

BUCHER hydraulics

Hydraulic Power Units - Overview

Bucher Hydraulics is a respected manufacturer that has been producing hydraulic components for 100 years. The M-series and T-series power units in this catalog are produced in Canada. All units include a welded steel reservoir, TEFC motor and spin-on filter.

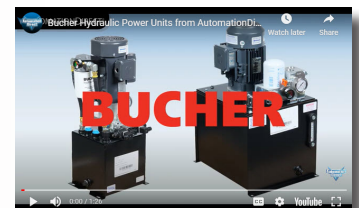
Features

- Totally enclosed fan cooled Premium Efficiency electric motor, rated for 60 Hz. 3-phase motors will also work at some 50 Hz voltages.
- Powder coated reservoir plumbed for vertical mounting
- Adjustable Safety Relief valve preset at factory
- Hydraulic connections:
 - T-Series: Aluminum adaptable base manifold with SAE 10, P & T ports
 - M-Series: Aluminum D03 manifold with SAE #6 A&B ports with included 4-Way/3-Position D03 Tandem Center valve
- Suction strainer at pump inlet
- Return line spin-on type filter with visual by-pass indicator
- Bayonet style filler / breather assembly with strainer basket (T-Series)
- Threaded style filler / breather assembly with dipstick (M-Series)
- Sight / level / temperature gauge (T-Series only)
- Liquid filled pressure gauge with isolator
- Two extra 1" NPT couplings through top of reservoir for electrical sensors should you need remote live data of level or temperature
- 3/4" NPT drain port on lower front / side of reservoir

Applications

- Industrial Presses and Processes
- CNC Machinery – Manufacturing
- Rollforming Equipment
- Material Lifts
- Automotive Lifts / Motorcycle Lifts
- Factory Automation
- Elevators
- Scissor Lifts & Platforms
- Material Handling Equipment
- Hydraulic Door Systems
- Positioning Equipment

Parts and Accessories



Click on the thumbnail or go to <https://www.automationdirect.com/VID-HY-0002> for a short video on Bucher Hydraulic Power Units.

Part No. 51045050002

Overview

M-Series hydraulic power units have a single-phase AC motor and one tandem center D03 solenoid valve. It can deliver flow rates from 1 to 3 gallons per minute (GPM) and pressures of 1500 to 3000 psi.

Features

- 60Hz 1 Phase, AC Power
- 3600 Nominal RPM
- Vertical mounting orientation
- Manifold: Single station D03 circuit with #6 SAE, 9/16-18 pressure and return port thread size
- Spin-on type oil filter, 10 micron, with by-pass indicator
- Tandem center D03 valve with 120 VAC DIN coils

Bucher M-Series - Hydraulic Power Unit Specifications

Part No.	51045050002	51045050003	51045050004	51045050005	51045050006	51045050007	51045050008
Model Number	M4505201-02HK01	M4505251-03HM01	M4505301-02HK01	M4505301-04HN01	M4505351D03HM01	M4505351D04HN01	M4505351D21HR01
Price	\$1,713.00	\$1,816.00	\$1,836.00	\$1,892.00	\$2,118.00	\$2,146.00	\$2,359.00
Manual Link	PDF						
Drawing Link	PDF	PDF	PDF	PDF	PDF	PDF	PDF
Circuit Design	Single station D03 with tandem center directional control valve						
HP (horsepower)	1	1.5	2		3		
Motor Frame	56HC				56C		
Voltage	115 / 208-230 VAC				115 / 230 VAC		
Full Load Amps	9.6 / 5.3 - 4.8	13.4 / 7.4 - 6.7	18.2 / 10.0 - 9.1	18.2 / 10.0 - 9.1	24 / 12	24 / 12	24 / 12
Maximum Pressure (psi)	1500	1500	3000	1500	3000	2000	1500
Nominal Flow (GPM)	1	1.5	1	2	1.5	2	3
Reservoir Capacity / Usable (gallons)	4 / 3	6 / 5	4 / 3	8 / 6	6 / 5	8 / 6	11 / 9

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T-Series - Hydraulic Power Units



Part No. [51060550015](#)

Overview

T-Series hydraulic power units have a three-phase AC motor and a P&T base manifold ready to accept up to 3 D03 valves using our stack-on adapters. It can deliver flow rates from 2 to 6.8 gallons per minute (GPM) and pressures from 1500 to 3000 psi.

Features

- 60Hz 3 Phase, AC Power
- 1800 Nominal RPM
- Vertical mounting orientation
- Manifold: #10 SAE, 7/8-14 pressure and return port size. Base manifold ready for up to (3) D03 valve adapters and valves
- Spin-on type oil filter, 7 micron, with visual by-pass indicator

Bucher T-Series - Hydraulic Power Unit Specifications

Part No.	51060550015	51060550016	51060550017	51060570014	51060620047	51060630034	51060630035
Model Number	T55B305MA1RF-01	T55B355RA1SF-01	T55B405RA1SF-01	T57C355RA1SF-01	T62C455DA1FF-01	T63D405CA1FF-01	T63D455DA1FF-01
Price	\$2,226.00	\$2,430.00	\$2,446.00	\$2,516.00	\$3,125.00	\$2,725.00	\$3,220.00
Manual Link	PDF						
Drawing Link	PDF	PDF	PDF	PDF	PDF	PDF	PDF
HP (horsepower)	2	3	5	3	7.5	5	7.5
Motor Frame	56C	182/4 TC			213/5 TC	182/4 TC	213/5 TC
Voltage	230/460 VAC						
Full Load Amps	5.72 / 2.86	7.62 / 3.81	12.4 / 6.18	7.62 / 3.81	17.7 / 8.86	12.4 / 6.18	17.7 / 8.86
Maximum Pressure (psi)	1500	2200	3000	1500	3000	2000	3000
Nominal Flow (GPM)	2			3		3.8	3.8
Reservoir Capacity / Usable (gallons)	10 / 5.2			15 / 9.8		20 / 12	

T-Series - Hydraulic Power Units

Continued

Bucher T-Series - Hydraulic Power Unit Specifications Continued					
Part No.	<u>51060640071</u>	<u>51060640072</u>	<u>51060640073</u>	<u>51060650030</u>	<u>51060650031</u>
Model Number	T64E405CA1FF-01	T64E455DA1FF-01	T64E505DA1FF-01	T65E455DA1FF-01	T65E505DA1FF-01
Price	\$2,807.00	\$3,302.00	\$3,469.00	\$3,315.00	\$3,482.00
Manual Link	<u>PDF</u>				
Drawing Link	<u>PDF</u>	<u>PDF</u>	<u>PDF</u>	<u>PDF</u>	<u>PDF</u>
HP (horsepower)	5	7.5	10	7.5	10
Motor Frame	182/4 TC	213/5 TC			
Voltage	230/460 VAC				
Full Load Amps	12.4 / 6.18	17.7 / 8.86	23.9 / 12.0	17.7 / 8.86	23.9 / 12.0
Maximum Pressure (psi)	1500	2200	3000	1600	2100
Nominal Flow (GPM)	5			6.8	
Reservoir Capacity / Usable (gallons)	30 / 22				

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T-Series - Dual Flow/Dual Pressure Hi-Lo Hydraulic Power Unit



Part No. [51060920005](#)

Overview

This Hi-Lo T-Series hydraulic power unit is a great choice for many applications such as presses, balers or compactors. It allows for high flow during low pressure demand that switches to low flow once pressure needed exceeds 600 psi.

Features

- Hi-Lo circuit with P&T base manifold, #10 SAE P&T ports
- Can be fitted with D05 stack-on body and D05 valve
- 60Hz 3 Phase, AC Power
- 1800 Nominal RPM
- Vertical mounting orientation
- Spin-on type oil filter, 10 micron, with visual by-pass indicator

Bucher T-Series - Dual Flow/Dual Pressure Hydraulic Power Unit Specifications	
Part No.	51060920005
Model Number	T92E405C91F4-01
Price	\$3,156.00
Manual Link	PDF
Drawing Link	PDF
Circuit Design	Hi-Lo with P&T base manifold ready for D05 stack-on body and D05 valve
HP (horsepower)	5
Motor Frame	182/4 TC
Voltage	230/460 VAC
Full Load Amps	12.4 / 6.18
Maximum Pressure (psi)	600 / 2500
Nominal Flow (GPM)	11 / 3
Reservoir Capacity / Usable (gallons)	30 / 22

Bucher T-Series Valve Mounting Accessories

Hydraulic Power Unit Accessories

Mounting accessories include directional valve adapters to allow mounting of D03 valves to the T5 and T6 series units and D05 valves to the Hi-Lo unit.



Part No. [510204910200](#)



Part No. [51020070044](#)

Bucher T-Series Valve Mounting Accessories

Part No.	Description	Weight (lbs)	Drawing Link	Price
510204910200*	Bucher valve adapter, for use with D03 series valves and T5x and T6x power units.	2.55	PDF	\$109.00
51020070043	Bucher mounting bolts, for use with 1 D03 series valve adapter and T5x and T6x power units.	0.20	N/A	\$7.25
51020070044	Bucher mounting bolts, for use with 2 D03 series valve adapters and T5x and T6x power units.	0.30	N/A	\$32.50
51020070045	Bucher mounting bolts, for use with 3 D03 series valve adapters and T5x and T6x power units.	0.45	N/A	\$43.50
51024491146	Bucher valve adapter, for use with D05 series valves and T9x power unit.	3.15	N/A	\$164.00
51020070047	Bucher mounting bolts, for use with 1 D05 series valve adapter and T9x power unit.	0.20	N/A	\$9.00

** No more than (3) of the valve adapters are recommended to stack on the base manifold.

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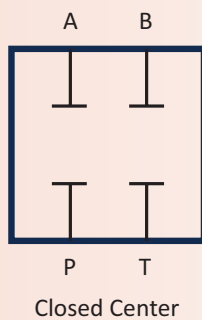
Hydraulic Valves - Overview

Valve Types

4-port (4-way), 3-position Bucher hydraulic control valves are available with four valve center options.

