



Install your **future**

SYSTEM **KAN-therm**

**Inox**

Ø **12-168,3 mm**





# KAN company

KAN is an experienced and well-known Polish producer of modern and complex installation systems KAN-therm recognised on the international arena.



Since opening its business activity in 1990, KAN-therm has built its position on strong pillars: professionalism, innovativeness, quality and development. Nowadays, it employs more than 1100 people. It has a branch network in Poland and international offices around the world. The products with the label KAN-therm are exported to 68 countries on different continents. The distribution chain covers Europe and a significant part of Asia, Africa and America.

> 30

years of experience on the installation market

68

countries to which we export

> 1100

employees worldwide





SYSTEM KAN-therm

# Inox

Ø12-168,3 mm

Highly resistant installation system consisting of pipes and fittings made of high-grade stainless steel.



The system is designed for standard indoor-use installations (heating, tap water, solar installations) as well as in the wide range of technological and industrial installations (chilled water, deionised water, compressed air, oils, lubricants and fuels, chemicals).

The KAN-therm Inox system, thanks to the use of top-class construction materials, is successfully used in many residential and public buildings or in the construction of various technological installations in industry.

- 01** Durable material
- 02** The highest quality and aesthetics
- 03** High corrosion resistance
- 04** Robust and versatile
- 05** GIGA hydraulics





# Benefits

## "Giga" hydraulics

The KAN-therm Inox system is one of the few systems on the market to include "GIGA SIZE" diameters of 139.7 and 168.3 mm, enabling very high flow rates. The special design of the elements ensures that there is no cross-sectional narrowing at the joint between pipe and fitting, thus preventing excessive local losses in the installation.

## Robust and versatile

Thanks to the use of high-quality seals in the fitting construction, the system can operate at temperatures as low as -35°C up to 200°C (depending on the seal type). The use of a special Press assembly technique and of professional crimping tools allows the system to operate at pressures of up to 16 bar. Thanks to the system's ability to withstand such high operating conditions, it can be used in a wide range of applications, from small installations in single-family homes to highly complex, specialised industrial installations.

## The highest quality and aesthetics

Stainless steel is an extremely durable and practical material that is also noble and elegant. Thanks to the variety of grades and the wide range of products, it is able to meet the most sophisticated requirements set for building and finishing materials by architects and interior decorators throughout the world.

## High corrosion resistance

Stainless steel is an iron alloy containing at least 11% chromium. It obtains its anti-corrosion properties through the formation of a surface layer of chromium oxides. This layer is extremely durable and, even in case of mechanical or chemical damage to the steel surface, it rebuilds immediately, so that the material anti-corrosive properties are retained.



## Ecology

Stainless steel is commonly used for appliances that come into contact with drinking water, and is a material that is completely safe for people and the environment. By using stainless steel elements, we avoid the need for paints and other corrosion protection, the use of which is not indifferent to the environment and human health.

## Durable material

The durability of elements made of stainless steel is incomparably higher than that of other materials used in the pipe system production. Their characteristics and appearance remain unchanged for decades.



# Applications

The system is designed for the construction of new, complete (supply risers and horizontal distribution pipes), internal heating, hot and cold water systems in multi-family houses.

Due to the high quality of the material used to manufacture pipes and fittings (stainless steel), the KAN-therm Inox system is particularly recommended for installations in buildings of a higher standard or for investments with a higher level of cleanliness, such as heating or drinking water installations in hospitals, laboratories, treatment rooms, etc.

The low thermal expansion of the pipes and the aesthetic appearance of the finished system components make them ideal for surface-mounted heating and drinking water installations. The KAN-therm Inox system is an excellent alternative for the renovation of old historic buildings in which it is not possible to pour installations in the building partitions.

After consultation with the KAN Technical Department, it is possible to use the system in non-standard installations such as compressed air, solar, industrial, technological and steam installations.

The operating pressure of the KAN-therm Inox system depends on the diameter range and pressing tools. When using standard "M" profile pressing tools, the permissible operating pressure is 16 bar for diameters of 12–168,3 mm. When using Novopress press tools equipped with jaws and clamping collars with an "HP" profile, the permissible operating pressure is 25 bar for diameters of 12–108 mm. An operating pressure of 25 bar covers water-filled installations.



