



SPX INDUSTRIAL PROCESSES

Pumping Solutions for Water for the Mining Industry

INNOVATION, DESIGN, MANUFACTURE + AFTERMARKET
SERVICES: PUMPING SOLUTIONS FOR A BETTER WORLD

> ClydeUnion Pumps

Water applications + expertise

ClydeUnion Pumps understands the growing need for reliable and alternative water sourcing in the mining industry. Water plays an essential role in extraction, ore and waste transportation, processing, and generating the finished product. ClydeUnion Pumps is committed to provide customers with leading edge pump technology suitable for their remote and demanding water supply applications.

Minerals and Mining leverages Clydeunion Pumps vast experience in the oil and gas industry particularly from pipelines.

Our expertise and engineering resources are considered industry leading with acquired knowledge from almost every major petroleum pipeline project around the world.

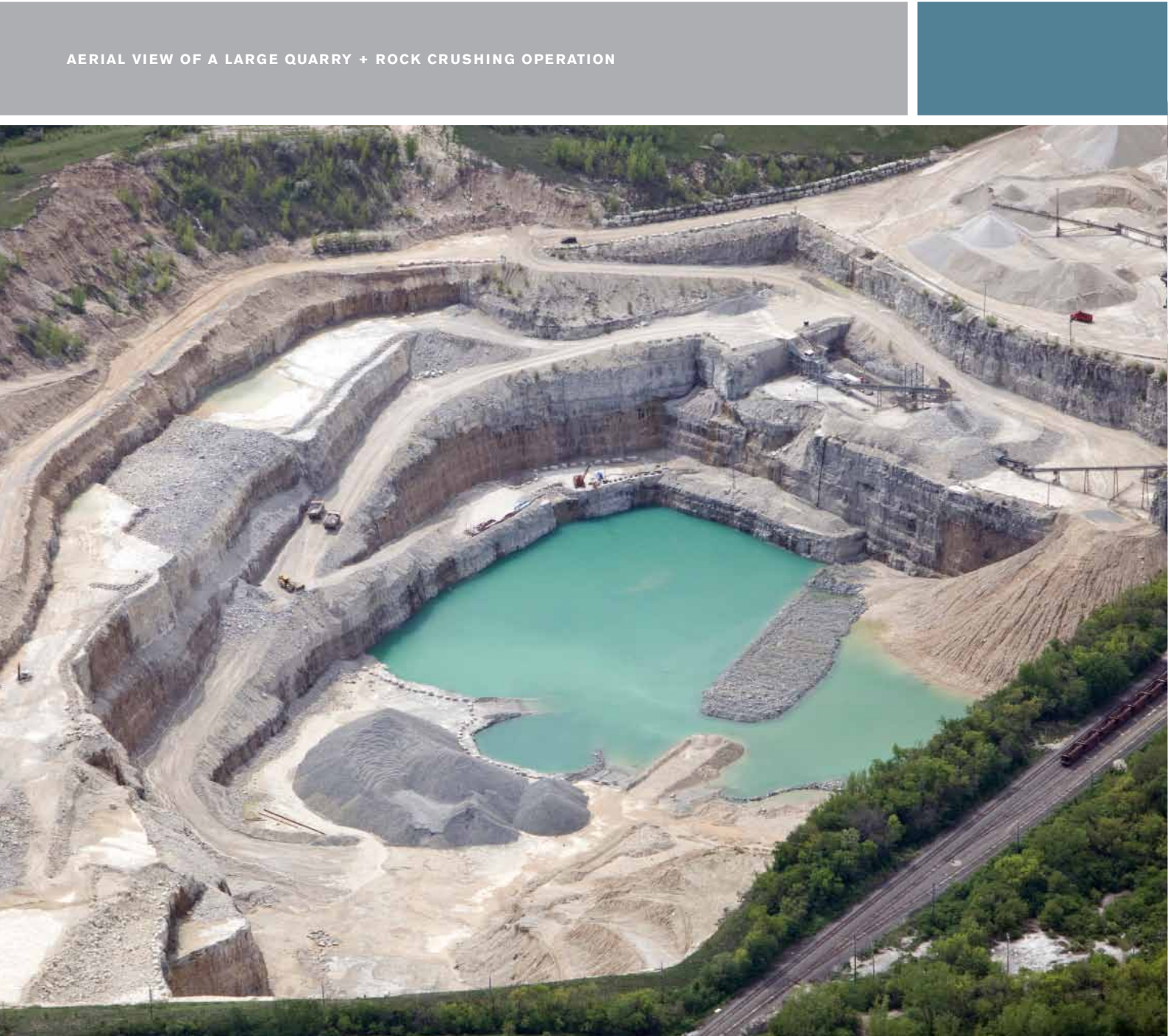
An upward trend for mine water sourcing has been to utilise the largest body of available water; the ocean. This reliable and virtually endless supply of water can be transported to the mine site in the form of raw or desalinated seawater. ClydeUnion Pumps offers a comprehensive range of pump products to cover all water supply applications from intake, reverse osmosis, through to product distribution, and pipeline transportation. ClydeUnion Pumps is a world leader in the supply of reliable pumping solutions.

