
















Hydraulic Pumps Section Overview

Power Source	Pump Types	Maximum Reservoir Capacity	Max. Flow at Rated Pressure (in ³ /min)	Series	Image	Page
Manual	Lightweight Hand Pumps Exclusively from Enerpac	155 in ³	.15 (in ³ /stroke)	P		62 ▶
	Steel Hand Pumps	453 in ³	.29	P		64 ▶
	Low Pressure Hand Pumps	200 in ³	1.55 (in ³ /stroke)	P		66 ▶
	Foot Pump For handsfree operation	38 in ³	.15 (in ³ /stroke)	P		68 ▶
	Multifluid Hand Pumps Pumping fluids up to 1000 bar	38 in ³	1.33 (in ³ /stroke)	MP		69 ▶
Electric	Ultra-High Pressure Hand Pumps Pressure up to 40,000 psi	60 in ³	.15 (in ³ /stroke)	P/11		70 ▶
	Economy Series Compact and Portable	1 gal.	20	PU		72 ▶
	Submerged Series Powerful and Low-Noise	1.5 gal.	20	PE		74 ▶
	Z-Class Pumps ZU4-Series Portable Pumps	10 gal.	60	ZU		78 ▶ 80 ▶
	Z-Class Pumps ZE3 to ZE6-Series The Industrial Standard	10 gal.	200	ZE		86 ▶
Air	8000-Series The Maximum Flow Pump	25 gal.	462	PE		92 ▶
	Turbo II Air Hydraulic Pumps The New Air Pump Standard	305 in ³	10	PA		94 ▶
	Air Hydraulic Pumps Single and Twin-Air Motor	2 gal.	9	PA PAM		96 ▶ 97 ▶
Gasoline	ZA4 Air Hydraulic Pumps The Standard for Air-Hydraulic Pumps	10 gal.	80	ZA		98 ▶
	Atlas Series Your Gasoline Pump Solution	10 gal.	100	PGM		100 ▶
	8000 Series For the Largest Jobs	25 gal.	346	EGM		102 ▶

▼ Shown: PUJ-1200B



Heavy on Performance, Light on Weight

- Lightweight and compact design, 22 to 41 lbs
- Large easy-carry handle for maximum portability
- Two-speed operation reduces cycle times for improved productivity
- 115 VAC 50/60-cycle universal motor will operate on voltages as low as 60 volts
- 24 vdc remote motor control, 10-ft length for operator safety
- Starts under full load
- High strength molded shroud with integral handle, protects motor from contamination and damage
- Designed for intermittent duty cycle



Gauges

Minimize the risk of overloading and ensure long, dependable service from your equipment. For use with

the Economy pump the G-2535L gauge and GA-3 gauge adaptor are suggested.

For a full range of gauges, please refer to the System Components section.

Page: 115



Speed Chart

To determine how the 0.5 hp Economy pump will operate your cylinder, see the Pump/Cylinder Speed Chart in the "Yellow Pages".

Page: 113

▼ An Economy pump PUJ-1200B is used with an RC-2514 to reposition a stamping die to simplify maintenance.



Used with Cylinder	Usable Oil Capacity (gal)	Model Number*	Pressure Rating (psi)	
			1 st stage	2 nd stage
Single-acting	.50	PUD-1100B	200	10,000
	1.00	PUD-1101B	200	10,000
	.50	PUD-1300B	200	10,000
	1.00	PUD-1301B	200	10,000
	.50	PUJ-1200B	200	10,000
	1.00	PUJ-1201B	200	10,000
Double-acting	.50	PUJ-1400B	200	10,000
	1.00	PUJ-1401B	200	10,000

* For 230 volt applications replace "B" suffix with "E".

** Electric dump valve for auto-retract of cylinders.



About the Economy Pump

The Economy pump is best suited to power small to medium size cylinders or hydraulic tools. Its lightweight and compact design makes it ideal for applications which require easy transport of the pump. The Universal motor works well on long extension cords or generator-driven electrical power supplies.

For further application assistance refer to the "Yellow Pages".

PUD-1100 Series

- Provides advance/auto-retract of single-acting cylinders
- Ideal for punching applications

- For applications not requiring load holding
- 10-ft pendant controls motor and valve operation

PUD-1300 Series

- Provides advance/hold/retract of single-acting cylinders
- 10-foot pendant controls motor and valve operation
- Ideal for applications requiring remote valve operation.

PUJ-Series

- Available with 3- and 4-way valves for single- or double-acting cylinders
- 10-ft pendant controls the motor operation
- Manual valves provide advance/hold/retract tool control



* 230V pumps (with "E" suffix).

Page: 104

PU Series

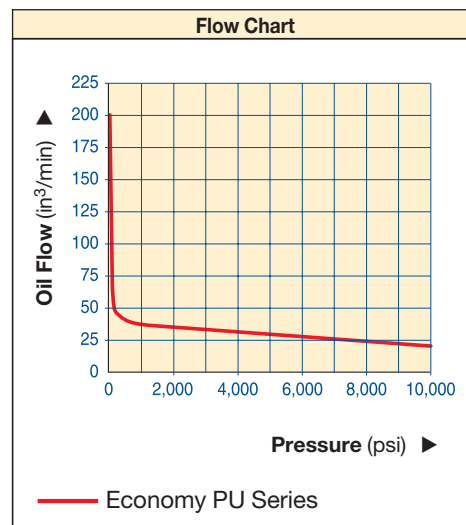
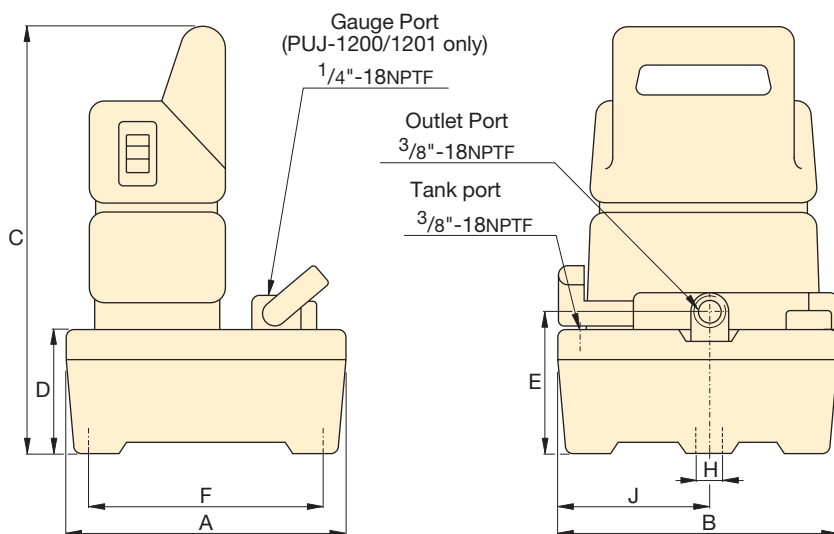


Reservoir Capacity:
0.5-1.0 gal.

Flow at Rated Pressure:
20 in³/min.

Motor Size:
.5 hp

Maximum Operating Pressure:
10,000 psi



Output Flow Rate		Valve Type	Current Draw	Motor Voltage	Sound Level	Dimensions (in)								Weight	Model Number*
(in ³ /min)						A	B	C	D	E	F	H	J		
1 st stage	2 nd stage	(Amps)	(VAC)	(dBA)	A	B	C	D	E	F	H	J	(lbs)		
200	20	Dump **	9.5	115	85	9.62	9.62	14.25	4.00	4.72	8.00	.40	5.25	26	PUD-1100B
200	20		9.5	115	85	14.50	12.18	14.72	4.15	5.12	12.74	.40	5.62	38	PUD-1101B
200	20	Dump and Hold	9.5	115	85	9.62	9.62	14.25	4.00	4.72	8.00	.40	5.25	26	PUD-1300B
200	20		9.5	115	85	14.50	12.18	14.72	4.15	5.12	12.74	.40	5.62	38	PUD-1301B
200	20	3-way, 2-pos.	9.5	115	85	9.62	9.62	14.25	4.00	4.72	8.00	.40	5.25	22	PUJ-1200B
200	20		9.5	115	85	14.50	12.18	14.72	4.15	5.12	12.74	.40	5.62	34	PUJ-1201B
200	20	4-way, 3-pos.	9.5	115	85	9.62	9.62	14.25	4.00	4.72	8.00	.40	5.25	29	PUJ-1400B
200	20		9.5	115	85	14.50	12.18	14.72	4.15	5.12	12.74	.40	5.62	41	PUJ-1401B

▼ Shown: PEJ-1401B



- Two-speed operation reduces cycle times for improved productivity
- Powerful .5 hp induction motor is submerged in the oil reservoir to run cooler, protect the motor, simplify the pump interface, save space and reduce noise
- Large 1.5 gallon reservoir allows operation of a wide range of cylinders
- 24 VDC remote pendant control on certain models for safer operation
- Externally adjustable relief valve allows control of operating pressure without opening the pump
- 40-micron internal return line filter keeps oil clean, promoting longer pump life
- Full length side tube for easy monitoring of oil level






◀ The Remote Jog Model of the Submerged Pump simplifies repair on this construction crane.

