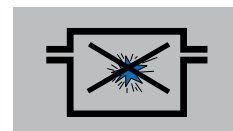




Increased safety Ex e II



Principle

In the case of ignition protection with an increased safety type, operation is based on the equipment preventing an ignition of the explosive atmosphere which can also leak into the housing. The equipment may not reach temperatures which are above the temperature class of gases which could potentially arise in the place of use, and sparks caused by electrical or mechanical means may also not occur. In electrical machines, electrical-thermal testing is thus of particular importance. In operation, protection against overloading is essentially important to maintaining explosion protection.

Important design parameters

- Special protection requirements for non-insulated active components.
- Air and creepage gaps are dimensioned larger than is generally the case in industry. Special requirements apply to the IP protection classes which must be maintained.
- More stringent requirements apply to windings with mechanical stability and insulating capacity, and the windings must be protected against elevated temperatures.

Applications

Installation materials such as junction boxes and distribution boxes, terminal compartments for heaters, storage batteries, transformers, inductive ballasts, electrical and squirrel cage induction motors, lighting fixtures. Cable glands for increased safety are tested according to IEC/EN 60079-7 for the following points:

- mechanical design
- electrical-thermal testing

1 Short, long or special entry threads

Progress® cable glands with short or long entry threads in metric or Pg designs can be used with existing threads or, in the case of drilled through holes, with locknuts.

2 Visible safety

The small bead on the sealing insert confirms the proper tightening torque.

3 High distortion protection

The integrated retaining grooves in the lower part and in the sealing insert ensure protection against twisting.

4 Guaranteed sealing capability

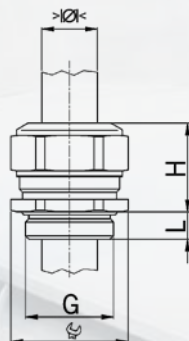
Inner contours matched to the sealing insert ensure a targeted deformation of the insert and thus guarantee its tightness. Protection Class IP68 to 10 bar as well as IP69K allow a wide range of uses.

Testing standards

IEC 60079-0:2004 / EN 60079-0:2006
IEC 60079-7:2006 / EN 60079-7:2007
IEC 61241-0:2004 / EN 61241-0:2006
IECEx SEV 12.0002X

Marking

II 2G Ex e II
Ex td A21 IP68
PTB 02 ATEX 1126X



Designation: Progress MS EX
Material: Nickel-plated brass
Seal: TPE
 one-piece sealing insert, not overall length insulated
Temperature range: -40°C / +100°C
Protection class: IP 68 (bis 10 bar) / IP 69K
Test standard: see page 12
Category 2G: Ex e II
Category 2D: Ex tD A21 IP68
Zone: Gas 1 and 2 / dust 21 and 22
Certificate: EC-type examination certificate PTB 02 ATEX 1126X
IECEx Certificate: IECEx SEV 12.0002X
Approvals:     

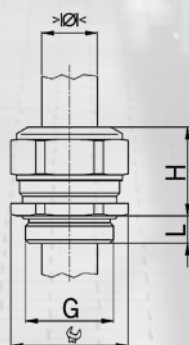
Short entry thread metric

G	>Ø< min mm	>Ø< max mm	 mm	H mm	L mm	i info	Art.-Nr.	
M8x1.25	3.0	3.5	11	14	5	1	EX1000.08.035	50
M8x1.25	4.0	5.0	11	14	5	1	EX1000.08.050	50
M10x1.5	3.0	4.0	13	15	5	1	EX1000.10.040	50
M10x1.5	4.5	6.0	13	15	5	1	EX1000.10.060	50
M12x1.5	5.0	6.5	15	17	5	-	EX1000.12.065	50
M12x1.5	6.5	8.0	15	17	5	-	EX1000.12.080	50
M16x1.5	4.5	6.0	18	20	5	-	EX1000.17.060	50
M16x1.5	6.0	8.0	18	20	5	-	EX1000.17.080	50
M20x1.5	6.0	8.0	24	21	6	-	EX1000.20.080	50
M20x1.5	8.0	11.0	24	21	6	-	EX1000.20.110	50
M25x1.5	9.5	12.5	30	25	7	-	EX1000.25.125	25
M25x1.5	12.5	16.0	30	27	7	-	EX1000.25.160	25
M32x1.5	14.0	17.0	36	28	8	-	EX1000.32.170	25
M32x1.5	17.0	21.0	36	28	8	-	EX1000.32.210	25
M40x1.5	20.0	24.0	46	31	8	-	EX1000.40.240	10
M40x1.5	24.0	28.5	46	31	8	-	EX1000.40.285	10

1 = Metric coarse-pitch thread

Short entry thread Pg

G	>Ø< min mm	>Ø< max mm	 mm	H mm	L mm	Art.-Nr.	
Pg 7	5.0	6.5	15	17	6	EX1000.07.065	50
Pg 7	6.5	8.0	15	17	6	EX1000.07.080	50
Pg 9	4.5	6.0	18	20	6	EX1000.09.060	50
Pg 9	6.0	8.0	18	20	6	EX1000.09.080	50
Pg 11	4.0	5.5	21	21	6	EX1000.11.055	50
Pg 11	5.5	8.5	21	21	6	EX1000.11.085	50
Pg 13	6.0	8.0	24	21	6	EX1000.13.080	50
Pg 13	8.0	11.0	24	21	6	EX1000.13.110	50
Pg 16	6.0	8.0	24	21	6	EX1000.16.080	50
Pg 16	8.0	11.0	24	21	6	EX1000.16.110	50
Pg 21	9.5	12.5	30	25	7.5	EX1000.21.125	25
Pg 21	12.5	16.0	30	25	7.5	EX1000.21.160	25
Pg 29	16.0	19.0	38	28	8	EX1000.29.190	25
Pg 29	19.0	23.0	38	28	8	EX1000.29.230	25
Pg 36	21.5	26.0	50	32	8	EX1000.36.260	10
Pg 36	26.0	30.5	50	32	8	EX1000.36.305	10



