

Shown: ZW5020HE-FT22



Z-Class electric pumps are designed for use in the harshest manufacturing environments. The pumps provide reliable and durable performance in a wide variety of configurations.

The standard for workholding applications

- Features Z-Class high-efficiency pump design; higher oil flow and by-pass pressure, cooler running and requires 18% less current than comparable pumps
- Totally enclosed, fan cooled industrial electric motors supply extended life and stand up to harsh industrial environments
- Multiple valve and reservoir configurations provide application specific models to match the most demanding workholding applications
- High-strength, molded electrical enclosure protects electronics, power supplies and LCD readout from coolant and contamination.

Collet-Lok® products

Swing clamps

Work Supports

Linear Cylinders

Power Sources

Basic configurations

All pumps listed in this chart include LCD electrical box, 20 litres reservoir, return line filter and either 0-420 bar pressure gauge or pressure transducer (solenoid valve models). For additional options, see the complete pump matrix on page 117.

Pump type

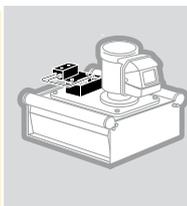
Valve/manifold type

Motor voltage

50/60 Hz

ZW-Series with manifold

- Used when supplying pressure to multiple valve circuits
- Valves must be supplied separately.



Pressure and tank ports

230 VAC, 3 ph

Single station DO3

230 VAC, 3 ph

Enerpac VP-series

230 VAC, 3 ph

Two station DO3

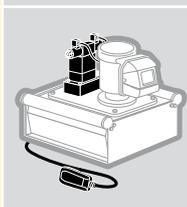
230 VAC, 3 ph

Four station DO3

230 VAC, 3 ph

ZW-Series with pallet coupling valve

- Provides momentary pressure and flow to fixture
- Ideal for pallet disconnect systems.



4-way, 3-pos. solenoid operated

115 VAC, 1 ph

4-way, 3-pos. solenoid operated

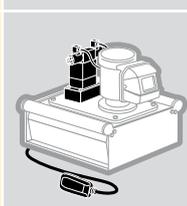
230 VAC, 3 ph

4-way, 3-pos. solenoid operated

460 VAC, 3 ph

ZW-Series with continuous connection valve

- Provides solenoid control of one single or double-acting circuit
- Control valve supplied with integrated pilot operated check to ensure positive pressure holding.



4-way, 3-pos. solenoid operated

115 VAC, 1 ph

4-way, 3-pos. solenoid operated

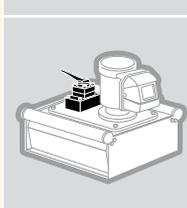
230 VAC, 3 ph

4-way, 3-pos. solenoid operated

460 VAC, 3 ph

ZW-Series with manual valve

- Provides manual control of one single or double-acting circuit
- Control valve supplied with center holding function to ensure positive position holding.



4-way, 3-pos. manually operated

115 VAC, 1 ph

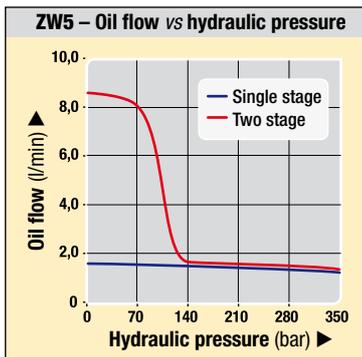
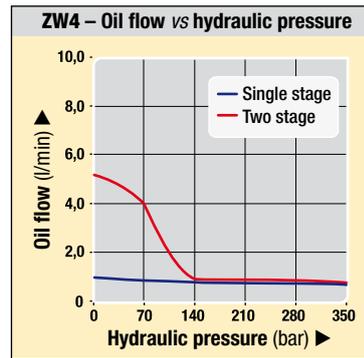
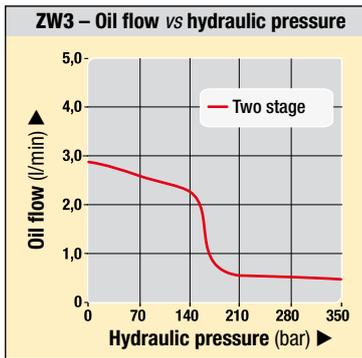
4-way, 3-pos. manually operated

230 VAC, 3 ph

4-way, 3-pos. manually operated

460 VAC, 3 ph

Output oil flow versus hydraulic pressure



ZW3 Series Output oil flow at 0,54 l/min at 350 bar LCD Electric Model Nr.	ZW4 Series Output oil flow at 0,82 l/min at 350 bar LCD Electric Model Nr.	ZW5 Series Output oil flow at 1,64 l/min at 350 bar LCD Electric Model Nr.
ZW3020HG-FE01	ZW4020HG-FW01	ZW5020HG-FW01
ZW3020HG-FE11	ZW4020HG-FW11	ZW5020HG-FW11
ZW3020HG-FE12	ZW4020HG-FW12	ZW5020HG-FW12
ZW3020HG-FE21	ZW4020HG-FW21	ZW5020HG-FW21
ZW3020HG-FE41	ZW4020HG-FW41	ZW5020HG-FW41
ZW3420DB-FT	ZW4420DB-FT	ZW5420DB-FT
ZW3420DE-FT	ZW4420DE-FT	ZW5420DE-FT
ZW3420DW-FT	ZW4420DW-FT	ZW5420DW-FT
ZW3420FB-FT	ZW4420FB-FT	ZW5420FB-FT
ZW3420FE-FT	ZW4420FE-FT	ZW5420FE-FT
ZW3420FW-FT	ZW4420FW-FT	ZW5420FW-FT
ZW3420LB-FG	ZW4420LB-FG	ZW5420LB-FG
ZW3420LE-FG	ZW4420LE-FG	ZW5420LE-FG
ZW3420LW-FG	ZW4420LW-FG	ZW5420LW-FG

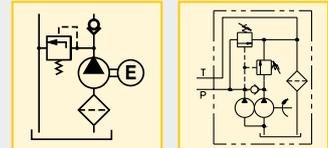
Flow rate: 0,54 - 1,64 l/min

Pressure: 350 bar max

Motor: 0,75 - 1,12 kW

Reservoir: 8 - 40 litres

- E** Bombas eléctricas
- F** Centrale hydraulique
- D** Tauchpumpe



! Important

All Z-Class electric pumps are CSA and CE compliant.



LCD electrical package is required for pumps utilizing electric valves, or optional accessories such as the pressure transducer, level switch, pressure switch or heat exchanger.

Single-stage pumps provide constant flow throughout the entire pressure range via a radial piston pump. Two-stage pumps provide high flow via a gear pump until the bypass pressure is reached. At pressures above the bypass setting, the radial piston pump provides flow to the maximum pressure.

Electric pumps *Dimensions & options*

Shown: ZW5020HE-FT22



ZW-series

Z-Class electric pumps are designed for use in the harshest manufacturing environments. The pumps provide reliable and durable performance in a wide variety of configurations.

- Efficient design reduces heat generation and reduces power consumption
- Balanced pump section reduces vibration improving durability and sound levels
- Optional back-lit LCD readout provides hour and cycle counts, low voltage warnings and pressure read-out when used with pressure transducer
- Low-voltage pendant on solenoid valve models with sealed switches improves operator safety
- **Z-Class** electric pumps can be supplied with factory installed accessories such as valve manifold, pressure transducer, and return line filter, creating a complete power unit solution.

