	G _{2:1} =P _{2:1}	H	J	K	L	N	Q _{st} =S _{st}	Q _{lg} =S _{lg}	R	T	R2:1	U	W	X	Z _{max}
MH - 16004035 - FF	40	98	168	190	30	M 16 x 1.5	M 20 x 1.5	14	40	63	49	19	22	32	28	½"	28	65	38	78	98
MH - 16005035 - FF	50	110	188	205	32	M 20 x 1.5	M 27 x 1.5	18	44	71	46	19	28	40	28	½"	36	71	44	84	110
MH - 16006335 - FF	63	128	216	224	38	M 27 x 2	M 33 x 2	21	44	77	59	22	36	54	36	¾"	45	82	44	90	128
MH - 16008035 - FF	80	152	262	250	44	M 33 x 2	M 42 x 2	21	50	86	70	25	45	66	45	¾"	56	99	50	113	152
MH - 16010035 - FF	100	178	308	300	51	M 42 x 2	M 48 x 2	33	57	113	86	30	56	84	56	1"	70	116	5	128	178
MH - 16012535 - FF	125	216	394	325	58	M 48 x 2	M 64 x 3	40	57	130	88	30	63	96	70	1"	90	147	57	150	216
MH - 16016035 - FF	160	250	416	370	75	M 64 x 3	M 80 x 3	40	70	146	97	35	85	128	90	1-¼"	110	158	70	185	250
MH - 16020035 - FF	200	330	560	450	97	M 80 x 3	M 100 x 3	58	76	198	100	35	95	140	110	1-¼"	140	212	82	225	330
MH - 16025035 - FF	250	395	638	550	123	M 100 x 3	M 125 x 4	65	88	199	174	45	112	160	140	1-½"	180	244	95	275	395
MH - 16032035 - FF	320	500	724	660	178	M 125 x 4	M 160 x 4	72	110	232	229	55	125	180	180	2"	220	280	102	320	500
MH - 16040035 - FF	400	640	876	740	227	M 160 x 4	M 200 x 4	83	114	265	259	55	160	220	220	2"	280	345	125	430	640
MH - 16050035 - FF	500	*	*	890	*	M 180 x 4	M 250 x 6	*	140	305	*	65	180	250	280	2-½"	350	*	*	*	780

HYDRAULIC CYLINDERS SERIES MH 35

160 Bar Pressure

Rear Flange Mtg.

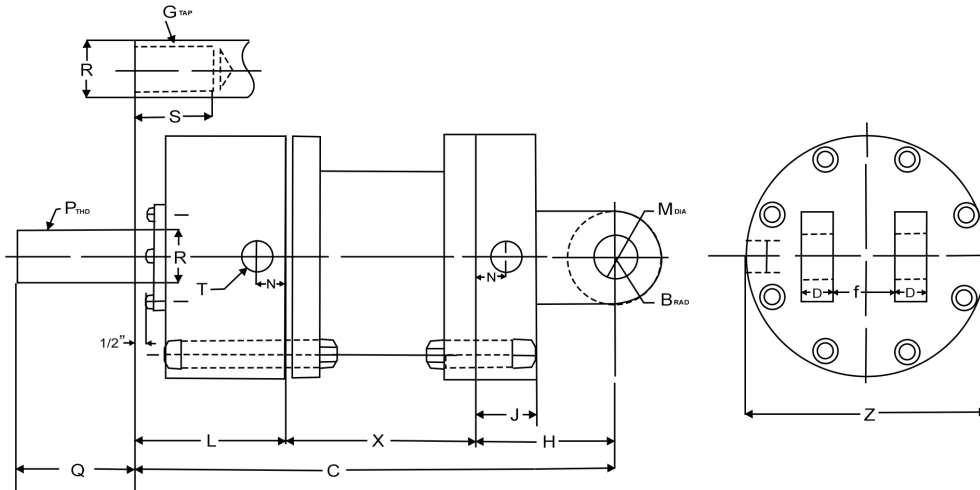


MODEL NO.	BORE (mm)	A	B	C	F	G _{1:1} =P _{1:1}	G _{2:1} =P _{2:1}	H	J	K	L	N	Q _{st} =S _{st}	Q _{lg} =S _{lg}	R	T	R2:1	U	X	Z _{max}
MH - 16004035 - RF	40	98	168	190	30	M 16 x 1.5	M 20 x 1.5	14	40	63	87	19	22	32	28	½"	28	65	78	98
MH - 16005035 - RF	50	110	188	205	32	M 20 x 1.5	M 27 x 1.5	18	44	71	90	19	28	40	28	½"	36	71	84	110
MH - 16006335 - RF	63	128	216	224	38	M 27 x 2	M 33 x 2	21	44	77	103	22	36	54	36	¾"	45	82	90	128
MH - 16008035 - RF	80	152	262	250	44	M 33 x 2	M 42 x 2	27	50	86	114	25	45	66	45	¾"	56	99	113	152
MH - 16010035 - RF	100	178	308	300	51	M 42 x 2	M 48 x 2	33	57	113	130	30	56	84	56	1"	70	116	128	178
MH - 16012535 - RF	125	216	394	325	58	M 48 x 2	M 64 x 3	40	57	130	138	30	63	96	70	1"	90	147	150	216
MH - 16016035 - RF	160	250	416	370	75	M 64 x 3	M 80 x 3	40	70	146	154	35	85	128	90	1-¼"	110	158	185	250
MH - 16020035 - RF	200	330	560	450	97	M 80 x 3	M 100 x 3	58	76	198	176	35	95	140	110	1-¼"	140	212	225	330
MH - 16025035 - RF	250	395	638	550	123	M 100 x 3	M 125 x 4	65	88	199	263	45	112	160	140	1-½"	180	244	275	395
MH - 16032035 - RF	320	500	724	660	178	M 125 x 4	M 160 x 4	72	110	232	318	55	125	180	180	2"	220	280	320	500
MH - 16040035 - RF	400	640	876	740	227	M 160 x 4	M 200 x 4	83	114	265	361	55	160	220	220	2"	280	345	430	640
MH - 16050035 - RF	500	*	*	890	*	M 180 x 4	M 250 x 6	*	140	305	420	65	180	250	280	2-½"	350	*	*	780

HYDRAULIC CYLINDERS SERIES MH 35

160 Bar Pressure

Female Clevis Mtg.

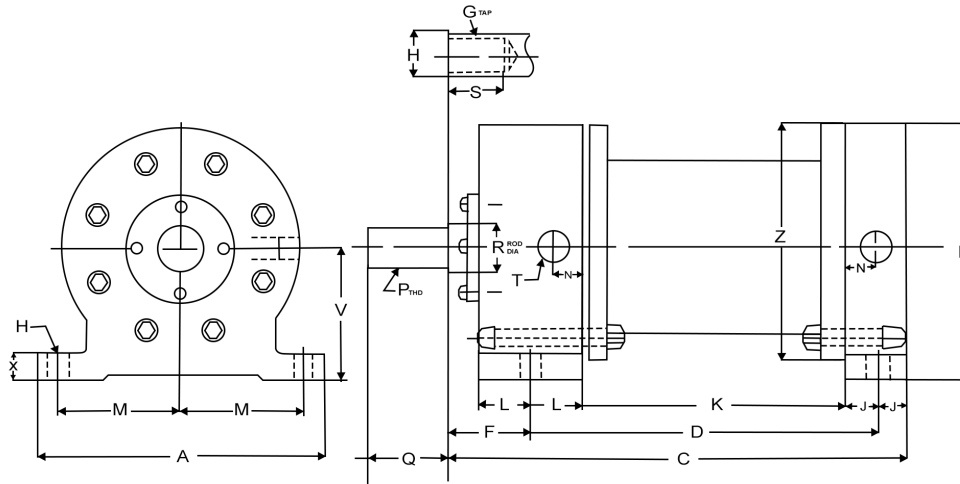


MODEL NO.	BORE (mm)	B	C	D	F	$G_{1:1}=P_{1:1}$	$G_{2:1}=P_{2:1}$	H	J	K	L	M	N	$Q_{st}=S_{st}$	$Q_{lg}=S_{lg}$	R	T	R2:1	Z _{max}
MH - 16004035 - FC	40	25	231	20	21	M 16 x 1.5	M 20 x 1.5	81	40	63	87	20	19	22	32	28	1/2"	28	98
MH - 16005035 - FC	50	32	257	20	26	M 20 x 1.5	M 27 x 1.5	96	44	71	90	25	19	28	40	28	1/2"	36	110
MH - 16006335 - FC	63	40	289	25	33	M 27 x 2	M 33 x 2	109	44	77	103	32	22	36	54	36	3/4"	45	128
MH - 16008035 - FC	80	47	332	30	41	M 33 x 2	M 42 x 2	132	50	86	114	40	25	45	66	45	3/4"	56	152
MH - 16010035 - FC	100	59	395	35	51	M 42 x 2	M 48 x 2	152	57	113	130	50	30	56	84	56	1"	70	178
MH - 16012535 - FC	125	71	428	40	64	M 48 x 2	M 64 x 3	160	57	130	138	63	30	63	96	70	1"	90	216
MH - 16016035 - FC	160	90	505	45	81	M 64 x 3	M 80 x 3	205	70	146	154	80	35	85	128	90	1-1/4"	110	250
MH - 16020035 - FC	200	112	615	55	101	M 80 x 3	M 100 x 3	241	76	198	176	100	35	95	140	110	1-1/4"	140	330
MH - 16025035 - FC	250	145	781	70	126	M 100 x 3	M 125 x 4	319	88	199	263	125	45	112	160	140	1-1/2"	180	395
MH - 16032035 - FC	320	178	930	85	161	M 125 x 4	M 160 x 4	380	110	232	318	160	55	125	180	180	2"	220	500
MH - 16040035 - FC	400	230	990	95	201	M 160 x 4	M 200 x 4	364	114	265	361	200	55	160	220	220	2"	280	640
MH - 16050035 - FC	500	320	1210	115	251	M 180 x 4	M 250 x 6	441	140	305	420	250	65	180	250	280	2-1/2"	350	780

HYDRAULIC CYLINDERS SERIES MH 35

160 Bar Pressure

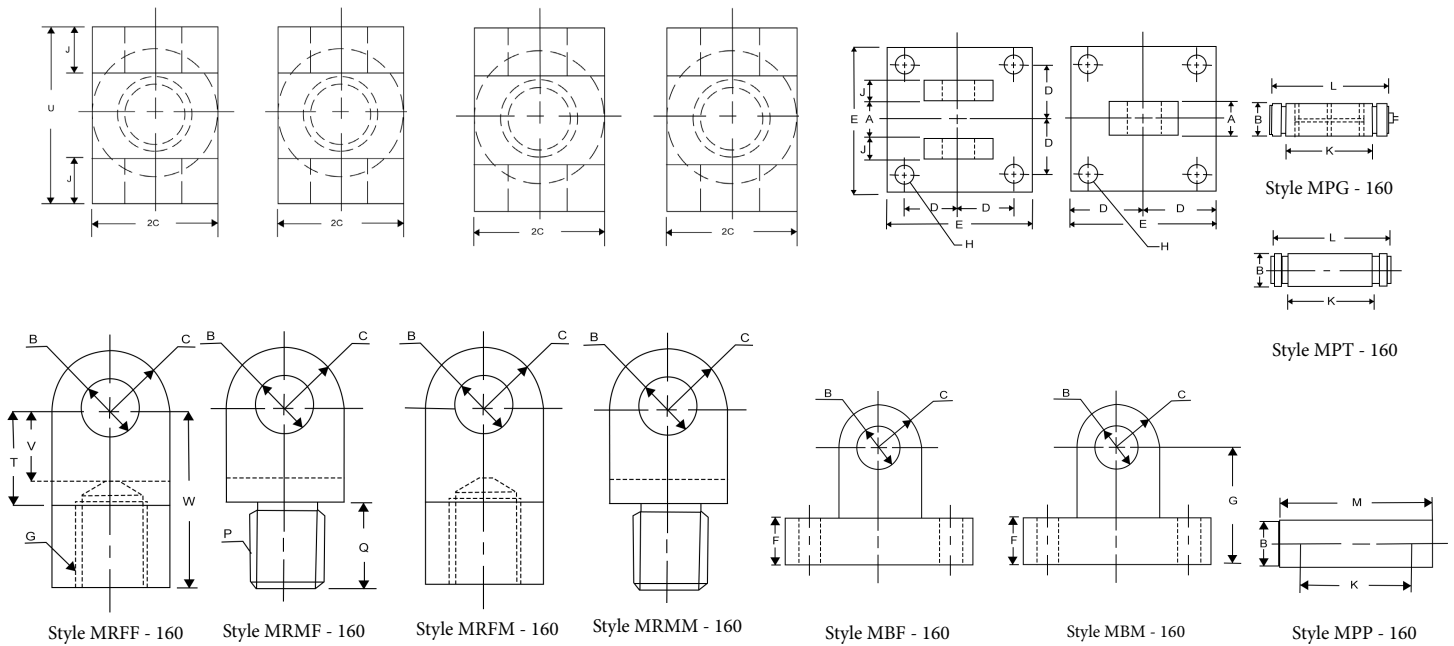
Side Log Mtg.



