IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres

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Certificate No.:	IECEx IMQ 13.0003X	Issue No: 3	Certificate history:
			Issue No. 3 (2016-02-05)
Status:	**Current**	Page 1 of 4	Issue No. 2 (2015-08-07)
			Issue No. 1 (2015-02-20)
Date of Issue:	**2016-02-05**		Issue No. 0 (2013-05-29)

Applicant: **Bimed Teknik Aletler San ve Tic. A.S.**
Orkide Cad. nr. 15 – Istanbul (Turkey)
Turkey

Electrical Apparatus: **Polyamide cable glands for circular and flat cables, polyamide taps: series B..-.; B..DC-.; T.-.; HIB..-.; HIB.-.(axb); HIB..-.(DS); EHIB..-.; EHIB..-.(DS); MHIB.-.; MHIB.-.(DS); HIT.-.**

Optional accessory:

Type of Protection: **Ex e; Ex tb**

Marking:

Ex e IIC Gb

Ex tb IIIC Db IP66/68

Approved for issue on behalf of the IECEx Certification Body: Mr. Mauro CASARI

Position: IMQ ExCB Manager

Signature:
(for printed version)

Date:

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2. This certificate is not transferable and remains the property of the issuing body.
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Certificate issued by:

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Via Quintiliano 43
20138 Milano,
Italy

IECEx Certificate of Conformity

Certificate No:	IECEx IMQ 13.0003X	Issue No: 3
Date of Issue:	**2016-02-05**	Page 2 of 4
Manufacturer:	**Bimed Teknik Aletler San ve Tic. A.S.** Orkide Cad. nr. 15 – Istanbul (Turkey) **Turkey**	
Additional Manufacturing location(s):		

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:

The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2011 Edition:6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-31 : 2013 Edition:2	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
IEC 60079-7 : 2006-07 Edition:4	Explosive atmospheres - Part 7: Equipment protection by increased safety "e"

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

Test Report:

IT/IMQ/ExTR13.0003/03 IT/IMQ/ExTR15.0001/02

Quality Assessment Report:

IT/CES/QAR12.0003/03 IT/CES/QAR12.0003/00 IT/CES/QAR12.0003/01
IT/CES/QAR12.0003/02

IECEx Certificate of Conformity

Certificate No:	IECEx IMQ 13.0003X	Issue No: 3
Date of Issue:	2016-02-05	Page 3 of 4

Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The polyamide cable glands series B..-.; B..DC-.; HIB..-.; HIB..-.(DS); EHIB..-.; EHIB..-.(DS); MHIB.-.; MHIB.-.(DS) are used to introduce permanently circular cables into enclosure.
The polyamide cable glands series HIB.-.(axb) are used to introduce permanently non-circular (flat) cables into enclosure.
Plugs series T.-. and HIT.-. are used to close unused cable entry of an enclosure.
Cable glands and plugs are suitable for electrical equipment either with type of protection Ex-e or type of protection Ex-t. Cable glands should be also used for intrinsically safe circuits Ex-i.
Cable glands MHIB.-.; MHIB.-.(DS) are provided with a reinforced metal insert in the cap.
Cable glands HIB..-.(DS), EHIB..-.(DS) and MHIB.-.(DS) are provided with single (S1) or double (S1+S2) sealing rings.
Cable glands HIB..-., EHIB..-. and MHIB.-. are provided with single (S1) sealing rings only.
Cable glands series HIB.-.(axb) are provided with sealing ring specific for non-circular (flat cables), sealing ring hole dimensions are specified in brackets.
Cable glands B..-.; B..DC-.; HIB..-.; HIB..-.(DS); EHIB..-.; EHIB..-.(DS); MHIB.-.; MHIB.-.(DS) can be supplied with tap, polyamide made, as accessory (BDPX-.-.), suitable to guarantee IP degree when installed according to manufacturer's instructions.
Additionally, dust plugs are used for Ex polyamide cable glands to protect the glands from dust during the shipment. It is taken out during installation.
Details on sealing rings material, flat washer (placed between the body and the cover of enclosures) materials and limitations are listed in Annex.

