

Directional Control Valves

Enerpac hydraulic valves are available in a wide variety of models and configurations.

Whatever your requirements... directional control, flow control, or pressure control... you can be sure that Enerpac has the correct valve to match your application exactly.

Designed and manufactured for safe operation up to 700 bar, the range of Enerpac valves allows for direct pump mounting, remote mounting, manual or solenoid actuation, and in-line installation, giving you flexible solutions to control your hydraulic system.



Assisted Return Pumps
To improve productivity and plunger retraction, Enerpac offers valve configurations designed to accelerate your cylinder retraction speeds.

ZU4 and ZE-Series pumps feature **Venturi Valve Technology** to facilitate the faster return of single-acting gravity and spring return cylinders.



Pressure & Flow Control Valves
For more hydraulic system control with pressure relief valves, shut-off valves, check valves and sequence valves see our "System Components".

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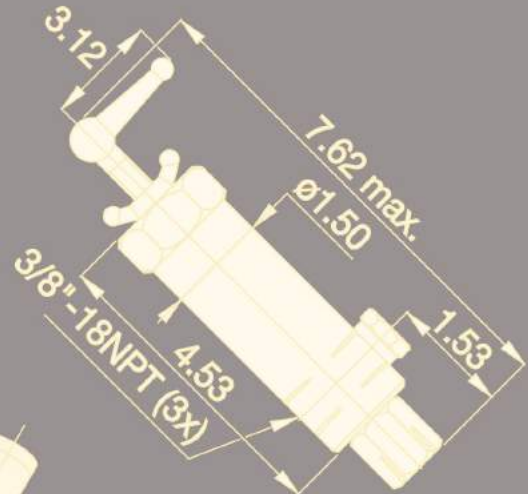
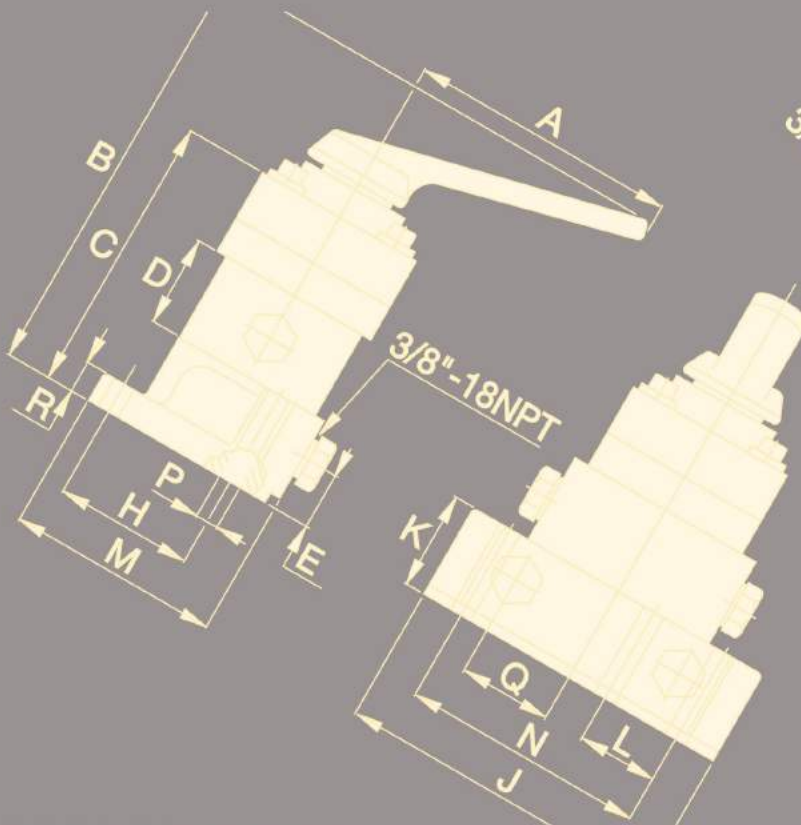
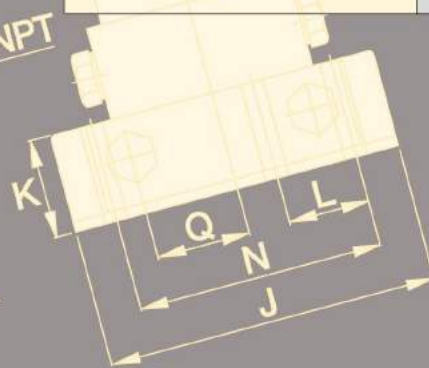
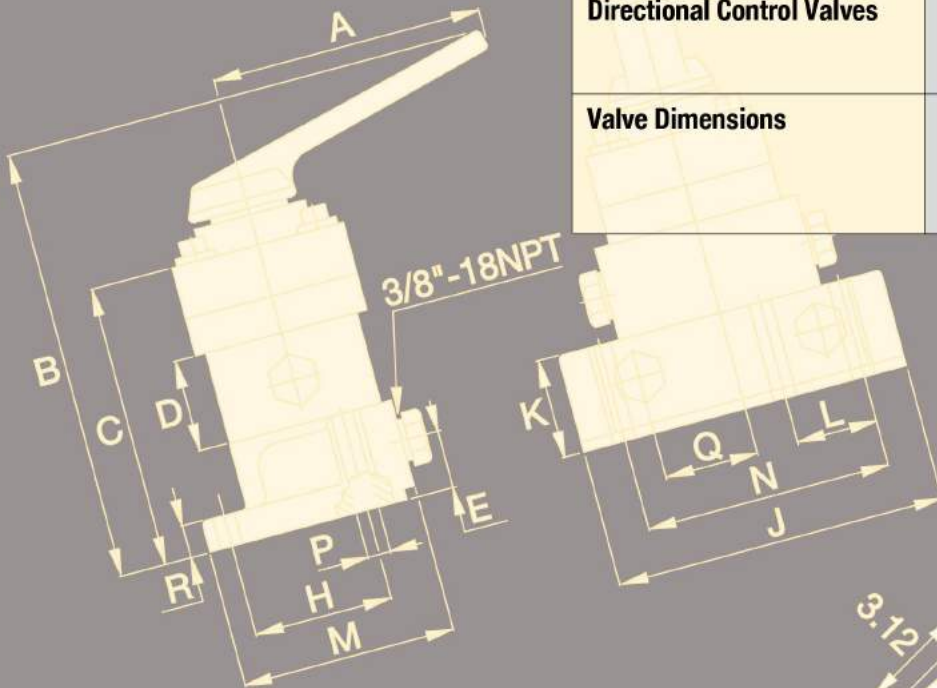