MODEL NO.	BORE (mm)	A	B	C	D	F	G _{1:1} =P _{1:1}	G _{2:1} =P _{2:1}	H	J	K	L	M	N	Q _{st} =S _{st}	Q _{lg} =S _{lg}	R	T	R2:1	v	X	Z _{max.}
MH - 16004035 - SL	40	160	102	233	128	85	M 16 x 1.5	M 20 x 1.5	14	20	63	45	66	19	22	32	28	½"	28	57	22	98
MH - 16005035 - SL	50	180	122	245	138	85	M 20 x 1.5	M 27 x 1.5	14	22	71	45	76	19	28	40	28	½"	36	67	22	110
MH - 16006335 - SL	63	203	138	275	156	97	M 27 x 2	M 33 x 2	14	22	77	57	88	22	36	54	36	¾"	45	75	22	128
MH - 16008035 - SL	80	254	162	290	168	97	M 33 x 2	M 42 x 2	18	25	86	57	109	25	45	66	45	¾"	56	87	25	152
MH - 16010035 - SL	100	292	178	347	205	113	M 42 x 2	M 48 x 2	22	29	113	63	124	30	56	84	56	1"	70	95	25	178
MH - 16012535 - SL	125	343	216	364	222	113	M 48 x 2	M 64 x 3	27	29	130	63	145	30	63	96	70	1"	90	114	32	216
MH - 16016035 - SL	160	406	252	404	249	120	M 64 x 3	M 80 x 3	27	35	146	70	176	35	85	128	90	1-¼"	110	132	38	250
MH - 16020035 - SL	200	470	312	464	306	120	M 80 x 3	M 100 x 3	30	38	198	70	205	35	95	140	110	1-¼"	140	162	44	330
MH - 16025035 - SL	250	559	420	527	325	158	M 100 x 3	M 125 x 4	33	44	199	82	247	45	112	160	140	1-½"	180	222	51	395
MH - 16032035 - SL	320	686	480	608	382	171	M 125 x 4	M 160 x 4	33	55	232	95	310	55	125	180	180	2"	220	252	51	500
MH - 16040035 - SL	400	864	584	645	417	171	M 160 x 4	M 200 x 4	46	57	265	95	386	55	160	220	220	2"	280	304	57	640
MH - 16050035 - SL	500	1064	710	819	495	210	M 180 x 4	M 250 x 6	52	70	305	120	480	65	180	250	280	2-½"	350	367	76	780

HYDRAULIC CYLINDERS SERIES MH 35

160 Bar Pressure

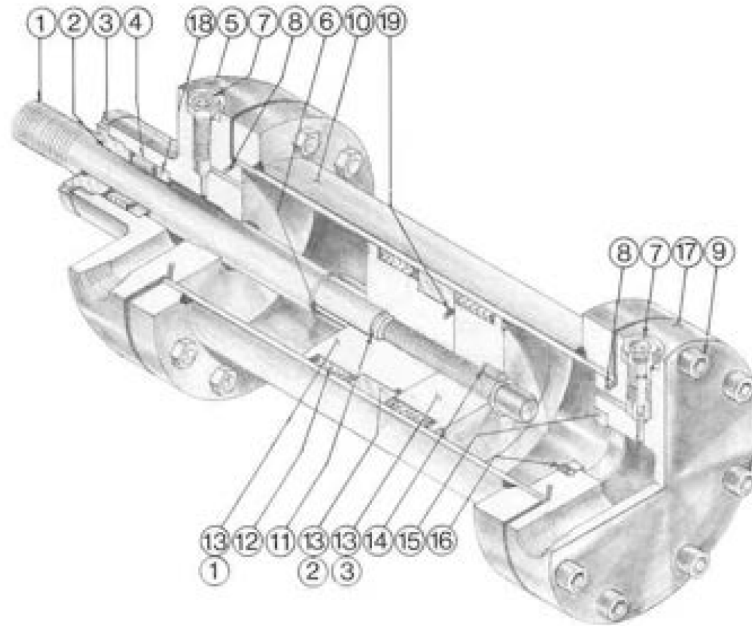


BORE (mm)	A	B	C	G=P	J	Q=S	T	U	V	W
40	20	20	25	M 16 x 1.5	20	22	51	60	41	73
50	25	25	32	M 20 x 1.5	20	28	62	65	52	90
63	32	32	40	M 27 x 2	25	36	75	82	65	111
80	40	40	47	M 33 x 2	30	45	92	100	82	137
100	50	50	59	M 42 x 2	35	56	110	120	95	166
125	63	63	71	M 48 x 2	40	63	118	143	103	181
160	80	80	90	M 64 x 3	45	85	150	170	135	235
200	100	100	112	M 80 x 3	55	95	180	210	165	275
250	125	125	145	M 100 x 3	70	112	243	265	223	355
320	160	160	178	M 125 x 4	85	125	290	330	270	415

BORE (mm)	A	B	C	D	E	F	G	H	J	K	L	M
40	20	20	25	47	122	22	53	14	20	63	70	84
50	25	25	32	52	140	22	62	18	20	68	75	89
63	32	32	40	63	168	22	72	21	25	85	95	110
80	40	40	47	76	206	25	88	27	30	110	120	134
100	50	50	59	90	246	25	96	33	35	130	143	171
125	63	63	71	107	294	32	122	40	40	153	169	210
160	80	80	90	120	320	38	150	40	45	180	196	237
200	100	100	112	153	422	44	204	58	55	225	245	288
250	125	125	145	185	500	51	251	65	70	280	300	343
320	160	160	178	220	584	51	301	72	85	350	370	413

MILL TYPE METRIC HYDRAULIC CYLINDERS SERIES MH 36

160 Bar Pressure



PART LIST

ITEM	QTY.	DESCRIPTION
1	1 only	Cylinder Rod (chrome plated)
2	*1 only	Rod Wiper
3	**1 only	Gland Bushing
4	*1 set	Gland Seal - Chevron "V" Ring
5	1 only	Front Head
6	1 only	Front Cushion
7	2 only	Adjustable Cushion Assembly
8	*2 only	Head Static Seal - "O" Ring
9	2 sets	Head Securing Cap Screws and Nuts
10	1 only	Cylinder Barrel Assembly
11	*1 only	Piston Rod Seal - "O" Ring

ITEM	QTY.	DESCRIPTION
12	*2 sets	Piston Dynamic Seal - Chevron "V" Rings
13/1	1 only	Piston - Front Section
13/2	1 only	Piston - Bushing
13/3	1 only	Piston - Rear Section
14	1 only	Piston Securing Screw
15	1 only	Rear Cushion
16	2 only	Rear Cushion Securing Screw
17	1 only	Rear Head
18	1 only	Lower Gland Bearing
19	*1 only	Piston Static Seal - "O" Ring

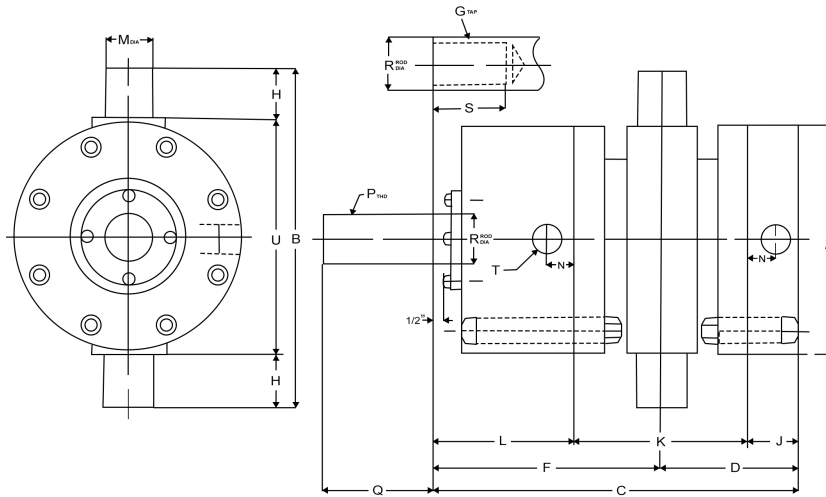
* Spare Parts

** Optional Spare Parts

HYDRAULIC CYLINDERS SERIES MH 36

160 Bar Pressure

Trunnion Mtg.

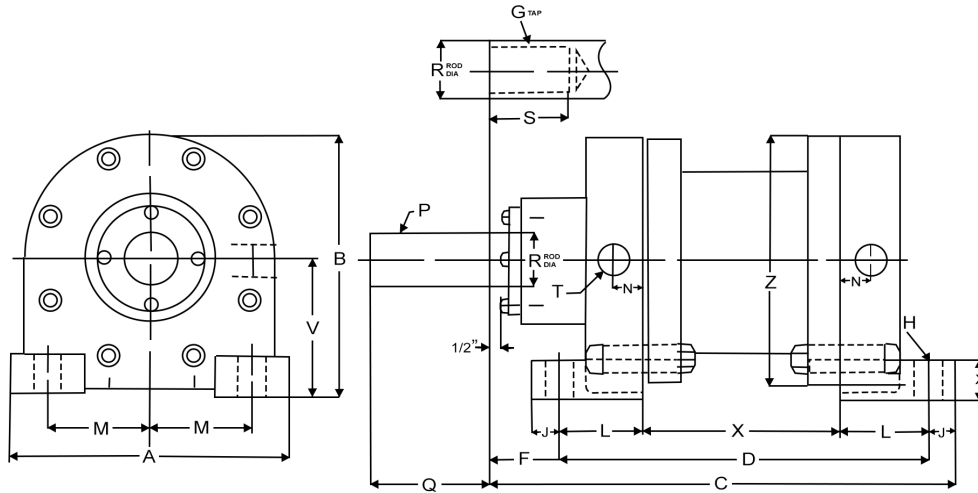


MODEL NO.	BORE (mm)	B	C	D	F	G _{1:1} =P _{1:1}	G _{2:1} =P _{2:1}	H	J	K	L	M	N	Q _{st} =S _{st}	Q _{lg} =S _{lg}	R	T	U	R2:1	Z _{max}
MH - 16004036 - T	40	122	190	71	119	M 16 x 1.5	M 20 x 1.5	16	40	63	87	20	19	22	32	28	½"	90	28	98
MH - 16005036 - T	50	145	205	79	126	M 20 x 1.5	M 27 x 1.5	20	44	71	90	25	19	28	40	28	½"	105	36	110
MH - 16006336 - T	63	170	224	82	142	M 27 x 2	M 33 x 2	25	44	77	103	32	22	36	54	36	¾"	120	45	128
MH - 16008036 - T	80	199	250	93	157	M 33 x 2	M 42 x 2	32	50	86	114	40	25	45	66	45	¾"	135	56	152
MH - 16010036 - T	100	240	300	113	187	M 42 x 2	M 48 x 2	40	57	113	130	50	30	56	84	56	1"	160	70	178
MH - 16012536 - T	125	295	325	122	203	M 48 x 2	M 64 x 3	50	57	130	138	63	30	63	96	70	1"	195	90	216
MH - 16016036 - T	160	366	370	143	227	M 64 x 3	M 80 x 3	63	70	146	154	80	35	85	128	90	1-¼"	240	110	250
MH - 16020036 - T	200	455	450	175	275	M 80 x 3	M 100 x 3	80	76	198	176	100	35	95	140	110	1-¼"	295	140	330
MH - 16025036 - T	250	570	550	187	363	M 100 x 3	M 125 x 4	100	88	199	263	125	45	112	160	140	1-½"	370	180	395
MH - 16032036 - T	320	720	660	226	434	M 125 x 4	M 160 x 4	125	110	232	318	160	55	125	180	180	2"	470	220	500
MH - 16040036 - T	400	890	740	246	494	M 160 x 4	M 200 x 4	160	114	265	361	200	55	160	220	220	2"	570	280	640
MH - 16050036 - T	500	1150	890	293	573	M 180 x 4	M 250 x 6	250	140	349	420	250	65	180	250	280	2-½"	700	350	780

HYDRAULIC CYLINDERS SERIES MH 36

160 Bar Pressure

Base Mtg.

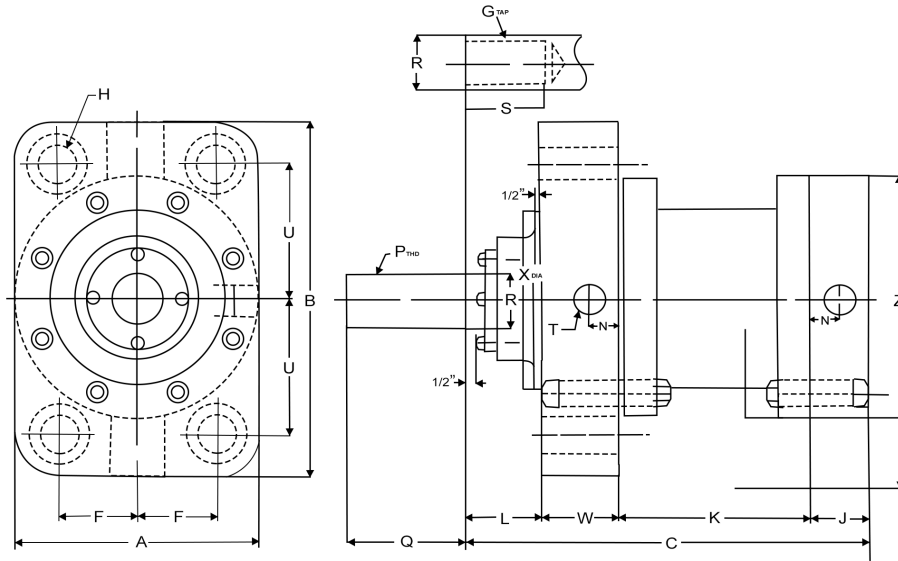


MODEL NO.	BORE (mm)	A	B	C	D	F	G _{1:1} =P _{1:1}	G _{2:1} =P _{2:1}	H	J	K	L	M	N	Q _{st} =S _{st}	Q _g =S _g	R	T	R2:1	V	X	Z _{max}
MH - 16004036 - B	40	118	102	218	171	33	M 16 x 1.5	M 20 x 1.5	14	14	63	54	45	19	22	32	28	½"	28	57	22	98
MH - 16005036 - B	50	130	122	233	187	32	M 20 x 1.5	M 27 x 1.5	14	14	71	58	51	19	28	40	28	½"	36	67	22	110
MH - 16006336 - B	63	148	138	252	193	45	M 27 x 2	M 33 x 2	14	14	77	58	60	22	36	54	36	¾"	45	75	22	128
MH - 16008036 - B	80	172	162	286	222	46	M 33 x 2	M 42 x 2	18	18	86	68	68	25	45	66	45	¾"	56	87	25	152
MH - 16010036 - B	100	198	178	344	271	51	M 42 x 2	M 48 x 2	22	22	113	79	77	30	56	84	56	1"	70	95	25	178
MH - 16012536 - B	125	236	216	379	298	54	M 48 x 2	M 64 x 3	27	27	130	84	91	30	63	96	70	1"	90	114	32	216
MH - 16016036 - B	160	270	252	424	340	57	M 64 x 3	M 80 x 3	27	27	146	97	108	35	85	128	90	1-¼"	110	132	38	250
MH - 16020036 - B	200	350	312	510	410	70	M 80 x 3	M 100 x 3	30	30	198	106	145	35	95	140	110	1-¼"	140	162	44	330
MH - 16025036 - B	250	415	420	616	441	142	M 100 x 3	M 125 x 4	33	33	199	121	174	45	112	160	140	1-½"	180	222	51	395
MH - 16032036 - B	320	520	480	726	518	175	M 125 x 4	M 160 x 4	33	33	232	143	227	55	125	180	180	2"	220	252	51	500
MH - 16040036 - B	400	660	584	832	585	201	M 160 x 4	M 200 x 4	46	46	265	160	284	55	160	220	220	2"	280	304	57	640
MH - 16050036 - B	500	810	710	1013	689	228	M 180 x 4	M 250 x 6	52	52	305	192	353	65	180	250	280	2-½"	350	367	76	780

HYDRAULIC CYLINDERS SERIES MH 36

160 Bar Pressure

Front Flange Mtg.