Best Performance for Mid-Range Cylinders and Tools

▼ SELECTION CHART

For more technical information see next page.

5 BASIC PUMP TYPES	
Select the model that suits your application. For special requirements see page 77 or contact your Enerpac office.	
PED-Series: with Dump Valve <ul style="list-style-type: none"> • Ideal for punching, crimping and cutting • For use when load holding is not required • Control pendant with 10 ft. cord controls valve and motor 	
PEM-Series: with Manual Valve <ul style="list-style-type: none"> • Ideal choice for most applications • Manual valve control, for both single-acting and double-acting applications • Manual motor control 	
PER-Series: with Solenoid Valve <ul style="list-style-type: none"> • Ideal for production and lifting • All valves are 3-position for Advance/Hold/Retract • Control pendant with 10 ft. cord for remote valve operation 	
PEJ-Series: with Remote Jog <ul style="list-style-type: none"> • For light production and lifting applications • Manual valve control for single-acting or double-acting cylinders • Control pendant with 10 ft. cord for remote motor operation 	
PES-Series: with Pressure Switch <ul style="list-style-type: none"> • Designed for maintaining pressure applications, such as clamping, workholding and testing • All versions include manual valves for directional control 	

* Contact Enerpac for details on VM style valves.

Submerged Electric Pumps



Submerged Pump Application

The Submerged pump is best suited to power small to medium size cylinders or hydraulic tools, or whenever a quiet, intermittent duty cycle is needed. With its low sound level and the addition of the optional oil cooler, the Submerged pump is suited to light production work as well.

Its lightweight and compact design also make it ideal for applications which require some transport of the pump.

For further application assistance see the "Yellow Pages" or contact your local Enerpac office.

Page: 104

PE Series



Reservoir Capacity:

1.5 gal.

Flow at Rated Pressure:

20 in³/min.

Motor Size:

.5 hp

Maximum Operating Pressure:

10,000 psi

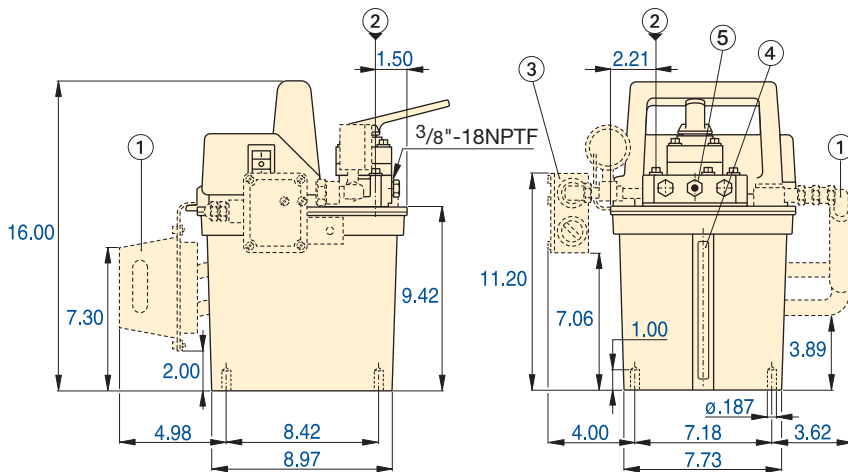
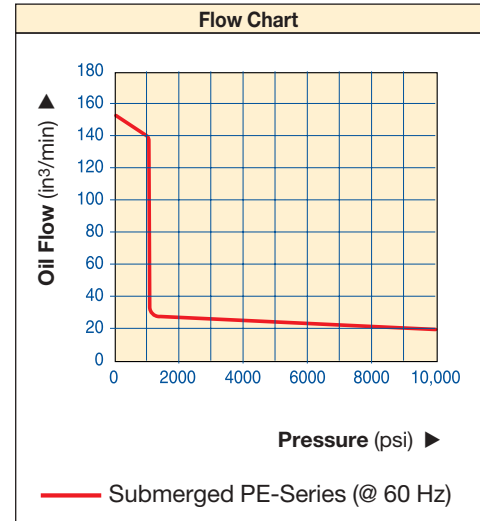
Pump Type	Used with Cylinder	Valve Function	Valve Type*	Usable Oil Capacity (gal)	Model Number 115 VAC, 1 ph	Weight (lbs)
	Single-acting	Advance/Retract	Dump	1.5	PED-1001B	55
	Single-acting	Advance/Retract	Manual VMP 10000D	1.5	PEM-1201B	53
	Single-acting	Advance/Hold/Retract	Manual VMF 10000D	1.5	PEM-1301B	53
	Double-acting	Advance/Hold/Retract	Manual VMC 10000D	1.5	PEM-1401B	53
	Single-acting	Advance/Hold/Retract	Solenoid (VEF-15500D)	1.5	PER-1301B	65
	Double-acting	Advance/Hold/Retract	Solenoid (VEC-15600D)	1.5	PER-1401B	65
	Single-acting	Advance/Retract	Manual VMP 10000D	1.5	PEJ-1201B	55
	Single-acting	Advance/Hold/Retract	Manual VMF 10000D	1.5	PEJ-1301B	55
	Double-acting	Advance/Hold/Retract	Manual VMC 10000D	1.5	PEJ-1401B	55
	Single-acting	Advance/Retract	Manual VMP 10000D	1.5	PES-1201B	62
	Double-acting	Advance/Hold/Retract	Manual VMC 10000D	1.5	PES-1401B	62

PE-Series, Submerged Electric Pumps

◀ For full features see page 74.

Submerged Pump Performance								
Motor Size	Pressure Rating		Output Flow Rate**		Motor Electrical Specifications*	Sound Level	Relief Valve Adjustment Range	
	(psi)		(in ³ /min)					
	(hp)	1 st stage	2 nd stage	1 st stage				
0.5	1,000	10,000	150	20	13 @ 115-1-50/60 6.75 @ 230-1-50/60	62-70	1,000-10,000	

* At bypass and maximum pressure. See matrix footnotes on next page for Hz limitations.
** All flow data at 60 Hz, 50 Hz data will be 5/6 th this number.



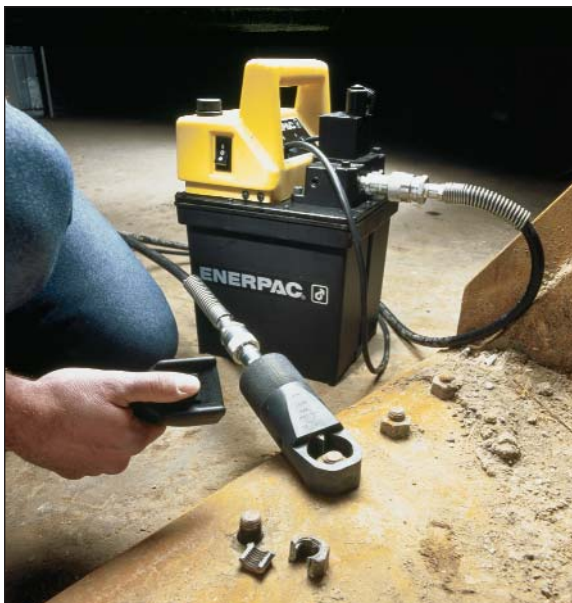
Dimensions shown in inches.

- ① Heat Exchanger (optional for all models)
- ② Fill Port
- ③ Pressure Switch (PES-Series, optional for other models)
- ④ Oil Level Indicator
- ⑤ Adjustable Relief Valve

i **Speed Chart**

To determine how a submerged pump will operate your cylinder, see the Pump/Cylinder Speed Chart in the "Yellow Pages".

Page: **113**



◀ This PED-1001B Submerged pump quickly and quietly powers a hydraulic nut cutter in this bucket maintenance application.

Submerged Electric Pumps Ordering Matrix

CUSTOM BUILD YOUR SUBMERGED PUMP

If the Submerged Pump that would best fit your application cannot be found in the chart on page 75, you can easily build your custom submerged pump here.

