

CONTENTS

SAFETY, MAINTENANCE AND MOUNTING INSTRUCTIONS

LYRA
Polyamide Cable Glands
for circular cables Type B...;
DRACO
Polyamide Plug Type T...
High Impact Plug Type HIT...
HI-LYRA
High Impact Polyamide Cable Glands
for circular cables Type HIB...; HIB... (DS)
for flat cables Type HIB... (axb)
VEGA
High Impact Polyamide Cable Glands
for circular cables Type EHIB...; EHIB... (DS)
CETUS
High Impact Protection Tap BDPX...-



- 1 MARKINGS and APPLICABLE CODES
- 2 PRODUCS and PARTS
- 3 MOUNTING INSTRUCTION GLANDS
- 4 MOUNTING INSTRUCTION PLUGS
- 5 SAFETY INSTRUCTION (IP PROTECTION)
- 6 SAFETY INSTRUCTION (IP PROTECTION)
- 7 SAFETY INSTRUCTION
- 8 SAFETY INSTRUCTION
- 9 TYPE B... T... HIT... and BDPX SIZE
- 10 TYPE HIB... SIZE
- 11 TYPE HIB...(DS) SIZE
- 12 TYPE EHIB... SIZE
- 13 TYPE EHIB...(DS) SIZE
- 14 EU DECLARATION OF CONFORMITY

1

MARKINGS

BMD BM...	CE	0722 II2GD Ex eb IIC Gb Ex Ib IIIC Db IP64/68 IMQ 13 ATEX 010X / IECEx IMQ 13.0003X
BMD HIBM...	CE	0722 II2GD Ex eb IIC Gb Ex Ib IIIC Db IP66/68 IMQ 13 ATEX 010X / IECEx IMQ 13.0003X
BMD HIBM...(DS)	CE	0722 II2GD Ex eb IIC Gb Ex Ib IIIC Db IP66/68 IMQ 13 ATEX 010X / IECEx IMQ 13.0003X
BMD EHIBM...	CE	0722 II2GD Ex eb IIC Gb Ex Ib IIIC Db IP66/68 IMQ 13 ATEX 010X / IECEx IMQ 13.0003X
BMD EHIBM...(DS)	CE	0722 II2GD Ex eb IIC Gb Ex Ib IIIC Db IP66/68 IMQ 13 ATEX 010X / IECEx IMQ 13.0003X
BMD T...	CE	0722 II2GD Ex eb IIC Gb Ex Ib IIIC Db IP66/68 IMQ 13 ATEX 010X / IECEx IMQ 13.0003X
BMD HIT...	CE	0722 II2GD Ex eb IIC Gb Ex Ib IIIC Db IP66/68 IMQ 13 ATEX 010X / IECEx IMQ 13.0003X
BMD BDPX...		

APPLICABLE CODES

DIRECTIVE 2014/34/EU	EN/IEC 60079-7
EN/IEC 60079-0	EN/IEC 60079-31
EN/IEC 60079-11	EN/IEC 60529

2

CABLE GLANDS & PLUGS PARTS

Nr.	Items
1	Dust Plug
2	Dome Plug (Thick)
3	Dome Plug (Thin)
4	Lock Nut
5	Standard Seal
6	Double Seal
7	Washer
8	Cap
9	Cap (Blue Ex-i)
10	Body

Nr.	Items
1	Plug
2	Washer
3	Lock Nut
4	Lock Nut (Blue Ex i)

Rev. 07

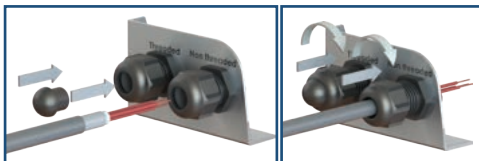
3 Mounting Instruction Glands



STEP 1
Mount the cable gland to the appropriate opening on the enclosure.



STEP 2
Tighten the gland or use locknut to tighten if the enclosure is non threaded.



STEP 3
Lead the cable through the cable gland.



STEP 4
Adjust the free length of the cable inside the enclosure and tighten the cap of the gland with sufficient torque.

4 Mounting Instruction Plugs

Case 1
Blind plug is assembled with a washer and it is put through the enclosure's cutout. The blind plug is then fixed with the aid of a lock nut and appropriate torque value and hole is sealed.



