Jacks Pumps Cutters Presses Cylinders Puller
Spreaders Torque tools Nut splitters Hole punch
Moving skates Crimping tools Bolt tensioners Hydro
pumps Toughlift jacking systems Jacks Pumps Cut
Presses
Nut splitters
tools Bolt tensioners Hydrotest pumps Toughlift jac
systems Jacks Pumps Cutters Presses Cylinders P
kits Spreaders Torque tools Nut splitters
punchers Moving skates Crimping tools Bolt tensi

Hi-Force®

HYDRAULIC TOOLS



Hi-Force®

SYSTEM COMPONENTS

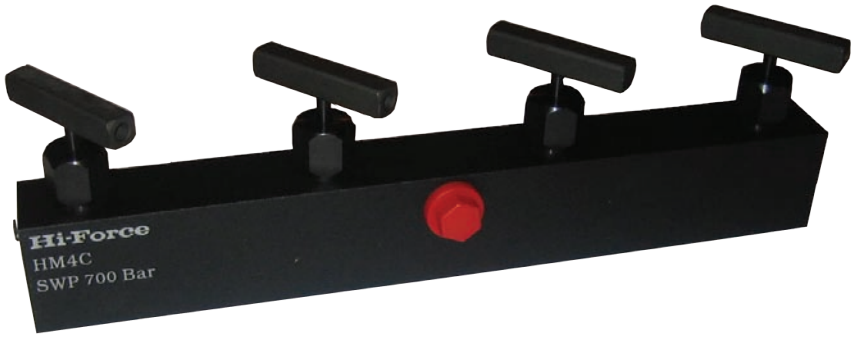
Hydraulic Hoses	High pressure hydraulic hoses	Pages 50 - 51
Hydraulic Oil	Premium grade hydraulic oil	Page 51
Pressure Gauges	Pressure gauges and gauge mounting blocks	Page 52
Manifolds	Distribution blocks, controlled manifolds and manifold stations with pressure gauges	Page 53
Couplers & Fittings	High pressure couplers, fittings and adaptors	Page 54
Control Valves	Directional and flow control valves	Pages 55 - 56

E









HIGH PRESSURE HYDRAULIC HOSES - BLACK



Working pressure 700 Bar

4:1 Factor of safety

Special lengths available on request

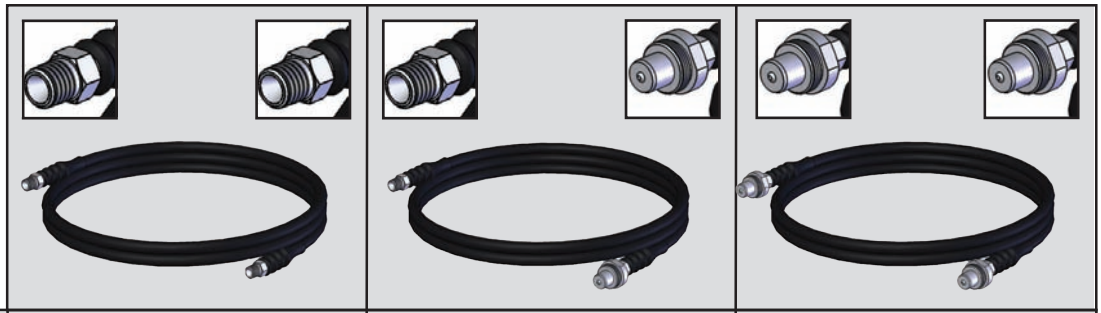
E

Hi-Force high pressure hydraulic hoses provide the vital, high quality, safe connection for your hydraulic equipment. Available in black and red and supplied complete with an ergonomically designed protective strain reliever at both ends, Hi-Force high pressure hoses are suitable for working pressures up to 700 Bar with a 4 : 1 factor of safety.

Tip for double acting systems ...

By using black hoses for the advance lines and red hoses (see next page) for the retract lines, identification is made easy and the possibility of incorrectly connected hoses is reduced.

