ALL PURPOSE PUMPS™

HYDRA™

INDUSTRIAL WATER SYSTEMS ENGINEERED FOR DATA CENTRES



INTRODUCING ALL PURPOSE PUMPS

All Purpose Pumps is an Australian pump manufacturer and systems provider with over 35 years of experience delivering engineered solutions for commercial, industrial, wastewater, and fire protection applications. With manufacturing and testing facilities in Melbourne and Geelong, we combine technical expertise, quality assurance, and responsive service to deliver reliable outcomes for our customers.

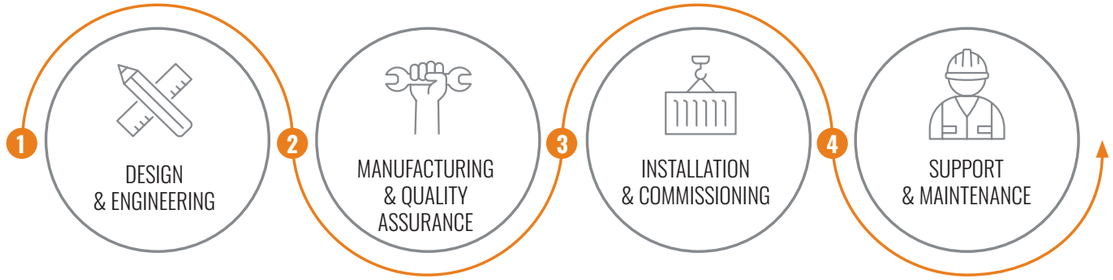
WITH YOU EVERY STEP OF THE WAY

From design to long-term support, APP delivers fully integrated pumping solutions that ensure quality, compliance, efficiency, and reliable performance throughout the project lifecycle.



WHY HYDRA FOR DATA CENTRES?

- Designed for mission-critical uptime
- N and N+1 redundancy options
- BMS/EMS integration
- FAT before delivery
- Australian engineering and manufacture
- Consultant design support
- BIM/Revit availability
- Service and commissioning support



DESIGN
Hydraulic design
Drawings and approvals
Consultant coordination

MANUFACTURE
In-house fabrication
FAT testing
QA inspections

COMMISSION
Installation support
Commissioning
BMS integration

SUPPORT
Periodical maintenance
Performance reporting
24/7 response

HYDRA™

HYDRA REPRESENTS ALL PURPOSE PUMPS' PREMIUM RANGE OF ENGINEERED WATER INFRASTRUCTURE SOLUTIONS, PURPOSE-BUILT FOR THE DEMANDING REQUIREMENTS OF DATA CENTRE APPLICATIONS.

HYDRA is a complete suite of industrial water systems engineered specifically for data centre infrastructure, including pressure boosting, storage, filtration and water quality management.

Designed for:

- Potable water storage
- Mechanical cooling systems
- Process water networks
- Auxiliary water systems
- Mission-critical facilities

At the core of the range are HYDRA Potable Water Panel Tanks, manufactured in accordance with Australian Standards and engineered to exceed structural requirements for wind loading, water pressure and long-term durability. These robust storage systems are complemented by HYDRA Chlorine Dosing Systems, which provide automated water treatment through continuous circulation, precision chemical injection and intelligent controls to maintain consistent free-chlorine levels. Supporting the complete lifecycle of the stored water, HYDRA Recirculation Filtration Systems deliver continuous circulation and high-efficiency filtration, reducing contaminants and protecting downstream equipment.

Together, the HYDRA product line forms a comprehensive, dependable and fully engineered water management solution. Backed by industry expertise and widely specified by leading consultants, HYDRA systems deliver exceptional reliability, compliance and operational assurance for projects where water quality and performance cannot be compromised.

The HYDRA range is built for performance, compliance and long-term durability, HYDRA systems support critical operations where water quality and supply stability are essential. Each product is fully engineered to integrate seamlessly into potable water, process water and mechanical cooling supply networks.

