









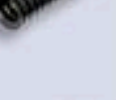


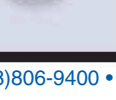

 	<p>Standard Straight-Through Polyamide PG, Metric, NPT 4</p> <p>Standard Straight-Through Nickel-Plated Brass PG, Metric, NPT 5</p> <p>Flathead and Multi Conductor Sealing Inserts 6</p> <p>Industrial Polyamide Straight-Through PG, Metric 7 Flat Cable PG, Metric 8 Multi-Conductor PG 9 Metric 10</p> <p>PVDF Straight-Through Metric 11</p> <p>Nickel-Plated Brass Straight-Through PG, Metric 12 Flat Cable PG, Metric 13 Multi-Conductor PG 14 Metric 15</p> <p>Stainless Steel Straight-Through PG, Metric 16</p> <p>Atex Polyamide PG, Metric 17</p> <p>EMC Nickel-Plated Brass PG, Metric 18-20</p> <p>Traction Relief Nickel-Plated Brass PG, Metric 21</p> <p>Polyamide PG, Metric 22</p>	               	<p>Once According to DIN 46320 Polystyrene Straight-Through PG 23</p> <p>Nickel-Plated Brass Straight-Through PG, Metric 24-27</p> <p>Locknuts Polyamide PG, Metric, NPT 28</p> <p>Nickel-Plated Brass PG, Metric, NPT 29</p> <p>EMC Type PG, Metric 30</p> <p>Stainless Steel PG, Metric 31</p> <p>Reducer Polyamide 32 Nickel-Plated Brass 33-34</p> <p>Enlarger Polycarbonate 35 Polyamide 36 Nickel-Plated Brass 37-38</p> <p>Adapter Nickel-Plated Brass 39-42</p> <p>Universal Mounting Tools 43</p> <p>Plugs Polyamide PG, Metric 44</p> <p>Nickel-Plated Brass PG, Metric 45</p> <p>Seal Rings PG, Metric 46-47</p> <p>Conduit 48</p> <p>Conduit Glands Straight-Through 49 90° 50</p> <p>O-Rings and Clamping Clips 51</p> <p>Technical Annex 52-55 Index 56-61 Terms and Conditions 62</p>
---	---	---	--

Cable Gland, Polyamide

Material:

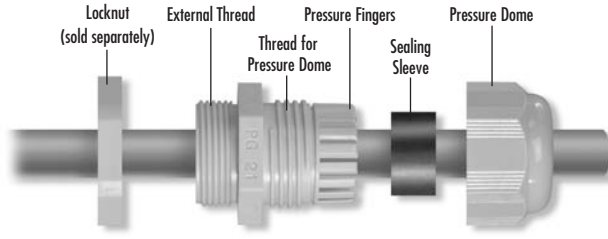
- Body: Polyamide 6
- Seal: Neoprene

Technical properties:

- Maximum strain relief through clamping range
- IP68 achieved without seal rings (PG and metric only)
- Trapezoidal thread with high torque guarantees tight and permanent fit of the dome nut
- Gas- and watertight

Applications:

- Machines and devices



Temperature Range	
PA6	Neoprene
-25 to 100°C (-13 to 212°F)	-25 to 100°C (-13 to 212°F)



PG Thread

Outer thread	Clamping range mm	Cat. No. Light Grey	Cat. No. Black	Std. Pk.
PG 7	1.5-5	5309107	5309207	100
PG 7	2.5-6.5	5308707	5308507	100
PG 9	1.5-6	5309109	5309209	50
PG 9	2.5-8	5308709	5308509	50
PG 11	2-7	5309111	5309211	50
PG 11	3.5-10	5308711	5308511	50
PG 13.5	3-9	5309113	5309213	50
PG 13.5	5-12	5308713	5308513	50
PG 16	5-12	5309116	5309216	50
PG 16	7-14	5308716	5308516	50
PG 21	7-16	5309121	5309221	25
PG 21	9-18	5308721	5308521	25
PG 29	11-21	5309129	5309229	20
PG 29	14-25	5308729	5308529	20
PG 36	13-26	5309136	5309236	10
PG 36	18-32	5308736	5308536	10
PG 42	17-31	5309142	5309242	5
PG 42	24-38.5	5308737	5308537	5
PG 48	26-39	5309148	5309248	5
PG 48	35-48	5308738	5308538	5

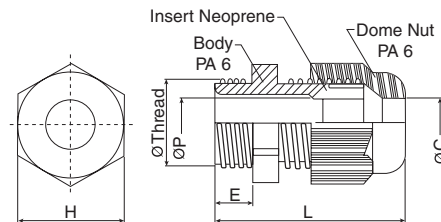
Thread Size	Dimensions					
	H mm	E mm	L mm	ØC mm	ØP mm	ØThread mm
PG7	15	8	32	6.7	6.8	12.5
PG9	19	8	35	8.5	8.7	15.2
PG11	22	8	37	10.5	10.5	18.6
PG13.5	24	9	39	12.5	12.5	20.4
PG16	27	10	43	14.5	14.5	22.5
PG21	33	11	50	18.5	18.5	28.3
PG29	42	11	53	25.5	25.5	37.0
PG36	53	13	65	32.5	32.5	47.0
PG42	60	13	68	39.0	39.0	54.0
PG48	70	14	70	48.5	48.5	59.3
NPT 3/8	19	11	38	8.5	8.7	17.1
NPT 1/2	24	14	44	12.5	12.5	21.2
NPT 3/4	33	15	54	18.5	18.5	26.7
NPT 1	42	18	60	25.5	25.5	33.3
M12x1.5	15	8	32	6.7	6.8	12.0
M16x1.5/9	19	10	37	8.5	8.5	16.0
M16x1.5/11	22	10	39	10.5	10.5	16.0
M20x1.5/13	24	10	40	12.5	12.5	20.0
M20x1.5/16	27	10	43	14.5	14.5	20.0
M25x1.5/16	27	10	45	14.5	14.5	25.0
M25x1.5/21	33	10	49	18.5	18.5	25.0
M32x1.5	42	10	52	25.5	25.5	32.0
M40x1.5	53	10	62	32.5	32.5	40.0
M50x1.5	60	12	67	39.0	39.0	50.0
M63x1.5	70	12	68	48.5	48.5	63.0

NPT Thread

NPT	Clamping range mm	Cat. No. Light Grey	Cat. No. Black	Std. Pk.
NPT 3/8"	1.5-6	5308904	5308924	50
NPT 3/8"	2.5-8	5308900	5308920	50
NPT 1/2"	3-9	5308905	5308925	50
NPT 1/2"	5-12	5308901	5308921	50
NPT 3/4"	7-16	5308906	5308926	20
NPT 3/4"	9-18	5308902	5308922	20
NPT 1"	11-21	5308907	5308927	20
NPT 1"	14-25	5308903	5308923	20

Metric Thread*

M	Clamping range mm	Cat. No. Light Grey	Cat. No. Black	Std. Pk.
M 12 x 1.5	1.5-5	5309612	5309712	100
M 12 x 1.5	2.5-6.5	5308950	5308940	100
M 16 x 1.5/9	1.5-6	5309615	5309715	50
M 16 x 1.5/11	2-7	5309616	5309716	50
M 16 x 1.5/9	2.5-8	5308958	5308948	50
M 16 x 1.5/11	3.5-10	5308951	5308941	50
M 20 x 1.5/13	3-9	5309619	5309719	50
M 20 x 1.5/16	5-12	5309620	5309720	50
M 20 x 1.5/13	5-12	5308959	5308949	50
M 20 x 1.5/16	7-14	5308952	5308942	50
M 25 x 1.5/16	5-12	5309624	5309724	50
M 25 x 1.5/21	7-16	5309625	5309725	25
M 25 x 1.5/16	7-14	5308960	5308962	50
M 25 x 1.5/21	9-18	5308953	5308943	25
M 32 x 1.5	11-21	5309632	5309732	20
M 32 x 1.5	14-25	5308954	5308944	20
M 40 x 1.5	13-26	5309640	5309740	10
M 40 x 1.5	18-32	5308955	5308945	10
M 50 x 1.5	17-31	5309650	5309750	5
M 50 x 1.5	24-38.5	5308956	5308946	5
M 63 x 1.5	26-39	5309663	5309763	5
M 63 x 1.5	35-48	5308957	5308947	5



* Extended thread available consult Altech

Material:

- Body: Nickel-plated brass
- Seal: Neoprene
- Clamping insert: Polyamide 6
- Sealing ring for outer thread: Nitril

Technical properties:

- Seal rings included for PG and Metric sizes
- Maximum strain relief through clamp range
- Gas- and watertight

Temperature Range Neoprene -25 to 100°C (-13 to 212°F)



PG Thread*

Outer thread	Clamping range mm	Cat. No.	Std. Pk.
PG 7	1.5-5	4220351	50
PG 7	2.5-6.5	4220307	50
PG 9	2.5-7	4220352	50
PG 9	4-9.5	4220309	50
PG 11	3-8.5	4220353	50
PG 11	6-11.5	4220311	50
PG 13.5	4-10	4220354	50
PG 13.5	7-13	4220313	50
PG 16	5-12	4220355	50
PG 16	8-15	4220316	50
PG 21	8-16	4220356	20
PG 21	11-19	4220321	20
PG 29	11-21	4220357	20
PG 29	16-26	4220329	20
PG 36	16-28	4220358	10
PG 36	22-34.5	4220336	10
PG 42	22-34	4220359	5
PG 42	27-40	4220342	5
PG 48	28-40	4220360	5
PG 48	35-48	4220348	5

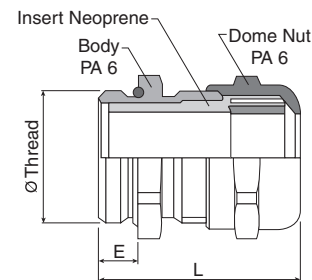
Thread Size	H mm	E mm	Dimensions			
			L mm	ØC mm	ØP mm	ØThread mm
PG7	14	5	32	6.7	6.8	12.5
PG9	17	6	35	8.5	8.7	15.2
PG11	20	6	37	10.5	10.5	18.6
PG13.5	22	6.5	39	12.5	12.5	20.4
PG16	24	6.5	43	14.5	14.5	22.5
PG21	30	7	50	18.5	18.5	28.3
PG29	40	8	53	25.5	25.5	37.0
PG36	50	9	65	32.5	32.5	47.0
PG42	58	10	68	39.0	39.0	54.0
PG48	65	10	70	48.5	48.5	59.3
NPT 3/8	18	15	38	9.7	10	17.1
NPT 1/2	23	20	46	13.2	13.5	21.2
NPT 3/4	28	20	48	16.2	16.5	26.7
NPT 1	36	25	55	21.5	22	33.3
M12x1.5	14	5	25	6.6	6.6	12.0
M16x1.5	17	5	28	9.7	10	16.0
M20x1.5	22	6	32	13.2	13.5	20.0
M25x1.5	27	7	35	16.2	16.5	25.0
M32x1.5	34	8	38	21.5	22	32.0
M40x1.5	42	8	41	27.5	28	40.0
M50x1.5	55	9	46	35.5	36	50.0
M63x1.5	65	10	54	48.5	50	63.0

NPT Thread

NPT 3/8"	2.5-7	4220810	50
NPT 3/8"	4-9.5	4220800	50
NPT 1/2"	4-10	4220811	50
NPT 1/2"	7-13	4220801	50
NPT 3/4"	5-13	4220812	20
NPT 3/4"	8-16	4220802	20
NPT 1"	7-17	4220813	5
NPT 1"	11-21	4220803	5

Metric Thread*

M 12 x 1.5	1.5-5	4220712	100
M 12 x 1.5	2.5-6.5	4220612	100
M 16 x 1.5	2.5-7	4220716	50
M 16 x 1.5	4-9.5	4220616	50
M 20 x 1.5	4-10	4220720	50
M 20 x 1.5	7-13	4220620	50
M 25 x 1.5	5-13	4220725	25
M 25 x 1.5	8-16	4220625	25
M 32 x 1.5	7-17	4220732	20
M 32 x 1.5	11-21	4220632	20
M 40 x 1.5	10-22	4220740	10
M 40 x 1.5	15-27	4220640	10
M 50 x 1.5	17-29	4220750	5
M 50 x 1.5	22-35	4220650	5
M 63 x 1.5	28-40	4220763	5
M 63 x 1.5	35-48	4220663	5



* Extended thread available consult Altech

Flat Head and Multi-Conductor Sealing

Flat Head Sealing

Material:

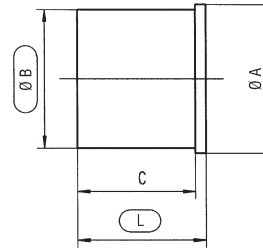
- EPDM, black

Features:

- For sealing cable gland entries when cables are not being installed.
- Insert into cable gland and tighten gland to seal.



Suitable for	ØA mm	ØB mm	C mm	L mm	Cat. No.	Std. Pk.
PG 7, PG 11, M 16	11.0	8.0	17.0	20.0	7217701	100
PG 13.5, PG 16, M 20	15.0	12.0	18.0	21.0	7217702	100
PG 21, M 25	18.0	15.0	19.0	22.0	7217703	100



Multi-Conductor Sealing

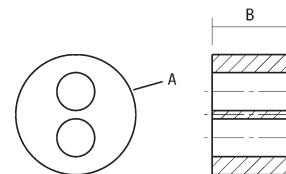
Material:

- Neoprene, black

Features:

- Standard Straight-Through Series
- Delivered separate, replaces sealing sleeve provided with gland

Suitable for	Hole Quantity	Hole Ø mm	ØA mm	B mm	Cat. No.	Std. Pk.
Multi-Conductor Seal						
PG 11/ M 16	2	4.0	13.0	8.0	8114200	100
PG 16/ M 20	2	5.0	17.0	10.0	8114203	100
PG 16/ M 20	2	6.0	17.0	10.0	8114201	100
PG 16/ M 20	4	5.0	17.0	10.0	8114202	100
PG 21/ M 25	2	6.0	22.5	11.5	8114204	100
PG 21/ M 25	2	8.0	22.5	11.5	8114208	100
PG 21/ M 25	3	7.0	22.5	11.5	8114205	100
PG 21/ M 25	4	6.5	22.5	11.5	8114206	100
PG 21/ M 25	6	4.0	22.5	11.5	8114207	100
PG 29/ M 32	4	6.0	30.5	13.0	8114212	100
PG 29/ M 32	4	8.0	30.5	13.0	8114209	100
PG 29/ M 32	6	6.0	30.5	13.0	8114210	100
PG 29/ M 32	8	4.0	30.5	13.0	8114211	100
Solid Sealing without holes						
PG 11/ M 16	–	–	13.0	8.0	8114250	100
PG 16/ M 20	–	–	17.0	10.0	8114251	100
PG 21/ M 25	–	–	22.5	11.5	8114252	100
PG 29/ M 32	–	–	30.5	13.0	8114253	100



Material:

- Body: Polyamide PA 6
25 % Glass-fiber Reinforced
- Seal: Tefabloc
ECA clamping ring: Polycarbonate

Characteristics:

- PG/metric thread
- ECA clamping ring
- Extended thread available

Technical properties:

- Strain relief through clamping ring
- Gas- and watertight
- Completely twist protected
- Combinable with various sealing inserts

Applications:

- Machines and devices
- Measuring and control engineering
- Plant installations

Dimensions

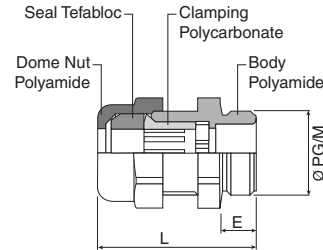
Thread Size	H mm	E mm	L mm	ØC mm	ØP mm	ØPG/M mm
PG7	15	8	31	6.5	7.0	12.5
PG9	19	8	32	8.5	9.0	15.2
PG11	22	8	35	11.5	11.0	18.6
PG13.5	24	9	36	12.5	13.5	20.4
PG16	27	10	40	14.5	15.0	22.5
PG21	33	11	44	18.5	19.0	28.3
PG29	42	12	55	25.0	25.0	37.0
PG36	55	18	65	35.0	37.0	47.0
PG42	65	18	67	43.0	44.0	54.0
PG48	70	18	67	51.0	51.0	59.3
M 16x1.5	19	8	32	8.5	9.0	16.0
M 20x1.5/13	24	9	36	12.5	13.5	20.0
M 20x1.5/16	27	9	39	14.5	15.0	20.0
M 25x1.5	33	11	44	18.5	19.0	25.0
M 32x1.5	42	12	55	25.0	25.0	32.0
M 40x1.5	55	15	63	35.0	34.5	40.0
M 50x1.5	65	15	65	43.0	42.5	50.0
M 63x1.5	70	15	65	51.0	51.0	63.0

Temperature Range PA
 -30 to 120°C (-22 to 248°F)



ECA Clamping Ring Polyamide

Outer thread	Clamping range mm	Cat. No. Light Grey	Cat. No. Black	Std. Pk.
PG				
PG 7	3-6	5313610	5313620	50
PG 9	5-8	5313611	5313621	50
PG 11	6-10	5313612	5313622	50
PG 13.5	8-12	5313613	5313623	50
PG 16	10-14	5313614	5313624	50
PG 21	11.5-18	5313615	5313625	20
PG 29	15-24	5313616	5313626	20
Metric				
M 16 x 1.5	5-8	5313640	5313650	50
M 20 x 1.5/13	8-12	5313641	5313651	50
M 20 x 1.5/16	10-14	5313644	5313654	50
M 25 x 1.5	11.5-18	5313642	5313652	20
M 32 x 1.5	15-24	5313643	5313653	20



Material:

- Body: Polyamide PA 6
25 % glass-fiber reinforced
- Seal: Tefabloc

Characteristic feature:

- PG/metric thread
- ECA clamping ring
- Extended thread available

Technical properties:

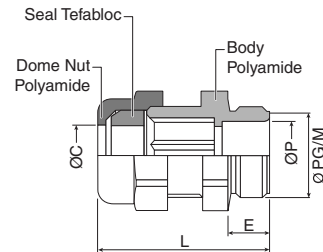
- Gas- and watertight
- Completely twist protected
- Combinable with various sealing inserts

Applications:

- Machines and devices
- Measuring and control engineering
- Plant installations

Short Seal Polyamide

PG	Clamping range mm	Cat. No. Light Grey	Cat. No. Black	Std. Pk.
PG 7	3-6	5211107	5211307	50
PG 9	4.5-8	5211109	5211309	50
PG 11	6.5-10.5	5211111	5211311	50
PG 13.5	7-12	5211113	5211313	50
PG 16	9-14	5211116	5211316	50
PG 21	11.5-18	5211121	5211321	20
PG 29	15-24.5	5211129	5211329	20
Metric				
M 16 x 1.5	4.5-8	5211416	5211616	50
M 20 x 1.5/13	7-12	5211420	5211620	50
M 20 x 1.5/16	9-14	5211421	5211621	50
M 25 x 1.5	11.5-18	5211425	5211625	20
M 32 x 1.5	15-24.5	5211432	5211632	20



Material:

- Body: Polyamide PA 6
25 % glass-fiber reinforced
- Seal: Santoprene/Nitril

Characteristic feature:

- PG/metric thread
- Extended thread available

Technical properties:

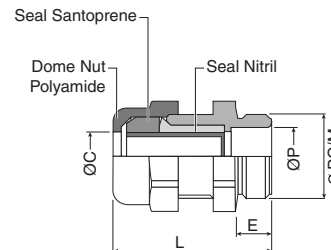
- Gas- and watertight
- Completely twist protected
- Combinable with various sealing inserts

Applications:

- Machines and devices
- Measuring and control engineering
- Plant installations

Long Seal, Two Part Polyamide

PG	Clamping range mm	Cat. No. Light Grey	Cat. No. Black	Std. Pk.
PG 9	3-8	5320001	5320051	50
PG 11	5-11	5320002	5320052	50
PG 13.5	5-12.5	5320003	5320053	50
PG 16	7-14.5	5320004	5320054	50
PG 21	10-18	5320005	5320055	20
PG 29	14-24	5320006	5320056	20
PG 36	22-32	5320007	5320057	10
PG 42	30-40	5320008	5320058	10
PG 48	34-46	5320009	5320059	5
Metric				
M 16 x 1.5	3-8	5320100	5320160	50
M 20 x 1.5/13	5-12.5	5320101	5320161	50
M 20 x 1.5/16	7-14.5	5320104	5320164	50
M 25 x 1.5	10-18	5320102	5320162	20
M 32 x 1.5	14-24	5320103	5320163	20
M 40 x 1.5	22-32	5320105	5320165	20
M 50 x 1.5	30-40	5320106	5320166	20
M 63 x 1.5	34-46	5320107	5320167	20



Cable Gland Industrial, Flat Seal, Polyamide

Material:

- Body: Polyamide PA 6
25 % Glass-fiber Reinforced
- Seal: Tefabloc

Characteristics:

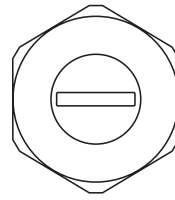
- PG/metric thread
- Seal for flat cable round, angular, oval

Technical properties:

- Gas- and watertight
- Completely twist protected
- Combinable with various sealing inserts

Applications:

- Machines and devices
- Measuring and control engineering
- Plant installations



See page 7 for dimensions.



Flat Cable, Rounded



Flat Cable, Angular



Flat Cable, Oval



Outer thread	Clamping range mm	Cat. No. Light Grey	Cat. No. Black	Clamping range mm	Cat. No. Light Grey	Cat. No. Black	Clamping range mm	Cat. No. Light Grey	Cat. No. Black	Std. Pk.
PG										
PG 9	3.5 x 5.5	5320300	5320500							50
PG 11	2.8 x 10.5	5320305	5320505							50
PG 11	3.5 x 9	5320306	5320506							50
PG 11	4 x 6	5320307	5320507							50
PG 13.5	3 x 12	5320310	5320510				5 x 8	5320375	5320575	50
PG 13.5	5 x 11	5320311	5320511				5 x 12	5320376	5320576	50
PG 16	5 x 12	5320315	5320515	8 x 12	5320351	5320551	5 x 12	5320380	5320580	50
PG 16	5 x 16	5320316	5320516				5.5 x 8.5	5320381	5320581	50
PG 16	7.5 x 14	5320317	5320517				5 x 15	5320382	5320582	50
PG 16							6 x 15	5320383	5320583	50
PG 16							7 x 14	5320384	5320584	50
PG 21	5 x 17	5320320	5320520	4 x 15	5320355	5320555	5 x 16	5320385	5320585	20
PG 21	7 x 18	5320321	5320521				7 x 16.5	5320386	5320586	20
PG 21	9 x 15	5320322	5320522				7 x 20	5320387	5320587	20
PG 29	6 x 29	5320325	5320525	6 x 26	5320360	5320560	10 x 27	5320390	5320590	20
PG 29	8 x 25	5320326	5320526	7 x 26	5320361	5320561				20
PG 29	10 x 25	5320327	5320527							20
PG 29	13 x 28	5320328	5320528							20
PG 36	6 x 30	5320330	5320530	5 x 36	5320365	5320565	6.5 x 32	5320393	5320593	20
PG 36	6 x 36	5320331	5320531	8 x 30	5320366	5320566	11 x 35	5320394	5320594	20
PG 36	8 x 36	5320332	5320532							20
PG 36	11 x 34	5320333	5320533							20
PG 36	12 x 35	5320334	5320534							20
PG 42	10 x 38	5320335	5320535	5.5 x 37	5320370	5320570	6 x 41	5320396	5320596	20
PG 42	13 x 35	5320336	5320536	6 x 39	5320371	5320571	9 x 38	5320397	5320597	20
PG 42	14 x 37	5320337	5320537							20
PG 48	6.5 x 47	5320342	5320542							20
PG 48	9 x 43	5320343	5320543							20
PG 48	14.5 x 39	5320344	5320544							20
PG 48	15 x 45	5320345	5320545							20
Metric										
M 16 x 1.5	3.5 x 5.5	5320710	5320810							50
M 20x1.5/13	3 x 12	5320715	5320815				5 x 8	5320770	5320870	50
M 20x1.5/13	5 x 11	5320716	5320816				5 x 12	5320771	5320871	50
M 20x1.5/16	5 x 12	5320717	5320817	8 x 12	5320785	5320885	5.5 x 8.5	5320772	5320872	50
M 20x1.5/16	7.5 x 14	5320718	5320818				7 x 14	5320773	5320873	50
M 25 x 1.5	5 x 16	5320720	5320820	4 x 15	5320786	5320886	5 x 15	5320774	5320874	20
M 25 x 1.5	5 x 17	5320721	5320821				5 x 16	5320775	5320875	20
M 25 x 1.5	7 x 18	5320722	5320822				6 x 15	5320776	5320876	20
M 25 x 1.5	9 x 15	5320723	5320823				7 x 16.5	5320777	5320877	20
M 32 x 1.5	8 x 25	5320730	5320830				7 x 20	5320780	5320880	20
M 32 x 1.5	10 x 25	5320731	5320831							20

Material:

- Body: Polyamide PA 6
25 % Glass-fiber Reinforced
- Seal: Tefabloc

Characteristics:

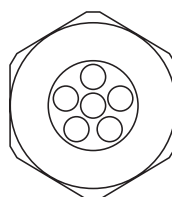
- PG thread
- Multi-holed seal inserts

Technical properties:

- Gas- and watertight
- Completely twist protected
- Combinable with various sealing inserts

Applications:

- Machines and devices
- Measuring and control engineering
- Plant installations



Temperature Range PA 6 -30 to 120°C (-22 to 248°F)



See page 7 for dimensions.

