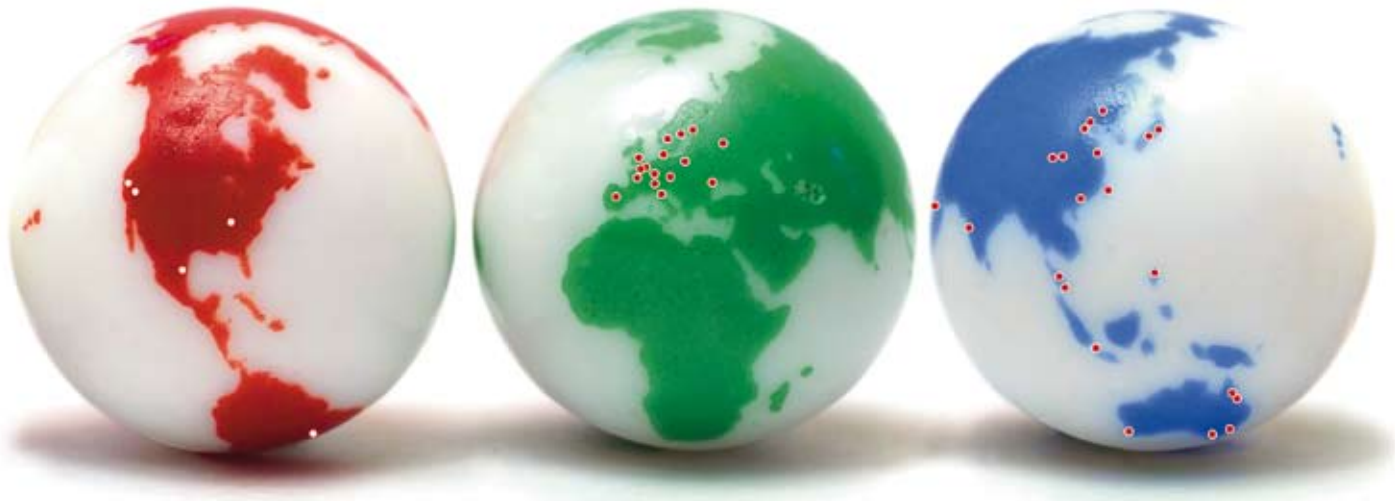


GF Piping Systems → worldwide at home

Our sales companies and representatives ensure local customer support in over 100 countries.

www.piping.georgfischer.com



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Adding Quality to People’s Lives



Building Technology

From Applications to Products

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4 - 5	Find your Solution
6 - 7	Application Environment Hotel
8 - 9	Application Environment Hospital
10 - 11	Application Environment Industrial Building
12 - 13	Application Environment References & Solutions
14 - 17	Hot and Cold Water
18 - 19	Water Treatment Systems
20 - 21	Grey Water
22 - 23	Heating
24 - 25	AC Cooling
26 - 27	Compressed Air
28 - 29	Fire Protection
30 - 31	Gas
32 - 47	Product and Systems
48 - 49	Material Specification
50 - 51	Product Range and Approvals

GF Piping Systems

Your global system provider

We are dedicated to designing, manufacturing and marketing piping systems for the safe and secure conveyance of liquids and gases.

We put customers first

- customer needs guide our product development
- we offer customer support and training worldwide
- we measure your satisfaction

We act fast

- local presence worldwide
- superior logistics
- speed in all details

We do what we say

- tested quality
- always trustworthy

Your global benefits at a glance

Training

- different materials and products
- installation techniques
- connection and jointing techniques

Planning

- professionally trained staff
- planning documentation (online, CD-ROM)
- product library (online and CD-ROM)
- online catalogues

Standards

- ISO
- BS
- ASTM

Distribution network and availability

+GF+

Added Value

GF Piping Systems at your service

We support you throughout

	Project Decision	Material Definition Specifications Planning	Warehousing	Installation
	End Customer	Engineering Company	Distributor	OEM/Installer
Piping system solutions consulting				
Technical and cost optimization				
Mechanical and chemical advice				
Material recommendation				
CAD library				
Planning fundamentals training				
Documentation (printed and electronic)				
Submit an offer				
Joining technologies and installation training				
Efficient distribution system				
Local certificates and approvals				
International standards				
Global subsidiaries				

Brandname	Material
INSTAFLEX PB	→ Polybutylene
iFIT	→ Polybutylene and Multilayer pipes, fittings PPSU
ALUPEX EXPRESS	→ ML
AQUASYSTEM	→ PP-R
COOL-FIT	→ ABS, PE 100
PRIMO FIT	→ Polyethylene, others



1
Start with Application Environment



2
Select your Application



3
Find your System Solution

Characteristics	Ø PP-H	PVC-U
Temperature limits (25 years)	0 / +80 **	0 / +60
Weight / meter pipe (PN10, d63)	0.49	0.4
Density	0.90-0.91	1.38
Flexural modulus	1250	> 2400
Tensile modulus	1300	
Stiffness *	3	5
Toughness *	5	3
	3	2
	1	1
Charpy notched impact strength	85	> 6
	4.8	> 3
	-	-
Taber abrasion	150...200	250...300
Abrasion resistance *	4	4
Coefficient of thermal expansion	0.16...0.18	0.07...0.08
Thermal conductivity	0.23	0.15