▼ This is how a Submerged Pump Model Number is built up:



1	2	3	4	5	6	7
Product Type	Motor Type	Pump Type	Pump Series	Valve Type	Reservoir Size	Motor Voltage

1 Product Type

P = Pump

2 Motor Type

E = Electric motor

3 Pump Type

D = Dump

J = Jog

M = Manual

R = Remote (Solenoid) ¹⁾²⁾

S = Pressure switch

4 Pump Series

1 = .5 hp, 10,000 psi

5 Valve Type

0 = Dump

2 = 3-way, 2-position, normally open

3 = 3-way, 3-position, tandem center

4 = 4-way, 3-position, tandem center

6 Reservoir Size

01 = 1.5 gallon

7 Motor Voltage and Heat Exchanger

B = 115 V, 1 Ph, 60 Hz ¹⁾

D = 115 V, 1 Ph, 60 Hz ¹⁾
with heat exchanger

E = 230 V, 1 Ph, 50 Hz ²⁾

F = 230 V, 1 Ph, 50 Hz ²⁾
with heat exchanger

I = 230 V, 1 Ph, 60 Hz

¹⁾ Can also run at 50 Hz with manual valve

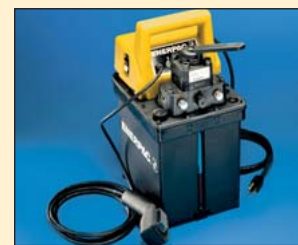
²⁾ Can also run at 60 Hz with manual valve

Ordering Example

Model Number: PER-1301B

The PER-1301B is a .5 hp, 10,000 psi, submerged electric pump, with 1.5 gallon usable oil capacity, a 3-way, 3-position modular, remote solenoid valve and a 115 V, 1 Phase, 60 Hz motor.

PE Series



Reservoir Capacity:

1.5 gal.

Flow at Rated Pressure:

20 in³/min.

Motor Size:

.5 hp

Maximum Operating Pressure:

10,000 psi



Hoses

Enerpac offers a complete line of high-quality hydraulic hoses. To ensure the integrity of your system,

specify only genuine Enerpac hydraulic hoses.

Page: **116**



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.

Page: **122**



The **PER-1301B**, **PER-1401B**, **PER-1301D** and **PER-1401D** include a Modular (solenoid) Valve and pilot operating check.

Page: **132**

Introducing the *Z-Class* power pumps from Enerpac—pumps that run cooler, use less electricity and are easy to service.



Enerpac has used the latest metallurgical, bearing and seal technologies to produce a pump whose features and benefits far surpass the electric pumps that are available today. By reducing the number of moving parts, improving flow dynamics and decreasing friction, *Z-Class* pumps will stay on the job longer, require less energy to operate and when needed, have lower service costs.

Z-Class electric pumps from Enerpac—simply the best pump you will ever use.



Z-Class Pumping Element — The Heart of Your Hydraulic System

Highly efficient design provides increased flow rates, reduced heat generation and a decrease in power consumption. This means improved tool speed and increased service life—which results in higher productivity and lower operating costs.

Heavy-duty bearings extend pump life by reducing friction, reducing surface-loading and lowering bearing stresses.

Pump cavity oil bath extends pump life by reducing heat, improving lubrication and reducing wear.

Self-priming, high-flow 1st stage pump increases pump performance by super-charging the 2nd stage piston pump—improving oil flow in both hot and cold weather operation.

Balanced rotating components reduce vibration creating a smoother running pump—reducing wear, friction and sound levels.

Replaceable piston check-valves increase service life of major pump components.

Ergonomic low-voltage pendant features sealed switches and operates at 15 vdc for improved operator safety.

Back-lit LCD on select Z-Class pumps

- pump usage information, hour and cycle counts
- low-voltage warning and recording
- offers self-test and diagnostic capabilities
- information displayed in 6 languages
- pressure read-out (when used with the optional pressure transducer)
- adjustable trigger pressure setting (when used with the optional pressure transducer)



Z-Class factory installed options & accessories

Extensive list of accessories including heat exchanger, roll-bars, skid bar, pressure transducer, return line filter and level and temperature switches, allow complete pump control over a wide range of industrial applications.

Z-Class electric pumps for your application

Available in one flow range for universal motor and 4 flow ranges for induction motor. Choose from single or two-stage models to provide the optimum cylinder and tool performance for almost any industrial application.

Pump Series	Motor Size	Flow @ 10,000 psi
ZU4	1.7 hp	60 in ³ /min
ZE3	1.0 hp	40 in ³ /min
ZE4	1.5 hp	60 in ³ /min
ZE5	3.0 hp	120 in ³ /min
ZE6	7.5 hp	200 in ³ /min



ZU4 Series Pump Applications

- **Mobile:** when frequent pump transport is required and/or on remote locations
- **Universal motor:** 1-phase, runs well under poor voltage supply, using generator power supply or using long extension cord
- **Duty-cycle:** for intermittent applications
- **Cylinders and tools:** for medium to large size single- and double-acting applications and high speed.



ZE Series Pump Applications

- **Stationary:** when pump remains in one location
- **Induction motor:** 1 and 3-phase for high cycle usage
- **Duty-cycle:** for heavy-duty, extended cycle application
- **Cylinders and tools:** for medium to large size single- and double-acting applications and high speed.

▼ Shown from left to right: ZU4108DB-T, ZU4420SB-H, ZU4304ME-K



- Features **Z-Class** high-efficiency pump design; higher oil flow and bypass pressure, cooler running and requires 18% less current draw than comparable pumps
- Powerful 1.7 hp universal electric motor provides high power-to-weight ratio and excellent low-voltage operating characteristics
- High-strength, molded composite shroud protects motor and electronics, while providing an ergonomic, non-conductive handle for easy transport
- Low-voltage pendant provides additional safety for the operator (remote control units)
- LCD readout provides a number of diagnostic and readout capabilities never before offered on a portable electric pump (included with electric valves, optional with manual valves)

▼ COMMON PUMP MODELS

For technical information and other options see next page.

BASIC PUMP TYPES

Select the model that suits your application. For special requirements contact your Enerpac office.

Manual Valve

- Ideal choice for most applications
- Manual valve control, for single-acting or double-acting applications
- Motor control on shroud

Manual Valve with Pendant

- For light production and lifting applications
- Manual valve control for single-acting or double-acting cylinders
- Low-voltage control pendant with 10-ft. cord for remote motor operation

Dump Valve

- Ideal for punching, crimping and cutting
- For use when load-holding is not required
- Low-voltage control pendant with 10-ft. cord controls valve and motor

Solenoid Valve

- Ideal for lifting applications and where remote control is required
- Motor runs continuously on pumps with VE33 and VE43 valves. With VE32 valve, motor only runs during the advance function, while holding and retracting, the motor is off
- Low-voltage control pendant with 10 ft. cord for remote motor and valve operation



◀ *Designed to be tough, the ZU4-Series with steel reservoirs will take the abuse of today's construction sites. The ZU4908JE is the ideal pump for post tensioning applications. For post tensioning tools see page 186.*

ZU-Series, Electric Pumps



ZU4 Pump Application

The ZU4 pump is best suited to power medium to large size cylinders or hydraulic tools, or wherever high speed, intermittent duty cycle is needed.

Patented Z-Class technology provides high by-pass pressures for increased productivity, specifically in applications using long hose runs and high-pressure drop circuits like heavy lifting or certain double-acting tools.

Its lightweight and compact design make it ideal for applications which require easy transport of the pump. It utilizes a universal motor which will work well on long extension cords or generator driven electrical power supplies.

For further application assistance contact your local Enerpac office.



ZU Series



Reservoir Capacity:

1.0-10.0 gal.

Flow at Rated Pressure:

60 in³/min.

