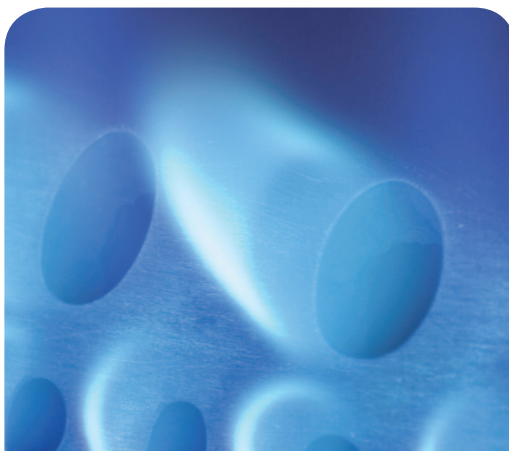
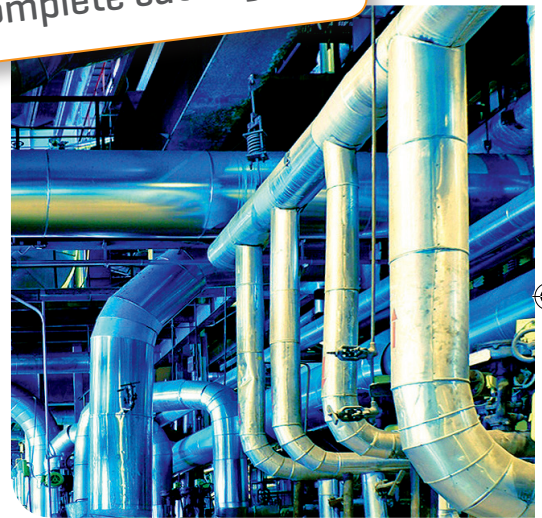
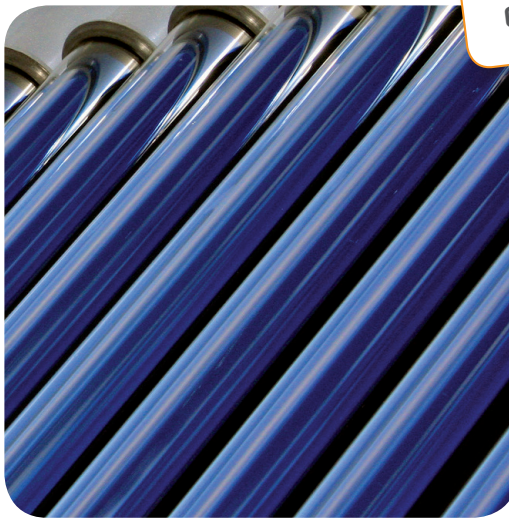


Safe - reliable - flexible

SANHA
a perfect fit

Please ask for our
complete catalogue!



Piping systems for all applications

www.sanha.com

Success needs responsibility

With more than 50 years of experience, SANHA is now Europe's leading manufacturers of pipeline systems and has been a family-owned enterprise since its establishment in 1964. Their product range comprises around 8,500 products made of copper and copper alloys, stainless steel, carbon steel and plastic, which are used in the areas of drinking water, heating, gas, solar energy, industry, fire protection, waste water and many other applications. The company has four production sites in Europe, all of which maintain the highest standards of quality. Practical, ready-to-install and reliable premium products, the highest quality standards, comprehensive service and a clear commitment to the three-stage sales channel through wholesale and retail partners are our success factors.

