



Install your **future**



SYSTEM **KAN-therm**

**ultraPRESS**

Ø **16-63 mm**



# KAN company

KAN is an experienced and well-known Polish producer of modern and complex KAN-therm systems installation 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 has employed more than 1100 people, it has a branch network in Poland and international offices in Germany, Ukraine, The United Arab Emirates, China, India, Hungary and the CIS countries. The products with the label KAN-therm are exported to 68 countries. The distribution chain covers Europe part of Asia, Africa and both Americas.

> 30

years of experience on the installation market

68

countries to which we export

> 1100

employees worldwide



SYSTEM KAN-therm

# ultraPRESS

Ø16-63 mm

System KAN-therm ultraPRESS is a modern, complete installation system that consists of PERTAL polyethylene pipes with aluminium layer and PPSU or brass fittings with diameters from 16 to 63 mm.



ultraPRESS fittings in the 16-32 mm diameter range have a unique "LBP" (Leak Before Press) function, making it easier to detect unpressed connections. Their special design provides a number of additional solutions to increase the comfort and safety of installation and guarantees many years of trouble-free operation of the installation.

The system is designed for indoor water supply systems (hot and cold water), central heating or cooling, technological heat and industrial installations (e.g. compressed air).

- 01** Unpressed connections indicator (LBP)
- 02** Multi-purpose scope of use
- 03** Installation and operation safety
- 04** Comfortable assembly
- 05** Compatibility
- 06** Easy identification of diameters by ring colour on the fitting



# Advantages

The KAN-therm ultraPRESS system is a modern and unique technical solution available on the market, offering 6 functions in one structure:

<b>01 LBP (Leak Before Press)</b>	The function of signalling unpressed connections (in the range of diameters 16-32 mm).
<b>02 Versatility</b>	Possibility to use pressing jaws with two different press profiles: 16-40mm (U or TH), 50-63mm (TH).
<b>03 Safety</b>	The special structure of the steel press ring forces the automatic and correct positioning of the pressing jaw.
<b>04 Comfort</b>	Safe and easy installation by eliminating the need for pipe calibration and chamfering (in the 16-32 mm diameter range).
<b>05 Compatibility</b>	The fittings are compatible with PERTAL pipes with aluminium layer. In addition, it is possible to connect PERT, PEXC and blueFLOOR PERT pipes with an EVOH layer (applies to diameters of 16-25 mm).
<b>06 Identification</b>	Easy identification of the fitting diameter thanks to the use of coloured plastic rings in the diameter range of 16-40 mm



## 50-year service life

All system components are tested in KAN's highly specialised testing laboratory for the 50-year service life of the installation.

## Versatile use

Polyethylene pipes with an aluminium layer included in the KAN-therm ultraPRESS system can be successfully used in heating and domestic water installations, as well as in all types of surface heating and cooling systems. Following consultation with KAN, the system can also be used in various types of technological and industrial installations such as compressed air.

## Reduced coefficient of thermal expansion

Polyethylene pipes with an aluminium layer in their structure have 8 times lower coefficient of thermal expansion compared to polyethylene pipes with an EVOH layer.

## Pipe plasticity

Thanks to their lack of shape memory, pipes with aluminium layer retain their shape, making it much easier to make pipelines.

## Health and ecology

The materials of which the system components are made are physiologically and microbiologically inert in drinking water installations, the materials are environmentally and human health friendly, as certified by the National Institute of Hygiene.

## Flush mounting

Possibility of flush mounting (hiding) connections in floors and walls (under plaster).



# Application

The KAN-therm ultraPRESS system is designed for the construction of indoor utility water installations, central heating and cooling installations, all kinds of surface heating and cooling installations (floor and wall), heating and cooling of external surfaces (sports pitches or ice rinks) and various types of industrial installations (e.g. compressed air) - following consultation with KAN.

The elements of the system can be successfully used in single-family and multi-family housing, in public utility facilities (schools, hotels, sports facilities).

Due to the low coefficient of thermal expansion, the phenomenon of pipes overhanging between the brackets is minimised with surface-mounted installation, and the system is well suited to the renovation of historic buildings.

