

IMPROVING YOUR PROCESSES



HYDRA-CELL® PRO seal-less,
packing-free process pumps.
Lowering energy consumption
and reducing maintenance costs.

We are passionate about improving your processes

For over 50 years, Wanner Engineering has manufactured HYDRA-CELL® packing-free, seal-less, industrial process pumps. Our next generation HYDRA-CELL® PRO has been designed to achieve a higher standard of pump performance and energy efficiency with 20+ years of expected service life.

By understanding our customers' processes and recognising their needs and goals, WANNER™ and our global partners have built an extensive knowledge base of many different applications.

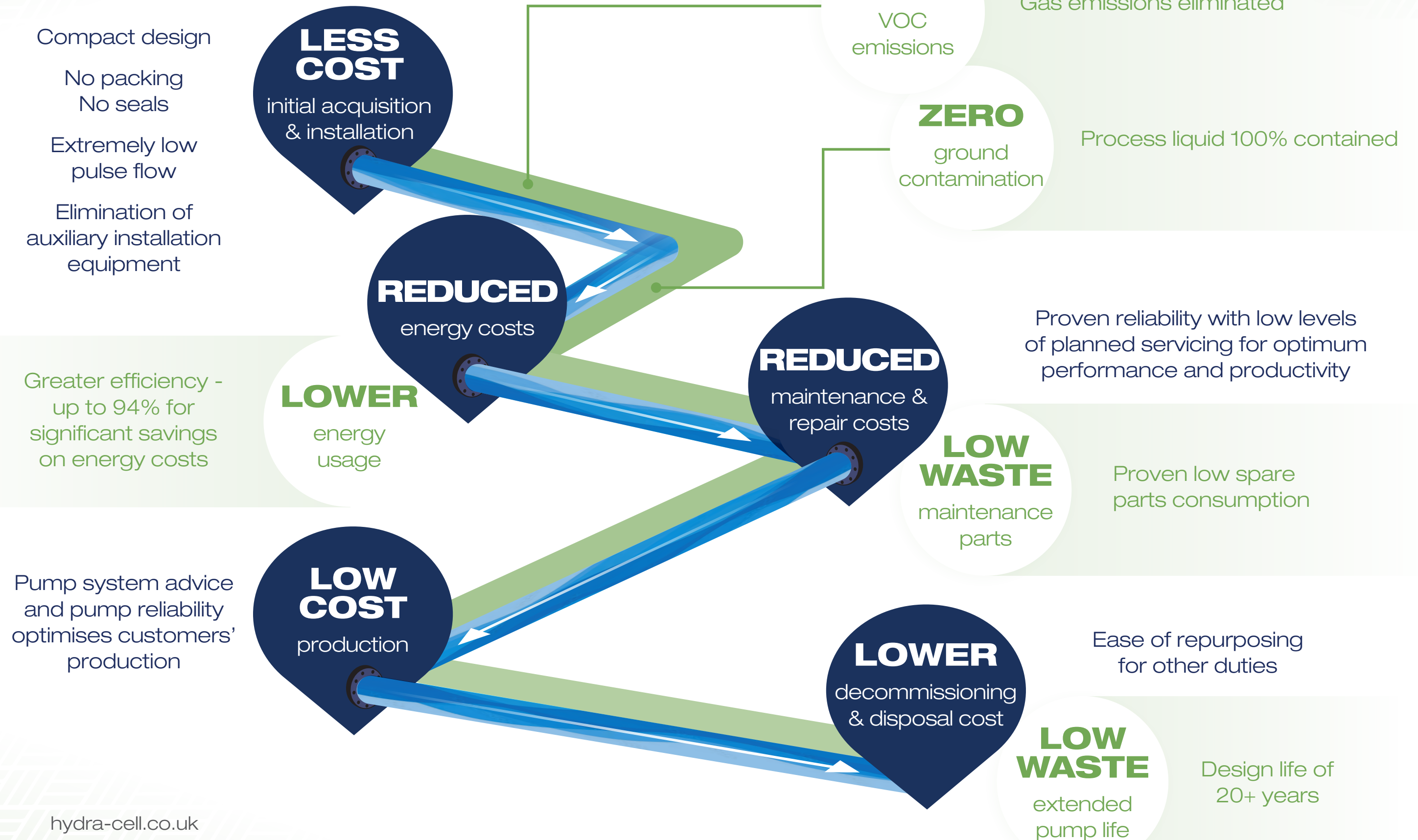
Our priority is to help organisations run safe, efficient, and cost-effective pumping processes.

Let us use our knowledge and experience to help you with your specific challenges.



LOWER COSTS OVER THE LIFE OF YOUR PUMP WITH HYDRA-CELL® PRO

LOWER ENVIRONMENTAL IMPACT



OUR GLOBAL SUPPORT TEAMS

Industrial, technical and engineering experience with backgrounds in hydraulics, mechanical and electrical systems.

Here to help you locally

Combined with a network of local partners in many countries with long histories supporting customers' processing requirements, WANNER gives customers access to a large knowledge base. Together with the Hydra-Cell® pump's unique advantages, our application knowledge and a passion to improve processes, this is how we best support our customers.

Customer Support Services and Logistics

Our customer service teams are real people at the end of the phone and have passion to deliver the promises they make; a loyal and trustworthy team always striving to exceed customers' expectations, supported by our global network of partners - many with 20 plus years' knowledge and experience working with Hydra-Cell pumps.

Technical Support Engineers

From pump selection support for your specific application processes, design service, installation advice, technical support, through to custom pump build and refurbishment, and with extensive experience in many industrial process industries, our technical engineers are here to help you, every step of the way.

hydra-cell.co.uk

Application Knowledge Base

Hundreds of thousands of Hydra-Cell® pumps are in service in many applications, in many industries around the world. Getting involved with customers processes and understanding their needs and goals Wanner engineers have built-up an extensive knowledge of applications. This knowledge and experience can be used to help new customers meet their specific challenges.

Service and Maintenance Training

Training resources, including live online courses, help keep the skills of your onsite engineers up-to-date. Also, our global network of engineers offers local, hands-on training for the maintenance and operation of Wanner Hydra-Cell Pro pumps.



ACCURATELY AND RELIABLY HANDLING YOUR PROCESS LIQUIDS

Liquid Handling Capabilities

Process engineers today are required to design pumping solutions for a broad and changing range of liquids with varied properties, including low lubricity, low viscosity, sensitivity to shear, and some being potentially hazardous, toxic, or explosive. Requirements for variable processing pressures, high accuracy flow rate control, and repeatability driven by complex and critical processes also present significant challenges for many pumping technologies.

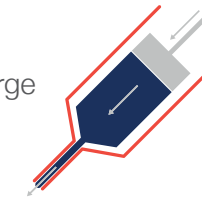
Eliminate seals and packing maintenance costs

Dynamic seals and packing account for approximately 80% of pump servicing and unplanned maintenance, especially when handling non-lubricating, abrasive, corrosive liquids and liquids with micron-sized particles; eliminating dynamic seals and packing will significantly reduce the total cost of ownership.

- No dynamic seals and no packing
- Reliable pumping with accurate and controllable flow
- Reduced total cost of operation and ownership
- Safe handling of difficult and hazardous liquids
- Protecting the environment and your operators
- No process liquid degradation

Injecting

Constant flow rate independent of discharge pressure and liquid properties.



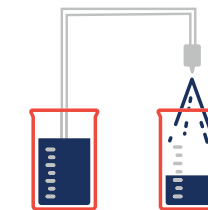
Metering and Dosing

Extremely low pulse flow eliminates the need for pulsation dampeners. Steady state accuracy better than $\pm 1\%$.



