



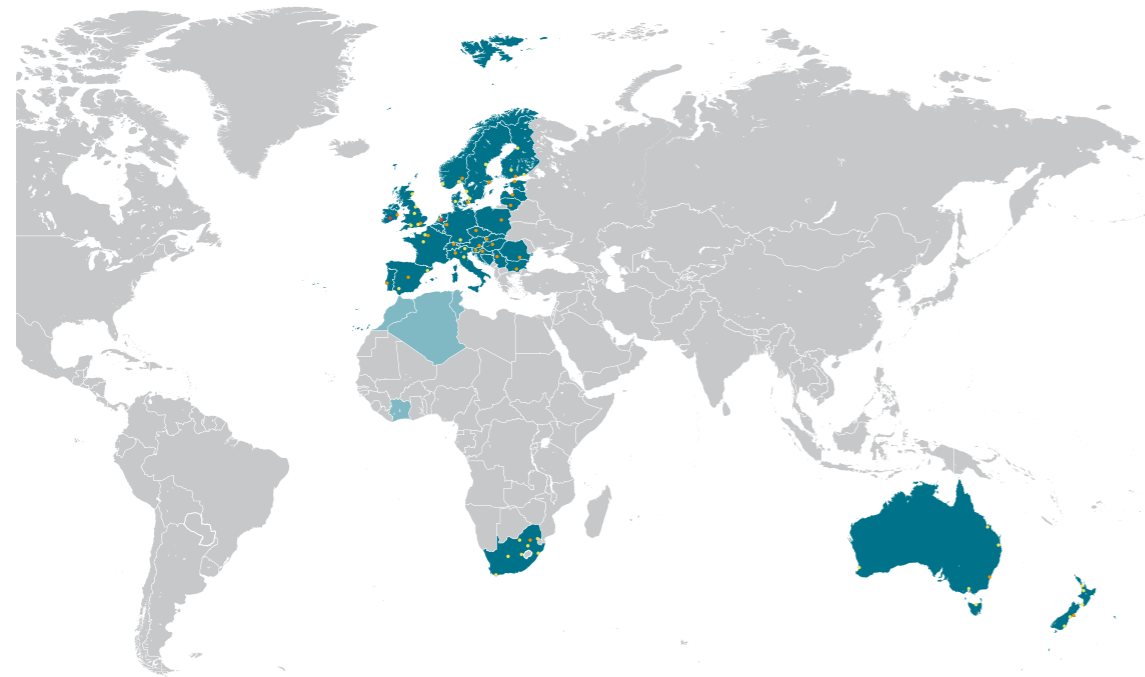
fluidity.
nonstop

IT'S ABOUT KEEPING YOUR PROCESSES RUNNING

**In Pharmaceutical
Processes**

 **AxFLOW**

AxFlow near you



About AxFlow in Ireland

Our team of experienced engineers are here to offer the very best technical advice and support. That, together with products from world leading manufacturers, means you can be sure of the highest quality equipment selected to provide the most precise, cost-effective and reliable solution to your fluid handling requirements.

The role that fluid handling systems play in your process is vital, yet often hidden. That's fine with us; we believe in 'fit and forget'. We work hard so that we can fit and you can forget.

AxFlow Group

The AxFlow Group is one of Europe's largest suppliers of centrifugal, rotary positive displacement and reciprocating pumps. Operating with offices and service locations in 27 European countries and offices in South

Africa, Australia and New Zealand, AxFlow with nearly 1100 employees represent many world leading pump manufacturers. It is not just about selling pumps and spares – AxFlow provide face-to-face technical support and problem solving capabilities unsurpassed within the pumps industry. That in-depth knowledge along with the ability to select the "best pump for the job" irrespective of supplier, allows AxFlow an almost unique perspective on providing the optimum solution. Recent years have seen AxFlow develop a comprehensive pump service and repair organisation as well as the ability to build bespoke pump-systems to solve process problems.

Our ultimate parent company Axel Johnson was formed in 1873 and to this day AxFlow remain part of a family owned business.



Air Operated Double Diaphragm Pumps



The **Saniflo™** Series pump line is specifically designed to meet the strict cleanliness guidelines established for sanitary process applications. Saniflo™ pumps incorporate a straight flow-through design, allowing large solids passage and easy drain down in CIP processes.



Wilden® Velocity Series compact pump.

Featuring the industry's first detachable mounting foot, the Velocity Series air-operated double-diaphragm (AODD) pump has adaptable mounting capabilities, is competitively priced and is the complete package for all small-dosing applications.

Multiple mounting options

- 1/4": 4.3 m (14.2') of dry suction lift for better priming
- 1/2": 5.1 m (16.9') of dry suction lift for better priming
- Startup pressures as low as 1.03 bar (15 psig)
- Bore-seal design eliminates leaks that result from torque decay
- Interchangeable footprint with previous Wilden designs (P.025, P25 and P1, P100)

Wilden Product range

Air Operated Double Diaphragm pumps from the worlds largest manufacturer.

Wilden's revolutionary **Advanced™** Series pumps were specifically designed to maximum performance and efficiency. The bolted configuration of these pumps ensures total product containment while the redesigned liquid path reduces internal friction to maximise output.

Flow rate: up to 60 m³/h
Suction lift: up to 9.5 m
Pump sizes: from 1/4" up to 4"

Atex models available
3A and EHEDG options available



SANIFLO



PRO-FLO SHIFT



Available in Wilden's Advanced™ and Original™ Series air-operated double-diaphragm (AODD) pumps, the Pro-Flo SHIFT:

- Achieves up to 60% savings in air consumption
- Delivers more yield per SCFM versus competitive AODD pumps
- Costs 50% less than electronically actuated ADS
- Has fewer operating parts, meaning less downtime and simplified maintenance
- Is available in a single-point exhaust option (for submersible applications)



Air Operated Double Diaphragm Pumps

Almatec Product range

The **ALMATEC™** series manufactured by Almatec GmbH includes a complete line of versatile pumps made for nearly any process application. With machined sealing surfaces and superior product containment, the ALMATEC™ pumps will exceed your expectations about how an air-operated double-diaphragm pump should perform.