4
Define your Material

Type 546
2-way Ball Valve



Fi 5678

Type 567
Butterfly Valve



GMST 5885

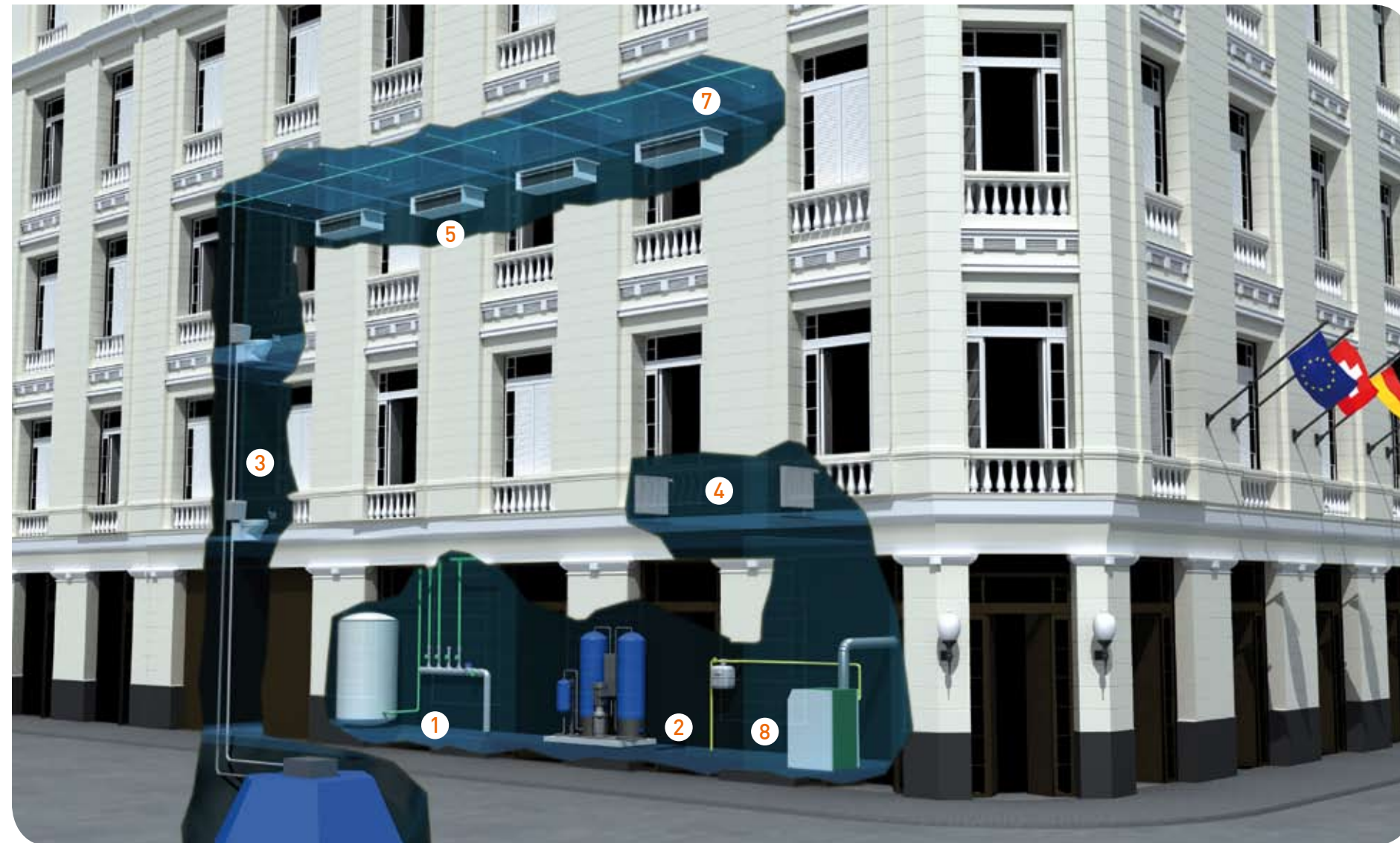
Variable Area Flow Meter



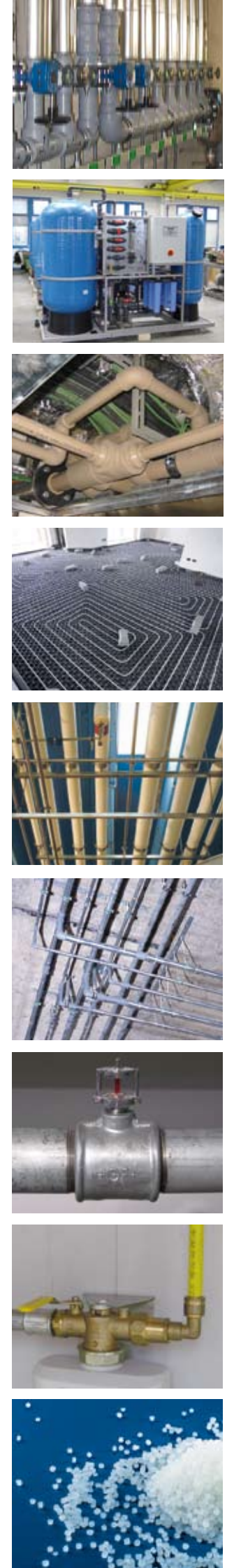
Fi 8222

5
Add Products

Hotels are an oasis of comfort and calmness. Guests expect first-class service which includes a perfectly functioning heating, air-conditioning and water supply at all times. Disturbances and noise – caused by repair work on defective piping systems – or even rust-coloured water from corroding pipes are unpleasant and make a negative impression on hotel guests, leading them to think twice about returning to this hotel. That is why it is always worth while to invest in good quality piping systems from GF Piping Systems. Our piping systems are corrosion- and repair-free and offer a prompt return on investment.



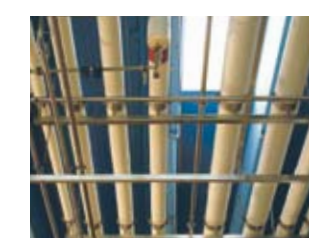
Hot and Cold Water 1	Water Treatment 2	Grey Water 3	Heating 4	AC Cooling 5	Fire Protection 7	Gas 8
INSTAFLEX (PB) iFIT (PB / ML) ALUPEX EXPRESS (ML) AQUASYSTEM (PP-R) Malleable cast iron fittings	INSTAFLEX (PB) iFIT (PB / ML) ALUPEX EXPRESS (ML) AQUASYSTEM (PP-R) PE (electro fusion) PVC-U	INSTAFLEX (PB) iFIT (PB / ML) ALUPEX EXPRESS (ML) AQUASYSTEM (PP-R) PE (electro fusion) PVC-U	iFIT (ML / PEX / PERT) ALUCLIMA (ML) Malleable cast iron fittings PRIMOFIT	COOL-FIT (ABS, PE 100)	Malleable cast iron fittings	Malleable cast iron fittings ALUPEX GAS (ML) PRIMOFIT PRIMOFIT FIREJOINT



Hospitals are a place of healing and convalescence – requiring highly complex equipment and medical apparatus for this purpose. Piping systems and cable ducts line the long hospital corridors. The technology is kept well out of sight, but it is nonetheless of vital importance. Hygiene is another concern and everything must be in perfect working order. Quality products are therefore essential. Compact, space-saving fittings, flexible piping and easy installation technology are the answer. GF Piping Systems supplies all this and more. You, your engineers and installers are provided with individual solutions for all your needs.



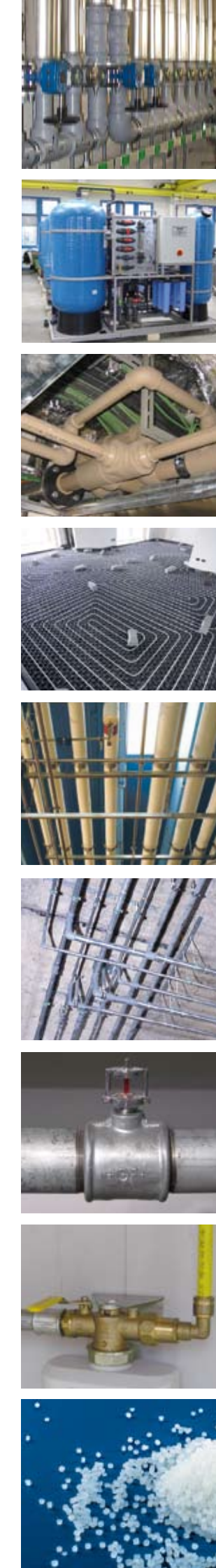
Hot and Cold Water 1	Water Treatment 2	Grey Water 3	Heating 4	AC Cooling 5	Compressed Air 6	Fire Protection 7	Gas 8
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Industrial buildings are a virtual playground for planners. Every building is constructed for a different purpose; creative solutions are needed. A factory, production and research facilities – the requirements are extremely diverse. But they have one thing in common: they all need a reliable supply of water, gas and compressed air. Production processes must operate without fail. Whether a new building, renovation or extension – GF Piping Systems has optimal systems for all areas so that you are assured the best possible solution. We focus on such important features as safety, environmental protection, durability and cost effectiveness.



Hot and Cold Water 1	Water Treatment 2	Grey Water 3	Heating 4	AC Cooling 5	Compressed Air 6	Fire Protection 7	Gas 8
INSTAFLEX (PB) iFIT (PB / ML) ALUPEX EXPRESS (ML) AQUASYSTEM (PP-R) Malleable cast iron fittings	INSTAFLEX (PB) iFIT (PB / ML) ALUPEX EXPRESS (ML) AQUASYSTEM (PP-R) PE (electro fusion) PVC-U	INSTAFLEX (PB) iFIT (PB / ML) ALUPEX EXPRESS (ML) AQUASYSTEM (PP-R) PE (electro fusion) PVC-U	iFIT (ML / PEX / PERT) ALUCLIMA (ML) Malleable cast iron fittings PRIMOFIT	COOL-FIT (ABS, PE 100)	INSTAFLEX (PB) Malleable cast iron fittings PRIMOFIT	Malleable cast iron fittings	Malleable cast iron fittings ALUPEX GAS (ML) PRIMOFIT PRIMOFIT FIREJOINT





Application Environment

GF Piping Systems developed the Quality Management System (QMS) to improve the comfort and the safeness for the end user. The QMS commences at the planning stage and terminates with handing over the building. Possible topics are:

Noise reduction

with a full plastic system

Hygienic concepts

for more safety

Prefabrication

which reduces costs and installation time

No corrosion

which ensures a longer life time

In addition, our advanced calculation method provides more safety to avoid pressure hammer and gives more consistency in hygiene. These are some of the advantages that GF Piping Systems is able to offer our clients.



GF Piping Systems offers custom-made solutions for each building. These references pointing our long-term expertise in building technology and our excellent customer relations. With GF Piping Systems you benefit from a professional partner for application-orientated plastic piping installations from AC to Gas. We developed interesting solutions to satisfy all your requirements

References and Solutions



from reliability, durability and low-noise transition. Our high quality plastics (PB, PP-R and PPSU) are guaranteed corrosion-free. An additional benefit is our local support during the building period to reach a higher quality of the installation on the building site. Use our competence to build, monitor and operate your network.





