*blue*globe® 5.06 GB

Innovative Cable Glands

www.*blue*globe.org

PFLITSCH®

Competence in cable management

The PFLITSCH *blue*globe® cable gland

Clearly better than the market standards

With its unique, ideal sealing concept in every respect, the new PFLITSCH cable gland *blue***globe**® made of brass, stainless steel and plastic sets new standards regarding safety, reliability, functionality and costs. Its secret is concealed in the blue, spherical sealing insert made of a TPE heavy-duty plastic. When the pressure screw is tightened up, the forces are optimally concentrated, as in a sphere, on the cable conducted, sealing it over a large surface ideally, securely and carefully.

Widest sealing ranges

With this sealing concept, PFLITSCH attains a clearly greater sealing range upwards and downwards than conventional cable glands. With only 3 sizes M16, M25 and M40, all cable diameters from 4 to 32 mm can be sealed. In the upper range, the *blue***globe**® M25 almost attains the values of the next larger, conventional M32. This saves on space and costs which pleases the designer, the buyer and the electrician alike.

Fig. 1

Fig. 2

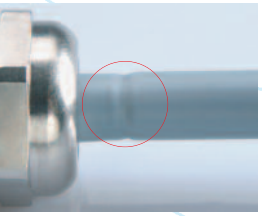

Fig. 3

Fig. 4

Highest strain relief

The extension forces in accordance with EN 50 262 Class B are likewise way above average: Practically speaking, the result is top strain relief without the conducted cable being notched and thus damaged in the long run (see Figs. 1 to 4). This means that in everyday industrial life cables are safe from being ripped out.

Highest protection rate

The above-average protection system IP 68 (≧15 bar) makes for careful and at the same time secure sealing as standard. PFLITSCH has also improved the sealing of the gland body to the housing wall. With the brass and stainless-steel gland, the O ring made of high-grade rubber lies in a slot before the connection thread, so that the sealing ring will reliably seal even when the holes have been predrilled too large. With the plastic version, the hexagonal collar has a self-sealing effect to the screwed surface.

Unique marking

The *blue***globe**® is different from all conventional cable glands through its unique marking. Apart from the marking on the pressure screw, the usable cable diameters are designated on the hexagonal *globe***marker**® on the insert sealing. The pressure screw itself indicates the manufacturer, the material, the connection thread and CE designation.

The *blue*globe® principle Benefits

A *blue*globe® gland body
- Materials: Nickel plated brass
  Stainless steel, 1.4305 (AISI 303)
  Polyamide (PA)
- Metric connection thread
- WEEE and RoHS conformity

B Pure elastic sealing insert

Material: TPE, blue
- Temperature range -40°C up to 130°C
- Halogen and plasticiser free
- High UV-stability
- UL 94 HB
- WEEE and RoHS conformity

C Highest protection rate IP 68, up to15 bar

D Radial symmetric, large area elastic sealing
- Soft pressing by patented "globe" sealing system
- No cable damages by notching and strangling reasons
- No folding of the sealing in case of small diameters

E Inlet removable

F Brass: O-ring groove located at an outer position
PA: Self tightening area
Metric connection thread

G Highest strain relief (EN 50262 class B)

