

Simplify underground dewatering.
Improve reliability.
Reduce maintenance costs.

Bartail® offers a range of high-pressure, severe duty slurry pumps modularised to handle the head and flow requirements of mine shaft dewatering. These pumps are engineered to increase mean time between failures (MTBF) with reduced maintenance and repair costs. They are simple to maintain in place.

MADW dewatering pump

Designed specifically for mine-shaft dewatering, the MADW pump is equipped to easily handle amounts and types of solids that regularly damage lesser rivals. With sustainable solids-handling capabilities up to 400 microns (µm) in a Class 2 slurry application, the MADW pumps are capable of withstanding occasional settling upsets for solids handling up to 50% concentration by weight or 5000µm solids.

Dewatering is more reliable with reduced cost of maintenance. These durable pumps have been engineered to increase MTBF. They feature an extremely robust design with replaceable wear liners and larger clearances to reduce wear. The patent pending seal chambers are designed to reduce load on seals. All components are designed for easy disassembly and reassembly to dramatically reduce downtime.

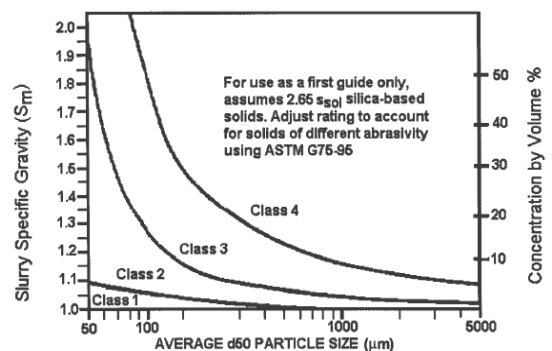
TYPE	HI Class 2: Fine silica sand
CONCENTRATION	Up to 12.5 % solids by weight (continuous)
SOLID SIZE	0–400 µm (0.000–0.032 in) continuous
pH	3 to 14
MAX. PRESSURE	7000 kPa (1,015 psi)
MAX. HEAD	700 m (2,300 ft)

Superior performance for light slurry applications

- Up to 12.5% solids by weight (5% solid by volume) continuous
- Specific Gravities to 1.08 continuous
- Nominal particulate sizes up to 400µm
- Occasional upsets to 5000µm particles

Compliant with Hydraulic Institute (HI) Standards for Pumping Solids — less wear, longer life

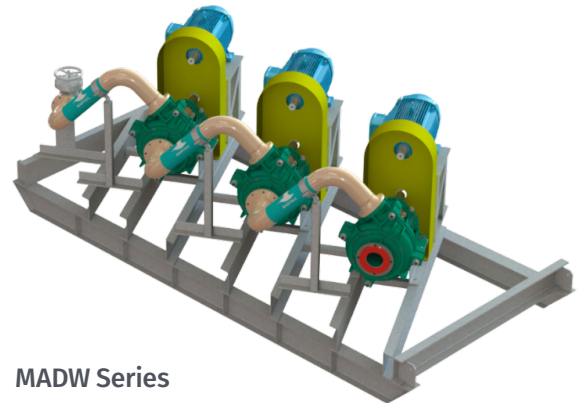
In HI Service Class 2, solids handling pumps wear rapidly when producing more than 73m head per stage (and on lighter Class 1, no more than 105m per stage). The MADW is carefully modularized to ensure extended MTBF on mine dewatering:



INT. SLURRY PUMP STANDARD (ANSI/HI 12.1 - 12.6)	SERVICE CLASS			
	1	2	3	4
MAX. HEAD PER STAGE	105 m 345 ft	73 m 240 ft	55 m 180 ft	40 m 130 ft
MAX. IMPELLER TIP SPEED	46 m/s 9000 ft/min	38 m/s 7500 ft/min	33 m/s 6500 ft/min	28 m/s 5500 ft/min

Bartail® materials for underground dewatering

Many hard rock mines extracting copper, nickel, cobalt and gold are sourced from volcanic deposits with high levels of sulphides which mixes with salty water rich in chlorides. The result is acidic mine water with pH levels as low as 3.6 being recorded. Common metal pump parts, as Ductile Iron, Cast Iron, Aluminium, and 27% Chrome White Iron, are NOT intended for low pH (acidic) duties. Bartail's proprietary WI49 duplex white iron was developed to handle both the entrained solids and corrosion needs. It outlasts!



MADW Series

WETTED MATERIAL	ABRASIVE CHARACTERISTICS OF PUMPAGE	APP. WEAR SERVICE CLASS	CORROSIVE CHARACTERISTICS OF PUMPAGE	PH RANGE	APPROX. BRINELL HARDNESS
GREY CAST IRON	Very mild fines	1	Noncorrosive	7 to 12	260
DUCTILE IRON - AS CAST (E.G. USED CHEMICAL PUMPS)	Mild fines	1	Noncorrosive	7 to 12	200
27% CHROME WHITE IRON (E.G. A05)	Severe	4	Mildly corrosive	5 to 14	550
BARTAIL WHITE IRON (WI49)	Severe	3	Corrosive	3 to 14	450
MARTENSITIC STAINLESS STEEL (EG 420SS)	Moderate	3	Mildly corrosive	4 to 12	450
AUSTENITIC STAINLESS STEEL (EG 316SS)	Mild	1	Corrosive	2 to 14	160
DUPLEX STAINLESS STEEL (EG 220S)	Moderate	2	Highly corrosive	1 to 14	250

Other underground dewatering solutions from Bartail®

While the MADW pump manages the widest range of solids at the lowest lifecycle cost, Bartail® offers a family of solutions to address specific dewatering challenges. Contact your representative to determine which option is right for your application.

PDDW Series

Double diaphragm piston pumps for applications requiring higher pressure ratings or to pump 'Class 4' dewatered sludge (paste).

HRDW Series

A tough helical rotor pump for applications with lower flow rates.

BTDW Series

A cost-effective stainless-steel alternative for Aluminium BIBO style pumps, suitable for Class 2 applications. Typically found in stopes, pumping to the main transfer dams or hoppers.

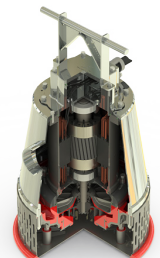
BTHP Series

A stainless-steel high head submersible pump, with all metal wet end, suitable for Class 2 applications. Typically used in stopes where higher pressure than the BTDW is desired.

For more information visit bartail.com.au or email info@bartail.com.au for a quote.



PDDW Series



BTDW Series



HRDW Series



BTHP Series

Typical Operating Parameters

	MADW	PDDW	HRDW	BTDW	BTHP
MAX. FLOW	2,000 m ³ /hr (8700 gpm)	650 m ³ /hr (2850 gpm)	70 m ³ /hr (300 gpm)	150 m ³ /hr (660 gpm)	50 m ³ /hr (220 gpm)
MAX. HEAD	700 m (2300 ft)	2500 m (8200 ft)	240 m (790 ft)	50 m (220 ft)	95 m (310 ft)
MAX. PRESSURE	7,000 kPa (1015 psi)	25,000 kPa (3625 psi)	2,400 kPa (350 psi)	1,000 kPa (145 psi)	1,500 kPa (145 psi)