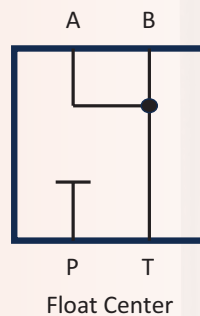
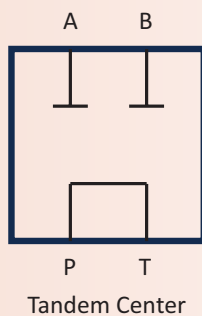
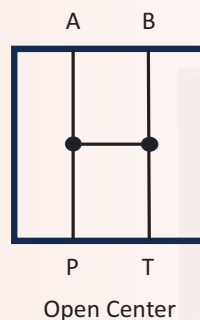
Closed Center Valves

A closed center valve allows the operator to stop and hold a load when needed by blocking P, T, A and B in a neutral position. An unloader valve (P/N [51020850999](#)) is required when using a valve that blocks the P port to prevent overheating.



Open Center Valves

An open center valve allows the cylinder to "freewheel" while in neutral by connecting P, T, A and B together, providing an open path from all working lines directly back to the reservoir, bypassing the pump. The open center valve allows for a constant flow of hydraulic oil without building additional pressure.

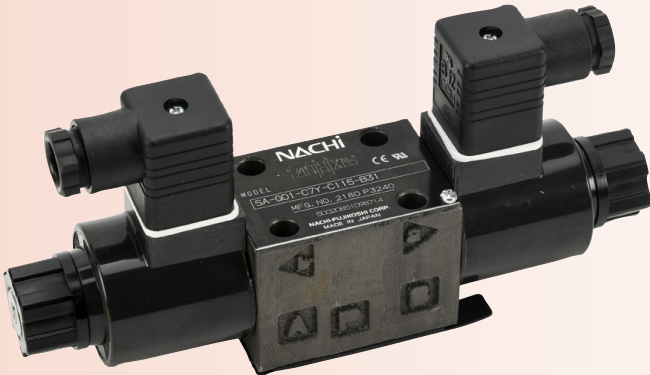


Tandem Center Valves

With a tandem center valve, loads can be held in neutral as the flow to A and B are closed off by connecting P to T. The tandem center valve works similar to an open center valve and allows for continuous flow of oil from the pump to the tank.

Float Center Valves

A float center valve blocks P making it a closed-center circuit. It has an open connection from working ports A and B to the tank. An unloader valve (P/N [51020850999](#)) is required when using a valve that blocks the P port to prevent overheating.



Part No. [50020851098714](#)

Overview

These hydraulic solenoid valves are in the NFPA D03 configuration. They deliver outstanding performance in a compact package. Mounting bolts included.

Features

- 4-way, 3-position
- Four different center conditions
- 120 VAC or 24 VDC double solenoids
- Manual overrides

D03-Series Bucher Hydraulic Valves								
Part No.	Ports	Position	Type	Solenoid	Voltage	Weight (lbs)	Drawing Link	Price
50020851098714	4-port (4-way)	3-position	Center tandem	Double solenoid	120 VAC	4.30	PDF	\$288.00
51020850058414*			Center closed			4.30	PDF	\$288.00
50020851106114			Center open			4.30	PDF	\$288.00
51020851106214*			Center float			4.30	PDF	\$288.00
50020851101114			Center tandem		24 VDC	4.75	PDF	\$288.00
50020852089314*			Center closed			4.75	PDF	\$288.00
51020852389414			Center open			5.05	PDF	\$288.00
50020851938214*			Center float			4.75	PDF	\$288.00

Note: Power A.C. Coils incorporate integrally molded full wave rectifiers.
A.C. Coils are rated 50/60 HZ.
* Unloader valve (P/N 51020850999) is required to be installed in the manifold when using a valve which blocks the P port.

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Hydraulic Power Unit Accessories

Overview

Bucher HPU Accessories include coils, replacement fluid filters, and unloader valve. The unloader valve [51020850999](#) is required to be installed in the manifold when using center closed or center float control valves. Refer to the manual for installation instructions.



Part No. [51020850999](#)



Part No. [51020191424](#)



Part No. [51020321165](#)

Bucher Hydraulic Power Unit Accessories					
Part No.	Description	Weight (lbs)	Drawing Link	Insert Link	Price
51020850999	Bucher unloader valve, 2-port (2-way), 2-position, normally open, single solenoid spring return.	0.35	PDF	N/A	\$128.00
51020191424	Bucher solenoid coil, replacement, 24 VDC, 22W, DIN 43650 connector. For use with Bucher solenoid valve 51020850999.	0.85	PDF	N/A	\$76.00
51020191422	Bucher solenoid coil, replacement, 120 VAC, 22W, DIN 43650 connector. For use with Bucher solenoid valve 51020850999.	0.80	PDF	N/A	\$83.00
51020321016	Bucher filter, hydraulic fluid, replacement, 10 micron, spin-on. For use with M-Series hydraulic power units.	1.35	N/A	N/A	\$44.50
500203226596	Bucher filter, hydraulic fluid, replacement, 7 micron, spin-on. For use with T5x and T6x series hydraulic power units.	1.40	N/A	N/A	\$60.00
51020321165	Bucher filter, hydraulic fluid, replacement, 10 micron, spin-on. For use with T9x series hydraulic power units.	2.50	N/A	N/A	\$80.00

To obtain the most current agency approval information, see the Agency Approval Checklist section on the specific part number's web page.

For additional details see manufacturer's technical specifications, manuals and inserts (where applicable).

Note: Power A.C. Coils incorporate integrally molded full wave rectifiers.

A.C. Coils are rated 50/60 HZ.

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Hydraulic Power Unit Heat Exchangers

Overview

These heat exchangers are designed specifically to fit the Bucher HPUs to reduce heat buildup during higher duty cycles. Bracket and hardware included for mounting to TEFC motor. By maintaining a lower oil temperature, hydraulic fluid lasts longer and components work more effectively, having a higher life expectancy.



Part No. [51024420101](#)

Bucher Hydraulic Power Unit Accessories				
Part No.	Description	Weight (lbs)	Insert Link	Price
51024420101	Bucher heat exchanger, 56C - 145TC frame. For use with T-Series hydraulic power units.	16.50	PDF	\$759.00
51024420102	Bucher heat exchanger, 182TC - 184TC frame. For use with T-Series hydraulic power units.	16.60	PDF	\$759.00
51024420103	Bucher heat exchanger, 213TC - 215TC frame. For use with T-Series hydraulic power units.	35.95	PDF	\$1,595.00

*To obtain the most current agency approval information, see the Agency Approval Checklist section on the specific part number's web page.

For additional details see manufacturer's technical specifications, manuals and inserts (where applicable).

Note: These oil coolers are not suitable for use in hydraulic systems operating with water-glycol or high water base fluids without a corrosion inhibitor suitable for aluminum and copper component protection.



Hydraulic Cylinders

Hydraulic Cylinders

Peninsular Hydraulic Cylinders incorporate state-of-the-art design features that are fabricated to very strict tolerance specifications from the highest quality materials available. The result is reliable and trouble-free operation under the most demanding conditions.

Operation

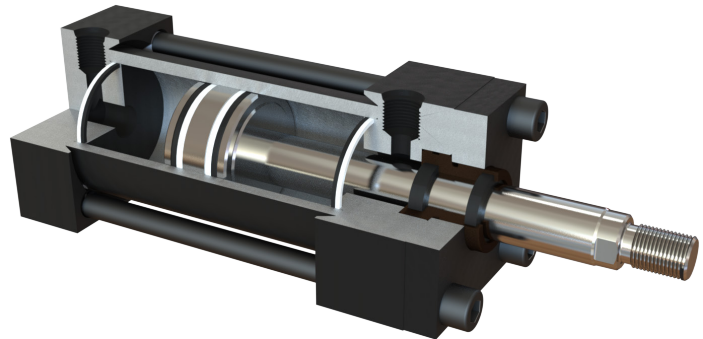
Double-acting cylinders have two ports - one in the head and one in the end cap. Directing pressurized fluid to the end cap will cause the rod to extend. Directing pressurized fluid to the head will cause the rod to retract.



Click on the thumbnail or go to <https://www.automationdirect.com/VID-HY-0001> for a short introduction on Peninsular Hydraulic Cylinders.