Facts and figures

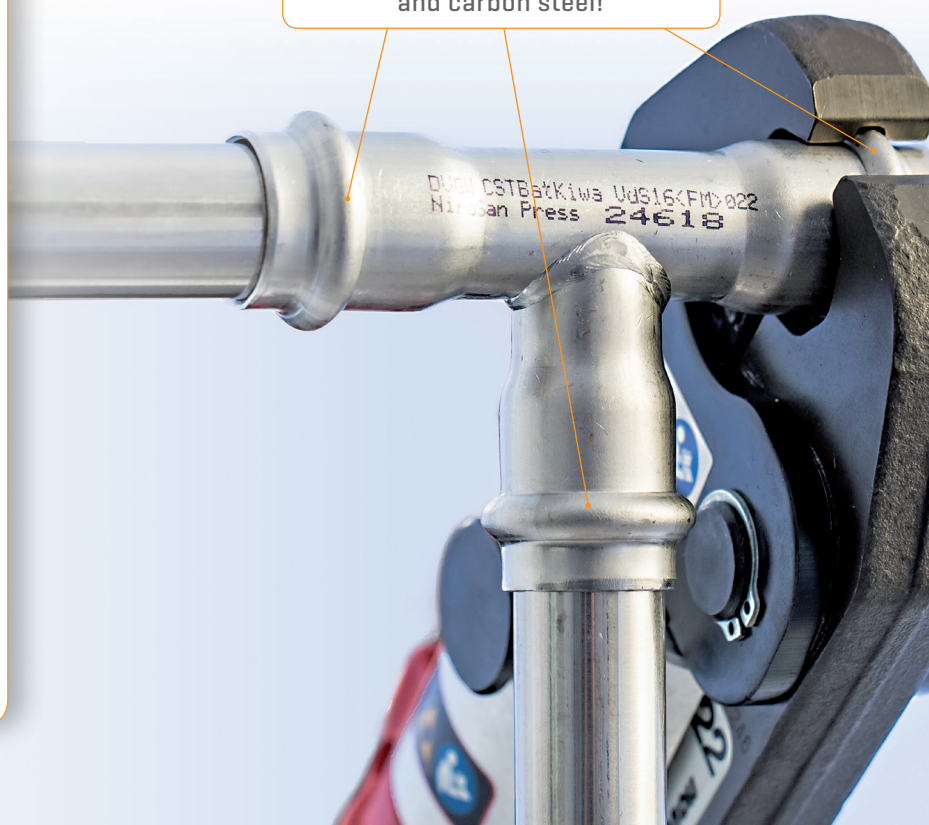
- Founded in 1964
- Owner-operated family enterprise
- 8,500 different products
- More than 70% in-house production
- Four production sites, including own pipe factory
- Sales activities in 40 countries
- € 100 million annual turnover
- Approx 650 employees
- Many patents and trademarks
- Fully certified in accordance with ISO 9001: 2008
- More than 200 international product certifications
- Three fully equipped training centres

SANHA provides unique tool for all SANHA press systems

SANHA is the only manufacturer of press systems to provide a full guarantee for the integrity of the press connection regardless of the manufacturer of the pressing tools. There are additional advantages that are incorporated into our installation friendly products. Together we call these features and benefits "combipress".

Can be pressed with SA, M and V profile

For copper, stainless steel and carbon steel!



Compatibility and many other advantages

SANHA tool compatibility

- Lower costs because no new tools are needed
- Greater safety because no press fault or malfunction can occur due to wrong tool
- Greater flexibility because all tools can be used
- Faster installation through simultaneous work
- Please visit www.sanha.com/en/unique-advantages/planning-service/ for more information on the prerequisites

Push & Stay – slide and grip

- Fast and easy pre-assembly and alignment before crimping
- Fitting securely grips the pipe without slipping off

Leak path feature

- Connections visibly leak if un-pressed (please refer to our "Leak Path" brochure, which can be downloaded from our website)
- Increased safety as un-pressed or incorrect connections identified

combipress
= Tool Compatibility + Push & Stay
+ Leak Path Feature
exclusive from SANHA

Find out more at www.sanha.co.uk

Fire protection & sound insulation

Our systems are tested and certified according to all relevant fire protection and sound insulation requirements

Broad and extensive range

The SANHA product range includes all standard installation materials such as copper and copper alloys, stainless steel, carbon steel and composites through to lead-free silicon bronze. For pressing, soldering, welding, screwing or plug-pressing. All standard dimensions from 6 to 159 mm or from 1/8" to 4" and numerous special shapes and reductions that leave nothing to be desired.

Material-neutral advice

SANHA supplies all materials and all connection methods – a basic condition for neutral advice. This way you always get the ideal solution for your application.

Comprehensive Training and service

Installation training resulting in two-year certification documents. CPD Seminars available on current technical topics. Full specifications, certification and warranties available.

Stainless steel: An allrounder NiroSan®

The premium user-friendly combinations of our various NiroSan® pipes in accordance with BS EN 10312 and NiroSan® system fittings allow one to fulfill special requirements and to achieve economical solutions with the highest corrosion resistance whether for potable water, heating gases or in industry and shipbuilding.