Designation: Progress MS EX
Material: nickel-plated brass
Seal: TPE
 one-piece sealing insert, not overall length insulated
Temperature range: -40°C / +100°C
Protection class: IP 68 (bis 10 bar) / IP 69K
Test standard: see page 12
Category 2G: Ex e II
Category 2D: Ex tD A21 IP68
Zone: Gas 1 and 2 / dust 21 and 22
Certificate: EC-type examination certificate PTB 02 ATEX 1126X
IECEX Certificate: IECEX SEV 12.0002X
Approvals:     

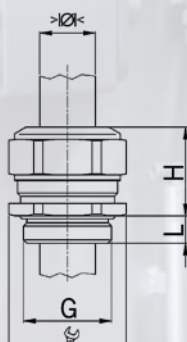
Long entry thread metric

G	>Ø< min mm	>Ø< max mm	 mm	H mm	L mm	i info	Art.-Nr.	
M8x1.25	3.0	3.5	11	14	10	1	EX1100.08.035	50
M8x1.25	4.0	5.0	11	14	10	1	EX1100.08.050	50
M10x1.5	3.0	4.0	13	15	10	1	EX1100.10.040	50
M10x1.5	4.5	6.0	13	15	10	1	EX1100.10.060	50
M12x1.5	5.0	6.5	15	17	10	-	EX1100.12.065	50
M12x1.5	6.5	8.0	15	17	10	-	EX1100.12.080	50
M16x1.5	4.5	6.0	18	20	10	-	EX1100.17.060	50
M16x1.5	6.0	8.0	18	20	10	-	EX1100.17.080	50
M20x1.5	6.0	8.0	24	21	10	-	EX1100.20.080	50
M20x1.5	8.0	11.0	24	21	10	-	EX1100.20.110	50
M25x1.5	9.5	12.5	30	25	11	-	EX1100.25.125	25
M25x1.5	12.5	16.0	30	27	11	-	EX1100.25.160	25
M32x1.5	14.0	17.0	36	28	13	-	EX1100.32.170	25
M32x1.5	17.0	21.0	36	28	13	-	EX1100.32.210	25
M40x1.5	20.0	24.0	46	31	13	-	EX1100.40.240	10
M40x1.5	24.0	28.5	46	31	13	-	EX1100.40.285	10

1 = Metric coarse-pitch thread

Long entry thread Pg

G	>Ø< min mm	>Ø< max mm	 mm	H mm	L mm	Art.-Nr.	
Pg 7	5.0	6.5	15	17	10	EX1100.07.065	50
Pg 7	6.5	8.0	15	17	10	EX1100.07.080	50
Pg 9	4.5	6.0	18	20	10	EX1100.09.060	50
Pg 9	6.0	8.0	18	20	10	EX1100.09.080	50
Pg 11	4.0	5.5	21	21	10	EX1100.11.055	50
Pg 11	5.5	8.5	21	21	10	EX1100.11.085	50
Pg 13	6.0	8.0	24	21	10	EX1100.13.080	50
Pg 13	8.0	11.0	24	21	10	EX1100.13.110	50
Pg 16	6.0	8.0	24	21	10	EX1100.16.080	50
Pg 16	8.0	11.0	24	21	10	EX1100.16.110	50
Pg 21	9.5	12.5	30	25	12	EX1100.21.125	25
Pg 21	12.5	16.0	30	25	12	EX1100.21.160	25
Pg 29	16.0	19.0	38	28	12	EX1100.29.190	25
Pg 29	19.0	23.0	38	28	12	EX1100.29.230	25
Pg 36	21.5	26.0	50	32	15	EX1100.36.260	10
Pg 36	26.0	30.5	50	32	15	EX1100.36.305	10



Designation: Progress MS Multi EX
Material: Nickel-plated brass
Seal: TPE / NBR
 one-piece sealing insert, not overall length insulated
Temperature range: -40°C / +100°C
Protection class: IP 68
Test standard: see page 12
Category 2G: Ex e II
Category 2D: Ex tD A21 IP68
Zone: Gas 1 and 2 / dust 21 and 22
Certificate: EC-type examination certificate PTB 02 ATEX 1126X
IECEx Certificate: IECEx SEV 12.0002X
Approvals:     

