





Technical Information

Other International Ex-Certifications

	Ukraine	No. 1100	
	Russia	PPC 00-27485 POCC-DE-RG05-B03140, POCC-RU-0001-11TB05	
	China	CQST CNEx06.1147U CQST CNEx06.1148U	
	Brazil	INMETRO MC AEX-4665-X INMETRO MC AEX-5233-X INMETRO MC AEX-5234-X INMETRO MC AEX-5235-X INMETRO MC AEX-8528	INMETRO MC AEX-6203-X INMETRO MC AEX-6410-X INMETRO MC AEX-6411-X INMETRO MC AEX-6412-X INMETRO MC AEX-8822-X

Installation Instructions

Multi hole inserts:

Cable diameter should not be less than 20% of hole diameter and the difference between cable diameter and hole should never exceed 1 mm (.04").

Flat cable inserts:

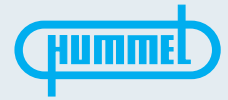
The clamping range of the cable used may not deviate from the manufacturer-specified minimum values by more than 1 mm in length and 1 mm in width. The geometries of the cable and the insert hole must be compatible (semicircular or straight at the sides).



IECEX BVS 07.0019X	IECEX KEM 06.0056
IECEX BVS 07.0021	IECEX KEM 07.0012
IECEX BVS 07.0020X	IECEX KEM 07.0014X
IECEX BVS 07.0022X	IECEX KEM 07.0013X
IECEX BVS 10.0078X	