Outer thread	Hole Quantity	Hole diameter mm	Cat. No. Light Grey	Cat. No. Black	Std. Pk.
PG 7	1	4	5315800	5315600	50
PG 7	1	5	5315801	5315601	50
PG 9	1	5	5315810	5315610	50
PG 9	2	1	5315811	5315611	50
PG 9	2	3	5315812	5315612	50
PG 9	2	3.5	5315813	5315613	50
PG 9	2	4	5315814	5315614	50
PG 9	3	3	5315815	5315615	50
PG 9	4	3	5315816	5315616	50
PG 9	4	4	5315817	5315617	50
PG 11	2	2.3	5315820	5315620	50
PG 11	2	3	5315821	5315621	50
PG 11	2	3.5	5315110	5315500	50
PG 11	2	4	5315822	5315622	50
PG 11	2	5	5315111	5315501	50
PG 11	2	6	5315112	5315502	50
PG 11	3	3	5315823	5315623	50
PG 11	3	3.5	5315113	5315503	50
PG 11	3	4	5315824	5315624	50
PG 11	3	5	5315114	5315504	50
PG 11	3	5.3	5315825	5315625	50
PG 11	4	1.5	5315826	5315626	50
PG 11	4	3.5	5315827	5315627	50
PG 11	6	2	5315828	5315628	50
PG 11	6	2.5	5315829	5315629	50
PG 13.5	2	3	5315830	5315630	50
PG 13.5	2	5	5315831	5315631	50
PG 13.5	2	6	5315130	5315510	50
PG 13.5	3	2	5315832	5315632	50
PG 13.5	3	3	5315833	5315633	50
PG 13.5	3	4	5315834	5315634	50
PG 13.5	3	5.3	5315835	5315635	50
PG 13.5	3	6	5315836	5315636	50
PG 13.5	4	3	5315837	5315637	50
PG 13.5	4	4	5315838	5315638	50
PG 13.5	4	5	5315839	5315639	50
PG 13.5	4	5.3	5315840	5315640	50
PG 13.5	6	3.5	5315841	5315641	50
PG 13.5	10	2	5315842	5315642	50
PG 16	2	4	5315850	5315650	50
PG 16	2	5	5315851	5315651	50
PG 16	2	6	5315852	5315652	50
PG 16	2	7	5315160	5315515	50
PG 16	2	8	5315853	5315653	50
PG 16	2	9	5315854	5315654	50
PG 16	3	3	5315855	5315655	50
PG 16	3	4	5315856	5315656	50
PG 16	3	5	5315857	5315516	50
PG 16	3	5.6	5315858	5315658	50
PG 16	3	6	5315859	5315659	50
PG 16	3	7	5315860	5315660	50
PG 16	3	8	5315861	5315661	50

Outer thread	Hole Quantity	Hole diameter mm	Cat. No. Light Grey	Cat. No. Black	Std. Pk.
PG 16	4	4	5315862	5315662	50
PG 16	4	5	5315863	5315663	50
PG 16	4	6	5315864	5315664	50
PG 16	5	4	5315865	5315665	50
PG 16	5	5	5315866	5315666	50
PG 16	6	4	5315867	5315667	50
PG 16	7	4	5315868	5315668	50
PG 21	2	4.5	5315869	5315669	20
PG 21	2	8	5315870	5315670	20
PG 21	2	8.7	5315871	5315671	20
PG 21	2	9	5315872	5315672	20
PG 21	2	11	5315873	5315673	20
PG 21	3	7	5315210	5315520	20
PG 21	3	8	5315211	5315521	20
PG 21	3	9	5315874	5315674	20
PG 21	4	5	5315875	5315685	20
PG 21	4	6	5315212	5315522	20
PG 21	4	7.5	5315876	5315676	20
PG 21	4	8	5315213	5315523	20
PG 21	5	5	5315877	5315677	20
PG 21	5	6	5315214	5315524	20
PG 21	5	6.5	5315215	5315525	20
PG 21	6	4	5315878	5315678	20
PG 21	6	5	5315879	5315679	20
PG 21	6	6	5315216	5315526	20
PG 21	6	6.5	5315217	5315527	20
PG 21	6	7	5315218	5315528	20
PG 21	7	6	5315219	5315529	20
PG 21	8	4	5315880	5315683	20
PG 21	8	5	5315220	5315530	20
PG 21	11	5	5315221	5315531	20
PG 21	21	2	5315881	5315684	20
PG 21	28	3	5315222	5315532	20
PG 29	2	9	5315289	5315690	20
PG 29	2	11	5315891	5315691	20
PG 29	2	12	5315892	5315692	20
PG 29	3	9	5315893	5315693	20
PG 29	3	11	5315894	5315694	20
PG 29	4	8	5315290	5315540	20
PG 29	4	9	5315895	5315695	20
PG 29	4	10	5315896	5315696	20
PG 29	6	6	5315897	5315697	20
PG 29	6	6.5	5315292	5315542	20
PG 29	6	7	5315293	5315543	20
PG 29	7	6	5315294	5315544	20
PG 29	7	7	5315898	5315698	20
PG 29	8	5	5315899	5315699	20
PG 29	8	6	5315295	5315545	20
PG 29	10	6	5315900	5315700	20
PG 29	11	5	5315296	5315546	20
PG 29	28	3	5315297	5315547	20

Cable Gland Industrial, Multi-conductor Seal, Polyamide, Metric Thread

Material:

- Body: polyamide PA 6
25% Glass-fiber Reinforced
- Seal: Tefabloc

Characteristics:

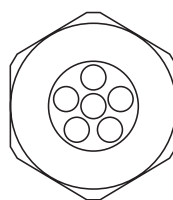
- Metric Thread
- Multi-holed seal inserts

Technical properties:

- Gas- and watertight
- Completely twist protected
- Combinable with various sealing inserts

Applications:

- Machines and devices
- Measuring and control engineering
- Plant installations



Temperature Range

PA 6

-30 to 120°C

(-22 to 248°F)



See page 7 for dimensions.

Outer thread	Hole Quantity	Hole diameter mm	Cat. No. Light Grey	Cat. No. Black	Std. Pk.
M 16 x 1.5	2	1	5316100	5318100	50
M 16 x 1.5	2	3	5316101	5318101	50
M 16 x 1.5	2	3.5	5316102	5318102	50
M 16 x 1.5	2	4	5316103	5318103	50
M 16 x 1.5	3	3	5316104	5318104	50
M 20 x 1.5/13	2	3	5316200	5318200	50
M 20 x 1.5/16	2	4	5316201	5318201	50
M 20 x 1.5/16	2	5	5316202	5318202	50
M 20 x 1.5/16	2	6	5316203	5318203	50
M 20 x 1.5/16	2	7	5316204	5318204	50
M 20 x 1.5/13	3	2	5316205	5318205	50
M 20 x 1.5/16	3	3	5316206	5318206	50
M 20 x 1.5/16	3	4	5316207	5318207	50
M 20 x 1.5/16	3	5	5316208	5318208	50
M 20 x 1.5/16	3	5.6	5316209	5318209	50
M 20 x 1.5/16	3	6	5316210	5318210	50
M 20 x 1.5/13	4	3	5316211	5318211	50
M 20 x 1.5/16	4	4	5316212	5318212	50
M 20 x 1.5/16	5	4	5316213	5318213	50
M 20 x 1.5/16	5	5	5316214	5318214	50
M 20 x 1.5/13	6	3.5	5316215	5318215	50
M 20 x 1.5/16	6	4	5316216	5318216	50
M 20 x 1.5/13	10	2	5316217	5318217	50
M 25 x 1.5	2	4.5	5316300	5318300	20
M 25 x 1.5	2	8	5316301	5318301	20
M 25 x 1.5	3	7	5316302	5318302	20
M 25 x 1.5	3	8	5316303	5318303	20
M 25 x 1.5	4	5	5316304	5318304	20

Outer thread	Hole Quantity	Hole diameter mm	Cat. No. Light Grey	Cat. No. Black	Std. Pk.
M 25 x 1.5	4	6	5316305	5318305	20
M 25 x 1.5	5	5	5316306	5318306	20
M 25 x 1.5	5	6	5316307	5318307	20
M 25 x 1.5	5	6.5	5316308	5318308	20
M 25 x 1.5	6	4	5316309	5318309	20
M 25 x 1.5	6	5	5316310	5318310	20
M 25 x 1.5	8	4	5316311	5318311	20
M 25 x 1.5	8	5	5316312	5318312	20
M 25 x 1.5	21	2	5316313	5318313	20
M 32 x 1.5	2	9	5316400	5318400	20
M 32 x 1.5	2	11	5316401	5318401	20
M 32 x 1.5	2	12	5316402	5318402	20
M 32 x 1.5	3	9	5316403	5318403	20
M 32 x 1.5	3	11	5316404	5318404	20
M 32 x 1.5	4	8	5316405	5318405	20
M 32 x 1.5	4	9	5316406	5318406	20
M 32 x 1.5	4	10	5316407	5318407	20
M 32 x 1.5	6	6	5316408	5318408	20
M 32 x 1.5	6	6.5	5316409	5318409	20
M 32 x 1.5	6	7	5316410	5318410	20
M 32 x 1.5	7	6	5316411	5318411	20
M 32 x 1.5	7	7	5316412	5318412	20
M 32 x 1.5	8	5	5316413	5318413	20
M 32 x 1.5	8	6	5316414	5318414	20
M 32 x 1.5	10	6	5316415	5318415	20
M 32 x 1.5	11	5	5316416	5318416	20
M 32 x 1.5	28	3	5316417	5318417	20

Material:

- Body: Polyvinylidene fluoride
- Seal: Santoprene
- ECA clamping ring: Polycarbonate

Characteristics:

- Metric thread
- ECA clamping ring
- Short and long seal

Technical properties:

- No halogen
- Strain relief through clamping ring
- Gas- and watertight
- Completely twist protected
- Combinable with various sealing inserts
- Chemical resistant

Applications:

- Machines and devices
- Measuring and control engineering
- Plant installations
- Food sector



Temperature Range PVDF -40 to 120°C (-40 to 248°F)



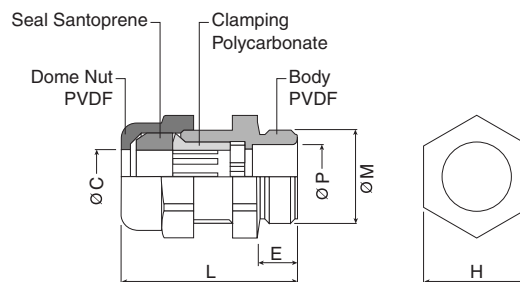
Metric Thread

ECA

Short Seal

Long Seal

Outer thread	Clamping range mm	Cat. No.	Clamping range mm	Cat. No.	Clamping range mm	Cat. No.	Std. Pk.
M 16 x 1.5	5-8	5330016	4.5-8	5330116	3-8	5330216	50
M 20 x 1.5/13	8-12	5330020	7-12	5330120	6-12.5	5330220	50
M 20 x 1.5/16	10-14	5330021	9-14	5330121	7-14.5	5330221	50
M 25 x 1.5	11.5-18	5330025	11.5-18	5330125	10-18	5330225	20
M 32 x 1.5	15-24	5330032	15-24.5	5330132	14-24	5330232	20



Thread Size	PG Dimensions					
	H mm	E mm	L mm	ØC mm	ØP mm	ØM mm
M 16x1.5	19	15	39	8.5	9	16
M 20x1.5/13	24	15	42	12.5	13.5	20
M 20x1.5/16	27	15	45	14.5	15	20
M 25x1.5	33	15	48	18.5	19	25
M 32x1.5	42	15	58	25	25	32

Cable Gland Industrial, Nickel-Plated Brass

Material:

- Body: Nickel-plated brass
- Seal: Tefabloc or Santoprene/Nitril
- ECA clamping ring: Polycarbonate
- Sealing ring for outer thread: Nitril

Technical properties:

- Strain relief through clamping ring
- Gas- and watertight
- Completely twist protected
- Combinable with various sealing inserts

Applications:

- Machines and devices
- Measuring and control engineering
- Plant installations

Characteristics:

- PG/Metric thread
- Extended Thread available

Temperature Range MS
-25 to 120°C (-13 to 248°F)



Dimensions

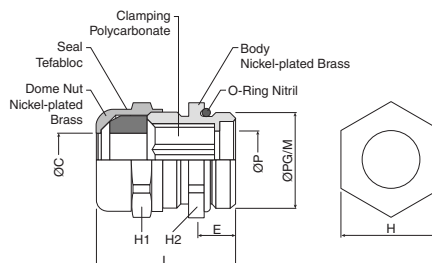
Thread Size	H1 mm	H2 mm	E mm	L mm	ØC mm	ØP mm	ØPG/M mm
PG7	14	14	5	24	6.5	7.2	12.5
PG9	17	17	6	25	8.5	9.2	15.2
PG11	20	20	6	26	10.5	11.2	18.6
PG13.5	22	22	6.5	28	12.5	13.1	20.4
PG16	24	24	6.5	30	15.2	15.6	22.5
PG21	30	30	7	35	18.5	20.1	28.3
PG29	40	40	8	43	25.0	26.2	37.0
PG36	50	50	9	50	30.5	33.0	47.0
PG42	58	58	10	57	35.5	40.0	54.0
PG48	64	64	10	59	40.5	47.5	59.3
M 12x1.5	14	14	7	27	6.5	7.2	12
M 16x1.5/7	14	17	7	27	6.5	7.2	16
M 16x1.5/9	17	17	7	27	8.5	9.2	16
M 20x1.5/11	20	22	7	28	10.5	11.2	20
M 20x1.5/13	22	22	7	29	12.5	13.1	20
M 25x1.5/16	24	26	8	31	15.2	15.6	25
M 25x1.5/21	30	30	8	37	18.5	20.1	25
M 32x1.5/21	30	33	8.5	38	18.5	20.1	32
M 32x1.5/29	40	40	8.5	45	25.0	26.2	32
M 40x1.5	40	42	8.5	45	25.0	26.2	40
M 50x1.5	50	55	9.5	51	30.5	33.0	50
M 63x1.5	58	70	10.5	58	30.5	40.0	63

ECA Clamping Ring Nickel-Plated Brass

Outer thread	Clamping range mm	Cat. No.	Std. Pk.
PG			
PG 7	3-6	4221079	50
PG 9	5-8	4221095	50
PG 11	6-10	4221117	50
PG 13.5	8-12	4221133	50
PG 16	9.5-14	4221168	20
PG 21	11.5-18	4221214	20
PG 29	15-24	4221290	20
PG 36*	23-30	4221362	10
PG 42*	26-35	4221427	5
PG 48*	35-40	4221486	5
Metric			
M 12 x 1.5	3-6	4221714	50
M 16 x 1.5/7	3-6	4221716	50
M 16 x 1.5/9	5-8	4221717	50
M 20 x 1.5/11	6-10	4221720	50
M 20 x 1.5/13	8-12	4221721	50
M 25 x 1.5/16	9.5-14	4221725	20
M 25 x 1.5/21	11.5-18	4221726	20
M 32 x 1.5/21	11.5-18	4221732	10
M 32 x 1.5/29	15-24	4221733	10
M 40 x 1.5	15-24	4221740	5
M 50* x 1.5	23-30	4221750	5
M 63* x 1.5	26-35	4221760	5

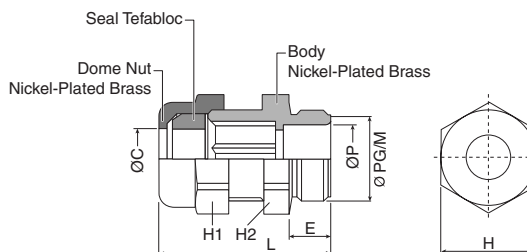


*Clamping ring made of polyoxymethylene (POM), temperature range -30°C to +95°C (-22°F to 203°F)



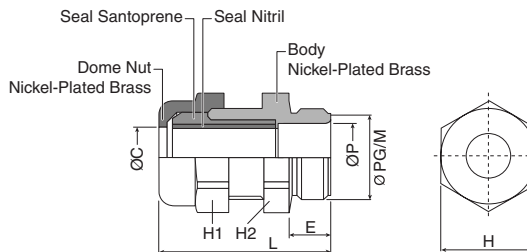
Short Seal Nickel-Plated Brass

PG			
PG 7	3-6	4221000	50
PG 9	5-8	4221001	50
PG 11	6-10	4221002	50
PG 13.5	8-12	4221003	50
PG 16	9.5-14	4221004	20
PG 21	11.5-18	4221005	20
PG 29	15-24	4221006	20
PG 36	22-30	4221007	10
PG 42	25-35	4221008	5
PG 48	30-40	4221009	5
Metric			
M 12 x 1.5	3-6	4221039	50
M 16 x 1.5/7	3-6	4221040	50
M 16 x 1.5/9	5-8	4221041	50
M 20 x 1.5/11	6-10	4221042	50
M 20 x 1.5/13	8-12	4221043	50
M 25 x 1.5/16	9.5-14	4221044	20
M 25 x 1.5/21	11.5-18	4221045	20
M 32 x 1.5/21	11.5-18	4221046	10
M 32 x 1.5/29	15-24	4221047	10
M 40 x 1.5	15-24	4221048	5
M 50 x 1.5	22-30	4221049	5
M 63 x 1.5	25-35	4221050	5



Long Seal, Two Part Nickel-Plated Brass

PG			
PG 9	3-8	4224001	50
PG 11	5-10.5	4224002	50
PG 13.5	6-12.5	4224003	50
PG 16	7-14.5	4224004	20
PG 21	10-18	4224005	20
PG 29	14-24	4224006	20
Metric			
M 16 x 1.5/9	3-8	4224101	50
M 20 x 1.5/11	5-10.5	4224102	50
M 20 x 1.5/13	6-12.5	4224103	50
M 25 x 1.5/16	7-14.5	4224104	20
M 25 x 1.5/21	10-18	4224105	20
M 32 x 1.5/21	10-18	4224106	10
M 32 x 1.5/29	14-24	4224107	10



Material:

- Body: Nickel-Plated Brass
- Seal: Tefabloc
- Sealing ring for outer thread: Nitril

Characteristics:

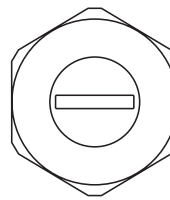
- PG/metric thread
- Seal for flat cable round, angular, oval
- Extended thread available

Technical properties:

- Gas- and watertight
- Completely twist protected
- Combinable with various sealing inserts

Applications:

- Machines and devices
- Measuring and control engineering
- Plant installations



See page 12 for dimensions.



Flat Cable, Rounded



Flat Cable, Angular



Flat Cable, Oval



Outer thread	Clamping range mm	Cat. No.	Clamping range mm	Cat. No.	Clamping range mm	Cat. No.	Std. Pks.
PG							
PG 9	3.5 x 5.5	4224300					50
PG 11	2.8 x 10.5	4224305					50
PG 11	3.5 x 9	4224306					50
PG 11	4 x 6	4224307					50
PG 13.5	3 x 12	4224310			5 x 8	4224375	50
PG 13.5	5 x 11	4224311			5 x 12	4224376	50
PG 16	5 x 12	4224315	8 x 12	4224351	5 x 12	4224390	25
PG 16	7.5 x 14	4224317			5.5 x 8.5	4224380	25
PG 16					6 x 10	4224382	25
PG 16					7 x 14	4224384	25
PG 16/21	5 x 16	4224316			5 x 15	4224381	20
PG 16/21					6 x 15	4224383	20
PG 21	5 x 17	4224320	4 x 15	4224355	5 x 16	4224385	20
PG 21	7 x 18	4224321			7 x 16.5	4224386	20
PG 21	9 x 15	4224322					20
PG 21/29					7 x 20	4224387	10
PG 29	8 x 25	4224326					10
PG 29	10 x 25	4224327					10
Metric							
M 16 x 1.5/9	3.5 x 5.5	4224700					50
M 20 x 1.5/11	2.8 x 10.5	4224705					50
M 20 x 1.5/11	3.5 x 9	4224706					50
M 20 x 1.5/11	4 x 6	4224707					50
M 20 x 1.5/13	3 x 12	4224710			5 x 8	4224775	50
M 20 x 1.5/13	5 x 11	4224711			5 x 12	4224776	50
M 25 x 1.5/16	5 x 12	4224715	8 x 12	4224751	5 x 12	4224790	20
M 25 x 1.5/16	7.5 x 14	4224717			5.5 x 8.5	4224780	20
M 25 x 1.5/16					6 x 10	4224781	20
M 25 x 1.5/16					7 x 14	4224782	20
M 25 x 1.5/21	5 x 16	4224716	4 x 15	4224755	5 x 15	4224784	20
M 25 x 1.5/21	5 x 17	4224720			5 x 16	4224785	20
M 25 x 1.5/21	7 x 18	4224721			6 x 15	4224783	20
M 25 x 1.5/21	9 x 15	4224722			7 x 16.5	4224786	20
M 32 x 1.5/29	8 x 25	4224726			7 x 20	4224787	10
M 32 x 1.5/29	10 x 25	4224727					10

Cable Gland Industrial, Multi-Conductor Seal, Nickel-Plated Brass, PG Thread

Material:

- Body: Nickel-Plated Brass
- Seal: Tefabloc
- Sealing ring for outer thread: Nitril

Characteristics:

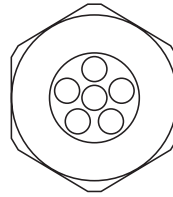
- PG thread
- Multi-holed seal inserts

Technical properties:

- Gas- and watertight
- Completely twist protected
- Combinable with various sealing inserts

Applications:

- Machines and devices
- Measuring and control engineering
- Plant installations



Temperature Range

MS
-25 to 120°C
(-13 to 248°F)



See page 12 for dimensions.