Motor Size:

1.7 hp

Maximum Operating Pressure:

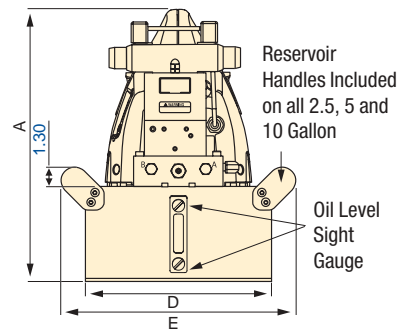
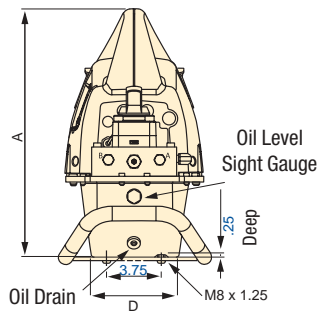
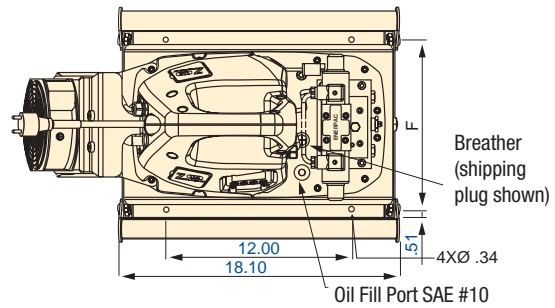
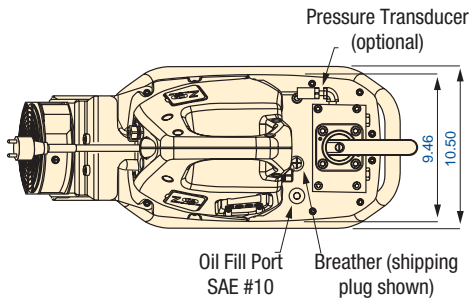
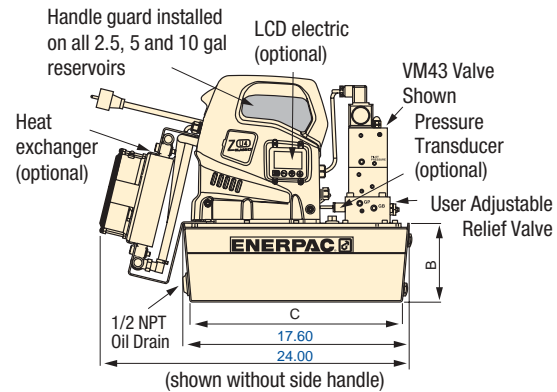
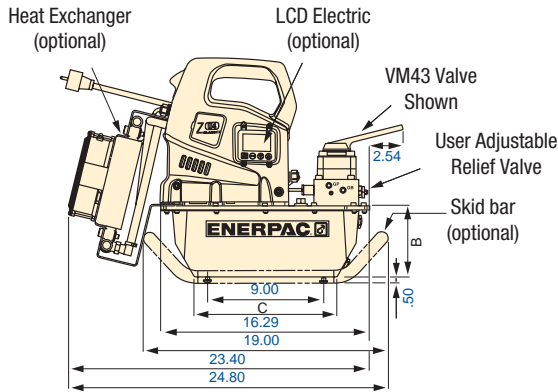
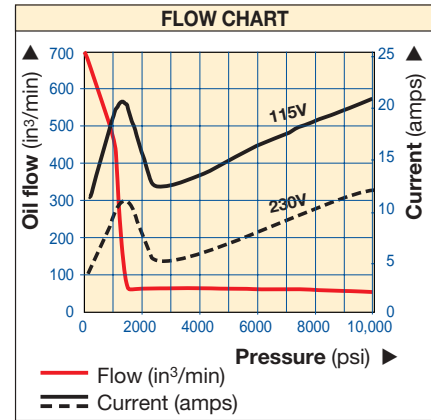
10,000 psi

Pump Type	Used with Cylinder		Valve Function			Valve Type ²⁾	Pump Control	Usable Oil Capacity (gal)	Model Number 115 VAC ³⁾ 1 Phase		LCD Product Weight w/oil ⁴⁾ (lbs)
									STD Electric	LCD Electric	
	●		●		●	VM32	Manual	1.0	ZU4204MB	ZU4204LB	59
	●		●		●	VM32	Manual	2.0	ZU4208MB	ZU4208LB	69
	●		●	●	●	VM33	Manual	2.0	ZU4308MB	ZU4308LB	70
	●		●	●	●	VM33	Manual	5.0	ZU4320MB	ZU4320LB	109
		●	●	●	●	VM43	Manual	2.0	ZU4408MB	ZU4408LB	70
		●	●	●	●	VM43	Manual	5.0	ZU4420MB	ZU4420LB	109
	●		●		●	VM32	Remote (Man.)	1.0	ZU4204JB	ZU4204KB	60
	●		●		●	VM32	Remote (Man.)	2.0	ZU4208JB	ZU4208KB	70
	●		●		●	VM32	Remote (Man.)	5.0	ZU4220JB	ZU4220KB	109
	●		●	●	●	VM33	Remote (Man.)	2.0	ZU4308JB	ZU4308KB	71
		●	●	●	●	VM43	Remote (Man.)	2.0	ZU4408JB	ZU4408KB	71
		●	●	●	●	VM43	Remote (Man.)	5.0	ZU4420JB	ZU4420KB	110
	●		●		●	VE32D	Remote	1.0	N/A	ZU4104DB	63
	●		●		●	VE32D	Remote	2.0	N/A	ZU4108DB	73
	●		●		●	VE32D	Remote	5.0	N/A	ZU4120DB	112
						-	-	-	-	-	-
						-	-	-	-	-	-
						-	-	-	-	-	-
	●		●		●	VE32	Remote	1.0	N/A	ZU4204SB	63
	●		●		●	VE32	Remote	2.0	N/A	ZU4208SB	73
	●		●	●	●	VE33	Remote	2.0	N/A	ZU4308SB	85
		●	●	●	●	VE43	Remote	2.0	N/A	ZU4408SB	85
		●	●	●	●	VE43	Remote	5.0	N/A	ZU4420SB	124
						-	-	-	-	-	-
						-	-	-	-	-	-
						-	-	-	-	-	-

- 1) All models meet CE safety requirements. "E" voltage versions also meet all requirements of the European EMC-Directive.
- 2) See valves section for technical information on valve types.
- 3) See custom order matrix for other voltage options.
- 4) Subtract 3 lbs. for STD Electric models.

ZU Series, Specifications and Dimensions

ZU4 Performance									
Motor Size	Output Flow Rate				Motor Electrical Specification	Sound Level	Relief Valve Adjustment Range		
	(in ³ /min)							(volts-ph-Hz)	(dBA)
(hp)	100 psi	700 psi	5000 psi	10,000 psi	(volts-ph-Hz)	(dBA)	(psi)		
1.7	700	535	76	60	115-1-50/60 230-1-50/60	85-90	2,000-10,000		



◀ Increased output flow and extended brush life increase productivity for post-tensioning applications.

Usable Reservoir Capacity (gal)	Pump Dimensions					
	A (in)	B (in)	C (in)	D (in)	E (in)	F (in)
1.0	17.0	5.6	11.0	6.0	-	-
2.0	19.5	8.0	11.3	6.6	-	-
2.5	17.6	6.1	16.5	12.0	15.1	11.0
5.0	18.6	7.1	16.3	16.6	19.7	15.6
10.0	22.0	10.6	15.7	19.9	22.7	18.9

CUSTOM BUILD YOUR ZU4 SERIES PUMP

If the ZU4 Series pump that would best fit your application cannot be found in the chart on page 81, you can easily build your custom ZU4 Series pump here.

▼ This is how a ZU-Series pump model number is built up:

Z	U	4	4	08	L	B	-	H	K	T	
1	2	3	4	5	6	7	8	8	8	8	
Product Type	Motor Type	Flow Group	Valve Type	Reservoir Size	Valve Operation	Voltage	Options	Options	Options	Options	

1 Product Type

Z = Pump Series

2 Motor Type

U = Universal electric motor

3 Flow Group

4 = 60 in³/min @ 10,000 psi

4 Valve Type (see page 130 for more details)

- 1 Dump (VE32D)
- 2 3 way/2 position manual or electric (VM32 or VE32)
- 3 3 way/3 position manual or electric (VM33 or VE33)
- 4 4 way/3 position manual or electric (VM43 or VE43)
- 6 3 way/3 position locking manual w/po check (VM33-L)
- 8 4 way/3 position locking manual w/po check (VM43-L)
- 9 4 way/3 position manual w/power seating (VM43-LPS)

5 Reservoir Size (useable capacity)

- 04 = 1.0 gallon
- 08 = 2.0 gallon
- 10 = 2.5 gallon (includes side handles)
- 20 = 5.0 gallon (includes side handles)
- 40 = 10.0 gallon (includes side handles)

6 Valve Operation

- D = Dump (solenoid valve w/pendant and LCD Electric)
- J = Jog (manual valve w/pendant and Standard Electric (i.e. w/o LCD))
- K = Jog (manual valve w/pendant and LCD Electric)
- L = Manual valve w/LCD Electric (w/o pendant)
- M = Manual valve w/Standard Electric (i.e. w/o LCD) [w/o pendant]
- S = Solenoid valve w/pendant and LCD Electric

7 Voltage

- B = 115V 1 ph 50/60Hz
- E = 208-240V 1 ph 50/60 Hz (w/European plug CE RF compliant)
- I = 208-240V 1 ph 50/60 Hz (w/NEMA 5-15 plug)

8 Options

- F = Filter
- G = 0-15,000 psi Gauge (2 1/2")¹⁾
- H = Heat exchanger²⁾
- K = Skidbar (1 and 2 gallon reservoirs only)
- L = Level/temp switch^{2) 3)}
- N = No reservoir handles (includes lifting eyes)
- R = Roll Bar
- T = Pressure transducer
- U = Foot switch

¹⁾ Pressure gauge not available on pump models with pressure transducer

²⁾ These options require LCD electric

³⁾ Not available on 1 and 2 gallon reservoirs

ZU Series



Reservoir Capacity:

1.0-10.0 gal.

