



**WEHR**

Minerals

WARMAN®

DWU Pump

WARMAN®

WARMAN®  
DWU 125  
MAX PRESSURE  
7000 kPa

PCDWU125/90\*\*\*



## The Warman® DWU dirty water pump enhances our high lift dewatering pump range.

The Warman® DWU pump is specifically designed to handle dirty water from onsite water sources such as ponds and open pits with specific gravity (SG) of up to 1.05. Designed using proven Computational Fluid Dynamics (CFD) and Weir Minerals' advanced materials technology, the Warman® DWU pump processes fluid efficiently and minimises the need for pump maintenance when compared to other pumps in the same application.

'Dirty water' is the name given to water with too high a percentage of suspended solids to be 'clean', but too low of a percentage to be classed as slurry. Dirty water becomes a problem onsite when the solids concentrate inside a dewatering pump collects around the motor frame, overheating the pump and causing the motor to fail.

The Warman® DWU pump provides a simple solution to a fluid transfer problem that can quickly affect an entire operation. Especially engineered for high head mine dewatering applications and excelling in general dewatering applications, the Warman® DWU pump is available with either an electric or diesel motor and can be mounted on either a pontoon, skid, or trailer, to provide sites with the flexibility to move the pump anywhere it's needed.



High pressure (7000kPa) casing for high-lift mine dewatering applications. The lifting lugs are designed for ease of maintenance.

**Engineered to deliver optimal results in high head mine dewatering applications**

The Warman® DWU pump is able to handle dirty water of SG 1.05 and has a casing pressure rated at 7000kPa (1000psi) for serious pumping, if required.

The range includes 4 pump sizes; Warman® DWU 200, 150, 125 and 75.

At maximum operating speed the DWU pumps will achieve a head of 130m at the best efficiency point.

**Building on years of research and development**

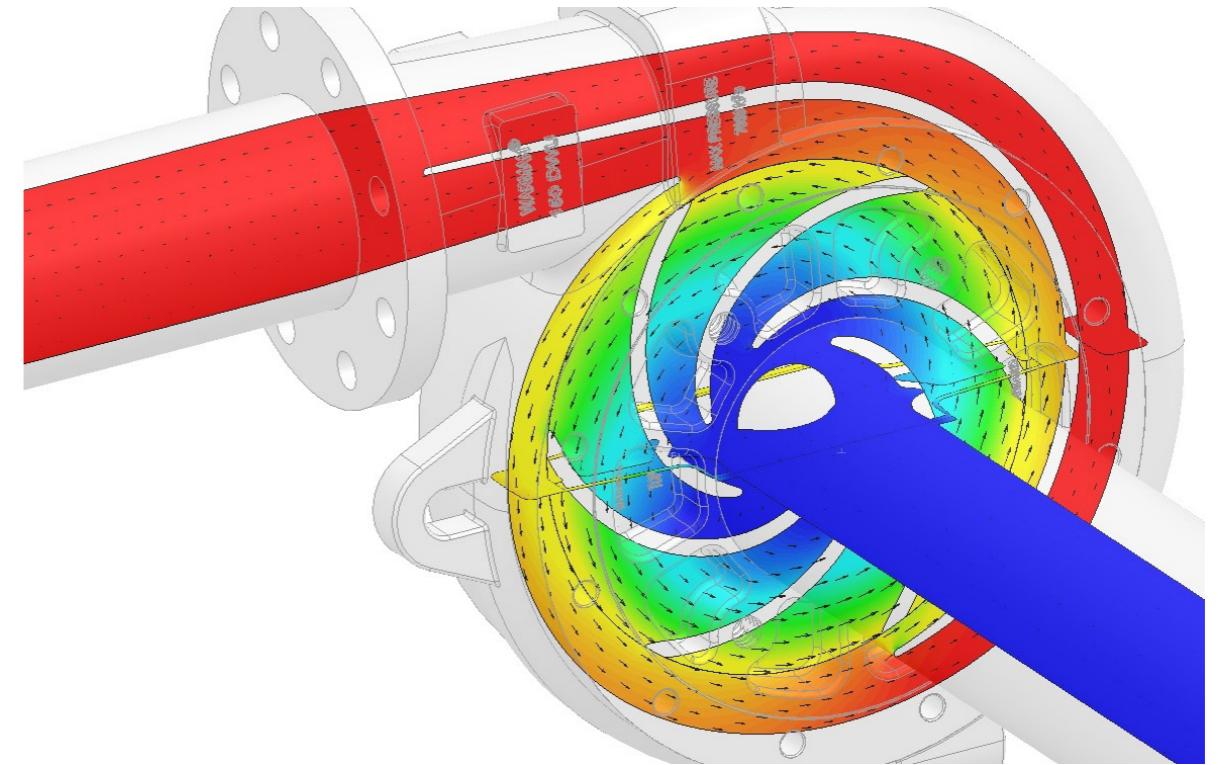
Weir Minerals' R&D engineers have utilised a double volute casing design and impeller balance holes to reduce the radial and axial hydraulic loads. By making use of the updated Warman® WBH® mechanical end design, customers can make use of component interchangeability, thus reducing stockholding of spares.

