

Mono[®]

National Oilwell Varco

Mono Mining



Australian innovation providing highly efficient, fully-integrated de-watering solutions for reducing the total cost of a mine de-watering program.

Mono[®]

Mono Pumps - Mining

Dedicated to our partnership

Mono Pumps has been focused on the Australian mining industry for over 30 years. When you install and commission a Mono Pump, you know that we have combined all of our technology and experience to develop the most reliable de-watering solutions, aimed at keeping your mine dry and production on-line.

The Duraflo pump has been designed to reduce the cost of de-watering. Through the use of long wearing materials and specialist coatings developed specifically for the mining industry, the Mono Duraflo pump has the capability to significantly cut your operating costs.

As an Australian manufacturer, with sales and service facilities across the country, be assured that Mono Pumps will support you across all aspects of your de-watering program. From concept design, through to full turn-key pump station projects, Mono Pumps has the equipment, experience and know-how to get the job done.

Products & Services Offered

Capital Projects

- De-watering solution designs
- Mono Progressive Cavity Pumps
- ABS Jumbo Submersible De-watering Pumps
- Versa-Matic® Air Operated Double Diaphragm Pumps

Service / Repair / Maintenance

- Pumps
- Complete Systems
- On-Site and Underground
- Workshop facilities in all states
- Service and Maintenance Contracts
- Condition Monitoring

Service Exchange

- Rotors
- Shafts
- Bearing Housings
- Bareshaft Pumps

Installation & Commissioning

- Above or Below Ground
- Qualified Personnel
- System Design Assistance
- Post Installation Report
- Pre-Commissioning Advice
- Post Commissioning Report
- Technical Assistance

Hire

- Progressive Cavity Pumps
- Submersible Pumps
- Starters
- AODD Pumps
- De-watering Rigs



Products & Services

Duracoat 3000® rotors

Whole of life cost is extremely important in mine de-watering applications. With the introduction of Duracoat 3000, Mono Pumps is able to provide a solution to the high running costs usually associated with PC de-watering pumps.

Duracoat 3000 is a proprietary Modified Tungsten Carbide coating that combines extreme hardness, toughness and corrosion resistance. It is one of the most densely applied products used in mining today. These unique characteristics result in the hardest wearing rotor coating available. This ensures the integrity of the rotor surface, despite the extreme nature of the pumped abrasives.

This ultimately saves you money due to both reduced down-time and extended periods between the replacement of wearing parts.

Hard Chrome Plating (HCP) provides a low cost economical solution for applications involving low to medium abrasion, or for shorter term installations.

Benefits

- Up to four times the life of Hard Chrome Plate
- An increase in stator life
- Reduced down time
- Reduced whole life cost



*Actual cost will vary dependent on application.



Mono Duraflo

1. Rotor - Duracoat 3000 or HCP

Duraflo mining pumps are fitted with Duracoat 3000 rotors to minimise operating costs by significantly extending the life of the rotor and stator. Where capital costs are important, Mono can offer HCP coated rotors. In all cases, maximum attention is paid to the rotor profile to maximise efficiency and part life.

2. Flexishaft®

The Mono designed and patented flexishaft has been proven over 40 years of service. Through the elimination of wearing parts the flexishaft allows for a maintenance free drive train with optimum reliability. The flexishaft is protected with an inert Halar coating and comes with a 5 year warranty.

