

PSI CASING SPACERS SYSTEM DSI

MEETS ALL REQUIREMENTS OF
THE CATHODIC PIPE PROTECTION

WIDE RANGE OF SKID
HEIGHTS MAKES THE
CENTERING EASY

EASY PENETRATION OF
CARRIER PIPE WITH
MINIMIZED FRICTION



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GENERAL INFORMATION

Polypropylen casing spacers are universally applicable in the installation of pipelines when a media pipe runs through a casing pipe.

Plastic insulators provide many advantages for these applications:

- Easy penetration of carrier pipe. The insulator's friction coefficient is reduced to a minimum because they are made of plastic.
- The minimized friction prevents the media pipe from taking damage inside the casing pipe.
- A wide range of skid heights ensures concentricity of the media pipe inside the casing pipe.
- Excellent insulation characteristics. All requirements of cathodic pipe protection are met.
- For an optimal pipe support, we recommend to assemble a double ring at the beginning and at the end of each crossing.



Type PA/PE



Type AZ/AC



Type GKO-mk



Type MA



Type RGV



Type GKO-gl/gs

Plastic insulators are suitable for all pipe diameters from 25 mm upwards and many skid heights are available to suit specific requirements.



More content can be found on www.psi-products.com



TECHNICAL DATA

Materials

Polypropylene has a good friction coefficient due to its waxy surface with good sliding properties. The sliding friction coefficient is approx. 0.2 for PP on steel. In comparison to this, steel on steel is approx. 0.5. Therefore the abrasion is reduced to a minimum. The material is strong and yet flexible and is therefore resistant to stress cracking. Flexibility of the body, stability of the skid form and excellent dielectric insulation are some more of the good characteristics of this material. Polypropylene has a higher temperature resistance compared to polyethylene. The base material is resistant from -20 °C to +100 °C

Installation notes

Plastic insulator rings are normally installed with the following spacing in between the rings:

- Pipe diameter up to 300 mm in 2.5 m support distance
- Pipe diameter 301 - 600 mm in 2.0 m support distance
- Pipe diameter of more than 600 mm in 1.5 m support distance

The installation distances are also dependent on the spans specifications of the respective pipe manufacturer.

In particular cases, the ring distance may be modified after having examined the installation situation.

Load capacity

Type	max. static load per ring*
PA/PE 0.75 - PA/PE 1.5	85 kg
PA/PE 2.0 - PA/PE 3.0	100 kg
PA/PE 4.0	200 kg
PA/PE 6.0 - PA/PE 12.0	250 kg
AZ/AC 1 / AZ/AC 2	200 kg
GKO-mK	250 kg
MA	650 kg
RGV	1.000 kg
GKO-gl	4.000 kg
GKO-gs	14.200 kg

*at an application temperature of +23 °C and max. skid height up to 75 mm

The load capacity data is applicable for a skid height up to 75 mm. For skid heights above 75 mm, these values need to be multiplied with a factor of 0.75.

All values are calculated for standard pipes. To determine the correct distance for your individual application many other factors have to be taken into consideration, such as carrier pipe wall thickness, pipe length and type of media. For further assistance please get in contact with us.

If you cannot determine the type according to our tables please specify:

- Outer diameter of carrier pipe (inclusive coating) in mm
- Inner diameter of casing pipe

GENERAL INFORMATION

Outer diameter of Pipe from 25 mm to 336 mm

Type PA/PE insulators are available for outer diameter of Pipes from 25 mm to 336 mm. PA/PE consist of two half shells. The nuts and bolts required for assembly are included in every delivery.

The type code indicates the outer diameter of carrier pipe in inch and the skid height in mm (e.g. PA/PE 4-38 = carrier pipe 4", skid height 38 mm).

The skid height is calculated from the difference in diameter of carrier pipe and casing pipe. It is important to consider the actual dimensions, including coatings and sockets, rather than the nominal sizes.