Outer thread	Hole Quantity	Hole diameter mm	Cat. No.	Std. Pk.
PG 7	1	4	4248640	50
PG 7	1	5	4248641	50
PG 9	1	5	4248642	50
PG 9	2	1	4248643	50
PG 9	2	3	4248644	50
PG 9	2	3.5	4248645	50
PG 9	2	4	4248646	50
PG 9	3	3	4248647	50
PG 9	4	3	4248648	50
PG 9	4	4	4248649	50
PG 11	2	2.3	4248650	50
PG 11	2	3	4248651	50
PG 11	2	3.5	4248405	50
PG 11	2	4	4248652	50
PG 11	2	5	4248660	50
PG 11	2	6	4248661	50
PG 11	3	3	4248653	50
PG 11	3	3.5	4248407	50
PG 11	3	4	4248654	50
PG 11	3	5	4248662	50
PG 11	3	5.3	4248655	50
PG 11	4	1.5	4248656	50
PG 11	4	3.5	4248657	50
PG 11	6	2	4248658	50
PG 11	6	2.5	4248659	50
PG 13.5	2	3	4248663	50
PG 13.5	2	5	4248664	50
PG 13.5	2	6	4248404	50
PG 13.5	3	2	4248665	50
PG 13.5	3	3	4248666	50
PG 13.5	3	4	4248667	50
PG 13.5	3	5.3	4248668	50
PG 13.5	3	6	4248669	50
PG 13.5	4	3	4248670	50
PG 13.5	4	4	4248671	50
PG 13.5	4	5	4248673	50
PG 13.5	4	5.3	4248672	50
PG 13.5	6	3.5	4248674	50
PG 13.5	10	2	4248675	50
PG 16	2	4	4248678	50
PG 16	2	5	4248679	50
PG 16	2	6	4248680	50
PG 16	2	7	4248409	50
PG 16	2	8	4248681	50
PG 16	2	9	4248682	50
PG 16	3	3	4248683	50
PG 16	3	4	4248684	50
PG 16	3	5	4248677	50
PG 16	3	5.6	4248685	50
PG 16	3	6	4248686	50
PG 16	3	7	4248695	50
PG 16	3	8	4248687	50

Outer thread	Hole Quantity	Hole diameter mm	Cat. No.	Std. Pk.
PG 16	4	4	4248688	50
PG 16	4	5	4248689	50
PG 16	4	6	4248694	50
PG 16	5	4	4248690	50
PG 16	5	5	4248691	50
PG 16	6	4	4248692	50
PG 16	7	4	4248693	50
PG 21	2	4.5	4248696	20
PG 21	2	8	4248697	20
PG 21	2	8.7	4248698	20
PG 21	2	9	4248699	20
PG 21	2	11	4248700	20
PG 21	3	7	4248542	20
PG 21	3	8	4248531	20
PG 21	3	9	4248701	20
PG 21	4	5	4248702	20
PG 21	4	6	4248529	20
PG 21	4	7.5	4248709	20
PG 21	4	8	4248703	20
PG 21	5	5	4248704	20
PG 21	5	6	4248539	20
PG 21	5	6.5	4248541	20
PG 21	6	4	4248705	20
PG 21	6	5	4248706	20
PG 21	6	6	4248713	20
PG 21	6	6.5	4248710	20
PG 21	6	7	4248715	20
PG 21	7	6	4248714	20
PG 21	8	4	4248707	20
PG 21	8	5	4248543	20
PG 21	11	5	4248712	20
PG 21	21	2	4248708	20
PG 21	28	3	4248711	20
PG 29	2	9	4248716	20
PG 29	2	11	4248717	20
PG 29	3	9	4248719	20
PG 29	3	11	4248720	20
PG 29	4	8	4248629	20
PG 29	4	9	4248721	20
PG 29	4	10	4248722	20
PG 29	6	6	4248627	20
PG 29	6	6.5	4248610	20
PG 29	6	7	4248614	20
PG 29	7	6	4248631	20
PG 29	7	7	4248723	20
PG 29	8	5	4248724	20
PG 29	8	6	4248632	20
PG 29	10	6	4248725	20
PG 29	11	5	4248634	20
PG 29	28	3	4248612	20

Material:

- Body: Nickel-Plated Brass
- Seal: Tefabloc
- Sealing ring for outer thread: Nitril

Characteristics:

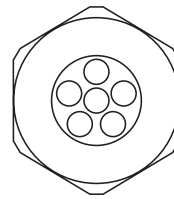
- Metric thread
- Multi-holed seal inserts
- Extended thread available

Technical properties:

- Gas- and watertight
- Completely twist protected
- Combinable with various sealing inserts

Applications:

- Machines and devices
- Measuring and control engineering
- Plant installations



Temperature Range MS -25 to 120°C (-13 to 248°F)



See page 12 for dimensions.

Outer thread	Hole Quantity	Hole diameter mm	Cat. No.	Std. Pk.
M 16 x 1.5/9	2	1	4249600	50
M 16 x 1.5/9	2	3	4249601	50
M 16 x 1.5/9	2	3.5	4249602	50
M 16 x 1.5/9	2	4	4249603	50
M 16 x 1.5/9	3	3	4249604	50
M 20 x 1.5/11	2	2.3	4249610	50
M 20 x 1.5/13	2	3	4249611	50
M 20 x 1.5/11	2	3.5	4249612	50
M 20 x 1.5/11	2	4	4249613	50
M 20 x 1.5/13	2	5	4249614	50
M 20 x 1.5/13	2	6	4249615	50
M 20 x 1.5/13	3	2	4249616	50
M 20 x 1.5/13	3	3	4249617	50
M 20 x 1.5/11	3	3.5	4249618	50
M 20 x 1.5/13	3	4	4249619	50
M 20 x 1.5/13	3	5.3	4249620	50
M 20 x 1.5/11	4	1.5	4249621	50
M 20 x 1.5/13	4	3	4249622	50
M 20 x 1.5/11	4	3.5	4249623	50
M 20 x 1.5/13	4	4	4249624	50
M 20 x 1.5/11	6	2	4249625	50
M 20 x 1.5/11	6	2.5	4249626	50
M 20 x 1.5/13	6	3.5	4249627	50
M 20 x 1.5/13	10	2	4249628	50
M 25 x 1.5/16	2	4	4249640	20
M 25 x 1.5/21	2	4.5	4249641	20
M 25 x 1.5/16	2	5	4249642	20
M 25 x 1.5/16	2	6	4249643	20
M 25 x 1.5/16	2	7	4249644	20
M 25 x 1.5/21	2	8	4249645	20
M 25 x 1.5/16	3	3	4249646	20
M 25 x 1.5/16	3	4	4249647	20
M 25 x 1.5/16	3	5	4249648	20
M 25 x 1.5/16	3	5.6	4249649	20
M 25 x 1.5/16	3	6	4249650	20
M 25 x 1.5/21	3	7	4249651	20
M 25 x 1.5/21	3	8	4249652	20
M 25 x 1.5/16	4	4	4249653	20
M 25 x 1.5/21	4	5	4249654	20
M 25 x 1.5/21	4	6	4249655	20
M 25 x 1.5/16	5	4	4249656	20
M 25 x 1.5/21	5	5	4249657	20
M 25 x 1.5/21	5	6	4249658	20
M 25 x 1.5/21	5	6.5	4249659	20
M 25 x 1.5/21	6	4	4249660	20
M 25 x 1.5/21	6	5	4249661	20
M 25 x 1.5/21	8	4	4249662	20
M 25 x 1.5/21	8	5	4249663	20
M 25 x 1.5/21	21	2	4249664	20
M 32 x 1.5/21	2	4.5	4249670	20
M 32 x 1.5/21	2	8	4249671	20
M 32 x 1.5/29	2	9	4249672	20
M 32 x 1.5/29	2	11	4249673	20
M 32 x 1.5/29	2	12	4249674	20
M 32 x 1.5/21	3	7	4249675	20
M 32 x 1.5/21	3	8	4249676	20

Outer thread	Hole Quantity	Hole diameter mm	Cat. No.	Std. Pk.
M 32 x 1.5/29	3	9	4249677	20
M 32 x 1.5/29	3	11	4249678	20
M 32 x 1.5/21	4	5	4249679	20
M 32 x 1.5/21	4	6	4249680	20
M 32 x 1.5/29	4	8	4249681	20
M 32 x 1.5/29	4	9	4249682	20
M 32 x 1.5/29	4	10	4249683	20
M 32 x 1.5/21	5	5	4249684	20
M 32 x 1.5/21	5	6	4249685	20
M 32 x 1.5/21	5	6.5	4249686	20
M 32 x 1.5/21	6	4	4249687	20
M 32 x 1.5/21	6	5	4249688	20
M 32 x 1.5/29	6	6	4249689	20
M 32 x 1.5/29	6	6.5	4249690	20
M 32 x 1.5/29	6	7	4249691	20
M 32 x 1.5/29	7	6	4249692	20
M 32 x 1.5/29	7	7	4249693	20
M 32 x 1.5/21	8	4	4249694	20
M 32 x 1.5/29	8	5	4249695	20
M 32 x 1.5/29	8	6	4249696	20
M 32 x 1.5/29	10	6	4249697	20
M 32 x 1.5/29	11	5	4249698	20
M 32 x 1.5/21	21	2	4249699	20
M 32 x 1.5/29	28	3	4249701	20

Cable Gland Industrial, Stainless Steel INOX 316L

Material:

- Body: Stainless Steel INOX 316L
- Seal: Santoprene
- ECA clamping ring: Polycarbonate
- Sealing ring for outer thread: Nitril

Characteristics:

- PG/Metric extended thread

Technical properties:

- Acid and lye resistant
- Gas- and watertight
- Completely twist protected
- Combinable with various sealing inserts

Applications:

- Machines and devices
- Measuring and control engineering
- Plant installations

Temperature Range EST
-25 to 120°C (-13 to 248°F)

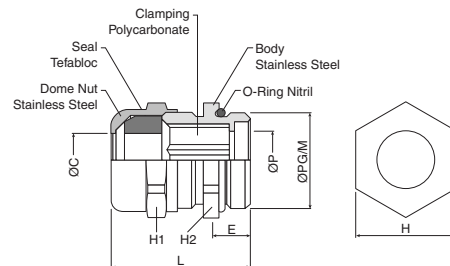


ECA Clamping Ring Stainless Steel

Outer thread	Clamping range mm	Cat. No.	Std. Pk.
PG			
PG 7	3-6	4222075	20
PG 9	5-8	4222091	20
PG 11	6-10	4222113	20
PG 13.5	8-12	4222130	10
PG 16	9.5-14	4222164	10
PG 21	11.5-18	4222210	5
PG 29	15-24	4222296	5
PG 36*	23-30	4222369	1
PG 42*	26-35	4222423	1
PG 48*	35-40	4222482	1
Metric			
M 12 x 1.5	3-6	4222012	20
M 16 x 1.5/7	3-6	4222016	20
M 16 x 1.5/9	5-8	4222017	20
M 20 x 1.5/11	6-10	4222020	10
M 20 x 1.5/13	8-12	4222021	10
M 25 x 1.5/16	9.5-14	4222025	5
M 25 x 1.5/21	11.5-18	4222026	5
M 32 x 1.5/21	11.5-18	4222032	1
M 32 x 1.5/29	15-24	4222033	1
M 40 x 1.5	15-24	4222041	1
M 50 x 1.5	23-30	4222050	1
M 63 x 1.5	26-35	4222063	1



Thread Size	Dimensions						
	H1 mm	H2 mm	E mm	L mm	ØC mm	ØP mm	ØPG/M mm
PG7	14	14	15	34	6.5	7.2	12.5
PG9	17	17	15	34	8.5	9.2	15.2
PG11	20	20	15	35	10.5	11.2	18.6
PG13.5	22	22	15	36.5	12.5	13.1	20.4
PG16	24	24	15	38.5	15.2	15.6	22.5
PG21	30	30	15	43	18.5	20.1	28.3
PG29	40	40	15	50	25.0	26.2	37.0
PG36	50	50	18	59	30.5	33.0	47.0
PG42	58	58	18	65	35.5	40.0	54.0
PG48	64	64	18	67	40.5	47.5	59.3
M 12x1.5	14	14	13	33	6.5	7.2	12
M 16x1.5/7	14	18	13	33	6.5	7.2	16
M 16x1.5/9	17	18	13	33	8.5	9.2	16
M 20x1.5/11	20	22	13	34	10.5	11.2	20
M 20x1.5/13	22	22	13	35	12.5	13.1	20
M 25x1.5/16	24	27	14	37	15.2	15.6	25
M 25x1.5/21	30	30	14	43	18.5	20.1	25
M 32x1.5/21	30	34	14.5	44	18.5	20.1	32
M 32x1.5/29	40	40	14.5	51	25.0	26.2	32
M 40x1.5	40	42	14.5	51	25.0	26.2	40
M 50x1.5	50	55	15.5	57	30.5	33.0	50
M 63x1.5	58	70	16.5	64	35.5	40.0	63



*Clamping ring made of polyoxymethylene (POM), temperature range -30°C to +95°C (-22°F to 203°F)

Material:

- Body: Polyamide PA 6
25 % Glass fiber Reinforced
- Seal: Neoprene
- ECA clamping ring: Polycarbonate

Characteristics:

- PG/Metric thread
- Extended thread available
- Strain relief through clamping ring

Applications:

- For explosion endangered areas according to EN 50014 and EN 50019
- Machines and devices
- Measuring and control engineering
- Plant installations



Temperature Range PA 6
-20 to 55°C (-4 to 131 °F)

Thread Size	Dimensions					
	H mm	E mm	L mm	ØC mm	ØP mm	ØPG/M mm
PG9	19	8	32	8.5	9.0	15.2
PG11	22	8	35	11.5	11.0	18.6
PG13.5	24	9	36	12.5	13.5	20.4
PG16	27	10	40	14.5	15.0	22.5
PG21	33	11	44	18.5	19.0	28.3
PG29	42	12	55	25.0	25.0	37.0
M 16x1.5	19	8	32	8.5	9.0	16.0
M 20x1.5/13	24	9	36	12.5	13.5	20.0
M 20x1.5/16	27	9	39	14.5	15.0	20.0
M 25x1.5	33	11	44	18.5	19.0	25.0
M 32x1.5	42	12	55	25.0	25.0	32.0

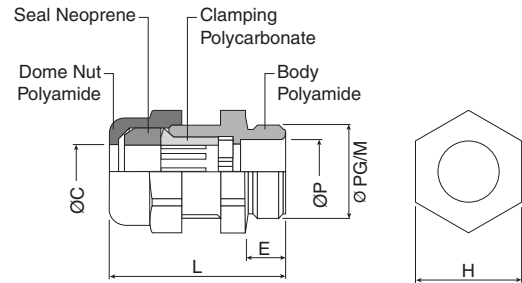
Gland must be mounted with flat seal and lockout.



ECA Clamping Ring (Punch-out Seal)

L.C.I.E. ATEX

Outer thread	Clamping range mm	Cat. No. Dark Grey	Cat. No. Black	Std. Pk.
PG				
PG 9	3.5 - 8.5	5507009	5507050	50
PG 11	4.0 - 10.5	5507011	5507051	50
PG 13.5	5.0 - 12.5	5507013	5507052	50
PG 16	6.5 - 14.0	5507016	5507053	50
PG 21	8.0 - 18.5	5507021	5507054	20
PG 29	10.0 - 25.0	5507029	5507055	20



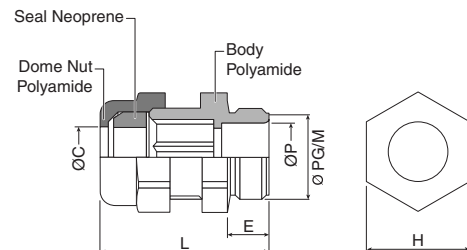
Metric				
Outer thread	Clamping range mm	Cat. No. Dark Grey	Cat. No. Black	Std. Pk.
M 16 x 1.5	3.5 - 8.5	5507216	5507250	50
M 20 x 1.5/13	5.0 - 12.5	5507220	5507251	50
M 20 x 1.5/16	6.5 - 14.0	5507221	5507252	50
M 25 x 1.5	8.0 - 18.5	5507225	5507253	20
M 32 x 1.5	10.0 - 25.0	5507232	5507254	20



Short Seal

L.C.I.E. ATEX

Outer thread	Clamping range mm	Cat. No. Dark Grey	Cat. No. Black	Std. Pk.
PG				
PG 9	4.5 - 8.0	5508009	5508050	50
PG 11	5.5 - 10.5	5508011	5508051	50
PG 13.5	7.0 - 12.0	5508013	5508052	50
PG 16	9.0 - 14.0	5508016	5508053	50
PG 21	11.5 - 18.0	5508021	5508054	20
PG 29	16.0 - 24.5	5508029	5508055	20



Metric				
Outer thread	Clamping range mm	Cat. No. Dark Grey	Cat. No. Black	Std. Pk.
M 16 x 1.5	4.5 - 8.0	5808216	5808250	50
M 20 x 1.5/13	7.0 - 12.0	5808220	5808251	50
M 20 x 1.5/16	9.0 - 14.0	5808221	5808252	50
M 25 x 1.5	11.5 - 18.0	5808225	5808253	20
M 32 x 1.5	16.0 - 24.5	5808232	5808254	20

Cable Gland Industrial, EMC, Nickel-Plated Brass

Material:

- Body: Nickel-plated brass
- Seal: Tefabloc
- Clamping ring for grounding connection: Tin-plated plastic
- Seal ring for outer thread: Nitril

Characteristics:

- PG/Metric thread

Technical properties:

- Continuous EMC protection due to tin-plated plastic
- Gas- and watertight
- Completely twist protected
- Combinable with various sealing inserts

Applications:

- Machines and devices
- Measuring and control engineering
- Plant installations



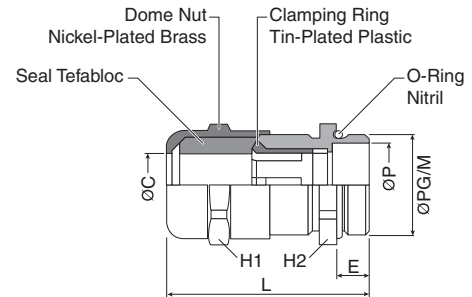
Temperature Range MS
-25 to 120°C (-13 to 248°F)



Dimensions

Thread Size	H1 mm	H2 mm	Dimensions		ØC mm	ØP mm	ØPG/M mm
			E mm	L mm			
PG7	14	14	5	35	6.5	7.2	12.5
PG9	17	17	6	37	8.5	9.2	15.2
PG11	20	20	6	40	10.5	11.2	18.6
PG13.5	22	22	6.5	40	12.5	13.1	20.4
PG16	24	24	6.5	40	15.2	15.6	22.5
PG21	30	30	7	50	18.5	20.1	28.3
PG29	40	40	8	60	25.0	26.2	37.0
PG36	50	50	9	70	30.5	33.0	47.0
M 12x1.5/7	14	14	7	37	6.5	7.2	12.0
M 16x1.5/7	14	17	7	37	6.5	7.2	16.0
M 16x1.5/9	17	17	7	38	8.5	9.2	16.0
M 20x1.5/11	20	22	7	41	10.5	11.2	20.0
M 20x1.5/13	22	22	7	41	12.5	13.1	20.0
M 25x1.5/16	24	26	8	41	15.2	15.6	25.0
M 25x1.5/21	30	30	8	51	18.5	20.1	25.0
M 32x1.5/21	30	33	8.5	51.5	18.5	20.1	32.0
M 32x1.5/29	40	40	8.5	60.5	25.0	26.2	32.0
M 40x1.5/29	40	42	8.5	60.5	25.0	26.2	40.0
M 40x1.5/36	50	50	8.5	67	30.5	33.0	40.0

Outer thread	Cable Clamping range mm	Shield Clamping range mm	Cat. No.	Std. Pk.
PG				
PG 7	4 - 6.5	4 - 6.5	4264007	50
PG 9	5 - 8.5	4.5 - 8.5	4264009	50
PG 11	7 - 10.5	6 - 10.5	4264011	50
PG 13.5	8 - 12.5	8 - 12.5	4264013	50
PG 16	10 - 14.5	10 - 14.5	4264016	20
PG 21	13.5 - 18	13.5 - 18	4264021	20
PG 29	17 - 24	17 - 24	4264029	10
PG36	24 - 30	24 - 30	4264036	10
Metric				
M 12 x 1.5/7	4 - 6.5	4 - 6.5	4264112	50
M 16 x 1.5/7	4 - 6.5	4 - 6.5	4264116	50
M 16 x 1.5/9	5 - 8.5	4.5 - 8.5	4264117	50
M 20 x 1.5/11	7 - 10.5	6 - 10.5	4264120	50
M 20 x 1.5/13	8 - 12.5	8 - 12.5	4264121	50
M 25 x 1.5/16	10 - 14.5	10 - 14.5	4264125	20
M 25 x 1.5/21	13.5 - 18	13.5 - 18	4264126	20
M 32 x 1.5/21	13.5 - 18	13.5 - 18	4264132	10
M 32 x 1.5/29	17 - 24	17 - 24	4264133	10
M 40 x 1.5/29	17 - 24	17 - 24	4264134	10
M 40 x 1.5/36	24 - 30	24 - 30	4264135	10



Material:

- Body: Nickel-plated brass
- Seal: Santoprene
- O-ring: Perbunan

Characteristics:

- PG thread

Technical properties:

- EMC protection due to pressure rings and circular spring
- Gas- and watertight
- Completely twist protected

Applications:

- Machines and devices
- Measuring and control engineering
- Plant installations

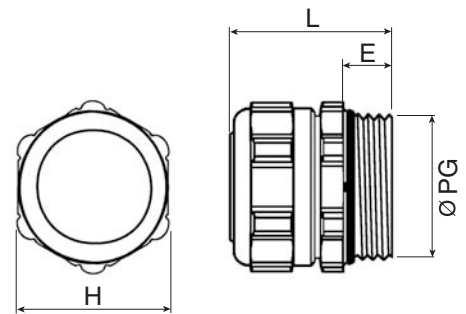


Thread Size	Dimensions			ØPG mm
	H mm	E mm	L mm	
PG9	20	6	34	15.2
PG11	24	10	41	18.6
PG13.5	24	10	41	20.4
PG16	30	11	43	22.5
PG21	30	12	44	28.3
PG29	40	13	53	37.0
PG36	50	14	61	47.0
PG42	60	15	65	54.0

Temperature Range MS
-40 to 135°C (-40 to 275°F)



