

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



For Reliable Control of Single and Double-Acting Cylinders

| 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 ONLY | 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 ONLY | 3-Way 3 Position, Tandem Center, Venturi Return Assist | |
| Solenoid 24 VDC | Single-acting | 3-Way, 3 Position, Tandem Center | |
| Solenoid 115 VAC | Single-acting | 3-Way, 3 Position, Tandem Center | |
| Solenoid 24 VDC | Double-acting | 4-Way, 3 Position, Tandem Center | |
| Solenoid 115 VAC | Double-acting | 4-Way, 3 Position, Tandem Center | |

- Advance/Retract and Advance/Hold/Retract operation of single-acting and double-acting cylinders
- 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 valves allow 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.

For remote valve applications, see page 142.

Pump Mounted Directional Control Valves



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 return cylinders. See details on www.enerpac.com

VM, VE Series



Flow Capacity:

4.5 gal/min.

Maximum Operating Pressure:

10,000 psi



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 return cylinders. See valve type in ZU4 and ZE-pump ordering matrix on pages 109 and 115.

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.

| Model Number | Hydraulic Symbol | Schematic Flowpath | | | Weight (lbs) |
|-----------------------|------------------|--------------------|---------|---------|--------------|
| | | Advance | Neutral | Retract | |
| VM22 | | | | | 5.6 |
| VM32 | | | | | 5.6 |
| VM33 | | | | | 6.7 |
| VM33VAC | | | | | 7.5 |
| VM43 | | | | | 6.8 |
| VM33L | | | | | 10.7 |
| VM43L | | | | | 10.8 |
| VE32 ¹⁾ | | | | | 8.7 |
| VE32D ¹⁾ | | | | | 8.7 |
| VE33VAC ¹⁾ | | | | | 22 |
| VE33 ¹⁾ | | | | | 20.3 |
| VE33-115 | | | | | 20.3 |
| VE43 ¹⁾ | | | | | 20.3 |
| VE43-115 | | | | | 20.3 |

¹⁾ When ordering Enerpac VE-Series solenoid valves, the pendant must be ordered separately for Z-Class Pumps See page 143 for product dimensions.

▼ Shown from left to right: **VC20, VC4L**



Reliable Remote Control



Locking Valves

For applications that require positive load holding, VC and VM 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
- Return line kit included with remote valves

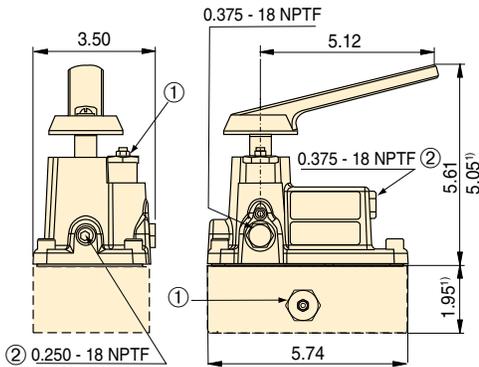
| Valve Operation | Used with Cylinder | Valve Type | Model Number | Hydraulic Symbol | Schematic Flowpath | | | Weight (lbs) |
|-----------------|--------------------|---|--------------|------------------|--------------------|------|---------|--------------|
| | | | | | Advance | Hold | Retract | |
| Manual | Single Acting | 3-Way, 3 Position, Tandem Center | VC3 | | | | | 6.4 |
| Manual | Single Acting | 3-Way, 3 Position, Tandem Center, Locking | VC3L | | | | | 10.3 |
| Manual | Single Acting | 3-Way, 3 Position, Closed Center | VC15 | | | | | 6.4 |
| Manual | Single Acting | 3-Way, 3 Position, Closed Center, Locking | VC15L | | | | | 10.3 |
| Manual | Double Acting | 4-Way, 3 Position, Tandem Center | VC4 | | | | | 6.4 |
| Manual | Double Acting | 4-Way, 3 Position, Tandem Center, Locking | VC4L | | | | | 10.3 |
| Manual | Double Acting | 4-Way, 3 Position, Closed Center | VC20 | | | | | 6.4 |
| Manual | Double Acting | 4-Way, 3 Position, Closed Center, Locking | VC20L | | | | | 10.3 |

Return line kit included with remote valves

VC, VM, VE-Series, Valve Dimensions

Pump Mounted Directional Control Valves

Valve dimensions in inches.