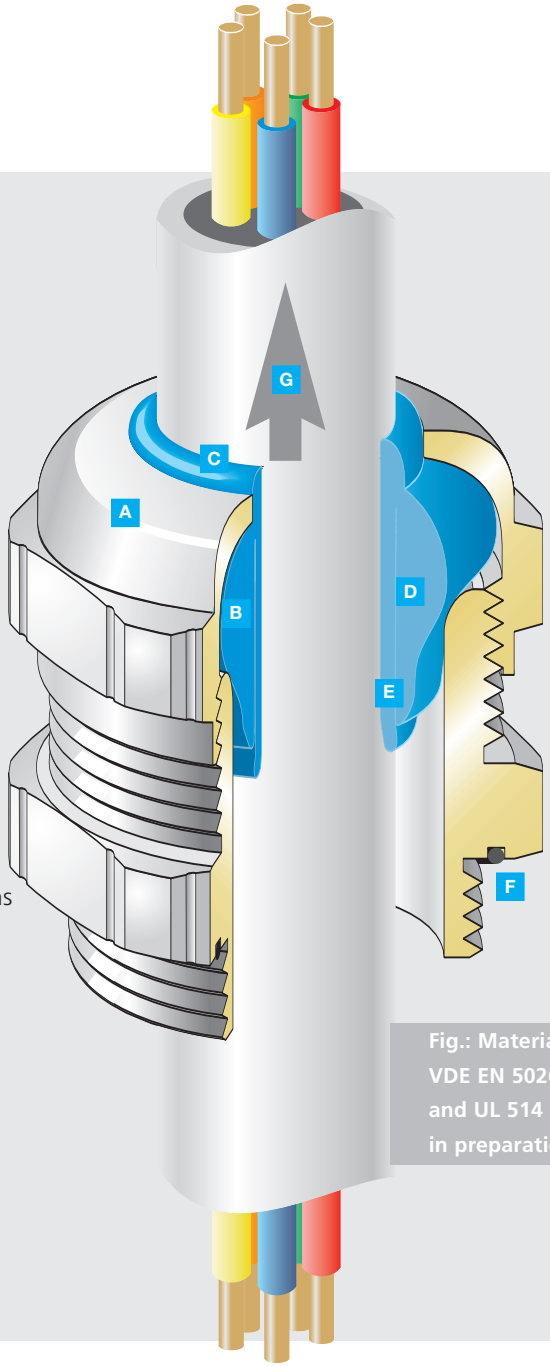

Fig.: Material brass, VDE EN 50262 and UL 514 B in preparation

Widest sealing ranges

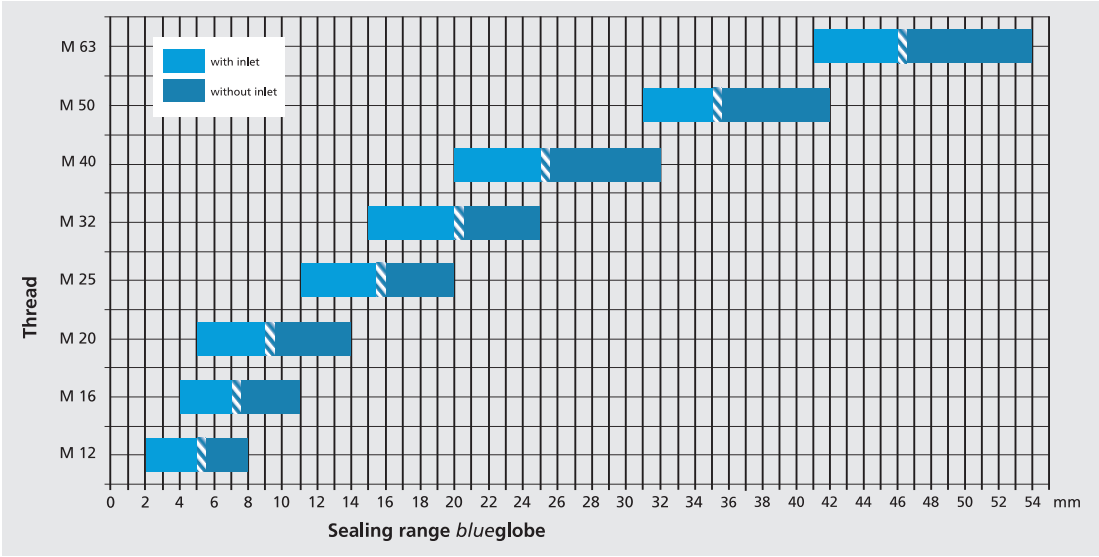

Diagram 1

Plastic

*blue*globe®

Polyamide, metric connection thread as per EN 50262
Type of protection: IP 68, up to15 bar over the whole sealing range

