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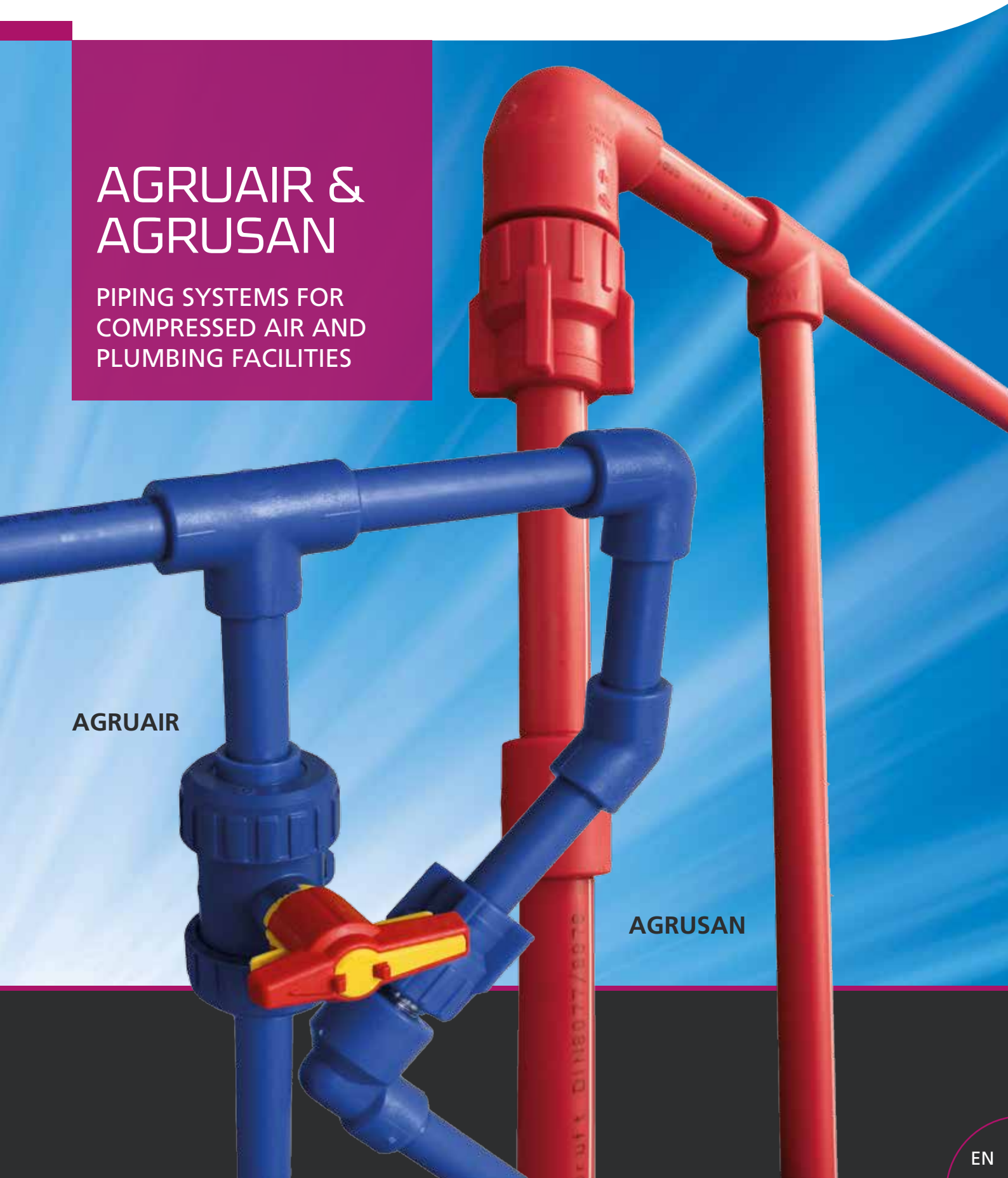
AGRUAIR & AGRUSAN

PIPING SYSTEMS FOR COMPRESSED AIR AND PLUMBING FACILITIES



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The Plastics Experts.

The AGRU success story already spans seven decades. Founded in 1948 by Alois Gruber sen., the company is now counted among the most important comprehensive suppliers for piping systems, semi-finished products, protective liners for concrete and geomembranes made of engineering plastics. The fact that we provide everything as a single source supplier distinguishes us from many competitors. We process exclusively high-quality thermoplastic materials. And when it comes to problem-solving expertise for material selection and installation, we are your best partner.

AGRUAIR is a compressed-air system for loads of up to 16 bar which is available in outer diameters from 20 mm to 110 mm. Made of PE 100 it is ideal for compressed-air applications. PE 100 remains permanently free of corrosion, is resistant to oils used in compressors, to stress cracks, and impacts, and can be used between - 40° and + 60° Celsius. As is usual in the case of PE lines, AGRUAIR can be installed both above ground and underground. The installation is very simple and typically handled by means of heating element socket welding or electrical socket welding. AGRUAIR has been approved for both compressed-air and water supply in accordance with ON B5172 or ON EN 12201. The system is approved by CAL/OSHA in the United States and approval by the CSA Group exists for Canada. All the important PE standards have also been met.