Flow at Rated Pressure:

60 in³/min.

Motor Size:

1.7 hp

Maximum Operating Pressure:

10,000 psi



Speed Chart

To determine how a submerged pump will operate your cylinder, see the Pump/Cylinder Speed Chart in the "Yellow Pages".

Page: **113**



Ordering Example

Model Number:
ZU4408LB-HKT

ZU4408LB-HKT is a 60 in³/min at 10,000 psi pump with a 4 gal (8-liter) reservoir, operates on 115V 1ph 50/60 Hz and is specified with optional LCD electrical panel, heat exchanger, pressure transducer and skidbar.



Torque Wrench Pumps

System matched air and electric pumps provide control to operate Enerpac Torque Wrenches.

Page: **212**



Back-lit LCD*

- Pump usage information, hour and cycle counts
- Low-voltage warning and recording
- Self-test and diagnostic capabilities
- Information can be displayed in six different languages (English, Spanish, German, French, Italian, Portuguese)

* Optional with manual valves, included with solenoid valves



Foot Switch

- Hands-free remote control on solenoid dump and 3-position valves
- With 10 foot cord

Accessory Kit No.	Can be used on ZU4 pumps with
ZCF-2 *	Solenoid VE-Series valves

* Add suffix **U** for factory installation.



ZU4-Series Features

The LCD is factory installed and cannot be ordered separately. Refer to page 80 for selection chart and page 83 for ordering matrix.



Pressure Transducer*

- More durable than analog gauges (against mechanical and hydraulic shock)
- More accurate than analog gauges (0.5% full scale of pump)
- Calibration can be fine tuned for certification
- "Set pressure" feature turns off motor at user defined pressure (or shifts valve to neutral on models with VE33/VE43 valves)
- Display pressure in psi, bar, or MPa

* Requires LCD Electric

Accessory Kit model number	Adjustable Pressure Range (psi)	Switch-point repeatability	Dead-band (psi)
ZPT-U4 *	50-10,000	± 0,5%	50

* Add suffix **T** for factory installation.



Level/Temperature Switch

- Ensures feedback on pump oil level and temperature
- Drop-in design allows for easy installation to pump reservoir
- Plugs directly into pump electrical enclosure
- Built-in thermal sensing shuts off pump when unsafe operating temperature is reached
- Oil level switch shuts down pump before oil reaches an unsafe operating level

Model Number	Operating Temperature (° F)	Maximum Pressure (psi)	Weight (lbs)
ZLS-U4	40-230	150	.11

* Add suffix **L** for factory installation.



Hoses

Enerpac offers a complete line of high-quality hydraulic hoses. To ensure the integrity of your system, specify only Enerpac hydraulic hoses.

Page: 116



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.

Page: 122

ZU-Series Factory Installed Options and Accessories



Heat Exchanger*

- Removes heat from the bypass oil to provide cooler operation
- Stabilizes oil viscosity, increasing oil life and reduces wear of pump and other hydraulic components

* Requires LCD Electric

Accessory Kit No.	Fits on reservoir	Weight (lbs)
ZHE-U4 *	1, 2, 2.5, 5, and 10 gallon	9.1

* Add suffix **H** for factory installation.



Return Line Filter

- 25 micron nominal filter removes contaminants from return oil flow before allowing it back into tank
- Internal by-pass valve prevents damage if filter is dirty
- With maintenance indicator
- Replaceable filter element PF25

Accessory Kit Model Number	Maximum Pressure (psi)	Maximum Oil Flow (GPM)	By-pass Setting (psi)
ZPF *	200	12.0	25

* Add suffix **F** for factory installation.



Heat Exchanger

Can be factory installed on ZU4-Series LCD Electric pumps.

- Extends system life.
- Stabilizes oil temperature at a maximum of 130 °F at 70 °F ambient temperature.

Do not exceed maximum oil flow and pressure ratings. Heat exchanger is not suitable for water-glycol or high water based fluids.

Thermal Transfer *	Maximum pressure	Maximum oil flow	Voltage
Btu/h	(psi)	(GPM)	(VDC)
900	900	7.0	12

* At GPM at 70 °F ambient temperature.

ZU Series



Reservoir Capacity:

1.0-10.0 gal.

Flow at Rated Pressure:

60 in³/min.

Motor Size:

1.7 hp

Maximum Operating Pressure:

10,000 psi



Skidbar*

- Provides easy two-hand lift
- Provides greater pump stability on soft or uneven surfaces
- Also available as an add-on kit (model number SBZ-4)

* 1 and 2 gallon reservoirs only

Accessory Kit No.	For ZU-Series pumps with reservoir	Weight (lbs)
SBZ-4 *	1-2 gal. w/o heat exchanger	4.8
SBZ-4L *	1-2 gal. with heat exchanger	7.0

* Add suffix **K** for factory installation.

▼ Shown from left to right: ZE3304MB-K, ZE4110DB-FHR



The New Standard for Industrial Applications, Z-Class



All models in the chart below are the industry's most commonly selected pump configurations. See the Z-Class pump ordering matrix for more options.

Page: 89

▼ SELECTION CHART *

BASIC PUMP CONFIGURATIONS Select your ZE pump model here for most applications. For special requirements, see the ZE Pump ordering matrix.	Pump Type	Used with Cylinder		Valve Function			Valve** Model Number	Useable Oil Capacity (gal)
Manual Valve without electric box or LCD <ul style="list-style-type: none"> • Ideal choice for most applications • Manual valve control, for both single-acting or double-acting applications • Manual motor control • On/off switch on 1-phase electric motor 		●		●		●	VM32	2.0
		●		●	●	●	VM33	2.0
		●		●	●	●	VM33	5.0
		●		●	●	●	VM33	10.0
			●	●	●	●	VM43	2.0
			●	●	●	●	VM43	5.0
			●	●	●	●	VM43	10.0
Manual Valve with electric box and LCD <ul style="list-style-type: none"> • Ideal choice for most applications • Manual valve control, for both single-acting or double-acting applications • Manual motor control 		●		●		●	VM32	2.0
		●		●		●	VM32	2.5
		●		●	●	●	VM33	5.0
		●		●	●	●	VM33	10.0
			●	●	●	●	VM43	5.0
			●	●	●	●	VM43	10.0
Solenoid Dump Valve with electric box and LCD <ul style="list-style-type: none"> • Ideal for punching, crimping and cutting • For use when load holding is not required • Push-button control pendant with 10 ft. cord controls the valve and motor 		●		●		●	VE32D	1.0
		●		●		●	VE32D	2.0
		●		●		●	VE32D	2.5
		●		●		●	VE32D	5.0
Solenoid 3-position Valve with Electric Box and LCD <ul style="list-style-type: none"> • Ideal for production and lifting applications • All valves are 3-position for Advance-Hold-Retract • Push-button control pendant with 10 ft. cord controls the valve and motor 		●		●	●	●	VE33	2.0
		●		●	●	●	VE33	2.5
		●		●	●	●	VE33	5.0
			●	●	●	●	VE43	2.0
			●	●	●	●	VE43	2.5
			●	●	●	●	VE43	5.0
			●	●	●	●	VE43	10.0

* Models in this chart are 115 VAC, 1-phase at 50/60 Hz for ZE3-4 or 220 VAC, 3 phase at 50/60 Hz for ZE5-6. For other options, please refer to the ZE Pump ordering matrix ** See Valve Section for technical information.

