



Install your **future**



SYSTEM **KAN-therm**

Steel

Ø **12-108 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 a number of international offices all over the world. The products with the label KAN-therm are exported to 68 countries on different continents. The distribution chain covers Europe, 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**

Steel

Ø 12-108 mm

Complete, state-of-the-art installation system consisting of pipes and fittings made of high-grade zinc-plated carbon steel.



SYSTEM KAN-therm Steel is designed for internal, closed-circuit pressure installations - central heating, chilled water, technological heat, solar, as well as industrial (e.g. heating oil).

The KAN-therm Steel system is used in multi-family and public buildings for new internal heating installations. Its material specifics and extensive range of products enable complete closed pressure installations (without air entering the installation water).

Due to the simplicity, speed and safety of assembly, thanks to the reliable and proven "Press" assembly technique (a technology that does not require the use of an open flame), the KAN-therm Steel system is particularly recommended for use when replacing old, steel corroded heating systems in multi-family buildings.

01

Quick and easy assembly

02

Safety and reliability

03

Aesthetics and corrosion resistance

04

Resistance to high pressure and temperature

05

High mechanical strength



Benefits

Quick and easy assembly

Thanks to the "Press" technique, the assembly time for pipes and fittings has been reduced by at least double compared to traditional steel systems joined by welding or threading.

Safety and reliability

Assembly takes place without the use of an open flame, which is of great importance when replacing old heating systems in multi-family buildings. In addition, all fittings in the system are equipped with the LBP (Leak Before Press) function - signalling unpressed connections.

Perfect for replacing old installations

Due to the wide diameter range (12-108 mm), the completeness of the offer, the high quality, attractive price and the operational and technical advantages (possibility of routing pipelines along old routes), the system is particularly suitable for use in the modernisation of heating installations.

High aesthetics and corrosion resistance

Installations made with the KAN-therm Steel system are characterised by their aesthetic appearance and can be used without additional paint coatings. An installation composed of standard system components will blend in perfectly with any type of room.

High mechanical strength

It protects the installation, particularly in public areas, from the various effects of vandalism. For this reason, the system is predisposed for use in public facilities such as schools, shopping centres, cinemas and exhibition halls, which are particularly vulnerable to this type of activity.



Resistance to high pressure and temperature

Thanks to the use of the "Press" assembly technique, the use of professional clamping tools and high-quality O-rings for sealing, it is possible to operate the system at pressures of up to 25 bar and temperatures of up to 200°C (depending on the type of tool and O-ring used).

Minimisation of pressure losses

Thanks to the special design of the fittings (socket-shaped ends), the phenomenon of diameter constriction at the connection between pipe and fitting is minimised, resulting in lower pressure losses, ensuring optimum media flow throughout the installation.

Applications

The system is used in multi-family and public buildings for new internal heating installations. Its material specifics and extensive range of products enable complete closed pressure installations (without air entering the installation water).

Due to the simplicity, speed and safety of assembly, thanks to the reliable and proven "Press" assembly technique (a technology that does not require the use of an open flame), the KAN-therm Steel system is particularly recommended for use when replacing old, steel corroded heating systems in multi-family buildings).

The low thermal elongation of the pipes and the aesthetic appearance of the finished system components (externally galvanised pipes and fittings) make them ideal for surface-mounted heating installations, e.g. renovations of old historic buildings where it is not possible to run the installation in the building envelope (only surface-mounted pipe routing).

After consultation with the KAN Technical Department, it is possible to use the system in non-standard installations such as compressed air, closed (pressure) central heating installations, chilled water installations.

The operating pressure of the KAN-therm Steel system depends on the diameter range used and the pressing tools. When using standard "M" profile pressing tools, the permissible operating pressure is 16 bar for diameters of 12-108 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 12-54 mm.

An operating pressure of 25 bar covers water-filled installations.