Features

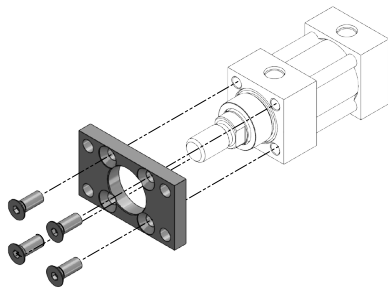
- Interchangeable with other popular brands of NFPA cylinders
- Available bore sizes: 1-1/2", 2", 2-1/2", 3-1/4", 4"
- Wide selection of stroke lengths
- All models are double-acting
- Head and end caps drilled for mounting on 1-1/2", 2" and 2-1/2" bores
- Ductile iron rod bearing
- 3000 psi working pressure
- Made in the USA
- All models are typically available for same-day shipment
- Temperature range is -20° F to 200° F



Mounting Options and Accessories

Front or Rear Flange Mount

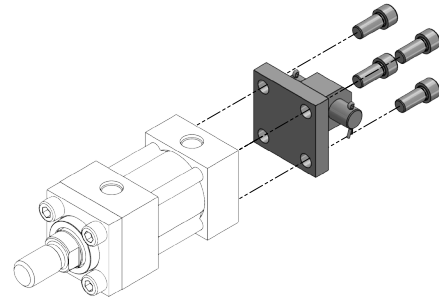
For Front or Rear Flange mounting, use the Flange Mount Kit. Use the drawing below for installation reference. **NOTE: Refer to derating table on Accessories Page for new rated pressure.**



Front or Rear Mount

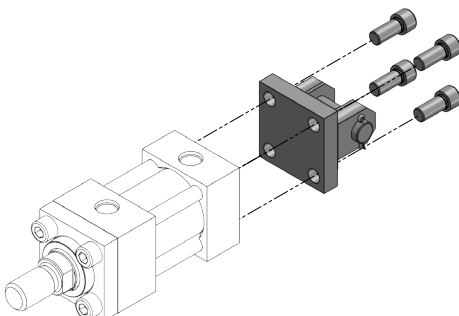
Rear Pivot Eye Mount

For Rear Pivot Eye Mounting, use the Rear Pivot Eye Kit. Use the drawing below for installation reference.



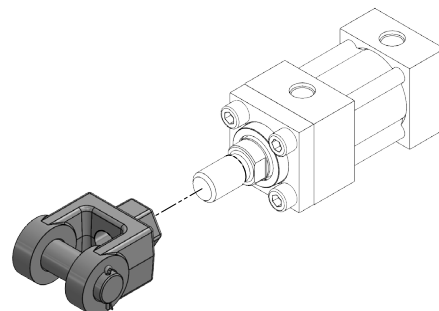
Rear Clevis Mount

For Rear Clevis mounting, use the Rear Clevis Mount Kit. Use the drawing below for installation reference.



Rod Clevis Mount

For Rod Clevis mounting, use the Rod Clevis Mount Kit. Use the drawing below for installation reference.

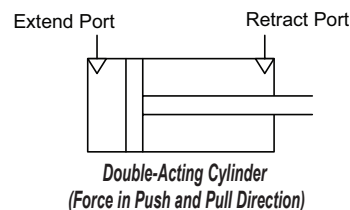




Hydraulic Cylinders

Cylinder Forces

- Cylinder force is calculated by multiplying the fluid pressure times the net piston area. Use the tables below to estimate the cylinder force.
- To increase the operating life of cylinders and other components, use the lowest system pressure (with an adequate safety margin) that will provide the needed force for your application.
- Any side load on the piston rod will reduce service life. Make every effort in machine design to minimize side loads.



PUSH - Extend Stroke - Cylinder Forces in Pounds

Cylinder Bore Size (in)	Hydraulic Working Line Pressure (PSI)							
	500	750	1000	1250	1500	2000	2500	3000
1-1/2	884	1325	1767	2209	2651	3534	4418	5301
2	1571	2356	3142	3927	4712	6283	7854	9425
2-1/2	2454	3682	4909	6136	7363	9818	12272	14726
3-1/4	4148	6222	8296	10370	12444	16592	20739	24887
4	6283	9425	12566	15708	18850	25133	31416	37699

PULL - Retract Stroke - Cylinder Forces in Pounds

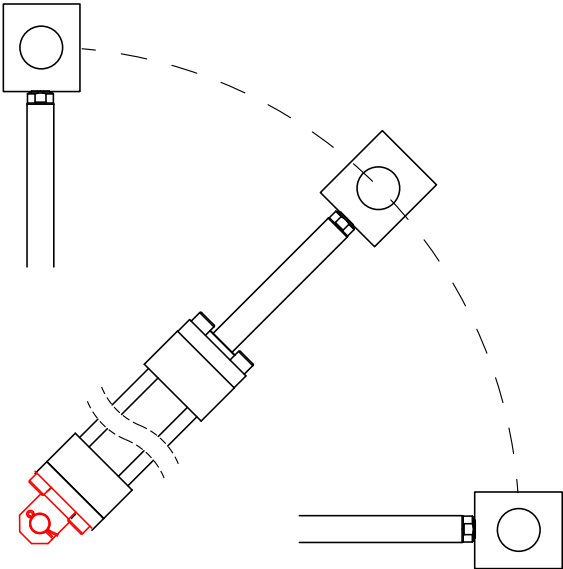
Cylinder Bore Size (in)	Cylinder Rod Diameter (in)	Hydraulic Working Line Pressure (PSI)							
		500	750	1000	1250	1500	2000	2500	3000
1-1/2	5/8	730	1095	1460	1825	2191	2921	3651	4381
	1	491	736	982	1227	1473	1964	2454	2945
2	1	1178	1767	2356	2945	3534	4712	5891	7069
	1-3/8	828	1243	1657	2071	2485	3313	4142	4970
2-1/2	1	2062	3093	4123	5154	6185	8247	10308	12370
	1-3/8	1712	2568	3424	4280	5136	6848	8560	10272
3-1/4	1-3/8	3405	5108	6811	8514	10216	13622	17027	20433
	1-3/4	2945	4418	5891	7363	8836	11781	14726	17672
4	1-3/4	5081	7621	10161	12701	15242	20322	25403	30483
	2	4712	7069	9425	11781	14137	18850	23562	28274



Hydraulic Cylinders

Piston Rod Sizing

- For proper use find the appropriate table for mounting configuration and read maximum allowable thrust at application bore and stroke. Select Rod Diameter to exceed design loads.



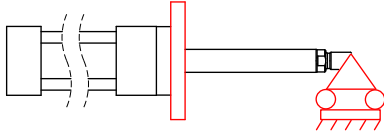
Clevis-to-Clevis Mount

Clevis-to-Clevis Mount (MP2 & MP4)															
Cylinder Bore Size (in)	Cylinder Rod Diameter (in)	Maximum Thrust at Stroke (in) (pressure is 3000 psi or less as required)													
		1	2	3	4	5	6	7	8	10	12	14	16	20	24
1-1/2	5/8	4925	4675	4425	4175	3920	3653	3387	3120	2587	2140	1740	1360	870	601
	1	5301	5301	5301	5301	5301	5301	5301	5301	5301	5301	5301	5301	5301	5125
2	1	9425	9425	9425	9425	9425	9425	9425	9425	9425	9425	8700	7875	5937	4937
	1-3/8	9425	9425	9425	9425	9425	9425	9425	9425	9425	9425	9425	9425	9425	9425
2-1/2	1	14726	14726	14726	14726	14726	12000	11810	11310	10310	9448	8648	7810	5905	4905
	1-3/8	14726	14726	14726	14726	14726	14726	14726	14726	14726	14726	14726	14726	14726	14726
3-1/4	1-3/8	24887	24887	24887	24887	24887	24887	24887	24887	24887	24887	24887	19333	16666	14285
	1-3/4	24887	24887	24887	24887	24887	24887	24887	24887	24887	24887	24887	24887	24887	24887
4	1-3/4	37699	37699	37699	37699	37699	37699	37699	37699	37699	37699	37699	37500	33863	30227
	2	37699	37699	37699	37699	37699	37699	37699	37699	37699	37699	37699	37699	37699	37699

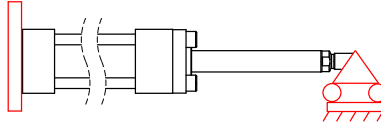


Hydraulic Cylinders

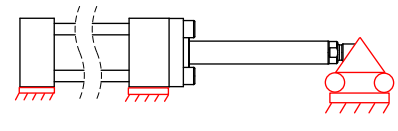
Piston Rod Sizing Cont.



