

Manifold Kits**Filter Kit****Heat Exchanger Kits****Pressure Switch Kits****Float/Temperature Switch Kit****ENERPAC**[®]
WORKHOLDING

- **Modular Pumps**
- **Metric Valves**
- **Block Cylinders**
- **Flow Control Valves**
- **Digital Pressure Switches**



Manifold Kits & WE-Pump accessories



99-015

Manifold Kits

9 ▶

- Necessary to mount valves, pressure switch, filter kit, heat exchanger and gauges to basic pump unit
- In single, four and six valve stations horizontal or up to 8 metric valve stations vertical
- Integrated adjustable relief valve
- With DO3, modular valve or standard Enerpac valve mounting pattern



99-012

Return Line Filter Kit

10 ▶

- Extend life of pump and other hydraulic components, reduces damage created by oil borne contaminants
- Internal pressure by-pass
- Provides 25 micron nominal filtration
- With maintenance indicator
- Spare filter element included
- Can be easily mounted to the pump



99-013

Heat Exchanger Kits

11 ▶

- Recommended for applications in which the pump is running continuously
- Stabilizes oil temperature at approx. 50°C
- Increases oil life and consequently that of the pump and other hydraulic components
- Available in 110 VAC, 220 VAC or 24 VDC



99-014

Float/Temperature Switch Kit

12 ▶

- Senses both oil level and temperature
- The float switch signals before the oil reaches an unsafe level
- The temperature switch signals when the oil temperature has reached 80°C to protect pump and components from overheating



99-039

Pressure Switch Kits

13 ▶

- Used to signal when the hydraulic circuit has reached a desired pressure
- Can be used to automate the clamp and unclamp cycle
- Monitors system pressure, and can be connected to external controls



Flow:	1,6 l/min
Pressure:	350 bar
Reservoir:	20 litres

- D** Spannpumpe
- F** Centrale hydraulique



Options

VP-series modular valves

Enerpac offers a full range of directional control valving alternatives based upon zero leak poppet valve technology. Available in three voltages and configurations.

5-8 ▶

VP-series Modular valves

5-8 ▶



G-series Pressure gauges



FL-series High pressure filters



FZ-series Fittings

20 ▶



HF-series Hydraulic oil



Important

Oil should be replaced every 500 working hours to ensure long life. Change filters when changing oil or 4 times a year which ever comes first.

Output flow rate should be matched to hydraulic components used in the system.

Shown: WEN-15020WR



3B-100

WE-series

Enerpac single stage electric pumps are designed to be customized for your application.

Application

Enerpac electric pump used in conjunction with swing cylinders, worksupports, directional valves, control valves and sequence valves can provide a complete clamping solution. The optional heat exchanger and filter kit provide additional life. The pressure switch allows the unit to be fully automated.

■ The Enerpac workholding pump easily customized with manifold, valves, return line filter and heat exchanger.



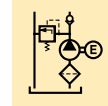
3B-099

When reliability is essential

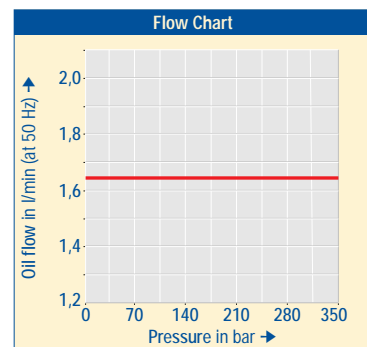
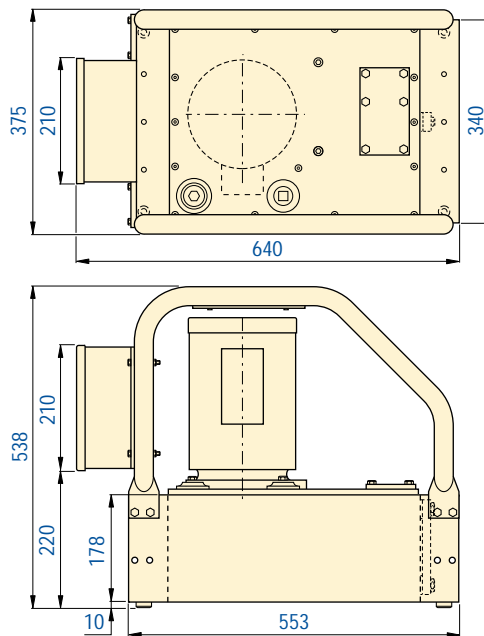
- New innovative modular design for demanding workholding applications
- Continuous duty cycle at full pressure
- Easy to customize with 6 modular standard kits to meet any requirement
- Multiple voltage options
- Integrated oil sight gauge and thermometer for system monitoring
- Electrical junction box includes terminal strip with plug in connections
- Oversized filtered breather for easy reservoir fills without the need of tools
- 20 litres reservoir

Flow:	1,6 l/min
Pressure:	350 bar
Motor:	1,1 - 2,2 kW
Reservoir:	20 litres

- Ⓓ Spannumppe
- Ⓕ Centrale hydraulique



WE-series

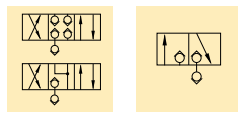


Product selection

Oil Flow at 50 Hz	Maximum pressure	Voltage	Model number	Usable oil capacity	Motor power	Motor speed at 50 Hz	Amperage draw	Weight
l/min	bar			litres	kW	RPM	A	kg
1,64	350	115/230V-1ph-50/60Hz	WEN-15020BR	15,1	1,1	1455	22/11	90
1,64	350	200V-3ph-50/60Hz	WEN-15020MR	15,1	2,2	1455	5,4	90
1,64	350	230/400V-3ph-50Hz	WEN-15020WR	15,1	1,1	1455	4,3/2,5	90

- Pressure: 350 bar**
- Max. Flow: 7 l/min**

- D** Verkeetingsventile
- F** Electro distributeurs



To control your cylinders

- Dual poppet valve design for zero internal leakage
- Inlet check-valve standard
- High cycle switching
- Stackable to 8 valve station high
- 17-350 bar operational pressure
- Oil flow capacity 7,0 l/min @ 350 bar
- G^{1/4}" oil connections and integrated filtration
- Multiple voltage options


Options

TRK-series Tie Rod Kits



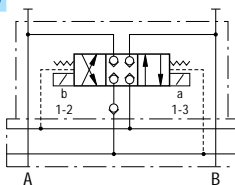
8 ▶

WM-12 Manifold

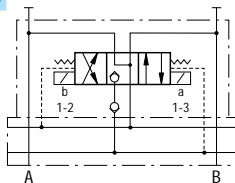


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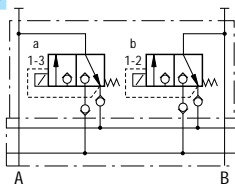
VP-11, 12, 13