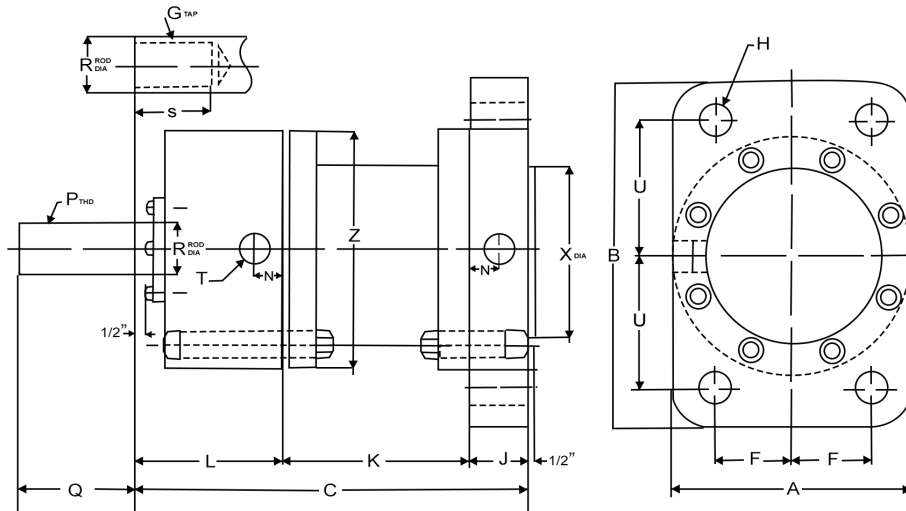


MODEL NO.	BORE (mm)	A	B	C	F	G _{1:1} =P _{1:1}	G _{2:1} =P _{2:1}	H	J	K	L	N	Q _{st} =S _{st}	Q _{lg} =S _{lg}	R	T	R2:1	U	W	X	Z _{max}
MH - 16004036 - FF	40	98	168	190	30	M 16 x 1.5	M 20 x 1.5	14	40	63	49	19	22	32	28	½"	28	65	38	78	98
MH - 16005036 - FF	50	110	188	205	32	M 20 x 1.5	M 27 x 1.5	18	44	71	46	19	28	40	28	½"	36	71	44	84	110
MH - 16006336 - FF	63	128	216	224	38	M 27 x 2	M 33 x 2	21	44	77	59	22	36	54	36	¾"	45	82	44	90	128
MH - 16008036 - FF	80	152	262	250	44	M 33 x 2	M 42 x 2	21	50	86	64	25	45	66	45	¾"	56	99	50	113	152
MH - 16010036 - FF	100	178	308	300	51	M 42 x 2	M 48 x 2	33	57	113	73	30	56	84	56	1"	70	116	5	128	178
MH - 16012536 - FF	125	216	394	325	58	M 48 x 2	M 64 x 3	40	57	130	81	30	63	96	70	1"	90	147	57	150	216
MH - 16016036 - FF	160	250	416	370	75	M 64 x 3	M 80 x 3	40	70	146	84	35	85	128	90	1-¼"	110	158	70	185	250
MH - 16020036 - FF	200	330	560	450	97	M 80 x 3	M 100 x 3	58	76	198	94	35	95	140	110	1-¼"	140	212	82	225	330
MH - 16025036 - FF	250	395	638	550	123	M 100 x 3	M 125 x 4	65	88	199	168	45	112	160	140	1-½"	180	244	95	275	395
MH - 16032036 - FF	320	500	724	660	178	M 125 x 4	M 160 x 4	72	110	232	216	55	125	180	180	2"	220	280	102	320	500
MH - 16040036 - FF	400	640	876	740	227	M 160 x 4	M 200 x 4	83	114	265	236	55	160	220	220	2"	280	345	125	430	640
MH - 16050036 - FF	500	*	*	890	*	M 180 x 4	M 250 x 6	*	140	305	*	65	180	250	280	2-½"	350	*	*	*	780

HYDRAULIC CYLINDERS SERIES MH 36

160 Bar Pressure

Rear Flange Mtg.

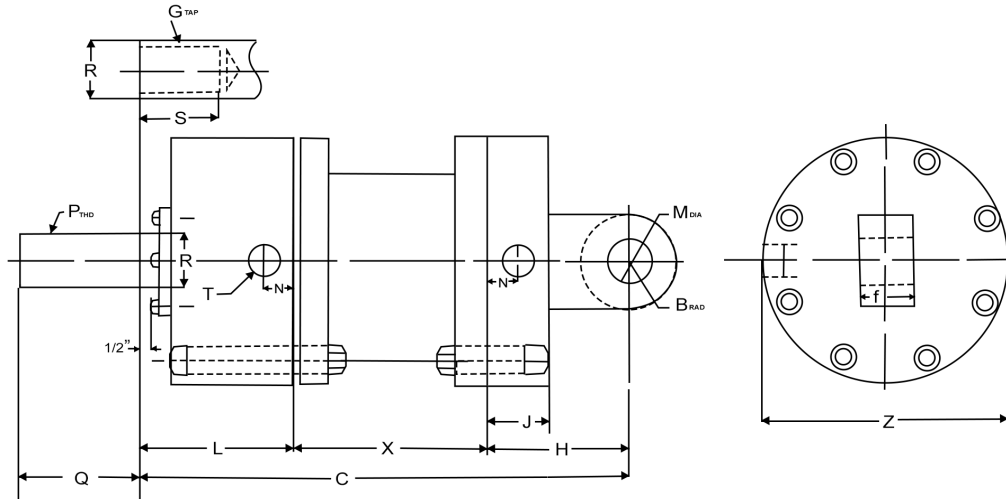


MODEL NO.	BORE (mm)	A	B	C	F	G _{1:1} =P _{1:1}	G _{2:1} =P _{2:1}	H	J	K	L	N	Q _{st} =S _{st}	Q _{lg} =S _{lg}	R	T	R2:1	U	X	Z _{max}
MH - 16004036 - RF	40	98	168	190	30	M 16 x 1.5	M 20 x 1.5	14	40	63	87	19	22	32	28	1/2"	28	65	78	98
MH - 16005036 - RF	50	110	188	205	32	M 20 x 1.5	M 27 x 1.5	18	44	71	90	19	28	40	28	1/2"	36	71	84	110
MH - 16006336 - RF	63	128	216	224	38	M 27 x 2	M 33 x 2	21	44	77	103	22	36	54	36	3/4"	45	82	90	128
MH - 16008036 - RF	80	152	262	250	44	M 33 x 2	M 42 x 2	27	50	86	114	25	45	66	45	3/4"	56	99	113	152
MH - 16010036 - RF	100	178	308	300	51	M 42 x 2	M 48 x 2	33	57	113	130	30	56	84	56	1"	70	116	128	178
MH - 16012536 - RF	125	216	394	325	58	M 48 x 2	M 64 x 3	40	57	130	138	30	63	96	70	1"	90	147	150	216
MH - 16016036 - RF	160	250	416	370	75	M 64 x 3	M 80 x 3	40	70	146	154	35	85	128	90	1-1/4"	110	158	185	250
MH - 16020036 - RF	200	330	560	450	97	M 80 x 3	M 100 x 3	58	76	198	176	35	95	140	110	1-1/4"	140	212	225	330
MH - 16025036 - RF	250	395	638	550	123	M 100 x 3	M 125 x 4	65	88	199	263	45	112	160	140	1-1/2"	180	244	275	395
MH - 16032036 - RF	320	500	724	660	178	M 125 x 4	M 160 x 4	72	110	232	318	55	125	180	180	2"	220	280	320	500
MH - 16040036 - RF	400	640	876	740	227	M 160 x 4	M 200 x 4	83	114	265	361	55	160	220	220	2"	280	345	430	640
MH - 16050036 - RF	500	*	*	890	*	M 180 x 4	M 250 x 6	*	140	305	420	65	180	250	280	2-1/2"	350	*	*	780

HYDRAULIC CYLINDERS SERIES MH 36

160 Bar Pressure

Male Clevis Mtg.

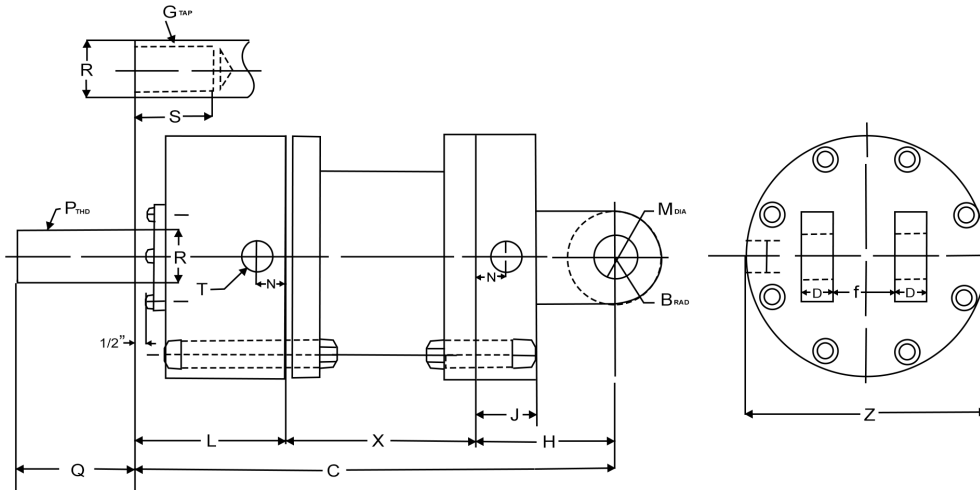


MODEL NO.	BORE (mm)	B	C	F	G _{1:1} =P _{1:1}	G _{2:1} =P _{2:1}	H	J	K	L	M	N	Q _{st} =S _{st}	Q _{lg} =S _{lg}	R	T	R2:1	Z _{max}
MH - 16004036 - MC	40	25	231	20	M 16 x 1.5	M 20 x 1.5	81	40	63	87	20	19	22	32	28	½"	28	98
MH - 16005036 - MC	50	32	257	25	M 20 x 1.5	M 27 x 1.5	96	44	71	90	25	19	28	40	28	½"	36	110
MH - 16006336 - MC	63	40	289	32	M 27 x 2	M 33 x 2	109	44	77	103	32	22	36	54	36	¾"	45	128
MH - 16008036 - MC	80	47	332	40	M 33 x 2	M 42 x 2	132	50	86	114	40	25	45	66	45	¾"	56	152
MH - 16010036 - MC	100	59	395	50	M 42 x 2	M 48 x 2	152	57	113	130	50	30	56	84	56	1"	70	178
MH - 16012536 - MC	125	71	428	63	M 48 x 2	M 64 x 3	160	57	130	138	63	30	63	96	70	1"	90	216
MH - 16016036 - MC	160	90	505	80	M 64 x 3	M 80 x 3	205	70	146	154	80	35	85	128	90	1-¼"	110	250
MH - 16020036 - MC	200	112	615	100	M 80 x 3	M 100 x 3	241	76	198	176	100	35	95	140	110	1-¼"	140	330
MH - 16025036 - MC	250	145	773	125	M 100 x 3	M 125 x 4	311	88	199	263	125	45	112	160	140	1-½"	180	395
MH - 16032036 - MC	320	178	930	160	M 125 x 4	M 160 x 4	380	110	232	318	160	55	125	180	180	2"	220	500
MH - 16040036 - MC	400	230	990	200	M 160 x 4	M 200 x 4	364	114	265	361	200	55	160	220	220	2"	280	640
MH - 16050036 - MC	500	320	1210	250	M 180 x 4	M 250 x 6	441	140	305	420	250	65	180	250	280	2-½"	350	780

HYDRAULIC CYLINDERS SERIES MH 36

160 Bar Pressure

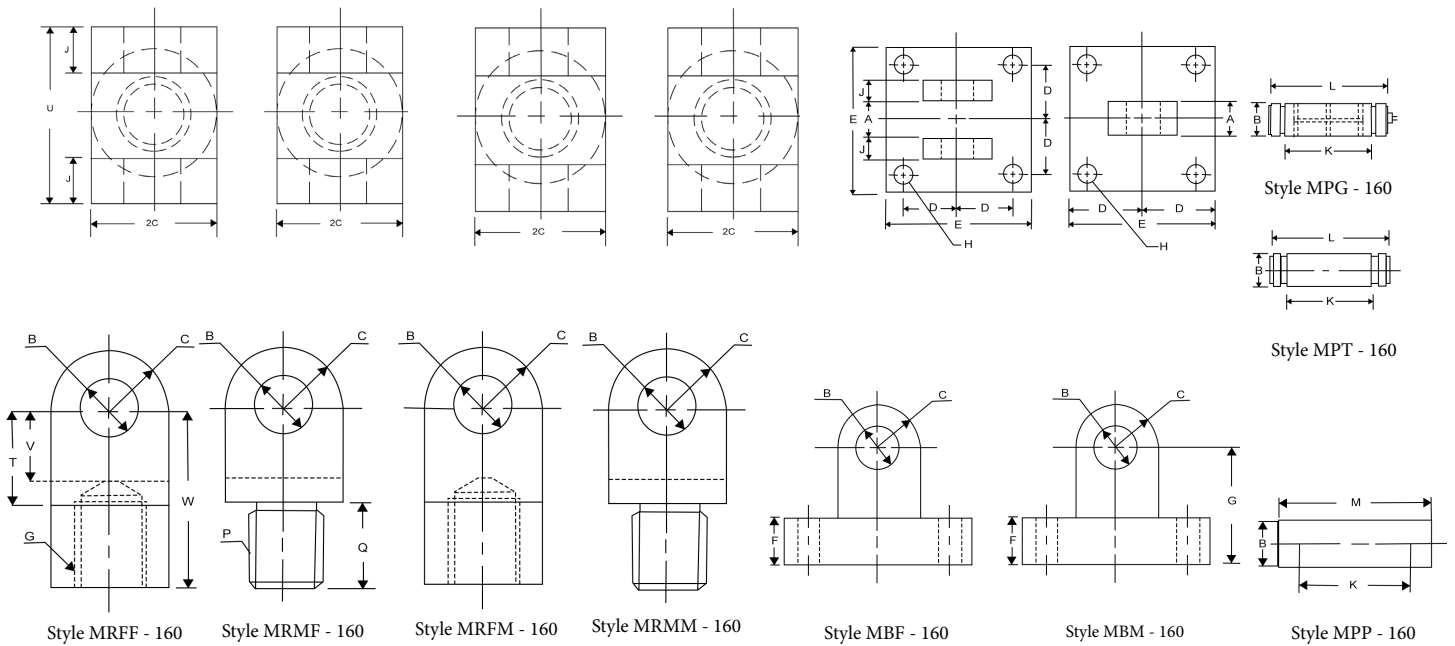
Female Clevis Mtg.