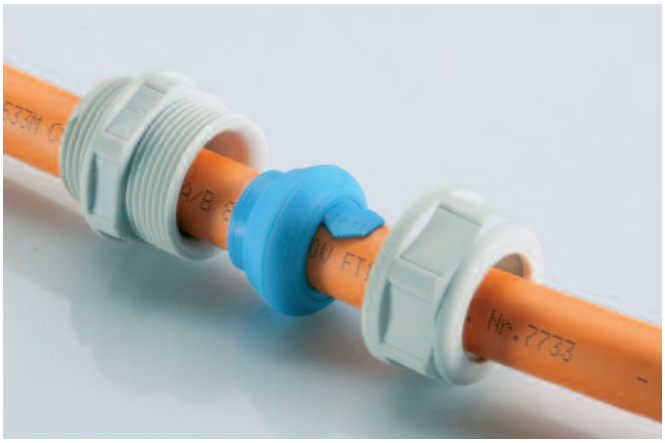

Fig. 1

Dichteinsatz

Material	Temperature range	Colour
TPE	-20 °C up to +120 °C	blue (RAL 5012)

Gland body

Material	Colour	Art.-No. supplement
PA	lightgrey (RAL 7035)	-
	graphitblack (RAL 9011)	n

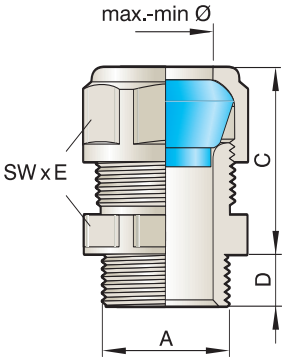

Fig. 2 with inlet

Connection thread/length A	D	Art.-No. Please supplement with the execution required grey = - black = n	Sealing range max./min. ø mm	Sealing range without inlet max./min. ø mm	C mm	Spanner width SW x E mm	
M12x1,5		in preparation					
M16x1,5	9	bg 216PA	11 – 4	11 – 7	27	20x22,2	50
M20x1,5	9	bg 220PA	14 – 5	14 – 9	31	24x26,7	50
M25x1,5	9	bg 225PA	20 – 11	20 – 15,5	33	30x33	50
M32x1,5	11	bg 232PA	25 – 15	25 – 20	34	36x39,5	25
M40x1,5	12	bg 240PA	32 – 20	32 – 26	37	45x48	10
M50x1,5		in preparation					
M63x1,5		in preparation					

(blueglobe reaches/exceeds partly the test requirements of EN 50262, as per Pflitsch laboratory)

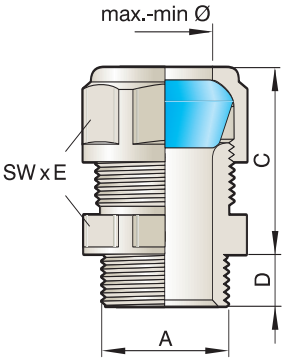

Fig. 3 without inlet

Tightening torques for PA in Nm

Thread	M16	M20	M25	M32	M40
pressure screw	4,5	8	10	12	14
double nipple	4,5	8	10	15	20

(Test value as per EN50262 x1,5)

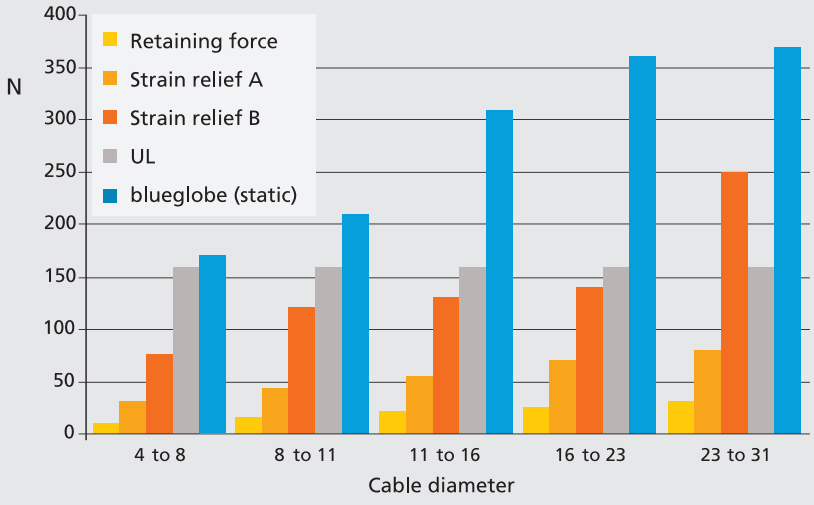

Diagram 1 (Source: PFLITSCH Laboratory)

