

ENERPAC 

ZU4 Series, Electric Pumps

NEW !!



ENERPAC
INDUSTRIAL TOOLS

ZU4 CLASS ■ **Designed To Last!**

Enerpac introduces the latest innovation in hydraulic pumps. These new pumps surpass the features and benefits of conventional electric pump design.

- LCD providing essential user information;
- Self-test, diagnostics and read-out capabilities available;
- High efficiency and low operating costs;
- Easy to service.



Introducing the Enerpac Z-Class hydraulic pumps – that run cooler, use less electricity and are easy to service compared to conventional pumps.

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 pump element – heart of your ZU4 Series 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.

ZU4 Series Electric pump – easy to service

Ergonomic heavy-duty composite shroud protects electric motor and key electrical components from environmental contamination, rain and debris and provides a non-conductive ergonomic handle for the operator.

Ergonomic and durable low-voltage pendant features sealed switches and operates on 15 Volts.

Easily accessible brush cavity allows rapid brush replacement in the field.

Brush design lasts 4-times longer than current designs and features “auto-stop” shunt to prevent commutator damage from normal brush wear.

Reduced current draw extends brush life and reduces electrical load on electrical circuits and generators.

Back-lit LCD (option)

Display provides essential user information:

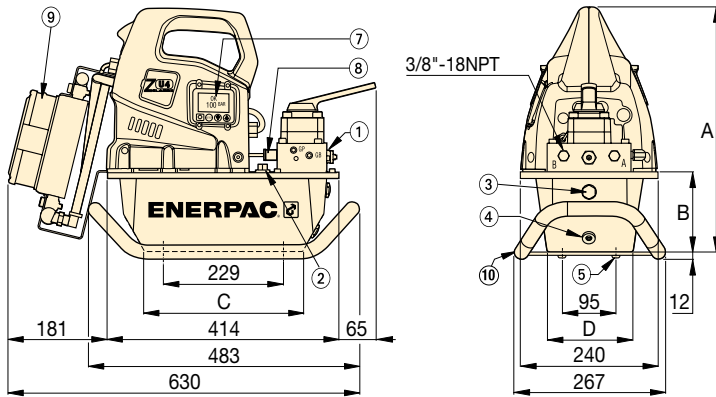
- Pump usage information, hour and cycle counts
- Low-voltage warning and recording
- Self-test, diagnostic and read-out capabilities
- Information displayed in 6 languages
- Pressure read-out (when used with the optional pressure transducer)
- Adjustable trigger pressure setting (when used with the optional pressure transducer).

ZU4 Series electric pumps from Enerpac – simply the best pump you will ever use!

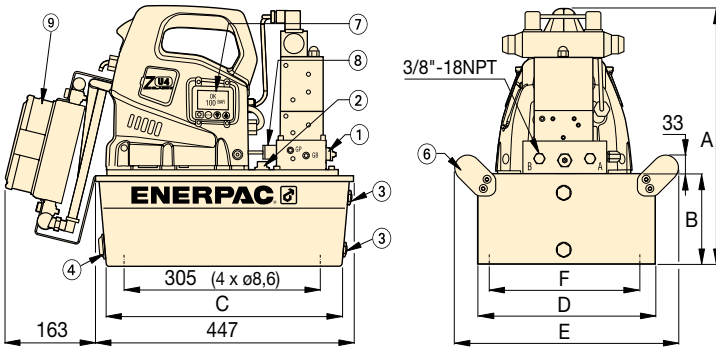
ZU4 Series, Pump & Valve Specifications

▼ ZU4 SERIES PUMP PERFORMANCE CHART

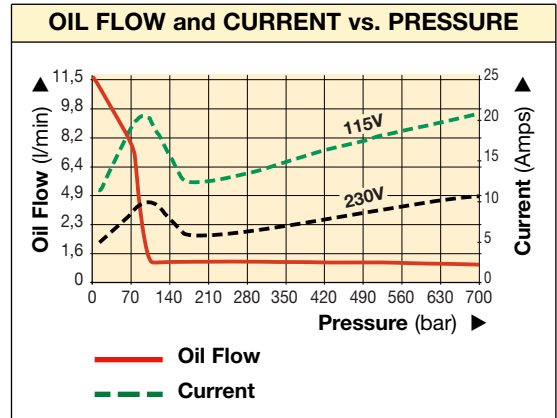
ZU4 Series Pump						
Motor Size (kW)	Output Flow Rate (l/min)				Motor Electrical Specification (Volts-ph-Hz)	Relief Valve Adjustment Range (bar)
	at 7 bar	at 50 bar	at 350 bar	at 700 bar		
1,25	11,5	8,8	1,2	1,0	115-1-50/60 230-1-50/60	140-700



ZU4 Series with 4 and 8 litres reservoirs



ZU4 Series with 10, 20 and 40 litres reservoirs (left view shown without side handle)



- 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" NPT.
- ⑤ M8, 12 mm deep.
- ⑥ Handles on all 10, 20 and 40 litres reservoirs.