MODEL NO.	BORE (mm)	B	C	D	F	$G_{1:1}=P_{1:1}$	$G_{2:1}=P_{2:1}$	H	J	K	L	M	N	$Q_{st}=S_{st}$	$Q_{lg}=S_{lg}$	R	T	R2:1	Z_{max}
MH - 16004036 - FC	40	25	231	20	21	M 16 x 1.5	M 20 x 1.5	81	40	63	87	20	19	22	32	28	1/2"	28	98
MH - 16005036 - FC	50	32	257	20	26	M 20 x 1.5	M 27 x 1.5	96	44	71	90	25	19	28	40	28	1/2"	36	110
MH - 16006336 - FC	63	40	289	25	33	M 27 x 2	M 33 x 2	109	44	77	103	32	22	36	54	36	3/4"	45	128
MH - 16008036 - FC	80	47	332	30	41	M 33 x 2	M 42 x 2	132	50	86	114	40	25	45	66	45	3/4"	56	152
MH - 16010036 - FC	100	59	395	35	51	M 42 x 2	M 48 x 2	152	57	113	130	50	30	56	84	56	1"	70	178
MH - 16012536 - FC	125	71	428	40	64	M 48 x 2	M 64 x 3	160	57	130	138	63	30	63	96	70	1"	90	216
MH - 16016036 - FC	160	90	505	45	81	M 64 x 3	M 80 x 3	205	70	146	154	80	35	85	128	90	1-1/4"	110	250
MH - 16020036 - FC	200	112	615	55	101	M 80 x 3	M 100 x 3	241	76	198	176	100	35	95	140	110	1-1/4"	140	330
MH - 16025036 - FC	250	145	773	70	126	M 100 x 3	M 125 x 4	311	88	199	263	125	45	112	160	140	1-1/2"	180	395
MH - 16032036 - FC	320	178	930	85	161	M 125 x 4	M 160 x 4	380	110	232	318	160	55	125	180	180	2"	220	500
MH - 16040036 - FC	400	230	990	95	201	M 160 x 4	M 200 x 4	364	114	265	361	200	55	160	220	220	2"	280	640
MH - 16050036 - FC	500	320	1210	115	251	M 180 x 4	M 250 x 6	441	140	305	420	250	65	180	250	280	2-1/2"	350	780

HYDRAULIC CYLINDERS SERIES MH 36

160 Bar Pressure

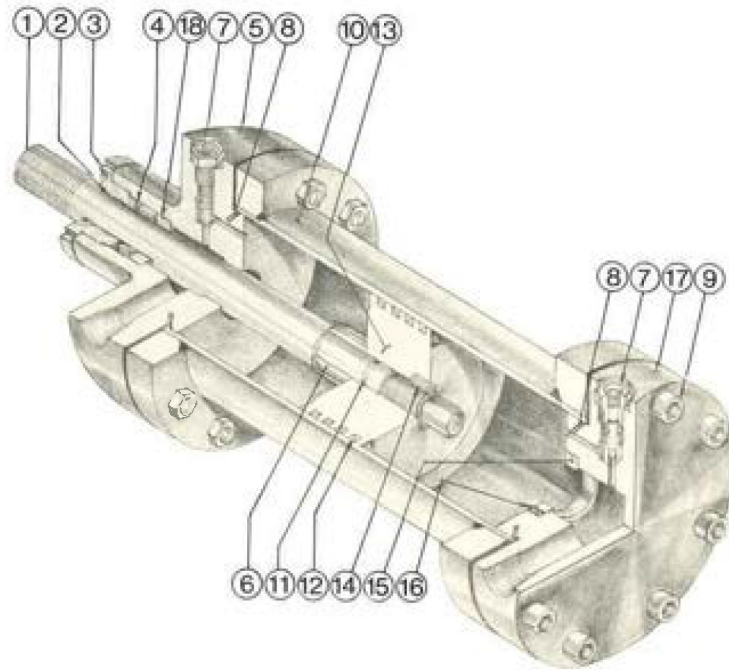


BORE (mm)	A	B	C	G=P	J	Q=S	T	U	V	W
40	20	20	25	M 16 x 1.5	20	22	51	60	41	73
50	25	25	32	M 20 x 1.5	20	28	62	65	52	90
63	32	32	40	M 27 x 2	25	36	75	82	65	111
80	40	40	47	M 33 x 2	30	45	92	100	82	137
100	50	50	59	M 42 x 2	35	56	110	120	95	166
125	63	63	71	M 48 x 2	40	63	118	143	103	181
160	80	80	90	M 64 x 3	45	85	150	170	135	235
200	100	100	112	M 80 x 3	55	95	180	210	165	275
250	125	125	145	M 100 x 3	70	112	243	265	223	355
320	160	160	178	M 125 x 4	85	125	290	330	270	415

BORE (mm)	A	B	C	D	E	F	G	H	J	K	L	M
40	20	20	25	47	122	22	53	14	20	63	70	84
50	25	25	32	52	140	22	62	18	20	68	75	89
63	32	32	40	63	168	22	72	21	25	85	95	110
80	40	40	47	76	206	25	88	27	30	110	120	134
100	50	50	59	90	246	25	96	33	35	130	143	171
125	63	63	71	107	294	32	122	40	40	153	169	210
160	80	80	90	120	320	38	150	40	45	180	196	237
200	100	100	112	153	422	44	204	58	55	225	245	288
250	125	125	145	185	500	51	251	65	70	280	300	343
320	160	160	178	220	584	51	301	72	85	350	370	413

MILL TYPE METRIC HYDRAULIC CYLINDERS SERIES MH 37

250 Bar Pressure



PART LIST

ITEM	QTY.	DESCRIPTION
1	1 only	Cylinder Rod (chrome plated)
2	*1 only	Rod Wiper
3	**1 only	Gland Bushing
4	1 set	Gland Seal - Chevron "V" Ring
5	1 only	Front Head
6	1 only	Front Cushion
7	2 only	Adjustable Cushion Assembly
8	*2 only	Head Static Seal - "O" Ring
9	2 sets	Head Securing Cap Screws and Nuts

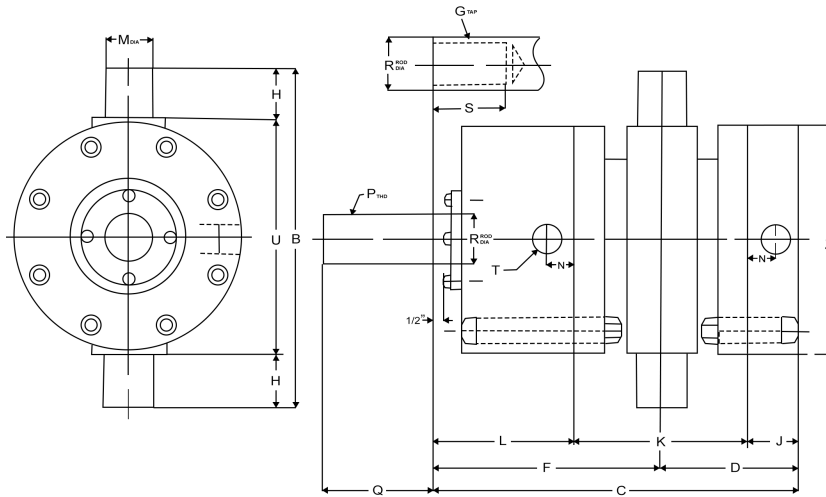
ITEM	QTY.	DESCRIPTION
10	1 only	Cylinder Barrel Assembly
11	*1 only	Piston Rod Seal - "O" Ring
12	*1 set	Piston Dynamic Seal - Piston Ring
13	1 only	Piston
14	1 only	Piston Securing Screw
15	1 only	Rear Cushion
16	2 only	Rear Cushion Securing Screw
17	1 only	Rear Head
18	1 only	Lower Gland Bearing

* Spare Parts
** Optional Spare Parts

HYDRAULIC CYLINDERS SERIES MH 37

250 Bar Pressure

Trunnion Mtg.

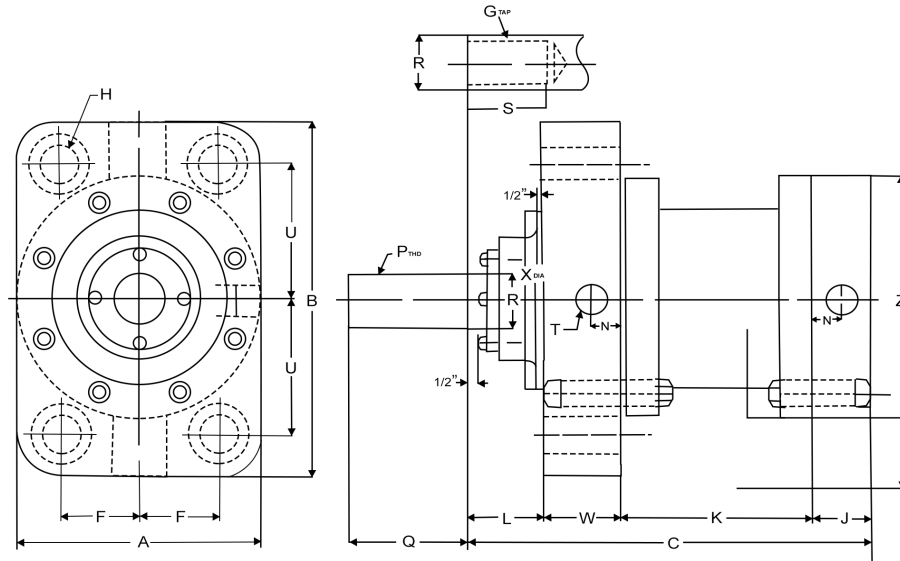


MODEL NO.	BORE (mm)	B	C	D	F	$G_{1:1}=P_{1:1}$	$G_{2:1}=P_{2:1}$	H	J	K	L	M	N	$Q_{st}=S_{st}$	$Q_{lg}=S_{lg}$	R	T	U	R2:1	Z_{max}
MH - 25004037 - T	40	140	222	82	140	M 20 x 1.5	M 20 x 1.5	20	42	80	100	32	19	28	40	28	½"	100	28	98
MH - 25005037 - T	50	162	240	88	152	M 24 x 2	M 27 x 1.5	25	46	84	110	32	19	32	48	32	½"	112	36	110
MH - 25006337 - T	63	189	270	96	174	M 30 x 2	M 33 x 2	32	46	99	125	40	22	40	60	40	¾"	125	45	128
MH - 25008037 - T	80	230	300	108	192	M 36 x 2	M 42 x 2	40	50	115	135	50	25	50	72	50	¾"	150	56	152
MH - 25010037 - T	100	280	335	120	215	M 48 x 2	M 48 x 2	50	60	120	155	63	30	63	96	63	1"	180	70	178
MH - 25012537 - T	125	350	364	127	237	M 56 x 2	M 64 x 3	63	60	134	170	80	30	75	112	70	1"	224	90	216
MH - 25016037 - T	160	440	433	147	286	M 72 x 3	M 80 x 3	80	70	153	210	100	35	85	128	90	1-¼"	280	110	275
MH - 25020037 - T	200	545	530	185	345	M 90 x 3	M 100 x 3	100	90	190	250	125	35	106	140	110	1-¼"	345	140	335
MH - 25025037 - T	250	675	598	202	396	M 110 x 3	M 125 x 4	125	100	203	295	160	45	112	160	140	1-½"	425	180	416
MH - 25032037 - T	320	850	694	235	459	M 140 x 4	M 160 x 4	160	120	229	345	200	55	140	180	180	2"	530	220	540
MH - 25040037 - T	400	1030	755	265	490	M 160 x 4	M 200 x 4	140	140	250	365	250	55	160	220	220	2"	630	280	690
MH - 25050037 - T	500	1230	815	268	547	M 220 x 4	M 250 x 6	140	140	255	420	320	65	220	320	280	2-½"	730	350	800

HYDRAULIC CYLINDERS SERIES MH 37

250 Bar Pressure

Front Flange Mtg.