Outer thread	Cable Clamping range mm	Shield Clamping range mm	Cat. No.	Std. Pk.
PG				
PG 9	4 - 6	2.5 - 6	4266003	25
PG 9	6.5 - 9.5	2.2 - 6.5	4266004	25
PG 9	6.5 - 9.5	3.5 - 8.5	4266005	25
PG 11	4 - 6	3 - 6	4266006	25
PG 11	6 - 9	3.5 - 7.5	4266007	25
PG 11	7 - 10.5	4 - 8.5	4266008	25
PG 13.5	4 - 6	4 - 6	4266010	25
PG 13.5	6 - 9	3.5 - 7.5	4266011	25
PG 13.5	7 - 10.5	4 - 8	4266013	25
PG 16	6 - 9.5	6 - 9	4266015	25
PG 16	6 - 10.5	6 - 9	4266014	25
PG 16	8 - 12	6 - 10	4266018	25
PG 16	10 - 14	9 - 13	4266016	25
PG 16	14 - 18	9 - 13	4266020	25
PG 21	6 - 10.5	6 - 10	4266023	20
PG 21	10 - 14	9 - 13	4266021	20
PG 21	14 - 18	9 - 13	4266024	20
PG 21	14 - 18	12.5 - 17.5	4266025	20
PG 21	17 - 20	12 - 18	4266022	20
PG 29	19 - 23	15 - 21	4266028	20
PG 29	22 - 27	15 - 21	4266029	20
PG 36	25 - 29	18 - 25.5	4266031	10
PG 36	29 - 32	24 - 31	4266033	10
PG 42	37 - 41	29 - 33	4266035	10



Cable Gland, EMC, Nickel-Plated Brass

Material:

- Body: Nickel-plated brass
- Seal: Perbunan N
- Sealing ring for outer thread: Nitril

Characteristics:

- PG thread

Technical properties:

- Shield contact through clamping chuck with integrated clamp protection
- Gas- and watertight

Applications:

- Machines and devices
- Measuring and control engineering
- Plant installations

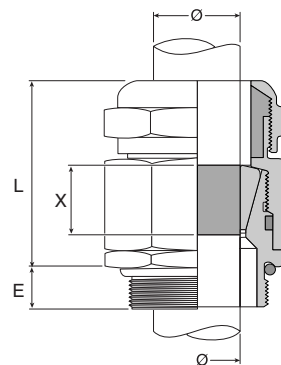
Temperature Range MS
-40 to 100°C (-40 to 212°F)

PROTECTION
IP68
RATING



Outer thread	Cable Clamping range mm	Shield Clamping range mm	Cat. No.	Std. Pk.
PG				
PG 9	6 - 8	3.1 - 4	4276040	25
PG 9	8 - 10	4.1 - 5	4276050	25
PG 9	8 - 10	5.1 - 6	4276060	25
PG 11	7 - 10	6.1 - 7	4276070	25
PG 11	8 - 12	7.1 - 8	4276080	25
PG 11	8 - 12	8.1 - 9	4276090	25
PG 16	11 - 15	9.1 - 10	4276100	25
PG 16	11 - 15	10.1 - 11	4276110	25
PG 16	14 - 17	11.1 - 12	4276120	25
PG 16	14 - 17	12.1 - 13	4276130	25
PG 21	15 - 20.5	13.1 - 14	4276140	25
PG 21	15 - 20.5	14.1 - 15	4276150	25
PG 21	15 - 20.5	15.1 - 16	4276160	25
PG 21	19 - 22	16.1 - 17	4276170	25
PG 21	19 - 22	17.1 - 18	4276180	25
PG 29	21 - 25.5	18.1 - 19.5	4276195	20
PG 29	21 - 25.5	19.6 - 21	4276210	20
PG 29	22 - 28	21.1 - 22.5	4276225	20
PG 29	26 - 32	22.6 - 24	4276240	20
PG 36	25 - 35	23.1 - 25	4276250	10
PG 36	25 - 35	25.1 - 27	4276270	10
PG 36	30 - 35	27.1 - 29	4276290	10
PG 48	31 - 35	29.1 - 31	4276310	10
PG 48	35 - 45	33.1 - 35	4276350	10

Thread Size	Dimensions			
	L mm	E mm	H mm	X mm
PG9	18	6	26	13
PG11	20/22	8	30	13
PG16	24	8	33	13
PG21	32	8	38	16
PG29	38	10	43	16
PG36	50	12	55	22
PG48	64	15	63	27



Material:

- Nickel-plated brass
- Sealing ring: Neoprene

Characteristics:

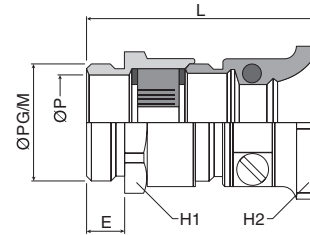
- PG/Metric thread
- Sealing ring, punchable

Applications:

- Tension proof grip
- Grounding connection possible
- Protects bent cable

Temperature Range PA

-25 to 100°C (-13 to 212°F)



Type ZEVB Nickel-Plated Brass

with traction relief and kink protection

Outer thread	Clamping range Seal mm	Clamping range traction relief mm	Cat. No.	Std. Pk.
PG				
PG 9	2 - 9	6 - 9.5	4308093	50
PG 11	4 - 11	8 - 11.5	4308115	50
PG 13.5	4.5 - 12	9 - 13	4308131	50
PG 16	5.5 - 14.5	10 - 15	4308166	25
PG 21	8 - 19	14 - 20	4308212	25
PG 29	12 - 27	19 - 30	4308298	10
Metric				
M 16 x 1.5	2 - 9	6 - 9.5	4308516	100
M 20 x 1.5	4 - 11	8 - 11.5	4308520	100
M 20 x 1.5	4.5 - 12	9 - 13	4308521	100
M 25 x 1.5	5.5 - 14.5	10 - 15	4308525	50
M 25 x 1.5	8 - 18	14 - 20	4308526	25
M 32 x 1.5	8 - 19	14 - 20	4308532	25
M 32 x 1.5	12 - 27	19 - 30	4308533	25

Thread Size	Dimensions					
	H1 mm	H2 mm	E mm	L mm	ØP mm	ØPG/M mm
PG9	17	22	6	34	12.5	15.2
PG11	20	24	6	36	15	18.6
PG13.5	22	28	6.5	37	17	20.4
PG16	24	30	6.5	40	18.5	22.5
PG21	30	38	7	43	24	28.3
PG29	40	50	8	48	32	37
M16	18	22	7	35	12.5	16
M20	22	24	7	37	15	20
M20	22	28	7	37.5	16	20
M25	27	30	8	41.5	18.5	25
M25	32	38	8	44	18.5	25
M32	34	38	8.5	44.5	24	32
M32	40	50	8.5	48.5	28	32

Material:

- Nickel-plated brass
- Sealing ring: Neoprene

Characteristics:

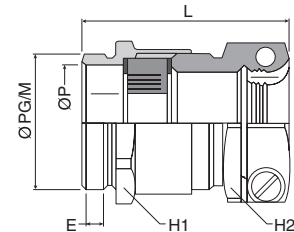
- PG/Metric thread

Applications:

- Centered traction relief
- No cable twisting while clamping
- Tension proof grip
- Grounding connection possible

Temperature Range PA

-25 to 100°C (-13 to 212°F)



Type ZA Nickel-Plated Brass

with centered traction relief and kink protection

Outer thread	Clamping range Seal mm	Clamping range traction relief mm	Cat. No.	Std. Pk.
PG				
PG 7	4 - 6	5.5 - 7.5	4305078	100
Pg 9	2 - 9	6.5 - 9.5	4305094	50
PG 11	4 - 11	7.5 - 11.5	4305116	50
PG 13.5	4.5 - 12	8.5 - 13.5	4305132	50
PG 16	5.5 - 14.5	10.5 - 16.5	4305167	25
PG 21	8 - 19	12 - 20.5	4305213	25
PG 29	12 - 27	19 - 29.5	4305299	10
PG 36	22 - 33	24 - 36.5	4305361	10
PG 42	25 - 40	33 - 42.5	4305426	5
PG 48	30 - 45	36 - 47.5	4305485	5
Metric				
M 12 x 1.5	4 - 6	5.5 - 7.5	4305500	50
M 16 x 1.5	2 - 9	6.6 - 9.5	4305501	50
M 16 x 1.5	4 - 11	7.5 - 11.5	4305502	50
M 16 x 1.5	4.5 - 12	8.5 - 13.5	4305503	50
M 20 x 1.5	4 - 11	7.5 - 11.5	4305504	50
M 20 x 1.5	4.5 - 12	8.5 - 13.5	4305505	50
M 20 x 1.5	5.5 - 14.5	10.5 - 16.5	4305506	50
M 25 x 1.5	5.5 - 14.5	10.5 - 16.5	4305507	20
M 32 x 1.5	8 - 19	12 - 20.5	4305508	20
M 32 x 1.5	12 - 27	19 - 29.5	4305509	20
M 40 x 1.5	12 - 27	19 - 29.5	4305510	20
M 50 x 1.5	22 - 33	24 - 36.5	4305511	10
M 50 x 1.5	25 - 40	33 - 42.5	4305512	10
M 63 x 1.5	25 - 40	33 - 42.6	4305513	5
M 63 x 1.5	30 - 45	36 - 47.5	4305514	5
M 75 x 1.5	30 - 45	36 - 47.5	4305515	1

Thread Size	Dimensions					
	H1 mm	H2 mm	E mm	L mm	ØP mm	ØPG/M mm
PG7	14	16	5	29	10	12.5
PG9	17	19	6	34	12.5	15.2
PG11	20	22	6	35	15	18.6
PG13.5	22	24	6.5	36	17	20.4
PG16	24	27	6.5	36	18.5	22.5
PG21	30	33	7	42	24	28.3
PG29	40	42	8	47	32	37
PG36	50	52	9	53	42	47
PG42	57	60	10	65	48	54
PG48	64	64	10	68	52.5	59.3
M12	14	16	7	29	8	12
M16	18	19	7	34	12.5	16
M16	20	22	7	34	12.5	16
M16	22	24	7	35	12.5	16
M20	22	22	7	34	15	20
M20	22	24	7	39	16	20
M20	24	27	7	34	16	20
M25	27	27	8	40	18.5	25
M32	34	33	8.5	43	24	32
M32	40	42	8.5	46	28	32
M40	42	42	8.5	45	32	40
M50	52	52	9.5	50	42	50
M50	58	60	9.5	54	42	50
M63	65	60	10.5	55	48	63
M63	65	64	10.5	56	48	63
M75	80	64	11.5	56	52.5	75

Cable Gland Industrial, with Traction Relief and Kink Protection, Polyamide

Material:

- Body: Polyamide 6
- Seal: Neoprene

Characteristics:

- PG/Metric/NPT threads
- Metric extended thread available



Temperature Range PA -20 to 100°C (-4 to 212°F)

Technical properties:

- Optimal strain relief through clamping range
- Seals against housing through sealing lip
- Trapezoidal threading with high torque guarantees tight and permanent fit of the dome nut
- Also available with reduction insert
- Gas- and watertight

Applications:

- Machines and devices



Outer thread	Clamping range mm	Cat. No. Dark Grey	Cat. No. Black	Std. Pk.	Thread Size	Dimensions			ØPG/M/NPT mm
						H mm	E mm	L mm	
PG									
PG 7	2.5 - 6.5	5306007	5306107	50	PG7	15	8	54	12.5
PG 9	3 - 8	5306009	5306109	50	PG9	19	8	64	15.2
PG 11	4 - 10	5306011	5306111	50	PG11	22	8	77	18.6
PG 11	2 - 7	5306012	5306112	50	PG13.5	24	9	88	20.4
PG 13.5	5.5 - 12	5306013	5306113	50	PG16	27	10	102	22.5
PG 13.5	3 - 7	5306014	5306114	50	M 12x1.5	15	6	54	12
PG 16	8.5 - 14	5306016	5306116	25	M 16x1.5	19	6	64	16
PG 16	5 - 11	5306017	5306117	25	M 20x1.5	24	8	88	20
Metric									
M 12 x 1.5	2.5 - 6.5	5306030	5306130	50	NPT 3/8"	19/22	15	64	17.1
M 16 x 1.5	4 - 8	5306031	5306131	50	NPT 1/2"	24	15	88	21.2
M 20 x 1.5	3 - 7	5306032	5306132	50					
M 20 x 1.5	5.5 - 12	5306033	5306133	50					
NPT									
NPT 3/8"	3 - 8	5306050	5306150	50					
NPT 1/2"	3 - 7	5306051	5306151	50					
NPT 1/2"	5.5 - 12	5306052	5306152	50					

Cable Gland, Polystyrene

- Material:**
- Polystyrene
- Seal:**
- Neoprene

- Characteristics:**
- Hexagon base
 - PG Thread

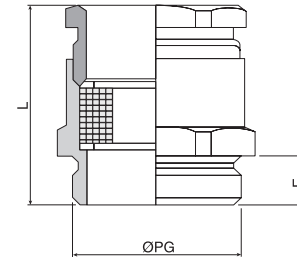
Temperature Range PS
 -20 to 70°C (-4 to 158°F)



once according to DIN 46320

Outer thread	Clamping range mm	Cat. No. Lt. Gray	Std. Pk.
PG			
PG 7	3.5 - 6	5202078	50
PG 9	4.5 - 7	5202094	50
PG 11	6 - 9	5202116	50
PG 13.5	9 - 12	5202132	50
PG 16	11 - 14	5202167	50
PG 21	14 - 18	5202213	25
PG 29	18 - 25	5202299	10
PG 36	25 - 32	5202361	10
PG 42	30 - 38	5202434	10
PG 48	36 - 44	5202485	10

Thread Size	Dimensions	
	E mm	L mm
PG7	8	29
PG9	8	31.5
PG11	8	33
PG13.5	9.5	36
PG16	10	40.5
PG21	11	43.5
PG29	11	46
PG36	13	57
PG42	13	61
PG48	14	60



Cable Gland, with Round Intermediate Part, Nickel-Plated Brass

Material:

- Nickel-plated brass

Seal:

- Neoprene

Characteristics:

- Simple sealing ring
- PG/Metric thread
- Extended thread available

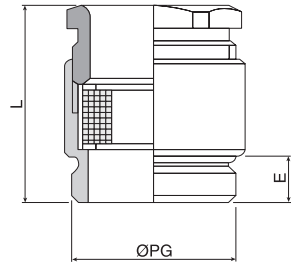


Temperature Range MS
-25 to 100°C (-13 to 212°F)

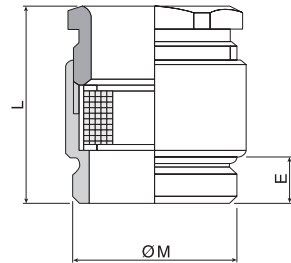
Thread Size	Dimensions		Thread Size	Dimensions	
	E mm	L mm		E mm	L mm
PG7	5	21	M 12x1.5	7	24
PG9	6	23	M 16x1.5	7	25
PG11	6	23	M 20x1.5	7	26
PG13.5	6.5	26	M 20x1.5	7	28
PG16	6.5	27	M 25x1.5	8	30
PG21	7	30	M 32x1.5	8.5	34
PG29	8	33	M 40x1.5	8.5	35
PG36	9	40	M 50x1.5	9.5	41
PG42	10	44	M 63x1.5	10.5	40
PG48	10	46			

once according to DIN 46320

Outer thread	Clamping range mm	Cat. No.	Std. Pk.
PG			
PG 7	5 - 7	4000005	100
PG 9	6 - 8	4000102	50
PG 11	8 - 10	4000200	50
PG 13.5	10 - 12	4000307	50
PG 16	12 - 14	4000404	25
PG 21	15 - 17	4000501	25
PG 29	24 - 26	4000552	10
PG 36	32 - 34	4000609	10
PG 42	39 - 41	4000650	5
PG 48	44 - 46	4000706	5



Outer thread	Clamping range mm	Cat. No.	Std. Pk.
Metric			
M 12 x 1.5	5 - 7	4104312	50
M 16 x 1.5	6 - 8	4104316	50
M 20 x 1.5	8 - 10	4104320	50
M 20 x 1.5	10 - 12	4104321	50
M 25 x 1.5	12 - 14	4104325	20
M 32 x 1.5	15 - 17	4104332	20
M 40 x 1.5	24 - 26	4104340	10
M 50 x 1.5	31 - 33	4104350	10
M 63 x 1.5	39 - 41	4104363	5



Cable Gland, with Round Intermediate Part, Nickel-Plated Brass



- Material:**
- Nickel-plated brass
- Seal:**
- Neoprene

- Characteristics:**
- Punchable sealing
 - PG/Metric thread

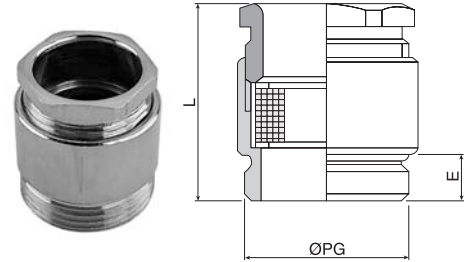


Temperature Range MS
-25 to 100°C (-13 to 212°F)

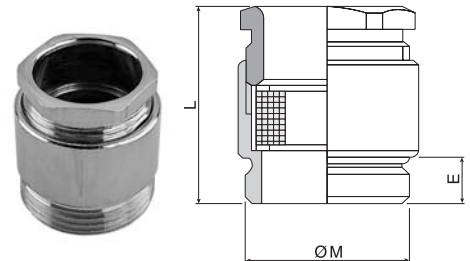
Dimensions			Dimensions		
Thread Size	E mm	L mm	Thread Size	E mm	L mm
PG9	6	23	M 16x1.5	7	25
PG11	6	23	M 20x1.5	7	26
PG13.5	6.5	26	M 20x1.5	7	28
PG16	6.5	27	M 25x1.5	8	30
PG21	7	30	M 32x1.5	8.5	34
PG29	8	33	M 40x1.5	8.5	35
			M 50x1.5	9.5	41
			M 63x1.5	10.5	40

according to DIN 46320

Outer thread	Clamping Range mm	Graded dimensions for sealing ring mm	Cat. No.	Std. Pk.
PG				
PG 9	2-9	5 - 7.5 - 10	4006100	50
PG 11	4-11	5 - 7.5 - 10	4006208	50
PG 13.5	4.5-12	7.5 - 10 - 12.5	4006305	50
PG 16	5.5-14.5	7.5 - 10 - 12 - 15	4006402	25
PG 21	8-19	10 - 13 - 16 - 19	4006500	25
PG 29	12-27	18 - 21 - 24 - 27	4006550	10



Outer thread	Clamping Range mm	Graded dimensions for sealing ring mm	Cat. No.	Std. Pk.
Metric				
M 16 x 1.5	2-9	5 - 7.5 - 10	4104516	50
M 20 x 1.5	4-11	5 - 7.5 - 10 - 12	4104520	50
M 20 x 1.5	4.5-12	7.5 - 10 - 12.5	4104521	50
M 25 x 1.5	5.5-14.5	7.5 - 10 - 12 - 15	4104525	20
M 32 x 1.5	8-19	10 - 13 - 16 - 19	4104532	20
M 40 x 1.5	12-27	18 - 21 - 24 - 27	4104540	20
M 50 x 1.5	22-23	24 - 27 - 30 - 33	4104550	10
M 63 x 1.5	25-40	30 - 33 - 36 - 39	4104563	5



Cable Gland, with Hexagon Intermediate Part, Nickel-Plated Brass

Material:
• Nickel-plated brass

Characteristics:
• Simple sealing ring
• PG/Metric thread

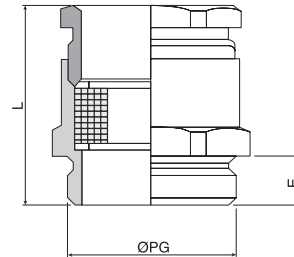


Temperature Range MS
-25 to 100°C (-13 to 212°F)

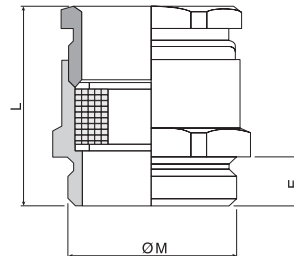
Dimensions			Dimensions		
Thread Size	E mm	L mm	Thread Size	E mm	L mm
PG7	5	21	M 12x1.5	7	23
PG9	6	23	M 16x1.5	7	25
PG11	6	23	M 20x1.5	7	25
PG13.5	6.5	26	M 20x1.5	7	28
PG16	6.5	27	M 25x1.5	8	29
PG21	7	30	M 32x1.5	8.5	32
PG29	8	33	M 40x1.5	8.5	34
PG36	9	40	M 50x1.5	9.5	40
PG42	10	44	M 63x1.5	10.5	45
PG48	10	46			

once according to DIN 46320

Outer thread	Clamping range mm	Cat. No.	Std. Pk.
PG			
PG 7	5-7	4001001	100
PG 9	6-8	4001109	50
PG 11	8-10	4001206	50
PG 13.5	10-12	4001303	50
PG 16	12-14	4001400	25
PG 21	15-17	4001508	25
PG 29	24-26	4001559	10
PG 36	31-33	4001605	10
PG 42	39-41	4001656	5
PG 48	44-46	4001702	5



Outer thread	Clamping range mm	Cat. No.	Std. Pk.
Metric			
M 12 x 1.5	5-7	4103312	50
M 16 x 1.5	6-8	4103316	50
M 20 x 1.5	8-10	4103320	50
M 20 x 1.5	10-12	4103321	25
M 25 x 1.5	12-14	4103325	25
M 32 x 1.5	15-17	4103332	25
M 40 x 1.5	24-26	4103340	10
M 50 x 1.5	31-33	4103350	10
M 63 x 1.5	39-41	4103363	5



Cable Gland, with Hexagon Intermediate Part, Nickel-Plated Brass



Material:
• Nickel-plated brass

Characteristics:
• Punchable sealing ring
• PG/Metric thread

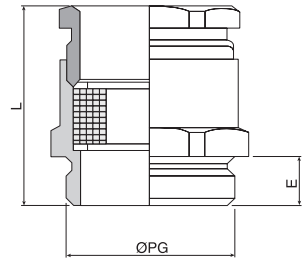


Temperature Range MS
-25 to 100°C (-13 to 212°F)

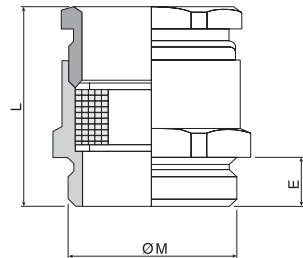
Dimensions			Dimensions		
Thread Size	E mm	L mm	Thread Size	E mm	L mm
PG9	6	23	M 16x1.5	7	25
PG11	6	23	M 20x1.5	7	25
PG13.5	6.5	26	M 20x1.5	7	28
PG16	6.5	27	M 25x1.5	8	29
PG21	7	30	M 32x1.5	8.5	32
PG29	8	33	M 40x1.5	8.5	34
PG36	9	40	M 50x1.5	9.5	40
PG42	10	44	M 63x1.5	10.5	45
PG48	10	46			

once according to DIN 46320

Outer thread	Clamping range mm	graded dimensions for sealing ring mm	Cat. No.	Std. Pk.
PG				
PG 9	2 - 9.0	5 - 7.5 - 10	4009100	50
PG 11	4 - 11	5 - 7.5 - 10	4009207	50
PG 13.5	4.5 - 10	7.5 - 10 - 12.5	4009304	50
PG 16	5.5 - 14.5	7.5 - 10 - 12 - 15	4009401	25
PG 21	8 - 19	10 - 13 - 16 - 19	4009509	25
PG 29	12 - 27	18 - 21 - 24 - 27	4009550	10
PG 36	22 - 33	24 - 27 - 30 - 33	4009606	10
PG 42	25 - 40	30 - 33 - 36 - 39	4009658	5
PG 48	30 - 45	36 - 39 - 42 - 45	4009695	5



Outer thread	Clamping range mm	graded dimensions for sealing ring mm	Cat. No.	Std. Pk.
Metric				
M 16 x 1.5	4 - 9.5	5 - 7.5 - 10	4103516	50
M 20 x 1.5	4 - 11.5	5 - 7.5 - 10 - 12	4103520	50
M 20 x 1.5	6 - 13	7.5 - 10 - 12.5	4103521	25
M 25 x 1.5	6 - 15	7.5 - 10 - 12 - 15	4103525	25
M 32 x 1.5	9 - 20	10 - 13 - 16 - 19	4103532	25
M 40 x 1.5	15 - 27	18 - 21 - 24 - 27	4103540	10
M 50 x 1.5	21 - 33	24 - 27 - 30 - 33	4103550	5
M 63 x 1.5	27 - 40	30 - 33 - 36 - 39	4103563	5



Lock Nuts, Polyamide

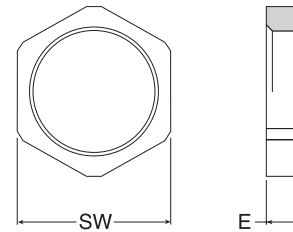
Material:

- Polyamide 6
- 25 % Glass fiber Reinforced

Characteristic feature:

- PG / metric and NPT thread

Temperature Range PA
-30 to 120°C (-22 to 248°F)



Thread	Thickness (E) mm	SW mm	Cat. No. Light grey	Cat. No. Black	Std. Pk.
PG (once according to DIN 46320)					
PG 7	5	19	7211881	7211851	50
PG 9	5	22	7211882	7211852	50
PG 11	5	24	7211883	7211853	50
PG 13.5	6	27	7211884	7211854	50
PG 16	6	30	7211885	7211855	50
PG 21	6.5	36	7211886	7211856	20
PG 29	7.5	46	7211887	7211857	20
PG 36*	8	60	7211888	7211858	10
PG 42*	9	65	7211889	7211859	5
PG 48*	9.5	70	7211890	7211860	5
Metric					
M 12 x 1.5	5	19	7211979	7211974	50
M 16 x 1.5	5	22	7211980	7211975	50
M 20 x 1.5	5	24	7211981	7211976	50
M 25 x 1.5	6	30	7211982	7211977	50
M 32 x 1.5	7.5	38	7211983	7211978	50
M 40 x 1.5	8	50	7211984	7211990	20
M 50 x 1.5*	9	60	7211985	7211991	10
M 63 x 1.5*	10	75	7211986	7211992	5
NPT					
NPT 3/8"	5	22	7211485	7211495	50
NPT 1/2"	6	27	7211486	7211496	20
NPT 3/4"	6.5	36	7211487	7211497	20
NPT 1"	7	41	7211488	7211498	20

* Not glass fiber reinforced.