HEATING



TECHNOLOGICAL HEAT



SOLAR SYSTEMS



COOLING



COMPRESSED AIR



TECHNICAL GASES



TECHNICAL OILS

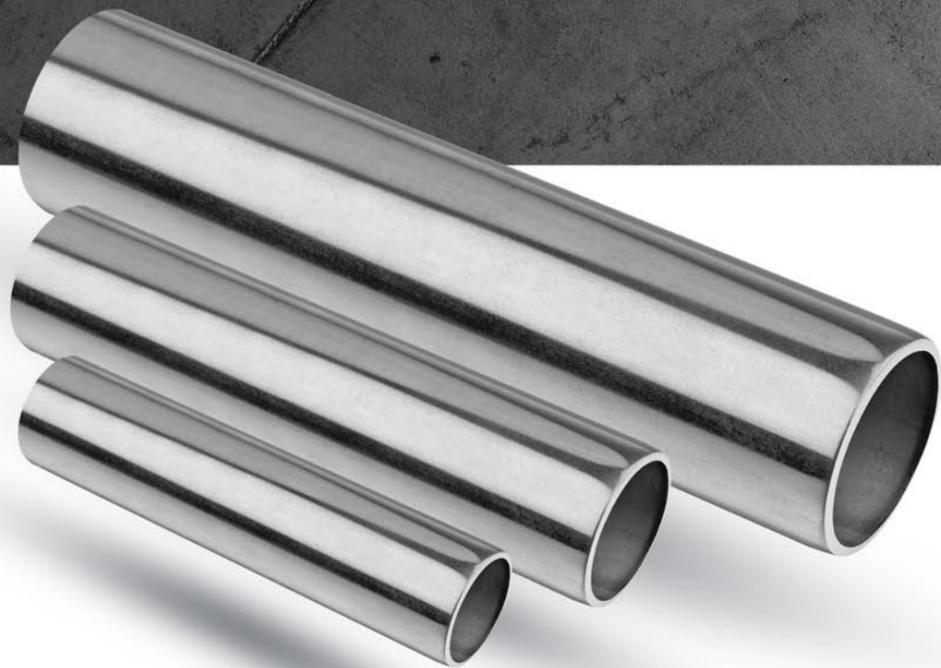


INDUSTRIAL SYSTEMS

Pipes

The pipes of the KAN-therm Steel system are made of carbon steel RSt 34-2, material number 1.0034 to DIN EN 10305-3. Pipes and fittings are protected against corrosion by a layer of zinc (Fe/Zn 88), 8-15 µm thick, applied to the external surface of the components.

Thanks to this protection, pipes and fittings can be used without additional paint coatings and an installation composed of standard system components will blend in perfectly with any type of room. For transport and storage, the pipes are additionally protected on the inside with a thermally applied oil coating.



Wall thickness of KAN-therm Steel pipes

	12-18 mm	22-66.7 mm	76.1-108 mm
Length			
Bars 6 m	1.2 mm	1.5 mm	2 mm

Type of material	Linear elongation coefficient	Lengthening of 4m with a 60°C rise in temperature	Thermal conductivity
	[mm/m x K]	[mm]	[W/m x K]
Steel	0.0108	2.59	58

Fittings

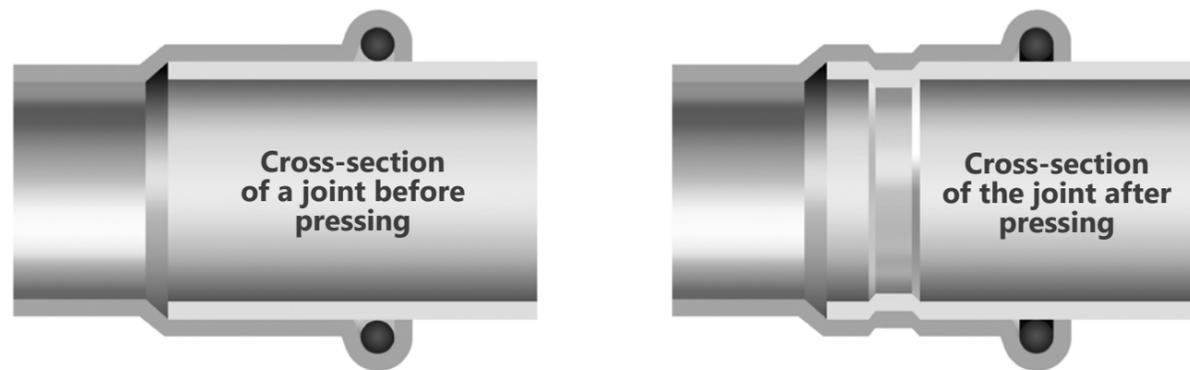
KAN-therm Steel fittings are made of the same material as pipes – RSt 34-2 carbon steel, material number 1.0034 according to DIN EN 10305-3.

Reliability and reduction of pressure loss



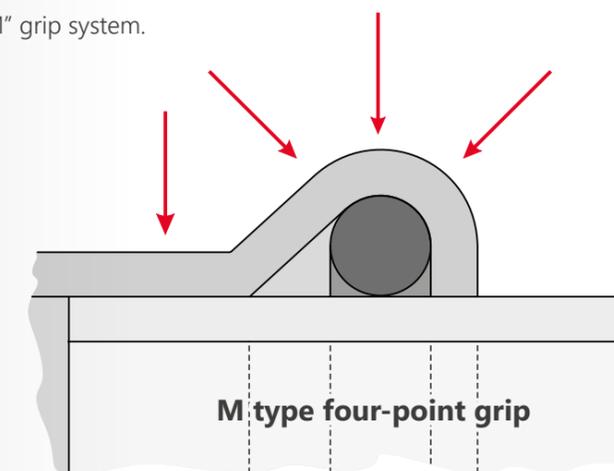
Similarly to pipes, fittings are also secured against corrosion with a layer of galvanized zinc-plating applied on the external surfaces of all elements.