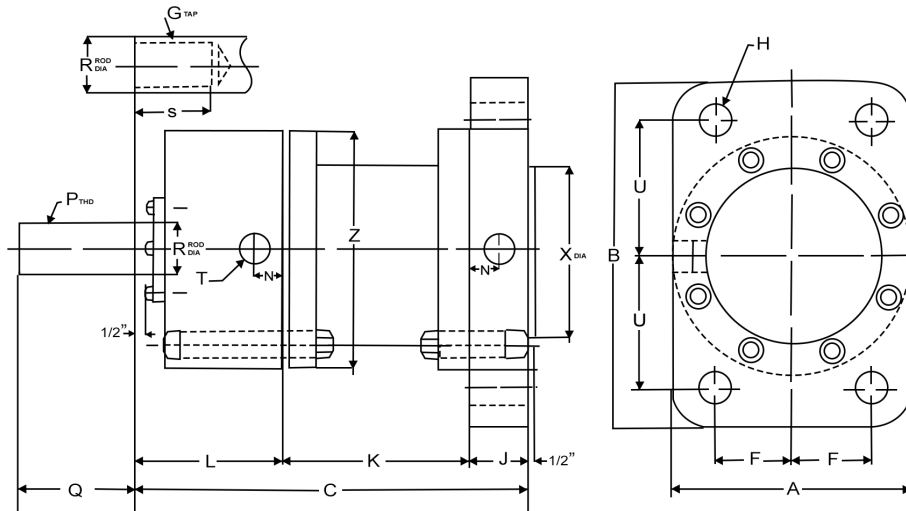


MODEL NO.	BORE (mm)	A	B	C	F	G _{1:1} =P _{1:1}	G _{2:1} =P _{2:1}	H	J	K	L	N	Q _{st} =S _{st}	Q _{lg} =S _{lg}	R	T	R2:1	U	W	X	Z _{max}
MH - 25004037 - FF	40	98	180	222	26	M 20 x 1.5	M 20 x 1.5	18	42	80	55	19	28	40	28	½"	28	67	45	84	98
MH - 25005037 - FF	50	110	204	240	29	M 24 x 2	M 27 x 1.5	21	46	84	60	19	32	48	32	½"	36	76	50	90	110
MH - 25006337 - FF	63	128	230	270	35	M 30 x 2	M 33 x 2	24	46	99	70	22	40	60	40	¾"	45	86	55	104	128
MH - 25008037 - FF	80	152	290	300	38	M 36 x 2	M 42 x 2	33	50	115	72	25	50	72	50	¾"	56	107	63	117	152
MH - 25010037 - FF	100	178	344	335	44	M 48 x 2	M 48 x 2	40	60	120	85	30	63	96	63	1"	70	127	70	128	178
MH - 25012537 - FF	125	216	424	364	52	M 56 x 2	M 64 x 3	46	60	134	90	30	75	112	70	1"	90	156	80	150	216
MH - 25016037 - FF	160	275	522	433	70	M 72 x 3	M 80 x 3	58	70	153	115	35	85	128	90	1-¼"	110	193	95	185	275
MH - 25020037 - FF	200	335	632	530	86	M 90 x 3	M 100 x 3	72	90	190	140	35	106	140	110	1-¼"	140	234	110	225	335
MH - 25025037 - FF	250	416	718	598	120	M 110 x 3	M 125 x 4	78	100	203	170	45	112	160	140	1-½"	180	271	125	275	416
MH - 25032037 - FF	320	540	830	694	175	M 140 x 4	M 160 x 4	85	120	229	195	55	140	180	180	2"	220	320	150	320	540
MH - 25040037 - FF	400	690	1036	755	229	M 160 x 4	M 200 x 4	106	140	250	205	55	160	220	220	2"	280	400	160	430	690
MH - 25050037 - FF	500	*	*	*	*	M 220 x 4	M 250 x 6	*	140	255	*	65	220	320	280	2-½"	350	*	*	*	800

HYDRAULIC CYLINDERS SERIES MH 37

250 Bar Pressure

Rear Flange Mtg.

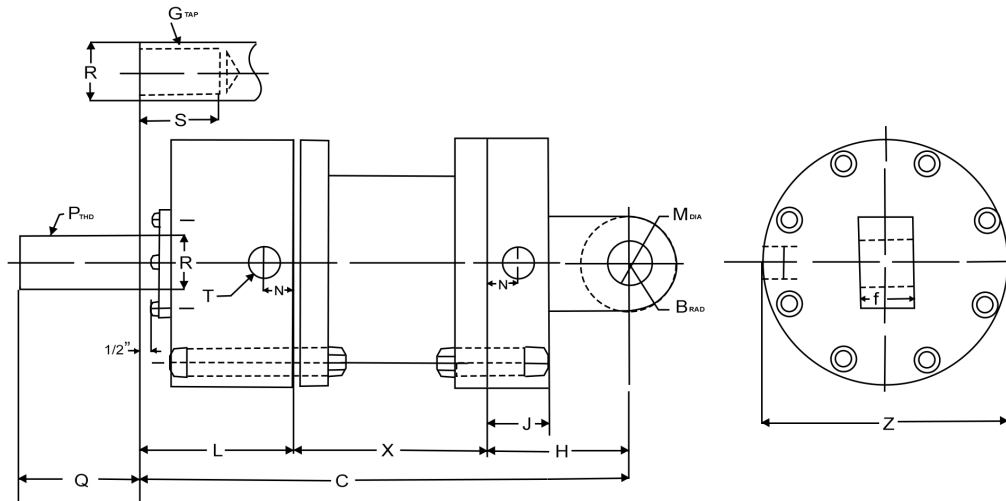


MODEL NO.	BORE (mm)	A	B	C	F	$G_{1:1}=P_{1:1}$	$G_{2:1}=P_{2:1}$	H	J	K	L	N	$Q_{st}=S_{st}$	$Q_{lg}=S_{lg}$	R	T	R2:1	U	X	Z _{max.}
MH - 25004037 - RF	40	98	180	222	26	M 20 x 1.5	M 20 x 1.5	18	42	80	100	19	28	40	28	1/2"	28	67	84	98
MH - 25005037 - RF	50	110	204	240	29	M 24 x 2	M 27 x 1.5	21	46	84	110	19	32	48	32	1/2"	36	76	90	110
MH - 25006337 - RF	63	128	230	270	35	M 30 x 2	M 33 x 2	24	46	99	125	22	40	60	40	3/4"	45	86	104	128
MH - 25008037 - RF	80	152	290	300	38	M 36 x 2	M 42 x 2	33	50	115	135	25	50	72	50	3/4"	56	107	117	152
MH - 25010037 - RF	100	178	344	335	44	M 48 x 2	M 48 x 2	40	60	120	155	30	63	96	63	1"	70	127	128	178
MH - 25012537 - RF	125	216	424	364	52	M 56 x 2	M 64 x 3	46	60	134	170	30	75	112	70	1"	90	156	150	216
MH - 25016037 - RF	160	275	522	433	70	M 72 x 3	M 80 x 3	58	70	153	210	35	85	128	90	1-1/4"	110	193	185	275
MH - 25020037 - RF	200	335	632	530	86	M 90 x 3	M 100 x 3	72	90	190	250	35	106	140	110	1-1/4"	140	234	225	335
MH - 25025037 - RF	250	416	718	598	120	M 110 x 3	M 125 x 4	78	100	203	295	45	112	160	140	1-1/2"	180	271	275	416
MH - 25032037 - RF	320	540	830	694	175	M 140 x 4	M 160 x 4	85	120	229	345	55	140	180	180	2"	220	320	320	540
MH - 25040037 - RF	400	690	1036	755	229	M 160 x 4	M 200 x 4	106	140	250	365	55	160	220	220	2"	280	400	430	690
MH - 25050037 - RF	500	*	*	*	*	M 220 x 4	M 250 x 6	*	140	255	420	65	220	320	280	2-1/2"	350	*	*	800

HYDRAULIC CYLINDERS SERIES MH 37

250 Bar Pressure

Male Clevis Mtg.

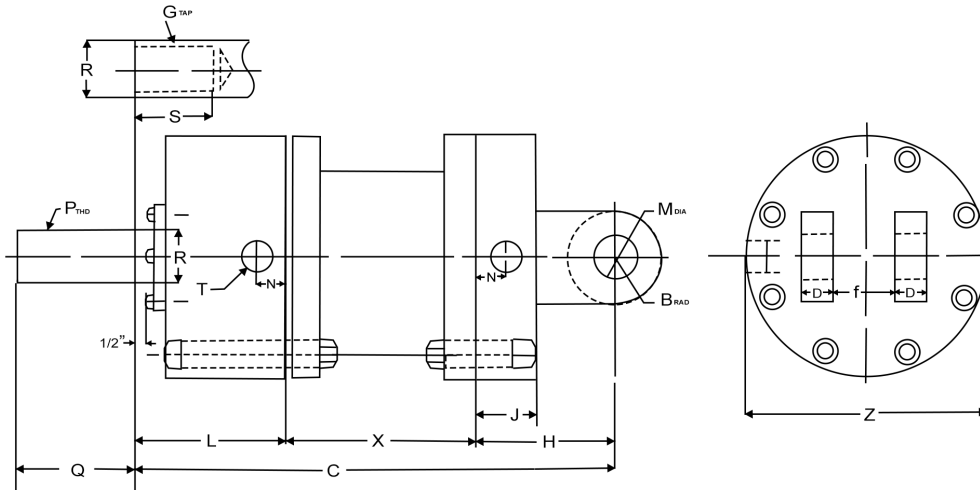


MODEL NO.	BORE (mm)	B	C	F	G _{1:1} =P _{1:1}	G _{2:1} =P _{2:1}	H	J	K	L	M	N	Q _{st} =S _{st}	Q _{lg} =S _{lg}	R	T	R2:1	Z _{max.}
MH - 25004037 - MC	40	32	272	25	M 20 x 1.5	M 20 x 1.5	92	42	80	100	25	19	28	40	28	½"	28	98
MH - 25005037 - MC	50	40	305	32	M 24 x 2	M 27 x 1.5	111	46	84	110	32	19	32	48	28	½"	36	110
MH - 25006337 - MC	63	50	348	40	M 30 x 2	M 33 x 2	124	46	99	125	40	22	40	60	40	¾"	45	128
MH - 25008037 - MC	80	63	395	50	M 36 x 2	M 42 x 2	145	50	115	135	50	25	50	72	50	¾"	56	152
MH - 25010037 - MC	100	71	442	63	M 48 x 2	M 48 x 2	167	60	120	155	63	30	63	96	63	1"	70	178
MH - 25012537 - MC	125	90	494	80	M 56 x 2	M 64 x 3	190	60	134	170	80	30	75	112	70	1"	90	216
MH - 25016037 - MC	160	112	590	100	M 72 x 3	M 80 x 3	227	70	153	210	100	35	85	128	90	1-¼"	110	275
MH - 25020037 - MC	200	160	746	125	M 90 x 3	M 100 x 3	306	90	190	250	125	35	106	140	110	1-¼"	140	335
MH - 25025037 - MC	250	200	861	160	M 110 x 3	M 125 x 4	363	100	203	295	160	45	112	160	140	1-½"	180	416
MH - 25032037 - MC	320	250	1024	200	M 140 x 4	M 160 x 4	450	120	229	345	200	55	140	180	180	2"	220	540
MH - 25040037 - MC	400	320	1075	250	M 160 x 4	M 200 x 4	430	140	250	365	250	55	160	220	220	2"	280	690
MH - 25050037 - MC	500	375	1225	320	M 220 x 4	M 250 x 6	550	140	255	420	320	65	220	320	280	2-½"	350	800

HYDRAULIC CYLINDERS SERIES MH 37

250 Bar Pressure

Female Clevis Mtg.

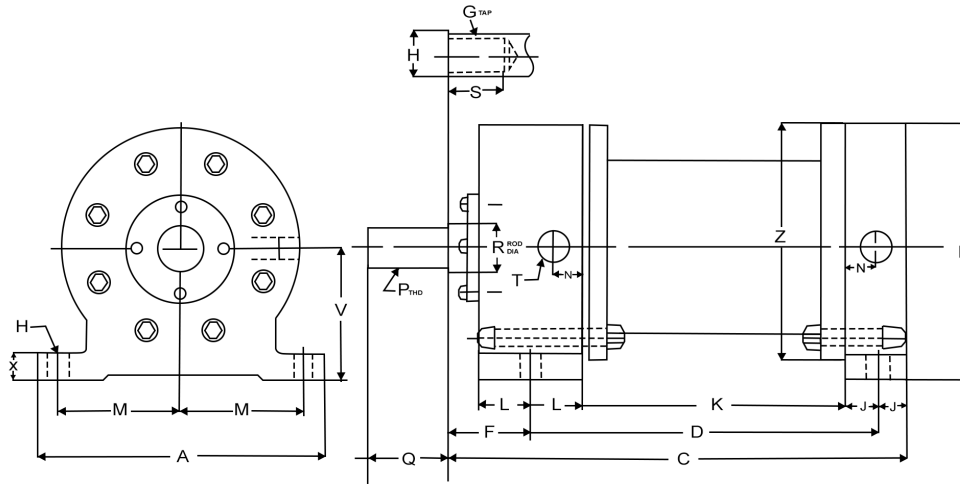


MODEL NO.	BORE (mm)	B	C	D	F	$G_{1:1}=P_{1:1}$	$G_{2:1}=P_{2:1}$	H	J	K	L	M	N	$Q_{st}=S_{st}$	$Q_{lg}=S_{lg}$	R	T	R2:1	Z _{max}
MH - 25004037 - FC	40	32	272	20	26	M 20 x 1.5	M 20 x 1.5	92	42	80	100	25	19	28	40	28	1/2"	28	98
MH - 25005037 - FC	50	40	305	20	33	M 24 x 2	M 27 x 1.5	111	46	84	110	32	19	32	48	28	1/2"	36	110
MH - 25006337 - FC	63	50	348	25	41	M 30 x 2	M 33 x 2	124	46	99	125	40	22	40	60	40	3/4"	45	128
MH - 25008037 - FC	80	63	395	30	51	M 36 x 2	M 42 x 2	145	50	115	135	50	25	50	72	50	3/4"	56	152
MH - 25010037 - FC	100	71	442	35	64	M 48 x 2	M 48 x 2	167	60	120	155	63	30	63	96	63	1"	70	178
MH - 25012537 - FC	125	90	494	40	81	M 56 x 2	M 64 x 3	190	60	134	170	80	30	75	112	70	1"	90	216
MH - 25016037 - FC	160	112	590	50	101	M 72 x 3	M 80 x 3	227	70	153	210	100	35	85	128	90	1-1/4"	110	275
MH - 25020037 - FC	200	160	746	70	126	M 90 x 3	M 100 x 3	306	90	190	250	125	35	106	140	110	1-1/4"	140	335
MH - 25025037 - FC	250	200	861	80	161	M 110 x 3	M 125 x 4	363	100	203	295	160	45	112	160	140	1-1/2"	180	416
MH - 25032037 - FC	320	250	1024	95	201	M 140 x 4	M 160 x 4	450	120	229	345	200	55	140	180	180	2"	220	540
MH - 25040037 - FC	400	320	1075	110	251	M 160 x 4	M 200 x 4	430	140	250	365	250	55	160	220	220	2"	280	690
MH - 25050037 - FC	500	375	1225	130	321	M 220 x 4	M 250 x 6	550	140	255	420	320	65	220	320	280	2-1/2"	350	800

