



High pressure fittings

SANHA[®] RefHP[®]

Solder fittings for high-pressure applications
up to **130 bar** | High precision - Safe installation

SANHA[®]
a perfect fit

Quality pays for itself - with the premium SANHA® RefHP® piping system

Many modern-day applications, from air conditioning to commercial and industrial refrigeration, employ more and more non-fluorinated refrigerants such as R744. However, the use of this medium, while highly efficient and environmentally friendly, leads to higher operating pressures of up to 130 bar at 150 °C.

For high-pressure applications like these, SANHA® has diligently developed its series 29000 SANHA® RefHP® system. Easy to install in compliance with TÜV Material Data Sheet 567 and info sheet AD-2000 Merkblatt 6/2 and economically viable, the SANHA® RefHP® system provides the optimal solution for your needs when it comes to cooling applications

What is more: High operating pressures require the highest possible safety standards for humans and the environment alike. Our high pressure fittings ensure premium quality based on more than 50 years of experience in the field of solder fittings. In addition, production in our own factories sets standards and guarantees high precision when it comes to tolerances.



General advantages of our high pressure solder

- Ideal for use in high-pressure applications such as refrigeration and air-conditioning systems, especially for CO₂ systems
- For pressures up to 130 bar
- UL tested and certified up to 130 bar
- RefHP® fittings are compatible with all four CuFe pipe types available on the market, offering a high degree of flexibility: KME - CL12 · HALCOR - TALOS XS · Wieland - K65 · Mueller - XHP
- SANHA® has more than 50 years of experience in the production of solder fittings and maintains very close manufacturing tolerances.
- Cost competitive to K65
- Highest European quality through production at our own plant in Ternat, Belgium.
- Wide range of fittings up to 2 5/8".
- Optimum cleaning of the fittings results in a carbon value of <math><0.5\text{mg C/dm}^2</math>. This is decisive for the quality of the soldered connection as carbon residues can lead to pitting corrosion at higher soldering temperatures.
- Easy recognition before and after installation: Pipes and fittings are clearly marked so that all components can be identified at a glance. In addition, the material is slightly magnetic and can be easily distinguished from copper using a neodymium magnet – a very practical advantage!

Facts & figures

The SANHA® RefHP® system is made from CuFe2P. This high-strength material is harder than traditional copper and as such can resist higher operating pressure even after hard soldering. At the same time, the material is insensitive to stress corrosion cracking and exhibits a high resistance to natural atmosphere.

Contrary to stainless steel, SANHA® RefHP® fittings and pipes are connected by capillary brazing and not welded. This makes them easy to install even without expensive specialist welders, needs no yearly training sessions and subsequently reduces installation time and cost noticeably.

The SANHA® RefHP® system is therefore particularly well suited for use in air conditioning, commercial or industrial refrigeration systems or any refrigeration system using CO₂ / R744 or similar media with operating pressures of up to 130 bar (for higher pressures or more information please contact our Technical Support at technik@sanha.com or +49 2054 925170).

Technical data

SANHA® RefHP® fittings for capillary brazing made of CuFe2P for piping made of copper materials are specially developed for energy-efficient cooling systems and have inch dimensions (diameter) according to ASTM B 280. Their dimensions and tolerances comply with product standards EN 1254-1 and EN 1254-5 and are appropriate for 'lap joints' according to EN 14276-1, Annex B in piping according to EN 378-2 and EN 14276-2. Fittings and pipes must be connected with silver solder with min. 2 % Ag. For connections with materials according to prEN 1412 (except numbers 000 and 400) we advise flux FH 10 (SANHA® art.no. 84948) according to EN 1045.

Operating conditions for SANHA® RefHP® Fittings from CuFe2P

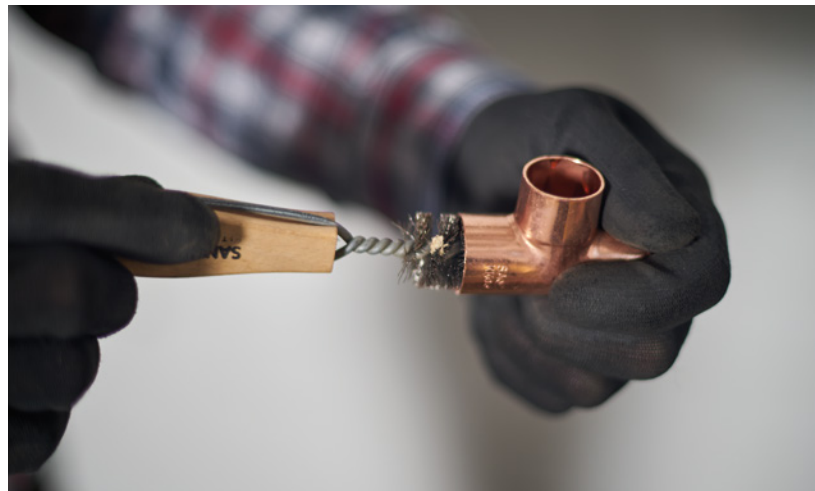
Outside pipe diameter	d ≤ 2 5/8"
Operating pressure	130 bar
Operating temperature SANHA® RefHP®	-196 °C up to +150 °C