Cutting edge materials for pump reliability

The geographical location of an existing or proposed mine site may determine it to be a suitable candidate for sourcing water from the ocean. Raw seawater is a chloride bearing fluid that will assist in the phenomena of stress corrosion cracking, crevice corrosion, and pitting thus requiring proper material selection to overcome these problems. Likewise, many reclaimed water applications from tailings ponds contain suspended solids leading to abrasive and erosive wear. To avoid these problems, proper material selection with known resistance to the service environment is essential for long operational life.

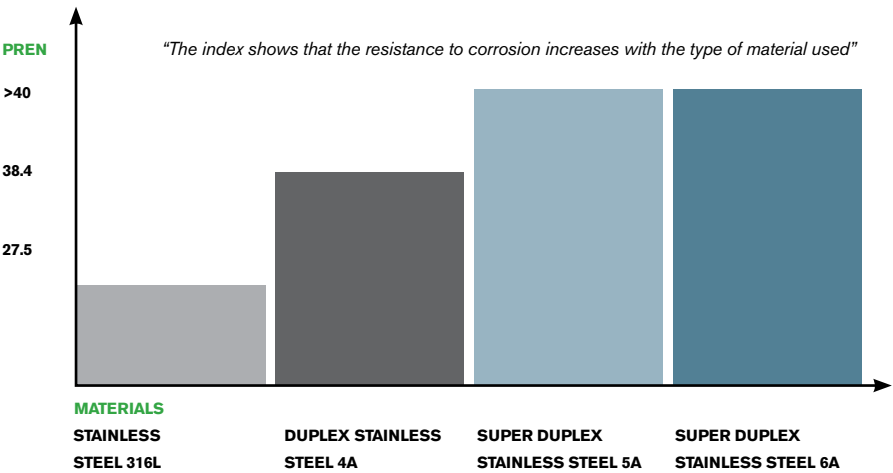
Through the amalgamation of recognised heritage pump companies such as Weir Pumps (Glasgow), Mather & Platt, Union Pump, and David Brown Pumps, ClydeUnion Pumps has brought together years of wide-ranging material R&D. ClydeUnion Pumps extensive knowledge in materials and coatings has been utilised in many high level chloride and suspended solid containing applications around the globe with proven operational success. ClydeUnion Pumps is committed to expand its material R&D and understands the importance of correct material selection to minimise corrosion and wear and to provide the most reliable pumping solution.