HYDRAULIC CYLINDERS SERIES MH 37

250 Bar Pressure

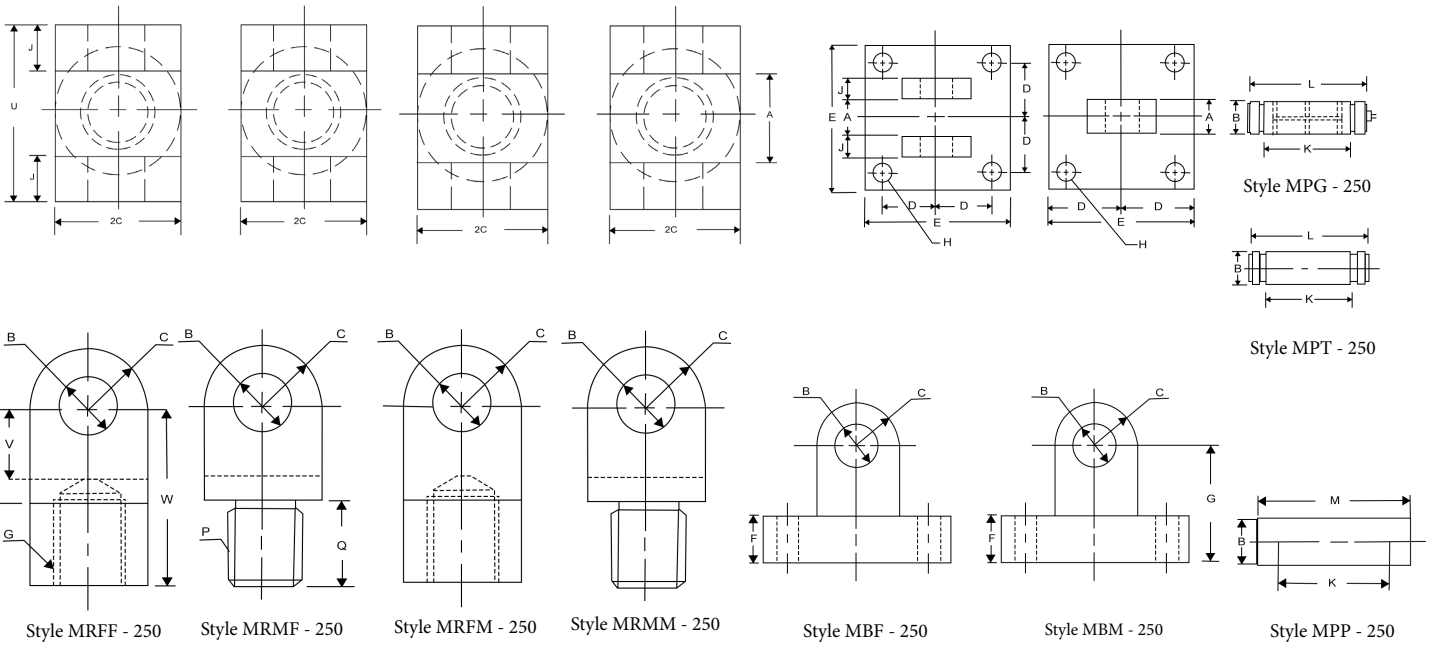
Side Log Mtg.



MODEL NO.	BORE (mm)	A	B	C	D	F	G _{1:1} =P _{1:1}	G _{2:1} =P _{2:1}	H	J	K	L	M	N	Q _{st} =S _{st}	Q _{lg} =S _{lg}	R	T	R2:1	v	X	Z _{max} .
MH - 25004037 - SL	40	160	110	280	159	100	M 20 x 1.5	M 20 x 1.5	14	21	80	58	66	19	28	40	28	½"	28	61	22	98
MH - 25005037 - SL	50	180	122	288	165	100	M 24 x 2	M 27 x 1.5	14	23	84	58	76	19	32	48	32	½"	36	67	22	110
MH - 25006337 - SL	63	208	140	303	180	100	M 30 x 2	M 33 x 2	14	23	99	58	90	22	40	60	40	¾"	45	76	25	128
MH - 25008037 - SL	80	255	164	340	205	110	M 36 x 2	M 42 x 2	18	25	115	65	110	25	50	72	50	¾"	56	88	25	152
MH - 25010037 - SL	100	305	190	381	221	130	M 48 x 2	M 48 x 2	22	30	120	71	131	30	63	96	63	1"	70	101	32	178
MH - 25012537 - SL	125	360	228	395	235	130	M 56 x 2	M 64 x 3	27	30	134	71	153	30	75	112	70	1"	90	120	38	216
MH - 25016037 - SL	160	440	288	439	270	134	M 72 x 3	M 80 x 3	33	35	153	82	187	35	85	128	90	1-¼"	110	150	44	275
MH - 25020037 - SL	200	515	348	520	317	158	M 90 x 3	M 100 x 3	40	45	190	82	218	35	106	140	110	1-¼"	140	180	57	335
MH - 25025037 - SL	250	610	440	569	348	171	M 110 x 3	M 125 x 4	46	50	203	95	259	45	112	160	140	1-½"	180	232	70	416
MH - 25032037 - SL	320	760	564	641	397	184	M 140 x 4	M 160 x 4	52	60	229	108	320	55	140	180	180	2"	220	294	76	540
MH - 25040037 - SL	400	915	714	682	428	184	M 160 x 4	M 200 x 4	72	70	250	108	388	55	160	220	220	2"	280	369	102	690
MH - 25050037 - SL	500	1100	824	735	445	220	M 220 x 4	M 250 x 6	80	70	255	120	470	65	220	320	280	2-½"	350	424	114	800

HYDRAULIC CYLINDERS SERIES MH 37

250 Bar Pressure

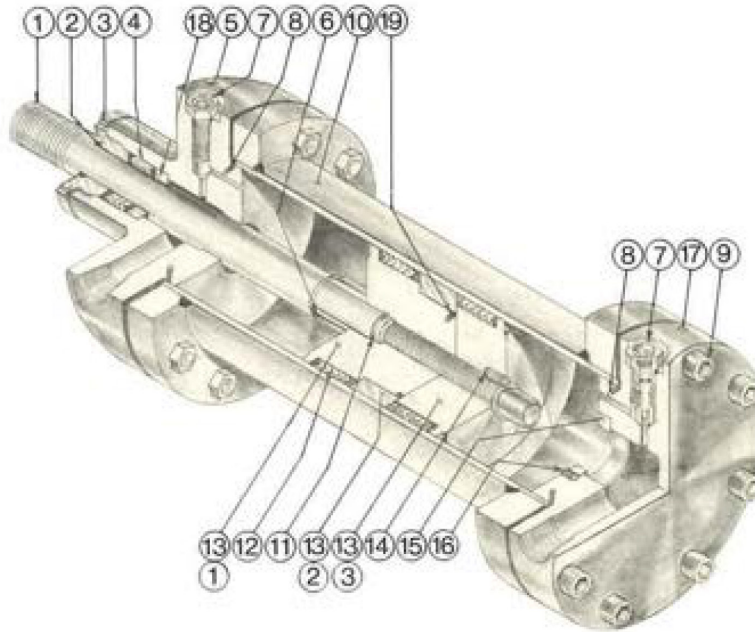


BORE (mm)	A	B	C	G=P	J	Q=S	T	U	V	W
40	25	25	32	M 20 x 1.5	20	28	60	65	50	88
50	32	32	40	M 24 x 2	20	32	75	72	65	107
63	40	40	50	M 30 x 2	25	40	88	90	78	128
80	50	50	63	M 36 x 2	30	50	110	110	95	160
100	63	63	71	M 48 x 2	35	63	122	133	107	185
125	80	80	90	M 56 x 2	40	75	145	160	130	220
160	100	100	112	M 72 x 3	50	85	177	200	157	262
200	125	125	160	M 90 x 3	70	106	236	265	216	342
250	160	160	200	M 110 x 3	80	112	288	320	263	400
320	200	200	250	M 140 x 4	95	140	355	390	330	495

BORE (mm)	A	B	C	D	E	F	G	H	J	K	L	M
40	25	20	25	52	140	22	53	18	20	68	76	89
50	32	32	40	58	158	22	62	21	20	79	87	100
63	40	40	50	69	186	25	75	24	25	93	105	118
80	50	50	63	85	236	25	88	33	30	120	132	145
100	63	63	71	102	284	32	103	40	35	143	159	184
125	80	80	90	120	332	38	128	46	40	170	186	227
160	100	100	112	148	412	44	156	58	50	210	230	267
200	125	125	160	190	524	87	217	72	70	280	300	343
250	160	160	200	220	596	70	270	78	80	335	355	398
320	200	200	250	257	684	76	326	85	90	400	420	463

MILL TYPE METRIC HYDRAULIC CYLINDERS SERIES MH 38

250 Bar Pressure



PART LIST

ITEM	QTY.	DESCRIPTION
1	1 only	Cylinder Rod (chrome plated)
2	*1 only	Rod Wiper
3	**1 only	Gland Bushing
4	*1 set	Gland Seal - Chevron "V" Ring
5	1 only	Front Head
6	1 only	Front Cushion
7	2 only	Adjustable Cushion Assembly
8	*2 only	Head Static Seal - "O" Ring
9	2 sets	Head Securing Cap Screws and Nuts
10	1 only	Cylinder Barrel Assembly
11	*1 only	Piston Rod Seal - "O" Ring

ITEM	QTY.	DESCRIPTION
12	*2 sets	Piston Dynamic Seal - Chevron "V" Rings
13/1	1 only	Piston - Front Section
13/2	1 only	Piston - Bushing
13/3	1 only	Piston - Rear Section
14	1 only	Piston Securing Screw
15	1 only	Rear Cushion
16	2 only	Rear Cushion Securing Screw
17	1 only	Rear Head
18	1 only	Lower Gland Bearing
19	*1 only	Piston Static Seal - "O" Ring

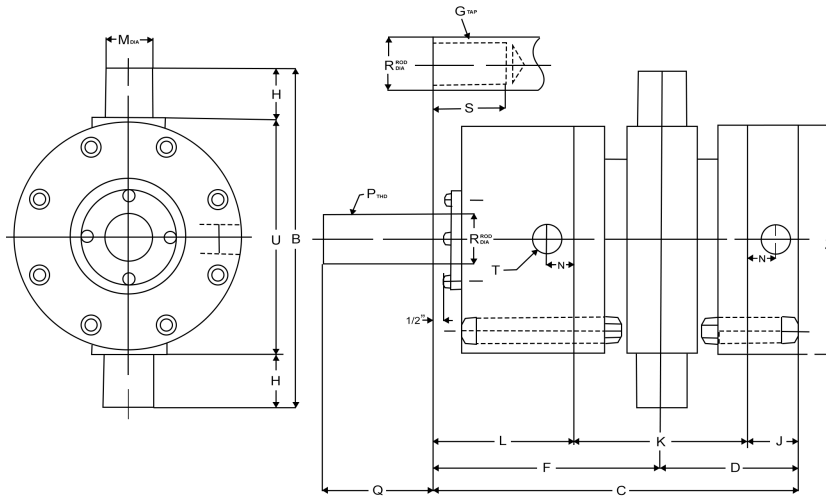
* Spare Parts

** Optional Spare Parts

HYDRAULIC CYLINDERS SERIES MH 38

250 Bar Pressure

Trunnion Mtg.

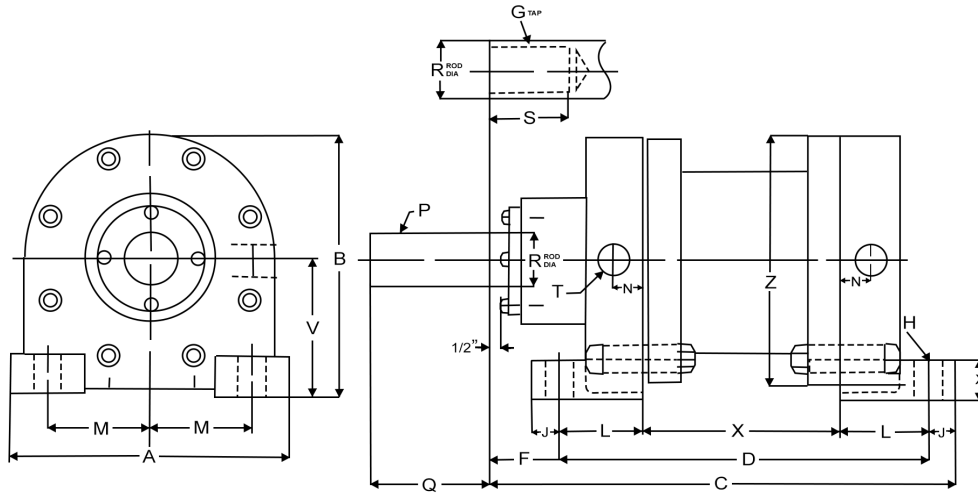


MODEL NO.	BORE (mm)	B	C	D	F	G _{1:1} =P _{1:1}	G _{2:1} =P _{2:1}	H	J	K	L	M	N	Q _{st} =S _{st}	Q _{lg} =S _{lg}	R	T	U	R2:1	Z _{max}
MH - 25004038 - T	40	140	222	82	140	M 20 x 1.5	M 20 x 1.5	20	42	80	100	32	19	28	40	28	½"	100	28	98
MH - 25005038 - T	50	162	240	88	152	M 24 x 2	M 27 x 1.5	25	46	84	110	32	19	32	48	32	½"	112	36	110
MH - 25006338 - T	63	189	270	96	174	M 30 x 2	M 33 x 2	32	46	99	125	40	22	40	60	40	¾"	125	45	128
MH - 25008038 - T	80	230	300	108	192	M 36 x 2	M 42 x 2	40	50	115	135	50	25	50	72	50	¾"	150	56	152
MH - 25010038 - T	100	280	335	120	215	M 48 x 2	M 48 x 2	50	60	120	155	63	30	63	96	63	1"	180	70	178
MH - 25012538 - T	125	350	390	140	250	M 56 x 2	M 64 x 3	63	60	160	170	80	30	75	112	70	1"	224	90	216
MH - 25016038 - T	160	440	460	160	300	M 72 x 3	M 80 x 3	80	70	180	210	100	35	85	128	90	1-¼"	280	110	275
MH - 25020038 - T	200	545	540	190	350	M 90 x 3	M 100 x 3	100	90	200	250	125	35	106	140	110	1-¼"	345	140	335
MH - 25025038 - T	250	675	640	223	417	M 110 x 3	M 125 x 4	125	100	245	295	160	45	112	160	140	1-½"	425	180	416
MH - 25032038 - T	320	850	715	245	470	M 140 x 4	M 160 x 4	160	120	250	345	200	55	140	180	180	2"	530	220	540
MH - 25040038 - T	400	1030	755	265	490	M 160 x 4	M 200 x 4	200	140	250	365	250	55	160	220	220	2"	630	280	690
MH - 25050038 - T	500	1230	865	293	572	M 220 x 4	M 250 x 6	250	140	305	420	320	65	220	320	280	2-½"	730	350	800

HYDRAULIC CYLINDERS SERIES MH 38

250 Bar Pressure

Base Mtg.