Hose bore is 6.6mm and outside diameter is 12.7mm for all models:



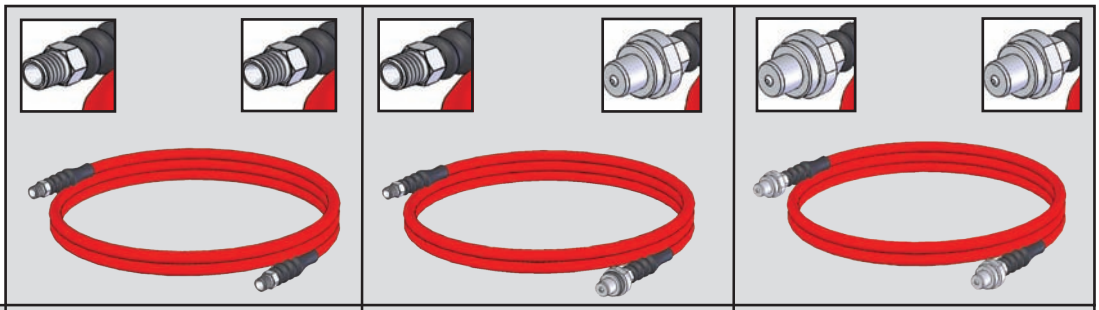
Length Metres	No couplers 3/8" - 18 NPT male fittings both ends	3/8"- 18 NPT male fitting one end with CM1 coupler fitted one end	CM1 male couplers fitted both ends
0.5	HH0.5	HC0.5	HC0.5C
1.0	HH1	HC1	HC1C
2.0	HH2	HC2	HC2C
3.0	HH3	HC3	HC3C
4.0	HH4	HC4	HC4C
5.0	HH5	HC5	HC5C
6.0	HH6	HC6	HC6C
10.0	HH10	HC10	HC10C
12.0	HH12	HC12	HC12C
15.0	HH15	HC15	HC15C
20.0	HH20	HC20	HC20C
25.0	HH25	HC25	HC25C
30.0	HH30	HC30	HC30C

HIGH PRESSURE HYDRAULIC HOSES - RED


HC10R

- Choice of hose end combinations
- Hand grip protective strain relievers
- Plastic protective end caps included

Hose bore is 6.6mm and outside diameter is 12.7mm for all models:



Length Metres	No couplers 3/8" - 18 NPT male fittings both ends	3/8"- 18 NPT male fitting one end with CM1 coupler fitted one end	CM1 male couplers fitted both ends
0.5	HH0.5R	HC0.5R	HC0.5CR
1.0	HH1R	HC1R	HC1CR
2.0	HH2R	HC2R	HC2CR
3.0	HH3R	HC3R	HC3CR
4.0	HH4R	HC4R	HC4CR
5.0	HH5R	HC5R	HC5CR
6.0	HH6R	HC6R	HC6CR
10.0	HH10R	HC10R	HC10CR
12.0	HH12R	HC12R	HC12CR
15.0	HH15R	HC15R	HC15CR
20.0	HH20R	HC20R	HC20CR
25.0	HH25R	HC25R	HC25CR
30.0	HH30R	HC30R	HC30CR

HYDRAULIC OIL


HF046-5 HF032-1

Hi-Force premium grade hydraulic oil is specially formulated for use with Hi-Force hydraulic tools, providing optimum performance throughout all working conditions.

Model number	Capacity litres	For use with
HF032-1	1	Manually operated pumps
HF032-5	5	Manually operated pumps
HF032-25	25	Manually operated pumps
HF046-1	1	Powered pumps
HF046-5	5	Powered pumps
HF046-25	25	Powered pumps

PRESSURE GAUGES & GAUGE MOUNTING BLOCKS



- Clear precise dual scale readings
- Manufactured to EN837-1
- Calibration certificates on request

Hi-Force hydraulic pressure gauges are your "window" to the system and are recommended for use within all hydraulic systems to allow the user to constantly monitor the system pressure. Hi-Force hydraulic pressure gauges are manufactured to EN837-1 and are accurate to +/- 1% of full scale. Standard range models up to 109 tonnes are featured in this catalogue, however gauges to suit Hi-Force high tonnage cylinders & digital pressure gauges are available on request. Always specify Hi-Force pressure gauges for use with your Hi-Force hydraulic tools.