AERIAL VIEW OF A LARGE QUARRY + ROCK CRUSHING OPERATION



ClydeUnion Pumps expertise applied to the desalination industry

PITTING RESISTANCE EQUIVALENT NUMBER (PREN) V MATERIALS CHART

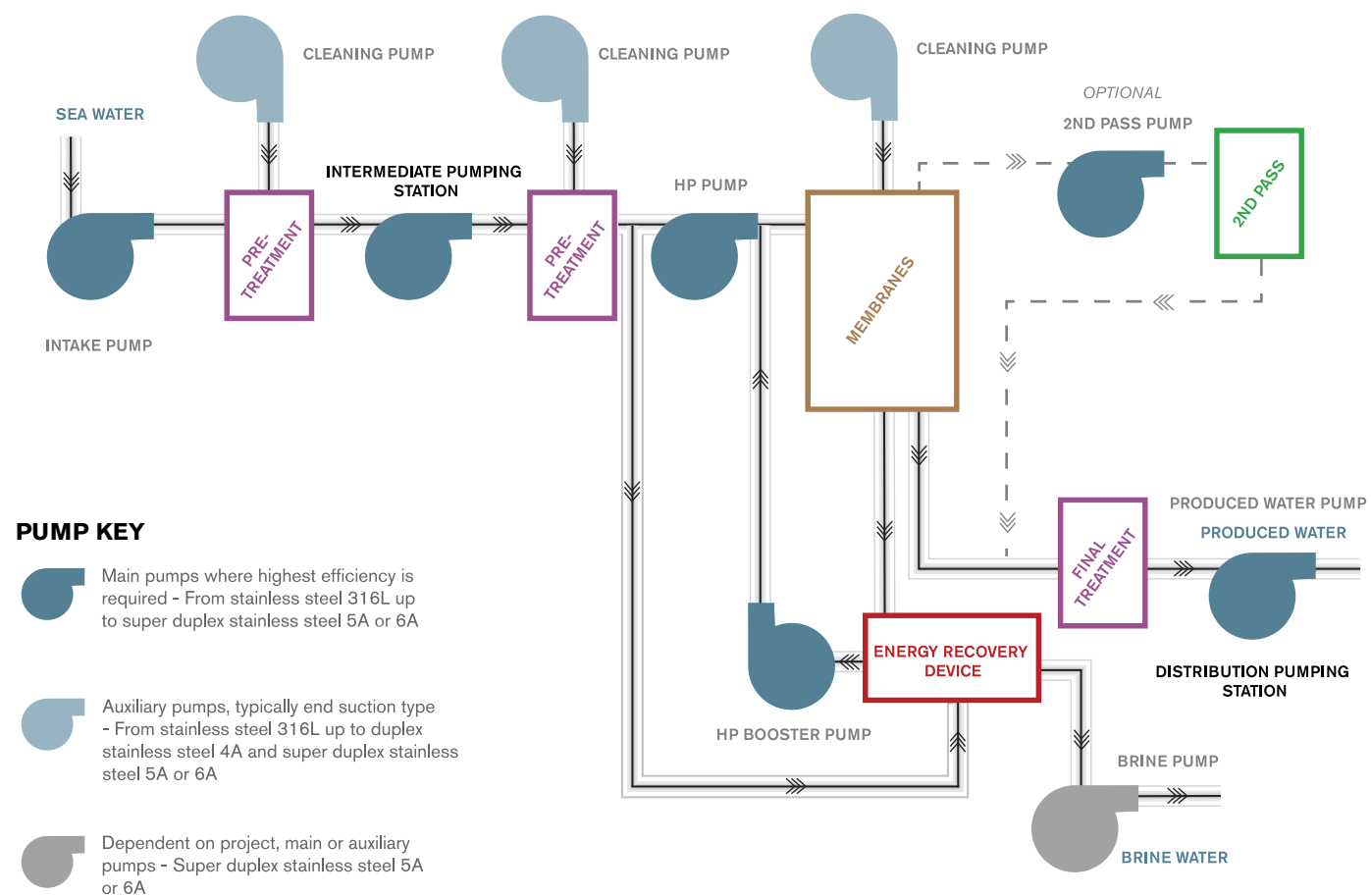


CUTTING - EDGE MATERIALS TO MAXIMISE DESALINATION PUMPS RELIABILITY

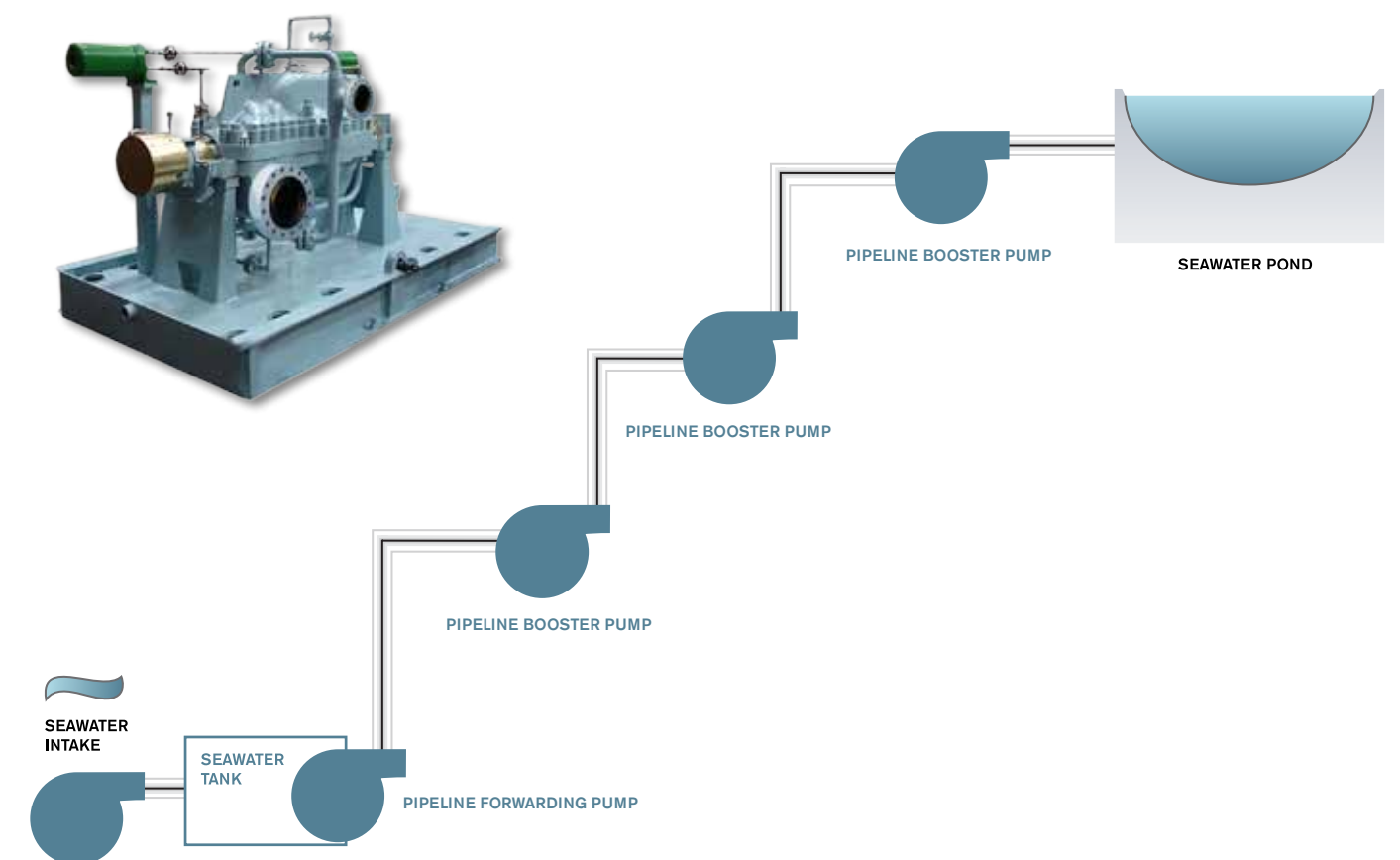
ClydeUnion Pumps, through its heritage links, understands the desalination market and other arduous sea water applications where pumps can be affected by stress corrosion cracking, crevice corrosion and pitting in chloride bearing environments. Through continuous investment in R&D, ClydeUnion Pumps ensures correct material selection to overcome the issues of corrosion and abrasion.



Desalination plant process



Water lift + pipeline process



ClydeUnion Pumps, an SPX Brand, product detail - for pipelines

CUP-BB3

The CUP-BB3 is a heavy duty axial split case multi-stage pump, with opposing impellers and either a double or single suction first stage impeller. These units are the most common and preferred pipeline pump design due its ease of maintenance and reliability.

PACKAGED WITH

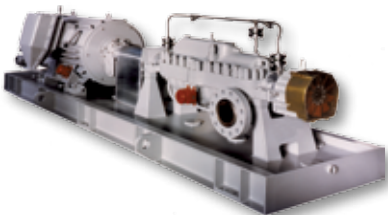
- Choice of driver; electric motor or diesel engine
- Pressurised lube oil systems for both the pump and motor bearings when required Integral with main baseplate or mounted on separate skid structure
- Customer requested monitoring equipment and control panels

APPLICATION

- RO High Pressure Pump
- Pipeline Pump

TECHNICAL DATA

Capacity: up to 2,750 m³/hr / 12,000 USgpm
Delivered head: up to 3,350 m / 11,000 feet
Temperature: up to 230°C / 450°F
Speeds: up to 6,500 rpm
Flange drilling: BS or ANSI



HPPL (HPRO)

The ClydeUnion Pumps HPPL (High Pressure Pipeline) pump is a radially split diffuser multi-stage pump designed initially for the requirements of desalination plants now utilised for pipeline applications. It features superior efficiencies and lower capital costs than equivalent pumps as well as numerous unique design features that ensure maximum through life costs and reliability in service.