Short entry thread metric

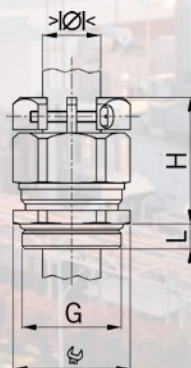
G	>Ø< min mm	>Ø< max mm			H mm	L mm	i info	Art.-Nr.	
M12x1.5	0.6	1.0	3	15	17	5	3	EX1310.12.3.010	50
M16x1.5	1.0	1.5	4	18	20	5	3	EX1310.17.4.015	50
M16x1.5	2.0	3.0	2	18	20	5	-	EX1310.17.2.030	50
M20x1.5	2.5	3.0	6	24	21	6	-	EX1310.20.6.030	50
M20x1.5	3.5	5.0	2	24	21	6	-	EX1310.20.2.050	50
M20x1.5	3.5	5.0	4	24	21	6	-	EX1310.20.4.050	50
M20x1.5	4.5	6.0	3	24	21	6	-	EX1310.20.3.060	50
M20x1.5	5.5	7.5	2	24	21	6	-	EX1310.20.2.075	50
M25x1.5	5.0	6.0	6	30	25	7	-	EX1310.25.6.060	25
M25x1.5	6.0	7.0	3	30	25	7	-	EX1310.25.3.070	25
M25x1.5	5.5	7.0	4	30	25	7	-	EX1310.25.4.070	25
M25x1.5	7.5	9.0	3	30	25	7	-	EX1310.25.3.090	25
M25x1.5	8.0	10.0	2	30	25	7	-	EX1310.25.2.100	25
M32x1.5	6.0	7.0	6	36	28	8	-	EX1310.32.6.070	25
M32x1.5	7.5	9.0	4	36	28	8	-	EX1310.32.4.090	25
M40x1.5	8.0	9.0	7	46	31	8	3	EX1310.40.7.090	10
M40x1.5	14.0	15.0	2	46	31	8	3	EX1310.40.2.150	10
M50x1.5	9.0	10.0	4	55	34	9	3	EX1310.50.4.100	10
M63x1.5	11.0	12.0	6	70	37	10	3	EX1310.63.6.120	5
M63x1.5	17.0	18.0	3	70	37	10	3	EX1310.63.3.180	5

3 = Material sealing insert NBR

Short entry thread Pg

G	>Ø< min mm	>Ø< max mm			H mm	L mm	i info	Art.-Nr.	
Pg 9	1.0	1.5	4	18	20	6	3	EX1310.09.4.015	50
Pg 9	2.0	3.0	2	18	20	6	-	EX1310.09.2.030	50
Pg 11	2.0	3.0	3	21	21	6	3	EX1310.11.3.030	50
Pg 11	3.0	4.0	2	21	21	6	3	EX1310.11.2.040	50
Pg 11	3.5	5.0	2	21	21	6	-	EX1310.11.2.050	50
Pg 13	2.5	4.0	3	24	23	6	3	EX1310.13.3.040	50
Pg 13	3.5	5.0	2	24	23	6	-	EX1310.13.2.050	50
Pg 16	2.5	3.0	6	24	23	6	-	EX1310.16.6.030	50
Pg 16	3.0	4.0	6	24	23	6	3	EX1310.16.6.040	50
Pg 16	4.5	6.0	2	24	23	6	-	EX1310.16.2.060	50
Pg 16	4.5	6.0	3	24	23	6	-	EX1310.16.3.060	50
Pg 21	5.5	7.0	4	30	28	7	-	EX1310.21.4.070	25
Pg 21	7.5	9.0	3	30	28	7	-	EX1310.21.3.090	25
Pg 29	5.5	6.5	6	38	28	8	3	EX1310.29.6.065	25
Pg 29	8.0	9.0	3	38	28	8	3	EX1310.29.3.090	25
Pg 36	9.0	10.0	4	50	32	8	3	EX1310.36.4.100	10
Pg 36	14.0	15.0	2	50	32	8	3	EX1310.36.2.150	10
Pg 48	11.0	12.0	6	65	37	11	3	EX1310.48.6.120	5
Pg 48	17.0	18.0	3	65	37	11	3	EX1310.48.3.180	5

3 = Material sealing insert NBR



Designation:	Progress MS KB EX
Material:	Nickel-plated brass
Screws:	Stainless steel A2
Seal:	TPE
	one-piece sealing insert, not overall length insulated
Temperature range:	-40°C / +100°C
Protection class:	IP 68 (bis 10 bar) / IP 69K
Test standard:	see page 12
Category 2G:	Ex e II
Category 2D:	Ex tD A21 IP68
Zone:	Gas 1 and 2 / dust 21 and 22
Certificate:	EC-type examination certificate PTB 02 ATEX 1126X
IECEx Certificate:	IECEx SEV 12.0002X
Approvals:	

Short entry thread metric

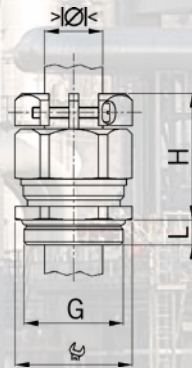
G	>Ø< min mm	>Ø< max mm	mm	H mm	L mm	Art.-Nr.	
M12x1.5	5.0	6.5	15/16	26	5	EX1803.12.03.065	50
M12x1.5	6.5	8.0	15/16	26	5	EX1803.12.03.080	50

Short entry thread Pg

G	>Ø< min mm	>Ø< max mm	mm	H mm	L mm	Art.-Nr.	
Pg 7	5.0	6.5	15/16	26	6	EX1803.07.03.065	50
Pg 7	6.5	8.0	15/16	26	6	EX1803.07.03.080	50

Available on request:

- Cable glands nickel-plated brass with long entry thread
- Cable glands nickel-plated brass with FPM sealing insert for high temperature applications (+200°C)
- Cable glands stainless steel A2 with long entry thread
- Cable glands stainless steel Stahl A2 or acid proof stainless steel A4 with long entry thread and FPM sealing insert for high temperature applications (+200°C)



Designation:	Progress MS KB EX
Material:	Nickel-plated brass
Screws:	Stainless steel A2
Seal:	TPE
	two-piece sealing insert, not overall length insulated
Temperature range:	-40°C / +100°C
Protection class:	IP 68 (bis 10 bar) / IP 69K
Test standard:	see page 12
Category 2G:	Ex e II
Category 2D:	Ex tD A21 IP68
Zone:	Gas 1 and 2 / dust 21 and 22
Certificate:	EC-type examination certificate PTB 02 ATEX 1125
IECEx Certificate:	IECEx SEV 12.0001
Approvals:	    