Material:

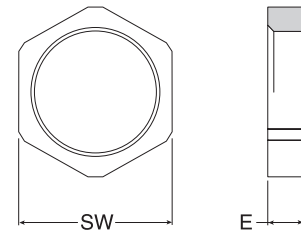
- Nickel-plated brass

Characteristics:

- PG and Metric thread



Thread	Thickness (E) mm	SW mm	Cat. No.	Std. Pk.
PG (once according to DIN 46320)				
PG 7	2.9	15	6000070	50
PG 9	2.9	18	6000096	50
PG 11	2.9	21	6000118	50
PG 13.5	3.1	23	6000134	50
PG 16	3.1	26	6000169	50
PG 21	3.6	32	6000215	20
PG 29	4.1	41	6000290	20
PG 36	5.1	51	6000363	10
PG 42	5.1	60	6000428	5
PG 48	5.6	64	6000487	5
Metric				
M 12 x 1.5	3	15	6004121	50
M 16 x 1.5	3	20	6004164	50
M 20 x 1.5	3.5	24	6004202	50
M 25 x 1.5	3.5	30	6004253	25
M 32 x 1.5	4.5	35	6004326	20
M 40 x 1.5	4.5	45	6004407	10
M 50 x 1.5	4.5	55	6004504	10
M 63 x 1.5	6	70	6004636	5



Lock Nuts, Ribbed, Nickel-Plated Brass

Material:

- Nickel-plated brass

Characteristics:

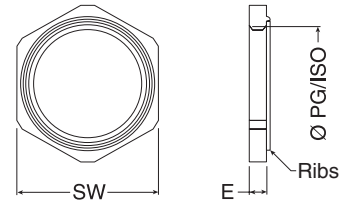
- PG and Metric thread

Applications:

- EMC applications



Thread	Thickness (E) mm	SW mm	Cat. No.	Std. Pk.
PG				
PG 7	2.9	15	6011007	50
PG 9	2.9	18	6011009	50
PG 11	3.1	21	6011011	50
PG 13.5	3.1	23	6011013	50
PG 16	3.1	26	6011016	50
PG 21	3.6	32	6011021	20
PG 29	4.1	41	6011029	20
PG 36	5.1	51	6011036	10
PG 42	5.1	60	6011042	10
PG 48	5.6	64	6011048	10
Metric				
M 12 x 1.5	3	15	6011112	50
M 16 x 1.5	3	20	6011116	50
M 20 x 1.5	3.5	24	6011120	50
M 25 x 1.5	3.5	30	6011125	25
M 32 x 1.5	4.5	35	6011132	20
M 40 x 1.5	4.5	45	6011140	10
M 50 x 1.5	5.5	55	6011150	10
M 63 x 1.5	6	70	6011163	10

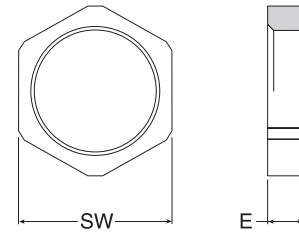


Material:
• Stainless Steel INOX 316 L

Characteristics:
• PG and Metric thread



Thread	Thickness (E) mm	SW mm	Cat. No.	Std. Pk.
PG				
PG 7	2.9	15	6008207	50
PG 9	2.9	19	6008209	50
PG 11	3.1	21	6008211	50
PG 13.5	3.1	23	6008213	50
PG 16	3.1	26	6008216	25
PG 21	3.6	32	6008221	20
PG 29	4.1	42	6008229	15
PG 36	5.1	57	6008236	10
PG 42	5.1	60	6008242	10
PG 48	5.6	65	6008248	10
Metric				
M 12 x 1.5	3	15	6010112	50
M 16 x 1.5	3	20	6010116	50
M 20 x 1.5	3.5	24	6010120	50
M 25 x 1.5	3.5	30	6010125	25
M 32 x 1.5	4.5	35	6010132	20
M 40 x 1.5	4.5	45	6010140	1
M 50 x 1.5	5.5	55	6010150	1
M 63 x 1.5	6	70	6010163	1



Reducer, Polyamide

- Material:**
- Polyamide
 - Glass fiber reinforced

- Characteristics:**
- PG Thread
 - Metric Thread

Temperature Range PA -40 to 100°C (-40 to 212°F)
--

External thread	Internal thread	SW mm	Thread length mm	Cat. No. Light Grey	Std. Pk.
Type B					
PG					
PG 11	PG 7	22	8	7005302	100
PG 13.5	PG 7	24	9	7005304	100
PG 13.5	PG 9	24	9	7005305	100
PG 16	PG 9	27	10	7005307	100
PG 16	PG 11	27	10	7005308	100
PG 21	PG 11	32	11	7005310	100
PG 21	PG 13.5	32	11	7005311	100
PG 21	PG 16	32	11	7005312	100
PG 29	PG 13.5	40	11	7005313	50
PG 29	PG 16	40	11	7005314	50
PG 29	PG 21	40	11	7005315	50
PG 36	PG 16	50	13	7005316	50
PG 36	PG 21	50	13	7005317	50
PG 36	PG 29	50	18	7005318	50
PG 42	PG 21	55	18	7005319	25
PG 42	PG 29	55	18	7005320	25
PG 42	PG 36	55	18	7005321	25
PG 48	PG 29	60	18	7005322	25
PG 48	PG 36	60	14	7005323	25
PG 48	PG 42	60	17	7005324	25
Type A					
PG 9	PG 7	19	8	7005301	100
PG 11	PG 9	22	8	7005303	100
PG 13.5	PG 11	24	9	7005306	100
PG 16	PG 13.5	27	10	7005309	100



Type B



Type A

External thread	Internal thread	SW mm	Thread length mm	Cat. No. Light Grey	Std. Pk.
Metric					
M 16 x 1.5	M 12 x 1.5	20	8	7008516	50
M 20 x 1.5	M 12 x 1.5	24	8	7008519	50
M 20 x 1.5	M 16 x 1.5	24	9	7008520	50
M 25 x 1.5	M 12 x 1.5	29	8	7008523	50
M 25 x 1.5	M 16 x 1.5	29	8	7008524	50
M 25 x 1.5	M 20 x 1.5	30	10	7008525	20
M 32 x 1.5	M 16 x 1.5	36	10	7008530	50
M 32 x 1.5	M 20 x 1.5	36	10	7008531	50
M 32 x 1.5	M 25 x 1.5	36	11	7008532	20
M 40 x 1.5	M 20 x 1.5	46	10	7008538	50
M 40 x 1.5	M 25 x 1.5	46	10	7008539	20
M 40 x 1.5	M 32 x 1.5	44	12	7008540	20
M 50 x 1.5	M 25 x 1.5	55	12	7008548	20
M 50 x 1.5	M 32 x 1.5	55	12	7008549	20
M 50 x 1.5	M 40 x 1.5	55	13	7008550	10
M 63 x 1.5	M 32 x 1.5	68	12	7008561	20
M 63 x 1.5	M 40 x 1.5	68	12	7008562	20
M 63 x 1.5	M 50 x 1.5	70	15	7008563	5

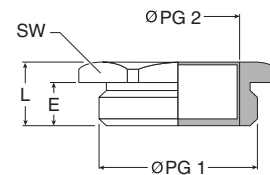


Reducer, Nickel-Plated Brass

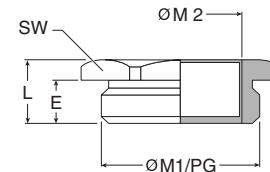
- Material:**
- Nickel-plated brass
 - O-ring: Nitril

- Characteristics:**
- PG thread
 - Metric thread
 - Hexagon

External thread	Internal thread	SW mm	Thread length mm (E)	Complete length mm (L)	Cat. No. without O-ring	Cat. No. with O-ring	Std. Pk.
PG 1	PG 2						
PG 9	PG 7	17	5	8	6102018	6102300	100
PG 11	PG 9	19	6	9	6102034	6102310	100
PG 11	PG 7	19	6	9	6102030	6102311	100
PG 13.5	PG 11	21	6	9	6102077	6102320	100
PG 13.5	PG 9	21	6	9	6102042	6102321	100
PG 13.5	PG 7	21	6	8.5	6102026	6102322	100
PG 16	PG 13.5	23	6	9	6102115	6102330	100
PG 16	PG 11	23	6	9	6102085	6102331	100
PG 16	PG 9	23	6	9	6102050	6102332	100
PG 16	PG 7	24	7	10	–	6102333	100
PG 21	PG 7	24	7	10	6102158	6102340	100
PG 21	PG 13.5	29	7	10	6102123	6102341	50
PG 21	PG 11	29	7	10	6102093	6102342	20
PG 21	PG 9	29	7	10	6102069	–	50
PG 29	PG 21	39	8	11	6102190	6102350	25
PG 29	PG 16	39	8	11	6102166	6102351	25
PG 29	PG 13.5	39	8	11	6102131	6102352	25
PG 29	PG 11	39	8	11	6102107	–	25
PG 36	PG 29	50	8	11	6102220	6102360	25
PG 36	PG 21	50	8	11	6102204	6102361	25
PG 36	PG 13.5	50	8	11	6102140	–	25
PG 42	PG 36	64	10	14	6102241	6102370	25
PG 42	PG 29	64	10	14	6102239	6102371	25
PG 48	PG 42	64	10	14	6102258	6102380	25
PG 48	PG 36	64	10	14	6102255	6102381	25
PG 48	PG 29	64	10	14	6102247	–	25
PG 48	PG 21	64	10	14	6102212	–	25
PG 48	PG 16	64	10	14	6102182	–	25



External thread	Internal thread	SW mm	Thread length mm (E)	Complete length mm (L)	Cat. No. without O-ring	Cat. No. with O-ring	Std. Pk.
Metric 1	Metric 2						
M 16 x 1.5	M 12 x 1.5	20	7	10	6102400	6102450	50
M 20 x 1.5	M 12 x 1.5	24	7	10	6102404	6102455	50
M 20 x 1.5	M 16 x 1.5	24	7	10	6102405	6102460	50
M 25 x 1.5	M 16 x 1.5	30	8	11.5	6102409	6102464	20
M 25 x 1.5	M 20 x 1.5	30	8	11.5	6102410	6102465	20
M 32 x 1.5	M 16 x 1.5	36	8.5	12.5	6102414	6102468	20
M 32 x 1.5	M 20 x 1.5	36	8.5	12.5	6102413	6102469	20
M 32 x 1.5	M 25 x 1.5	36	8.5	12.5	6102415	6102470	20
M 40 x 1.5	M 25 x 1.5	42	8.5	12.5	6102419	6102476	10
M 40 x 1.5	M 32 x 1.5	42	8.5	12.5	6102420	6102475	10
M 50 x 1.5	M 32 x 1.5	55	9.5	14.5	6102426	6102479	10
M 50 x 1.5	M 40 x 1.5	55	9.5	14.5	6102425	6102480	5
M 63 x 1.5	M 40 x 1.5	70	10.5	17.5	6102429	6102484	1
M 63 x 1.5	M 50 x 1.5	70	10.5	17.5	6102430	6102485	1
M 75 x 1.5	M 63 x 1.5	80	11.5	19.5	6102435	6102490	1
PG	Metric 2						
PG 9	M 6 x 1.0	18	6.5	9.5	–	6104106	50
PG 9	M 8 x 1.25	18	6.5	9.5	–	6104108	50
PG 9	M 10 x 1.5	18	6.5	9.5	–	6104110	50
PG 11	M 6 x 1.0	20	6.5	9.5	–	6104206	50
PG 11	M 8 x 1.25	20	6.5	9.5	–	6104208	50
PG 11	M 10 x 1.5	20	6.5	9.5	–	6104210	50
PG 11	M 12 x 1.5	20	5	8	–	6104212	50
PG 16	M 16 x 1.5	24	7	10	–	6104416	50
PG 21	M 25 x 1.5	30	7.5	11	–	6104525	50
PG 29	M 32 x 1.5	38	8	12	–	6104632	50

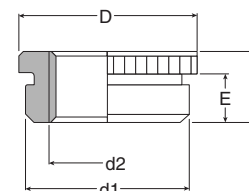
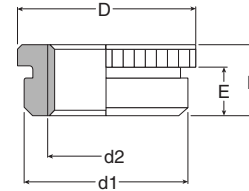
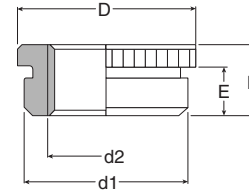


Reducer, Ribbed, Nickel-Plated Brass

Material:
• Nickel-plated brass

Characteristics:
• PG/Metric external thread
• PG/Metric internal thread
• Round ribbed

External thread (d1)	Internal thread (d2)	Diameter mm (D)	Thread length mm (E)	Complete length mm (L)	Cat. No.	Std. Pk.
Formerly DIN 46300						
PG	PG					
PG 9	PG 7	17	6	8.5	6100015	50
PG 11	PG 7	20	6	8.5	6100023	50
PG 11	PG 9	20	6	9	6100031	50
PG 13.5	PG 7	22	6.5	9	6100040	50
PG 13.5	PG 9	22	6.5	9.5	6100058	50
PG 13.5	PG 11	22	6.5	9.5	6100066	50
PG 16	PG 7	24	6.5	9.5	6100074	25
PG 16	PG 9	24	6.5	9.5	6100082	25
PG 16	PG 11	24	6.5	9.5	6100090	25
PG 16	PG 13.5	24	6.5	9.5	6100104	25
PG 21	PG 11	30	7	10	6100112	20
PG 21	PG 13.5	30	7	10	6100120	20
PG 21	PG 16	30	7	10	6100139	20
PG 29	PG 16	39	8	11.5	6100147	15
PG 29	PG 21	39	8	11.5	6100155	15
PG 36	PG 21	50	9	12.5	6100163	10
PG 36	PG 29	50	9	12.5	6100171	10
PG 42	PG 29	57	10	14	6100180	10
PG 42	PG 36	57	10	14	6100198	10
PG 48	PG 36	64	10	14	6100201	10
PG 48	PG 42	64	10	14	6100210	10



Metric	PG	Diameter mm (D)	Thread length mm (E)	Complete length mm (L)	Cat. No.	Std. Pk.
M 16 x 1.5	PG 7	20	6	9	6104716	100
M 20 x 1.5	PG 9	24	6.5	9.5	6104720	50
M 25 x 1.5	PG 11	30	7	10	6104725	50
M 25 x 1.5	PG 13.5	30	7	10	6104726	50
M 25 x 1.5	PG 16	30	7	10	6104727	50
M 32 x 1.5	PG 16	34	8	11.5	6104732	20
M 32 x 1.5	PG 21	34	8	11.5	6104733	20
M 40 x 1.5	PG 21	50	9	12	6104740	10
M 50 x 1.5	PG 29	57	9	12	6104750	5
M 63 x 1.5	PG 36	70	10.5	14.5	6104763	1
M 63 x 1.5	PG 42	70	10.5	14.5	6104764	1

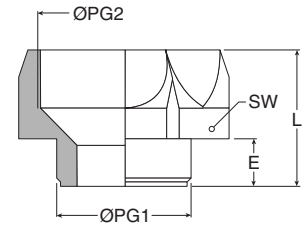
Metric	Metric	Diameter mm (D)	Thread length mm (E)	Complete length mm (L)	Cat. No.	Std. Pk.
M 16 x 1.5	M 12 x 1.5	20	7	10	6104816	50
M 20 x 1.5	M 12 x 1.5	24	7	10	6104819	50
M 20 x 1.5	M 16 x 1.5	24	7	10	6104820	50
M 25 x 1.5	M 16 x 1.5	30	8	11.5	6104824	50
M 25 x 1.5	M 20 x 1.5	30	8	11.5	6104825	50
M 32 x 1.5	M 20 x 1.5	34	8.5	12.5	6104831	20
M 32 x 1.5	M 25 x 1.5	34	8.5	12.5	6104832	20
M 40 x 1.5	M 25 x 1.5	50	8.5	12.5	6104839	20
M 40 x 1.5	M 32 x 1.5	50	8.5	12.5	6104840	20
M 50 x 1.5	M 32 x 1.5	57	9.5	14.5	6104849	10
M 50 x 1.5	M 40 x 1.5	57	9.5	14.5	6104850	10
M 63 x 1.5	M 40 x 1.5	70	10.5	17.5	6104862	5
M 63 x 1.5	M 50 x 1.5	70	10.5	17.5	6104863	5
M 75 x 1.5	M 63 x 1.5	80	11.5	19.5	6104875	1
PG	Metric					
PG 16	M 20 x 1.5	24	7	10	6100416	50
PG 21	M 25 x 1.5	30	8	11.5	6100421	20
PG 29	M 25 x 1.5	39	9	12.5	6100429	20

Material:
 • Polycarbonate

Characteristics:
 • PG external thread
 • PG internal thread

Temperature Range PC
 -40 to 135°C (-40 to 275°F)

External thread	Internal thread	SW mm	Thread length mm (E)	Complete length mm (L)	Cat. No. Light Gray	Std. Pk.
PG 1	PG 2					
PG 7	PG 9	19	6.5	19	7004010	50
PG 9	PG 11	22	7	21.5	7004028	50
PG 11	PG 13.5	24	9	23.5	7004036	50
PG 13.5	PG 16	27	9	23	7004044	50
PG 16	PG 21	32	10	25.5	7004052	25
PG 21	PG 29	41	10	28.5	7004060	25
PG 29	PG 36	55	12	38	7004079	1
PG 36	PG 42	60	14	45	7004087	1
PG 42	PG 48	65	16	39	7004095	1



Enlarger, Polyamide

Material:

- Polyamide glass fiber reinforced

Characteristics:

- PG/Metric external thread
- PG/Metric internal thread

Temperature Range PA -30 to 100°C (-22 to 212°F)
--

External thread	Internal thread	SW mm	Thread length mm	Complete length mm	Cat. No. Light Gray	Std. Pk.
PG						
PG 7	PG 9	19	7	20	7004200	100
PG 9	PG 11	22	8	23	7004201	100
PG 11	PG 13.5	24	8	23	7004202	100
PG 13.5	PG 16	27	9	26	7004203	100
PG 16	PG 21	32	9	29	7004204	100
PG 21	PG 29	42	10	32	7004205	50
PG 29	PG 36	53	11	35.5	7004206	25
PG 36	PG 42	60	13	40.5	7004207	10
PG 42	PG 48	65	13	41	7004208	10
Metric						
M12 x 1.5	M16 x 1.5	20	8	18.5	7004300	50
M16 x 1.5	M20 x 1.5	24	8	20	7004301	50
M20 x 1.5	M25 x 1.5	30	9	22	7004302	50
M25 x 1.5	M32 x 1.5	36	10	24	7004303	20
M32 x 1.5	M40 x 1.5	44	11	26	7004304	20
M40 x 1.5	M50 x 1.5	55	12	28	7004305	20
M50 x 1.5	M63 x 1.5	70	13	31.5	7004306	10



Material:

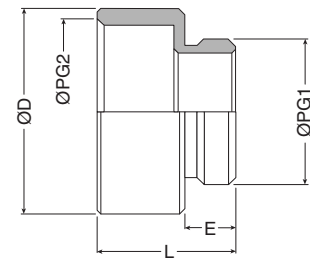
- Nickel-plated brass

Characteristics:

- PG external thread
- PG internal thread
- Round

According to DIN 259 and formerly by DIN 46320

External thread	Internal thread	Diameter mm (D)	Thread length mm (E)	Complete length mm (L)	Cat. No.	Std. Pk.
PG 1	PG 2					
PG 7	PG 9	17	5	15	6200010	50
PG 9	PG 11	20	6	16.5	6200028	50
PG 9	PG 13.5	22	6	17.5	6200036	50
PG 11	PG 13.5	22	6	17.5	6200044	50
PG 11	PG 16	24	6	18.5	6200052	25
PG 13.5	PG 16	24	6.5	19	6200060	25
PG 13.5	PG 21	30	6.5	21	6200079	20
PG 16	PG 21	30	6.5	21	6200087	20
PG 21	PG 29	39	7	23	6200095	15
PG 29	PG 36	50	8	28	6200109	10
PG 36	PG 42	57	9	31	6200117	10
PG 42	PG 48	64	10	33	6200125	10



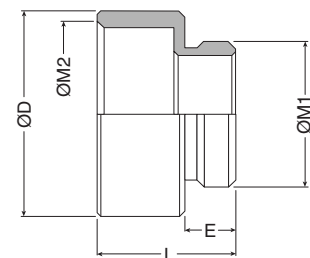
Material:

- Nickel-plated brass

Characteristics:

- Metric external thread
- Metric internal thread
- Round

External thread	Internal thread	Diameter mm (D)	Thread length mm (E)	Complete length mm (L)	Cat. No.	Std. Pk.
Metric 1	Metric 2					
M 12 x 1.5	M 16 x 1.5	18	5	15	6200212	50
M 16 x 1.5	M 20 x 1.5	22	6	17.5	6200216	50
M 20 x 1.5	M 25 x 1.5	27	6.5	19	6200220	50
M 25 x 1.5	M 32 x 1.5	34	8	20.5	6200225	20
M 32 x 1.5	M 40 x 1.5	42	7	23	6200232	20
M 40 x 1.5	M 50 x 1.5	53	9	31	6200240	10
M 50 x 1.5	M 63 x 1.5	65	9.5	24	6200250	5
M 63 x 1.5	M 75 x 1.5	80	10.5	26	6200263	1

