

▼ ZU4308ME (Classic), ZU4420SEH (Pro)



- High-efficiency two-speed pump design – higher oil flow and bypass pressure
- Powerful 1,25 kW 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.

### 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

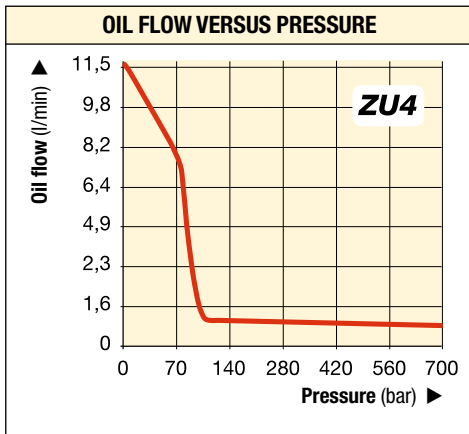
- Digital (LCD) display features a built-in hour meter and shows self-diagnostic, cycle-count and low voltage warning information.
- Pressure can also be displayed when the pump is equipped with an optional pressure transducer.



### Assisted Return Pumps with Venturi Valve Technology

To improve productivity and plunger retraction, Enerpac offers valve configurations designed to accelerate your cylinder retraction speeds, ZU4-Series pumps feature **Venturi Valve Technology** to facilitate the faster return of single-acting gravity return cylinders. See valve type in ordering matrix and details in section Directional Control Valves.

# ZU4-Series, Specifications and Dimensions



ZU4-SERIES PERFORMANCE CHART							
Motor Size (kW)	Output Flow Rate at 50 Hz (l/min)				Motor Electrical Specifications (Volts-Ph-Hz)	Sound Level (dBA)	Relief Valve Adjustment Range (bar)
	7 bar	50 bar	350 bar	700 bar			
1,25	11,5	8,8	1,2	1,0	115-1-50/60 230-1-50/60	85-90	140-700

## ZU4 Series

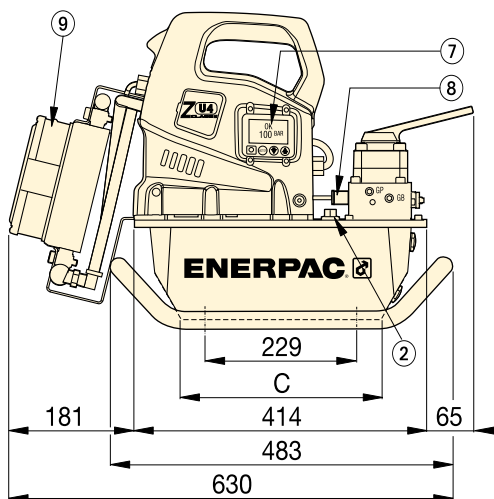


Reservoir Capacity:  
**4,6 - 39 litres**

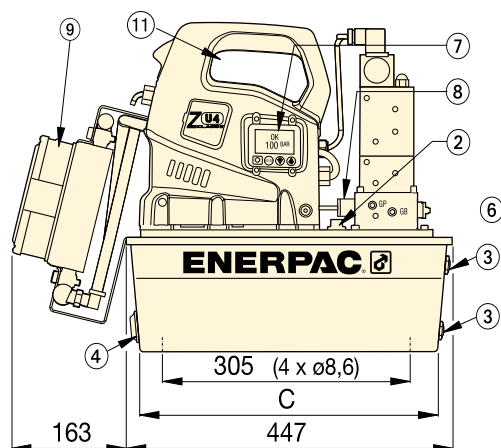
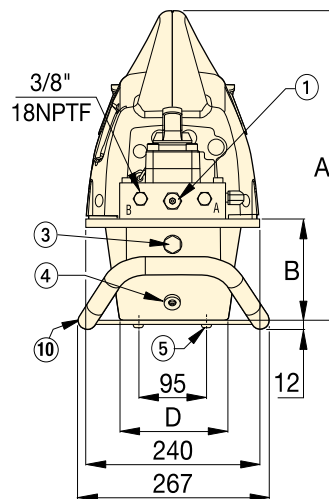
Flow at Rated Pressure:  
**1,0 l/min**

Motor Size:  
**1,25 kW**

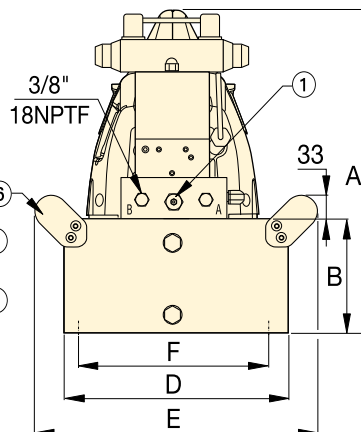
Maximum Operating Pressure:  
**700 bar**



ZU4-Series with 4,6 and 6,8 litres reservoirs



ZU4-Series with 19,8 and 39 litres reservoirs  
(left view shown without side handle)



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, 6 mm deep
- ⑥ Handles on all 19,8 and 39 litres reservoirs.