Hot and Cold Water



Systems in combination

INSTAFLEX

PB pipes d16 – d225
Pipes in bars or coils

Joining technology

Compression fittings d16 – d25
Socket fusion fittings d16 – d110
Electrofusion fittings d16 – d110
Electrofusion sockets d16 – d225
Butt fusion fittings [d125, d160, d225]

iFIT

PB pipes d16 – d32
Pre-insulated pipes d16 – d32
Polybutylene pipes and multi-layer composite pipes (PE-RT-AL-PE).

AQUASYSTEM (PP-R)

Socket fusion fittings d20 – d125
Electrofusion couplings d20 – d125

AQUASYSTEM application ranges

PN 10 cold water (10 bar at 20 °C)
PN 20 hot water (8 bar at 70 °C)
Temperature range 0 – 80 °C

ALUPEX

Multilayer pipe (pex-c/ Al / pex-b)
ML pipe dn 14 – dn 75
Pre-insulated ML pipes dn 14 – dn 32
Axial pressed
Cr-brass fittings dn 14 – dn 75

Malleable cast iron fittings

FE ½" – 4"
PRIMO FIT ¾" – 3"
PE d20 – d63



The maximum of flexibility. Our electrofusion and socket fusion fittings permit efficient, fast and economical installation of the different systems. In combination with iFIT you have all the possibilities for the installation of hot and cold water. All the systems and jointings are developed for a life time of 50 years on a working pressure of 70 °C at 10 bar. A full plastic system like INSTAFLEX offers you a noise reduction and prevents corrosion. These advantages give more comfort and save maintenance cost during the life time of the building and installation. GF Piping Systems offer you systems for a safe and reliable installation as well as local support to increase the installation quality during the building work.

Hot and cold water from the source to the tap. Our systems are designed for potable water. For this application GF Piping Systems offer you a reliable system with a hygienic approval that simulates a service life of 50 years. With our plastic systems you have an absolute corrosion free installation and less incrustation. This reduces the maintenance costs and gives a better comfort for you building during the whole life time. The flexibility of our system allows the pre-fabrication of the manifolds and the risers. With this advantage you are reducing the installation time and the overall operational costs.

Pre-fabrication provides shorter building time. With INSTAFLEX (PB) it is possible to pre-fabricate pipelines in coils, up to 7 floors including all the outlets. Flexibility in the branch positioning is possible with weld-in saddles of AQUASYSTEM (PP-R). These are installed in the shafts and connected to the run-outs with the iFIT system. The hot and cold water distribution solutions from GF Piping Systems are system-related and therefore ideal for new builds, renovation projects and the repair of traditional systems. The high quality plastics PB, PP-R and PPSU are guaranteed corrosion-free and have a very long service life.



Feel the comfort

Comfort and hygiene. Reliability and safety. These things are especially important to us in our homes. With the state-of-the-art building technology line of products from GF Piping Systems, we contribute to comfort and safety in your home.

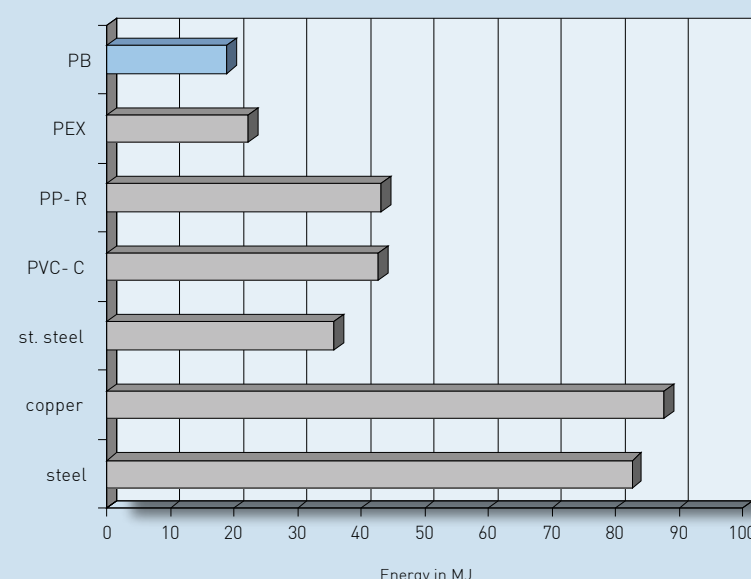
Planners of hotels, hospitals and industrial buildings want comprehensive, ecological and cost-efficient solutions. GF Piping Systems offer a variety of materials and innovative systems; we have the perfect solution for every application.

These advantages give more comfort and save maintenance costs during the life time of the building and installation.

- noise reduction
- no noise due to pressure hammer
- corrosion-free
- less incrustation, better water quality
- less heat loss, shorter warm-up time of the water

GF Piping Systems offer excellent solutions that satisfy all requirements for your building projects or for your installations. All from one source.

Energy equivalent value for 1 meter pipe DN 32

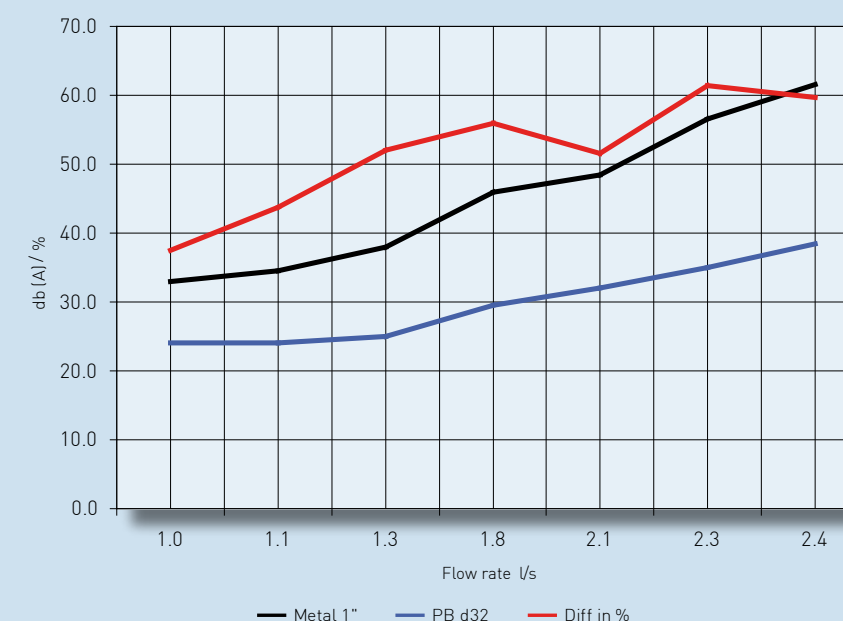


Noise reduction. The noise reduction is one of the requirements for a modern building. With the plastic systems of GF Piping Systems you have the maximum of noise reduction for the whole installation. This gives you a higher value for the building and more comfort for the user. The charts above show the sonic speed and transmission of a plastic piping system compared to a metal system.

Heat loss. Hygiene is the most important issue for the drinking water installation. Our plastic piping systems are hygienic and dependable solutions for your applications. GF Piping System developed a system for every type of building with low heat conductivity: hot water stays warm for a longer time and cold water stays at a low temperature for a longer time. With this solution you save energy costs and provide more comfort for the user.

Hot and Cold Water

Sound test SVGW Nr. 0711 - 5292



Expansion

Material	Fixed point	Expansion loop	Clamp intersp.
PB 16 - 75	Yes	No	2m*
PB 90 - 225	No	Yes	2m*
PP - R	No	Yes	2m*
ML	No	Yes	2m*

* with pipe carrier

Chemical resistance. Based on the requirement of the water quality of drinking water there is no restriction. You will find further information in the technical documentation of the several products available. In terms of hypochlorite, ozone, aggressive gases please contact your GF Piping Systems partner.



