MultiJet 120 iV

THE VERY BEST IN HIGH PRESSURE WATER JETTING SYSTEMS

INNOVATION THROUGH EXPERIENCE

www.calderltd.com
Calder MultiJet pump units incorporate the very latest technologies to provide market-leading solutions for the marine, offshore, chemical, petrochemical and civil engineering sectors.

For over 30 years, people have put their trust in Calder MultiJet pump units. As specialist manufacturers of high pressure pump systems, we design and engineer high pressure water jetting systems which set the standards for use in the most harsh operating environments around the globe. We are an independent company with one focus: to build the best high pressure pump units in the world.

We understand that quality, reliability, value for money and ease of maintenance are of the utmost importance to you and our commitment to continual improvement is demonstrated in each new generation of MultiJet units.

Whether your business is:

- Surface Preparation
- Coating Removal
- Heat Exchanger/Bundle Cleaning
- Vessel Cleaning
- Pipe Cleaning
- Plant Commission Cleans
- Descaling Applications
- Abrasive Cutting
- Shutdown/Turnarounds

the MultiJet unit offers maximum performance whilst returning the lowest cost of ownership in the industry throughout its lifetime.

Road-Going Trailer-Mounted Options

- **Trailer**
  Road-going trailer – short wheel base, 2.5 tonnes maximum gross weight, free standing.

- **Tow Eye**
  Tow eye or ball hitch available.

- **Towing**
  Torsion axles provide smoother towing.

- **Jockey Wheel**
  Stable operation, jockey wheel provides increased operational stability.

- **Skid**
  Our rugged frame incorporates lifting eyes and forklift slots to enable easy handling and transportation.

- **Spark Arrester**
  Exhaust spark arrester fitted as standard.

- **Overspeed Valve**
  Optional Chalwyn-type overspeed valve available.
• **Ultra Low Friction Labyrinth Seal System**  
  Totally unique, our HP plunger pump labyrinth seal system is formed by circumferential labyrinth grooves between the plunger and the seal bushing, creating a low friction liquid seal. Our seal technology has helped us achieve the single most important advance in pump reliability, giving significant service life and uptime advantages over traditional packing seal technology. To prove it, why not ask us to demonstrate the ‘drop test’ to you?

• **Simple Diagnostics**  
  Pump or engine faults are indicated in the control panel enabling fast resolution following unit shutdown.

• **Fuel tank**  
  250-litre capacity fuel tank (approx. 8 hours running time) incorporated into skid offering reduced weight and low centre of gravity.

• **Robust Pump Gearend**  
  Our HP pump gearend incorporates critical standard features which are not included by many competitors. The gearend pressure lubrication system includes an oil filter and oil cooler. A built-in lubrication pump ensures that oil is delivered to all bearing surfaces and that the oil is circulated through the on-board 25-micron oil filters to ensure maximum oil cleanliness: this, combined with our gearend oil cooler, which maintains pump lube oil at temperatures below 70°C, protects your high pressure pump power end even when operating on continuous duty, resulting in long term reliability.

• **Direct Drive - Efficient And Maintenance Free**  
  The in-built speed reducer installed in the high pressure pump gearend allows direct drive from the diesel engine, eliminating the need for large ratio V-belt drives and additional guarding: this also eliminates bearing side load damage, and reduces weight and maintenance requirements whilst enabling an extremely compact unit design which requires no clutch mechanism.

• **Reduced Pump Maintenance**  
  Repair when you want to, not when you have to….. With our labyrinth seal system design, emergency repairs to the high pressure pump whilst ‘on the job’ are eliminated. As labyrinth wear is gradual, over many thousands of hours, you will experience that scheduled repairs and maintenance are all that is necessary.

• **Boost Pump**  
  Fitted as standard, eliminates cavitation and guarantees inlet water feed pressure.

• **Water Tank**  
  Heavy duty water tank, stainless steel construction eliminating corrosion potential, anti-vibration mounted to skid.

• **Maximum Performance**

• **Safe Application**

• **Reliable Operation**

• **Simple Maintenance**

• **Inlet Water Filter**  
  Bag type inlet water filter, stainless steel construction, protects the HP pump from damage due to dirt/abrasive contamination from feed water supply. Our ‘fast clamp’ system allows quick and simple filter replacements.

• **Maintenance**  
  Easy access to all filters and key maintenance areas.

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**THE VERY BEST IN HIGH PRESSURE WATER JETTING SYSTEMS**
Calder pump packages can comply with most international standards and specifications including:

- ATEX
- IEC
- GOST
- EN
- DNV
- API
- ANSI
- PED
- AS/NZ
- NORSOK
- NACE
- CE
- PED

ISO 9001 Quality standard has been practised by Calder since 1987 with award of certification in 1999. Our rigorous application of this highly respected International Quality Standard has ensured that we consistently meet and exceed our customers’ most demanding expectations for both quality and reliability.

ISO 14001 Environmental Standard has been held by Calder since 1999. Careful and judicious management of our working environment with the application of sound and well-informed design applications utilising the latest and most efficient technologies helps us to produce equipment which minimises the environmental footprint of our production facility and the operating equipment in the field.

OHSAS 18001 We at Calder pride ourselves on our safety record. As members of the British Safety Council we practise the strictest safety procedures within our factory and working environments, applying rigorous risk assessments to all activities and equipment which we design and build.

### MultiJet 120 iV Performance Chart

<table>
<thead>
<tr>
<th>Plunger Dia (mm)</th>
<th>Working Pressure psi (bar)</th>
<th>Flowrate usgpm (lpm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>17.5</td>
<td>43,500 (3,000)</td>
<td>5.0 (19)</td>
</tr>
<tr>
<td>20</td>
<td>32,625 (2,250)</td>
<td>6.6 (25)</td>
</tr>
<tr>
<td>25</td>
<td>21,025 (1,450)</td>
<td>10.5 (40)</td>
</tr>
<tr>
<td>30</td>
<td>14,500 (1,000)</td>
<td>15 (57)</td>
</tr>
<tr>
<td>35</td>
<td>10,875 (750)</td>
<td>20.6 (78)</td>
</tr>
<tr>
<td>40</td>
<td>8265 (570)</td>
<td>27.5 (104)</td>
</tr>
</tbody>
</table>

### Control Panel

- Sealed stainless steel enclosure. Functions: Start-stop, pressure up/down (using hydro throttle control), engine speed, emergency stop.

### Safety Shutdown:

- Pump - low inlet water pressure
- Pump - low oil pressure
- Engine - low oil pressure
- Watertank - low level

### Indicators:

- fuel level - discharge pressure - engine revs - engine temperature - pump fault - engine fault

### Performance Conversion Kits

- Maximise the potential of your pump unit and enable MultiJet to multi-task with our ‘Performance Conversion Kit’ which will enhance the range of applications you can tackle by increasing your operating pressure range up to 3,000 bar (43,500 psi).
- Performance conversion kits can be fitted at any time during the life of your MultiJet and take less than 30 minutes to install. Typical conversions available include, but are not limited to, 3,000 psi, 5,000 psi, 7,500 psi, 10,000 psi, 15,000 psi, 21,000 psi, 36,000 psi and 43,500 psi.
- Fit the Performance Conversion Kit in under 30 minutes and increase your operating pressure range up to 3,000 bar (43,500 psi).