

Max. Working Pressure - 700 bar / 10,000 psi


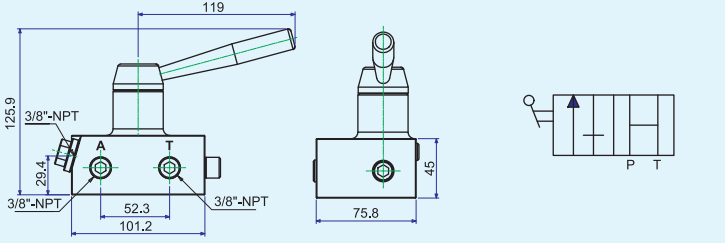

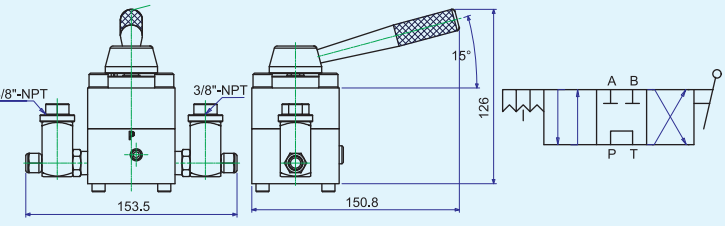

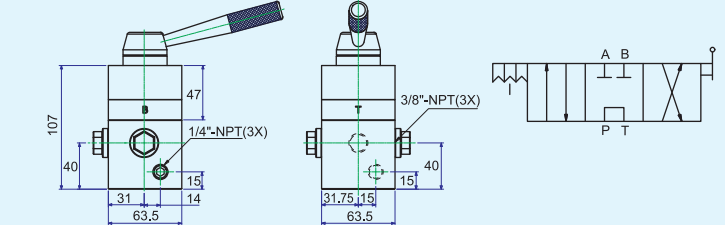
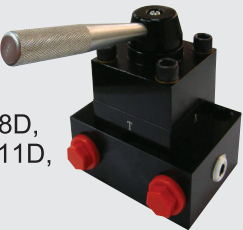
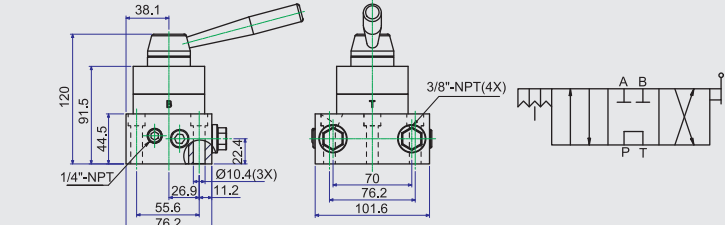

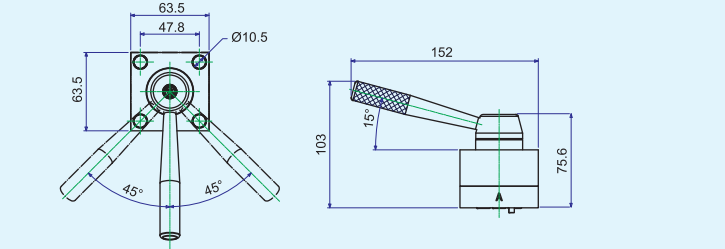

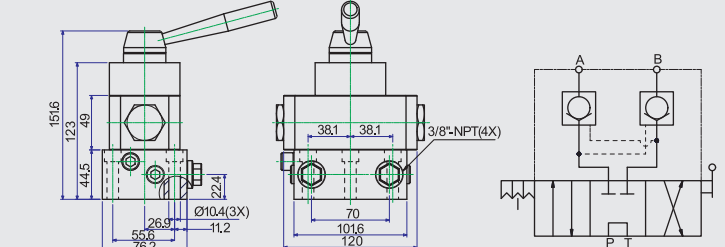
FITTINGS

Model No.	Description	Dimensions (mm)
ADL101	Elbow	
ADL102	Elbow	
ADL202	Elbow	
ADL303	Elbow	
ADC303	Elbow	
ADE303	Elbow	
ADT101	Tee	
ADT202	Tee	
ADT303	Tee	
ADG303	Tee	
ADG323	Tee	
ADF102	Adaptor	
ADF203	Adaptor	
ADF302	Adaptor	