ZE-Series Electric Pumps

- Features **Z-Class** high-efficiency pump design; higher oil flow and by-pass pressure, cooler running and requires 18% less current draw than comparable pumps
- Totally enclosed, fan-cooled industrial electric motors supply extended life and stand up to harsh industrial environments
- Low-voltage pendant, on certain models, provides additional safety for the operator
- Multiple valve and reservoir configurations provide application specific models to match the most demanding industrial applications
- High-strength, molded electrical enclosure protects electronics, power supplies and LCD readout from harsh industrial environments
- LCD readout provides a number of diagnostic and readout capabilities never before offered on an industrial pump (included with electric valve models, optional on other models)

ZE Series



Reservoir Capacity:
1.0 - 10 gal.

Flow at Rated Pressure:
40 - 200 in³/min

Motor Size:
1.0 - 7.5 hp

Maximum Operating Pressure:
10,000 psi



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



Single-Stage or Two-Stage Pumps

Choose single-stage pumps for applications that require constant flow regardless of pressure, such as testing or clamping.

Two-stage pumps have an increased output flow at low pressure to allow fast movement towards the load, for reduced cycle times and increased productivity.



How to Order Single-Stage Pumps

To specify a single-stage pump, place the letter "S" at the end of the model number.

For example:

ZE5320LG-S

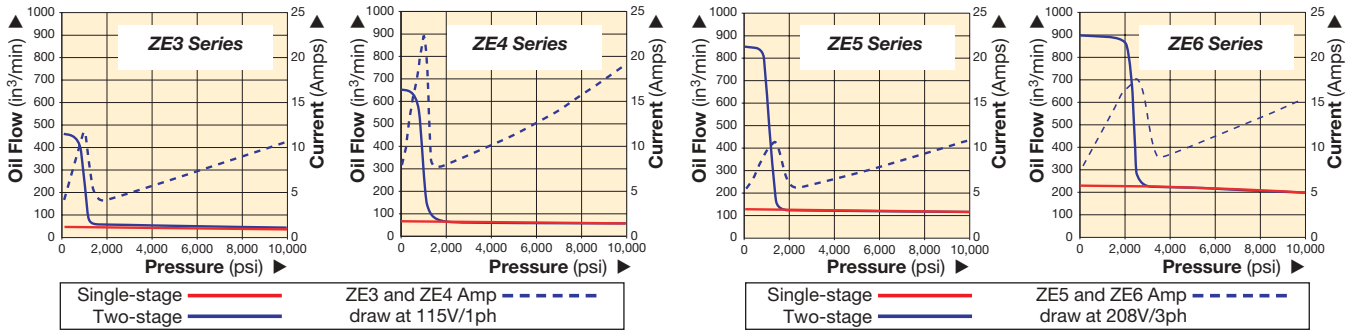
This is a 3.0 hp ZE5 series pump with a VM33 manual valve, 5 gallon reservoir, LCD electrical box, 220 VAC, 50/60 Hz 3-phase motor and single-speed option.

ZE3 Series (1.0 hp) Output Flow Rate at 10,000 psi: 40 in ³ /min		ZE4 Series (1.5 hp) Output Flow Rate at 10,000 psi: 60 in ³ /min		ZE5 Series (3.0 hp) Output Flow Rate at 10,000 psi: 120 in ³ /min		ZE6 Series (7.5 hp) Output Flow Rate at 10,000 psi: 200 in ³ /min	
Model Number	Weight (lbs)	Model Number	Weight (lbs)	Model Number	Weight (lbs)	Model Number	Weight (lbs)
ZE3208MB	96	ZE4208MB	104				
ZE3308MB	97	ZE4308MB	105				
ZE3320MB	133	ZE4320MB	141	ZE5320MG	152	ZE6320MG	192
ZE3340MB	183	ZE4340MB	191	ZE5340MG	203	ZE6340MG	243
ZE3408MB	97	ZE4408MB	106				
ZE3420MB	133	ZE4420MB	141	ZE5420MG	152	ZE6420MG	192
ZE3440MB	183	ZE4440MB	191	ZE5440MG	203	ZE6440MG	243
ZE3208LB	101	ZE4208LB	110				
ZE3210LB	106	ZE4210LB	115	ZE5210LG	132	ZE6210LG	172
ZE3320LB	138	ZE4320LB	147	ZE5320LG	160	ZE6320LG	200
ZE3340LB	188	ZE4340LB	197	ZE5340LG	210	ZE6340LG	250
ZE3420LB	139	ZE4420LB	147	ZE5420LG	160	ZE6420LG	200
ZE3440LB	189	ZE4440LB	197	ZE5440LG	210	ZE6440LG	251
ZE3104DB	95	ZE4104DB	104				
ZE3108DB	105	ZE4108DB	114				
ZE3110DB	110	ZE4110DB	119	ZE5110DG	136	ZE6110DG	176
ZE3120DB	141	ZE4120DB	150	ZE5120DG	163	ZE6120DG	203
ZE3308SB	107	ZE4308SB	125				
ZE3310SB	112	ZE4310SB	130	ZE5310SG	147	ZE6310SG	188
ZE3320SB	153	ZE4320SB	161	ZE5320SG	174	ZE6320SG	214
ZE3408SB	117	ZE4408SB	125				
ZE3410SB	122	ZE4410SB	130	ZE5410SG	147	ZE6410SG	188
ZE3420SB	153	ZE4420SB	161	ZE5420SG	174	ZE6420SG	214
ZE3440SB	204	ZE4440SB	212	ZE5440SG	225	ZE6440SG	265

* All models in this chart are 115 VAC, 1-phase at 50/60 Hz. For other options please refer to the ZE Pump ordering matrix.

ZE-Series, Specifications and Dimensions

▼ FLOW CHARTS

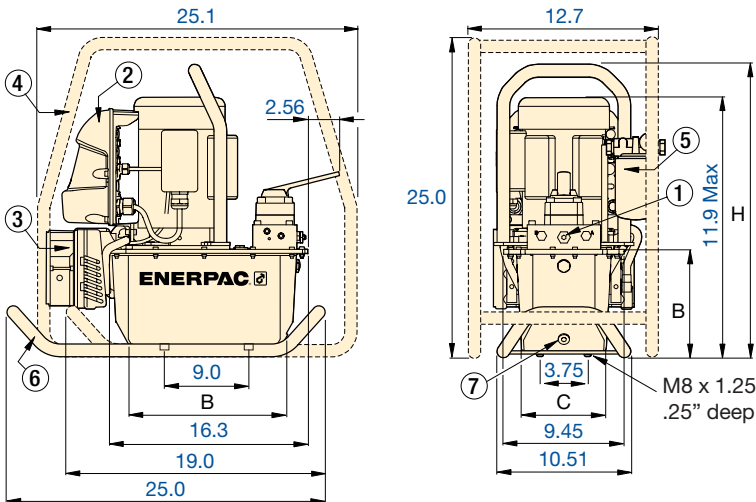


▼ PERFORMANCE CHART

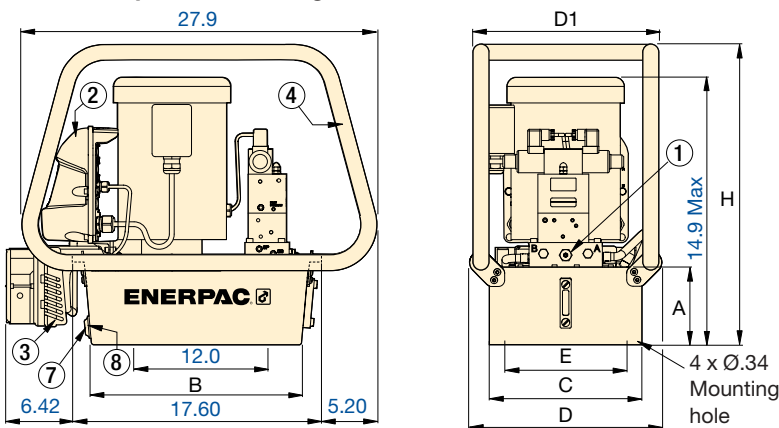
ZE Pump Series	Operation	Output Flow Rate (in ³ /min)				Available Reservoir Sizes (useable oil) (gal)	Motor Size		Relief Valve Adjustment Range (psi)	Sound Level (dBA)
		100 psi	700 psi	5,000 psi	10,000 psi		hp	RPM		
3	Single-stage	43	43	42	40	1, 2, 2.5, 5, 10	1.0	1750	1000 - 10,000	75
	Two-stage	450	385	42	40					
4	Single-stage	64	64	62	60	1, 2, 2.5, 5, 10	1.5	1750	1000 - 10,000	75
	Two-stage	650	600	62	60					
5	Single-stage	128	126	123	120	2.5, 5, 10	3.0	1750	1000 - 10,000	75
	Two-stage	850	825	123	120					
6	Single-stage	220	215	210	200	2.5, 5, 10	7.5	3450	1000 - 10,000	80
	Two-stage	900	890	210	200					

Output flow rate is listed at 60 Hz.