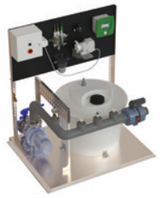
SOLUTIONS



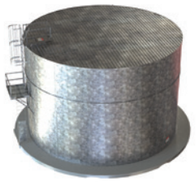
WATER PRESSURE BOOSTER SYSTEMS



RECIRCULATION FILTRATION SYSTEM



CHLORINE DOSING & MONITORING



INDUSTRIAL WATER STORAGE TANKS



AUTOMATIC SCREEN FILTRATION SYSTEMS

HYDRA™
WATER PRESSURE BOOSTER SYSTEMS

OVERVIEW

All Purpose Pumps HYDRA Industrial Water Pressure Booster Systems are engineered to provide reliable, constant water pressure to mechanical cooling and process equipment. Optimised for flows from 1 to 150+ L/s, they ensure consistent performance across varying demand conditions. Each system is fully custom-designed to meet project-specific requirements and principal specifications. Advanced configurations, including dual redundancy (N+1), deliver uninterrupted operation and enhanced reliability for mission-critical applications.

HYDRA Pressure Booster Systems are engineered to handle a full range of flow conditions, including low-flow applications, through the use of low-flow jacking pumps. This approach maintains optimal hydraulic efficiency across all operating points, reduces mechanical stress on pump components, and extends the operational lifespan of the system while ensuring reliable, high-performance operation.

COMPONENT OVERVIEW

BASE:

- Common galvanised base plate and controller stand, capable of vibration isolation mount installation.
- Baseplate and lifting point designed to meet AS4100:1998 and AS1170.1:2002.

MANIFOLD:

- Stainless steel suction and discharge manifolds.
- Pump isolation and non-return valves.
- 20mm test and drain valve.
- Stainless steel liquid filled pressure gauge.
- Pressure accumulator tank.
- Pressure Sensing Transducer (VSD).

PUMPS:

- Vertical multistage pump with standard IEC motors and M.I.P (Maintenance in Place) capabilities.
- Cartridge mechanical shaft seal.
- Vibration isolation rubber mounts.
- AS4020:2018 potable water compliant.

CONTROLLER:

- Incorporating colour touch screen & panel mounted VSD with communication interface.
- Manufactured in accordance with the relevant standards: AS3000:2007, AS1939:1990 and AS3439.1:2002.
- Constant Pressure VSD's (Variable Speed Drives) including capability for Ultra-Low Harmonics.
- High level interface for system monitoring and data logging.
- BACnet control (if required).
- IP 44 control panel enclosure as standard, with opportunity to increase IP rating upon request.
  - AS3000:2018 Electrical Wiring Rules.
  - AS1939:1990 Degrees of protection provided by enclosures.
  - AS3439.1:2002 Low voltage switchgear and control gear assemblies.

INCLUSIONS

- Delivery to Site - optional crane truck.
- Factory Acceptance Testing (F.A.T) at our state-of-the-art facility.
- Onsite Commissioning.
- 24/7 technical support.

FEATURES

- High Flow Vertical Multistage Pumps.
- Low Flow Vertical Multistage Pump.
- Reliable and proven control logic.
- Variable Speed Drive Controller with LED Screen.
- Fully Fabricated Stainless Steel Manifold and Valves.
- Pressure Tanks.
- Common Steel Base for easy transport and installation.

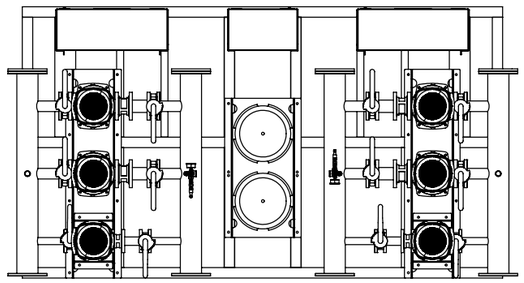
TECHNICAL DATA

APPLIES TO N+1 ARRANGEMENTS

STANDARD RANGE*	
Number of pumps	1-6
Flow range	1L/s - 150+L/s
Maximum head	2000kpa
Liquid temperature	0°C to +50°C
Ambient temperature	0°C to +30°C