Example

- PE-coated carrier pipe with PE coating ND 100
- Outer diameter (117.9 x 5.2 mm)
- Steel casing ND 200 (219.1 x 6.3)
- Inner diameter 206.5 mm - outer diameter of carrier pipe 117.9 mm = 88.6
- $88,6 : 2 = 44.3$ mm skid height
- Suitable type: PA/PE 4-38

This means the suitable type of insulator is PA/PE 4-38.

After determining the skid height, the next lower height is selected from the table (e.g. 44.3 mm, ideal skid height = 38 mm). The segments can be assembled with the corrosion protected steel bolts DIN 912 and nuts DIN 562 included.

Up to type PA/PE 4 the insulator rings have 4 skids; from type PA/PE 6 up to 6 skids are provided. The following table gives the technical details on available sizes, skid heights of the various types and carrier pipe diameters.

Type	max. static load per ring*
PA/PE 0.75 - PA/PE 1.5	85 kg
PA/PE 2.0 - PA/PE 3.0	100 kg
PA/PE 4.0	200 kg
PA/PE 6.0 - PA/PE 12.0	250 kg

*at an application temperature of +23 °C and max. skid height up to 75 mm



More content can be found on
www.psi-products.com

SELECTION TABLE

Nominal diameter		Outer diameter of Pipe in mm		Type PA/PE	Skid height in mm including basic element	width mm	Number of segments	Number of skids	Bolts DIN 912 Qty/Size
mm	Inch	min.	max.						
20	0.75	25.0	32.0	PA/PE 0.75-12.5	12.5	80	2	4	4 M4 x 30
				PA/PE 0.75-21	21.0				
				PA/PE 0.75-25	25.0				
				PA/PE 0.75-36	36.0				
25	1.0	32.0	40.0	PA/PE 1-13	13.0	80	2	4	4 M4 x 30
				PA/PE 1-19	19.0				
				PA/PE 1-25	25.0				
				PA/PE 1-34	34.0				
32	1.25	42.0	48.3	PA/PE 1.25-11	11.0	80	2	4	4 M4 x 30
				PA/PE 1.25-17.5	17.5				
				PA/PE 1.25-29	29.0				
				PA/PE 1.25-40	40.0				
40	1.5	48.0	54.0	PA/PE 1.5-11	11.0	80	2	4	4 M4 x 30
				PA/PE 1.5-14.5	14.5				
				PA/PE 1.5-26	26.0				
				PA/PE 1.5-36	36.0				
				PA/PE 1.5-48	48.0				
				PA/PE 1.5-70	70.0				
50	2.0	60.0	67.0 ¹⁾	PA/PE 2-16	16.0	100	2	4	4 M6 x 40
				PA/PE 2-25	25.0				
				PA/PE 2-36	36.0				
				PA/PE 2-48	48.0				
				PA/PE 2-55	55.0				
				PA/PE 2-70	70.0				
				PA/PE 2-90	90.0				
				PA/PE 2-110	110.0				
65	2.5	76.1	82.5 ²⁾	PA/PE 2.5-16	16.0	100	2	4	4 M6 x 40
				PA/PE 2.5-25	25.0				
				PA/PE 2.5-36	36.0				
				PA/PE 2.5-48	48.0				
				PA/PE 2.5-55	55.0				
				PA/PE 2.5-70	70.0				
				PA/PE 2.5-90	90.0				
				PA/PE 2.5-105	105.0				
80	3.0	88.9	96.0 ³⁾	PA/PE 3-16	16.0	100	2	4	4 M6 x 40
				PA/PE 3-25	25.0				
				PA/PE 3-36	36.0				
				PA/PE 3-48	48.0				
				PA/PE 3-55	55.0				
				PA/PE 3-70	70.0				
				PA/PE 3-90	90.0				
100	4.0	106.6	120.0 ⁴⁾	PA/PE 4-16	16.0	130	2	4	4 M6 x 55
				PA/PE 4-25	25.0				
				PA/PE 4-38	38.0				
				PA/PE 4-55	55.0				
				PA/PE 4-75	75.0				
				PA/PE 4-90	90.0				
125	Siehe unter Liste AZ/AC Ø 125 mm Typ AZ/AC 1								