## SYSTEM KAN-therm ultraPRESS

### PERTAL pipe type

Parameters	Heating installations	Domestic water installations
T <sub>working</sub> [°C]	80	60
T <sub>maximal</sub> [°C]	90	80
T <sub>emergency</sub> [°C]	100	100
Working pressure [bar]	10	10



TAP WATER



HEATING



TECHNOLOGICAL HEAT



COOLING



COMPRESSED AIR



TECHNICAL GASES



UNDERFLOOR HEATING AND COOLING



WALL HEATING AND COOLING



CEILING HEATING AND COOLING



EXTERNAL SURFACES HEATING AND COOLING

# Pipes

The ultraPRESS system offers extremely durable PERTAL polyethylene pipes with an aluminium layer, made of the highest quality materials, with diameters from 16 mm up to 63 mm.

## Polyethylene pipes with a layer of aluminium



1 Polyethylene PE-RT

3 Aluminium layer

4 Binding layer

5 Polyethylene PE-RT

2 Binding layer

ultraPRESS PERTAL



### Pipes with an aluminium layer consist of:

**inner layer** (base pipe) made of polyethylene with increased thermal resistance PE-RT,

**middle layer** in the form of a butt-welded aluminium tape with a laser,

**outer layer (shell)** made of polyethylene with increased thermal resistance PE-RT.

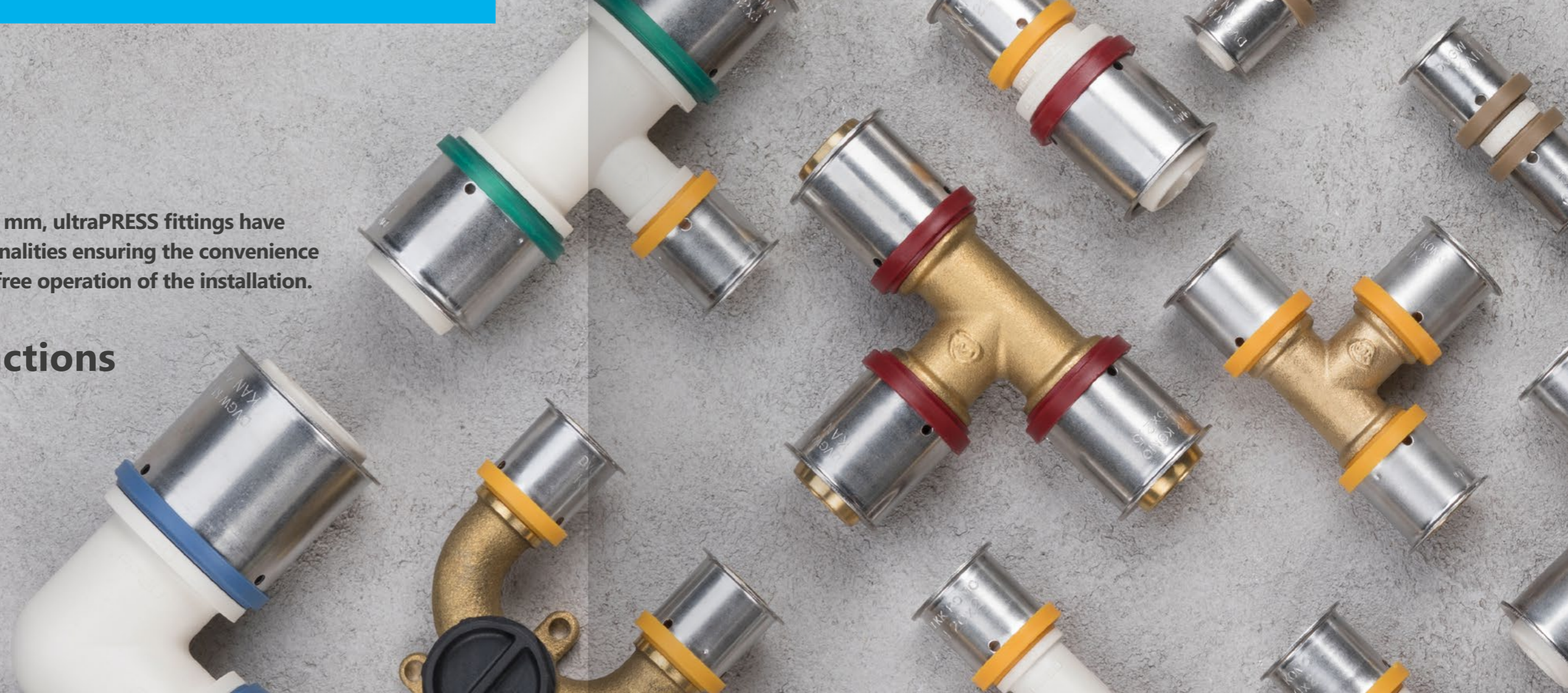
The aluminium layer ensures diffusion tightness and makes the pipes have 8 times lower thermal expansion than polyethylene pipes with an EVOH layer. Due to butt welding of the aluminium layer, the pipes have a perfectly round cross-section. PERTAL pipes with an aluminium layer are a universal product that can be used both in hot and cold tap water installations (application class 1 and 2) as well as high-temperature radiator systems (application class 5).