- ① User Adjustable Relief Valve
- ② Auxiliary Port

VC, VM, VE Series



Flow Capacity:

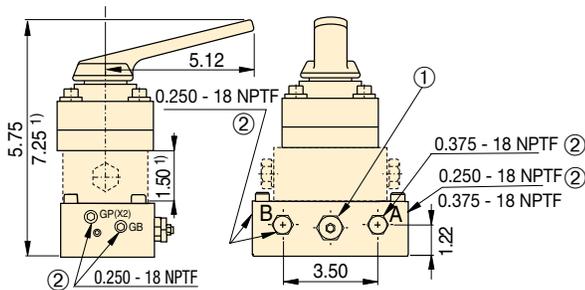
4.5 gal/min.

Maximum Operating Pressure:

10,000 psi

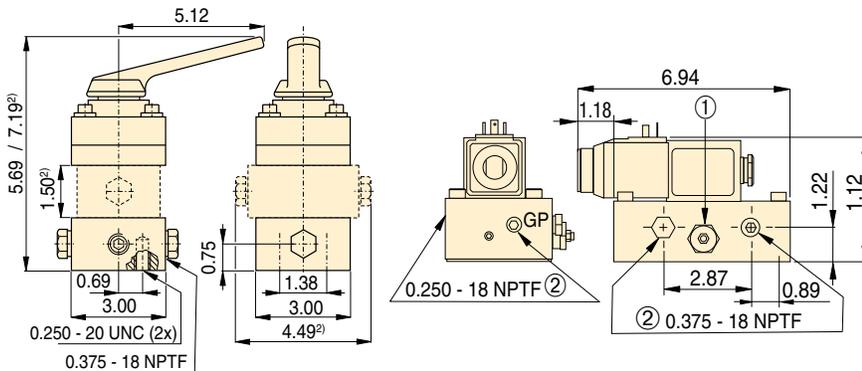
VM22, VM32

¹⁾VM22 only



VM33, VM33L, VM43, VM43L

¹⁾VM33VAC, VM33L and VM43L only



**VC3, VC3L, VC15, VC15L
VC4, VC4L, VC20, VC20L**

VE32, VE32D

²⁾ VC3L, VC15L, VC4L and VC20L only



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.

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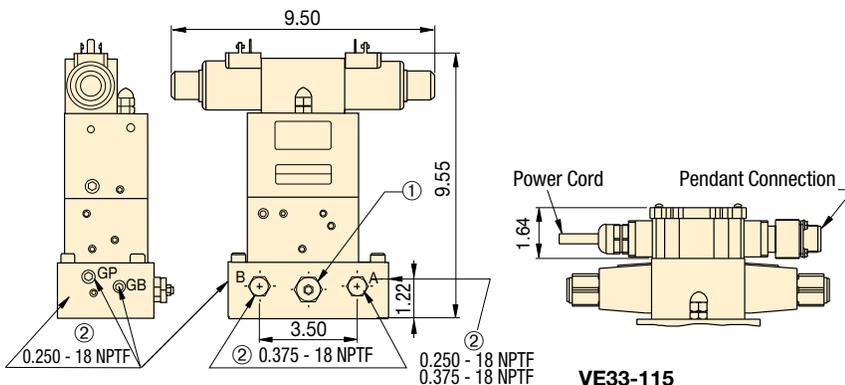


Valving Help

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

Page: 399

Remote Manual Directional Control Valves



VE33, VE43

**VE33-115
VE43-115**