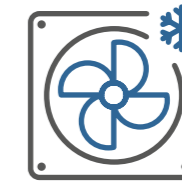
POTABLE WATER



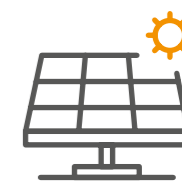
HEATING



TECHNOLOGICAL HEAT



COOLING



SOLAR SYSTEMS



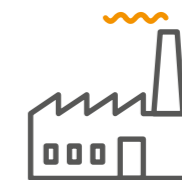
COMPRESSED AIR



TECHNICAL GASES



TECHNICAL OILS



INDUSTRIAL SYSTEMS



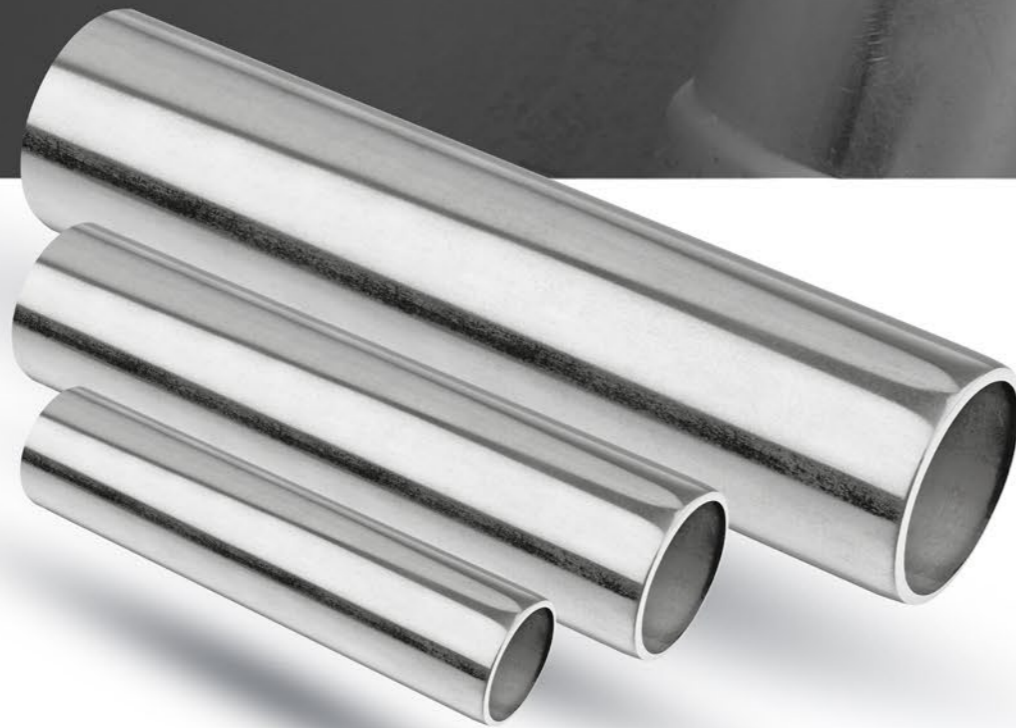
BALNEOLOGY INSTALLATIONS



# Pipes

The KAN-therm Inox system range includes welded pipes made from thin-walled stainless steel: Corrosion-resistant, chromium-nickel-molybdenum steel X2CrNiMo17 12 2, No. 1.4404 to DIN EN 10088, made in accordance with EN 10312, according to AISI 316L, and corrosion-resistant, chromium-molybdenum-titanium steel X2CrMoTi18-2, No. 1.4521 to DIN EN 10088, made in accordance with EN 10312, according to AISI 444.

The pipes have a low coefficient of thermal expansion, which makes it easier to compensate for the entire installation. The availability of GIGA SIZE diameters of 139,7 and 168,3 mm allows the system elements to be used for the construction of piping installations requiring very high flow rates, such as those found in large-scale construction.