Short entry thread metric

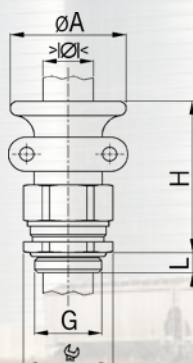
G	>Ø< min mm	>Ø< max mm	 mm	H mm	L mm	Art.-Nr.	
M16x1.5	6.0	10.5	18/19	30	5	EX1803.17	50
M20x1.5	8.0	15.0	24	31	6	EX1803.20	50
M25x1.5	12.5	20.5	30	35	7	EX1803.25	25
M32x1.5	17.0	25.5	36	40	8	EX1803.32	25
M40x1.5	24.0	33.0	46	44	8	EX1803.40	10
M50x1.5	33.0	42.0	55	49	9	EX1803.50	10
M63x1.5	40.0	52.0	70	55	10	EX1803.63	5

Short entry thread Pg

G	>Ø< min mm	>Ø< max mm	 mm	H mm	L mm	Art.-Nr.	
Pg 9	6.0	10.5	18/19	30	6	EX1803.09	50
Pg 11	5.5	12.0	21	31	6	EX1803.11	50
Pg 13	8.0	15.0	24	31	6	EX1803.13	50
Pg 16	8.0	15.0	24	31	6	EX1803.16	50
Pg 21	12.5	20.5	30	35	7.5	EX1803.21	25
Pg 29	19.0	27.5	38	40	8	EX1803.29	25
Pg 36	26.0	35.0	50	47	8	EX1803.36	10
Pg 42	33.0	42.0	55	49	10	EX1803.42	10
Pg 48	37.0	49.0	65	51	11	EX1803.48	5

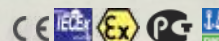
Available on request:

- Cable glands nickel-plated brass with long entry thread
- Cable glands nickel-plated brass with FPM sealing insert for high temperature applications (+200°C)
- Cable glands stainless steel A2 with long entry thread
- Cable glands stainless steel A2 or acid proof stainless steel A4 with long entry thread and FPM sealing insert for high temperature applications (+200°C)



Designation:	Progress MS T+KB EX
Material:	Nickel-plated brass
Screws:	Stainless steel A2
Seal:	TPE two-piece sealing insert, not overall length insulated
Temperature range:	-40°C / +100°C
Protection class:	IP 68 (bis 10 bar) / IP 69K
Test standard:	see page 12
Category 2G:	Ex e II
Category 2D:	Ex tD A21 IP68
Zone:	Gas 1 and 2 / dust 21 and 22
Certificate:	EC-type examination certificate PTB 02 ATEX 1125
IECEx Certificate:	IECEx SEV 12.0001

Approvals:



Short entry thread metric

G	>Ø< min mm	>Ø< max mm		ØA mm	H mm	L mm	Art.-Nr.	
M16x1.5	6.0	10.5	18	28	43	5	EX1801.17	50
M20x1.5	8.0	15.0	24	34	46	6	EX1801.20	50
M25x1.5	12.5	20.5	30	44	52	7	EX1801.25	25
M32x1.5	17.0	25.5	36	50	59	8	EX1801.32	10
M40x1.5	24.0	33.0	46	57	59	8	EX1801.40	5

Short entry thread Pg

G	>Ø< min mm	>Ø< max mm		ØA mm	H mm	L mm	Art.-Nr.	
Pg 9	6.0	10.5	18	28	43	6	EX1801.09	50
Pg 11	5.5	12.0	21	30	43	6	EX1801.11	50
Pg 13	8.0	15.0	24	34	46	6	EX1801.13	50
Pg 16	8.0	15.0	24	34	46	6	EX1801.16	50
Pg 21	12.5	20.5	30	44	52	7.5	EX1801.21	25
Pg 29	19.0	27.5	38	50	59	8	EX1801.29	10

Long entry thread metric

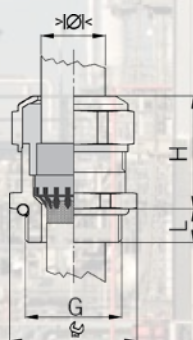
G	>Ø< min mm	>Ø< max mm		ØA mm	H mm	L mm	Art.-Nr.	
M16x1.5	6.0	10.5	18	28	43	10	EX1811.17	50
M20x1.5	8.0	15.0	24	34	46	10	EX1811.20	50
M25x1.5	12.5	20.5	30	44	52	11	EX1811.25	25
M32x1.5	17.0	25.5	36	50	59	13	EX1811.32	10
M40x1.5	24.0	33.0	46	57	59	13	EX1811.40	5

Long entry thread Pg

G	>Ø< min mm	>Ø< max mm		ØA mm	H mm	L mm	Art.-Nr.	
Pg 9	6.0	10.5	18	28	43	10	EX1811.09	50
Pg 11	5.5	12.0	21	30	43	10	EX1811.11	50
Pg 13	8.0	15.0	24	34	46	10	EX1811.13	50
Pg 16	8.0	15.0	24	34	46	10	EX1811.16	50
Pg 21	12.5	20.5	30	44	52	12	EX1811.21	25
Pg 29	19.0	27.5	38	50	59	12	EX1811.29	10

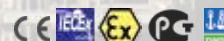
Available on request:

- Cable glands nickel-plated brass with trumpet and clamps and FPM sealing insert for high temperature applications (+200°C)



Designation: Progress MS EMV Rapid EX
Material: Nickel-plated brass
Seal: TPE
 one-piece sealing insert, not overall length insulated
O-Ring : NBR
Temperature range: -40°C / +100°C
Protection class: IP 68 (bis 10 bar) / IP 69K
Test standard: see page 12
Category 2G: Ex e II
Category 2D: Ex tD A21 IP68
Zone: Gas 1 and 2 / dust 21 and 22
Certificate: EC-type examination certificate PTB 02 ATEX 1126X
IECEx Certificate: IECEx SEV 12.0002X
Eigenschaften: For a quick installation of partially dismantled cables as well as for thoroughly shielded cables

