

▼ ZU4308MB (Classic), ZU4420SBH (Pro)



- High-efficiency two-speed pump design – higher oil flow and by-pass pressure
- Powerful 1.70 hp universal electric motor provides high power-to-weight ratio and excellent low-voltage operating characteristics
- High-strength, moulded 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).

Pro-Series models only

- Back-lit LCD readout provides pressure display and a number of diagnostics and readout capabilities never offered on a portable pump before:
 - pump usage information, hour and cycle counts
 - self-test, diagnostic and read-out capabilities
 - pressure readout and auto-mode pressure settings.



◀ Designed to be tough, the ZU4-Series with steel reservoirs will take the abuse of today's construction sites.



Z-Class – A Pump For Every Application

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

Enerpac ZU4-Series Pumps are built to power small to large-sized cylinders or hydraulic tools, or wherever high-speed, intermittent duty, remote hydraulic power is needed.

Classic Electric Pumps

- The Classic has traditional electro-mechanical components (transformers, relays and switches) in place of solid-state electronics.
- The Classic delivers durable, safe and efficient hydraulic power for demanding markets like construction, post-tensioning and foundation repair.

Standard Electric Pumps

- For applications that do not require digital display features of the Premium Pump. Available in all manual or jog versions.

Pro Electric Pumps

- Digital (LCD) display features a built-in hour meter and shows self-diagnostic, cycle-count and low-voltage warning information.
- Pressure can also be displayed when the pump is equipped with an optional pressure transducer.

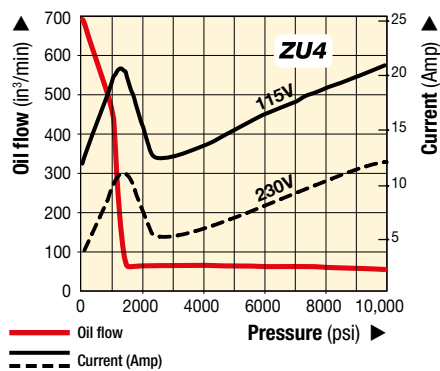


Assisted Return Pumps with Venturi Valve Technology

ZU4 and ZE-Series pumps feature Venturi Valve Technology to accelerate single-acting gravity and spring-return cylinder retraction speeds. See valve type in ordering matrix and details in section Directional Control Valves.

ZU4-Series, Specifications and Dimensions

OIL FLOW VERSUS PRESSURE



ZU4-SERIES PERFORMANCE CHART

Motor Size	Output Flow Rate at 60 Hz (in³/min)				Motor Electrical Specifications	Sound Level	Relief Valve Adjustment Range
(hp)	100 psi	700 psi	5,000 psi	10,000 psi	(Volts-Ph-Hz)	(dBA)	(psi)
1.70	700	535	76	60	115-1-50/60 230-1-50/60	85-90	2000 - 10,000

ZU4 Series



Reservoir Capacity:

1.2 - 10.3 gallons

Flow at Rated Pressure:

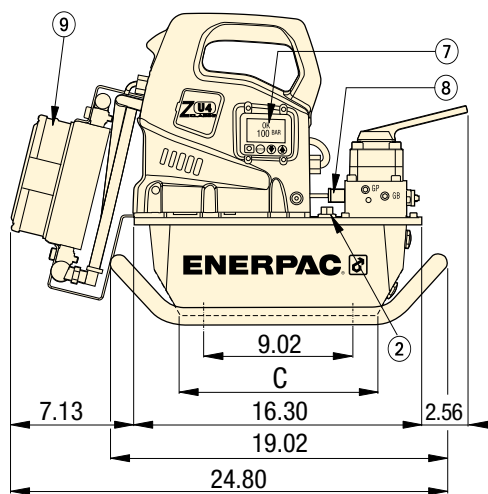
60 in³/min

Motor Size:

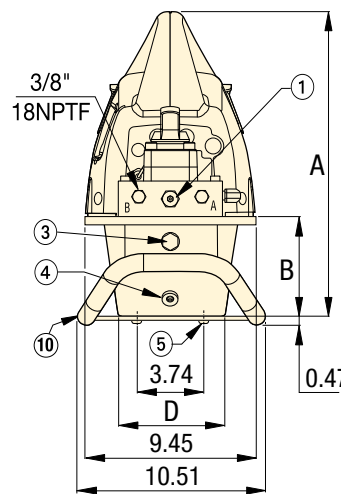
1.70 hp

Maximum Operating Pressure:

10,000 psi



ZU4-Series with 1.2 and 1.8 gallons reservoirs

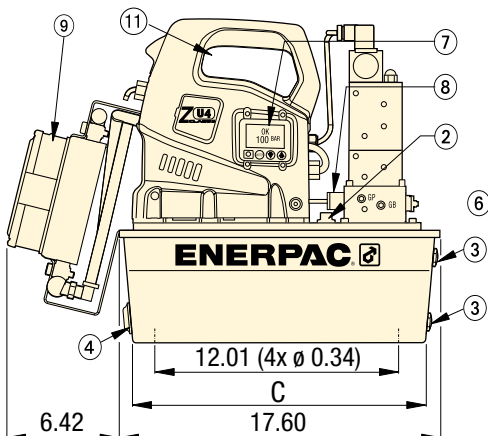


3/8"-18 NPTF Advance and Retract Ports

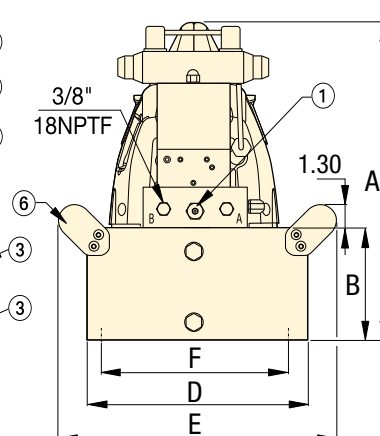
- ① User adjustable relief valve
- ② Oil fill port SAE #10 7/8"-14 UNF-2B
- ③ Oil level sight gauge
- ④ Oil drain 1/2" NPTF
- ⑤ M8, 0.25 inch (6 mm) deep
- ⑥ Handles on all 5.2 and 10.3 gallons reservoirs.

Options

- ⑦ Back-lit LCD Electric
- ⑧ Pressure transducer
- ⑨ Heat Exchanger
- ⑩ Skid Bar. Fits 1.2 and 1.8 gallons reservoirs
- ⑪ Handle guard installed on all 5.2 and 10.3 gallons reservoirs
- ⑫ Reservoir handles (not shown) included on all 5.2 and 10.3 gallons reservoirs



ZU4-Series with 5.2 and 10.3 gallons reservoirs
(left view shown without side handle)



Reservoir Capacity	Pump Dimensions (in)					
	(gal)	A	B	C	D	F
1.2	1.2	16.7	5.6	11.0	6.0	-
1.8	1.8	16.7	5.6	11.0	8.1	-
5.2	5.2	18.3	7.1	16.5	16.6	19.7
10.3	10.3	21.7	10.6	15.7	19.9	22.7

▼ STEP 1: Select a pump from the Pump Ordering Matrix

The functionality of the pump can be determined by the model number. Utilize the guide below to select the best pump for the application from the pump ordering matrix.

Z	U	4	4	08	J	B	-	H	R
1 Product Type	2 Motor Type	3 Flow Group	4 Valve Type	5 Reservoir Capacity	6 Valve Operation	7 Voltage		8 Factory Installed Accessories	

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

- 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 with pilot operated check valve (**VM33L**)
- 7** = 3 way/2 position manual (**VM22**)
- 8** = 4 way/3 position locking manual with pilot operated check valve (**VM43L**)
- 9** = 4 way/3 position manual w/power seating (**VM43LPS**)
- 10** = 3 way/3 position manual Venturi valve (**VM33VAC**)
- 11** = 3 way/3 position electric Venturi valve (**VE33VAC**)

5 Reservoir Capacity

- 04** = 1.2 gallons
- 08** = 1.8 gallons
- 20** = 5.2 gallons (includes side handles)
- 40** = 10.3 gallons (includes side handles)

6 Valve Operation

- D** = Dump solenoid valve with pendant and LCD Electric
- J** = Jog manual valve with pendant (without LCD)
- L** = Manual valve with LCD Electric (without pendant)
- M** = Manual valve (without pendant and LCD)
- P** = Manual valve with pendant (without LCD)
- S** = Solenoid valve with pendant and LCD Electric

7 Voltage

- B** = 115V, 1 ph, 50/60Hz
- E** = 208-240V, 1 ph, 50/60 Hz (with European plug and CE EMC compliant)
- I** = 208-240V, 1 ph, 50/60 Hz (with NEMA 6-15 plug)

▼ STEP 2: Factory Installed Accessories

Select factory installed accessories and add to the pump model number after the hyphen. The example above shows that a **Heat Exchanger (H)** and **Roll Cage (R)** have been added to the pump.