¹⁾ up to max. outer diameter of Pipe 75.0 mm with 4x M6 x 55 bolts

²⁾ up to max. outer diameter of Pipe 88.9 mm with 4x M6 x 55 bolts

³⁾ up to max. outer diameter of Pipe 101.6 mm with 4x M6 x 55 bolts

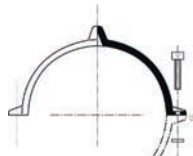
⁴⁾ up to max. outer diameter of Pipe 127.0 mm with 4x M6 x 70 bolts

SELECTION TABLE

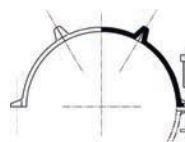
Nominal diameter		Outer diameter of Pipe in mm		Type PA/PE	Skid height in mm including basic element	width mm	Number of segments	Number of skids	Bolts DIN 912 Qty/Size
mm	Inch	min.	max.						
150	6	160.0	178.0	PA/PE 6-16	16	130	2	6	4 M6 x 70
				PA/PE 6-25	25				
				PA/PE 6-36	36				
				PA/PE 6-55	55				
				PA/PE 6-75*	75				
				PA/PE 6-90*	90				
200		193.7	210.0	PA/PE 7-16	16	175	2	6	4 M6 x 70
				PA/PE 7-25	25				
				PA/PE 7-36	36				
				PA/PE 7-55	55				
				PA/PE 7-75	75				
				PA/PE 7-90	90				
				PA/PE 7-110	110				
				200	8				
PA/PE 8-25	25								
PA/PE 8-36	36								
PA/PE 8-55*	55								
PA/PE 8-75*	75								
PA/PE 8-90*	90								
250		244.5	260.0	PA/PE 9-16	16	175	2	6	4 M6 x 70
				PA/PE 9-25	25				
				PA/PE 9-36	36				
				PA/PE 9-55	55				
				PA/PE 9-75	75				
				PA/PE 9-90	90				
				PA/PE 9-110	110				
				250	10				
PA/PE 10-25	25								
PA/PE 10-36	36								
PA/PE 10-55*	55								
PA/PE 10-75*	75								
PA/PE 10-90*	90								
315		298.5	315.0	PA/PE 11-16	16	175	2	6	4 M6 x 70
				PA/PE 11-25	25				
				PA/PE 11-36	36				
				PA/PE 11-55	55				
				PA/PE 11-75	75				
				PA/PE 11-90	90				
				PA/PE 11-110	110				
				300	12				
PA/PE 12-25	25								
PA/PE 12-36	36								
PA/PE 12-55*	55								
PA/PE 12-75*	75								
PA/PE 12-90*	90								

Anti Sliding Tape against slipping of spacers, see next page

*Plug-in skid

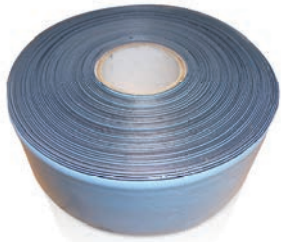


Sectional drawing of segment.
PA/PE 0.75 to PA/PE 4
Ring with a total of 4 skids



Sectional drawing of segment.
PA/PE 6 to PA/PE 12
Ring with a total of 6 skids

ACCESSORIES

Accessory Anti Sliding Tape	
	width 50 mm, length 15 m
	width 100 mm, length 15 m

Material: PE-tape with butyl rubber mixture

Application

On a smooth pipe surface (e.g. PE, PVC, steel/cast or PE-coated or stoneware) we recommend wrapping Anti Sliding Tape where there is contact between the pipe and insulator to guarantee optimum security against slipping.

The ideal product to close the annular space between media and casing pipe is the PSI Casing End Seal.

GENERAL INFORMATION

Outer diameter of pipe from 98 mm to 385 mm

AZ/AC insulator rings are used for pipe outer diameters from 98 to 385 mm and consist of several segments. This type of Insulator is made of several segments. The number of segments depends on the carrier pipe's outer diameter. The nuts and bolts required for assembly are included.