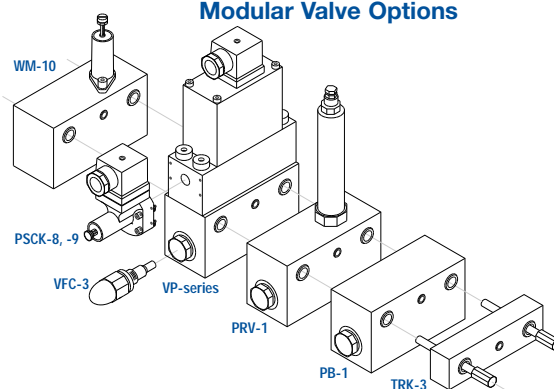
VP-21, 22, 23



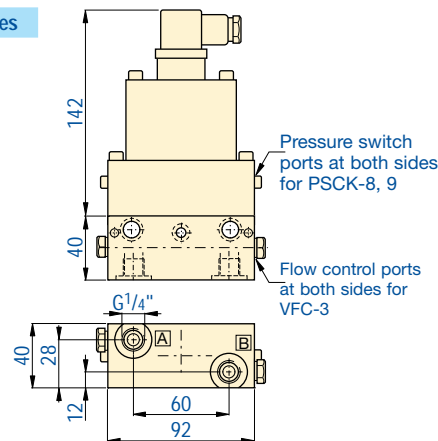
VP-31, 32, 33



Modular Valve Options



VP-series



Shown: VP-11

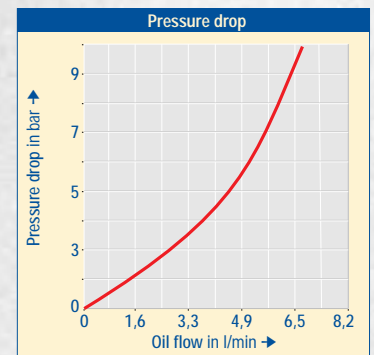


VP-series

Solenoid directional valves control the direction of the oil flow to each cylinder port.

Application

With the use of WM-12 manifold these valves allow quick and easy assembly of hydraulic control valves on your Enerpac WE-series pump. For remote mounting of these valves use WM-10 manifold.



Product selection

Voltage @ Current at 50/60 Hz	Model number	Flowpath	Used with cylinder(s)
4/3 Closed centre			
24 VDC @ 1,13 A	VP-11		1x Double-act. or 2x Single-act.
110 VAC @ 500 mA	VP-12		1x Double-act. or 2x Single-act.
230 VAC @ 250 mA	VP-13		1x Double-act. or 2x Single-act.
4/3 Float centre			
24 VDC @ 1,13 A	VP-21		1x Double-act. or 2x Single-act.
110 VAC @ 500 mA	VP-22		1x Double-act. or 2x Single-act.
230 VAC @ 250 mA	VP-23		1x Double-act. or 2x Single-act.
3/2 Normally closed			
24 VDC @ 1,13 A	VP-31		1x Double-act. or 2x Single-act.
110 VAC @ 500 mA	VP-32		1x Double-act. or 2x Single-act.
230 VAC @ 250 mA	VP-33		1x Double-act. or 2x Single-act.

DIN 43650 electrical connector included.
Valve weight 3,0 kg.

■ Enerpac modular VP-valves stackbuilt on WM-12 manifold, mounted on the WE-series workholding pump.



Pressure Switches, Flow Control Valve PSCK, VFC-series

Valves

Shown: PSCK-8, VFC-3



▶ PSCK-8, 9

Solenoid operated pressure switches will open or close electrical contacts when the desired pressure value is reached.

Application

To give an electrical signal when a preset pressure value is reached. The electrical signal is used to control further working cycles, such as actuating control valves or to terminate a working cycle. Directly mounted into Enerpac VP-series modular valves.

▶ VFC-3

Throttle type valve to control the amount of oil flow in the hydraulic circuit.

Application

Used to control cylinder speed in hydraulic circuits. Directly mounted into Enerpac VP-series modular valves or custom made manifolds for remote applications.

■ PSCK-8 and VFC-3 directly mounted on VP-series modular valves.



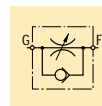
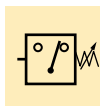
To control your hydraulic system

- Mounts directly into VP-series modular valves
- In-line installation
- Cartridge type flow control valve and pressure switches can be manifold mounted
- Lockable adjustment screw on PSCK models

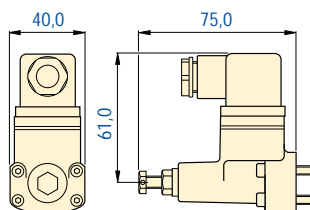
Pressure: 350 bar

Voltage: 115/230VAC, 24VDC

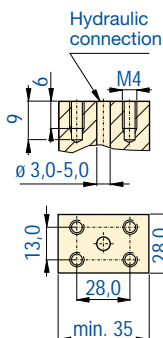
- Ⓓ Druckschalter
- Ⓕ Pressostats



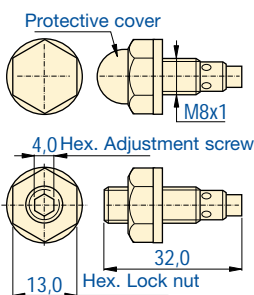
PSCK-8, 9



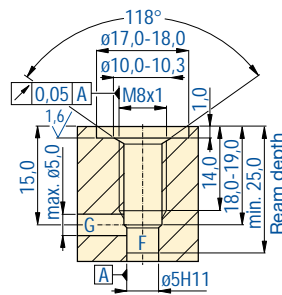
PSCK-8, 9 Mounting dim.



VFC-3



VFC-3 Mounting dimensions



Options

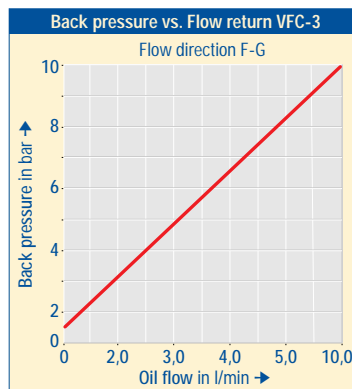
PB-1 Auxiliary porting block

8 ▶



FZ-series Fittings

20 ▶



Product selection

Solenoid Voltage @ Current at 50/60 Hz	Model number	Hydraulic scheme	Pressure range bar	Deadband bar	Max. oil flow l/min
Pressure switch					
24 VDC @ 2 A	PSCK-8		100 - 350	18 - 35	7,0
115 VAC @ 2 A					
230 VAC @ 2 A					
Pressure switch					
24 VDC @ 2 A	PSCK-9		20 - 210	6 - 15	7,0
115 VAC @ 2 A					
230 VAC @ 2 A					

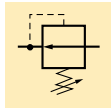
Product selection

Valve type	Model number	Hydraulic scheme	Pressure range bar	Maximum oil flow l/min
Flow control valve				
Screw-in throttle valve	VFC-3		0 - 350	7,0