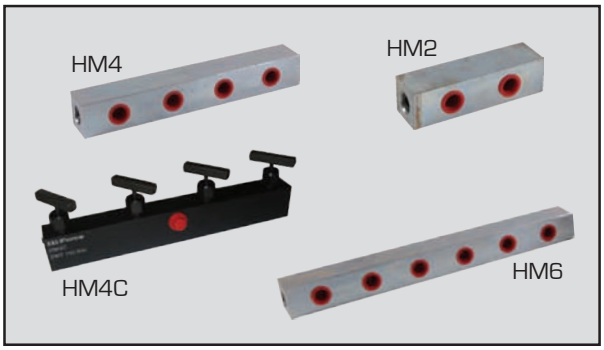
Gauges :

Model number	Gauge diameter mm	Gauge type	Reading Inner scale	Reading Outer scale	Inlet thread	Compatible Hi-Force cylinders	Weight kg
HG63G	63	glycerine	0-700 Bar	0-10.000 Psi	¼"-18NPT	All models	0.2
HG1	100	dry	0-700 Bar	0-10.000 Psi	½"-14NPT	All models	0.9
HG1G	100	glycerine	0-700 Bar	0-10.000 Psi	½"-14NPT	All models	1.0
HG5	100	dry	0-700 Bar	0-4.5 tonnes	½"-14NPT	All 4.5 tonnes models	0.9
HG10	100	dry	0-700 Bar	0-10 tonnes	½"-14NPT	All 10 tonnes models	0.9
HG11	100	dry	0-700 Bar	0-11 tonnes	½"-14NPT	All 11 tonnes models	0.9
HG20	100	dry	0-700 Bar	0-20 tonnes	½"-14NPT	All 20 tonnes models	0.9
HG23	100	dry	0-700 Bar	0-23 tonnes	½"-14NPT	All 23 tonnes models	0.9
HG25	100	dry	0-700 Bar	0-25 tonnes	½"-14NPT	All 25 tonnes models	0.9
HG32	100	dry	0-700 Bar	0-32 tonnes	½"-14NPT	All 32 tonnes models	0.9
HG33	100	dry	0-700 Bar	0-33 tonnes	½"-14NPT	All 33 tonnes models	0.9
HG50	100	dry	0-700 Bar	0-50 tonnes	½"-14NPT	All 50 tonnes models	0.9
HG61	100	dry	0-700 Bar	0-61 tonnes	½"-14NPT	All 61 tonnes models	0.9
HG102	100	dry	0-700 Bar	0-102 tonnes	½"-14NPT	All 102 tonnes models	0.9
HG109	100	dry	0-700 Bar	0-109 tonnes	½"-14NPT	All 109 tonnes models	0.9
HG2	150	dry	0-700 Bar	0-10.000 Psi	½"-14NPT	All models	1.6
HG2G	150	glycerine	0-700 Bar	0-10.000 Psi	½"-14NPT	All models	1.7

Gauge mounting blocks :

	Dimensions						
Model number	Length mm	Width mm	Height mm	Gauge thread	Inlet thread	Outlet thread	Weight kg
HGA1	75	32	32	½"-14NPT	⅜"-18NPT male	⅜"-18NPT female	0.25
HGA2	170	32	32	½"-14NPT	⅜"-18NPT male	⅜"-18NPT female	0.85
HGA1-25	75	32	32	¼"-18NPT	⅜"-18NPT male	⅜"-18NPT female	0.30
HGA2-25	170	32	32	¼"-18NPT	⅜"-18NPT male	⅜"-18NPT female	0.90

MANIFOLDS



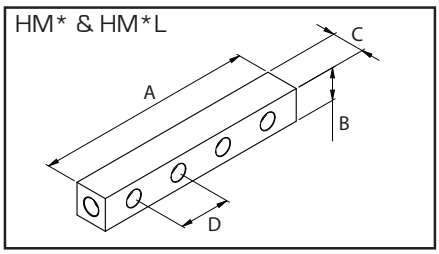
Working pressure 700 Bar

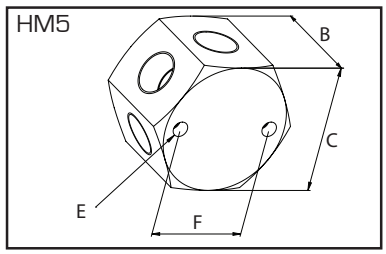
Choice of open or controlled manifolds

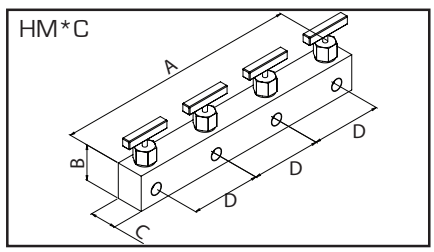
2, 4, 5, 6 or 8 outlet port models available