The universal applicability of type AZ/AC provides two special advantages:

- variable ring diameter, which is especially important for thick-walled pipes whose outer diameter substantially deviates from the nominal size (e.g. AZ/AC pressure pipe ND 16, vitrified clay pipes);
- only two segment sizes are required to assemble ND 100 to ND 350 insulator rings - a decisive advantage in stock-keeping.

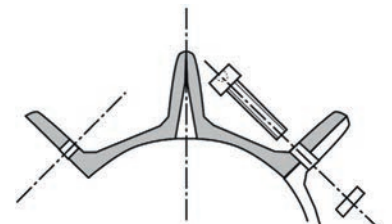
The skid height is calculated from the difference in diameter of the carrier pipe and the casing pipe. It is important to consider the actual dimensions, including coatings and sockets, rather than the nominal sizes. For an example calculation refer to type PA/PE.

The segments can be assembled with the corrosion protected steel bolts according to DIN 912 and nuts according to DIN 562.

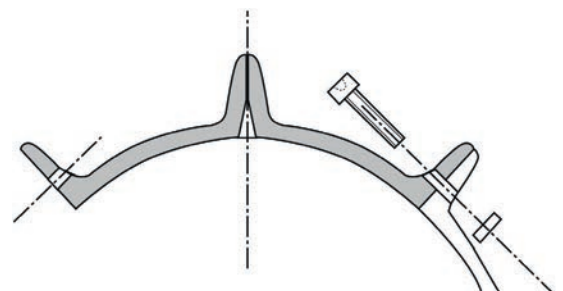
The following table gives the technical details on available sizes and skid heights of the various types and carrier pipe diameters.

Type	max. static load per ring*
AZ/AC 1 / AZ/AC 2	200 kg

*at an application temperature of +23 °C and max. skid height up to 75 mm



Sectional drawing of AZ/AC 1



Sectional drawing of segment AZ/AC 2



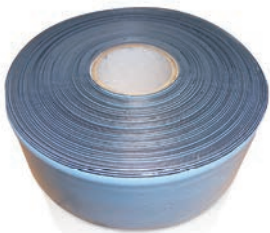
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SELECTION TABLE

Type	Skid height	Width	Number of bolts per segment
AZ/AC-1	16	130	2 M6 x70
AZ/AC-1	25	130	2 M6 x70
AZ/AC-1	36	130	2 M6 x70
AZ/AC-1	55	130	2 M6 x70
AZ/AC-1	75	130	2 M6 x70
AZ/AC-1	90	130	2 M6 x70
AZ/AC-1	110	130	2 M6 x70
AZ/AC-2	16	130	2 M6 x70
AZ/AC-2	25	130	2 M6 x70
AZ/AC-2	36	130	2 M6 x70
AZ/AC-2	55	130	2 M6 x70
AZ/AC-2	75	130	2 M6 x70
AZ/AC-2	90	130	2 M6 x70
AZ/AC-2	110	130	2 M6 x70

Anti Sliding Tape see below

Outer diameter of carrier pipe in mm		Number of segments per ring		Bolts Qty/Size
min.	max.	AZ/AC 1	AZ/AC 2	
98	130	3		6 M6x70
130	172	4		8 M6x70
173	202	5		10 M6x70
203	230		3	6 M6x70
234	268	1	3	8 M6x70
269	310		4	8 M6x70
302	350	1	4	10 M6x70
350	385		5	10 M6x70

Accessory Anti Sliding Tape	
	width 50 mm, length 15 m
	width 100 mm, length 15 m

Material: PE-tape with butyl rubber mixture

Application

On a smooth pipe surface (e.g. PE, PVC, steel/cast or PE-coated or stoneware) we recommend wrapping Anti Sliding Tape where there is contact between the pipe and insulator to guarantee optimum security against slipping.

The ideal product to close the annular space between media and casing pipe is the PSI Casing End Seal.

GENERAL INFORMATION

GKO-mk is the latest PSI casing spacer generation. Due to the bolt less wedge system the installation can be achieved quickly and easily. The flexible design ensures suitability for all pipe diameters > 160 mm. If required, an additional support for cable ducts can be installed on the segments.