Factory installed features & options:

- ⑦ Back-lit LCD Electric.
- ⑧ Pressure transducer.
- ⑨ Heat Exchanger
- ⑩ Skid Bar (Modelnr. SBZ-4). Fits 4 and 8 litres reservoirs.

Reservoir Size ¹⁾ (litres)	ZU4 Series Pump Dimensions (mm)					
	A	B	C	D	E	F
4	432	142	279	152	-	-
8	495	203	287	167	-	-
10	447	155	419	305	384	279
20	472	180	414	422	501	396
40	559	270	399	505	576	480

¹⁾ Usable oil capacity.

▼ VE43 factory mounted on ZU4420SE-H



These valves are exclusive for the Z-Class pumps

- All valves feature several gauge ports for "system", A port and B port pressure monitoring based on application requirement
- User adjustable relief valves allow the operator to easily set the optimum working pressure for each application
- All valves except VM32 and VE32D include manifold with built-in "System Check" feature, for more precise pressure holding and improved system control.

Model Number	Valve Type and Hydraulic Symbol	Model Number	Valve Type and Hydraulic Symbol
VM32	Manual 3/2 	VE32 ¹⁾	Solenoid 3/2
VM33	Manual 3/3 	VE33	Solenoid 3/3
VM43	Manual 4/3 	VE43	Solenoid 4/3
VE32D	Solenoid 3/2 Dump 	¹⁾ VE32 provides "Hold" function by turning off pump and holding pressure against system check-valve.	

ZU4 Series, Electric Pumps

▼ Shown from left to right: ZU4108DE-T, ZU4420SE-H, ZU4304ME-K



ZU4 CLASS

Tough, Dependable and Innovative

- High-efficiency two speed pump design – higher oil flow and bypass pressure, cooler running and requires 18% less current draw than comparable pumps
- 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
- Durable steel reservoirs
- LCD provides self test, diagnostic and read-out capabilities never before offered on a portable electric pump
- Designed to last and easy to service



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

▼ 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.

Dump Valve

- Ideal for punching, crimping and cutting.
- For use when load-holding is not required.
- Low-voltage control pendant with 3m. cord controls valve and motor.

Manual Valve

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

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 3m cord for remote motor and valve operation.

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 3m. cord for remote motor operation.

ZU4 Series, Electric Pumps



ZU4 Series Pump Applications

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

Patent-pending **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 cylinders and 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.



ZU4 Series



Reservoir Capacity:

4 - 40 litres

Flow at Rated Pressure:

1,0 l/min

Motor Size:

1,25 kW

Maximum Operating Pressure:

700 bar

Pump Type	For use with cylinder	Valve Function ²⁾	Valve Type ²⁾	Pump Control	Usable Oil Capacity (litres)	Model Number ¹⁾ 230 V / 1 phase ³⁾		Weight ⁴⁾ (kg)
						STD (Standard) Electric	LCD Electric	
	Single-Acting	Advance/Retract	VE32D	Remote	4	-	ZU4104DE	28,5
	Single-Acting	Advance/Retract	VE32D	Remote	8	-	ZU4108DE	33,1
						-	-	
						-	-	
	Single-Acting	Advance/Retract	VM32	Manual	4	ZU4204ME	ZU4204LE	26,1
	Single-Acting	Advance/Retract	VM32	Manual	8	ZU4208ME	ZU4208LE	31,3
	Single-Acting	Advance/Hold/Retract	VM33	Manual	4	ZU4304ME	ZU4304LE	28,5
	Single-Acting	Advance/Hold/Retract	VM33	Manual	8	ZU4308ME	ZU4308LE	31,7
	Double-Acting	Advance/Hold/Retract	VM43	Manual	4	ZU4404ME	ZU4404LE	27,2
	Double-Acting	Advance/Hold/Retract	VM43	Manual	8	ZU4408ME	ZU4408LE	31,7
	Single-Acting	Advance/Hold/Retract	VE32	Remote	4	-	ZU4204SE	28,5
	Single-Acting	Advance/Hold/Retract	VE32	Remote	8	-	ZU4208SE	33,1
	Single-Acting	Advance/Hold/Retract	VE33	Remote	8	-	ZU4308SE	38,5
	Double-Acting	Advance/Hold/Retract	VE43	Remote	8	-	ZU4408SE	38,5
						-	-	
						-	-	
	Single-Acting	Advance/Retract	VM32	Remote (Man.)	4	ZU4204JE	ZU4204KE	27,2
	Single-Acting	Advance/Retract	VM32	Remote (Man.)	8	ZU4208JE	ZU4208KE	31,7
	Single-Acting	Advance/Hold/Retract	VM33	Remote (Man.)	8	ZU4308JE	ZU4308KE	32,2
	Double-Acting	Advance/Hold/Retract	VM43	Remote (Man.)	8	ZU4408JE	ZU4408KE	32,2