Flow rate will be approximately 5/6 of these values at 50 Hz.



ZE-Series Pumps with 1 and 2 gallon reservoir



ZE-Series Pumps with 2.5, 5, 10 gallon reservoir



User Adjustable Relief Valve

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

- ① User adjustable relief valve on all manual and solenoid valves:
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)

Reservoir Size (useable oil) (gal)	ZE-Series Pump Dimensions (in)						
	A	B	C	D	D1	E	H
1.0	5.6	11.0	6.0	-	-	-	20.2
2.0	8.1	11.3	6.6	-	-	-	22.6
2.5	6.1	16.5	12.0	15.1	14.6	11.0	23.6
5.0	7.1	16.5	16.6	19.7	19.2	15.6	24.6
10.0	10.6	15.7	19.9	22.7	22.5	18.9	28.1

ZE Electric Pump Ordering Matrix

CUSTOM BUILD YOUR ZE SERIES PUMP

If the ZE Series pump that would best fit your application cannot be found in the chart on page 86, you can easily build your custom ZE Series pump here.

▼ This is how a ZE Series Pump model is built up:

Z	E	4	4	20	L	B	-	F	H	L	T
1	2	3	4	5	6	7		8	8	8	8
Product Type	Motor Type	Flow Group	Valve Type	Useable Oil Capacity	Valve Operation	Voltage		Options	Options	Options	Options

1 Product Type

Z = Pump Class

2 Prime movers

E = Induction Electric Motor

3 Flow Group

- 3** = 40 in³/min @ 10,000 psi
- 4** = 60 in³/min @ 10,000 psi
- 5** = 120 in³/min @ 10,000 psi¹⁾
- 6** = 200 in³/min @ 10,000 psi¹⁾

4 Valve Types

- 0** = No valve w/coverplate
- 1** = Dump (VE32D)
- 2** = 3 way/2 position manual (VM32)
- 3** = 3 way/3 position manual or electric (VM33 or VE33)
- 4** = 4 way/3 position manual or electric (VM43 or VE43)
- 6** = 3 way/3 position locking manual w/po check (VM33L)
- 8** = 4 way/3 position locking manual w/po check (VM43L)

5 Useable Oil Capacity

- 04** = 1.0 gallon²⁾
- 08** = 2.0 gallon²⁾
- 10** = 2.5 gallon
- 20** = 5.0 gallon
- 40** = 10.0 gallon

8 Options (specify in alphabetical order)

- | | |
|--|--|
| F = Filter | P = Pressure switch ⁴⁾ |
| G = 0-15,000 psi Gauge (2 ¹ / ₂ " ⁷⁾ | R = Roll bar |
| H = Heat Exchanger ⁴⁾ | S = Single stage |
| K = Skidbar (1 and 2 gal. reservoirs only) | T = Pressure transducer ⁴⁾ ⁷⁾ |
| L = Level/temp switch ⁴⁾ ⁵⁾ | U = Foot switch ⁴⁾ |
| N = No reservoir handles (includes lifting eyes) | |

- 1) ZE5 and ZE6 series pumps only available with 3-phase motors.
- 2) 1 and 2 gallon reservoirs only available on ZE3 and ZE4 series pumps.
- 3) 115 volt pumps are supplied with CE and CSA approved 15 amp plug for intermittent use. 20 A circuit recommended for frequent full pressure use.
- 4) These options require LCD electrical package. Pressure switch option only available on manual valves without locking valve. The LCD electrical package can accept either a pressure switch or pressure transducer, but not both.
- 5) Not available with 1 and 2 gallon reservoirs.
- 6) Standard Electric models with 3-phase motors are shipped without cord, motor starter or overload protection.
- 7) Pressure gauge not available on pump models with pressure transducer. Pressure transducer provides digital pressure readout on LCD display.

6 Valve Operation

- D** = Dump valve (w/ pendant and LCD)
- L** = Manual valve (w/o pendant, w/ LCD)
- M** = Manual valve ⁶⁾ (w/o pendant or LCD)
- N** = No valve ⁶⁾ (no electrical box)
- S** = Solenoid valve (w/ pendant and LCD)
- W** = No valve (w/o pendant and LCD)

7 Voltages

- Single Phase
 - B** = 115V 1 ph 50-60Hz ³⁾
 - E** = 208-240V 1 ph 50-60 Hz European Plug
 - I** = 208-240V 1 ph 50-60 Hz USA Plug
- Three Phase ⁶⁾
 - M** = 190-200V 3ph 50-60Hz
 - G** = 208-240V 3ph 50-60Hz
 - W** = 380-415V 3ph 50-60Hz
 - K** = 440V 3ph 50-60Hz
 - J** = 460-480V 3ph 50-60Hz
 - R** = 575V 3ph 60Hz

ZE Series



Reservoir Capacity:

1 - 10 gal.

Flow at Rated Pressure:

40 - 200 in³/min.

Motor Size:

1.0 - 7.5 hp

Maximum Operating Pressure:

10,000 psi



Ordering Example 1

Model Number: ZE4420MB

ZE4420MB is a 60 in³/min, 10,000 psi pump with a 4 way, 3-position manual valve, a 5 gallon reservoir, operates on a 115 VAC 1 ph 50/60 Hz motor and includes standard electrical package.

Ordering Example 2

Model Number: ZE6440SG-HNU

ZE6440SG-HNU is a 200 in³/min, 10,000 psi pump with a 4 way, 3-position electric valve, a 10 gallon reservoir, operates on a 230 VAC 3 ph 50/60 Hz motor. It includes LCD electrical package and foot switch on 10 ft cord, no reservoir handles and the optional heat exchanger.



Single-Stage or Two-Stage

Choose single-stage pumps for applications that require constant flow regardless of pressure, such as testing or clamping.

Two-stage pumps have an increased output flow at low pressure to allow fast movement towards the load, for reduced cycle times and increased productivity.



Electric Box 1)

- Back-lit LCD
- Pump usage information, hour and cycle counts
- Low-voltage warning and recording
- Self-test and diagnostic capabilities
- Pressure read-out 2)
- Auto-mode pressure setting 2)
- Information can be displayed in six languages 3)

- 1) Included on pumps with solenoid valves. Can be factory installed on pumps with manual valve
- 2) When used with optional pressure transducer
- 3) English, French, German, Italian, Spanish and Portuguese



Level/Temperature Switch 4)

- Shuts down pump before oil level reaches an unsafe level, avoiding damage due to cavitation
- Shuts down pump when unsafe oil temperature is reached
- Ideal if pump is used in remote area without visual access to oil level

4) 24 V, requires Electric Box. Available for 2.5, 5 and 10 gallon reservoirs

Accessory Kit Model Number	Fixed Temperature Signal (°F)	Operating Temperature (°F)	Max. Pressure (psi)
ZLS-U4 *	75	40 - 230	150

* Add suffix L for factory installation, see ordering matrix.



Return Line Filter

- 25 micron nominal filter removes contaminants from return oil flow before allowing it back into tank
- Internal by-pass valve prevents damage if filter is dirty
- With maintenance indicator
- Replaceable filter element PF25

Accessory Kit Model Number	Maximum Pressure (psi)	Maximum Oil Flow (GPM)	By-pass Setting (psi)
ZPF *	200	12.0	25

* Add suffix F for factory installation, see ordering matrix.



Roll Bars

- For easy portability and hoisting
- Protects pump and electric box
- Available for all reservoir sizes



Skid Bar

- Provides easy two-hand lift
- Provides greater pump stability on soft or uneven surfaces



Foot Switch 5)

- Hands-free remote control on solenoid dump and 3-position valves
- With 10 foot cord

5) 15 V, requires Electric Box

Accessory Kit Number	Fits on reservoir	Weight (lbs)
ZRB-04 *	1 and 2 gallon	12.1
ZRB-10 *	2.5 gallon	13.2
ZRB-20 *	5 gallon	13.2
ZRB-40 *	10 gallon	13.2

* Add suffix R for factory installation, see ordering matrix.