Water Treatment Systems



Water
Treatment

Systems for Water Treatment

PVC-U d6 – d400
PVC-C d16 – d225
PB d16 – d225

Pipes, fittings, measurement and control instruments, valves and installation tools

System features

PVC-U 0 – 60 °C
PVC-C 0 – 80 °C
PB 0 – 95 °C

Media

Sea water
Fresh water
Osmosis water
De-ionized water



High economic efficiency and long service life.

Solutions from GF Piping Systems in PVC-U and PVC-C have become the worldwide leading industrial systems for water treatment thanks to their special features. GF Piping Systems has been producing these plastic piping systems since 1957. Whether for treatment of drinking water or swimming pool water – with plastic systems from GF Piping Systems you know you have a recognised and time-tested solution for your buildings.

Compact solutions from GF Piping Systems. To enable compact constructions, we have developed special components. With our modular automation and SIGNET measurement and control technology you are assured flexible and efficient measurement and control.

The water treatment systems can be pre-fitted by the manufacturer and subsequently installed as compact units. Modules, preassembled with measurement and control technology, are built directly into the piping systems. Water treatment systems for a variety of applications on hotels and hospitals are generated from these individual modules. Whether for drinking water, swimming pools, whirlpools or for waste water treatment, GF Piping Systems has the solution.

Measurement and control technology.

We offer complete solutions in plastic for water treatment and distribution, including automated valves (pneumatic and electric actuators). SIGNET systems for flow measurement, for pH value measurement, for pressure and temperature measurement and for conductivity measurement are also included in our product range.

Water Treatment



Grey Water



Grey Water

Grey Water

Systems in combination

INSTAFLEX

PB pipes d16 – d225

Pipes in bars or coils

Fittings and valves

Installation accessories

Joining technology

Compression fittings d16 – d25

Socket fusion fittings d16 – d110

Electrofusion fittings d16 – d110

Electrofusion sockets d16 – d225

Butt fusion fittings (d125, d160, d225)

Weld in saddles d125 – d225

iFIT

PB pipes d16 – d32

Pre-insulated pipes d16 – d32

Innovative modular fitting system with modules and adaptors.

Polybutylene pipes and multi-layer

Composite pipes (PE-RT-AL-PE)

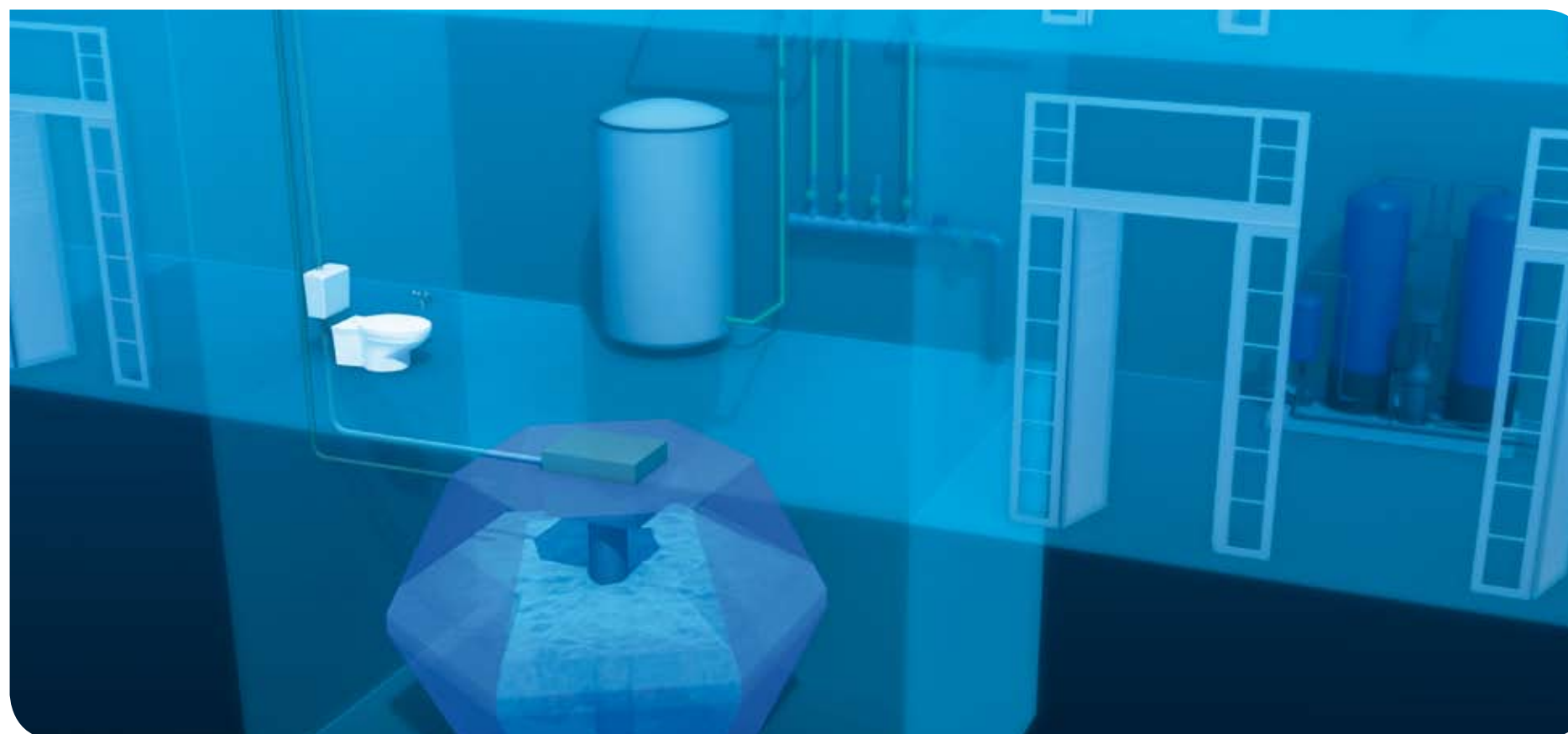
AQUASYSTEM (PP-R)

Socket fusion fittings d20 – d125

Electrofusion couplings d20 – d125

PE electro fusion

PE d20 – d250



Waste water pipes for aggressive fluids.

Appropriate pipes for carrying water from toilets, showers and the kitchens are essential for the safe operation of any building. For different reasons more and more projects use rainwater for garden irrigation, car cleaning or flush tanks - but rainwater can react aggressively on metal. By using a corrosion free system from GF Piping Systems you benefit from the flexibility of our plastic piping system, from the reduction of maintenance costs and from a better sound protection from the pumps. With corrosion free systems you have the possibility to use one system for most of the applications. You save a lot of tools and different systems on the site. With our full plastic system we give you a high quality solution to enhance your efficiency on site and cut the maintenance costs during the system life time.

Pre-fabricated solutions for black and grey water applications.

Black and grey water systems from GF Piping Systems are a major contributing factor to safety. The all-plastic, durable systems complement our drinking water systems ideally. Our modern electrofusion technology or solvent cement jointing technology leads to fast installation and the highly diversified product mix provides installers with the flexibility they require. For custom-made solutions we offer our pre-fabrication service.



Heating

Under Floor Heating, Radiator Connection and Concrete Activation

Systems in combination

iFIT

PB pipes d16 – d32
Pre-insulated pipes d16 – d32
Innovative modular fitting system with modules and adaptors.
Polybutylene pipes and multi-layer Composite pipes (PE-RT-AL-PE).