	Wall thickness of KAN-therm Inox pipes	
Pipe length	12 - 168.3 mm (1.4404)	15 - 108 mm (1.4521)
Bar 6 m	1.0 - 2.0 mm	1.0 - 2.0 mm



Type of material	Linear elongation coefficient	4 m segment expansion at 60 °C temperature difference	Thermal conductivity
	[mm/m x K]	[mm]	[W/(m x K)]
Inox	0,0166	3,98	15



# Fittings

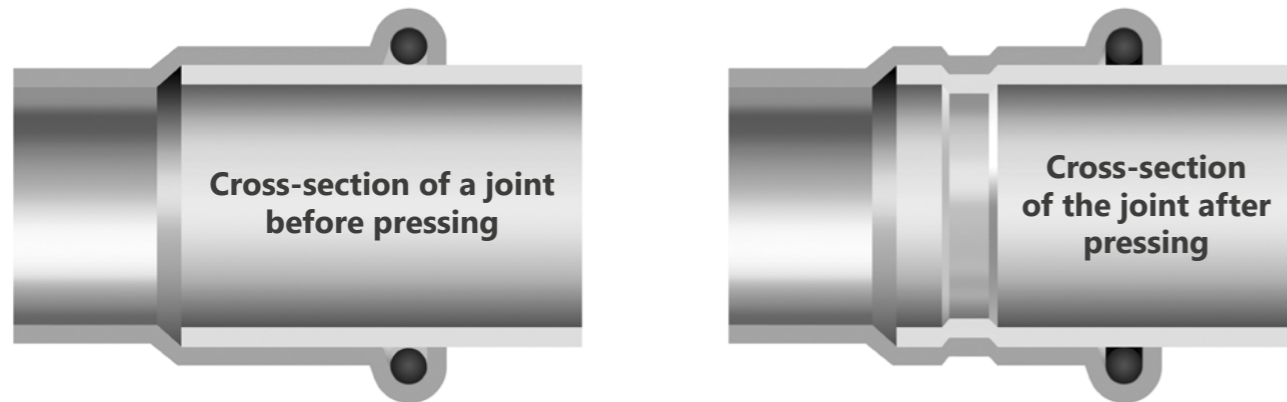
The KAN-therm Inox system fittings are made of corrosion-resistant steel (stainless steel), chromium-nickel-molybdenum X2CrNiMo17-12-2, no. 1.4404 according to DIN-EN 10088 made in accordance with DIN-EN 10312 according to AISI 316L.

High quality and aesthetics



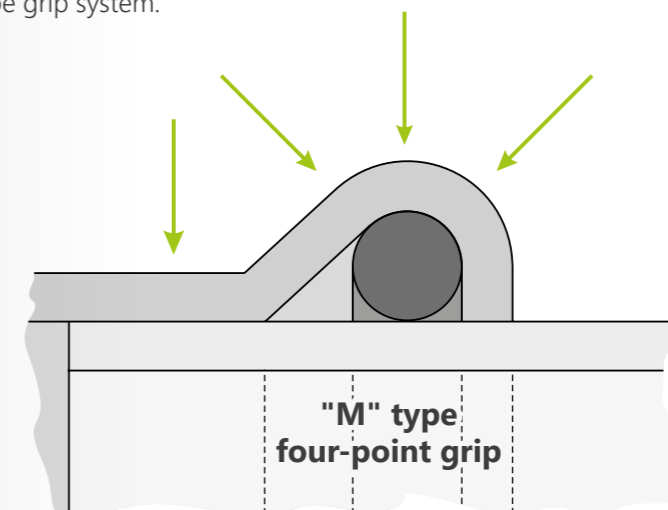
The fittings of the KAN-therm Inox system are available in a range of diameters from 12 mm to 168.3 mm.

The Press technology applied in the KAN-therm Inox system allows for producing fast and tight joints by pressing them using commonly available crimping profiles, eliminating the need to thread or weld particular system elements. This allows very fast system installation, even when large-diameter pipes and fittings are used. Thanks to this technology of joining system elements, we obtain the highest quality and reliability of connection and the highest aesthetics of the whole installation.



