



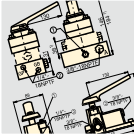



Directional Control Valves Section Overview

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.

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



Pressure and Flow Control Valves

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



Valving Help

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



Pump Mounted Directional Control Valves

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



- Advance/Retract and Advance/Hold/Retract operation of single-acting 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.

▼ ZE-Series electric pump, with VM43 directional valve coupled to a A-65 distribution manifold with V-82 needle valves to operate double-acting jacks in a lifting job.



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, 3-Position, Tandem Center
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
Solenoid 24 VDC	Double-acting	4-Way, 3-Position, Tandem Center

For remote valve information, see page 116.

Pump Mounted Directional Control Valves



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.

VM VE Series



Flow Capacity:

17 l/min

Maximum Operating Pressure:

700 bar

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

See page 117 for valve dimensions.



Fittings

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



Locking Valves

For applications that require positive load holding, VM-Series valves (except VM32 valve) 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.



Pendants for VE-Series Solenoid Valves

When ordering Enerpac VE-Series solenoid valves, the pendant must be ordered separately for Z-Class. Pendant connection to be plugged into electric box of pump.

To be used with solenoid valves:	Pendant Model Nr.
VE32D	ZCP-1
VE32, VE33, VE43	ZCP-3



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Remote Manual Directional Control Valves

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




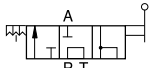
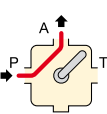
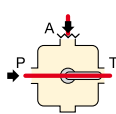
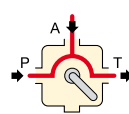
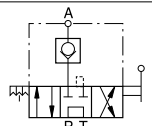
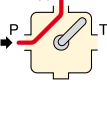
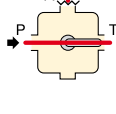
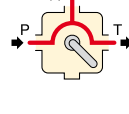
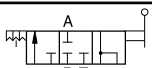
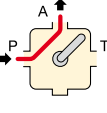
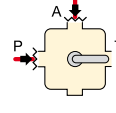
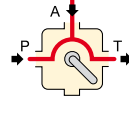
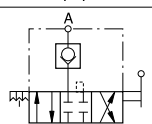
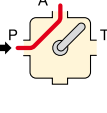
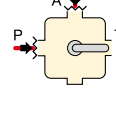
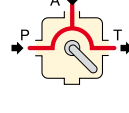
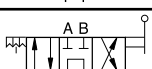
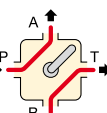
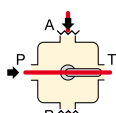
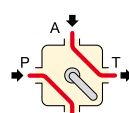
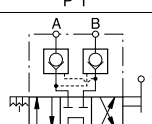
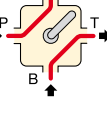
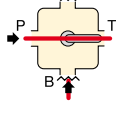
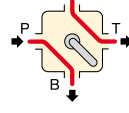
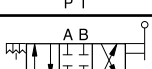
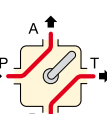
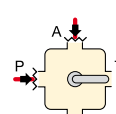
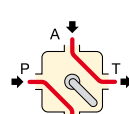
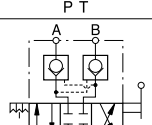
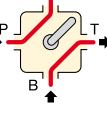
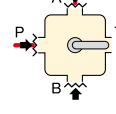
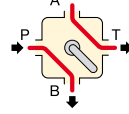
Remote Control of Single and Double-Acting Cylinders and Tools



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.

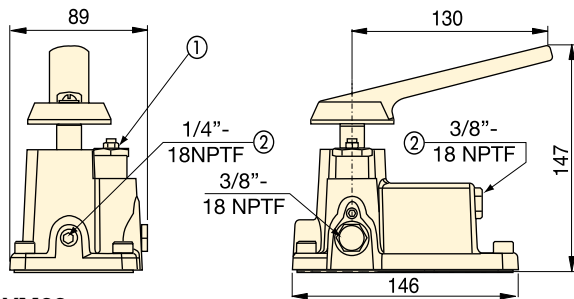
- **Advance/Hold/Retract operation for use with single-acting or double-acting cylinders and tools.**