Flow: 0,54 - 1,64 l/min
Pressure: 350 bar
Motor: 0,75 - 1,12 kW
Reservoir: 8 - 40 litres

- E** Bombas eléctricas
- F** Centrale hydraulique
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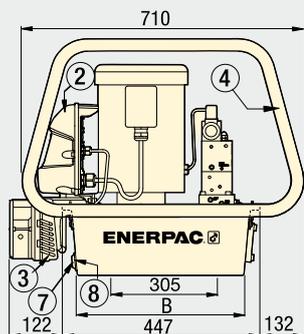
Options

User adjustable relief valve

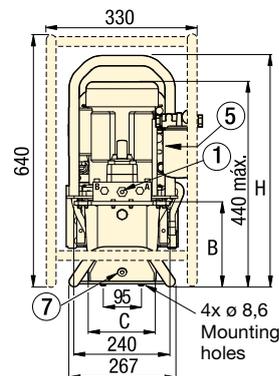
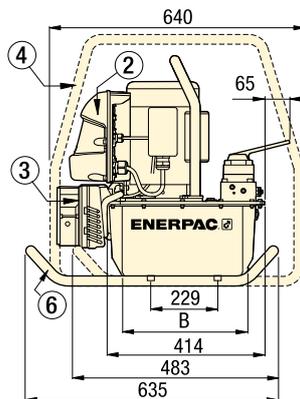
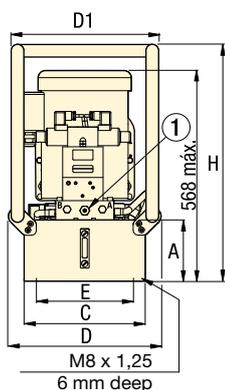


All ZW-Series have a user adjustable relief valve to allow the operator to easily set the optimum working pressure.

10, 20, 40 litres



8 litres



- ① Pump mounted manifold
 - User adjustable relief valve
 - 3/8" NPTF on A and B ports
 - 1/4" NPTF on auxiliary ports
- ② Electric Box (Optional w/manual valve)
- ③ Heat Exchanger (Optional)
- ④ Roll Bar (Optional)
- ⑤ Return Line Filter (Optional)
- ⑥ Skid Bar (Optional)
- ⑦ Oil Drain
- ⑧ Oil Level/Temperature Switch (Optional)

Product dimensions in mm [$\text{D} \pm \text{D}$]

Usable oil capacity	ZW Series pump dimensions							
	litres	A	B	C	D	D1	E	H
8	206	287	168	-	-	-	-	574
10	155	419	305	384	371	279	599	
20	180	419	422	500	488	396	625	
40	269	399	505	577	572	480	714	

Product selection

Output flow rate at 50 Hz (l/min)	Pump series	Motor size kW	Relief Valve adjustment range bar	Sound level dBA
2,80	ZW3 *	0,75	70 - 350	75
5,19	ZW4	0,75	70 - 350	75
8,74	ZW5	1,12	70 - 350	75

* Constant flow rate for single-stage models.

ZW-series, Electric Pump ordering matrix

Custom build your pump

▼ This is how a ZW-series Model number is built:

Z	W	4	0	20	H	G	- FG	01
1	2	3	4	5	6	7	8	9
Product Type	Motor Type	Flow Group	Valve Type	Usable Oil Capacity	Valve Operation	Voltage	Options ¹	Manifold Options

1 Product type

Z = Z-Class Pump

2 Motor type

W = Workholding Electric

3 Flow group

3 = 0,54 l/min

4 = 0,82 l/min

5 = 1,64 l/min

4 Valve type

0 = No valve or valve manifold

2 = 3-way, 2-position, manual valve

3 = 3-way, 3-position, manual valve

4 = 4-way, 3-position, manual or solenoid valve

6 = 3-way, 3-position, tandem center w/P.O. check (manual only)

8 = 4-way, 3-position, tandem center w/P.O. check (manual only)

5 Usable oil capacity

8 = 8 litres (2 gallon)

10 = 10 litres (2,5 gallon)

20 = 20 litres (5 gallon)

40 = 40 litres (10 gallon)

6 Valve operation

D = Solenoid valve (pallet coupling) with pendant and LCD (valve type **4**)

F = Solenoid valve (continuous connection) with pendant and LCD (valve type **4**)

G = Valve manifold without LCD (valve type **0**)

H = Valve manifold with LCD (valve type **0**)

L = Manual valve with LCD (without pendant, valve type **2, 3, 4, 6** or **8**)

M = Manual valve without LCD (valve type **2, 3, 4, 6** or **8**)

N = No valve, without LCD (valve type **0**)

W = No valve with LCD (valve type **0**)

7 Power supply

Single Phase

B = 115V, 1 ph, 50-60 Hz³

E = 208-240V, 1 ph, 50-60 Hz
European plug

I = 208-240V, 1 ph, 50-60 Hz
USA plug

Three Phase

M = 190-200V, 3 ph, 50/60 Hz

G = 208-240V, 3 ph, 50/60 Hz

W = 380-415V, 3 ph, 50/60 Hz

K = 440V, 3 ph, 50/60 Hz

J = 460-480V, 3 ph, 50/60 Hz

R = 575V, 3 ph, 50/60 Hz

8 Options²

F = Return line filter, 25 micron

G = 0-420 bar pressure gauge, 63,5 mm⁵

H = Heat exchanger⁴

L = Level/temperature switch⁴

N = No handles (lifting eyes only)²

P = Pressure switch⁴

R = Roll bars

S = Single stage

T = Pressure transducer⁴

U = Foot switch⁴

9 Manifold options⁵ (Pump types G and H only)

01 = Pressure & tank porting manifold

11 = Single station D03

12 = VP series manifold

13 = Single station CETOP

21 = 2 station D03

22 = 2 station CETOP

41 = 4 station D03

42 = 4 station CETOP

¹ Options should be specified in alphabetical order.

² Unless specified, all pumps are supplied with reservoir handles.

³ 115 volt pumps are supplied with CE and CSA approved 15 Amp plug for intermittent use. 20 Amps circuit recommended for frequent full pressure use.

⁴ These options require LCD electrical package.

⁵ Pressure gauge not available on pump models with pressure transducer. Pressure transducer provides digital pressure readout on LCD display.

⁶ Pressure switch option is only used as input to a customer control. It is not used with the LCD electrical package.

Example

The **ZW5810LG-FT** is a 1,64 l/min, 2-stage pump with a manual 4-way, 3 position tandem center valve, integrated P.O. check, LCD electrical box, 10 litres reservoir, 208-240 volt 3-phase motor, return line filter and pressure transducer.

Flow: 0,54 - 1,64 l/min

Pressure: 350 bar

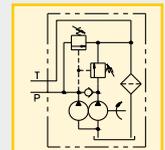
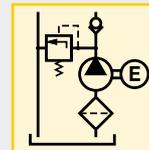
Motor: 0,75 - 1,12 kW

Reservoir: 8 - 40 litres

E Bombas eléctricas

F Centrale hydraulique

D Modulare Spannumppe



Example

ZW4020GE-FGS21 is a 0,82 l/min, single-stage pump with a 2 station D03 manifold, standard electric without LCD, 20 litres reservoir, 230 volt, 50/60 Hz motor, return line filter and 0-420 bar pressure gauge.

ZW4410DW-T is a 0,82 l/min, 2-stage pump with a pallet de-coupling valve, LCD electrical box, 10 litres reservoir, 380-415 volt 3-phase motor and pressure transducer.

ZW5040HG-FGL01 is a 1,64 l/min, 2-stage pump with a pressure and tank manifold, LCD electrical box, 40 litres reservoir, 230 Volt 3-phase motor, return line filter, 0-420 bar pressure gauge and level and temperature shutdown switch.

Shown: ZPF



ZPF series

The oil filter kit removes contaminants from the return oil flow before allowing it back into the reservoir, reducing component damage.

