



I N D E X

Pg. No.	Product Line
1-21	Cable Glands
23-40	Cable Gland Accessories
41-57	Ex Proof Cable Gland, Conduit Glands & Accessories
59-72	Flexible Metallic & Non Metallic Conduits
73-100	Conduit Glands And Accessories
101-108	Junction Boxes
109	Design A Flange
110	Robokit
111-114	Floating & Multiway Strip Connectors
115-118	Industrial Plugs & Sockets
119-138	Heavy Duty Connectors
139-178	Cable Drag Chains
179-192	Alphabetical Index

THE RIGHT PROTECTION FOR YOUR WIRES AND CABLES

The lamellar construction of CONTROLWELL Cable Glands provides a vice like grip on the cable offering true strain relief.

Available in straight, elbow, spiral & conus type of constructions, these Cable Glands are made from Polyamide, Brass and stainless steel materials to suit your varied applications.

These IP68 grade, gas and water tight Cable Glands are available with a choice of Pg, Metric & NPT threads.

International approvals like VDE, UL, CSA & CE mark further testify that we at Controlwell remain dedicated to providing your cables with **The Right Protection**.

CABLE GLANDS

THE RIGHT PROTECTION FOR
YOUR INDUSTRIAL APPLICATIONS



STANDARD POLYAMIDE CABLE GLANDS - PG THREADS



These glands are liquid tight, easy to assemble and offer good strain relief with wide clamping range. The lamellar construction of glands provide an excellent grip on the cable. Cable glands with various range of clamping are also available on request. They are manufactured according to requirement of DIN EN 62444 / 50262.

Technical Details :

Material	Polyamide 6
Flammability	UL 94 V2
Colour	RAL 7001 (Grey), RAL 9005 (Black) RAL 7035 (L.Grey)
Protection Class	IP 68-5 Bar, 30 min
Sealing Ring	CR-Chloroprene Rubber
Temperature Range	-20°C to +100°C Continuous, -30°C to +150°C Intermittent
Attachment Thread	DIN 40430
Approvals	    

Pg Threads

Size	Cat. No. Grey	Cat. No. Light Grey	Cat. No. Black	Thread Diameter (mm)	Thread Length (mm)	 (mm)	Clamping Range (mm)	Standard Pack (pieces)
Pg 7	BS-01	BS-11	BS-21	12.5	8	15	3 - 6.5	100
Pg 9	BS-02	BS-12	BS-22	15.2	8	19	4 - 8	50
Pg 11	BS-03	BS-13	BS-23	18.6	8	22	5 - 10	50
Pg 13.5	BS-04	BS-14	BS-24	20.4	10	24	6 - 12	50
Pg 16	BS-05	BS-15	BS-25	22.5	10	27	10 - 14	50
Pg 21	BS-06	BS-16	BS-26	28.3	11	33	13 - 18	25
Pg 29	BS-07	BS-17	BS-27	37.0	11	42	18 - 25	20
Pg 36	BS-08	BS-18	BS-28	47.0	13	53	22 - 32	10
Pg 42	BS-09	BS-19	BS-29	54.0	13	60	30 - 38	10
Pg 48	BS-10	BS-20	BS-30	59.3	14	65	34 - 44	10

Cable Glands with Reduced Clamping Range

Size	Cat. No. Grey	Cat. No. Light Grey	Cat. No. Black	Thread Diameter (mm)	Thread Length (mm)	 (mm)	Clamping Range (mm)	Standard Pack (pieces)
Pg 7	BS-01R	BS-11R	BS-21R	12.5	8	15	2 - 5	100
Pg 9	BS-02R	BS-12R	BS-22R	15.2	8	19	2 - 6	50
Pg 11	BS-03R	BS-13R	BS-23R	18.6	8	22	3 - 7	50
Pg 13.5	BS-04R	BS-14R	BS-24R	20.4	9	24	5 - 9	50
Pg 16	BS-05R	BS-15R	BS-25R	22.5	10	27	7 - 12	50
Pg 21	BS-06R	BS-16R	BS-26R	28.3	11	33	9 - 16	25
Pg 29	BS-07R	BS-17R	BS-27R	37.0	11	42	12 - 20	20
Pg 36	BS-08R	BS-18R	BS-28R	47.0	13	53	20 - 26	10
Pg 42	BS-09R	BS-19R	BS-29R	54.0	13	60	25 - 31	10
Pg 48	BS-10R	BS-20R	BS-30R	59.3	14	65	29 - 35	10

STANDARD POLYAMIDE CABLE GLANDS - METRIC THREADS



These glands are liquid tight, easy to assemble and offer good strain relief with wide clamping range. The lamellar construction of glands provide an excellent grip on the cable. Cable glands with various range of clamping are also available on request. They are manufactured according to requirement of DIN EN 62444 / 50262. Mainly used in railways and industrial applications.