Application (classes according to ISO 10508)	Dimension	Pipe type	Connection type	
			Press	Screwed
Cold water, hot water	16 × 2,0		+	+
<b>[Application class 1 (2)]</b>	20 × 2,0		+	+
$T_{work}/T_{max} = 60(70)/80^{\circ}C, P_{work} = 10 \text{ bar}$	25 × 2,5	PERTAL	+	+
Underfloor heating, radiator heating	26 × 3,0		+	+
low temperature <b>[Application class 4]</b>	32 × 3,0		+	-
$T_{work}/T_{max} = 60/70^{\circ}C, P_{work} = 10 \text{ bar}$	40 × 3,5		+	-
Radiator heating <b>[Application class 5]</b>				
$T_{work}/T_{max} = 80/90^{\circ}C, P_{work} = 10 \text{ bar}$	50 × 4,0	PERTAL	+	-
For all classes of Temergency = 100 °C	63 × 4,5		+	-

# Fittings

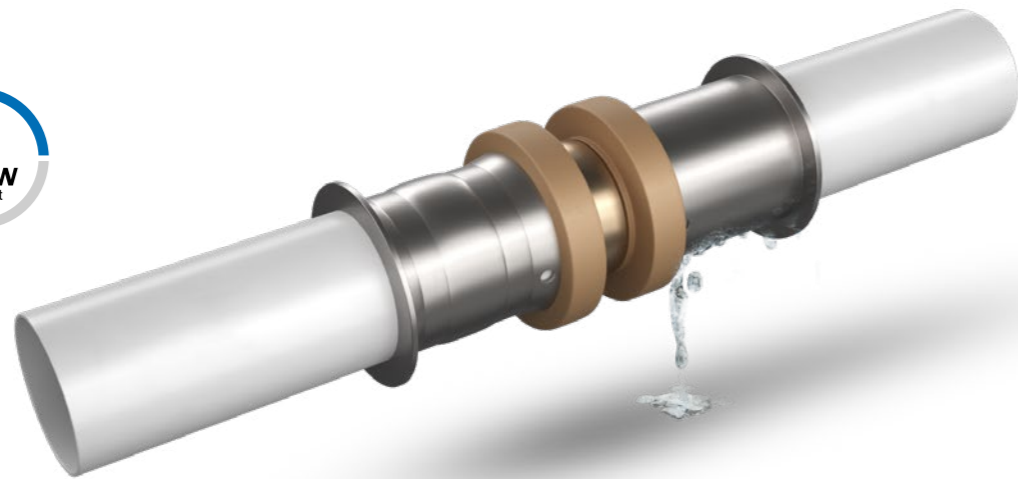
In the diameter range of 16-40 mm, ultraPRESS fittings have a number of additional functionalities ensuring the convenience of their assembly and trouble-free operation of the installation.

**6in1 - many functions in one design!**



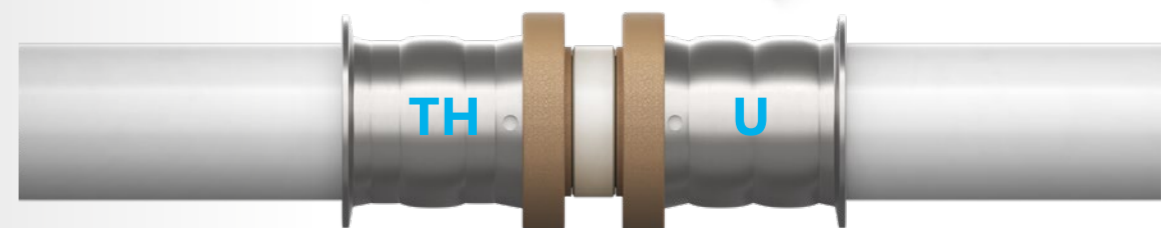
## 01 LBP System

Leak **B**efore **P**ress, thanks to this function, unpressed connections leak even when the system is filled with water (without the need to build up pressure) - in accordance with DVGW guidelines. This enables unpressed joints to be located easily and quickly, even in very difficult building conditions.