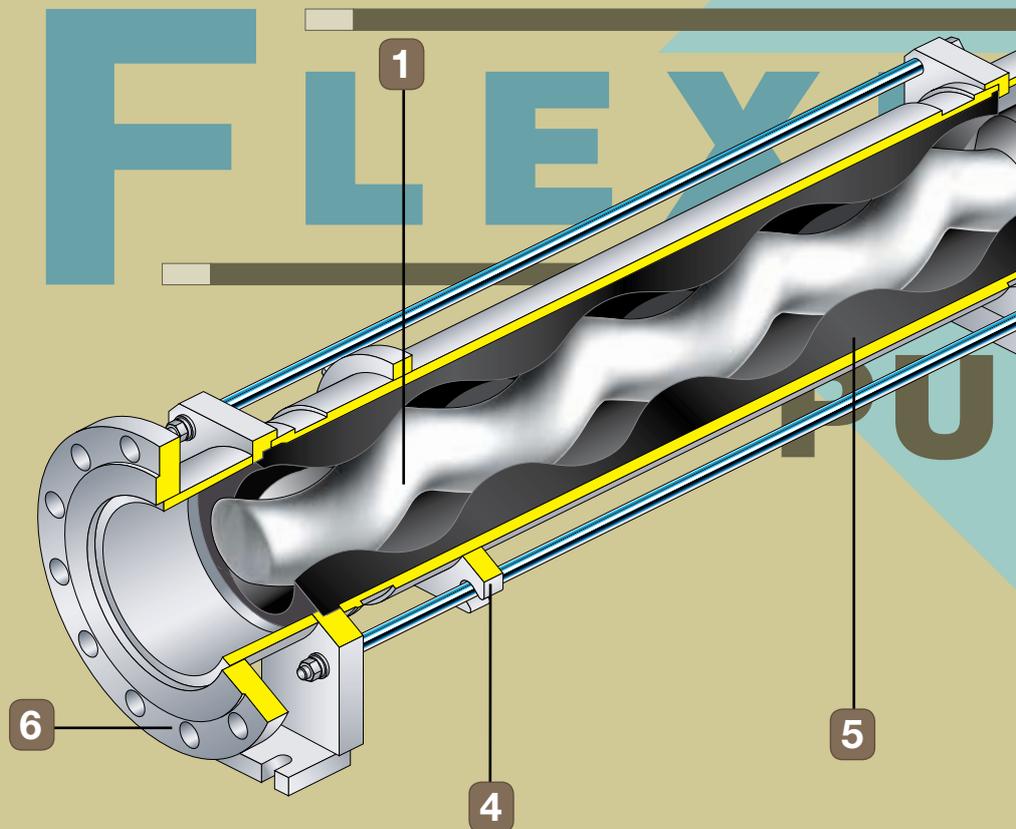


3. Gland

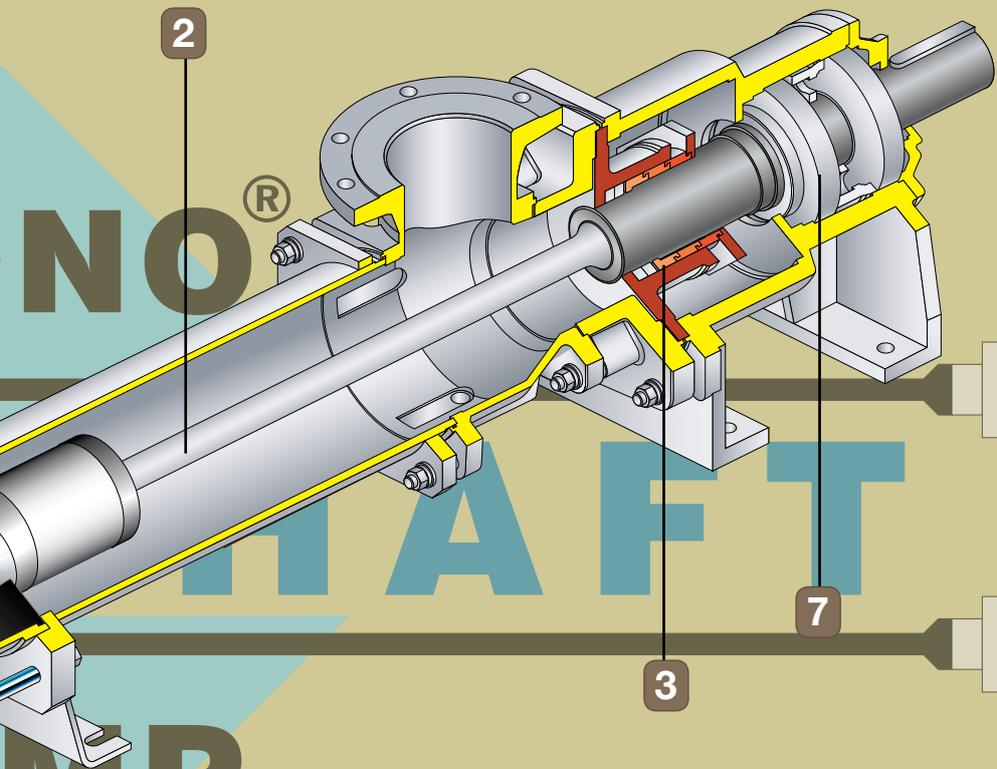
Mono has again gone to the forefront of design and improvement of mining pumps. The new Dura 7 gland arrangement was designed specifically for these pumps to increase the life of the drive shaft, achieving up to 3 times the wear resistance on the standard gland arrangement.