Case 2
The product can be assembled with a thicker and threaded enclosure without a problem.



Case 3
When water tightness is not an issue, the product is put through the enclosure's cutout and the connection is maintained with a nut. This applies only non-threaded enclosures.



Case 4
When water tightness is not an issue, the assembly is maintained without a washer provided that the thread form and enclosure thickness allow.



5 SAFETY INSTRUCTION (IP PROTECTION)

IP protection for Non Threaded enclosure applications (Ex e and Ex Ib Recommended Hole)

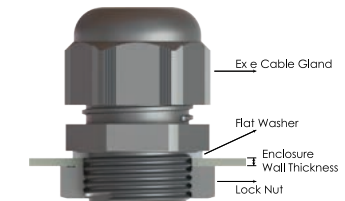
Thread	Metric Threads		G Threads (GAS UNI ISO 228/1)		PG Threads	
	Hole Diameter (min. - max. mm)	Thread	Thread	Hole Diameter (min. - max. mm)	Thread	Hole Diameter (min. - max. mm)
M8x1.25	8.0-8.2	G 1/4"		13.2-13.4	PG 7	12.5-12.7
M12x1.5	12.0-12.2	G 3/8"		16.6-16.8	PG 9	15.2-15.4
M16x1.5	16.0-16.2	G 1/2"		21.0-21.2	PG 11	18.6-18.8
M20x1.5	20.0-20.2	G 3/4"		26.4-26.6	PG 13.5	20.4-20.6
M25x1.5	25.0-25.2	G 1"		33.3-33.6	PG 16	22.5-22.7
M32x1.5	32.0-32.3	G 1 1/4"		41.9-42.2	PG 21	28.3-28.5
M40x1.5	40.0-40.3	G 1 1/2"		47.8-48.1	PG 29	37.0-37.3
M50x1.5	50.0-50.3	G 2"		59.6-59.9	PG 36	47.0-47.3
M63x1.5	63.0-63.3	G 2 1/2"		75.2-75.5	PG 42	54.0-54.3
M75x1.5	75.0-75.3	G 3"		87.9-88.2	PG 48	59.3-59.6
M90x1.5	90.0-90.3	G 4"		113.1-113.4		
M100x1.5	100.0-100.3	G 5"		138.6-138.8		
M110x1.5	110.0-110.3					
M115x2.0	115.0-115.3					
M130x2.0	130.0-130.3					

Recommended Hole Diameters for Non Threaded enclosure applications in relation with the used thread types are shown above. For more detailed information please refer to CA4-IP.

Diameters for Non Threaded enclosure applications in relation with the used thread types are shown above. For more detailed information please refer to CA4-IP. For non-threaded enclosures it is recommended to use flat washer between the gland body and enclosure. The recommended wall thickness is 1.5 mm for non threaded enclosures.

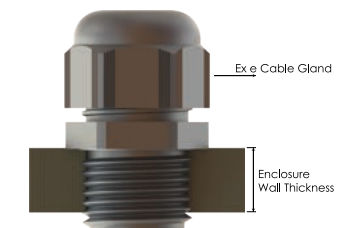
For non-threaded enclosures, in case of enclosure wall thickness is equal or lower than 1.5 mm, Bimed flat washer should be used. O-ring can stay in the channel if it is necessary. During the assembly it is recommended to rotate the locknut. If the assembly needs to be done by rotating the gland, then o-ring should be preferred.

6 SAFETY INSTRUCTION (IP PROTECTION)



IP protection for cylindrical threaded joint

Ex e
The recommended wall thickness is min 1.5mm for non threaded enclosures. For threaded enclosures it is recommended to engage 3 full threads, otherwise it is recommended to use locknut.



IP protection for tapered threaded joint

Ex e
For NPT thread Ex e applications, please refer to NPT ANSI B1.20.1 standard.