### Options

- ⑦ Back-lit LCD Electric
- ⑧ Pressure transducer
- ⑨ Heat Exchanger
- ⑩ Skid Bar. Fits 4,6 and 6,8 litres reservoirs
- ⑪ Handle guard installed on all 19,8 and 39 litres reservoirs
- ⑫ Reservoir handles (not shown) included on all 19,8 and 39 litres reservoirs

Pump Dimensions (mm)						
Reservoir Capacity (litres)	A	B	C	D	E	F
4,6	424	142	279	152	-	-
6,8	424	142	279	206	-	-
19,8	465	180	413	422	500	396
39	551	269	399	503	576	480

## ▼ 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.

<b>Z</b>	<b>U</b>	<b>4</b>	<b>4</b>	<b>08</b>	<b>J</b>	<b>E</b>	<b>-</b>	<b>H</b>	<b>R</b>
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** = 1,0 l/min @ 700 bar

### 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** = 4,6 litres
- 08** = 6,8 litres
- 20** = 19,8 litres
- 40** = 39,0 litres

### 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:

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



### 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'.

Page: 405



### Assisted Return Pumps with Venturi Valve Technology

To improve productivity and plunger retraction, Enerpac offers valve configurations designed to accelerate your cylinder retraction speeds. ZU4 and ZE-Series pumps feature **Venturi Valve Technology** to facilitate the faster return of single-acting gravity and spring return cylinders. See valve type in ordering matrix and details in section Directional Control Valves.

Page: 122





### Spring Centred Valve Kits

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

Page: 123

# ZU4-Series, Pump Ordering Matrix

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

	S/A or D/A <sup>1)</sup>	Hold 	Valve Type <sup>2)</sup>	Reservoir Capacity (litres)	 (kg)	Model Number 230 VAC, 1 phase, 50/60 Hz <sup>3)</sup>
<b>With Dump Valve</b> <ul style="list-style-type: none"> <li>• Ideal for punching, crimping and cutting</li> <li>• For use when load-holding is not required.</li> </ul>	S/A		VE32D	4,6	29	ZU4104DE (B, I)
	S/A		VE32D	6,8	31	ZU4108DE (B, I)
	S/A		VE32D	19,8	51	ZU4120DE (B, I)
	–		–	–	–	–
	–		–	–	–	–
<b>With Solenoid Valves</b> <ul style="list-style-type: none"> <li>• Ideal for lifting applications and where remote control is required</li> <li>• Motor runs continuously on pumps with VE33 and VE43 valves.</li> <li>• With VE32 valve, motor only runs during the advance function, while holding and retracting, the motor is off</li> <li>• Venturi Valve technology (VE33VAC) for faster retract of single-acting cylinders.</li> </ul>	S/A	●	VE32	4,6	29	ZU4204SE (B, I)
	S/A	●	VE32	6,8	31	ZU4208SE (B, I)
	S/A	●	VE32	19,8	51	ZU4220SE (B, I)
	S/A	●	VE33	6,8	37	ZU4308SE (B, I)
	S/A	●	VE33	19,8	57	ZU4320SE (B, I)
	S/A	●	VE33	39,0	79	ZU4340SE (B, I)
	S/A	●	VE33VAC	6,8	34	ZU41108SE (B)
	S/A	●	VE33VAC	19,8	53	ZU41120SE (B)
	S/A	●	VE33VAC	39,0	76	ZU41140SE (B)
	D/A	●	VE43	6,8	37	ZU4408SE (B, I)
	D/A	●	VE43	19,8	56	ZU4420SE (B, I)
	D/A	●	VE43	39,0	79	ZU4440SE (B, I)

## ZU4-Series



Reservoir Capacity:

**4,6 - 39 litres**

Flow at Rated Pressure:

**1,0 l/min**



Motor Size:

**1,25 kW**

Maximum Operating Pressure:

**700 bar**

## ▼ ZU-SERIES PUMP MODELS WITH MANUAL VALVES

	S/A or D/A <sup>1)</sup>	Hold 	Valve Type <sup>2)</sup>	Reservoir Capacity (litres)	 (kg) <sup>5)</sup>	Model Number 230 VAC, 1 phase, 50/60 Hz <sup>3)</sup>		
						Manual Only	Standard Electric with Pendant	Classic Electric with Pendant <sup>4)</sup>
<b>With Manual Valves</b> <ul style="list-style-type: none"> <li>• Ideal choice for most applications</li> <li>• Manual valve control, for single-acting or double-acting applications</li> <li>• Motor control on shroud</li> <li>• Venturi Valve technology (VM33VAC) for faster retract of single acting cylinders</li> <li>• Pendant models ideal for light production and lifting applications</li> <li>• Locking valves provide hydraulic locking of cylinder until valve is shifted into retract position.</li> </ul>	S/A		VM22	4,6	27	ZU4704ME (B, I)	–	ZU4704PE (B, I)
	S/A		VM22	6,8	29	ZU4708ME (B, I)	–	ZU4708PE (B, I)
	S/A		VM22	19,8	49	ZU4720ME (B, I)	–	ZU4720PE (B, I)
	S/A		VM32	4,6	25	ZU4204ME (B, I)	ZU4204JE (B, I)	–
	S/A		VM32	6,8	28	ZU4208ME (B, I)	ZU4208JE (B, I)	–
	S/A		VM32	19,8	47	ZU4220ME (B, I)	ZU4220JE (B, I)	–
	S/A		VM32	39,0	70	ZU4240ME (B, I)	ZU4240JE (B, I)	–
	S/A	●	VM33	4,6	25	ZU4304ME (B, I)	–	–
	S/A	●	VM33	6,8	28	ZU4308ME (B, I)	ZU4308JE (B, I)	ZU4308PE (B)
	S/A	●	VM33	19,8	48	ZU4320ME (B, I)	ZU4320JE (B, I)	ZU4320PE (B)
	S/A	●	VM33	39,0	71	ZU4340ME (B, I)	ZU4340JE (B, I)	ZU4340PE (B)
	S/A	●	VM33VAC	6,8	29	ZU41008ME (B)	ZU41008JE (B)	–
	S/A	●	VM33VAC	19,8	48	ZU41020ME (B)	ZU41020JE (B)	–
	S/A	●	VM33L	6,8	30	ZU4608ME (B)	ZU4608JE (B)	–
	S/A	●	VM33L	19,8	49	ZU4620ME (B)	ZU4620JE (B)	–
	D/A	●	VM43	6,8	29	ZU4408ME (B, I)	ZU4408JE (B, I)	ZU4408PE (B)
	D/A	●	VM43	19,8	48	ZU4420ME (B, I)	ZU4420JE (B, I)	ZU4420PE (B)
	D/A	●	VM43	39,0	71	ZU4440ME (B, I)	ZU4440JE (B, I)	ZU4440PE (B)
	D/A	●	VM43L	4,6	30	ZU4808ME (B)	ZU4808JE (B)	–
	D/A	●	VM43L	19,8	50	ZU4820ME (B)	ZU4820JE (B)	–

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

<sup>3)</sup> "B" indicates pump is available in 115V, 1-phase, 50/60 Hz. Model number order example: **ZU4208MB**.

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

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

<sup>5)</sup> Weights given for pump with manual valve. For Standard Electric with pendant add 0,5 kg and Classic Electric with pendant add 1,5 kg.


NOTE: Valve operation "L" available on pumps with manual valve. Substitute "M" for "L" valve operation. Example: **ZU4608LE**.



## Roll Cage (R)

- Protects and stabilizes the pump.

Popular Pump Models with Factory Installed Roll Cage	
ZU4108DE-R (B, I)	ZU4308ME-R (B, I)
ZU4208JE-R (B, I)	ZU4320ME-R (B, I)
ZU4220JE-R (B, I)	ZU4408ME-R (B, I)
ZU4208SE-R (B, I)	ZU4420ME-R (B, I)
ZU4308JE-R (B, I)	ZU4408JE-R (B, I)
ZU4320JE-R (B, I)	ZU4420JE-R (B, I)
ZU4308SE-R (B, I)	ZU4408SE-R (B, I)
ZU4320SE-R (B, I)	ZU4420SE-R (B, I)