## 02 Versatility

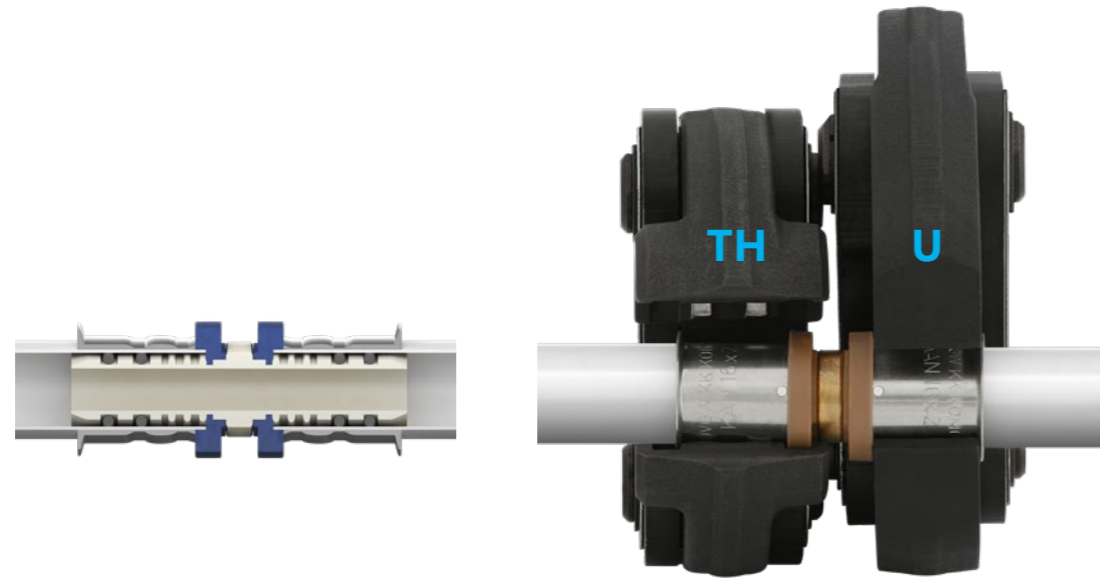
The construction of ultraPRESS fittings allows for making connections using clamping jaws with two most popular clamping profiles "U" and "TH".



## 03 Safety

A specially profiled steel pressed sleeve protects against improper mounting of the jaw on the fitting during the assembly process.

The "TH" sleeve collar covers the plastic ring, the "U" jaw is mounted between the plastic ring and the steel ring flange. This design solution eliminates assembly errors caused by incorrect alignment of the pressing jaws.



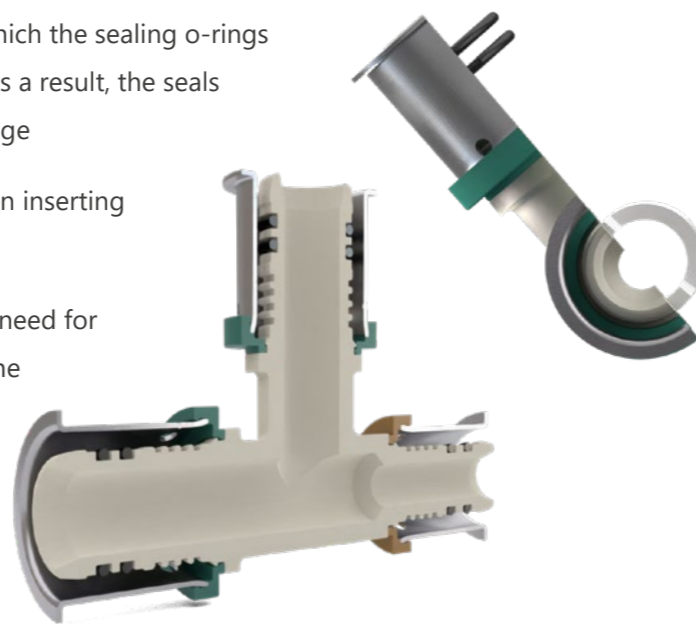
## 04 Comfort

The end of the fitting end is designed in the form of a cone, which enables automatic calibration of the deformed pipe end while inserting it into the fitting.