Technical Details :

Material	Polyamide 6
Flammability	UL 94 V2
Colour	RAL 7001 (Grey), RAL 9005 (Black) RAL 7035 (L.Grey)
Protection Class	IP 68-5 Bar, 30 min
Sealing Ring	CR-Chloroprene Rubber
Temperature Range	-20°C to +100°C Continuous, -30°C to +150°C Intermittent
Attachment Thread	EN 60423
Approvals	    DNV-GL

Metric Thread

Size	Cat. No. Grey	Cat. No. Light Grey	Cat. No. Black	Thread Diameter (mm)	Thread Length (mm)	 (mm)	Clamping Range (mm)	Standard Pack (pieces)
M 12 x 1.5	BM-0S	BM-1S	BM-2S	12	8	15	3 - 6.5	50
M 12 x 1.5	BM-EN-0SL	-	-	12	15	15	3 - 6.5	50
M 16 x 1.5	BM-EN-01	BM-EN-11	BM-EN-21	16	8	19	4 - 8	50
M 16 x 1.5	BM-01	BM-11	BM-21	16	10	22	5 - 10	50
M 16 x 1.5	BM-01L	BM-11L	BM-21L	16	15	22	5 - 10	50
M 20 x 1.5	BM-02	BM-12	BM-22	20	10	24	6 - 12	50
M 20 x 1.5	BM-02L	BM-12L	BM-22L	20	15	24	6 - 12	50
M 20 x 1.5	BM-03	BM-13	BM-23	20	10	27	10 - 14	50
M 20 x 1.5	BM-04	BM-14	BM-24	20	15	27	10 - 14	50
M 25 x 1.5	BM-EN-03	BM-EN-13	BM-EN-23	25	8	29	11 - 17	25
M 25 x 1.5	BM-05	BM-15	BM-25	25	10	33	13 - 18	25
M 25 x 1.5	BM-06	BM-16	BM-26	25	15	33	13 - 18	25
M 32 x 1.5	BM-EN-04	BM-EN-14	BM-EN-24	32	10	36	15 - 21	25
M 32 x 1.5	BM-07	BM-17	BM-27	32	15	42	18 - 25	20
M 40 x 1.5	BM-EN-05	BM-EN-15	BM-EN-25	40	10	46	19 - 28	10
M 40 x 1.5	BM-08	BM-18	BM-28	40	18	53	22 - 32	10
M 50 x 1.5	BM-09	BM-19	BM-29	50	18	60	30 - 38	10
M 63 x 1.5	BM-10	BM-20	BM-30	63	18	65	34 - 44	5
M 75 x 2.0	BM-B02	BM-B12	BM-B22	75	25	75	48 - 55	5

Cable Glands with Reduced Clamping Range

Size	Cat. No. Grey	Cat. No. Light Grey	Cat. No. Black	Thread Diameter (mm)	Thread Length (mm)	 (mm)	Clamping Range (mm)	Standard Pack (pieces)
M 12 x 1.5	BI-0S	BI-1S	BI-2S	12	8	15	2 - 5	50
M 16 x 1.5	BI-01	BI-11	BI-21	16	10	22	3 - 7	50
M 16 x 1.5	BI-01L	BI-11L	BI-21L	16	15	22	3 - 7	50
M 20 x 1.5	BI-02	BI-12	BI-22	20	10	24	5 - 9	50
M 20 x 1.5	BI-02L	BI-12L	BI-22L	20	15	24	5 - 9	50
M 20 x 1.5	BI-03	BI-13	BI-23	20	10	27	7 - 12	50
M 20 x 1.5	BI-04	BI-14	BI-24	20	15	27	7 - 12	50
M 25 x 1.5	BI-05	BI-15	BI-25	25	10	33	9 - 16	25
M 25 x 1.5	BI-06	BI-16	BI-26	25	15	33	9 - 16	25
M 32 x 1.5	BI-07	BI-17	BI-27	32	15	42	12 - 20	20
M 40 x 1.5	BI-08	BI-18	BI-28	40	18	53	20 - 26	10
M 50 x 1.5	BI-09	BI-19	BI-29	50	18	60	25 - 31	10
M 63 x 1.5	BI-10	BI-20	BI-30	63	18	65	29 - 35	5

STANDARD POLYAMIDE CABLE GLANDS - NPT THREAD / G THREAD



These glands are liquid tight, easy to assemble and offer good strain relief with wide clamping range. The lamellar construction of glands provide an excellent grip on the cable. Cable glands with various range of clamping are also available on request. They are manufactured according to requirement of DIN EN 62444 / 50262.

Technical Details :

Material	Polyamide 6
Flammability	UL 94 V2
Colour	RAL 7001 (Grey), RAL 9005 (Black)
	RAL 7035 (L.Grey)
Protection Class	IP 68-5 Bar, 30 min
Sealing Ring	CR-Chloroprene Rubber
Temperature Range	-20° C to +100° C Continuous, -30° C to +150° C Intermittent
Approvals	    

NPT Threads - ANSI B1.20.1

Size	Cat. No. Grey	Cat. No. Light Grey	Cat. No. Black	Thread Diameter (mm)	Thread Length (mm)	⌘ (mm)	Clamping Range (mm)	Standard Pack (pieces)
NPT 3/8"	BSPA-01	BSPA-11	BSPA-21	17.15	15	22	5 - 10	50
NPT 1/2"	BSPB-02	BSPB-12	BSPB-22	21.34	15	24	6 - 12	50
NPT 1/2"	BSPC-02	BSPC-12	BSPC-22	21.34	15	27	10 - 14	50
NPT 3/4"	BSPD-03	BSPD-13	BSPD-23	26.67	15	33	13 - 18	25
NPT 1"	BSP-04	BSP-14	BSP-24	33.40	18	42	18 - 25	20