Transferring

High efficiency resulting in energy saving and run dry capability.



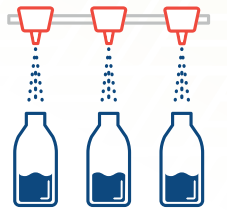
Blending, Mixing and Sampling

Non-lubricating, corrosive and abrasive liquids are pumped successfully.



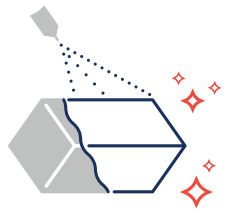
Filling

Ultimate controllability ensures accuracy.



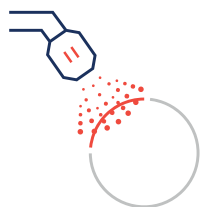
Cleaning

Ability to handle hot recycled liquids reliably.



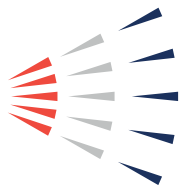
Coating

Smooth flow rate ensures even coating.



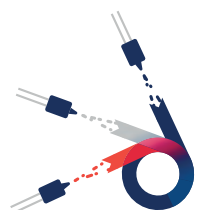
Spraying

Pumps liquids with suspended solids reliably.



Filtering and Reverse Osmosis

Desalination, processing of liquid waste streams, concentration of acidic and caustic solutions can all be done with the seal-less design.



Propane / Butane

Freon

Ammonia

Polymers

Fuels / Additives

D.I. Water

Glycols

Chlorine

Acids / Caustics

Glues / Adhesives

Inks / Paints

Resins

Slurries

◀ **Non-Lubricating**

Viscous Abrasive ▶

INDUSTRIES WE SERVE

Chemical and Petrochemical

Extremely low pulse flow, accurate, wide flow range and compact.

Pharmaceuticals

Critical process reliability.

Oil and Gas & Biodiesel

Reduced maintenance costs.
Lower energy usage.

Biofuel

Designed for reliability, reduced total life cycle costs and process optimisation.

Food and Drink

Low shear pumping action
safeguarding the integrity of ingredients.

Water and Waste Treatment

Sustained pumping performance with no dynamic seals to wear.

Industrial Cleaning

High pressure cleaning capability, high and sustainable pumping efficiency.

General Industry

Reliable handling of difficult liquids with low maintenance and high energy efficiency.

Reverse Osmosis

High efficiency and ultra-high pressure pumps for industrial effluent and sea water desalination.

Car and Vehicle Washing

Keep your systems operating 24/7 - and with low maintenance costs.

Steam Generation

Eliminate seal maintenance when handling aggressive and corrosive liquids.

Polyurethane Foam

Handling polyols, blowing agents, isocyanates and accurate dosing of additives and catalysts.

Paper and Pulp

High pressure cleaning, non-woven processing, wet-end trimming and extremely accurate metering and spraying of glues, adhesives and coating chemicals.

Paint and Coatings

Smooth, controllable and consistent supply of coating material to the spray nozzles.

Marine

Reliable handling of environmentally-friendly fuels such as Methanol, LNGs and Ammonia.

Machine Tool

High efficiency and exact coolant delivery as required by the process and controlled by your CNC machine.



hydra-cell.co.uk

WANNER'S GLOBAL HISTORY



1973-2023



1972

William Wanner, Sr. was issued the first Hydra-Cell patent. (DPC)



1973

Wanner Engineering established by William Wanner Sr. (DPC)



1985

Wanner International established in the UK.



1989

Major investment in state-of-the-art manufacturing equipment



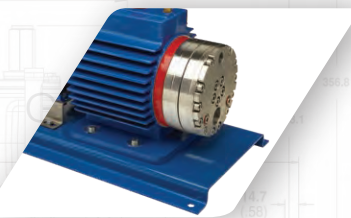
2003

Wanner patented Kel-Cell Diaphragm Position Control Technology (DPC)



2004

Wanner Pumps Ltd. established in Hong Kong



2005

Wanner launched Hydra-Cell® metering range of pumps



2006

New patents for T & Q range of unique asynchronous design of pump



2007

Wanner Pumps expansion into Shanghai to support customers in China



2008

90,000 sq. feet expansion to US manufacturing facility



2011

Wanner set up team in India.



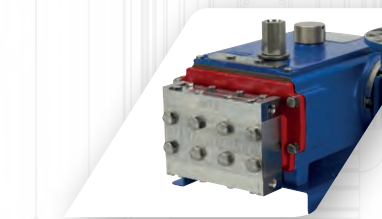
2012

Investment in robotic machining cells



2016

Wanner office opened in South America



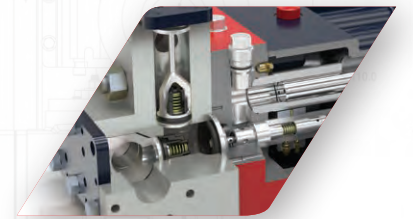
2016

New patents for MT metering pump range



2020

Launch of the Q330



2020

New patents for Advanced Diaphragm Position Control (ADPC).



2020

Wanner opened Technical Centre of Excellence in UK.