*Note – contact our team for higher capacities

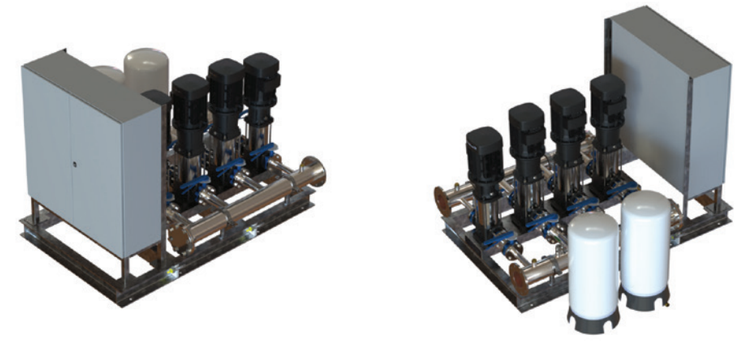
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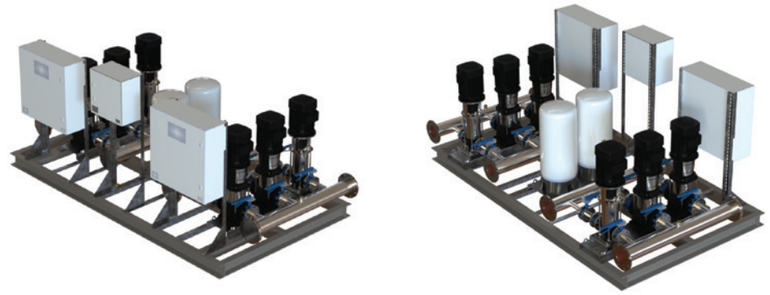
HYDRA™
WATER PRESSURE BOOSTER SYSTEMS

TYPICAL ARRANGEMENTS

N SYSTEM



N+1 SYSTEM



HIGH-FLOW SYSTEMS



HYDRA™
RECIRCULATION FILTRATION SYSTEM

OVERVIEW

All Purpose Pumps HYDRA Industrial Water Recirculation Filtration Systems are engineered to provide continuous circulation and highefficiency filtration of industrial water within storage tank networks. These systems ensure water quality is maintained, protecting downstream equipment and supporting reliable operation of mechanical cooling or process systems.

Each HYDRA system is fully custom-designed to meet specific project requirements and principal specifications. Advanced configurations including dual redundancy (N+1) and integrated skid-mounted solutions, combined with Water Pressure Booster Systems, are available to deliver enhanced reliability and seamless integration into complex water infrastructure.

SYSTEM OVERVIEW

BASE:

- Common galvanised base plate and controller stand.
- Baseplate lifting point designed to meet AS4100:1998 and AS1170.1:2002.

MANIFOLD:

- Stainless steel manifolds.
- Pump isolation and non return valves.
- 20mm test and drain valve.
- Stainless steel liquid filled pressure gauge.
- Pressure accumulator tank.
- Pressure Sensing Transducer (VSD)
- Flow control valves.

PUMPS:

- Single stage end suction pump or vertical multistage pump with standard IEC motors and M.I.P (Maintenance in Place) capabilities.
- Cartridge mechanical shaft seal.
- Vibration isolation rubber mounts.
- AS4020:2018 potable water compliant.

CONTROLLER:

- Manufactured in accordance with the relevant standards: AS3000:2007, AS1939:1990 and AS3439.1:2002.
- Constant Pressure VSD's (Variable Speed Drives) including capability for ultra-low harmonics ULH.
- High level interface for system monitoring and data logging.
- BACnet control (if required).