Accessory Kit Model Nr.	Fits on Reservoir
	
ZRC-04	4,6 and 6,8 litres <sup>1)</sup>
ZRC-04H	4,6 and 6,8 litres <sup>2)</sup>
ZRB-20	19,8 litres
ZRB-40	39 litres

<sup>1)</sup> Without heat exchanger


<sup>2)</sup> With heat exchanger

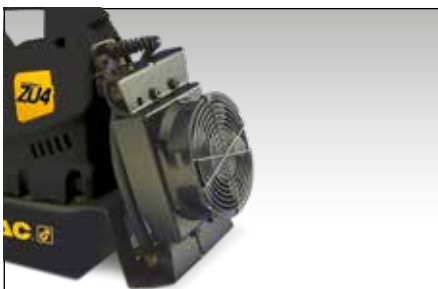


## Foot Switch (U)

- 3 metres cord, hands-free control.

Popular Pump Models with Factory Installed Foot Switch	
ZU4108DE-U (B, I)	
ZU4208SE-U (B, I)	
ZU4220SE-U (B, I)	
ZU4320SE-U (B, I)	
ZU4408SE-U (B, I)	
ZU4420SE-U (B, I)	


Accessory Kit Model Nr.	Can be used on ZU4 Pumps with solenoid dump and 3-position valves, LCD electric
	
ZCF-2	Solenoid VE-Series valves



## Heat Exchanger (H)

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

Popular Pump Models with Factory Installed Heat Exchanger	
ZU4108DE-H (B, I)	
ZU4208SE-H (B, I)	
ZU4308SE-H (B, I)	
ZU4408SE-H (B, I)	
ZU4420SE-H (B, I)	


Accessory Kit Model Nr.	Can be used on
	
ZHE-U115	115 V pumps
ZHE-U230	230V pumps

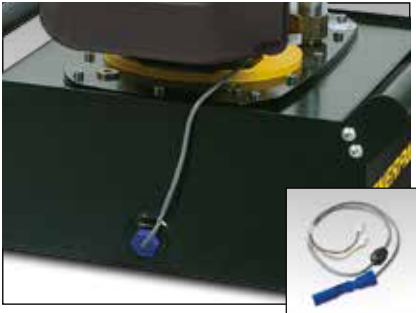


## Pressure Transducer (T)

- More durable than analog gauges
- Displays psi, bar or Mpa
- Motor shutoff or shift to neutral at set pressure.

Popular Pump Models with Factory Installed Pressure Transducer, Requires LCD Electric Pump	
ZU4108DE-T (B, I)	
ZU4208SE-T (B, I)	
ZU4308SE-T (B, I)	
ZU4408SE-T (B, I)	
ZU4420SE-T (B, I)	

Accessory Kit Model Nr.	Adjustable Pressure Range	Switch-Point Repeatability	Dead-band
	(bar)	(%)	(bar)
ZPT-U4	3,5 - 700	± 0,5	3,5



### Level/Temperature Switch (L) <sup>1)</sup>

- 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:

**4,6 - 39 litres**

Flow at Rated Pressure:


**1,0 l/min**

Motor Size:

**1,25 kW**

Maximum Operating Pressure:

**700 bar**

Accessory Kit Model Nr.	Operating Temperature (°C)	Maximum Pressure (bar)	 (kg)
ZLS-U4	5 - 110	10	0,1

<sup>1)</sup> Level/Temperature switch (L) not available on 4,6 or 6,8 litres reservoir.

Accessory Kit Model Nr.	Max. Pressure (bar)	Max. Oil Flow (l/min)	By-Pass Setting (bar)
ZPF	14	45	1,7



### Heat Exchanger

Stabilizes oil temperature at a maximum of 54 °C at 21 °C 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 * (Btu/h)	Maximum Pressure (bar)	Maximum Oil Flow (l/min)	Voltage (VDC)
900	20,7	26,5	12

\* At 1,9 l/min at 21 °C ambient temperature.



### Skidbar (K)

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




### Pressure Gauge (G)

- Minimize risk of overloading to ensure long life of equipment
- ø 63 mm face diameter, glycerin filled
- Dual scale in bar and psi.



### 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 Nr.	Fits on Reservoir	 (kg)
SBZ-4	4,6 and 6,8 litres <sup>2)</sup>	2,2
SBZ-4L	4,6 and 6,8 litres <sup>3)</sup>	3,2

<sup>2)</sup> Without heat exchanger

<sup>3)</sup> With heat exchanger

Accessory Kit Model Nr.	Description
G2536L	0 - 1000 bar, 0 - 15.000 psi