Extend life of hydraulic components

...increase 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
- Maintenance indicator included

Filtration: 25 micron

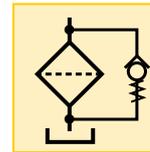
Pressure: max. 13,8 bar

Max. flow: 45,4 l/min

(E) Filtro

(F) Filtre

(D) Filter

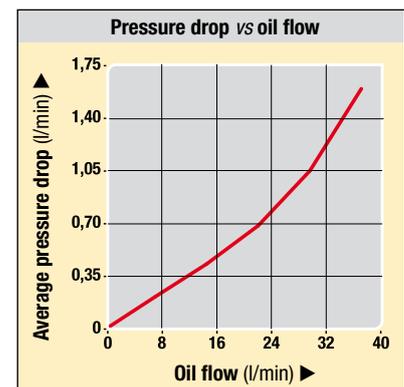


Options

PF-25 replacement filter element



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



Product selection

Nominal filtration	Model number	Maximum pressure	Maximum oil flow	Bypass pressure setting	Filter gauge service indicator	kg
micron		bar	l/min	bar		
25	ZPF	13,8	45,4	1,7	●	1,5

Transfer: 900 Btu/h

Pressure: max. 21 bar

Voltage: 24V

- E** Intercambiador de calor
- F** Échangeur de chaleur
- D** Wärmetauscher



Extends system life

- Electrical connector factory installed
- All installation components included
- Stabilizes oil temperature at a maximum of 54° C at 21° C ambient temperature
- Stabilizes oil viscosity, increasing oil life and reduces wear of pump and other hydraulic components

Shown: ZHE-E10



ZHE series

Heat exchanger removes heat from the return oil to provide cooler operation.

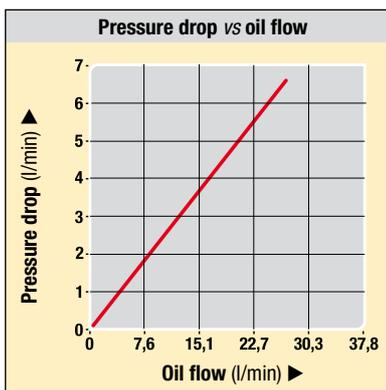
Important

ZHE- Series Heat Exchangers

Heat exchanger stabilizes oil temperature at 54° C at 21° C ambient temperature.

Thermal transfer at 19 l/min and 21° C ambient temperature: 900 Btu/hour.

Do not exceed maximum oil flow of 26,5 l/min and maximum pressure of 20,7 bar. Not suitable for water-glycol or high water based fluids.



Product selection

Voltage	Model number	Thermal transfer*		Amperage draw	Maximum pressure	Maximum oil flow	
		Btu/h	kJoule				
VDC				A	bar	l/min	kg
24	ZHE-E10	900	950	0,95	21	26,5	4,0

*At 1,9/min and ambient temperature of 21° C.

Shown: ZLS-U4



ZLS 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 glass, the level/temp switch will turn off the pump before internal damage can occur due to cavitations.

Electronic level/temperature 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.

Temp. set point: 80° C

Voltage: 24 VDC

- E** Indicador del nivel/temp.
- F** Interrupteur de niveau/temp.
- D** Ölstand/Temperaturschalter



Product Selection

Fixed temperature signal	Model number	Voltage	Thermostat rating setting	Maximum pressure	
°C		VDC	Amps	bar	kg
80	ZLS-U4	24	2,6	10	0,05

Shown: ZPT-U4, ZPS-W4



ZPT-series

ZPT pressure transducer provides constant pressure monitoring for automated pump control.

ZPS-series

ZPS pressure switch can be used to provide a pressure signal to an external control.

Control your pump, monitor pressure

ZPT pressure transducer

- More durable than analog gauges (against mechanical and hydraulic shock)
- More accurate than analog gauges (0,5% full scale)
- Calibration can be fine tuned for certification
- "Auto-mode" provides automatic pressure make-up
- Display pressure in psi, bar or MPa

Pressure: 3,5 - 700 bar

Voltage: 115 VAC / 24 VDC

- E** Presión transductor
- F** Pressostats
- D** Druckschalter



ZPS pressure switch

- Includes glycerin filled gauge, G2536L
- Can be used to provide pressure input to customer provided controls
- Not to be used with LCD control
- For pressure based input to the LCD control, use the ZPT-U4 transducer.

Product Selection

Adjustable pressure range	Electrical specification	Model number	Accuracy (full scale)	Deadband	
bar				bar	kg
3,5 - 700	4-20 mA	ZPT-U4	0,5 %	3,5	0,13
35 - 700	115 VAC /24 VDC N.O.	ZPS-W4	2,0 %	8 - 40	1,22

Note: Electrical harness included with kit. ZPS-W4 includes 0-420 bar pressure gauge.

Important

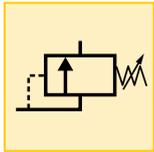
The pressure transducer is factory installed in the "A" port on pumps supplied with valves, and in the "P" port on models with manifolds.

Pressure: 350 bar

Stations: 1-4 valves horizontal

Stations: 1-8 valves vertical

- E** Colectores
- F** Manifolds
- D** Verkettingsblöcke



Increased flexibility for complex systems

- Manifolds provide hydraulic connection to remote or pump mounted valves
- Used when multiple valves are required for controlling several independent circuits
- Available for 2 and 4 station D03 as well as Enerpac VP series mounting
- Pressure and tank porting manifold available for use with remote valve sticks
- Manifolds include integrated relief valve for system pressure control.

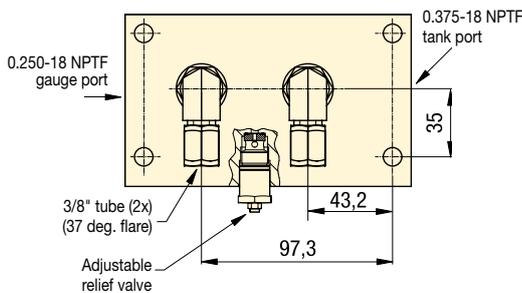
Shown: MB-2, -4



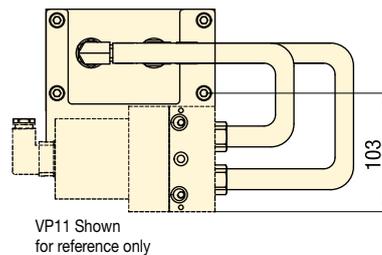
▶ MB series

Manifolds allow the use of multiple valves powered by a single hydraulic pump. Manifolds are available factory installed on your Z-Class workholding power unit, or separately for future system upgrades.

Option 01



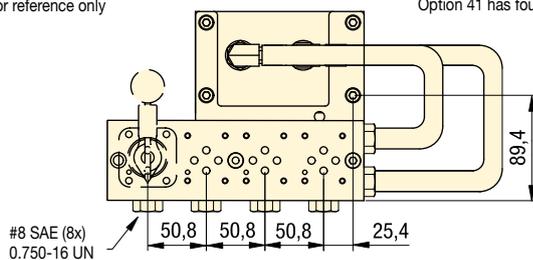
Option 12



Option 21, 41

VMMD-001 Shown for reference only

Option 21 has two valve stations
 Option 41 has four valve stations



Product Selection

Valve mounting pattern	Option code (see page 117)	Number of stations	Coverplate model number
Porting manifold, SAE ports	01	-	-
Enerpac VP Series	12	1-8	-
2 station DO3	21	2	MC-1
4 station DO3	41	4	MC-1
2 station CETOP3	22	2	MC-3
4 station CETOP3	42	4	MC-3

Options

Pressure transducer

120 ▶



Level switch

120 ▶



■ *Enerpac porting manifold provides pressure and tank line to remote mounted valve stack on a machining center.*



Pallet coupling pumps *Application & selection*

Shown: ZW4420FE-FT



▶ The new Enerpac Pallet Coupling Pump provides three modes of operation:

Manual mode

Pump runs as long as operator holds down pendant button.