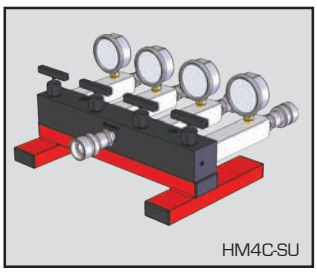
Hi-Force manifolds are designed specifically to allow easy control of the direction of flow of the hydraulic fluid within the system. Supplied either as open manifold blocks or with individual needle type shut off/throttle valves on each 3/8" NPT outlet, Hi-Force manifolds provide even greater versatility in your hydraulic system. The range offers 9 models with a choice of up to 8 outlets per manifold and all models are suitable for 700 Bar maximum working pressure.

Model number	Type	Design	Number of outlets	Female Threads Inlet	Female Threads Outlet	Weight kg	Dimensions in mm A	B	C	D	E	F
HM2	manifold	parallel	2	3/8"-18NPT	2 x 3/8"-18NPT	1.0	114	32	32	50	-	-
HM4	manifold	parallel	4	3/8"-18NPT	4 x 3/8"-18NPT	1.5	214	32	32	50	-	-
HM5	manifold	hexagon	5	3/8"-18NPT	5 x 3/8"-18NPT	0.7	-	41	51	-	M6	38
HM6	manifold	parallel	6	3/8"-18NPT	6 x 3/8"-18NPT	2.0	314	32	32	50	-	-
HM8	manifold	parallel	8	3/8"-18NPT	8 x 3/8"-18NPT	2.5	414	32	32	50	-	-
HM4L	manifold	extended parallel	4	3/8"-18NPT	4 x 3/8"-18NPT	2.4	394	32	32	110	-	-
HM6L	manifold	extended parallel	6	3/8"-18NPT	6 x 3/8"-18NPT	3.7	614	32	32	110	-	-
HM2C	controlled manifold	parallel	2	3/8"-18NPT	2 x 3/8"-18NPT	2.0	150	51	38	100	-	-
HM4C	controlled manifold	parallel	4	3/8"-18NPT	4 x 3/8"-18NPT	3.5	350	51	38	100	-	-

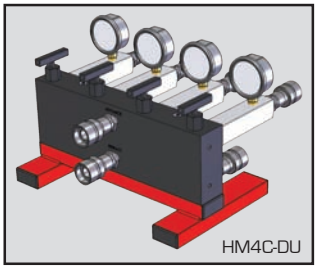







HM4C-SU

Model no.	Description
HM4C-SU	4-Way controlled manifold unit, suitable for single acting systems. Supplied complete with four pressure gauges, reading 0-700 bar, female coupler on inlet port and four female couplers on outlet ports. All mounted on a sturdy framework.


HM4C-DU

Model no.	Description
HM4C-DU	4-Way controlled manifold unit, suitable for double acting systems. Supplied complete with four pressure gauges, reading 0-700 bar, female coupler on inlet port and four female couplers on outlet ports. Also included is a 4-way open manifold for return flow, again with female couplers on inlet and outlet ports. All mounted on a sturdy framework.

HIGH PRESSURE COUPLERS AND FITTINGS

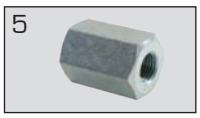
Hi-Force high pressure couplers and fittings are designed for easy system connection and assembly of your Hi-Force hydraulic equipment. All Hi-Force couplers and fittings are suitable for 700 Bar maximum working pressure. Hi-Force recommends the use of threaded dust caps with quick connect couplers to protect the thread of the coupler and at the same time prevent any contaminants entering your hydraulic system. Always specify Hi-Force couplers and fittings for use with your Hi-Force hydraulic tools.



























Safety first !

Be sure to use genuine Hi-Force couplers and fittings which are designed to withstand the full 700 bar working pressure.