Front Mount Supported

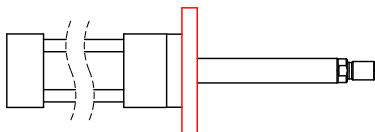


Rear Mount Supported

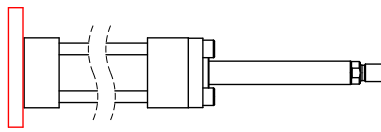


Side Mount Supported

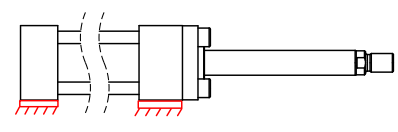
Side or Flange Mount (supported) (MS4, MF1 or MF2)															
Cylinder Bore Size (in)	Cylinder Rod Diameter (in)	Maximum Thrust at Stroke (in) (pressure is 3000 psi or less as required)													
		1	2	3	4	5	6	7	8	10	12	14	16	20	24
1-1/2	5/8	5301	5301	5301	5301	5301	5301	5301	5301	4750	4250	3733	3200	2200	1400
	1	5301	5301	5301	5301	5301	5301	5301	5301	5301	5301	5301	5301	5301	5301
2	1	9425	9425	9425	9425	9425	9425	9425	9425	9425	9425	9425	9425	9425	9000
	1-3/8	9425	9425	9425	9425	9425	9425	9425	9425	9425	9425	9425	9425	9425	9425
2-1/2	1	14726	14726	14726	14726	14726	14726	14726	14726	14726	14726	14726	14726	10500	8800
	1-3/8	14726	14726	14726	14726	14726	14726	14726	14726	14726	14726	14726	14726	14726	14726
3-1/4	1-3/8	24887	24887	24887	24887	24887	24887	24887	24887	24887	24887	24887	24887	24887	24887
	1-3/4	24887	24887	24887	24887	24887	24887	24887	24887	24887	24887	24887	24887	24887	24887
4	1-3/4	37699	37699	37699	37699	37699	37699	37699	37699	37699	37699	37699	37699	37699	37699
	2	37699	37699	37699	37699	37699	37699	37699	37699	37699	37699	37699	37699	37699	37699



Front Mount Unsupported



Rear Mount Unsupported



Side Mount Unsupported

Side or Flange Mount (unsupported) (MS4, MF1 or MF2)															
Cylinder Bore Size (in)	Cylinder Rod Diameter (in)	Maximum Thrust at Stroke (in) (pressure is 3000 psi or less as required)													
		1	2	3	4	5	6	7	8	10	12	14	16	20	24
1-1/2	5/8	5301	5301	4250	3200	2200	1400	900	580	325	200	120	N/A*	N/A*	N/A*
	1	5301	5301	5301	5301	5301	5301	5301	5301	3466	1800	1228	850	460	231
2	1	9425	9425	9425	9425	9425	8800	7000	5500	3466	1800	1228	850	460	231
	1-3/8	9425	9425	9425	9425	9425	9425	9425	9425	9425	8800	6000	3800	1971	1276
2-1/2	1	14726	14726	14726	14726	10500	8800	7000	5500	3466	1800	1228	850	460	231
	1-3/8	14726	14726	14726	14726	14726	14726	14726	14726	12571	8800	6000	3800	1971	1276
3-1/4	1-3/8	24887	24887	24887	24887	24887	24887	20000	17333	12571	8800	6000	3800	1971	1276
	1-3/4	24887	24887	24887	24887	24887	24887	24887	24887	23076	16800	12500	6666	3822	3822
4	1-3/4	37699	37699	37699	37699	37699	37699	36470	34117	29230	23076	16800	12500	6666	3822
	2	37699	37699	37699	37699	37699	37699	37699	37699	35833	29230	23076	13777	7333	7333

* These sizes must be supported for use.



Hydraulic Cylinders – 1-1/2 inch Bore

1-1/2 in. Bore, Double-acting, Tapped End Caps



Peninsular hydraulic cylinders, NFPA interchangeable cylinder, 1-1/2" bore, 5/8" diameter piston rod (1" oversized rod available), 7/16"-20 (3/4"-16 for oversize) male threaded end, SAE -8 ports, double acting, tapped end caps and one side for mount; flange, pivot and clevis mount options available.

- Heavy wall seamless D.O.M. steel material (1020 to 1026). Precision honed to 10/15 micro inch finish cylinder body.
- Square, precision-machined carbon steel end caps ± 0.002 all sides
- Piston rod: 100,000 psi minimum yield strength induction hardened and chrome plated steel with core hardness of Rc 28-34. Case hardened to Rc 50-55. Rod is hard chrome-plated and polished to 12/15 micro inch finish. Solid male threads contain a radiused undercut

1-1/2 in bore, double acting, tapped end caps

Part Number with Standard Ø5/8" Rod	Price	Drawing Link	Weight (lb)	Stroke Length (in)	Part Number with Oversize Ø1.0" Rod	Price	Drawing Link	Weight (lb)	Stroke Length (in)
HP16150A1S	\$462.00	PDF	8	1	HP16150B1S	\$547.00	PDF	8	1
HP16150A2S	\$469.00	PDF	9	2	HP16150B2S	\$555.00	PDF	9	2
HP16150A3S	\$476.00	PDF	10	3	HP16150B3S	\$563.00	PDF	10	3
HP16150A4S	\$483.00	PDF	11	4	HP16150B4S	\$570.00	PDF	11	4
HP16150A5S	\$490.00	PDF	12	5	HP16150B5S	\$577.00	PDF	12	5
HP16150A6S	\$497.00	PDF	13	6	HP16150B6S	\$584.00	PDF	13	6
HP16150A8S	\$509.00	PDF	15	8	HP16150B8S	\$596.00	PDF	15	8
HP16150A10S	\$514.00	PDF	17	10	HP16150B10S	\$600.00	PDF	17	10
HP16150A12S	\$528.00	PDF	19	12	HP16150B12S	\$617.00	PDF	19	12
HP16150A14S	\$541.00	PDF	21	14	HP16150B14S	\$632.00	PDF	21	14
HP16150A16S	\$554.00	PDF	23	16	HP16150B16S	\$647.00	PDF	23	16
HP16150A20S	\$575.00	PDF	27	20	HP16150B20S	\$673.00	PDF	27	20
HP16150A24S	\$599.00	PDF	31	24	HP16150B24S	\$699.00	PDF	31	24

Specifications

1.77 sq. in. piston area	3000 PSI Rating, 5000 PSI Non-Shock
Buna-N Nitrile O-Rings are seated into grooves in both the head end and cap end covers. O-Rings are backed up with Teflon® rings which effectively prevent O-Ring extrusion under pressure	Recommended fluids include: Transmission fluid (ATF) Petroleum based oil HWBF (95-5) Water glycol Water/oil emulsions
Temperature range -20°F to 200°F (-28 to 94°C)	See table for PUSH (Extended) / PULL (Retracted) cylinder forces.
See table for cylinder rod force limitations.	
Filtration: Oil cleanliness, measured against ISO Cleanliness Code 4406 15/12/10 microns or better	

Mounting Accessories

	Part No.	
Style	Ø5/8" Rod	Ø1.0" Rod
Mounting Plates	HDM-1201	HDM-1202
Rear Pivot Eye	HM21150-6	
Rear Clevis Bracket	HM24150-6	

*Mounting Plate (Rectangular Flange) Pressure Derating

Cylinder Bore Size (in)	Cylinder Rod Diameter (in)	Max Pressure (PSI)
1-1/2	5/8	2500
	1	1500

Rod Accessories

	Part No.	
Style	Ø5/8" Rod	Ø1.0" Rod
Rod Clevis	C1150-86	C1200-86



Hydraulic Cylinders – 2 inch Bore

2 in. Bore, Double-acting, Tapped End Caps



Peninsular hydraulic cylinders, NFPA interchangeable cylinder, 2" bore, 1" diameter piston rod (1-3/8" oversized rod available), 3/4"-16 (1"-14 for oversize) male threaded end, SAE -8 ports, double acting, tapped end caps and one side for mount, flange, pivot and clevis mount options available.

- Heavy wall seamless D.O.M. steel material (1020 to 1026). Precision honed to 10/15 micro inch finish cylinder body.
- Square, precision-machined carbon steel end caps ± 0.002 all sides
- Piston rod: 100,000 psi minimum yield strength induction hardened and chrome plated steel with core hardness of Rc 28-34. Case hardened to Rc 50-55. Rod is hard chrome-plated and polished to 12/15 micro inch finish. Solid male threads contain a radiused undercut

2 in bore, double acting, tapped end caps									
Part Number with Standard Ø1.0" Rod	Price	Drawing Link	Weight (lb)	Stroke Length (in)	Part Number with Oversize Ø1-3/8" Rod	Price	Drawing Link	Weight (lb)	Stroke Length (in)
HP16200A1S	\$552.00	PDF	13	1	HP16200B1S	\$626.00	PDF	13	1
HP16200A2S	\$559.00	PDF	14	2	HP16200B2S	\$635.00	PDF	14	2
HP16200A3S	\$566.00	PDF	15	3	HP16200B3S	\$644.00	PDF	15	3
HP16200A4S	\$573.00	PDF	16	4	HP16200B4S	\$654.00	PDF	16	4
HP16200A5S	\$580.00	PDF	17	5	HP16200B5S	\$664.00	PDF	17	5
HP16200A6S	\$588.00	PDF	18	6	HP16200B6S	\$674.00	PDF	18	6
HP16200A8S	\$600.00	PDF	20	8	HP16200B8S	\$694.00	PDF	20	8
HP16200A10S	\$627.00	PDF	22	10	HP16200B10S	\$725.00	PDF	22	10
HP16200A12S	\$639.00	PDF	24	12	HP16200B12S	\$744.00	PDF	24	12
HP16200A14S	\$651.00	PDF	26	14	HP16200B14S	\$764.00	PDF	26	14
HP16200A16S	\$669.00	PDF	28	16	HP16200B16S	\$786.00	PDF	28	16
HP16200A20S	\$699.00	PDF	32	20	HP16200B20S	\$826.00	PDF	32	20
HP16200A24S	\$729.00	PDF	36	24	HP16200B24S	\$872.00	PDF	36	24

