



We are Aliaxis

**Aliaxis is a global leader
in advanced plastic piping systems**





We are Aliaxis.

Aliaxis is a global leader in advanced plastic piping systems for building, infrastructure, industrial and agriculture applications.

The company provides communities around the world with sustainable innovative solutions for water and energy, leading the industry in a way that anticipates the rapidly evolving needs of its customers and of society.

With a global workforce of about 16,000 employees, Aliaxis offers specific solutions that meet our customers' most demanding needs across the globe.

Aliaxis is active through leading local brands and operating in over 45 countries, combining local solutions with global innovation and operational excellence.

The company is privately owned, with its global headquarters in Brussels, Belgium.



We are Aliaxis.

GLOBAL FOOTPRINT

Our Group is active through more than 100 manufacturing and commercial companies, operating in over 45 countries.

We have an established portfolio of leading brands that are valued by our customers and end-users alike, no matter where in the world they're based.

EXPERIENCE

The piping systems in chemical production are subjected to extreme conditions.

Aggressive substances need to be transported and processed.

For more than 60 years, Aliaxis – thanks to its strong local businesses – has been operating in the industrial sector, offering our customers a complete portfolio of products, supported by technical competence. Plastic piping systems from Aliaxis are synonymous for a safe and efficient installation.

IN-HOUSE R&D AND ENGINEERING

Our R&D and Engineering departments are focused on turning cutting-edge technologies into products. They are always available to develop bespoke solutions to meet the most challenging applications and requirements.

SOLUTIONS PROVIDER

Aliaxis offers a comprehensive range of solutions to meet our customers' needs. Our solutions include: pipes & fittings in single and double wall configuration in several piping standards, manual & automatic valves, welding units, metal joints, electrical ducts & conduits and measurement devices. The objective of Aliaxis is to offer a complete system from one source, taking care of any specific requirements and complementing our offering with complimentary products.





**we
make
life
flow**

STANDARDS AND APPROVALS

Aliaxis high performance plastic pipework systems are lightweight and easy to install whilst having excellent corrosion and resistance properties.

Our products are manufactured to the highest level and meet the requirements of many international standards and approvals.

COMMITTED TO THE ENVIRONMENT

Lifecycle analyses have shown that plastic pipe systems are not only more environmentally-friendly but also healthier alternatives to pipes made from other materials.

But we don't rest on our laurels. Environmental protection is taken into account for each of our business processes.

Our environmental program defines specific KPIs for monitoring CO₂ emissions, non-recycled waste and water consumption. It also includes initiatives aimed at sharing best practices and training, as well as raising environmental awareness among our employees.

GLOBAL SOLUTIONS FROM A GLOBAL COMPANY

Aliaxis, through our local manufacturing sites around the world and our wide product portfolio, is able to support Engineering and Design departments in all the different project stages.

Starting from the front end of a project, Aliaxis is supporting engineering and design to ensure a sustainable and efficient solution.

Aliaxis has more than 60 years of experience in Industrial thermoplastic piping systems and this know-how is at complete disposal of the various project partners: from the Engineering companies, to Consultants and End Users.

Our competence in all applications and proven track record throughout the entire product range ensure the highest management during project planning and execution.

Aliaxis offers a global portfolio in terms of corrosion resistant solutions, meeting piping standards and product range with an international presence.









Industry

WATER TREATMENT

PVC-U, Fittings, Valves, Pipe
TemperFIP100 Corzan PVC-C Pipes, Fittings, Valves
FLS instrumentation (M9.07 + C300 + F3.00)
Actuated valves
Fitmaster
Filtmaster for seawater
GRIP
STRAUB-FLEX / STRAUB-OPEN-FLEX

CHEMICAL INDUSTRY

PP-H Pipes, Fittings, Valves
PVDF Pipes, Fittings, Valves
PLX pipework systems
FLS instrumentation (M9.06+ PH660CD)
FLS instrumentation (M9.10+ HF6 + F3.00)

MARINE

PVC-U Actuated and manual valves
HTA[®] PVC-C
SuperFlo ABS
Fluxo
METAL-GRIP-FIRE-FENCE
GRIP
STRAUB-FLEX / STRAUB-OPEN-FLEX
KRYOCLIM[®]
GIRAIR[®]
Wastes & Traps
MAGNUM 3G

MINING

PP-H Pipes, Fittings, Valves
PVC-C Pipes, Fittings, Valves
KENADRAIN[®]
PLAST PRO

SWIMMING POOL, SPA & LSS

VEE and FE Valves
PVC-U Valves (420 + 930+ V800)
F6.60
Floor drains
Linum
Invisible water channel
Modular Connecto[®] channels
GRIP

COMPRESSED AIR

GIRAIR[®]
Air-Line Extra

INDUSTRY

WATER TREATMENT

PVC-U FITTINGS, VALVES, PIPE

Description

PVC-U (rigid polyvinyl chloride – unplasticized) is obtained through the polymerization of a vinyl chloride monomer. The presence of chlorine in the PVC-U molecule results in a high performance resin, in terms of thermal stability, chemical and mechanical resistance. PVC-U represents one of the more economic solutions in the field of thermoplastic materials for resolving problems in the transport of corrosive chemical fluids, and in the distribution and treatment of water in general.



Main Features

High chemical resistance to most acids and alkalis, paraffin/aliphatic hydrocarbons and saline solutions. PVCU is fully compatible with the transport of foodstuffs, potable water as provided by national and international standard.

Technical Features

- PVC-U resins have good thermal stability in the temperature range between 20°C and 50°C and are typically used in industrial and water supply applications. Low linear thermal expansion coefficient.
- Range: 16 - 315.
- Working temperature: 0 - 60°C.

Certifying Body

WRAS, KIWA, ACS, BSI, IIP UNI, ABS, Bureau Veritas, CSTB.

INDUSTRY

WATER TREATMENT

TemperFIP100 Corzan PVC-C Pipes, Fittings, Valves

Description

PVC-C (Chlorinated Polyvinylchloride) is a strong material with high performance of thermal stability, chemical and mechanical resistance up to about 100°C, it's obtained by the post-chlorination of the PVC-U suspension process (substitution of Hydrogen atoms with Chlorine atoms of alternates monomers in the molecular chain). Specifically designed for industrial applications, PVC-C is suitable for lines transporting hot corrosive fluids and chemical process, it is also fully compatible for use in transporting water of treatment plants, as well as for conveying demineralized water, spa and hot cold water distribution.



Main Features

PVC-C material is one of the best cost-effective solutions between the thermoplastic and metal materials, in solving the possible problems during the conveyance of hot water and corrosive chemical fluids in the process and service lines.

Technical Features

- PVC-C has the lowest thermal expansion coefficient of thermoplastic materials, with benefits of reduced need for supporting and dilatation joints, this resulting in considerable advantages in terms of designing of the plant.
- Range: 16 - 225.
- Working temperature: 0 - 100°C.

Certifying Body

ABS, ACS, DIBT, DNV, NSF, WRAS, TA-Luft, Bureau Veritas.

M9.07 + C300 + F3.00

Description

System for conductivity and flow measurement dedicated to high level of resistivity (pure water, demi water).

The new FLS M9.07 is a dual monitor and transmitter which combines conductivity and flow measurements.

C300 conductivity sensors with stainless steel electrodes has been designed for ultrapure water monitoring (certified cell constant 0,01) and for waste water application (cell constant 10). C300 sensors are completely made in SS ensuring suitability for a wide range of applications.

The simple and reliable paddlewheel flow sensor type F3.00 is designed for use with every kind of solid-free liquids.

The sensor can measure flow from 0.15 m/s (0.5 ft/s) producing a frequency output signal highly repeatable.



Main Features

M9.07

- Wide graphic display.
- Multicolor backlight.
- Help on Board.
- Guided calibration procedure.
- Simultaneous visualization of two parameters.

F3.00

- Easy insertion flow system.
- User friendly BLE technology on paddlewheel.

C300

- Stainless steel measuring surfaces.
- Considerable ratio performance/price.
- Temperature sensor included.
- Sensor in 316SS completely.
- C300.001TCCK with certified cell constant.

Main applications

- Water treatment and regeneration.
- Industrial waste water treatment and recovery.
- Softener process.
- Filtration systems.
- Desalination process.
- Demineralized water production.
- Reverse osmosis process.
- Cooling water monitoring.
- Processing and manufacturing industry (from Food&Beverage to Microelectronics to Surface treatment...).

Certifying Body

CE - RoHS Compliant - EAC.

INDUSTRY

WATER TREATMENT

ACTUATED VALVES

Description

FIP actuated valves line consists of a complete range of solenoid, ball, butterfly and diaphragm valves made of various chlorinated, polyolefinic and fluorinated thermoplastic materials to meet all application needs. The actuated valves are available with different types of actuation: electrically operated (solenoids or motorized at 1/4 turn) and pneumatic (at 1/4 turn or linear).



Main Features	Pneumatically and electrically actuated ball, butterfly, diaphragm, regulating and 3-way solenoid valves in all the main thermoplastic materials.
Technical Features	<ul style="list-style-type: none"> • Suitable for remote automated operation of the main valves in FIP range. The actuation can both be electric or pneumatic, according to the needs and availability of the client. The range is highly customizable and engineered to achieve the maximum reliability. • Range: DN 10-400. • Working pressure: Max PN16.
Certifying Body	ACS (PVCU and PVCC), DIBt (PPH and PVDF), EAC (PVCU), NSF (PVCU, PVCC and PPH), TA-Luft (PVCU), UKR SEPRO, WRAS (PVCU and PVCC), DVGW KTW W270 (PVC-U), NIZP (PVC-U and PP-H).

INDUSTRY

WATER TREATMENT

FITMASTER

Description

FITMASTER couplings for PVC and HDPE metric pipes provided of grooves to the end parts



Main Features	Guarantees the absorption of mechanical stress, the control of expansion and contraction of the system, the load capacity in pipe ends, the migration of vibrations and an easy alignment. Intelligent solution (fast and easy installation system); Total security (long lasting, resistant and flexible system); advanced technology (complete range manufactured with technical thermoplastics).
Technical Features	<ul style="list-style-type: none"> • Manufactured in polyamide reinforced with fiberglass for a high working pressure performance up to PN16 or PN10, depending on the model. The hydraulic sealing is done at low a high pressure thanks to the internal gasket made in flexible and high resistant EPDM 70. Guarantees initial sealing at low pressure. When the system is pressurized, the Fitmaster special gasket expands proportionately to pressure increase providing the system with unique reliability and tightness. • Range: 2", 2 1/2", 3", 4", 6" and 8". • Working temperature: from 0° C to 40° C.
Certifying Body	Elastomer with Drinking water approval: DWGV, ÖNORM, ACS, AFNOR, WRc.

FITMASTER FOR INDUSTRIAL APPLICATIONS

Description

Filtmaster automatic filtration stations can be used in a wide range of applications as: cooling tower protection, nozzle protection, pre-filtration to protect UF/RO membranes, filtration of wastewater for reuse and filtration for irrigation.



Main Features

The most efficient, versatile & profitable filtering tool.

- **Efficiency**
The application of the most advanced technology results in a higher level of filtering performance.
- **Versatility**
The wide modular capacity of its components allows its perfect use for any kind of water in both agricultural and industrial fields.
- **Profitability**
The design of its components optimizes the cleaning process with lower energetic costs.

Technical Features

Requirements

- Dimensioning: According to the net flow and water quality.
- Minimum backwash pressure: 2,5 bar.
- Minimum filtration pressure: 1 bar.
- Minimum backwash flow: 8 m³/h.

Clamp

- AISI 304 stainless steel clamp.

Connections

- 2", 3" connections.
- Threaded BSP, threaded NPT and grooved FITMASTER connections.

Discs

Polypropylene discs designed for keeping a regular filtration path along the double face grooved discs. Available in 20, 25, 50, 100, 130 and 200 microns.

AISI 304 stainless steel screen or plastic PP screen in polypropylene frame.

Reinforced outlet

- 1" female metallic reinforced outlet to be used either with a drainage valve or with an air valve.

Body.

- Injected in reinforced polyamide.
- Nominal pressure: 10 bar.

Manometric intake connections

- Three 1/4" manometric take-off points.

GRIP

Description

STRAUB-GRIP pipe couplings are for pipe connections which require an Axial restraint. This system is suitable for Metallic and Rigid Plastic pipes such as PVC. The compact design allows pipe routing in very confined spaces. Unexpected secondary stresses are accommodated by the couplings due to the flexible design. This enables simple and quick installation that results in noticeable cost savings.



Main Features

- Progressive Sealing and Gripping system for all metallic and rigid plastic pipe materials.
- Compensates for pipe misalignment.
- Extended service life due to low tightening torques.
- Resistant to water hammer.
- Works with Vacuum.
- One tightening torque for all pipe materials.
- 2 Screw = 2 Minutes.

Technical Features

- Outside diameter: 21.3 up to 711.20 mm.
- Temperature: -20 °C up to +180 °C.
- Sealing sleeve: EPDM, NBR, FPM/FKM.

Certifying Body

NSF, DVGW, SVGW, WRAS.

STRAUB-FLEX / STRAUB-OPEN-FLEX

Description

STRAUB-FLEX and STRAUB-OPEN-FLEX pipe couplings enable pipe connections for practically all conceivable pipe diameters, for the same or different types of pipe materials, various media and temperatures as well as for a wide range of the operating pressure values. As STRAUB-FLEX pipe couplings cannot axially absorb any forces, the pipes must be secured axially using appropriate measures on-site such as tie rods, fixed and sliding points, concrete abutments etc. The sealing sleeve separates the coupling casing from the pipe surface so that sound, vibrations and oscillations are optimally damped. STRAUB-OPEN-FLEX pipe couplings have the same characteristics as STRAUB-FLEX couplings, but expand their possible uses.



Main Features

- Sizes Up to 3800mm are possible
- Allows pipe settlement and compensation without losing the seal on the pipe
- Rep Flex and Open Flex allow pipe repairs on all types of pipe materials to take place
- Progressive sealing system increases the service life.
- Re- useable
- Allows different diameters of pipe material up to 30mm to be connected

Technical Features

- Outside diameter: 48.3 up to 4064.0 mm.
- Temperature: -20 °C up to +180 °C.
- Sealing sleeve: EPDM, NBR, FPM/FKM.

Certifying Body

- ABS Certificate.
- Bureau Veritas Certificate.
- DNV GL.
- Rina Certificate.
- China Classification Society.

INDUSTRY

CHEMICAL INDUSTRY

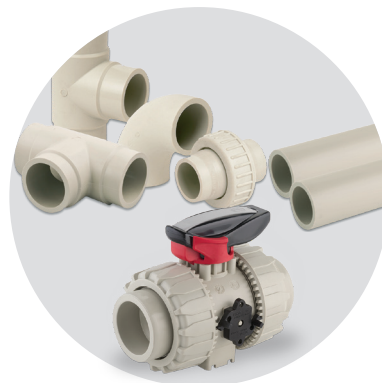
PP-H PIPES, FITTINGS, VALVES

Description

Complete system of pipes, fittings and valves for use in the realization of process and service lines for conveying pressurized industrial fluids.

For use in piping systems PP-H offers excellent performance at working temperatures and a high resistance to chemicals due to the physical and thermal characteristics of the resin.

In addition to ensuring excellent chemical resistance, especially against halogens and alkaline solutions, the use of PP-H resins with special additives also ensures high mechanical properties when conveying detergents and similar chemicals.



Main Features	Easy to install, not toxic, light material, grey polyolefin resin.
Technical Features	<ul style="list-style-type: none"> • Range: DN 10–400. • Working temperature: valves and butt welding fittings DN 10–400, socket welding fittings DN 10–100.
Certifying Body	EC 10/2011, DM 21/3/73, FDA, DM 174/2004, NSF61, KTW.

INDUSTRY

CHEMICAL INDUSTRY

PVDF PIPES, FITTINGS, VALVES

Description

Complete system of pipes, fittings and valves for use in the realization of process and service lines for conveying pressurized industrial fluids, where the high purity of pipelines is strictly requested

PVDF (polyvinylidene difluoride) is a fluorinated and semi-crystalline polymer containing 59% of its weight in fluorine. This material is obtained through the polymerization of vinylidene fluoride. It boasts exceptional mechanical, physical and chemical resistance, guaranteeing excellent thermal stability. Thanks to its high purity and exceptional performance, PVDF is the best alternative to metal materials, and is extensively used in industrial applications as chemical process industry, pharmaceutical, pulp and paper, electronic, etc.



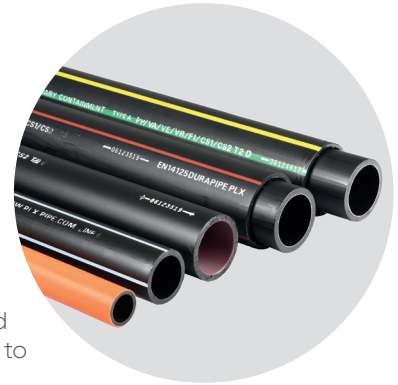
Main Features	<ul style="list-style-type: none"> • Very low flammability, not toxic, easy to install. • High chemical resistance to most acids and alkalis, paraffin/aliphatic hydrocarbons and saline solutions.
Technical Features	<ul style="list-style-type: none"> • Range: DN 10–400. • Working temperature: valves and butt welding fittings DN 10–400, socket welding fittings DN 10–100.
Certifying Body	EC 10/2011, DM 21/3/73, FDA, DM 174/2004. DVGW KTW W270, FDA, NSF, DIBt, EAC, TA_Luft, UKR SEPRO, WRAS.

PLX PIPEWORK SYSTEMS

Description

A complete range of specialist welded pipework systems for the safe transfer of fuels and their vapours. PLX is suitable for use with traditional fuels such as leaded and unleaded petroleum and diesel, as well as alternative fuels such as bio-diesel, E10, E85 and a range of other fuel oils. PLX provides a specialist solution for fuel transfer across a variety of applications including forecourts, back-up power generators, rail, marine and off-grid power.