AUTO mode without timer

Pump runs until user-adjustable pressure setting is reached.

AUTO mode with timer

Pump runs until pressure setting is reached, and adjustable timer runs out.

■ ZW5410FE-FT used to connect and disconnect a palletized fixture.

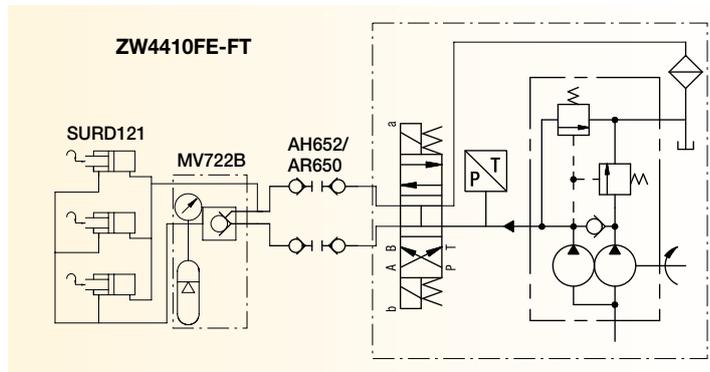


Automatic pressure control for palletized fixtures

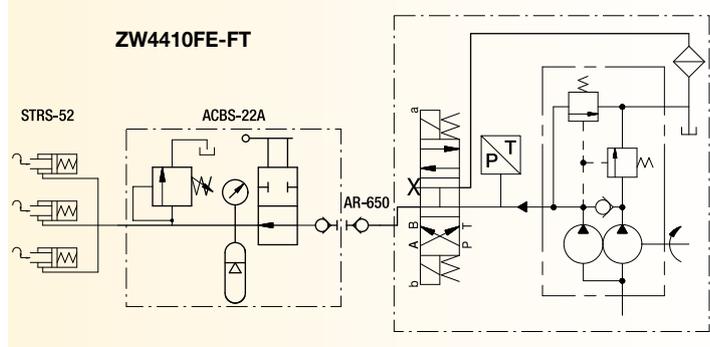
- Programmable clamp and unclamp pressure settings increase automation capability
- Programmable dwell settings ensure desired pressure level is maintained on large circuits or circuits with accumulators
- Remote pendant features sealed switches for improved operator safety
- Backlit LCD provides pump usage information, hour and cycle counts.

Example Circuits

- Double-acting circuit



- Single-acting circuit



Product selection

Flow rate @ max. pressure	Motor size	Motor voltage	Model number	Pressure range	Sound level	Usable oil capacity	
l/min	kW	V-ph-Hz		bar	dBA	litres	kg
0,54	0,75	115-1-50	ZW3408DB-FT	70-350	75	8	52
		115-1-50	ZW3410DB-FT			10	61
		230-1-50	ZW3408DE-FT			8	52
		230-1-50	ZW3410DE-FT			10	61
0,82	0,75	115-1-50	ZW4410DB-FT	70-350	75	10	54
		230-1-50	ZW4410DE-FT				
		400-3-50	ZW4410DW-FT				
1,64	1,12	115-1-50	ZW5410DB-FT	70-350	75	10	58
		230-1-50	ZW5410DE-FT				
		400-3-50	ZW5410DW-FT				

i Operation – pallet coupling pump

Manual mode

Motor and pump operate only when operator presses and holds the up (or down) arrow on the pendant. When button is released, pressure in the hoses is relieved.

AUTO mode

With DWELL timer set equal to zero: operator starts the motor by pressing and holding the up (or down) arrow on the pendant. Pump builds to pressure on the clamp (or unclamp) circuit until it reaches customer programmed setting. The motor immediately turns off and pressure in the hoses is relieved.

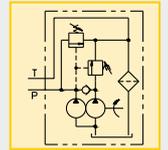
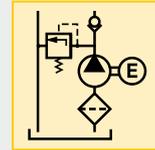
With DWELL timer set greater than zero: operator starts the motor by pressing the up (or down) arrow on the pendant. Once the pump reaches the programmed setting, the DWELL timer starts. When the timer runs out, the motor stops and pressure in the hoses is relieved.

Flow: 0,54 - 1,64 l/min

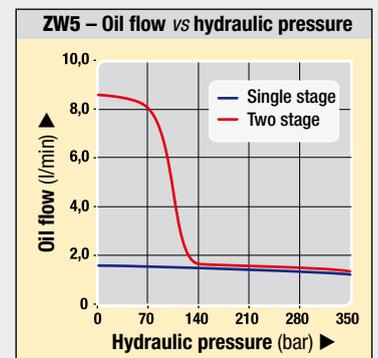
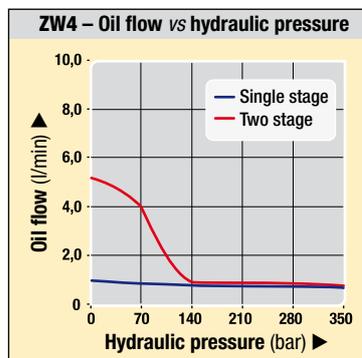
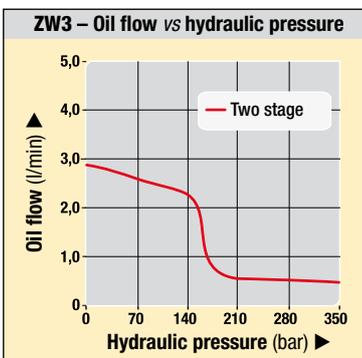
Pressure: 350 bar

Motor: 0,75 - 1,12 kW

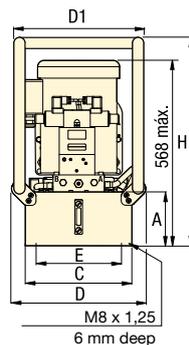
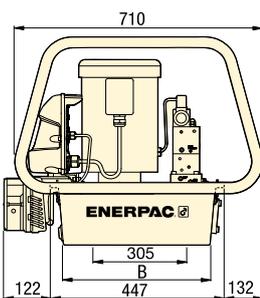
Reservoir: 8,0 - 40,0 litres



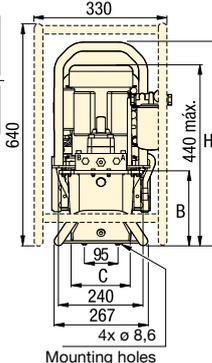
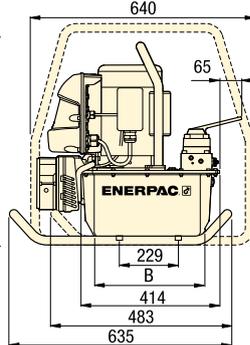
globe Output oil flow versus hydraulic pressure



10, 20, 40 litres



8 litres



A Product dimensions in mm []

Usable oil capacity litres	Model number	A	B	C	D	D1	E	H	kg		
									ZW3	ZW4	ZW5
8	ZWxx08xx	206	279	206	—	—	—	574	42	42	47
10	ZWxx10xx	155	412	305	384	371	279	599	49	49	52
20	ZWxx20xx	180	412	422	500	488	396	625	61	61	65
40	ZWxx40xx	269	399	506	577	572	429	714	84	84	87

! Important

Enerpac recommends a pressure differential of no less than 14 bar for most applications. If you believe your application requires a tighter differential, please contact us directly.