In addition, the body of the fitting, in which the sealing o-rings are mounted, has also been modified. As a result, the seals are additionally protected against damage

(cutting the seal) and displacement when inserting the pipe into the fitting.

This design of the fitting eliminates the need for calibration and internal chamfering of the pipe, if it has been cut correctly (perpendicular cut using sharp cutting tools).



## 05 Compatibility

PERTAL pipes with an aluminium layer combined with ultraPRESS fittings form the basis of the ultraPRESS system offer. Thanks to the unique design of ultraPRESS fittings, it is also possible to connect PERT, PEXC and blueFLOOR PERT pipes with EVOH layer. Refer to the KAN-therm Designer and Contractor's guidebook for the maximum operating parameters of such a connection.





## 06 Identification, corrosion resistance and durability

PPSU and brass fittings in the 16-40 mm diameter range are fitted with a plastic ring, the colour of which depends on the diameter of the connection. This solution facilitates the identification of the fitting and speeds up work on the construction site and in the warehouse.

Fittings bodies made of PPSU display absolute water-neutrality, metal-like mechanical strength and are resistant to high temperatures.

Brass fittings are protected against contact corrosion by isolating the brass body from the aluminium layer present in the pipe with a coloured plastic ring.



# Fittings

More possibilities thanks to the diameter of 50 and 63 mm



ultraPRESS fittings with a diameter of 50 and 63 mm enable the use of a complete solution such as the ultraPRESS system in large facilities.

They enable the construction of extensive installations requiring large flows and heating or cooling powers.



# Tools

New, personalised KAN-therm tools with jaws for diameters of  $\varnothing$  16-40 mm

- 3 professional tool sets with U and TH jaws
- All equipped with automatic jaw retraction!
- New, durable tool cases

