**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 for single- or double-acting cylinders.
  - Manual valve with power seat (VM43LPS), ideal for post-tensioning applications.

- **Dump Valve** *
  - Ideal for punching, crimping and cutting.
  - For use when load-holding is not required.

- **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 controls valve and motor.

---

**ZU4-Series, Portable Electric Pumps**

- Shown from left to right: ZU4304ME, ZU4420SE-H, ZU4304PE-K

**ZU4-Series Features and Options**

For special requirements see factory installed features and options.

**COMMON PUMP MODELS**

For technical information and other options see next page.

- **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 for single- or double-acting cylinders.
  - Manual valve with power seat (VM43LPS), ideal for post-tensioning applications.

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  - 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.
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 Hydraulic 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 Pump

- 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 Pump

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

Pro Electric Pump

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

- For every application

Z-Class

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

<table>
<thead>
<tr>
<th>Pump Type</th>
<th>Used with Cylinder</th>
<th>Valve Function</th>
<th>Valve Type</th>
<th>Pump Control</th>
<th>Oil Capacity (litres)</th>
<th>Model Number</th>
<th>Pro Electric Weight (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classic Electric</td>
<td>VM32</td>
<td>Manual</td>
<td>4</td>
<td>ZU4204RE</td>
<td>ZU4204ME</td>
<td>ZU4204LE</td>
<td>27</td>
</tr>
<tr>
<td>Standard Electric</td>
<td>VM32</td>
<td>Manual</td>
<td>8</td>
<td>ZU4208RE</td>
<td>ZU4208ME</td>
<td>ZU4208LE</td>
<td>32</td>
</tr>
<tr>
<td>Classic Electric</td>
<td>VM33</td>
<td>Manual</td>
<td>8</td>
<td>ZU4308RE</td>
<td>ZU4308ME</td>
<td>ZU4308LE</td>
<td>32</td>
</tr>
<tr>
<td>Pro Electric</td>
<td>VM33</td>
<td>Manual</td>
<td>20</td>
<td>ZU4320RE</td>
<td>ZU4320ME</td>
<td>ZU4320LE</td>
<td>50</td>
</tr>
<tr>
<td>Classic Electric</td>
<td>VM43</td>
<td>Manual</td>
<td>8</td>
<td>ZU4408RE</td>
<td>ZU4408ME</td>
<td>ZU4408LE</td>
<td>32</td>
</tr>
<tr>
<td>Pro Electric</td>
<td>VM43</td>
<td>Manual</td>
<td>20</td>
<td>ZU4420RE</td>
<td>ZU4420ME</td>
<td>ZU4420LE</td>
<td>50</td>
</tr>
<tr>
<td>Classic Electric</td>
<td>VM32</td>
<td>Remote (Man.)</td>
<td>4</td>
<td>ZU4204PE</td>
<td>ZU4204JE</td>
<td>ZU4204KE</td>
<td>27</td>
</tr>
<tr>
<td>Pro Electric</td>
<td>VM32</td>
<td>Remote (Man.)</td>
<td>8</td>
<td>ZU4208PE</td>
<td>ZU4208JE</td>
<td>ZU4208KE</td>
<td>32</td>
</tr>
<tr>
<td>Classic Electric</td>
<td>VM33</td>
<td>Remote (Man.)</td>
<td>20</td>
<td>ZU4320PE</td>
<td>ZU4320JE</td>
<td>ZU4320KE</td>
<td>50</td>
</tr>
<tr>
<td>Pro Electric</td>
<td>VM33</td>
<td>Remote (Man.)</td>
<td>8</td>
<td>ZU4308PE</td>
<td>ZU4308JE</td>
<td>ZU4308KE</td>
<td>32</td>
</tr>
<tr>
<td>Classic Electric</td>
<td>VM43</td>
<td>Remote (Man.)</td>
<td>8</td>
<td>ZU4408PE</td>
<td>ZU4408JE</td>
<td>ZU4408KE</td>
<td>32</td>
</tr>
<tr>
<td>Pro Electric</td>
<td>VM43</td>
<td>Remote (Man.)</td>
<td>20</td>
<td>ZU4420PE</td>
<td>ZU4420JE</td>
<td>ZU4420KE</td>
<td>50</td>
</tr>
<tr>
<td>Classic Electric</td>
<td>VE32D</td>
<td>Remote</td>
<td>4</td>
<td>N/A</td>
<td>N/A</td>
<td>ZU4104DE</td>
<td>29</td>
</tr>
<tr>
<td>Pro Electric</td>
<td>VE32D</td>
<td>Remote</td>
<td>8</td>
<td>N/A</td>
<td>N/A</td>
<td>ZU4108DE</td>
<td>33</td>
</tr>
<tr>
<td>Classic Electric</td>
<td>VE32D</td>
<td>Remote</td>
<td>20</td>
<td>N/A</td>
<td>N/A</td>
<td>ZU4120DE</td>
<td>51</td>
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<tr>
<td>Pro Electric</td>
<td>VE32D</td>
<td>Remote</td>
<td>8</td>
<td>N/A</td>
<td>N/A</td>
<td>ZU4108DE</td>
<td>33</td>
</tr>
<tr>
<td>Classic Electric</td>
<td>VE32</td>
<td>Remote</td>
<td>4</td>
<td>N/A</td>
<td>N/A</td>
<td>ZU4204SE</td>
<td>29</td>
</tr>
<tr>
<td>Pro Electric</td>
<td>VE32</td>
<td>Remote</td>
<td>8</td>
<td>N/A</td>
<td>N/A</td>
<td>ZU4208SE</td>
<td>33</td>
</tr>
<tr>
<td>Classic Electric</td>
<td>VE33</td>
<td>Remote</td>
<td>8</td>
<td>N/A</td>
<td>N/A</td>
<td>ZU4308SE</td>
<td>39</td>
</tr>
<tr>
<td>Pro Electric</td>
<td>VE33</td>
<td>Remote</td>
<td>8</td>
<td>N/A</td>
<td>N/A</td>
<td>ZU4408SE</td>
<td>39</td>
</tr>
<tr>
<td>Classic Electric</td>
<td>VE43</td>
<td>Remote</td>
<td>20</td>
<td>N/A</td>
<td>N/A</td>
<td>ZU4420SE</td>
<td>56</td>
</tr>
</tbody>
</table>

