

Electric pumps *Application & selection*

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

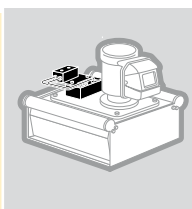
Valve/manifold type

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

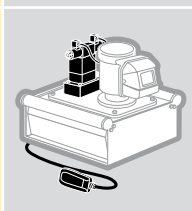
230 VAC, 3 ph

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

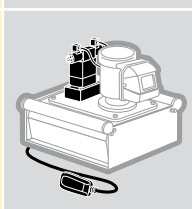
230 VAC, 3 ph

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

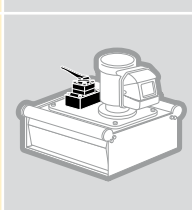
230 VAC, 3 ph

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

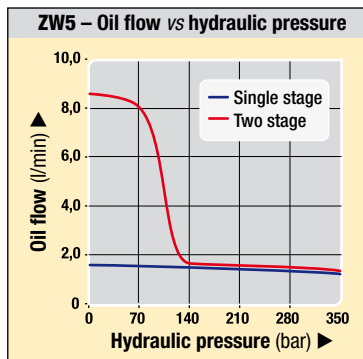
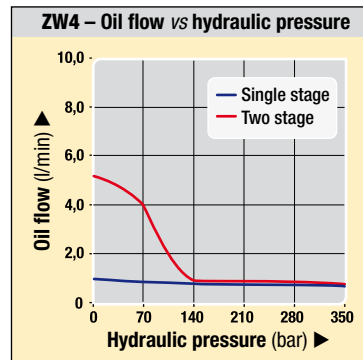
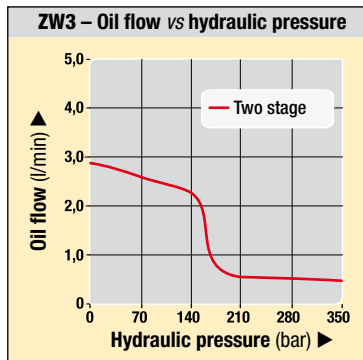
4-way, 3-pos. manually operated

230 VAC, 3 ph

4-way, 3-pos. manually operated

460 VAC, 3 ph

Output oil flow versus hydraulic pressure



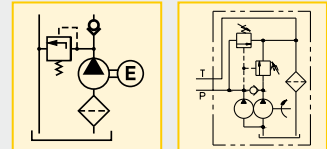
Flow rate: 0,54 - 1,64 l/min

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.

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

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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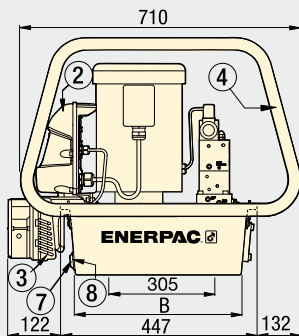
Options

User adjustable relief valve

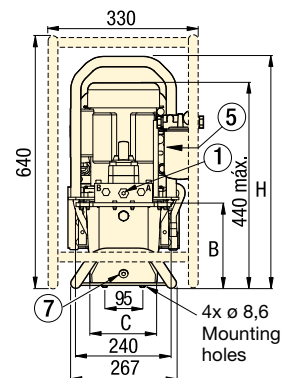
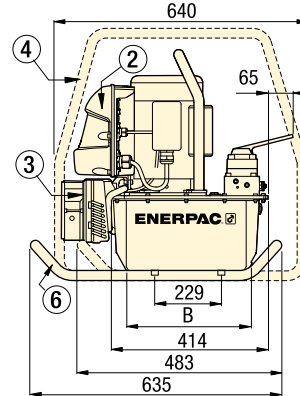
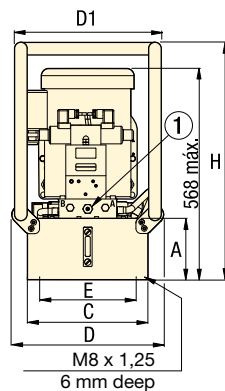


All ZW-Series have a user adjustable relief valve to allow the operator to easily set the optimum working pressure.

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 []

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

7 bar	Output flow rate at 50 Hz				Pump series	Motor size	Relief Valve adjustment range	Sound level
	50 bar	115 bar	210 bar	350 bar				
2,80	2,68	2,32	0,54	0,54	ZW3 *	0,75	70 - 350	75
5,19	4,17	-	0,86	0,82	ZW4	0,75	70 - 350	75
8,74	8,23	-	1,68	1,64	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

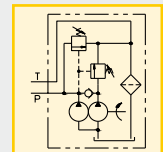
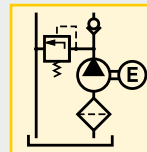
Motor: 0,75 - 1,12 kW

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.