FILTRATION:

Watermark® Automatic Backwash Filters with BMS comprising of:

- 100um automatic backwash filter – Judo.
- 50um Judo, with provisions for 100um spacer. Custom solutions available to suit site requirements.
- 6um automatic self-cleaning screen filtration.
- Ultraviolet Disinfection – a range of highly customisable Watermark-certified UV disinfection systems, designed for long life with up to 12,000 hours lamp life & low maintenance with selfwiping capability.

INCLUSIONS

- Delivery to Site - optional crane truck.
- Factory Acceptance Testing (F.A.T) at our state-of-the-art facility.
- Onsite Commissioning.
- 24/7 technical support.

FEATURES

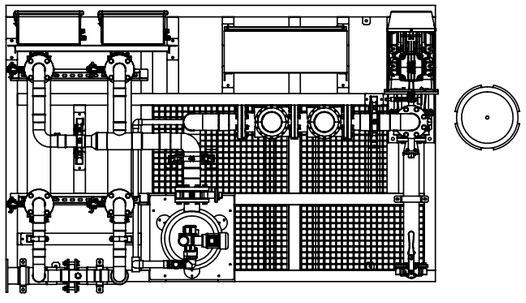
- Vertical or Horizontal Multistage Pumps.
- Reliable and proved control logic.
- Variable Speed Drive Controller with LED Screen.
- Fabricated Stainless Steel Pipework and Valves.
- Pressure Tanks.
- Common Steel Base for easy transport and installation.

TECHNICAL DATA [APPLIES TO N+1 ARRANGEMENTS]

STANDARD RANGE*	
Number of pumps	1-2 Pumps
Flow range	1L/s - 120L/s
Maximum head	2000kpa
Liquid temperature	0°C to +50°C
Ambient temperature	0°C to +30°C

*Note – contact our team for higher capacities

DRAWING



HYDRA™
RECIRCULATION FILTRATION SYSTEM

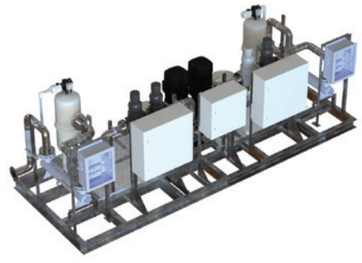
TYPICAL ARRANGEMENTS

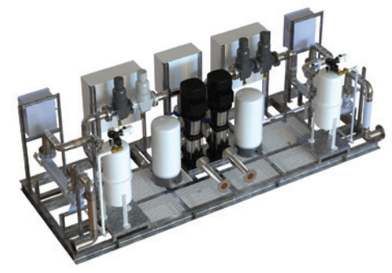
N SYSTEM





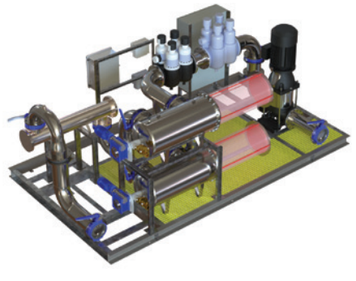
N+1 SYSTEM





HIGH-FLOW SYSTEMS





HYDRA™
CHLORINE DOSING & MONITORING SYSTEM

OVERVIEW

All Purpose Pumps' HYDRA Chlorine Dosing & Monitoring Systems provide a premium, engineered solution for maintaining safe and compliant water quality in both potable and industrial storage applications. By accurately controlling free chlorine levels through continuous circulation, precise chemical injection and intelligent automation, HYDRA ensures disinfected, stable water with minimal manual input—ideal for data centres.

Building on this capability, HYDRA Monitoring Dosing Systems are purpose-designed for mission-critical sites such as data centres. These systems pair active chlorine dosing with real-time monitoring of key water parameters to ensure stored and circulating water consistently meets strict operational standards. Together, HYDRA Chlorine Dosing and Monitoring Systems provide a dependable, intelligent and fully engineered treatment solution, safeguarding water quality wherever reliability is essential.

