Murray Engineering’s pumping division offers an unmatched comprehensive service for all your fluid transfer requirements. With more than 150+ years of industry experience, our dedicated team can assist you with all aspects of your dewatering requirements. Unlike other companies, Murray Engineering offers personalised solutions and services, not just a piece of equipment.

Murray engineering have supplied and repaired various brands of pumping and associated equipment both in house and on site. Our highly experienced and industry recognised service technicians, fitters and boiler makers coupled with world class ISO certified service facilities and fully equipped service vehicles are available for all on, and off site pumping requirements.

Murray Engineering offers a complete turnkey solution for all your mine dewatering needs.

PUMPING CAPABILITIES

- Supply and service of all pump systems and associated equipment
- Design and manufacture of pump systems
- Supply of qualified, experienced pump technicians
- Installation and commissioning with on-site labour hire
- Upgrades to existing materials of construction to extend equipment life
- Site pump audits, plant health checks and production availability improvements
- Overhaul of all types, sizes and brands of pumps
- Supply of many OEM pumps and parts
- Supply of re-engineered spare parts for any OEM pump as required
- Boiler feed & cooling water pump overhaul and re-rate
- Mechanical seal and valve overhauls
- Motorisation and skid packaging with diesel, electric or turbine drive
- Repair and service of fans, blowers, mixers and gearboxes.
- Turbine overhauls
- Compressor service and overhaul
- On-site maintenance and repairs including embedded engineers/specialized mechanical fitters on site for full time service contracts
- Dynamic balancing
- Failure analysis with full RCFA reporting
- Full spectrum vibration analysis and condition monitoring reporting

Irrespective of which substance needs to be transferred, our reliable and robust solutions are perfectly suited for any arduous application. With global support and a team of industry leading specialists, our focus is providing proven benefits to our customers, coupled with significant commercial savings.
MEPS DEWATERING EQUIPMENT SOLUTIONS

The MEPS - Helical Rotor Pump and the MEPS - Heavy Duty Centrifugal Pump Set are designed for arduous dewatering applications. The base unit includes a tank, progressive cavity pump, inspection ladder, valves, flow meter, piping and mounting on a common galvanized or painted steel skid. Murray Engineering also provides the unit with a control panel as required, with integrated instrumentation such as high/low level switches for the tank or dry run protection for the pump. These are available as a stand-alone unit, traveller or main pumping station with multiple pumps.

MEPS SLURRY EQUIPMENT SOLUTIONS

When slurries are too thick and pump speeds get too high for other technologies, Murray Engineering steps in.

Our Progressing Cavity Pumps can transfer even very thick slurries at low operational speeds, thus significantly reducing wear. Our pumps can also easily handle big solids and withstand high pressures.

Where thickened slurries need to be back-filled, a MEPS hopper pump is used. High pressure and capacity capabilities, coupled with low wear rates ensure reliable, cost effective operation.
**MEPS HELICAL ROTOR PUMPS FEATURES & BENEFITS**

The MEPS Pump is designed for dewatering purposes. The base unit includes a tank, progressing cavity pump, inspection ladder, valves, and piping all mounted on a common galvanized or painted steel skid. Murray Engineering also provide the unit with a control panel as required; with integrated instrumentation such as high/low level switches for the tank or dry-run protection for the pump.

**ROUTERS**
Rotors are available in wear and corrosion resistant materials:
- Chrome
- SS316 with HCP
- Duplex
- Super Duplex
- Tungsten Carbide Coating

**STATORS**
- NEMOLAST® Nitrile Rubber
- NEMOLAST® Natural Rubber
  - Handles up to 80% of hard solids.

**SUCTION HOUSING**
- Carbon steel with Halar-coated internal or rubber lined.
- Chromium-nickel-molybdenum steel.
- SS316
- Duplex
- Super duplex
- Tungsten carbide coating for high abrasive resistance.
  - Last up to 3 times more than HCP.
- NEMO CERATEC® (limit sizes)

**DRIVE TRAIN**
The drive and connecting shaft with coupling rod and two universal joints provide the power transmission from the drive to the rotor.

**SHAFT SEALING**
- Standard design with single acting seal, wear resistant, bi-directional mechanical seals.
- Double acting mechanical seal from a range of manufacturers, as well as cartridge seal.
- Gland packing stuffing box option.

**JOINTS**
Double Sealed Pivot Joint (Z Joint) is the most reliable and sturdy joint option used for greatest flow rates and pressures possible, where torque and axial loads are at their highest. The Z joint make the pump suction housing shorter when compared to flexishaft, which reduces the NPSH required and it is easier to maintain.