A multi-layered polyethylene composite pipe system offering an internal permeation barrier, PLX is available in both single-wall and secondary-contained options, and is specifically designed to provide maximum permeation protection to the environment.



PLX

Main Features

- Single-wall and secondary-contained options.
- Excellent lifetime cost savings vs traditional materials.
- Leak detection capability (secondary containment).
- Maximised flow rates.
- Efficient electrofusion installation process.
- "Conductive" PLX+ option available.
- Solutions for AdBlue and forecourt cable protection.
- Wide range of dedicated tooling.

Technical Features

- Range: Sizes 32 mm to 315 mm.
- 30 year design life .

Certifying Body

PLX is fully compliant with the Energy Institute (Institute of Performance Systems) and conforms to EN14125 regulations.

M9.06 + pH660CD

Description

System for monitoring pH/ORP value with different type of installations: in-line, submersed, hot-tap.

The new FLS M9.06 is a powerful pH/ORP monitor and transmitter designed to satisfy a broad range of applications.

pH/ORP 600 is the rugged version of the traditional flat electrodes with an improved self-cleaning effect.



Main Features

M9.06

- Wide graphic display.
- Multicolor backlight.
- Help on Board.
- Guided calibration procedure.
- Electrode quality diagnosis.

pH660CD

- Autocleaning effect of Electrode.
- High protection from process contamination.
- Installation and maintenance are easy due to the quick disconnect BNC connectors.

Main applications

- Water & Wastewater treatment.
- Pre-chlorination & de-chlorination.
- Neutralization systems.
- Ozone treatment.
- Cooling towers.
- Boiler systems.
- Bleach production.
- Pulp & Paper.
- Textile Dye Process.

Certifying Body

CE - RoHS Compliant - EAC.

M9.10+ HF6 + F3.00

Description

System for monitoring level/pressure and flow.

The FLS M9.10 is a powerful Dual-parameter monitor and transmitter designed to manage analog and frequency signals (or two analog signals) from every types of device which provide a 4-20mA or a frequency output.

FLS HF6 is a new family of transmitters suitable for hydrostatic level/depth measurement and for pressure monitoring.

The simple and reliable paddlewheel flow sensor type F3.00 is designed for use with every kind of solid-free liquids.

The sensor can measure flow from 0.15 m/s (0.5 ft/s) producing a frequency output signal highly repeatable.



Main Features

M9.10

- Wide graphic display.
- Multicolor backlight.
- Help on Board.
- Guided calibration procedure.
- Simultaneous visualization of two parameters.

HF6

- Level measurement not affected by foam or vapors.
- Semi flush ceramic diaphragm for a long-lasting operating time.
- Flexible submersible installation (with or without cable protection).

F3.00

- Easy insertion flow system.
- User friendly BLE technology on paddlewheel.

Main applications

- Storage Tank management.
- Liquid inventory control.
- Over flow detection.
- Water/Wastewater monitoring.
- Chemicals processing.
- Tank farm management.
- Water recycling.

Certifying Body

CE - RoHS Compliant - EAC.

PVC-U ACTUATED AND MANUAL VALVES

Description

Wide range of valves manual and electrical/pneumatic actuation, provided of specific marine approval, always appreciated for performance in exercise and fire behavior.



Main Features	Diaphragm, ball, butterfly: a huge possibilities of technical solution to satisfy every request from marine market segment.
Technical Features	<ul style="list-style-type: none"> • Range: DN 10-400. • Working pressure and temperature: Max PN16, 0-60°C.
Certifying Body	ABS, ACS, Bureau Veritas, EAC, NSF, DNV-GL, TA-Luft, UKR SEPRO, WRAS, RMRS, NIZP.

HTA® PVC-C

Description

A supply of quality potable water is essential to both passengers and crew.

It also requires absolute reliability and all products require to be of the highest quality and durability.

HTA® PVC-C is one of the best cost-effective solutions, and the best-in-class fire behavior of HTA® PVC-C makes it one of the best thermoplastic material to be used in marine applications.

Advantages for yards:

- High resistance to chlorin disinfection.
- Reduce the risk of biofilm development (legionella) - Marine certified in according with last IMO Resolution MSC399/95 FTP code 2010 (HTA / HTA-E / HTA-F).

Applications:

- Hot and Cold Water.
- Black & Grey Water.
- Pool & Spa.
- Water Treatment.



Main Features

- PVC-C (Chlorinated Polyvinylchloride) is a strong material with high performance of thermal stability, chemical and mechanical resistance up to about 100°C.
- Limits scaling.
- Suitable for chemical and thermal treatment for both hot and cold water.
- No corrosion.
- Installation time under control.
- Safe integral welded joints.
- Dedicated bracketing.
- Recycling friendly.
- Durability/watertight.

Technical Features

- Best in Class Fire reaction B s1 d0
Lowest thermal expansion coefficient of thermoplastic materials
Reduced need for supporting and expansion joints with considerable advantages in terms of network design.
- Range:
 - HTA®
 - PN 25 (Ø16 to Ø63)
 - PN 16 (Ø32 to Ø160)
 - PN 10 (Ø200)
 - HTA®-F in PN16 (Ø16 to Ø160).
 - Working temperature: 0 - 100°C.
 - Certified at 70 °C/6 bar.

Certifying Body

- Certificate of Health Conformity (ACS): French drinking water certification.
- ATEC N° 14/13-1924 covers the whole system : pipes, fittings and welding polymer.
- Fire rating: Bs1d0 (Euroclasses).
- Veritas Marine, RMRS, RINA DNV-GL.
- EPD: Environmental Performance Declaration.
- Internationally certified WRAS/AENOR/IIP UNI/ ATG & BELGAQUA/ GOST.

SUPERFLO ABS

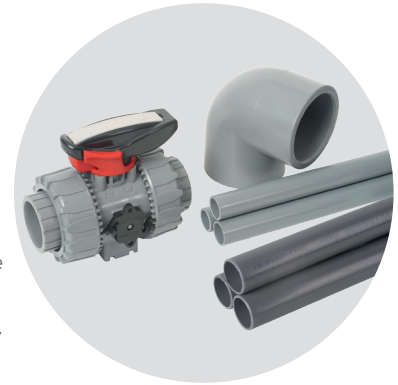
Description

The high performance cold and chilled water solution. SuperFlo ABS is a fully matched, solvent-welded system including pipe, fittings and valves for chilled and cold water services and other environmental control systems.

SuperFlo ABS has a smooth bore which greatly reduces the build-up of biofilms which can create potential for harmful bacteria such as legionella and pseudomonas, and is completely corrosion resistant meaning lower maintenance costs and optimum pump efficiencies.

The system operates within a wide range of temperatures and remains extremely ductile even as low as -40°C . SuperFlo ABS is ideal for chilled and boosted cold water, low temperature cooling, de-mineralised water and ballast water movement applications in building, industrial and marine applications.

The jointing method is fast and simple, and being extremely lightweight SuperFlo ABS is much easier to handle than traditional materials, making installation quicker, cheaper and safer.



Durapipe UK

Main Features

- Lightweight and easy to install.
- 50-year design life.
- Corrosion and impact resistant.
- Smooth bore allows optimum pump efficiencies.
- Low thermal conductivity helps to reduce temperature loss.
- Fully matched range of pipe, fittings and valves.

Technical Features

- Range: Sizes 3/8" to 8" (imperial); Sizes 16 mm to 315 mm (metric).
- Working pressure: Up to 15 bar (Class E) pressure rating on imperial pipes; Up to 10 bar pressure rating on metric pipes.
- Working temperature: Wide operating temperature -40°C to $+60^{\circ}\text{C}$.

Certifying Body

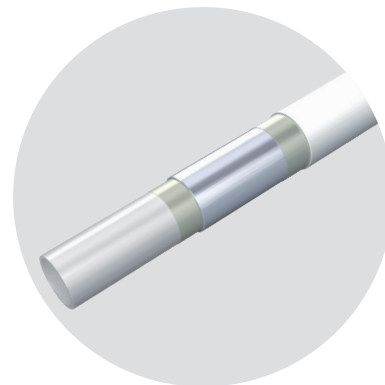
Globally recognised approvals including WRAS, DNV & Bureau Veritas.

FLUXO

Description

Multilayer 5 layers pipes and brass press-fittings to supply both cold and hot water.

It is commonly used in heating systems, plumbing installations and underfloor heating. Fluxo is made of cross-linked polyethylene type B.



Main Features

Pipes

- 5 Layer: PE-Xb-Glue- aluminum-Glue – PE-Xb.
- Flexible Easy to bend by hand.
- High quality welding: the aluminum layer is laser welded at 0,5 micron head to head.
- More resistance to pressure and temperature.
- 100% oxygen barrier.
- Continuous design temperature 70°C for 50 years.

Fittings

- High quality brass.
- Certified system.

Technical Features

- Thermal conductivity (W/mK): 0,4 W/mKa.
- Potability: < 6 (mg/kg).
- Thermal durability: no breaks on outer layer.
- Linear dilatation coefficient: 0,026 mm/mK.
- Internal roughness: 0,007 mm.

Insulation:

- Operating temperature: -45°C +100 °C.
- Density: 35 kg/m³.
- Thermal conductivity coefficient (at 40°C) : 0,039 W/(m°C).
- Fire classification BL S1 D0.
- Toxicity: N.100/CF/T/97 16/01/98.

DN range: 16-75

Working temperature: -45° + 100°C.

Certifying Body

EN-ISO 21003 KIWA, K 55985/03 KIWA/KOMO, MAC 312311CS RINA.



INDUSTRY MARINE

METAL-GRIP-FIRE-FENCE

Description

This is the original STRAUB fire protection system for applications where fire protection is required. The STRAUB-FIRE-FENCE types meet the highest global standardised requirements for fire and temperature tests. An intumescent plastic is firmly bonded to the outside of the casing. In the event of fire, this swells and protectively encloses the pipe coupling – and retains the complete functional capability in doing so.



Main Features	This Systems is the optimum solution for fire extinguishing equipment and for many different systems with increased fire protection requirements such as in civil engineering (tunnels), for shipyards for seagoing vessels with various requirements and other applications.
Technical Features	<ul style="list-style-type: none">• Outside diameter: 30.0 up to 457.2 mm.• Temperature: -20 °C up to +100 °C.• Sealing sleeve: EPDM, NBR, FDM/FKM.
Certifying Body	ISO 19921 – ISO 19922.



INDUSTRY MARINE

GRIP

Description

STRAUB-GRIP pipe couplings are for pipe connections which require an Axial restraint. This system is suitable for Metallic and Rigid Plastic pipes such as PVC . The compact design allows pipe routing in very confined spaces. Unexpected secondary stresses are accommodated by the couplings due to the flexible design. This enables simple and quick installation that results in noticeable cost savings.



Main Features	<ul style="list-style-type: none">• Progressive Sealing and Gripping system for all metallic and rigid plastic pipe materials.• Compensates for pipe misalignment.• Extended service life due to low tightening torques.• Resistant to water hammer.• Works with Vacuum.• One tightening torque for all pipe materials.• 2 Screw = 2 Minutes.
Technical Features	<ul style="list-style-type: none">• Outside diameter: 21.3 up to 711.20 mm.• Temperature: -20 °C up to +180 °C.• Sealing sleeve: EPDM, NBR, FPM/FKM.
Certifying Body	NSF, DVGW, SVGW, WRAS.

STRAUB-FLEX / STRAUB-OPEN-FLEX

Description

STRAUB-FLEX and STRAUB-OPEN-FLEX pipe couplings enable pipe connections for practically all conceivable pipe diameters, for the same or different types of pipe materials, various media and temperatures as well as for a wide range of the operating pressure values. As STRAUB-FLEX pipe couplings cannot axially absorb any forces, the pipes must be secured axially using appropriate measures on-site such as tie rods, fixed and sliding points, concrete abutments etc. The sealing sleeve separates the coupling casing from the pipe surface so that sound, vibrations and oscillations are optimally damped. STRAUB-OPEN-FLEX pipe couplings have the same characteristics as STRAUB-FLEX couplings, but expand their possible uses.



Main Features	<ul style="list-style-type: none"> • Length compensation. • Very large diameters possible. • Fold-out (STRAUB-OPEN-FLEX). • Can be used for connecting pipes without removal of existing pipes.
Technical Features	<ul style="list-style-type: none"> • Outside diameter: 48.3 up to 4064.0 mm. • Temperature: -20 °C up to +180 °C. • Sealing sleeve: EPDM, NBR, FPM/FKM.
Certifying Body	<ul style="list-style-type: none"> • ABS Certificate. • Bureau Veritas Certificate. • DNV GL. • Rina Certificate. • China Classification Society.

INDUSTRY

MARINE

KRYOCLIM®

Description

KRYOCLIM® pipework system is designed for all secondary (indirect) refrigeration and comfort cooling installations between -30°C and +40°C (chilled water services).

On fishing boats it is particularly adapted to transport ice slurry.



Main Features

Respect of legal obligations where applicable (e.g. in France: CH25, CH35)

- High impact resistance (ductile vinyl material) even at low temperatures.
- Corrosion free.
- Low thermal losses.
- Safe integral solvent welded joints.
- Ease of installation on both new build and renovation projects even occupied.
- Reduced maintenance.

Technical Features

- Best in Class Fire reaction B s1 d0.
- Lowest thermal expansion coefficient of thermoplastic materials
- Reduced need for supporting and expansion joints with considerable advantages in terms of network design.
- Range: PN10 from Ø20 to Ø160, PN6 Ø200.
- Working temperature: -30 °C up to +40 °C.

Certifying Body

French ATEC certification N°14/09-1443
Marine certifications: RMRS
Fire rating: Bs1d0 (Euroclasses)

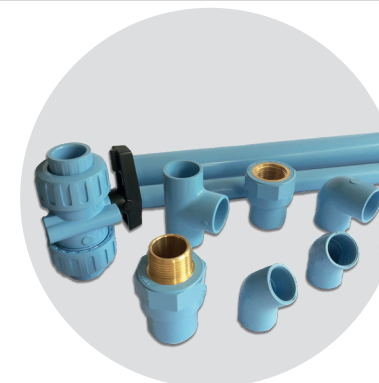
INDUSTRY

MARINE

GIRAIR®

Description

GIRAIR® is a complete system, especially developed for compressed air, neutral gas distribution and centralized vacuum networks.



Main Features

- Corrosion free.
- Impact resistance (ductile vinyl material).
- UV protective layer for durable impact resistance .
- A high compatibility level with most compressor oils.
- Energy saving.

Technical Features

- Best in Class Fire Reaction: B s1 d0.
- Blue colour as per NF A 571.
- Range: PN12.5 from Ø16 to Ø110.
- Working temperature: 12.5 bar ≥ 0°C to +25°C / 10 bar ≥ +25°C to +40°C.

Certifying Body

Fire rating: Bs1d0 (Euroclasses).
Marine certifications: RMRS.

WASTES AND TRAPS

Description

Passengers are increasingly demanding about comfort during their cruise.

Our portfolio of solutions with our Turboflow-XS® outlet drain including MAGNETECH® magnetic valve, Easyphon washbasin trap will give them the best comfort they will require during their cruise especially in their cabins.



Main Features	<ul style="list-style-type: none"> • Wastes and traps with built-in -seals (Easyphon® & Easybain®, Turboflow®) making installation faster and easier. • Low maintenance - no spare parts needed for seals. • Turboflow XS, using the unique and patented Magnetech® technology with a magnetic valve and counterbalance valve, combines compactness, performance and extreme durability.
Technical Features	<ul style="list-style-type: none"> • Material: PP or ABS. • High flow rate to reduce clogging and overflow risks (e.g Turboflow models). • Anti-odor systems. • Easyphon bottle traps for washbasins and sinks. • Easybain wastes for bathtubs. • Turboflow range for shower trays. • Shallow Turboflow XS with Magnetech technology.
Certifying Body	Compliant with EN274.

MAGNUM 3G

Description

Compression fitting range, provided of "slide & tighten" system to help the installer connecting PE portions pipe, very appreciated for the high resistant to the pull-out, typical requirement in mining application.



MAGNUM 3G

Main Features	Easy to connect, provided of visual stop indicator, wide range of shape of fittings to solve any installer problem.
Technical Features	<ul style="list-style-type: none"> • High quality materials: nut and clinching ring in POM, body in PP-B, gasket in EPDM. • Range: from d.16 mm up to d.110 mm.
Certifying Body	IIP, ACS, WRAS, AFNOR, AENOR, DVGW.



INDUSTRY

MINING

PP-H PIPES, FITTINGS, VALVES

Description

Full range of manual and actuated ball, butterfly and diaphragm valves; sediment strainers, regulating, 3-way, non-return and other ancillary valves are also available.

The mining segment requests often to pipeline to be resistant to chemical cleaner, the use of PP-H is one of the best solution.



Main Features	Easy to install, not toxic, light material, grey polyolefin resin.
Technical Features	<ul style="list-style-type: none">• Range: DN 10-400• Working pressure: valves and butt welding fittings DN 10-400, socket welding fittings DN 10-100
Certifying Body	DIBt, EAC, RINA, TA-Luft, UKR SEPRO



INDUSTRY

MINING

PVC-C FITTINGS, VALVES

Description

Full range of manual and actuated ball, butterfly and diaphragm valves; sediment strainers, regulating, 3-way, non-return and other ancillary valves are also available.

The cleaner based on sulfuric acid very popular in mining it is corrosive for most pipeline: PVC-C system is the right and the correct solution being extremely resistant to this media.



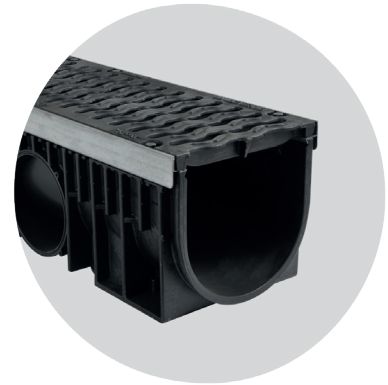
Main Features	Easy to install thanks to solvent cementing method, light to manage, high performance at high temperature.
Technical Features	<ul style="list-style-type: none">• Range: DN 10-300.• Working temperature: Max PN16, 0-60°C.
Certifying Body	ABS, ACS, Bureau Veritas, DNV-GL, EAC, Lloyd Register, KR, NSF, TA-Luft, UKR SEPRO, WRAS, RMRS.