Brass

*blue*globe®

Brass nickel plated, metric connection thread as per EN 50262
Type of protection: IP 68, up to15 bar over the whole sealing range

Sealing insert

Material	Temperature range	Colour
TPE	-40 °C up to +130 °C	blue (RAL 5012)

Gland body

Material	Execution
brass	galv. nickel plated

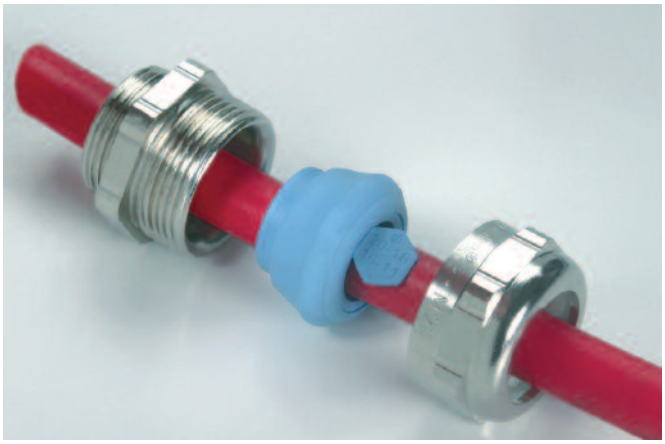

Fig. 1

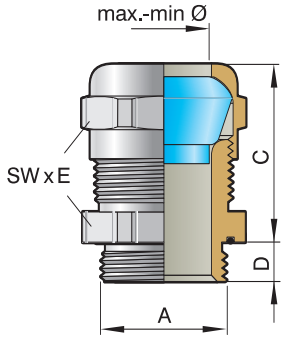

Fig. 2 with inlet

Connection thread/length A	D	Article No.	Sealing range max./min. ø mm	Sealing range without inlet max./min. ø mm	C mm	Spanner width SW x E mm	
M12x1,5	5	bg212 ms	8 – 2	8 – 5	21	17x18,9	50
M16x1,5	6	bg216 ms	11 – 4	11 – 7	25	20x22,2	50
M20x1,5	6,5	bg220 ms	14 – 5	14 – 9	29	24x26,5	50
M25x1,5	7,5	bg225 ms	20 – 11	20 – 15,5	29	30x33	50
M32x1,5	8	bg232 ms	25 – 15	25 – 20	32	36x39,5	25
M40x1,5	8	bg240 ms	32 – 20	32 – 26	35	45x48	10
M50x1,5	10	bg250 ms	42 – 31	42 – 35	35	57x61	5
M63x1,5	10	bg263 ms	54 – 41	54 – 46	38	68x74	5
M85x2		bg285 ms	in preparation				

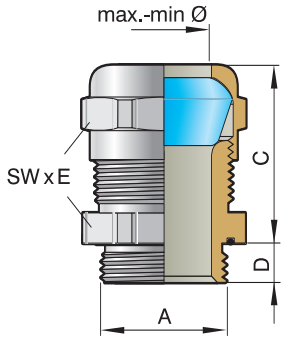

Fig. 3 without inlet

Connection thread/length A	D	Article No.	Sealing range max./min. ø mm	Sealing range without inlet max./min. ø mm	C mm	Spanner width SW x E mm	
M12x1,5	15	bg812 ms	8 – 2	8 – 5	21	17x18,9	50
M16x1,5	15	bg816 ms	11 – 4	11 – 7	25	20x22,2	50
M20x1,5	15	bg820 ms	14 – 5	14 – 9	29	24x26,5	50
M25x1,5	15	bg825 ms	20 – 11	20 – 15,5	29	30x33	50
M32x1,5	15	bg832 ms	25 – 15	25 – 20	32	36x39,5	25
M40x1,5	15	bg840 ms	32 – 20	32 – 26	35	45x48	10
M50x1,5	15	bg850 ms	42 – 31	42 – 35	35	57x61	5
M63x1,5	15	bg863 ms	54 – 41	54 – 46	38	68x74	5