2021

G Series certified to highest gas and dust groups zones 1 & 2



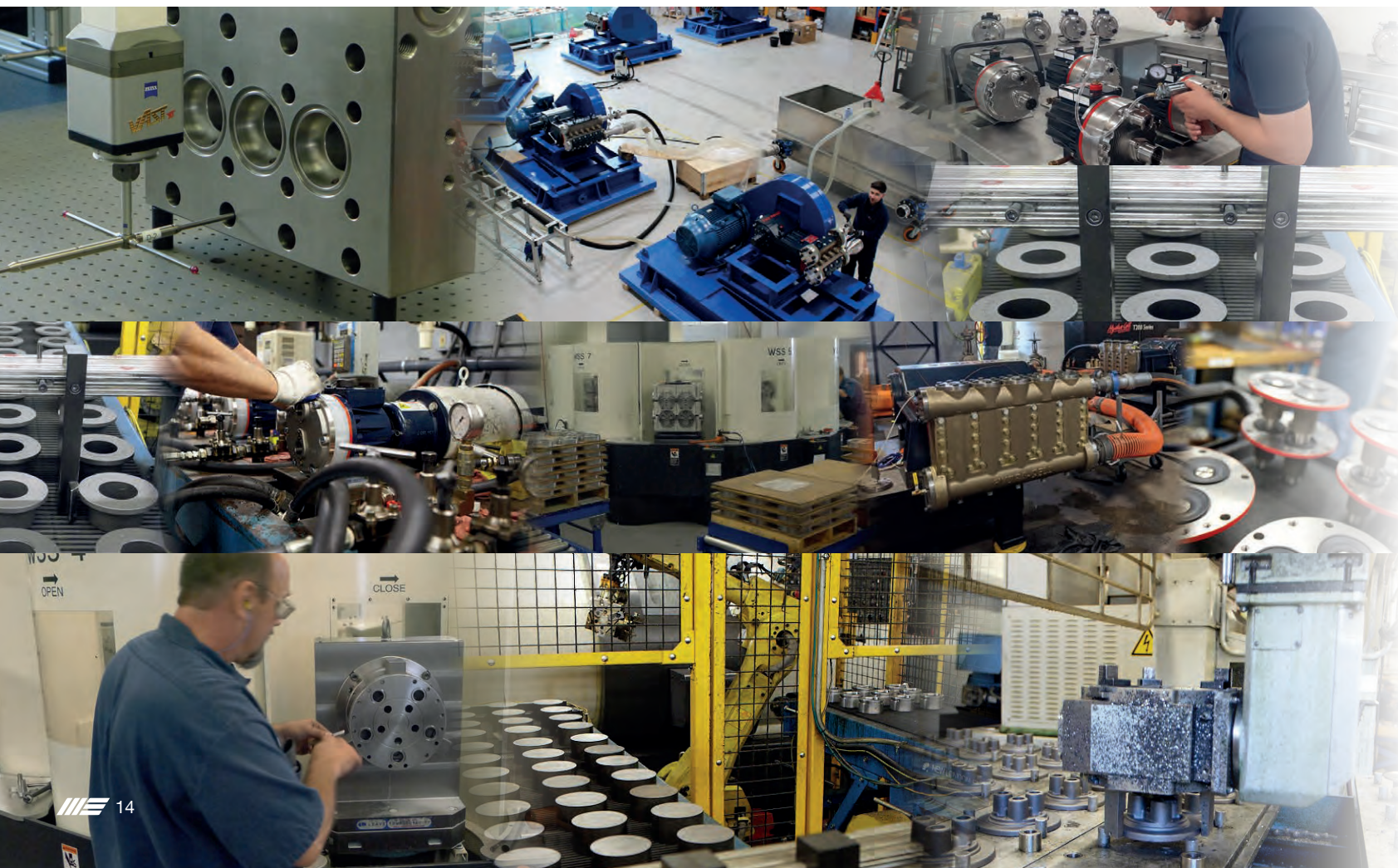
2022

G66 70 bar product enhancement launch

MANUFACTURING EXCELLENCE SINCE 1973

50+ years of helping customers improve their pumping processes

WANNER has an ongoing multi-million dollar investment commitment into the latest manufacturing machinery and processes to ensure the quality of our process pump solutions are reliable, safe and energy efficient; together with continuous development in bespoke testing and certifications to meet demands of industry - for today and into the future, helping customers with their pumping challenges.



hydra-cell.co.uk

High Volume Manufacturing

Wanner Engineering designs, manufactures and assembles the complete range of Hydra-Cell® Pro pumps in their 140,000 sq. ft. state-of-the-art facility located in Minneapolis, Minnesota, USA.

Skid Build & Custom Pump Production

In addition to our high-volume manufacturing plant in the USA, Wanner International's purpose-built UK facility provides services for controlled pump assembly for batch traceability of pump components, pump customisation, hazardous area/ATEX certification, pump skid development and testing to customer-specific specifications.

Renowned Reliability

Metal cutting and machining quality is a key part to achieving the renowned reliability and quality of the Hydra-Cell pump. It is the belief of owner and CEO Bill Wanner that these processes are kept in-house with heavy investment in machining centres and personnel.

Sophisticated and automated quality control measurement equipment is used by the machinists for first article inspection and ongoing statistical process control (SPC). The engineering test laboratory provides the capability for the range of test required, including: hot and cold liquids, high pressure testing and accurate metering. Final assembly of the pumps is carried out by dedicated teams - every pump is tested before it leaves the factory.

Introducing WANNER™ HYDRA-CELL® PRO Delivering exceptional energy efficiency and savings

Energy efficiency, reducing energy consumption and costs in pumps and pumping systems is increasingly important for more environmentally sustainable processes. WANNER™ HYDRA-CELL® PRO pump technology delivers a new pump performance standard to help meet these challenges. This innovation provides gains in energy efficiency of up to 30% in many cases across the large, adjustable pump RPM range, with even higher efficiencies delivered at low pump speeds.



SAFETY AND SUSTAINABILITY

The cost of operator safety is priceless

With 100% containment, no points of leakage or spillage of hazardous liquids, eliminating volatile organic compounds (VOCs) emissions and ground contamination, you can protect your operators and the environment with the seal-less design of our Hydra-Cell® Pro pumps.



hydra-cell.co.uk



SUSTAINABILITY
WORKING TOGETHER

Pumps for ATEX / Hazardous Areas

The Wanner seal-less pump range is independently assessed and certified by major approval bodies to ATEX (Directive 2014/34/EU and the UK equivalent regulation No. 1107). We supply certified pumps to the latest legislation, providing operation safety for your operators and plant. We have European and UK registration and marks for CE UKCA and ATEX UKEXs.

Reduce Energy Usage up to 50%

From pump shaft to hydraulic power, high efficiencies combined with the wide range of flow rate controllability ensures optimum energy use.

Sustainability - Working together to help make a difference for the future

WANNER has customers, partners and suppliers all around the world, and it's our mission to make a difference and help our customers to run far more environmentally-sound and safe pumping processes as part of their overall operations.