8 Factory installed accessories include the following:

- | | |
|---|--|
| F = Return Line Filter | N = Lifting Eyes (no reservoir handles) |
| G = Pressure Gauge ¹⁾ | R = Roll Cage |
| H = Heat Exchanger | T = Pressure Transducer |
| K = Skid Bar | U = Foot Switch |
| L = Level/Temperature Switch ²⁾ | |

^{1) + 2)}: See the notes about Pressure Gauge and Level/Temperature Switch in right column.



Two-Speed Pumps

Recommended for applications where cylinder plunger must advance rapidly to load contact, and applications where greater oil capacities are required, such as multiple cylinder hook-ups.



Speed Chart

To determine how a specific pump will operate your cylinder, see the Pump-Cylinder Speed Chart in the 'Yellow Pages'.

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Assisted Return Pumps with Venturi Valve Technology

ZU4 and ZE-Series pumps feature Venturi Valve Technology to accelerate single-acting gravity and spring-return cylinder retraction speeds. See valve type in ordering matrix and details in section Directional Control Valves.

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Spring Centered Valve Kits

VM and VC-Series manual 3-position valves can be easily converted into spring centered valves. With these retrofit kits the handle will automatically move into the neutral valve position when released.

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Pressure Gauge, Level/Temperature Switch

¹⁾ Pressure Gauge (**G**) not available on pump models with pressure transducer (**T**). The pressure transducer provides digital pressure read-out on LCD-display.

²⁾ Level/Temperature Switch (**L**) requires electric package. Not available on reservoirs 04 and 08.

ZU4-Series, Pump Ordering Matrix

▼ ZU-PRO SERIES PUMP MODELS WITH SOLENOID VALVE, PENDANT AND LCD ELECTRIC

	S/A or D/A ¹⁾	Hold	Valve Type ²⁾	Reservoir Capacity		Model Number 115 VAC, 1 phase, 50 / 60 Hz ³⁾
				(gal)	(lbs)	
With Dump Valve • Ideal for punching, crimping and cutting • For use when load-holding is not required.	S/A		VE32D	1.2	63	ZU4104DB (I, E)
	S/A		VE32D	1.8	69	ZU4108DB (I, E)
	S/A		VE32D	5.2	112	ZU4120DB (I, E)
	—	—	—	—	—	—
	—	—	—	—	—	—
With Solenoid Valves • 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 • Venturi Valve technology (VE33VAC) for faster retract of single-acting cylinders.	S/A	●	VE32	1.2	63	ZU4204SB (I, E)
	S/A	●	VE32	1.8	69	ZU4208SB (I, E)
	S/A	●	VE32	5.2	112	ZU4220SB (I, E)
	S/A	●	VE33	1.8	81	ZU4308SB (I, E)
	S/A	●	VE33	5.2	124	ZU4320SB (I, E)
	S/A	●	VE33	10.3	174	ZU4340SB (I, E)
	S/A	●	VE33VAC	1.8	74	ZU41108SB (E)
	S/A	●	VE33VAC	5.2	117	ZU41120SB (E)
	S/A	●	VE33VAC	10.3	168	ZU41140SB (E)
	D/A	●	VE43	1.8	81	ZU4408SB (I, E)
	D/A	●	VE43	5.2	124	ZU4420SB (I, E)
	D/A	●	VE43	10.3	174	ZU4440SB (I, E)

ZU4-Series



Reservoir Capacity:

1.2 - 10.3 gallons

Flow at Rated Pressure:

60 in³/min


Motor Size:

1.70 hp

Maximum Operating Pressure:

10,000 psi

▼ ZU-SERIES PUMP MODELS WITH MANUAL VALVES

	S/A or D/A ¹⁾	Hold	Valve Type ²⁾	Reservoir Capacity		Model Number 115 VAC, 1 phase, 50 / 60 Hz ³⁾		
				(gal)	(lbs) ⁵⁾	Manual Only	Standard Electric with Pendant	Classic Electric with Pendant ⁴⁾
With Manual Valves • Ideal choice for most applications • Manual valve control, for single-acting or double-acting applications • Motor control on shroud • Venturi Valve technology (VM33VAC) for faster retract of single-acting cylinders • Pendant models ideal for light production and lifting applications • Locking valves provide hydraulic locking of cylinder until valve is shifted into retract position.	S/A		VM22	1.2	59	ZU4704MB (I, E)	—	ZU4704PB (I, E)
	S/A		VM22	1.8	65	ZU4708MB (I, E)	—	ZU4708PB (I, E)
	S/A		VM22	5.2	108	ZU4720MB (I, E)	—	ZU4720PB (I, E)
	S/A		VM32	1.2	55	ZU4204MB (I, E)	ZU4204JB (I, E)	—
	S/A		VM32	1.8	61	ZU4208MB (I, E)	ZU4208JB (I, E)	—
	S/A		VM32	5.2	104	ZU4220MB (I, E)	ZU4220JB (I, E)	—
	S/A		VM32	10.3	155	ZU4240MB (I, E)	ZU4240JB (I, E)	—
	S/A	●	VM33	1.2	56	ZU4304MB (I, E)	—	—
	S/A	●	VM33	1.8	62	ZU4308MB (I, E)	ZU4308JB (I, E)	ZU4308PB (E)
	S/A	●	VM33	5.2	106	ZU4320MB (I, E)	ZU4320JB (I, E)	ZU4320PB (E)
	S/A	●	VM33	10.3	156	ZU4340MB (I, E)	ZU4340JB (I, E)	ZU4340PB (E)
	S/A	●	VM33VAC	1.8	63	ZU41008MB (E)	ZU41008JB (E)	—
	S/A	●	VM33VAC	5.2	106	ZU41020MB (E)	ZU41020JB (E)	—
	S/A	●	VM33L	1.8	66	ZU4608MB (E)	ZU4608JB (E)	—
	S/A	●	VM33L	5.2	109	ZU4620MB (E)	ZU4620JB (E)	—
	D/A	●	VM43	1.8	63	ZU4408MB (I, E)	ZU4408JB (I, E)	ZU4408PB (E)
	D/A	●	VM43	5.2	106	ZU4420MB (I, E)	ZU4420JB (I, E)	ZU4420PB (E)
	D/A	●	VM43	10.3	156	ZU4440MB (I, E)	ZU4440JB (I, E)	ZU4440PB (E)
	D/A	●	VM43L	1.8	67	ZU4808MB (E)	ZU4808JB (E)	—
	D/A	●	VM43L	5.2	110	ZU4820MB (E)	ZU4820JB (E)	—

¹⁾ S/A or D/A = For use with Single-Acting or Double-Acting cylinders and tools. ²⁾ Additional details can be found in the Directional Control Valve section

³⁾ "E" indicates pump is available in 208-240V, 1-phase, 50/60 Hz. Model number order example: **ZU4208ME**.

"I" indicates pump is available in 208-240V, 1-phase, 50/60 Hz with NEMA 6-15 plug. Model number order example: **ZU4208MI**.

⁴⁾ Classic Electric Pump has traditional electro-mechanical components (transformers, relays, switches) in place of solid-state electronics.

⁵⁾ Weights given for pump with manual valve. For Standard Electric with pendant add 1.0 lbs and Classic Electric with pendant add 3.0 lbs.

NOTE: Valve operation "L" available on pumps with manual valve. Substitute "M" for "L" valve operation. Example: **ZU4608LB**.



Roll Cage (R)

- Protects and stabilizes the pump.

Popular Pump Models (115 VAC, 1 phase)
with Factory Installed Roll Cage

ZU4108DB-R (I, E)	ZU4308MB-R (I, E)
ZU4208JB-R (I, E)	ZU4320M-BR (I, E)
ZU4220JB-R (I, E)	ZU4408M-BR (I, E)
ZU4208SB-R (I, E)	ZU4420M-BR (I, E)
ZU4308JB-R (I, E)	ZU4408JB-R (I, E)
ZU4320JB-R (I, E)	ZU4420JB-R (I, E)
ZU4308SB-R (I, E)	ZU4408SB-R (I, E)
ZU4320SB-R (I, E)	ZU4420SB-R (I, E)

Accessory Kit
Model No.



ZRC-04	1.2 and 1.8 gallons ¹⁾
ZRC-04H	1.2 and 1.8 gallons ²⁾
ZRB-20	5.2 gallons
ZRB-40	10.3 gallons

¹⁾ Without heat exchanger

²⁾ With heat exchanger



Foot Switch (U)

- 10 foot cord, hands-free control.

