

The Proven Solution



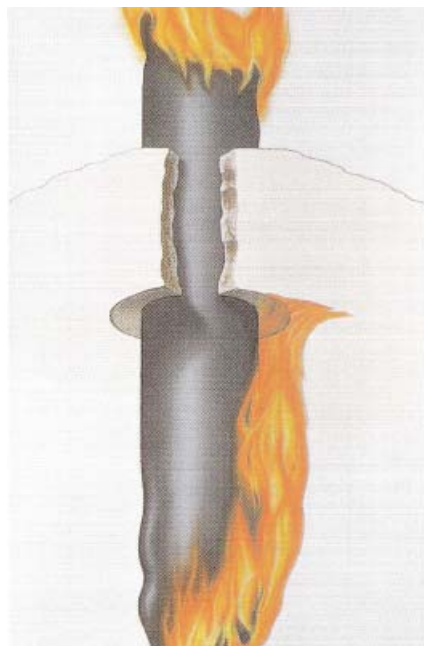
# Pipe Seal

A penetration seal system  
for thermoplastic pipes of all types  
and sizes up to 500mm Diameter



## General Information

To an increasing extent, plastic pipes are replacing steel pipes in modern structures, in industrial facilities as well as in residential buildings. However, despite the many advantages gained through the use of plastic pipes, their one draw-back is that they are combus-



Unsealed - rapid flame spread

Two groups of thermoplastic pipes are used today:

- ↑ Propagating ones, such as PE, HDPE, ABS/ASA, PP and
- ↑ Non propagating ones, such as PVC, PVC-C and special PP.

They ignite at rather low temperatures and melt, the propagating ones,, in addition, allow rapid flamespread. Both types permit the passage of fire, hot gases and smoke through wall

and ceiling penetrations after collapsing. They also contribute to the spread of fire horizontally, as melted, burning plastic runs along the floor. The corrosive gases emitted by burning PVC combine with the smoke gases, disseminating rapidly throughout a structure, causing unreparable damage to electrical and electronic installations.

## KBS Pipe Seals are rated 2 hours

The KBS Pipe Seal consists, basically, of a round steel casing, supplied in two halves with a heat-expanding inner shell and, in the case of special type M, an additional mechanical strangling device.



Sealed - 2 hours fire resistance

Under heat exposure, the softening pipe is squeezed together by the pressure of the expanding intumescent material and, in case of type M, the double action of the additional mechanical device, preventing the passage of heat, smoke or gases. The continuing expansion of the inner sleeve produces a thick, strong foam, eventually filling the entire penetration in the wall or ceiling for an absolutely tight seal.

## KBS Pipe Seal S (standard)

Low cost, small dimension Pipe Seal for pipes up to 250 mm diameter and 23.6 mm wall thickness.

## KBS Pipe Seal M

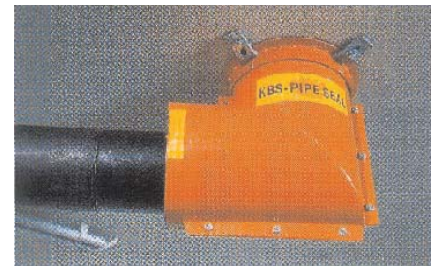
The double-action Pipe Seal with the added mechanical strangling device. Basically developed for large diameter pipes – up to 500 mm (!), **KBS Pipe Seal M** can also be used on pipe bundles or pipes with smaller diameters passing at small diagonal angles. The spring-loaded mechanical device, when released by pulling the safety bolts, closes the remaining space between the pipe and seal with a fibre-glass curtain. **KBS Pipe Seal M** has also been tested and rated 2 hours for **one side only** wall penetrations of non-propagating pipes up to 16 mm.



*KBS Pipe Seal S and M*

## KBS Pipe Seal M-AN

For pipes with 90° elbow bends. **KBS Pipe Seal M-AN** allows installation where the bend is at close distance from the wall or ceiling (consult Installation Instructions for detail).



*KBS Pipe Seal M-AN*

## KBS Pipe Seal M-DI

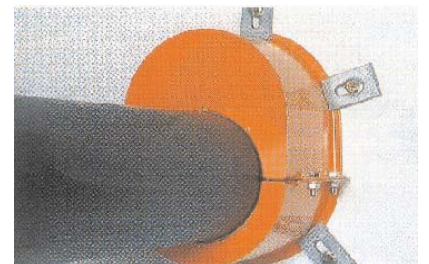
For pipes passing walls or ceilings diagonally. By using a larger diameter **KBS Pipe Seal M-DI**, various exit angles of pipes can be accommodated.