Accessory Kit Number	For ZE-Series pumps with reservoir	Weight (lbs)
SBZ-4 *	1-2 gal. w/o heat exchanger	4.8
SBZ-4L *	1-2 gal. with heat exchanger	7.0

* Add suffix K for factory installation, see ordering matrix.

Accessory Kit Number	Can be used on ZE-Series pumps with
ZCF-2 *	Solenoid VE-Series valves

* Add suffix U for factory installation, see ordering matrix.

ZE-Series, Factory Installed Options & Accessories



Pressure Transducer 1)

- Displays pressure on LCD in bar, MPa or psi
- More accurate than analog gauge
- Calibration can be fine-tuned for certification
- Easy-viewing variable rate display
- “Set pressure” feature turns off motor at user defined pressure

1) 24 V, requires Electric Box



Pressure Switch 2)

- Controls pump, monitors system
- Adjustable pressure 500-10,000 psi
- Includes glycerine filled 15,000 psi pressure gauge G2536L
- Accuracy $\pm 1,5\%$ of full scale

2) 24 V, requires Electric Box. Not available in combination with pressure transducer.

ZE Series



Reservoir Capacity:

1 - 10 gal.

Flow at Rated Pressure:

40 - 200 in³/min.

Motor Size:

1.0 - 7.5 hp

Maximum Operating Pressure:

10,000 psi

Accessory Kit Model number	Adjustable Pressure Range (psi)	Switch-point repeatability	Dead-band (psi)
ZPT-U4 *	50-10,000	$\pm 0,5\%$	50

* Add suffix **T** for factory installation, see ordering matrix.

Accessory Kit Model number	Switch-point repeatability	Deadband (psi)	Oil Ports (NPT)
ZPS-E3 *	$\pm 2\%$	115-550	3/8"

* Add suffix **P** for factory installation, see ordering matrix.



Pendants 3)

- For pump types with valve operation “W” (No Valve, with Electric Box, without pendant)

3) When ordering Enerpac VE-Series solenoid valve the pendant must be ordered separately. Pendant connection to be plugged into electric box

Pendant Model Number	To be used with solenoid valve:
ZCP-1	VE32D
ZCP-3	VE32, VE33, VE43



Heat Exchanger 4)

- Removes heat from bypass oil to provide cooler operation
- Stabilizes oil viscosity, increasing oil life and reduces wear of pump and other hydraulic components.

Accessory Kit Number	Fits on reservoir	Weight (lbs)
ZHE-E04 *	1 and 2 gallon	9.0
ZHE-E10 *	2.5, 5, and 10 gallon	9.0

* Add suffix **H** for factory installation, see ordering matrix.



ZHE-Series Heat Exchangers

Heat exchanger stabilizes oil temperature at 130 °F at 70 °F ambient temperature. Thermal transfer at 5 GPM and 70 °F ambient temperature: 900 Btu/hour.

Do not exceed max. oil flow of 7.0 GPM and max. pressure of 300 psi. Not suitable for water-glycol or high water based fluids.

▼ Shown: PEM-8418



- Panel-mounted pressure gauge and adjustable relief valve for system pressure control
- Two-speed pump design, with high by-pass pressure, for rapid cylinder advance
- Dual voltage motor (230/460 VAC, 3 phase, 60 Hz)
- Full length reservoir sight tube with integral thermometer for ease in monitoring oil level and temperature

The Largest Pump for the Largest Jobs



Locking Valves

Pumps with VM-4 manual valves are available with VM-4L manual valves for positive load holding.

Add suffix "L" to pump model number.

Page: 130



FS-34 Foot Control Switch

This 3-position switch allows hands-free control of the solenoid valve on the pump. Operates 24 and

115 V valves that use the square electrical connector.



Hoses

Enerpac offers a complete line of high-quality hydraulic hoses. To ensure the integrity of your system,

specify only genuine Enerpac hydraulic hoses.

Page: 116



◀ With similar specifications, a gasoline powered EGM-8000 Series is shown here performing a synchronized lift.

8000-Series Electric Pumps



About the 8000 Series

The 8000 Series is the largest pump in the Enerpac line and the best choice to power most large size cylinders, multiple cylinder circuits, and applications where the need for high speed requires high flow rates.

The 8000 Series, with its large reservoir capacity, is best suited

for large jobs and may be the only solution because of the required oil capacity.

For further application assistance see our “Yellow Pages”, or consult your local Enerpac office.

Page: 104

PE Series



Reservoir Capacity:

25 gal.

Flow at Rated Pressure:

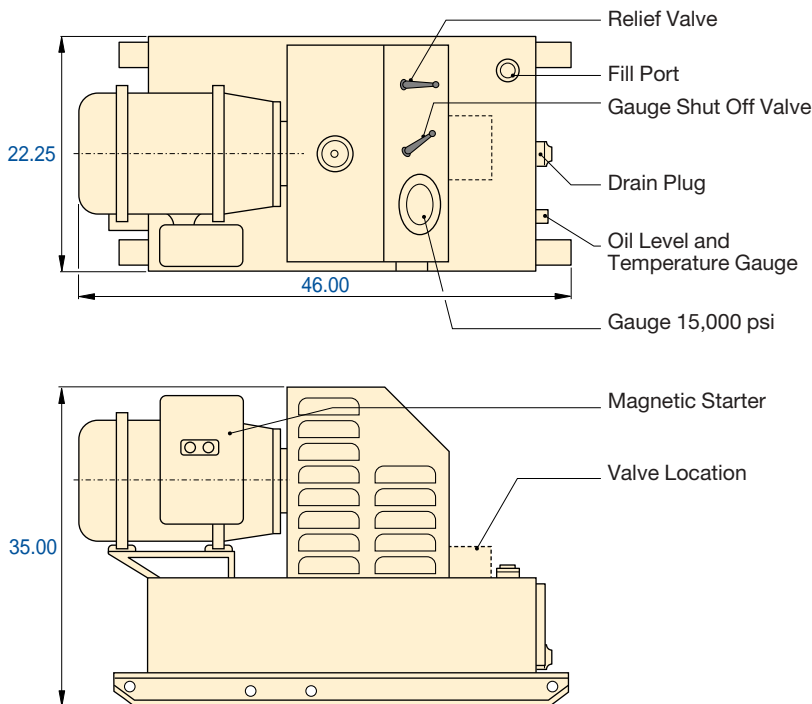
2.0 gal/min.

Motor Size:

12.5 hp

Maximum Operating Pressure:

10,000 psi



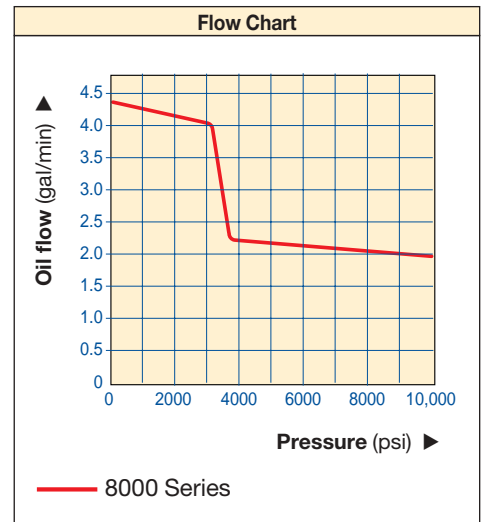
Dimensions shown in inches.



Speed Chart

To determine how an 8000 Series pump will operate your cylinder, see the Pump/Cylinder Speed Chart in the “Yellow Pages”.

Page: 113



Used with Cylinder	Usable Oil Capacity (gal)	Model Number	Pressure Rating (psi)		Output Flow Rate (gal/min)		Valve Type	Valve Function	Current Draw (Amps)	Motor Voltage* (VAC)	Sound Level (dBA)	Weight (lbs)
			1st stage	2nd stage	1st stage	2nd stage						
Single-acting	18	PEM-8218	3,700	10,000	4.4	2.0	Manual (VM-2)	3-way, 2-pos.	33.0	230	78-84	720
	18	PEM-8218C	3,700	10,000	4.4	2.0			16.5	460	78-84	720
Double-acting	18	PEM-8418	3,700	10,000	4.4	2.0	Manual (VM-4)	4-way, 3-pos.	33.0	230	78-84	720
	18	PEM-8418C	3,700	10,000	4.4	2.0			16.5	460	78-84	720
	18	PER-8418	3,700	10,000	4.4	2.0	Solenoid (VSP-4)	4-way, 3-pos.	33.0	230	78-84	765
	18	PER-8418C	3,700	10,000	4.4	2.0			16.5	460	78-84	765

* Consult Enerpac for availability of other voltages.