1) See valves section for technical information on valve types. 2) See custom order matrix on page 91 for other voltage options.

Subtract 1,4 kg for Standard (STD) Electric models.
ZU4-Series, Options & Accessories

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 bar, psi or MPa.
  * Requires LCD Electric

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.

<table>
<thead>
<tr>
<th>Accessory Kit Model Number</th>
<th>Adjustable Pressure Range (bar)</th>
<th>Switch-point repeatability</th>
<th>Dead-band (bar)</th>
<th>Model Number</th>
<th>Operating Temperature (°C)</th>
<th>Maximum Pressure (bar)</th>
<th>(kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZPT-U4 *</td>
<td>3.5 - 700</td>
<td>± 0,5%</td>
<td>3.5</td>
<td>ZLS-U5 *</td>
<td>5-110</td>
<td>10</td>
<td>0,1</td>
</tr>
</tbody>
</table>

* Add suffix L for factory installation.

Foot Switch
- Hands-free remote control on solenoid dump and 3-position valves
- With 3 metres cord.

Roll Cage
- Protects pump
- Provides greater pump stability.

<table>
<thead>
<tr>
<th>Accessory Kit Number</th>
<th>Fits on reservoir</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZRC-04 *</td>
<td>4 and 8 litres (^1)</td>
</tr>
<tr>
<td>ZRC-04H *</td>
<td>4 and 8 litres (^2)</td>
</tr>
<tr>
<td>ZRB-10 *</td>
<td>10 litres</td>
</tr>
<tr>
<td>ZRB-20 *</td>
<td>20 litres</td>
</tr>
<tr>
<td>ZRB-40 *</td>
<td>40 litres</td>
</tr>
</tbody>
</table>

\(^1\) Without heat exchanger
\(^2\) With heat exchanger

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

<table>
<thead>
<tr>
<th>Accessory Kit Modelnr.</th>
<th>Fits on reservoir</th>
</tr>
</thead>
<tbody>
<tr>
<td>SBZ-4 *</td>
<td>4 and 8 l without heat exchanger</td>
</tr>
<tr>
<td>SBZ-4L *</td>
<td>4 and 8 l with heat exchanger</td>
</tr>
</tbody>
</table>

* Add suffix K for factory installation.