Specifications	
3.14 sq. in. piston area	3000 PSI Rating, 5000 PSI Non-Shock
Buna-N Nitrile O-Rings are seated into grooves in both the head end and cap end covers. O-Rings are backed up with Teflon® rings which effectively prevent O-Ring extrusion under pressure	Recommended fluids include: Transmission fluid (ATF) Petroleum based oil HWWF (95-5) Water glycol Water/oil emulsions
Temperature range -20°F to 200°F (-28 to 94°C)	See table for PUSH (Extended) / PULL (Retracted) cylinder forces.
See table for cylinder rod force limitations.	
Filtration: Oil cleanliness, measured against ISO Cleanliness Code 4406 15/12/10 microns or better	

Mounting Accessories		
	Part No.	
Style	Ø1" Rod	Ø1-3/8" Rod
Mounting Plates	HDM-1203	HDM-1204
Rear Pivot Eye	HM21200-6	
Rear Clevis Bracket	HM24200-6	

*Mounting Plate (Rectangular Flange) Pressure Derating		
Cylinder Bore Size (in)	Cylinder Rod Diameter (in)	Max Pressure (PSI)
2	1	2500
	1-3/8	1500

Rod Accessories		
	Part No.	
Style	Ø1" Rod	Ø1-3/8" Rod
Rod Clevis	C1200-86	C1400-86



Hydraulic Cylinders – 2-1/2 inch Bore

2-1/2 in. Bore, Double-acting, Tapped End Caps



Peninsular hydraulic cylinders, NFPA interchangeable cylinder, 2-1/2" bore, 1" diameter piston rod (1-3/8" oversized rod available), 3/4"-16 (1"-14 for oversize) male threaded end, SAE -8 ports, double acting, tapped end caps and one side for mount, flange, pivot and clevis mount options available.

- Heavy wall seamless D.O.M. steel material (1020 to 1026). Precision honed to 10/15 micro inch finish cylinder body.
- Square, precision-machined carbon steel end caps ± 0.002 all sides
- Piston rod: 100,000 psi minimum yield strength induction hardened and chrome plated steel with core hardness of Rc 28-34. Case hardened to Rc 50-55. Rod is hard chrome-plated and polished to 12/15 micro inch finish. Solid male threads contain a radiused undercut

2-1/2 in bore, double acting, tapped end caps

Part Number with Standard Ø1.0" Rod	Price	Drawing Link	Weight (lb)	Stroke Length (in)	Part Number with Oversize Ø1-3/8" Rod	Price	Drawing Link	Weight (lb)	Stroke Length (in)
HP16250A1S	\$602.00	PDF	17	1	HP16250B1S	\$709.00	PDF	19	1
HP16250A2S	\$612.00	PDF	18	2	HP16250B2S	\$720.00	PDF	21	2
HP16250A3S	\$621.00	PDF	19	3	HP16250B3S	\$731.00	PDF	23	3
HP16250A4S	\$630.00	PDF	20	4	HP16250B4S	\$742.00	PDF	25	4
HP16250A5S	\$639.00	PDF	21	5	HP16250B5S	\$753.00	PDF	27	5
HP16250A6S	\$648.00	PDF	22	6	HP16250B6S	\$765.00	PDF	29	6
HP16250A8S	\$657.00	PDF	24	8	HP16250B8S	\$777.00	PDF	33	8
HP16250A10S	\$682.00	PDF	26	10	HP16250B10S	\$808.00	PDF	37	10
HP16250A12S	\$697.00	PDF	28	12	HP16250B12S	\$830.00	PDF	41	12
HP16250A14S	\$716.00	PDF	30	14	HP16250B14S	\$852.00	PDF	45	14
HP16250A16S	\$736.00	PDF	32	16	HP16250B16S	\$886.00	PDF	49	16
HP16250A20S	\$774.00	PDF	36	20	HP16250B20S	\$932.00	PDF	57	20
HP16250A24S	\$812.00	PDF	40	24	HP16250B24S	\$971.00	PDF	65	24

Specifications

4.91 sq. in. piston area	3000 PSI Rating, 5000 PSI Non-Shock
Buna-N Nitrile O-Rings are seated into grooves in both the head end and cap end covers. O-Rings are backed up with Teflon® rings which effectively prevent O-Ring extrusion under pressure	Recommended fluids include: Transmission fluid (ATF) Petroleum based oil HWBF (95-5) Water glycol Water/oil emulsions
Temperature range -20°F to 200°F (-28 to 94°C)	See table for PUSH (Extended) / PULL (Retracted) cylinder forces.
See table for cylinder rod force limitations.	
Filtration: Oil cleanliness, measured against ISO Cleanliness Code 4406 15/12/10 microns or better	

Mounting Accessories

	Part No.	
Style	Ø1" Rod	Ø1-3/8" Rod
Mounting Plates	HDM-1205	HDM-1206
Rear Pivot Eye	HM21250-6	
Rear Clevis Bracket	HM24250-6	

*Mounting Plate (Rectangular Flange) Pressure Derating

Cylinder Bore Size (in)	Cylinder Rod Diameter (in)	Max Pressure (PSI)
2-1/2	1	2500
	1-3/8	1900

Rod Accessories

	Part No.	
Style	Ø1.0" Rod	Ø1-3/8" Rod
Rod Clevis	C1200-86	C1400-86



Hydraulic Cylinders – 3-1/4 inch Bore

3-1/4 in. Bore, Double-acting, Tapped End Caps



Peninsular hydraulic cylinders, NFPA interchangeable cylinder, 3-1/4" bore, 1-3/8" diameter piston rod (1-3/4" oversized rod available), 1"-14 (1 1/4"-12 for oversize) male threaded end, SAE -12 ports, double acting, flange, pivot and clevis mount options available.

- Heavy wall seamless D.O.M. steel material (1020 to 1026). Precision honed to 10/15 micro inch finish cylinder body.
- Square, precision-machined carbon steel end caps ± 0.002 all sides
- Piston rod: 100,000 psi minimum yield strength induction hardened and chrome plated steel with core hardness of Rc 28-34. Case hardened to Rc 50-55. Rod is hard chrome-plated and polished to 12/15 micro inch finish. Solid male threads contain a radiused undercut

3-1/4 in bore, double acting, tapped end caps

Part Number with Standard Ø1-3/8" Rod	Price	Drawing Link	Weight (lb)	Stroke Length (in)	Part Number with Oversize Ø1-3/4" Rod	Price	Drawing Link	Weight (lb)	Stroke Length (in)
HP0325A1S	\$648.00	PDF	35	1	HP0325B1S	\$782.00	PDF	37	1
HP0325A2S	\$668.00	PDF	37	2	HP0325B2S	\$802.00	PDF	40	2
HP0325A3S	\$682.00	PDF	39	3	HP0325B3S	\$820.00	PDF	43	3
HP0325A4S	\$696.00	PDF	41	4	HP0325B4S	\$838.00	PDF	46	4
HP0325A5S	\$715.00	PDF	43	5	HP0325B5S	\$858.00	PDF	49	5
HP0325A6S	\$745.00	PDF	45	6	HP0325B6S	\$889.00	PDF	53	6
HP0325A8S	\$790.00	PDF	49	8	HP0325B8S	\$923.00	PDF	59	8
HP0325A10S	\$820.00	PDF	53	10	HP0325B10S	\$962.00	PDF	65	10
HP0325A12S	\$854.00	PDF	57	12	HP0325B12S	\$998.00	PDF	71	12
HP0325A14S	\$884.00	PDF	61	14	HP0325B14S	\$1,032.00	PDF	77	14
HP0325A16S	\$912.00	PDF	65	16	HP0325B16S	\$1,063.00	PDF	83	16
HP0325A20S	\$978.00	PDF	73	20	HP0325B20S	\$1,132.00	PDF	95	20
HP0325A24S	\$1,044.00	PDF	81	24	HP0325B24S	\$1,198.00	PDF	107	24

Specifications

8.3 sq. in. piston area	3000 PSI Rating, 5000 PSI Non-Shock
Buna-N Nitrile O-Rings are seated into grooves in both the head end and cap end covers. O-Rings are backed up with Teflon® rings which effectively prevent O-Ring extrusion under pressure	Recommended fluids include: Transmission fluid (ATF) Petroleum based oil HWBF (95-5) Water glycol Water/oil emulsions
Temperature range -20°F to 200°F (-28 to 94°C)	See table for PUSH (Extended) / PULL (Retracted) cylinder forces.
See table for cylinder rod force limitations.	
Filtration: Oil cleanliness, measured against ISO Cleanliness Code 4406 15/12/10 microns or better	

Mounting Accessories

	Part No.	
Style	Ø1-3/8" Rod	Ø1-3/4" Rod
Mounting Plates	HDM-1207	HDM-1208
Rear Pivot Eye	HM21325-6	
Rear Clevis Bracket	HM24325-6	

*Mounting Plate (Rectangular Flange) Pressure Derating

Cylinder Bore Size (in)	Cylinder Rod Diameter (in)	Max Pressure (PSI)
3-1/4	1-3/8	2500
	1-3/4	2100

Rod Accessories

	Part No.	
Style	Ø1-3/8" Rod	Ø1-3/4" Rod
Rod Clevis	C1400-86	C1600-86



Hydraulic Cylinders – 4 inch Bore

4 in. Bore, Double-acting, Tapped End Caps



Peninsular hydraulic cylinders, NFPA interchangeable cylinder, 4" bore, 1-3/4" diameter piston rod (2" oversized rod available), 1 1/4"-12 (1 1/2"-12 for oversize) male threaded end, SAE -12 ports, double acting, flange, pivot and clevis mount options available.