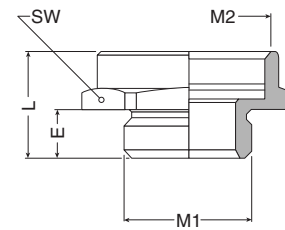


Enlarger, Nickel-Plated Brass

Material:
 • Nickel-plated brass

Characteristics:
 • Metric external thread
 • Metric internal thread
 • Hexagon

External thread	Internal thread	SW mm	Thread length mm (E)	Complete length mm (L)	Cat. No. without O-ring	Cat. No. with O-ring	Std. Pk.
Metric 1	Metric 2						
M12 x 1.5	M16 x 1.5	19	7	19	6200312	6200412	50
M16 x 1.5	M20 x 1.5	22	7	19	6200316	6200416	50
M20 x 1.5	M25 x 1.5	28	7	20	6200320	6200420	50
M25 x 1.5	M32 x 1.5	36	8	21.5	6200325	6200425	20
M32 x 1.5	M40 x 1.5	42	8.5	22	6200332	6200432	20
M40 x 1.5	M50 x 1.5	52	8.5	23	6200340	6200440	10
M50 x 1.5	M63 x 1.5	65	9.5	25	6200350	6200450	5
M63 x 1.5	M75 x 1.5	80	10.5	27.5	6200363	6200463	1



Material:

- Nickel-plated brass

Characteristics:

- PG external thread
- Metric internal thread
- Hexagon

External thread	Internal thread	SW mm	Thread length mm	Complete length mm	Cat. No.	Std. Pk.
Form A						
PG						
Metric						
PG 7	M 12 x 1.5	17	6.5	16.5	6604807	50
PG 7	M 16 x 1.5	19	6.5	16.5	6604808	50
PG 9	M 16 x 1.5	19	6.5	16.5	6604810	50
PG 9	M 20 x 1.5	22	6.5	18.5	6604811	50
PG 11	M 20 x 1.5	22	7	17	6604813	50
PG 11	M 25 x 1.5	27	7	18	6604814	50
PG 13.5	M 20 x 1.5	24	7	17	6604816	50
PG 13.5	M 25 x 1.5	27	7	18	6604817	50
PG 16	M 20 x 1.5	27	7	16	6604818	50
PG 16	M 25 x 1.5	27	7	18	6604819	50
PG 16	M 32 x 1.5	36	7	18.5	6604820	50
PG 21	M 32 x 1.5	36	8	19.5	6604822	20
PG 21	M 40 x 1.5	42	8	19.5	6604823	20
PG 29	M 40 x 1.5	42	8.5	20	6604831	20
PG 29	M 50 x 1.5	55	8.5	21	6604832	20
PG 36	M 50 x 1.5	55	8.5	21	6604837	10
PG 42	M 63 x 1.5	65	10	23.5	6604843	5
PG 48	M 63 x 1.5	65	10	24.5	6604849	5
PG 48	M 75 x 1.5	80	10	24.5	6604850	5
Form B						
PG 9	M 12 x 1.5	19	6.5	10	6604809	50
PG 11	M 16 x 1.5	22	7	11	6604812	50
PG 13.5	M 16 x 1.5	24	7	11	6604815	50
PG 21	M 25 x 1.5	32	8	13	6604821	20
PG 29	M 25 x 1.5	40	8.5	14	6604829	20
PG 29	M 32 x 1.5	40	8.5	14	6604830	20
PG 36	M 40 x 1.5	55	8.5	15	6604836	10
PG 42	M 50 x 1.5	58	10	16.5	6604842	5
PG 48	M 50 x 1.5	65	10	17	6604848	5



Form A



Form B

Adapter, Metric to PG Thread, Nickel-Plated Brass

- Material:**
- Nickel-plated brass
 - O-ring: Nitril

- Characteristics:**
- Metric external thread
 - PG internal thread
 - Hexagon

External thread	Internal thread	SW mm	Thread length mm	Complete length mm	Cat. No. without O-ring	Cat. No. with O-ring	Std. Pk.
Form A Metric							
M 12 x 1.5	PG 7	14	7	17	6604712	6604658	100
M 16 x 1.5	PG 9	18	7	17.5	6604716	6604660	50
M 16 x 1.5	PG 11	20	7	18	6604715	6604661	50
M 16 x 1.5	PG 13.5	22	7	19.5	6604709	6604662	50
M 16 x 1.5	PG 16	24	7	21.5	6604717	6604663	50
M 20 x 1.5	PG 11	22	7	18	6604720	6604666	50
M 20 x 1.5	PG 13.5	22	7	19.5	6604721	6604664	50
M 20 x 1.5	PG 16	24	7	20.5	6604722	6604667	50
M 20 x 1.5	PG 21	32	7	22.5	6604708	6604668	50
M 25 x 1.5	PG 16	27	8	21.5	6604726	6604669	50
M 25 x 1.5	PG 21	32	8	23.0	6604725	6604670	50
M 25 x 1.5	PG 29	40	8	25	6604727	6604676	20
M 32 x 1.5	PG 21	34	8.5	23.5	6604729	6604672	20
M 32 x 1.5	PG 29	40	8.5	25.0	6604732	6604681	10
M 40 x 1.5	PG 29	42	8.5	25	6604734	6604675	10
M 40 x 1.5	PG 36	50	8.5	28.0	6604740	6604685	10
M 50 x 1.5	PG 36	52	9.5	29	6604742	6604678	10
M 50 x 1.5	PG 42	58	9.5	31.5	6604750	6604689	5
M 63 x 1.5	PG 42	65	10.5	32.5	6604752	6604692	1
M 63 x 1.5	PG 48	65	10.5	32.5	6604763	6604694	1
M 75 x 1.5	PG 48	80	11.5	34.5	6604764	6604695	1
Form B							
M 16 x 1.5	PG 7	18	7	10.5	6604713	6604659	100
M 20 x 1.5	PG 9	22	7	11	6604719	6604665	50
M 25 x 1.5	PG 9	27	8	12	6604707	6604674	50
M 25 x 1.5	PG 11	27	8	12	6604723	6604671	50
M 25 x 1.5	PG 13.5	27	8	12	6604724	6604673	50
M 32 x 1.5	PG 13.5	34	8.5	12.5	6604706	6604677	20
M 32 x 1.5	PG 16	34	8.5	12.5	6604728	6604679	20
M 32 x 1.5	PG 21	34	8.5	12.5	6604730	6604680	20
M 40 x 1.5	PG 16	42	8.5	13.5	6604705	6604682	10
M 40 x 1.5	PG 21	42	8.5	13.5	6604733	6604683	10
M 40 x 1.5	PG 29	42	8.5	13.5	6604735	6604684	20
M 50 x 1.5	PG 21	52	9.5	15.5	6604704	6604686	10
M 50 x 1.5	PG 29	52	9.5	15.5	6604741	6604687	10
M 50 x 1.5	PG 36	52	9.5	15.5	6604743	6604688	10
M 63 x 1.5	PG 29	65	10.5	17.5	6604703	6604690	5
M 63 x 1.5	PG 36	65	10.5	17.5	6604751	6604691	5
M 63 x 1.5	PG 42	65	10.5	17.5	6604753	6604693	5



Form A



Form B

Adapter, PG/M to NPT Thread, Nickel-Plated Brass

Material:

- Nickel-Plated Brass

Characteristics:

- PG/Metric external thread
- NPT internal thread
- Hexagon

External thread	Internal thread	SW mm	Thread length mm	Complete length mm	Cat. No.	Std. Pk.
PG Form A						
PG 7	NPT 3/8"	19	5	19.5	6400400	50
PG 9	NPT 1/2"	24	6	24	6400401	50
PG 11	NPT 1/2"	24	6	24	6400402	50
PG 13.5	NPT 1/2"	24	6.5	24.5	6400403	50
PG 13.5	NPT 3/4"	30	6.5	25	6400404	50
PG 16	NPT 1/2"	24	6.5	24.5	6400405	50
PG 16	NPT 3/4"	30	6.5	25	6400406	50
PG 21	NPT 3/4"	30	7	23	6400407	20
PG 21	NPT 1"	36	7	30	6400408	20
PG 29	NPT 1 1/4"	50	8	32	6400410	20
PG 36	NPT 1 1/2"	55	9	34	6400412	10
PG 48	NPT 2"	64	10	35	6400415	5
Form B						
PG 29	NPT 1"	40	8	18	6400409	20
PG 36	NPT 1 1/4"	50	9	18.5	6400411	10
PG 42	NPT 1 1/2"	60	10	19.5	6400413	5
PG 48	NPT 1 1/2"	64	10	19.5	6400414	5
Metric Form A						
M16 x 1.5	NPT 3/8"	19	7	21.5	6402316	50
M16 x 1.5	NPT 1/2"	24	7	25	6402317	50
M20 x 1.5	NPT 1/2"	24	7	25	6402321	50
M25 x 1.5	NPT 3/4"	30	8	27	6402326	20
M32 x 1.5	NPT 1"	36	8.5	31	6402333	10
Form B						
M20 x 1.5	NPT 3/8"	24	7	13	6402320	50
M25 x 1.5	NPT 1/2"	30	8	15	6402325	20
M32 x 1.5	NPT 3/4"	36	8.5	15.5	6402332	10



Form A



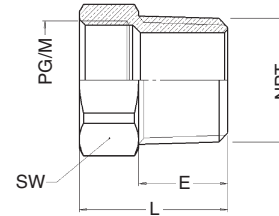
Form B

Adapter, NPT to PG/M Thread, Nickel-Plated Brass

Material:
 • Nickel-plated brass

Characteristics:
 • NPT external thread
 • PG or M internal thread
 • Hexagon

External Thread	Internal Thread	SW mm	Thread Length mm (E)	Complete Length mm (L)	Cat. No.	Std. Pk.
NPT	PG					
3/8"	PG 7	19.0	15.0	20.0	6402020	50
1/2"	PG 9	22.0	20.0	25.0	6402038	50
1/2"	PG 11	22.0	20.0	28.0	6402046	50
1/2"	PG 13.5	24.0	20.0	30.0	6402054	50
1/2"	PG 16	24.0	20.0	30.0	6402055	50
3/4"	PG 11	29.0	20.0	30.0	6402060	50
3/4"	PG 13.5	29.0	20.0	30.0	6402062	50
3/4"	PG 16	29.0	20.0	30.0	6402070	50
3/4"	PG 21	32.0	20.0	32.0	6402072	50
1"	PG 16	36.0	25.0	35.0	6402087	20
1"	PG 21	36.0	25.0	35.0	6402089	20
1"	PG 29	42.0	25.0	38.0	6402091	20
1 1/4"	PG 29	46.0	25.0	35.0	6402097	20
1 1/4"	PG 36	50.0	25.0	42.0	6402099	10
1 1/2"	PG 36	52.0	26.0	42.0	6402100	10
1 1/2"	PG 48	65.0	26.0	49.0	6402102	5
2"	PG 48	65.0	27.0	50.0	6402119	5
NPT	Metric					
3/8"	M 20	23.0	15.0	26.0	6402214	50
3/8"	M 25	28.0	15.0	27.0	6402215	50
1/2"	M 20	23.0	20.0	30.0	6402216	50
1/2"	M 25	28.0	20.0	32.0	6402217	50
1"	M 20	36.0	25.0	31.0	6402218	20
1"	M 25	36.0	25.0	31.0	6402219	20



Features:

- Self adjusting of widths across flat
- Fixing of widths across flat possible
- Ratchet function

Nut Width mm	Cat. No.	Std. Pk.
13.0 - 23.0	9000020	1
24.0 - 36.0	9000025	1



2 Piece Set with case

Nut Width mm	Cat. No.	Std. Pk.
13.0 - 23.0 & 24.0 - 36.0	9000030	1



Plug, Polyamide, Round

Material:

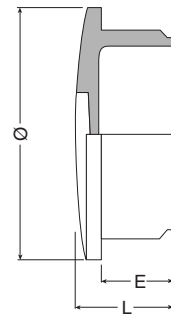
- Polyamide
- 25 % glass fiber reinforced

Characteristics:

- PG/Metric
- Round, with slot

Temperature Range PA
 -30 to 120°C (-22 to 248°F)

External thread	Diameter mm	Thread length mm (E)	Complete length mm (L)	Cat. No. Light Grey	Std. Pk.
PG					
PG 7	15	6	8	7215517	100
PG 9	19	6	9	7215525	100
PG 11	22	6	9	7215533	100
PG 13.5	25	6	9.5	7215541	100
PG 16	27	6	9.5	7215550	100
PG 21	33	8	11	7215568	100
PG 29	44	8	12	7215576	100
PG 36	55	10	15	7215584	50
PG 42	62	10	16	7215592	50
PG 48	69	12	18.5	7215606	50
Metric					
M 12 x 1.5	16	6	8	7217312	50
M 16 x 1.5	20	6	8	7217316	50
M 20 x 1.5	26	8	10.5	7217320	50
M 25 x 1.5	32	8	11	7217325	20
M 32 x 1.5	40	10	13.5	7217332	20
M 40 x 1.5	48	10	14	7217340	20
M 50 x 1.5	55	12	17	7217350	10
M 63 x 1.5	70	12	18	7217363	5



Plug, Nickel-Plated Brass, Round

Material:

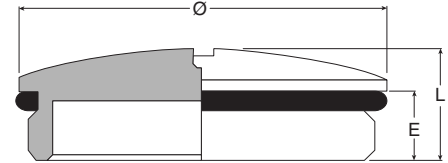
- Nickel-plated brass
- O-ring, Nitril

Characteristics:

- PG/Metric thread
- Round, with slot



External thread	Diameter mm	Thread length mm (E)	Complete length mm (L)	Cat. No.	Std. Pk.
PG					
PG 7	14	5	8	6700507	50
PG 9	17	6	9	6700509	50
PG 11	20	6	9	6700511	50
PG 13.5	22	6.5	9.5	6700513	50
PG 16	24	6.5	9.5	6700516	25
PG 21	30	7	11	6700521	20
PG 29	39	8	12	6700529	15
PG 36	50	9	15	6700536	10
PG 42	57	10	16	6700542	10
PG 48	64	10	16	6700548	10
Metric					
M 12 x 1.5	14	5	7	6700612	100
M 16 x 1.5	18	6	8	6700616	100
M 20 x 1.5	22	6.5	8.5	6700620	100
M 25 x 1.5	27	7	10	6700625	100
M 32 x 1.5	34	8	11	6700632	50
M 40 x 1.5	44	9	13	6700640	50
M 50 x 1.5	54	10	14.5	6700650	25
M 63 x 1.5	67	10	15	6700663	25



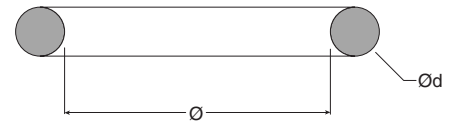
O-Ring, Perbunan

Material:
• Perbunan

Characteristics:
• PG and metric thread

Temperature Range -25 to 120°C (-13 to 248°F)

Connecting thread		Internal Diameter mm	Thickness mm (d)	Cat. No.	Std. Pk.
PG	metric				
PG 7	M 12	10	1.5	8112070	1000
PG 9	M 16	13	1.5	8112096	1000
PG 11		16	1.5	8112118	1000
PG 13.5	M 20	18	1.5	8112134	1000
PG 16		20	1.5	8112169	1000
PG 21		25	2	8112215	1000
	M 25	22	2	8112250	100
	M 32	28	2	8112320	100
PG 29		33	2	8112290	1000
	M 40	37	2	8112400	100
PG 36		43	2	8112363	1000
	M 50	48	2	8112500	100
PG 42		50	2	8112428	1000
PG 48	M 63	55	2	8112630	1000
	M 75	68	2.6	8112675	100



Flat Packing, Neoprene

Material:
• Neoprene, black

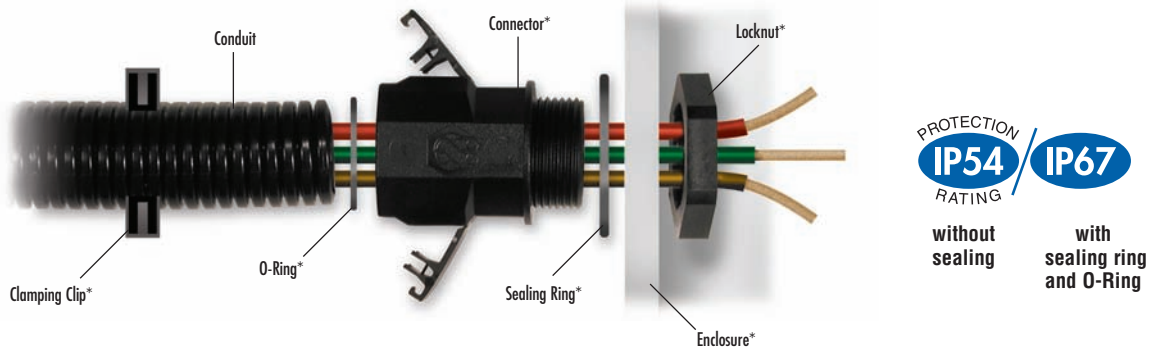
Characteristics:
• PG and metric thread

Temperature Range
-25 to 100°C (-13 to 212°F)

Connecting thread	External diameter mm	Internal diameter mm	Thickness mm	Cat. No.	Std. Pk.
PG					
PG 7	17	11.3	1.2	8113301	100
PG 9	20	13.9	1.2	8113302	100
PG 11	23	17.1	1.2	8113303	100
PG 13.5	25	19.0	1.2	8113304	100
PG 16	27	21.0	1.2	8113305	100
PG 21	34	26.6	1.5	8113306	50
PG 29	45	35.2	1.5	8113307	50
PG 36	56	45.2	1.5	8113308	50
PG 42	67	52.2	1.5	8113309	50
PG 48	72	57.7	1.5	8113310	50
Metric					
M 12	15	10	1.2	8113490	100
M 16	20	13.9	1.2	8113302	100
M 20	24	18	1.2	8113492	100
M 25	30	23	1.2	8113493	100
M 32	40	30	1.5	8113494	100
M 40	48	38	1.5	8113495	100
M 50	58	48	1.5	8113496	100
M 63	75	61	1.5	8113497	100
M 75	90	73	1.5	8113498	100



POLYFLEX® , PA 6 normal profile conduit



Material:

- Polyamide 6

Upper temperature range:

- Short-term: 150°C, (302°F)

Characteristics:

- Parallel corrugated
- Gray available

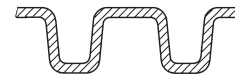
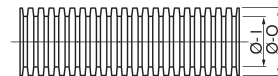
Technical properties:

- Flame retardant according to FMVSS302 and UL94
- Halogen free
- Durable
- UV resistant according to DIN EN ISO 8580

Applications:

Engine compartment, car body and interior, machines, instruments, devices, ship and train building, switch cabinet and movable machine parts.

Temperature Range PA 6
 -40 to 120°C (-40 to 248°F)



NW	Ø-I mm	Ø-O mm	Bending Radius mm	Cat. No. Black	Std. Pk.
7.5	6.7	10.0	13	1200070	50
8.5	8.4	11.7	15	1200089	50
10	9.9	13.0	20	1200100	50
12	12.2	15.7	30	1200127	50
13	12.7	15.8	35	1200135	50
14	14.2	18.5	40	1200143	50
16	15.0	18.9	45	1200160	50
17	16.6	21.2	45	1200178	50
19	19.3	24.3	50	1200194	50
22	21.3	25.4	50	1200224	50
23	23.2	28.3	55	1200232	50
26	25.8	31.2	60	1200267	25
29	29.0	34.5	65	1200291	25
37	36.0	42.4	90	1200372	25
50	47.7	54.0	100	1200500	25

Fitting conduit glands and accessories:

see pages 49-51.

* Sold separately.

Material:

- Polyamide 66

Technical properties:

- Easy and tight mounting
- Special click-in system
- Grasps from the outside
- Gray available

- Conduit can be rotated within the mounting gland
- Halogen free

Applications:

- All fields using conduit

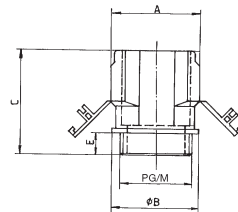
Mounting instructions:

Insert the conduit with a short twist all the way into the end of the SEM conduit gland.



Temperature Range PA 6
-25 to 100°C (-13 to 212°F)

Thread	Fits for NW	E mm	SW mm	A mm	B mm	C mm	Cat. No. Black	Std. Pk.
PG								
PG 7	8.5	10	15	20.2	16	39	3800075	50
PG 7	12	10	19	24	21	40.3	3802070	50
PG 9	10	10	18	21.3	20	39.5	3800091	50
PG 9	12	10	19	24	21	40.3	3802091	50
PG 11	12	10	19	24	20.8	40.5	3800113	50
PG 11	13	10	20	24.8	22	40	3800114	50
PG 13.5	10	7	22	26.7	23.6	40	3802132	50
PG 13.5	14	10	22	26.7	23.6	40	3800130	50
PG 16	17	10	26	29.6	28.9	40.6	3800164	50
PG 21	22	11	30	35	34	46	3800211	25
PG 21	23	11	32	37.6	35	47.7	3800210	25
PG 29	29	12	41	45.2	45	53.8	3800296	20
PG 36	37	12	50	54	56.8	57.4	3800369	10
PG 48	50	12	64	65.3	72	57.5	3800482	5
Metric								
M 12 x 1.5	10	10	18	21.9	20	40	3803410	50
M 16 x 1.5	10	15	18	21.8	19.8	45	3803413	50
M 16 x 1.5	13	15	19	24	20.9	40	3803412	50
M 20 x 1.5	17	15	26	30	29	40	3803418	50
M 25 x 1.5	22	15	30	34.7	33.8	50	3803434	25
M 25 x 1.5	23	15	30	38.2	35	52	3803424	25
M 32 x 1.5	29	12	41	45	44.6	54	3803429	20



according to EN 60 423

M 12 x 1.5	M 12	11	16	20.2	16	39	3803120	50
M 16 x 1.5	M 16	10	19	23.9	20.3	41	3803163	50
M 20 x 1.5	M 20	10	24	28	25.5	41	3803201	25
M 25 x 1.5	M 25	11	30	33.3	32.2	48	3803252	50
M 32 x 1.5	M 32	10	41	45.2	45	54	3803325	20

Notes:

- * Without sealing ring
- ** With sealing ring and flat packing, see pages 51 & 47.

Conduit Gland SEM/W-angled 90°, quick-mounting system for Polyflex PA 6 conduit

Material:

- Polyamide 66

Technical properties:

- Easy and tight mounting
- Special click-in system
- Grasps from the outside

- Gray available

- Conduit can be rotated within the mounting gland
- Halogen free

Applications:

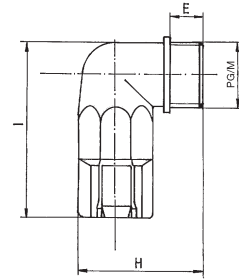
All fields using conduit

Mounting instructions:

Insert the conduit with a short twist all the way into the end of the SEM conduit gland.