Model No.	Description	Dimensions (mm)
ADF303	Adaptor	
ADF304	Adaptor	
ADI202	Connector	
ADI203	Connector	
ADI303	Connector	
ADO101	Hexagon Nipple	
ADO202	Hexagon Nipple	
ADO2031	Reducing Connector	
ADO203	Reducing Connector	
ADO204	Hexagon Nipple	
ADO205	Hexagon Nipple	
ADO303	Hexagon Nipple	
BG9705	Swivel Connector	


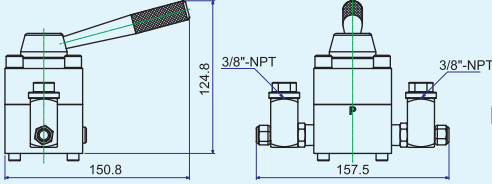
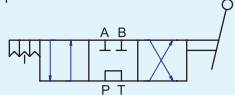

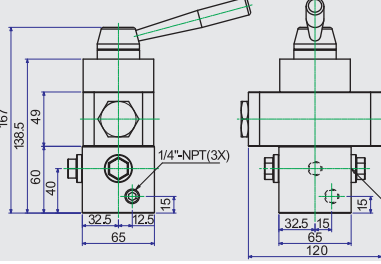
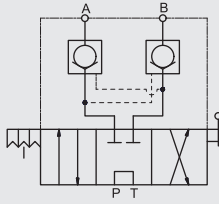

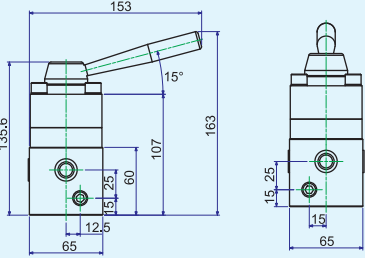
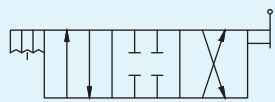
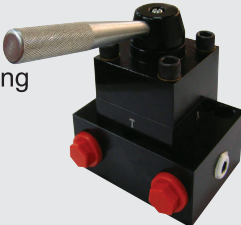
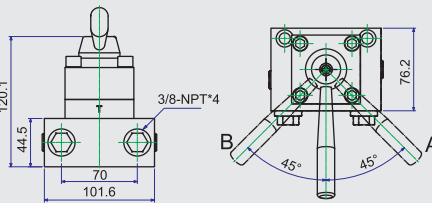
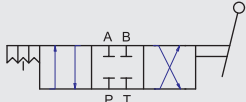

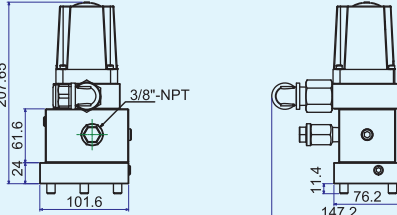
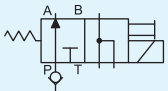

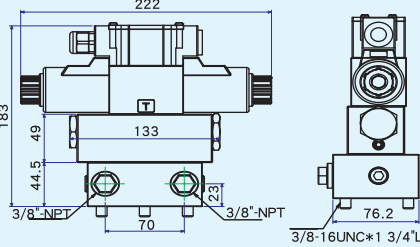
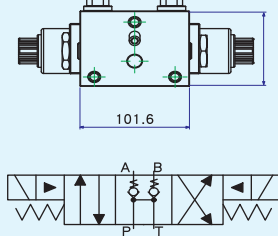
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Directional Control Valve