SYSTEM OVERVIEW

CONTROLS:

- HMI colour touch screen display coupled with a complete dashboard of indicator lights.
- Permanent data storage with system log.
- USB download of logged data.
- System run time clock.
- Expandable for monitoring and control of additional parameters, as required.

REDUNDANCY AND ALERTS:

- Early chemical storage low level warning.
- Low flow protection.
- ORP monitoring to override.
- Integrated run-time monitoring provides overdose protection.

FUTURE EXPANSION

- Controls incorporate the logic and allow space for additional channels.
- The manifold is configured with ports to support additional sensors.

BASEPLATE

- Stainless steel and HDPE construction.

REMOTE CONNECTIVITY:

- Modbus TCP/IP.
- Voltage Free common fault for up to 10 scenarios.

PUMP:

- Slower operating speeds enhance long-term reliability and durability.
- Stainless steel construction.

FEATURES

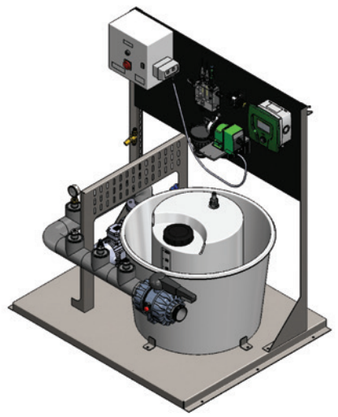
- Large LCD Full Colour Touchscreen Display.
- Large capacity storage for logging.
- High-performance microprocessor & operating system.

TECHNICAL DATA

STANDARD RANGE*	
Tank volume range	$2m^3$ to $+287m^3$
Chlorine storage	110L
Sample line discharge	8mm
Options	pH Monitoring Salinity Monitoring
BMS communication	Common voltage free output for up to 10 events Modbus TCP/IP

*Note – contact our team for increased capacities

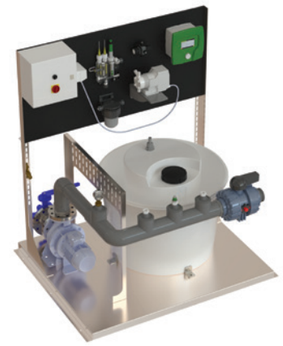
DRAWING



HYDRA™
CHLORINE DOSING & MONITORING SYSTEM

TYPICAL ARRANGEMENTS







HYDRA™
INDUSTRIAL WATER STORAGE TANKS

OVERVIEW

All Purpose Pumps HYDRA Industrial Water Storage Tanks are engineered for data centre, healthcare, and commercial applications, delivering durable and reliable water storage solutions. Manufactured in compliance with Australian Standards, HYDRA tanks are widely specified by leading industry specialists for their proven quality and performance.

Each tank is fully engineered to exceed structural, seismic, and wind-loading requirements, ensuring safe, long-term operation in demanding environments. Every HYDRA system is custom designed to meet project-specific requirements, with the All Purpose Pumps experienced engineering team; collaborating closely with clients throughout design, coordination, and integration with existing infrastructure. Our professionals provide complete installation and commissioning services, ensuring tanks are installed to the highest safety standards and deliver a seamless, reliable, fully engineered water storage solution.

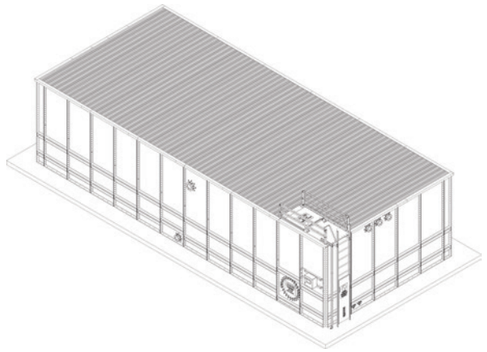
SYSTEM OVERVIEW

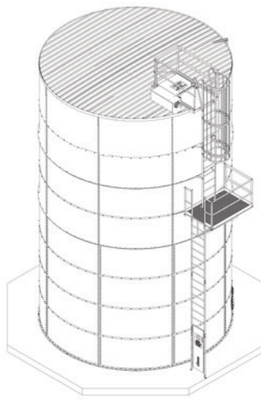
COMPRISING:

- Steel Panel Tank (bolted) with internal PVC Liner suitable for use with potable water, available in the following material:
  - Galvanised Steel.
  - 304 Stainless Steel.
  - 316 Stainless Steel.
  - High Grade Galvanised GR450 & LDX 2101 Stainless Steel for complex & large storage.
- Manufactured in accordance with relevant Australian Standards.
- Sheet metal roofing with anti-vermin protection.
- 750 x 750mm inspection access in top of tank.
- 600 x 600mm manhole access inside of tank at low level.
- External galvanised steel access ladder constructed in accordance with AS1657:2018.
- External ladder fitted with lockable guard.
- Mechanical Tank level indicator with signage.
- Inlet, overflow connection & outlet connection with anti-vortex plate.
- Drain outlet.

INCLUSIONS

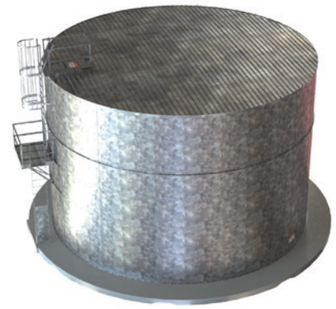
- Each tank is customised to suit individual site installations.
- Expert Engineering & Project Management assistance – Plinth construction, egress, pipework connections, installation program & coordination, delivery logistics & compliance.
- Construction on site by APP Specialist Tank Installation Team.
- General Arrangement Design drawings provided in PDF format for the above equipment after time of order.
- BIM models.
- Suitable for use with Chlorine Dosing systems.

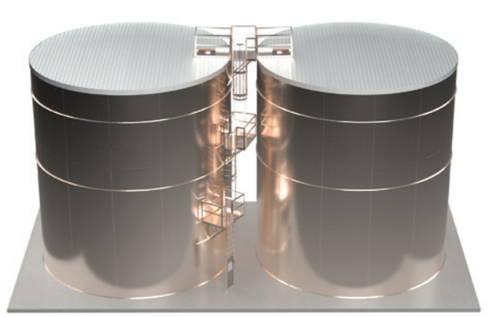




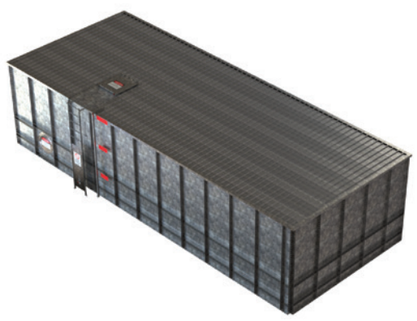
HYDRA™
INDUSTRIAL WATER STORAGE TANKS

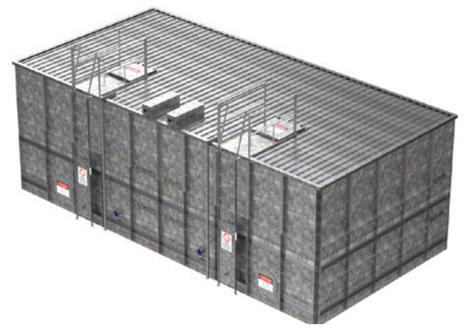
TYPICAL ARRANGEMENTS











HYDRA™
AUTOMATIC SCREEN FILTRATION SYSTEMS

OVERVIEW

Our HYDRA Automatic Screen Filtration System is engineered to safeguard mission-critical data centre cooling infrastructure by delivering clean, reliable domestic water to industrial Water Storage Tanks. Designed around high-performance automatic backwash filters, the system provides continuous filtration without interrupting downstream flow; ensuring stable water quality for chillers, heat exchangers and other essential cooling equipment.