SANHA tool compatibility. The system can be pressed with original SA-, V- and M contours up to and including 54 mm (up to 108 mm: SA and M) and is available in dimensions 15 – 108 mm. More info at www.sanha.co.uk



	NiroSan®	NiroSan® Gas	NiroSan® Industry	NiroSan® SF
Series	9000	17000	18000	19000
O ring	EPDM	HNBR	FKM	FKM
Op. temperature	– 30 °C – + 120 °C	– 20 °C – + 70 °C	– 20 °C – + 200 °C (depending on medium)	– 20 °C – + 200 °C (depending on medium)
Application	Drinking water Heating Rain water Solar Compressed air Extinguishing Sprinklers Inert gases Cooling water Ship building Technical gases Glycol	Natural gas, LNG (< PN5) Flammable gases	Heating Rain water Solar Compressed air Extinguishing Sprinklers Inert gases Cooling water Ship building Technical gases Low pressure steam systems* District heating*	silicon-free applications

Operating conditions

Water and aqueous solutions	$d \leq 22 \text{ mm} \mid 40 \text{ bar}$ · $d = 28 - 35 \text{ mm} \mid 25 \text{ bar}$ · $d = 42 - 108 \text{ mm} \mid 16 \text{ bar}$
Technical gases ¹⁾	$d \leq 108 \text{ mm} \mid 16 \text{ bar}$
Flammable gases ²⁾	$d \leq 108 \text{ mm} \mid 5 \text{ bar}$

1) non-toxic, non-flammable 2) DVGW-G 260 – Outer pipe diameter d (mm) | Operating pressure (bar)

* Depending on temperature and pressure – please contact our Technical Support at 01628 819245.

SANHA stainless steel pipes

NiroSan® [Series 9000]

- TIG welded, annealed
- Material 1.4404 / 316L
- less carbon, MO content of $\geq 2.3 \%$ for better corrosion resistance
- compliant with BS EN 10312
- Marking in black

NiroSan®-Eco [Series 9600]

- as series 9000
- additionally wall thickness optimised

NiroSan®-F [Series 9700]

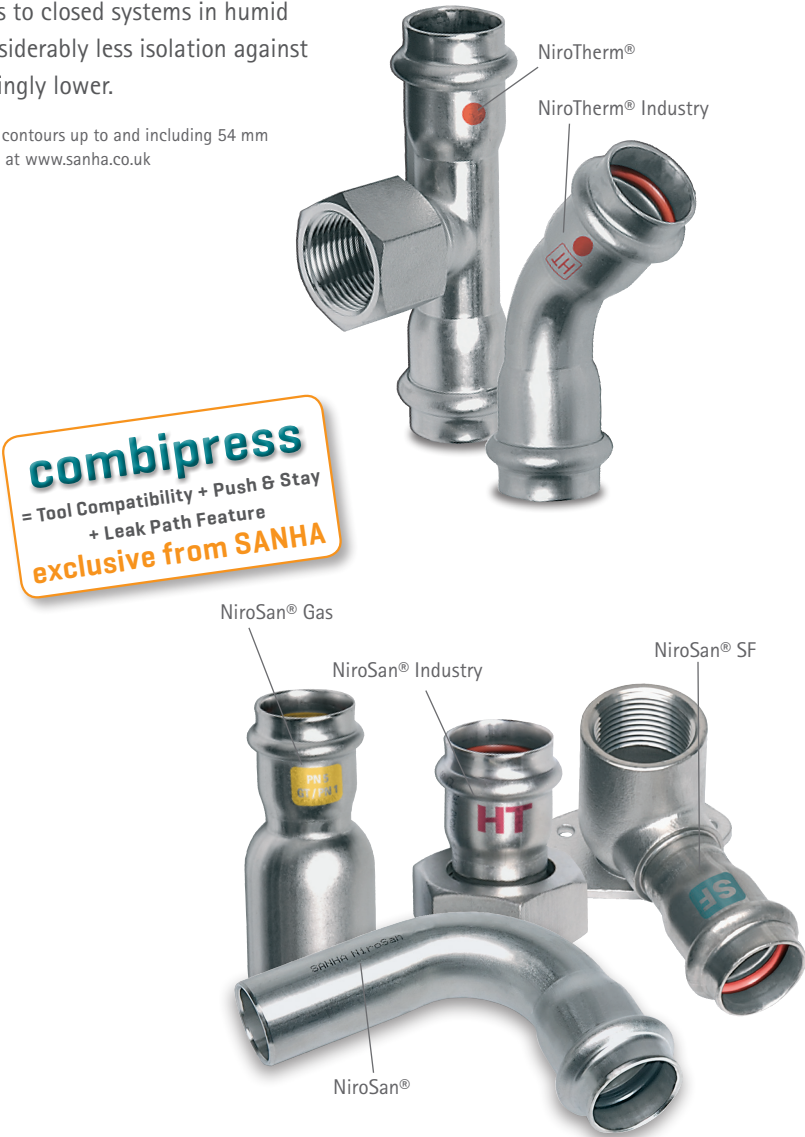
- TIG welded, pickled for higher corrosion resistance, nickel-free
- Material 1.4521 acc. to BS EN 10088
- produced acc. to BS EN 10312
- Marking with black letters and continuous green stripe