*KBS Pipe Seal M-DI*

## KBS Pipe Seal OSI

For **One Side Installation** in walls. Most pipe seal devices on the market today must be installed on both sides of the wall as a fire may occur on either side. However, there are cases where only one side is accessible. Here **KBS Pipe Seal OSI** is the only solution for propagating pipes up to 200 mm.



*KBS Pipe Seal OSI*

## Installation

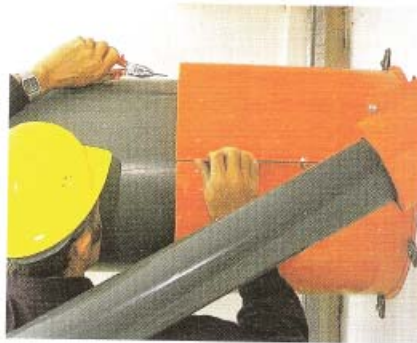
**KBS Pipe Seals** are easily installed. The two halves are positioned over the pipe and joined with the supplied nuts and bolts. Separate mounting brackets allow the choice of suitable positions for the placement of the supplied fire resistant plugs.

Detailed instructions with packaging.

- ↑ Tested and rated for pipes up to 500 mm diameter.
- ↑ Small outer dimensions requiring minimum space for installation
- ↑ One seal, type M, can be used for multi-pipe bundles
- ↑ Tested and rated on pneumatic tubes with control and power cable attached
- ↑ Tested and rated on penetrations in light-weight plasterboard walls as well as on penetrations through KBS Panel Seals, KBS Mortar Seals or KBS Sealbag Seals.
- ↑ Only one KBS Pipe Seal needed for all ceiling penetrations
- ↑ Tested and rated for diagonal penetrations at various angles
- ↑ Tested and rated on 90° elbow pipes at close distance to ceiling or wall

One wall-side installation  
Rated 2 hours for...

- ↑ KBS Pipe Seal M with non-propagating pipes up to 110 mm diameter.
- ↑ KBS Pipe Seal OSI with non-propagating pipes and propagating pipes up to 200 mm diameter.



KBS Pipe Seal M installed on 500mm diameter pipe

KBS Pipe Seal M-DI



Pipe bundle in KBS Pipe Seal M

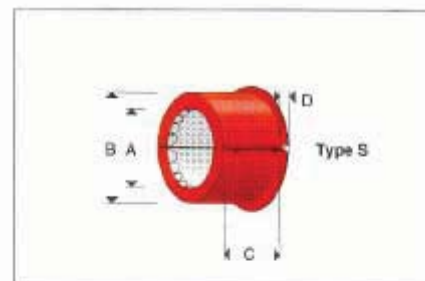


Pneumatic tube with cables in KBS Pipe Seal M

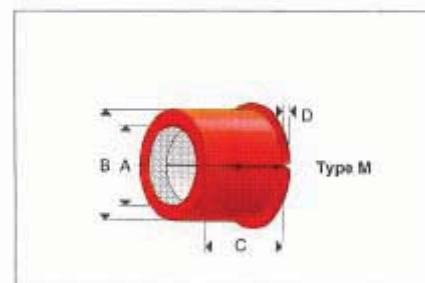


KBS Pipe Seal M in KBS Sealbag penetration seal

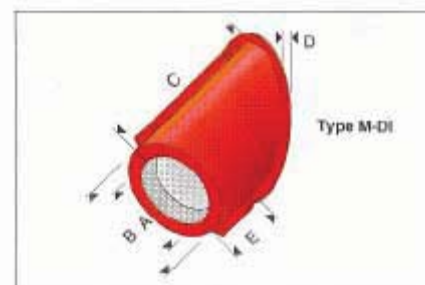
Type	For pipes up to outside D.	Dimensions				
		A	B	C	D	E
S 050	50mm	53	75	50	10	-
S 063	63mm	66	88	60	10	-
S 075	75mm	78	100	70	10	-
S 090	90mm	93	125	80	10	-
S 110	110mm	113	155	90	10	-
S 125	125mm	128	170	100	10	-
S 140	140mm	143	185	110	10	-
S 160	160mm	163	205	120	10	-
S 180	180mm	183	225	160	15	-
S 200	200mm	203	245	200	15	-
S 250	250mm	253	295	250	15	-