KENADRAIN

Description

KENADRAIN® is a professional range of hydraulic channels for heavy duty applications and intensive traffic (industry, car parks, logistics centers), meeting the highest environmental demands in rainwater management.

Those pre-fabricated systems, thanks to their male-female interlocking assembly and their complete accessories (vertical, side outlets and sump units) enable an easy installation and integrates perfectly to the drainage network.



Nicoll

Main Features

- High hydraulic performance thanks to the smooth surface and range of accessories available in large diameters.
- Light weight.
- High resistance to horizontal and vertical loads thanks to the material and its design optimized by computer modelling.
- Functional and ease of installation : easy opening of the outlets, tight connections to the PVC fittings to the pipe networks.
- Aesthetic: can be installed in paved, concreted and asphalted surrounding surfaces.

Technical Features

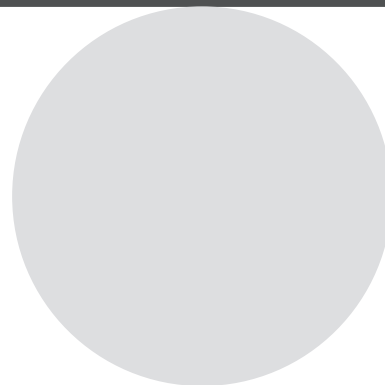
- Kenadrain®: channel body made of thick polypropylene with galvanised steel edge rails for a better mechanical resistance.
- Excellent resistance to frost, de-icing salt and to most chemical agents.
- Patented system to fix the gratings for Kenadrain system for width (150, 200 and 300 mm).
- Range: available in 4 internal widths (100, 150 , 200 & 300 mm) with galvanized or stainless steel edge rails.
- Park drain: 80 mm shallow channel for multi-storey car parks.
- Cascade system for width 100 mm with 4 different depths to optimize hydraulics of the installation.
- Slotted solutions for width 100 and 150 mm in different stainless steel grades (430, 304 and 316).
- Load classes: from A15 to E600.

Certifying Body

In compliance with EN1433 standard .
Quality Insurance certification ISO 9001 and environmental ISO 14001.
Gratings compliant with People with Reduced Mobility accessibility requirements.

PLAST PRO

Description



Main Features

Technical Features

Certifying Body

INDUSTRY

SWIMMING POOLS, SPA & LSS

VEE AND FE VALVES

Description

Modern and updated swimming pool deserves a right designer: technique and elegance for a higher level of performance.



Main Features	100% corrosion free double union ball valve with threaded ball support. The Easyfit feature of the VEE valves allows a safe installation, regulation and maintenance without additional tools.
Technical Features	<ul style="list-style-type: none"> • PN16 and PN10, 0-60 °C. • Range: DN 10-200. • Working temperature: PN16, 0-60 °C.

INDUSTRY

SWIMMING POOLS, SPA & LSS

PVC-U VALVES (420 + 930+ V800)

Description

Astore brand PVC valves are a right solution for swimming pool, with a remarkable balancing between the performances offered and the total cost of ownership. Astore has a complete range to control, to mix and to adjust the fluid in swimming pool pipelines.



Main Features	Double union ball valve three ways ball valve (T or L port), butterfly valve.
Technical Features	<ul style="list-style-type: none"> • Range from d.16 up to d.300. • Working temperature from 0 °C to 60 °C.
Certifying Body	CE marks.



INDUSTRY

SWIMMING POOLS, SPA & LSS

F6.60

Description

The new F6.60 are flow meters without moving mechanical parts which can be applied for a maintenance free flow monitoring also on dirty liquids or with suspended solids.

The F6.60 family can provide three different options: frequency output to be connected to FLS flow monitors, 4-20 mA output for long distance transmission and PLC connection and the new volume pulse output freely settable.

The insertion magmeter family is provided with an USB interface and a dedicated software (freely downloadable from FLS web site) which allows to easily set by a PC all parameters according to specific installation requirements (as full scale and cut off).



Main Features

- No moving parts, no wear, maintenance free.
- High mechanical resistance.
- Accurate measurement of dirty liquids.
- Pipe size range: from DN15 (0,5") to DN600 (24").
- Adjustable Flow Rate Range.
- Low pressure drop.
- User Settable Operating Parameters.
- 4-20 mA, frequency or volumetric pulse output.
- Bi-directional flow measurement selectable (for F6.60).
- Special versions for salt-water applications (high concentrations of chlorides like sea water). and for high temperature conditions.

Main applications

- Raw water intake.
- Pools, spas and aquariums.
- Sea water applications.

Certifying Body

CE - RoHS Compliant - EAC.



INDUSTRY

SWIMMING POOLS, SPA & LSS

FLOOR DRAINS

Description

Self-cleaning drains, designed to increase your evacuation flow thanks to their hydrodynamically smooth interior and the absence of right angles. This effect reduces the sedimentation of solids, as they are carried away by the flow of water.



Main Features

- Reduced maintenance thanks to the self-cleaning system.
- Solutions for waterproofing.
- Low height installation and highest flow rate.

Technical Features

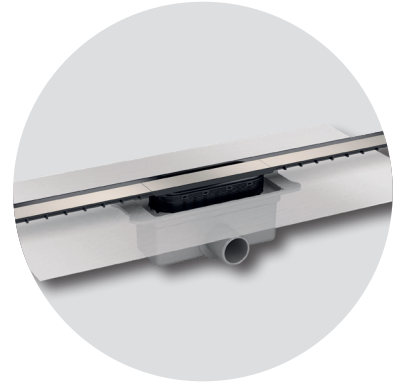
- Wide range (PP; PVC; Dry trap).
- Grill and frame: PVC or Stainless steel (AISI 304).
- Connections: 50, 75, 90, 110 and 125 mm.

INDUSTRY

SWIMMING POOLS, SPA & LSS

LINNUM

The biggest product range of linear channels for tiled shower tray waste outlets.



Main Features

- Easy to install in every situation.
- Perfect finish, design and functionality.
- Guarantees a perfect shower waterproofing, without leakage.
- We offer the widest range of solutions on the market.
- Low height installation and very high flow rate.

Technical Features

- Material: body in ABS, and stainless steel (AISI 304) for grids and frames.
- Options: 6 lengths linear channels, 5 outlet options, 2 trap versions, up to 7 grid designs.
- Connections: 40 and 50 mm.

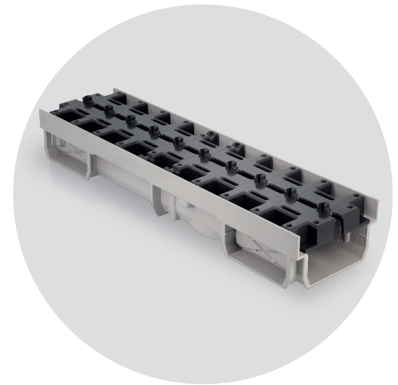
Certifying Body

EN 1253-2.

INDUSTRY

SWIMMING POOLS, SPA & LSS

INVISIBLE WATER CHANNEL



Main Features

Technical Features

Certifying Body



INDUSTRY

SWIMMING POOLS, SPA & LSS

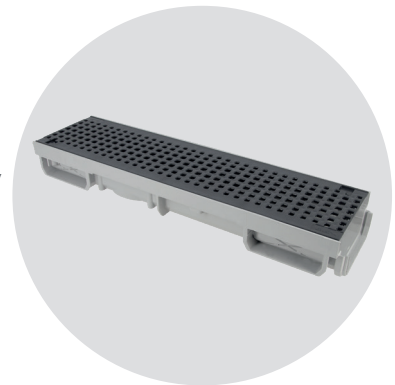
Modular Connecto® channels

Description

Connecto® range of hydraulic channels offers solutions for swimming pools, spa applications and surroundings

Those pre-fabricated systems, thanks to their male-female interlocking assembly and their complete range of accessories (vertical, side outlets and sump units) enable an easy installation and integrates perfectly to the drainage network.

The invisible slot gratings and new design PVC gratings enabling expansion management offer unique and innovative solutions.



Main Features

- High hydraulic performance.
- Ease of installation.
- Space saving in concrete.
- Aesthetically pleasing.
- Easy maintenance (2 in 1 products: channel and inspection box).
- Compliant with barefoot standards.

Main applications

- Material: channels and gratings made of PVC with a resistance to UV rays.
- Good resistance to chemical agents and detergents.
- Shallow PVC channels (60 mm depth) with invisible slot gratings or with square perforations PVC gratings specially designed for swimming pools.
- PVC gratings available in light grey, anthracite, sand and white.

Certifying Body

Compliant with EN1433 standard.
Gratings compliant with People with Reduced Mobility accessibility requirements.



INDUSTRY

SWIMMING POOLS, SPA & LSS

GRIP

Description

STRAUB-GRIP pipe couplings are for pipe connections which require an Axial restraint. This system is suitable for Metallic and Rigid Plastic pipes such as PVC. The compact design allows pipe routing in very confined spaces. Unexpected secondary stresses are accommodated by the couplings due to the flexible design. This enables simple and quick installation that results in noticeable cost savings.



Main Features

- Progressive Sealing and Gripping system for all metallic and rigid plastic pipe materials.
- Compensates for pipe misalignment.
- Extended service life due to low tightening torques.
- Resistant to water hammer.
- Works with Vacuum.
- One tightening torque for all pipe materials.
- 2 Screw = 2 Minutes.

Technical Features

- Outside diameter: 21.3 up to 711.20 mm.
- Temperature: -20 °C up to +180 °C.
- Sealing sleeve: EPDM, NBR, FPM/FKM.

Certifying Body

NSF, DVGW, SVGW, WRAS.



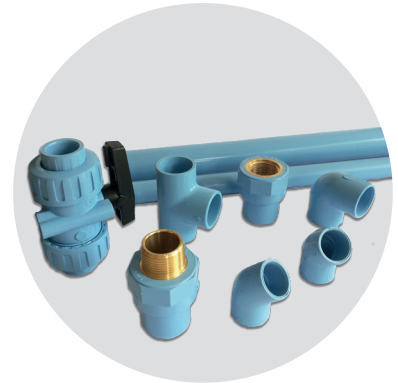
INDUSTRY

COMPRESSED AIR

GIRAIR®

Description

GIRAIR® is a complete system, especially developed for compressed air, neutral gas distribution and centralized vacuum networks.



Main Features

- Corrosion free.
- Impact resistance (ductile vinyl material).
- UV protective layer for durable impact resistance.
- A high compatibility level with most compressor oils.
- Energy saving.

Technical Features

- Best in Class Fire Reaction: B s1 d0.
- Blue colour as per NF A 571.
- PN 12.5 from ø16 to ø110.
- Working temperature: 12.5 bar => 0°C to +25°C/10 bar => +25°C to +40°C.

Certifying Body

Common Arrangements of Works Systems'.
(CAWS) – applicable to S30.



INDUSTRY

COMPRESSED AIR

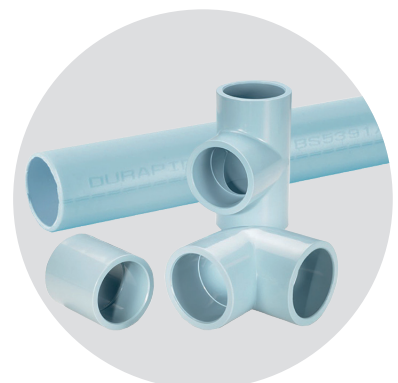
Air-line Xtra

Description

Air-Line Xtra is the ideal solution for ensuring that air is kept clean and uncontaminated for use in process and manufacturing industries.

A lightweight, non-corrodible compressed air distribution system, Air-Line Xtra is manufactured from a specially formulated blend of ABS and is suitable for continuous operation at 12.5 bar at 20°C.

Boasting a 30 year design life, Air-Line Xtra is specifically designed for the conveyance of compressed air, and meets the requirements of the UK Pressure Systems and Transportable Container Regulations.



Main Features

- Lightweight.
- Easy to install.
- Ultra smooth internal bore.
- Corrosion resistant.

Technical Features

- Simple solvent cement jointing.
- Sizes 16 mm to 110 mm).
- 12.5 bar pressure rating at 20°C.

Certifying Body

Common Arrangements of Works Systems'.
(CAWS) – applicable to S30.





Building

UNDERGROUND DRAINAGE

UGD sewage PVC-U fittings
Non-return valves
Easyclip Mechanical Connection
Sistema colector inspection chambers

SOIL & WASTE

PVC-U soil&waste system
AMAX - Ultramax PP system
Phonoblock
Friaphon acoustic
HTA-E high temperature
Chutunic & Chutaphone
d-BLUE acoustic soil & waste system
Akatherm HDPE soil & waste system
Studor active drainage ventilation

SURFACE DRAINAGE & ROOFING SOLUTIONS

Catch basins, covers and grills
Modular channels
Hydraulic channels
Floor drains
Rain water gullies
Raingutter systems
"Belriv" Fascia & soffit
Atemax Roof ventilation
Akasison Siphonic roof drainage

SANITARY

Fluxo
HTA® PVC-C
HTA-E High temperature
Waste & traps
Bathroom floor drainage
Walk in Showers
Ciclon
Concealed cisterns
Ventilation

RECYCLING

Treatment systems for recovery of grey water
Rainwater recovery
Civil waste water treatment: reed bed system

DEPURATION

Pre-treatments (grease traps, imhoff tanks, septic tanks)
Civil waste water plants: percolating filter
Civil waste water plants: activated sludge
Waste water plants: system for carwashing

CHILLED WATER

KRYOCLIM

CHEMICAL DRAINAGE

Vulcathene



BUILDING

UNDERGROUND DRAINAGE

UGD SEWAGE PVC-U FITTINGS

Description

A complete range of fittings and special accessories for underground drainage application. Fittings and ancillary equipments are fully certified by European Standard Institutes allowing the design of drainage systems complying with local Building Regulations. Aliaxis provides easy-to-install, secure and reliable solutions aiming at building long-lasting networks.

Product specifications, certifications, technical data sheets and AutoCAD drawings may be downloaded from our site www.redi.it



REDI

Main Features

- Wide range of EN 1401 certified fittings.
- Long lasting application track record (> 50 years).
- Wide range of special hand-made and thermoformed PVC fittings available on request.
- Easy to be assembled (push fit).
- High chemical compatibility.
- Very low abrasion.
- Full bore capacity.

Technical Features

- Push fit system.
- DN range: Ø 110 ÷ Ø 630. RAL8023, RAL7037.
- Vicat Temp. 79°C.

According to

UGD PVC fittings tested and certified according to EN 1401.



BUILDING

UNDERGROUND DRAINAGE

NON-RETURN VALVES

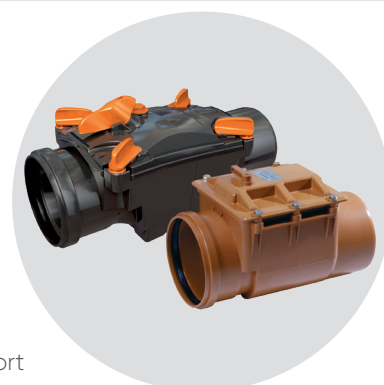
Description

Redi non-return valves represent the best technical solution to prevent back flow from the public sewer in case of overflow of main sewage network.

Redi non-return valves range consists of 3 different models: type 0, CLASSICA (type 1) and OTTIMA (type 1 or 2).

The new Ottima non-return valve is designed to meet the highest technological standards on the market. It is manufactured with modern technology that ensures high reliability. The innovation expressed through its design, resulting in increased safety, improved functionalities.

A wide range of non-return valves, with important approvals and technical support for any issue.



REDI

Main Features

- Easy opening and closure. Easy assembly between existing pipes.
- Ottima range also includes:
 - minimum offset (7mm)
 - stainless steel flap
 - no metal parts
 - co-injected gaskets
 - stable base
 - single or double flap
 - detachable closing lever (public areas application).

Technical Features

- Ottima range available with diameter from 100 mm up to 160 mm.
- Classica range available with diameter from 100 mm up to 630 mm.
- Stainless steel flap available for all models.

According to

Non-return valves with diam. up to 200 mm are tested and certified by LGA (Germany) according to EN13564. For bigger size diameters non-return valve DOP are available.

BUILDING UNDERGROUND DRAINAGE



EASYCLIP MECHANICAL CONNECTION

Description

EasyClip is a mechanical saddle, providing a fast lateral connection to the main sewage pipeline, without use of any adhesive or cement. This system enables the creation of a connection to a new or pre-existing pipeline, suitable for both sewage and rainwater.

Very low volumes of excavation, working method directly on the top of the main pipeline and no curing time required are just some of the advantages characterizing the installation of Redi mechanical saddles.



REDI

Main Features	<p>Reliable connection to different pipeline materials (smooth plastic pipes, corrugated pipes and concrete pipes).</p> <ul style="list-style-type: none"> • Cost saving installation. • Speed of installation. • Cements not required in installation. • Ease of installation. • Certified water tightness. • Flexible solutions.
Technical Features	<ul style="list-style-type: none"> • Inlet pipe diameter: Ø 160, Ø 200. • Applicable on various pipe materials (PVC-U, HDPE, PP, GRP, Clay, Concrete, Corrugated). • Diameter of main pipe Ø 200 – Ø 1200. • Special model with swivel available.
According to	Tested and certified by MPA (Germany) and CSTB (France) according to EN13598.

BUILDING UNDERGROUND DRAINAGE



SISTEMA COLECTOR INSPECTION CHAMBERS

Description

Sistema Colector" is a modular system formed by PVC manufactured components which allows the installation of sewage networks of grey, black or stormwater networks. Inspection grids and covers made of PVC or ductile, to install in areas requiring weight resistance classes from A-15 to C-250.