CONDITIONS OF CERTIFICATION: YES as shown below:

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.
The cable gland installation shall be done according to safety manufacturer instructions to maintain degree of protection.
For gas installations (only for cable glands with M50/PG42/PF 1 ½"/NPT 1 ½" threads and following) and dust installations: Warning. Potential electrostatic charging hazard - See instructions. Clean only with antistatic clothes.
When cable glands are installed with polyamide insert BDPX-.-., mechanical risk have to be taken into account, depending on 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).
Cable glands for non circular cables shall be fitted with proper cables, suitable for sealing ring, according to manufacturer's instruction.

IECEx Certificate of Conformity

Certificate No:	IECEx IMQ 13.0003X	Issue No: 3
Date of Issue:	**2016-02-05**	Page 4 of 4

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

Issue 1:

Standard updating to IEC 60079-0:2011, 6th Edition
Adding new model BM-XEU40L derived from already tested cable glands types: differences have no effects on protection mode.
Adding KLINGERSIL® C-4400 or EPDM rubber as material used for additional gasket between cable gland and enclosure.
Cable glands B.-. and B.DC-. can be supplied with tap, polyamide made, as accessory (BP.-.), suitable to guarantee IP degree when installed according to manufacturer's instructions.

Adding serie HIB.-.; HIB.-.(DS); MHIB.-.; MHIB.-.(DS); HIT.-.

Issue 2:

Standard update to IEC 60079-31:2013 ed. 2
Introductions of alternative of blue cap for the following series: B..-.; B..DC.; HIB..-.; HIB..-.(DS). Change of related key code, according to Annex. The blue cap versions of cable glands are used for Ex i circuits.
Addition of models BN.-X8, BN.-X9, BN.-X10, covered by tests already performed.

New models HIB.-.(axb) with sealing rings specific for non circular (flat) cables

New models EHIB..-.; EHIB..-.(DS) with alternative cap versions

Issue 3:

Changes in clamping range for rationalization between single and double sealing rings, for series HIB..-.; HIB..-.(DS); EHIB..-.; EHIB..-.(DS). These changes does not impair the validity of tests already performed.
Change in cap shape for series EHIB..-.; EHIB..-.(DS). The new design does not impair the validity of tests already performed.
Change name for protection tap from BP.-. to BDPX-.-.

Annex:

IECEx IMQ 13.0003X issue No. 3 Annex.pdf

General description

The polyamide cable glands series B..-.; B..DC-.; HIB..-.; HIB..-.(DS); EHIB..-.; EHIB..-.(DS); MHIB.-.; MHIB.-.(DS) are used to introduce permanently circular cables into enclosure.
The polyamide cable glands series HIB.-.(axb) are used to introduce permanently non-circular (flat) cables into enclosure.
Plugs series T.-. and HIT.-. are used to close unused cable entry of an enclosure.
Cable glands and plugs are suitable for electrical equipment either with type of protection Ex-e or type of protection Ex-t.
Cable glands should be also used for intrinsically safe circuits Ex-i.
Cable glands MHIB.-.; MHIB.-.(DS) are provided with a reinforced metal insert in the cap.
Cable glands HIB..-.(DS), EHIB..-.(DS) and MHIB.-.(DS) are provided with single (S1) or double (S1+S2) sealing rings.
Cable glands HIB..-., EHIB..-. and MHIB.-. are provided with single (S1) sealing rings only.
Cable glands series HIB.-.(axb) are provided with sealing ring specific for non-circular (flat cables), sealing ring hole dimensions are specified in brackets.
Cable glands B..-.; B..DC-.; HIB..-.; HIB..-.(DS); EHIB..-.; EHIB..-.(DS); MHIB.-.; MHIB.-.(DS) can be supplied with tap, polyamide made, as accessory (BDPX-.-.), suitable to guarantee IP degree when installed according to manufacturer's instructions. Details in Table 4.
Additionally, dust plugs are used for Ex polyamide cable glands to protect the glands from dust during the shipment. It is taken out during installation.
Details on sealing rings material, flat washer (placed between the body and the cover of enclosures) materials and limitations are listed in Table 1.