NiroTherm®

The fittings and pipes are produced from the material 1.4301 (AISI 304). Due to the well-known corrosion resistance of stainless steel, NiroTherm® offers installers a real alternative compared to conventional steels when it comes to closed systems in humid atmospheres such as within the screed. Since it needs considerably less isolation against humidity, the installation is faster and labour costs accordingly lower.

SANHA tool compatibility. The system can be pressed with original SA-, V- and M contours up to and including 54 mm (up to 108 mm: SA and M) and is available in dimensions 15 – 108 mm. More info at www.sanha.co.uk

	NiroTherm®	NiroTherm® Industry
	91000	98000
	EPDM	FKM
	- 30 °C – + 120 °C	- 20 °C – + 200 °C (depending on medium)
	Heating (open & closed) Cooling (open & closed) Compressed air (up to oil class 5 (< 25 mg/m³)) Glycol	Industrial systems Compressed air (all oil classes) Glycol Solar
	d ≤ 108 mm 16 bar	
	d ≤ 108 mm 16 bar	



NiroTherm® [Series 9100]

- TIG welded, annealed for higher corrosion resistance
- Wall thickness optimised
- Material 1.4301 acc. to BS EN 10088
- Marking in red
- See national requirements for drinking water



Classic copper SANHA®-Press

System press fittings from copper for copper pipes according to EN 1057 for drinking water and heating installations. SANHA®-Press system fittings are well-known for outstanding quality, easy to work with and offer the right solution for a wide range of applications, whether they are residential or office buildings. They can be ideally combined with our unique PURAPRESS series 8000 made of completely lead-free copper alloy silicon bronze.

SANHA tool compatibility. The system can be pressed with original SA-, V- and M contours up to and including 54 mm (up to 108 mm: SA and M) and is available in dimensions 15 - 108 mm. More info at www.sanha.co.uk



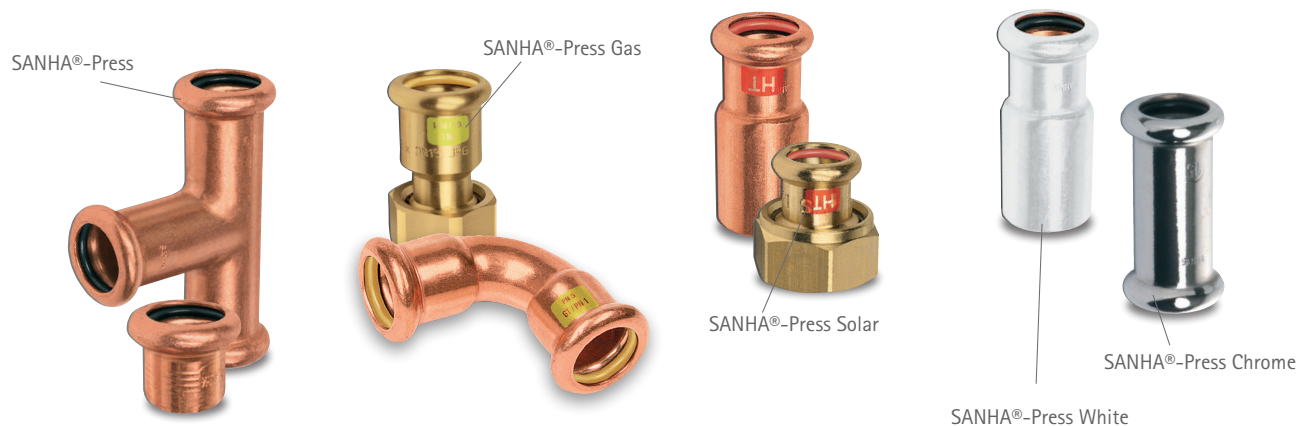
	SANHA®-Press	SANHA®-Press Gas	SANHA®-Press Solar	SANHA®-Press Chrome SANHA®-Press White
Series	6000	10000 + 11000	12000 + 13000	16000 + 26000
O ring	EPDM (Black)	HNBR (Yellow)	FKM (Red)	EPDM (Black)
Op. temperature	- 30 °C - + 120 °C	- 20 °C - + 75 °C	- 20 °C - + 200 °C (depends on medium)	- 30 °C - + 120 °C (depends on medium)
Application	Drinking water Heating Rain water Solar Compressed air Extinguishing Sprinklers Inert gases Cooling water Ship building Glycol	Natural gas, LNG (< PN5)	Solar Compressed air Inert gases Cooling water Low pressure steam District heating Fuel oil Diesel Glycol	Heating Rain water Solar Compressed air Inert gases