Model No.	Description	Dimensions (mm)
B1014	 <p>2 Position / 2 Way Valve Pump Mounted, when load holding is not needed.</p>	
BP421	 <p>For using with single- or double acting cylinders. Manual, Advance / Hold / Retract</p>	
BP422	 <p>Manual, Advance / Hold / Retract</p>	
BP423	 <p>Manual, Advance / Hold / Retract Available models HP80D, AP13D, AP18D, EP13D, EP18D, EP211D, EP320D & EP420D</p>	
BP42R	 <p>BP42R is the upper section of BP423 as enclosed only.</p>	
BP425	 <p>Manual, Advance / Hold / Retract, Lock for load holding.</p>	


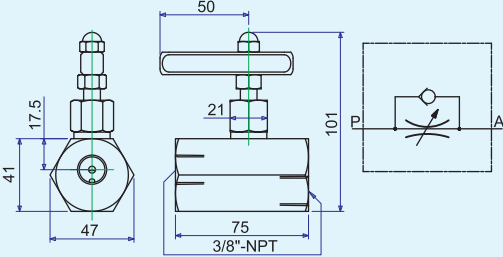

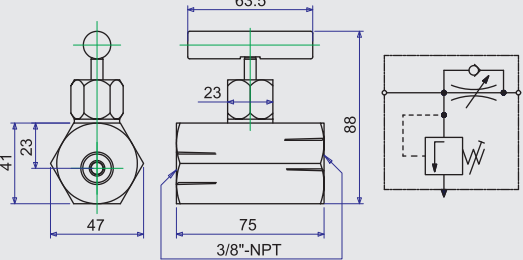

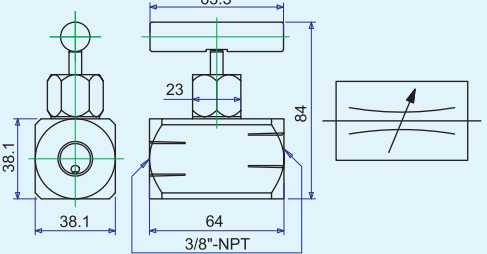

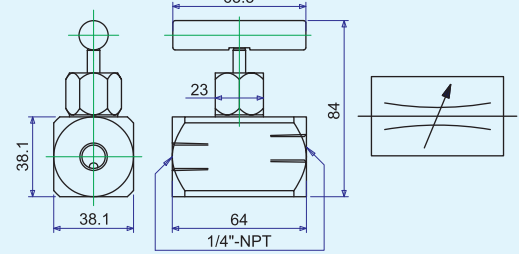

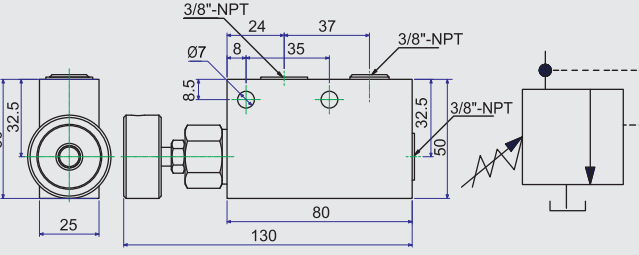

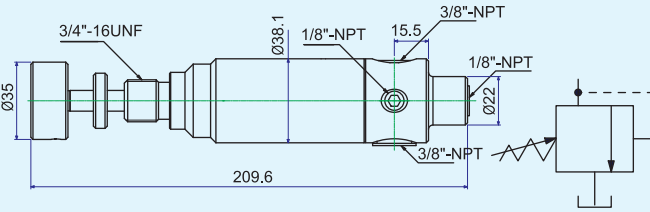
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Directional Control Valves

Model No.	Description	Dimensions (mm)		
BP426	BP426 is similar to BP421, but used on HP35D only.			
BP427	Manual, Advance / Hold / Retract, Lock for load holding.			
BP430	BP430 is similar to BP422, but with closed center.			
BP432	Overlooking & mounting dimensions is same as BP423, but with closed center.			
SV32	3 Way / 2 Position Solenoid Valve for Single-acting cylinders 24V / 110V / 220V			
SV43	4 Way / 3 Position Solenoid Valve for Double-acting cylinders 24V / 110V / 220V			