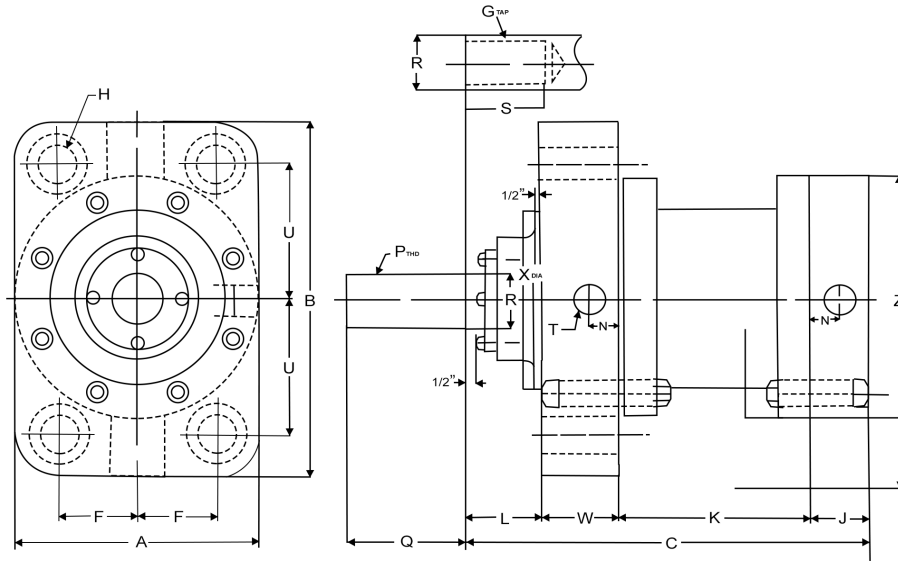


MODEL NO.	BORE (mm)	A	B	C	D	F	$G_{1:1}=P_{1:1}$	$G_{2:1}=P_{2:1}$	H	J	K	L	M	N	$Q_{st}=S_{st}$	$Q_{lg}=S_{lg}$	R	T	R2:1	v	X	Z _{max}
MH - 25004038 - B	40	118	110	250	192	44	M 20 x 1.5	M 20 x 1.5	14	14	80	56	44	19	28	40	28	½"	28	61	22	98
MH - 25005038 - B	50	130	122	268	204	50	M 24 x 2	M 27 x 1.5	14	14	84	60	50	19	32	48	32	½"	36	67	22	110
MH - 25006338 - B	63	148	140	298	219	65	M 30 x 2	M 33 x 2	14	14	99	60	57	22	40	60	40	¾"	45	76	22	128
MH - 25008038 - B	80	172	164	336	251	67	M 36 x 2	M 42 x 2	18	18	115	68	67	25	50	72	50	¾"	56	88	25	152
MH - 25010038 - B	100	198	190	379	284	73	M 48 x 2	M 48 x 2	22	22	120	82	78	30	63	96	63	1"	70	101	32	178
MH - 25012538 - B	125	256	228	444	334	83	M 56 x 2	M 64 x 3	27	27	160	87	95	30	75	112	70	1"	90	120	38	216
MH - 25016038 - B	160	315	288	526	386	107	M 72 x 3	M 80 x 3	33	33	180	103	121	35	85	128	90	1-¼"	110	150	44	275
MH - 25020038 - B	200	375	348	620	460	120	M 90 x 3	M 100 x 3	40	40	200	130	149	35	106	140	110	1-¼"	140	180	57	335
MH - 25025038 - B	250	456	440	732	537	149	M 110 x 3	M 125 x 4	46	46	245	146	186	45	112	160	140	1-½"	180	232	70	416
MH - 25032038 - B	320	580	564	819	594	173	M 140 x 4	M 160 x 4	52	52	250	172	244	55	140	180	180	2"	220	294	76	540
MH - 25040038 - B	400	730	714	899	674	153	M 160 x 4	M 200 x 4	72	72	250	212	310	55	160	220	220	2"	280	369	102	690
MH - 25050038 - B	500	860	824	1025	745	200	M 220 x 4	M 250 x 6	80	80	305	220	360	65	220	320	280	2-½"	350	424	114	800

HYDRAULIC CYLINDERS SERIES MH 38

250 Bar Pressure

Front Flange Mtg.

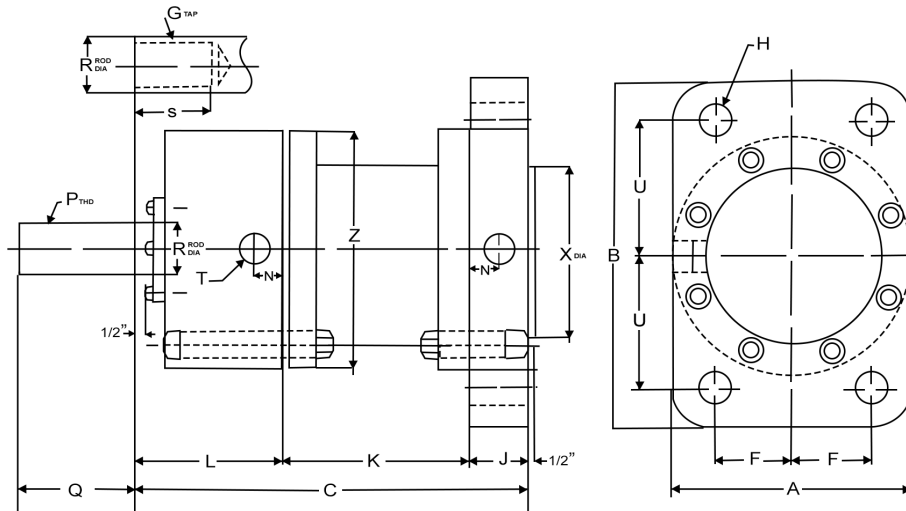


MODEL NO.	BORE (mm)	A	B	C	F	G _{1:1} =P _{1:1}	G _{2:1} =P _{2:1}	H	J	K	L	N	Q _{st} =S _{st}	Q _{lg} =S _{lg}	R	T	R2:1	U	W	X	Z _{max}
MH - 25004038 - FF	40	98	180	222	26	M 20 x 1.5	M 20 x 1.5	18	42	80	55	19	28	40	28	½"	28	67	45	84	98
MH - 25005038 - FF	50	110	204	240	29	M 24 x 2	M 27 x 1.5	21	46	84	60	19	32	48	32	½"	36	76	50	90	110
MH - 25006338 - FF	63	128	230	270	35	M 30 x 2	M 33 x 2	24	46	99	70	22	40	60	40	¾"	45	86	55	104	128
MH - 25008038 - FF	80	152	290	300	38	M 36 x 2	M 42 x 2	33	50	115	72	25	50	72	50	¾"	56	107	63	117	152
MH - 25010038 - FF	100	178	344	335	44	M 48 x 2	M 48 x 2	40	60	120	85	30	63	96	63	1"	70	127	70	128	178
MH - 25012538 - FF	125	216	424	390	52	M 56 x 2	M 64 x 3	46	60	160	90	30	75	112	70	1"	90	156	80	150	216
MH - 25016038 - FF	160	275	522	460	70	M 72 x 3	M 80 x 3	58	70	180	115	35	85	128	90	1-¼"	110	193	95	185	275
MH - 25020038 - FF	200	335	632	540	86	M 90 x 3	M 100 x 3	72	90	200	140	35	106	140	110	1-¼"	140	234	110	225	335
MH - 25025038 - FF	250	416	718	640	120	M 110 x 3	M 125 x 4	78	100	245	170	45	112	160	140	1-½"	180	271	125	275	416
MH - 25032038 - FF	320	540	830	715	175	M 140 x 4	M 160 x 4	85	120	250	195	55	140	180	180	2"	220	320	150	320	540
MH - 25040038 - FF	400	690	1036	755	229	M 160 x 4	M 200 x 4	106	140	250	205	55	160	220	220	2"	280	400	160	430	690
MH - 25050038 - FF	500	*	*	865	*	M 220 x 4	M 250 x 6	*	140	305	*	65	220	320	280	2-½"	350	*	*	*	800

HYDRAULIC CYLINDERS SERIES MH 38

250 Bar Pressure

Rear Flange Mtg.

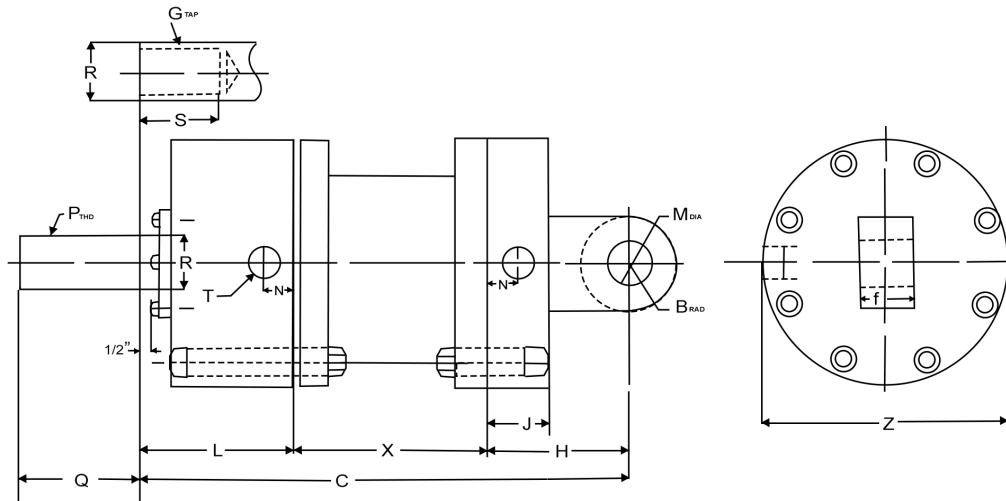


MODEL NO.	BORE (mm)	A	B	C	F	$G_{1:1}=P_{1:1}$	$G_{2:1}=P_{2:1}$	H	J	K	L	N	$Q_{st}=S_{st}$	$Q_{lg}=S_{lg}$	R	T	R2:1	U	X	Z _{max.}
MH - 25004038 - RF	40	98	180	222	26	M 20 x 1.5	M 20 x 1.5	18	42	80	100	19	28	40	28	1/2"	28	67	84	98
MH - 25005038 - RF	50	110	204	240	29	M 24 x 2	M 27 x 1.5	21	46	84	110	19	32	48	32	1/2"	36	76	90	110
MH - 25006338 - RF	63	128	230	270	35	M 30 x 2	M 33 x 2	24	46	99	125	22	40	60	40	3/4"	45	86	104	128
MH - 25008038 - RF	80	152	290	300	38	M 36 x 2	M 42 x 2	33	50	115	135	25	50	72	50	3/4"	56	107	117	152
MH - 25010038 - RF	100	178	344	335	44	M 48 x 2	M 48 x 2	40	60	120	155	30	63	96	63	1"	70	127	128	178
MH - 25012538 - RF	125	216	424	390	52	M 56 x 2	M 64 x 3	46	60	160	170	30	75	112	70	1"	90	156	150	216
MH - 25016038 - RF	160	275	522	460	70	M 72 x 3	M 80 x 3	58	70	180	210	35	85	128	90	1-1/4"	110	193	185	275
MH - 25020038 - RF	200	335	632	540	86	M 90 x 3	M 100 x 3	72	90	200	250	35	106	140	110	1-1/4"	140	234	225	335
MH - 25025038 - RF	250	416	718	640	120	M 110 x 3	M 125 x 4	78	100	245	295	45	112	160	140	1-1/2"	180	271	275	416
MH - 25032038 - RF	320	540	830	715	175	M 140 x 4	M 160 x 4	85	120	250	345	55	140	180	180	2"	220	320	320	540
MH - 25040038 - RF	400	690	1036	755	229	M 160 x 4	M 200 x 4	106	140	250	365	55	160	220	220	2"	280	400	430	690
MH - 25050038 - RF	500	*	*	865	*	M 220 x 4	M 250 x 6	*	140	305	420	65	220	320	280	2-1/2"	350	*	*	800

HYDRAULIC CYLINDERS SERIES MH 38

250 Bar Pressure

Male Clevis Mtg.