Temperature Range PA 6 -25 to 100°C (-13 to 212°F)
--



Thread	Fits NW	E mm	I mm	H mm	Cat. No. Black	Std. Pk.
PG						
PG 7	8.5	10	46	32	7303076	25
PG 9	10	10	53	35	7303092	25
PG 11	12	10	54.5	35.5	7303114	25
PG 13.5	14	10	58.5	39.5	7303130	25
PG 16	17	11	59	42.5	7303165	25
PG 21	23	11	74	49.5	7303211	25
PG 21	22	11	73	49.5	7303212	25
PG 29	29	12	89	59	7303297	10
PG 36	37	12	107	70	7303360	5
PG 48	50	13	121	85	7303483	5
Metric						
M 16 x 1.5	10	15	55	40	7303717	25
M 16 x 1.5	13	15	56	40.5	7303718	25
M 20 x 1.5	17	15	62	47	7303721	25
M 25 x 1.5	22	15	77	53.5	7303726	25
M 32 x 1.5	29	15	93	62.5	7303733	10

according to EN 60 423

M 12 x 1.5	M 12	10	52	33.5	7303712	25
M 16 x 1.5	M 16	10	56	35	7303716	25
M 20 x 1.5	M 20	10	62	40	7303720	25
M 25 x 1.5	M 25	11	77	49	7303725	25
M 32 x 1.5	M 32	15	93	58	7303732	10

Notes:

- * Without sealing ring
- ** With sealing ring and flat packing, see pages 51 & 47.

O-Ring for Corrugated Tubes and Clamping Clips

Material:

- Perbunan

Characteristic feature:

- Shore: 70 ± 5

Feature:

The O-ring must be mounted into the first groove of the conduit

The conduit, with its pre-mounted sealing ring, must be inserted into the SEM gland and simply twisted into the end.

Temperature Range

-25 to 100°C (-13 to 212°F)

Fits for NW	Internal Diameter mm	Thickness mm	Cat. No.	Std. Pk.
8.5	9.0	1.0	8112600	100
10	8.9	1.25	8112601	100
12	8.5	1.5	8112602	100
13	8.1	1.6	8112603	100
14	12.5	1.5	8112604	100
17	15.0	1.5	8112605	100
22	15.0	1.5	8112606	100
23	17.0	2.5	8112607	100
29	23.0	2.5	8112608	100
37	23.0	2.5	8112609	100
50	31.0	2.5	8112610	100



Clamping clip for conduit tubes

Material:

- Polyamide

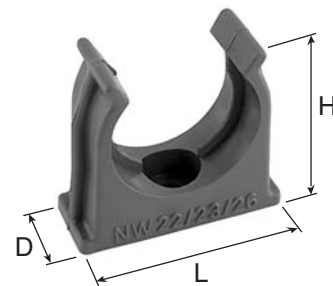
Color:

- Black

Temperature Range

-25 to 100°C (-13 to 212°F)

Suitable for NW	L mm	H mm	D mm	Cat. No.	Std. Pk.
8.5/10	30.0	23.0	13.0	8218102	100
12/13	30.0	23.0	13.0	8218137	100
14	31.0	24.0	13.0	8218140	100
17	35.0	30.0	15.0	8218170	100
22/23/26	42.0	38.0	16.0	8218234	100
29	51.0	49.0	16.0	8218293	50
37	61.0	51.0	18.0	8218374	50
50	74.0	64.0	19.0	8218501	50



Technical Annex, Chemical resistance of plastic materials

Reagents	Concentration %	at temp. +°C	Poly-amide	Poly-amide	Poly-amide	Thermo-plastic Polyurethane	Poly-propylene	Poly-ethylene	Poly-ethylene	Poly-styrene	Thermo-plastic elastomere	Nitrile-butadiene-rubber
			PA 6	PA 66	PA 12	PU	PP	HD-PE	LD-PE	PS	TPE	NBR
Acetaldehyde	40	20	o	o	+		+					20°C o
Acetic acid	100	20					+	+	+			o
Acetone	100	20	+	+	+	-	+	o	o			-
Acrylic acid	100	> 30	-	-	-							-
Allyl alcohol	96	20	o	o	+		+	+	+	20% +		
Alum, hydrous	dilute	40					+	+	+	+		20°C +
Aluminium chloride, hydrous	dilute	40					+	+	+	+		20°C +
Aluminium sulphate, hydrous	dilute	40					+	+	+	+		20°C +
Ammonia solution, hydrous	saturated	20	20% +	20% +	20% +		+	+	+	20% +		
Ammonium chloride, hydrous	saturated	60				3% o	+	+	+			20% +
Ammonium nitrate, hydrous	dilute	40					+	+	+	+		20% +
Ammonium sulphate, hydrous	dilute	40					+	+	+			-
Aniline hydrochloride, hydrous	saturated	20					+	o	o			
Aniline, pure	100	20	o	o	o		+	+	+	-	+	
Benzaldehyde, hydrous	saturated	20	pure o	pure o	pure o		+			-		-
Benzine	100	20	+	+	+		o	+	o	-	o	+
Benzoic acid, hydrous	any	40	20% o	20% o			+	+	+	+		-
Benzole	100	20	+	+	+		o	o	o	-		-
Bleaching liquor	12,5 Cl	20	-	-	o	3% -	+	+	+	+		-
Borax, hydrous	dilute	40					+	+	+	+		20% o
Boric acid, hydrous	dilute	40	o	o	o	3% o	+	+	+			20% +
Bromine, liquid	100	20	-	-	-		-	-	-	-	-	-
Butanediol, hydrous	to 10	20	pure +	pure +			+	+	+			
Butanol	to 100	20					+	+	+	+		+
Butylacetate	100	20	+	+	+		o	o	o	-		-
Calcium chloride, hydrous	saturated	40	+	+	+		+	+	+	+		20% +
Carbon bisulphide	100	20	+	+	+		+	o	o	-		-
Carbon dioxide	100	60	+	+	+							20% +
Carbon dioxide, dry	100	60					+	+	+	50°C +		20% +
Carbon tetrachloride	100	20	+	+	+		-	o	-	-		
Caustic potash solution, hydrous	50	20	+	+	+		+	+	+	+	10% +	
Caustic soda lye, hydrous	10	20	+	+	+	3% o	+	+	+	+	50% +	
Chlorine	any	20	-	-	-		-	-	-	-		-
Chrome alum, hydrous	dilute	40					+	+	+			20% +
Citric Acid	to 10	40	20% +	20% +	20% +	3% o	+	+	+	+		20% +
Cooling liquids DIN 53521		120	o	o								
Copper monochloride, hydrous	saturated	20					+	+	+			+
Copper sulphate, hydrous	saturated	60					+	+	+			20% +
Cresol, hydrous	to 90	20	pure -	pure -			+	+	o	o		-
Cyclohexanol	-	20	+	+	+		+	+	+	+		+
Diesel fuel		85	+	+	+	20% +	20% +	20% +	20% +			
Drilling oil			+	+	+							
Ethanoic acid	10	20	o	o	+	3% o	+	+	+	o	+	
Ethyl alcohol, hydrous	10	20	40 Vol.%+	40 Vol.%+	40 Vol.%+		+				+	+
Ethyl dichloride	100	20					o	-	-			-
Ethyl ether	100	20					o					o
Ethylene oxide, liquid	100	20					o					
Ferric cyanide, hydrous	saturated	60					+	+	+			
Ferrous chloride, hydrous, indiff.	10	20	+	+		+	+	+	+		+	
Fluorine	50	40	pure -	pure -	pure -		-	-	-			
Formaldehyde, hydrous	dilute	40	pure +	pure +	pure +		40% +	40% +	40% +	30% +		20°C o
Formic acid, hydrous	10	20	o	o	+		+	+		+		
Glucose, hydrous	any	50					+	+	+			
Hydraulic fluid, hardly inflammable		80	+	+	+							
Hydraulic oil H and HL (DIN 51524)		100	+	+	+							

	Concentration %	at temp. +°C	Poly-amide	Poly-amide	Poly-amide	Thermo-plastic Polyurethane	Poly-propylene	Poly-ethylene	Poly-ethylene	Poly-styrene	Thermo-plastic elastomere	Nitrile-butadiene-rubber
Reagents			PA 6	PA 66	PA 12	PU	PP	HD-PE	LD-PE	PS	TPE	NBR
Hydrobromic acid, hydrous	to 10	40	-	-	-		+	+	+			-
Hydrochloric acid, hydrous	30	20	20% -	20% -	20% -	3% -	+	+	+	15% +	10% +	o
Hydrogen	100	60	20°C +	20°C +	20°C +		+	+	+			20°C +
Hydrosilicofluoric acid, hydrous	to 30	20	-	-			+	+	+			
Hydroxylamine sulphate, hydrous	to 12	30					+					
Kerosine	100	80	+	+	+		20°C +	20°C +	20°C o	-		
Lactic acid, hydrous	to 90	20	10% +	10% +	10% +	3% o	+	+	+	80% +		+
Lubricating grease, base diester oil		110	o	o								
Lubricating grease (base polyphenyle ester)		110	+	+	+							
Lubricating grease, base silicone oil		110	+	+	+							
Magnesium carbonate, hydrous saturated		100					+			50°C +		
Magnesium chloride, hydrous saturated		20	10% +	10% +	10% +		+	+	+	+		+
Mercury	pure	20	+	+	+		+	+	+	+		+
Methyl alcohol	100	20	+	+	+		40°C +	+	+	+	+	+
Methylene chloride	100	20	o	o	o		o	o	-			
Mineral oil			+	+	+		20°C +	20°C +	20°C +			
Nickel chloride, hydrous saturated		20	10% o	10% o	10% o		+			+		+
Nickel sulphate, hydrous saturated		20	10% o	10% o	10% o		+	+	+			+
Nitric acid, hydrous	50	20	-	-	-	3% -	o	o	o	30% +		-
Nitro glycerin	dilute	20						-	-			
Oil and grease		20	+	+	+		o				o	
Oleic acid	-	20	+	+	+		+	+	+	+		o
Oxalic acid	any	20	10% o	10% o	10% o	3% o	+	+	+	+		o
Ozone	pure		-	-	-		o	o	o			
Phosgene, gaeous	100	20					o	o	o			
Phoshoric acid, hydrous dilute		20	10% -	10% -	10% -	3% o	+	+	+	86% +		-
Phosphorus pentoxide	100	20					+					
Potassium bromide, hydrous any		20	10% +	10% +	10% +		+	+	+	+		
Potassium chloride, hydrous 10		20	+	+	+		+	+	+	+		+
Potassium dichromate, hydrous 40		20	5% o	5% o	5% o		+	+	+			+
Potassium nitrate, hydrous any		20	10% +	10% +	10% +		+	+	+	+		+
Potassium permanganate, hydrous saturated		20					+			+		
Sea water		40	+	+	+	20°C +	+	+	+	+	+	20°C +
Soap solution, hydrous any		20	dilute +	dilute +	dilute +		+	+	+			+
Sodium chlorate, hydrous saturated		20	10% o	10% o	10% o		+	+	+			
Sodium sulphide, hydrous dilute		40					+	+	+			
Sulphuric acid, hydrous 10		20	-	-	-	3% -	50% +	50% +	50% +	+	98% +	-
Tin dichloride, hydrous dilute		40					+	+	+	-	10% +	20°C +
Toluene	100	20	+	+	+	-		o	o	o		-
Trichloroethylene	100	20	o	o	o		o	o	-			
Urea, hydrous to 10		40	20% +	20% +	20% +		+	+	+	+		
Vinyl acetate	100	20					+					
Waste gas-, containing carbon dioxide any		60						+	+			
Waste gas-, containing SO2 low		60						+	+			
Xylene	100	20	+	+	+		-	o	o	-		-
Zinc chloride, hydrous dilute		60	10% o	10% o			+	+	+	50°C +		20°C +
Zinc sulphate, hydrous dilute		60					+	+	+			20°C +

Source: *Plastic Table*, B. Carlowitz, Carl Hanser Verlag, et. al.

The above mentioned data enable a preselection. However it is not the use of the data, to promise definite properties of the products or their suitability for a concrete application purpose. The data doesn't release the purchaser to control the quality conformance.

CHART I International Protection (IP) Ratings to IEC 529

Protection Modes to EN 60529 DIN VDE 0470 Part 1			Second Digit – Degree of Water Protection								
			IP X0 No Protection	IP X1 Protection against dripping water falling vertically	IP X2 Protection against dripping water even when tilted 15° vertically	IP X3 Protection against dripping water even when tilted 60°	IP X4 Protection against splashing water from any direction	IP X5 Protection against water jets from any direction	IP X6 Protection against heavy seas from any direction	IP X7 Protection against effects of immersion	IP X8 Protection against submersion
First Digit	Person touching	Protection against penetration of foreign bodies									
	IP 0X	No protection	No protection	IP 00							
IP 1X	Protection against touching with the hand	Protection against large solid bodies > 50mm Ø	IP 10	IP 11	IP 12						
IP 2X	Protection against touching with the finger	Protect. against med., solid bodies > 12.5 mm Ø	IP 20	IP 21	IP 22	IP 23					
IP 3X	Protection against touching with tools, wires, etc., > 2.5 mm Ø	Protection against small, solid bodies > 2.5 mm Ø	IP 30	IP 31	IP 32	IP 33	IP 34				
IP 4X	Protection against touching with tools, wires, etc., > 1 mm Ø	Protection against small, solid bodies > 1 mm Ø	IP 40	IP 41	IP 42	IP 43	IP 44				
IP 5X	Protection against touching with tools, wires, etc., > 1 mm Ø	Protection against internal dust accumulation	IP 50				IP 54	IP 55			
IP 6X	Protection against touching with tools, wires, etc., > 1 mm Ø	Protection against all dust penetration	IP 60					IP 65	IP 66	IP 67	IP 68

In some countries a third digit is added. It gives information about the mechanical properties of the equipment. This designation has not yet been standardized according to current DIN and IEC regulations. Devices in this catalogue correspond to digit IP .7.

CHART II NEMA / IP Cross Reference

The chart below provides a cross-reference from NEMA to International Protection (IP) Ratings. This cross-reference is an approximation based on the most current information available. It is not sanctioned by NEMA, IEC, or any other regulatory body. This chart should be used only as a guideline.

IEC 529 Protection Ratings	NEMA Ratings									
	1	2	3	3R	4	4X	5	6	12	13
IP 00	↓									
IP 10		↓								
IP 11										
IP 20										
IP 21										
IP 22										
IP 23										
IP 30										
IP 31				↓						
IP 32										
IP 33										
IP 40										
IP 41										
IP 42										
IP 43										
IP 50										
IP 51							↓			
IP 52										
IP 53										
IP 54										
IP 55										
IP 56										
IP 60										
IP 61										
IP 62			↓							
IP 63										
IP 64										
IP 65										
IP 66					↓	↓				
IP 67								↓		
IP 68									↓	

CHART III International Protection (IP) Ratings to IEC 262

The standard EN 50 262 was issued on 01.04.1998 and published in April 1999 in Germany as DIN-EN 50 262/VDE 0619. The well-known standards for cable glands, such as DIN VDE 0619 (VDE 0619): 1987-09, DIN 46 319: 1989-12, DIN 46 320-1: 1985-09 and DIN 46 320-2...-4: 1973-01 etc, are only applicable until 31.12.1999. Approved technical drawings using these standards are valid until 01.03.2001.

- 1.) Fields of application for standard EN 50 262: This European standard contains the requirements and tests for the construction and design of metric cable glands. This standard covers the cable gland as a complete part, but not the parts of cable glands.
- 2.) The screw-in thread of cable glands must be constructed according to chart 1 of EN 60 423. The dimensions of the thread are M6x0,75; M8x1; M10x1; M12x1.5; M16x1.5; M20x1.5; M25x1.5; M32x1.5; M40x1.5; M50x1.5; M63x1.5 and M75x1.5.
- 3.) The mounting holes must be dimensioned according to **Chart A**.
- 4.) Cable glands must be able to guarantee the retaining power for cables and conduits for the complete sealing section. Cable glands with traction relief for cables and conduits must free the conduits from the load of tension and twist. The tests are carried out, with in each case the smallest and largest mentioned value of the seal resp. tension relief section of the according loads and torque values in **Chart B**.

These tests are performed with test pins reproducing the outer diameters of the cables and conduits. The test pins consist of a metal rod with an elastomere sheath.

- 5.) Cable glands must be impact resistant. A test pin according to the smallest value of the sealing section is fastened to the test probe and then the test is carried out a lowest temperature according to the energy in accordance with category of **Chart C**. All specifications, charts and values are excerpts from standard DIN 50 262. Obviously further tests (electric properties, IP-Code etc.), which are necessary to classify and mark cable glands are described in this standard. It would although go beyond the scope of this catalogue.

Chart A: Mounting holes for cable glands								
Thread size	12	16	20	25	32	40	50	63
Diameter of	M12	M16	M20	M25	M32	M40	M50	M63
Mounting hole								
+ 0,2/- 0,4 mm	12,5	16,5	20,5	25,5	32,5	40,5	50,5	63,5

Chart B: Tensile load for retaining power and tension relief, torque for turning tests				
Cable and Conduit diameter	Retaining Power	Tensile relief Type A	Tensile relief Type B	Torque Type A and B
[mm]	[N]	[N]	[N]	[Nm]
bis 4	5	-	-	-
> 4 bis 8	10	30	75	0,10
> 8 bis 11	15	42	120	0,15
> 11 bis 16	20	55	130	0,35
>16 bis 23	25	70	140	0,60
> 23 bis 31	30	80	250	0,80
> 31 bis 43	45	90	350	0,90
> 43 bis 55	55	100	400	1,00
> 55	70	115	450	1,20

Chart C: Value for impact test								
Categorie	1	2	3	4	5	6	7	8
Load [N]	2	2	2	2	10	10	10	20
Weight [Kg]	0,2	0,2	0,2	0,2	1,0	1,0	1,0	2,0
Energy [J]	0,2	0,5	1,0	2,0	4,0	7,0	10,0	20,0
Height [m]	0,1	0,25	0,5	1,0	0,4	0,7	1,0	1,0

CHART IV Tightening torque for cable glands according to standard DIN VDE 0619

In casing with female thread respectively hole with lock nut.

Pressure screws may be tightened with max 21/43 of the tightening torque according to the chart.

Note:

The values in the chart serve as a general guideline, the exact procedure depends upon the material.

Nominal size	Metal	Plastic moulded parts
	Tightening torque [Nm]	Tightening torque [Nm]
Pg 7	6,25	2,5
Pg 9	6,25	3,75
Pg 11	6,25	3,75
Pg 13,5	6,25	3,75
Pg 16	7,5	5,0
Pg 21	10,0	7,5
Pg 29	10,0	7,5
Pg 36	10,0	7,5
Pg 42	10,0	7,5
Pg 48	10,0	7,5

Index

Part No.	Page	Part No.	Page	Part No.	Page	Part No.	Page	Part No.	Page
1200070	48	4006500	25	4220612	5	4221740	12	4224390	13
1200089	48	4006550	25	4220616	5	4221750	12	4224700	13
1200100	48	4009100	27	4220620	5	4221760	12	4224705	13
1200127	48	4009207	27	4220625	5	4222012	16	4224706	13
1200135	48	4009304	27	4220632	5	4222016	16	4224707	13
1200143	48	4009401	27	4220640	5	4222017	16	4224710	13
1200160	48	4009509	27	4220650	5	4222020	16	4224711	13
1200178	48	4009550	27	4220663	5	4222021	16	4224715	13
1200194	48	4009606	27	4220712	5	4222025	16	4224716	13
1200224	48	4009658	27	4220716	5	4222026	16	4224717	13
1200232	48	4009695	27	4220720	5	4222033	16	4224720	13
1200267	48	4103312	26	4220725	5	4222041	16	4224721	13
1200291	48	4103316	26	4220732	5	4222050	16	4224722	13
1200372	48	4103320	26	4220740	5	4222063	16	4224726	13
1200500	45	4103321	26	4220750	5	4222075	16	4224727	13
3800075	49	4103325	26	4220763	5	4222091	16	4224751	13
3800091	49	4103332	26	4220800	5	4222113	16	4224755	13
3800113	49	4103340	26	4220801	5	4222130	16	4224775	13
3800114	49	4103350	26	4220802	5	4222164	16	4224776	13
3800130	49	4103363	26	4220803	5	4222210	16	4224780	13
3800164	49	4103516	27	4220810	5	4222296	16	4224781	13
3800210	49	4103520	27	4220811	5	4222369	16	4224782	13
3800211	49	4103521	27	4220812	5	4222423	16	4224783	13
3800296	49	4103525	27	4220813	5	4222482	16	4224784	13
3800369	49	4103532	27	4221000	12	4224001	12	4224785	13
3800482	49	4103540	27	4221001	12	4224002	12	4224786	13
3802070	49	4103550	27	4221002	12	4224003	12	4224787	13
3802091	49	4103563	27	4221003	12	4224004	12	4224790	13
3802132	49	4104312	24	4221004	12	4224005	12	4248404	14
3803120	49	4104316	24	4221005	12	4224006	12	4248405	14
3803163	49	4104320	24	4221006	12	4224101	12	4248407	14
3803201	49	4104321	24	4221007	12	4224102	12	4248409	14
3803252	49	4104325	24	4221008	12	4224103	12	4248529	14
3803325	49	4104332	24	4221009	12	4224104	12	4248531	14
3803410	49	4104340	24	4221039	12	4224105	12	4248539	14
3803412	49	4104350	24	4221040	12	4224106	12	4248541	14
3803413	49	4104363	24	4221041	12	4224107	12	4248542	14
3803418	49	4104516	25	4221042	12	4224108	12	4248543	14
3803424	49	4104520	25	4221043	12	4224109	12	4248610	14
3803429	49	4104521	25	4221044	12	4224300	13	4248612	14
3803434	49	4104525	25	4221045	12	4224305	13	4248614	14
4000005	24	4104532	25	4221046	12	4224306	13	4248627	14
4000102	24	4104540	25	4221047	12	4224307	13	4248629	14
4000200	24	4104550	25	4221048	12	4224310	13	4248631	14
4000307	24	4104563	25	4221049	12	4224311	13	4248632	14
4000404	24	4220307	5	4221050	12	4224315	13	4248634	14
4000501	24	4220309	5	4221079	12	4224316	13	4248640	14
4000552	24	4220311	5	4221095	12	4224317	13	4248641	14
4000609	24	4220313	5	4221117	12	4224320	13	4248642	14
4000650	24	4220316	5	4221133	12	4224321	13	4248643	14
4000706	24	4220321	5	4221168	12	4224322	13	4248644	14
4001001	26	4220329	5	4221214	12	4224326	13	4248645	14
4001109	26	4220336	5	4221290	12	4224327	13	4248646	14
4001206	26	4220342	5	4221362	12	4224351	13	4248647	14
4001303	26	4220348	5	4221427	12	4224355	13	4248648	14
4001400	26	4220351	5	4221486	12	4224375	13	4248649	14
4001508	26	4220352	5	4221714	12	4224376	13	4248650	14
4001559	26	4220353	5	4221716	12	4224380	13	4248651	14
4001605	26	4220354	5	4221717	12	4224381	13	4248652	14
4001656	26	4220355	5	4221720	12	4224382	13	4248653	14
4001702	26	4220356	5	4221721	12	4224383	13	4248654	14
4006100	25	4220357	5	4221725	12	4224384	13	4248655	14
4006208	25	4220358	5	4221726	12	4224385	13	4248656	14
4006305	25	4220359	5	4221732	12	4224386	13	4248657	14
4006402	25	4220360	5	4221733	12	4224387	13	4248658	14