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.

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

Foot Switch

Roll Cage

Skid Bar

Hoses

Foot Switch

Foot Switch

Foot Switch

Foot Switch

Foot Switch

Foot Switch

Foot Switch

Foot Switch

Foot Switch

Foot Switch
ZU4-Series Options
Accessory Kits can be installed by the customer. See chart below for all possible options on ZU4-Series pumps:

- Classic Electric
- Standard (STD) Electric (no LCD)
- Pro Electric (with LCD)

Refer to page 91 for ordering matrix.

<table>
<thead>
<tr>
<th>ZU4-Series Options</th>
<th>Factory Installed</th>
<th>Accessory Kits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Classic Electric</td>
<td>Standard Electric</td>
</tr>
<tr>
<td></td>
<td>Classic Electric</td>
<td>Standard Electric</td>
</tr>
<tr>
<td>Return Line Filter</td>
<td>F</td>
<td>F</td>
</tr>
<tr>
<td>Skid Bar [1]</td>
<td>K</td>
<td>K</td>
</tr>
<tr>
<td>Roll Cage</td>
<td>R</td>
<td>R</td>
</tr>
<tr>
<td>Heat Exchanger</td>
<td>H</td>
<td>H</td>
</tr>
<tr>
<td>1000 bar Pressure Gauge</td>
<td>G</td>
<td>G</td>
</tr>
<tr>
<td>Pressure Transducer</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Level/Temperature Switch</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Foot Switch</td>
<td>–</td>
<td>–</td>
</tr>
</tbody>
</table>

\[1\] Skid Bar not in combination with Roll Cage.

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

25 Micron Return Line Filter
- Removes contaminants from return oil flow
- By-pass valve prevents damage if filter is dirty
- With maintenance indicator.

<table>
<thead>
<tr>
<th>Accessory Kit Modelnr.</th>
<th>Maximum Pressure (bar)</th>
<th>Maximum Oil Flow (l/min)</th>
<th>By-pass Setting (bar)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZPF</td>
<td>13,8</td>
<td>45,4</td>
<td>1,7</td>
</tr>
</tbody>
</table>

* Add suffix F for factory installation.

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

<table>
<thead>
<tr>
<th>Accessory Kit Nr.</th>
<th>Can be used on</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZHE-U115 *</td>
<td>115 V pumps</td>
</tr>
<tr>
<td>ZHE-U230 *</td>
<td>230 V pumps</td>
</tr>
</tbody>
</table>

* Add suffix H for factory installation.

Heat Exchanger
Can be factory installed on ZU4-Series Classic, Standard Electric and Pro Electric models.

- 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.

<table>
<thead>
<tr>
<th>Thermal Transfer *</th>
<th>Maximum pressure (bar)</th>
<th>Maximum oil flow (l/min)</th>
<th>Voltage (VDC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>900</td>
<td>950</td>
<td>20,7</td>
<td>26,5</td>
</tr>
</tbody>
</table>

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

www.enerpac.com
ZU4, Specifications and Dimensions

### ZU4-SERIES PERFORMANCE

<table>
<thead>
<tr>
<th>Motor Size (kW)</th>
<th>Output Flow Rate at 50 Hz (l/min)</th>
<th>Motor Electrical Specifications (volts-ph-Hz)</th>
<th>Sound Level (dBA)</th>
<th>Relief Valve Adjustment Range (bar)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.25</td>
<td>11.5, 8.8, 1.2, 1.0</td>
<td>115-1-50/60 230-1-50/60</td>
<td>85-90</td>
<td>140-700</td>
</tr>
</tbody>
</table>

### OIL FLOW VERSUS PRESSURE

- **7 bar**: 11,5
- **350 bar**: 9,8
- **50 bar**: 8,2
- **700 bar**: 6,4
- **140 bar**: 4,9
- **280 bar**: 3,2
- **560 bar**: 2,3
- **700 bar**: 1,6

### ZU4-Series with 4 and 8 litres reservoirs

- ¾"-18 NPTF Advance and Retract Ports
- User adjustable relief valve
- Oil fill port SAE #10 ¾"-14 UNF-2B
- Oil level sight gauge
- Oil drain ½" NPTF
- M8, 12 mm deep
- Handles on all 10, 20 and 40 litres reservoirs.

