Cable Entries

Type of Explosion Protection:	**I M2 EEx e I**
Degree of Enclosure Protection:	**IP 66**
EC-Type Examination Certificate:	**IBExU 03 ATEX 1219**

Use

The cable entries are designed to be attached to enclosures of type of explosion protection Increased Safety (EEx e) and Intrinsic Safety (EEx i) and they serve for the leading in of not installed cables (for example heavy rubber-sheathed cables, being used in mining, among others) into electrical equipment. The **BöSha** manufacturing programme of cable entries stands out by the grade of the material used. Products are manufactured of high-grade material only, material that is able to withstand ambient influences and, therefore, has a long design life.

*In addition to cable entries **BöSha** offers the following products:*

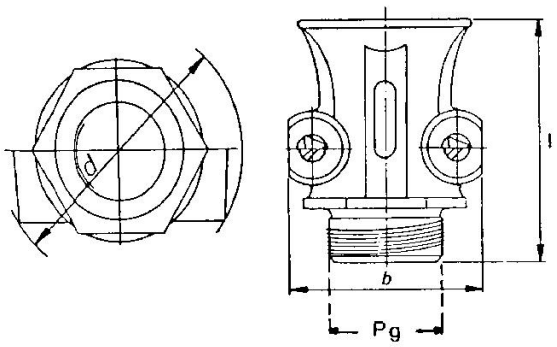
Right-Angle Cable Entries

Cable-Gland Flanges

Blind Flanges

Screw Plugs

Cable Entries with Pg-Thread

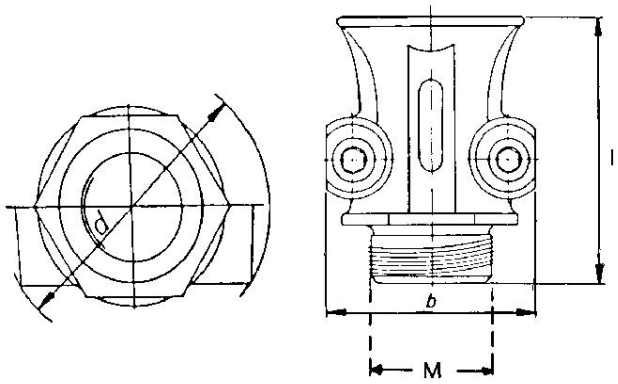


In the industry, a lot of equipment still has threaded holes with Pg-thread.
For this reason, besides offering metric threads, **BöSha** decided to have parts of this Pg-programme also certified according to the ATEX-directive.

The following sizes are available:

Cable Entry *without* Adapter	Cable Entry *with* Adapter	Thread Size	Inside Ø from - to mm	Dimensions		
				b mm	l mm	d (from - to) mm
BS 1 a MP e	BS 1 a MP e/Z	Pg 13.5	8 - 11	33.5	47.5	39.5 - 41.0
BS 1 b MP e	BS 1 b MP e/Z	Pg 13.5	9 - 12.5	33.5	47.5	39.0 - 40.8
BS 2 a MP e	BS 2 a MP e/Z	Pg 16	7 - 10	36.0	50.2	40.7 - 42.2
BS 2 b MP e	BS 2 b MP e/Z	Pg 16	9 - 12	36.8	50.2	42.7 - 44.2
BS 2 c MP e	BS 2 b MP e/Z	Pg 16	11 - 14	41.0	55.0	44.6 - 46.1
BS 2 s MP e	BS 2 s MP e/Z	Pg 16	12 - 15	38.3	51.0	42.5 - 44.0
BS 3 a MP e	BS 3 a MP e/Z	Pg 21	13 - 16	47.6	65.0	52.0 - 53.5
BS 3 b MP e	BS 3 b MP e/Z	Pg 21	14 - 17	48.3	66.0	52.0 - 53.5
BS 3 c MP e	BS 3 c MP e/Z	Pg21	15 - 18	49.0	65.0	54.2 - 55.7
BS 3 d MP e	BS 3 d MP e/Z	Pg 21	17 - 19	50.0	67.0	55.0 - 56.5
BS 4 a MP e	BS 4 a MP e/Z	Pg 29	18 - 21	52.0	70.0	56.5 - 58.0
BS 4 b MP e	BS 4 b MP e/Z	Pg 29	21.5 - 24	55.7	76.0	59.2 - 61.2
BS 4 c MP e	BS 4 c MP e/Z	Pg 29	22 - 26	55.8	79.0	60.3 - 62.3
BS 4 d MP e	BS 4 d MP e/Z	Pg 29	24 - 28	57.5	80.0	61.0 - 63.0
BS 5 a MP e	BS 5 a MP e/Z	Pg 36	28 - 32	64.8	95.6	68.5 - 70.5
BS 5 b MP e	BS 5 b MP e/Z	Pg 36	30 - 34	67.0	100.5	70.0 - 72.0
BS 5 c MP e	BS 5 c MP e/Z	Pg 36	32 - 36	69.8	100.5	73.0 - 75.0
BS 6 a MP e	BS 6 a MP e/Z	Pg 42	34 - 38	71.7	106.0	73.5 - 75.5
BS 6 b MP e	BS 6 b MP e/Z	Pg 42	36 - 40	73.5	104.2	76.0 - 78.0
BS 6 c MP e	BS 6 c MP e/Z	Pg 42	40 - 44	77.5	110.2	78.5 - 80.5