The **E-Series** represents the latest generation of plastic air-operated double diaphragm pumps made in solid design.

Flow rate: up to 48 m³/h
Suction lift: up to 9.5 m
Pump sizes: from 1/4" up to 3"
ATEX available



E-SERIES



E-Series pumps made of PE conductive and PTFE conductive meet the ATEX requirements of the directive 94/9/EG.



The **ALMATEC™** C-series range of Air Operated Double Diaphragm (AODD) Pumps is a reliable solid-design with increased pump safety due to innovative ring-tightening structures. The C-Series range is cost-effective and has different connection options available to suit existing installations. The good suction head, self-priming and dry run capability and the absence of drives, rotating parts and shaft seals are further features.

- Manifolds as separate housing parts
- Wear parts compatible with other Almatec pumps
- Flows up to 32 m³/h
- Pressures to 7 bar

C-SERIES



Air Operated Double Diaphragm Pumps



BIOCOR

The **Biocor™** Series pump line offers high purity pumps designed to meet the ever increasing demands of pharmaceutical and biotech processes. Designed by Almatec GmbH these pumps are at the leading edge of AODD pump technology.

Flow rate: up to 17 m³/h
Suction lift: up to 9 m
Sized in DN20, DN32 & DN40



Blacoh Pulsation Dampeners

Cure pulsation, vibration, water hammer & surge problems.

Wherever vibration, pressure fluctuation, non-steady flow, noise, or rapidly wearing pump components are a problem or a significant disadvantage in the application, Blacoh can solve those problems to improve both the efficiency of the pump and the longevity of its components.

Blacoh is the leader and foremost expert in the manufacture of fluid control products for virtually every application from the harshest chemicals to the most delicate cosmetics. They serve many of the largest oil, pharmaceutical, food, chemical, and petrochemical companies in the world.



- Suitable for Pumps with discharge connection from 1/8" up to 6"
- Simple, reliable design and quick installation
- Easy in-line maintenance
- Pressure ranges up to 10,000 psi available
- Temperature ranges from -51 °C to +205 °C
- Custom models, larger sizes and higher pressure ratings available on request.
- Bodies available in a full range of chemically resistant materials
- Bladders available for even the most corrosive applications





Process Equipment

ABO Butterfly Valves

The ABO Series 900 Butterfly Valves are of premium quality with a resilient seat designed for use in industrial applications. Whether it is potable, sewage, sea or industrial water, light chemicals, pharmaceuticals, oil or oil derivatives, sugar juice, as well as applications in the food processing industry, ABO Series 900 will provide long-term reliability and low maintenance requirements.



ABO valve

- Body type options include Wafer, Lugged and Double Flanged
- Options for disc material for brass, Aluminium bronze, Stainless Steel, Ductile Iron Epoxy Coated, Hastelloy, Titanium and Halar or Rilsan Coating.
- Manufactured in accordance to ISO 9001, EN12266-1, ISO 5208
- Seat Material options include NBR, EPDM, Viton, Silicone, Epichlorohydrin and Hypalon
- Top flange manufactures according to ISO 5211

Noah Actuators

The Noah Series of Electric ¼ Actuators are particularly suitable for Ball, Butterfly and Plug Valves. Options are available to suit most application environments and industry types. Its compact and simple design will assure reliability and quality for customers even in hazardous locations. The Noah Series of Electric Actuators give the best automation solutions, long life, low maintenance and reliable service.



- Torque ratings from 30Nm up to 3,500Nm.
- Open/Close operation or Modulating by 4-20mA control signal.
- IP67 as standard.
- Operating voltage of 24VDC, 110VAC, 220VAC or 380VAC.
- Epoxy Coated Aluminium Body



NOAH Actuation

Pressure Relief and Reducing Valves

Goetze KG Armaturen is a world leading German Manufacturer of Safety Valves, Pressure Relief and Pressure Reducing Valves. Their comprehensive range covers most duty applications. Whether for Air, Water or chemicals.

GOETZE



- TUV and ISO quality certified,
- Options for preset, calibrated and certified, or can be supplied for user setting.
- ATEX rating is optional for all products.
- Material options such as Gunmetal, Stainless Steel and Spheroidal Graphite Cast Iron



Process Equipment

Auma Actuators

Auma actuators are one of the industry's leading manufacturer in Electric quarter and Multi Turn valve automation solutions, available for duties from simple ¼ turn On/Off to Fully Modulating Multi turn actuators with various control options – Profibus, Modbus, analogue Position control and more.

With options such as Ex Rating, IP68 environmental protection, Non-intrusive / Bluetooth setup and UPS supply.



- Quarter Turn (SQ) and Multi Turn (SA)
- Available in 110v/220v 1phase or 380/400 v 3phase
- IP67 – IP68
- Supplied as standard with "Matic" control unit, for selectable Local / Remote control, with Reversing Contactors, Push Button Control
- Indicator lamps for Fully Open / Fully Closed, Running and Fault Display
- Adjustable Torque and Limit switches
- Manual Override via De-Clutchable Handwheel
- Paint Specification – C5M Marine Grade
- ISO Standard Valve Mounting Pad
- Visual Position Indication
- Available up to 1500 Starts per hour

auma
Solutions for a world in motion

Airpower Pneumatic Actuators

The air power actuator uses the same dimensions for double and single acting actuators with a 90° or 180° pivoting angle. This means that a double acting actuator can easily be converted to a spring return actuator by adding springs and vice versa. The aluminium housing is hard anodised and powder coated. The caps are manufactured die cast aluminium and is likewise powder coated allowing for deployment possibilities in almost all situations especially critical environments meaning that the Air Power Pneumatic actuator will suit all your needs for 90° - 180° valve actuation.