AGRUSAN is designed for plumbing and heating installations. In addition to hot and cold water, more aggressive media, such as those used in hospitals and health spas, can be transported. The material, PPR, is designed for operating temperatures between - 5° and + 70° Celsius. AGRUSAN is therefore highly resistant to heat ageing. Because it is also resistant to corrosion, abrasion and various chemicals (aqueous solutions of acids, alkalis, salts and hydrocarbons), AGRUSAN pipes have a very long service life. The smooth interior surfaces of the pipes prevent deposits from building up and blocking the pipes, while good heat insulation properties and reduced flow noise make it an ideal system for the plumbing and heating industries. AGRUSAN complies with the following standards: DIN 8077, DIN 8078, DIN EN 12108, ÖNORM EN 12202and ÖNORM EN ISO 15874-1.

AGRUAIR & AGRUSAN
The more economical pressure pipe systems

Three things are particularly important when it comes to installing compressed-air and plumbing pipe systems: efficiency, operational reliability and ease of installation. The AGRUAIR & AGRUSAN system meets all these requirements. Regardless of whether you need to transport air or water under pressure, these flexible, temperature-resistant plastic piping systems are always your best choice.

High economic efficiency

Easy installation & universal use due to wide range of fittings
AGRUAIR & AGRUSAN can be installed extremely quickly
- comprehensive range of fittings in PE 100 and PPR
- heating element socket welding, butt welding or electrical welding possible
- pipelines can be laid above ground or underground

Maintenance-free pipework

No corrosion and debris inside the pipe because of smooth surfaces
AGRUAIR & AGRUSAN offer the right solution for every requirement
- resistance to corrosion, abrasion and many chemicals
- completely smooth interior surfaces prevent deposits effectively
- wide operational temperature range of - 40° to + 70° Celsius

Full pressure resistance

AGRUAIR made of PE 100 is ideal for transporting compressed air
PE 100 blue offers several advantages over PVC, ABS and copper
- it is significantly superior to PVC in terms of impact resistance and elasticity
- in contrast to ABS, it is permanently resistant to compressor oil
- 26% less pressure loss compared to copper thanks to smooth and corrosion-free interior surfaces

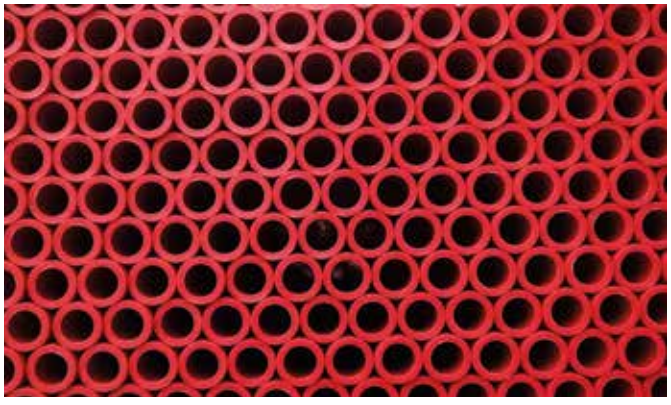
High temperature resistance

AGRUSAN made of PPR red is a system for hot and cold water distribution
PPR red is multifunctional, because it
- is suitable for cold and hot water, and aqueous solutions of acids and bases
- is resistant to heat ageing and is heat-insulating
- is optimised for applications between - 5° and + 70° C

AGRUAIR & AGRUSAN
Piping systems for compressed air and plumbing facilities

AGRUAIR – efficient compressed-air transport

The material advantages that PE 100 is known for, such as toughness, flexibility and elongation at break, are ideal for the AGRUAIR compressed-air pipelines and ensure optimal flow conditions. Compressing air also always creates condensation, which causes corrosion or patina inside metal pipes. PE 100 remains completely maintenance and corrosion-free, and even the machine oil from the compressor cannot damage the material. AGRUAIR pipes are insensitive to vibrations as well. Thanks to their flexibility, low weight and very good welding properties, installation is easy and safe.



AGRUSAN – safe hot water transport

PPR, polypropylene random copolymer, is the ideal material for transporting hot and cold water safely in the plumbing and heating sectors, and also for industrial applications such as acid and alkaline transport. Excellent impact resistance and smooth internal walls make the system practically maintenance-free once installed. Thanks to its good thermal and sound insulation properties, a much thinner layer of additional insulation can be used. Flow noise is also perceived to be quieter. AGRUSAN pipes are temperature-resistant and extremely durable.