Cable Entries with M-Thread



Cable Entry *without* Adapter	Cable Entry *with* Adapter	Thread Size	Inside Ø from - to (mm)	Dimensions		
				b (mm)	l (mm)	d (from - to) (mm)
BS 1 a M e	BS 1 a M e/Z	M 20 x 1.5	8 - 11	33.5	47.5	39.5 - 41.0
BS 1 b M e	BS 1 b M e/Z	M 20 x 1.5	9 - 12.5	33.5	47.5	39.0 - 40.8
BS 2 a M e	BS 2 a M e/Z	M 22 x 1.5	7 - 10	36.0	50.2	40.7 - 42.2
BS 2 b M e	BS 2 b M e/Z	M 22 x 1.5	9 - 12	36.8	50.2	42.7 - 44.2
BS 2 c M e	BS 2 b M e/Z	M 22 x 1.5	11 - 14	41.0	55.0	44.6 - 46.1
BS 2 s M e	BS 2 s M e/Z	M 22 x 1.5	12 - 15	38.3	51.0	42.5 - 44.0
BS 3 a M e	BS 3 a M e/Z	M 28 x 1.5	13 - 16	47.6	65.0	52.0 - 53.5
BS 3 b M e	BS 3 b M e/Z	M 28 x 1.5	14 - 17	48.3	66.0	52.0 - 53.5
BS 3 c M e	BS 3 c M e/Z	M 28 x 1.5	15 - 18	49.0	65.0	54.2 - 55.7
BS 3 d M e	BS 3 d M e/Z	M 28 x 1.5	17 - 19	50.0	67.0	55.0 - 56.5
BS 4 a M e	BS 4 a M e/Z	M 36 x 1.5	18 - 21	52.0	70.0	56.5 - 58.0
BS 4 b M e	BS 4 b M e/Z	M 36 x 1.5	21.5 - 24	55.7	76.0	59.2 - 61.2
BS 4 c M e	BS 4 c M e/Z	M 36 x 1.5	22 - 26	55.8	79.0	60.3 - 62.3
BS 4 d M e	BS 4 d M e/Z	M 36 x 1.5	24 - 28	57.5	80.0	61.0 - 63.0
BS 5 a M e	BS 5 a M e/Z	M 48 x 1.5	28 - 32	64.8	95.6	68.5 - 70.5
BS 5 b M e	BS 5 b M e/Z	M 48 x 1.5	30 - 34	67.0	100.5	70.0 - 72.0
BS 5 c M e	BS 5 c M e/Z	M 48 x 1.5	32 - 36	69.8	100.5	73.0 - 75.0
BS 6 a M e	BS 6 a M e/Z	M 55 x 1.5	34 - 38	71.7	106.0	73.5 - 75.5
BS 6 b M e	BS 6 b M e/Z	M 55 x 1.5	36 - 40	73.5	104.2	76.0 - 78.0
BS 6 c M e	BS 6 c M e/Z	M 55 x 1.5	40 - 44	77.5	110.2	78.5 - 80.5
BS 7 a M e	BS 7 a M e/Z	M 64 x 2	41 - 46	91.5	111.0	95.0 - 97.5
BS 7 b M e	BS 7 b M e/Z	M 64 x 2	44 - 49	91.6	110.0	96.2 - 98.7
BS 7 c M e	BS 7 c M e/Z	M 64 x 2	48 - 53	96.0	117.0	103.5 - 106.0
BS 8 a M e	BS 8 a M e/Z	M 80 x 2	52 - 57	103.6	121.5	108.8 - 1113
BS 8 b M e	BS 8 b M e/Z	M 80 x 2	55 - 61	103.2	116.2	108.3 - 111.3
BS 8 c M e	BS 8 c M e/Z	M 80 x 2	59 - 65	123.3	126.8	127.8 - 130.8
BS 8 d M e	BS 8 d M e/Z	M 80 x 2	62 - 68	123.5	126.5	130.0 - 133.0
BS 9 a M e	BS 9 a M e/Z	M 95 x 2	68 - 74	123.5	130.0	135.5 - 138.5
BS 9 b M e	BS 9 b M e/Z	M 95 x 2	74 - 80	127.8	134.5	140.7 - 143.7
BS 10 M e	BS 10 M e/Z	M 100 x 2	80 - 86	133.5	143.0	142.0 - 145.0

