



Pipeline Accessories

Compenseal[®],
Sealing Sleeves Type KMR
4 pipes





1 bar
with load cycles
MFPA tested



Product information

Special flexible sealing collar made out of high quality **EPDM elastomer** for wall penetrations at pipelines which are exposed to movements. The seal is extremely suitable for axial and radial pipe movement as well as any subsidence or sagging, and it is tight against high external water pressure.

Usage

As a movement compensator, the sealing collar is perfectly suited for **preinsulated pipe** penetration through walls and ceilings on buildings.

- Water pressure tight up to 1.0 bar

Advantages

- suitable for axial and radial pipe movement up to +/- 40 mm
- suitable in case of subsidence or sagging, depending on outside pipe diameter and core hole sizes up to 40 mm
- ideal movement compensator

Dimensions

Standard for outside pipe diameter 75 mm **up to 800 mm** and core bores 150 mm up to 900 mm.

Complete Set:

The seal is supplied with one component PU sealant, stainless steel straps, 12 mm stainless steel hexhead screws and 14 mm dowels as a complete set.

The 4 pipes warranty only applies to faulty material. Checking the suitability of the product for the individual application is solely the responsibility of the user.

Dimensions 4 pipes Compenseal

HDPE jacket outer diameter in mm	max. core drilled hole Ø mm	OD wall flange mm	Art.-No.
KMR OD 75-90-110	150 / 200	350	20050
KMR OD 125-140-160	200 / 250	400	20051
KMR OD 180-200-225	300	450	20052
KMR OD 250-280-315	350 / 400	565	20053
KMR OD 355-400	450 / 500	650	20054
KMR OD 450-500	550 / 600	750	20055
KMR OD 560-630	650 / 700	880	20056
KMR OD 670	800	1050	20058
KMR OD 710-800	800 / 900	1050	20057

Other dimensions on request



4 pipes stainless steel straps used for pipe sizes up **OD 315 mm**
Torque value 10 Nm

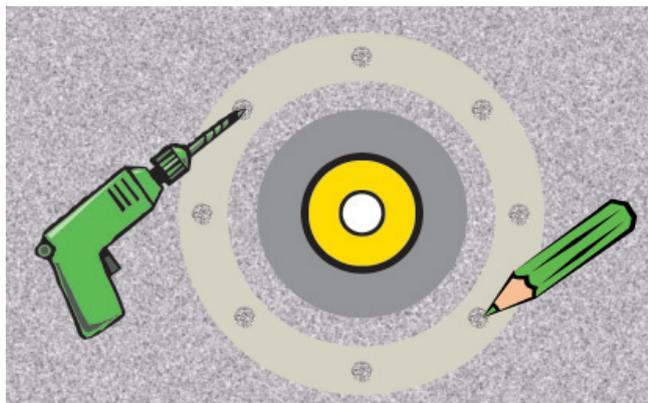


4 pipes stainless steel strap width 20 mm for pipe size **OD 75 mm up to 280 mm**, Torque value 10 Nm

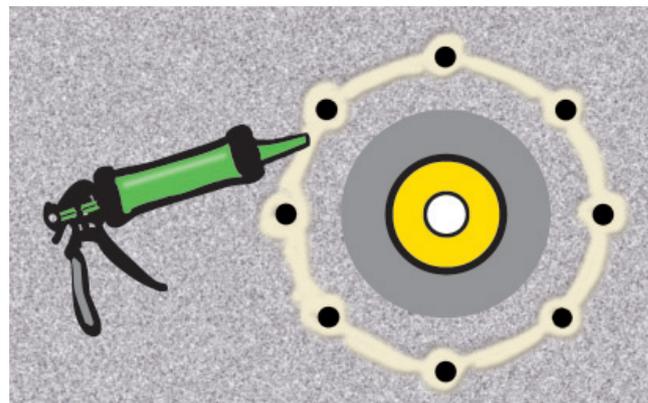
Product Data

Material	EPDM
Pressure plate	stainless steel V2A
Operating temperature	120°C
Thickness	8 mm ± 1 mm
Durometer Shore A	60 ± 5
Elongation at break	400%

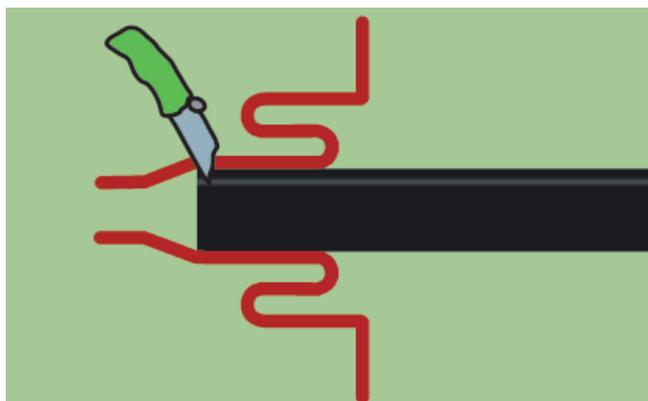
Application Instructions Compenseal® 4 pipes



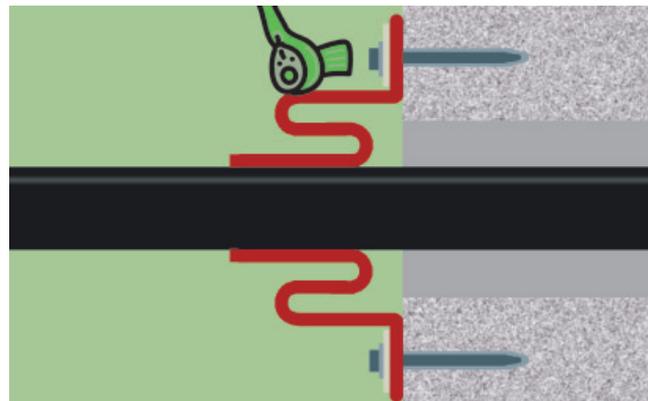
1. Centre and support **carrier pipe in** core bore.
2. Apply pressure plate centered to core bore and mark **boreholes** at wall/ceiling. After that **drill** into marks and **put dowel inside**.