The "press" technology applied in the KAN-therm Steel system allows for producing fast and tight joints by pressing them using generally available crimping profiles, eliminating the need to thread or weld particular system elements. Thanks to this solution the process of assembling an installation, even with large-diameter pipes and fittings, is reduced to the absolute minimum.



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

Tightness and reliability of joints in the KAN-therm Steel system is guaranteed by special O-ring seals and the four-point type "M" grip system.



O-Rings

KAN-therm Steel system fittings are, by standard, equipped with special O-rings. Depending on the required operating parameters for the system and the type of medium transported, fittings may be equipped with two types of O-rings: EPDM (factory-mounted), and FPM/Viton (replaced by the client).

All KAN-therm Steel system fittings offer the LBP function (signaling of loose joints, LBP – Leak Before Press). Loose joints are not water-tight and thus easy to locate. In the 12-54mm diameter range, the LBP function is performed by specially structured O-rings, equipped with special notches, which ensure full and optimal control over the joints during pressure tests. In the 66.7-108mm diameter range, the LBP function is performed by a special structure of the fitting's stub pipe, that is through minimal increase of the internal diameter of the fitting in relation to the external diameter of the pipe.

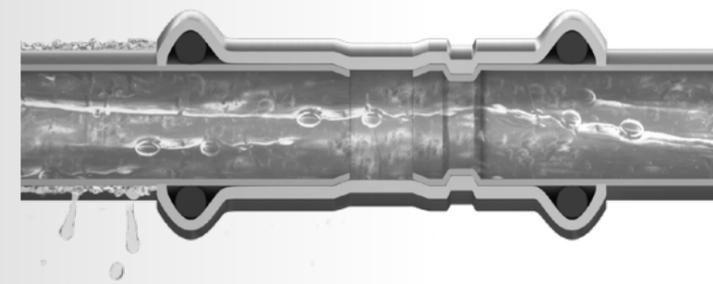


O-ring name	Properties and operating parameters	Application
EPDM ethylene-propylene rubber	 <p>diameter range: 12-108 mm color: black max operating pressure: 16 or 25 bar (depending on the used tools, diameter range and transported medium) operating temperature: -35°C to 135°C short-term: 150°C</p>	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

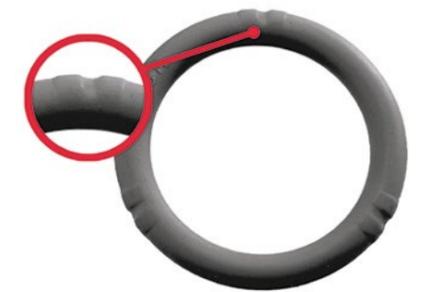
* The use of ethylene glycol and propylene glycol based non-freezing solutions with a maximum concentration of up to 50% approved by the system manufacturer is permitted. ** maximum concentration of synthetic oils up to 5 mg/m3, mineral oils are not allowed.

In the 12-54mm diameter range, the LBP function is performed by specially structured O-rings, equipped with special furrows, which ensure full and optimal control over the joints during pressure tests.

In the 66.7-108mm diameter range, the LBP function is performed by a special structure of the fitting's stub pipe, that is through minimal increase of the internal diameter of the fitting in relation to the external diameter of the pipe.



O-ring action with the LBP function of leakage detection.



LBP O-rings with a function of leakage detection.

Tools

The KAN-therm Steel 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 or battery-powered electric tools from reputable companies are available, the selection of which depends on the size of the diameter to be installed.

Press tool **AC 3000**



Jaws „M”
12-35 mm

Collars „M”
42-54 mm



Adapter ZBS1
42-54 mm

Press tool **DC 4000**



Battery 18V/4 Ah



230 V charger



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



HP/M collar **35-108 Snap On**



Adapter **ZB203**



Adapter **ZB221, ZB222**



Crimping tool **EFP203**



Adapter **ZB 203 35-54 mm**



HP/M collar **35-54 Snap On**



Jaws PB2 „M“ 12-35 mm



Crimping tool **ECO 301***



Jaws „M“ 12-28 mm



HP/M collar **35-66.7 Snap On**



Adapter **ZB 303**



Adapter **ZB 323**



Crimping tool **ACO 401/403**



HP collar **76.1-108 Snap On**



KAN-therm MINI

Battery 10.8 V 1.5 Ah or 2.5 Ah

SBM Jaws "M" 15-28 mm

230 VAC charger

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 Steel 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 Steel 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 Steel 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 Steel 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