Warman® WBH® mechanical ends are available in either grease or oil lubricated options.

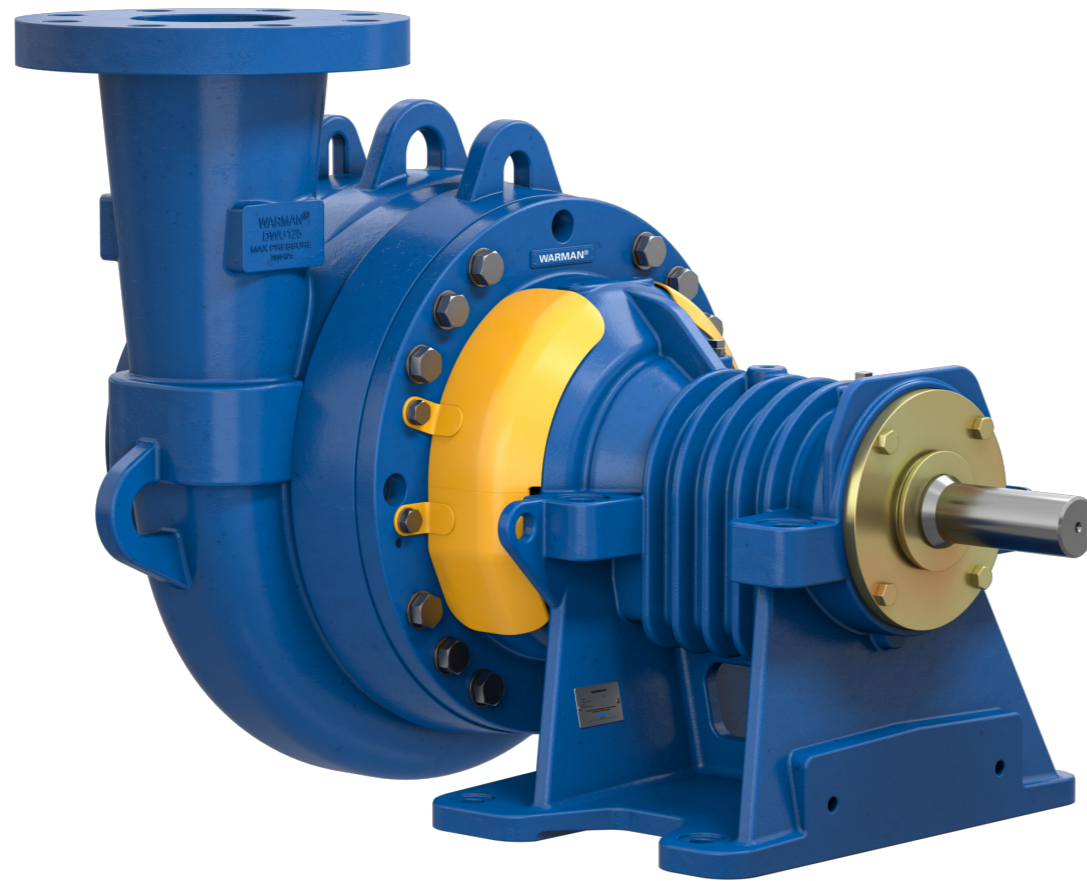
**Warman® DWU pump for underground multistage applications**