Pressure:	350 bar
Flow:	15 l/min

Precise control of hydraulic pressure

- D** Druckreduzierventil
- F** Valve de pression réglable

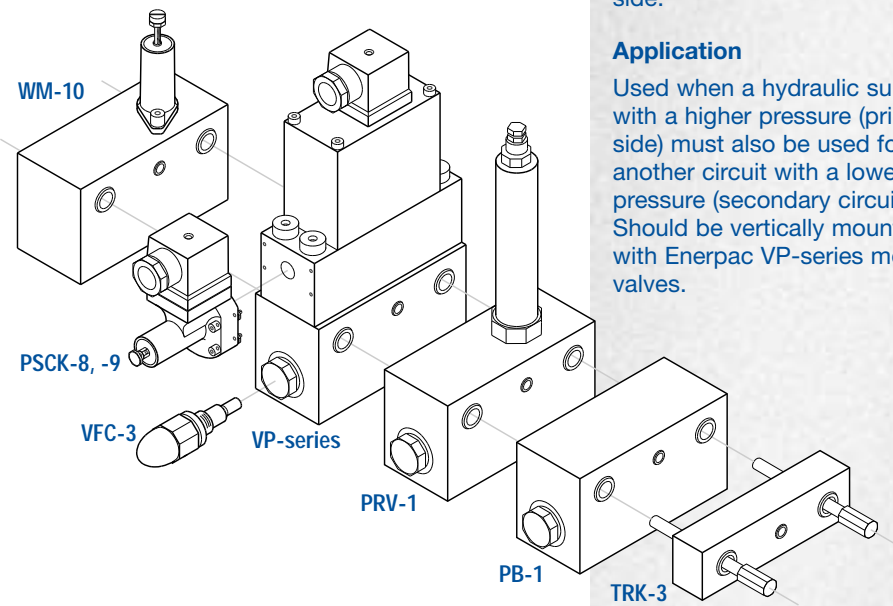


- Vertical mounting with VP-series modular valves
- Stackable for multiple pressures on one valve stack assembly
- Tool adjustable knob can be locked
- Precise control of pressure
- G1/4" oil connection

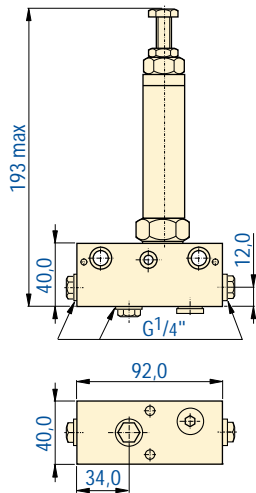
Options

TRK-series Tie rod kits		8 ▶
WM-12 Manifold		9 ▶
FZ-series Fittings		20 ▶
FL-series High pressure filters		

Modular Valve Options



PRV-1



Shown: PRV-1



PRV-series

The pressure reducing valve regulates system pressure for all subsequent valves, according to the adjusted pressure. This valve maintains a constant pressure in a secondary circuit. Includes a check valve that prevents pressure drop on secondary side.

Application

Used when a hydraulic supply with a higher pressure (primary side) must also be used for another circuit with a lower pressure (secondary circuit). Should be vertically mounted with Enerpac VP-series modular valves.

■ PRV-1 connected with remote manifold WM-10.

Product selection

Porting	Model number	Hydraulic scheme	Adjustable pressure range	Maximum oil flow	Weight
			bar	l/min	kg
Pressure Reducing Valve					
3x G1/4"	PRV-1		30 - 300	15	1,6



Tie Rod Kits, Remote/Porting Manifolds TRK, WM/PB-series

Valves

Shown: WM-10, TRK-4, PB-1



▶ TRK-series

TRK-series Tie Rod Kits mount Enerpac VP-series modular valves to the WM-12 or WM-10 manifold. These tie rods can accommodate one to eight modular valve stations.

▶ WM-10

The WM-10 Remote Manifold allows mounting of VP-series modular valves to a remote location from the pumping unit. This manifold has a built-in adjustable relief valve.

▶ PB-1

The PB-1 Porting Manifold provides three pressure ports for auxiliary lines or accessories, such as a pressure gauge. Mounts between VP-series modular valve stations using TRK-series Tie Rod Kits.

■ Tie Rods mount VP-series modular valves and accessories to the manifold, providing leak-free sealing.



Simplifies valve and accessory mounting

TRK-1 to 8

- Connects 1 to 8 modular valve stations high
- Provide leak-free sealing between modular valves

WM-10

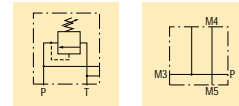
- Allows remote mounting of modular valves
- Adjustable relief valve incorporated
- G1/4" oil connection

PB-1

- Provide 3 auxiliary pressure lines
- G1/4" oil connection

Pressure:	350 bar
Mounting:	1-8 modular valves
Flow:	15 l/min

- Ⓚ Zugstangen
- ⓕ Vis de montage de distrib.



💡 Options

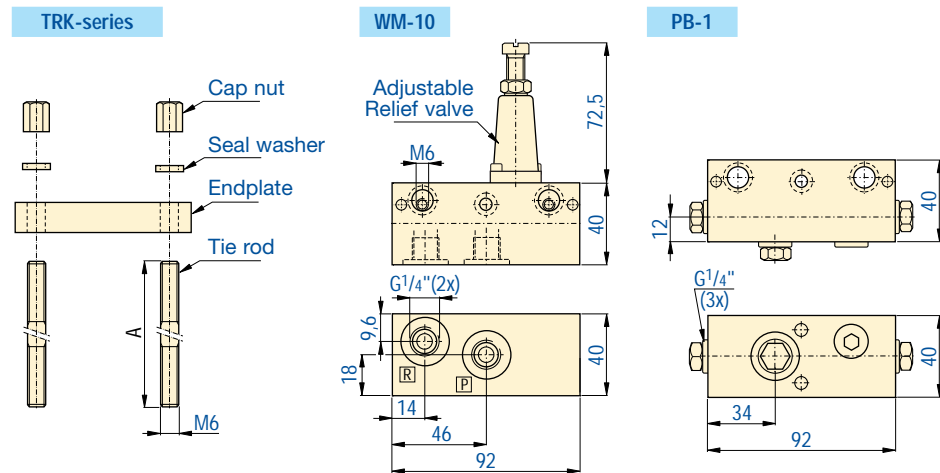
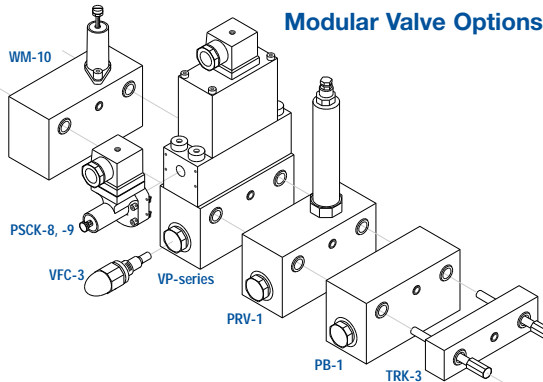
WM-12 Manifold