Cable Glands with Reduced Clamping Range

Size	Cat. No. Grey	Cat. No. Light Grey	Cat. No. Black	Thread Diameter (mm)	Thread Length (mm)	⌘ (mm)	Clamping Range (mm)	Standard Pack (pieces)
NPT 3/8"	BSPA-01R	BSPA-11R	BSPA-21R	17.15	15	22	3 - 7	50
NPT 1/2"	BSPB-02R	BSPB-12R	BSPB-22R	21.34	15	24	5 - 9	50
NPT 1/2"	BSPC-02R	BSPC-12R	BSPC-22R	21.34	11	27	7 - 12	50
NPT 3/4"	BSPD-03R	BSPD-13R	BSPD-23R	26.67	15	33	9 - 16	25
NPT 1"	BSP-04R	BSP-14R	BSP-24R	33.40	18	42	12 - 20	20

G Threads - G ISO 228

Size	Cat. No. Grey	Cat. No. Light Grey	Cat. No. Black	Thread Diameter (mm)	Thread Length (mm)	⌘ (mm)	Clamping Range (mm)	Standard Pack (pieces)
G 1/4"	BPF-0S	BPF-1S	BPF-2S	13.16	10	15	3 - 6.5	50
G 3/8"	BPF-01	BPF-11	BPF-21	16.66	11	22	5 - 10	50
G 1/2"	BPF-02	BPF-12	BPF-22	20.96	10	24	6 - 12	50
G 1/2"	BPF-03	BPF-13	BPF-23	20.96	11	27	10 - 14	50
G 3/4"	BPF-04	BPF-14	BPF-24	26.44	12	33	13 - 18	25
G 1"	BPF-05	BPF-15	BPF-25	33.25	13	42	18 - 25	25

Cable Glands with Reduced Clamping Range

Size	Cat. No. Grey	Cat. No. Light Grey	Cat. No. Black	Thread Diameter (mm)	Thread Length (mm)	⌘ (mm)	Clamping Range (mm)	Standard Pack (pieces)
G 1/4"	BPFR-0S	BPFR-1S	BPFR-2S	13.16	10	15	2 - 5	50
G 3/8"	BPFR-01	BPFR-11	BPFR-21	16.66	11	22	3 - 7	50
G 1/2"	BPFR-02	BPFR-12	BPFR-22	20.96	10	24	5 - 9	50
G 1/2"	BPFR-03	BPFR-13	BPFR-23	20.96	11	27	7 - 12	50
G 3/4"	BPFR-04	BPFR-14	BPFR-24	26.44	12	33	9 - 16	25
G 1"	BPFR-05	BPFR-15	BPFR-25	33.25	13	42	12 - 20	25

SPIRAL CABLE GLANDS



These Glands offer maximum protection against conductor fatigue caused by flexing cables. Designed for kink protection and mainly used for moving machine assemblies. They are available with reduced clamping range and long thread also.

Technical Details :

Material	Polyamide 6
Flammability	UL 94 V2
Colour	RAL 7001 (Grey), RAL 9005 (Black)
Protection Class	IP 68-5 Bar, 30 min
Sealing Ring	CR-Chloroprene
Temperature Range	-20° C to +100° C Continuous, -30° C to +150° C Intermittent
Attachment Threads	Pg - DIN 40430 Metric - EN 60423 NPT PF (Available on request)
Approvals	     

Pg Thread

Size	Cat. No. Grey	Cat. No. Black	Thread Diameter (mm)	Thread Length (mm)	 (mm)	Clamping Range (mm)	Standard Pack (pieces)
Pg 7	BSSP-01	BSSP-21	12.5	8	15	3 - 6.5	50
Pg 9	BSSP-02	BSSP-22	15.2	8	19	4 - 8	50
Pg 11	BSSP-03	BSSP-23	18.6	8	22	5 - 10	50
Pg 13.5	BSSP-04	BSSP-24	20.4	10	24	6 - 12	50
Pg 16	BSSP-05	BSSP-25	22.5	10	27	10 - 14	50
Pg 21	BSSP-06	BSSP-26	28.3	11	33	13 - 18	25

Metric Thread

Size	Cat. No. Grey	Cat. No. Black	Thread Diameter (mm)	Thread Length (mm)	 (mm)	Clamping Range (mm)	Standard Pack (pieces)
M 12 x 1.5	BMSP-0S	BMSP-2S	12	8	15	3 - 6.5	50
M 16 x 1.5	BMSP-01	BMSP-21	16	10	22	5 - 10	50
M 20 x 1.5	BMSP-02	BMSP-22	20	10	24	6 - 12	50
M 20 x 1.5	BMSP-03	BMSP-23	20	10	27	10 - 14	50
M 25 x 1.5	BMSP-05	BMSP-25	25	10	33	13 - 18	50

NPT Thread

Size	Cat. No. Grey	Cat. No. Black	Thread Diameter (mm)	Thread Length (mm)	 (mm)	Clamping Range (mm)	Standard Pack (pieces)
NPT 3/8"	BNSPA-01	BNSPA-21	17.15	15	22	5 - 10	50
NPT 1/2"	BNSPB-02	BNSPB-22	21.34	15	24	6 - 12	50
NPT 1/2"	BNSPC-02	BNSPC-22	21.34	15	27	10 - 14	50
NPT 3/4"	BNSPD-03	BNSPD-23	26.67	15	33	13 - 18	50

ELBOW CABLE GLANDS



These Glands are liquid tight, offer good strain relief with wide clamping range. These Glands are used where cables have to run parallel to the housing wall (i.e. 90° application). They are available with reduced clamping range.