Underground dewatering presents a number of challenges not present on the surface, including the need to lift liquids to significant heights, deal with increased solids content and contend with strict space limitations.

The Warman® DWU pump is especially designed for multistage in series dirty water pumping systems. The main benefit of the DWU is the ability to install all pumps in one location, minimising the time and cost involved in both installation and maintenance.



Hydraulic flow design using CFD software



One-piece Warman® DWU bearing frame design for optimum alignment of bearings, seal and impeller to front liner, thus reducing wear and lowering stockholding.

**Warman® DWU pump materials**

Warman® DWU Pump Materials		
COMPONENT	STANDARD	CORROSION RESISTANT
Casing	SG 500 ductile iron (70 bar)	C23 stainless steel (35 bar)
Suction Cover	SG 500 ductile iron	C23 stainless steel
Side Liners	Alloy A05 27% chrome white cast iron	Ultrachrome® A51 duplex stainless white cast iron
Impeller	Alloy A11 tempered 27% chrome white cast iron	Ultrachrome® A52 heat treated duplex stainless white cast iron
Stuffing Box	SG 500 ductile iron	C23 stainless steel
Shaft Sealing	Packing/Expeller/Mechanical	Packing/Expeller/Mechanical
pH Range	> 5	> 2

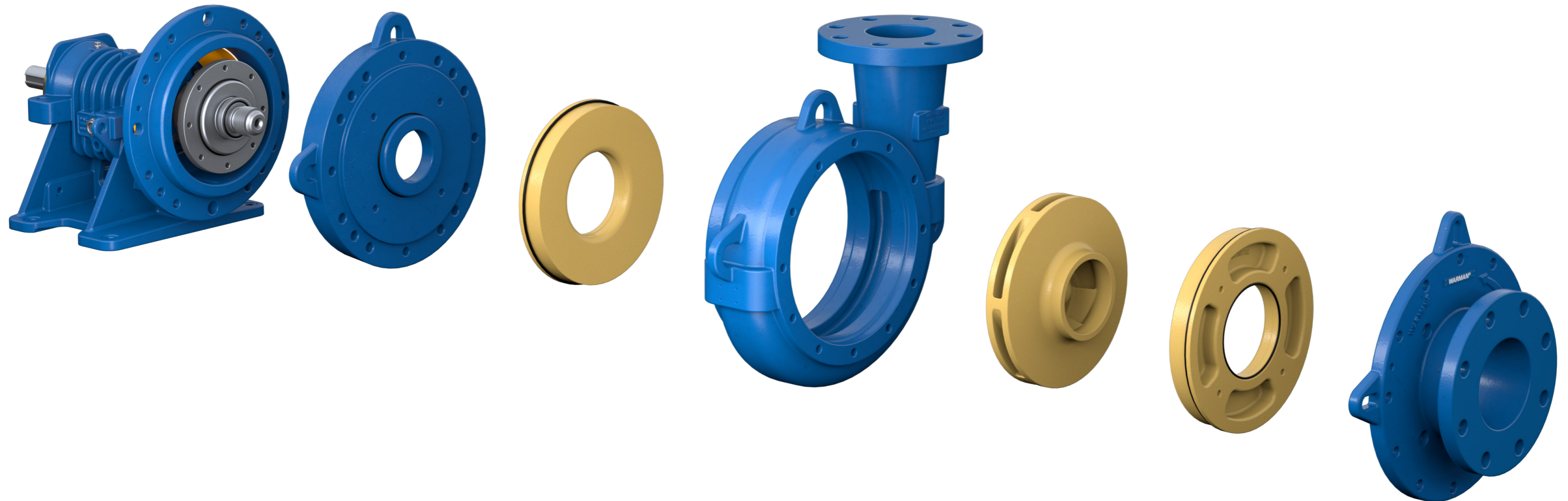
## Warman® DWU pump features

### Mechanical end:

- New compact design using 90% common parts which are interchangeable with the mechanical end of the Warman® WBH® pump
- The one-piece frame aids the correct alignment of bearings, seals and impeller
- Rigid bearing frames minimise vibrations and distortions from external piping loads
- Large capacity bearings are capable of withstanding high loads, thus ensuring improved bearing life
- Optional oil or grease lubrication at lower speeds
- External cooling fans to dissipate heat, thus keeping the bearings cool
- Impeller release collar to ease impeller removal (larger models)
- Lifting lugs on all major components
- Improved assembly and disassembly procedures
- Pump shaft sealing options; packaging, mechanical, expeller

### Wet-end:

- Hydraulic design using CFD (Computational Fluid Dynamics)
- Components designed and verified using FEA (Finite Element Analysis)
- Double volute design to reduce radial loads, and thrust reduction impeller design to reduce axial thrust loads, thus enhancing bearing life
- Maximum casing pressure: (Ideally suited for series pumping)
  - Standard Materials 7000kPa
  - Corrosion Resistant Materials 3500kPa
- Suction flanges designed to fit standard BS4504, 40 bar flanges
- Discharge flanges designed to fit standard BS4504, 64 bar flanges
- High chrome iron impeller and side liners to improve wear life