Joining the system elements with the Press technology allows for acquiring joints with minimum pipe cross-section narrowing, which considerably reduces the pressure loss in the entire installation and produces excellent hydraulic conditions.

The tightness and reliability of joints in the KAN-therm Inox system are guaranteed by special O-Ring seals and the four-point "M" type grip system.

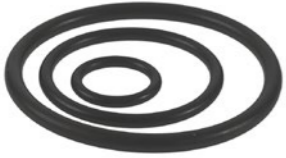





# O-Ring seals

KAN-therm Inox system fittings are, by standard, equipped with special O-Ring seals. Depending on the required operating parameters for the system and the type of medium transported, the fittings may be equipped with three types of O-Rings: EPDM (factory-mounted), FPM/Viton (the green ones, replaced by the customer).

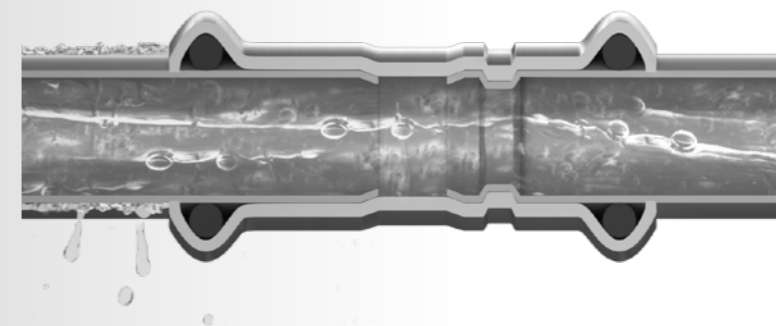
All fittings of the KAN-therm Inox system have an LBP function (signalling of unpressed joints, LBP is Leak Before Press, "unpressed means not tight").

O-Ring name	Properties and operating parameters	Application
EPDM (ethylene-propylene rubber)	 <p>diameter range: 12 - 108 mm            colour: black            max. operating pressure: 16 or 25 bar (depending on the tools used, the diameter range and the type of medium transported)            operating temperature: -35 °C to +135 °C            short term: 150°C            diameter range: 139,7 -168,3 mm            max. operating pressure: 16 bar operating temperature: -20 °C to +110 °C</p>	<p>potable water            hot water, central heating            conditioned water            with glycol solutions*            compressed air (with no oil**)</p>
FPM/Viton fluoride rubber	 <p>diameter range: 12 - 168,3 mm            colour: green            max. operating pressure: 16 or 25 bar (depending on the tools used, the diameter range and the type of medium transported)            operating temperature: -30 °C to +200 °C            short term: 230°C</p>	<p>installations:</p> <ul style="list-style-type: none"> <li>• solar</li> <li>• compressed air</li> <li>• fuel oil</li> <li>• fuel</li> <li>• with vegetable fat</li> <li>• glycol solutions*</li> </ul> <p>Notice: Do not use in hot water installations.</p>

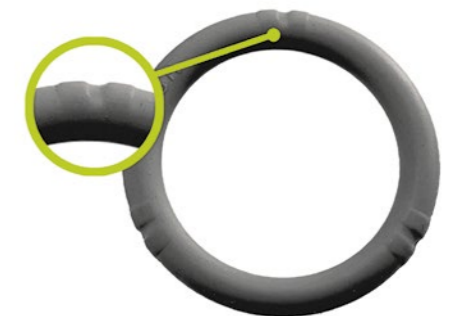
\* The use of ethylene glycol and propylene glycol based non-freezing solutions with a maximum concentration of up to 50% approved by the system manufacturer is permitted.

\*\* maximum concentration of synthetic oils up to 5 mg/m3, mineral oils are not allowed.

In the 15–54 mm diameter range, LBP function is performed by specially structured O-Rings. Due to the special furrows, LBP O-Rings ensure optimal control over the joints during a pressure test. In the 76.1–168 mm diameter range, the LBP function is performed by a special structure of fitting stub pipe, that is through minimal increase of the internal diameter of the fitting in relation to the external pipe diameter.