It allows the construction of trapped inspection chamber, decanting inspection chamber, inspection chamber, and the inspection of buried sewage networks



Main Features	<ul style="list-style-type: none"> • Reduction in time of installation due to easiness and quickness of assembly. • Low specific weight which enables an easier handling, transport and installation. • It allows easily maintenance from the surface. • Pollution of underground waters and aquifers is avoided. • Root penetration into the networks is avoided.
Technical Features	<ul style="list-style-type: none"> • Material body: PVC. • Grill and frame: PVC and iron cast (available soon). • Options: Cover terminal, grid terminal (trap available). • Connections: 110, 160, 200 and 250 mm. • Width diameter system: 250, 315, 400 and 500 mm.
According to	EN1401.



BUILDING

SOIL & WASTE

PVC-U soil&waste system

Description

System for soil, vent and waste system single and double socket (up to 0,5 bar = 5 m of water pressure)



REDI *Nicoll*

Main Features

- PVC is the first plastic material used for S&W piping system.
- It's the most common material worldwide and its technical and chemical features are well known.
- Thanks to the solvent welding it can better resist to over-pressure and vacuum conditions than the gasketed systems.
- Joining method requires specific skills, it helps us to provide technical support increasing customer's intimacy.

Technical Features

- Material: Thermoplastic PVC-U (un-plasticized).
- Color: RAL 7037 grey.
- Joining method: solvent welding/cementing.
- Resistance to decay: PVC is completely resistant to decay.
- Biological resistance: algae and bacteria present in the waste water do not have any effect on the PVC pipes.
- Chemical resistance: PVC is particularly resistant to chemical attacks and can therefore be used without problems for the drainage of industrial water containing chemical compounds in the pH range between 2 (acid) and 12 (alkaline).
- Hydraulic roughness: the internal surfaces of the pipes and fittings conforming to EN1329 standard are hydraulically smooth. REDI couplings and fittings are designed to ensure good hydraulic performance.
- DN range: 32-500.
- Working temperature: 0-70°C continuous drainage.
- Maximum temperature of 95°C for discontinuous drainage of the normal household appliances.

According to

- Certified system according to NF EN1329 and NF T 54-030.
- Fire resistance: not flammable complying to Class B s2 d0 EN 13501:2007.

AMAX - ULTRAMAX PP SYSTEM

Description

Pipes and fittings for soil, vent and waste system
(up to 0,5 bar = 5 m of water pressure)



REDI

Main Features

- ULTRAMAX presents a perfectly WHITE and uniform interior. This feature is particularly appreciated during video inspection. The technology used allows an extrusion flow of the extremely regular raw material which enables a perfect fusion among the layers which are realized with different colors but the same material.
- Impact resistance: The great elasticity of the pipe allows complete compression when under impact, without breaks, cracks or functional consequences, even at low temperatures.
- Self-extinguishing material.
- ULTRAMAX is completely self-extinguishing and matches Class B1 characteristics according to the DIN 4102 standard.

Technical Features

- Material: double layer polypropylene.
- Color: RAL 7037 grey (outside) - RAL 9013 white (inside).
- Joining method: push fit and solvent welded.
- Pipe structure:
 - External layer: grey homopolymer
 - Internal layer: white homopolymer.
- Shock resistance: High impact/shock resistance.
- Chemical resistance: Polypropylene is particularly resistant to chemical attacks (available chemical resistance table).
- From pH 2 up to 12.
- DN range: 32-160.
- Working temperature: 0-90°C continuous drainage.
 - Maximum temperature of 95°C for discontinuous drainage of the normal household appliances.

According to

- Certified system according to UNI EN 1451.
- Fire resistance: self-extinguishing complying to Class B1 DIN 4102.



BUILDING

SOIL & WASTE

PHONOBLOCK

Description

Acoustic pipes and fittings for soil, vent and waste system (up to 0,5 bar = 5 m of water pressure).



REDI

Main Features

- Phonoblock can be installed as a common push fit system or joined by gluing as the traditional PVC system.
- Exclusive and patented range of brackets called Phonoklip.
- Best S&W fire classification B s1 d0.
- Full compatibility with all materials (PP, ABS, PVC, PE).

Technical Features

- Material: Thermoplastic single layer PVC-U mineral fillers.
- Color: RAL 9004 black.
- Joining method: push fit and solvent welded.
- Density:
 - Pipes: 1,60 g/cm³
 - Fittings: 1,39 g/cm³.
- Ring stiffness: SN4 EN 1401.
- Biological resistance: algae and bacteria proof.
- Chemical resistance: PVC is particularly resistant to chemical attacks and can therefore be used without problems for the drainage of industrial water containing chemical compounds in the pH range between 2 (acid) and 12 (alkaline).
- DN range: 40-160.
- Working temperature: 0-70°C continuous drainage.
 - Maximum temperature of 95°C for discontinuous drainage of the normal household appliances.

According to

- Standards: Certified system according to UNI EN14366 13 dB 2l/s.
- Fire resistance: not flammable complying to EUROCLASS B s1 d0 EN 13501:2007.

FRIAPHON® ACOUSTIC

Description

FRIAPHON® is the most effective solution against acoustic pollution.

This complete system is especially adapted to all project configurations for both vertical and horizontal drainage but also for drainage of waste, soil and rainwater inside buildings.

Designed to maintain acoustic comfort all along the system, it was developed to obtain the best acoustic performances.



Applications

Discharge of soil & waste water and rainwater:

- Construction of new buildings and renovation: residential, hotels, health care facilities.
- Buildings with high acoustic requirements.



Main Features

- Acoustic performances thanks to dedicated fittings (cushioning elbows and acoustic patches etc...).
- Structural noise 11 db at 2 l/s.
- Network durability: no corrosion, no scale.
- Fire safety : fire classification Bs1d0 - Euroclasses.
- Light weight easy to install.
- No fire permit required.
- Environmentally friendly.

Technical Features

- Material pipes and fittings : PVC-U with mineral loads.
- Coextruded pipe for improved acoustic performances.
- Range: Pipes : Ø 52, 78, 90, 110, 135, 160 and 200 mm.
- Working temperature: 0-70°C continuous drainage.
- Maximum temperature of 95°C for discontinuous drainage of the normal household appliances.

According to

- ATEC n° 14.1/14-1948.
- Fire classification: Bs1d0 (Euroclasses).
- Acoustic test reports from: - Fraunhofer Institute. - CSTB.
- Ranked best in class solution for S&W pipe systems: ESA 5.
- DIBt.
- DS Certificering A/S ETA Danmark.
- BASTA Sweden.
- KIWA SWEDCERT AB.
- EPD: environmental performance declaration (FDES).



BUILDING

SOIL & WASTE

HTA-E HIGH TEMPERATURE

Description

HTA®-E is a complete system for conveying hot effluents up to 100°C. This system is safe, reliable and durable.

Applications

- Centralized kitchens in retirement homes, hospitals, hotels, schools, restaurant.
- Condensate drainage (boilers).
- Food industries.
- Shipyards (black and grey water system).



Main Features

- Corrosion free.
- Low pipe surface temperature.
- Optimal hydraulic performances.
- Limited condensation and heat loss.
- Watertightness.
- Installation time under control (lightweight pipes, simple tools, no fire permit required).

Technical Features

- Material : HTA® CPVC.
- Best in Class Fire Reaction: B s1 d0.
- Lowest thermal expansion coefficient of thermoplastic materials.
- Range: From Ø 40 to Ø 200.
- Working temperature: CPVC resists high temperatures up to 100 °C without pressure.

According to

- ATEC N° 14/13-1885 French technical evaluation.
- Veritas Marine and RMRS.
- Fire rated: Bs1d0 (Euroclasses - European Certification).
- EPD: Environmental Performance Declaration Sheet (FDES).

CHUTUNIC & CHUTAPHONE

Description

CHUTUNIC single stack acoustic system enables optimized waterflow of black and grey waters. Combined with CHUTAPHONE accessories it enables also noise reduction.

Particularly adapted for hospitalities, healthcare, residences, offices, high-rise buildings.



Main Features

- High hydraulic performance thanks to the helical shape of the pipe allowing air and water circulation.
- Acoustic performance improved by the wide range of acoustic fittings (cushioning elbows, acoustic patches etc..).
- Space saving in the technical shafts (3 in 1 pipe).

Technical Features

- Material: PVC-U.
- No overpressure and negative pressure (no gurgles and helps to maintain waterseal in the traps).
- Fire rating : NF Me approval – B s1 d0.
- Range: Ø 100 (110 mm on request).

According to

- ATEC N° 14/12- 1746*V1 French technical approval.
- Fraunhofer EN14366.
- NFMe certification.



BUILDING

SOIL & WASTE

DBLUE ACOUSTIC SOIL & WASTE SYSTEM

Description

The dBlue acoustic pipe system offers a unique combination of acoustic performance, weight, resistance and mechanical strength.

Applications

- Residential housing.
- Multi occupancy apartments.
- High-rise.
- Hospitals.
- Hotels.
- And other commercial buildings, where reduced noise levels are required.



dBlue

Main Features

- Complete rubber ring joint system with excellent sound insulation properties.
- A triple layer pipe which is rigid, noise-attenuated with a smooth bore that resists incrustation and blockages.
- dBlue metal brackets with rubber lining reduce acoustic vibrations to a minimum.
- Fast installation of rubber ring joints without additional tools.
- Transitions to PVC, PP-HT and HDPE possible without additional transition fittings required.
- Installation inside the building and embedded in concrete (wrapped connections).
Low maintenance cost (little risk of incrustation or blockage due to smooth surface of PP).
- Stack-aerator high-rise solution for single stack downpipes.

Technical features

- Material PP-MD mineral-reinforced (pipes and fittings).
- Size range DN40 to DN200.
- Sound insulation 18 dB 4,0 l/s.
- High resistance to waste water temperatures up to 90°C (peak 95°C).
- High chemical resistance ranging from pH2 to pH12.
- Density mineral filled layer: 1,4 g/cm³.
- Ring stiffness > 4 kN/m².
- Fire behaviour B2 (normally inflammable) DIN 4102-1, E (normally inflammable) EN 13501-1.
- Availability of acoustic traps (floor, P- & S-traps).
- Installation possible at temperatures down to -10 °C.
- No high-temperature spread with use of fire collars.
- No corrosion.
- 100% recyclable.
- Digital support with dBlue Revit Content Package.

According to

- Standards: EN12056, EN 1451, EN 1411, EN 14366, EN 13254, EN 13255, EN 681.
- Fire behaviour: EN 13501, DIN 4102.
- Approvals: SKZ, Fraunhofer Acoustic, ITB, ITC, SCB, UA, Watermark, Fraunhofer (noise measurement), ITC (fire class measurement).

AKATHERM HDPE SOIL & WASTE SYSTEM

Description

Akatherm HDPE is a durable and tough soil & waste drainage system.

The excellent characteristics of high density polyethylene makes it suitable for a wide range of applications. Akatherm HDPE is available in nominal diameters d40 to d315 mm with a full range of pipes, a comprehensive range of fittings including connection fittings, sanitary fittings, traps and tools. The Akatherm Stack-aerator is the high-rise solution for single stack downpipes.



Applications

- Residential housing, commercial kitchens and laundries.
- Installation underground, embedded in concrete or in bridges and roads.
- Storm water drainage, trade waste, industrial applications and laboratories, ceiling voids and hard to reach places.

akatherm HDPE

Main Features

- Complete product range consisting of pipes and fittings from 40 mm to 315 mm.
- Wide range of branches, bends, traps, sanitary and connection fittings.
- Light weight system with simple and secure jointing techniques like electrofusion.
- Fully closed system with homogenous joints.
- Cost saving prefabrication even in large sizes.
- Non-toxic: 100% recyclable and environmental friendly.
- Digital support with Akatherm Revit Content Package.

Technical Features

- Impact-resistant and tough: unbreakable at temperatures above 5°C.
- Elastic and flexible: adjusts to local ground movement for underground use.
- Thermal resistant: applications possible between -40°C and 80°C.
- Chemical resistant: suitable for transport of polluted waste water.
- UV & weather resistant: unrestricted outside use through carbon black additives.
- Wear resistant: lower cost due to long lifetime.
- Welded system: simple and secure installation using butt-welding and electrofusion.
- Homogeneous welded joints: pull tight and leak proof for a completely closed system.
- Prefabrication: fast and cost-saving installation of repetitive systems.
- Light in weight: cost saving in transport and handling.
- Low heat conductivity: no condensation insulation required during short periods of cooling.

According to

- Standards: EN1519, EN12666, ISO8770, EN1053, EN1054, DIN 11925-2, DS/ISO/TTR 10358, EN 681.
- Fire behaviour: EN 13501, DIN 4102.
- Approvals: SKZ, KOMO, Qplus, BCCA, ETA, CSTB, Kitemark, Onorm, RISE, Watermark.



BUILDING

SOIL & WASTE

STUDOR ACTIVE DRAINAGE VENTILATION

Description

Studor offers high-quality solutions for all commercial and residential buildings, eliminating the need for roof penetrations and extensive group vent piping.

Providing a range of valves, and complete systems to limit pressure fluctuations guaranteeing the integrity of the traps, Studor supports with solutions and services to ensure eliminating drainage smells with a maintenance-free drainage system.

Applications

- Residential, domestic and commercial buildings.
- New low-rise, medium-rise, high-rise or existing buildings.



Main Features

- Smooth functioning drainage system in any building project.
- Scientifically proven solution for total piece of mind.
- An in-house hydraulic design support service using StudorCAD.
- Warranty on hydraulic system performance.
- New building solutions and retrofit existing buildings.
- Reassurancing the highest quality drainage system for any building.

Technical Features

- Maxi-Filtra is a robust two-way vent that eliminates bad odours with a sturdy filter designed specifically for outdoor drainage applications.
- P.A.P.A. (Positive Air Pressure Attenuator) and AAV (Air Admittance Valves) within the single stack system guarantees a complete and unique drainage and ventilation system solution for medium and high-rise buildings.
- Digital support with StudorCAD and Studor Revit Content Package.

According to

- Standards: KEYMARK, NSF 14, EN12380.
- Approvals: Watermark, BBA, ICC-ES, UK LABC Certificate.

BUILDING

SURFACE DRAINAGE AND ROOFING SOLUTIONS



CATCH BASINS, COVERS AND GRILLS

Description

Wide range of fully injected PP catch basins and PVC covers/grills suitable both for rainwater connections inspection and for electric cables inspection.

Redi PVC covers/grills are suitable for installation both in pedestrian areas (A15) and in areas subject to light traffic (B125).

Thanks to its monolithic structure, Redi catch basins are particularly robust and easy to handle and install: the pre-cut outlets make the pipe connection and the installation easy and durable.



Main Features

PVC covers and grills are resistant and long lasting.

- Easy to handle and to install.
- Covers and grills are available both in grey 7035 and green 6005 (for gardening application).
- Monolithic body.
- Pre-cut outlets for pipe connection up to 315 mm.
- Smooth rounded angles for a higher shock resistance.
- Suitable as inspection chamber for electric cables installation.

Note: a concrete floor seating is recommended to prevent subsidence.

Technical Features

- Covers/grills are made of PVC for a higher UV rays resistance. Catch basins are made of PP.
- Catch basins, covers and grills available with sizes from 200x200 up to 550x550.

According to

Tested and certified by ISTITUTO GIORDANO according to EN124.

BUILDING

SURFACE DRAINAGE AND ROOFING SOLUTION

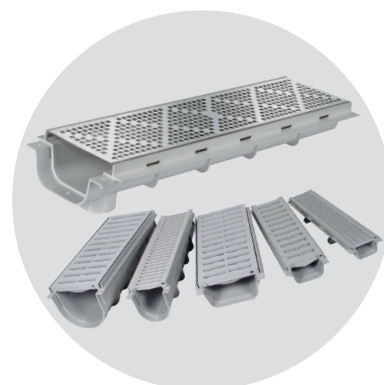


MODULAR CHANNELS

Description

Wide variety of linear drainage solutions both for inside and outside the building applications. Our channels portfolio includes PVC 1/2 m channels (width 100, 130 or 200 mm) or 1 m PP channels (width 130 mm), all available both with plastic grill (PVC or PP) and with metal grill (galvanized, stainless steel, etc).

The large range of special accessories ensures an easy and perfect installation in any context.



Main Features

- Reduced maintenance thanks to the self-cleaning design.
- Highest drainage capacity for every specific application.
- High UV rays resistance of PVC channels and grills.
- Several technical solutions according to the specific installation field (swimming pool, bathroom, garage, etc).

Technical Features

- Body of the channel made of PVC or PP.
- Channel grills available both in plastic material (PVC or PP) and in metal.
- Channels connection outlets available with diameter from 40 mm up to 110 mm.

According to

CE mark according to EN-1433.
Load class according to EN124.



BUILDING

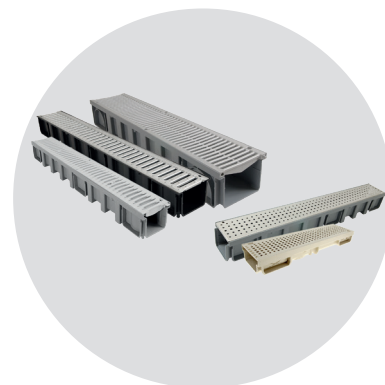
SURFACE DRAINAGE AND ROOFING SOLUTION

HYDRAULIC CHANNELS

Description

CONNECTO® and KENADRAIN® are professional ranges of hydraulic channels for both, light duty (garages, driveways, patios, swimming pools, terraces etc...) and heavy duty applications or intensive traffic (car parks, gas stations, roads and non trafficked areas of hard shoulders), meeting the highest environmental demands in rainwater management.

Those pre-fabricated systems, thanks to their male-female interlocking assembly and their complete range of accessories (vertical, side outlets and sump units) enable an easy installation and integrate perfectly to the drainage network.



Main Features

- Possibility to carry out all kinds of installation (crosses, tees, angles) thanks to the modular CONNECTO system.
- High hydraulic performance thanks to the smooth surface and range of accessories available in large diameters.
- Light weight.
- High resistance to horizontal and vertical loads thanks to the material and its design optimized by computer modelling.
- Functional and ease of installation : easy opening of the outlets, tight connections to the PVC fittings to the pipe networks.
- Aesthetic: can be installed in paved, concreted and asphalted surrounding surfaces.