Technical Details :

Material	Polyamide 6
Flammability	UL 94 V2
Colour	RAL 9005 (Black)
Protection Class	IP 68-5 Bar, 30 min
Sealing Ring	Chloroprene
Temperature Range	-20° C to +80° C Continuous, -30° C to +150° C Intermittent
Attachment Threads	Pg - DIN 40430

Size	Cat. No. Black	Thread Diameter (mm)	Thread Length (mm)	 (mm)	Clamping Range (mm)	Standard Pack (pieces)
Pg 7	EG-21	12.5	8	19	4 - 8	50
Pg 9	EG-22	15.2	7	19	4 - 8	50

CONUS CABLE GLANDS



These economical screw type glands are used for securing round cables in normal applications. They are also available for securing flat cables on request.

Technical Details :

Material	Polyamide 6
Colour	RAL 7035 (Light Grey)
Protection Class	IP 54
Sealing Ring	TPE
Pressure Washer	Poly Propylene (PP) for round cable
Pressure Washer	Steel for flat cable
Temperature Range	-20° C to +80° C Continuous +150° C Intermittent
Threads available	Pg - DIN 40430

Size	Cat. No. Round Cables	Cat. No. Flat Cables	Thread Diameter (mm)	Thread Length (mm)	 (mm)	Clamping Range (mm) Round Cables	Size of Flat Cables (mm)	Standard Pack (pieces)
Pg 21	BD-16	BDF-16	28.3	11	33	14 - 18	10 x 3.2	50
Pg 29	BD-17	BDF-17	37	11	42	18 - 25	15 x 4.4	25
Pg 36	BD-18	BDF-18	47	13	53	25 - 32	25 x 4.6	20

STANDARD BRASS CABLE GLANDS - PG & NPT THREADS



These metallic glands are liquid tight, offer excellent strain relief and have lameller designed plastic inserts for protection against distortion. These glands are suitable for use in machinery and equipment, measuring and controlling devices, medical equipments and many other fields where exceptional stability and safe functioning is required. Cable glands with long thread length or reduced clamping range are also available on request. Cable gland can be produced for high temperature (300°C) with silicone sealing and reduced sealing ring.

Technical Details :

Material	Brass, Nickel Plated
Flammability	UL 94 V2
Clamping Insert	Polyamide 6
Protection Class	IP 68-5 Bar, 30 min.
Sealing Ring	CR-Chloroprene Rubber / Silicone
O Ring	Perbunan (NBR) / Silicone
Temperature Range	-20°C to +100°C Continuous, -40°C to +150°C Intermittent
Attachment Threads	Pg-DIN 40430 / NPT-ANSI B 1.20.1
Approvals	  

Pg Cable Gland

Size	Cat. No.	Thread Diameter (mm)	Thread Length (mm)	⌀ (mm)	Clamping Range (mm)	Standard Pack (pieces)
Pg 7	BSBC-01	12.5	6	14	3 - 6.5	50
Pg 9	BSBC-02	15.2	6	17	4 - 8	50
Pg 11	BSBC-03	18.6	6	20	5 - 10	50
Pg 13.5	BSBC-04	20.4	6.5	22	6 - 12	25
Pg 16	BSBC-05	22.5	6.5	24	10 - 14	25
Pg 21	BSBC-06	28.3	7.2	30	13 - 18	20
Pg 29	BSBC-07	37.0	8	40	18 - 25	15
Pg 36	BSBC-08	47.0	9	50	22 - 32	12
Pg 42	BSBC-09	54.0	12	58	30 - 38	12
Pg 48	BSBC-10	59.3	14	64	34 - 44	12

Pg Long Thread Cable Gland

Size	Cat. No.	Thread Diameter (mm)	Thread Length (mm)	⌀ (mm)	Clamping Range (mm)	Standard Pack (pieces)
Pg 7	BSBE-01	12.5	10	14	3 - 6.5	50
Pg 9	BSBE-02	15.2	10	17	4 - 8	50
Pg 11	BSBE-03	18.6	10	20	5 - 10	50
Pg 13.5	BSBE-04	20.4	10	22	6 - 12	50
Pg 16	BSBE-05	22.5	10	24	10 - 14	25
Pg 21	BSBE-06	28.3	12	30	13 - 18	25
Pg 29	BSBE-07	37.0	12	40	18 - 25	20
Pg 36	BSBE-08	47.0	14	50	22 - 32	15
Pg 42	BSBE-09	54.0	16	58	30 - 38	12
Pg 48	BSBE-10	59.3	18	64	34 - 44	12