7 SAFETY INSTRUCTION

- Qualified personnel in compliance with the nation laws shall carry out the maintenance in accordance with EN/IEC 60079-17 and installation in accordance with EN/IEC 60079-14.
- Changes to products are not allowed.
- Only Bimed spare parts must be used.
- The maintenance operations must be carried out only after the engine has been cut off from mains or from the related electrical appliance.
- The following instructions must be strictly followed in order to get a correct installation.
- Ex e II Gb cable glands can be used with Ex i circuits, in that case caps shall be in blue color.
- The cable gland installation shall be done according to safety manufacturer instructions to maintain degree of protection.
- Cable gland installation shall be done taking into account the temperature range declared for cable glands in relation to protection mode execution, versus the ambient temperature proper of installation.
- The cable glands are only suitable for fixed installations. Cables shall be effectively clamped to prevent pulling or twisting.
- The cable glands/plugs and the relevant cables, shall be used where a protection against risk of mechanical damage is provided, when they are suitable for low mechanical risk (4J) only.
- For gas installations (only for cable glands with M50/PG42/PF1 1/2"/NPT1 1/2" threads and following) and dust installations: Warning. Potential electrostatic charging hazard. Clean only with antistatic cloths.
- The certificate does not indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed in the first page of the manual.
- The certificate does not cover hazards coming from environmental conditions different from those clearly and precisely indicated in clause 1 of EN 60079-0.
- When cable glands are installed with polyamide insert BDPX-- mechanical risk have to be taken into account, depending on the cable gland and insert tap. When insert tap is removed in order to install the proper cable, the integrity of sealing rings have to be checked, in order to guarantee the correct tightness. If necessary, sealing rings have to be replaced with new ones (original spare parts only).

8 Materials and service temperatures

Series	Service Temperature 1	Sealing Rings Material	Flat Washer Materials	OR Materials	Mechanical Risk
B.-.	+40 to +80 °C2	Chloroprene (Neoprene) Silicone	Chloroprene (neoprene) Silicone KUNGERSEB C-4400 EPDM rubber NBR	Chloroprene (neoprene) Silicone EPDM rubber	Low (4J)
B.-DC.-	+40 to +80 °C2	Chloroprene (Neoprene) Silicone	Chloroprene (neoprene) Silicone KUNGERSEB C-4400 EPDM rubber NBR	Chloroprene (neoprene) Silicone EPDM rubber	Low (4J)
T.-.	+40 to +80 °C	-	Chloroprene (neoprene) Silicone KUNGERSEB C-4400 EPDM rubber NBR	-	Low (4J)
HB.-.	-30 to +70 °C -40 to +70 °C -60 to +70 °C	NBR Chloroprene (neoprene) Silicone	Chloroprene (neoprene) Silicone KUNGERSEB C-4400 EPDM rubber NBR	Chloroprene (neoprene) Silicone EPDM rubber	High (7J)
EHB.-.	-30 to +70 °C -40 to +70 °C -60 to +70 °C	NBR Chloroprene (neoprene) Silicone	Chloroprene (neoprene) Silicone KUNGERSEB C-4400 EPDM rubber NBR	Chloroprene (neoprene) Silicone EPDM rubber	High (7J)
HB.-.(aux)	-40 to +70 °C	Silicone	Chloroprene (neoprene) Silicone KUNGERSEB C-4400 EPDM rubber NBR	Chloroprene (neoprene) Silicone EPDM rubber	High (7J)
HB.-.(DS)	-30 to +70 °C -40 to +70 °C -60 to +70 °C2	NBR Chloroprene (neoprene) Silicone	Chloroprene (neoprene) Silicone KUNGERSEB C-4400 EPDM rubber NBR	Chloroprene (neoprene) Silicone EPDM rubber	High (7J)
EHB.-.(DS)	-30 to +70 °C -40 to +70 °C -60 to +70 °C	NBR Chloroprene (neoprene) Silicone	Chloroprene (neoprene) Silicone KUNGERSEB C-4400 EPDM rubber NBR	Chloroprene (neoprene) Silicone EPDM rubber	High (7J)
HB.-.X	-30 to +70 °C -40 to +70 °C -60 to +70 °C	-	NBR Chloroprene (neoprene) Silicone KUNGERSEB C-4400	-	High (7J)

Notes
 1- Service temperature is related to material of sealing rings and polyamide which cable glands body is made of, but can be additionally limited by material of flat washer/ material temperature limitations: chloroprene (-40 to +100 °C); silicone (-40 to +180 °C); EPDM rubber (-40 to +110 °C); KUNGERSEB C-4400 fiber (-50 to +130 °C). The use of these materials in flat washer/for has to be taken into account in determination of lower limit of service temperature of cables.
 2- When used blue caps (B.-B.DC.-) and/or BDPX.- protection top is used, the service temperature is -40 to +70 °C. Low mechanical risk (4J).