- Flexible design
- Non-metallic connection for simple and fast installation
- New wedge connection technology

PSI Anti Sliding Tape or similar products can be used to improve adhesion on smooth surfaces, or to balance pipe tolerances.

Subject to technical changes



Type	max. static load per ring*
GKO-mK	250 kg

*at an application temperature of +23 °C and max. skid height up to 75 mm



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SELECTION TABLE

Type	Skid height	Width	Art. No.
GKO mk	25	130	3-002-04101
GKO mk	36	130	3-002-04102
GKO mk	50	130	3-002-04103
GKO mk	65	130	3-002-04104
GKO mk	75	130	3-002-04105
GKO mk	90	130	3-002-04106
GKO mk	110	130	3-002-04107
GKO mk	125	130	3-002-04108

Anti Sliding Tape see below

Outer diameter of carrier pipe in mm		Number of segments per ring
min.	max.	
160	180	4
181	230	5
231	280	6
281*	330*	7
331*	380*	8
381*	430*	9

*from outer diameter of carrier pipe 281 mm only still suitable for plastic pipes

Accessory Anti Sliding Tape	
	width 50 mm, length 15 m
	width 100 mm, length 15 m

Material: PE-tape with butyl rubber mixture

Application

On a smooth pipe surface (e.g. PE, PVC, steel/cast or PE-coated or stoneware) we recommend wrapping Anti Sliding Tape where there is contact between the pipe and insulator to guarantee optimum security against slipping.

The ideal product to close the annular space between media and casing pipe is the PSI Casing End Seal.

GENERAL INFORMATION

Outer diameter of Pipe from 400 mm

Starting with a pipe of outer diameter of 402 mm, MA insulator rings, consisting of two segment sizes (MA and MA 2) and various skid heights, for the adaptation to the existing pipe outer diameters.

The special advantage of these insulators is their universal applicability. The following rule is used to determine the composition of suitable insulator rings:

For every 100 mm of outer diameter of Pipe 1 MA segment
For every 50 mm of outer diameter of Pipe 1 MA 2 segment

Example:

Outer diameter of carrier pipe 559 = 5 MA segments
+ 1 MA 2 segment.

The skid height of the segments is calculated from the difference in diameter of the carrier pipe and the casing pipe. For an example calculation refer to type PA/PE.

The segments can be assembled with the included corrosion protected steel bolts according to DIN 912 and nuts according to DIN 562.

The following table gives the technical details on available sizes, skid heights of the various types and carrier pipe diameters.

Type	max. static load per ring*
MA	650 kg

*at an application temperature of +23 °C and max. skid height up to 75 mm



More content can be found on
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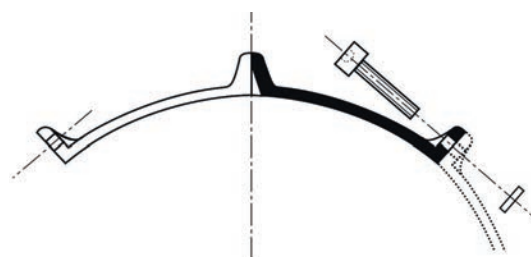
SELECTION TABLE

Type	Skid height in mm	Width in mm	Number of skids	Number of bolts per segment
MA 25	25	160	3	2 M8 x 70
MA 36	36	160	3	2 M8 x 70
MA 50	50	160	3	2 M8 x 70
MA 65	65	160	3	2 M8 x 70
MA 75	75	160	3	2 M8 x 70
MA 2/25	25	160	2	2 M8 x 70
MA 2/36	36	160	2	2 M8 x 70
MA 2/50	50	160	2	2 M8 x 70
MA 2/65	65	160	2	2 M8 x 70
MA 2/75	75	160	2	2 M8 x 70