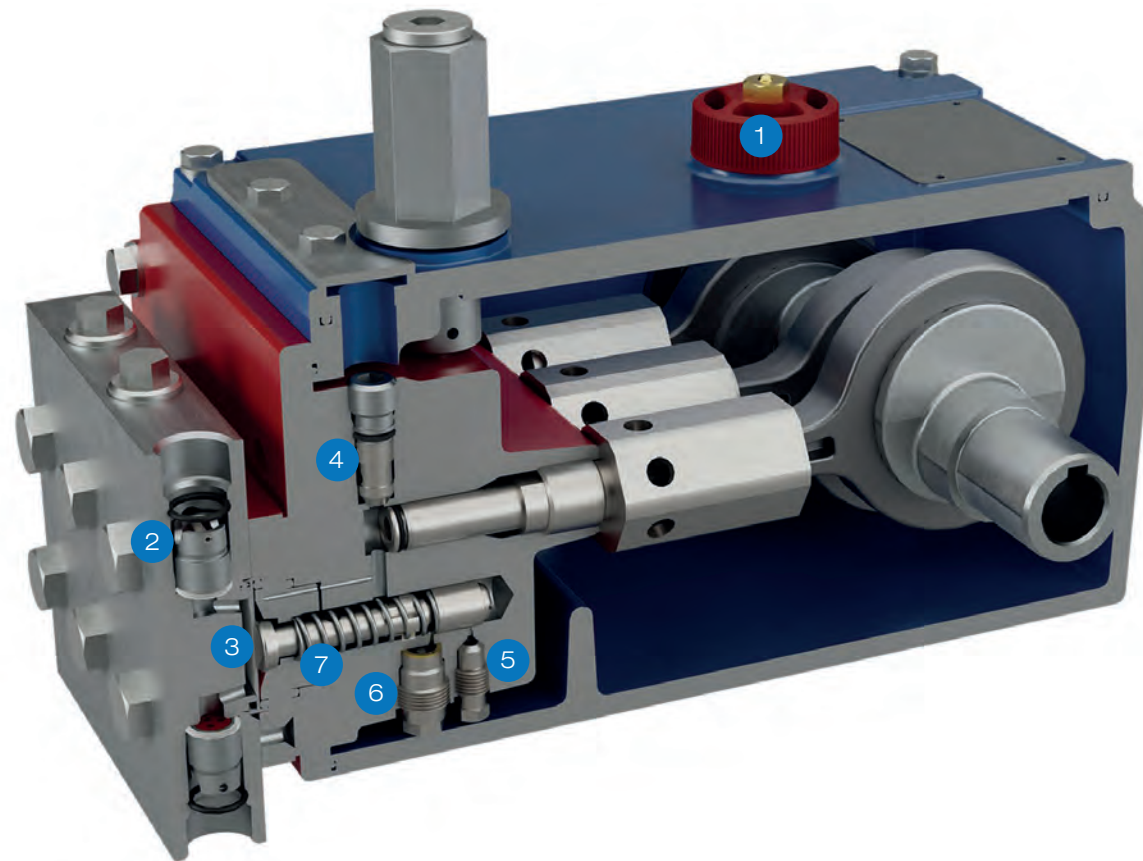


HYDRA-CELL® PUMP TECHNOLOGY

Asynchronous Design - MT Series

hydra-cell.co.uk

WANNER™ HYDRA-CELL® PRO
METERING PUMP SOLUTIONS

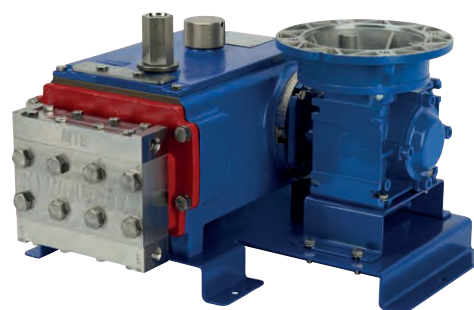


- 1 Oil Fill Cap
- 2 Check Valve Assembly
- 3 3 x Hydraulically Balanced Diaphragms
- 4 Air Bleed Valve
- 5 Overfill Valve
- 6 Underfill Valve
- 7 Diaphragm Return Mechanism

Metering and dosing with ultimate accuracy and controllability

The WANNER™ HYDRA-CELL® PRO series boasts a compact footprint and features a triplex diaphragm design in a single liquid end which creates an extremely low pulse linear flow, in most cases eliminating the need for pulsation dampeners.

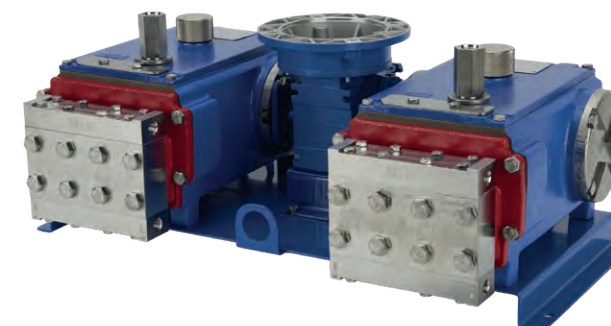
Delivering accurate dosing, exceeding API 675 standards for accuracy, linearity, and repeatability, with a constant flow rate independent of discharge pressure, a wide adjustable flow range and eliminates leaks with its 100% sealed pumping chamber.



MT8 with gear reducer



MT8 with manual adjustment controller for use in ATEX areas



MT8 with duplexing options



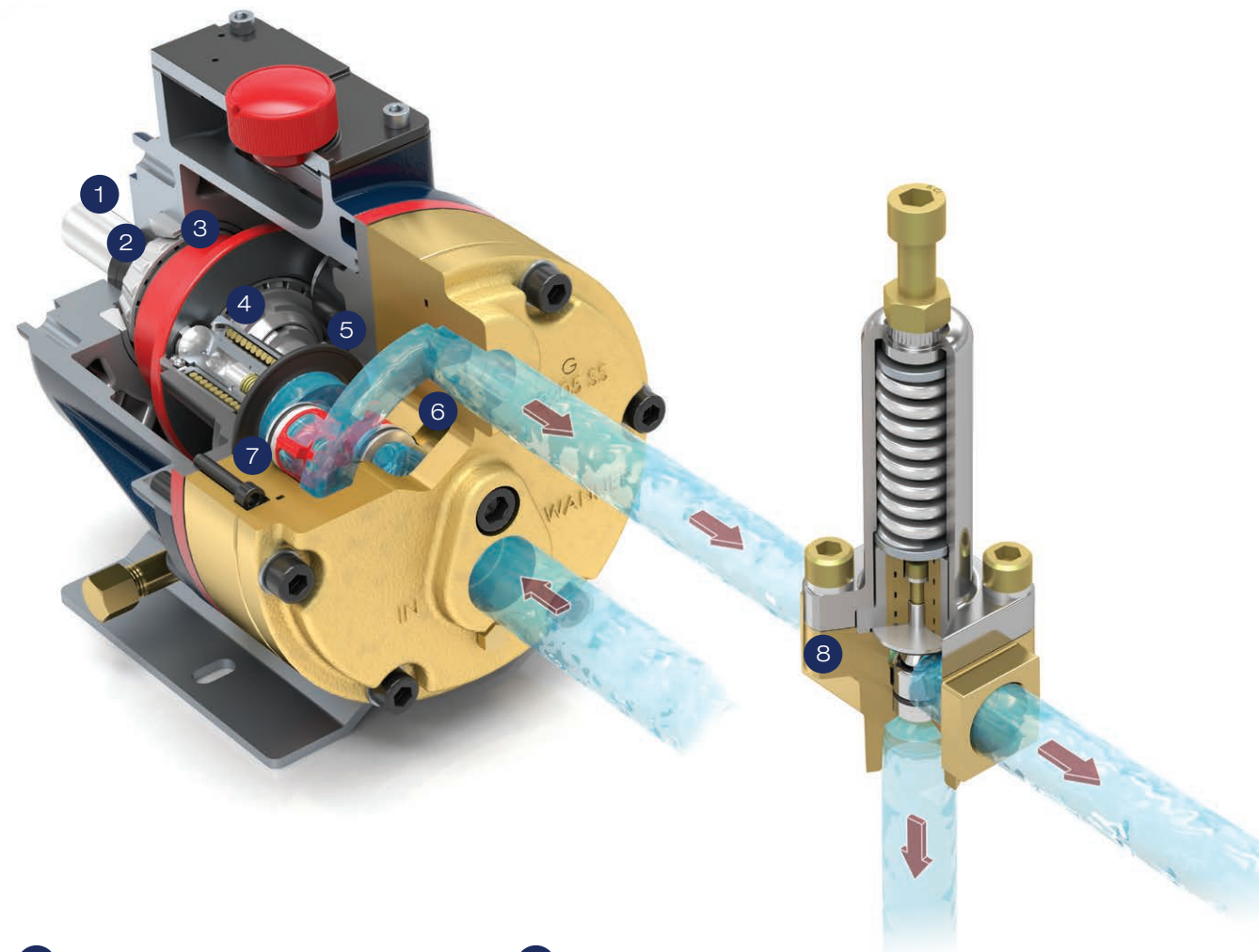
MT8 with adjustable electronic control for use in safe areas

HYDRA-CELL® PUMP TECHNOLOGY

Wobble Plate Design

hydra-cell.co.uk

WANNER™ HYDRA-CELL® PRO
SEAL-LESS PUMP TECHNOLOGIES



- | | |
|--------------------------------|-----------------------------|
| 1 Drive Shaft | 5 Diaphragms |
| 2 Tapered Roller Bearings | 6 Inlet Valve Assembly |
| 3 Fixed-angle Cam/Wobble Plate | 7 Discharge Valve Assembly |
| 4 Hydraulic Cells (Patented) | 8 Pressure Regulating Valve |

Long service life, reduce energy usage and lower maintenance costs

WANNER™ HYDRA-CELL® PRO process pumps are highly-efficient and reliable for pumping corrosive, non-lubricating, slurries and abrasive liquids, for transfer, injection and spraying.

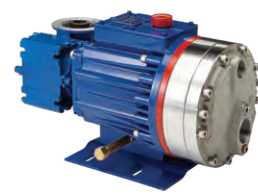
Eliminate maintenance costs with no mechanical or dynamic seals, packing, or cups to leak, wear, or replace; the seal-less design ensures 100% liquid containment - protecting operators and the environment.