- **Housing: Aluminium alloy, hard anodised, outside PE Coated**
- **Interface: Namur VDI/VDE 3845**
- **Ambient Temperature: -35° - +80° C**
- **Torque range: 2 Nm to 13,022 Nm**
- **Control Pressure: 2 – 10 Bar**
- **Control Media: Filtered air minimum acc to DIN/ISO 8573-1 Class 4**

airpower
europe gmbh ape



Process Equipment



MT BSP Threaded Ball Valves

The MT range of BSP Threaded Ball Valves are suitable for use in installations in hot and cold water, low pressure steam, chemical installations, solvents, fluids of all kinds and air. Chemical industries, petrochemical industries, food industries for external and auxiliary processes.

- CF8M stainless steel (AISI-316) Body & Ball
- Available in Two Pieces or Three Pieces
- Full Bore
- ISO Pad for Actuation or Lever Operated
- PTFE Ball Seats
- Available in Sizes from 8mm to 100mm
- Maximum Working Pressure of 63bar
- Working temperature range of -20° to 80° C



MT Wafer Swing Check Valve

The MT range of Wafer Swing Check Valves are suitable for use in installations in hot and cold water, low pressure steam, chemical installations, solvents, fluids of all kinds and air. Chemical industries, petrochemical industries, food industries for external and auxiliary processes.

- 316 stainless body and disc (AISI-316)
- Reduced Bore
- FKM O-Rings
- Available in Sizes from 40mm to 150mm
- Maximum Working Pressure of 16bar
- Working temperature range of -20° to 80° C



MT Flanged Ball Valves

The MT range of Flanged Stainless Steel Ball Valves are suitable for use in installations in hot and cold water, low pressure steam, chemical installations, solvents, fluids of all kinds and air. Chemical industries, petrochemical industries, food industries for external and auxiliary processes.

- CF8M stainless steel (AISI-316) Body & Ball
- Full Bore
- ISO Pad for Actuation or Lever Operated
- Reinforced PTFE Ball Seats
- Available in Sizes from 15mm to 150mm
- Maximum Working Pressure of 16bar
- Working temperature range of -20° to 80° C



Metering Pumps

Blue-White

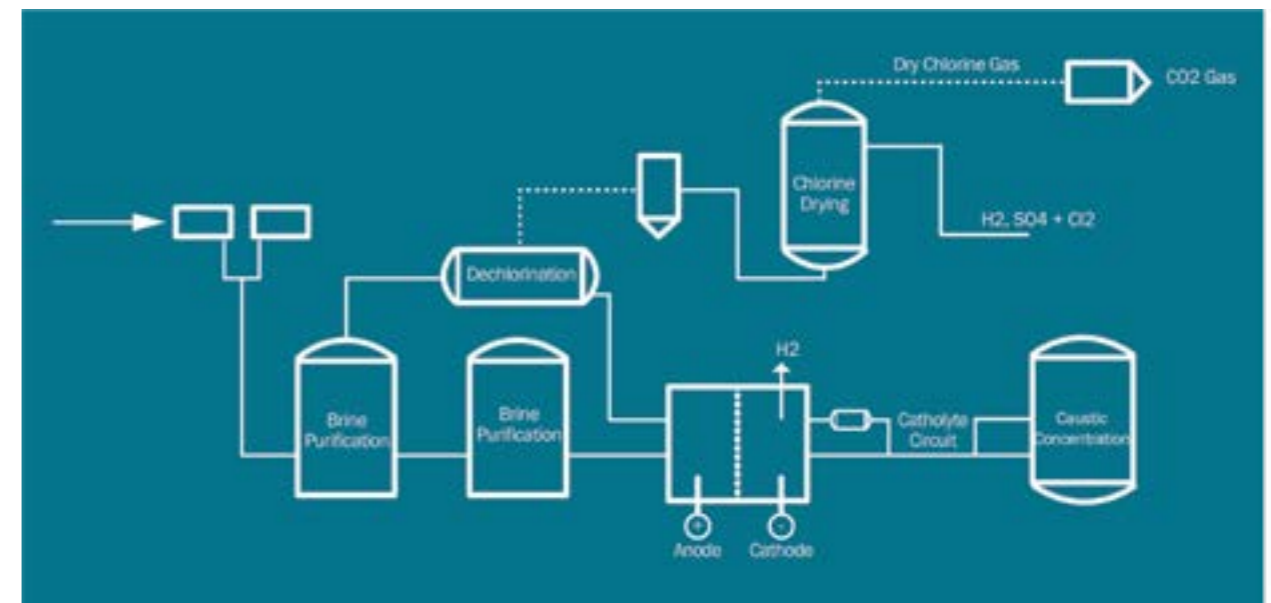
Blue-White Industries is a leading manufacturer of chemical metering pumps (diaphragm, peristaltic), flowmeters (variable-area, paddlewheel, ultrasonic), and water treatment accessories.

Blue-White Flex-Pro

The compact Blue-White ProSeries hose dosing pumps can be widely used in general Chemical Dosing applications as well a wide range of applications in the water and waste water treatment sector. The pumps are ideal for accurate dosing and injection of aggressive and viscous chemical with a low dosing capacity. The design of the Flex-Pro ensures that the pump is self-priming and the medium only comes into contact with the hose.



- PVDF Hose Connection
- Patented Tube Fail Detection (TFD)
- Flows up to 600 l / h
- Pressures to 8.6 bar
- SCADA & Pulse inputs 4-20mA, 0-10Vdc, 0-30 VDC
- Digital touch pad with backlit LCD display
- Advanced serial and Ethernet communication



A chlorine production line



Centrifugal Pumps

Johnson pumps

- Flows up to 850 m³/h
- Pressures up to 10 bar
- Adjustable axial impeller position
- Shaft seal: mechanical bellows to EN12756
- Easy and low cost maintenance



CombiBloc from Johnson Pump

These closed coupled centrifugal pumps are designed for optimal suction capabilities with minimal flow distortion. The hydraulic balancing of the closed impeller gives extended bearing life & high efficiencies.