NPT Thread

Size	Cat. No.	Thread Diameter (mm)	Thread Length (mm)	⌀ (mm)	Clamping Range (mm)	Standard Pack (pieces)
NPT 3/8"	BNBC-01	17.15	11.5	17	4 - 8	50
NPT 3/8"	BNBC-01S	17.15	11.5	20	5 - 10	50
NPT 1/2"	BNBC-02	21.34	13	22	6 - 12	50
NPT 1/2"	BNBC-02S	21.34	13	24	10 - 14	50
NPT 3/4"	BNBC-03	26.67	13	30	13 - 18	25
NPT 1"	BNBC-04	33.40	13	40	18 - 25	10
NPT 1 1/4"	BNBC-05	42.16	25.6	50	22 - 32	10
NPT 1 1/2"	BNBC-06	48.26	26	58	30 - 38	10
NPT 2"	BNBC-07	60.33	27	64	34 - 44	10

STANDARD BRASS CABLE GLANDS - METRIC THREADS



These metallic glands are liquid tight, offer excellent strain relief and have lameller designed plastic inserts for protection against distortion. These glands are suitable for use in machinery and equipment, measuring and controlling devices, medical equipments and many other fields where exceptional stability and safe functioning is required. Cable glands with long thread length or reduced clamping range are also available on request. Cable gland can be produced for high temperature (300° C) with silicone sealing and reduced clamping range.

Technical Details :

Material	Brass, Nickel Plated
Flammability	UL 94 V2
Clamping Insert	Polyamide 6
Protection Class	IP 68-5 Bar, 30 min.
Sealing Ring	CR-Chloroprene Rubber
O Ring	Perbunan (NBR) / Silicone
Temperature Range	-20° C to +100° C Continuous, -40° C to +150° C Intermittent
Attachment Threads	EN 60423
Approvals	  

Metric Thread

Size	Cat. No.	Thread Diameter (mm)	Thread Length (mm)	 (mm)	Clamping Range (mm)	Standard Pack (pieces)
M 12 x 1.5	BMBC-0S	12	6	14	3 - 6.5	50
M 16 x 1.5	BMBC-01	16	7	17	4 - 8	50
M 16 x 1.5	BMBC-E1	16	7	20	5 - 10	50
M 20 x 1.5	BMBC-02S	20	8	24	10 - 14	50
M 20 x 1.5	BMBC-02	20	8	22	6 - 12	50
M 25 x 1.5	BMBC-03	25	8	24	10 - 14	25
M 25 x 1.5	BMBC-03S	25	8	30	13 - 18	25
M 25 x 1.5	BMBC-E3	25	8	27	11 - 17	25
M 32 x 1.5	BMBC-04	32	9	30	13 - 18	25
M 32 x 1.5	BMBC-04S	32	9	40	18 - 25	25
M 32 x 1.5	BMBC-E4	32	8	34	15 - 21	25
M 32 x 1.5	BMBC-04S	32	9	40	12 - 20	50
M 40 x 1.5	BMBC-05	40	9	40	18 - 25	20
M 40 x 1.5	BMBC-05S	40	9	50	22 - 32	20
M 40 x 1.5	BMBC-E5	40	9	43	19 - 28	20
M 50 x 1.5	BMBC-06	50	9	50	22 - 32	15
M 50 x 1.5	BMBC-06S	50	9	64	34 - 44	10
M 50 x 1.5	BMBC-E6	50	9	58	27 - 38	12
M 63 x 1.5	BMBC-07	63	14	64	34 - 44	12
M 63 x 1.5	BMBC-07S	63	10	75	37 - 53	10

Metric Long Thread Cable Gland

Size	Cat. No.	Thread Diameter (mm)	Thread Length (mm)	 (mm)	Clamping Range (mm)	Standard Pack (pieces)
M 12 x 1.5	BMBE-0S	12	12	14	3 - 6.5	50
M 16 x 1.5	BMBE-01	16	12	18	4 - 8	50
M 16 x 1.5	BMBE-01S	16	12	20	5 - 10	50
M 20 x 1.5	BMBE-02	20	12	22	6 - 12	50
M 25 x 1.5	BMBE-03	25	12	24	10 - 14	25
M 25 x 1.5	BMBE-E3	25	12	27	11 - 17	25
M 32 x 1.5	BMBE-04	32	15	30	13 - 18	25
M 32 x 1.5	BMBE-E4	32	15	34	15 - 21	25
M 32 x 1.5	BMBE-04S	32	15	40	18 - 25	25
M 32 x 1.5	BMBE-04SR	32	15	40	12 - 20	25
M 40 x 1.5	BMBE-05	40	15	40	18 - 25	20
M 40 x 1.5	BMBE-05S	40	15	50	22 - 32	20
M 40 x 1.5	BMBE-E5	40	15	43	19 - 28	20
M 50 x 1.5	BMBE-06	50	15	50	22 - 32	15
M 50 x 1.5	BMBE-E6	50	15	58	27 - 38	10
M 63 x 1.5	BMBE-07	63	18	64	34 - 44	12
M 63 x 1.5	BMBE-07S	63	18	75	37 - 53	10

DOUBLE SEAL & COMPRESSION TYPE CABLE GLANDS - PG & METRIC THREADS



These metallic glands are liquid tight, offer excellent strain relief. They are suitable for use in machinery and medical equipments measuring and controlling devices where exceptional devices stability and safe functioning is required. These cable glands are constructed with double seal thus providing wide clamping range. Cable gland can be produced for high temperature (300°C) with silicone sealing.