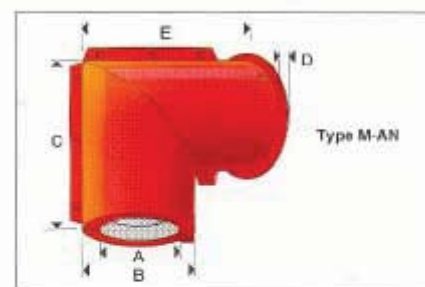
M 050	50mm	53	75	65	10	-
M 063	63mm	66	88	75	10	-
M 075	75mm	78	100	85	10	-
M 090	90mm	93	125	105	10	-
M 110	110mm	113	155	115	10	-
M 125	125mm	128	170	125	10	-
M 140	140mm	143	185	140	10	-
M 160	160mm	163	205	150	10	-
M 180	180mm	183	225	190	15	-
M 200	200mm	203	245	230	15	-
M 225	225mm	228	270	255	15	-
M 250	250mm	253	295	285	15	-
M 280	280mm	283	325	315	15	-
M 315	315mm	318	360	335	15	-
M 355	355mm	358	420	390	15	-
M 400	400mm	403	475	440	15	-
M 500	500mm	505	590	680	20	-



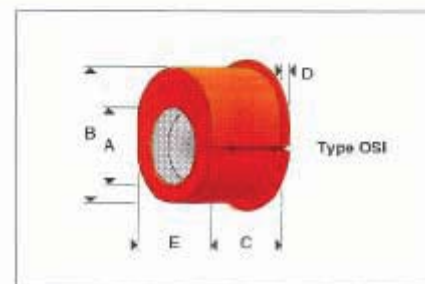
M-DI 110	110mm	113	155	185	25	95
M-DI 200	200mm	203	245	290	25	150



M-AN 075	75mm	90	112	177	20	212
M-AN 110	110mm	130	172	262	20	292
M-AN 160	160mm	190	232	352	20	382
M-AN 200	200mm	240	282	462	25	512



OSI 050	50mm	53	107	65	10	75
OSI 063	63mm	66	126	75	10	88
OSI 075	75mm	78	140	85	10	100
OSI 090	90mm	93	167	105	10	125
OSI 110	110mm	113	199	115	10	155
OSI 125	125mm	128	227	125	10	170
OSI 140	140mm	143	252	140	10	185
OSI 160	160mm	163	289	150	10	205
OSI 180	180mm	183	323	190	15	225
OSI 200	200mm	203	359	230	15	245



## Selection of International Test Results and Approvals

KBS Pipe Seal type	Fire and temp. rating (min)	Max. pipe diameter (mm)		KBS Pipe Seals need for	
		Propagating plastic	Non-propagating	Wall penetrations	Floor penetration
S	120		110	one side only*	one side only*
	120	250	250	both sides	both sides
M	90	110	200	one side only*	one side only*
	120		160	one side only*	one side only*
	120	400	400	both sides	underside only
	30	500	500	both sides	underside only
M-AN	120	200	200	both sides	underside only
M-DI	120	200	200	both sides	underside only
OSI	120	200	200	one side only*	-

\*Optional

The above data, particularly the recommendations for the application and use of our products are based on our knowledge and experience. Due to different materials and conditions of application, which are beyond our control, we recommend in any case to carry out sufficient tests in order to ensure that our products are suitable for the intended processes and applications. Therefore, any liability for such recommendations or any oral advice is expressly excluded unless we have acted wilfully or by gross negligence.



**KBS Passive Fire Pty. Ltd.**  
 PO Box 1502  
 Crows Nest NSW 1585, Australia  
 P: 61 2 9969 7100  
 F: 61 2 9969 7200  
 E: [mail@kbspassivefire.com](mailto:mail@kbspassivefire.com)  
 W: [www.kbspassivefire.com](http://www.kbspassivefire.com)

Project Office:  
 PO Box 21096  
 Coquitlam BC V3E 3P9, Canada  
 P: 1 604 941 1001  
 F: 1 604 941 1029