4. Tie Bars & Anti-Rotation Rings

The use of tie bars with the addition of anti-reversing rings is the recommended solution for elimination of the stator moving when in place.



Mining Pump



5. Stator

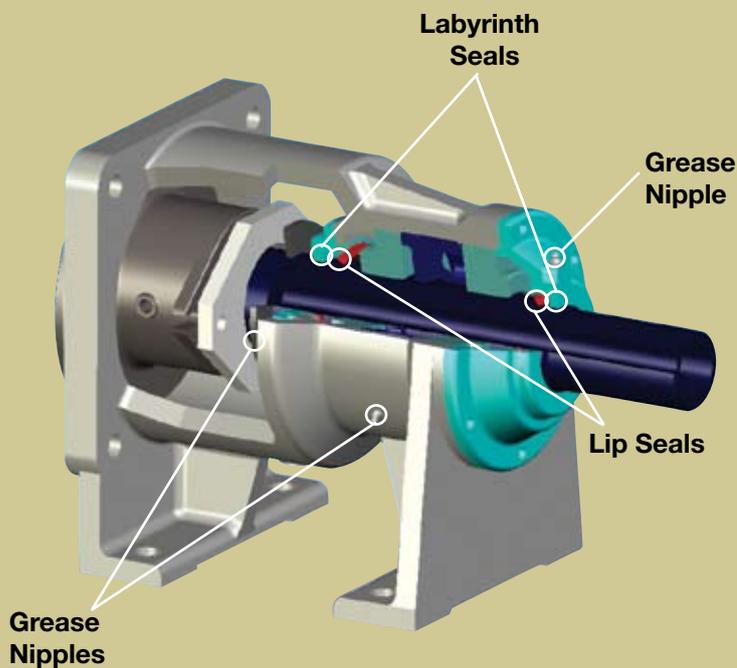
Stator is made of resilient and abrasion resistant synthetic rubber compound (Nitrile). As with all genuine Mono parts, dimensional accuracy can be assured through sophisticated co-ordinate measuring technologies.

6. End Cover

Duraflo pumps are fitted with marine grade Ni-Resist end covers and adaptor flanges to minimise the effects of erosion, corrosion and leakage traditionally found in stainless steel and cast iron end covers.

7. Bearing Housing

The Duraflo pump is built with a heavy duty bearing housing, including taper roller bearings and grease packed labyrinth seals. With easy access to multiple greasing points, the bearings can be kept clean and well lubricated to maximise bearings life in extremely harsh often wet environments.



Mono Duraflo De-

Utilising years of service to the mining industry, Mono Pumps has developed a standardised mine de-watering station in a configuration to suit your needs, be it fixed or mobile situation they are available in bareshaft, motorised or full hopper station with the options shown here.

1. Motor

1000V and 415V motors. High quality, mining specification design. MEPS2 compliant, high efficiency.

2. Base

All mining bases are of heavy section mild steel galvanized construction. Lifting lugs and fork lifting points are located on all standard bases along with heavy duty drag bars and bolt down fastening points.