Maintenance-free pipework

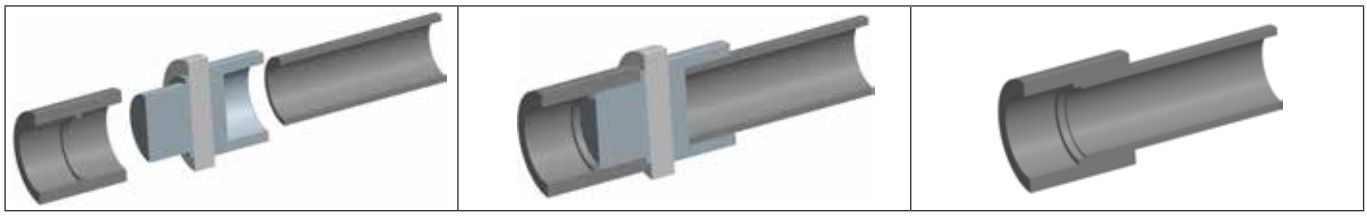
AGRUAIR & AGRUSAN are set apart by the fact that they are completely maintenance-free. Thanks to the robustness and flexibility of the plastics, the pipes' smooth interior walls and the complete lack of corrosion, a system typically remains sealed and deposit-free for decades once welded. The plastics PPR and PE 100 can fulfil virtually any requirement in the wide temperature range from - 40° to + 70° Celsius. To regulate the bleeding of compressed air, AGRUAIR is equipped with a controllable plastic ball valve.

Comprehensive range of fittings

Efficiency is extremely important when it comes to AGRUAIR and AGRUSAN. And this includes making them fast and easy to install. The comprehensive range of fittings in PE 100 and PPR, some of which have metal inserts, ensures that pipes can be joined quickly and safely. In addition to heating element socket welding, electrical socket welding is also possible.

Installation using socket welding

In heating element socket welding, the pipe and fitting are welded overlapping. The pipe end and fitting are heated up to the required welding temperature using a sleeve- or socket-shaped heating element and then welded together. The pipes, heating element and fitting are dimensionally matched so that a joining pressure builds up during welding. Heating element socket welding can be performed manually with outside pipe diameters of up to 50 mm. In the case of larger pipes, a welding device is necessary due to the increasing joining forces.



Socket welding process preparation | Adjusting and heating | Joining and cooling

References

PPR is the ideal material for hot water systems.
The image shows an installation in a hospital where operational reliability is the top priority.

Clean installation

AGRUAIR pipes are supplied as rods. When it comes to the installation of pipelines in visible areas and below ceilings in particular, the big advantage of AGRUAIR pipes is their linearity.

Special applications

Thermal waters rich in mineral nutrients can rapidly corrode metal pipes and cause deposits to build up and block pipes. AGRUSAN is the perfect choice here. PPR red is so well-suited to the high temperature and the aggressiveness of the brine transported here, it could be tailor-made for it. AGRUSAN's standard applications also include industrial applications involving aqueous solutions of acids and bases.

AGRUAIR/AGRUSAN product range

Pipes

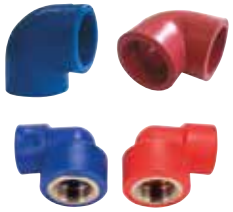
AGRUAIR PE 100 blue
OD 20 mm – OD 110 mm

AGRUSAN PPR red
OD 20 mm – OD 110 mm

Elbow 90°,
Transition elbows 45° and 90°

AGRUAIR PE 100 blue
OD 20 mm – OD 110 mm

AGRUSAN PPR red
OD 20 mm – OD 110 mm



Elbow 45°

AGRUAIR PE 100 blue
OD 20 mm – OD 110 mm

AGRUSAN PPR red
OD 20 mm – OD 110 mm

Reducer concentric

AGRUAIR PE 100 blue
OD 25/20 mm – OD 110/90 mm

AGRUSAN PPR red
OD 25/20 mm – OD 110/90 mm

Flange adaptors

AGRUAIR PE 100 blue
OD 20 mm – OD 110 mm

AGRUSAN PPR red
OD 32 mm – OD 110 mm

Tees normal/reduced

AGRUAIR PE 100 blue
OD 20 mm – OD 110 mm

AGRUSAN PPR red
OD 32 mm – OD 110 mm

Adaptor with metal thread

AGRUAIR PE 100 blue
OD 20 mm – OD 63 mm

AGRUSAN PPR red
OD 20 mm – OD 63 mm

Ball valve

AGRUAIR PE 100 blue
OD 20 mm – OD 63 mm

E-couplers

AGRUAIR PE 100 black
OD 20 mm – OD 110 mm

AGRUSAN PPR grey
OD 20 mm – OD 110 mm

Valves

AGRUSAN PPR red
OD 20 mm – OD 40 mm

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Your distributor

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AGRU Kunststofftechnik GmbH
Ing.-Pesendorfer-Strasse 31
4540 Bad Hall, Austria

T. +43 7258 7900
F. +43 7258 790 - 2850
office@agru.at

www.agru.at