FZ-series Fittings



G-series Pressure gauges



🌐 Product selection

Number of modular valves	Model number	Tie rod length A mm	Mounting thread mm
Tie Rod Kits			
1	TRK-1	85	M6
2	TRK-2	125	M6
3	TRK-3	165	M6
4	TRK-4	205	M6
5	TRK-5	245	M6
6	TRK-6	285	M6
7	TRK-7	325	M6
8	TRK-8	365	M6

🌐 Product selection

Oil connection	Model number	Hydraulic scheme	Pressure range bar
Remote Manifold with pressure relief			
2x G1/4"	WM-10		350
Porting Manifold (P port connection)			
3x G1/4"	PB-1		350

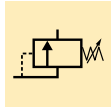
Pressure: 350 bar

Valves: 1-6 horizontally

Valves: 1-8 vertically

D Verkettungsblock-Sätze

F Manifolds



Options

VP-series Modular valves

5-8 ▶



Important

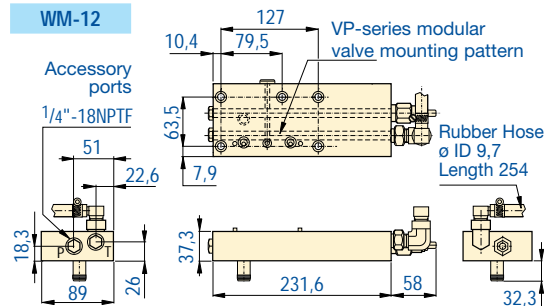
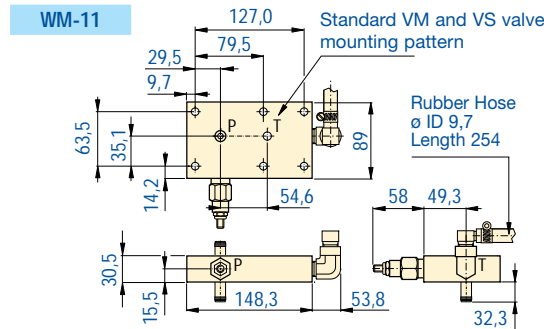
Manifold relief valve adjustment range is 70-350 bar.

To use pump with remote valving, use WM-11 manifold with VM-2 manual valve.

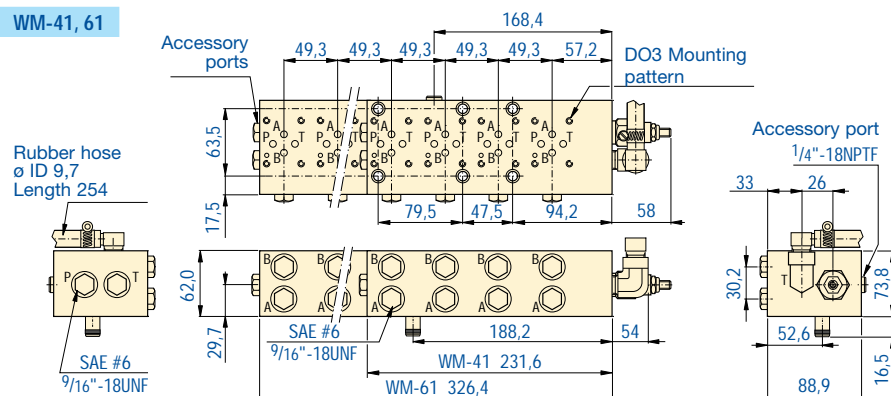
To seal a non-used manifold station on WM-41 and WM-61, order MC-1 Cover Plate.

For quick and easy installation ...integrated workholding system

- Manifolds allow the use of accessories such as heat exchangers, filter kits, pressure switches and gauges
- Multiple valve options
- Integrated adjustable relief valve allows user to set the maximum system pressure
- With DO3, Enerpac modular valve and standard Enerpac valve mounting patterns
- All installation components included



WM-41, 61



Product selection

Valve mounting pattern	Model number	Manifold feature	Cover Plate Model nr*	Weight kg
Enerpac VM, VS valves	WM-11	Single valve manifold	—	3,6
Enerpac VP modular valves	WM-12	Vertical valve building (1-8 stations)	—	5,9
DO3, Enerpac VSS, VST valves	WM-41	Four valve stations horizontal	MC-1	10,2
DO3, Enerpac VSS, VST valves	WM-61	Six valve stations horizontal	MC-1	13,9

* Note: Manifold Cover Plate must be ordered separately. Includes gasket and mounting bolts.

Shown: WM-61



WM-series

Designed for use in conjunction with the Enerpac WE-series workholding pump, these manifolds allow installation of multiple directional control valves to command a variety of system functions. The manifolds contain a user adjustable relief valve. The manifolds also allow the connection of the filter kit and/or heat exchanger.

Application

Manifolds are necessary to mount directional control valves.

■ Enerpac WM-41 manifold used in Enerpac WE-series pump. Non-used manifold stations are sealed with cover plates.



Shown: WFK-25



WFK-series

The oil filter kit removes contaminants from the return oil flow before allowing it back into the reservoir. This reduces component damage created by oil borne contaminants.

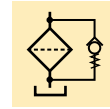
Extends life of hydraulic components

...increases system reliability

- 25 micron nominal filter cleans oil to increase system life
- Internal bypass valve to prevent damage if the filter is dirty
- All installation components included
- Kit assembles quickly and easily to Enerpac pump and manifold
- Replaceable filter element
- Inexpensive to maintain, requires no special tool
- Maintenance indicator included

Filtration:	25 micron
Pressure:	max. 13,8 bar
Flow:	max. 26,5 l/min

- (D) Ölfiltersatz
- (F) Filtre



Options

WF-25 Replacement filter element



FL-series High pressure filters

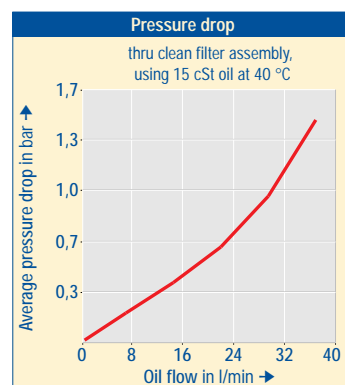


Important

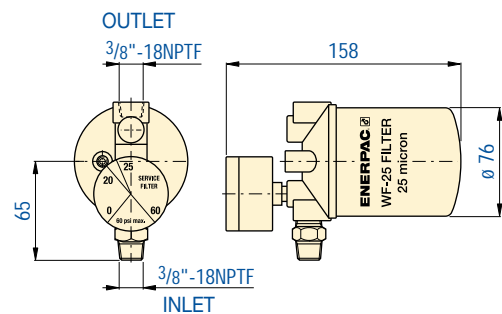
Do not exceed maximum flow rate and pressure ratings.