3. Belt & Pulley Guard

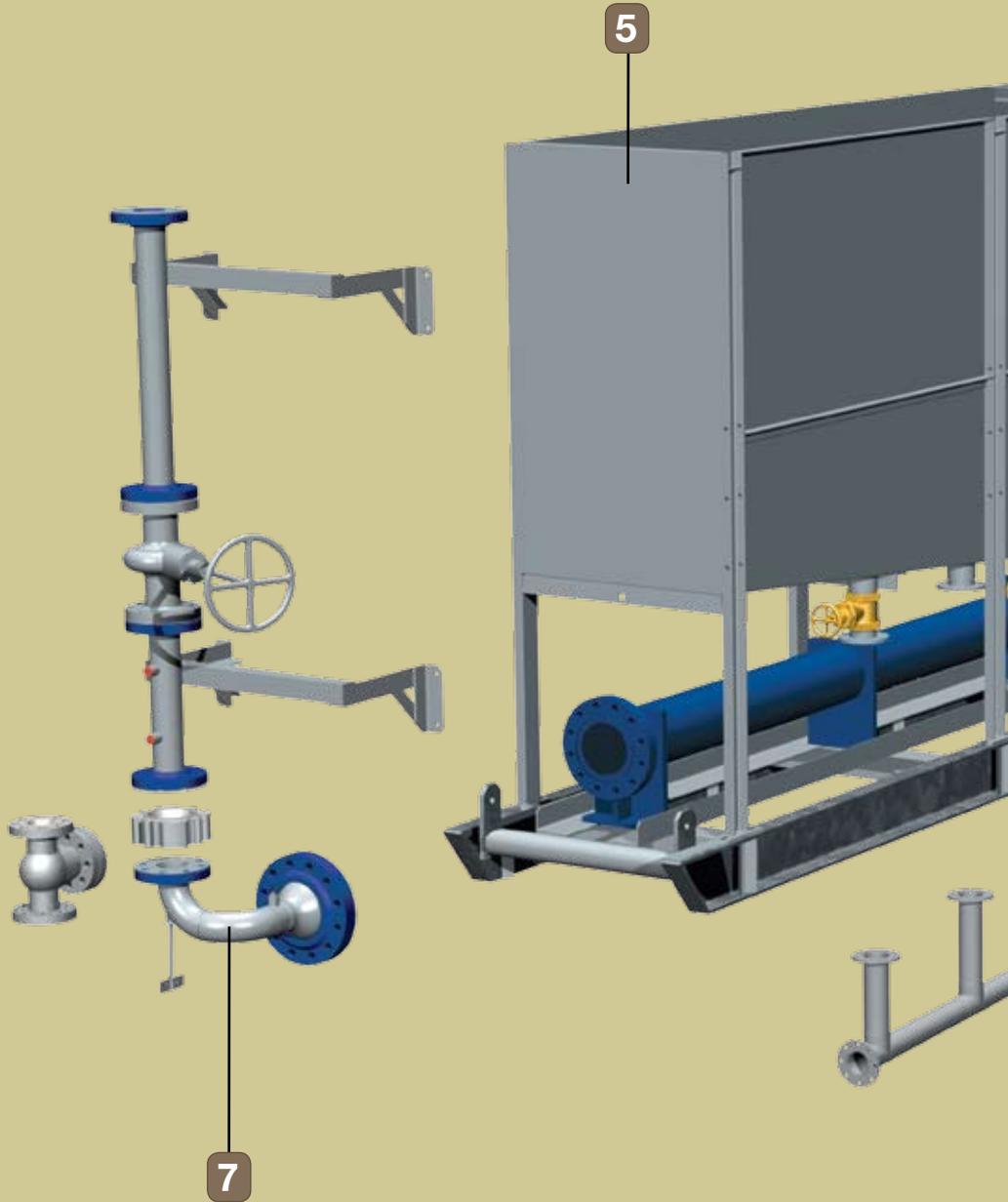
All pulley guards designed and manufactured by Mono Pumps are made to comply with AS4024.1 and all necessary OH&S legislation.

4. Grease Point

A central grease point is located on the motor stool for greasing of both the pump and motor bearings. For your convenience there is an etched label showing the recommended greasing schedule.

5. Hopper (Option)

The hopper is constructed of 6mm fully seam welded heavy duty steel plate. For corrosion protection the hopper is blasted to class 2.5 then painted with a quality two part epoxy. There are 2 or 3 baffled sections depending on the size of the unit to assist in the settling of solids. Solids can be periodically removed via brass gate valves located in each section. The hopper contains an internal overflow pipe and auxiliary bar for hanging of level floats.



ewatering Station



6. Dump Manifold (Option)

The dump manifold is integrated with the internal overflow pipe, all terminating at a class E flange.

7. Discharge Pipework (Option)

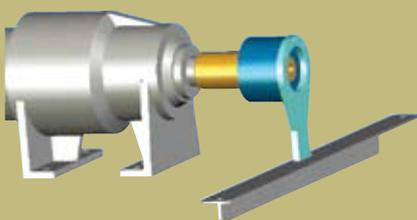
Discharge pipework includes a steel gate valve and the option of either a steel Swing Check or Duo Check (wafer) non return valves in both 4" and 6" configuration.

All discharge pipework incorporates the swing away design which allows for easy access to the pump. The pipework is fitted with 25mm & 50mm BSP sockets to enable easy connection of pressure gauges, wash-down hoses and pressure relief valves.

8. Walkway (Option)

All walkways and ladders that are designed and manufactured by Mono Pumps are made to AS1657.1992.

Anti-Reversing Device



Anti-Reversing clutches are essential whenever a pump is operated against a high static head as occurs in de-watering applications. They are supplied as standard on all Duraflo de-watering pump stations.

The anti-reversing clutch will prevent reverse rotation of the pump in the event of non-return valve failure.