APPLICATION

- RO High Pressure Pump
- Pipeline Pump

TECHNICAL DATA

Capacity: up to 3,000 m³/hr / 13,212 USgpm
Delivered head: up to 800 m / 2,660 feet
Temperature: up to 180°C / 350°F
Speeds: up to 3,600 rpm
Flange drilling: BS or ANSI



UNIGLIDE-E

The Uniglide-e is an engineered to order axially split, double suction pump. This traditional range is available in larger capacities than the standard Uniglide-e.

APPLICATION

- Intake pump
- Booster pump
- Cleaning + flushing pump

TECHNICAL DATA

Capacity: up to 4,000 m³/hr / 17,600 USgpm
Delivered head: up to 200 m / 670 feet
Temperature: up to 80°C / 180°F
Speeds: up to 1,760 rpm
Flange drilling: BS or ANSI



UNIGLIDE

The Uniglide is an engineered to order axially split, double suction pump. This traditional range is available in larger capacities than the standard Uniglide-e.

APPLICATION

- Intake pump
- Booster pump
- Cleaning + flushing pump

TECHNICAL DATA

Capacity: up to 20,000 m³/hr / 88,000 USgpm
Delivered head: up to 200 m / 670 feet
Temperature: up to 180°C / 350°F
Speeds: up to 3,600 rpm
Flange drilling: BS or ANSI



DUOGLIDE-E

The Duoglide-e provides higher efficiency and lower maintenance than traditional ring section or high speed single stage pumps. Duoglide provides higher efficiency and lower maintenance than traditional ring section or high speed single stage pumps.

APPLICATION

- Intake pump
- Booster pump

TECHNICAL DATA

Capacity: up to 1,350 m³/hr / 5,950 USgpm
Delivered head: up to 275 m / 910 feet
Temperature: up to 180°C / 350°F
Speeds: up to 3,600 rpm
Flange drilling: BS or ANSI



DUOGLIDE

The Duoglide is an engineered to order, traditional axial split two stage pump. This range is available for higher head and flow beyond the standard Duoglide-e, providing higher efficiency and lower maintenance than traditional ring section or high speed single stage pumps.

APPLICATION

- Intake pump
- Booster pump

TECHNICAL DATA

Capacity: up to 2,500 m³/hr / 11,000 USgpm
Delivered head: up to 320 m / 1,050 feet
Temperature: up to 180°C / 350°F
Speeds: up to 3,600 rpm
Flange drilling: BS or ANSI



API COMPLIANT PUMPS

Water conveyance to and within a mine site can be remote, demanding and require a high level of pumping reliability. When required by the customer, ClydeUnion Pumps will provide pumping equipment designed and built according to the latest edition of the API 610 pump specification. Although its primary intention is for the oil & gas industry, the API 610 specification is one of the most stringent design requirements in the world providing reliability, dependability, safety, and longevity. ClydeUnion Pumps is a world class leader in providing API pump products to the oil and gas industry with numerous installations throughout the world including pipelines in the most hostile environments.

CLYDEUNION PUMPS FOR THE MINING INDUSTRY

ClydeUnion Pumps wide range of engineered products including multi-stage, axially and radial split case, end suction, and vertical turbine that are utilised in various other mining applications such as dewatering, leaching, acid and solvent transfer, brine transfer, and boiler feed.

When a miner's choice for water from the ocean is desalinated seawater, ClydeUnion Pumps offer a comprehensive range of products to cover all applications from seawater intake pumps through to product distribution.

ClydeUnion Pumps, an SPX Brand, product detail - vertical pumps

SBWM

The SBWM is a vertically suspended lineshaft driven pump. Its extensive range of hydraulics gives a comprehensive range of heads & flows whilst various drive arrangements allow above and below floor discharge options.

APPLICATION

- Intake pump
- 2nd pass pump

ULETRIGLIDE

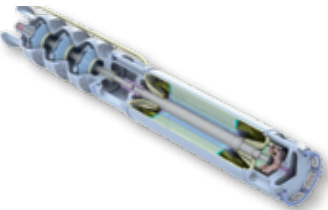
The Ulectriglide is a submersible motor driven pump. The pump set comprises a single or multi-stage submerged bowl pump directly coupled to a submerged water filled squirrel cage motor. This motor is supported by a rising main column pipe delivering water to the desalination plant. This pump is generally supplied in duplex or super duplex stainless steels.