¹⁾ All models meet CE safety requirements. "E" voltage versions also meet all requirements of the European EMC-Directive.

²⁾ See page 3 for hydraulic symbol of these valves.

³⁾ See custom ordering matrix on page 7 for other voltage options.

⁴⁾ Subtract 1,4 kg. for STD Electric models.



Back-lit LCD ¹⁾

- 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 ²⁾

¹⁾ Included on pumps with solenoid valves. Can be factory installed on pumps with manual valve.

²⁾ English, French, German, Italian, Spanish and Portuguese.



Pressure Transducer ³⁾

- More durable than analog gauges
- More accurate than analog gauges
- Calibration can be fine tuned for certification
- Easy-viewing variable rate display
- "Set pressure" feature turns off motor at user defined pressure ⁴⁾
- Display pressure in bar, MPa or psi

³⁾ Requires LCD Electric.

⁴⁾ Or shifts valve to neutral position on pump models with VE33 and VE43 solenoid valves.



ZU4 Series Features & Options

The LCD, Pressure Transducer and Heat Exchanger are factory installed features and cannot be ordered separately. The Skidbar can be installed by customer or ordered pump mounted from factory. Refer to page 5 and 7 for selection chart and ordering matrix.



Pressure Transducer

This pressure transducer is more durable against mechanical and hydraulic shock than analog gauges.

- Digital pressure read-out provides accuracy of 0,5% of full scale.
- Easy-viewing variable rate display automatically varies increments between 3, 14, 35 and 145 bar as rate of pressure change increases.
- "Set pressure" feature turns off motor at user defined pressure (or shifts valve to neutral on models with VE33 and VE43 solenoid valves).



Heat Exchanger ⁵⁾

- 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

⁵⁾ Requires LCD Electric. Heat Exchanger adds 4,1 kg to pump weight.



Skidbar ⁶⁾

- Provides easy two-hand lift
- Provides greater pump stability on soft or uneven surfaces
- Also available as kit (Modelnr. SBZ-4)

⁶⁾ 4 and 8 litres reservoirs only. Skidbar adds 2,2 kg to pump weight.



Heat Exchanger

Can be factory installed on ZU4 Series LCD Electric pumps.

- Extends system life.
- 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 high water based fluids.

Thermal Transfer *		Maximum pressure	Maximum oil flow	Voltage
Btu/h	kJoule	(bar)	(l/min)	(VDC)
900	950	20,7	26,5	12

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

ZU4 Series, Electric Pumps Ordering Matrix

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 5, you can easily build your custom ZU4 Series pump here.

▼ This is how a ZU4 Series pump model number is built up:

Z	U	4	1	04	D	E	-	H	K	T
1	2	3	4	5	6	7	8			
Product Type	Motor Type	Flow Group	Valve Type	Reservoir Size	Valve Operation	Voltage	Factory installed features and options			

1 Product Type

Z = Pump Series

2 Prime Mover

U = Universal electric motor

3 Flow Group

4 = 1,0 l/min @ 700 bar

4 Valve Type

(see page 3 for details)

1 = Dump VE32D

2 = 3-way, 2-pos. manual VM32 or electric VE32

3 = 3 way, 3 pos. manual VM33 or electric VE33

4 = 4 way, 3 pos. manual VM43 or electric VE43

6 = 3 way, 3 pos. manual locking valve VM33-L with pilot operated check.

8 = 4 way, 3 pos. manual locking valve VM43-L with pilot operated check.