Technical Details :

Material	Brass, Nickel Plated
Flammability	UL 94 V2
Clamping Insert	Polyamide 6
Protection Class	IP 68-5 Bar, 30 min.
Sealing Ring	CR-Chloroprene Rubber (Double Seal)
Sealing Ring	NBR (Compression Type)
O Ring	Perbunan (NBR) / Silicone
Temperature Range	-20° C to +100° C Continuous, -40° C to +150° C Intermittent
Attachment Threads	Pg-DIN 40430 / Metric - EN 60423
Approvals	  

Pg Double Seal Cable Gland

Size	Cat. No.	Thread Diameter (mm)	Thread Length (mm)	 (mm)	Outer Seal Clamping Range (mm)	Double Seal Clamping Range (mm)	Standard Pack (pieces)
Pg 7	BDSP-01	12.5	6	14	4 - 7	-	50
Pg 9	BDSP-02	15.2	6	18	6 - 10	4 - 6	50
Pg 11	BDSP-03	18.6	6	22	7 - 10	4.5 - 7	50
Pg 13.5	BDSP-04	20.4	6	24	10 - 15	8 - 10	50
Pg 16	BDSP-05	22.5	6	24	10 - 15	8 - 10	25
Pg 21	BDSP-06	28.3	7.6	32	13 - 20	10 - 13	25
Pg 29	BDSP-07	37.0	8	40	21.5 - 28	19 - 21.5	20
Pg 36	BDSP-08	47.0	8	50	30 - 35	26 - 30	15
Pg 42	BDSP-09	54.0	10	58	39 - 44.5	35 - 39	12
Pg 48	BDSP-10	59.3	11	64	40 - 48	37 - 40	12

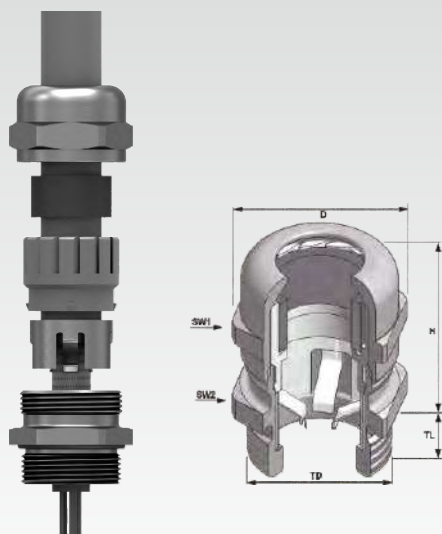
Metric Double Seal Cable Gland

Size	Cat. No.	Thread Diameter (mm)	Thread Length (mm)	 (mm)	Outer Seal Clamping Range (mm)	Double Seal Clamping Range (mm)	Standard Pack (pieces)
M 12 x 1.5	BDSM-0S	12	6	14	4 - 6	-	50
M 16 x 1.5	BDSM-01	16	5.1	18	6.5 - 9	4 - 6	50
M 20 x 1.5	BDSM-02	20	6	22	7 - 12	4.5 - 7	50
M 25 x 1.5	BDSM-03	25	7	28	14 - 17.5	10 - 13	25
M 32 x 1.5	BDSM-04	32	8	35	19 - 23.5	14.5 - 18	25
M 40 x 1.5	BDSM-05	40	8	43	23.5 - 27	16.5 - 23.5	20

Metric Compression Type Cable Gland

Size	Cat. No.	Thread Diameter (mm)	Thread Length (mm)	 (mm)	Clamping Range (mm)	Standard Pack (pieces)
M 63 x 1.5	BDSM-07	63	16	70	50 - 56	5
M 72 x 2	BDSM-08	72	16	77	56 - 62	4
M 75 x 2	BDSM-09	75	16	90	56 - 64	4
M 80 x 2	BDSM-10	80	18	90	60 - 67	2
M 80 x 2	BDSM-10R	80	18	90	50 - 56	2
M 85 x 2	BDSM-11	85	22	95	68 - 77	2
M 85 x 2	BDSM-11R	85	22	95	63 - 70	2
M 90 x 2	BDSM-12	90	22	95	68 - 77	2
M 110 x 2	BDSM-13	110	25	120	60 - 82	2

EMC BRASS CABLE GLANDS - PG THREAD - 2ND GENERATION



EMC cable glands are used in applications which require use of shielded cables for electromagnetic protection. These glands help in maintaining the electromagnetic integrity of the shielded cable by means of contacts placed inside the body of the gland, which come in contact with the shield of the insulation stripped cable which is passed through the gland.

The 2nd generation EMC cable glands have contact leaves fixed to the gland body in such a manner that when the cable is made to enter the gland they allow for an easy entry by opening up with the push force of the cable. Once the cable is in position the spring action of the contact leaves ensures that a proper contact is made with the braiding ensuring that integrity of the electromagnetic shielding is maintained. Available in Pg, Metric & NPT threads.