P400



P500



P600



G10



G15



G25



G35



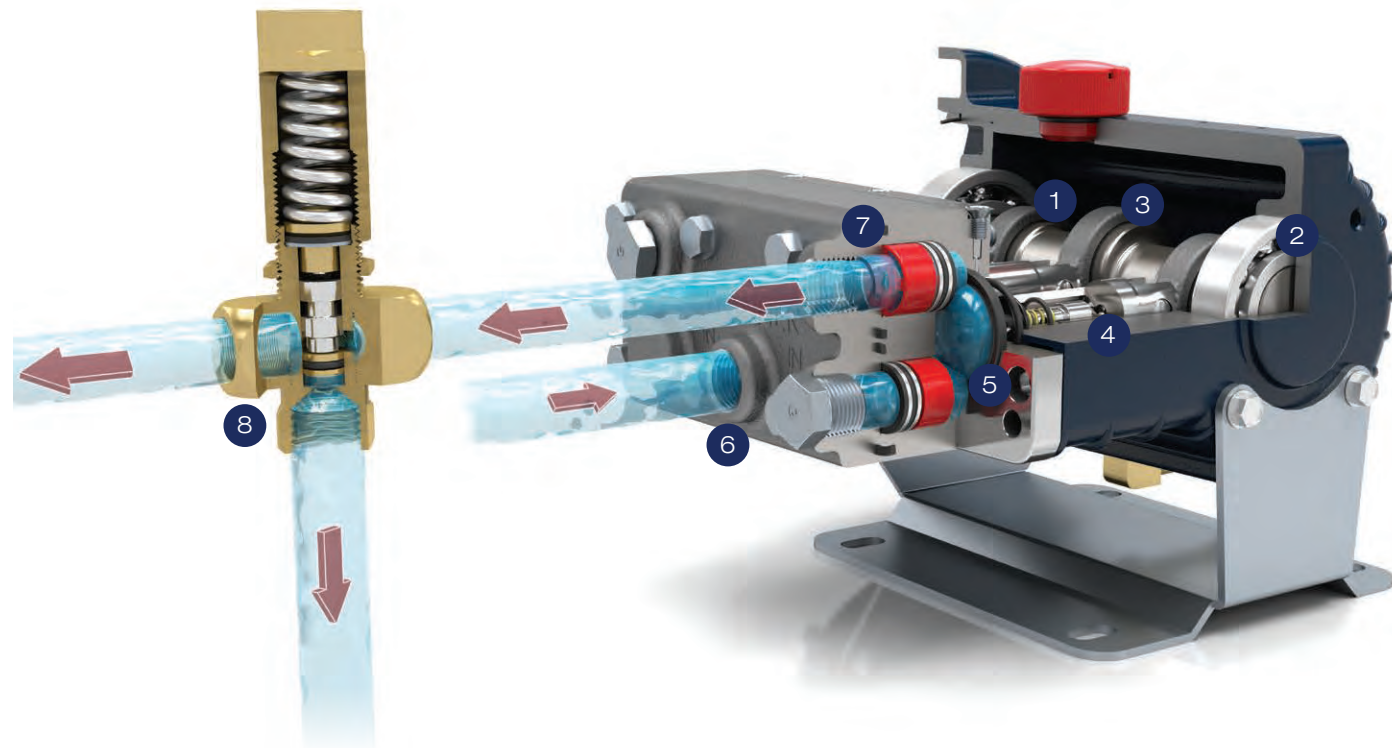
G66

HYDRA-CELL® PUMP TECHNOLOGY

Crankshaft Design

hydra-cell.co.uk

WANNER™ HYDRA-CELL® PRO
SEAL-LESS PUMP TECHNOLOGIES



- | | |
|------------------------------|---------------------------------------|
| 1 Drive Shaft | 5 Diaphragms |
| 2 Precision Ball Bearings | 6 Inlet Valve Assembly |
| 3 Connecting Rods | 7 Discharge Valve Assembly |
| 4 Hydraulic Cells (Patented) | 8 Pressure Regulating Valve (In-line) |

Long service life, reduce energy usage and lower maintenance costs

WANNER™ HYDRA-CELL® PRO process pumps are highly-efficient and reliable for pumping corrosive, non-lubricating, slurries and abrasive liquids, for transfer, injection, transfer and spraying.

Eliminate maintenance costs with no mechanical or dynamic seals, packing, or cups to leak, wear, or replace; the seal-less design ensures 100% liquid containment - protecting operators and the environment.



G03



G04



P200



P300

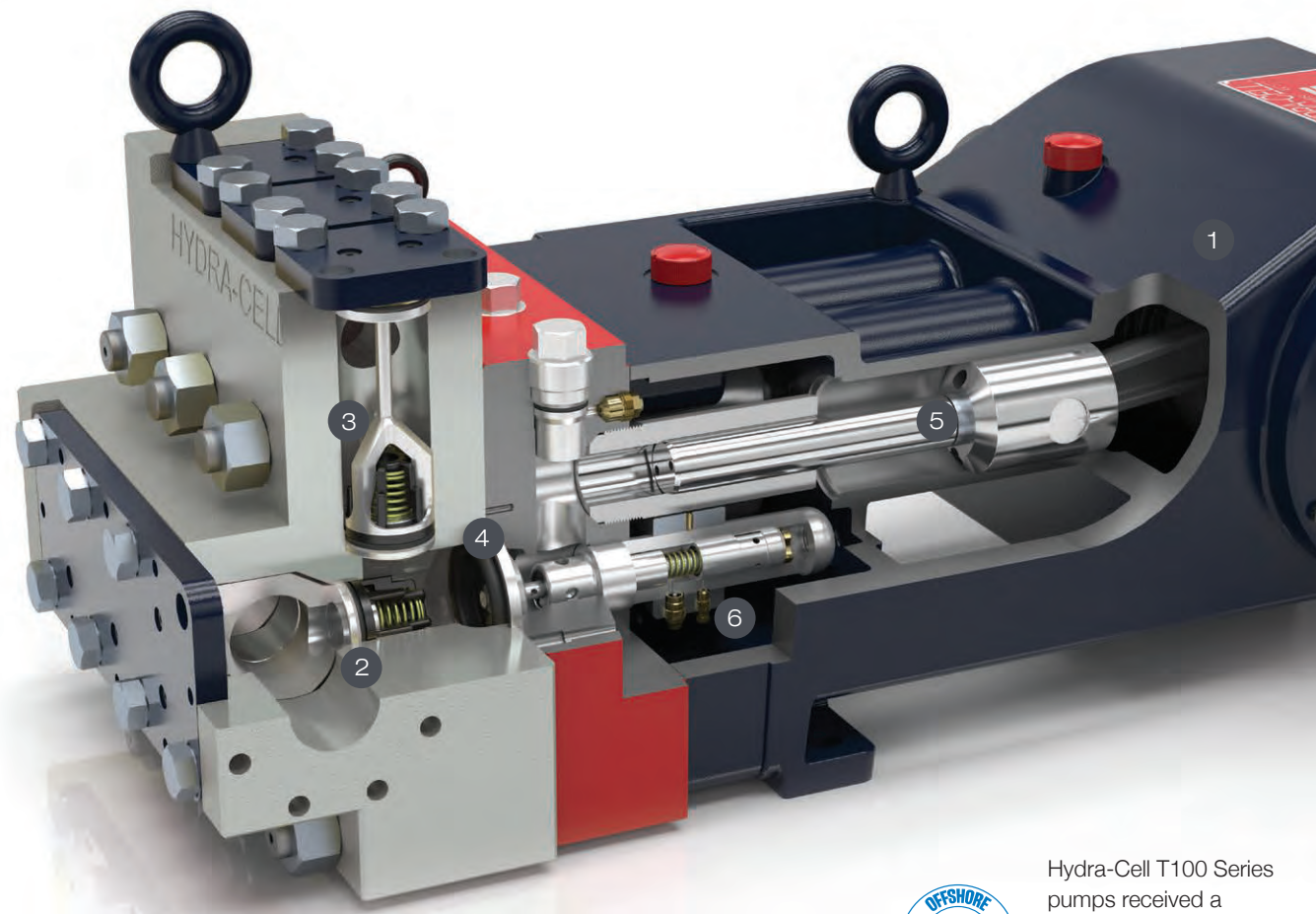
HYDRA-CELL® PUMP TECHNOLOGY

Asynchronous Design - T and Q series

hydra-cell.co.uk



WANNER™ HYDRA-CELL® PRO
SEAL-LESS PUMP TECHNOLOGIES



- 1 Drive Shaft
- 2 Inlet Valve Assembly
- 3 Discharge Valve Assembly
- 4 Diaphragms
- 5 Plunger
- 6 Underfill & Overfill Valves