9 TYPE B.. T... HIT... and BDPX SIZE

Size	Clamping Range Ø min-max mm		Body Tightening Torques [Nm]	Cap Tightening Torques [Nm]	Part Number
	M20x1.5	M25x1.5			
M20x1.5	5.0-10.0	1.5	2.5	2.5	BM-SX2
	6.0-12.0	2.0	8.5	8.5	BM-X2
	10.0-14.0	2.0	9.0	9.0	BM-X2L
	10.0-14.0	2.0	9.0	9.0	BM-X3
M25x1.5	10.0-14.0	2.0	9.0	9.0	BM-SX5
	10.0-14.0	2.0	9.0	9.0	BM-SX6
	13.0-18.0	2.5	13.5	13.5	BM-X5
	13.0-18.0	2.5	13.5	13.5	BM-X6
M32x1.5	11.0-17.0	2.5	5.0	5.0	BM-XEU325
	15.0-21.0	4.0	6.0	6.0	BM-XEU32
	13.0-18.0	2.5	13.5	13.5	BM-SX7
	18.0-25.0	4.0	16.0	16.0	BM-X7
M40x1.5	19.0-28.0	6.0	8.0	8.0	BM-XEU40L
	22.0-32.0	6.0	22.0	22.0	BM-X8
M50x1.5	30.0-38.0	8.0	23.0	23.0	BM-X9
M63x1.5	34.0-44.0	10.0	25.0	25.0	BM-X10

TYPE T.			TYPE HIT.		
Size	Body Tightening Torques [Nm]	Part Number	Size	Body Tightening Torques [Nm]	Part Number
M12x1.5	1.5	TP-X02	M 12x1.5	1.5	HITP-X02
M16x1.5	1.5	TP-X01	M 16x1.5	1.5	HITP-X01
M20x1.5	2.0	TP-X1	M 16x1.5	1.5	HITP-X01L
M25x1.5	2.5	TP-X2	M 20x1.5	2.0	HITP-X01HL
M32x1.5	4.0	TP-X3	M 20x1.5	2.0	HITP-X1
M40x1.5	6.0	TP-X4	M 20x1.5	2.0	HITP-X1L
M50x1.5	8.0	TP-X5	M 20x1.5	2.0	HITP-X1HL
M63x1.5	10.0	TP-X6	M25x1.5	2.5	HITP-X2
			M32x1.5	4.0	HITP-X2HL
			M40x1.5	6.0	HITP-X4
			M50x1.5	8.0	HITP-X5
			M63x1.5	10.0	HITP-X6

These torque values are recommended according to the tests performed in Bimed laboratory.

DOME PLUGS					
Size	Clamping Range Ø min-max mm		Body Tightening Torques [Nm]	Cap Tightening Torques [Nm]	Part Number
	P	D			
9	4.0	9.2	1.5	1.5	BDPX-09-21
11	5.0	10.5	1.5	1.5	BDPX-11-21
13	6.0	12.0	2.0	2.0	BDPX-13-21
16	7.0	13.3	2.0	2.0	BDPX-16-21
18	8.0	15.0	2.5	2.5	BDPX-18-21
20	9.0	16.0	2.5	2.5	BDPX-20-21
22	10.0	17.0	3.0	3.0	BDPX-22-21
25	12.0	19.0	4.0	4.0	BDPX-25-21
28	14.0	21.0	5.0	5.0	BDPX-28-21
32	16.0	23.0	6.0	6.0	BDPX-32-21
37	18.0	25.0	7.5	7.5	BDPX-37-21
45	22.0	30.0	10.0	10.0	BDPX-45-21
52	26.0	35.0	13.0	13.0	BDPX-52-21