Technical Features

- Material:
 - Connecto®: Polypropylen except shallow channel drains made of PVC.
 - Kenadrain channel body made of thick polypropylen with galvanised steel edge rails for a better mechanical resistance.
- Excellent resistance to frost, de-icing salt and to most chemical agents.
- Patented system to fix the gratings for Kenadrain system for widths (150, 200 and 300 mm).

CONNECTO®:

- Available in 4 differents heights (54, 60, 98, 115 mm) for width 130 mm.
- Available in width 200 mm (height 142 mm).
- Load classes: from A15 to C250.
- Large choice of gratings in different materials (PVC, polyamide, ductile iron , galvanized and stainless steel) and designs (slotted, mesh, invisible slot).
- Large range of accessories (horizontal, vertical outlets).
- Innovative solutions such as the new invisible slot grating and new PVC gratings enabling expansion management.

KENADRAIN®:

- Available in 4 internal widths (100, 150 , 200 & 300 mm) with galvanized or stainless steel edge rails.
- "Park" drain: 80 mm shallow channel for multy-storey car parks.
- "Cascade system" for widths 100 mm with 4 different depths to optimize hydraulics of the installation.
- Slotted solutions for widths 100 and 150 mm in different stainless steel grades (430, 304 and 316).
- Load classes: from A15 to E600.

According to

- In compliance with EN1433 standard.
- Quality Insurance certification ISO 9001 and environmental ISO 14001.
- Gratings compliant with People with Reduced Mobility accessibility requirements.

BUILDING

SURFACE DRAINAGE AND ROOFING SOLUTIONS



FLOOR DRAINS

Description

Wide range of floor drains for a perfect localized evacuation.

Our floor drains portfolio is suitable both for residential and commercial/ industrial applications such as terraces, bathrooms, garages, parkings, warehouses, etc



REDI



Nicoll

Main Features

- Floor drains are available with PVC, PP or ABS body.
- Largest part of the range is available both with plastic grill (PVC, PP or ABS) and with stainless steel grill.
- Patented dry trap solution available for specific models.

Technical Features

- Body of the floor drains is made of PVC, PP or ABS.
- Grills made of PVC, PP or stainless steel.
- Connection outlets (horizontal or vertical) available with diameter from 40 mm up to 110 mm.

According to

Flow rate tested according to EN1253.
K3 load class according to EN1253.

BUILDING

SURFACE DRAINAGE AND ROOFING SOLUTION



RAINWATER GULLIES

Description

Rainwater gullies are the best solution for collecting the rainwater from the gutter downpipe and connecting it to the main pipeline: thanks to this inspection chamber specifically designed for gutter connection, we ensure an easy access for maintenance and cleaning.



REDI

Nicoll

Main Features

- Trapped and untrapped solutions available.
- Leaf guard.
- Round or square inlet.
- Vertical or horizontal outlet.

Technical Features

- Rainwater gullies are made of PP.
- Outlet connection available with diameter from 100 mm up to 125 mm.
- Inlet connection available with diameter from 50 mm up to 125 mm.

According to

Flow rate tested according to EN1253-1 CSTB.



BUILDING

SURFACE DRAINAGE AND ROOFING SOLUTION

RAINGUTTER SYSTEMS

Description

The Nicoll raingutter systems are made of TECHTAN®, the only composite material with a 30 year warranty.

Wide range of gutters for all the applications, from a chalet to a multi-occupancy or industrial building for all kinds of roofs (tile, fascia, metallic roof, flat roofs).

4 different designs:

- OVATION®: The reinvented design.
- VODALIS®: The finishing touch.
- ELITE: The classic.
- Half-Round: The economic.

Every gutter and downpipe system developed by Nicoll offers unique performance in the fast collection and drainage of rainwater into the network. They ensure protection for facades against infiltration and last longer than ever thanks to the new Nicoll® 100% recyclable exclusive material: TECHTAN®.

Nicoll gutters in TECHTAN®, combine performance and elegance:

- TECHTAN® compared to standard PVC: more qualitative appearance, reinforced resistance and durability.
- TECHTAN® compared to aluminum: same choice of colors, increased resistance.
- TECHTAN® compared to zinc: just as resistant and more economical.

Every range of product can be chosen according to the type of building to be equipped and the regional architecture, and every solution offers hydraulic characteristics suitable for the size of the roof and the climate conditions of the site.



Main Features

- 30 year warranty.
- ultra-resistant against mechanical shocks, hail, corrosion, strong winds (tested by the CSTB).
- resistance to UV beyond EN 607 .
- resistance to extreme temperatures from -40 °C to +70 °C.
- 7 colors available.
- Wide range of accessories such as invisible brackets, rainwater collectors, leaf catchers etc...

Technical Features

- Installation: solvent welding or rubber system.
- 100% recyclable.

According to

- EN607 (profiles & fittings).
- EN1462 (brackets).
- 30 years warranty.



"BELRIV" FASCIA & SOFFIT

Description

Belriv® solutions in PVC protect roof/eaves overhangs while highlighting the architecture of the building.

Full range including fascia, soffit, wall profiles (soffit retainer), angles, junction parts, nails or brackets, ventilation profile.

For new and renovated roofs.

The Belriv System helps fix the rain gutters

2 models for 2 ways of installations:

- Belriv Tradi®: fascia to be nailed
 - Fascia height from 1000 to 400 mm
 - Fascia thickness : 7-10 mm, 15 or 18 mm.
- Belriv System®: 1/4 turn brackets
 - Fascia height: 170 and 210mm.



Main Features

- Maintenance- solution that requires no painting or protective coating.
- High resistance: free UV/frost/strong winds and bad weather.
- wide range of colours in line with architectural trends.
- 2 designs of soffit : traditional or contemporary.
- Colors & materials that work perfectly with Nicoll rain gutter systems.

Technical Features

- Excellent resistance to strong winds.
- UV stable.
- Best-in-class rigidity of fascia (3 thicknesses):
 - 10 year warranty.



BUILDING

SURFACE DRAINAGE AND ROOFING SOLUTION

ATEMAX ROOF VENTILATION

Description

Roof vents

Simple dome vents (classic version) , or aeraulic versions, for any type of roof, including flat roof

Applications:

- Roof ventilation.
- Stack vent.
- Kitchen hood.
- Mechanically controlled air exhaust (incl. Double flow).

Available in diameters D100, 125 and 160 mm.



Main Features

- 5 colors.
- UV stable.
- Best-in-class flow rate (pressure drop <10 Pa) according to the regulation about Mechanically controlled air exhaust.
- Roof vent with or without mosquito net.
- Protection against birds and pest.

Technical Features

BUILDING

SURFACE DRAINAGE AND ROOFING SOLUTIONS



AKASISON SIPHONIC ROOF DRAINAGE

Description

The Akasison siphonic roof drainage system offers many advantages for buildings with large or complex roofs. The fully filled pipe system has small diameters which installed horizontally and close to the roof for maximum space saving and full freedom of design. Fewer roof outlets and fewer down pipes leads to less ground work and contribute to lower cost of building. Akasison offers complete security during heavy rainfall with a low water level on the roof.



Applications:

- Warehouses & distribution centres.
- Industrial buildings.
- Commercial buildings.
- Office and residential.
- Sport
- Public, healthcare and education



Main Features

- Freedom of design.
- Space saving.
- Cost efficient.
- High performance.
- 100% recyclable.
- Self-cleaning

Technical Features

- Engineering: precise dimensioning of pipe diameters and position of roof outlets to optimise system performance.
- Roof outlets: wide range of roof outlets suitable for many roof types.
- Pipe system: robust PE piping system resistant to pressure and temperature changes and suitable for prefabrication.
- Fixing system: Quick and secure fixing system resistant to expansion forces.

According to

- Standard: EN1519.
- Approvals: SKZ, KOMO, Qplus, BCCA, ETA, CSTB, Kitemark, Onorm, RISE, Watermark.



BUILDING SANITARY

FLUXO

Description

Multilayer piping & fitting systems for hot and cold water installations inside buildings: 5-layer pipes and brass press-fittings. Fluxo is ideal for heating systems, plumbing installations and underfloor heating.



Main Features

- Low thermic dilation.
- No corrosion.
- High reliability.
- Easy and fast installation. High safety during installation (no hot welding).

Pipes:

- 5 Layers : PE-Xb-Glue- aluminum-Glue – PE-Xb.
- Flexible Easy to bend by hand.
- High quality welding the aluminum layer is laser welded at 0,5 micron head to head.
- More resistance to pressure and temperature.
- 100% oxygen barrier.
- Continuous design temperature 70°C for 50 years.

Fittings

- High quality brass.
- Certified system.

Technical Features

- Thermal conductivity (W/mK): 0,4 W/mKa
 - Potability: < 6 (mg/kg)
 - Thermal durability: no breaks on outer layer
 - Linear dilatation coefficient: 0,026 mm/mK
 - Internal roughness: 0,007 mm.
- Insulation:
 - Operating temperature: -45°C +100°C
 - Density: 35 kg/m³
 - Thermal conductivity coefficient (at 40°C): 0,039 W/(m°C)
 - Fire classification BL S1 D0
 - Toxicity: N.100/CF/T/97 16/01/98.
- DN Range: Ø16 to Ø75.
- Working temperature: -45°C to +100°C.

According to

- NF.
- EN-ISO 21003 KIWA.
- K 55985/03 KIWA/KOMO.
- MAC 312311CS RINA.

HTA® PVC-C

Description

Developed for high sanitary requirements, HTA® is a complete system for domestic hot and cold water services and low temperature heating in healthcare, hospitality, commercial buildings



Main Features

- HTA® PVC-C (Chlorinated Polyvinylchloride) is a strong material with high performance of thermal stability, chemical and mechanical resistance up to about 100°C.
- Lowest biofilm development potential for synthetic material formulation.
- Limits scaling.
- Suitable for chemical and thermal treatment for both hot and cold water.
- No corrosion.
- Installation time under control.
- Safe integral welded joints.
- Dedicated bracketing.
- Recycling friendly.
- Durability/watertight .

Technical Features

- Material: HTA® PVC-C formulation is among the best in class material regarding the limitation of Biofilm development.
- Best in Class Fire reaction B s1 d0.
- Lowest thermal expansion coefficient for a monoplayer thermoplastic materials.
- Reduced need for supporting and expansion joints with considerable advantages in terms of network design.
- Range HTA®
 - PN 25 (Ø16 to Ø63)
 - PN 16 (Ø32 to Ø160).
 - PN 10 (Ø200 mm)
- HTA®-F in PN16 (Ø16 to Ø160).
- Working temperature: 0 - 100°C.
- Certified at 70 ° C / 6 bar.

According to

- Certificate of Health Conformity (ACS): French drinking water certification.
- ATEC N° 14/13-1924 covers the whole system : pipes, fittings and welding polymer.
- Fire rating: Bs1d0 (Euroclasses).
- EPD: Environmental Performance Declaration.
- Internationally certified WRAS/AENOR/IIP UNI/ ATG & BELGAQUA/ GOST.



BUILDING SANITARY

HTA-E HIGH TEMPERATURE

Description

HTA®-E is a complete system for conveying hot effluents up to 100°C. This system is safe, reliable and durable.

Applications

- Centralized kitchens in retirement homes, hospitals, hotels, schools, restaurant.
- Condensate drainage (boilers).
- Food industries.
- Shipyards (black and grey water system).



GIRPI

Main Features

- Corrosion free.
- Low pipe surface temperature.
- Optimal hydraulic performances.
- Limited condensation and heat loss.
- Watertightness.
- Installation time under control (lightweight pipes, simple tools, no fire permit required).

Technical Features

- Material: HTA® CPVC.
- Best in Class Fire Reaction : B s1 d0.
- Lowest thermal expansion coefficient of thermoplastic materials.
- Range: from Ø40 to Ø200.
- Working temperature: CPVC resists high temperatures up to 100°C without pressure.

According to

- ATEC N° 14/13-1885 French technical evaluation.
- Veritas Marine and RMRS.
- Fire rated: Bs1d0 (Euroclasses - European Certification).
- EPD: Environmental Performance Declaration Sheet (FDES).



WASTE & TRAPS

Description

The biggest product and accessories range, chromed and white versions for waste disposal of any sanitary appliance from its outlet until the connection to the sewage net.

A complete range of bottle traps and waste outlets to equip bathrooms (and kitchens) appliances.

Range dedicated for washbasins, bathtubs and shower trays using the latest technologies such as Magnetech® and Co-injection.



Nicoll

Main Features

- Easy and secure connections.
- Able to connect to any sanitary element.
- Great corrosion resistance and very durable product.
- Modular and easily adjustable to any installation requirement.
- Wastes and traps with built-in -seals (Easyphon® & Easybain®, Turboflow)® making installation faster and easier.
- Low maintenance - no spare parts needed for seals.
- Turboflow XS, using the unique and patented Magnetech® technology with a magnetic valve and counterbalance valve, combines compactness, performance and extreme durability.

Technical Features

- Material: PP, and ABS for chromed versions.
- Options: Single traps, double traps, bathtub/shower tray waste outlets, floor traps, and every spare part necessary to connect them.
- Connections: 32, 40 and 50 mm. (3/4" , 1 1/2" , and 2").
- High flow rate to reduce clogging and overflow risks (e.g Turboflow models).
- Anti-odor systems.

According to

EN 274.



BATHROOM FLOOR DRAINAGE

The biggest product range floor gullies an channel for tiled shower tray waste outlets.



Nicoll

Main Features

- Easy to install in every situation.
- Perfect finishing and maximum reliability.
- Guarantees a perfect shower waterproofing.
- We offer the widest range of solutions on the market.
- Low height installation and very high flow rate.

Technical Features

- Material: body in ABS, and stainless steel (AISI 304) for grids and frames.
- Options: 6 lengths linear channels, 5 outlet options, 2 trap versions, up to 7 grid designs.
- Connections: 40 and 50 mm.

According to

EN 1253-2

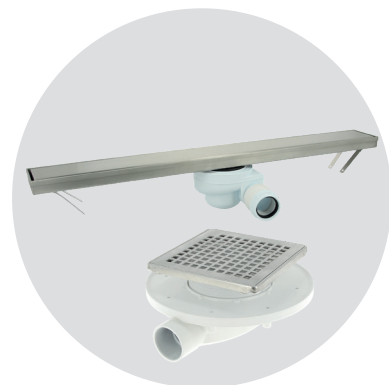


BUILDING SANITARY

WALK-IN SHOWERS

Description

Range of solutions for walk-in showers proposed for each single project from PVC floor drains to shower channels using the latest technologies such as Magnetech.



Main Features

- Good hydraulic performance.
- No compromise with waterproofing.
- Ease of installation.
- Hygienic and easy maintenance.
- Aesthetically pleasing.
- Docia XS, using the unique and patented Magnetech® technology with a magnetic valve and counterbalance valve, combines compactness, performance and extreme durability.

According to

Compliant with EN1253.



CICLON

Description

Sanitary macerators and lifting station adapted to all needs.
Allows the installation of a complete bathroom or kitchen in non-usual places.
Also available with concealed cistern frame or to be concealed.



Main Features

- WC macerators with WC inlet and auxiliary inlets (40 mm.), and a vertical outlet (32mm). Equipped with non-return valve.
- Lifting station with 3 lateral inlets (40 mm.) and 2 top inlets (40 mm.) includes valve to connect sanitary elements or electrical appliances (washing machines, dishwashers).
- The low noise-level of our CICLON macerator models make them easy to install in any part of your home or work premises without them being bothersome.

Technical Features

- Vertical pump: Up to 6 m (7 m in lifting station).
- Horizontal pump: Up to 62 m (72 m in lifting station).
- Maximum operating wastewater temperature: 50°.
- Power impulsion: Up to 550 W.
- Electrical supply: 220-240 V / 50Hz.

Certifying Body

Products certified according to standard EN12050 by the prestigious institutes LGA (Germany) and Buildcert (UK).



CONCEALED CISTERNS

Description

2 ranges of WC concealed cisterns:

- Happy Support®.
- Solemur®.



Main Features

- SOLEMUR® available with different frames:
self-standing (i.e. for any type of wall, even light walls), wall-mounted, on corners, or low-height
- HAPPY SUPPORT®
– with a self-standing frame (i.e. for any type of wall, even partition walls)
– frame in 2 blocks (detachable cistern for an easier access and sequential installation)
– with brakes on the feet for an easier height adjustment.

Technical Features

- Front and top opening of the cistern : for an easier access to the valves.
- Swivel pan connector in PVC (NF Me fire regulation) and sliding fixing collar.
- Cable-flush mechanism for a simple and quick installation.
- Anti-corrosion treated frame, resists to loads over 400 kg (NF017).
- Class 1 acoustic silent float valve.
- Water saving (cisterns volumes adjusted from 3 to 6 liters).
- No risk of water leakage as the water supply is connected inside the cistern
– Dual-volume touch control plates or infrared triggers, with a broad choice of designs.

According to

UNI CIG 7129



BUILDING SANITARY

VENTILATION

Description

The ventilation range includes:

- Acoustic grills.
- Built-in round/rectangular grills.
- Push-in round/square grills.
- Surface mounted square grills.
- Built-in metallic grills.



REDI

Main Features

- The grills are made of ABS and are equipped with removable mesh.
- The metallic range includes copper and aluminum grills.
- For a quick installation, grills have a spring fixed to a foldable support that blocks during the period of use. This kind of spring permit to apply the grill to pipes or holes with different diameters.
- The acoustic grill prevents the noise transmission from outside (traffic jam, ambulance, building site, common noises).

Technical Features

- Grill with removable core insert.
 - All ventilation grills consist of two different parts:
 - The frame (perimetrical)
 - The core (central) with wings. It's removable to easily access to the mosquito mesh.
 - You have to check at least once per year to inspect the pipe.
 - Round push-in grills - PATENTED.
- To remove the grill, rotate anticlockwise holding the wings and extracting.