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Flow Control Valves

Model No.	Description	Dimensions (mm)
VC331	<p>Needle Valve To control cylinder speed, also can be used as shut-off valve for temporary holding. But not recommended to use for precise flow control.</p> 	 <p>Dimensions: 41, 17.5, 47, 50, 21, 101, 75, 3/8"-NPT</p>
VB66	<p>Manually Operated Check Valve Used with single or double acting cylinders for load holding. Upon cylinder retracting, valve is manually opened to allow oil flowing back to the tank and with auto overload relief design.</p> 	 <p>Dimensions: 41, 23, 47, 63.5, 23, 88, 75, 3/8"-NPT</p>
VB101	<p>Needle Valve (3/8"NPT ports) To be used as shut-off valve for temporary holding. Same as VB66, but without auto overload relief design.</p> 	 <p>Dimensions: 38.1, 38.1, 38.1, 63.5, 23, 84, 64, 3/8"-NPT</p>
VB102	<p>Needle Valve (1/4"NPT ports) To be used as shut-off valve for temporary holding. Same as VB66 but without auto overload relief design</p> 	 <p>Dimensions: 38.1, 38.1, 38.1, 63.5, 23, 84, 64, 1/4"-NPT</p>
BG9623	<p>In-line Pressure Relief Valve Used with single or double acting cylinders for remote locations in a hydraulic circuit where maximum pressure requirements are less than basic overload setting in a pump.</p> 	 <p>Dimensions: 50, 25, 32.5, 130, 80, 3/8"-NPT, 24, 37, 8, 35, 8.5, 32.5, 150, 3/8"-NPT</p>
PRV9633	<p>In-line Pressure Regulator Valve Used for single or double acting cylinders to permit adjusting operating pressures at various values below relief valve setting of pump.</p> 	 <p>Dimensions: Ø35, 3/4"-16UNF, Ø38.1, 1/8"-NPT, 15.5, 3/8"-NPT, 1/8"-NPT, Ø22, 3/8"-NPT, 209.6</p>

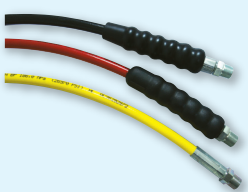
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HOSES

- Heavy duty hoses rated at 700 bar, meet IJ-1000 specification as worldwide safety standards.
- Hoses are black rubber coated with two layers of steel braided reinforcement.
- Flexible hoses with spring guard at both ends to protect adaptors.

Description	Model No.	End One	End Two	Length		I/D	
				(feet)	(mtr)	(inch)	(mm)
Rubber Hoses 	HS225	1/4" NPT	1/4" NPT	5	1.5	1/4	6.4
	HS235	1/4" NPT	3/8" NPT	5	1.5	1/4	6.4
	HS226	1/4" NPT	1/4" NPT	6	1.8	1/4	6.4
	HS236	1/4" NPT	3/8" NPT	6	1.8	1/4	6.4
	HS332	3/8" NPT	3/8" NPT	2	0.6	1/4	6.4
	HS333	3/8" NPT	3/8" NPT	3	0.9	1/4	6.4
	HS335	3/8" NPT	3/8" NPT	5	1.5	1/4	6.4
	HS336	3/8" NPT	3/8" NPT	6	1.8	1/4	6.4
	HS337	3/8" NPT	3/8" NPT	7	2.1	1/4	6.4
	HS338	3/8" NPT	3/8" NPT	8	2.4	1/4	6.4
	HS3310	3/8" NPT	3/8" NPT	10	3.0	1/4	6.4
	HS3312	3/8" NPT	3/8" NPT	12	3.6	1/4	6.4
	HS3315	3/8" NPT	3/8" NPT	15	4.5	1/4	6.4
HS3320	3/8" NPT	3/8" NPT	20	6.0	1/4	6.4	