Conditions of use

- 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.
- The cable gland installation shall be done according to safety manufacturer instructions to maintain degree of protection.
- For gas installations (only for cable glands with M50/PG42/PF 1 ½"/NPT 1 ½" threads and following) and dust installations: Warning. Potential electrostatic charging hazard - See instructions. Clean only with antistatic clothes.
- When cable glands are installed with polyamide insert BDPX-.-., mechanical risk have to be taken into account, depending on 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).
- Cable glands for non circular cables shall be fitted with proper cables, suitable for sealing ring, according to manufacturer's instruction.

Design options

Threads types: Metric ISO pitch 1,5 (ISO 965/1 and ISO 965/3)
NPT ANSI ASME B1.20.1
ISO 228/1
PG DIN 40430

Table 1: materials and service temperatures

Series	Service temperature [1]	Sealing rings material	Flat washer materials	OR materials	Mechanical risk
B..-.	-40 ÷ +80 °C [3]	chloroprene (neoprene) silicone	chloroprene (neoprene) silicone KLINGERSIL® C-4400 EPDM rubber, NBR	chloroprene (neoprene) silicone EPDM rubber	Low (4J)
B..DC-.	-40 ÷ +80 °C [3]	chloroprene (neoprene) silicone	chloroprene (neoprene) silicone KLINGERSIL® C-4400 EPDM rubber, NBR	chloroprene (neoprene) silicone EPDM rubber	Low (4J)
T.-.	-40 ÷ +80 °C	-	chloroprene (neoprene) silicone KLINGERSIL® C-4400 EPDM rubber, NBR	-	Low (4J)
HIB..-.	-30 ÷ +70 °C	NBR	chloroprene (neoprene) silicone KLINGERSIL® C-4400 EPDM rubber, NBR	chloroprene (neoprene) silicone EPDM rubber	High (7J)
	-40 ÷ +70 °C	chloroprene (neoprene)			
	-60 ÷ +70 °C	silicone			
EHIB..-.	-30 ÷ +70 °C	NBR	chloroprene (neoprene) silicone KLINGERSIL® C-4400 EPDM rubber, NBR	chloroprene (neoprene) silicone EPDM rubber	High (7J)
	-40 ÷ +70 °C	chloroprene (neoprene)			
	-60 ÷ +70 °C	silicone			
HIB.-.(axb)	-60 ÷ +70 °C	silicone	chloroprene (neoprene) silicone KLINGERSIL® C-4400 EPDM rubber, NBR	chloroprene (neoprene) silicone EPDM rubber	High (7J)
HIB..-.(DS)	-30 ÷ +70 °C	NBR	chloroprene (neoprene) silicone KLINGERSIL® C-4400 EPDM rubber, NBR	chloroprene (neoprene) silicone EPDM rubber	High (7J) [2]
	-40 ÷ +70 °C	chloroprene (neoprene)			
	-60 ÷ +70 °C [2]	silicone			
EHIB..-.(DS)	-30 ÷ +70 °C	NBR	chloroprene (neoprene) silicone KLINGERSIL® C-4400 EPDM rubber, NBR	chloroprene (neoprene) silicone EPDM rubber	High (7J) [2]
	-40 ÷ +70 °C	chloroprene (neoprene)			
	-60 ÷ +70 °C [2]	silicone			
MHIB.-.	-30 ÷ +70 °C	NBR	chloroprene (neoprene) silicone KLINGERSIL® C-4400 EPDM rubber, NBR	chloroprene (neoprene) silicone EPDM rubber	High (7J) [2]
	-40 ÷ +70 °C	chloroprene (neoprene)			
	-60 ÷ +70 °C [2]	silicone			
MHIB.-.(DS)	-30 ÷ +70 °C	NBR	chloroprene (neoprene) silicone KLINGERSIL® C-4400 EPDM rubber, NBR	chloroprene (neoprene) silicone EPDM rubber	High (7J) [2]
	-40 ÷ +70 °C	chloroprene (neoprene)			
	-60 ÷ +70 °C [2]	silicone			
HIT.-X.	-30 ÷ +70 °C	-	NBR	-	High (7J)
	-40 ÷ +70 °C		chloroprene (neoprene) EPDM rubber		
	-60 ÷ +70 °C		silicone		
	-60 ÷ +70 °C		KLINGERSIL® C-4400		