Approvals for HSK Strain Relief Fittings / Licence Number 40012033

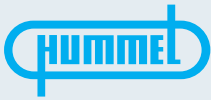
Page	Article	Number	Temperature Range	Approval G (Gas)	Approval D (Dust)	EC-Type Examination Certificate
146	RSD-MS-Ex	1.078.*	-20 °C – 95 °C	x	x	DMT 03 ATEX E 049
146	RSD-MS-Ex	1.079.*	-60 °C – 180 °C	x	x	DMT 03 ATEX E 049
150	RSD-INOX-Ex	1.098.*	-20 °C – 180 °C	x	x	DMT 03 ATEX E 049
150	RSD-INOX-Ex	1.099.*	-60 °C – 180 °C	x	x	DMT 03 ATEX E 049
149	V-INOX-Ex	1.192.*	-20 °C – 95 °C	x	x	DMT 03 ATEX E 049
149	V-INOX-FPM-Ex	1.193.*	-20 °C – 180 °C	x	x	DMT 03 ATEX E 049
149	V-INOX-VMQ-Ex	1.194.*	-60 °C – 180 °C	x	x	DMT 03 ATEX E 049
145	V-MS-Ex	1.197.*	-20 °C – 95 °C	x	x	DMT 03 ATEX E 049
145	V-MS-FPM-Ex	1.198.*	-20 °C – 180 °C	x	x	DMT 03 ATEX E 049
145	V-MS-VMQ-Ex	1.199.*	-60 °C – 180 °C	x	x	DMT 03 ATEX E 049
132	HSK-K-MZ-Ex	1.215.*	-20 °C – 70 °C	x	x	KEMA 99 ATEX 6971 X
110–114	HSK-K-Ex	1.291.*	-20 °C – 95 °C	x	x	DMT 02 ATEX E 047 X
110, 111	HSK-K-Ex	1.295.*	-20 °C – 95 °C	x	x	DMT 02 ATEX E 047 X
144	HSK-V-Ex / Mz-V-Ex	1.296.*	-20 °C – 95 °C	x	x	BVS 03 ATEX E 298
142, 143	V-Ex	1.297.*	-20 °C – 90 °C	x	x	DMT 03 ATEX E 049
165, 166	Snapclip-Duo-MS-Ex	1.566.* / 1.567.*	-20 °C – 95 °C	x	x	BVS 06 ATEX E 069 X
164	Snapflex-Ex	1.560.*	-20 °C – 95 °C	x	x	BVS 06 ATEX E 069 X
131	HSK-K-FLAKA-Ex	1.589.*	-20 °C – 95 °C	x	x	DMT 02 ATEX E 047 X
134	HSK-M-FLAKA-Ex	1.689.*	-20 °C – 95 °C	x	x	DMT 03 ATEX E 051 X
130	HSK-K-Multi-Ex	1.599.*	-20 °C – 95 °C	x	x	DMT 02 ATEX E 047 X
105, 106	A2F	1.604.*	-20 °C – 80 °C	x	x	CESI 09 ATEX 019 X
103, 104	EXIOS	1.605.*	-60 °C – 105 °C	x	x	BVS 10 ATEX E 062 X
115–118, 124, 125	HSK-M/EMV-Ex	1.610.* / 1.616.*	-20 °C – 95 °C	x	x	DMT 03 ATEX E 051 X
126, 127, 135, 136	HSK-MZ/EMV-Ex	1.611.* / 1.617.*	-20 °C – 95 °C	x	x	DMT 03 ATEX E 051 X
119, 120	HSK-INOX-Ex	1.612.*	-20 °C – 95 °C	x	x	DMT 03 ATEX E 051 X
138	HSK-M-Ex-d	1.622.*	-60 °C – 105 °C	x	x	KEMA 99 ATEX 6968 X
139	HSK-MZ-Ex-d	1.628.*	-60 °C – 105 °C	x	x	KEMA 99 ATEX 6968 X
140	HSK-INOX-Ex-d	1.632.*	-60 °C – 105 °C	x	x	KEMA 99 ATEX 6968 X
140	HSK-INOX-PVDF-Ex-d	1.633.*	-20 °C – 130 °C	x	x	KEMA 99 ATEX 6968 X
138	HSK-M-PVDF-Ex-d	1.634.*	-20 °C – 130 °C	x	x	KEMA 99 ATEX 6968 X
122, 123	HSK-M-EMV-D-Ex	1.636.*	-20 °C – 95 °C	x	x	DMT 03 ATEX E 051 X
122, 123	HSK-M-EMV-D-Ex	1.637.*	-60 °C – 105 °C	x	x	KEMA 99 ATEX 6971 X
115–118, 124, 125	HSK-M/EMV-Ex	1.640.* / 1.646.*	-60 °C – 105 °C	x	x	KEMA 99 ATEX 6971 X
126–128	HSK-MZ/EMV-Ex	1.641.* / 1.647.*	-60 °C – 105 °C	x	x	KEMA 99 ATEX 6971 X
119, 120	HSK-INOX-Ex	1.642.*	-60 °C – 105 °C	x	x	KEMA 99 ATEX 6971 X
115–118	HSK-M-PVDF-Ex	1.660.*	-20 °C – 130 °C	x	x	KEMA 99 ATEX 6971 X
135, 136	HSK-MZ-PVDF-Ex	1.661.*	-20 °C – 130 °C	x	x	KEMA 99 ATEX 6971 X
119, 120	HSK-INOX-PVDF-Ex	1.662.*	-20 °C – 130 °C	x	x	KEMA 99 ATEX 6971 X
125	HSK-M-EMV-PVDF-Ex	1.666.*	-20 °C – 130 °C	x	x	KEMA 99 ATEX 6971 X
127, 128	HSK-MZ-EMV-PVDF-Ex	1.667.*	-20 °C – 130 °C	x	x	KEMA 99 ATEX 6971 X
133	HSK-M-Multi-Ex	1.687.*	-20 °C – 95 °C	x	x	DMT 03 ATEX E 051 X
164	Snapclip-Ex	1.731.*	-20 °C – 95 °C	x	x	BVS 06 ATEX E 069 X
147, 151	V-MS-/INOX-Ex-d	1.875.* / 1.895.*	-20 °C – 95 °C	x	x	KEMA 06 ATEX 0024
147, 151	V-MS-/INOX-FPM-Ex-d	1.876.* / 1.896.*	-20 °C – 180 °C	x	x	KEMA 06 ATEX 0024
147, 151	V-MS-/INOX-VMQ-Ex-d	1.877.* / 1.897.*	-60 °C – 180 °C	x	x	KEMA 06 ATEX 0024
148, 152	RSD-MS-/INOX-Ex-d	1.878.* / 1.898.*	-20 °C – 95 °C	x	x	KEMA 06 ATEX 0024
148, 152	RSD-MS-/INOX-Ex-d	1.879.* / 1.899.*	-60 °C – 180 °C	x	x	KEMA 06 ATEX 0024