Rubber Hoses(High Flow) 	HFHS332	3/8" NPT	3/8" NPT	2	0.6	3/8	9.4
	HFHS333	3/8" NPT	3/8" NPT	3	0.9	3/8	9.4
	HFHS335	3/8" NPT	3/8" NPT	5	1.5	3/8	9.4
	HFHS336	3/8" NPT	3/8" NPT	6	1.8	3/8	9.4
	HFHS338	3/8" NPT	3/8" NPT	8	2.4	3/8	9.4
	HFHS3310	3/8" NPT	3/8" NPT	10	3.0	3/8	9.4

Polyurethane Hose 	PHS332	3/8" NPT	3/8" NPT	2	0.6	1/4	6.3
	PHS333	3/8" NPT	3/8" NPT	3	1.0	1/4	6.3
	PHS335	3/8" NPT	3/8" NPT	5	1.5	1/4	6.3
	PHS336	3/8" NPT	3/8" NPT	6	1.8	1/4	6.3
	PHS337B	3/8" NPT	3/8" NPT	7	2.1	1/4	6.3
	PHS338	3/8" NPT	3/8" NPT	8	2.4	1/4	6.3
	PHS3310	3/8" NPT	3/8" NPT	10	3.0	1/4	6.3
	PHS3312	3/8" NPT	3/8" NPT	12	3.6	1/4	6.3
	PHS3315	3/8" NPT	3/8" NPT	15	4.5	1/4	6.3
	PHS3320	3/8" NPT	3/8" NPT	20	6.0	1/4	6.3
	PHS3330	3/8" NPT	3/8" NPT	30	9.0	1/4	6.3

Polyurethane Hose (High Flow) 	HPHS332	3/8" NPT	3/8" NPT	2	0.6	3/8	9.7
	HPHS333	3/8" NPT	3/8" NPT	3	1.0	3/8	9.7
	HPHS335	3/8" NPT	3/8" NPT	5	1.5	3/8	9.7
	HPHS336	3/8" NPT	3/8" NPT	6	1.8	3/8	9.7
	HPHS338	3/8" NPT	3/8" NPT	8	2.4	3/8	9.7
	HPHS3310	3/8" NPT	3/8" NPT	10	3.0	3/8	9.7
	HPHS3312	3/8" NPT	3/8" NPT	12	3.6	3/8	9.7
	HPHS3315	3/8" NPT	3/8" NPT	15	4.5	3/8	9.7
	HPHS3320	3/8" NPT	3/8" NPT	20	6.0	3/8	9.7
	HPHS3330	3/8" NPT	3/8" NPT	30	9.0	3/8	9.7

ACCESSORIES

Max. Working Pressure - 700 bar / 10,000 psi



COUPLERS

Image	Model No. (Set)	Specification	Model No.
	CP210	NEEDLE (Plastic caps for both ends) RAM HALF: 1/4 NPT HOSE HALF: 1/4 NPT	CP211 CP212
	CP230	NEEDLE (Metal cover for Ram half) RAM HALF: 1/4 NPT HOSE HALF: 1/4 NPT	CP231 CP232
	CP380	NEEDLE (Plastic caps for both ends) RAM HALF: 3/8 NPT HOSE HALF: 3/8 NPT	CP381 CP382
	CP330B	BALL (Plastic caps for both ends) RAM HALF: 3/8 NPT HOSE HALF: 3/8 NPT	CP331B CP332B
	CP350	NEEDLE (Metal cover for Ram half) RAM HALF: 3/8 NPT HOSE HALF: 3/8 NPT	CP351 CP352
	CP430	NO-SPILL RAM HALF: 3/8 NPT HOSE HALF: 3/8 NPT	CP431 CP432

GAUGES

Description	Model No.	Specification
	M0039	Liquid filled dampens needle vibration. Calibrated to read in bar, psi. Dial - 2-1/2" ; Thread Size: 1/4NPT Accuracy, Meet DIN Standard ±1.6% of full scale.
	M0136	All Features same as M0039 Except with Dial - 100 mm.
	P1710	All Stainless Steel Pressure Gauge Vibration-free display & long service life by filling glycerin. Measuring ranges: 0~1600 bar & 0~4000 bar Dial: 100mm Thread: M16 x 1.5 Accuracy class 1.6, meet EN 837-1 standard.