APPLICATION

- Intake pump

TECHNICAL DATA

Capacity:	up to 40,000 m³/hr / 176,000 USgpm
Delivered head:	up to 100 m / 330 feet
Temperature:	up to 180°C / 350°F
Speeds:	up to 3,600 rpm
Flange drilling:	BS or ANSI



TECHNICAL DATA

Capacity:	up to 3,400 m³/hr / 15,000 USgpm
Delivered head:	up to 200 m / 670 feet
Temperature:	up to 180°C / 350°F
Speeds:	up to 3,600 rpm
Flange drilling:	BS or ANSI

Reciprocating pumps

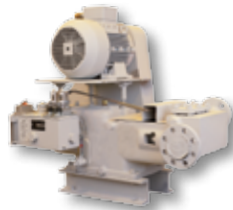
The ClydeUnion Pumps reciprocating power pumps are ruggedly designed for minimum maintenance and meet the heavy duty requirements of continuous operation in the desalination industry. These units are driven via electric motors or diesel engines through V-belt or gear reduction. Stuffing boxes are specifically designed for applications to maximise packing life and minimise maintenance. Equipment can be packaged to meet the most stringent requirements of API 674.

SMALL POWER

Capacity:	up to 17 m³/hr / 75 USgpm
Discharge pressure:	up to 6,900 m / 23,000 feet (10,000 psi)
Temperature:	up to 182 °C / 360 °F
Speeds:	up to 440 rpm depending on model
Models include:	SX3, DX5, TX10, TD28, TD30, TD60, TD90

APPLICATION

- HP pump



MEDIUM POWER

Capacity:	up to 87 m³/hr / 385 USgpm
Discharge pressure:	up to 6,900 m / 23,000 feet (10,000 psi)
Temperature:	up to 177 °C / 350 °F
Speeds:	up to 400 rpm depending on model
Models include:	QD100, TD120, QD200

APPLICATION

- HP pump



LARGE POWER

Capacity:	up to 146 m³/hr / 645 USgpm
Discharge pressure:	up to 6,900 m / 23,000 feet (10,000 psi)
Temperature:	up to 177 °C / 350 °F
Speeds:	up to 290 rpm
Models include:	TD240, QD400

APPLICATION

- HP pump



GEARED POWER

Capacity:	up to 142 m³/hr / 625 USgpm
Discharge pressure:	up to 5,200 m / 17,300 feet (7,500 psi)
Temperature:	up to 177 °C / 350 °F
Speeds:	up to 385 rpm depending on model
Models include:	TX50, TX70, TX90, TX115, TX125, TX150, TX200, QX300

APPLICATION

- HP pump



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INSTALLATION + COMMISSIONING: TROUBLE FREE COMMISSIONING ANYWHERE IN THE WORLD



PARTS: ANY BRAND, ANY MATERIAL, ANYTIME

Lifetime worldwide support

Every product ClydeUnion Pumps supplies is supported by a full lifetime commitment. ClydeUnion Pumps provides a full aftermarket service, drawing on either its own engineers or fully trained and highly experienced service partners, depending on the location of the installation. ClydeUnion Pumps has service facilities in over 40 countries spread throughout Europe, America, Asia, the Middle East and Africa.

ClydeUnion Pumps after sales support extends across all of its legacy brands as well as new equipment, and provides full backup for obsolete products and for third party equipment. The parts ClydeUnion Pumps supply meet the original specification, or are upgraded where appropriate, and many components can be covered by a Rapid Response option which can have parts on site within 24 hours.

ClydeUnion Pumps after sales support is subject to the same supply chain management as the pump manufacturing. This provides customers with the lowest lead times and costs whilst meeting the highest standards of quality assurance.

In addition to spare parts, routine servicing, overhauls and inventory control, the aftermarket support covers upgrades and comprehensive technical advice about the potential refitting of existing installations for greater efficiency and reliability. ClydeUnion Pumps can work with your own engineers to carry out meticulous inspections and advise on maintenance schedules, carry out full vibration analysis, pressure and pulsation testing, and train your service personnel.

ClydeUnion Pumps history and breadth of experience, as well as its geographical coverage and expertise, make it the natural first choice for any pump related problem or enquiry, no matter what the location, the scale of the task or the original

manufacturer. We guarantee supply of parts for all heritage brands and/or obsolete products, including:

- Weir Pumps
- Clyde Pumps
- Union Pump
- Girdlestone
- Mather & Platt
- Harland
- Drysdale
- WH Allen
- Allen Gwynnes
- David Brown Pumps
- DB Guinard Pumps
- American Pump
- Pumpline



MINERALS + MINING PLANT AT NIGHT



PUMPING SOLUTIONS FOR WATER FOR THE MINING INDUSTRY

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