Valving Help
See Basic System Set-Up and Valve Information in our 'Yellow Pages'.

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Directional Control Valves Section Overview

Valve Type	Series	Page
Pump Mounted Manual and Solenoid Directional Control Valves	VM VE	116 ▶
Remote Mounted Manual Directional Control Valves	VC	118 ▶
Valve Dimensions	VM VE VC	119 ▶



▼ Shown from left to right: VM32, VE33, VM33, VM43L, VE43



- Advance/Retract and Advance/Hold/Retract operation of single- and double-acting cylinders and tools
- Manual or solenoid operation
- Pump mounting will retrofit on most Enerpac pumps
- Available “locking” option on VM-Series valves for load-holding applications
- Standard “locking” feature on VE-Series 3-position valves
- User adjustable relief valve allows the operator to easily set the working pressure.

Venturi Valve Technology

- For fast return of single-acting gravity and spring return cylinders
- Available as manual or solenoid valve on ZU4- and ZE-Series electric pumps
- Retrofit Venturi valve kits for field installation on existing ZU4- and ZE-Series electric pumps.



Adjustable relief valve

All valves feature several gauge ports for “system”, A port and B port pressure monitoring. User adjustable relief valves are included on all models to allow the operator to easily set the optimum working pressure for each application.

VM33 and VE43 valves include “System Check” feature, for more precise pressure holding and improved system control.

The VM33 has improved porting which provides faster cylinder retraction while motor is running.

Locking Valves

For applications that require positive load holding, VM-Series valves (except VM22 and VM32) are available with a pilot-operated check valve. This option provides hydraulic locking of the load until the valve is shifted into the retract position.