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/OR material temperature limitations: chloroprene (-40÷100 °C); silicone (-60÷180 °C); EPDM rubber (-40÷110 °C); KLINGERSIL® C-4400 fiber (-50÷130 °C); NBR (-40÷100 °C). The use of these materials in flat washer/OR has to be taken into account in determination of lower limit of service temperature of cable glands, while upper limit is 80 °C for BX.-., B.DC-., T.-., and 70°C for all other models.
[2] Some models, according to Tables 3 have the reduced temperature range -40÷+70°C.
[3] B.I-.; B.IDC-.: when used blue caps and/or BDPX-.-. protection tap is used, the service temperature is -40÷70 °C. Low mechanical risk (4J).

Table 2: key code

B	1	3	-	2		1 thread type: “N” – NPT ANSI ASME B1.20.1 “M” – Metric ISO pitch 1,5 (ISO 965/1 and ISO 965/3) “P” – PG DIN 40430 “PF” – ISO 228/1
B	1	3	DC	-	2	
HIB	1	3	-	2		
EHIB	1	3	-	2		2 size and dimensions, according to Tables 3
HIB	1	-	2	(axb)		
HIB	1	3	-	2	(DS)	3 cap: “I” – blue cap for use in circuits Ex-i none – black cap “T”- Tampon blue print on black material
EHIB	1	3	-	2	(DS)	
MHIB	1	-	2			(axb): dimensions in mm of sealing ring, as follows: type SXL 5x15 type SXM 5x12,8 type SXS 6x10,8
MHIB	1	-	2	(DS)		(DS) double sealing ring (S1; S1+S2) DC double crowns (sealing rings)
T	1	-	2			1: thread type: “N” – NPT ANSI ASME B1.20.1 “P” – Metric ISO pitch 1,5 (ISO 965/1 and ISO 965/3) “B” – PG DIN 40430 “G” – ISO 228/1
HIT	1	-	2			2: size and dimensions, according to Tables 3
BDPX-	1	-	2			1: diameter 2: size

Cable glands/plugs sizes

Table 3.1: B..-.; B..DC-.				
Model	**Thread**	**Min-max cable [mm]**	**Torque value [Nm]**	**Mechanical risk**
BM.-SX2	M20x1.5	5,0-10,0	2,5	Low (4J)
BM.-X2	M20x1.5	6,0-12,0	5,0	
BM.-X2L	M20x1.5	6,0-12,0	5,0	
BM.-X3	M20x1.5	10,0-14,0	5,5	
BM.-X4	M20x1.5	10,0-14,0	5,5	
BM.-SX5	M25x1.5	10,0-14,0	5,5	
BM.-X5	M25x1.5	13,0-18,0	7,0	
BM.-SX6	M25x1.5	10,0-14,0	5,5	
BM.-X6	M25x1.5	13,0-18,0	7,0	
BM.-XEU25	M25x1.5	11,0-17,0	5,0	
BM.-XEU32	M32x1.5	15,0-21,0	6,0	
BM.-SX7	M32x1.5	13,0-18,0	7,0	
BM.-X7	M32x1.5	18,0-25,0	9,0	
BM.-XEU40	M40x1.5	19,0-28,0	5,0	
BM.-XEU40L	M40x1.5	19,0-28,0	5,0	
BM.-X8	M40x1.5	22,0-32,0	17,0	
BM.-X9	M50x1.5	30,0-38,0	22,0	
BM.-X10	M63x1.5	34,0-44,0	23,0	
BN.-SX2	NPT 1/2"	5,0-10,0	2,5	Low (4J)
BN.-X2	NPT 1/2"	6,0-12,0	5,0	
BN.-LX2	NPT 1/2"	10,0-14,0	5,5	
BN.-X3	NPT 3/4"	13,0-18,0	7,0	
BN.-X4	NPT 1"	18,0-25,0	9,0	
BN.-X8	NPT 1 1/4"	22,0-32,0	17,0	
BN.-X9	NPT 1 1/2"	30,0-38,0	22,0	
BN.-X10	NPT 2"	34,0-44,0	23,0	
BPF.-SX2	PF 1/2"	5,0-10,0	2,5	Low (4J)
BPF.-X2	PF 1/2"	6,0-12,0	5,0	
BPF.-LX2	PF 1/2"	10,0-14,0	5,5	
BPF.-X3	PF 3/4"	13,0-18,0	7,0	
BPF.-X4	PF 1"	18,0-25,0	9,0	
BP.-X4	PG 13,5	6,0-12,0	5,0	Low (4J)
BP.-X5	PG 16	10,0-14,0	5,5	
BP.-X6	PG 21	13,0-18,0	7,0	
BP.-X7	PG 29	18,0-25,0	9,0	
BP.-X8	PG 36	22,0-32,0	17,0	
BP.-X9	PG 42	30,0-38,0	22,0	
BP.-X10	PG 48	34,0-44,0	23,0	
BM.DC-X3	M25x1.5	12,0-18,0	8,0	Low (4J)