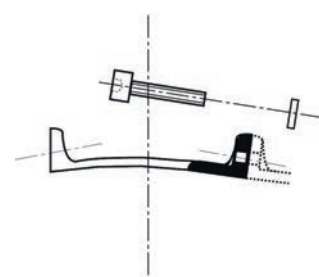
MA 2 as half a segment

Anti Sliding Tape against slipping see below

Nominal diameter		Outer diameter of carrier pipe in mm		Number of segments per ring		Bolts Qty/size - length
ND	inch	min.	max.	MA	MA 2	
400	16	402	420	4		8 M8 x 70
		420*	426*	4		6 M8x70 + 2 M8x90
		426*	432*	4		4 M8x70 + 4 M8x90
450	18	450	485	4	1	10 M8x70
		485*	494*	4	1	8 M8x70 + 2 M8x90
500	20	500	530	5		10 M8 x 70
		530*	544*	5		8 M8x70 + 2 M8x90
550	22	548	599	5	1	12 M8 x 70
600	24	600	653	6		12 M8 x 70
650	26	654	699	6	1	14 M8 x 70
700	28	700	749	7		14 M8 x 70
750	30	750	799	7	1	16 M8 x 70
800	32	800	849	8		16 M8 x 70
850	34	850	899	8	1	18 M8 x 70
900	36	900	949	9		18 M8 x 70
950	38	950	994	9	1	20 M8 x 70
1000	40	995	1044	10		20 M8 x 70
1050	42	1045	1097	10	1	22 M8 x 70
1100	44	1098	1149	11		22 M8 x 70
1150	46	1150	1199	11	1	24 M8 x 70
1200	48	1200	1249	12		24 M8 x 70



Sectional drawing of MA segment




Sectional drawing of MA 2 segment

Caution: Install bolt length as specified for the corresponding segments.

For larger nominal diameter upon request.

* Please contact our inside sales department

Accessory Anti Sliding Tape

	width 50 mm, length 15 m
	width 100 mm, length 15 m

Material: PE-tape with butyl rubber mixture

Application

On a smooth pipe surface (e.g. PE, PVC, steel/cast or PE-coated or stoneware) we recommend wrapping Anti Sliding Tape where there is contact between the pipe and insulator to guarantee optimum security against slipping.

The ideal product to close the annular space between media and casing pipe is the PSI Casing End Seal.

GENERAL INFORMATION

For high load capacity and pipe outer diameters starting from 500 mm.

RGV insulator rings are used for pipes with outer diameter >500 mm. They differ from MA types in having two reinforced load-carrying solid skids per segment. The fastening skids (36 mm high) are for connection only. To match the required outer diameter, RGV segments are combined with RGV 2 segments.

High static-load capacity and versatility are the particular advantages of the RGV casing spacers. The following simple method is used to determine the composition of suitable insulator rings:

For every 100 mm outer diameter of pipe = 1 RGV segment
For every 50 mm outer diameter of pipe = 1 RGV half segment

Example:

outer diameter of carrier pipe 559 = 5 RGV segments
+ 1 RGV half segment.

The skid height of the segments is calculated from the difference in diameter of the carrier pipe and the casing pipe. For an example calculation refer to type PA/PE.

The segments can be assembled with the included corrosion protected steel bolts according to DIN 912 and nuts according to DIN 562.

The following table gives the technical details on available sizes, skid heights of the various types and carrier pipe diameters.

Type	max. static load per ring*
RGV	1.000 kg

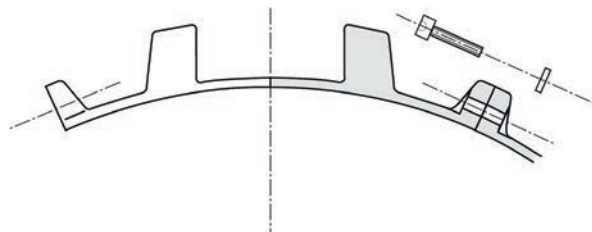
*at an application temperature of +23 °C and max. skid height up to 75 mm



More content can be found on
www.psi-products.com

SELECTION TABLE

Type	Skid height	Width	Number of bolts
RGV	50	210	2 M8 x 70
	75	210	2 M8 x 70
	90	210	2 M8 x 70
	125	210	2 M8 x 70
RGV half	50	210	2 M8 x 70
	75	210	2 M8 x 70
	90	210	2 M8 x 70
	125	210	2 M8 x 70