Approvals:



Short entry thread metric

G	>Ø< min mm	>Ø< max mm	 mm	H mm	L mm	Art.-Nr.	
M12x1.5	4.5	6.0	15	20	5	EX1081.12.060	50
M12x1.5	6.0	7.5	15	20	5	EX1081.12.075	50
M16x1.5	6.0	8.0	18	23	5	EX1081.17.080	50
M16x1.5	8.0	10.0	18	25	5	EX1081.17.100	50
M20x1.5	8.0	11.0	24	25	6	EX1081.20.110	50
M20x1.5	11.0	14.0	24	27	6	EX1081.20.140	50
M25x1.5	13.0	16.0	30	30	7	EX1081.25.160	25
M25x1.5	16.0	19.0	30	33	7	EX1081.25.190	25
M32x1.5	18.0	21.0	36	32	8	EX1081.32.210	25

Available on request:

Long entry thread

Short entry thread Pg

G	>Ø< min mm	>Ø< max mm	 mm	H mm	L mm	Art.-Nr.	
Pg 7	4.5	6.0	15	20	6	EX1081.07.060	50
Pg 7	6.0	7.5	15	20	6	EX1081.07.075	50
Pg 9	6.0	8.0	18	23	6	EX1081.09.080	50
Pg 9	8.0	10.0	18	25	6	EX1081.09.100	50
Pg 11	5.5	8.5	21	25	6	EX1081.11.085	50
Pg 11	8.5	12.0	21	25	6	EX1081.11.120	50
Pg 13	8.0	11.0	24	25	6	EX1081.13.110	50
Pg 13	12.5	14.0	24	27	6	EX1081.13.140	50
Pg 16	8.0	11.0	24	24	6	EX1081.16.110	50
Pg 16	12.5	14.0	24	27	6	EX1081.16.140	50
Pg 21	13.0	16.0	30	30	7	EX1081.21.160	25
Pg 21	17.0	19.0	30	33	7	EX1081.21.190	25
Pg 29	19.0	23.0	38	33	8	EX1081.29.230	25
Pg 29	23.0	25.5	38	32	8	EX1081.29.255	25



Designation:	Progress MS EMV EX
Material:	Nickel-plated brass
Seal:	TPE one-piece sealing insert, not overall length insulated
O-Ring :	NBR
Temperature range:	-40°C / +100°C
Protection class:	IP 68 (bis 10 bar) / IP 69K
Test standard:	see page 12
Category 2G:	Ex e II
Category 2D:	Ex tD A21 IP68
Zone:	Gas 1 and 2 / dust 21 and 22
Certificate:	EC-type examination certificate PTB 02 ATEX 1126X
IECEx Certificate:	IECEx SEV 12.0002X
Properties:	Excellent shield contact through the contact sleeve with the braided shield terminating within the cable gland
Approvals:	    

Short entry thread metric

G	>10< min mm	>10< max mm	 mm	H mm	L mm	i info	Art.-Nr.	
M8x1.25	2.5	3.5	11	15	5	1	EX1080.08.035	50
M8x1.25	3.0	4.0	11	15	5	1	EX1080.08.040	50
M10x1.5	3.0	4.0	13	16	5	1	EX1080.10.040	50
M10x1.5	4.0	6.0	13	16	5	1	EX1080.10.060	50
M12x1.5	4.5	6.0	15	20	5	-	EX1080.12.060	50
M12x1.5	6.0	7.5	15	20	5	-	EX1080.12.075	50
M16x1.5	6.0	8.0	18	23	5	-	EX1080.17.080	50
M16x1.5	8.0	10.0	18	25	5	-	EX1080.17.100	50
M20x1.5	8.0	11.0	24	25	6	-	EX1080.20.110	50
M20x1.5	12.5	14.0	24	27	6	-	EX1080.20.140	50
M25x1.5	13.0	16.0	30	30	7	-	EX1080.25.160	25
M25x1.5	17.0	19.0	30	33	7	-	EX1080.25.190	25
M32x1.5	17.0	21.0	36	32	8	-	EX1080.32.210	25
M40x1.5	23.0	28.5	46	34	8	-	EX1080.40.285	10

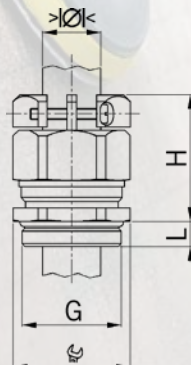
1 = Metric coarse-pitch thread

Available on request:

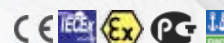
Long entry thread

Short entry thread Pg

G	>10< min mm	>10< max mm	 mm	H mm	L mm	Art.-Nr.	
Pg 7	4.5	6.0	15	20	6	EX1080.07.060	50
Pg 7	6.0	7.5	15	20	6	EX1080.07.075	50
Pg 9	6.0	8.0	18	23	6	EX1080.09.080	50
Pg 9	8.0	10.0	18	25	6	EX1080.09.100	50
Pg 11	5.5	8.5	21	23	6	EX1080.11.085	50
Pg 11	9.5	12.0	21	23	6	EX1080.11.120	50
Pg 13	8.0	11.0	24	25	6	EX1080.13.110	50
Pg 13	12.5	14.0	24	27	6	EX1080.13.140	50
Pg 16	8.0	11.0	24	24	6	EX1080.16.110	50
Pg 16	12.5	14.0	24	27	6	EX1080.16.140	50
Pg 21	13.0	16.0	30	30	7.5	EX1080.21.160	25
Pg 21	17.0	19.0	30	33	7.5	EX1080.21.190	25
Pg 29	19.0	23.0	38	33	8	EX1080.29.230	25
Pg 29	24.0	25.5	38	32	8	EX1080.29.255	25
Pg 36	25.0	30.5	50	36	8	EX1080.36.305	10