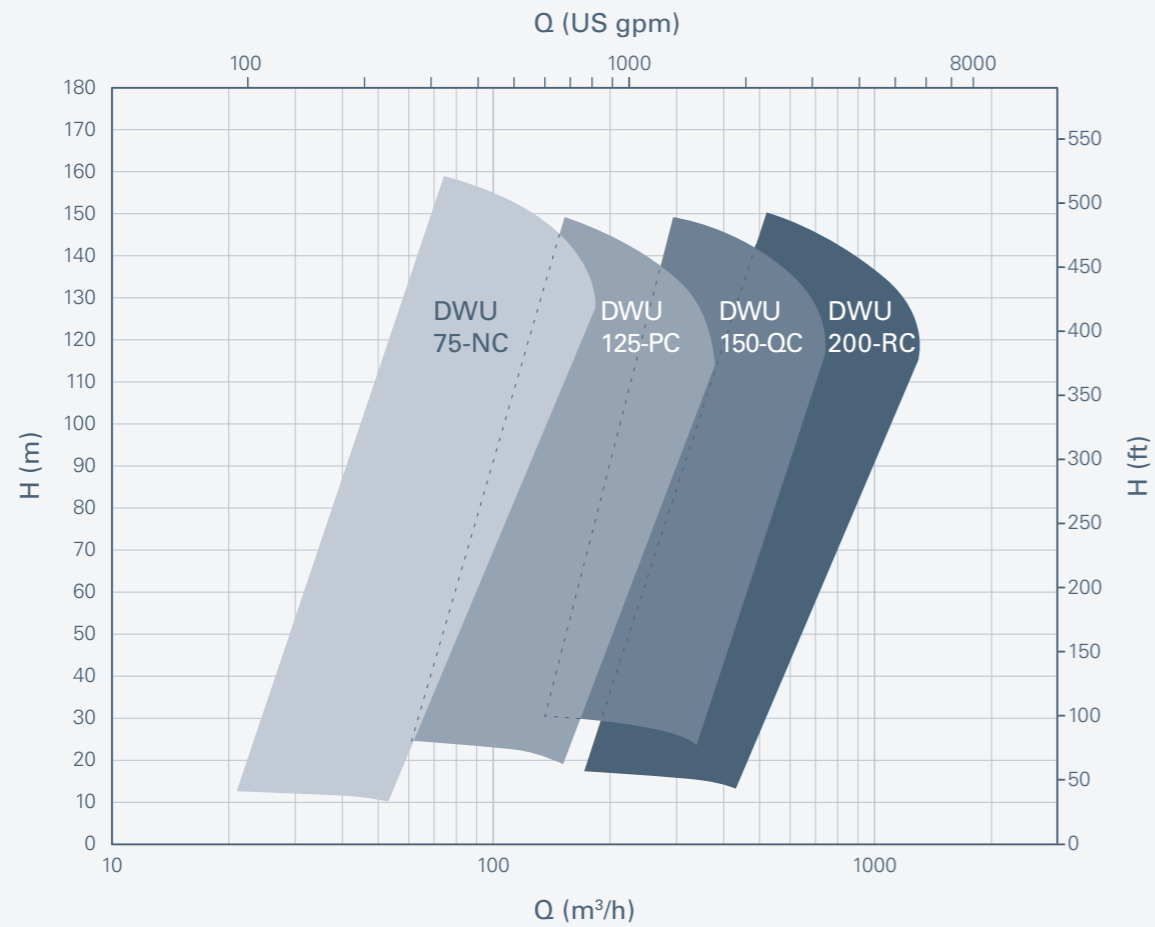


## Product selection and specification

### Warman® DWU dewatering pump - quick selection guide

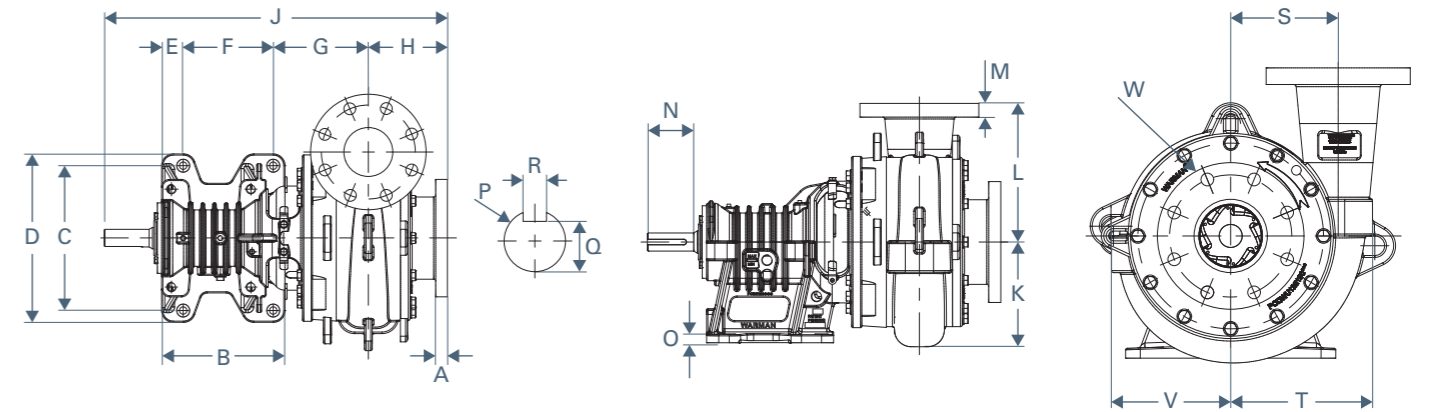
Approximate clear water performance - to be used for preliminary selection only

### Warman® DWU Pump Series Performance Tombstones



### Warman® DWU dewatering pump - outline dimensions

To be used for preliminary selection only. All measurements in mm.