For complete ordering matrix of all factory-installed options see page 117.

globe Options

Heat exchanger

119 ▶



Level switch

120 ▶



Pressure transducer

120 ▶



Return line filter

118 ▶



Continuous connection pumps *Application & selection*

Shown: ZW4420FE-FT



▶ The new Enerpac Continuous Connection Pump provides two modes of operation:

Manual mode

Pump runs continuously, building pressure as long as operator holds down pendant button.

AUTO mode

Pump runs continuously, maintaining user-set pressure window on clamp circuit as long as necessary.

■ ZW5410FE-FT used to control clamping cycle on a horizontal machining center.



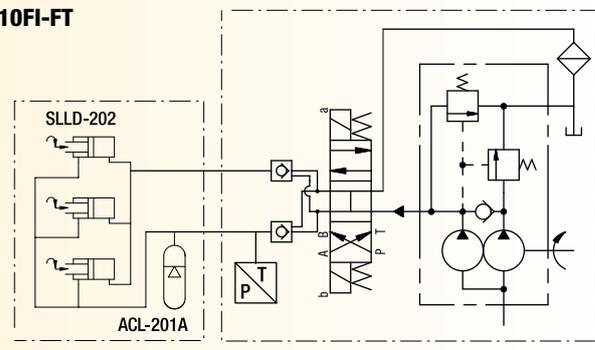
Automatic pressure control for continuous connection fixtures

- Programmable pressure setting allows pump to maintain system pressure continuously
- Includes pilot operated check valve ensuring pressure is maintained in circuit
- Z-Class high-efficiency pump design; featuring higher oil flow and by-pass pressure than comparable pumps
- High-strength, molded electrical enclosure protects electronics, power supplies and LCD readout from harsh industrial environments.

Example Circuits

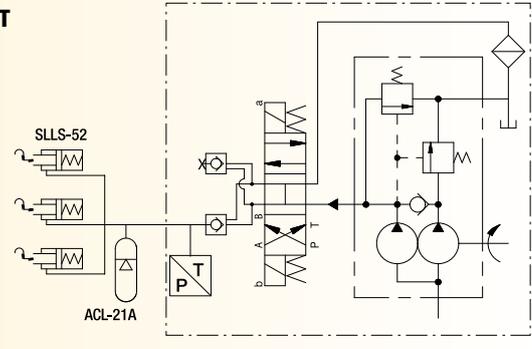
- Double-acting circuit

ZW4410FI-FT



- Single-acting circuit

ZW4410FI-FT



Product selection

Flow rate @ max. pressure	Motor size	Motor voltage	Model number	Pressure range	Sound level	Usable oil capacity	
l/min	kW	V-ph-Hz		bar	dB(A)	litres	kg
0,54	0,75	115-1-50	ZW3408FB-FT	70-350	75	8	52
		115-1-50	ZW3410FB-FT				
		230-1-50	ZW3408FI-FT				
		230-1-50	ZW3410FI-FT				
0,82	0,75	115-1-50	ZW4410FB-FT	70-350	75	10	54
		230-3-50	ZW4410FG-FT				
		460-3-50	ZW4410FJ-FT				
1,64	1,12	115-1-50	ZW5410FB-FT	70-350	75	10	58
		230-3-50	ZW5410FG-FT				
		460-3-50	ZW5410FJ-FT				

i Operation – continuous connection pump

Manual mode: The operator turns the pump motor on, and then presses and holds the up arrow on the pendant. When the button is released, the valve shifts to neutral, but pressure is maintained in the clamp circuit by the pilot-operated check valve. When the operator presses and holds the down arrow on the pendant, pressure in the clamp circuit will release, and the fixture will unclamp.

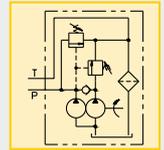
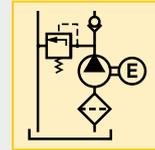
AUTO mode: The operator turns the pump motor on, and then presses and holds the up arrow on the pendant. When the customer-programmed HI PRESS setting is reached, the valve shifts to neutral, but pressure is maintained in the clamp circuit by the pilot-operated check valve. If pressure drops below the LO PRESS setting, the valve will re-activate and build pressure in the clamp circuit again. The pump will maintain this cycle until the operator presses and holds the down arrow on the pendant. When the down arrow is pressed, pressure in the clamp circuit will release, and the fixture will unclamp.

Flow: 0,54 - 1,64 l/min

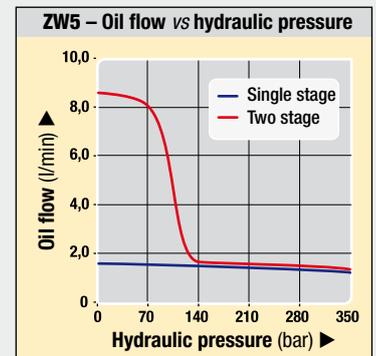
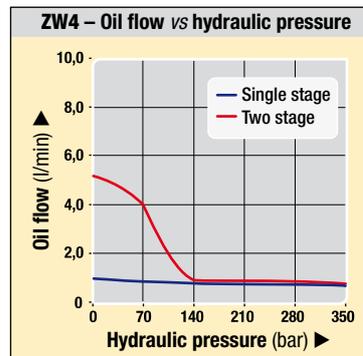
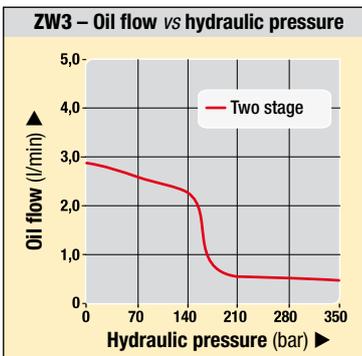
Pressure: 350 bar

Motor: 0,75 - 1,12 kW

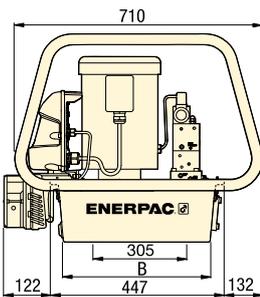
Reservoir: 8 - 40 litres



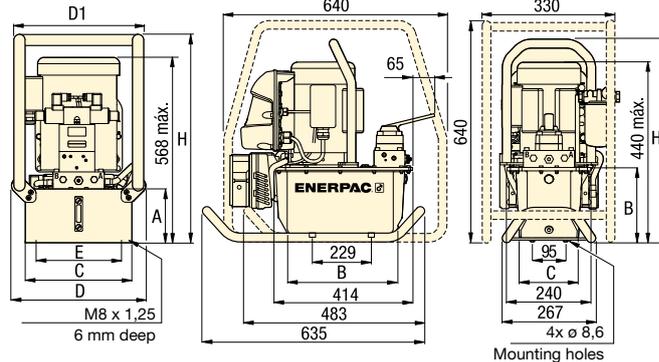
globe Output oil flow versus hydraulic pressure



10, 20, 40 litres



8 litres



A Product dimensions in mm []

Usable oil capacity	Model number	A	B	C	D	D1	E	H	kg		
									ZW3	ZW4	ZW5
litres											
8	ZWxx08xx	206	279	206	—	—	—	574	42	42	47
10	ZWxx10xx	155	412	305	384	371	279	599	49	49	52
20	ZWxx20xx	180	412	422	500	488	396	625	61	61	65
40	ZWxx40xx	269	399	506	577	572	429	714	84	84	87

! Important

Enerpac recommends a pressure differential of no less than 14 bar for most applications. If you believe your application requires a tighter differential, please contact us directly.