Designation: Progress MS EMV KB EX
Material: Nickel-plated brass
Screws: Stainless steel A2
Seal: TPE
 one-piece sealing insert, not overall length insulated
Temperature range: -40°C / +100°C
Protection class: IP 68 (bis 10 bar) / IP 69K
Test standard: see page 12
Category 2G: Ex e II
Category 2D: Ex tD A21 IP68
Zone: Gas 1 and 2 / dust 21 and 22
Certificate: EC-type examination certificate PTB 02 ATEX 1125
IECEx Certificate: IECEx SEV 12.0001
Approvals:



Short entry thread metric

G	>Ø< min mm	>Ø< max mm	mm	H mm	L mm	Art.-Nr.	
M12x1.5	4.5	6.0	15/16	26	5	EX1803.80.12.060	50
M12x1.5	6.0	7.5	15/16	26	5	EX1803.80.12.075	50
M16x1.5	6.0	8.0	18/19	30	5	EX1803.80.17.080	50
M16x1.5	8.0	10.0	18/19	30	5	EX1803.80.17.100	50
M20x1.5	8.0	11.0	24	31	6	EX1803.80.20.110	50
M20x1.5	11.0	14.0	24	31	6	EX1803.80.20.140	50
M25x1.5	13.0	16.0	30	35	7	EX1803.80.25.160	25
M25x1.5	16.0	19.0	30	35	7	EX1803.80.25.190	25
M32x1.5	18.0	21.0	36	40	8	EX1803.80.32.210	25
M32x1.5	21.0	25.0	36	40	8	EX1803.80.32.250	25
M40x1.5	24.0	28.5	46	44	8	EX1803.80.40.285	10
M40x1.5	28.5	32.0	46	44	8	EX1803.80.40.320	10
M50x1.5	33.0	37.0	55	49	9	EX1803.80.50.370	10
M50x1.5	37.0	41.0	55	49	9	EX1803.80.50.410	10
M63x1.5	40.0	46.0	70	55	10	EX1803.80.63.460	5
M63x1.5	46.0	50.0	70	55	10	EX1803.80.63.500	5

Short entry thread Pg

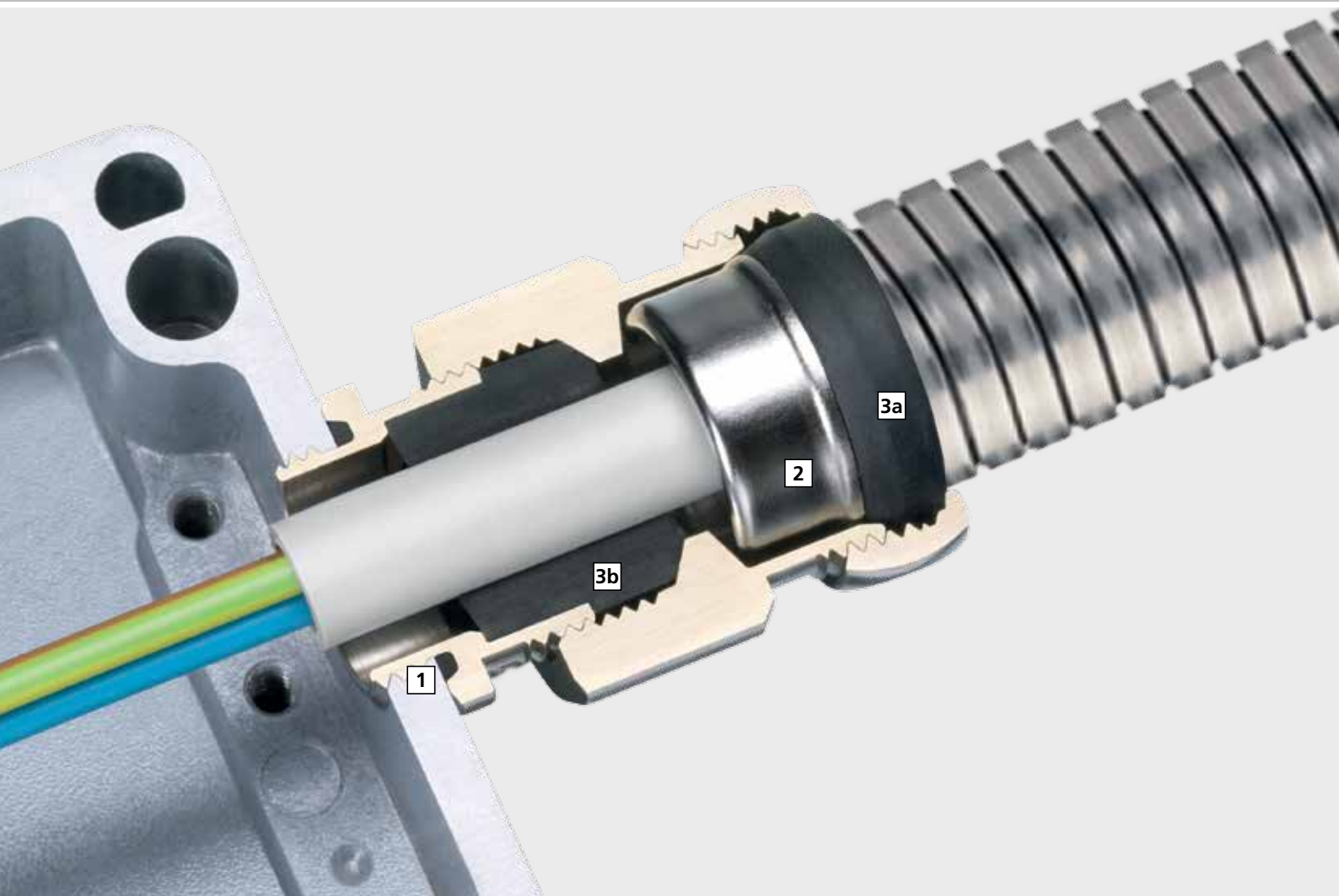
G	>Ø< min mm	>Ø< max mm	mm	H mm	L mm	Art.-Nr.	
Pg 7	4.5	6.0	15/16	26	6	EX1803.80.07.060	50
Pg 7	6.0	7.5	15/16	26	6	EX1803.80.07.075	50
Pg 9	6.0	8.0	18/19	30	6	EX1803.80.09.080	50
Pg 9	8.0	10.0	18/19	30	6	EX1803.80.09.100	50
Pg 11	5.5	8.5	21	31	6	EX1803.80.11.085	50
Pg 11	8.5	12.0	21	31	6	EX1803.80.11.120	50
Pg 13	8.0	11.0	24	31	6	EX1803.80.13.110	50
Pg 13	11.0	14.0	24	31	6	EX1803.80.13.140	50
Pg 16	8.0	11.0	24	31	6	EX1803.80.16.110	50
Pg 16	11.0	14.0	24	31	6	EX1803.80.16.140	50
Pg 21	13.0	16.0	30	35	7.5	EX1803.80.21.160	25
Pg 21	16.0	19.0	30	35	7.5	EX1803.80.21.190	25
Pg 29	19.0	23.0	38	40	8	EX1803.80.29.230	25
Pg 29	23.0	25.5	38	40	8	EX1803.80.29.255	25
Pg 36	25.0	30.5	50	47	8	EX1803.80.36.305	10
Pg 36	30.5	35.0	50	47	8	EX1803.80.36.350	10
Pg 42	33.0	37.0	55	49	10	EX1803.80.42.370	10
Pg 42	37.0	41.0	55	49	10	EX1803.80.42.410	10
Pg 48	39.0	43.0	65	51	11	EX1803.80.48.430	5
Pg 48	43.0	46.5	65	51	11	EX1803.80.48.465	5