Operating conditions

Water and aqueous solutions	d ≤ 108 mm 16 bar		d ≤ 108 mm 16 bar	d ≤ 28 mm 16 bar
Technical gases ¹⁾	d ≤ 108 mm 16 bar	d ≤ 54 mm 16 bar	d ≤ 108 mm 16 bar	d ≤ 28 mm 16 bar
Flammable gases ²⁾		d ≤ 54 mm 5 bar		

1) non-toxic, non-flammable 2) DVGW-G 260 - Outer pipe diameter d (mm) | Operating pressure (bar)

* Depending on temperature and pressure - please contact our Technical Support at 01628 819245.



Lead-free silicon bronze PURAPRESS®

PURAPRESS® are unique modern premium transition press fittings for copper and stainless steel pipes made from completely lead-free silicon bronze CuSi. They are tested and approved for reliable connections with copper pipes according to EN 1057 and NiroSan® stainless steel system tubes and certified by all relevant national and international certification bodies. Press fittings of the PURAPRESS series are, just like our capillary fittings of the series PURAFIT, manufactured from the completely lead-free premium material silicon bronze CuSi and therefore an excellent solution for non-lead contaminated drinking water installations.

	PURAPRESS®
	8000
	EPDM
	- 30 °C – + 120 °C
	Drinking water Heating Rain water Compressed air Extinguishing Inert gases Cooling water Glycol
	d ≤ 108 mm 16 bar
	d ≤ 108 mm 16 bar



Carbon steel: For closed systems SANHA®-Therm

The SANHA®-Therm installation system consists of tried and trusted SANHA®-Therm press fittings from carbon steel with a black sealing ring from EPDM (ethylene propylene diene monomer) and SANHA®-Therm carbon steel pipes according to EN 10305-3.

SANHA tool compatibility. The system can be pressed with original SA-, V- and M contours up to and including 54 mm (up to 108 mm: SA and M) and is available in dimensions 15 – 108 mm. More info at www.sanha.co.uk

SANHA®-Therm	SANHA®-Therm Industry
24000	28000
EPDM (Black)	FKM (Red)
- 30 °C – + 120 °C	- 30 °C – + 200 °C (depends on medium)
Heating (closed circuits - no DZ pipes) Solar Cooling water* Compressed air (oil free) Extinguishing (no DZ pipes) Glycol	Solar Cooling water* Compressed air (independent of the oil class) Glycol
d ≤ 108 mm 16 bar	
d ≤ 108 mm 16 bar	d ≤ 108 mm 16 bar
	d ≤ 108 mm 16 bar

combipress
= Tool Compatibility + Push & Stay
+ Leak Path Feature
exclusive from SANHA



Brass SANHA-Threaded fittings

Threaded brass fittings (material no. CW617N, composition CuZn-40Pb2) are well-suited for the use in a wide range of applications such as heating, rain water or water /glycol mixtures (or similar water with frost protection additives). Threaded brass fittings are durable and easy to install. Even though brass fittings are allowed for drinking water installations in many countries, we recommend the use of our lead-free series for this application.

Our programme of threaded brass fittings also includes brass extensions. These are produced in accordance with all relevant quality requirements of the German Sanitary Brass Quality Union and are marked with the Quality Sign RAL-GZ 643. The wide range of different threaded brass fitting dimensions from 1/4" up to 2 1/2" as well as several different chromed versions off installers the option of finding the right fitting for the application in question.

Lead-free Silicon bronze 3fit®-Press and 3fit®-Push

3fit System press fittings made of lead-free silicon bronze CuSi for use in a system with MultiFit®-Flex and MultiFit®-PEX multi-layer plastic pipes by SANHA according to DVGW W 542 (for drinking water and heating installations) as well as copper pipes. More information on the adequate pipes under "Safe connection" below.