Table 3.2: T.-.								
Model	**Torque value [Nm]**	**Model**	**Torque value [Nm]**	**Model**	**Torque value [Nm]**	**Model**	**Torque value [Nm]**	**Mechanical risk**
TP-X02	1.5	TN-X02	1.5	TG-X02	1.5	TB-X02	1.5	Low (4J)
TP-X01	1.5	TN-X01	1.5	TG-X01	1.5	TB-X01	1.5	
TP-X1	2	TN-X1	2	TG-X1	2	TB-X1	2	
TP-X2	2.5	TN-X2	2.5	TG-X2	2.5	TB-X2	2.5	
TP-X3	4	TN-X3	4	TG-X3	4	TB-X3	4	
TP-X4	6	TN-X4	6	TG-X4	6	TB-X4	6	
TP-X5	8	TN-X5	8	TG-X5	8	TB-X5	8	
TP-X6	10	TN-X6	10	TG-X6	10	TB-X6	10	

* Table 3.3: HIB..-.; EHIB..-.				
Model		**Min-max cable [mm]**	**Torque value [Nm]**	**Mechanical risk**
HIB..-0XS	EHIB..-0XS	4-6.5	2	High (7J)
HIB..-XS	EHIB..-XS	4-6.5	2	
HIB..-SX1	EHIB..-SX1	5-8	4	
HIB..-SX1L	EHIB..-SX1L	5-8	4	
HIB..-X1	EHIB..-X1	6-10	4	
HIB..-X1L	EHIB..-X1L	6-10	4	
HIB..-SX2	EHIB..-SX2	6-10	2.5	
HIB..-X2	EHIB..-X2	7-12	5	
HIB..-X2L	EHIB..-X2L	7-12	5	
HIB..-MX2	EHIB..-MX2	7-13	4.5	
HIB..-X3	EHIB..-X3	11-14	5.5	
HIB..-X4	EHIB..-X4	11-14	5.5	
HIB..-SX5	EHIB..-SX5	11-14	5.5	
HIB..-SX6	EHIB..-SX6	11-14	5.5	
HIB..-XEU25	EHIB..-XEU25	12-17	5	
HIB..-XEU25L	EHIB..-XEU25L	12-17	5	
HIB..-X5	EHIB..-X5	14-18	8	
HIB..-X6	EHIB..-X6	14-18	8	
HIB..-SX7	EHIB..-SX7	14-18	8	
HIB..-XEU32	EHIB..-XEU32	16-21	6	
HIB..-XEU32L	EHIB..-XEU32L	16-21	6	
HIB..-X7	EHIB..-X7	19-25	9	
HIB..-XEU40	EHIB..-XEU40	20-28	5	
HIB..-XEU40L	EHIB..-XEU40L	20-28	5	
HIB..-X8	EHIB..-X8	23-32	17.5	
HIB..-X9	EHIB..-X9	31-38	22	
HIB..-X10	EHIB..-X10	35-44	24	