Large selection of standard adaptors

Working pressure 700 Bar

Model number	See picture	Description	Thread specification
HF7	1	Nipple	¼" NPT male to ¼" NPT male
HF8	5	Adaptor	¼" NPT female to ¼" NPT female
HF10	2	Elbow	⅜" NPT female to ⅜" NPT female
HF12	3	Equal tee	⅜" NPT female
HF13	4	Cross	⅜" NPT female
HF14	5	Adaptor	⅜" NPT female to ⅜" NPT female
HF15	5	Reducer	⅜" NPT female to ¼" NPT female
HF16	6	Elbow	⅜" NPT female to ⅜" NPT male
HF17	1	Nipple	⅜" NPT male to ⅜" NPT male
HF19	1	Long nipple	⅜" NPT male to ⅜" NPT male
HF24	7	Adaptor	⅜" NPT male to ⅜" BSP female
HF27	1	Nipple	¼" NPT male to ⅜" NPT male
HF30	7	Reducer	⅜" NPT male to ¼" NPT female
HF31	8	Tee	⅜" NPT female to ⅜" NPT male
HF33	7	Reducer	⅜" NPT male to ¼" BSPT female
HF55	7	Reducer	⅜" NPT female to ¼" NPT male
HF69	7	Adaptor	½" BSP male to ⅜" NPT female
CF1	9	Female coupler	⅜" NPT male
CM1	10	Male coupler	⅜" NPT female
CMF1	9 + 10	Complete coupler	⅜" NPT
CF2	9	Female coupler	¼" NPT male
CM2	10	Male coupler	¼" NPT female
CMF2	9 + 10	Complete coupler	¼" NPT
CFD1	11	Metal dust cap for CF1	
CMD1	12	Metal dust cap for CM1	
CFD2	11	Metal dust cap for CF2	
CMD2	12	Metal dust cap for CM2	
PPC1	13	Moulded universal dust cap to suit CF1 & CM1	