The 3fit®-Press system is approved according to DVGW W 534 and WRAS.

	SANHA-threaded fittings	3fit®-Press	3fit®-Push
Series	—	25000 (Pb-free)	23000
O ring	—	EPDM (Black)	EPDM (Black)
Operating temperature	– 20 °C – + 200 °C	– 30 °C – + 70 °C	– 30 °C – + 70 °C
Application	Rain water Inert gases Cooling water Heating	Drinking water Heating Rain water Closed cooling systems Compressed air	Drinking water Heating Rain water Closed cooling systems
Operating conditions			
Water and aqueous solutions	1/4"...2 1/2" 10 bar – 90 °C	+ 25 °C 16 bar / + 50 °C 13 bar / + 70 °C 10 bar	



Multilayer composite pipes

MultiFit® system pipes

MultiFit®-Flex

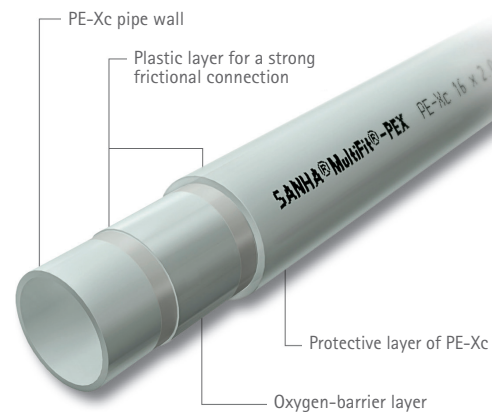
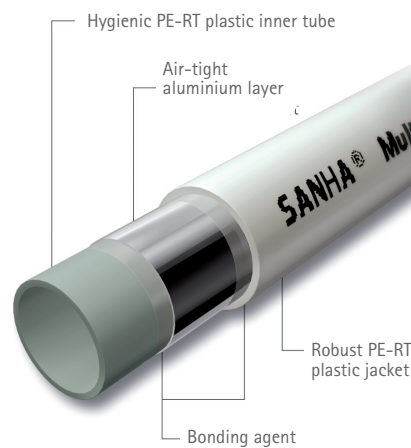
MultiFit®-Flex system pipes are flexible, easy to install, long lasting and absolutely reliable. The 5-layer composite pipes are made of a hygienic PE-RT plastic inner pipe, a 100 % oxygen-impermeable, butt-welded aluminium layer and a robust PE-RT plastic jacket, connected by bonding agents. Multifit-Flex pipes are ideal for underfloor heating distribution, drinking water and heating installations.

MultiFit®-PEX

MultiFit®-PEX plastic composite pipes of radiation crosslinked, oxygen-impermeable PE-Xc are the optimum solution, in particular for underfloor heating or radiator connection lines in screed as well as for cooling systems. The 5-layer pipes are distinguished by their extraordinary flexibility and thus by their very high ease of installation. The basic material of high-density polyethylene is physically crosslinked by electron radiation without additives, which ensures high temperature-resistance with maximum flexibility and is therefore highly installation-friendly. The plastic oxygen barrier film (EVOH) makes the pipes oxygen-impermeable in accordance with DIN 4726.

MultiFit®-PE-RT

Our Multifit®-PE-RT pipe system consist of the same material as our Multifit®-Flex pipes except that the 100 % oxygen-tight aluminium layer has been exchanged for an EVOH layer. This makes Multifit®-PE-RT systems the perfect economically sensible alternative for all applications which need no special corrosion protection. SANHA Multifit®-PE-RT pipes are available in 16 x 2 mm and a coil of 400 m.



Technical data of system pipes

d x s in mm	S _{Al layer} in mm	Weight of empty Multi-Fit®-Flex system pipe in kg/m	Weight of water-filled pipe in kg/m	Water content in l/m	Mounting distance L1 / L2 in m	
Cold water						
Warm water						
MultiFit®-Flex						
16 x 2,0	0,20	0,105	0,218	0,113	0,60	0,25
20 x 2,0	0,25	0,140	0,341	0,201	0,70	0,30
26 x 3,0	0,35	0,260	0,574	0,314	0,80	0,35
32 x 3,0	0,50	0,350	0,881	0,531	0,90	0,40
40 x 3,5	0,50	0,500	1,355	0,855	1,10	0,50
50 x 4,0	0,60	0,700	2,085	1,385	1,25	0,60
63 x 4,5	0,80	1,100	3,390	2,290	1,40	0,75
MultiFit®-PEX and MultiFit®-PE-RT						
16 x 2,0	–	0,091	0,218	0,113	0,60	0,25
MultiFit®-PEX						
20 x 2,0	–	0,117	0,318	0,201	0,70	0,30