Hydra-Cell T100 Series pumps received a "Spotlight on New Technology" award from the Offshore Technology Conference



Q155 LP/MP



Q330 LP



Q330 MP/HP



T60



T100 LP



T100 MP



T100 HP



T200 LP/MP/HP

Designed for safety, reliability and to reduce maintenance costs and lower energy consumption

WANNER™ HYDRA-CELL® PRO API 674 high horse power process pumps have no dynamic seals and are packing-free, significantly reducing service and maintenance costs.

API 675 performance standards for steady state accuracy, linearity and repeatability are also exceeded.

Equipped with multiple diaphragms in a single pump head, this minimises pulsation while still providing linear flow over a wide range of pressures and flow rates.

With a sealed pumping chamber, the pumps provide leak-free operation ensuring operator safety and protecting the environment.

A PUMP FOR YOUR PROCESS

hydra-cell.co.uk

Materials of Construction

Manifolds

Manifolds for Hydra-Cell® pumps are available in a variety of materials to suit your process application. They are easy to replace and interchangeable to accommodate different liquids processed by the same pump. Special manifolds with a 2:1 dosing ratio are also available. (Consult factory.)

Non-metallic Pump Heads

Non-metallic pump heads are often used when a corrosive or aggressive liquid is being processed at lower pressures.

- Polypropylene
- PVDF
- PVC

Metallic Pump Heads

Metallic pump heads can handle higher operating pressures. Hastelloy CW12MW or Stainless Steel is also selected for corrosion resistance and other properties.

- Brass
- Bronze and NAB
- Cast Iron (Nickel-plated)
- Ductile Iron (Nickle Plated)
- Duplex Alloy 2205 Stainless Steel
- Super Duplex Alloy 2507
- Hastelloy CW12MW / CX2M
- Nickel Aluminium Bronze (NAB)
- 304 Stainless Steel
- 316L Stainless Steel CF3M



Special Custom Options

Hydra-Cell pumps can also be fitted with ANSI, DIN, SAE, Tri-Clamp, ASME BPE or other specialised flange connections, as well as polishing and elastomer diaphragm options to FDA compliance. (Consult Wanner International).

(The range of material choices depends on each pump model - for example, models designed to operate at higher pressures are available with metallic pump heads only.)

Registered trademarks of materials:

Aflas®	Asahi Glass Co., Ltd.	Mesamoll®	Lanxess Deutschland GmbH
Buna®-N (Nitrile)	E.I. Du Pont de Nemours and Co., Inc.	Neoprene®	E.I. Du Pont de Nemours and Co., Inc.
Celcon®	Celanese Company	Nitronic® 50	AK Steel Corporation
Elgiloy®	Elgiloy Limited Partnership	Teflon® (PTFE)	E.I. Du Pont de Nemours and Co., Inc.
Hastelloy® CW12MW	Haynes International, Inc.	Viton® (FKM)	DuPont Performance Elastomers, LLC
Kynar® (PVDF)	Arkema, Inc.	Zytel® (Nylon)	E.I. Du Pont de Nemours and Co., Inc.

Diaphragms and O-rings

Diaphragms and corresponding O-rings are available in several elastomeric materials.

- Aflas (used with PTFE and FFKM O-rings)
- Butyl
- Buna-N
- EPDM (requires EPDM-compatible oil)
- FFKM
- FKM
- Neoprene
- PTFE



Valve Materials

Hydra-Cell® valve assemblies (seats, valves, springs, and retainers) are available in a variety of materials to suit your process application. Options for 3.1 certificates and polished parts are also available on request.

Valve Seats

- Ceramic
- Hastelloy CW12MW
- Nitronic 50
- Tungsten Carbide
- 17-4 PH Stainless Steel
- 316L Stainless Steel

Valves

- Ceramic
- Hastelloy CW12MW
- Nitronic 50
- Tungsten Carbide
- 17-4 PH Stainless Steel

Valve Springs

- Elgiloy (Exceeds SST grade 316L)
- Hastelloy C / PVDF
- 17-7 Stainless Steel
- 316L Stainless Steel