Sectional drawing of a RGV segment

Anti Sliding Tape see below

Nominal diameter		Outer diameter of pipe in mm		Number of segments		Bolts Quantity/ Size
ND	inch	min.	max.	RGV	RGV half	
500	20	500	535	5		10 M8 x 70
550	22	547	595	5	1	12 M8 x 70
600	24	596	645	6		12 M8 x 70
650	26	646	699	6	1	14 M8 x 70
700	28	700	750	7		14 M8 x 70
750	30	751	799	7	1	16 M8 x 70
800	32	800	850	8		16 M8 x 70
850	34	851	899	8	1	18 M8 x 70
900	36	900	950	9		18 M8 x 70
950	38	951	999	9	1	20 M8 x 70
1000	40	1000	1075	10		20 M8 x 70
1100	44	1090	1180	11		22 M8 x 70
1200	48	1190	1290	12		24 M8 x 70
1300	52	1291	1390	13		26 M8 x 70
1400	56	1391	1490	14		28 M8 x 70
1500	60	1491	1590	15		30 M8 x 70
1600	64	1591	1690	16		32 M8 x 70
1700	68	1691	1790	17		34 M8 x 70
1800	72	1791	1890	18		36 M8 x 70
1900	76	1891	1990	19		38 M8 x 70
2000	80	1991	2100	20		40 M8 x 70

Larger nominal diameters upon request.

Accessory Anti Sliding Tape	
	width 50 mm, length 15 m
	width 100 mm, length 15 m

Material: PE-tape with butyl rubber mixture

Application

On a smooth pipe surface (e.g. PE, PVC, steel/cast or PE-coated or stoneware) we recommend wrapping Anti Sliding Tape where there is contact between the pipe and insulator to guarantee optimum security against slipping.

The ideal product to close the annular space between media and casing pipe is the PSI Casing End Seal.

GENERAL INFORMATION

Due to the bolt less wedge system and half segments GKO gh, the installation can be achieved easily and quickly. Owing to various diameter ranges and type GKO gh half segments, continuous use for an outer diameter exceeding 400 mm is possible. If required additional cable ducts can be attached with cable binders to the segment.

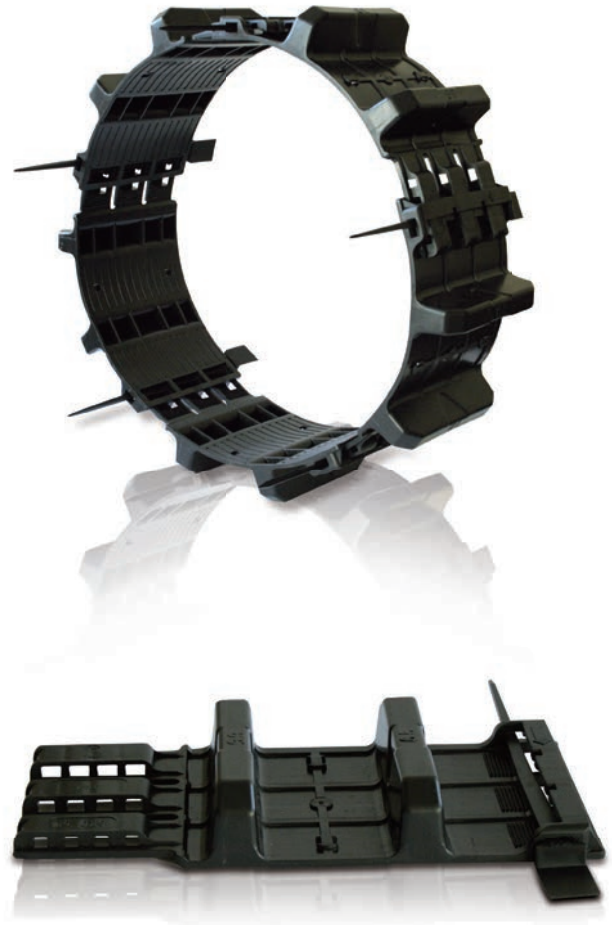
- Flexible designs
- Non-metallic connection for simple and fast installation
- New wedge connection technology

PSI Anti Sliding Tape or similar products can be used to improve adhesion on smooth surfaces or to balance pipe tolerances.