GAUGE ADAPTORS

Model No.	Dimensions (mm)
E0567	
E1336	
E1343	
E1745	
MA323	

HYDRAULIC OIL

- Used for 700 bar cylinders / hand pumps (transparent) and electric pumps (blue color).
- Contains anti-rust, anti-wear, anti-oxidant and anti-foaming additives.
- High quality hydraulic oil with low pour point.

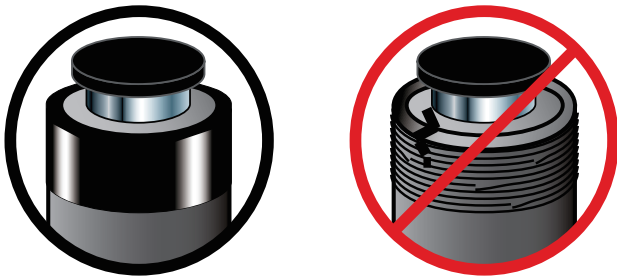
Model No.	Specification
HO1L	ISO 15 Grade, 1L Package
HO2L	ISO 15 Grade, 2L Package
HO4L	ISO 15 Grade, 4L Package
HO5L	ISO 15 Grade, 5L Package

1. Choose the right ram.



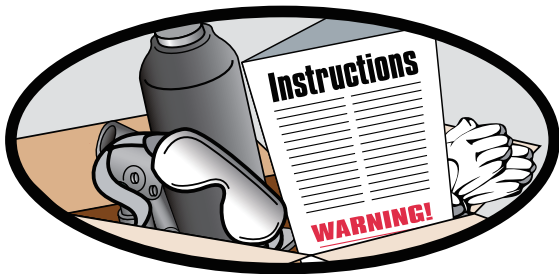
You must know the weight of what you intend to lift and choose a ram with at least 20% more capacity. Be aware of possible load shift requiring more capacity at the particular lifting point.

2. Check each components



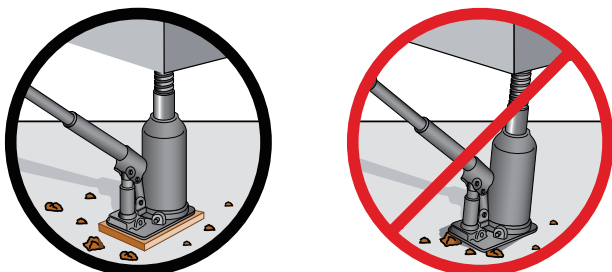
Check each component before you set up your hydraulic system. Do not use damaged or worn components. Turn them in for repair or replacement.

3. Safety instructions.



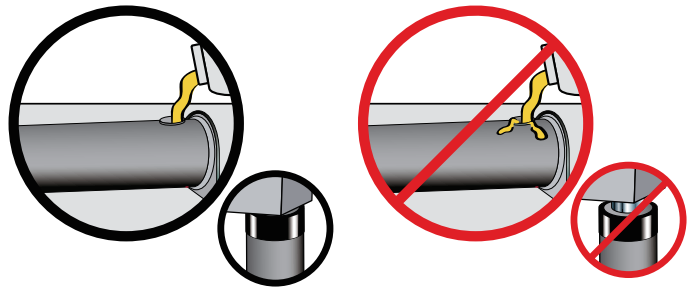
Read all warning labels and instructions. Operating instructions must be understood before using equipment. Never remove labels from equipment. Replace missing, worn, or damaged labels. Always wear safety goggles and protective clothing when using hydraulic equipment.