* Table 3.4: HIB.-.(axb)						
Cable gland code	**Sealing ring dimensions [mm x mm]**	**Complete code**	**Cable min [mm x mm]**	**Cable max [mm x mm]**	**Torque value [Nm]**	**Mechanical risk**
HIB.-SX5	6,0x10,8	HIB.-SX5 (6,0x10,8)	4,21x11,69	5,23 x 13,21	8	High (7J)
	5,0x12,8	HIB.-SX5 (5,0x12,8)	5,03 x 12,50	6,05 x 14,02		
HIB.-X5	6,0x10,8	HIB.-X5 (6,0x10,8)	4,21x11,69	5,23 x 13,21		
	5,0x12,8	HIB.-X5 (5,0x12,8)	5,03 x 12,50	6,05 x 14,02		
	5,0x15,0	HIB.-X5 (5,0x15,0)	6,09 x 13,72	7,11 x 15,24		
HIB.-XEU25	6,0x10,8	HIB.-XEU25 (6,0x10,8)	4,21x11,69	5,23 x 13,21		
	5,0x12,8	HIB.-XEU25 (5,0x12,8)	5,03 x 12,50	6,05 x 14,02		
	5,0x15,0	HIB.-XEU25 (5,0x15,0)	6,09 x 13,72	7,11 x 15,24		
HIB.-SX6	6,0x10,8	HIB.-SX6 (6,0x10,8)	4,21x11,69	5,23 x 13,21		
	5,0x12,8	HIB.-SX6 (5,0x12,8)	5,03 x 12,50	6,05 x 14,02		
HIB.-X6	6,0x10,8	HIB.-X6 (6,0x10,8)	4,21x11,69	5,23 x 13,21		
	5,0x12,8	HIB.-X6 (5,0x12,8)	5,03 x 12,50	6,05 x 14,02		
	5,0x15,0	HIB.-X6 (5,0x15,0)	6,09 x 13,72	7,11 x 15,24		
HIB.-XEU25L	6,0x10,8	HIB.-XEU25L (6,0x10,8)	4,21x11,69	5,23 x 13,21		
	5,0x12,8	HIB.-XEU25L (5,0x12,8)	5,03 x 12,50	6,05 x 14,02		
	5,0x15,0	HIB.-XEU25L (5,0x15,0)	6,09 x 13,72	7,11 x 15,24		

* metric threads cable glands sizes are shown; models with other threads, as detailed in table 2, are available. Full list is shown in drawings A3-14-IEC.15 rev. 1 and A3-14-IEC.16 rev. 1.

* Table 3.5: HIB..-.(DS); EHIB..-.(DS)					
Model		Min-max cable [mm] **	Torque value [Nm]		Mechanical risk
			S1+S2	S1	
HIB..-0XS(DS)	EHIB..-0XS(DS)	3-6.5	1	2	High (7J)
HIB..-XS(DS)	EHIB..-XS(DS)	3-6.5	1	2	
HIB..-SX1(DS)	EHIB..-SX1(DS)	4-8	3.5	4	High (7J) HIB.-.(DS) and EHIB.-.(DS): models with silicone sealing rings have the reduced temperature range -40÷+70°C HIB.I-.(DS) and HIB.I-.(DS): models with silicone sealing rings have the temperature range -60÷+70°C
HIB..-SX1L(DS)	EHIB..-SX1L(DS)	4-8	3.5	4	
HIB..-X1(DS)	EHIB..-X1(DS)	4-10	3.5	4	
HIB..-X1L(DS)	EHIB..-X1L(DS)	4-10	3.5	4	
HIB..-SX2(DS)	EHIB..-SX2(DS)	4-10	3.2	2.5	
HIB..-X2(DS)	EHIB..-X2(DS)	6-12	5	5	
HIB..-X2L(DS)	EHIB..-X2L(DS)	6-12	5	5	
HIB..-MX2(DS)	EHIB..-MX2(DS)	4-13	3.5	4.5	
HIB..-X3(DS)	EHIB..-X3(DS)	8-14	5.5	5.5	
HIB..-X4(DS)	EHIB..-X4(DS)	8-14	5.5	5.5	
HIB..-SX5(DS)	EHIB..-SX5(DS)	8-14	5.5	5.5	
HIB..-SX6(DS)	EHIB..-SX6(DS)	8-14	5.5	5.5	
HIB..-XEU25(DS)	EHIB..-XEU25(DS)	9-17	5	5	
HIB..-XEU25L(DS)	EHIB..-XEU25L(DS)	9-17	5	5	
HIB..-X5(DS)	EHIB..-X5(DS)	10-18	5.5	8	
HIB..-X6(DS)	EHIB..-X6(DS)	10-18	5.5	8	
HIB..-SX7(DS)	EHIB..-SX7(DS)	10-18	5.5	8	High (7J)
HIB..-XEU32(DS)	EHIB..-XEU32(DS)	12-21	4.5	6	
HIB..-XEU32L(DS)	EHIB..-XEU32L(DS)	12-21	4.5	6	
HIB..-X7(DS)	EHIB..-X7(DS)	14-25	8	9	
HIB..-XEU40(DS)	EHIB..-XEU40(DS)	17-28	5	5	
HIB..-XEU40L(DS)	EHIB..-XEU40L(DS)	17-28	5	5	
HIB..-X8(DS)	EHIB..-X8(DS)	21-32	15	17.5	
HIB..-X9(DS)	EHIB..-X9(DS)	22-38	18	22	
HIB..-X10(DS)	EHIB..-X10(DS)	28-44	22	24	