Popular Pump Models (115 VAC, 1 phase)
with Factory Installed Foot Switch

ZU4108DB-U (I, E)
ZU4208SB-U (I, E)
ZU4220SB-U (I, E)
ZU4320SB-U (I, E)
ZU4408SB-U (I, E)
ZU4420SB-U (I, E)

Accessory Kit
Model No.



ZCF-2	Solenoid VE-Series valves
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Heat Exchanger (H)

- Removes heat from by-pass oil
- Increases oil life, reduces wear on hydraulic components.

Popular Pump Models
with Factory Installed Heat Exchanger

ZU4108DB-H (I, E)
ZU4208SB-H (I, E)
ZU4308SB-H (I, E)
ZU4408SB-H (I, E)
ZU4420SB-H (I, E)

Accessory Kit
Model No.



ZHE-U115	115 V pumps
ZHE-U230	230 V pumps



Pressure Transducer (T)


- More durable than analog gauges
- Displays psi, bar or MPa
- Motor shut-off or shift to neutral at set pressure.

Popular Pump Models (115 VAC, 1 phase)
with Factory Installed Pressure Transducer,
Requires LCD Electric Pump

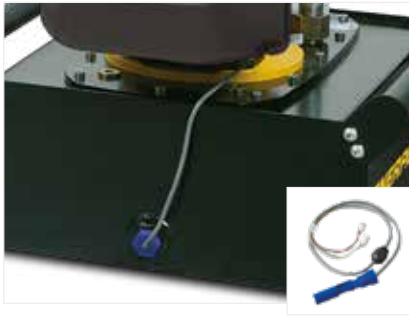
ZU4108DB-T (I, E)
ZU4208SB-T (I, E)
ZU4308SB-T (I, E)
ZU4408SB-T (I, E)
ZU4420SB-T (I, E)

Accessory Kit
Model No.



	(psi)	(%)	(psi)
ZPT-U4	1015-10,000	± 0,5	50

Note: The pressure transducer provides digital pressure read-out on LCD-display.



Level/Temperature Switch (L) ¹⁾

- Shuts off pump when high operating temperature or low oil is reached
- Plugs directly into pump electrical enclosure
- Easy installation to pump reservoir
- Requires LCD electric.



Return Line Filter (F)

- 25 micron filter removes contaminants from return oil flow
- Internal by-pass valve prevents damage if filter is dirty
- With maintenance indicator
- Replaceable filter element PF25.

ZU4 Series



Reservoir Capacity:

1.2 - 10.3 gallons

Flow at Rated Pressure:


60 in³/min

Motor Size:

1.70 hp

Maximum Operating Pressure:

10,000 psi

Accessory Kit Model Number	Operating Temperature (°F)	Maximum Pressure (psi)	 (lbs)
ZLS-U4	40 - 230	150	0.2

¹⁾ Level/Temperature switch (L) not available on 1.2 or 1.8 gallon reservoir.



Skidbar (K)

- Provides easy two-hand lift
- Provides greater pump stability on soft or uneven surfaces
- Cannot be used in combination with roll cage.

Accessory Kit Model Number	Max. Pressure (psi)	Max. Oil Flow (GPM)	By-Pass Setting (psi)
ZPF	200	12.0	25



Pressure Gauge (G)

- Minimize risk of overloading to ensure long life of equipment
- ø 2.5 inch face diameter, glycerine-filled
- Dual scale in bar and psi.



Heat Exchanger

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 water based fluids.


Thermal Transfer *	Maximum Pressure	Maximum Oil Flow	Voltage
(Btu/h)	(psi)	(GPM)	(VDC)
900	300	7.0	12

* At 0.5 gal/min at 70 °F ambient temperature.



Hoses

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

Accessory Kit Model Number	Fits on Reservoir	 (lbs)
SBZ-4	1.2 and 1.8 gallons ²⁾	2,2
SBZ-4L	1.2 and 1.8 gallons ³⁾	3,2

²⁾ Without heat exchanger

³⁾ With heat exchanger

Accessory Kit Model Number	Description
G2536L	0 - 15,000 psi, 0 - 1000 bar

Note: Pressure Gauge not available on pump models with pressure transducer. The pressure transducer provides digital pressure read-out on LCD-display.