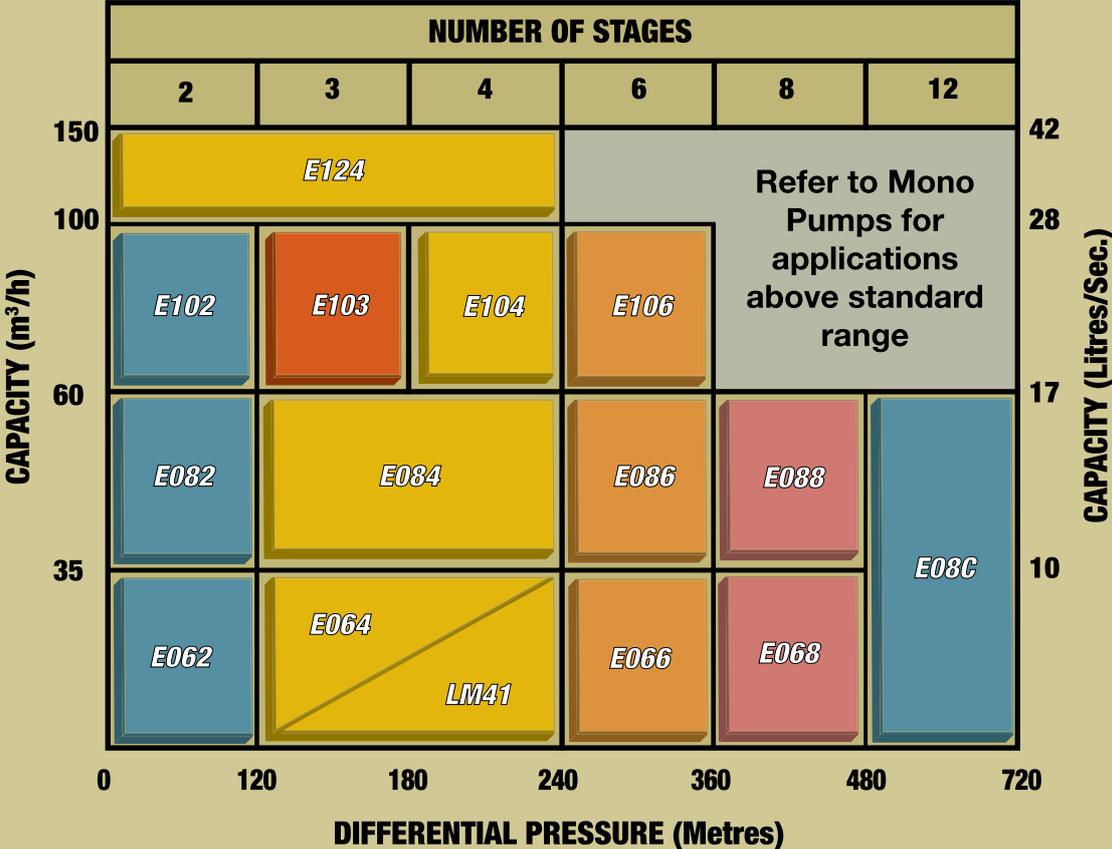
The clutch allows free rotation of the pump in one

direction only and will engage and prevent rotation in the opposite direction. The clutch will disengage automatically and allow for normal rotation without the need for resetting or readjustment.