ALUCLIMA

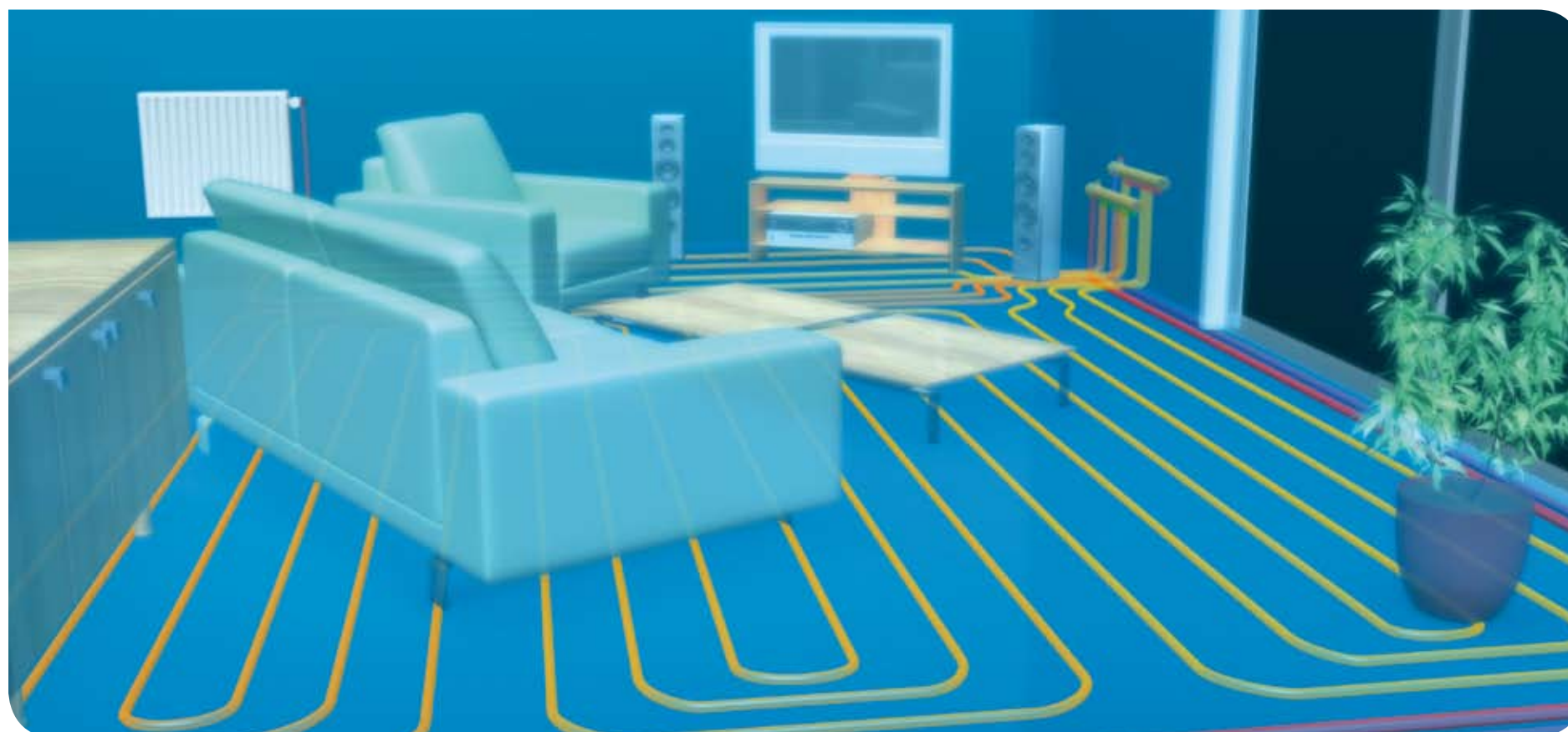
Underfloor heating system with radiant panels
System panels
Multilayer pipe (pex-b/ Al / pex-b) d16 – d20
PE-RT pipe d16 – d20

Malleable cast iron fittings

FE 1/8" – 4"

PRIMOFIT

FE 3/8" – 3"
PE d20 – d63
PN 16 max. 105 °C



Heating that feels good. The energy required to heat buildings is supplied by oil, gas, wood, geothermal heat, heat recovery from industrial and incineration plants, as well as electricity. This energy is transported via water. Modern systems have been designed so that they can operate at water temperatures of max. 60 °C.

Multilayer composite pipes and plastic pipes with an oxygen barrier are used in such applications. GF Piping Systems supplies pipes for radiator connection, floor heating and active components, which comply with building standards in most countries.



Heating

Heating



AC Cooling

System features

COOL-FIT

ABS

Material ABS

(Acrylonitrile butadiene styrene)

d16 – d315

PN 10 (10 bar at 20 °C)

-40 °C to +60 °C

Pipes and fittings

Special components also possible

Especially useful for repairs

Malleable cast iron fittings

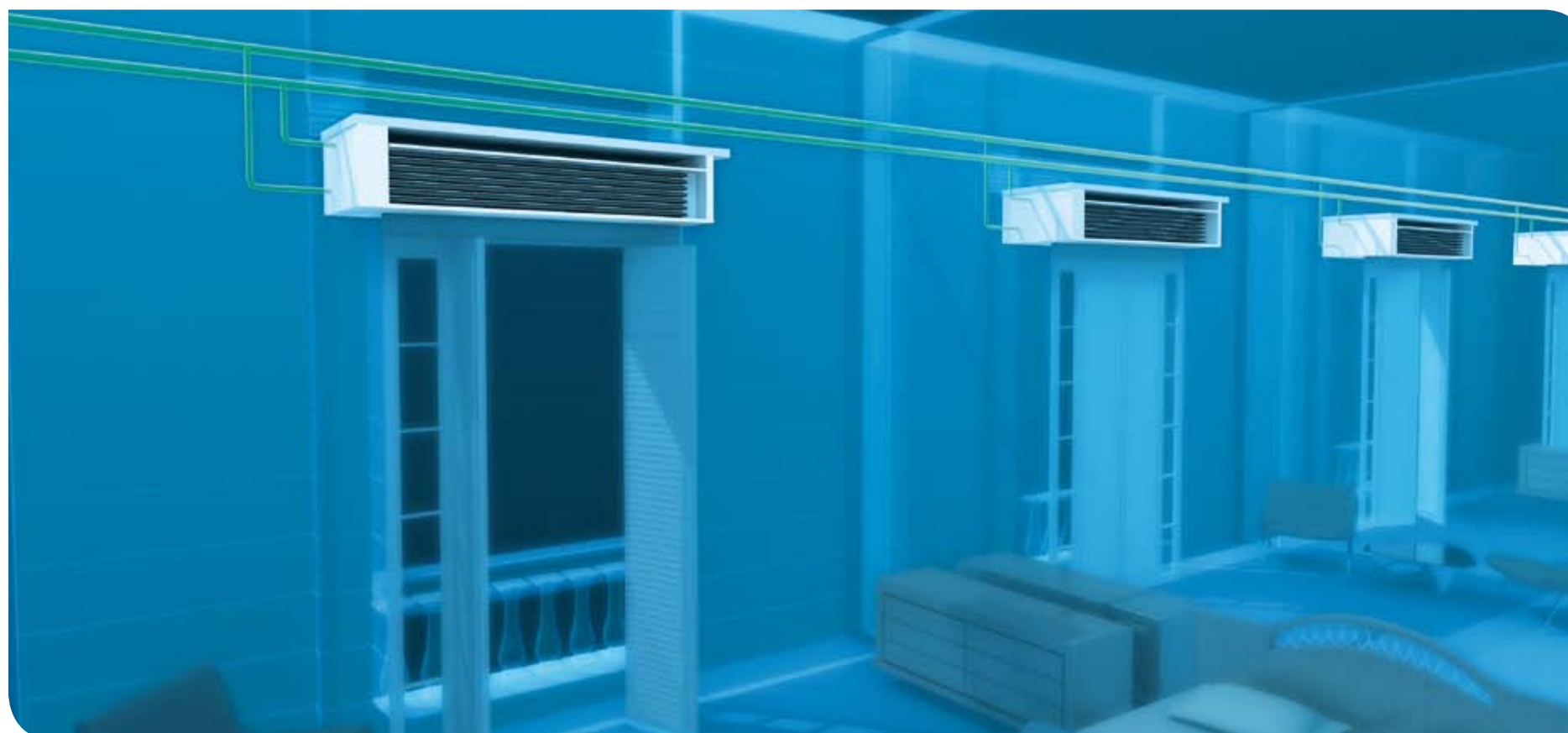
FE ½" – 4"

PRIMOFIT

FE ¾" – 3"

PE d20 – d63

PN 16 max. 100 °C



We know different ways of designing air conditioning systems – with ceiling cooling, with active components or induction equipment. All systems have one energy carrier in common: water. The water can be cold, 3 °C to 14 °C, or warm up to 60 °C, if it is required to heat rooms.