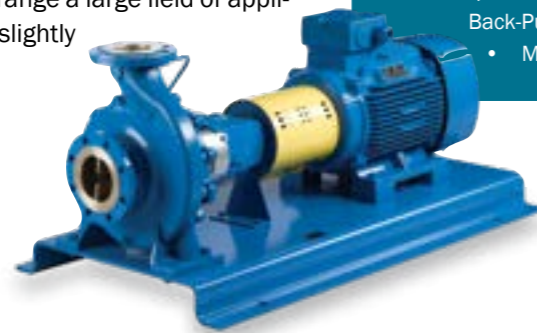
Suitable for clean & aggressive liquids, it includes a casing drain for rapid emptying.

Johnson Pump®



CombiNorm from Johnson Pump

Johnson Pump's family of long-coupled horizontal centrifugal pumps maximise interchangeability of parts. The great variety in materials, flexible choice in bearings & shaft seals give this range a large field of application. Suitable for clean & slightly contaminated liquids.



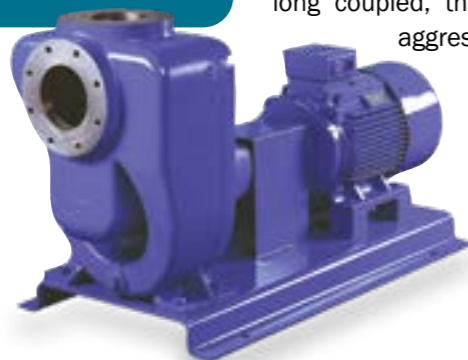
- Flows up to 1500 m³/h
- Pressures up to 10-16 bar
- Suitable for temperatures up to 200 °C
- Simple maintenance with standard components and Back-Pull-Out principle
 - Magnetic Drive versions available



- Flows up to 300 m³/h
- Pressures up to 8 bar
- Self-priming up to 7 m
- Oil bath for mechanical seal prevents dry running
- No need for non-return valve on inlet

FreFlow from Johnson Pump

Self-Priming centrifugal pumps with a high performance & easy operation. The robust design ensures a durability to the pump lifespan. Suitable for low viscosity liquids (150 cPs) & liquids with entrained gasses. Close or long coupled, the pumps will handle contaminated, aggressive or corrosive liquids.



Specialist Pumps

Griswold from PSG

Griswold's line of 811 ANSI Pumps is engineered for flexibility and durability.

The 811 is available in a wide range of sizes, capacities and materials to fit virtually any process fluid application. With over 30 selections and multiple design options, we've got your application covered – for abrasive and corrosive substances.

Challenge your existing equipment quality, delivery and costs with Griswold's ready-to-ship inventory of 811 pumps and parts. Our 811 pump line and wearing parts



interchange quickly and seamlessly with a variety of ANSI pump models and brands – without piping, baseplate or coupling changes. All at a significant cost saving.

Flow rate: 1 to 1 700 m³/h

Gruppo Aturia Pumps

Several years ago Gruppo Aturia incorporated the workforce and production facility of Caster Pumps.

As a consequence, Gruppo Aturia offers one of the most comprehensive portfolios of magnetically driven pumps in Europe; many of which directly replace the original Caster models.

This range includes:

- PTM PP and PVDF regenerative turbine pumps.
- PTM-SP Self priming PP and PVDF regenerative turbine pumps
- PCM PP and PVDF centrifugal pumps
- PCM-SP Self Priming PP and PVDF centrifugal pumps
- STM Stainless steel regenerative turbine pumps
- NDM ISO 5199/2858 centrifugal pumps
- SVM Stainless steel rotary vane pumps
- SMKM API 685 process pumps

Gruppo Aturia is the oldest Italian pump company with 5 manufacturing plants and over 4,500 pumps operating in nuclear power plants around the world.

- Flows 0.1 to 1,800 m³/hr
- Heads to 300 m
- Temperatures -150 to 400 °C
- System pressures to 350 bar





Centrifugal Pumps

SPX Flow - Centrifugal Pumps

Engineering excellence to meet the highest international standards for hygiene.

W+ Series from APV

The W+ design focuses on maximising performance efficiency with the highest hygienic standards. The unique volute in the backplate increases efficiency & reduces turbulence which ensures gentle product handling. W+ pumps are designed for simple maintenance and inspection of seals.



- Problem free operation and long life cycle
- 17 sizes cover up to 800 m³/h / 15 bar
- Very low noise and vibration levels
- Options include: Inducer version, 3A version, electro-polishing



Ws+ Series from APV

The Ws+ uniquely combines the abilities of most liquid ring pumps with the efficiencies of the W+ series. The result is lower power consumption & less noise for entrained air and suction lift applications. The pumps can be configured to a specific duty point to produce efficiencies previous unobtainable with LR pumps.



- Ideal for CIP return
- 3 sizes cover up to 90 m³/h / 6.5 bar
- Particle friendly design
- Options incl: 3A version, electro-polishing, casing drain



Rotary Lobe / Circumferential Piston Pumps

SPX Flow - Positive Displacement Pumps

Known for exceptional quality and precision made components.

Universal Series from WCB

The world famous Waukesha Cherry-Burrell 'Universal' brand out performs all lobe & wing type rotary pump technologies. It is sought after in all industries from general chemical to food and pharmaceutical. The non-galling Waukesha Alloy 88 rotors have tighter running clearances giving the best energy efficiencies.



WAUKESHA UNIVERSAL I & UNIVERSAL II



WAUKESHA UNIVERSAL III STAINLESS STEEL

Waukesha Cherry-Burrell



- Flows up to 102 m³/h, max pressures of 13.8 or 34.5 bar
- Temperature range from -40 °C to 149 °C
- Both single & double mechanical seals or O-ring type seals
- Pump head in 316LSS as standard, gear casing in 304SS
- Rotor/shaft connection zone sealed from the product
- Large diameter shafts have a greater strength & stiffness
- Options include: Seal flush, CIP holes, aseptic & Free-drain profile, PRV cover, heating jackets, rectangular inlets



DW Series from APV

Designed for ultra-hygienic applications, with minimal internal clearances. The result is low-slip and increased efficiency even on low viscosity fluids. Gentle product handling reduces risk of damage on sensitive duties. A low NPSH requirement gives improved suction capability.

