SYSTEM
KAN-therm

EN 2015

SYSTEM **KAN-therm**

Innovative systems for compressed air

ISO **9001**

Compressed air installations in the KAN-therm system

The KAN-therm system is an optimal, comprehensive installation multi-system consisting of state-of-art complimentary technical solutions within the scope of pipe installations.

It is a perfect implementation of the vision of a universal system, backed by many years of experience and passion from the KAN constructors as well as strict quality control of the materials and end products.

In addition, to use in standard heating and utility water installations, the KAN-therm system elements can be also applied for construction of specific installations for the compressed air industry. The compressed air distribution installation is a set of pipes, fittings (elbows, tees, reductions) and couplings used in this industry, from the generation point to the receivers (machines, tools). Each of the above specified elements must be properly selected according to the needs of the user as well as quality, quantity and pressure of the transferred air.

The pipeline system that transfers compressed air to the receivers is one of the most important elements of the entire installation.
This regards both transfer pipelines as well as connections to the machines.
All these elements, when poorly sized and mounted (too small diameters of the transfer or connection pipelines, too "complicated" installation), will generate high pressure drops and, therefore, higher operation costs. This will result in higher energy consumption by the compressors due to necessary operation with higher pressure supply.

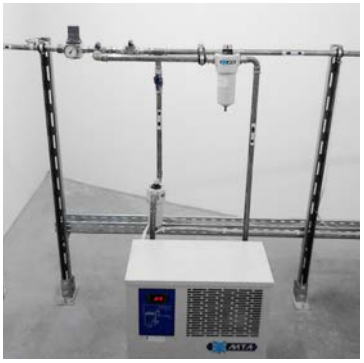
The decrease of compressor operating pressure by 1 bar is a decrease of energy consumption by over 7%.

In order to provide a safe operation of the assembled installation for many years, concurrently ensuring constant flow conditions, it is necessary to use pipe systems meeting the highest requirements regarding quality and durability of the particular elements.

The elements of the KAN-therm system meet these conditions.

Depending on the operating parameters and quality of transferred air, various KAN-therm installation systems can be used for construction of the compressed air installation.





System KAN-therm Inox

is a system of pipes and fittings made of stainless steel, with diameters ranging from 12 to 168mm.

The "press" technology applied in the KAN-therm Inox System provides a quick and reliable performance of connections by means of pressing of fittings with the use of commonly available crimping tools, eliminating the process of threading or welding of the particular elements.

This allows for a very fast assembly of the installation, even in the case of pipes and couplings with large diameters.

Type of component	Material		
	EN 10088	DIN	AISI/ASTM
Pipes	1.4404	X2CrNiMo17-12-2	316L
	1.4521	X2CrMoTi18-2	444
Fittings	1.4404	X2CrNiMo17-12-2	316L

Application guidelines:

Parameter	Value
Max. working pressure	for diameters 12 - 54mm: 16 bar
	for diameters 76.1 - 168mm: 10 bar
Working temperature	for EPDM sealing: within the range from -35 °C to +135 °C
	for FPM/Viton sealing: within the range from -30 °C to +200 °C
Max. oil content in the air	for the EPDM sealing: up to 25mg/m^3
	for the FPM/Viton: over 25mg/m^3

CAUTION:

Compressed air containing mineral or vegetable oil require application of the FPM/Viton sealing. The EPDM O-rings can be used in a dry (without oil) compressed air installation or installation containing synthetic oils of which the amount does not exceed 25mg/m^3.

ISO 9001

System KAN-therm Steel

is a comprehensive installation system consisting of zinc plated carbon steel pipes and fittings, with diameters ranging from 12 to 108mm.

The "press" technology applied in the KAN-therm Steel System provides a quick and reliable performance of connections by means of pressing of couplings with the use of commonly available crimping tools, eliminating the process of threading or welding of the particular elements.

This allows for a very fast assembly of the installation, even in the case of pipes and fittings with large diameters.

Type of component	Material
Pipes and fittings	RSt 34–2 carbon steel, material number 1.0034 as per DIN EN 10305–3
Corrosion protection: pipes and fittings	external galvanic zinc plating (Fe/Zn 88), 8 -15 μm thick

Application guidelines:

Parameter	Value
Max. working pressure	for diameters 15 - 54mm: 16 bar
	for diameters 66.7 - 108mm: 10 bar
Working temperature	for EPDM sealing: within the range from -35 °C to +135 °C
	for FPM/Viton sealing: within the range from -30 °C to +200 °C
Max. moisture content	max. up to 880mg/m3 (if this value is exceeded, it is recommended to use the KAN-therm Inox System or KAN-therm plastic systems)
Max. oil content in the air	for the EPDM sealing: up to 25mg/m^3
	for the FPM/Viton: over 25mg/m^3

CAUTION:

Compressed air containing mineral or vegetable oil require application of the FPM/Viton sealing. The EPDM O-rings can be used in a dry (without oil) compressed air installation or installation containing synthetic oils of which the amount does not exceed 25mg/m^3.

System KAN-therm PP

The KAN-therm PP system is a comprehensive installation system consisting of pipes and fittings made of PP-R synthetic polypropylene plastics (type 3), with diameters ranging from 16 - 110mm.