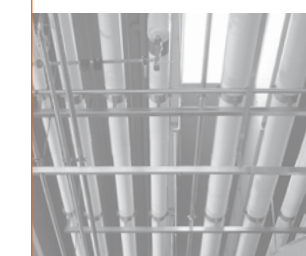
Cold water systems must be well insulated to utilize energy at the right place and to produce a minimum of condensation on the outer pipe walls. The slightest leak in the insulation jacket can cause condensation and – on metal pipes – corrosion. Corrosion on the interior of the pipes can be counteracted with inhibitors, but this is expensive and not entirely ecological acceptable from an

environmental point of view. Furthermore, metal pipe systems should be emptied and cleaned every four to five years because of silting which could clog control valves. All these factors lead to spiralling operating costs for metal air conditioning systems.

Plastic systems from GF Piping

Systems, such as ABS, PE or INSTAFLEX, do not corrode. The risk of silting is also very low since inhibitors are generally not required.

INSTAFLEX is ideal for two-pipe systems as well as for four-pipe heating systems. Polybutylene – the INSTAFLEX material – withstands temperatures up to 95 °C, at a working pressure of 5 bar and with a guaranteed service life of 25 years. Low weight, a choice of jointing techniques and the resulting easy and quick installation are further advantages offered by plastic pipes. GF Piping Systems offer complete systems in plastic as well as butterfly valves, ball valves and the suitable actuators – worldwide from one source.



AC Cooling

AC Cooling



Compressed Air

For Industrial Applications and Laboratories

Compressed Air

System features

INSTAFLEX

PB pipes d16 – d225

Pipes in bars or coils

Fittings and valves

Installation accessories

Joining technology

Compression fittings d16 – d25

Socket fusion fittings d16 – d110

Electrofusion fittings d16 – d110

Electrofusion sockets d16 – d225

Butt fusion fittings (d125, d160, d225)

Weld in saddles d125 – d225

Malleable cast iron fittings

FE ½" – 4"

PRIMOFIT

FE ¾" – 3"

PE d20 – d63



The friction loss should be minimal in a compressed air piping system during the transport of compressed air from a compressor to a tapping point. The quality of the compressed air produced by the compressor should remain consistent and the system must be absolutely tight. These are just some of the important requirements which GF Piping Systems satisfies with their PE100 and PB INSTAFLEX systems. GF Piping Systems provides a complete solution, consisting of pipes, fittings, valves and fixation parts in the working pressure you need.

Air distribution is an essential component in a compressed air supply system. It has a great impact on cost efficiency and transporting energy. A pressure drop of 1 bar reduces output by 30%, while an unnecessary increase of 1 bar sends costs soaring by 10%. The smoothness of the internal wall in plastic systems from GF Piping Systems guarantees minimal pressure loss.

Dividing ring mains into sections with installed isolation valves makes additional adjustment easy by not interfering too much in the production process. Pressure and temperature limits are decisive criteria in material selection. INSTAFLEX allows operating at a higher ambient temperature while still complying with system requirements.



Compressed Air



Fire Protection

System features

INSTAFLEX

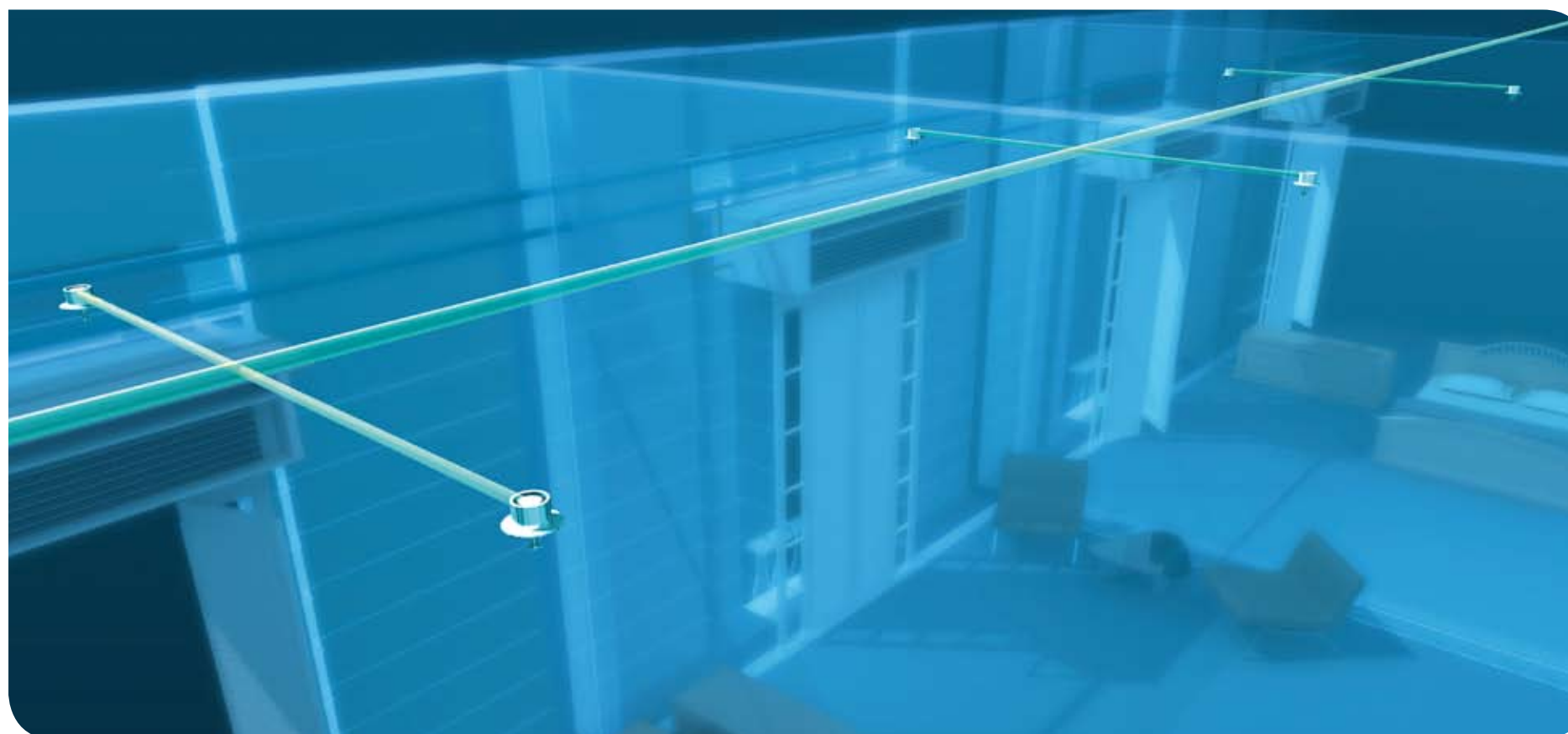
PB pipes d16 – d225
Pipes in bars or coils
Fittings and valves
Installation accessories

Joining technology

Compression fittings d16 – d25
Socket fusion fittings d16 – d110
Electrofusion fittings d16 – d110
Electrofusion sockets d16 – d225
Butt fusion fittings (d125, d160, d225)
Weld in saddles d125 – d225

Malleable cast iron fittings

FE ½" – 4"



Sprinkler systems are traditionally made of steel pipes.

For GF Piping Systems the malleable iron fitting has a history of success beyond comparison. Our fittings are the perfect example of high precision and have all major FM approvals. They are available in a galvanised or black finish.

GF Piping Systems has developed a new method of **installation** in which the sprinkler pipes are built into the concrete ceiling. This enables the use of corrosion-free plastic systems, for example INSTAFLEX. By this means headroom is available in the structural level for other system components and costs can be reduced.



Fire
Protection

Fire Protection



Gas

System features

ALUPEX Gas

Multilayer pipe

(pex-c/ Al / pex-b) d16 – d40

Malleable cast iron fittings

FE 1/2" – 4"

PRIMOFIT

FE 3/8" – 3"

PE d20 – d63

PN 16 max. 105 °C

PRIMOFIT FIREJOINT

FE 1/2" – 2"



The most important issue for a gas installation is the **reliability of a piping system**. With more than 160 years of experience in gas and water GF Piping Systems is a reliable and trusted partner. Especially suited for gas applications are our malleable cast iron fittings or ALUPEX Gas. Both products have different advantages and should be selected according to the respective requirements.