Part No.	Page	Part No.	Page	Part No.	Page	Part No.	Page	Part No.	Page
4248659	14	4249600	15	4249690	15	4276150	20	5211113	7
4248660	14	4249601	15	4249691	15	4276160	20	5211116	7
4248661	14	4249602	15	4249692	15	4276170	20	5211121	7
4248662	14	4249603	15	4249693	15	4276180	20	5211129	7
4248663	14	4249604	15	4249694	15	4276195	20	5211307	7
4248664	14	4249610	15	4249695	15	4276210	20	5211309	7
4248665	14	4249611	15	4249696	15	4276225	20	5211311	7
4248666	14	4249612	15	4249697	15	4276240	20	5211313	7
4248667	14	4249613	15	4249698	15	4276250	20	5211316	7
4248668	14	4249614	15	4249699	15	4276270	20	5211321	7
4248669	14	4249615	15	4249701	15	4276290	20	5211329	7
4248670	14	4249616	15	4264007	18	4276310	20	5211416	7
4248671	14	4249617	15	4264009	18	4276350	20	5211420	7
4248672	14	4249618	15	4264011	18	4305078	21	5211421	7
4248673	14	4249619	15	4264013	18	4305094	21	5211425	7
4248674	14	4249620	15	4264016	18	4305116	21	5211432	7
4248675	14	4249621	15	4264021	18	4305132	21	5211616	7
4248677	14	4249622	15	4264029	18	4305167	21	5211620	7
4248678	14	4249623	15	4264036	18	4305213	21	5211621	7
4248679	14	4249624	15	4264112	18	4305299	21	5211625	7
4248680	14	4249625	15	4264116	18	4305361	21	5211632	7
4248681	14	4249626	15	4264117	18	4305426	21	5306007	22
4248682	14	4249627	15	4264120	18	4305485	21	5306009	22
4248683	14	4249628	15	4264121	18	4305500	21	5306011	22
4248684	14	4249640	15	4264125	18	4305501	21	5306012	22
4248685	14	4249641	15	4264126	18	4305502	21	5306013	22
4248686	14	4249642	15	4264132	18	4305503	21	5306014	22
4248687	14	4249643	15	4264133	18	4305504	21	5306016	22
4248688	14	4249644	15	4264134	18	4305505	21	5306017	22
4248689	14	4249645	15	4264135	18	4305506	21	5306030	22
4248690	14	4249647	15	4266003	19	4305507	21	5306031	22
4248691	14	4249648	15	4266004	19	4305508	21	5306032	22
4248692	14	4249649	15	4266005	19	4305509	21	5306033	22
4248693	14	4249650	15	4266006	19	4305510	21	5306050	22
4248694	14	4249651	15	4266007	19	4305511	21	5306051	22
4248695	14	4249652	15	4266008	19	4305512	21	5306052	22
4248696	14	4249654	15	4266010	19	4305513	21	5306107	22
4248697	14	4249655	15	4266011	19	4305514	21	5306109	22
4248698	14	4249656	15	4266013	19	4305515	21	5306111	22
4248699	14	4249659	15	4266014	19	4308093	21	5306112	22
4248700	14	4249660	15	4266015	19	4308115	21	5306113	22
4248701	14	4249661	15	4266016	19	4308131	21	5306114	22
4248702	14	4249662	15	4266018	19	4308166	21	5306116	22
4248703	14	4249663	15	4266020	19	4308212	21	5306117	22
4248704	14	4249664	15	4266021	19	4308298	21	5306130	22
4248705	14	4249670	15	4266022	19	4308516	21	5306131	22
4248706	14	4249671	15	4266023	19	4308520	21	5306132	22
4248707	14	4249672	15	4266024	19	4308521	21	5306133	22
4248708	14	4249673	15	4266025	19	4308525	21	5306150	22
4248709	14	4249674	15	4266028	19	4308526	21	5306151	22
4248710	14	4249675	15	4266029	19	4308532	21	5306152	22
4248711	14	4249676	15	4266031	19	4308533	21	5308507	4
4248712	14	4249677	15	4266033	19	5202078	23	5308509	4
4248713	14	4249678	15	4266035	19	5202094	23	5308511	4
4248714	14	4249679	15	4276040	20	5202116	23	5308513	4
4248715	14	4249680	15	4276050	20	5202132	23	5308516	4
4248716	14	4249681	15	4276060	20	5202167	23	5308521	4
4248717	14	4249682	15	4276070	20	5202213	23	5308529	4
4248719	14	4249683	15	4276080	20	5202299	23	5308536	4
4248720	14	4249684	15	4276090	20	5202361	23	5308537	4
4248721	14	4249685	15	4276100	20	5202434	23	5308538	4
4248722	14	4249686	15	4276110	20	5202485	23	5308707	4
4248723	14	4249687	15	4276120	20	5211107	7	5308709	4
4248724	14	4249688	15	4276130	20	5211109	7	5308711	4
4248725	14	4249689	15	4276140	20	5211111	7	5308713	4

Index

Part No.	Page	Part No.	Page	Part No.	Page	Part No.	Page	Part No.	Page
5308716	4	5309213	4	5315215	9	5315630	9	5315820	9
5308721	4	5309216	4	5315216	9	5315631	9	5315821	9
5308729	4	5309221	4	5315217	9	5315632	9	5315822	9
5308736	4	5309229	4	5315218	9	5315633	9	5315823	9
5308737	4	5309236	4	5315219	9	5315634	9	5315824	9
5308738	4	5309242	4	5315220	9	5315635	9	5315825	9
5308900	4	5309248	4	5315221	9	5315636	9	5315826	9
5308901	4	5309612	4	5315222	9	5315637	9	5315827	9
5308902	4	5309615	4	5315289	9	5315638	9	5315828	9
5308903	4	5309616	4	5315290	9	5315639	9	5315829	9
5308904	4	5309619	4	5315291	9	5315640	9	5315830	9
5308905	4	5309620	4	5315292	9	5315641	9	5315831	9
5308906	4	5309624	4	5315293	9	5315642	9	5315832	9
5308907	4	5309625	4	5315294	9	5315650	9	5315833	9
5308910	4	5309632	4	5315295	9	5315651	9	5315834	9
5308911	4	5309640	4	5315296	9	5315652	9	5315835	9
5308912	4	5309650	4	5315297	9	5315653	9	5315836	9
5308913	4	5309663	4	5315500	9	5315654	9	5315837	9
5308914	4	5309712	4	5315501	9	5315655	9	5315838	9
5308915	4	5309715	4	5315502	9	5315656	9	5315839	9
5308916	4	5309716	4	5315503	9	5315658	9	5315840	9
5308917	4	5309719	4	5315504	9	5315659	9	5315841	9
5308920	4	5309720	4	5315510	9	5315660	9	5315842	9
5308921	4	5309724	4	5315515	9	5315661	9	5315850	9
5308922	4	5309725	4	5315516	9	5315662	9	5315851	9
5308923	4	5309732	4	5315520	9	5315663	9	5315852	9
5308924	4	5309740	4	5315521	9	5315664	9	5315853	9
5308925	4	5309750	4	5315522	9	5315665	9	5315854	9
5308926	4	5309763	4	5315523	9	5315666	9	5315855	9
5308927	4	5313610	7	5315524	9	5315667	9	5315856	9
5308940	4	5313611	7	5315525	9	5315668	9	5315857	9
5308941	4	5313612	7	5315526	9	5315669	9	5315858	9
5308942	4	5313613	7	5315527	9	5315670	9	5315859	9
5308943	4	5313614	7	5315528	9	5315671	9	5315860	9
5308944	4	5313615	7	5315529	9	5315672	9	5315861	9
5308945	4	5313616	7	5315530	9	5315673	9	5315862	9
5308946	4	5313620	7	5315531	9	5315674	9	5315863	9
5308947	4	5313621	7	5315532	9	5315675	9	5315864	9
5308948	4	5313622	7	5315540	9	5315676	9	5315865	9
5308949	4	5313623	7	5315542	9	5315677	9	5315866	9
5308950	4	5313624	7	5315543	9	5315678	9	5315867	9
5308951	4	5313625	7	5315544	9	5315679	9	5315868	9
5308952	4	5313626	7	5315545	9	5315683	9	5315869	9
5308953	4	5313640	7	5315546	9	5315684	9	5315870	9
5308954	4	5313641	7	5315547	9	5315690	9	5315871	9
5308955	4	5313642	7	5315600	9	5315691	9	5315872	9
5308956	4	5313643	7	5315601	9	5315692	9	5315873	9
5308957	4	5313644	7	5315610	9	5315693	9	5315874	9
5308958	4	5313650	7	5315611	9	5315694	9	5315875	9
5308959	4	5313651	7	5315612	9	5315695	9	5315876	9
5308960	4	5313652	7	5315613	9	5315696	9	5315877	9
5308962	4	5313653	7	5315614	9	5315697	9	5315878	9
5309107	4	5313654	7	5315615	9	5315698	9	5315879	9
5309109	4	5315110	9	5315616	9	5315699	9	5315880	9
5309111	4	5315111	9	5315617	9	5315700	9	5315881	9
5309113	4	5315112	9	5315620	9	5315800	9	5315891	9
5309116	4	5315113	9	5315621	9	5315801	9	5315892	9
5309121	4	5315114	9	5315622	9	5315810	9	5315893	9
5309129	4	5315130	9	5315623	9	5315811	9	5315894	9
5309136	4	5315160	9	5315624	9	5315812	9	5315895	9
5309142	4	5315210	9	5315625	9	5315813	9	5315896	9
5309148	4	5315211	9	5315626	9	5315814	9	5315897	9
5309207	4	5315212	9	5315627	9	5315815	9	5315898	9
5309209	4	5315213	9	5315628	9	5315816	9	5315899	9
5309211	4	5315214	9	5315629	9	5315817	9	5315900	9

Part No.	Page	Part No.	Page	Part No.	Page	Part No.	Page	Part No.	Page
5316100	10	5318205	10	5320102	7	5320397	8	5320773	8
5316101	10	5318206	10	5320103	7	5320500	8	5320774	8
5316102	10	5318207	10	5320104	7	5320505	8	5320775	8
5316103	10	5318208	10	5320105	7	5320506	8	5320776	8
5316104	10	5318209	10	5320106	7	5320507	8	5320777	8
5316200	10	5318210	10	5320107	7	5320510	8	5320780	8
5316201	10	5318211	10	5320160	7	5320511	8	5320785	8
5316202	10	5318212	10	5320161	7	5320515	8	5320786	8
5316203	10	5318213	10	5320162	7	5320516	8	5320870	8
5316204	10	5318214	10	5320163	7	5320517	8	5320871	8
5316205	10	5318215	10	5320164	7	5320520	8	5320872	8
5316206	10	5318216	10	5320165	7	5320521	8	5320873	8
5316207	10	5318217	10	5320166	7	5320522	8	5320874	8
5316208	10	5318300	10	5320167	7	5320525	8	5320875	8
5316209	10	5318301	10	5320300	8	5320526	8	5320876	8
5316210	10	5318302	10	5320305	8	5320527	8	5320877	8
5316211	10	5318303	10	5320306	8	5320528	8	5320880	8
5316212	10	5318304	10	5320307	8	5320530	8	5320885	8
5316213	10	5318305	10	5320310	8	5320531	8	5320886	8
5316214	10	5318306	10	5320311	8	5320532	8	5330016	11
5316215	10	5318307	10	5320315	8	5320533	8	5330020	11
5316216	10	5318308	10	5320316	8	5320534	8	5330021	11
5316217	10	5318309	10	5320317	8	5320535	8	5330025	11
5316300	10	5318310	10	5320320	8	5320536	8	5330032	11
5316301	10	5318311	10	5320321	8	5320537	8	5330116	11
5316302	10	5318312	10	5320322	8	5320542	8	5330120	11
5316303	10	5318313	10	5320325	8	5320543	8	5330121	11
5316304	10	5318400	10	5320326	8	5320544	8	5330125	11
5316305	10	5318401	10	5320327	8	5320545	8	5330132	11
5316306	10	5318402	10	5320328	8	5320551	8	5330216	11
5316307	10	5318403	10	5320330	8	5320555	8	5330220	11
5316308	10	5318404	10	5320331	8	5320560	8	5330221	11
5316309	10	5318405	10	5320332	8	5320561	8	5330225	11
5316310	10	5318406	10	5320333	8	5320565	8	5330232	11
5316311	10	5318407	10	5320334	8	5320566	8	5507009	17
5316312	10	5318408	10	5320335	8	5320570	8	5507011	17
5316313	10	5318409	10	5320336	8	5320571	8	5507013	17
5316400	10	5318410	10	5320337	8	5320575	8	5507016	17
5316401	10	5318411	10	5320342	8	5320576	8	5507021	17
5316402	10	5318412	10	5320343	8	5320580	8	5507029	17
5316403	10	5318413	10	5320344	8	5320581	8	5507050	17
5316404	10	5318414	10	5320345	8	5320582	8	5507051	17
5316405	10	5318415	10	5320351	8	5320583	8	5507052	17
5316406	10	5318416	10	5320355	8	5320584	8	5507053	17
5316407	10	5318417	10	5320360	8	5320585	8	5507054	17
5316408	10	5320001	7	5320361	8	5320586	8	5507055	17
5316409	10	5320002	7	5320365	8	5320587	8	5507216	17
5316410	10	5320003	7	5320366	8	5320593	8	5507220	17
5316411	10	5320004	7	5320370	8	5320594	8	5507221	17
5316412	10	5320005	7	5320371	8	5320596	8	5507225	17
5316413	10	5320006	7	5320375	8	5320597	8	5507232	17
5316414	10	5320007	7	5320376	8	5320710	8	5507250	17
5316415	10	5320008	7	5320380	8	5320715	8	5507251	17
5316416	10	5320009	7	5320381	8	5320716	8	5507252	17
5316417	10	5320051	7	5320382	8	5320717	8	5507253	17
5318100	10	5320052	7	5320383	8	5320718	8	5507254	17
5318101	10	5320053	7	5320384	8	5320720	8	5508009	17
5318102	10	5320054	7	5320385	8	5320721	8	5508011	17
5318103	10	5320055	7	5320386	8	5320722	8	5508013	17
5318104	10	5320056	7	5320387	8	5320723	8	5508016	17
5318200	10	5320057	7	5320390	8	5320730	8	5508021	17
5318201	10	5320058	7	5320390	8	5320731	8	5508029	17
5318202	10	5320059	7	5320393	8	5320770	8	5508050	17
5318203	10	5320100	7	5320394	8	5320771	8	5508051	17
5318204	10	5320101	7	5320396	8	5320772	8	5508052	17

Index

Part No.	Page	Part No.	Page	Part No.	Page	Part No.	Page	Part No.	Page
5508053	17	6011150	30	6102351	33	6104832	34	6402060	42
5508054	17	6011163	30	6102352	33	6104839	34	6402062	42
5508055	17	6100015	34	6102360	33	6104840	34	6402070	42
5808216	17	6100023	34	6102361	33	6104849	34	6402072	42
5808220	17	6100031	34	6102370	33	6104850	34	6402087	42
5808221	17	6100040	34	6102371	33	6104862	34	6402089	42
5808225	17	6100058	34	6102380	33	6104863	34	6402091	42
5808232	17	6100066	34	6102381	33	6104875	34	6402097	42
5808250	17	6100074	34	6102400	33	6200010	37	6402099	42
5808251	17	6100082	34	6102404	33	6200028	37	6402100	42
5808252	17	6100090	34	6102405	33	6200036	37	6402102	42
5808253	17	6100104	34	6102409	33	6200044	37	6402119	42
5808254	17	6100112	34	6102410	33	6200052	37	6402214	42
6000070	29	6100120	34	6102413	33	6200060	37	6402215	42
6000096	29	6100139	34	6102414	33	6200079	37	6402216	42
6000118	29	6100147	34	6102415	33	6200087	37	6402217	42
6000134	29	6100155	34	6102419	33	6200095	37	6402218	42
6000169	29	6100163	34	6102420	33	6200109	37	6402219	42
6000215	29	6100171	34	6102425	33	6200117	37	6402316	41
6000290	29	6100180	34	6102426	33	6200125	37	6402317	41
6000363	29	6100198	34	6102429	33	6200212	37	6402320	41
6000428	29	6100201	34	6102430	33	6200216	37	6402321	41
6000487	29	6100210	34	6102435	33	6200220	37	6402325	41
6004121	29	6100416	34	6102450	33	6200225	37	6402326	41
6004164	29	6100421	34	6102455	33	6200232	37	6402332	41
6004202	29	6100429	34	6102460	33	6200240	37	6402333	41
6004253	29	6102018	33	6102464	33	6200250	37	6604658	40
6004326	29	6102026	33	6102465	33	6200263	37	6604659	40
6004407	29	6102030	33	6102468	33	6200312	38	6604660	40
6004504	29	6102034	33	6102469	33	6200316	38	6604661	40
6004636	29	6102042	33	6102470	33	6200320	38	6604662	40
6008207	31	6102050	33	6102475	33	6200325	38	6604663	40
6008209	31	6102069	33	6102476	33	6200332	38	6604664	40
6008211	31	6102077	33	6102479	33	6200340	38	6604665	40
6008213	31	6102085	33	6102480	33	6200350	38	6604666	40
6008216	31	6102093	33	6102484	33	6200363	38	6604667	40
6008221	31	6102107	33	6102485	33	6200412	38	6604668	40
6008229	31	6102115	33	6102490	33	6200416	38	6604669	40
6008236	31	6102123	33	6104106	33	6200420	38	6604670	40
6008242	31	6102131	33	6104108	33	6200425	38	6604671	40
6008248	31	6102140	33	6104110	33	6200432	38	6604672	40
6010112	31	6102158	33	6104206	33	6200440	38	6604673	40
6010116	31	6102166	33	6104208	33	6200450	38	6604674	40
6010120	31	6102182	33	6104210	33	6200463	38	6604675	40
6010125	31	6102190	33	6104212	33	6400400	41	6604676	40
6010132	31	6102204	33	6104416	33	6400401	41	6604677	40
6010140	31	6102212	33	6104525	33	6400402	41	6604678	40
6010150	31	6102220	33	6104632	33	6400403	41	6604679	40
6010163	31	6102239	33	6104716	34	6400404	41	6604680	40
6011007	30	6102247	33	6104720	34	6400405	41	6604681	40
6011009	30	6102255	33	6104725	34	6400406	41	6604682	40
6011011	30	6102300	33	6104726	34	6400407	41	6604683	40
6011013	30	6102310	33	6104727	34	6400408	41	6604684	40
6011016	30	6102311	33	6104732	34	6400409	41	6604685	40
6011021	30	6102320	33	6104733	34	6400410	41	6604686	40
6011029	30	6102321	33	6104740	34	6400411	41	6604687	40
6011036	30	6102322	33	6104750	34	6400412	41	6604688	40
6011042	30	6102330	33	6104763	34	6400413	41	6604689	40
6011048	30	6102331	33	6104764	34	6400414	41	6604690	40
6011112	30	6102332	33	6104816	34	6400415	41	6604691	40
6011116	30	6102333	33	6104819	34	6402020	42	6604692	40
6011120	30	6102340	33	6104820	34	6402038	42	6604693	40
6011125	30	6102341	33	6104824	34	6402046	42	6604694	40
6011132	30	6102342	33	6104825	34	6402054	42	6604695	40
6011140	30	6102350	33	6104831	34	6402055	42	6604703	40

Part No.	Page	Part No.	Page	Part No.	Page	Part No.	Page	Part No.	Page
6604704	40	6700507	45	7005323	32	7215525	44	8113302	47
6604705	40	6700509	45	7005324	32	7215533	44	8113303	47
6604706	40	6700511	45	7008516	32	7215541	44	8113304	47
6604707	40	6700513	45	7008519	32	7215550	44	8113305	47
6604708	40	6700516	45	7008520	32	7215568	44	8113306	47
6604709	40	6700521	45	7008523	32	7215576	44	8113307	47
6604712	40	6700529	45	7008524	32	7215584	44	8113308	47
6604713	40	6700536	45	7008525	32	7215592	44	8113309	47
6604715	40	6700542	45	7008530	32	7215606	44	8113310	47
6604716	40	6700548	45	7008531	32	7217312	44	8113490	47
6604717	40	6700612	45	7008532	32	7217316	44	8113492	47
6604719	40	6700616	45	7008538	32	7217320	44	8113493	47
6604720	40	6700620	45	7008539	32	7217325	44	8113494	47
6604721	40	6700625	45	7008540	32	7217332	44	8113495	47
6604722	40	6700632	45	7008548	32	7217340	44	8113496	47
6604723	40	6700640	45	7008549	32	7217350	44	8113497	47
6604724	40	6700650	45	7008550	32	7217363	44	8113498	47
6604725	40	6700663	45	7008561	32	7217701	6	8114200	6
6604726	40	7004010	35	7008562	32	7217702	6	8114201	6
6604727	40	7004028	35	7008563	32	7217703	6	8114202	6
6604728	40	7004036	35	7211485	28	7303076	50	8114203	6
6604729	40	7004044	35	7211486	28	7303092	50	8114204	6
6604730	40	7004052	35	7211487	28	7303114	50	8114205	6
6604732	40	7004060	35	7211488	28	7303130	50	8114206	6
6604733	40	7004079	35	7211495	28	7303165	50	8114207	6
6604734	40	7004087	35	7211496	28	7303211	50	8114208	6
6604735	40	7004095	35	7211497	28	7303212	50	8114209	6
6604740	40	7004200	36	7211498	28	7303297	50	8114210	6
6604741	40	7004201	36	7211851	28	7303360	50	8114211	6
6604742	40	7004202	36	7211852	28	7303483	50	8114212	6
6604743	40	7004203	36	7211853	28	7303712	50	8114250	6
6604750	40	7004204	36	7211854	28	7303716	50	8114251	6
6604751	40	7004205	36	7211855	28	7303717	50	8114252	6
6604752	40	7004206	36	7211856	28	7303718	50	8114253	6
6604753	40	7004207	36	7211857	28	7303720	50	8218102	51
6604763	40	7004208	36	7211858	28	7303721	50	8218137	51
6604764	40	7004300	36	7211859	28	7303725	50	8218140	51
6604807	39	7004301	36	7211860	28	7303726	50	8218170	51
6604808	39	7004302	36	7211881	28	7303732	50	8218234	51
6604809	39	7004303	36	7211882	28	7303733	50	8218293	51
6604810	39	7004304	36	7211883	28	8112070	46	8218374	51
6604811	39	7004305	36	7211884	28	8112096	46	8218501	51
6604812	39	7004306	36	7211885	28	8112118	46	9000020	43
6604813	39	7005301	32	7211886	28	8112134	46	9000025	43
6604814	39	7005302	32	7211887	28	8112169	46	9000030	43
6604815	39	7005303	32	7211888	28	8112215	46		
6604816	39	7005304	32	7211889	28	8112250	46		
6604817	39	7005305	32	7211890	28	8112290	46		
6604818	39	7005306	32	7211974	28	8112320	46		
6604819	39	7005307	32	7211975	28	8112363	46		
6604820	39	7005308	32	7211976	28	8112428	46		
6604821	39	7005309	32	7211977	28	8112500	46		
6604822	39	7005310	32	7211978	28	8112600	51		
6604823	39	7005311	32	7211979	28	8112601	51		
6604829	39	7005312	32	7211980	28	8112602	51		
6604830	39	7005313	32	7211981	28	8112603	51		
6604831	39	7005314	32	7211982	28	8112604	51		
6604832	39	7005315	32	7211983	28	8112605	51		
6604836	39	7005316	32	7211984	28	8112606	51		
6604837	39	7005317	32	7211985	28	8112607	51		
6604842	39	7005318	32	7211986	28	8112608	51		
6604843	39	7005319	32	7211990	28	8112609	51		
6604848	39	7005320	32	7211991	28	8112610	51		
6604849	39	7005321	32	7211992	28	8112675	46		
6604850	39	7005322	32	7215517	44	8113301	47		