For complete ordering matrix of all factory-installed options see page 117.

globe Options

Heat exchanger 119 ▶

Level switch 120 ▶

Pressure transducer 120 ▶

Return line filter 118 ▶

Single station D03 pumps *Application & selection*

Shown: ZW4010GE-11



▶ D03 valve mounting style

Pump accepts any industry standard D03 style directional valve. Also available with 2 station and 4 station manifolds.

⚠ Important

Be aware of leakage rates of any valve installed on an Enerpac pump. Many standard spool valves have excessive leakage rates at higher pressures that can limit the performance of the electric pump. Be sure to consult Enerpac if you are unsure of your choice of valve.

■ ZW5020HW-F11 with customer installed valve used to provide pressure to a clamping fixture.



Industry standard mounting for electric or manual valves

- Highly efficient design provides increased flow rates, reduced heat generation and a decrease in power consumption
- Extensive list of accessories including
 - Heat exchanger
 - Roll-bars
 - Pressure transducer
 - Level and temperature switches
- Replaceable piston check-valves increase service life of major pump components
- Optional backlit LCD provides pump usage information, hour and cycle counts
- Also available with 2 station and 4 station manifolds.

🌐 Product selection

Flow rate @ max. pressure	Motor size	Motor voltage	Model number	Pressure range	Sound level	Usable oil capacity	🏋️
l/min	kW	V-ph-Hz		bar	dBA	litres	kg
0,54	0,75	115-1-50	ZW3008GB-11	70-350	75	8	52
		115-1-50	ZW3010GB-11		75	10	61
		230-1-50	ZW3008GI-11		75	8	52
		230-1-50	ZW3010GI-11		75	10	61
0,82	0,75	115-1-50	ZW4010GB-11	70-350	75	10	54
		230-3-50	ZW4010GG-11				
		460-3-50	ZW4010GJ-11				
1,64	1,12	115-1-50	ZW5010GB-11	70-350	75	10	58
		230-3-50	ZW5010GG-11				
		460-3-50	ZW5010GJ-11				

i Operation – single station D03 pumps

The Single Station D03 pumps are supplied without the standard LCD electrical control. This configuration is intended to be used with user supplied controls. Control requirements include: Motor Starter or Contactor, and remote control of the pump mounted valve. Typical applications include: Special Machines and CNC Machines where the control of the pump and valve will be done by PLC or machine control.

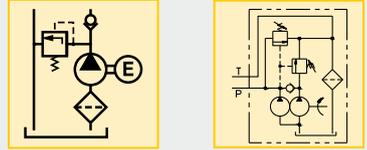
The use of the ZPF Return Line Filter is recommended. If the pump is to be run at pressure at a relief valve setting, the ZHE-E10 Heat Exchanger is also recommended. For monitoring of the oil level and temperature, use the ZLS-U4 Level/Temp Switch. For pump shutdown at pressure, the ZPS-W4 Pressure Switch Kit can provide an input to the customer supplied controls. As these accessories are designed to be used with the standard Enerpac LCD control, the customer assumes responsibility to adapt the standard leads to their controls.

Flow: 0,54 - 1,64 l/min

Pressure: 350 bar

Motor: 0,75 - 1,1 kW

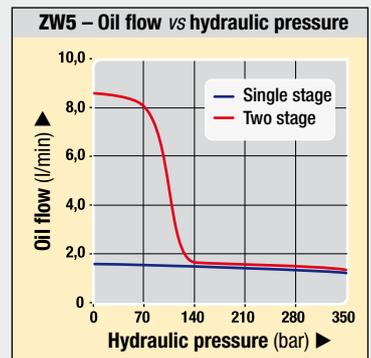
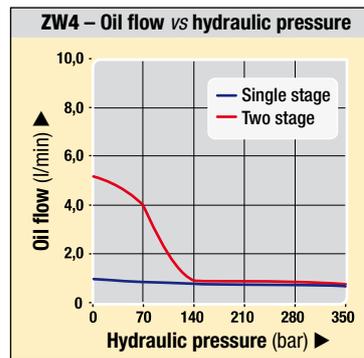
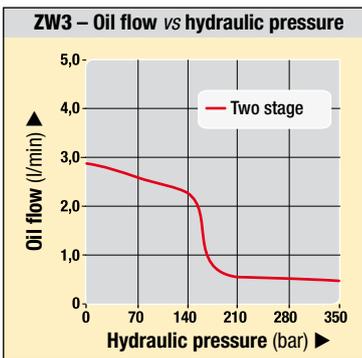
Reservoir: 8 - 40 litres



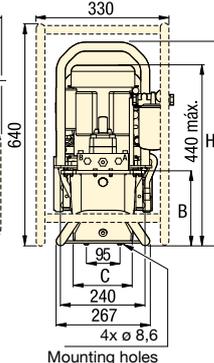
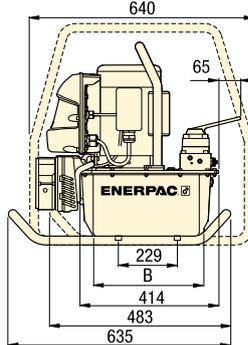
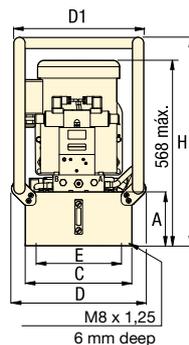
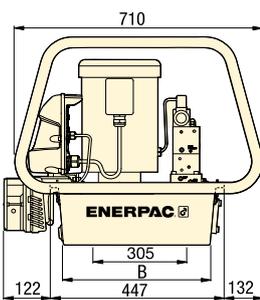
! Important

Enerpac recommends a pressure differential of no less than 14 bar for most applications. If you believe your application requires a tighter differential, please contact us directly.

g Output oil flow versus hydraulic pressure



10, 20, 40 litres



8 litres

A Product dimensions in mm []

Usable oil capacity	Model number	A	B	C	D	D1	E	H	kg		
									ZW3	ZW4	ZW5
litres											
8	ZWxx08xx	206	279	206	—	—	—	574	42	42	47
10	ZWxx10xx	155	412	305	384	371	279	599	49	49	52
20	ZWxx20xx	180	412	422	500	488	396	625	61	61	65
40	ZWxx40xx	269	399	506	577	572	429	714	84	84	87

! Options

- Heat exchanger**  [119](#)
- Level switch**  [120](#)
- Pressure transducer**  [120](#)
- Return-line filter**  [118](#)
- VP03 solenoid valves**  [141](#)
- VMM series manual valves**  [143](#)

Shown: ZW5111SWE100



► Enerpac's workholding pump unit features an innovative range of zero leakage, poppet design, directional valves. With the modular valve design, various independent single-acting or double-acting circuits can be realized.

Application

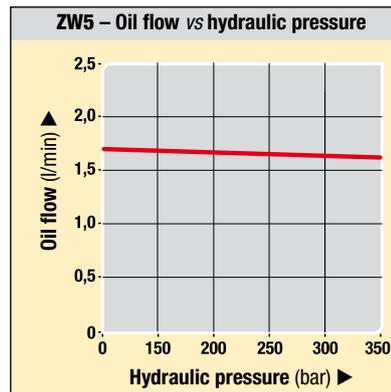
These advanced workholding pumps, operating at maximum 350 bar hydraulic pressure, are highly suitable for production tooling applications – offering the optimum in terms of compact size for required oil flow and pressure rating and customization to your specific needs.

Enerpac electric pump used in conjunction with swing cylinders, work supports, directional valves, control valves and sequence valves can provide a complete clamping solution. The pressure switch allows the unit to be fully automated.