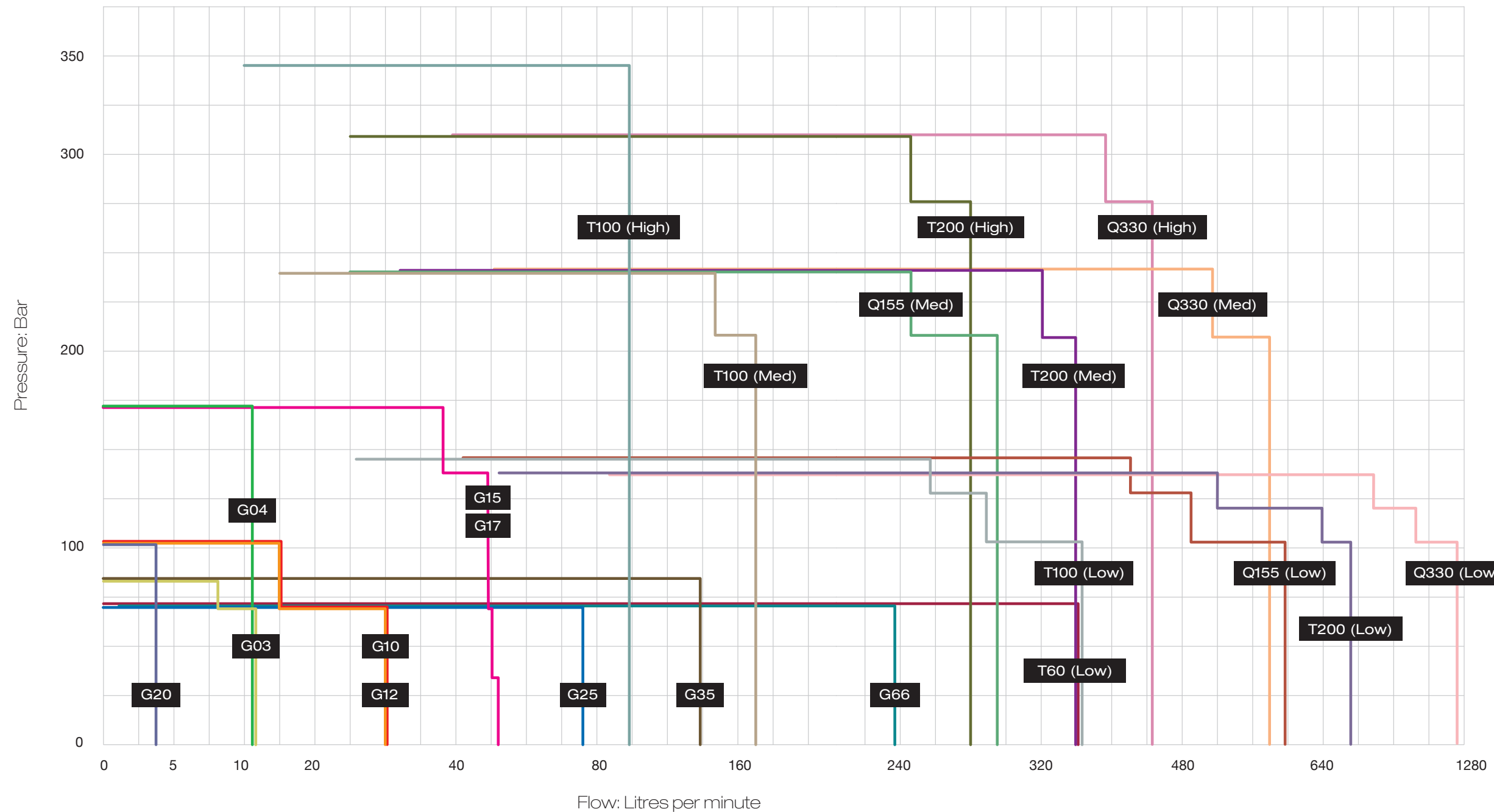
Valve Spring Retainers

- Celcon
- Hastelloy CW12MW
- Nylon (Zytel)
- Polypropylene
- PVDF
- 17-7 PH Stainless Steel

Easy Repurposing

With a wide range of materials of construction and the easy interchangeability of liquid end parts, diaphragms and valves makes repurposing of the Hydra-Cell pump simple and easy.