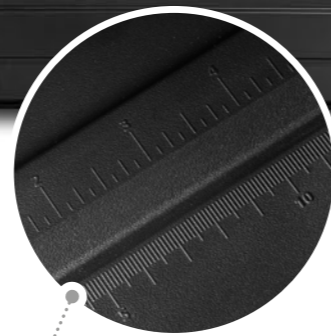
## KAN-therm AC 3000



TH Jaws

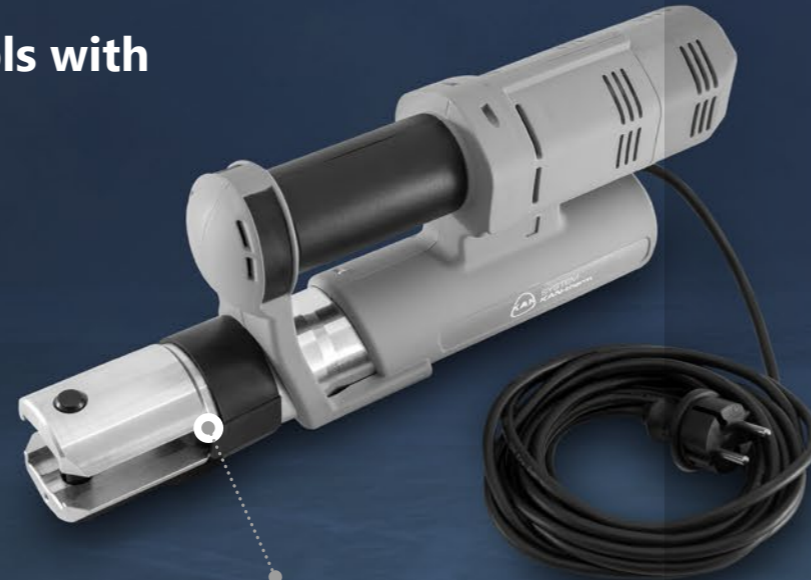


U Jaws



A plastic case with a practical measuring ruler on the housing

## KAN-therm AC ECO



## KAN-therm DC 4000



18V/4 Ah battery



230V charger





• KAN-therm **MINI**



Battery 10.8 V 1.5 Ah

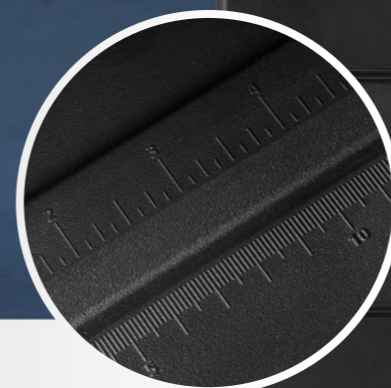


230V charger



## New KAN-therm tool MINI for the construction of installations in single-family houses $\varnothing$ 16-32 mm

- Small, light, handy with quick charging - equipped with 2 batteries
- Batteries compatible with ultraLINE tools!
- Practical measuring ruler on the casing of the suitcase
- The 360° rotating head guarantees a comfortable approach to the fitting with the tool



Plastic case with a practical measuring ruler on the housing



U Jaws



## REMS tools



Power-Press ACC electric press tool

Power-Press SE electric press tool



Aku-Press battery press tool



„U or TH” profile press jaws 16-40 mm

Eco Press press tool

„TH” profile press jaws 50-63 mm

## NOVOPRESS tools



ACO 103 battery press tool



PB1 „U or TH” profile press jaws 16-32 mm



ACO 203XL battery press tool



PB2 „U or TH” profile press jaws 16-40 mm



EFP203 electric press tool

„TH” Snap On profile collar 50 and 63 mm



ZB 203 adapter 50 and 63 mm



PB2 „U or TH” profile press jaws 16-40 mm

## Tools for the pre-treatment of pipes with an aluminium layer



For pipes with diameters of **16-32 mm** the handy and convenient pistol-grip snips are worth recommending.



For pipes with diameters of **16-63 mm** use roll cutter.

## Tools for calibrating and chamfering pipes



Universal calibrators (multi-diameter): **16/20/25-26 mm, 25-26/32/40 mm, 50/63 mm**. In the case of ultraPRESS fittings **16-32 mm** calibration is not required but facilitates assembly.



## Tools for profiling pipes with an aluminium layer





External spring  
**16-26 mm.**



Internal spring  
**16-26 mm.**

## KAN-therm pressed fittings regarding the available diameters, clamp profiles and the method of pipe preparation

Coupling design	Diameter range	Clamp profile	Pipe processing method	
			diameter calibration	edge chamfering
 KAN-therm ultraPRESS Colour of the spacer ring	16	U or TH	no	no
	20		no	no
	25		recommended	no
	26	C or TH	recommended	no
	32	U or TH	recommended	no
	40	U or TH	yes	yes
	50	TH	yes	yes
	63	TH	yes	yes



**01** | Cutting the pipe with pistol or roller shears.



**02** | Pipe profiling with a spring.



**03** | Insert the pipe into the fitting as far as possible.



**04** | Placing the clamping jaw on the fitting.

## Assembly

### Speed, comfort and safety

Tight and secure connections in the KAN-therm ultraPRESS system are made by clamping a steel ring on a pipe and a fitting.

Easy-to-use and versatile tools are used to make the connections. Connections do not require additional seals such as tape or tow (caulking).

The KAN-therm ultraPRESS system has been designed based on the principle of "quick installation - lasting effect", which allows for a measurable acceleration of investment and finishing works.

Due to the unique design of the elements, the assembly of the KAN-therm ultraPRESS system is extremely simple, fast and, above all, safe.



**05** | Starting the press drive and pressing the joint.



**06** | Unlocking and removing the jaw from the fitting. The connection is ready for a leak test.



## The best evidence of the highest quality are numerous completed projects in various sectors of the construction industry

Despite the fact that they are not visible on a daily basis, installations made in the KAN-therm system have been working flawlessly in the largest housing estates, in public buildings, single-family houses, sports and recreational facilities, as well as in industrial halls and factories for over 20 years.

The KAN-therm ultraPRESS system is a perfect solution for both new investments and renovated buildings, therefore it can also be found in the oldest historic buildings as well as monuments and religious buildings.



# Multisystem **KAN-therm**

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 Green	
	Steel	
	Inox	
	Groove	
	Copper, Copper Gas	
	Sprinkler	
	PowerPress	
	Surface heating and cooling Control automation	
	Football Stadium installations	
	Cabinets and manifolds	