For best performance, replace filter element on regular basis. Change filters when changing oil or 4 times a year which ever comes first.

■ Enerpac filter kit mounted to WE-series pump.



WFK-25



Product selection

Nominal filtration	Model number	Maximum pressure	Maximum oil flow	Bypass setting	Filter gauge/ service indicator	Weight	Replacement filter element included
micron		bar	l/min	bar		kg	
25	WFK-25	13,8	26,5	1,7	yes	1,1	WF-25

Note: Filter kit contains two filter elements.

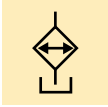
Transfer: 900 Btu/h / 950 kJ

Pressure: max. 20,7 bar

Voltage: 115/230VAC, 24VDC

D Wärmetauscher

F Refroidisseur



Extends system life

- Stabilizes oil temperature at a maximum of 50°C at 21°C ambient temperature
- Kit assembles quickly to Enerpac pump and manifold assembly
- Electrical connector factory installed
- All installation components included
- Available in a variety of voltages

Options

WFK-25
Return line
filter

10 ▶



FTS-1 Float/
Temperature
switch

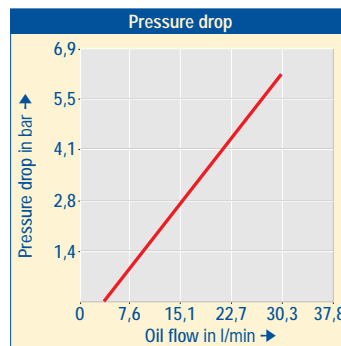
12 ▶



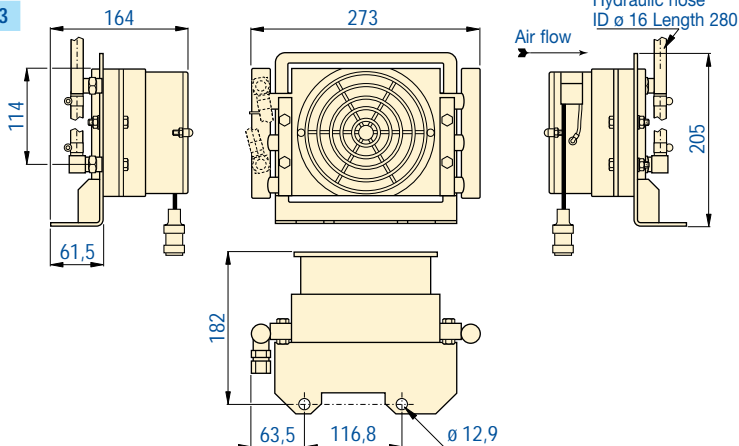
Important

Do not exceed maximum flow and pressure ratings.

Heat exchanger is not suitable for water-glycol or high water based fluids.



WHE-1, 2, 3



Product selection

Voltage at 50/60 Hz	Model number	Thermal transfer *			Amperage draw	Maximum pressure	Maximum oil flow	Weight
		Btu/h	kJ	kcal/h				
115VAC, 1ph	WHE-1	900	950	915	0,26	20,7	26,5	2,8
230VAC, 1ph	WHE-2	900	950	915	0,19	20,7	26,5	2,8
24VDC	WHE-3	900	950	915	0,66	20,7	26,5	2,8

* At 1,9 l/min at 21°C ambient temperature.

Shown: WHE-1



WHE-series

Heat exchanger removes heat from the return oil to provide cooler operation. This stabilizes oil viscosity, increases pump life and reduces wear of other hydraulic components.

Heat exchanger kit installed on Enerpac WE-series electric pump.



Shown: FTS-1



FTS-series

Oil level indicator for pump reservoir. If the pump is mounted in a remote area that does not provide visual access to the external oil level sight, the float switch can provide a signal to turn off the pump before internal damage can occur due to cavitation.

Built-in thermal switch provides a signal to a machine control before pump damage can occur due to in excess oil temperature of 80°C.

The drop-in design of the float/temperature switch allows easy installation to pump reservoir.



Electronic float switch for feedback on pump oil level

- Drop-in design allows for easy installation to pump reservoir
- Electrical connector included
- Built-in thermal sensing provides feedback on oil temperature
- Senses low oil level in pump reservoir
- Universal voltage at 50/60 Hz

Temperature: 80 °C

Voltage: 120-240 VAC

- Ⓓ Ölstand/Temperaturschalter
- Ⓕ Interrupteur de niveau/temp.



Options

WHE Heat Exchangers

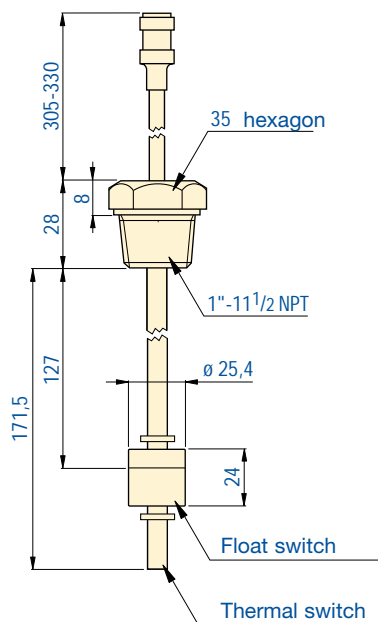
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Important

The float switch mounts into the NPT threaded port on the top of the reservoir cover.

FTS-1

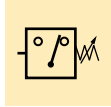


Product selection

Temperature range	Model number	Fixed temperature signal	Electrical rating / Pilot duty rating at 50/60 Hz	Thermostat rating at 120VAC (inductive)	Maximum pressure	Weight
°C		°C		A	bar	kg
5-110	FTS-1	80	20VA 120-240VAC	2,6	10	0,3

- Pressure:** 18 - 350 bar
- Accuracy:** ± 0,25 - 2,0%

- D** Druckschalter
- F** Pressostats



Options

G-series Pressure gauges



Important

The pressure switch and electrical harness are specifically designed to work in conjunction with the Enerpac electric pump and manifolds. For other uses, please reference individual pressure switches.