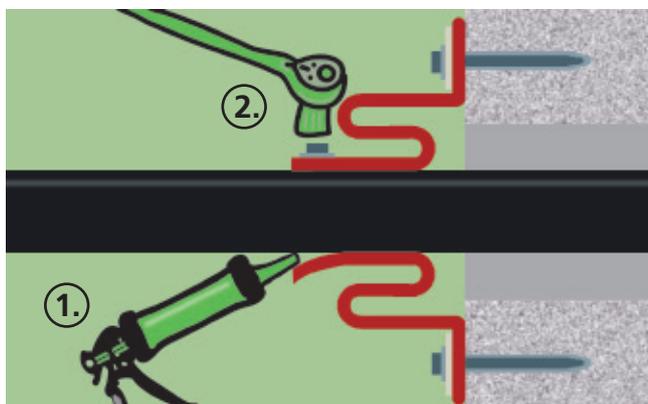
3. Apply **sealing compound** material on the wall with a dispensing gun in a circle around every screw bore as well as the complete core bore range.



4. **If necessary, cut down the seal nozzle to the correct pipe dimension.**
Pull Compenseal® over the pipe's end and cut off the seal with a sharp knife along the edge.
The edges in the nozzle are not the cutting marks.



5. Push the side of the Compenseal® with flange bore holes first over the carrier pipe, collar facing the wall. After that interlock Compenseal® with pressure plate and **spread emergent sealing compound**.



6. Adjust **opening** of the collar to carrier pipe so that a wave shaped expansion zone occurs. **Inject sealing compound** circularly into the collar opening (1) and **fasten bolt strap tightly with 10 Nm** (2).

Advice:

- The sealing surface of the wall/ceiling has to be flat and score-free.
- You have to consider that carrier pipe, the wall/ceiling and Compenseal® are dry during the application as well as being free of any fat or dust.
- When laid into the ground the Compenseal® must be covered before backfilling with an **expansion cushion** to ensure that the seal can move in all directions.
- For a carrier pipe size of 315 mm and bigger, a tightening bolt steel strap will be delivered.
- The pipe must be supported in front of and behind the wall to avoid any sagging or bending.
- The bolt strap needs to be retightened with **10 Nm after one hour**.

Subject to technical changes

Sealing Sleeve - Type KMR 4 pipes



Pipe movements and subsidence are the big challenges for a **pipeline wall penetration seal**, especially at **pre-insulated high-temperature pipelines**.

The sealing sleeve type KMR 4 pipes fulfills the high technical requirements to seal wall penetrations securely and permanently, gas- and watertight, especially in larger dimensions.

To deploy this sealing sleeve, it is necessary to have a casing pipe on which a sleeve can be mounted. The sealing system consists of a **sealing sleeve** made of **synthetic elastomer** with a thickness of about 5 mm. A one-component **special-sealing adhesive** has to be injected under the sleeve on both sides.

Two high-quality stainless steel straps press the sleeve on and hold the sealing adhesive in position under stress.

A pressure tightness of up to 1.0 bar can be reached up to an annular space of 75 mm. For larger annular spaces please consult us at 4 pipes.

Place a **compensation cushion** in front of the sleeve before the trench will be backfilled. So a stretching zone is created in case of any expansion.

Sealing sleeve type KMR is available up to a size of 2000 mm carrier pipe diameter. The sealing sleeves are manufactured **individually** and have to be ordered with exact specification of pipe diameters and the expected expansion.

The maximum permanent operating temperature for these sealing sleeves is 55°C. For special requirements, please contact us at 4 pipes.

The sealing sleeve comes in a set ready to mount with sufficient fastening straps and sealing adhesive in a 310 ml cartridge.

For retrofit applications, we can find a suitable installation partner for on-site welding with special equipment. In such case, the cost will depend on the required effort.

**Delivery time on request.
Product will be custom made.**



The pipe must be supported in front of and behind the wall to avoid any sagging or bending.

You can find the technical datasheet for KMR type under ASTM seals on page 28.

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Tightened 4 pipes-clamping straps with TOX connection technology.

**No welding, so corrosion protection is optimised.
(Used for pipe sizes \geq DN 300)**

Torque value for bolt strap 10 Nm

Sealing Sleeve - Type KMR 4 pipes

Application



1. Slide sealing sleeve over the pipe and casing



2. Fit the supplied steel strap with max. 10 Nm at the front end of the sleeve on the casing pipe



3. Fill the sealant all around under the sleeve

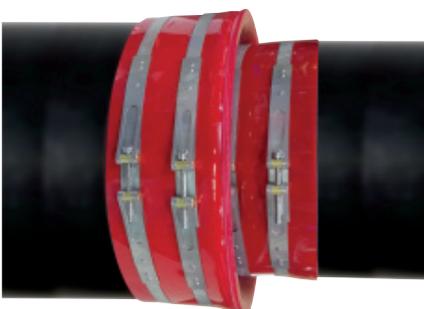


4. Fix second strap with **10 Nm** (smoothen escaping sealant).
Repeat step 2 to step 4 on the carrier pipe



5. Fully assembled sealing sleeve type KMR

6. The bolt strap needs to be retightened with **10 Nm after one hour**



Expansion direction S-shape mounting



Expansion direction stretched mounting



Before backfilling protect sealing sleeves with expansion-pads

Split-sleeve version is possible on request.
The installation can be carried out by DVS trained personnel.