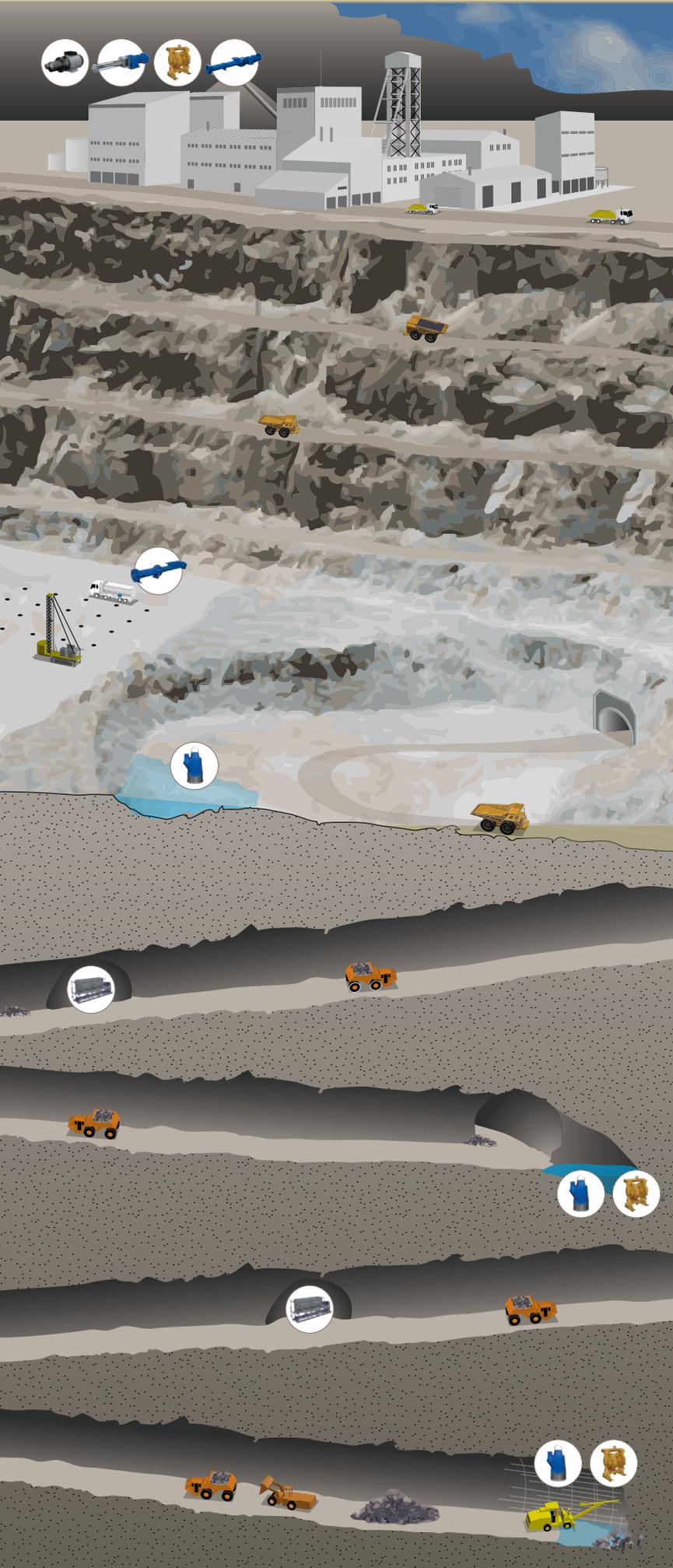
Note: Anti-reversing clutches are used specifically to prevent damage to pumps caused by reverse rotation and must be used in conjunction with non-return valves and isolating valves.

Typical Performance Data

Standard Mono Mining Range



Mono Mine Pumping Solutions



Mining Station

- Least whole life options available.
- Suit fixed or mobile situations
- Different configurations available to meet your requirements



Monobloc Range

- Flocculants
- Process plants
- General transfer



Jumbo® De-watering Pump

- No external moving parts
- Nuisance water removal
- Competitively priced



X Range

- Explosive emulsions
- Truck and surface mounting
- Intrinsically safe flexishaft connections



LF Range

- Metered dosing
- Compact size
- Polymer & flocculant transfer



CP Range

- Compact & versatile
- Oily water separators
- Oil transfer in maintenance bay



Versa-Matic AODD

- Solids handling capability
- Totally submersible
- Anti-stalling and non-icing

Versa-Matic Air Pumps

Solids handling pumps that are anti-stalling, non-icing and lubrication free

- Screen mounted and flap valve pumps designed to pump mediums which contain large solids.
- Can handle semi-solids up to 1.125" (28.57mm).
- Screen mount bases screen fluid to prevent larger solids from inhibiting the operation of the pump.
- Can be fully submerged in pits, sumps or other bodies of fluid.
- Can deliver flows up to 1140lpm making quick work of many difficult applications.
- 12V DC & air operated centrifugal pumps.