Reliable Control of Single and Double-Acting Cylinders and Tools

Valve Operation	Used with Cylinder	Valve Type	
Manual	Single-acting	3-Way, 2-Position	
Manual	Single-acting	3-Way, 2-Position	
Manual	Single-acting	3-Way, 3-Position, Tandem Center	
Manual	Single-acting	3-Way, 3-Position, Tandem Center, Venturi Return Assist	
Manual	Double-acting	4-Way, 3-Position, Tandem Center	
Manual	Single-acting	3-Way, 3-Position, Tandem Center, Locking	
Manual	Double-acting	4-Way, 3-Position, Tandem Center, Locking	
Solenoid 24 VDC	Single-acting	3-Way, 2-Position	
Solenoid 24 VDC	Single-acting	3-Way, 2-Position, Dump	
Solenoid 24 VDC	Single-acting	3-Way, 3-Position, Tandem Center, Venturi Return Assist	
Solenoid 24 VDC	Single-acting	3-Way, 3-Position, Tandem Center	
Solenoid 24 VDC	Double-acting	4-Way, 3-Position, Tandem Center	

For remote valve information, see page 118.
See page 119 for valve dimensions.

Pump Mounted Directional Control Valves

VM VE Series



Maximum Flow Capacity:

17 l/min

Maximum Operating Pressure:

700 bar

Model Number	Hydraulic Symbol	Schematic Flowpath			Weight (kg)
		Advance	Neutral	Retract	
VM22					2,5
VM32					2,5
VM33					3,0
VM33VAC					3,5
VM43					3,1
VM33L					4,8
VM43L					4,9
VE32 ¹⁾					3,9
VE32D ¹⁾					3,9
VE33VAC					10,0
VE33 ¹⁾					9,3
VE43 ¹⁾					9,3

¹⁾ When ordering Enerpac VE-Series solenoid valves, the pendant must be ordered separately for Z-Class. See page 101 for pendant ordering details.

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Assisted Return Pumps with Venturi Valve Technology

To improve productivity and plunger retraction, Enerpac offers valve configurations designed to accelerate your cylinder retraction speeds. ZU4 and ZE-Series pumps feature **Venturi Valve Technology** to facilitate the faster return of single-acting gravity and spring return cylinders.

See valve type in ZU4 and ZE-pump ordering matrix on pages 97 and 103.

Venturi Valve Retrofit Kits

For field installation on existing ZU4, ZE and ZA-Series pumps, Retrofit Kits are available for manual and solenoid operated valves.

For valve model	For valve operation	Retrofit Kit Model Nr.
VM33, VM33L	Manual	VM33RVK
VE33	Solenoid	VUV5



Spring Centred Valve Kits

VM and VC-Series manual 3-position valves can be easily converted into spring centred valves. With these retro-fit kits the

handle will automatically move into the neutral valve position when released.

For valve model	Model Number
VM33, VM43	VMC3343K
VM33L, VM43L	VMC3343KL
VC3, VC15, VC4, VC20	VMC34K
VC3L, VC15L, VC4L, VC20L	VMC34KL

Remote Manual Directional Control Valves

▼ Shown from left to right: VC-20, VC-4L



Remote Control of Single and Double-Acting Cylinders and Tools



Locking Valves

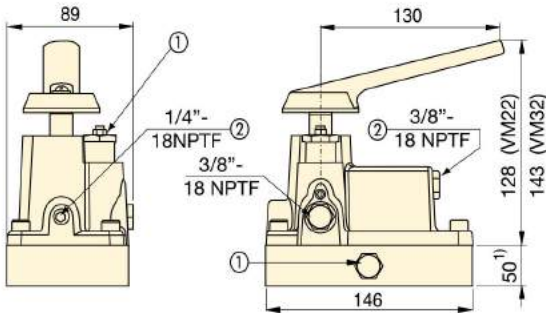
For applications that require positive load holding, VC-Series valves are available with a pilot-operated check valve. This option provides hydraulic locking of the load until the valve is shifted into the retract position.

- Advance/Hold/Retract operation for use with single-acting or double-acting cylinders and tools
- Return line kit included with remote valves.