**MEPS PUMP RANGE AND COMPARISON TO EXISTING PUMPS**
The below illustration compares Murray Engineering helical rotor pumps vs. other helical rotor pumps. With an average of 70 days free running per year, and a significant reduction in maintenance costs, our MEPS are engineered for optimum performance.

<table>
<thead>
<tr>
<th>OPERATING DUTY</th>
<th>REVOLUTIONS PER YEAR</th>
<th>TYPICAL REVOLUTIONS PER YEAR OF COMPETITOR PUMPS</th>
<th>DIFFERENCE PER YEAR</th>
<th>DIFFERENCE PER YEAR IN ABSORBED POWER</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>3 STAGE HELICAL ROTOR</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 L/S @ 180M</td>
<td>84,096,000</td>
<td>99,864,000</td>
<td>15,768,000</td>
<td>43,800 KW</td>
</tr>
<tr>
<td>16 L/S @ 180M</td>
<td>135,604,800</td>
<td>162,936,000</td>
<td>27,331,200</td>
<td>35,040 KW</td>
</tr>
<tr>
<td>22 L/S @ 180M</td>
<td>170,820,000</td>
<td>204,984,000</td>
<td>34,164,000</td>
<td>61,320 KW</td>
</tr>
<tr>
<td><strong>4 STAGE HELICAL ROTOR</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 L/S @ 240M</td>
<td>74,635,200</td>
<td>89,352,000</td>
<td>14,716,800</td>
<td>26,280 KW</td>
</tr>
<tr>
<td>16 L/S @ 240M</td>
<td>128,772,000</td>
<td>152,424,000</td>
<td>23,652,000</td>
<td>35,040 KW</td>
</tr>
</tbody>
</table>
Murray Engineering can supply and fit OEM and aftermarket spares to all makes and models of OEM pumps. We pride ourselves on delivering the highest level of quality with our in-house repair service. Our services include but are not limited to:

- Pump assessment and rebuilds to restore pump performance
- Overhaul of electric motors, mechanical seals and valves
- Rewind and clean and bake of electric motors
- Supply of various pump materials
- Material coating
- Manufacture/ supply of replacement components
- Blast and paint facilities
- Assembly of pump sets with electric motors or diesel engines
- Performance testing of pumps

Our rotors and stators are constructed in identical materials to other brands of helical rotor pumps, with significant cost savings over OEM parts with a very comparable service life.

Murray Engineering is a world class service provider to the mining industry, and is headquartered at a modern, purpose-built 55,000m² facility in Western Australia, with branches in Kalgoorlie, Newcastle, Roxby Downs and Mongolia.

Founded in 2007, the company has grown to a +$100 million per annum revenue.

Murray Engineering prides itself on providing world class service, reflected in its growing list of clients, which includes leading companies from a range of industries throughout the world.

With seven divisions and hundreds of services, we’ve got you covered.
SEVEN DIVISIONS, HUNDREDS OF SERVICES

WE’VE GOT YOU COVERED

"TESTIMONIALS"

MEPL has continually exceeded our expectations. They delivered the fleet of new vehicles and equipment well ahead of time with all vehicles meeting all our specifications and requirements. The efficiency of the mobilization was critical to the project restart and operational plans for the mine, and MEPL excelled in ensuring our objectives were met ahead of time and within budget.

- Tier 1 mining company.

I would like to thank Shane & Dean for their efforts and assistance, the way they have controlled the job, followed direction and added valuable input into the process is a credit to them and to Murrays.

- Tier 1 mining group.

Rob, Paul and your team, I think I can speak for everyone in thanking you for dropping everything and assisting us with providing your people and equipment at a moment’s notice to get us back up and running.

- Precious metals mining company.

I would like to thank you for support and relay the great job that Rob has done to date on site, pleased to report also he was nominated through our Vital Behaviours awards via work mates, which is extremely pleasing to see a contractor living our values whilst on site. Thanks again for continued support.

- Major gold mining group.

Looking around the piping section it was good to see an enthusiastic team taking pride in their work. Please pass on to the team my congratulations on the quality of their workmanship.

- Major environmental services group.

Just wanted to let you know the wash down rig is performing well. Pass the word around, you and your team did some good work.

- Major gold mining group.
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SEVEN DIVISIONS, HUNDREDS OF SERVICES-
WE’VE GOT YOU COVERED