Cable-Gland Flanges

BöSha cable-gland flanges, after interposing a rubber gasket, are intended to be attached to enclosures of types of explosion protection Increased Safety (EEx e) and Intrinsic Safety (EEx i). A threaded socket serves for the screwing-in of a cable entry without adapter.
The gable-gland flanges of brass are used in conjunction with cable entries for leading in of rubber-sheathed cables and cables without lead sheath into standard enclosure openings.
A projection on the outer face is provided with Pg- or M-thread, sealing ring and two compression members.
Mounting of a cable entry is carried out after insertion of a gasket, using four hexagon socket head cap screws.

"Cable-Gland Flanges" for M- and *Pg*-Threads with Hexagon Socket Head Cap Screws

Cable-Gland Flange	Thread Size	Cable Diameters from - to	External Dimension	Fixing Hole Spacing
BS 21 A MP e BS 21 A M e	*Pg 13.5* M 20 x 1.5	8 - 12.5 mm	98 x 60 mm	70 x 32 mm
BS 22 A MP e *BS* 22 A M e	*Pg 16* M 22 x 1.5	7 - 15 mm	98 x 60 mm	70 x 32 mm
BS 23 A MP e BS 23 A M e	*Pg 21* M 28 x 1.5	13 - 19 mm	98 x 60 mm	70 x 32 mm
BS 24 A MP e BS 24 A M e	*Pg 29* M 36 x 1.5	18 - 28 mm	98 x 60 mm	70 x 32 mm
BS 25 A MP e BS 25 A M e	*Pg 36* M 48 x 1.5	28 - 36 mm	98 x 60 mm	70 x 32 mm
BS 24 B MP e BS 24 B M e	*Pg 29* M 36 x 1.5	18 - 28 mm	143 x 96 mm	112 x 65 mm
BS 25 B MP e BS 25 B M e	*Pg 36* M 48 x 1.5	28 - 36 mm	143 x 96 mm	112 x 65 mm
BS 26 B MP e BS 26 B M e	*Pg 42* M 55 x 1.5	34 - 44 mm	143 x 96 mm	112 x 65 mm
BS 27 B M e	M 64 x 2	41 - 53 mm	143 x 96 mm	112 x 65 mm
BS 28 B M e	M 80 x 2	52 - 68 mm	143 x 96 mm	112 x 65 mm
BS 27 C M e	M 64 x 2	41 - 53 mm	147 x 120 mm	112 x 85 mm
BS 28 C M e	M 80 x 2	52 - 68 mm	147 x 120 mm	112 x 85 mm
BS 29 C M e	M 95 x2	68 - 80 mm	147 x 120 mm	112 x 85 mm
BS 30 C M e	M 100 x 2	80 - 86 mm	147 x 120 mm	112 x 85 mm