Copper and red brass SA CAPILLARY SOLDER FITTINGS

Solder and transition fittings in copper and copper alloy for copper pipes according to EN 1057. Tested according to BE EN 1254, BS 864-2, and BSI certified to BS 864-2. The SANHA capillary solder fittings are manufactured from copper, Cu-DHP, CW024A (moulded parts) and copper alloy CC499K (threaded parts, cast parts) and fulfil the requirements of BS EN 1254. Certified according to DVGW GW 8.

Lead-free silicon bronze PURAFIT®

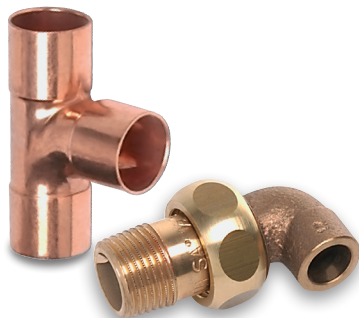
PURAFIT® threaded fittings are now made from lead-free silicon bronze. The copper alloy used for this is suitable for use in drinking water installations, as unlike traditional brasses, it cannot contribute to the lead content in water, therefore assisting the installer in meeting the stringent lead level demanded by the Drinking Water Directive. PURAFIT® threaded fittings in lead-free silicon bronze, tested and certified according to DVGW GW 6, and conforms to EN 1254. Suitable for all standard commercial pipes according to EN and for many applications in the sanitation and heating technology.

Copper/iron alloy SANHA RefHP

In air conditioning and refrigeration technology environmentally friendly solutions are becoming more and more important. Optimum results are obtained by an increase in efficiency and the use of ecologically safe refrigerants such as CO₂ (R744) for the transcritical part with higher operating pressures. To meet the desired pressures of up to 130 bar, we recommend our RefHP Series as the ideal solution.

	SA [Soft- / Hard soldering]				PURAFIT®	SANHA RefHP
Series	4000 + 5000				3000	29000
Operating temperature	– 30 °C – + 110 °C				– 20 °C – + 200 °C	– 196 °C – + 150 °C
Application	Drinking water Heating Medical gases Gas installations Rainwater Solar systems Compressed air Fire extinguishing system Sprinkler systems Inert gases Cooling water piping				Drinking water Heating Flammable gases Rainwater Solar systems Compressed air Fire extinguishing system Sprinkler systems Inert gases Cooling water piping	Cooling and refrigeration, high pressure
	Maximum permissible operating pressures				Operating conditions	Operating pressure
	Operating temperature	pipe outside diameter in mm			Water and aqueous solutions 1/8"...3/4" 25 bar – 120 °C · 16 bar – 225 °C 1"...3" 16 bar – 120 °C · 6 bar – 225 °C Techn. gases ¹⁾ 1/8"...3" 16 bar (depending on the area of application) Flammable gases ²⁾ 1/4"...3" 5 bar	d ≤ 2 1/8" 130 bar
		6...28	35...54	64...108		
	+ 30 °C	40 bar	25 bar	16 bar		
	+ 65 °C	25 bar	16 bar	16 bar		
	+ 110 °C	16 bar	10 bar	10 bar		

1) non-toxic, non-flammable; 2) DVGW-G 260



MASTER 3 –

Sound-insulating waste system from SANHA

The reliable and durable waste system for professional drainage

SANHA MASTER 3: For professionals!

The exclusive MASTER 3 sound-insulating waste system from SANHA consists of high-quality three-layer pipes and modern fittings. The waste pipes are constructed with three perfectly matched layers that work together to meet all the demands that a waste system is subjected to in the construction of a modern house, apartment and industrial building. Each layer optimises the properties of the pipe: The smooth inner layer prevents encrustations and is partly responsible for the good sound insulation properties. The solid middle layer is extremely robust and the terracotta outer layer provides excellent impact resistance even at low temperatures. The sealing ring consists of styrene-butadiene rubber (SBR).