fittings


- Corrosion-proof material
- The highly stable CuFe2P ensures easy and cost-effective installation.
- Excellent machining properties, no toxic chemical elements.
- Makes a significant contribution to an energy-efficient and environmentally- friendly cooling system:
 - Compared to conventional systems, as much as 25 % energy can be saved in transcritical CO₂ systems!
 - This is particularly important for supermarkets, where cooling systems operate 24/7.
- Suitable for installation under the European Pressure Equipment Directive.
- Transition fittings available in metric sizes.

Advantages over TIG welding of stainless steel


- The lower weight compared to stainless steel reduces installation costs, material use and improves handling.
- Quick and easy installation thanks to proven and installer-friendly soldering technology compared to TIG welding.




29001a Bend 90° 1M

	Art.-Nr.	Inch
	129001A38	3/8
	129001A12	1/2
	129001A58	5/8
	129001A34	3/4
	129001A78	7/8
	129001A118	1 1/8
	129001A138	1 3/8
	129001A158	1 5/8
	129001A218	2 1/8
	129001A258	2 5/8


29002a Bend 90° 2M

	Art.-Nr.	Inch
	129002A38	3/8
	129002A12	1/2
	129002A58	5/8
	129002A34	3/4
	129002A78	7/8
	129002A118	1 1/8
	129002A138	1 3/8
	129002A158	1 5/8
	129002A218	2 1/8
	129002A258	2 5/8


29040 Bend 45° 1M

	Art.-Nr.	Inch
	12904038	3/8
	12904012	1/2
	12904058	5/8
	12904034	3/4
	12904078	7/8
	129040118	1 1/8
	129040138	1 3/8
	129040158	1 5/8


29041 Bend 45° 2M

	Art.-Nr.	Inch
	12904138	3/8
	12904112	1/2
	12904158	5/8
	12904134	3/4
	12904178	7/8
	129041118	1 1/8
	129041138	1 3/8
	129041158	1 5/8
	129041218	2 1/8


29130 Tee

	Art.-Nr.	Inch	Art.-Nr.	Inch
	12913038	3/8	129130787812	7/8 x 7/8 x 1/2
	12913012	1/2	129130787858	7/8 x 7/8 x 5/8
	12913058	5/8	129130787834	7/8 x 7/8 x 3/4
	12913034	3/4	12913011814118	1 1/8 x 1/4 x 1 1/8
	12913078	7/8	1291301181278	1 1/8 x 1/2 x 7/8
	129130118	1 1/8	12913011834118	1 1/8 x 3/4 x 1 1/8
	129130138	1 3/8	1291301187812	1 1/8 x 7/8 x 1/2
	129130158	1 5/8	12913011878118	1 1/8 x 7/8 x 1 1/8
	129130218	2 1/8	12913011811834	1 1/8 x 1 1/8 x 3/4
	129130258	2 5/8	12913011811878	1 1/8 x 1 1/8 x 7/8
	129130381438	3/8 x 1/4 x 3/8	12913013814138	1 3/8 x 1/4 x 1 3/8
	129130381238	3/8 x 1/2 x 3/8	12913013834138	1 3/8 x 3/4 x 1 3/8
	129130123838	1/2 x 3/8 x 3/8	12913013878138	1 3/8 x 7/8 x 1 3/8
	129130123812	1/2 x 3/8 x 1/2	129130138118138	1 3/8 x 1 1/8 x 1 3/8
	129130121238	1/2 x 1/2 x 3/8	12913013813834	1 3/8 x 1 3/8 x 3/4
	129130583858	5/8 x 3/8 x 5/8	12913013813878	1 3/8 x 1 3/8 x 7/8
	129130581212	5/8 x 1/2 x 1/2	129130138138118	1 3/8 x 1 3/8 x 1 1/8
	129130581258	5/8 x 1/2 x 5/8	12913015814158	1 5/8 x 1/4 x 1 5/8
	129130585838	5/8 x 5/8 x 3/8	12913015834158	1 5/8 x 3/4 x 1 5/8
	129130585812	5/8 x 5/8 x 1/2	12913015878158	1 5/8 x 7/8 x 1 5/8
	129130341434	3/4 x 1/4 x 3/4	129130158118158	1 5/8 x 1 1/8 x 1 5/8
	129130341234	3/4 x 1/2 x 3/4	129130158138158	1 5/8 x 1 3/8 x 1 5/8
	129130345834	3/4 x 5/8 x 3/4	12913015815878	1 5/8 x 1 5/8 x 7/8
	129130343412	3/4 x 3/4 x 1/2	129130158158118	1 5/8 x 1 5/8 x 1 1/8
	129130343458	3/4 x 3/4 x 5/8	129130158158138	1 5/8 x 1 5/8 x 1 3/8
	129130781478	7/8 x 1/4 x 7/8	12913021814218	2 1/8 x 1/4 x 2 1/8
	129130781278	7/8 x 1/2 x 7/8	129130218138218	2 1/8 x 1 3/8 x 2 1/8
	129130785878	7/8 x 5/8 x 7/8	129130218158218	2 1/8 x 1 5/8 x 2 1/8
	129130783478	7/8 x 3/4 x 7/8		