4. Each jack or ram must be fully supported at the base.



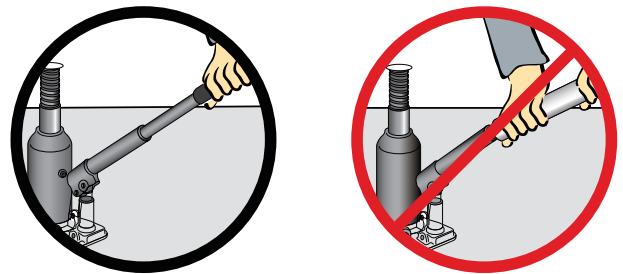
Every jack or ram, whether used individually or in a system, should be completely supported on a solid, firm, non-sliding foundation capable of supporting the load.

5. Fill oil reservoirs with cylinder retracted.



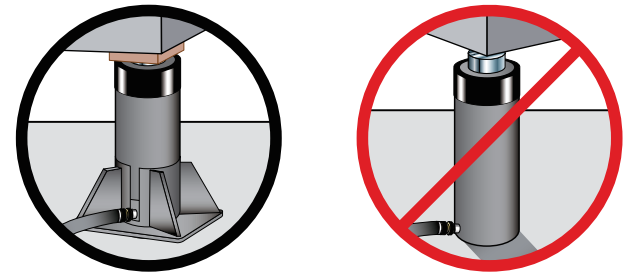
Only fill pump to recommended level, and fill only when the connected cylinder is fully retracted.

6. Know how your hydraulics work.



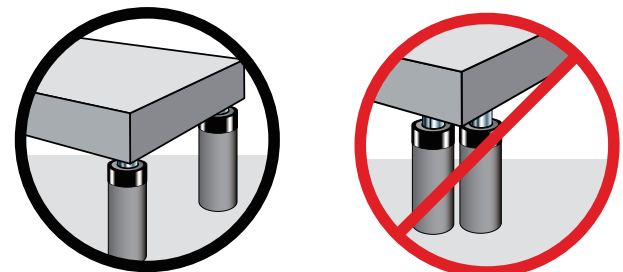
Do not use extensions or cheater bars on hydraulic jacks or hand pumps to raise a load.

7. Center the load on the lifting point.



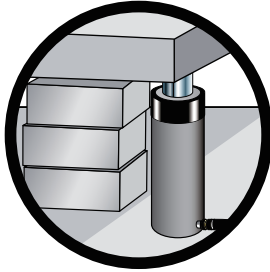
The load must be centered on the ram, or equally distributed on multiple rams. Off center loading can result in the ram slipping out and loss of the load.

8. When using multiple rams, distribute the load evenly.



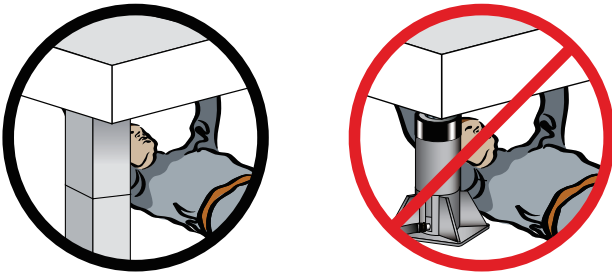
For multiple rams lift, you must be able to determine the location and number of lifting points that will allow the load to be evenly distributed to all the rams. This is called load balance. Size, center of gravity, and load geometry must be considered in order to correctly determine load balance.