Valve Operation	Used with Cylinder	Valve Type	Model Number	Hydraulic Symbol	Schematic Flowpath			 (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

Return line kit included with remote valves

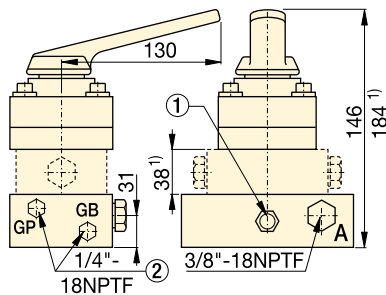
Directional Control Valves Dimensions

Pump Mounted Directional Control Valves



VM32

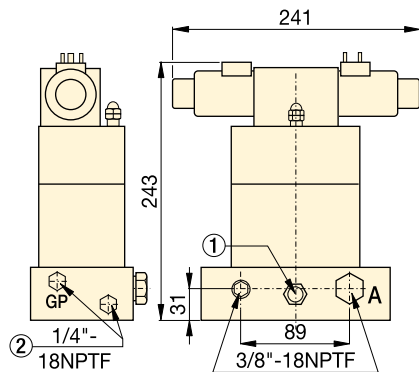
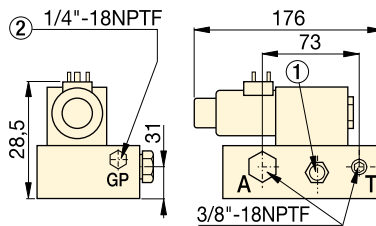
- ① User Adjustable Relief Valve
- ② Auxiliary Port



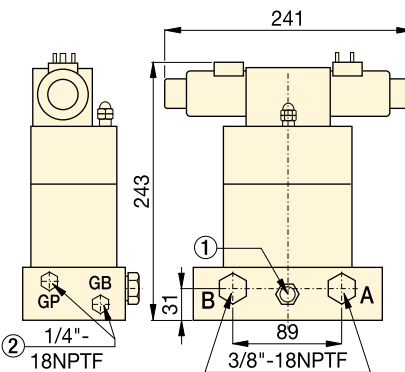
VM33, VM33L, VM43, VM43L

¹⁾ VM33L and VM43L only

VE32D

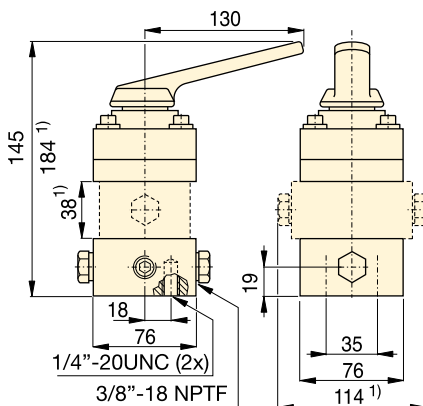


VE33



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



Flow Capacity:

17 l/min

Maximum Operating Pressure:

700 bar



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.



Fittings

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



Valving Help

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



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System Components & Valves

ENERPAC System Components:

All the additional elements you need to complete your high pressure hydraulic system and get started.

Engineered to work with your Enerpac cylinders, pumps and tools, all Enerpac components are designed to the most exacting standards.

With this complete line of hydraulic hoses, couplers, fittings, manifolds, oil and gauges, Enerpac has the accessories to complement your system and ensure the efficient operation, long life and safety of your hydraulic equipment.



Yellow Pages

For sample system set-ups and how to correctly specify your system components, please view the Enerpac "Yellow Pages" section in this catalogue.

























Maintain System Integrity

Use Enerpac System Components, designed to interface with Enerpac cylinders, pumps and tools to ensure your system operates at peak performance.



System Components and Control Valves Overview

Component Type	Series	Page
Hoses	H700	 
Couplers	A, C, F, T	 
Hydraulic Oil	HF	 
Manifolds	A	 
Control Manifolds	AM	 
Fittings	BFZ FZ	 
Force Gauges Pressure Gauges	GF GP	 
Pressure Gauges, glycerine filled Pressure Gauges, dry	G H	 
Test System Gauges	T	 
Digital Pressure Gauges	DGR	 
Gauge Accessories	GA NV V	 
Pressure and Flow Control Valves	V	