- Heavy wall seamless D.O.M. steel material (1020 to 1026). Precision honed to 10/15 micro inch finish cylinder body.
- Square, precision-machined carbon steel end caps ± 0.002 all sides
- Piston rod: 100,000 psi minimum yield strength induction hardened and chrome plated steel with core hardness of Rc 28-34. Case hardened to Rc 50-55. Rod is hard chrome-plated and polished to 12/15 micro inch finish. Solid male threads contain a radiused undercut

4 in bore, double acting, tapped end caps									
Part Number with Standard $\emptyset 1\text{-}3/4"$ Rod	Price	Drawing Link	Weight (lb)	Stroke Length (in)	Part Number with Oversize $\emptyset 2.0"$ Rod	Price	Drawing Link	Weight (lb)	Stroke Length (in)
HP0400A1S	\$834.00	PDF	47	1	HP0400B1S	\$986.00	PDF	48	1
HP0400A2S	\$853.00	PDF	50	2	HP0400B2S	\$998.00	PDF	51	2
HP0400A3S	\$872.00	PDF	53	3	HP0400B3S	\$1,015.00	PDF	54	3
HP0400A4S	\$891.00	PDF	56	4	HP0400B4S	\$1,032.00	PDF	57	4
HP0400A5S	\$909.00	PDF	59	5	HP0400B5S	\$1,054.00	PDF	60	5
HP0400A6S	\$927.00	PDF	62	6	HP0400B6S	\$1,075.00	PDF	63	6
HP0400A8S	\$956.00	PDF	68	8	HP0400B8S	\$1,105.00	PDF	69	8
HP0400A10S	\$976.00	PDF	74	10	HP0400B10S	\$1,150.00	PDF	75	10
HP0400A12S	\$1,012.00	PDF	80	12	HP0400B12S	\$1,184.00	PDF	81	12
HP0400A14S	\$1,048.00	PDF	86	14	HP0400B14S	\$1,212.00	PDF	87	14
HP0400A16S	\$1,082.00	PDF	92	16	HP0400B16S	\$1,249.00	PDF	93	16
HP0400A20S	\$1,145.00	PDF	104	20	HP0400B20S	\$1,318.00	PDF	105	20
HP0400A24S	\$1,214.00	PDF	116	24	HP0400B24S	\$1,392.00	PDF	117	24

Specifications	
12.57 sq. in. piston area	3000 PSI Rating, 5000 PSI Non-Shock
Buna-N Nitrile O-Rings are seated into grooves in both the head end and cap end covers. O-Rings are backed up with Teflon® rings which effectively prevent O-Ring extrusion under pressure	Recommended fluids include: Transmission fluid (ATF) Petroleum based oil HWBF (95-5) Water glycol Water/oil emulsions
Temperature range -20°F to 200°F (-28 to 94°C)	See table for PUSH (Extended) / PULL (Retracted) cylinder forces.
See table for cylinder rod force limitations.	
Filtration: Oil cleanliness, measured against ISO Cleanliness Code 4406 15/12/10 microns or better	

Mounting Accessories		
	Part No.	
Style	$\emptyset 1\text{-}3/4"$ Rod	$\emptyset 2.0"$ Rod
Mounting Plates	HM4400A	HM4400B
Rear Pivot Eye	HM21400-6	
Rear Clevis Bracket	HM24400-6	

*Mounting Plate (Rectangular Flange) Pressure Derating		
Cylinder Bore Size (in)	Cylinder Rod Diameter (in)	Max Pressure (PSI)
4	1-3/4	2500
	2	1800

Rod Accessories		
	Part No.	
Style	$\emptyset 1\text{-}3/4"$ Rod	$\emptyset 2.0"$ Rod
Rod Clevis	C1600-86	C1800-86



Hydraulic Cylinders Accessories

Mounting Plates



Hydraulic Cylinder Mounting Plates*					
Part Number	Description	Pcs/Pkg	Wt (lb)	Price	Drawing Link
HDM-1201	Peninsular flange mount plate, steel. For use with 1-1/2in bore x 5/8in rod hydraulic NFPA cylinders. Mounting hardware included.	1	1	\$24.00	PDF
HDM-1202	Peninsular flange mount plate, steel. For use with 1-1/2in bore x 1in rod hydraulic NFPA cylinders. Mounting hardware included.	1	1	\$24.00	PDF
HDM-1203	Peninsular flange mount plate, steel. For use with 2in bore x 1in rod hydraulic NFPA cylinders. Mounting hardware included.	1	2	\$48.50	PDF
HDM-1204	Peninsular flange mount plate, steel. For use with 2in bore x 1-3/8in rod hydraulic NFPA cylinders. Mounting hardware included.	1	2	\$48.50	PDF
HDM-1205	Peninsular flange mount plate, steel. For use with 2-1/2in bore x 1in rod hydraulic NFPA cylinders. Mounting hardware included.	1	3	\$47.50	PDF
HDM-1206	Peninsular flange mount plate, steel. For use with 2-1/2in bore x 1-3/8in rod hydraulic NFPA cylinders. Mounting hardware included.	1	3	\$47.50	PDF
HDM-1207	Peninsular flange mount plate, steel. For use with 3-1/4in bore x 1-3/8in rod hydraulic NFPA cylinders. Mounting hardware included.	1	5.5	\$70.00	PDF
HDM-1208	Peninsular flange mount plate, steel. For use with 3-1/4in bore x 1-3/4in rod hydraulic NFPA cylinders. Mounting hardware included.	1	5.5	\$70.00	PDF
HM4400A	Peninsular flange mount plate, steel. For use with 4in bore x 1-3/4in rod hydraulic NFPA cylinders. Mounting hardware included.	1	8	\$162.00	PDF
HM4400B	Peninsular flange mount plate, steel. For use with 4in bore x 2in rod hydraulic NFPA cylinders. Mounting hardware included.	1	8	\$162.00	PDF

*Mounting Plate (Rectangular Flange) Pressure Derating		
Cylinder Bore Size (in)	Cylinder Rod Diameter (in)	Max Pressure (PSI)
1-1/2	5/8	2500
	1	1500
2	1	2500
	1-3/8	1500
2-1/2	1	2500
	1-3/8	1900
3-1/4	1-3/8	2500
	1-3/4	2100
4	1-3/4	2500
	2	1800

Rear Pivot Eye



Hydraulic Cylinder Rear Pivot Eye					
Part Number	Description	Pcs/Pkg	Wt (lb)	Price	Drawing Link
HM21150-6	Peninsular rear pivot eye, steel. For use with 1-1/2in bore hydraulic NFPA cylinders. Mounting hardware included.	1	1.5	\$30.50	PDF
HM21200-6	Peninsular rear pivot eye, steel. For use with 2in bore hydraulic NFPA cylinders. Mounting hardware included.	1	3	\$52.00	PDF
HM21250-6	Peninsular rear pivot eye, steel. For use with 2-1/2in bore hydraulic NFPA cylinders. Mounting hardware included.	1	3.5	\$76.00	PDF
HM21325-6	Peninsular rear pivot eye, steel. For use with 3-1/4in bore hydraulic NFPA cylinders. Mounting hardware included.	1	8	\$79.00	PDF
HM21400-6	Peninsular rear pivot eye, steel. For use with 4in bore hydraulic NFPA cylinders. Mounting hardware included.	1	13.5	\$215.00	PDF



Hydraulic Cylinders Accessories

Rear Clevis Bracket



Note: Comes with pivot pin installed.

Hydraulic Cylinder Rear Clevis Bracket					
Part Number	Description	Pcs/Pkg	Wt (lb)	Price	Drawing Link
<u>HM24150-6</u>	Peninsular cylinder rear clevis bracket, steel. For use with 1-1/2in bore hydraulic NFPA cylinders. Mounting hardware included.	1	1.5	\$41.00	<u>PDF</u>
<u>HM24200-6</u>	Peninsular cylinder rear clevis bracket, steel. For use with 2in bore hydraulic NFPA cylinders. Mounting hardware included.	1	3	\$76.00	<u>PDF</u>
<u>HM24250-6</u>	Peninsular cylinder rear clevis bracket, steel. For use with 2-1/2in bore hydraulic NFPA cylinders. Mounting hardware included.	1	3.5	\$102.00	<u>PDF</u>
<u>HM24325-6</u>	Peninsular cylinder rear clevis bracket, steel. For use with 3-1/4in bore hydraulic NFPA cylinders. Mounting hardware included.	1	7.5	\$172.00	<u>PDF</u>
<u>HM24400-6</u>	Peninsular cylinder rear clevis bracket, steel. For use with 4in bore hydraulic NFPA cylinders. Mounting hardware included.	1	12	\$258.00	<u>PDF</u>

Rod Clevis



Note: Comes with Pivot Pin installed.