10 TYPE HIB... SIZE

Size	Clamping Range Ø min-max mm		Body Tightening Torques [Nm]	Cap Tightening Torques [Nm]	Part Number
	M12x1.5	M16x1.5			
M12x1.5	4.0-6.5	1.5	1.5	1.5	HIBM-OXS
	4.0-6.5	1.5	1.5	1.5	HIBM-XS
M16x1.5	5.0-8.0	1.5	2.0	2.0	HIBM-SX1
	5.0-8.0	1.5	2.0	2.0	HIBM-SX1L
M20x1.5	6.0-10.0	1.5	2.5	2.5	HIBM-X1
	6.0-10.0	1.5	2.5	2.5	HIBM-X1L
M25x1.5	6.0-10.0	1.5	2.5	2.5	HIBM-SX2
	6.0-10.0	1.5	2.5	2.5	HIBM-X2
M32x1.5	7.0-12.0	2.0	5.0	5.0	HIBM-X2L
	7.0-12.0	2.0	6.0	6.0	HIBM-MX2
M40x1.5	7.0-13.0	2.0	7.0	7.0	HIBM-X3
	7.0-13.0	2.0	7.0	7.0	HIBM-X4
M50x1.5	11.0-14.0	2.0	7.0	7.0	HIBM-SX5
	11.0-14.0	2.0	7.0	7.0	HIBM-SX6
M63x1.5	14.0-18.0	2.5	8.0	8.0	HIBM-X5
	14.0-18.0	2.5	8.0	8.0	HIBM-X6
M12x1.5	12.0-17.0	2.5	6.0	6.0	HIBM-XEU25
	12.0-17.0	2.5	6.0	6.0	HIBM-XEU25L
M16x1.5	16.0-21.0	4.0	7.0	7.0	HIBM-XEU32
	16.0-21.0	4.0	7.0	7.0	HIBM-XEU32L
M20x1.5	14.0-18.0	2.5	8.0	8.0	HIBM-SX7
	14.0-18.0	2.5	8.0	8.0	HIBM-X7
M40x1.5	20.0-28.0	6.0	14.0	14.0	HIBM-XEU40
	20.0-28.0	6.0	14.0	14.0	HIBM-XEU40L
M50x1.5	23.0-32.0	8.0	15.0	15.0	HIBM-X8
	23.0-32.0	8.0	18.0	18.0	HIBM-X9
M63x1.5	35.0-44.0	10.0	23.0	23.0	HIBM-X10

These torque values are recommended according to the tests performed in Bimed laboratory.

11 TYPE HIB...(DS) SIZE

Size	Clamping Range Ø min-max mm		Body Tightening Torques [Nm]	Cap Tightening Torques [Nm]		Part Number
	Outer Seal (S1) mm	Inner Seal (S1+S2) mm		S1+S2	S1	
M12x1.5	4.0-6.5	3.0-4.0	1.5	1.5	1.5	HIBM-OXS(DS)
	4.0-6.5	3.0-4.0	1.5	1.5	1.5	HIBM-XS(DS)
M16x1.5	5.0-8.0	4.0-5.0	1.5	2.0	2.0	HIBM-SX1(DS)
	5.0-8.0	4.0-5.0	1.5	2.0	2.0	HIBM-SX1L(DS)
M20x1.5	6.0-10.0	4.0-6.0	1.5	2.5	2.5	HIBM-X1(DS)
	6.0-10.0	4.0-6.0	1.5	2.5	2.5	HIBM-X1L(DS)
M25x1.5	6.0-10.0	4.0-6.0	1.5	2.5	2.5	HIBM-SX2(DS)
	7.5-12.0	6.0-7.5	2.0	5.0	5.0	HIBM-X2(DS)
M32x1.5	7.5-12.0	6.0-7.5	2.0	5.0	5.0	HIBM-X2L(DS)
	7.0-13.0	4.0-7.0	2.0	4.0	4.0	HIBM-MX2(DS)
M40x1.5	11.0-14.0	8.0-11.0	2.0	7.0	7.0	HIBM-X3(DS)
	11.0-14.0	8.0-11.0	2.0	7.0	7.0	HIBM-X4(DS)
M50x1.5	11.0-14.0	8.0-11.0	2.0	7.0	7.0	HIBM-SX5(DS)
	11.0-14.0	8.0-11.0	2.0	7.0	7.0	HIBM-SX6(DS)
M63x1.5	13.0-18.0	10.0-13.0	2.5	8.0	8.0	HIBM-X5(DS)
	13.0-18.0	10.0-13.0	2.5	8.0	8.0	HIBM-X6(DS)
M12x1.5	13.0-17.0	9.0-13.0	2.5	6.0	6.0	HIBM-XEU25(DS)
	13.0-17.0	9.0-13.0	2.5	6.0	6.0	HIBM-XEU25L(DS)
M16x1.5	16.0-21.0	12.0-16.0	4.0	7.0	7.0	HIBM-XEU32(DS)
	16.0-21.0	12.0-16.0	4.0	7.0	7.0	HIBM-XEU32L(DS)
M20x1.5	13.0-18.0	10.0-13.0	2.5	8.0	8.0	HIBM-SX7(DS)
	20.0-25.0	14.0-20.0	4.0	12.0	13.0	HIBM-X7(DS)
M40x1.5	21.0-28.0	17.0-21.0	6.0	14.0	14.0	HIBM-XEU40(DS)
	21.0-28.0	17.0-21.0	6.0	14.0	14.0	HIBM-XEU40L(DS)
M50x1.5	25.0-32.0	21.0-25.0	6.0	15.0	15.0	HIBM-X8(DS)
	31.0-38.0	22.0-31.0	8.0	18.0	20.0	HIBM-X9(DS)
M63x1.5	35.0-44.0	28.0-35.0	10.0	23.0	23.0	HIBM-X10(DS)