**O-Ring action with the LBP function of leakage detection.**



**O-Rings with a function of leakage detection.**



# Tools

The KAN-therm Inox system is not only pipes and fittings but also a whole group of professional, modern tools that enable the elements to be connected reliably and safely. Mains-operated or battery-powered electric tools from reputable companies are available; the choice depends on the diameter size to be installed.

Press tool **AC 3000**



Jaws "M" 12-35 mm

Collar "M" 42-54 mm



Adapter ZBS1  
42-54 mm

Press tool **DC 4000**



Battery 18V/4 Ah



Charger 230V





## NOVOPRESS tools



Crimping tool **ACO 102**



Jaws "M" 15-35 mm



Crimping tool **ACO 103**



Jaws "M" 15-35 mm



Crimping tool **ACO 203XL**



Jaws PB2 "M" 12-35 mm



Collar "HP/M" 35-108 Snap On



Adapter **ZB203**



Adapter **ZB221, ZB222**



Crimping tool **EFP203**



Collar "HP/M" 35-54 Snap On



Adapter **ZB 203 35-54 mm**



Jaws PB2 "M" 12-35 mm



Crimping tool **ECO 301\***



Jaws "M" 12-28 mm



Collar "HP/M" 35-66,7 Snap



Adapter **ZB 303**



Adapter **ZB 323**



Crimping tool **ACO 401/403**



Collar "HP" 76,1-139,7 Snap On



Collar "HP" 168,3 mm





**KAN-therm MINI**

Battery 10,8 V 1,5 Ah or 2,5 Ah

Jaws SBM "M" 15-28 mm

Charger 230V

## REMS tools



Crimping tool Power-Press ACC



Crimping tool Power-Press SE



Crimping tool Aku-Press



Jaws "M" 12-35 mm



Jaws "M" 42-54 mm

## KLAUKE tools



Jaw 76,1-108 mm\*

Crimping tool UAP 100\*





**01**

Cutting of pipes with special roll cutters - the cut must be perpendicular to the axis of the pipe. The cut must be complete, without breaking off the cut pipe sections.



**02**

Chamfering of the external and internal surface of the cut pipe end using special deburrers (for diameters up to and including 54 mm) or steel files (for diameters above 54 mm).



## Assembly

### Speed, comfort and safety

Joining elements of the KAN-therm Inox system uses the simple, fast and, above all, safe (no working with open flame) Press technique - consisting in pressing a fitting onto a pipe using special crimping machines. All tools designed for the installation of the KAN-therm Inox system are easy to use and do not require special qualifications.

Before starting the pressing process, check the operability of the tools. It is recommended to use the pressing machines and pressing jaws supplied in the KAN-therm Inox system offer.



**03**

Checking the presence and condition of the o-ring in the fitting.



**04**

Push the pipe into the fitting to the required depth.





**05** Marking the required insertion depth of the pipe into the fitting - essential for achieving the right connection strength.



**06** Preparing the jaw. The jaw, once removed from the case, must be unlocked and then unfolded.



**07** The jaw has a special groove into which the flange of the fitting must be fitted.



**08** Securing the jaw by pushing the pin in as far as possible.



**09** Connecting the crimping tool to the jaw before pressing.



**10** Press fittings for diameters up to and including 54 mm.

**11** Press fittings for diameters over 54 mm.





## The best proof of the top quality is the numerous projects in various sectors of the construction industry.

Although they remain hidden on a day-to-day basis, installations based on KAN-therm system have been working trouble-free in major residential estates, public facilities, single-family houses, sports and recreation facilities, as well as industrial halls and factories for over 20 years now.

The KAN-therm Inox system is an excellent solution for both new developments and refurbished buildings, which is why it can also be found in the oldest historic buildings and sacred structures.



# Multisystem **KAN-therm**

Optimal, complete multipurpose installation system consisting of state-of-the-art, mutually complementary technical solutions for pipe water distribution installations, heating installations, as well as technological and fire extinguishing installations.

	ultraLINE	
	ultraPRESS	
	PP	
	Steel	
	Inox	
	Groove	
	Copper, Copper Gas	
	Sprinkler	
	PowerPress	
	Heating and Cooling surface, automation	
	Football Stadium installations	
	Cabinets and Manifolds	