Hydraulic Cylinder Rod Clevis					
Part Number	Description	Pcs/Pkg	Wt (lb)	Price	Drawing Link
<u>C1150-86</u>	Peninsular rod clevis, 7/16-20 UNF thread, steel. For use with 5/8in rod hydraulic NFPA cylinders. 1/2in clevis pin included.	1	0.5	\$21.50	<u>PDF</u>
<u>C1200-86</u>	Peninsular rod clevis, 3/4-16 UNF thread, steel. For use with 1in rod hydraulic NFPA cylinders. 3/4in clevis pin included.	1	1.6	\$37.50	<u>PDF</u>
<u>C1400-86</u>	Peninsular rod clevis, 1-14 UNS thread, steel. For use with 1-3/8in rod hydraulic NFPA cylinders. 1in clevis pin included.	1	4.2	\$64.00	<u>PDF</u>
<u>C1600-86</u>	Peninsular rod clevis, 1-1/4-12 UNF thread, steel. For use with 1-3/4in rod hydraulic NFPA cylinders. 1-3/8in clevis pin included.	1	18	\$90.00	<u>PDF</u>
<u>C1800-86</u>	Peninsular rod clevis, 1-1/2-12 UNF thread, steel. For use with 2in rod hydraulic NFPA cylinders. 1-3/4in clevis pin included.	1	25	\$128.00	<u>PDF</u>



Hydraulic Hoses - Overview



Gates hoses and fittings are some of the best in the industry. Royal Brass and Hose is a leading manufacturer of Gates hose assemblies in the USA. AutomationDirect.com offers both the ProFlex™ and MXT™ lines of hoses, both with Gates Megacrimp fittings. Adapters are nickel-plated steel and come in straight or 90° elbows. JIC, o-ring boss and o-ring face connection styles are available.

Features

- Hose diameters from 1/4 inch (-4 size) to 3/4 inch (-12 size)
- Assembly lengths from 2 feet to 10 feet
- Straight female JIC swivel fittings on both ends
- Meets or exceeds SAE 100R2/EN 857 2SC/EN 853 2SN, SAE 100R16, SAE 100R17
- ProFlex tested to 200,000 cycles
- MXT tested to **600,000** cycles
- All Requirements as per SAE J514 & 6149-3

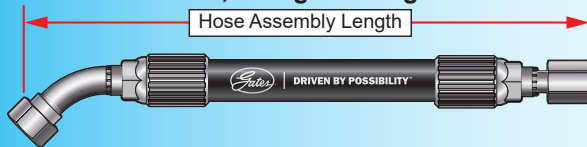
Straight Fittings Each End



90° One End, Straight Fitting Other End



45° One End, Straight Fitting Other End



Applications

- Manufacturing
- Machine tools
- Machinery
- Construction
- Mining
- Agriculture

SAE Thread Identification

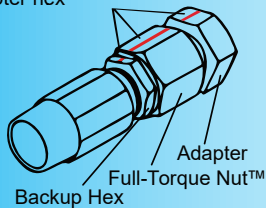
Fitting Size	Dash Size	Thread Size
SAE 4	-04	7/16-20
SAE 5	-05	1/2-20
SAE 6	-06	9/16-18
SAE 8	-08	3/4-16
SAE 10	-10	7/8-14
SAE 12	-12	1 1/16-12

Flats Method Installation

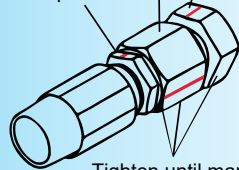
Termination Type	Dash Size 1/16 in	Flats
JIC	-04	1.5 - 1.75
	-06	1.0 - 1.5
	-08	1.5 - 1.75
	-10	1.0 - 1.5
	-12	

Fitting and Adapter Installation: Flats Method

Once hand-tight, mark a straight line between the backup hex, nut and adapter hex



Adapter
Full-Torque Nut
Backup Hex



Tighten until marks are misaligned by the specified values; this example is two flats. The backup hex mark should align with the adapter mark.

NOTE:

1. Seal faces must be in contact and the fitting fully hand-tightened before marking flats
2. Flats method is the most accurate for the first assembly cycle; for multiple disassembly/assembly cycles, torque values are more reliable
3. Tightening two flats or more is equivalent to severe over-torque and may damage seal faces

Dash Size	JIC 37° (Steel)		Flat Face O-Ring Seal (Steel)		SAE O-Ring Boss (Steel) & Gates Adapterless ≤ 4000PSI	
1/16 in	LB-FT		LB-FT		LB-FT	
	Min	Max	Min	Max	Min	Max
-04	11	14	18	23	13	17
-06	18	22	29	37	22	28
-08	36	45	41	51	37	46
-10	57	71	44	55	44	55
-12	79	99	66	83	70	88



MXT™ Hydraulic Hoses



Overview

Gates MXT hydraulic hose assemblies are the latest technology that offer a lighter, stronger and more flexible hose assembly to meet evolving application challenges.

Features

- **Long Lifespan**
- Synthetic black rubber
- Reinforced braided steel wire
- Tested to 3X impulse criteria (600,000 cycles)

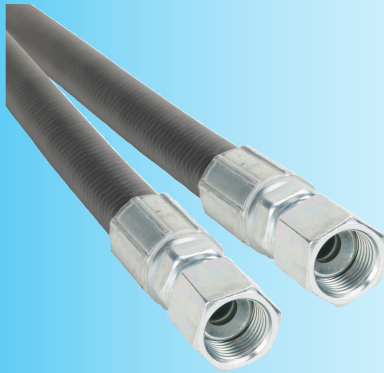
Part No. [1/2MXT-24IN-FJXEE](#)

MXT Hydraulic Hoses Selection						
Part No.	I.D. in (mm)	O.D. in (mm)	Fitting	Assembly Length (ft)	Weight (lbs)	Price
1/4MXT-24IN-FJXEE	1/4 (6.35)	0.55 (14.0)	(2) -4 female straight JIC 37° fittings	2	0.65	\$40.00
1/4MXT-48IN-FJXEE				4	1.06	\$56.00
1/4MXT-72IN-FJXEE				6	1.48	\$72.00
1/4MXT-96IN-FJXEE				8	1.90	\$89.00
1/4MXT-120IN-FJXEE				10	2.34	\$105.00
3/8MXT-24IN-FJXEE	3/8 (9.53)	0.675 (17.1)	(2) -6 female straight JIC 37° fittings	2	0.88	\$46.00
3/8MXT-48IN-FJXEE				4	1.38	\$65.00
3/8MXT-72IN-FJXEE				6	1.91	\$84.00
3/8MXT-96IN-FJXEE				8	2.42	\$103.00
3/8MXT-120IN-FJXEE				10	2.99	\$122.00
1/2MXT-24IN-FJXEE	1/2 (12.7)	0.795 (20.2)	(2) -8 female straight JIC 37° fittings	2	1.26	\$56.00
1/2MXT-48IN-FJXEE				4	1.92	\$78.00
1/2MXT-72IN-FJXEE				6	2.58	\$100.00
1/2MXT-96IN-FJXEE				8	3.20	\$121.00
1/2MXT-120IN-FJXEE				10	5.38	\$143.00
3/4MXT-24IN-FJXEE	3/4 (19.1)	1.08 (27.4)	(2) -12 female straight JIC 37° fittings	2	2.17	\$103.00
3/4MXT-48IN-FJXEE				4	3.13	\$140.00
3/4MXT-72IN-FJXEE				6	4.11	\$176.00
3/4MXT-96IN-FJXEE				8	6.65	\$213.00
3/4MXT-120IN-FJXEE				10	7.62	\$249.00

MXT Hydraulic Hose Specifications				
Hose Size	DIN (Ref)	Working Pressure PSI (MPa)	Burst Pressure PSI (MPa)	Min. Bend Radius in (mm)
-4	6	6,000 (41.4)	24,000 (165.5)	1.5 (38.1)
-6	10	4,800 (33.1)	19,200 (132.4)	2.5 (64.0)
-8	12	4,000 (27.6)	16,000 (110.3)	2.8 (70.0)
-12	19	3,125 (21.5)	12,500 (86.2)	4.8 (121.0)



PROFLEX™ Hydraulic Hoses



Overview

Gates ProFlex hydraulic hose assemblies are lighter and more flexible than many hoses in the industry. Thousands of industrial facilities, global operations and OE manufacturers choose Gates ProFlex hose.

Features

- Synthetic black rubber
- Reinforced braided steel wire
- Qualified for 200,000 cycles impulse life with MEGACRIMP, PCK, GB (-8, -12 & -16) couplings