- 26 sizes cover flows of 370 m³/h & pressures to 30 bar
- All models are CIP/SIP cleanable
- Easy maintenance of wearing parts
- Build variations: rotors, seals, heating jacket, integral PRV, rectangular inlet, port types.

Industrial Rotary Lobe Pumps

with rubber coated rotors in stainless steel
AISI-420 or AISI-316

Different types of connections available, large solids pass and wear-resistant plates easily replaceable.

- Self-priming
- Reversible
- Flow up to 120 m³/h
- Pressure up to 8 bar
- Viscosities up to 100.000 cPs
- Maximum solids size up to 50 mm
- Axial wear plates
- Abrasion resistance





Centrifugal Pumps

Verdermag

Global Magnetic Drive Pumps.

A combination of the latest materials and engineering practices, coupled with Verder's experience in manufacturing synchronous magnet-driven seal less pumps, has created a flexible range of pumps ideally suited to modern requirements. Tried and trusted designs have been updated and developed to allow modular construction, with many interchangeable components. The pumps can be assembled from stock components to give quick response times, whilst spares requirements are kept to an absolute minimum.

Materials: Cast iron, Stainless steel, Hastelloy C, Polypropylene, E.T.F.E and E.T.F.E. lined

Flow rate: up to 300 m³/h

Max Head: 110 m

- No leaking seals
- Environmentally friendly
- Dry run protected
- Simple to maintain
- Long life silicon bearings and many other materials
- Atex models available



Applications: High/low Temperature, Thermal oils, Refrigeration use, Toxic liquid containment, Hazardous liquid transfer, Chemical processing.



Argal Route

The Argal range of Route pumps are available as magnetic driven and mechanical seal versions. They are suitable for pumping a diverse range of chemical with impurities and suspended solids. The pumps can be offered with a fitted stainless steel casing harness to improve their physical robustness.

- Mag drive or mech sealed.
- Dry running option available for mag drive models.
- PP or ETFE
- Single and double seals.
- Optional stainless steel casing reinforcement.



Eccentric Disc Pump

PSG products

Mouvex - over a Century of Innovation and Performance.

"This unique Mouvex technology provides extraordinary self-priming up to 9 meters and may run dry for short periods of time. This design has a compressor effect which helps to clear pipelines, therefore reducing waste. Additionally, eccentric disc pumps are very low shear for shear sensitive liquids such as sauces, silicon emulsions, cosmetics, food, etc.

Performance tests show shear rates are lower than circumferential piston pumps, lobe and gear pumps. Designed without mechanical seals, packing or magnets, the Mouvex sealless pump means no leaks. The stainless steel models are ideal for sanitary applications, carry 3A approval certification and are designed per EHEDG.

The unique Mouvex principle eccentric disc pump produces the pumping performance of a rotary positive displacement pump by oscillation alone. The wetted pumping elements do not rotate and the pump is totally sealless.

An extremely gentle pumping action enables the pump to handle shear sensitive liquids.



Mouvex Eccentric Disc Pumps feature product recovery capabilities that significantly reduce waste from hygienic food and beverage, pharmaceutical and cosmetic manufacturing while increasing your return on investment.

Flow rate: up to 65 m³/h
Self-priming: up to 9 m
Pressure: up to 16 bar
Viscosity: up to 10 000 cps



SLS - HYGIENIC



SLC - CHEMICAL



MICRO C



The sealless Micro C pump is ideal for handling low flow rates and can be used for metering/dosing applications.

Flow rate: up to 760 l/h
Pressure: up to 15 bar
Accuracy: 0.5%



Screw Pumps

Waukesha

Twin Screw series from Waukesha

The Waukesha Universal Twin Screw Series Pump range offers reliability, process flexibility and smooth operation. The twin screw pump offers gentle product handling as it pumps large particulates without degradation. With front loaded access to product side seals, the pump can be easily maintained.



- 17-4PH reinforced stainless steel shaft
- Alloy 88 non-galling screws
- 316L stainless steel body and cover
- Flows up to 277 m³ / h
- Pressures to 25.5 bar
- Sealing options with single and double mechanical seals
- No heat emission
- Ease of maintenance
- Hygienic EHEDG Certification
- Ideal for low inlet pressure applications



Waukesha
Cherry-Burrell



Process Equipment

APV Process Equipment

Engineering excellence to meet the highest international standards for hygiene.

APV Process Valves

APV's extensive valve range includes valves built to the highest hygienic and aseptic standards and are designed for CIP use. From simple shut-off valves to aseptic diaphragm valves, mix-proof valves and control valves, APV has an extensive offering.



- Sized 1-4" / DN25-100 and larger across most ranges
- Designed for easy maintenance, valves are modular and adaptable.
- Operated either manually or pneumatically,
- CU4 control top brings precision control, clarity and reliability to your process.
- Some valves available with ATEX / Ehedg / 3A approval



APV®

NOV Mono Hygienic pump

Reliable & well-proven design for hygienic applications

Progressive cavity pumps provide the gentlest pumping action on the market for solids handling, offering minimal product degradation in shear-sensitive applications such as salad dressings and salsas while being able to move suspended solids with minimal damage to products such as diced fruits, vegetables, and soups.

Why choose a PC pump?

- Gentle pumping action for solids handling
- Pulsation free flow
- High pressures possible
- Viscous products possible
- Pumping solids in suspension possible, with minimal product degradation
- Relative low speed, gentle flow
- Minimal product degradation in shear-sensitive applications.

Max Flow rate: 107m³ per hour
Max pressure: 12 bar

NEW!