Subject to technical changes

Type	max. static load per ring*
GKO-gl	4.000 kg
GKO-gs	14.200 kg

*at an application temperature of +23 °C and max. skid height up to 75 mm




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SELECTION TABLE

Type	Skid height	Width
GKO-gl	36	225
	50	225
	65	225
	75	225
	90	225
	110	225
	125	225
GKO-gs	36	225
	50	225
	65	225
	75	225
	90	225
	110	225
	125	225
GKO-gs H	36	225
	50	225
	65	225
	75	225
	90	225
	110	225
	125	225

Anti Sliding Tape see below

Outer diameter of carrier pipe in mm		Number of segments	
min.	max.	GKO gl/gs	GKO-gs H
400	440	3	1
441	490	4	
491	540	4	1
541	625	5	
626	659	5	1
660	749	6	
750	854	7	
855	959	8	
960	1067	9	
1068	1199	10	
1200	1330	11	
1331	1440	12	
1441	1540	13	
1541	1660	14	
1661	1800	15	
1801	1910	16	
1911	2042	17	
2043	2150	18	
2151	2270	19	
2271	2400	20	
2401	2500	21	

Accessory Anti Sliding Tape	
	width 50 mm, length 15 m
	width 100 mm, length 15 m

Material: PE-tape with butyl rubber mixture

GKO-gl



GKO-gs



GKO-gs H



Application

On a smooth pipe surface (e.g. PE, PVC, steel/cast or PE-coated or stoneware) we recommend wrapping Anti Sliding Tape where there is contact between the pipe and insulator to guarantee optimum security against slipping.

The ideal product to close the annular space between media and casing pipe is the PSI Casing End Seal.

SELECTION TABLE

Pipe ND			Outer diameter of pipe in mm		No. of elements		Position of wedges per Insulator element			
PE/PVC	Steel	GGG	from	to	Whole GKO	Half GKO	1	2	3	4
ND 400			397	402	3	1			3	1
	ND 400		406	411	3	1		1	3	
		ND 400	429	439	3	1	1	3		
ND 450			448	452	4				3	1
			456	462	4			1	3	
ND 500			498	504	4	1			2	3
	ND 500		508	513	4	1			4	1
		ND 500	532	542	4	1		3	2	
			538	542	5					5
			559	564	5				4	1
	ND 600		610	615	5		2	3		
ND 600			630	635	5	1			6	
		ND 600	635	645	5	1		1	5	
			660	665	6				3	3
	ND 700		711	716	6			5	1	
		ND 700	738	748	6		4	2		
			762	767	7				2	5
ND 800			796	802	7				7	
	ND 800		813	819	7			3	4	
		ND 800	842	852	7		1	6		
			864	870	8				1	7
	ND 900		914	920	8			1	7	
		ND 900	945	955	8			6	2	
ND 1000			1016	1022	9				7	2
		ND 1000	1048	1058	9			4	5	
			1057	1063	9			6	3	
			1118	1125	10				6	4
ND 1200			1219	1226	11				6	5
			1321	1328	11		1	10		
ND 1400			1422	1430	12			9	3	
			1524	1532	13			7	6	
ND 1600			1626	1634	14			5	9	
			1727	1736	15			3	12	
ND 1800			1829	1838	16			1	15	
			1930	1939	17				16	1
ND 2000			2032	2041	17			16	1	
			2134	2144	18			14	4	
ND 2200			2235	2245	19			12	7	
			2337	2347	20			10	10	
ND 2400			2438	2448	21			8	13	

The position specified for the wedges per insulator element are guideline values and can deviate by one or two slots, depending on the outside temperature.

GKO Insulators example application:

For a pipe outer diameter of 429 mm, select 3 whole segments and 1 half segment. Insert a wedge in position 1 and 3 wedges in position 2.





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