* Table 3.6: MHIB.-.			
Model	Min-max cable [mm]	Torque value [Nm]	Mechanical risk
MHIB.-0XS	4-6.5	2	High (7J)
MHIB.-XS	4-6.5	2	
MHIB.-SX1	5-8	2.5	High (7J) Models with silicone sealing rings have the reduced temperature range -40÷+70°C
MHIB.-SX1L	5-8	2.5	
MHIB.-X1	6-10	2.5	
MHIB.-X1L	6-10	2.5	
MHIB.-SX2	6-10	2.5	
MHIB.-X2	7-12	5	
MHIB.-X2L	7-12	5	
MHIB.-MX2	7-13	4.5	
MHIB.-X3	11-14	5.5	
MHIB.-X4	11-14	5.5	
MHIB.-SX5	11-14	5.5	
MHIB.-SX6	11-14	5.5	
MHIB.-XEU25	12-17	5	
MHIB.-XEU25L	12-17	5	
MHIB.-X5	14-18	8	
MHIB.-X6	14-18	8	
MHIB.-SX7	14-18	8	High (7J)
MHIB.-XEU32	16-21	6	
MHIB.-XEU32L	16-21	6	
MHIB.-X7	19-25	9	
MHIB.-XEU40	20-28	5	
MHIB.-XEU40L	20-28	5	
MHIB.-X8	23-32	17.5	
MHIB.-X9	31-38	22	
MHIB.-X10	35-44	23	

* metric threads cable glands sizes are shown; models with other threads, as detailed in table 2, are available. Full list is shown in drawings A3-14-IEC.15 rev. 1 and A3-14-IEC.16 rev. 1.
**Specific details for correct use of cable glands in relation to clamping range for single (S1) or multiple sealing rings (S1+S2) are given in Instructions manual MI06 rev. 3