(blueglobe reaches/exceeds partly the test requirements of EN 50262, as per Pflitsch laboratory)

Tightening torques for brass and stainless steel pressure screws and double nipple

Thread	M12	M16	M20	M25	M32	M40	M50	M63
Nm	5	8	10	15	15	20	30	35

Test value as per EN50262 x1,5

Stainless steel

*blue*globe®

Stainless steel 1.4305 (AISI 303),
metric connection thread as per EN 50262
Type of protection: IP 68, up to15 bar over the whole sealing range

Sealing insert

Material	Temperature range	Colour
TPE	-40 °C up to +130 °C	blue (RAL 5012)

Gland body

Material	Execution
Stainless steel	1.4305

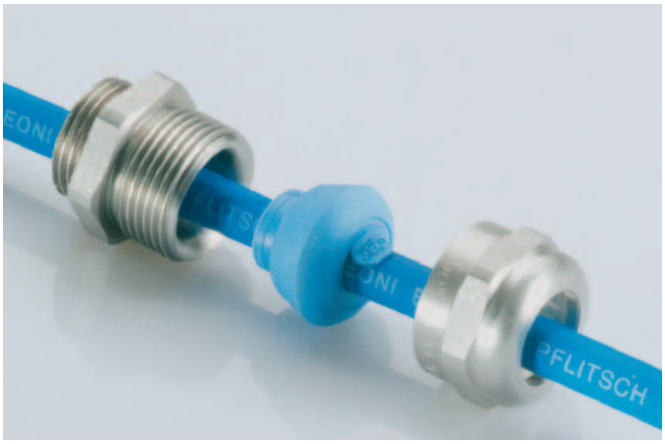

Fig. 1

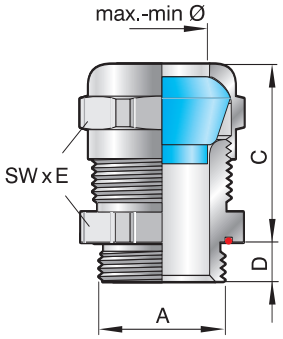

Fig. 2 with inlet

Connection thread/length A	D	Article No.	Sealing range max./min. ø mm	Sealing range without inlet max./min. ø mm	C mm	Spanner width SW x E mm	
M12x1,5	5	bg212 va	8 – 2	8 – 5	21	17x18,9	50
M16x1,5	6	bg216 va	11 – 4	11 – 7	25	20x22,2	50
M20x1,5	6,5	bg220 va	14 – 5	14 – 9	29	24x26,5	50
M25x1,5	7,5	bg225 va	20 – 11	20 – 15,5	29	30x33	50
M32x1,5	8	bg232 va	25 – 15	25 – 20	32	36x39,5	25
M40x1,5	8	bg240 va	32 – 20	32 – 26	35	45x48	10
M50x1,5	10	bg250 va	42 – 31	42 – 35	35	57x61	5
M63x1,5	10	bg263 va	54 – 41	54 – 46	38	68x74	5