According to

UNI CIG 7129.

VENTILATION

Description

Wide range including:

- Air inlet modules: for windows or walls.
- Grids: for all applications (including rooms with fire place, stove, gaz boiler, kitchen hood, tumble dryer).



Nicoll

Main Features

Air inlet modules

- classic design, with or without mosquito net.
- UV stable (ASA).
- Design to protect from rain.

Grids

- Designer range "NEOLIA" with 9 colours, stylish square design, both for exterior & interior, with or without closing system for air inlet

Technical Features

Air inlet modules: for 15, 22, 30 or 45 m³/h

- Ventilation grids:
 - Interior: round shape, in PS
 - Exterior: square / rect. shape, in ASA or aluminium.

All types of installation:

- Clip-on: for D80, 100, 110, 125, 140, or 160 pipes.
- Solvent welding.
- Sealed.
- Screw-on.

According to

UNI CIG 7129.



BUILDING RECYCLING

TREATMENT SYSTEMS FOR RECOVERY OF GREY WATER

Description

Compact greywater recovery system reduces drinking water consumption in a building up to 50%.

Wastewater used for personal hygiene (greywater) are taken back to a hygienically pure status through a multiple process, biological treatment, ultrafiltration and UV sterilization. Treated water responds to the EU Law requirements for bathing water and can be reused for gardening, car washing, flush WC, and any other use allowed with not drinkable water.



Main Features

- Plug & Play.
- New generation filters.
- Remote controlled (option).
- Low maintenance.
- Easy sizing.
- Low energy consumption.
- Auto cleaning cycle.
- Compact.
- Skid assembled.
- Silent pump.

Technical Features

- Highly customized.

According to

DM 185.2003.



BUILDING RECYCLING

RAINWATER RECOVERY

Description

Irriga and Riusa are systems made to reuse rainwater from housing and assure an ideal water reserve for green spaces irrigation, car washing, or WC flushes. The rainwater is accumulated in a buried or external tank and distributed by an electro pump or through gravity forces. Thanks to this installation rainwater, instead of being wasted, is kept for domestic use mentioned above.



Main Features

- Collection and usage of rainwater for irrigation, toilet drain and washing machine.
- Up to 50 % reduction of water consumption for garden irrigation and car washing.
- Reduce the risk of irregularity and problems in water dispensing during high demand peaks.
- Prevent main sewage from overflow in case of storm.

Technical Features

- PE material, Roto molding.
- Size: from 3.500 liters to 41.000 liters.

According to

2006/42/CE – 2004/108/CE – 2006/95 /CE.

CIVIL WASTE WATER TREATMENT: REED BED SYSTEM

Description

The sub-irrigation and phytoremediation systems with absorbent trays are used for civil wastewater which are not discharged into a public sewerage system or into surface water streams.

Incoming wastewater are distributed inside absorbent trays, each one containing an adequate number of plants.

The purification process takes advantage of soil evaporation and transpiration, both direct and by means of the plants, and of wastewater organic elements absorption performed by the roots of the plants.



Main Features

- No electricity needed.
- Technical Support.
- System customization possibilities .

Technical Features

- Beds in PE to be filled with gravel, must be completed with terrain and plants.
- Water treatment performed by plants.
- Size: from 2 to 32 equivalent residents (and more).
- High customization possibilities.

According to

91/ 271 CE.



BUILDING DEPURATION

PRE-TREATMENTS (GREASE TRAPS, IMHOFF TANKS, SEPTIC TANKS)

Description

Pre-treatment for pollutant, before entrance in secondary treatment or public sewage. In the grease trap, the material pollutant from kitchens and canteens that has a specific weight lower than water, is separated by to the physical floating process. In septic tanks and Imhoff tanks the separation of the fecal material that has a specific weight higher than water, by to the physical decantation process.



Main Features

- Technical Support.
- System customization possibilities.

Technical Features

- Roto molding manufacturing.
- Grease traps sizes: from 5 to 14 equivalent residents.
- Imhoff tanks sizes: from 3 to 85 equivalent residents.
- Septic tanks sizes: from 2 to 100 equivalent residents.
- High customization possibilities.

According to

EN 858 – 1825 e 12566-1.



BUILDING DEPURATION

CIVIL WASTE WATER PLANTS: PERCOLATING FILTER

Description

Secondary level treatment to obtain final effluent compatible with final receptor (river , land , other). The purification process is biological and is based on the action of the bacterial flora that develops on the filling bodies with a high specific surface with which the products are filled.

The percolating filters are suitably filled with polypropylene media featuring a high specific surface area to encourage the growth of the bacterial population responsible for purifying the wastewater



Main Features

- High efficiency.
- Technical Support.
- System customization possibilities.
- No electricity needed, production of stable sludge, easy to manage.

Technical Features

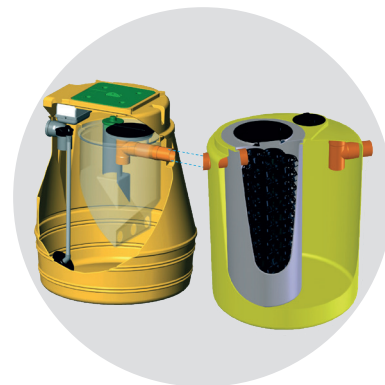
- Roto molding manufacturing.
- Water Treatment performed by bacteria activated by oxygen.
- Sizes: from 5 to 300 equivalent residents.
- High customization possibilities.



CIVIL WASTE WATER PLANTS: ACTIVATED SLUDGE

Description

Secondary level treatment to obtain final effluent compatible with final receptor (river, land, other). The purification process is biological and is based on the action of the aerobic bacterial flora that feeds on the organic substance present in the waste water. These systems are composed of an oxidation zone where air is blown to develop the bacterial flora and a subsequent calm zone where the fecal matter decants.



Main Features

- High efficiency. Technical Support. System customization possibilities.
- Low electricity consumption, production of stable sludge, easy to manage.

Technical Features

- Roto molding manufacturing.
- Water Treatment performed by bacteria activated by oxygen.
- Sizes: from 5 to 300 equivalent residents.
- High customization possibilities.

According to

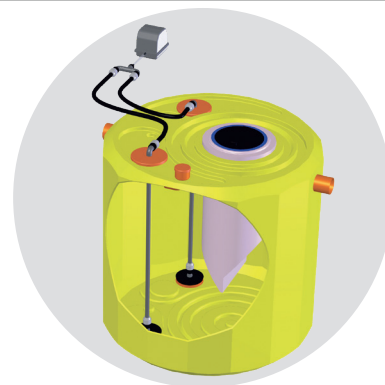
91/ 271 CE.



WASTE WATER PLANTS: SYSTEM FOR CARWASHING

Description

Secondary level treatment to obtain final effluent compatible with final receptor (river, land, other). The purification system is a mix between a biological and physical chemical process. In a first phase, pretreatments are provided for the flotation of oils and detergents and settling of aggregates. Subsequently is placed a biological reactor on activated carbon bed and if the waste is highly polluted, a final phase of pressure filtration is necessary.



Main Features

- High efficiency.
- Technical support.
- System customization possibilities.

Technical Features

- Biological and chemical water treatment.
- Sizes from 1,5 to 5 m³/h.
- High customization possibilities.
- Roto molding and painted steel manufacturing.

According to

91/ 271 CE.



BUILDING

CHILLED WATER

KRYOCLIM®

Description

KRYOCLIM® pipework system is designed for all secondary (indirect) refrigeration and comfort cooling installations between -30°C and +40°C (chilled water services).



Main Features

Respect of legal obligations where applicable (e.g. in France: CH25, CH35)

- High impact resistance (ductile vinyl material) even at low temperatures.
- Corrosion free.
- Low thermal losses.
- Safe integral solvent welded joints.
- Ease of installation on both new build and renovation projects even occupied.
- Reduced maintenance.

Technical Features

- Best in Class Fire Reaction: B s1 d0.
- Good chemical resistance to anti-freeze and coolants such as MEG & MPG.
- Range: PN 10 from Ø20 to Ø160, PN 6 Ø200.
- Working Temperature: -30°C up to +40°C.

According to

- French ATEC certification N°14/09-1443.
- Fire rating: Bs1d0 (Euroclasses).

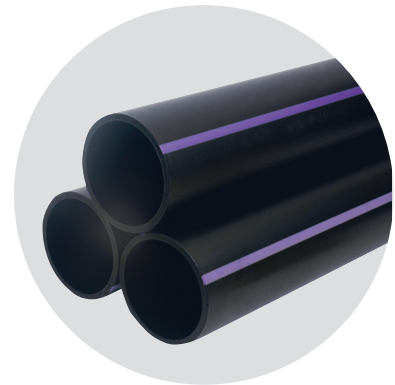
VULCATHENE

Description

Vulcathene is a complete laboratory drainage system manufactured from a proprietary material which provides excellent chemical resistance even at high temperatures, with the added benefit of preventing degradation from UV exposure.

This highly engineered system comes with the quality assurance of being the only BBA approved laboratory drainage system on the market. Vulcathene can be specified in the comfort that it has been rigorously tested against its specific purpose; to safely transport chemical effluents.

In order to cater for the complete drainage requirements of a laboratory, the Vulcathene portfolio has been developed to include sinks, traps and many other laboratory furniture items to provide a fully matched and reliable installation.



Main Features

- Highly chemical resistant even at high temperatures.
- Full BBA product and system approval.
- Two simple jointing methods; enfusion and mechanical.
- Thermal stress relief solutions.
- Wide operating temperature capabilities (-20 °C to 100 °C).
- Comprehensive range designed for laboratory and chemical drainage use.

Technical Features

- Range: Sizes 38 mm to 152 mm.
- Working temperature: wide operating temperature capabilities (-20 °C to 100 °C).
- Fully matched with fittings and laboratory bench items.

According to

Fully BBA approved.





Infrastructure

WATER DISTRIBUTION

FLEXIPOL PE100 pipes
Push fast pipe union system
PE Fittings
MAGNUM 3G - HGR (High chemical resistance)
Water meter valves
STRAUB-FLEX / STRAUB-OPEN-FLEX
STRAUB STEP FLEX E REP FLEX
FLS Instrumentation (F6.61)

MUNICIPALITIES

Protecta_line
Excel Plus - Disinfectant-resistant pipes
GASYPOL PE100
Fabricated fittings
Easyclip mechanical connection
Flap valves
Waterloc®
Hydraulic channels
FRIALEN® Safety fitting couplers and shapes
FRIALEN® Safety fitting spigot saddles
FRIALEN® Safety fitting shut-off valve FRIALOC®
FRIALEN® Safety fitting tapping tees and valves
FRIAFIT® - The closed pe sewage system for municipalities
FRIAMAT®
FRIATOOLS® Scraper tools
Repair solutions (Wide range, STRAUBCLAMP, ULTRAGRIP, FRIAGRIP)



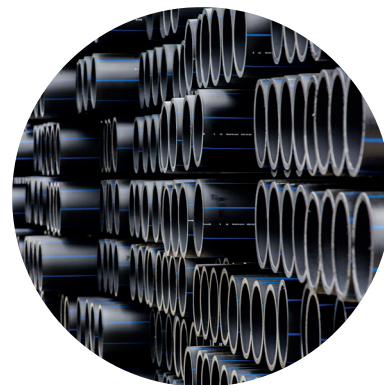
INFRASTRUCTURE

WATER DISTRIBUTION

FLEXIPOL PE100 PIPES

Description

The use of Polyethylene (PE) pipes provides great advantages over other traditional pipes.



Main Features

- **Durability:** pipe life is considered at least 50 years.
- **Toxicity:** They are odorless, tasteless and non-toxic.
- **Resistance:** Corrosion and most of the chemical agents.
- **Low Load Loss:** Due to its smooth inner surface they produce less friction.
- **Flexibility and elasticity:** Facilitates the most sinuous paths and better withstand water hammers compared to rigid materials and allows the manufacture of rolls and reels so it can be manufactured in great lengths insensitive to freezing.
- **Easy installation.**

Technical Features

- PE100, PE100 RD Last made RD resin pipe additive generation that gives it greater resistance to disinfection carried out in the pipes of drinking water even using chlorine dioxide.
- PE100 RC Pipe made with latest RC resin generation that gives it greater resistance to slow and fast propagation of fissures and loads punctual.
- PE100 RT pipe with raised Temperature Resistance.
- Range: from Ø20 mm to 1000 mm, in coils and sticks. Working pressure classes: SDR7,4-PN25, SDR11-PN16, SDR17-PN10, SDR21-PN8, SDR26-PN6.
- Working temperature: from -20° C to +40° C.

Certifying Body

ISO 9001:2015.



INFRASTRUCTURE

WATER DISTRIBUTION

PUSH FAST PIPE UNION SYSTEM

Description

The Push Fast pipe joining system is an innovation as it facilitates the joining of PE pipes by the traditional "bell plug" system, simplifying the joining of PE pipes. Range of fittings: sockets, elbows, tees, stub flanges.



Main Features

Advantage: Quick, simple and efficient union: No machinery required. It does not require anchors or jaws

Technical Features

- Easy transport and handling. Adaptable to winding terrain. Excellent water hammer behavior. It can be installed in adverse conditions: rain, presence of water in trench ... The tightness improves when loading. 50 years design life.
- Range: available up to 16 bars in PE100. Compatible with PE100, PE80, monotube. Manufactured with 6 m or 12 m length pipe.
- Working temperature: from -20 °C to +40 °C.

Certifying Body

Details if available.

INFRASTRUCTURE

WATER DISTRIBUTION



PE FITTINGS

Description

PE material is the more used polymer in infrastructure market segment, the new gas and water pipelines are around the 65% in PE.

Thanks to the experiences done by Aliaxis in this fields during the last 40 years, FIP brand is able to offer a complete range of short and long spigot fittings system for butt welding connection, long fittings for electrofusion welding.



Main Features	Very light in weight, low permeability, simple method of installation.
Technical Features	<ul style="list-style-type: none"> • Range: DN 20÷800. • Working temperature: -20÷60 °C.
Certifying Body	EC 10/2011, DM 21/3/73, DM 174/2004, KTW.

INFRASTRUCTURE

WATER DISTRIBUTION



MAGNUM 3G - HCR (HIGH CHEMICAL RESISTANCE)

Description

High chemical resistance compression fitting system.
System for joining pressure pipes with high resistance to corrosion.



MAGNUM 3G

Main Features	<ul style="list-style-type: none"> • Easy and fast connection to pipe thanks to "slide and tighten" system that allows an easy pipe introduction, ensuring a unique hydraulic seal due to the tightening of the external nut. • High performance. Made from advanced thermoplastic materials. Chemical and corrosion and resistance CO₂. Suitable to replace brass fittings in building and infrastructure segments. Composite body drinking water compliance. EPDM seal ring 70 Shore A drinking water approved.
Technical Features	<ul style="list-style-type: none"> • Materials suitable for severe chemical application and drinking water approved, useful to replace brass fittings in water authorities application. Nut and clinching ring in POM, body in plastic composite, gasket in EPDM. Provided of visual indicator to assure the correct tightening of the nut. • PN16 at 20 °C to meet the needs of high pressure systems . • Range: from 20 mm or d25 mm to 32 mm. • Working temperature: up to + 23 °C.
Certifying Body	ACS.

INFRASTRUCTURE

WATER DISTRIBUTION

WATER METER VALVES

Description

Water meter valves with body in PPS, high performance corrosion-resistant thermoplastic suitable for use in installations disinfected with chlorine for drinking water



Main Feature

- High performance.
- Valves made from advanced thermoplastic materials.
- Chemical and corrosion and resistance ClO_2 .
- Suitable to replace brass valves in building and infrastructure segments.
- Composite body drinking water compliance.
- EPDM seal ring 70 Shore A drinking water approved.

Technical Features

- For PEHD or PELD pipes. PN16 at 20°C.
- Range: 25 mm and 32 mm.
- Working temperature: up to + 23 °C.

Certifying Body

Details if available.

STRAUB-FLEX / STRAUB-OPEN-FLEX

Description

STRAUB-FLEX and STRAUB-OPEN-FLEX pipe couplings enable pipe connections for practically all conceivable pipe diameters, for the same or different types of pipe materials, various media and temperatures as well as for a wide range of the operating pressure values. As STRAUB-FLEX pipe couplings cannot axially absorb any forces, the pipes must be secured axially using appropriate measures on-site such as tie rods, fixed and sliding points, concrete abutments etc. The sealing sleeve separates the coupling casing from the pipe surface so that sound, vibrations and oscillations are optimally damped. STRAUB-OPEN-FLEX pipe couplings have the same characteristics as STRAUB-FLEX couplings, but expand their possible uses.



Main Features

- Sizes Up to 3800mm are possible
- Allows pipe settlement and compensation without losing the seal on the pipe
- Rep Flex and Open Flex allow pipe repairs on all types of pipe materials to take place
- Progressive sealing system increases the service life.
- Re- useable
- Allows different diameters of pipe material up to 30 mm to be connected

Technical Features

- Outside diameter: 48.3 up to 4064.0 mm.
- Temperature: -20 °C up to +180 °C.
- Sealing sleeve: EPDM, NBR, FPM/FKM.

Certifying Body

- ABS Certificate.
- Bureau Veritas Certificate.
- DNV GL.
- Rina Certificate.
- China Classification Society.

STRAUB STEP FLEX E REP FLEX

Description

STRAUB-FLEX and STRAUB-OPEN-FLEX pipe couplings enable pipe connections for practically all conceivable pipe diameters, for the same or different types of pipe materials, various media and temperatures as well as for a wide range of the operating pressure values. As STRAUB-FLEX pipe couplings cannot axially absorb any forces, the pipes must be secured axially using appropriate measures on-site such as tie rods, fixed and sliding points, concrete abutments etc. The sealing sleeve separates the coupling casing from the pipe surface so that sound, vibrations and oscillations are optimally damped. STRAUB-OPEN-FLEX pipe couplings have the same characteristics as STRAUB-FLEX couplings, but expand their possible uses.