9. Block or crib your load as it raises.



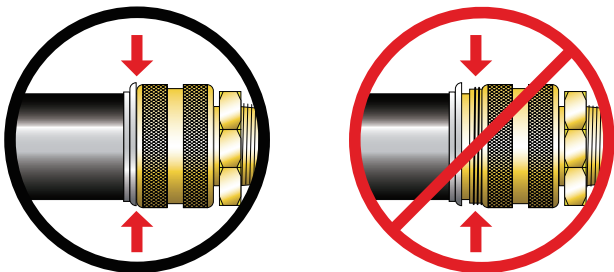
Place blocking or cribbing under the loads as you raise it. Each time you raise it higher, insert more blocking. Position yourself in a manner that will keep you clear of the load, and will not allow your hands or other body parts between the load and the cribbing.

10. Do not use rams as permanent supports.



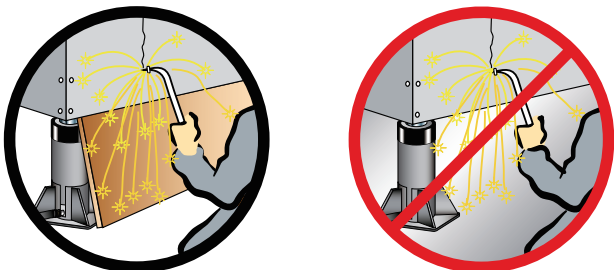
Hydraulic rams are not meant to be used as permanent supports, but are designed to lift and lower. If you need to hold the load for any length of time, cribbing or Powerram locknut cylinders should be used.

11. Hydraulic connections.



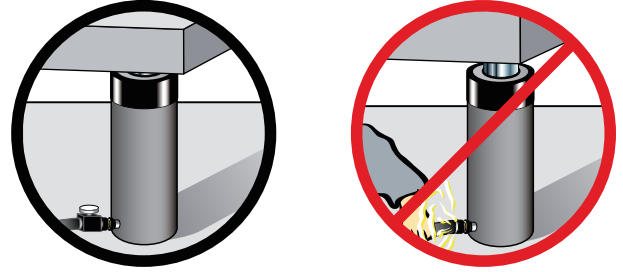
When making connections with quick couplers, make sure the couplings are fully engaged. Threaded connections such as fittings, gauges, etc. must be securely tightened and leak free. Never use excessive tightening force that may distort the fittings or strip the thread profile.

12. Avoid extreme heat or weld splatter.



Weld splatter will damage plunger rods and hoses. Hydraulic fluid can ignite if vaporized or exposed to high temperatures.

13. Disconnecting the hydraulics.



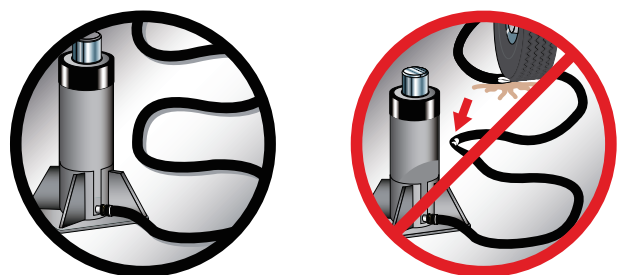
Never attempt to disconnect hydraulic hoses, fittings or couplers under pressure. Unload the ram, open the release screw on the hand pump and shift or open all hydraulic controls several times. If system includes a gauge, double check the gauge to insure pressure has been completely released.

14. Do not carry or drag pumps and rams by their hoses.



Dragging or carrying rams or pumps by a connected hose can damage the couplers and hoses. Using damaged couplers and hoses can be dangerous.

15. Keep hydraulic hoses free of obstructions.



Do not drop sharp or heavy objects on hose. Keep hose out of heavy traffic areas. This will cause internal damage to hose wire strands. Applying pressure to a damaged hose may cause it to rupture. Avoid sharp bends and kinks when routing hydraulic hoses.

HYDROLUTIONTM

INTEGRATED HYDRAULIC SOLUTIONS. ASIA FORCE

Hydrolution Technologies Pte Ltd

Premier @ Kaki Bukit

10 Kaki Bukit Avenue 4

#05-65 Singapore 415874

Tel.: +65 69264622

E-mail: sales@hydrolution.asia

Website: www.hydrolution.asia