19 ▶

Controls your pump, monitors your system

- Integrated kit mounts easily to your hydraulic system
- All installation components included

Mechanical switches PSCK-1, 2

- Accuracy of ± 2% of full scale
- Adjustable increments of 21 bar
- High duty cycle

Digital switches PSCK-3, 4

- Accuracy of ± 0,25% of full scale
- Solid state
- Adjustable increments of 3,5 bar
- Adjustable deadband
- Dual pressure set point
- High duty cycle

Shown: PSCK-3, PSCK-1

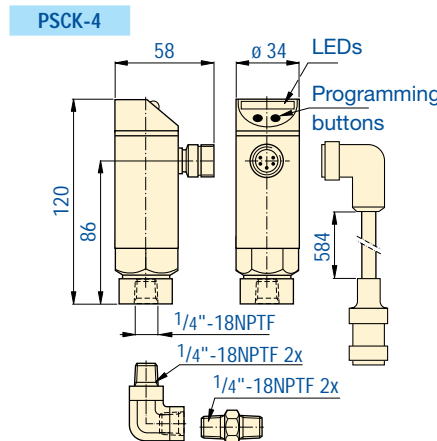
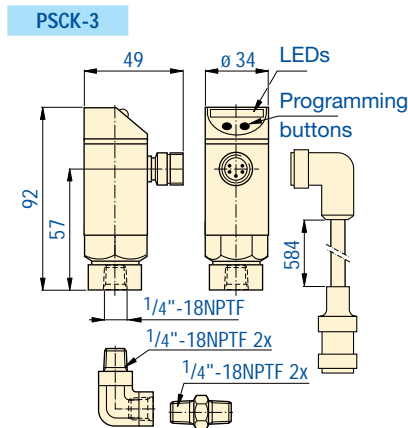
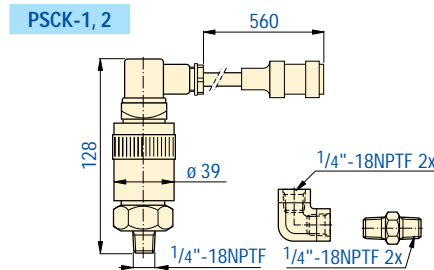


PSCK-series

Pressure switches monitor the hydraulic system to determine any change of pressure. The signal can then be used to control the pump, or other peripheral devices.

Application

These pressure switches are designed for use in high cycle applications, machine tool interface, robotics and flexible machine systems. These switches can be used to automate the clamp and unclamp cycle.



Product selection

Adjustable pressure range	Electrical specification at 50/60 Hz	Model number	Type of adjustment	Deadband adjustment	Switch point repeatability	Temperature range	Oil ports
bar				bar	% of range	°C	
35-245	125/250VAC @ 5A	PSCK-1	mechanical	6,2-28	± 2,0 %	4-74	1/4" NPT
207-350	125/250VAC @ 5A	PSCK-2	mechanical	17-55	± 2,0 %	4-74	1/4" NPT
18-350	24VDC @ 250 mA	PSCK-3	digital	4	± 0,25 %	-25-80	1/4" NPT
18-350	115VAC @ 2,5A	PSCK-4	digital	4	± 0,25 %	-25-70	1/4" NPT

Note: Electrical harness included with kit. Weight of all pressure switch models: 0,5 kg.

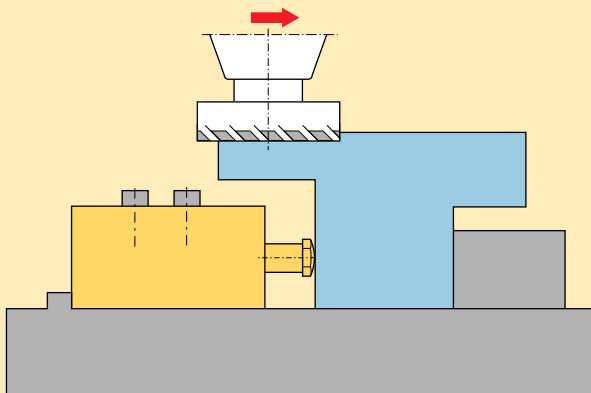


Block Cylinders *Application & Selection*

Shown: CDB-10162, CDB-70502, CSB-18252



▶ Block cylinders are used for punching, pressing, rivetting and bending applications. Flexible by design, block cylinders are also used for moving, positioning, lifting, opening and closing.



Block cylinder positions workpiece against a fixed point.

■ The versatile Enerpac block cylinders, fixture mounted for clamping applications.

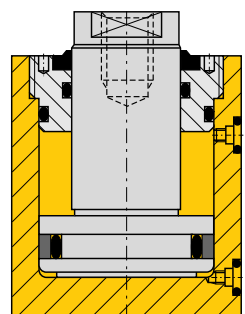


Versatile, rugged, all purpose cylinder

- **Six clamping capacities**, enables you to choose the correct force for your application
- **Variety of strokes**, to meet design needs
- **Versatile mounting options**, the standard mounting holes allow horizontal or vertical positioning
- **Double-acting and single-acting (spring return)**, allows selection of cylinder that best conforms to your application
- **Equipped with Viton seals**
- **Oil connection alternatives**, cylinders incorporate both manifold mount and BSPP porting to meet your fixturing requirements
- **Compact cylinder design** does not require large amounts of space on your fixture
- **Integral wiper**, keeps contaminants out of cylinder to extend life
- **Designed according to ISO-standards**

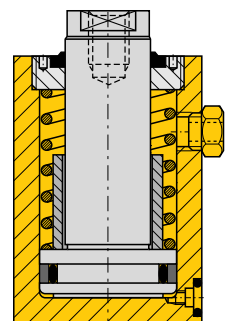
CDB Double-acting Block Cylinders:

- Internal threaded plunger
- Manifold O-ring ports
- Viton seals
- Hard chrome-plated plunger
- BSPP oil ports
- Black oxide base



CSB Single-acting Block Cylinders:

- Internal threaded plunger
- Manifold O-ring ports
- Viton seals
- Hard chrome-plated plunger
- BSPP oil port
- Strong return spring
- Filtered vent plug
- Black oxide base