Valve Operation	Used with Cylinder	Valve Type	Model Number	Hydraulic Symbol	Schematic Flowpath			Weight (kg)
					Advance	Hold	Retract	
Manual	Single-Acting	3-Way, 3-Position, Tandem Center	VC-3					2,9
Manual	Single-Acting	3-Way, 3-Position, Tandem Center, Locking	VC-3L					4,7
Manual	Single-Acting	3-Way, 3-Position, Closed Center	VC-15					2,9
Manual	Single-Acting	3-Way, 3-Position, Closed Center, Locking	VC-15L					4,7
Manual	Double-Acting	4-Way, 3-Position, Tandem Center	VC-4					2,9
Manual	Double-Acting	4-Way, 3-Position, Tandem Center, Locking	VC-4L					4,7
Manual	Double-Acting	4-Way, 3-Position, Closed Center	VC-20					2,9
Manual	Double-Acting	4-Way, 3-Position, Closed Center, Locking	VC-20L					4,7

Directional Control Valves Dimensions

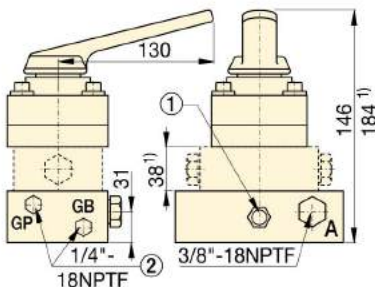
Pump Mounted Directional Control Valves



- ① User Adjustable Relief Valve
- ② Auxiliary Port

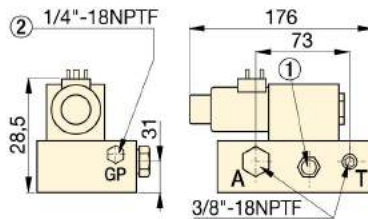
VM22, VM32

¹⁾ VM22 only

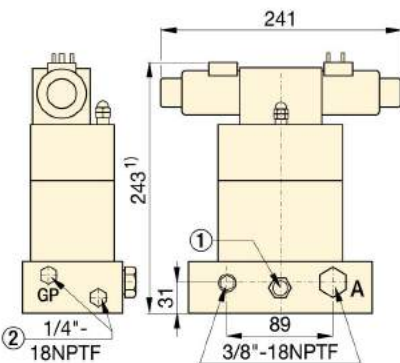


VM33, VM33L, VM33VAC, VM43, VM43L

¹⁾ VM33VAC, VM33L and VM43L only

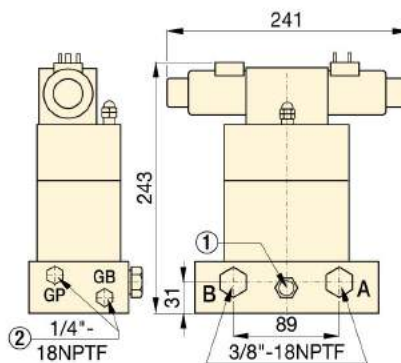


VE32D



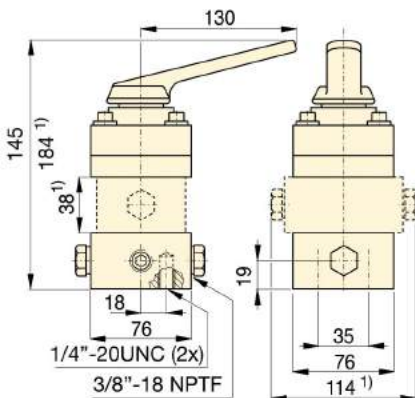
VE33, VE33VAC

¹⁾ VE33VAC is 38 mm higher: 281 mm



VE43

Remote Manual Directional Control Valves



VC-3, VC-3L, VC-15, VC-15L
VC-4, VC-4L, VC-20, VC-20L

¹⁾ VC-3L, VC-15L, VC-4L and VC-20L only

VM VE VC Series



Maximum Flow Capacity:

17 l/min

Maximum Operating Pressure:

700 bar



Spring Centred Valve Kits

VM and VC-Series manual 3-position valves can be easily converted into spring centred valves. With these retro-fit kits the handle will automatically move into the neutral valve position when released.

handle will automatically move into the neutral valve position when released.

For valve model	Model Number
VM33, VM43	VMC3343K
VM33L, VM43L	VMC3343KL
VC3, VC15, VC4, VC20	VMC34K
VC3L, VC15L, VC4L, VC20L	VMC34KL



Gauges

Minimize the risk of overloading and ensure long, dependable service from your equipment. Refer to the System Components

Section for a full range of gauges.

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Fittings

For additional fittings see the fitting page of the System Components section in this catalogue.

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Valving Help

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