With single or dual-stage filtration, manifold complete with bypass, and fully automated differential-pressure-triggered backwashing, the system maintains optimal performance even under variable authority water conditions. Each filter operates independently, with built-in bypassing and dedicated drain connections to support seamless maintenance and long service life.

Engineered for dependability, automation, and compliance, this filtration system provides confidence that your cooling water supply remains clean, stable, and ready to support continuous uptime.

SYSTEM OVERVIEW

BASE:

- Common galvanised base plate and controller stand.

MANIFOLD:

- Stainless steel suction and discharge manifolds.
- Manual bypass & isolation.
- 20mm test and drain valve.
- Stainless steel liquid filled pressure gauges on suction & discharge manifolds.

FILTERS:

- Automatic backwash via differential pressure and timer control.
- Efficient screen cleaning ratio of 1:1 using point rotation principle.
- No interruption to water flow during screen cleaning.
- AS 4020:2018 potable water compliant.
- Stainless steel screen that is Silver coated to inhibit bacterial growth.

CONTROLS:

- BMS connections for operation, fault, and backwash status available.
- Manufactured in accordance with the relevant standards: AS3000:2007, A51939:1990 and AS3439.1:2002.

INCLUSIONS

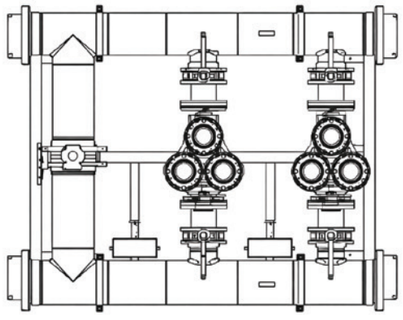
- Delivery to site - optional crane truck.
- Factory Acceptance Testing (F.A.T) at our state-of-the-art facility.
- Onsite commissioning.
- 24/7 technical support.

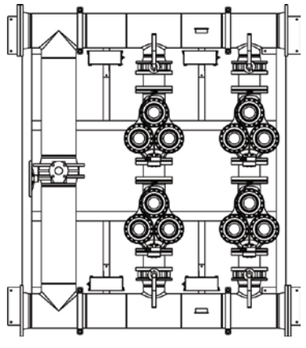
TECHNICAL DATA
APPLIES TO N+1 ARRANGEMENTS

STANDARD RANGE*	
Arrangement options	N (duty or duty/duty) N+1 (duty/standby)
Filtration series	1-2 Per N System
Filtration micron	30um to 500um
Flow range	1L/s - +110L/s
Maximum head	1000kpa
Liquid temperature	0°C to +50°C
Ambient temperature	0°C to +30°C

*Note – contact our team for increased capacities

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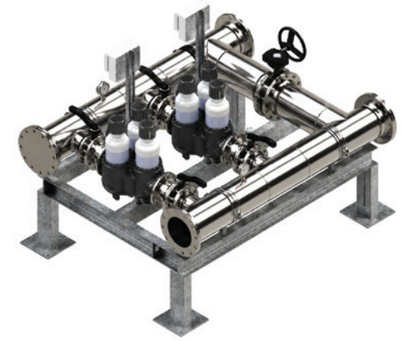




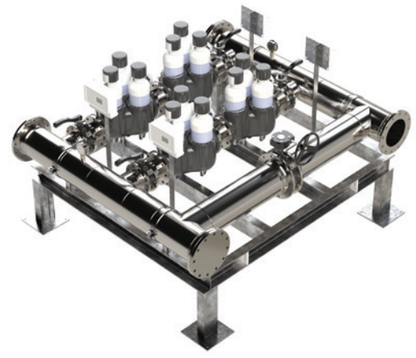
HYDRA™
AUTOMATIC SCREEN FILTRATION SYSTEMS

TYPICAL ARRANGEMENTS

SINGLE FILTRATION SERIES



DUAL FILTRATION SERIES



ALL PURPOSE PUMPS™

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ISO 45001 Certified OH&S Management System

ISO 14001 Certified Environmental Management System

ISO 9001 Certified Quality Management System 610C593

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