Connection of the system elements is performed by means of polyfusion welding (thermal polyfusion) by means of electric welders. The welding technique, due to uniform connection, guarantees exceptional tightness and mechanical strength of the installation.

Type of component	Material
Pipes	PP uniform pipes, compliant with the PN-EN ISO 15874 standard: PP-R random copolymer, compliant with the PN-EN ISO 15874 standard
	PP Stabi Al pipes, compliant with AT-15-8286/2011: PP-R random copolymer, compliant with the PN-EN ISO 15874 standard + perforated aluminium foil
	PP Glass pipes, compliant with AT-15-8635/2011: PP-R random copolymer, compliant with the PN-EN ISO 15874 standard + glass fibre
Fittings	uniform: PP-R random copolymer, compliant with the PN-EN ISO 15874 standard
	with threads: PP-R random copolymer, compliant with the PN-EN ISO 15874 standard + brass inserts

Application guidelines:

Parameter	Value
Max. working pressure	pipes PN10: up to 10 bar
	pipes PN16: up to 16 bar
	pipes PN20: up to 20 bar
Working temperature	up to 20 °C

System KAN-therm Press LBP

is a new comprehensive installation system consisting of press fittings (with diameters ranging from 16-40 mm, new generation LBP profiles) and multilayer pipes PE-RT/Al/PE-RT, PE-X/Al/PE-X as well as uniform pipes PE-Xc and PE-RT.

Depending on the type of material configuration, the KAN-therm Press LBP System offer includes:

- multilayer Multi Universal PE-RT/Al/PE-RT pipes, with diameters ranging from 16-40mm
- multilayer Multi Universal PE-X/Al/PE-X pipes, with diameters ranging from 50 – 63mm
- PE-Xc pipes with anti-diffusion layer, with diameters ranging from 16 - 25mm
- PE-RT pipes with anti-diffusion layer, with diameters ranging from 16 - 20mm

The basic connection method for the pipes and fittings is the "press" technique with a pressed stainless steel sleeve.

Type of component	Material
Pipes	PE-RT/Al/PE-RT pipes, compliant with the PN-EN ISO 21003 standard, material: PE-RT polyethylene type II, aluminium
	PE-X/Al/PE-X pipes, compliant with the PN-EN ISO 21003 standard, material: cross-linked polyethylene, aluminium
	PE-Xc pipes, compliant with the PN-EN ISO 15875 standard, material: cross-linked polyethylene, EVOH anti-diffusion layer
	PE-RT pipes, compliant with the PN-EN ISO 22391 standard, material: PE-RT polyethylene type II, EVOH anti-diffusion layer
Fittings	PPSU and PPSU with brass inserts
	brass

Application guidelines:

Type of connection	Parameter	Value
PE-RT/Al/PE-RT or PE-X/Al/PE-X pipes and Press/ Press LBP fittings	Max. working pressure	up to 10 bar
	Working temperature	up to 60°C
PE-RT or PE-Xc pipes and Press LBP fittings	Max. working pressure	up to 6 bar
	Working temperature	up to 60°C

CAUTION!

The EPDM O-rings and PPSU fittings can be used in a dry (without oil) compressed air installation or installation containing ONLY synthetic oils of which the does not exceed 25mg/m^3.

System KAN-therm Push

is a comprehensive installation system consisting of PE-Xc or PE-RT polyethylene pipes and PPSU or brass fittings, with diameters ranging from 12-32mm.

Tight connections without O-rings in the KAN-therm Push System are obtained by means of sliding the brass ring onto the fitting and pipe. The connections do not require any additional sealing, such as Teflon tape or tow. Manifolds and installation cabinets are a supplementation to the system.

Type of component	Material
Pipes	PE-Xc pipes, compliant with the PN-EN ISO 15875 standard, material: cross-linked polyethylene, EVOH anti-diffusion layer
	PE-RT pipes, compliant with the PN-EN ISO 22391 standard, material: PE-RT polyethylene type II, EVOH anti-diffusion layer
Fittings	PPSU and PPSU with brass inserts
	brass
Sliding rings	brass

Application guidelines:

Parameter	Value
Max. working pressure	up to 10 bar
Working temperature	up to 60 °C

CAUTION:

Use only in in a dry compressed air installation or installation containing ONLY synthetic oils of which the amount does not exceed 25mg/m^3.

System KAN-therm Push Platinum

is a comprehensive installation system consisting of PE-Xc/Al/PE-HD Platinum multilayer pipes and standard KAN-therm Push fittings made of PPSU and brass, with diameters ranging from 14–32mm.

Tight connections without O-rings in the KAN-therm Push Platinum System are obtained by means of sliding the brass ring onto the fitting and pipe. The connections do not require any additional sealing, such as Teflon tape or tow. Manifolds and installation cabinets are a supplementation to the system.

Type of component	Material
Pipes	E-Xc/Al/PE-HD Platinum pipes, compliant with the PN-EN ISO 21003 standard, material: cross-linked polyethylene, aluminium, high density polyethylene
Fittings	PPSU, PPSU with brass inserts
	brass
Sliding rings	brass

Application guidelines:

Parameter	Value
Max. working pressure	up to 10 bar
Working temperature	up to 60 °C

CAUTION:

Use only in in a dry compressed air installation or installation containing ONLY synthetic oils of which the amount does not exceed 25mg/m³.

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