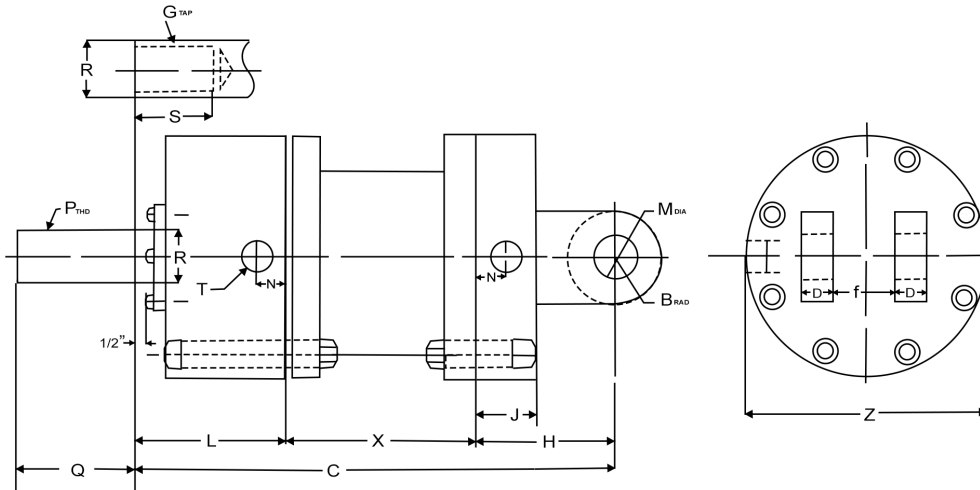


MODEL NO.	BORE (mm)	B	C	F	G _{1:1} =P _{1:1}	G _{2:1} =P _{2:1}	H	J	K	L	M	N	Q _{st} =S _{st}	Q _{lg} =S _{lg}	R	T	R2:1	Z _{max.}
MH - 25004038 - MC	40	32	272	25	M 20 x 1.5	M 20 x 1.5	92	42	80	100	25	19	28	40	28	½"	28	98
MH - 25005038 - MC	50	40	305	32	M 24 x 2	M 27 x 1.5	111	46	84	110	32	19	32	48	28	½"	36	110
MH - 25006338 - MC	63	50	348	40	M 30 x 2	M 33 x 2	124	46	99	125	40	22	40	60	40	¾"	45	128
MH - 25008038 - MC	80	63	395	50	M 36 x 2	M 42 x 2	145	50	115	135	50	25	50	72	50	¾"	56	152
MH - 25010038 - MC	100	71	442	63	M 48 x 2	M 48 x 2	167	60	120	155	63	30	63	96	63	1"	70	178
MH - 25012538 - MC	125	90	520	80	M 56 x 2	M 64 x 3	190	60	160	170	80	30	75	112	70	1"	90	216
MH - 25016038 - MC	160	112	617	100	M 72 x 3	M 80 x 3	227	70	180	210	100	35	85	128	90	1-¼"	110	275
MH - 25020038 - MC	200	160	756	125	M 90 x 3	M 100 x 3	306	90	200	250	125	35	106	140	110	1-¼"	140	335
MH - 25025038 - MC	250	200	903	160	M 110 x 3	M 125 x 4	363	100	245	295	160	45	112	160	140	1-½"	180	416
MH - 25032038 - MC	320	250	1045	200	M 140 x 4	M 160 x 4	450	120	250	345	200	55	140	180	180	2"	220	540
MH - 25040038 - MC	400	320	1075	250	M 160 x 4	M 200 x 4	430	140	250	365	250	55	160	220	220	2"	280	690
MH - 25050038 - MC	500	375	1275	320	M 220 x 4	M 250 x 6	550	140	305	420	320	65	220	320	280	2-½"	350	800

HYDRAULIC CYLINDERS SERIES MH 38

250 Bar Pressure

Female Clevis Mtg.

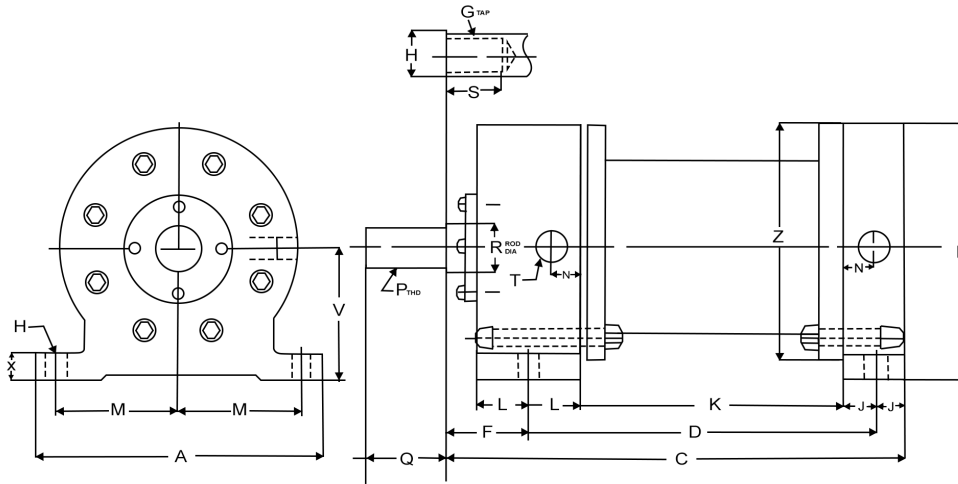


MODEL NO.	BORE (mm)	B	C	D	F	G _{1:1} =P _{1:1}	G _{2:1} =P _{2:1}	H	J	K	L	M	N	Q _{st} =S _{st}	Q _{lg} =S _{lg}	R	T	R2:1	Z _{max}
MH - 25004038 - FC	40	32	272	20	26	M 20 x 1.5	M 20 x 1.5	92	42	80	100	25	19	28	40	28	1/2"	28	98
MH - 25005038 - FC	50	40	305	20	33	M 24 x 2	M 27 x 1.5	111	46	84	110	32	19	32	48	28	1/2"	36	110
MH - 25006338 - FC	63	50	348	25	41	M 30 x 2	M 33 x 2	124	46	99	125	40	22	40	60	40	3/4"	45	128
MH - 25008038 - FC	80	63	395	30	51	M 36 x 2	M 42 x 2	145	50	115	135	50	25	50	72	50	3/4"	56	152
MH - 25010038 - FC	100	71	442	35	64	M 48 x 2	M 48 x 2	167	60	120	155	63	30	63	96	63	1"	70	178
MH - 25012538 - FC	125	90	520	40	81	M 56 x 2	M 64 x 3	190	60	160	170	80	30	75	112	70	1"	90	216
MH - 25016038 - FC	160	112	617	50	101	M 72 x 3	M 80 x 3	227	70	180	210	100	35	85	128	90	1-1/4"	110	275
MH - 25020038 - FC	200	160	756	70	126	M 90 x 3	M 100 x 3	306	90	200	250	125	35	106	140	110	1-1/4"	140	335
MH - 25025038 - FC	250	200	903	80	161	M 110 x 3	M 125 x 4	363	100	245	295	160	45	112	160	140	1-1/2"	180	416
MH - 25032038 - FC	320	250	1045	95	201	M 140 x 4	M 160 x 4	450	120	250	345	200	55	140	180	180	2"	220	540
MH - 25040038 - FC	400	320	1075	110	251	M 160 x 4	M 200 x 4	430	140	250	365	250	55	160	220	220	2"	280	690
MH - 25050038 - FC	500	375	1275	130	321	M 220 x 4	M 250 x 6	550	140	305	420	320	65	220	320	280	2-1/2"	350	800

HYDRAULIC CYLINDERS SERIES MH 38

250 Bar Pressure

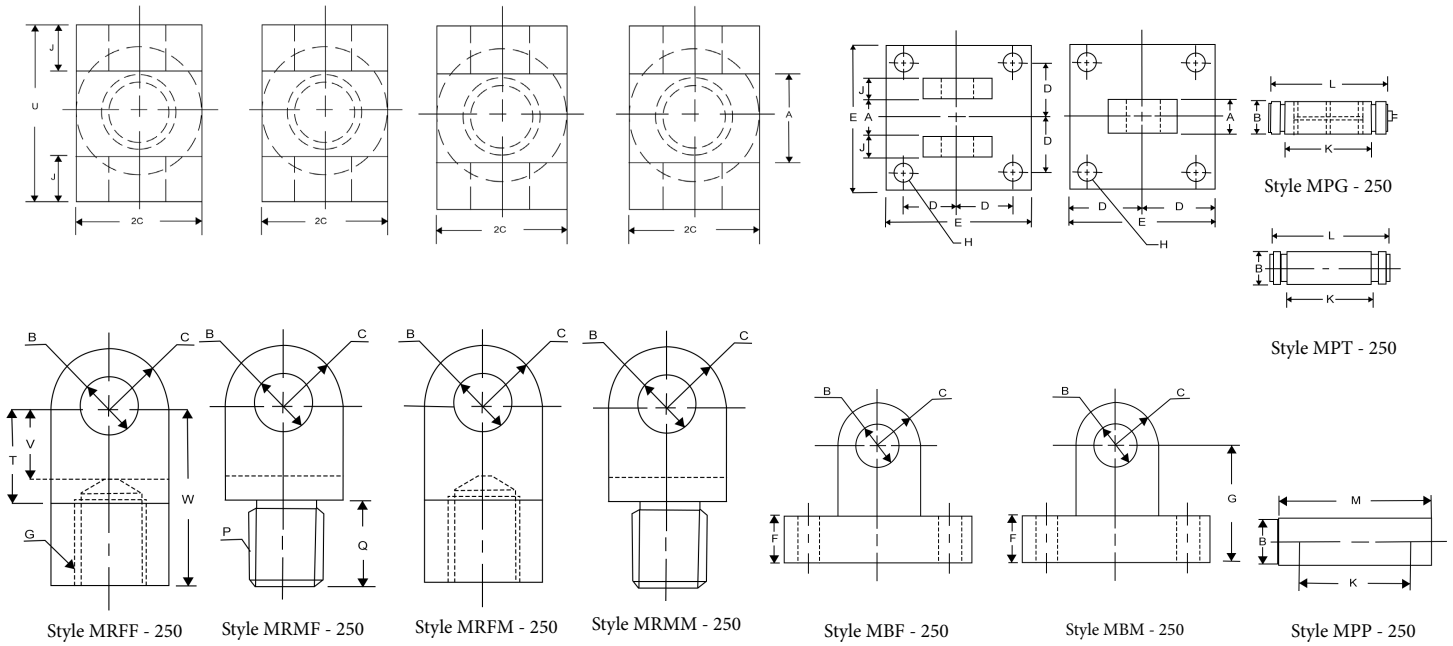
Side Log Mtg.



MODEL NO.	BORE (mm)	A	B	C	D	F	G _{1:1} =P _{1:1}	G _{2:1} =P _{2:1}	H	J	K	L	M	N	Q _{st} =S _{st}	Q _{lg} =S _{lg}	R	T	R2:1	v	X	Z _{max.}
MH - 25004038 - SL	40	160	110	280	159	100	M 20 x 1.5	M 20 x 1.5	14	21	80	58	66	19	28	40	28	½"	28	61	22	98
MH - 25005038 - SL	50	180	122	288	165	100	M 24 x 2	M 27 x 1.5	14	23	84	58	76	19	32	48	32	½"	36	67	22	110
MH - 25006338 - SL	63	208	140	303	180	100	M 30 x 2	M 33 x 2	14	23	99	58	90	22	40	60	40	¾"	45	76	25	128
MH - 25008038 - SL	80	255	164	340	205	110	M 36 x 2	M 42 x 2	18	25	115	65	110	25	50	72	50	¾"	56	88	25	152
MH - 25010038 - SL	100	305	190	381	221	130	M 48 x 2	M 48 x 2	22	30	120	71	131	30	63	96	63	1"	70	101	32	178
MH - 25012538 - SL	125	360	228	421	261	130	M 56 x 2	M 64 x 3	27	30	160	71	153	30	75	112	70	1"	90	120	38	216
MH - 25016038 - SL	160	440	288	466	297	134	M 72 x 3	M 80 x 3	33	35	180	82	187	35	85	128	90	1-¼"	110	150	44	275
MH - 25020038 - SL	200	515	348	530	327	158	M 90 x 3	M 100 x 3	40	45	200	82	218	35	106	140	110	1-¼"	140	180	57	335
MH - 25025038 - SL	250	610	440	611	390	171	M 110 x 3	M 125 x 4	46	50	245	95	259	45	112	160	140	1-½"	180	232	70	416
MH - 25032038 - SL	320	760	564	662	418	184	M 140 x 4	M 160 x 4	52	60	250	108	320	55	140	180	180	2"	220	294	76	540
MH - 25040038 - SL	400	915	714	682	428	184	M 160 x 4	M 200 x 4	72	70	250	108	388	55	160	220	220	2"	280	369	102	690
MH - 25050038 - SL	500	1100	824	785	495	220	M 220 x 4	M 250 x 6	80	70	305	120	470	65	220	320	280	2-½"	350	424	114	800

HYDRAULIC CYLINDERS SERIES MH 38

250 Bar Pressure



BORE (mm)	A	B	C	G=P	J	Q=S	T	U	V	W
40	25	25	32	M 20 x 1.5	20	28	60	65	50	88
50	32	32	40	M 24 x 2	20	32	75	72	65	107
63	40	40	50	M 30 x 2	25	40	88	90	78	128
80	50	50	63	M 36 x 2	30	50	110	110	95	160
100	63	63	71	M 48 x 2	35	63	122	133	107	185
125	80	80	90	M 56 x 2	40	75	145	160	130	220
160	100	100	112	M 72 x 3	50	85	177	200	157	262
200	125	125	160	M 90 x 3	70	106	236	265	216	342
250	160	160	200	M 110 x 3	80	112	288	320	263	400
320	200	200	250	M 140 x 4	95	140	355	390	330	495

BORE (mm)	A	B	C	D	E	F	G	H	J	K	L	M
40	25	20	25	52	140	22	53	18	20	68	76	89
50	32	32	40	58	158	22	62	21	20	79	87	100
63	40	40	50	69	186	25	75	24	25	93	105	118
80	50	50	63	85	236	25	88	33	30	120	132	145
100	63	63	71	102	284	32	103	40	35	143	159	184
125	80	80	90	120	332	38	128	46	40	170	186	227
160	100	100	112	148	412	44	156	58	50	210	230	267
200	125	125	160	190	524	57	217	72	70	280	300	343
250	160	160	200	220	596	70	270	78	80	335	355	398
320	200	200	250	257	684	76	326	85	90	400	420	463

Our Long History of Excellence is Your Guarantee of Success



Anker-Holth®

a division of Magnum Integrated Technologies Inc.

200 First Gulf Blvd, Brampton, ON, Canada, L6W4T5

Tel: 905-455-0402 Fax: 905-455-0422

www.ankerholth.com