### Options (see chart on page 89):

1. Back-lit LCD Electric
2. Pressure transducer
3. Heat Exchanger
4. Skid Bar
   - Fits 4 and 8 litres reservoirs
5. Handle guard installed on all 10, 20 and 40 litres reservoirs
6. Reservoir handles (not shown) included on all 10, 20 and 40 litres reservoirs.

### Motor Specifications

- **Usable Reservoir Capacity**
  - 4 litres
  - 8 litres
  - 10 litres
  - 20 litres
  - 40 litres

### Pump Dimensions (mm)

<table>
<thead>
<tr>
<th>Usable Reservoir Capacity (liter)</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>424</td>
<td>142</td>
<td>279</td>
<td>152</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>8</td>
<td>424</td>
<td>142</td>
<td>279</td>
<td>206</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>10</td>
<td>439</td>
<td>157</td>
<td>413</td>
<td>305</td>
<td>384</td>
<td>279</td>
</tr>
<tr>
<td>20</td>
<td>465</td>
<td>180</td>
<td>413</td>
<td>422</td>
<td>500</td>
<td>396</td>
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<td>40</td>
<td>551</td>
<td>269</td>
<td>399</td>
<td>503</td>
<td>576</td>
<td>480</td>
</tr>
</tbody>
</table>

**Portable power pump with increased output flow and extended brush life increase productivity for post-tensioning applications.**
**ZU4-Series, Pump 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 86, you can easily build your custom ZU4-Series pump here.

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

<table>
<thead>
<tr>
<th>Z</th>
<th>U</th>
<th>4</th>
<th>1</th>
<th>04</th>
<th>D</th>
<th>E</th>
<th>H</th>
<th>K</th>
<th>T</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Product Type</td>
<td>2</td>
<td>Motor Type</td>
<td>3</td>
<td>Flow Group</td>
<td>4</td>
<td>Valve Type</td>
<td>5</td>
<td>Reservoir Size</td>
</tr>
</tbody>
</table>

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** (see page 114-115 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/position checking (VM33-L)
7 3 way/2 position manual or electric (VM22)
8 4 way/3 position locking manual w/position checking (VM43-L)
9 4 way/3 position manual w/power seating (VM43-LPS)

5 **Reservoir Size** (useable capacity)
- 04 = 4 litres
- 08 = 8 litres
- 10 = 10 litres
- 20 = 20 litres
- 40 = 40 litres
- 80 = 80 litres
1) reservoir 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)
- **P** = Manual valve w/pendant and classic electric (i.e. w/o LCD [w/o pendant])
- **R** = Manual valve w/Classic electric (i.e. w/o LCD) [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 and CE EMC compliant)
- **I** = 208-240V, 1 ph, 50/60 Hz (w/NEMA 6-15 plug)

8 **Options and Accessories** (see page 89 for possibilities)
- **F** = Filter
- **G** = 0-1000 pressure bar (63,5 mm)
- **H** = Heat exchanger
- **K** = Skid Bar (4 and 8 litres reservoirs only)
- **L** = Level/temperature switch
- **N** = No reservoir handles (includes lifting eyes)
- **R** = Roll Cage
- **T** = Pressure transducer
- **U** = Foot switch

1) Pressure gauge not available on pump models with pressure transducer
2) These options require Pro Electric
3) Not available on 4 and 8 litres reservoirs

---

**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

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

**Ordering Example**
**Model Number:**
ZU4408DE-HKT

ZU4408DE-HKT is a Pro Electric model pump with LCD, 1,0 l/min oil flow at 700 bar, pump with a dump valve, an 8 liter reservoir, operates on 230V, heat exchanger, pressure transducer and skid bar.

**Torque Wrench Pumps and Hoses**
Enerpac system matched air and electric torque wrench pumps provide control to operate hydraulic torque wrenches.