29002AR Bend Reduction

	Art.-Nr.	Inch
	129002AR7834	7/8 x 3/4
	129002AR11878	1 1/8 x 7/8
	129002AR138118	1 3/8 x 1 1/8
	129002AR158138	1 5/8 x 1 3/8


29270 Coupling

	Art.-Nr.	Inch
	12927038	3/8
	12927012	1/2
	12927058	5/8
	12927034	3/4
	12927078	7/8
	129270118	1 1/8
	129270138	1 3/8
	129270158	1 5/8
	129270218	2 1/8
	129270258	2 5/8

29243IM Reduction

	Art.-Nr.	Inch
	129243IM3810	3/8a x 10
	129243IM1212	1/2a x 12
	129243IM5815	5/8a x 15
	129243IM3418	3/4a x 18
	129243IM7822	7/8a x 22
	129243IM11828	1 1/8a x 28
	129243IM13835	1 3/8a x 35
	129243IM15842	1 5/8a x 42

29245 Coupling M/F

	Art.-Nr.	Inch
	12924534	3/4
	12924578	7/8
	129245118	1 1/8
	129245138	1 3/8
	129245158	1 5/8
	129245218	2 1/8

29240 Reduction



Art.-Nr.	Inch
1292401238	1/2 x 3/8
1292405812	5/8 x 1/2
1292403458	3/4 x 5/8
1292407834	7/8 x 3/4
12924011812	1 1/8 x 1/2
12924011878	1 1/8 x 7/8
12924013812	1 3/8 x 1/2
12924013858	1 3/8 x 5/8
12924013834	1 3/8 x 3/4
12924013878	1 3/8 x 7/8
129240138118	1 3/8 x 1 1/8
12924015834	1 5/8 x 3/4
12924015878	1 5/8 x 7/8
129240158118	1 5/8 x 1 1/8
129240158138	1 5/8 x 1 3/8
129240218158	2 1/8 x 1 5/8
129240258218	2 5/8 x 2 1/8