These torque values are recommended according to the tests performed in Bimed laboratory.

12 TYPE EHB...(DS) SIZE

Size	Clamping Range Ø min-max mm		Body Tightening Torques [Nm]	Cap Tightening Torques [Nm]	Part Number
	Single Seal Ø min-max mm	Double Seal Ø min-max mm			
M12x1.5	4.0-6.5	1.5	2.0	2.0	EHBIM-OXS
	4.0-6.5	1.5	2.0	2.0	EHBIM-XS
M16x1.5	5.0-8.0	1.5	4.0	4.0	EHBIM-SX1
	5.0-8.0	1.5	4.0	4.0	EHBIM-SX1L
M20x1.5	6.0-10.0	1.5	4.0	4.0	EHBIM-X1
	6.0-10.0	1.5	4.0	4.0	EHBIM-X1L
M25x1.5	6.0-10.0	2.0	4.0	4.0	EHBIM-SX2
	7.0-12.0	2.0	7.0	7.0	EHBIM-X2
M32x1.5	7.0-12.0	2.0	7.0	7.0	EHBIM-X2L
	7.0-13.0	2.0	4.0	4.0	EHBIM-MX2
M40x1.5	11.0-14.0	2.0	5.5	5.5	EHBIM-X3
	11.0-14.0	2.0	5.5	5.5	EHBIM-X4
M50x1.5	11.0-14.0	2.0	5.5	5.5	EHBIM-SX5
	11.0-14.0	2.0	5.5	5.5	EHBIM-SX6
M63x1.5	14.0-18.0	2.5	7.5	7.5	EHBIM-X5
	14.0-18.0	2.5	7.5	7.5	EHBIM-X6
M12x1.5	12.0-17.0	2.5	5.0	5.0	EHBIM-XEU25
	12.0-17.0	2.5	5.0	5.0	EHBIM-XEU25L
M16x1.5	16.0-21.0	4.0	8.5	8.5	EHBIM-XEU32
	16.0-21.0	4.0	8.5	8.5	EHBIM-XEU32L
M20x1.5	14.0-18.0	4.0	7.5	7.5	EHBIM-SX7
	19.0-25.0	4.0	8.5	8.5	EHBIM-X7
M40x1.5	20.0-28.0	6.0	7.5	7.5	EHBIM-XEU40
	20.0-28.0	6.0	7.5	7.5	EHBIM-XEU40L
M50x1.5	23.0-32.0	6.0	16.0	16.0	EHBIM-X8
	31.0-38.0	8.0	30.0	30.0	EHBIM-X9
M63x1.5	35.0-44.0	10.0	33.0	33.0	EHBIM-X10

These torque values are recommended according to the tests performed in Bimed laboratory.

13 TYPE EHB...(DS) SIZE

Size	Clamping Range Ø min-max mm		Body Tightening Torques [Nm]	Cap Tightening Torques [Nm]	Part Number
	Outer Seal (S1) mm	Inner Seal (S1+S2) mm			