### Warman® DWU Pump Base Dimensions

PUMP SIZE	A	B	C	D	E	F	G	H	I	J
DWU 75	24	280	280	330	25	230	204	140	215	723
DWU 125	27	315	370	430	55	230	239	199	295	870
DWU 150	34	400	470	540	65	300	292	224	351	1078
DWU 200	38	482	610	710	92	340	356	283	415	1330

### Warman® DWU Wet End Dimensions

PUMP SIZE	K	L	M	N	O	ØP	Q	R	S	T
DWU 75	194	252	27	100	25	35	30	10	167	218
DWU 125	260	344	34	115	20	45	40	14	220	295
DWU 150	344	410	30	150	25	60	53	18	292	400
DWU 200	453	502	44	215	30	85	74.5	22	356	515

### Warman® DWU Drive Shaft Dimensions

PUMP SIZE	V	ØW	MASS (kg)	INTAKE FLANGE	DISCHARGE FLANGE
DWU 75	190	235	200	235 OD x 100 ID, 8 x ø 22 holes equispaced on 190 PCD	215 OD x 75 ID, 8 x ø 22 holes equispaced on 170 PCD
DWU 125	245	300	405	300 OD x 150 ID, 8 x ø 26 holes equispaced on 250 PCD	295 OD x 125 ID, 8 x ø 30 holes equispaced on 240 PCD
DWU 150	341	375	800	375 OD x 200 ID, 12 x ø 30 holes equispaced on 320 PCD	351 OD x 150 ID, 8 x ø 33 holes equispaced on 280 PCD
DWU 200	430	450	1502	450 OD x 254 ID, 12 x ø 33 holes equispaced on 385 PCD	415 OD x 200 ID, 12 x ø 36 holes equispaced on 345 PCD

# Take control of your water with Weir Minerals

## Diesel Pumps

Weir Minerals' range of Warman® and Multiflo® diesel pumps provides the ideal solution for unpowered sites handling dewatering, tailings decanting and other dirty water applications.

Our range of diesel driven pump units can be custom engineered and tailored specifically to your unique site requirements, as well as providing a reduced equipment footprint and portability around site while still retaining the same performance, reliability and robust build Weir Minerals pumps are known for.

## Electric Pumps

### Warman® DWU Horizontal Skid/Base Pumps

The Warman® DWU pump is specifically designed to efficiently handle dirty water from onsite water sources such as ponds and open pits with specific gravity (SG) of up to 1.05.

### Multiflo® ME Horizontal Skid/Base Pumps

The Multiflo® ME range is customisable for specific site conditions, including efficient pumping of water in high head applications, and management of slurries and high percentages of solids encountered in dewatering.

### Floway® Vertical Mounted Pumps

Vertical Floway® single and multistage turbine pumps are available in a variety of material combinations suitable for a variety of applications such as process water supply and dewatering.

### GEHO® PD Pumps

GEHO® positive displacement pumps are built to handle abrasive, slurries and pastes with up to 90% solids content and have a proven track record in long distance applications such as dewatering and tailings disposal.

## Submersible Pumps

### Warman® SHW Submersible Slurry Pumps

The Warman® SHW submersible slurry pump is a fully customisable slurry pumping solution that provides advanced pump features and high chrome wear parts for maximum processing efficiency.

### Warman® MGS Submersible Slurry Pumps

The Warman® MGS pump series provides continuous and reliable pumping of highly abrasive slurries whilst maintaining high efficiencies when pumping slurries with high specific gravity (SG).

### Warman® SJG Submersible Pump

The Warman® SJG range of submersible dewatering pumps is designed to perform across a variety of mine and quarry dewatering applications with a robust but low weight design.

## ETO Barge Solutions

Weir Minerals engineers and manufactures Multiflo® barge solutions that can be custom designed to meet your specific site requirements. Whether you need diesel or electric drive, a simple float for a single pump or a barge to with multiple pump houses, our in-house design team can provide the optimal solution.

Multiflo® barge solutions bring together the complete barge and pump-set under a single team of global specialists. Using state-of-the-art 3D-CAD modeling, our engineers ensure the pump-set and barge are matched and go together properly; lead times are reduced, assembly and installation problems





## Minerals

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