

Technical Leaflet

KBS® Pipe Seal M

Pipe collar for fire stopping of combustible pipes.

1. Usage

Field of application	KBS® Pipe Seal M is used for sealing plastic pipes in our KBS® Kombischott (panel seal) systems and as a single pipe penetration in fire rated walls and floors. KBS® Pipe Seal M has been tested and is available for sealing plastic pipes up to an outside diameter of 630 mm.
Installation	KBS® Pipe Seal M is used as a mounting collar. Please refer to the application instructions enclosed with each packaging unit.

2. Product specification

Description	KBS® Pipe Seal M is a red painted sheet steel collar with an intumescent insert. KBS® Pipe Seal M also has a mechanical locking device that optimizes the way the collar works in the event of a fire: When exposed to heat, the softening tubes are pressed together by the high expansion pressure of the intumescent material and the mechanical locking device is activated. The cross-section of the pipe is closed in a very short time. This prevents fire, smoke and gases from passing through. The progressive expansion of the intumescent insert quickly creates a thick and firm foam that fills the entire wall or floor penetration. This ultimately leads to an absolutely tight seal. The intumescent material used is not influenced by water or carbon dioxide.
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Product program/sizes	The pipe collar is available in 19 sizes. Standard sizes DN 50 – 400 mm and as custom-made pieces up to 630 mm.
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Collar type	Diameter of pipe
KBS® Pipe Seal M 50 – M 400	50 mm - 400 mm
Custom-made sizes (on request)	
KBS® Pipe Seal M 450	450 mm
KBS® Pipe Seal M 500	500 mm
KBS® Pipe Seal M 560	560 mm
KBS® Pipe Seal M 630	630 mm

Form of supply	2 half shells together with fixing clamps.
Installation instructions	Some types of collars can not only be used for the appropriate pipe but have been tested for several pipe diameters. One-sided installation is also possible with wall mounting. The type of collar and assembly to be used in a given application must be selected on the basis of the respective approval document. To ensure a stable installation the special sizes KBS® Pipe Seal M 500 - 630 are equipped with a welded flange including fastening holes.
Disposal	In accordance with national regulations. See also safety data sheet.

3. Scope of testing and approval

Type approval (Germany)	Approved as pipe penetration seal up to a diameter of 400 mm, Z-19.17-385.
EN 1366-3	Approved and classified as pipe penetration seal up to a diameter of 630 mm.
VKF-Approval (Switzerland)	Approved as pipe penetration seal up to a diameter of 400 mm.

4. Storage

Storage	Store cardboard boxes in dry environment.
Storage temperature	No limitations.

5. General Instructions

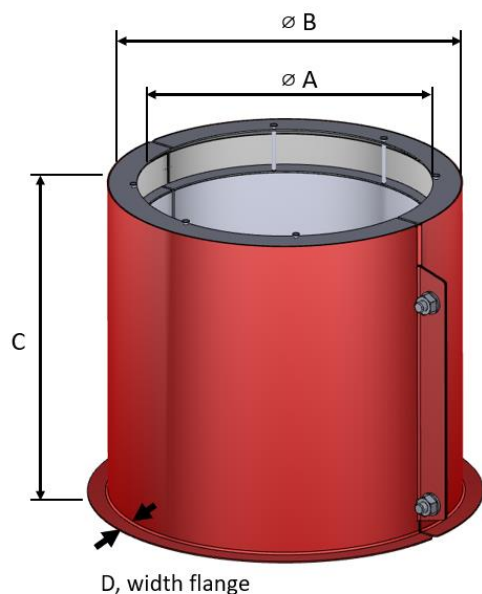
Safety precautions	When installing KBS® Pipe Seal M observe the general rules for safety at work.
Packaging	Cardboard box containing 1 pipe collar.

This information and all further technical advice reflect our present knowledge and experience. The purpose is to inform interested parties about our products and their use and should not be construed as guaranteeing specific properties of products described or their suitability for a particular application, nor as providing complete instructions for use. The information implies no guarantee for product and shelf life properties, nor any liability or other legal responsibility on our part. Any existing third-party intellectual property rights, especially patent rights, must be taken into consideration. Application and usage of our products based on our technical advice are beyond our control and are the sole responsibility of the user. The user is not released from the obligation to conduct careful inspection and testing of incoming goods in order to verify the suitability for the intended application. For experimental products we do not guarantee for later commercial availability. Validly existing laws and provisions must be taken into consideration by the recipient of our products. In addition, the currently valid version of our general conditions of sale applies.