* Table 3.7: MHIB.-.(DS)				
Model	Min-max cable [mm] **	Torque value [Nm]		Mechanical risk
		S1+S2	S1	
MHIB.-0XS(DS)	3-6.5	1.5	2	High (7J) Models with silicone sealing rings have the reduced temperature range -40÷+70°C
MHIB.-XS(DS)	3-6.5	1.5	2	
MHIB.-SX1(DS)	4-8	2	2.5	
MHIB.-SX1L(DS)	4-8	2	2.5	
MHIB.-X1(DS)	4-10	3.2	2.5	
MHIB.-X1L(DS)	4-10	3.2	2.5	
MHIB.-SX2(DS)	4-10	3.2	2.5	
MHIB.-X2(DS)	6-12	5	5	
MHIB.-X2L(DS)	6-12	5	5	
MHIB.-MX2(DS)	4-13	3.5	4.5	
MHIB.-X3(DS)	8-14	5.5	5.5	
MHIB.-X4(DS)	8-14	5.5	5.5	
MHIB.-SX5(DS)	8-14	5.5	5.5	
MHIB.-SX6(DS)	8-14	5.5	5.5	
MHIB.-XEU25(DS)	9-17	5	5	
MHIB.-XEU25L(DS)	9-17	5	5	
MHIB.-X5(DS)	10-18	5.5	8	
MHIB.-X6(DS)	10-18	5.5	8	
MHIB.-SX7(DS)	10-18	5.5	8	High (7J)
MHIB.-XEU32(DS)	12-21	4.5	6	
MHIB.-XEU32L(DS)	12-21	4.5	6	
MHIB.-X7(DS)	14-25	8	9	
MHIB.-XEU40(DS)	17-28	5	5	
MHIB.-XEU40L(DS)	17-28	5	5	
MHIB.-X8(DS)	21-32	15	17.5	
MHIB.-X9(DS)	22-38	18	22	
MHIB.-X10(DS)	28-44	23	23	

Table 3.8: HIT.-.								
Model	Torque value [Nm]	Model	Torque value [Nm]	Model	Torque value [Nm]	Model	Torque value [Nm]	Mechanical risk
HITP-X02	1.5	HITN-X02	1.5	HITG-X02	1.5	HITB-X1	1.5	High (7J)
HITP-X01	1.5	HITN-X01	1.5	HITG-X01	1.5	HITB-X2	1.5	
HITP-X01L	1.5	HITN-X01L	1.5	HITG-X01L	1.5	HITB-X2L	1.5	
HITP-X01HL	1.5	HITN-X01HL	1.5	HITG-X01HL	1.5	HITB-X2HL	1.5	
HITP-X1	2	HITN-X1	2	HITG-X1	2	HITB-X3	1.5	
HITP-X1L	2	HITN-X1L	2	HITG-X1L	2	HITB-X4	2	
HITP-X1HL	2	HITN-X1HL	2	HITG-X1HL	2	HITB-X4L	2	
HITP-X2	2.5	HITN-X2	2.5	HITG-X2	2.5	HITB-X4HL	2	
HITP-X2HL	2.5	HITN-X2HL	2.5	HITG-X2HL	2.5	HITB-X5	2	
HITP-X3	4	HITN-X3	4	HITG-X3	4	HITB-X6	2.5	
HITP-X4	6	HITN-X4	6	HITG-X4	6	HITB-X6HL	2.5	
HITP-X5	8	HITN-X5	8	HITG-X5	8	HITB-X7	4	
HITP-X6	10	HITN-X6	10	HITG-X6	10	HITB-X8	6	
-	-	-	-	-	-	HITB-X9	8	
-	-	-	-	-	-	HITB-X10	10	

Table 4: BDPX-.-.				
From size ...	... to size	Material	Mechanical risk	Sealing ring
M12/PG7/PF 1/4"/ NPT1/4"	M63/PG48/PF 2"/ NPT 2"	polyamide	High (7J) at T≥-40°C Low (4J) at T<-40°C	single
M12/PG7/PF 1/4"/ NPT1/4"	M32/PG21/PF 1"/ NPT 1"		High (7J)	double
M32/PG21/PF 1"/ NPT 1"	M63/PG48/PF 2"/ NPT 2"		High (7J) at T≥-40°C Low (4J) at T<-40°C	

* metric threads cable glands sizes are shown; models with other threads, as detailed in table 2, are available. Full list is shown in drawings A3-14-IEC.15 rev. 1 and A3-14-IEC.16 rev. 1.
**Specific details for correct use of cable glands in relation to clamping range for single (S1) or multiple sealing rings (S1+S2) are given in Instructions manual MI06 rev. 3

Remarks

All tests on HIB..-.; EHIB..-.; HIB.-.(axb); HIB..-.(DS); EHIB..-.(DS); MHIB.-.; MHIB.-.(DS); HIT.-. have been performed taking into account an upper service temperature of +80 °C.

Service temperature has been then assumed to +70 °C, due to RTI/TI declared (90°C) for material.