29301 End cap

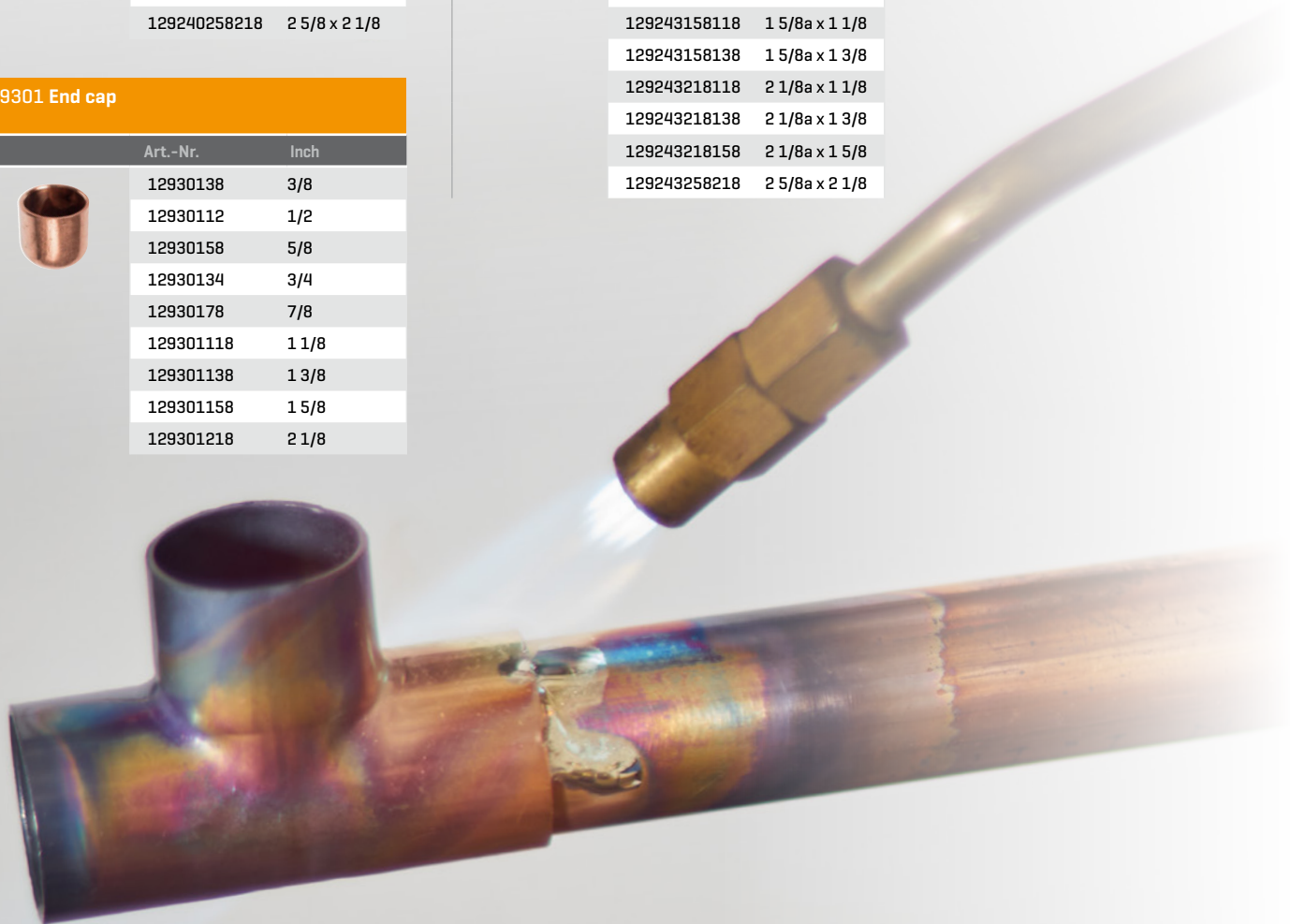


Art.-Nr.	Inch
12930138	3/8
12930112	1/2
12930158	5/8
12930134	3/4
12930178	7/8
129301118	1 1/8
129301138	1 3/8
129301158	1 5/8
129301218	2 1/8

29243 Reduction



Art.-Nr.	Inch
1292431238	1/2a x 3/8
1292435838	5/8a x 3/8
1292435812	5/8a x 1/2
1292433438	3/4a x 3/8
1292433412	3/4a x 1/2
1292433458	3/4a x 5/8
1292437838	7/8a x 3/8
1292437812	7/8a x 1/2
1292437858	7/8a x 5/8
1292437834	7/8a x 3/4
12924311812	1 1/8a x 1/2
12924311858	1 1/8a x 5/8
12924311834	1 1/8a x 3/4
12924311878	1 1/8a x 7/8
129243138118	1 3/8a x 1 1/8
12924315878	1 5/8a x 7/8
129243158118	1 5/8a x 1 1/8
129243158138	1 5/8a x 1 3/8
129243218118	2 1/8a x 1 1/8
129243218138	2 1/8a x 1 3/8
129243218158	2 1/8a x 1 5/8
129243258218	2 5/8a x 2 1/8





responsible
sustainable
fair.

A partner you can trust

SANHA[®] offers convincing advantages

As a family-owned company since 1964, we have been following a simple principle for many decades: every pipe and every fitting must offer the customer added value in terms of safety and practical benefits at fair prices - sustainably, of course. This is our aim, our claim and at the same time the best recommendation from our satisfied customers.

As a specialist for piping systems, we offer a unique range of products for all common connection technologies and applications as a one-shop solution. Proven techniques are just as much part of our programme as well as practical new developments.

Your advantages:

Always a perfect fit Our customers are central to all our activities. As a family enterprise, SANHA[®] highly values an active close and long-term relationship with all our partners, from designers, installers, contractors and trading companies. With decades of experience in the market, we are committed to close support of our customers, with a highly experience local and international technical service.

Large product range SANHA[®] offers a wide range of materials, products and dimensions, multiple connection methods as well as significant expertise and experience – all from a one stop shop.

Nationwide technical service SANHA[®] is pleased to offer a wide range of services from installation training, online seminars, design advice, planning service, specifications and on-site support as and when required.

For what is yet to come With an active CSR and sustainability strategy, we help to protect our climate and environment, promote sports and culture and are always respectful with our employees and partners.