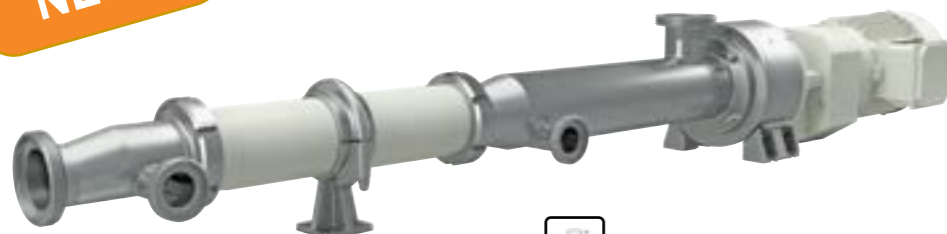


Plate Heat Exchangers

APV's Plate Heat Exchangers (PHE) minimise energy consumption though more efficient process heat recovery, reducing operating costs. Plate technologies such as the Energy-saver, Duraflow, Easyflow and others ensure a PHE optimised for your requirements. Innovations such as the Duo-Safety system allow for early leak detection and preventative maintenance.

- Extensive range of plate areas; 0.01 m² – 4.6 m² / plate
- Most ranges span -35 °C to 180 °C, with further temperatures available
- Pressure ratings of 0-16 bar standard, reaching 35 bar on some.
- Gaskets designed for very quick, easy installation.
- Hygienic and Industrial Frames available
- Welded PHE for very high temperatures and pressures





Process Equipment

Tubular Heat Exchangers

Excellent for Food & Beverage applications, with their high resistance to fouling. Tubular Heat Exchangers are perfect for liquids sensitive to texture changes, higher viscosities & containing solids. THEs can be configured with multiple inner tubes, or with concentric inner shells. Welded THEs are designed for steam duties – no gasket seals to break down.

- Modular design allows for units in series/parallel
- Can be installed vertically or horizontally
- 3A and FDA approved
- Handling temperatures to 285°C & pressures of 60 bar



- Designed for temperatures from -10 °C to 150 °C
- Pressures up to 25 bar if required
- Upto 0.8 m² heat exchange surface per cylinder
- Service media include Steam, Glycol, Brine Hot or Cold water
- Modular units are easy to maintain with low downtime

Scraped Surface Heat Exchangers

APV's VT+ /HT+ units are specifically designed for hygienic processing of medium to high viscosity products as well as liquids containing particles or solids. They can be installed horizontally or vertically to minimise the footprint. Floating scrapers are installed in a staggered configuration with three optional rotor diameters. The units are highly efficient due to a large product area/volume ratio. Different material options, build variations and customisation options allow for optimised product handling, heat transfer and service life across a large range of applications.



SPX Flow Cavitator – The Next Generation in Mixing and Heating Technology

This patented technology offers breakthrough benefits for both the heating and mixing applications. The heart of this technology is the rotor with specifically machined radial holes, spinning in a liquid chamber. The spinning action generates internal liquid frictions (disk friction) and the holes create hydrodynamic cavitation.

The disk friction heats the liquid, away from the metal surfaces. This ensures heating without scale build-up and fouling on the surfaces.

The hydrodynamic cavitation creates high shear, resulting in an efficient homogenisation effect at the microscopic level. This improves product quality and functional performance. It mixes liquids with liquids, gasses or solids.

The potential applications of the unique APV Cavitator technology are numerous.



Flow rate up to 20m³/hr.



- Improved process efficiencies (time, operating costs, and/or capital costs)
- Enhanced product quality, yield and/or raw material savings
- Extended process run times related to scale-free heating
- Elimination or reduction of process downtime from maintenance requirements
- Smaller footprint than traditional technology
- Designed for easy disassembly and fully capable of CIP.
- Makes high quality emulsions at the desired particle size



Process Equipment

In-line mixers

The DAR inline mixer is a multi-stage rotor/stator type mixer. It provides continuous mixing of different liquid combinations, high viscosity products and inline emulsification. Ideal for butter or similar products requiring a homogenous, liquid free, blended end product.

- Alternating stator rings and rotating wheels create a tangential shear.
- Two sizes – 3" and 4" rotors
- Flow rates up to 6000 kg/h
- Close coupled IEC design
- Sanitary design, made from 316L and FDA approved gaskets



Static mixers

Characterised by low energy consumption, the TPX static mixers are used for continuous mixing of different combinations of liquids, gasses and particles. It also ensures an equal mixing of different temperatures. The four helical mixing elements separate, spread, rotate and whirl fluids so that they are properly mixed.

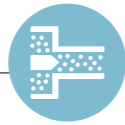
- Flow rates up to 110 m³/h
- Lines sizes 1.5" – 4"
- Connections available in ISO, Clamp, DIN type
- Sanitary design, made from 316L and FDA approved gaskets

Homogenisers

Rannie. Gaulin. Brands synonymous with Homogenisation for over 100 years. Valve technology options & experience Emulsion, disruption, dispersion. Reliable, low maintenance, precision liquid ends. Engineered power ends for minimal noise and vibration whilst maximising efficiency.

- Pressures - Rannie 1 500 bar, Gaulin 600 bar
- Flow rates – Rannie 45 m³/h, Gaulin 50 m³/h
- Homogenisation valves and type – SEO, XFD, LW Universal, patented Micro Gap
- Actuation – manual or hydraulic (optional Automated HMG Valves)