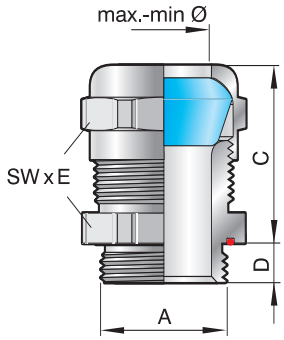

Fig. 3 without inlet

Connection thread/length A	D	Article No.	Sealing range max./min. ø mm	Sealing range without inlet max./min. ø mm	C mm	Spanner width SW x E mm	
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M16x1,5	15	bg816 va	11 – 4	11 – 7	25	20x22,2	50
M20x1,5	15	bg820 va	14 – 5	14 – 9	29	24x26,5	50
M25x1,5	15	bg825 va	20 – 11	20 – 15,5	29	30x33	50
M32x1,5	15	bg832 va	25 – 15	25 – 20	32	36x39,5	25
M40x1,5	15	bg840 va	32 – 20	32 – 26	35	45x48	10
M50x1,5		in preparation					
M63x1,5		in preparation					

(blueglobe reaches/exceeds partly the test requirements of EN 50262, as per Pflitsch laboratory)

Tightening torques for brass and stainless steel pressure screws and double nipple

Thread	M12	M16	M20	M25	M32	M40	M50	M63
Nm	5	8	10	15	15	20	30	35

Test value as per EN50262 x1,5

Materials

PA

Polyamides are engineering plastics for a host of technical applications and are particularly well-suited for machine elements. They possess good strength properties with a high degree of viscosity and impact resistance as well as good wear resistance. The special partial crystalline polyamide used in *blue***globe**® - with defined glass-fibre content – conforms with the current European directives WEEE and RoHS and is halogen and phosphorus-free. The PA used is a thermally stable, flame-proofed and self-extinguishing technical thermoplastic material. Certified in accordance with UL 94, Fire Class V0. The operating temperature is between -20 °C up to approx. 120 °C, briefly up to 200 °C. The incandescent inflammability temperature is at 960 °C. As a rule, polyamides have good resistance to all kinds of chemicals. With the exception of concentrated acids, only a few chemicals attack polyamides.

TPE

Thermoplastic elastomers combine the particularly highly elastic properties of the elastomers with the processing possibilities of the thermoplastics. They are multi-purpose materials suitable for a large range of application possibilities. The special TPE used by PFLITSCH for *blue***globe**® was optimised by us specifically for use in cable glands. The TPE used conforms with the current European directives WEEE and RoHS and is halogen and plasticiser-free. The inflammability limits required in UL94 are not exceeded, and TPE is certified according to UL94 HB. The operating temperature is -40 °C up to 130 °C, and the median calorific value is 26.5 MJ/kg. TPE has high UV stability and is enormously weather and ozone-resistant. Its chemical resistance is high and its tendency for cold flow slight.

Brass

Brass is an alloy of copper with zinc. Fundamental differentiation is made between pure (binary) brass and special brass. The material CuZn39Pb3 is the main alloy for machining and especially suitable for automatic machines. Brass possesses good resistance to water, vapour, various salt solutions and many organic liquids, however, not to oxidising acids. Under certain conditions (water with high Cl content, low carbon hardness and low flow rate), it may result in corrosion in the form of elution (zinc being eluted from brass). Surface treatment: Hot-dip galvanised nickel precipitates are suitable for wear and corrosion protection due to their special mechanical and chemical properties. Nickel is easily polishable and magnetic. Brass may be implemented in accordance with the European directives WEEE RoHS.

1.4305 (AISI 303)

Stainless steels are characterised by special resistance to chemically attacking watery media. A chrome content of approx. >12 % by mass allows the formation of a passive layer, suppressing rusting with normal atmospheric corrosion load. Greater chrome content and addition of other alloy elements will extend resistance to considerably more aggressive media. Optimum protection against chemical attack presupposes as smooth as possible a surface free of all kinds of impurities. The material is conform with the current directives WEEE and RoHS. Stainless steel 1.4305 in accordance with EN 10088-2 with the designation X8 Cr NiS 18-9 has the chemical composition:

Carbon	< 0,10 %
Chrome	18 %
Nickel	9 %

Assembly instructions *blue*globe®

Small cable diameter

Fig. 1
With IP68 installations ***globe***marker on the outside

Fig. 2
or removing ***globe***marker

Large cable diameter

Fig. 3
With a large cable diameter – remove inlet. Insert screwdriver vertically into separating seam

Fig. 4
Lift out the inlet

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