ALUPEX Gas is a piping system made of multilayer pipes and brass screw or press fittings for the gas application in the building. The jointing is an axial press connection (sleeve) or compression fitting. This system allows you a fast and safe connection without o-rings. With the high performance multilayer pipe you are also save fittings

and installation time. GF Piping Systems offers a wide product range from gas lines in the underground to piping systems for the end user in the building.

Malleable cast iron fittings. As safe solution, also for the pre-wall installation malleable cast iron fittings are classified according the EC regulations in the high class "A1" regarding reaction to fire and are therefore approved without fire resistance testing. **PRIMOFIT FIREJOINT** is a compression fitting which offers full end load capability and resistance against fire impact from outside (test procedure: withstand 850 °C for 30 minutes). An additional graphite ring maintains end load capability and sealing during a fire.

Gas



Gas

INSTAFLEX

INSTAFLEX is a full plastic system which complies with the requirements of building technology. The different joining techniques give you the right solution and flexibility for each environment on the building site.

The modern all-plastic system has an outstanding flexibility in installation and operation. It allows cost-effective installation and a reduction of maintenance and energy costs. It offers you a long service life as well as noise-insulation and it is corrosion- and incrustation-free. With INSTAFLEX you increase the quality of the building.

Product range:

Pipes in bars d16 – d225
Material: PB

Pipes in coils d16 – d25
Material: PB

Pipes with protective pipes in coils d16 – d25
Material: PB - PE (protective pipe)

Compression fittings (transition) d16 – d25
Material: Corrosion resistant brass

Electrofusion and socket fusion d16 – d110
Material: PB

Butt fusion with electrofusion socket d125 – d225
Material: PB

Valves with electro and socket fusion d20 – d63
Material: PB



Advantages:

noise reduction for higher comfort

no maintenance costs
no corrosion,
no incrustation

pre-fabrication saves installation time and labour costs

Electro fusion

easy and fast
pre-fabrication possible
full plastic solution
good access in narrow spots

Socket fusion

ideal for pre-fabrication
space-spacing
cuts material costs
full plastic solution

Compression

no special tool
low creep behaviour



Clean the fitting.



Place the pipe into the fitting and tighten the screws to fix the pipe.



Welding.



Check if the weld indicator comes out.

iFIT

You may compare iFIT with a Swiss army knife: one tool for all situations on the building site. iFIT is an innovative modular fitting system with modules and adaptors for bathroom/WC and heating installations. With fewer parts in the range, iFIT is more versatile than traditional installation systems. This allows low inventories with a maximum on flexibility.

iFIT enables more reliable processing thanks to view windows and click joints.

Advantages:

- Push
- fast, easy and safe
- fewer tools, lower investment
- disassembling possible
- turnable
- reduces labour costs
- low stock-keeping
- saves tool costs without electricity
- save claim costs
- extremely cost-effective

Product range:

Pipes in bars d16 – d32
Material: PB / ML

Pipes in coils d16 – d25
Material: PB / ML / PEX

Pipes with protective pipes in coils d16 – d25
Material: PB / ML

Pre insulated pipes in coils 6 mm and 9 mm
Material: ML

Transition fittings
Material: Corrosion resistant brass

Fittings
Material: PPSU



Cut the pipe.



Chamfer.



Push until the pipe fully covers the window.



Push until you hear the click.

ALUPEX

ALUPEX is a piping system made of multilayer pipes and brass screw or press fittings.

The Alupex Express Press system is an innovative piping system consisting of axial compressed fittings and multilayer pipe (PE-Xc/AL/PE-Xb) for sanitary, heating and indoor gas installations. The system is designed for new installations as well as for replacements and / or extensions of existing pipe network. The press fitting system allows an irreversible connection. This is possible thanks to an optimal fitting design, high performance multilayer pipes and efficient tools. An ADZ brass coupling makes the Alupex Express fitting. The tightness is achieved by the nut traction on a deformable ring. This kind of press fitting grants better performances for flow as well as temperature resistance.

Product range:

The product range covers all the usual fittings of the jointing systems for pipes from the dn 14 to dn 75



Advantages:

- extendable with no loss in quality, flexible and easy to process
- system guarantee with irreversible connection
- connection without o-ring, no corrosion
- no welding
- piping systems without overlapping – longitudinal butt welding
- high quality and durable product manufactured with crosslinked PE
- abrasion resistant with PE-X outliner



Cut the pipe.



Chamfer.



Calibration.



Press.



ALUCLIMA

ALUCLIMA is a radiant floor heating and cooling system, composed of insulating panels, piping and a regulation system. In the development of this system GF Piping Systems focused primarily on the durability (safety) and cost-effectiveness of this system.

ALUCLIMA heating and cooling system has a high flexibility in all situations. Easy to install it's the right solution for all kind of buildings (residential, historical, industrial).

ALUCLIMA floor heating works at low temperatures and develops a uniform heat distribution and therefore all air flow is eliminated. This is one of the main causes of allergies. Furthermore, the floor heating is the best solution to eliminate acarus, mould and humidity.

Product range:

ALUCLIMA heating systems are composed from the following products:

Insulating panels: styrofoam or cork panels (10 to 40 mm)

Pipes: multilayer pipes and PE-RT pipes diameter d16 and d20 available

All pipes are available in coils from 60 m to 500 m

Regulation system: water- and room temperature regulation system



Advantages:

The main advantages in using the ALUCLIMA system are given by:

one system for heating and cooling

no draft and dust problems

clean and comfortable ambiance

no radiators

reduction of energy costs

easy to install, high product reliability, long durability

technical support and planning with the help of the GF Piping Systems Team



Cut the pipe.



Chamfer.



Calibration.



Press.



Malleable Cast Iron Fittings

Due to their long history and tradition malleable cast iron fittings are the most common (widest spread) pipe fittings. Because of their durability and mechanical strength these fittings continuously enjoy great popularity.

The material bearing high mechanical stress together with the universal, standardised jointing method ensures a safe use in a wide range of applications.

- sanitary, heating and gas installation
- sprinkler and gas fire extinguishing systems
- construction of industrial plants
- machine construction
- construction of petrol stations
- machines for paper production and printing machines
- commercial vehicles construction

Technical data:

Fittings: White heart malleable cast iron
EN-GJM-400-5 acc. to EN 1562

Surface: black or galvanised
Suitable for: steel pipes acc. to EN 10255

Max. working conditions: 120 °C / 25 bar, 300 °C / 20 bar, interpolated values between

Range: $\frac{3}{8}$ to 4 inch
Temperature range:
-20 °C to +300 °C (short term to -50 °C)

Connection:
jointing threads, sealing on the threads



Advantages:

corrosion retarding and reinforced (free outrunning) internal threads design for the most common articles

narrow threads with precise axial alignment ensure high sealing forces and exact pipe lining

the biggest range of all producers – cost reduction due to a minimum number of joints

highest grade material with best galvanizability

drinking water friendly galvanising with highly pure zinc

drinking water friendly preservation against rust during storage, also ideal for anaerobic sealing

special tested fittings for high pressures above 25 bar



Cut the pipe.



Mark the insert length of the fitting.



Tighten the connection by hand for a dry fit.



Screw the fitting.

AQUASYSTEM

AQUASYSTEM is a full plastic system which complies with the requirements of building technology. The wide product range gives you the right solution for each application: traditional pipes for hot (PN20) and cold (PN10) water, PPR-ALU and FIBRE pipes to reduce the expansions and increase the bracketing distance.

As a full plastic system AQUASYSTEM provides low noise transmission and the reduction of the maintenance and energy costs as well as longevity. Moreover the system is corrosion and incrustation-free. With AQUASYSTEM you improve the quality of the building.

Product range:

Pipes in bars d20 – d125 (PN10 and PN20)
Material: PPR

PPR-ALU Pipes d20 – d125
Material: Alu, PPR

FIBRE Pipe d20 – d125
Material: PPRCT – PPH GF – PPRCT

Socket fusion fittings d20 – d125
Material: PPR

Threaded fittings ½" – 3"
Material: PPR

Electro fusion socket d20 – d125
Material: PPR

Valves d20 – d63
Material: PPR



Cut the pipe.



Mark the insertion depth.



Heat pipe and fitting.