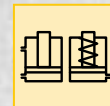
Force: 10,7 - 270,5 kN

Stroke: 16 - 56 mm

Pressure: 40 - 350 bar

D Blockzylinder

F Vérins cube



Options

BS-series
Contact bolts

17 ▶



FZ-series
Fittings

20 ▶



VP-series
Modular valves

5-8 ▶



G-series
Pressure gauges



FL-series
High pressure filters



WE-series
Workholding pumps

2 ▶



VFC-series
Flow control valves

18 ▶



PSCK-series
Pressure switches

19 ▶



Product selection

Clamping force at 350 bar		Stroke	Model number	Piston diameter	Rod diameter	Cylinder effective area		Cylinder oil capacity		Minimum spring return force	Weight
push	pull					mm	mm	mm	mm		
▼ Single-acting											
10,7	-	18,0	CSB-10182	20,0	12,0	3,1	-	5,7	-	107	1,2
16,9	-	25,0	CSB-18252	25,0	16,0	4,9	-	12,3	-	156	1,8
43,3	-	25,0	CSB-40252	40,0	25,0	12,6	-	31,2	-	378	2,7
67,6	-	25,0	CSB-70252	50,0	32,0	19,6	-	49,2	-	427	4,4
▼ Double-acting											
10,7	6,9	16,0	CDB-10162	20,0	12,0	3,1	2,0	5,1	3,3	-	0,9
10,7	6,9	36,0	CDB-10362	20,0	12,0	3,1	2,0	11,3	7,2	-	1,2
16,9	10,0	20,0	CDB-18202	25,0	16,0	4,9	2,9	9,8	5,7	-	1,3
16,9	10,0	50,0	CDB-18502	25,0	16,0	4,9	2,9	24,6	9,8	-	1,8
43,3	21,8	25,0	CDB-40252	40,0	25,0	12,6	6,3	31,5	15,7	-	1,9
43,3	21,8	50,0	CDB-40502	40,0	25,0	12,6	6,3	62,8	31,6	-	2,6
67,6	40,0	25,0	CDB-70252	50,0	32,0	19,6	11,6	49,2	29,0	-	3,2
67,6	40,0	50,0	CDB-70502	50,0	32,0	19,6	11,6	98,2	58,0	-	4,3
172,9	105,3	25,0	CDB-180252	80,0	50,0	50,2	30,6	125,5	76,6	-	9,3
172,9	105,3	50,0	CDB-180502	80,0	50,0	50,2	30,6	251,2	153,1	-	11,5
270,5	162,9	56,0	CDB-280562	100,0	63,0	78,5	47,3	439,7	265,1	-	18,2

Block Cylinders *Dimensions & Options*

Shown: CDB-10162, CDB-70502, CSB-18252

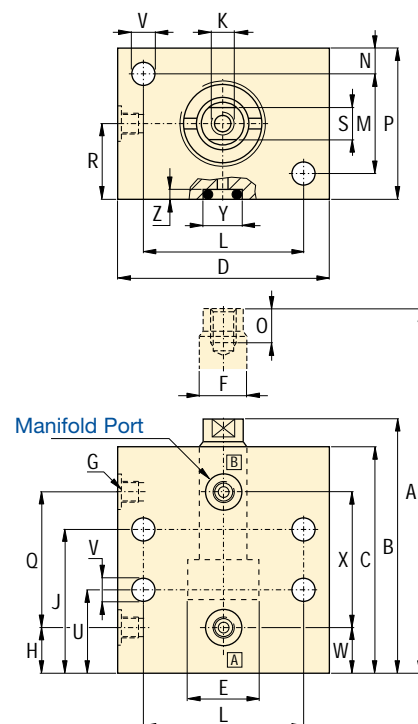
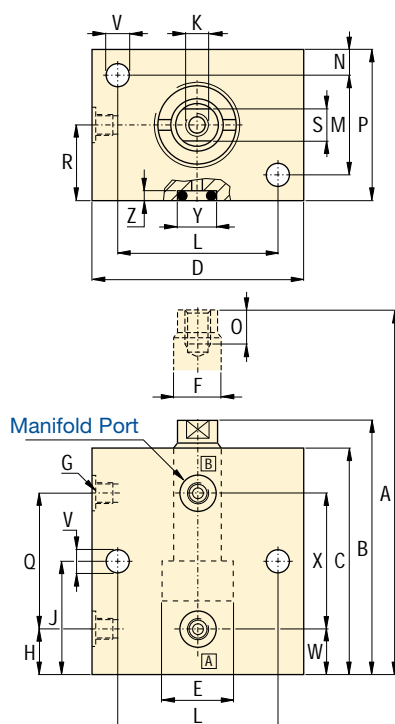
Block Cylinders



▶ These compact block cylinders are easily mounted – in the horizontal or vertical position – for a range of special tooling applications. They can be used for positioning, clamping, pushing, pressing or punching operations. The plunger has an internal thread to accommodate accessories such as contact bolts.

CDB-10162, 18202, 40252, 70252, 180252

CSB-10182, 18252, 40252, 70252
CDB-10362, 18502, 40502, 70502, 180502, 280562



Product dimensions in mm [⌀]

Model number	A	B	C	D	øE	øF	G	H	J	K	L	M
▼ Single-acting												
CSB-10182	100	82	74	60	20	12	G ¹ / ₈ "	12	44,0	M6	45	25
CSB-18252	125	100	92	65	25	16	G ¹ / ₈ "	12	57,0	M8	50	30
CSB-40252	130	105	93	80	40	25	G ¹ / ₈ "	9	57,0	M16	60	35
CSB-70252	143	118	104	100	50	32	G ¹ / ₄ "	12	64,0	M20	80	45
▼ Double-acting												
CDB-10162	77	61	55	60	20	12	G ¹ / ₈ "	12	24,6	M6	45	25
CDB-10362	118	82	74	60	20	12	G ¹ / ₈ "	12	44,5	M6	45	25
CDB-18202	90	70	62	65	25	16	G ¹ / ₈ "	12	26,9	M8	50	30
CDB-18502	150	100	92	65	25	16	G ¹ / ₈ "	12	56,9	M8	50	30
CDB-40252	105	80	68	80	40	25	G ¹ / ₈ "	9	32,0	M16	60	35
CDB-40502	155	105	93	80	40	25	G ¹ / ₈ "	9	56,9	M16	60	35
CDB-70252	115	90	76	100	50	32	G ¹ / ₄ "	13	36,1	M20	80	45
CDB-70502	168	118	104	100	50	32	G ¹ / ₄ "	12	63,8	M20	80	45
CDB-180252	131	106	89	140	80	50	G ¹ / ₄ "	15	41,4	M30	110	80
CDB-180502	185	135	118	140	80	50	G ¹ / ₄ "	12	70,6	M30	110	80
CDB-280562	208	152	133	170	100	63	G ¹ / ₄ "	18	77,7	M36	135	90

■ Block cylinder used for punching applications.





i Installation instructions

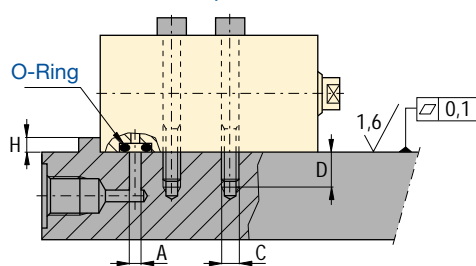
When operating above 150 bar in applications as shown below, you must provide cylinder back-up. Use a linear support to eliminate shear loads on the mounting bolts. Minimum thickness of this stop should be equal to the correct bolt diameter.

Manifold mounting

When hydraulic connections are made through the integrated O-ring ports, the sealing surface must have a maximum roughness of Ra 1,6.

Single-acting cylinders

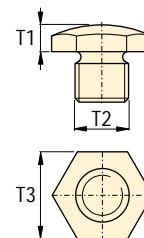
If the risk of machining coolants or debris being entering via the breather vent (port B) exists, it is recommended that this port be piped to a clean, remote termination point.



BS Contact bolts

These optional buttons allow the cylinders to act as a datum point in your clamping applications. They protect the plunger when cylinders are used for pushing applications.