Available on request:

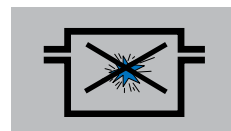
Long entry thread



EMC cable gland Series 85 with clamps increased safety Ex e II



Increased safety Ex e II



Principle

In the case of ignition protection with an increased safety type, operation is based on the equipment preventing an ignition of the explosive atmosphere which can also leak into the housing. The equipment may not reach temperatures which are above the temperature class of gases which could potentially arise in the place of use, and sparks caused by electrical or mechanical means may also not occur. In electrical machines, electrical-thermal testing is thus of particular importance. In operation, protection against overloading is essentially important to maintaining explosion protection.

AGRO combination conduit glands provide an optimal mix if you want to feed cables inside a conduit into an enclosure and at the same time want a secure seal and strain relief for the cables.

Attention!

Only metallic or metal-braided conduits may be applied!

Important design parameters

- There are special protection requirements for non-insulated active components.
- Air and creepage gaps are dimensioned larger than is generally the case in industry. Special requirements apply to the IP protection classes which must be maintained.
- More stringent requirements apply to windings with mechanical stability and insulating capacity, and the windings must be protected against elevated temperatures.

Applications

For installations where cable protection is important such as metal-working machines or where mechanical damage can occur or effects due to weather must be excluded.

Conduit glands for increased safety are tested according to IEC/EN 60079-7 for the following points:

- mechanical design
- electrical-thermal testing

1 Short entry threads, metric

Progress® cable glands with short entry threads can be used with existing screw threads.

2 Grounding

The screened tap connection is accomplished with a brass contact sleeve instead of the gasket (3a) over 360°.