Weld them together.

Advantages:

longevity - designed to work more than 50 years

noise reduction for higher comfort

low pressure losses

low expansion with the fibre pipe

no maintenance costs, no corrosion, no incrustation

low thermal conductivity

Electro fusion

fast and easy
good access in narrow situations
full plastic solution

Socket fusion

easy and reliable
save space
cuts material costs
full plastic solution



PVC-U

The PVC-U piping systems are produced from a unique PVC-U compound to ensure highest possible thermal stability and chemical resistance. The full product range covers all requirements with regard to pipes, fittings, valves, automation as well as measurement & control. A life-time warranty and our comprehensive back-up support service add value to all PVC-U products from GF Piping Systems by optimising their long-term ownership cost.

PVC-C

The PVC-C product range from GF Piping Systems is produced to the same high quality standards as our PVC-U range. Its superior mechanical strength provides excellent reliability for all applications with continuous temperature load of up to 80 °C and for a maximum pressure of up to 16 bar at 20 °C.

Advantages:

- complete product range
- full back-up support based on long-term experience
- reliable and proven solvent cement jointing technique, a technique which is easy to learn and quick to apply
- meets highest demands regarding impact resistance, thermal stability, chemical resistance and service life



Product range:

PVC-U pipes, grey and transparent	PN 4 to PN 16
PVC-U fittings, grey	PN6 to PN16
Ranges	d6 to d400
Standards	ISO/DIN, BS, ASTM, JIS
PVC-C pipes, grey	PN10 to PN 16
PVC-C fittings, grey	PN6 to PN 16
Ranges	d16 to d225
Standards	ISO/DIN, ASTM



Chamfer the pipe.



Clean the pipe and the fitting.



Apply the Tangit cement.



Push the pipe into the fitting.

System features

ABS

Material ABS
(Acrylonitrile butadiene styrene)
d16 – d315
PN 10 (10 bar at 20 °C)
-40 °C to +60 °C
Pipes and fittings
Special components also possible

COOL-FIT

- PN 10
(nominal working pressure 10 bar)
- -50 °C to +40 °C
nominal working temperatures
- DN 10 to DN 300 dimensions

Advantages:

- no corrosion
- high efficiency of insulation = 0.026 W/m.K
- reducing costs of suspension
- 25 years service life
- save installation time
- high product reliability
- hygienically safe and aesthetic



Product range:

Pre-insulated pipe and fittings

Delivered ready to install to site. High quality PUR insulation, black outer jacket, UV and weathering resistant, water and vapour tight joints.

Complete system

Carrier pipe system ABS, low temperature and high impact resistance. Manual and actuated valves for shut-off and flow control. Transition unions for plastic to metal connections.

Joining technique

Reliable, speedy jointing using TANGIT ABS solvent cement, completely homogeneous joint «cold welding» pipe and fitting.



Cleaning the pipe and socket.



Apply the ABS Cement to the inside surface.



Apply the double sided sealing tape around the outer pipe.



Using an open flame apply heat to the sleeve.

This table allows you to select the material according to its characteristics.

Characteristics		ABS	PE 100	PP-R	PVC-U	PVC-C	PB	Unit	Standard
Temperature limits		-40 / +60	-40 / +60	0 / +80	0 / +60	0 / +80	0 / +95	°C	
Weight / meter pipe [PN10, d63]		0.368	0.33	0.49	0.4	0.435	1.020 **	kg /m	
Density		≥ 1.035	0.95	0.90-0.91	1.38	1.5	0.94	g/cm³	ISO 1183
Flexural modulus	23 °C	≥ 1800	-	900	> 2400	-		N/mm²	EN ISO 527-1
Tensile modulus	23 °C		900	-		> 2550	450	N/mm²	EN ISO 527-1
Stiffness *		4	2	2	5	5	1		
Toughness *	23 °C	5	5	4	3	3	4		
	0 °C	4	4	3	2	2	3		
	-40 °C	3	3	1	1	1	-		
Charpy notched impact strength	23 °C	42	83	20	> 6	> 6	30	kJ/m²	DIN EN ISO 179/1eA
	0 °C	-	-	35	> 3	-	14	kJ/m²	DIN EN ISO 179/1eA
	-40 °C	>10	13	-	-	-	-	kJ/m²	DIN EN ISO 179/1eA
Taber abrasion		-	60	150...200	250...300	250...300	160	mm³/10³cycles	DIN 53754
Abrasion resistance *		/	5	4	4	4	4		
Coefficient of thermal expansion	not linear	0.1	0.15...0.2	0.16...0.18	0.07...0.08	0.06...0.07	0.13	mm/m K	DIN 53752
Thermal conductivity	23 °C	0.17	0.38	0.24	0.15	0.15	0.32	W/m K	DIN 52612
Limiting oxygen index LOI		19	< 19	< 19	42	60	< 19	%	ISO 4589
Burning behaviour (0 burning / X self-extinguishing)		0	0	0	X	X	0	0	
Long-term strength MRS		14	10	8	25	25	14	-	ISO 9080 / ISO 12162
Pressure resistance *		3	2	2	4	4	3	-	

	PVC-U	PVC-C	PE 100	INSTAFLEX	iFIT	ABS
	PB					
Pipes	■	■	■	■	■	■
Fittings	■	■	■	■	■	■
Butterfly Valves	■	■	■ ²			■
Ball Valves	■	■	■ ²	■ ¹	■	■
Diaphragm Valves	■	■		■ ¹		■
Actuated Valves	■	■	■ ²	■ ¹		■
Process Control Valves	■	■	■ ²			■
Measurement and Control	■	■	■ ²	■		■

* Relative values ranked on a scale from 1 to max.5 being the highest value


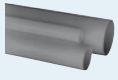

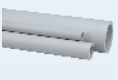

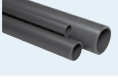

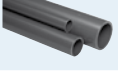

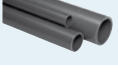

** PN 16

¹ Valves in PP, PVC with PB Adapter

² Valves in PP, PVC, ABS



Product Range

Product Range							
		Document Number	Size Range	Pressure Rating	Temperature Range	Material Available	
ABS Pipes / Fittings		GMST 8256	d16 – d315	PN 10	-40 °C – 60 °C	–	AC
PE100 Pipes / Fittings		GMST 8256	d20 – d400	PN 16	-50 °C – 60 °C	–	AC C WT
PP-R Pipes / Fittings		GMST 8256	d20 – d110	PN 10 / 20	0 °C – 80 °C	–	HC WT GW
PVC-U Pipes / Fittings		GMST 8256	d25 – d315	PN 10	0 °C – 60 °C	–	WT GW
PVC-U Pipes / Fittings		GMST 8256	d12 – d160	PN 16	0 °C – 60 °C	–	WT GW
PVC-C Pipes / Fittings		GMST 8256	d16 – d160	PN 16	0 °C – 80 °C	–	WT GW
PVC-C Pipes / Fittings		GMST 8256	d75 – d225	PN 10	0 °C – 80 °C	–	WT GW
PB Pipes / Fittings INSTAFLEX		GMST 8256	d16 – d225	PN 10	0 °C – 90 °C	–	HC WT GW CA
iFIT Pipes / Fittings		GMST 8256	d16 – d32	PN 16	0 °C – 90 °C	PB / ML	HC WT GW H
Alupex				PN 10			HC WT GW H G
Malleable cast iron fittings			1/4" – 4"	PN 16			HC AC C CA FP G H

- HC Hot and Cold
- WT Water Treatment
- GW Grey Water
- AC Air Condition
- C Cooling
- CA Compressed Air
- FP Fire Protection
- G Gas
- H Heating

Approvals

						
iFIT	✓	✓	✓	✓		✓
INSTAFLEX	✓	✓	✓	✓	✓	not before 12/08
AQUASYSTEM				✓	✓	✓
PE-100						

						
iFIT	✓	✓				
INSTAFLEX	not before 12/08	✓	✓	✓	✓	✓
AQUASYSTEM	✓	✓		✓	✓	
PE-100		✓		✓		

					
iFIT			✓	✓	✓
INSTAFLEX	✓	✓	✓	✓	✓
AQUASYSTEM	✓				✓
PE-100	✓				✓

Products