Process Equipment

Laboratory homogenisers

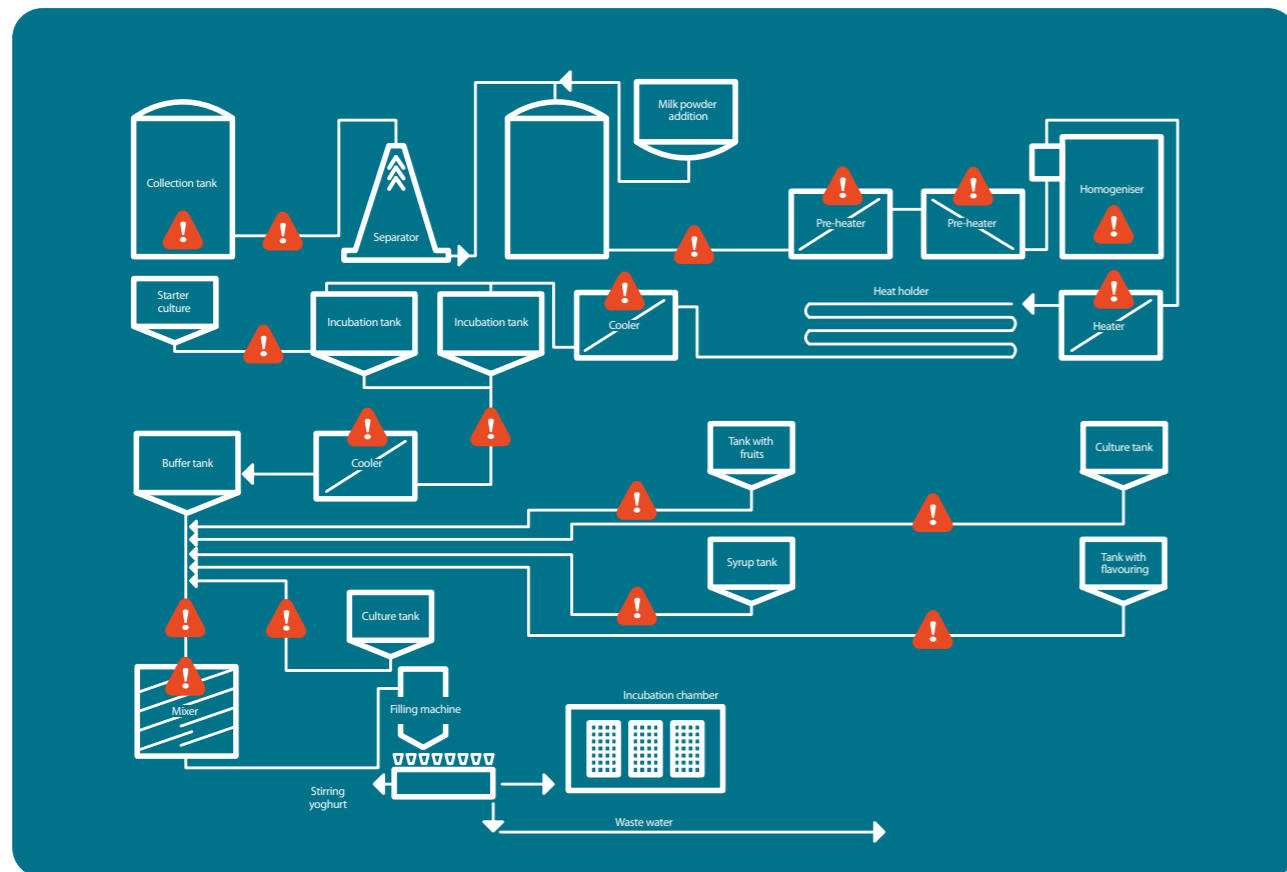
Designed for small scale testing or pilot plant use, these units are manually fed through a funnel. The homogenising pressure can be manually adjusted and there is a digital pressure display. There is the option of a 2nd stage homogenising valve.

- Two sizes – 1 000 bar & 2 000 bar
- Flow rates of 22 l/h and 11 l/h respectively
- Manually varied homogenisation pressure
- Both models driven by a 3 kW motor



fluidity.nonstop in yoghurt production

A yoghurt production line best illustrates the critical control points where products are transferred, dosed and processed by our pumps, heat exchangers, mixers, valves and other process equipment. To get the very best from your process, all these individual parts should work in harmony. In the chart that follows, those critical fluid handling points are marked with a red symbol. You may only need to consider performance, dimensions and material specifications of the pump; alternatively you might also need to evaluate the pumping technology, safety issues or compatibility with upstream and downstream systems as well as overall process control matters.



Metering Pumps

Bran+Luebbe

Worldwide leader in metering, analyzing and processing liquids.

Bran+Luebbe's strong position in international markets is based on the high precision and reliability of their products.

Typical applications in Oil and Gas, Chemical, Food and Beverage, Personal Care, Pharmaceutical, Pulp and Paper, Water Treatment.

Bran+Luebbe offers an unrivalled range of metering pumps for practically every situation in which liquids have to be measured and mixed together.



Turn-key metering and blending systems, the complete solution for higher productivity and product quality.

Bran+Luebbe process pumps feature the safety of seal less diaphragm technology and the reliability of robust, energy efficient modular crankcases.

ProCam

Flow rate: up to 3 000 l/h

Diaphragm Pump Pressure: up to 20 bar

Piston Pump Pressure: up to 80 bar

Up to 6 pump heads driven by one motor



NOVADOS Membrane pump

Metering Pump range up to 7 heads with one motor

Flow rate: up to 22 600 l/h

Pressure: up to 1000 bar



NOVAPLEX Integral pump

Process Pumps for high pressure, high flow applications

Flow rate: up to 150 800 l/h

Pressure: up to 1 000 bar





Hose pumps

Relax peristaltic hose pumps

The widest model range in the market.

Hose pumps, also called peristaltic pumps, are excellent for moving a wide variety of fluids efficiently and with great dosing accuracy. They work just as happily with viscous and abrasive media as they do with shear-sensitive fluids.

The operating principle

The hose, which can be made from any of a variety of materials, is housed in the pump body. The pump rotor exerts pressure as it rotates on a set of rollers or shoes which, in turn, compress the hose. This forms a vacuum behind the roller or shoe drawing fluid into the



realAx | hose pumps

hose while the next roller or shoe gently pushes the fluid forward through the hose. Pump wear is concentrated on the hose component which is quick and inexpensive to replace in situ.

Flow rate: from 0 to 72 m³/h
Suction lift: up to 9 m
Pressure: up to 15 bar



Rollers

Shoes or rollers?

Rollers mounted on bearings compress the surface of the hose during rotation. This design generates less friction and mechanical stress on the hose and it can support pressures of up to 8 bar.

Fixed shoes move across the surface of the hose during compression. Typically this technology is preferred for higher operating pressures (up to 15 bar).