3 Guaranteed sealing capability

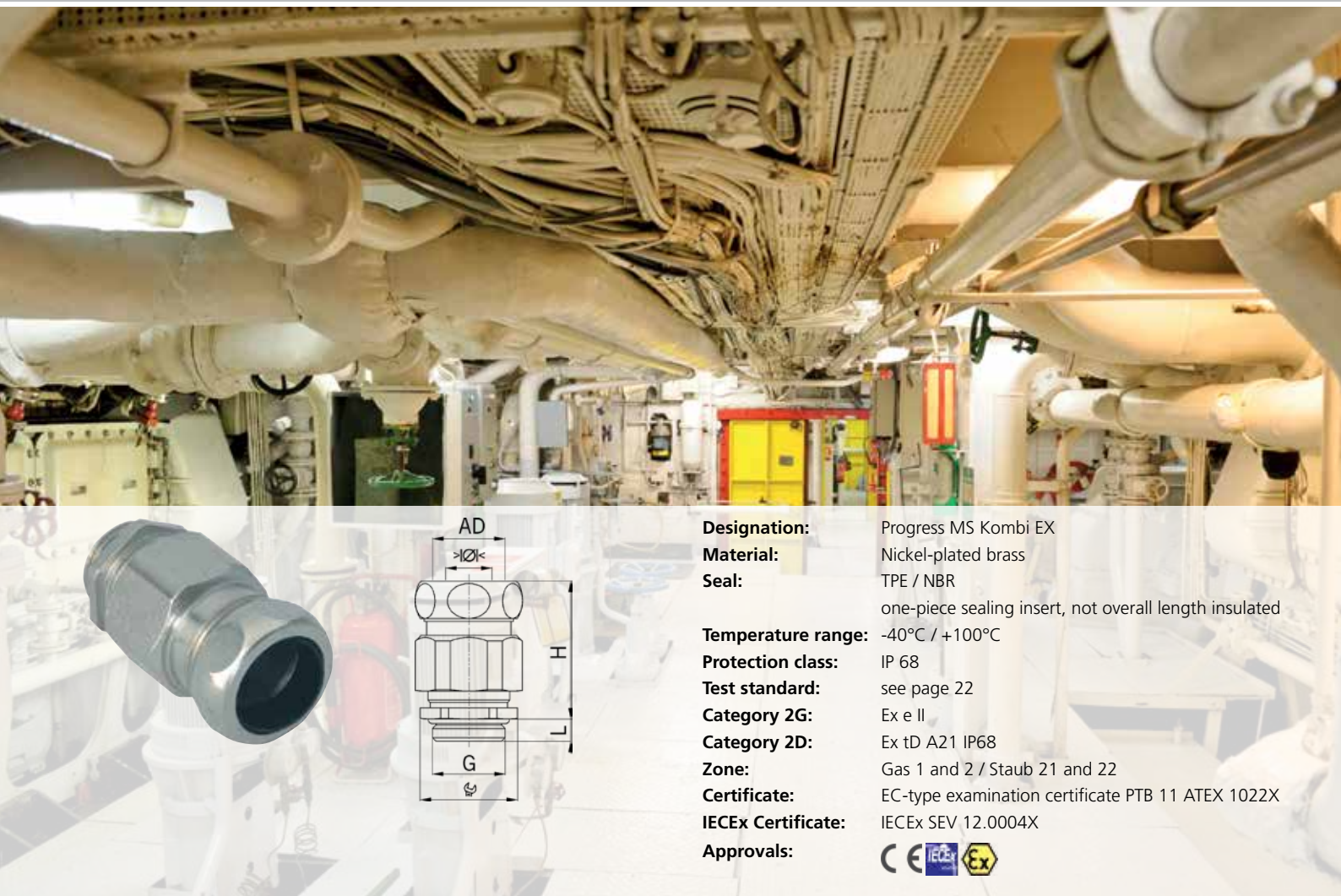
The sealing capability of the combination conduit gland is ensured not only between the conduit and the conduit gland (3a) but also through the sealing insert in the cable gland (3b) at the entrance into the housing.

Testing standards

IEC 60079-0:2004 / EN 60079-0:2006
IEC 60079-7:2006 / EN 60079-7:2007
IEC 61241-0:2004 / EN 61241-0:2006

Marking

II 2G Ex e II
Ex td A21 IP68
PTB 02 ATEX 1122X
IECEx SEV 12.0004X



Designation: Progress MS Kombi EX
Material: Nickel-plated brass
Seal: TPE / NBR
 one-piece sealing insert, not overall length insulated
Temperature range: -40°C / +100°C
Protection class: IP 68
Test standard: see page 22
Category 2G: Ex e II
Category 2D: Ex tD A21 IP68
Zone: Gas 1 and 2 / Staub 21 and 22
Certificate: EC-type examination certificate PTB 11 ATEX 1022X
IECEx Certificate: IECEx SEV 12.0004X
Approvals:   

Short entry thread metric

G	AD mm	>Ø< min mm	>Ø< max mm	 mm	H mm	L mm	Art.-Nr.	
M12x1.5	10	4.0	6.5	15/17	33	5	EX1700.12.10.065	25
M16x1.5	14	4.5	6.0	18/21	38	5	EX1700.17.14.060	25
M16x1.5	14	6.0	8.0	18/21	38	5	EX1700.17.14.080	25
M16x1.5	14	8.5	10.5	18/21	38	5	EX1700.17.14.105	25
M20x1.5	17	6.5	8.0	24/25	38	6	EX1700.20.17.080	25
M20x1.5	17	9.5	11.0	24/25	38	6	EX1700.20.17.110	25
M20x1.5	19	6.5	8.0	24/27	39	6	EX1700.20.19.080	25
M20x1.5	19	9.5	11.0	24/27	39	6	EX1700.20.19.110	25
M20x1.5	19	12.0	15.0	24/27	39	6	EX1700.20.19.150	25
M20x1.5	21	6.5	8.0	24/29	39	6	EX1700.20.21.080	25
M20x1.5	21	9.5	11.0	24/29	39	6	EX1700.20.21.110	25
M20x1.5	21	12.0	15.0	24/29	39	6	EX1700.20.21.150	25
M25x1.5	21	10.5	12.5	30/29	43	7	EX1700.25.21.125	25
M25x1.5	21	13.0	16.0	30/29	43	7	EX1700.25.21.160	25
M25x1.5	27	10.5	12.5	30/36	50	7	EX1700.25.27.125	25
M25x1.5	27	13.0	16.0	30/36	50	7	EX1700.25.27.160	25
M25x1.5	27	17.0	20.5	30/36	50	7	EX1700.25.27.205	25
M32x1.5	27	19.0	21.0	36/36	52	8	EX1700.32.27.210	25
M40x1.5	36	25.0	28.5	45/45	56	8	EX1700.40.36.285	25
M50x1.5	45	35.0	37.0	55/54	60	9	EX1700.50.45.370	1
M63x1.5	56	44.0	46.0	70/66	67	10	EX1700.63.56.460	1

Available on request:

Long entry thread

Depending on the type of conduit, the stabilising bush must be ordered separately.

Warning: Only metallic conduits or conduits with metallic braiding may be applied!