Main Features

- Length compensation.
- Very large diameters possible.
- Fold-out (STRAUB-OPEN-FLEX).
- Can be used for connecting pipes without removal of existing pipes.

Technical Features

- Outside diameter: 48.3 up to 4064.0 mm.
- Temperature: -20 °C up to +180 °C.
- Sealing sleeve: EPDM, NBR, FPM/FKM.

Certifying Body

- ABS Certificate.
- Bureau Veritas Certificate.
- DNV GL.
- Rina Certificate.
- China Classification Society.

F6.61

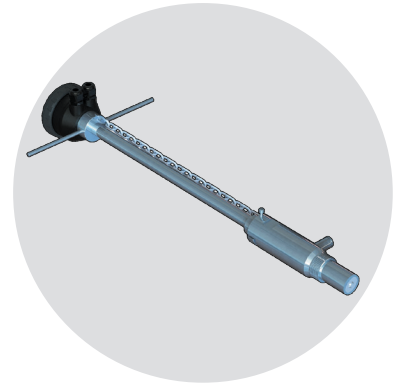
Description

FLS F6.61 Hot Tap Insertion Magmeter Flow Sensor is a flowmeter without moving mechanical parts which can be applied for the measurement of dirty liquids so long as they are conductive and homogeneous.

The sensor can provide three different options: frequency output to be connected to FLS flow monitors, 4-20 mA output for long distance transmission and PLC connection and the new volume pulse output freely settable.

FLS F6.61 Insertion Magmeter is provided with an USB interface and a dedicated software (freely downloadable from FLS web site) which allows to easily set by a PC all parameters according to specific installation requirements.

The sensor can be assembled in a wide dynamic range of pressurized pipe sizes from DN50 (2") to DN900 (36") using a standard clamp saddle and an isolation ball valve.



Main Features

- Adjustable sensor position.
- Hot-Tap installation.
- Operating parameters settable by PC interface.
- Pressure intake.
- Standard 1 1/4" BSP process connection.
- No moving parts, no wear, maintenance free.
- Flow Rate Range settable from 0.05 to 8 m/s (0.15 to 25 ft/s).
- Accurate measurement of dirty liquids.
- 4-20 mA, frequency or volume pulse outputs.
- Bi-directional flow measurement selectable.

Main applications

- Water distribution.
- Leak Detection or Monitoring.
- Raw water intake.
- Water and waste water treatment.
- Ground water remediation.

Certifying Body

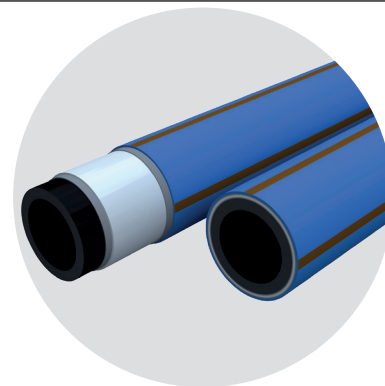
CE - RoHS Compliant - EAC.

PROTECTA_LINE

Description

The tried and trusted barrier system. Protecta-Line is the market leading and original barrier pipe system that has been tried and tested by water companies and housebuilders for 25 years to safely transport drinking water through areas of contaminated land and sites with potential future contamination concerns.

Protecta-Line's comprehensive range is available from 25mm up to 630mm and incorporates a diverse range of fully approved fittings for different jointing methods to meet every customer's requirements. Developments in this range over the years ensures a complete service-to-mains PE barrier pipe and fittings system ensuring that your scheme can be completed using Protecta-Line compatible products from trunk-mains to service connections.



PROTECTA-LINE THE TRIED & TRUSTED BARRIER SYSTEM

Main Features

- Proven protection against all recognised brownfield contaminants.
- Dedicated fittings range.
- Lightweight and flexible.
- Excellent lifetime cost savings.
- Kitemarked system.
- Peace of mind from using a proven product.

Technical Features

- Range: Sizes 25 mm to 630 mm.
- Protecta-Line Electrafusion, mechanical, compression and ferrule fittings approved to BS8588 and WRAS.

Approved to

WRAS and BS 8588, the new British standard for barrier pipes and fittings



EXCEL-PLUS® - DISINFECTANT-RESISTANT PIPES

Description

Multilayer pipe for water supply lines made of PE100 RC and inner lining of PVDF Kynar®. Optimum performance in places of concentrated disinfection and high temperature.



Main Features

Mechanical resistance. The body in PE100 RC PN16 gives the pipe greater mechanical resistance to punching and the fast and slow propagation of cracks. High resistance to corrosive soils and electrolytic corrosion generated by transport in electrical environments. Insensitivity to disinfectants. The inner lining of PVDF provides lasting protection against oxidation generated by disinfectants. It is a polymer characterized by high chemical resistance to oxidants in strong concentration and high temperature. Impermeable to hydrocarbons. The Excel Plus® pipe demonstrated its impermeability to hydrocarbons, presenting an identical performance at these three-layer multilayer but with greater ease of installation. Biofilm inhibition. The inner lining of Kynar® PVDF considerably slows bacterial proliferation in the tube walls compared to a standard PE tube, or a steel, and facilitates the removal of that biofilm.

Technical Features

- Material: inner lining of PVDF, outer layer of PE100 RC SDR11. Color: blue RAL 5017, white marking in accordance with the standard. Reference standards: UNE-EN-12201.
- Range: from Ø25 mm to 63 mm, in coils (50 meters) and sticks (5 meters). Soon up to 110 mm.
- Working temperature: from -20 °C to +40 °C.

Certifying Body

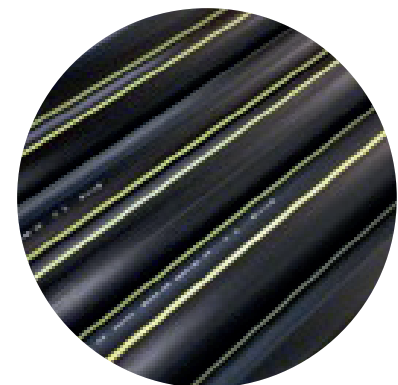
Health Certificate ACS of the CARSO Laboratory.



GASYPOL PE100

Description

Pipe for gaseous fuels.



Main Features

Resistant to the fast and slow propagation of cracks and point loads

Technical Features

- PE100 RC. Pipe made with latest RC resin generation that gives it greater resistance to slow and fast propagation of fissures and loads punctual. Black with yellow strip.
- Range: from Ø20 mm to 315 mm, in coils and sticks. Working pressure classes: SDR11-PN16, SDR17-PN10.
- Working temperature: from -20 °C to +40 °C.

Certifying Body

Hessel declaration of compliance with PAS 1075 available.



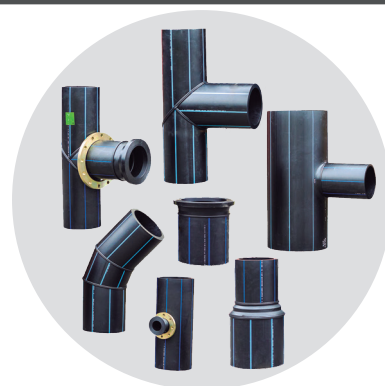
INFRASTRUCTURE

MUNICIPALITIES

FABRICATED FITTINGS

Description

Custom-made fabricated fittings.



Main Features We can carry out custom pieces or projects according to specific needs.

Technical Features

- Made from PE100 pipes.
- Range: from Ø20 mm to 630 mm. For larger diameters please consult us.
- Working temperature: from -20 °C to +40 °C.

Certifying Body Details if available.



INFRASTRUCTURE

MUNICIPALITIES

EASYCLIP MECHANICAL CONNECTION

Description

EasyClip is a compression fitting saddle, providing a fast lateral connections to the main sewage pipe, without use of any adhesives or cement. This system enables the creation of a new connection to a new or pre-existing pipe, suitable for both foul and rainwater.

Very low volumes of ground excavation, working method directly on the top of the main pipe, no curing time is required, complying with the regulation of the major Water Companies, warranty of sealing and full bore flow.



REDI

Main Features

- Reliable and fast connection to pipes
- Major reduction of the time required for excavating and backfilling existing pipelines.
- Speed of installation.
- Installation without the use of sealants.
- Ease of installation.
- Low overall installation costs.
- Guaranteed joint security.
- Flexible solutions.

Technical Features

- Entrance pipe Ø160; Ø200.
- Applicable on various pipes material PVC-U, HDPE, PP, GRP, Clay, Concrete, Corrugated.
- Diameter of main pipe Ø250 – Ø1200.
- Version with swivel to help connection.

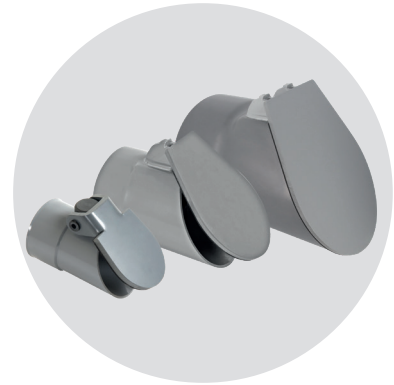
Certifying Body Tested according to EN13598 (refer to catalogue for certification list) tested & certified; Approved by most Water companies; MPA; CSTB; internal tests (DOP).



FLAP VALVES

Description

The Nicoll flap valves prevent pests in the discharge pipes and backflows. Positioned at the end of the pipe it is suitable for different kinds of soil and waste/sewage systems : rainwaters, retention basins etc...



Main Features

- Robust injected hinge .
- Elastomeric seal on the surface.
- Simple and easy installation: female socket to be solvent welded.
- Fabricated parts available on request.

Technical Features

- Thick PVC valve and hinge with nitrile rubber gasket over the entire surface of the flap.
- Wide range from diameter 100 up to 400 mm.

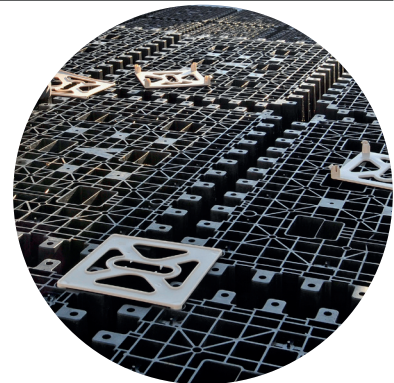


WATERLOC®

Description

WATERLOC® rainwater management solution makes it possible to temporarily store runoff water before gradually returning it to the network, to infiltrate it at the source when the ground allows it or to reuse it.

WATERLOC® can be integrated into all types of structures: non-traffic, light and heavy traffic areas.



Main Features

- Stackable and nestable Waterloc® modules considerably facilitate transport, handling and storage
- Modular system.
- Lightweight: Waterloc® cell only 13 kg.
- The simplicity of interlocking of the modules facilitates the assembly of the basin and help saving time on the site.

Technical Features

- Material: Virgin polypropylene.
- Monolithic design: WATERLOC® solution offers high mechanical resistance and durability.
- Inspectable.
- Cells of 250 liters: 95 % of void.
- Plate and accessories (connectors, customized items, outlets).
- Technical support for projects.



INFRASTRUCTURE

MUNICIPALITIES

HYDRAULIC CHANNELS

Description

CONNECTO® and KENADRAIN® are professional ranges of hydraulic channels for both, light duty (garages, driveways, patios, swimming pools, terraces etc...) and heavy duty applications or intensive traffic (car parks, gas stations, roads and non trafficked areas of hard shoulders), meeting the highest environmental demands in rainwater management.

Those pre-fabricated systems, thanks to their male-female interlocking assembly and their complete range of accessories (vertical, side outlets and sump units) enable an easy installation and integrate perfectly to the drainage network.



Main Features

- Possibility to carry out all kinds of installation (crosses, tees, angles) thanks to the modular CONNECTO® system.
- High hydraulic performance thanks to the smooth surface and range of accessories available in large diameters.
- Light weight.
- High resistance to horizontal and vertical loads thanks to the material and its design optimized by computer modelling.
- Functional and ease of installation: easy opening of the outlets, tight connections to the PVC fittings to the pipe networks.
- Aesthetic: can be installed in paved, concreted and asphalted surrounding surfaces..

Technical Features

Material:

- CONNECTO®: Polypropylene except shallow channel drains made of PVC,
- KENADRAIN®: channel body made of thick polypropylene with galvanised steel edge rails for a better mechanical resistance.
- Excellent resistance to frost, de-icing salt and to most chemical agents,
- Patented system to fix the gratings for Kenadrain system for widths (150, 200 and 300 mm).

CONNECTO®:

- Available in 4 different heights (54, 60, 98, 115 mm) for width 130 mm.
- Available in width 200 mm (height 142 mm).
- Load classes: from A15 to C250.
- Large choice of gratings in different materials (PVC, polyamide, ductile iron, galvanized and stainless steel) and designs (slotted, mesh, invisible slot).
- Large range of accessories (horizontal, vertical outlets).
- Innovative solutions such as the new invisible slot grating and new PVC gratings enabling expansion management.

KENADRAIN®:

- Available in 4 internal widths (100, 150, 200 & 300 mm) with galvanized or stainless steel edge rails.
- "Park" drain: 80 mm shallow channel for multi-storey car parks.
- Cascade system" for widths 100 mm with 4 different depths to optimize hydraulics of the installation.
- Slotted solutions for widths 100 and 150 mm in different stainless steel grades (430, 304 and 316).
- Load classes: from A15 to E600.

Certifying Body

In compliance with EN1433 standard.
Gratings compliant with People with Reduced Mobility accessibility requirements.



FRIALEN® SAFETY FITTING COUPLERS AND SHAPES

Description

Sustainable solutions for water and gas utilities.



Main Features	With exposed heating coils for optimal heat transfer, large insertion depth, wide fusion zones plus cold zones at the end and in the middle to prevent the flow of molten material, for use without holding devices.
Technical Features	<ul style="list-style-type: none"> • Gas operating pressure up to 10bar, water up to 16 (25) bar. • d 16 - d 1200. • Working temperature: from -10 °C to +45 °C.
Approvals	Water and Gas and Hydrogen application EN 1555-3, -4, ISO 4437-3, -4, for drinking water and pressure drainage systems according to EN 12201-3, -4 and ISO 4427-3, -4.
Certifying Body	DVGW, Watermark, Kiwa et. al.



FRIALEN® SAFETY FITTING SPIGOT SADDLES

Description

Simplified installation of branch lines



Main Features	Under-pressure tapping possible, covers several dimensions, differentiated clamping technologies, broad range.
Technical Features	<ul style="list-style-type: none"> • Gas operating pressure up to 10bar, water up to 16 bar. • Range: d 250 - d 1200. • Working temperature: from -10 °C to +45 °C.
Approvals	Water and Gas and Hydrogen application EN 1555-3, -4, ISO 4437-3, -4, for drinking water and pressure drainage systems according to EN 12201-3, -4 and ISO 4427-3, -4.
Certifying Body	DVGW, Watermark, Kiwa et. al.



INFRASTRUCTURE

MUNICIPALITIES

FRIALEN® SAFETY FITTING SHUT-OFF VALVE FRIALOC®

Description

The unique PE shut-off valve, facilitates the completely fused and homogeneous PE piping system for water application.



Main Features

Thanks to the innovative mechanism, a reliable shut-off can be achieved with only 9 or 14 turns and without major force. Very low-wear drive. A forced flushing prevents dead spaces and stagnation. The small sealing area minimises biological growth. The free passage corresponds up to d180 mm to the connecting pipe SDR 11.

Technical Features

- Water operating pressure up to 16 bar.
- d 90 – d 250.
- Working temperature: from -10 °C to +45 °C.

Approvals

Water.

Certifying Body

DVGW.



INFRASTRUCTURE

MUNICIPALITIES

FRIALEN® SAFETY FITTING TAPPING TEES AND VALVES

Description

House connection saddles for use on pipes with operating pressure.



Main Feature

Integrated drill with solid upper and lower stop, incl. integrated torque limiter (DAA) or with actuating spindle in stainless steel 1.4305 (DAV). A complete tool-free mounting of the saddle by innovative fast clamping system (RED SNAP). By new design, 50 % of total installation time can be saved. With exposed heating coil.

Technical Features

- Gas operating pressure up to 10 bar, water up to 16 bar.
- Range: d 40/d20 – d 225/d 63 Top Loading TL up to d 400/63.
- Working temperature: -10 °C to +45 °C.

Approvals

Water and Gas application.

Certifying Body

DVGW.



FRIAFIT® - THE CLOSED PE SEWAGE SYSTEM FOR MUNICIPALITIES

Description

Longest service lifetime and lowest maintenance cost for sewage and waste water application.



Main Features

For the jointing of HD-PE pipes in non-pressure and pressure systems for sewage, wastewater or drinking water pipes. With exposed heating coils for optimal heat transfer, large insertion depth, extra wide fusion zones plus cold zones at the end and in the middle to prevent the flow of molten material for use without holding devices. With pin indicator for visually checking fusion.

Technical Features

- Generally to SDR 33 - SDR 11 pipes.
- FRIAFIT couplers AM and sewage bends ABM/ABMS to SDR 33 - SDR 17 pipe.
The FRIAFIT sewage system is designed for unpressurised pipes (open conduits). Under DIN EN 1610, the maximum test pressure is 0.5 bar. FRIAFIT couplers AM SDR 17 are also approved for use in drinking water and PN 10 pressurised pipe systems.
- d 110-d 1200.
- Working temperature: from -10 °C to +45 °C.

Approvals

Waste water, sewage, drinking water
FRIAFIT couplers AM SDR 17 have been certified under DVGW GW 335-B2 (certificates DV-8606BO6114 and DV-8611BO6115) and are subjected to regular monitoring by external agencies.

Certifying Body

DVGW.



FRIAMAT®

Description

FRIAMAT fusion units for pipe jointing. Comfortable, long service life.



Main Features

The range of application depends on the power requirement of the fitting to be and the respective processing temperature. FRIAMAT Universal Fusion Units up to d 900 and of FRIAMAT XL up to d 1200. The fusion starts automatically after scanning the barcode label on the respective fitting.