Shoes



PERISTALTIC DOSING PUMP
SERIES APY



INDUSTRIAL HOSE PUMP
SERIES ISI



INDUSTRIAL HOSE PUMP
SERIES IP



INDUSTRIAL HOSE PUMP
SERIES RP HIGH PRESSURE



Gear Pumps

Gear Metering pumps

Eclipse from Pulsafeeder

Pulsafeeder's Eclipse Series is a structurally rugged gear metering pump for medium to highly corrosive liquids. Magnetically driven, this seal-less pump gives a smooth, pulse free flow. Available in corrosion-resistant materials (plastic or metal) for chemical processing applications.



Flow rate: up to 150 LPH
Pressure: up to 10 bar
Dry Run capabilities



EnviroGear from PSG

By mounting the magnet directly to the motor, the E Series requires only a single fluid chamber, unlike traditional magnetically coupled PD pumps. The rotor & idler gears are supported in three places by the eccentric spindle, eliminating many effects of a cantilevered load.

Flow rate: up to 45 m³/h
Pressure: up to 13.8 bar
Easily handles high viscosity fluids

TopGear Pumps from Johnson Pump

The sturdy design of the TopGear series gives customers in industrial and hygienic high reliability & prolonged life. With an optimised teeth profile, either thin or high viscosity liquids can be handled. Small clearances mean reduced slip & high volumetric efficiency. Multiple shaft seal types available.



Flow rate: up to 250 m³/h
Pressure: up to 30 bar
Reduced NPSH and improved priming



Gear Pumps from Pompe Cucchi

Pompe Cucchi's five ranges of gear pump bring reliability & accuracy (<0.5%) to industrial & hygienic duties. Materials include a variety of metals & plastics. Shafts & gears thermo-chemically treated for surface hardness. Designed for simple inspection & maintenance.

Flow rate: up to 80 m³/h
Pressure: up to 20 bar
Multiple seal types and build variations



Specialist Pumps

Specialised Pumps - AxFlow provide a wide range of pumps products from world leading manufacturers. Each pump is carefully selected to give the best solution - first time.

PIAB



Vacuum conveyors and equipment.

Vacuum is used with great advantage in order to convey dry powder products through dedicated pipe systems. PIAB's vacuum conveying systems are built of strong components of high quality. Our objective is to offer solutions that help our customers raise their productivity.

Production of food, pharmaceuticals and chemical products demands the highest possible degree of safety as to hygiene and operation. PIAB's C series of vacuum conveyors has been developed as an answer to the severe requirements of operational safety and hygiene in the food, pharmaceutical and chemical industries.

Transfer rates of up to 4 000 kg/h with distances of up to 50 m achievable.

- Compressed Air Drives
- Reliable
- High efficiency
- Atex models available
- Small size and weight
- Low noise
- 5 year Warranty
- No heat emission
- Ease of maintenance



Applications: Materials handling, Packaging, Lifting, Vacuum forming, printing.



Flux

Barrel, container, vertical immersion pumps.

Manually portable pumps for IBC, drum & barrel emptying applications. Modular & adaptable with various tube lengths, materials & drive types. Available as an axial flow impeller design for smooth flows on thin liquids or in a positive displacement type for thicker

liquids. Options include flow meters or batching systems, hoses and more.



- Flow rate: up to 14.4 m³/h on centrifugal models
- Pressure: up to 8 bar on PD models
- Low shearing for sensitive liquids
- Self-priming and can empty containers.



AxFlow Systems

Small, Medium, Large It's not about size, it's about the perspective!

We like to bring our engineering expertise and services to the table. Our systems range from pump assemblies, compact, skid-based systems that improve dosing performance within larger production processes, through comprehensive and mobile trailer-based mixing and delivery systems.

'System thinking' from AxFlow brings benefits whether you're planning a newbuild or evaluating your existing processes. With our expertise in fluid handling, we can readily identify critical points in your processes where

re-designing or streamlining could make a significant contribution before you commit to a final design. We're one point of contact, one source of documentation, design, installation, engineering and service team.

Our systems have been installed and are in operation across virtually all areas of industry.



Mobile dosing systems - Example: dosing fruit: Our mobile, plug-n-play units for dosing various ingredients such as fruits in yoghurts and ice creams are made entirely from food-grade 316 stainless steel. They are designed for easy manipulation within the production process.





You get more than just pump repair

Its not just about selling pumps, at AxFlow we are committed to providing ongoing support to make sure our customers always think of AxFlow as their premier business partner for the supply of pumping equipment.



Technical Advice

Whether it's a 'pump-in-a-box' or the design and manufacture of a complex custom built system, AxFlow specialist engineers provide a complete product and service package. Our team of experienced engineers offer the very best technical advice and support.



Working Together

We have experienced Engineers located throughout Ireland ready to meet you and discuss your pumping needs. Be it troubleshooting or application expertise we are happy to help. If you are in doubt regarding a pump application we are often able to offer a trial pump to prove the solution.



Training

Most companies would agree that product and maintenance training can bring many benefits, including improving production. Recognising this need, AxFlow has created a range of in-house and on-site training courses with flexibility to suit individual companies' requirements.



+ products +



= *fluidity*.nonstop

fluidity.nonstop[®] is about keeping your processes running. And it's our promise and our commitment to a level of service and a quality of product, performance and expertise that has never been bettered.

By its nature, *fluidity.nonstop* is never static, that promise is ever-evolving and improving. As needs and demands change, we work to meet those new challenges and try to surpass them. We are Europe's leading source of pumps and pump expertise for the process industry and we intend to maintain that position by working fluidly and ceaselessly to be the best.

For more information, please visit www.axflow.ie

AxFlow Limited

Unit 3, 10B Stadium Business Park | Ballycoolin Road | Dublin 11 | D11 WE88

Tel: 003531 8829864 | Fax: 003531 8853825

Muine Bheag Business Park | Royal Oak Rd | Moneybeg | Muine Bheag, Co. Carlow
R21 WF43

Tel: 00353 59 9722827 | Fax: 00353 599722829

E mail: info@axflow.ie | Website: www.axflow.ie