Assembly Instructions

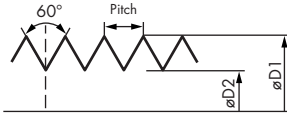
1. Code		2. Code	Penetration of water								
Protection against human access to hazardous parts	Protection of equipment against penetration of solid foreign objects		Non-protected	protection against dripping water	Protected against vertically falling water drops when device is tilted up to 15°	Water sprayed at an angle up to 60° on either side of the vertical shall have no harmful effects	Water splashed from any direction shall have no harmful effects	Water projected in jets from any direction shall have no harmful effects	Water projected in powerful jets from any direction shall have no harmful effects	protection against temporary submersion	protection against permanent submersion
			IP x0	IP x1	IP x2	IP x3	IP x4	IP x5	IP x6	IP x7	IP x8
Non-protected	Non-protected	IP 0x	IP 00								
Protected against access to hazardous parts with the back of the hand	Protected against solid foreign objects larger in diameter than 50mm	IP 1x	IP 10	IP 11	IP 12						
Protected against access to hazardous parts with a finger	Protected against solid foreign object larger in diameter than 12,5 mm	IP 2x	IP 20	IP 21	IP 22	IP 23					
Protected against access to hazardous parts with a tool larger in diameter than 25 mm	Protected against solid foreign objects larger in diameter than 2,5 mm	IP 3x	IP 30	IP 31	IP 32	IP 33	IP 34				
Protected against access to hazardous parts with a wire larger in diameter than 1,0 mm	Protected against solid foreign objects larger in diameter than 1 mm	IP 4x	IP 40	IP 41	IP 42	IP 43	IP 44				
Protected against access to hazardous parts with a wire larger in diameter than 1,0 mm	Prevents penetration of dust sufficient to cause damage inside the equipment.	IP 5x	IP 50				IP 54	IP 55			
Protected against access to hazardous parts with a wire larger in diameter than 1,0 mm	Dust proof	IP 6x	IP 60					IP 65	IP 66	IP 67	IP 68

Product Material Abbreviations	
CR Chloroprene rubber	PP Polypropylene
FPM Fluorelastomer	PVC Polyvinylchloride
Ms Nickel plated brass	PVDF Polyvinylidenfluoride
NBR Buna-N	SB Styrene Butadiene
PA Polyamide	VMQ Silicone
PE Polyethylene	



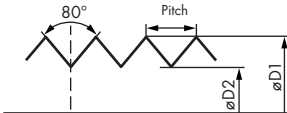
Technical Information

Metric ISO Thread Specifications



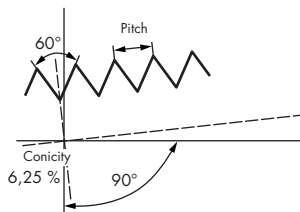
Size	Pitch mm	Outside-Ø D1 mm	Inside-Ø D2 mm	Thru-hole mm
M 12 x 1,5	1,5	12	10,13	12,2
M 16 x 1,5	1,5	16	14,13	16,2
M 20 x 1,5	1,5	20	18,13	20,2
M 25 x 1,5	1,5	25	23,13	25,2
M 32 x 1,5	1,5	32	30,13	32,2
M 40 x 1,5	1,5	40	38,13	40,2
M 50 x 1,5	1,5	50	48,13	50,2
M 63 x 1,5	1,5	63	61,13	63,2

PG Thread Specifications



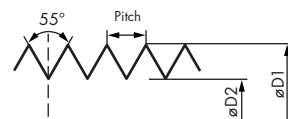
Size	Pitch mm	Outside-Ø D1 mm	Inside-Ø D2 mm	Thru-hole mm
PG 7	1,270	12,5	11,28	12,7
PG 9	1,410	15,2	13,86	15,4
PG 11	1,410	18,6	17,26	18,8
PG 13,5	1,410	20,4	19,06	20,7
PG 16	1,410	22,5	21,16	22,8
PG 21	1,588	28,3	26,78	28,6
PG 29	1,588	37,0	35,48	37,4
PG 36	1,588	47,0	45,48	47,5
PG 42	1,588	54,0	52,48	54,5
PG 48	1,588	59,3	57,78	59,8

NPT Thread Specifications



Size	Pitch mm	Outside-Ø mm	Number of pitches n
1/4" NPT	1,411	13,716	18
3/8" NPT	1,411	17,145	18
1/2" NPT	1,814	21,336	14
3/4" NPT	1,814	26,67	14
1" NPT	2,208	33,4	11 1/2
1 1/4" NPT	2,208	42,164	11 1/2
1 1/2" NPT	2,208	48,26	11 1/2
2" NPT	2,208	60,325	11 1/2
2 1/2" NPT	3,175	73,025	8
3" NPT	3,175	88,9	8
3 1/2" NPT	3,175	101,6	8

British G Thread Specifications



Size	Pitch mm	Outside-Ø D1 mm	Inside-Ø D2 mm	Thru-hole mm
G 1/4"	1,337	13,157	11,145	13,4
G 3/8"	1,337	16,662	14,950	17,0
G 1/2"	1,814	20,955	18,631	21,3
G 5/8"	1,814	26,441	24,117	26,8
G 1"	2,309	33,249	30,291	33,7
G 1 1/4"	2,309	41,910	38,952	42,4
G 1 1/2"	2,309	47,803	44,845	48,3
G 2"	2,309	59,614	56,656	60,2
G 2 1/2"	2,309	75,184	72,226	75,7
G 3"	2,309	87,884	84,926	88,5
G 3 1/2"	2,309	100,330	97,372	101,0
G 4"	2,309	113,030	110,072	114,0