Technical Details :

Material	Brass, Nickel Plated
Clamping Insert	Polyamide 6 UL94 V2
Contact Spring	Special Copper Alloy
Sealing Ring	CR-Chloroprene Rubber
O Ring	Perbunan (NBR)
Protection Class	IP 68-5 Bar, 30 min
Oper. Temperature	-20°C to +100°C Continuous -40°C to +150°C Intermittant
Attachment Threads	DIN 40430
Approvals	  

Pg Thread - 2nd Generation

Size	Cat. No.	Thread Diameter (mm)	Thread Length (mm)	Wrench (mm)	Clamping Range (mm)	Shield Diameter (mm)	Standard Pack (pieces)
Pg 7	BSEM-01	12.5	6.0	14	3 - 6.5	2.5 - 4.5	50
Pg 9	BSEM-02	15.2	6.0	17	4 - 8	3.5 - 6.0	50
Pg 11	BSEM-03	18.6	6.0	20	5 - 10	4.0 - 8.0	50
Pg 13.5	BSEM-04	20.4	6.5	22	6 - 12	5.0 - 10.0	50
Pg 16	BSEM-05	22.5	6.5	24	10 - 14	8.5 - 11.5	25
Pg 21	BSEM-06	28.3	7.2	30	13 - 18	11.0 - 14.0	25
Pg 29	BSEM-07	37	8.0	40	18 - 25	16.0 - 20.0	20
Pg 36	BSEM-08	47	9.0	50	22 - 32	20.0 - 27.0	15
Pg 42	BSEM-09	54	12.0	58	30 - 38	28.0 - 34.0	12
Pg 48	BSEM-10	59.3	14.0	64	34 - 44	31.0 - 40.0	12

Pg Long Thread Cable Gland - 2nd Generation

Size	Cat. No.	Thread Diameter (mm)	Thread Length (mm)	Wrench (mm)	Clamping Range (mm)	Shield Diameter (mm)	Standard Pack (pieces)
Pg 7	BSEN-01	12.5	10.0	14	3 - 6.5	2.5 - 4.5	50
Pg 9	BSEN-02	15.2	10.0	17	4 - 8	3.5 - 6.0	50
Pg 11	BSEN-03	18.6	10.0	20	5 - 10	4.0 - 8.0	50
Pg 13.5	BSEN-04	20.4	10.0	22	6 - 12	5.0 - 10.0	50
Pg 16	BSEN-05	22.5	10.0	24	10 - 14	8.5 - 11.5	25
Pg 21	BSEN-06	28.3	12.0	30	13 - 18	11.0 - 14.0	25
Pg 29	BSEN-07	37	12.0	40	18 - 25	16.0 - 20.0	20
Pg 36	BSEN-08	47	14.0	50	22 - 32	20.0 - 27.0	15
Pg 42	BSEN-09	54	16.0	58	30 - 38	28.0 - 34.0	12
Pg 48	BSEN-10	59.3	18.0	64	34 - 44	31.0 - 40.0	12

EMC BRASS CABLE GLANDS - METRIC & NPT THREAD - 2ND GENERATION

Metric Thread - 2nd Generation

Size	Cat. No.	Thread Diameter (mm)	Thread Length (mm)	 (mm)	Clamping Range (mm)	Shield Diameter (mm)	Standard Pack (pieces)
M12 x 1.5	BMEM-0S	12	6	14	3 - 6.5	2.5 - 4.5	50
M16 x 1.5	BMEM-01	16	7	17	4 - 8	3.5 - 6.0	50
M16 x 1.5	BMEM-01S	16	6.5	20	5 - 10	4.0 - 8.0	50
M20 x 1.5	BMEM-02	20	8	22	6 - 12	5.0 - 10.0	50
M25 x 1.5	BMEM-03	25	8	24	10 - 14	8.5 - 11.5	25
M25 x 1.5	BMEM-03S	25	8	30	13 - 18	11.0 - 14.0	25
M32 x 1.5	BMEM-04	32	9	30	13 - 18	11.0 - 14.0	25
M32 x 1.5	BMEM-04S	32	9	40	18 - 25	16.0 - 20.0	25
M40 x 1.5	BMEM-05	40	9	40	18 - 25	16.0 - 20.0	20
M40 x 1.5	BMEM-05S	40	9	50	22 - 32	20.0 - 27.0	20
M50 x 1.5	BMEM-06	50	9	50	22 - 32	20.0 - 27.0	15
M63 x 1.5	BMEM-07	63	14	64	34 - 44	31.0 - 40.0	12
M75 x 1.5	BMEM-09	75	20	90	53 - 64	45.0 - 60.0	12