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Dimensional Drawing

KBS® Pipe Seal M

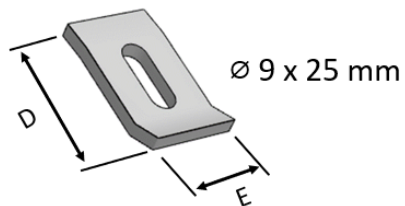


Pipe Outer-Diameter	Type KBS® Pipe Seal	A	B	C	D	Mounting Type - see below -
[mm]	[-]	[mm]	[mm]	[mm]	[mm]	[-]
50	M 50	53	75	65	10	3 x I
63	M 63	66	88	75	10	3 x I
75	M 75	78	100	85	10	3 x I
90	M 90	93	125	105	10	3 x I
110	M 110	113	155	115	10	4 x I
125	M 125	128	170	125	10	4 x I
140	M 140	143	185	140	10	4 x I
160	M 160	163	205	150	10	4 x I
180	M 180	183	225	190	15	5 x I
200	M 200	203	245	230	15	6 x II
225	M 225	228	270	255	15	6 x II

Pipe Outer-Diameter	Type KBS® Pipe Seal	A	B	C	D	Mounting Type - see below -
[mm]	[-]	[mm]	[mm]	[mm]	[mm]	[-]
250	M 250	253	295	285	15	6 x II
280	M 280	283	325	315	15	6 x II
315	M 315	318	360	335	15	6 x II
355	M 355	358	420	390	15	6 x II
400	M 400	403	475	440	15	6 x II
450	M 450	455	565	690	70	III
500	M 500	505	615	690	70	III
560	M 560	568	678	690	70	III
630	M 630	638	748	690	70	III
Caution: The weight of the KBS® Pipe Seal M 630 is approx. 130kg!						

Mounting Type, I+II

Brackets

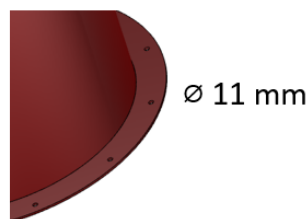


Type I: D = 50 mm
E = 25 mm

Type II: D = 50 mm
E = 30 mm

Mounting Type, III

Drill holes in flange



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Fasteners for KBS® Pipe Seals

KBS® Pipe Seal M

KBS® Pipe Seal Type	Pipe outside diameter (mm)	<u>Concrete</u> Walls/Ceilings Steel dowels	<u>Autoclaved aerated concrete</u> Walls/ceilings Plastic dowel/ Steel screw	<u>Masonry walls</u> (Brick, Sand-lime brick) Plastic dowel/steel screw	<u>Lightweight partitions</u> <u>Panel seal</u> <u>Mixed penetration seal</u>	KBS® Pipe Seal M ≤ 160 on a Promatect 500 attachment box
M	50 – 110	* Hilti HSA M6x65 * UPAT IMC 6/10/55	* ¹ Fischer FMD 8x32/x60 * ¹ Hilti HPD 8x20 * ¹ Würth W-MG 8x60 Hilti HUS–H 6x60	* ¹ Fischer FMD 8x32/x60 * ¹ Würth W-MG 8x60 Hilti HUS–H 6x60	With continuous threaded rods M6 (up to sleeve size 110) or M8 (from sleeve size 125) and corresponding nuts and washers 6.5x20 or 8.5x25. In such cases, the retaining clips are replaced by lapped flanges from the KBS® Pipe seal delivery program	With lapped flanges of the KBS® Pipe Seal delivery program or retaining clips and drywall screws 3.5 x 50 mm. Number of retaining clips: One more than specified in the installation instructions.
M	125 – 250	Fischer FAZ II 8/10 Fischer FMD 8x32/x60 Hilti HSA M8x85 UPAT IMC 8/20/81 Würth W-MG 8x60	Fischer long-shaft dowel FUR 10x100SS / SXR 10x80 FUR / SXR 10x100T Fischer nail dowel N 10x100/50 S (50) Hilti HRD H 10/100 MEA multifunctional dowel MFR SB 10-100 Tx MEA multifunctional dowel MFR SB 10-100 SSKS MEA multifunctional dowel MFR FB 10-100 SSKS	Fischer long-shaft dowel FUR 10x100SS / SXR 10x80 FUR / SXR 10x100T Fischer nail dowel N 10x100/50 S (50) Hilti HRD H 10/100 MEA multifunctional dowel MFR SB 10-100 Tx MEA multifunctional dowel MFR SB 10-100 SSKS MEA multifunctional dowel MFR FB 10-100 SSKS		
M	280 - 400	Fischer FAZ II 8/10 Fischer FMD 8x32/x60 Hilti HSA M8x85 UPAT IMC 8/20/81 Würth W-MG 8x60	Fischer FMD 8x32/x60 Fischer long-shaft dowel FUR 10x100SS / SXR 10x80 FUR / SXR 10x100T Fischer nail dowel N 10x100/50 S (50) Hilti HPD 8x20 MEA multifunctional dowel MFR SB 10-100 Tx MEA multifunctional dowel MFR SB 10-100 SSKS MEA multifunctional dowel MFR FB 10-100 SSKS Würth W-MG 8x60	Fischer FMD 8x32/x60 Fischer long-shaft dowel FUR 10x100SS / SXR 10x80 FUR / SXR 10x100T Fischer nail dowel N 10x100/50 S (50) MEA multifunctional dowel MFR SB 10-100 Tx MEA multifunctional dowel MFR SB 10-100 SSKS MEA multifunctional dowel MFR FB 10-100 SSKS UPAT URD FUS 10/100 Würth W-MG 8x60		

* Use 6 mm steel dowels only when mounting with lapped flange, use only 8 mm steel dowels when mounting with retaining clips.

*¹ Only use 8 mm plastic dowels for installation with a lapped flange; only use 10 mm plastic dowels for installation with retaining clips.

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