INDUSTRIAL PROCESS PUMPS



Hydra-Cell **G-Series** Seal-less pumps



Hydra-Cell **T-Series** Seal-less pumps



Hydra-Cell **Q-Series** Seal-less pumps



METERING & DOSING PUMPS ATEX / Hazardous areas



MT8



P200



P300



G04



G03



P400



G15



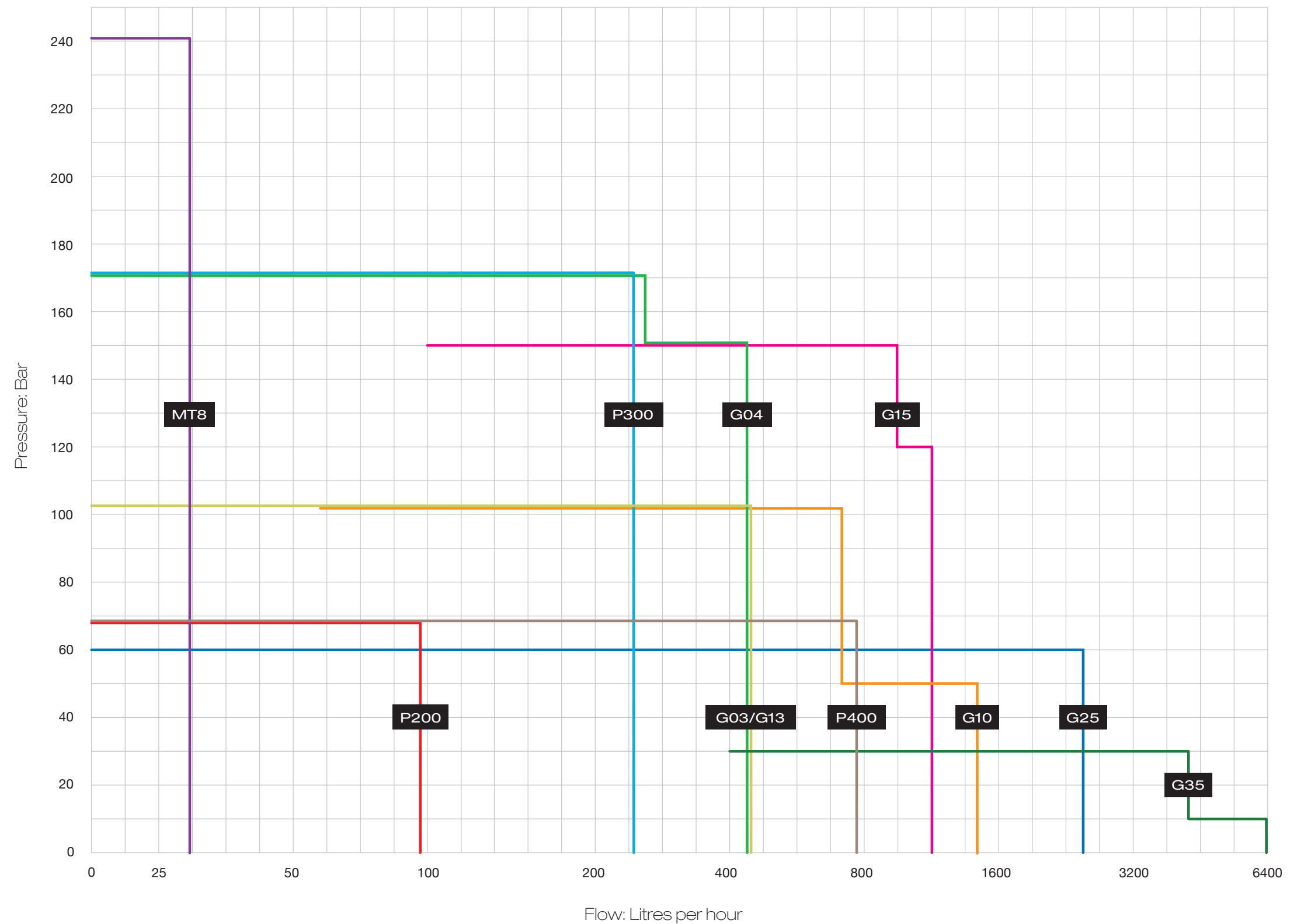
G10



G25

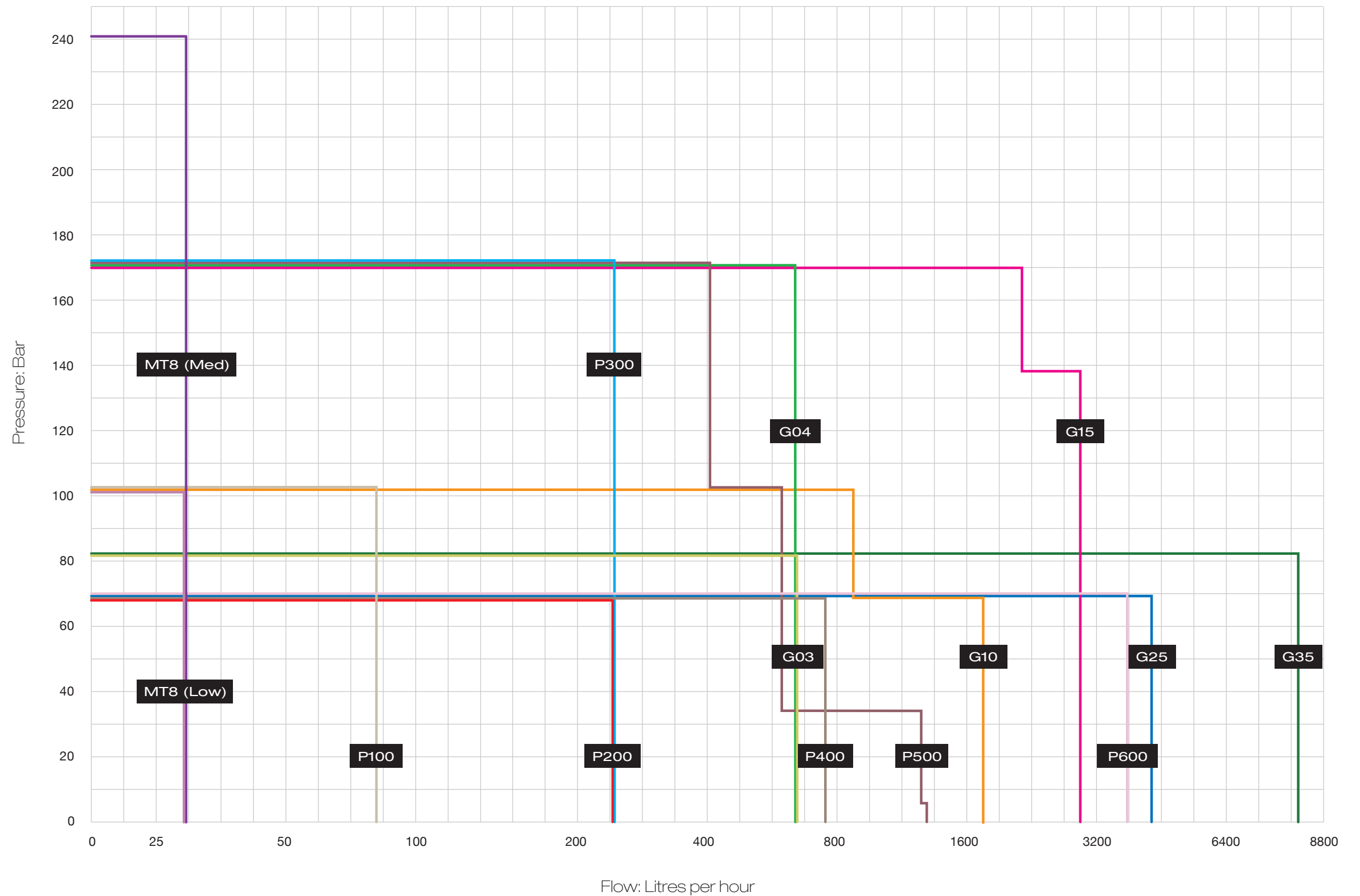


G35





METERING & DOSING PUMPS Non-ATEX / Safe areas



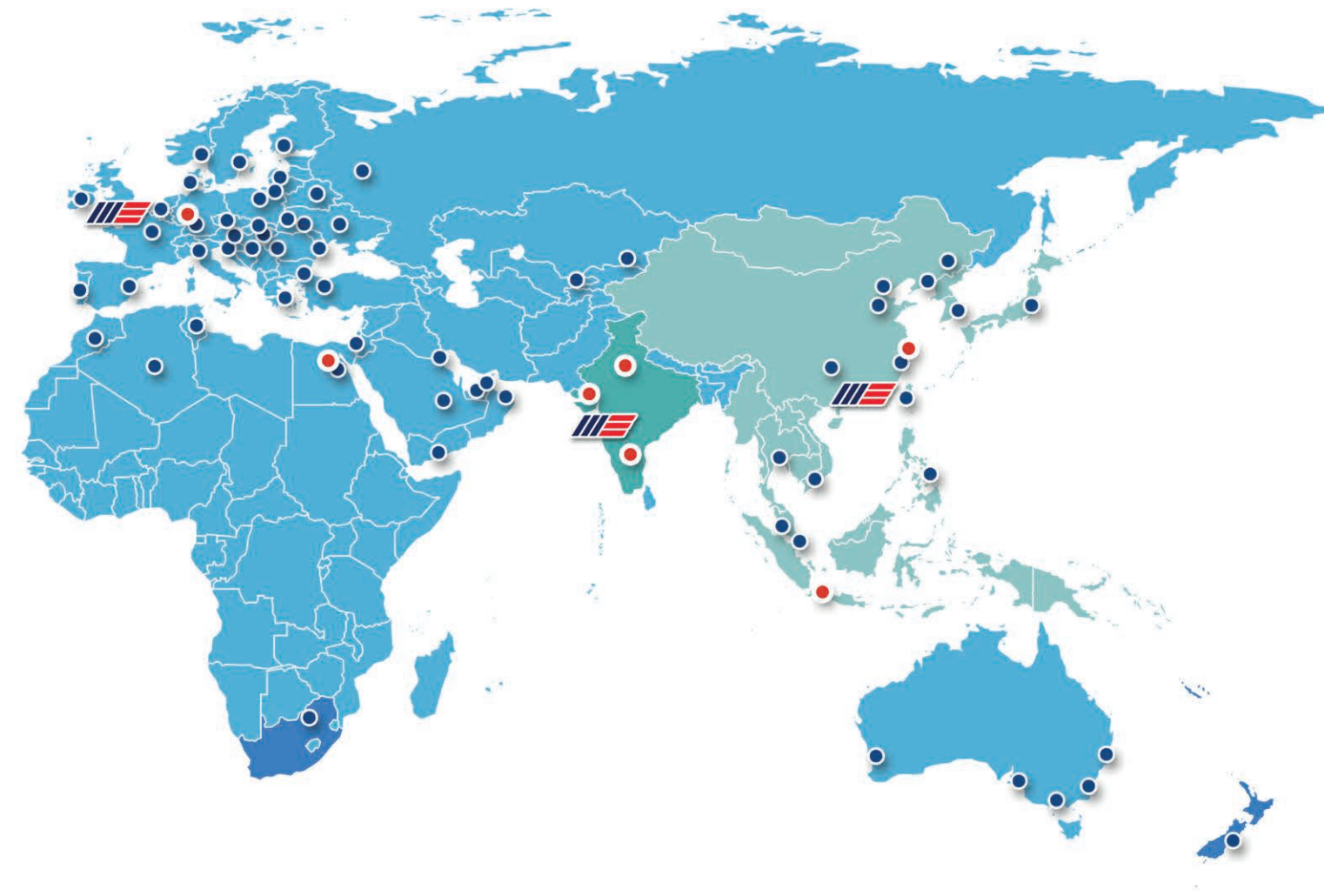
The WANNER™ group of companies has customers, partners and suppliers all around the world, and it's our priority to help our customers run far more cost-effective, environmentally sound and safe pumping processes as part of their overall operations.

Our multinational network of Hydra-Cell® Pro product champions and Wanner technical engineers are available for video conference calls or in-person onsite meetings. We are committed to a culture of genuine humans answering the phone, ready to help with your process challenge.

Tel: + 44 (0) 1252 816847

Email: support@wannerint.com

hydra-cell.co.uk



Partners in over 70 countries

Americas

-  Minneapolis, Minnesota USA
-  Wichita Falls, Texas USA
-  São Paulo, Brazil
-  Buenos Aires, Argentina

EMEA | Australia

-  Hampshire, United Kingdom
-  Cairo, Egypt
-  Remagen, Germany

Asia | Pacific

-  Kowloon, Hong Kong
-  Shanghai, China
-  Jakarta, Indonesia

India

-  Mumbai, India
-  New Delhi
-  Bangalore
-  Gujarat



WANNER INTERNATIONAL LTD.™
Hampshire UK
+44 (0) 1252 816847
support@wannerint.com
www.hydra-cell.co.uk

©2023. Wanner International Limited. All rights reserved. WANNER™ and Hydra-Cell® are registered trademarks.

All material contained are protected by copyright under UK & US copyright law, international conventions and other copyright laws.

Version 1 03/24