Customize to your needs

- Various models including electric controls and pressure switch
- Stackable to 8 VP-series valve stations high
- Customer adjustable relief valve
- Glycerine dampened pressure gauge G-2517L on pumps with VP-series valves
- 230/460/3/50/60 Hz 1,1 kW motor.

Output oil flow



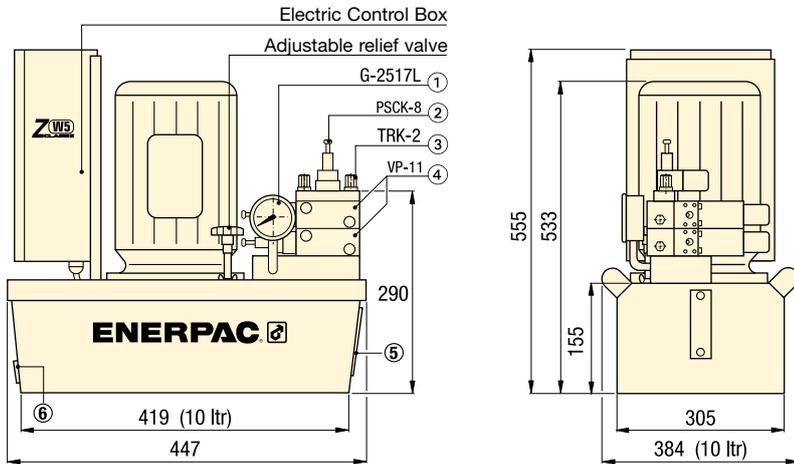
Product selection

Oil flow rate	Pressure range	Voltage and current	Usable oil capacity ²⁾	Valve models included	Model number	kg
l/min	bar	V @ A	litres			
▼ With manifold for VP-series modular valves, no electric controls						
1,64	100-350	230 @ 4,8	10,0	–	ZW5VPSEE100	65
1,64	100-350	400 @ 2,4	10,0	–	ZW5VPSWE100	65
▼ With manifold for CETOP 03 valves, no electric controls						
1,64	100-350	230 @ 4,8	10,0	–	ZW5C03SEE100	65
1,64	100-350	400 @ 2,4	10,0	–	ZW5C03SWE100	65
▼ For 2x single-acting circuits						
1,64	100-350	230 @ 4,8	10,0	1x VP-41	ZW5141SEE100	77
1,64	100-350	400 @ 2,4	10,0	1x VP-41	ZW5141SWE100	77
▼ For 1x double-acting circuits + isolating valve ¹⁾ for A-port						
1,64	100-350	230 @ 4,8	10,0	1x VP-11	ZW5111SEE100	77
1,64	100-350	400 @ 2,4	10,0	1x VP-11	ZW5111SWE100	77
▼ For 2x double-acting circuits + isolating valves ¹⁾ for all A-ports						
1,64	100-350	230 @ 4,8	10,0	2x VP-11	ZW5211SEE100	80
1,64	100-350	400 @ 2,4	10,0	2x VP-11	ZW5211SWE100	80

¹⁾ Isolating valve is pressure switch PSCK-8.

²⁾ ZW5-series pumps comes standard with 8 litres reservoir. (4, 8, 20 or 40 reservoir is optional).

ZW5-series Shown: ZW5211SEE100 with standard 10 litres reservoir



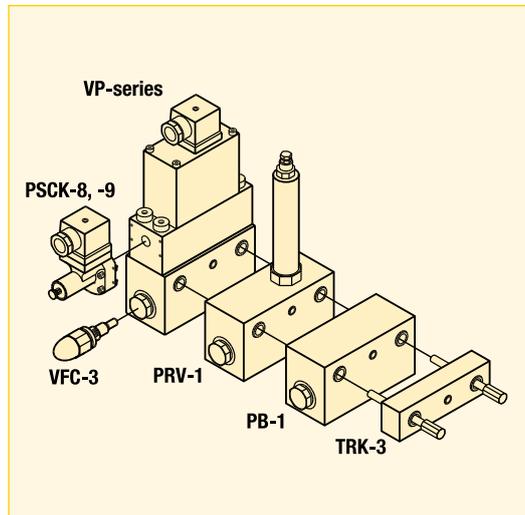
- ① Pressure gauge
- ② Pressure switch
- ③ Tie Rod Kit
- ④ Directional valve
- ⑤ Oil level glass
- ⑥ Oil drain

Product selection

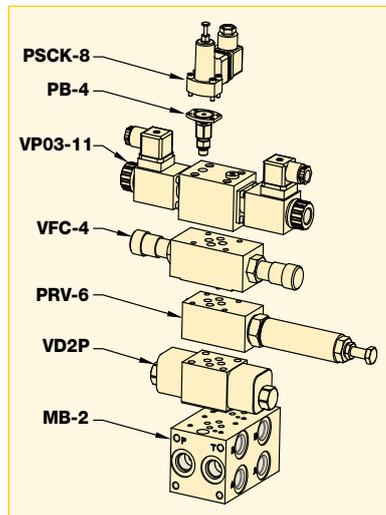
Pump series	Voltage	Phase	Continuous operation at 350 bar	Motor capacity	Motor speed	Motor protection class	Sound Level
	Volt			kW	RPM		dB(A)
ZW5....	230	1	50%	1,1	1390	IP54	75
ZW5.....	400	3	50%	1,1	1390	IP54	75

Valve options

See page 136 for VP-series valves and available options.

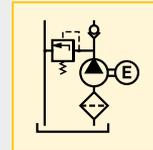


See page 141 for VP03-series valves and available options.



- Flow: 1,64 l/min**
- Pressure: 100 - 350 bar**
- Motor: 1,1 kW**
- Reservoir: 4 - 40 litres**

- E Bombas eléctricas**
- F Centrale hydraulique**
- D Modulare Spannumppe**



Options

VP-series, modular valves
[136](#)

VFC-3 flow control valve
[137](#)

Pressure switches
[188](#)

Hoses and couplers
[192](#)

High-pressure filters
[193](#)

Fittings
[194](#)

Electric Driven Workholding Pumps *Application & selection*

Shown: ZW5111SWE100



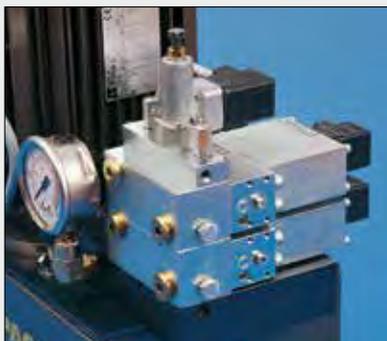
ZW5 series

These advanced workholding pumps, operating at maximum 350 bar hydraulic pressure, are highly suitable for production tooling applications – offering the optimum in terms of compact size for required oil flow and pressure rating and customization to your specific needs.

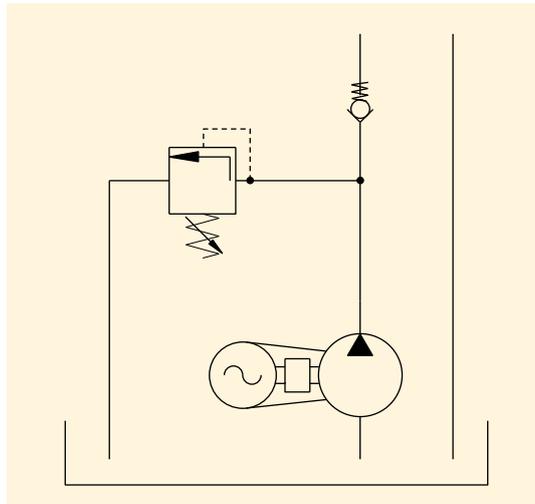
Application

Enerpac electric pump used in conjunction with swing cylinders, work supports, directional valves, control valves and sequence valves can provide a complete clamping solution. The pressure switch allows the unit to be fully automated.