Flap Valve Pump

Range: 20m @ 550lpm
65m @ 60lpm



Solids Handling, Screen Mounted Pump

Range: 20m @ 380lpm
65m @ 75lpm



Porta-Matic 12V Battery Powered Portable Pump

Max. Flow: 163lpm
Max. Pressure: 7.6m



AP50 Air Driven High-Pressure Pump

Max. Flow: 473lpm
Max. Pressure: 33m



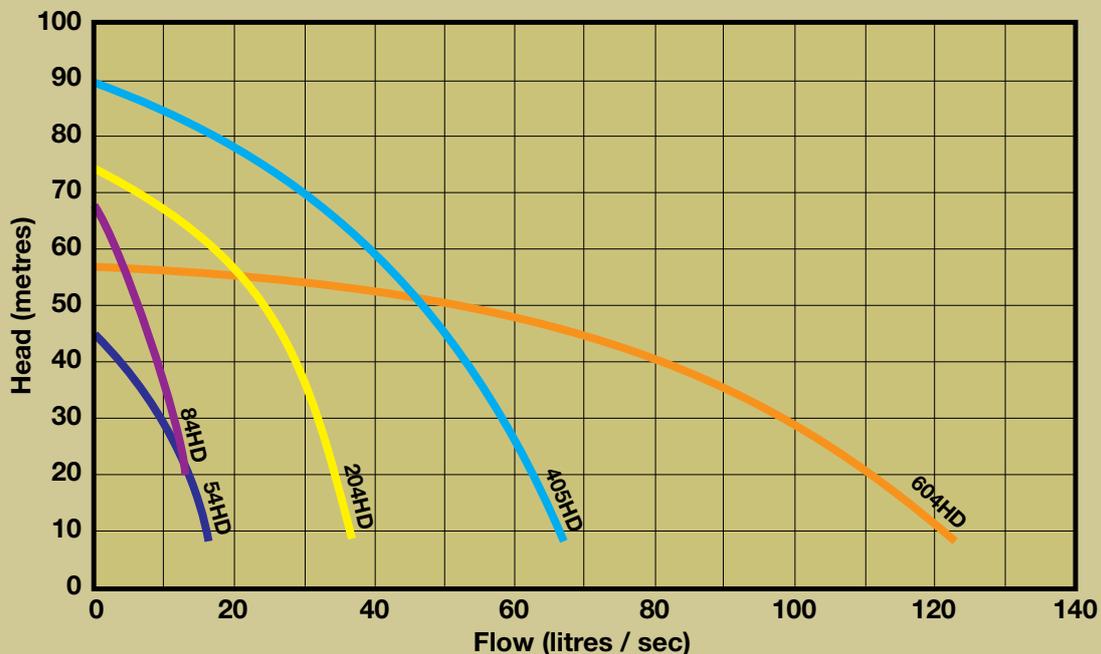
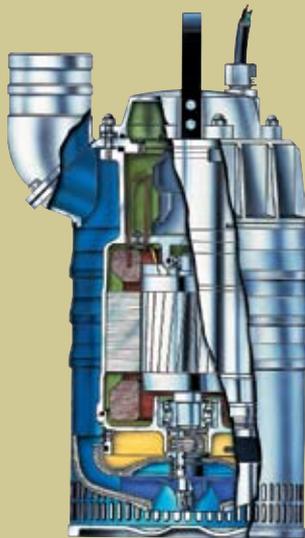
SludgeMaster Air-driven High-Flow Pump