5 Reservoir Size

(usable oil capacity)

04 = 4 litres

08 = 8 litres

10 = 10 litres¹⁾

20 = 20 litres¹⁾

40 = 40 litres¹⁾

¹⁾ reservoir includes side handles.

6 Valve Operation

D = Dump (solenoid valve with pendant and LCD Electric)

J = Jog (manual valve with pendant and Standard Electric i.e. without LCD)

K = Jog (manual valve with pendant and LCD Electric)

L = Manual valve with LCD Electric (without pendant)

M = Manual valve with Standard Electric (i.e. without LCD, without pendant)

S = Solenoid valve with pendant and LCD Electric.

7 Voltage

B = 115V, 1 phase, 50/60Hz

E²⁾ = 208-240V, 1 phase, 50/60 Hz (with European plug EMC directive compliant).

I = 208-240V, 1 phase, 50/60 Hz (with NEMA 5-15 plug).

²⁾ E-voltage meet all CE requirements.

8 Factory installed features & options

(see page 6 for details)

H Heat exchanger (requires pump with LCD Electric) adds 4,1 kg.

K Skid bar (fits 4 and 8 litres reservoir) adds 2,2 kg.

T Pressure transducer (requires pump with LCD Electric).

ZU4 Series



Reservoir Capacity:

4 - 40 litres

Flow at Rated Pressure:

1,0 l/min

Motor Size:

1,25 kW

Maximum Operating Pressure:

700 bar



Steel Reservoirs

Steel reservoirs in a range of sizes, provide durability and the optimum oil capacity to operate many different cylinder and system sizes.



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.



ZU4 Series Pumps cross over with TITAN pumps

TITAN Pumps	ZU4 Series Pumps STD Electr.	LCD Electr.
PUJ-3209E	ZU4208JE	ZU4208KE
PUJ-3309E	ZU4308JE	ZU4308KE
PUJ-3409E	ZU4408JE	ZU4408KE
PUD-3309E	-	ZU4208SE
PUR-3409E	-	ZU4408SE
PUM-3309E	ZU4308ME	ZU4308LE
PUM-3409E	ZU4408ME	ZU4408LE

Ordering Example 1

Model Nr: ZU4104DE-HKT

Two stage LCD Electric pump with dump valve and 4 litres reservoir, 230V motor, heat exchanger, skidbar and pressure transducer.

Ordering Example 2

Model Nr: ZU4408JE

Two stage STD (standard) Electric pump with manual valve with pendant (jog) and 8 litres reservoir, 230V motor.

ZU4 Series, Electric Pumps

The Industrial Tools Line

Cylinders

- General Purpose
- Pancake
- Aluminium Lightweight
- Low Height
- Heavy Duty
- Hollow Plunger
- Industrial
- Pull
- Long Stroke
- Jacks
- Spread

Pumps

- Manual
- Electric Driven
- Compressed Air Driven
- Petrol Driven

System Components

- Hoses, Couplers, Oil
- Gauges, Adaptors
- Manifolds, Fittings

Valves

- 3-and 4-Way Directional
- Pressure and Flow Control

Presses

- Bench and Workshop
- Roll Frame Presses
- Arbor and C-Clamps

Pullers

- Master Pullers Sets
- Multi Purpose Puller Sets
- Posi Lock® Pullers

Tools

- Maintenance Sets
- Punches
- Machine Lifts
- Load Skates
- Cutters
- Pipe Benders

Bolting Tools

- Nut Splitters
- Flange/Wedge Spreaders
- Flange Alignment Tools
- Torque Wrenches
- Torque Wrench Pumps
- Twin Safety Hoses

Integrated Hydraulic Solutions

- Stage Lift Systems
- Synchronous Lifting Systems
- Synchronous Hoisting Systems

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Controlled Hydraulic Movement

Enerpac SyncLift – The integrated solutions with PLC-control for synchronous lifting systems up to 64 lifting points.

Enerpac SyncHoist – Synchronous Hoisting Systems turn lifting with cranes into High Accuracy Hoisting and Load Positioning. The safe and economical solution for precise positioning of roof sections, concrete elements and other non-standard shape construction components.

Learn more about SyncHoist and view the animation at www.enerpac.com.



The Enerpac Industrial Tools Catalog E324e

A complete range of quality high force tools for all industrial applications, with local availability and after-sales service anywhere in the world. This is what has made Enerpac the recognized global market leader in it's field.



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