BS-series



A Installation dimensions in mm [DIN 913]

Clamping capacity	Oil channel diameter	Mounting thread	Minimum thread length	Torque (bolt type 12.9 DIN912)	Minimum support height
kN	ø A	C	D	Nm	H
10,7	5	M6	11	17	5
16,9	5	M8	13	40	5
43,3	5	M10	16	85	5
67,6	5	M12	19	145	5
172,9	8	M16	24	353	10
270,5	8	M20	28	675	10

B Contact bolts

Optional Spherical Contact Bolts	T1	T2	T3
	mm	mm	mm
BS-6	3,5	M6	9
BS-8	4,0	M8	13
BS-16	6,0	M16	22
BS-20	6,0	M20	24
BS-30	10,0	M30	41
BS-36	13,0	M36	50


N	O	P	Q	R	S	U	øV	W	X	øY	Z	Model number
min.												
▼ Single-acting												
8	10	40	45	20	8	24	7	12	45	11	1,3	CSB-10182
8	12	45	60	23	8	27	9	12	50	11	1,3	CSB-18252
10	25	55	62	27	10	27	11	9	60	11	1,3	CSB-40252
10	30	66	68	33	10	29	12,5	15	80	11	1,3	CSB-70252
▼ Double-acting												
7	10	40	25	20	8	-	7	12	25	11	1,3	CDB-10162
8	10	40	45	20	8	24	7	12	45	11	1,3	CDB-10362
8	12	45	30	23	8	-	9	12	30	11	1,3	CDB-18202
8	12	45	60	23	8	27	9	12	60	11	1,3	CDB-18502
10	25	55	38	27	10	-	10,5	9	38	11	1,3	CDB-40252
10	25	55	62	27	10	27	10,5	9	62	11	1,3	CDB-40502
11	30	66	39	33	10	-	12,5	12	40	11	1,3	CDB-70252
10	30	66	68	33	10	29	12,5	15	65	11	1,3	CDB-70502
15	45	110	45	55	15	-	17	15	45	14	1,8	CDB-180252
15	45	110	77	55	15	31	17	20	70	14	1,8	CDB-180502
18	50	125	80	62	18	38	21	18	80	14	1,8	CDB-280562


Force:	10,7 - 270,5 kN
Stroke:	16 - 56 mm
Pressure:	40 - 350 bar

- D** Blockzylinder
- F** Vérins cube




i Options

FZ-series Fittings  [20](#)

G-series Pressure gauges 

WE-series Workholding pumps  [2](#)

VP-series Modular valves  [5-8](#)

VFC-series Flow control valves  [18](#)

PSCK-series Pressure switches  [19](#)

! Important

Linear cylinder support is required at pressures above 150 bar. Follow installation instructions on this page.

Shown: VFC-1, VFC-2



VFC-1 and 2

Provide repeatable oil flow control. The internal check valve allows metered flow in one direction and free flow in the opposite direction. Precise control is achieved with a micro-meter style adjustment knob, which can be locked with the set screw.

Application

Use VFC-series flow control valves in-line with the Enerpac WE-series workholding pump to protect your components from damage due to high flow rates.

In-line installation of a VFC-1 flow control valve.



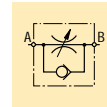
Regulate the flow of oil

- Color coded flow indicator
- Free flow return
- Fine metering capability
- Lockable
- Standard Viton seals

Max. flow: 38 l/min

Pressure: 350 bar

- Ⓓ Stromregelventile
- Ⓕ Valves de contrôle débit



Options

FZ-series Fittings

20 ▶



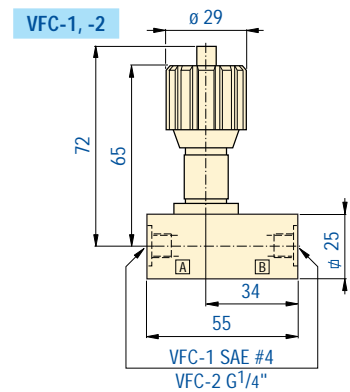
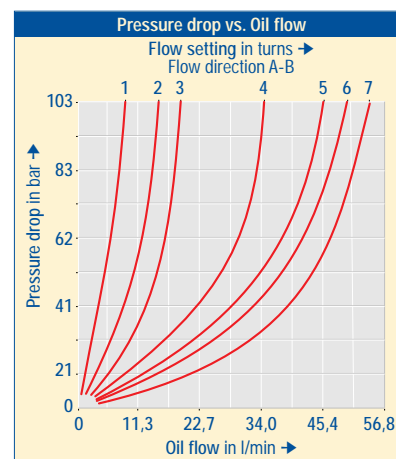
FL-series High pressure filters



Important

Do not exceed maximum flow and pressure ratings.

Install the valve so the checked or metered flow (from port B) is connected to the cylinder.



Product selection

Maximum oil flow	Model number	Hydraulic scheme	Oil port connections	Pressure range	Weight
l/min				bar	kg
Flow control valves					
37,8	VFC-1		SAE #4	0 - 350	0,8
37,8	VFC-2		G1/4\"/>		

Shown: FZ-2023, FZ-2054, FZ-2052



Quick and easy connection of hydraulic components

- BSPP thread to tube fittings and NPT threads
- 5000 psi (350 bar / 35 MPa) working pressure
- Straight unions and 90° elbows

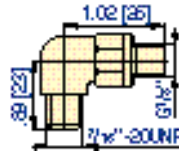
Threads: NPT, UNF to BSPP

Pressure: 5000 psi/350 bar/35 MPa

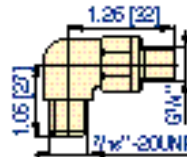
(E) Acoplamientos

(F) Raccords

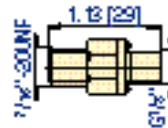
FZ-2051



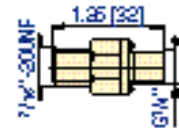
FZ-2052



FZ-2053



FZ-2054



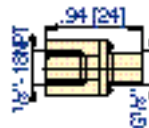
FZ-series

Adapter fittings are used to connect Enerpac workholding components in a variety of hydraulic circuits.

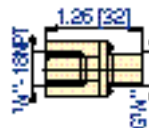
Product selection

Threads	Model number
G1/8" - 7/16"-20UNF	FZ-2051
G1/4" - 7/16"-20UNF	FZ-2052
G1/8" - 7/16"-20UNF	FZ-2053
G1/4" - 7/16"-20UNF	FZ-2054
G1/8" - 1/8"-18NPT	FZ-2055
G1/4" - 1/4"-18NPT	FZ-2023

FZ-2055



FZ-2023



Options

H-series Hydraulic hoses



Important

Only use fittings rated for the maximum pressure in the hydraulic system: 5000 psi / 350 bar / 35 MPa

Enerpac Locations Worldwide

Internet: www.enerpac.com e-mail: info@enerpac.com

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