Max. Flow: 1140lpm
Max. Pressure: 20m

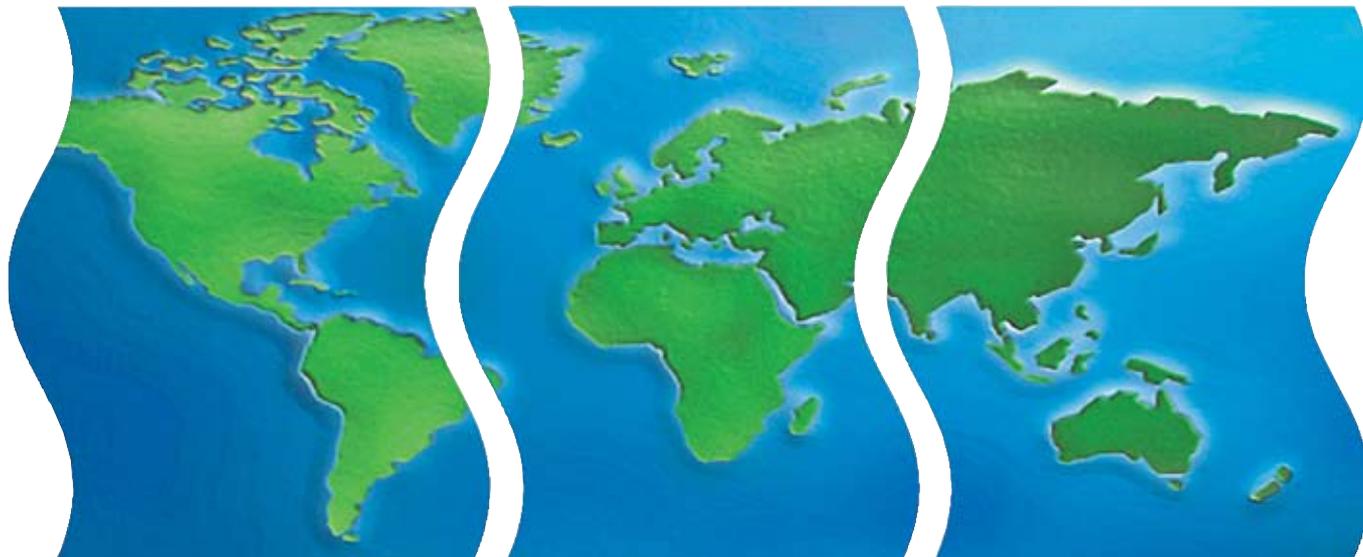
ABS Jumbo® 54 to 604

Lightweight, heavy-duty pumps with high quality in every detail

- Optimal cooling due to outlet position and cooling jacket.
- Optional discharge sizes and orientation.
- Low weight with major parts in aluminium and cooling jackets in stainless steel.
- Flexible performance with a variety of semi-open impellers
- Wear resistant impellers in white cast iron and rubber lined wear parts.
- Plug in start as standard with built in contactor on DOL pumps.
- Built in motor protection with thermal sensors ensures dry running operation.
- Modular system provides many interchangeable parts.
- Rigid stainless steel shafts supported on maintenance free ball bearings.
- Reliable design with two mechanical seals lubricated in environmental friendly oil. Lower seal has durable silicon carbide.
- Easily adjustable wear parts allows compensation for wear and maintains high pump efficiency.



Mono Pumps Around the World



Americas

Monoflo Incorporated
 10529 Fisher Road
 Houston
 Texas 77041
 U.S.A.
 Tel: +1 713 980 8400
 Fax: +1 713 466 3101
 Email: inquire@monoflo.com
 www.monoflo.com



For total peace of mind ask about our scheduled maintenance contracts to suit your individual needs. We offer a complete package for all our product ranges including installation and commissioning if required.

Australia & New Zealand Branches:

	Telephone	Facsimile
Sydney	02 8536 0900	02 9542 3649
Brisbane	07 3350 4582	07 3350 3750
Adelaide	08 8447 8333	08 8447 8373
Perth	08 9479 0444	08 9479 0400
Darwin	08 8931 3300	08 8931 3200
Kalgoorlie	08 9022 4880	08 9022 3660
Dunedin NZ	+64 3476 7264	+64 3476 2154

Representatives in -

Country NSW
 Tasmania
 Central & North Queensland

Europe

Mono Pumps Limited
 Martin Street
 Audenshaw
 Manchester M34 5JA
 England
 Tel: +44 (0) 161 339 9000
 Fax: +44 (0) 161 344 0727
 Email: info@mono-pumps.com
 www.mono-pumps.com

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MONO CARES

Mono Pumps (Australia) Pty Ltd cares about its customers and the level of service that it provides. We welcome all feedback good or bad on products and services provided.

Please address all feedback to the email address below -

Email: feedback@mono-pumps.com

Your feedback will assist Mono in providing better service and becoming a better company in meeting your requirements.

Mono
Quality Management

Mono Pumps (Australia) Pty Ltd, PO Box 123, Mordialloc, Victoria, 3195, Australia.

Australasia

Mono Pumps (Australia) Pty Ltd
 338-348 Lower Dandenong Road
 Mordialloc Victoria 3195
 Australia
 Tel: +61 (0) 3 9580 5211
 Fax: +61 (0) 3 9580 6659
 Email: ozsales@mono-pumps.com
 www.mono-pumps.com

Mono Pumps (New Zealand) Ltd
 PO Box 71-021
 35 - 41 Fremlin Place
 Avondale Auckland 7
 New Zealand
 Tel: +64 (0) 9 829 0333
 Fax: +64 (0) 9 828 6480
 Email: info@mono-pumps.co.nz
 www.mono-pumps.com

National Oilwell Inc.
 Suite 1603-1606, Air China Plaza
 No. 36 Xiaoyun Road
 Chaoyang District
 Beijing 100027
 China
 Tel: +86 (0) 10 8447 5109
 Fax: +86 (0) 10 8447 5110
 email: alan.chen@natoil.com

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Mono Pumps (Australia) Pty Ltd

ABN 77004449478

Telephone: +61 (0) 3 9580 5211

Facsimile: +61 (0) 3 9580 6659

E-mail: ozsales@mono-pumps.com

Website: www.mono-pumps.com



Mono
 ART18/2
 National Oilwell Varco