Technical Features

- FRIAMAT 7 prime and FRIAMAT prime eco are equipped with a Bluetooth® interface. The availability of the Bluetooth function in the FRIAMAT fusion unit and thus the possibility of using the FRIAMAT APP is given in many countries worldwide.
- Range: FRIAMAT 7 prime & basic - FRIAMAT prime eco - FRIAMAT print eco - FRIAMAT basic eco.
- FRIAMAT units operate reliably at ambient temperatures from -20 °C to +50 °C.

Approvals

Acc. ISO12176-2.

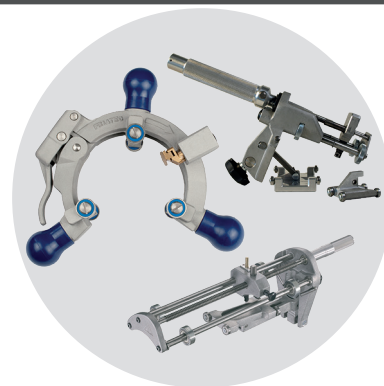


INFRASTRUCTURE MUNICIPALITIES

FRIATOOLS® SCRAPER TOOLS

Description

Accessories for pipe jointing. Comfortable, long service life.



Main Features

Dimension-bound compact scraper tools for the reliable removal of the oxide layer of HDPE and PE-Xa pipes and at the outlets of FRIALEN safety fittings. Super long scraping length, in the diameter d 32 also for FRIALONG long couplers. Scraper blade made of carbide with 2 edges (twice the service life). Automatic compensation of pipe out-of-roundness and tolerances. Manual operation, with hand crank or cordless screwdrive.

Technical Features

- Range: d 20- d 1200.

Certifying Body

DVGW.

REPAIR SOLUTIONS (WIDE RANGE, STRAUBCLAMP, ULTRAGRIP, FRIAGRIP)

Description

Complete solution for any kind of pipe repair or material transition.



Main Feature	Range of restrained and flexible pipe couplings, flange adaptors, repair clamps and dedicated repair products, suitable for any pipe material to be found in water or gas pipe schemes; designed for 50 years service life
Technical Features	<ul style="list-style-type: none"> • Gas operating pressure up to 5 bar, water up to 16 bar (maximum pressure depending on size and range). • Range: DN 32-DN 5000.
Approvals	Specific approvals for gaskets and coatings available.
Certifying Body	DVGW W270, WRAS (Sealings).





Agriculture

FILTRATION

Filtmaster

Irrigation valves and air release valves

Irrigation valves for pe pipe

IRRIGATION

Single and double union irrigation ball valves

Compression Fittings Astore

Clamp saddles

Compression fitting gama 55

FLS instrumentation (F3.00.W)

FERTIGATION

FS-FC

ULF-F3.80

S1 and S2 solenoid valve

VEE - EASYFIT

SXE/SSE - EASYFIT

WATER NETWORK

Astore double union ball valves

Ball valves

AGRICULTURE FILTRATION

FILMASTER

Description

Filtration systems. Manual and automatic filters with discs or screens filtration elements in different materials and micron.



Main Features

The most efficient, versatile & profitable filtration tool.

- **Efficiency:** The application of the most advanced technology results in a higher level of filtration performance.
- **Versatility:** The wide modular capacity of its components allows its perfect use for any kind of water in both agricultural and industrial fields.
- **Profitability:** The design of its components optimizes the cleaning process with lower energetic costs.

Technical Features

- Manual filters: body in injected polypropylene reinforced with glass fiber. 3/4", 1", 1 1/4" and 1 1/2" connections BSP and NPT threaded.
- Automatic filters: body in reinforced polyamide. 1" female metallic reinforced outlet to be used either with a drainage or air valve. 2", 3" and 4" connections BSP and NPT threaded or grooved FITMASTER connections. In filtration position the piston compress the disc cartridge and the conical flexible non-return membrane remain open, allowing filtered water to the network. In cleaning position the backwash valve inverts clean water flow into the filter, closing the membrane.
- Range: Manual filters from 3/4" to 1 1/2" (up to 15 m³/h). Automatic filters from 2" to 4".
- PN10 bar. Manometric intake connections. Dimensioning: According to the net flow and water quality. Minimum backwash pressure: 2,5 bar. Minimum filtration pressure: 1 bar. Minimum backwash flow: 8 m³/h for 2" backwash valves and 12 m³/h for 3" backwash valves. maximum temperature 60° C- pH interval: 4-13.

AGRICULTURE FILTRATION

IRRIGATION VALVES AND AIR RELEASE VALVES

Description

The JIMTEN air release valves manage the air inside the pipelines, preventing damages by negative pressures or overpressures and guarantee an optimal hydraulic performance. Irrigation valves.



Main Features

Air release valves double (X-294 and X-380) and triple (X-295) effect. Compact design and single hydraulic locking for all functions. Body and base manufactured in Polyamide and EPDM lock joints. Floater manufactured in expanded Polystyrene. X-380 floater manufactured in PP that guarantees closing at low pressures and prolongs the service life of the installation avoiding the suction of impurities.

Technical Features

- **Expulsion:** when the pipe is being filled up, the air release valve remains open expelling all the surplus air outside the installation. **Air admission:** during the emptying of pipelines, vacuum, is generated by negative pressures. The air valve opens automatically to let atmospheric air going into the network. **Expulsion of residual air (only model X-295):** the air release valve purges constantly the residual air generated in the installation. The irrigation valve have been designed so it is possible to disassemble part of the installation while the rest remains under pressure. In order to do so, the valve must be placed in the correct direction, as indicated by the arrow on the casing.
- Range: 3/4", 1", 1 1/2" and 2" NPT/BSP male threaded connections. PN 16 bar. Working pressure: 0,2-16 bar.
- Working temperature: from +5° C to 60° C.

IRRIGATION VALVES FOR PE PIPE

Description

In irrigation PE pipes are well known and appreciated, Astore PVC valves are a good solution to adjust the flow in these pipeline, the union ends able to couple to PE pipe or threaded gives different possibilities.

This range of Astore PVC ball valve are expressly realized to connect PE pipes.



Main Features	Easy and simple connection, through compression fitting solution and Butt welding or electrofusion welding.
Technical Features	<ul style="list-style-type: none">• Range: from d.16 mm up to d.110 mm.• Working temperature: from 0 °C up to 60 °C.



AGRICULTURE IRRIGATION

SINGLE AND DOUBLE UNION IRRIGATION BALL VALVES

Description

The range of Astore ball valves is an excellent solution very popular in the irrigation market segment. The ease of use and the fitness for purpose are the main and appreciate characteristics.



Main Features	Double and single union ball valves provided of free carrier, adjustment through the external nut.
Technical Features	<ul style="list-style-type: none">• Range from d.16 up to 110 and from r.3/8" up to 4".• Pressure rating up to PN 16.• Working temperature from 0 °C up to 60 °C.
Certifying Body	CE marks.



AGRICULTURE IRRIGATION

COMPRESSION FITTINGS ASTORE

Description

The Astore compression fitting is one of the hystorical fittings in the irrigation and water conveying market. Despite this it remains one of the more appreciated mechanical connection for PE pipe thanks to its characteristics of strenght and ease to install.



Main Features	The range of Astore compression fittings includes many solutions for the installer. Very simple in terms of number of components, the particular shape of the clinching ring is a unique feature, which has always been highly appreciated.
Technical Features	<ul style="list-style-type: none">• Body and nuts molded in PP-B, clinching ring in acetalic resin, o'ring gasket in NBR.• Range: from d.16 mm up to d.110 mm.• Working temperature: from 0 °C up to 60 °C.
Certifying Body	ACS, DVGW (d-20-25-32)



CLAMP SADDLES

Description

Astore mechanical clamp saddle in PP-B used to obtain branches from the main pipe, an economic and simple solution, useful if it needs a quick intervention



Main Features

Simple O'Ring gaskets to ensure the sealing of the branches, connection obtained by screwing the metallic nuts and bolts. The Astore saddle are suitable to apply on all metric pipes independently from the material.

Technical Features

- Consisting of two part in PP-B connectable by zinc plated steel nuts and bolt, provided of reinforcing ring on the branch.
- Range: PN 10-6-4 according to dimension, available in three releases 503, 505 and 508 (double branch).
- Working temperature: from 0 °C up to 60 °C.



COMPRESSION FITTING GAMA 55

Description

Water conduction system for PE pipe.



Main Features

Jimten's Gama'55 offers the most extensive range in Compression Fittings for PE pipes (low & high density) of the market. Its compact design, easiness of installation and reliability has been tested by the different European Certification Organizations.

Technical Features

- The operating security is mastered thanks to the perfect water tightness system and the conical pressing ring, for all kinds of polyethylene pipes, whose tensile strength and tearing of resistance overcomes all the existent norms specifications.
- Range: PN16 from Ø16 to 63 mm. PN10 from Ø75 to 110 mm.
- Working temperature: from -20 °C to +80 °C.
- Possibility to be supplied with barcode.

Certifying Body

AENOR, AIMPLAS, ITC, CEMAGRAF, ACS.

F3.00.W

Description

The new FLS B.L.E. (Bluetooth Low Energy) F3.00.W is an innovative system for flow monitoring based on Bluetooth transmission technology.

The paddlewheel flow sensor is provided with an integrated transmitter that communicates with the receiver. The receiver is compatible with FLS monitors or other devices which can provide digital inputs.

The FLS B.L.E. F3.00.W is a reliable solution for every kind of solid-free liquid.

Easy and quick to install, it is suitable for pipes in different materials, sized from DN15 to DN600 (0,5" to 24").

It can cover also long operating distances up to 100 meters and work in presence of electromagnetic interferences generated by devices like pumps or inverters.

Through the auto-diagnostic system, the user is always informed about the lack of signal and the exhausted battery.



Main Features

- High chemical resistance.
- Pipe size range: from DN15 (0,5") to DN600 (24").
- Low pressure drop.
- Self-pairing system.
- Self-diagnostic check and reporting.
- High Electromagnetic interference immunity.
- Long operating distance.

Main applications

- Flow control and monitoring.
- Water regeneration plant.
- Water distribution.
- Fertigation.

Certifying Body

CE - RoHS Compliant - GOST R.



FS-FC

Description

FS-FC Rotameters operate according to the variable area principle, where a float is suspended in upward flowing media in a conic plastic tube.

The vertical position of the float within the metering tube depends on the flowrate of the media.

The metering tube is graduated in suitable flow units and the top edge of the float indicates the instant flow rate value.

Versions for liquids and gases are available, providing accurate and cost effective measurement with scales in l/h and Nm³/h.



Main Feature

- Metering tubes are available in Trogamid (PA) suitable for most inert media, PVC-U suitable for slight corrosive media and Polysulfone (PSU) suitable for corrosive media on an extended operating temperature range.
- Standard scales: H₂O, NaOH 30%, NaOH 50%, HCl 30-33%, Air.
- End connectors available in PVC-U, PVC-C, PP, SS, Malleable Cast Iron. Male threads molded onto the end of the metering tube are used for easy mounting of unions. Standard unions are in PVC-U, but others are available according to the different working conditions; Metal unions widen the range of operating conditions such as pressure and temperature.
- The floats are available in Stainless Steel AISI 316 and in PP to match the proper chemical compatibility with the flow medium and to offer different measuring ranges.
- Magnetic Float option is available to be combined with micro switches for MIN and MAX alarm, clamped on the guide of the flowmeter. The micro switches, housing a bistable reed contact are activated by the passage of the magnet incorporated into the float.
- Flowmeters body are equipped with a double guide allowing the installation of two alarm in a very close position.
- Double scale option available for specific application requirements to customize measuring units for an easy conversion or comprehension of the flow rate values.
- High level of accuracy: FS accuracy class 2,5; FC accuracy class 4.
- Simple operation and very limited maintenance.

Technical Features

- Construction
 - FS: Standard variable area flowmeters
 - FC: Compact variable area flowmeters.
- Size range DN 10 ÷ 65.
- Tube material PVC-U, PA, PSU.
- Seal material EPDM supplied as standard, FPM.
- Float material Red PP, AISI 316 Stainless Steel FS-FC.
- DN range: DN10-DN65.
- Working temperature:
 - Operating pressure PVC-U, PVC-C, PP end connectors: 10 bar with water at 20 °C
 - Carbon Steel, Stainless Steel end connectors: 15 bar with water at 20 °C
 - Temperature range PVC-U (supplied as standard)
 - Transparent PVC-U, Trogamid, Polysulfone (PSU): from 5 °C (41 °F) to 60 °C (140 °F) .
- PVC-C
 - Transparent PVC-U, Trogamid: from 5 °C (41 °F) to 60 °C (140 °F)
 - Polysulfone (PSU): from 5 °C (41 °F) to 80 °C (176 °F) .
- PP-H
 - Transparent PVC-U, Trogamid: from 5 °C (41 °F) to 60 °C (140 °F)
 - Polysulfone (PSU): from 0 °C (32 °F) to 90 °C (194 °F) AISI 316 Stainless Steel, Carbon Steel
 - Transparent PVC-U: from 5 °C (41 °F) to 60 °C (140 °F)
 - Trogamid: from -20 °C (-4 °F) to 60 °C (140 °F)
 - Polysulfone (PSU): from -20 °C (-4 °F) to 100 °C (212 °F).

Certifying Body

CE.



AGRICULTURE FERTIGATION

ULF-F3.80

Description

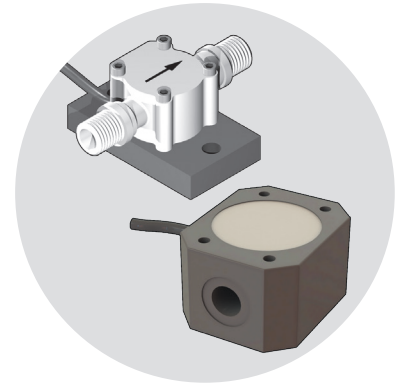
Solution for flow measurement in dosing system.

The FLS compact Ultra Low Flow sensors ULF have been for use with every kind of aggressive and solid-free liquids as long as featured by a viscosity and density similar to water.

The FLS Oval Gear Flow sensors F3.80 have been designed following the main industrial application requirements: high mechanical resistance and reliable performances.

These sensors are suitable to measure a wide range of viscous solid-free liquids with a very high accuracy and repeatability.

Both sensors lines can be combined with FLS monitors and transmitters.



Main Feature

- Compact dimensions.
- Easy mounting and installation.
- High chemical resistance.
- High viscosity fluids measurement (F3.80).
- Low pressure loss.

Main applications

- Water treatment.
- Dosing systems.
- Pulsating flows measurement (F3.80).
- High viscosity and not conductive fluid measurement (F3.80).

Certifying Body

CE - RoHS Compliant - EAC.



AGRICULTURE FERTIGATION

S1 AND S2 SOLENOID VALVE

Description

S1 and S2 are electrical actuated valves which they owe their functioning to presence internally of a solenoid, able to stop the flow actioning a moving gasket. Simple principle but used from ever in fertigation management.



Main Features

Installation and maintenance friendly design: high cycling lifetime electric solenoid actuator with moving internal components designed to exceed 5 million cycles without maintenance. Slewing round shape coil, IP65 protection class. Integrated manual override. All metallic parts are isolated from fluids and external environment.

Technical Features

- Up to PN6 .
- Range: DN 4-15.
- Working temperature: PN6, 0-60 °C.

Certifying Body

EAC - RSM.

VEE EASYFIT

Description

FIP and Giugiaro Design designed and developed VEE Easyfit, the innovative True Union ball valve with union nut tightening control, that permits simple and safe installation for reliable service in time.

The precision and accuracy necessary from this market segment requires valves able to reach high performance: VEE easyfit is the answer.



Main Features	100% corrosion free double union ball valve with threaded ball support. The Easyfit feature allows a safe installation, regulation and maintenance without additional tools.
Technical Features	<ul style="list-style-type: none"> • PN16, 0-60 °C. • Range: DN 10-100. • Working temperature: PN16, 0-60 °C.
Certifying Body	ABS - BUREAU VERITAS - DNV - EAC - RMRS.

SXE/SSE EASYFIT

Description

The Easyfit check valve line developed with Giugiaro Design offers two different versions: SXE with ball shutter and SSE with spring loaded shutter. Easyfit check valves stand out for the innovative installation method that guarantees reliable service over time. This valve is also equipped with the customizable Labelling System.



Main Features	True union Easyfit check valves with compact design. SXE model without spring for preferred vertical installation. SSE model with spring for horizontal and vertical installation.
Technical Features	<ul style="list-style-type: none"> • PN16, 0-60 °C. • Range: DN 10-100. • Working temperature: PN16, 0-60 °C.
Certifying Body	ABS, Bureau Veritas, DNV, NSF, RMRS.



AGRICULTURE WATER NETWORK

ASTORE DOUBLE UNION BALL VALVES

Description

The 322 Astore ball valve is a good and significantly economic way to manage the water conveying in the traditional water network, a very simple on/off method to use in PVC pipeline.



Main Features	Connection to the pipeline by solvent welding or threads, excellent balancing among price and performances.
Technical Features	<ul style="list-style-type: none">• Double union valves in PVC, gasket in EPDM, ball seats in PE.• Pressure rating up to PN 16 according to the diameter.• Range: from d.16 mm up to d.110 mm.• Working temperature: from 0 °C up to 60 °C.
Certifying Body	CE



AGRICULTURE WATER NETWORK

BALL VALVES

Description

PVC ball valves 2 and 3 ways, threaded, PE pipe connector, solvent socket or flanges connections. Ball valve Ø 140 DN125 full bore specially designed for agri-food industry. Internal smooth surface that prevents damage caused by solids in suspension.



Main Features	Body in PVC up to Ø 63mm. Upper diameters body in PPFV
Technical Features	<ul style="list-style-type: none">• The valve has been designed so it is possible to disassemble part of the installation while the rest remains under pressure. In order to do so, the valve must be placed in the correct direction, as indicated by the arrow on the casing.• Range from Ø20 to 140 mm solvent socket or 1/2" to 2 1/2" threaded.• Working temperature: from +5 °C to 6 °C.
Certifying Body	Details if available.

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