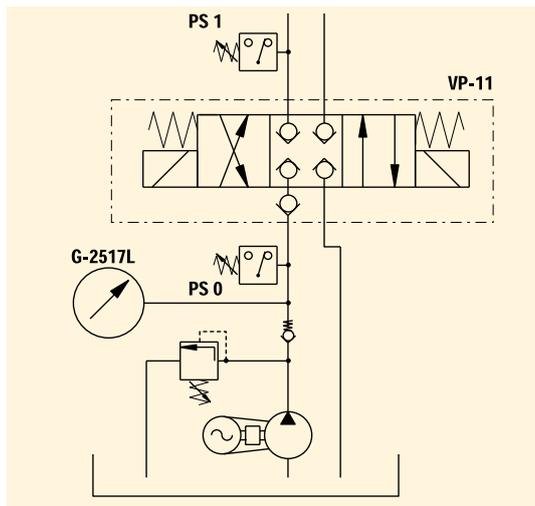
■ *Enerpac VP-series valves stackbuilt on ZW5211SWE100. The pressure switch PSCK-8 is mounted directly onto the endplate of Tie Rod Kit TRK-2.*



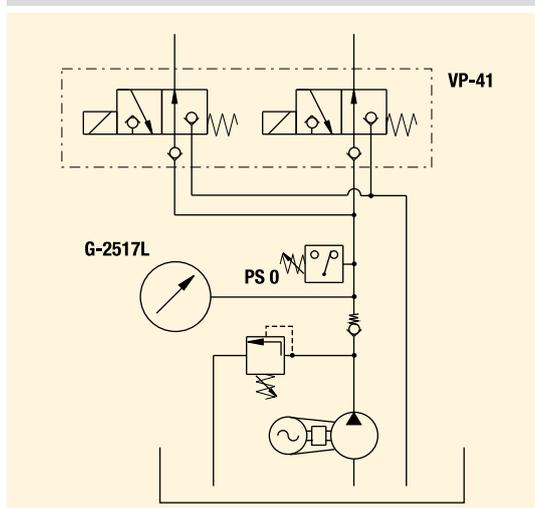
ZW5VPSEE100 with manifold for VP-series or CETOP 03 valves, without electric controls and gauge



ZW5111SEE100 For 1x Double-Acting circuit and Isolating Valve for A-port



ZW5141SEE100 For 2x Single-Acting circuits



Basic pumps

Customize to your needs with the Enerpac VP-series valves and options or choose your own D03 valve.

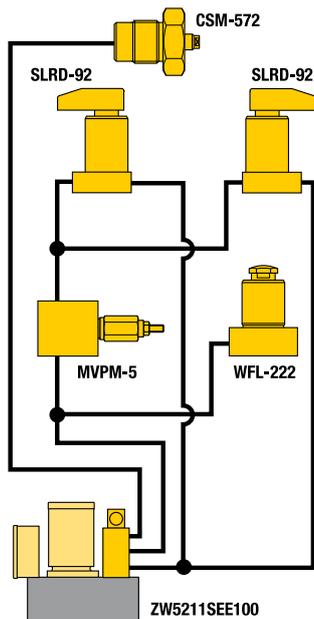
Isolating valves

For applications where clamping pressure has to be maintained, isolating valves are an economic and safe solution.

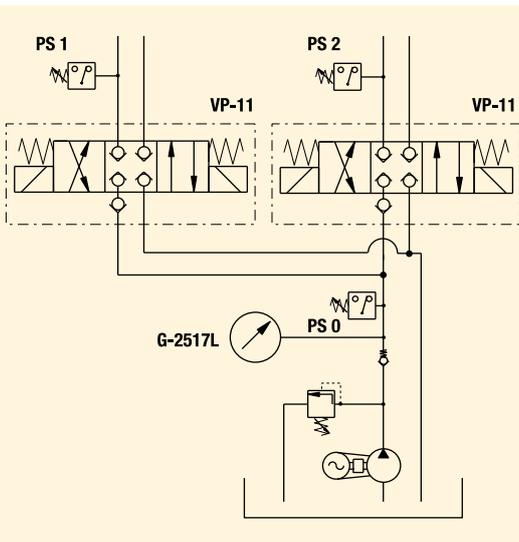
The pressure switch (PS 1) switches in the hydraulic line to the cylinder actuates the valve with a closed center position and isolates the circuit when the preset pressure has been reached. In case of pressure drop the switch opens the valve to compensate.

For some particular applications, i.e., when a workpiece has to be positioned and clamped with different forces, you can set different isolating valve pressures for the independent circuits.

Pressure switch (PS 0) switches the motor off at maximum pressure; in case of pressure drop due to activating circuits, the motor restarts.



ZW5211SEE100 for 2x Double-Acting circuit and Isolating Valve for all A-ports



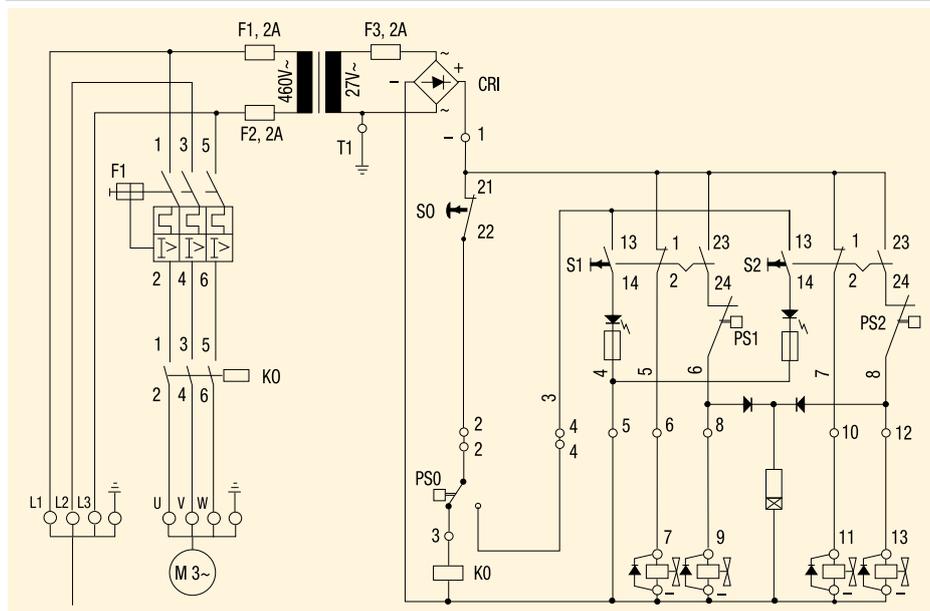
Application example

Building the right workholding system for a specific production tooling requirement is best achieved by observing the Basic System Set-up in our “Yellow Pages” (☐202 ▶).

Electric Scheme

Shown the electric scheme of the ZW5211SWE100 (400 volt) for two double-acting circuits and isolating valves (pressure switches) in both A-lines.

ZW5211SWE100



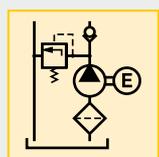
Flow: 1,64 l/min

Pressure: 100 - 350 bar

Motor: 1,1 kW

Reservoir: 4 - 40 litres

- E** Bombas eléctricas
- F** Centrale hydraulique
- D** Modulare Spannumppe



Options

Sequence valves 

☐152 ▶

Flow control valves 

☐155 ▶

Hoses and couplers 

☐192 ▶

High pressure filters 

☐193 ▶

Hydraulic oil 

☐193 ▶

Fittings 

☐194 ▶

VP-series valve options 

☐136 ▶