Part No. 1/2PFX-24IN-FJXEE

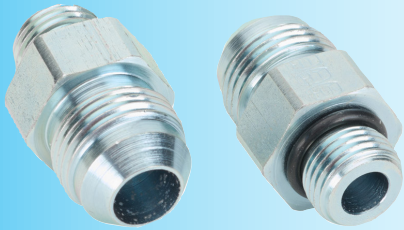
ProFlex Hydraulic Hoses Selection

Part No.	I.D. in (mm)	O.D. in (mm)	Fitting	Assembly Length (ft)	Weight (lbs)	Price
<u>1/4PFX-24IN-FJXEE</u>	1/4 (6.3)	0.52 (13.2)	(2) -4 female straight JIC 37° fittings	2	0.60	\$29.00
<u>1/4PFX-48IN-FJXEE</u>				4	0.96	\$33.00
<u>1/4PFX-72IN-FJXEE</u>				6	1.31	\$37.00
<u>1/4PFX-96IN-FJXEE</u>				8	1.67	\$42.00
<u>1/4PFX-120IN-FJXEE</u>				10	2.02	\$46.00
<u>3/8PFX-24IN-FJXEE</u>	3/8 (9.5)	0.65 (16.5)	(2) -6 female straight JIC 37° fittings	2	0.86	\$33.00
<u>3/8PFX-48IN-FJXEE</u>				4	1.34	\$39.00
<u>3/8PFX-72IN-FJXEE</u>				6	1.82	\$44.00
<u>3/8PFX-96IN-FJXEE</u>				8	2.30	\$50.00
<u>3/8PFX-120IN-FJXEE</u>				10	2.79	\$55.00
<u>1/2PFX-24IN-FJXEE</u>	1/2 (12.7)	0.81 (20.5)	(2) -8 female straight JIC 37° fittings	2	1.26	\$42.00
<u>1/2PFX-48IN-FJXEE</u>				4	1.91	\$49.00
<u>1/2PFX-72IN-FJXEE</u>				6	2.62	\$55.00
<u>1/2PFX-96IN-FJXEE</u>				8	3.16	\$61.00
<u>1/2PFX-120IN-FJXEE</u>				10	3.87	\$68.00
<u>3/4PFX-24IN-FJXEE</u>	3/4 (19.0)	1.08 (27.4)	(2) -12 female straight JIC 37° fittings	2	2.18	\$81.00
<u>3/4PFX-48IN-FJXEE</u>				4	3.24	\$91.00
<u>3/4PFX-72IN-FJXEE</u>				6	4.20	\$102.00
<u>3/4PFX-96IN-FJXEE</u>				8	5.32	\$113.00
<u>3/4PFX-120IN-FJXEE</u>				10	7.74	\$124.00

ProFlex Hydraulic Hose Specifications

Hose Size	DIN (Ref)	Working Pressure PSI (MPa)	Burst Pressure PSI (MPa)	Min. Bend Radius in (mm)
-4	6	5,800 (39.9)	23,000 (160.0)	1.9 (48.2)
-6	10	4,800 (33.1)	19,200 (132.4)	2.5 (64.0)
-8	12	4,000 (27.6)	16,000 (110.3)	3.5 (88.9)
-12	19	3,125 (21.5)	12,500 (86.2)	4.7 (119.3)

HY-TECH Hydraulic Threaded Adapters



Part No. 8MJ-6MB

Overview

Hydraulic threaded adapters are used to connect hoses to valves, actuators or manifolds.

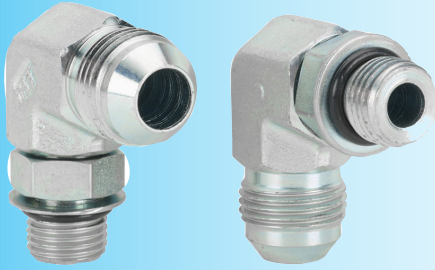
Features

- Plated steel body
- All Requirements as per SAE J514 & 6149-3

HY-TECH Hydraulic JIC to O-ring Boss Straight Adapters Selection

Part No.	Connection 1 (Male JIC)	Connection 2 (Male O-ring boss)	Max. Temp.	Max. Pressure	Qty./pack	Weight (lbs)	Price
<u>4MJ-4MB</u>	-4	-4	212°F (100°C)	5,000 psi	2	0.10	\$3.75
<u>4MJ-6MB</u>		-6			2	0.14	\$4.75
<u>4MJ-8MB</u>		-8			2	0.23	\$6.50
<u>6MJ-4MB</u>	-6	-4			2	0.12	\$4.50
<u>6MJ-6MB</u>		-6			2	0.14	\$4.25
<u>6MJ-8MB</u>		-8			2	0.24	\$6.25
<u>6MJ-10MB</u>		-10			2	0.36	\$8.50
<u>8MJ-6MB</u>	-8	-6		4,500 psi	2	0.22	\$6.00
<u>8MJ-8MB</u>		-8			2	0.27	\$6.50
<u>8MJ-10MB</u>		-10			2	0.36	\$8.75
<u>8MJ-12MB</u>		-12			2	0.60	\$11.00
<u>10MJ-8MB</u>	-10	-8		3,500 psi	2	0.38	\$8.50
<u>10MJ-10MB</u>		-10			2	0.40	\$9.00
<u>12MJ-8MB</u>	-12	-8			2	0.60	\$12.00
<u>12MJ-10MB</u>		-10			2	0.56	\$12.00
<u>12MJ-12MB</u>		-12			2	0.67	\$12.00
<u>12MJ-16MB</u>		-16			2	0.93	\$19.00

HY-TECH Hydraulic Threaded Adapters



Part No. [8MJ-6MB90](#)

Overview

Hydraulic threaded adapters are used to connect hoses to valves, actuators or manifolds.

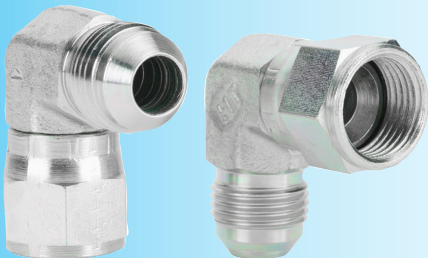
Features

- Plated steel body
- All Requirements as per SAE J514 & 6149-3

HY-TECH Hydraulic JIC to O-ring Boss Elbow Adapters Selection

Part No.	Connection 1 (Male JIC)	Connection 2 (Male O-ring boss)	Max. Temp.	Max. Pressure	Qty./pack	Weight (lbs)	Price
4MJ-4MB90	-4	-4	212°F (100°C)	5,000 psi	2	0.14	\$8.25
4MJ-6MB90		-6			2	0.24	\$9.25
4MJ-8MB90		-8			2	0.45	\$14.50
6MJ-4MB90	-6	-4			2	0.23	\$10.00
6MJ-6MB90		-6			2	0.23	\$8.00
6MJ-8MB90		-8			2	0.45	\$12.50
6MJ-10MB90		-10			2	0.68	\$18.00
8MJ-6MB90	-8	-6		4,500 psi	2	0.41	\$11.50
8MJ-8MB90		-8			2	0.48	\$13.00
8MJ-10MB90		-10			2	0.72	\$16.00
8MJ-12MB90		-12			2	1.16	\$24.50
10MJ-8MB90	-10	-8		3,500 psi	2	0.66	\$17.00
10MJ-10MB90		-10			2	0.75	\$17.00
10MJ-12MB90		-12			2	1.19	\$28.00
12MJ-8MB90	-12	-8			2	1.02	\$32.50
12MJ-10MB90		-10			2	1.07	\$24.50
12MJ-12MB90		-12			2	1.21	\$22.50

HY-TECH Hydraulic Threaded Adapters



Part No. [8MJ-8FJX90](#)

Overview

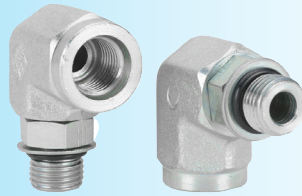
Hydraulic threaded adapters are used to connect hoses to valves, actuators or manifolds.

Features

- Plated steel body
- All Requirements as per SAE J514 & 6149-3

HY-TECH Hydraulic Elbow JIC to JIC Adapters Selection							
Part No.	Connection 1 (Male JIC)	Connection 2 (Female JIC)	Max. Temp.	Max. Pressure	Qty./pack	Weight (lbs)	Price
4MJ-4FJX90	-4	-4	250°F (121.1°C)	5,000 psi	2	0.14	\$9.50
6MJ-6FJX90	-6	-6			2	0.23	\$11.00
8MJ-8FJX90	-8	-8		4,500 psi	2	0.44	\$13.00
10MJ-10FJX90	-10	-10		3,500 psi	2	0.64	\$17.50
12MJ-12FJX90	-12	-12			2	1.05	\$26.50

HY-TECH Hydraulic Threaded Adapters

Part No. 8MB-6FBPart No. 6MB-6FB90

Overview

Hydraulic threaded adapters are used to connect hoses to valves, actuators or manifolds.

Features

- Plated steel body
- All Requirements as per SAE J514 & 6149-3

Part No. 8MJ-8FFORX

HY-TECH Hydraulic O-ring Boss Straight Reducer Adapters Selection							
Part No.	Connection 1	Connection 2	Max. Temp.	Max. Pressure	Qty./pack	Weight (lbs)	Price
<u>8MB-4FB</u>	-8 male o-ring boss	-4 female o-ring boss	212°F (100°C)	6,000 psi	2	0.28	\$15.50
<u>8MB-6FB</u>		-6 female o-ring boss			2	0.26	\$7.50
<u>10MB-8FB</u>	-10 male o-ring boss	-8 female o-ring boss		5,000 psi	<u>2</u>	0.41	\$9.00
<u>12MB-8FB</u>	-12 male o-ring boss				2	0.42	\$14.50
<u>12MB-10FB</u>		-10 female o-ring boss			2	0.63	\$15.00
HY-TECH Hydraulic O-ring Boss Elbow Adapters Selection							
<u>4MB-4FB90</u>	-4 male o-ring boss	-4 female o-ring boss	212°F (100°C)	6,000 psi	2	0.30	\$17.50
<u>6MB-6FB90</u>	-6 male o-ring boss	-6 female o-ring boss			2	0.56	\$24.50
HY-TECH Hydraulic JIC to Flat Face Adapters Selection							
<u>6MJ-6FFORX</u>	-6 male JIC 37 deg	-6 female flat face o-ring	212°F (100°C)	6,000 psi	2	0.28	\$13.50
<u>8MJ-8FFORX</u>	-8 male JIC 37 deg	-8 female flat face o-ring			2	0.48	\$18.00