Blind Flanges

BöSha blind flanges seal off lead-in passages and, after interposing a rubber gasket, they are fixed in front of the lead-in passage of an enclosure of type of explosion protection Increased Safety (EEx e) or Intrinsic Safety (EEx i).
Bolting is done with four hexagon socket head cap screws. The screw heads are countersunk in the exposed face of the blind flanges.

„Blind Flanges " for M- and Pg-Threads with Hexagon Socket Head Cap Screws

Blind Flange	Thread	External Dimension	Fixing Hole Spacing
BS 20 A MP e	Pg	98 x 60 mm	70 x 32 mm
BS 20 A M e	M	98 x 60 mm	70 x 32 mm
BS 20 B MP e	Pg	143 x 96 mm	112 x 65 mm
BS 20 B M e	M	143 x 96 mm	112 x 65 mm
BS 20 C M e	M	147 x 120 mm	112 x 85 mm

Screw Plugs

BöSha screw plugs are intended for closing unused threaded openings of enclosures of types of explosion protection Increased Safety (EEx e) and Intrinsic Safety (EEx i).
They consist of a cone-shaped plug, a bolt, a spring washer, a steel washer, a threaded plate and a gasket.

„Screw Plugs" for M- and Pg-Threads with Hexagon Socket Head Cap Screws

Screw Plug	Thread Size	Screw Plug	Thread Size
SV MP 13.5	Pg 13.5	SV M 20	M 20 x 1.5
SV MP 16	Pg 16	SV M 22	M 22 x 1.5
SV MP 21	Pg 21	SV M 28	M 28 x 1.5
SV MP 29	Pg 29	SV M 36	M 36 x 1.5
SV MP 36	Pg 36	SV M 48	M 48 x 1.5
SV MP 42	Pg 42	SV M 55	M 55 x 1.5

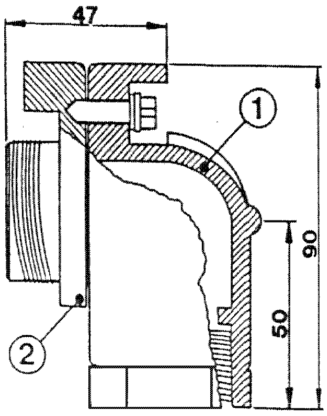
Right-Angle Cable Entries

BöSha right-angle cable entries ensure lasting protection of rubber sheathed cables running at right angles fitted to explosionproof equipment of types of explosion protection EEx e I and EEx i I.

The right-angle cable entry of sturdy, impact resistant, non-corroding solid brass includes compression members and sealing ring.
The right-angle screw-in socket is designed for Pg 29- or M 36 x1.5-threads for cable diameters from 18 – 28 mm.
It is screwed into the existing thread with outside hexagon (SW 46) after inserting one sealing ring and two compression members in the thread of the equipment.
A rotation lock is provided in the form of a lock ring which is secured with a hexagon socket head cap screw. The hexagon socket head cap screw is secured by a spring washer, to prevent accidental slackening. The lock ring is located between screw-in socket and enclosure.
Cable entries with Pg 29- or M 36 x 1.5-thread can be screwed into the unoccupied end of the **BöSha** right-angle cable entry.

Right-Angle Cable Entry	Thread Size	Ø of Cables (from - to) mm
BS 44 W MP e	Pg 29	18 - 28
BS 44 W M e	M 36 x 1.5	18 - 28

Dimensions



1 = Right-Angle Cable Entry

2 = Rotation Lock