DIRECTIONAL CONTROL VALVES

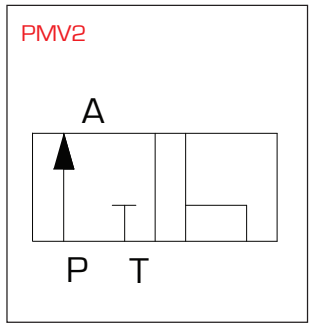


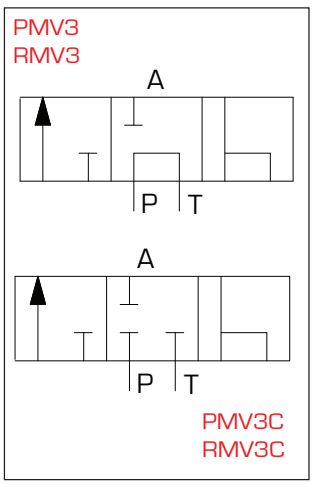
Working pressure 700 Bar

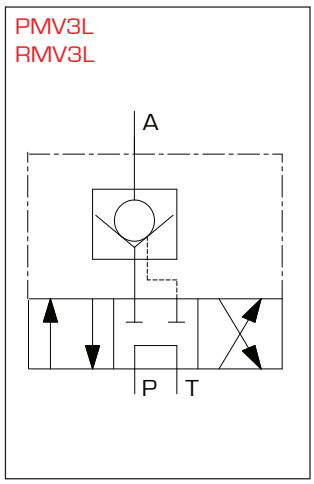
Pump or remote mounted design

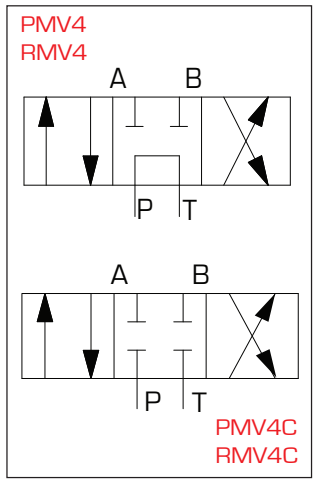
Manual or solenoid options available

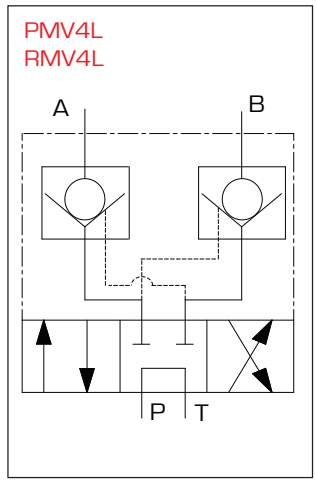
Hi-Force control valves are designed to provide precise control of the hydraulic system either by accurate pressure or directional flow control. The PMV range of pump mounted valves is identical to the valves fitted to the Hi-Force powered pumps featured on pages 35 - 37, 39 - 40, 43, 44 and can be easily interchanged, making your powered pump even more versatile. The RMV range allows for remote mounting away from the pump. Always specify Hi-Force control valves for use with your Hi-Force hydraulic tools. Flow control values are featured on the next page.







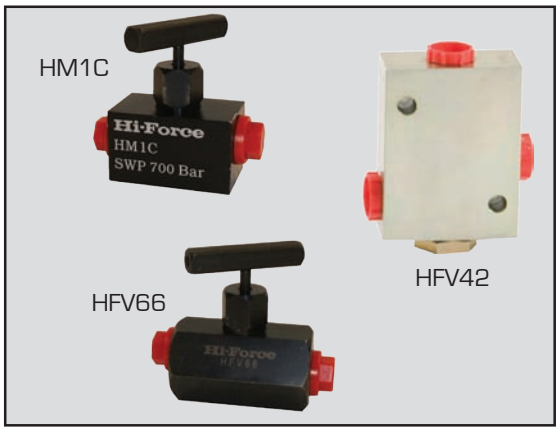




Directional control valves :

Description	Model number			
	Manual valve no load holding	Manual valve with load holding	Solenoid valve 24V incl. control	Manual valve closed centre
Pump mounted, 2-way, 2 position valve	**PMV2**	-	-	-
Pump mounted, 3-way, 3 position valve	**PMV3**	**PMV3L**	**PMV3S**	**PMV3C**
Pump mounted, 4-way, 3 position valve	**PMV4**	**PMV4L**	**PMV4S**	**PMV4C**
Remote mounted, 3-way, 3 position valve	**RMV3**	**RMV3L**	**RMV3S**	**RMV3C**
Remote mounted, 4-way, 3 position valve	**RMV4**	**RMV4L**	**RMV4S**	**RMV4C**

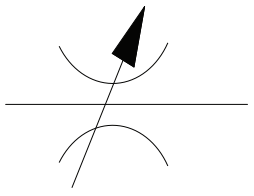
FLOW CONTROL VALVES



Working pressure 700 Bar

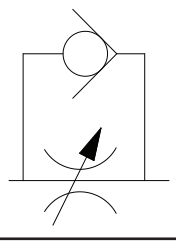
3/8" 18 NPT connections

Ensures system safety and control


HM1C

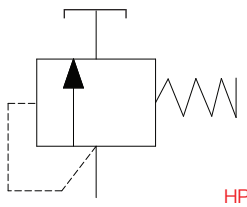
Manual shut off valve with needle type flow control. Used for load holding and throttling functions. Can also be used as a gauge isolator.

Model Number	Dimensions in mm Height	Length	Width
HM1C	82	64	38


HFV66

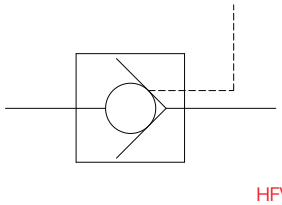
Manual check valve used for automatic load locking, with precise manual load lowering feature.

Model Number	Dimensions in mm Height	Length	Width
HFV66	86	75	47


HPV152

Adjustable pressure relief valve, for pressure setting from 55 to 700 Bar. Supplied complete with return line hose.

Model Number	Dimensions in mm Height	Length	Width
HPV152	102	64	32


HFV42

Pilot operated check valve used as a safety valve for double acting cylinders. Pilot port connects to cylinder retract line.

Model Number	Dimensions in mm Height	Length	Width
HFV42	84	64	32

Hi-Force®
HYDRAULIC TOOLS

UK Head Office

Hi-Force Limited
Prospect Way, Daventry
Northants, NN11 8QH
United Kingdom

Tel: +44 1327 301 000
Fax: +44 1327 706 555
daventry@hi-force.com

Your authorised distributor:

www.hi-force.com

Cat. Ref. HF0110E