Areas of application

MASTER 3 waste pipes and fittings are used primarily as hot water-resistant waste pipes for domestic and industrial grey, black, and rain water: Single and collecting connection lines, Downpipes, Collecting pipelines, Bypass lines, Ventilation pipes, Internal rainwater pipes, Central vacuum cleaning systems and Residential ventilation systems

Excellent sound insulation

The technical sound-insulation properties of the MASTER 3 waste system by SANHA have been tested by the Fraunhofer Institute in accordance with EN 14366 and it meets all the requirements of DIN 4109 for sound insulation. The installation noise level is between <10 and 23 db(A)*.

Proven fire barrier

With MASTER 3, SANHA provides a domestic waste system, as a stand-alone system or in combination with other SANHA pipeline systems, which complies with standards and offers a practical solution for all standard applications in building technology with regard to fire protection. We recommend the tested and approved DOYMA Curaflam ECO Pro fire protection cuff, which also allows zero clearance installation, as a fire barrier.**

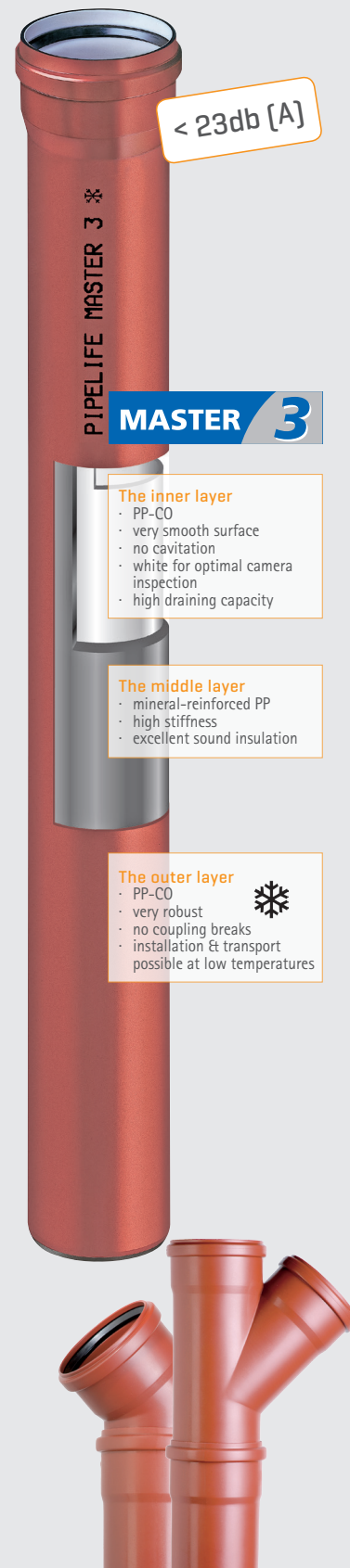
Sound level dB(A) according to EN 14366, Fraunhofer Institute

	Volume flow (L/sec)			
	0,5	1,0	2,0	4,0
MASTER 3 with Bismat 1000 insulation brackets (SL 125/SX 100)*	<10	10	14	18
MASTER 3 with Bismat 2000 insulation brackets and rubber Inlay	<10	13	17	21
MASTER 3 with Master 3 insulation brackets	11	16	18	23

* Flow rate of 0.5 or 4 l/s

** Detailed information can be found in the general building approval (abZ), Approval number MASTER 3: Z-42.1-481, Approval number DOYMA Curaflam ECO Pro: Z-19.17-1989 or the technical documentation at www.doyma.de

Please refer to the technical documentation and installation instructions.



With safety on your side

SANHA offers genuine advantages

As a family enterprise for over 50 years we have been observing a simple principle: every pipe and every fitting must give the customer added value in terms of safety and practical use at a fair price. This is our mission and, at the same time, the best recommendation from our satisfied customers.

As a specialist for pipeline systems we offer a unique breadth and depth of products for all of the usual connection techniques and applications from a one stop shop. Tried and tested installation techniques are as much a part of our program as practice-oriented innovations.

And that's why: SANHA. Always a perfect fit.

Your advantages:

1 Always fits

At SANHA, the focus is on the installer, whose job we want to make as easy as possible. For this reason, all SANHA products offer extensive advantages that enable easy and convenient workmanship.

2 Large product range

SANHA offers a wide material, product and dimension range, multiple connection methods, with significant expertise and experience – all from a one stop shop. SANHA, the pipeline specialist.

3 Guaranteed safety

SANHA has all the important approvals, certifications and warranties, backed up by WRAS and BSI, ensuring you are always on the safe side.

4 Nationwide technical service

SANHA is pleased to offer a wide range of services from installation training, technical seminars, design advice, specifications and on site support as and when required.



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