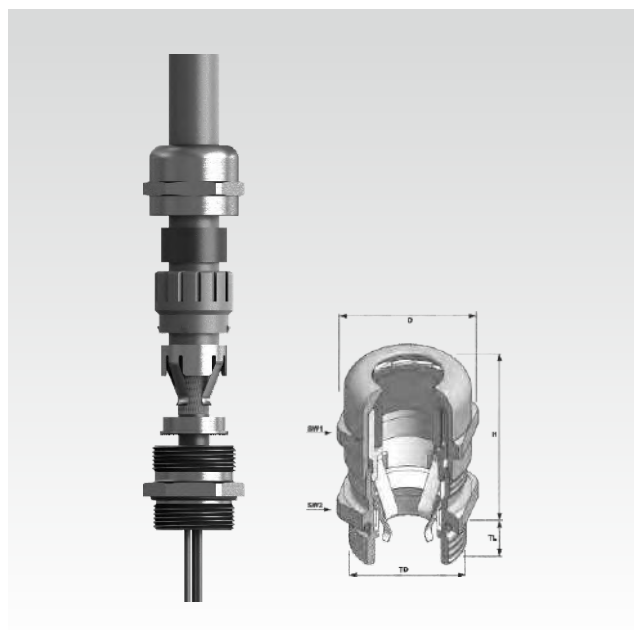
Metric Long Thread Cable Gland - 2nd Generation

Size	Cat. No.	Thread Diameter (mm)	Thread Length (mm)	 (mm)	Clamping Range (mm)	Shield Diameter (mm)	Standard Pack (pieces)
M12 x 1.5	BMEN-0S	12	12.0	14	3 - 6.5	2.5 - 4.5	50
M16 x 1.5	BMEN-01	16	12.0	17	4 - 8	3.5 - 6.0	50
M20 x 1.5	BMEN-02	20	12.0	22	6 - 12	5.0 - 10.0	50
M25 x 1.5	BMEN-03	25	12.0	24	10 - 14	8.5 - 11.5	25
M32 x 1.5	BMEN-04	32	15.0	30	13 - 18	11.0 - 14.0	25
M40 x 1.5	BMEN-05	40	15.0	40	18 - 25	16.0 - 20.0	20
M50 x 1.5	BMEN-06	50	15.0	50	22 - 32	20.0 - 27.0	15
M63 x 1.5	BMEN-07	63	18.0	64	34 - 44	31.0 - 40.0	12

NPT Thread - 2nd Generation

Size	Cat. No.	Thread Diameter (mm)	Thread Length (mm)	 (mm)	Shield Diameter (mm)	Standard Pack (pieces)
NPT 3/8"	BNEM-01	17.15	11.5	20	5 - 10	25
NPT 1/2"	BNEM-02	21.34	13.0	22	6 - 12	25
NPT 3/4"	BNEM-03	26.67	13.0	30	13 - 18	25
NPT 1"	BNEM-04	33.40	13.0	40	18 - 25	25

EMC BRASS CABLE GLANDS - METRIC THREAD - 3RD GENERATION



The 3rd generation EMC cable glands offer an advantage that as the gland is tightened the contact force exerted on the braided portion of the cable also increases, this leads to a lower contact resistance. Also the wider gap between the contact leaves allows for an easier insertion and removal of the cable.

Technical Details :

Material	Brass, Nickel Plated
Clamping Insert	Polyamide 6 V2
Contact Spring	Special Copper Alloy
Sealing Ring	CR-Chloroprene Rubber
O Ring	Perbunan (NBR)
Protection Class	IP 68-5 Bar, 30 min
Oper. Temperature	-20°C to +100°C Continuous -40°C to +150°C Intermittant
Attachment Threads	EN 60423
Approvals	  

Metric Thread - 3rd Generation

Size	Cat. No.	Thread Diameter (mm)	Thread Length (mm)	 (mm)	Clamping Range (mm)	Shield Diameter (mm)	Standard Pack (pieces)
M12 x 1.5	BMEM-ES	12	6	14	3 - 6.5	2.5 - 4.5	50
M16 x 1.5	BMEM-E1	16	7	20	5 - 10	4.0 - 8.0	50
M20 x 1.5	BMEM-E2	20	8	22	6 - 12	5.0 - 10.0	50
M25 x 1.5	BMEM-E3	25	8	27	11 - 17	9.5 - 15.0	25
M32 x 1.5	BMEM-E4	32	8	34	15 - 21	13.5 - 19.0	25
M40 x 1.5	BMEM-E5	40	9	43	19 - 28	17.0 - 25.0	20
M50 x 1.5	BMEM-E6	50	9	58	27 - 38	25.0 - 32.0	12
M63 x 1.5	BMEM-E7	63	14	68	34 - 44	31.0 - 41.0	12

EMC BRASS CABLE GLANDS - 4TH GENERATION



The 4th generation EMC cable glands offer bigger opening for the cable to enter between the contact leaves and also the lowest contact resistance on account of the large contact surface and superior contact force. In these glands also, as the gland is tightened the contact leaves exert a higher contact force ensuring a positive contact with the shield of the cable.

Technical Details :

Material	Brass, Nickel Plated
Clamping Insert	Polyamide 6 V2
Contact Spring	Special Copper Alloy
Sealing Ring	Chloroprene
O Ring	Perbunan (NBR)
Protection Class	IP 68-5 Bar, 30 min
Oper. Temperature	-20°C to +100°C -40°C to +150°C Intermittant
Threads available	Pg - DIN 40430, Metric - EN 60423 NPT - ANSI B 1.20.1
Approvals	  

Pg Thread - 4th Generation

Size	Cat. No.	Thread Diameter (mm)	Thread Length (mm)	 (mm)	Clamping Range (mm)	Shield Diameter (mm)	Standard Pack (pieces)
Pg 7	BSEM-E1(PG7T)	12.5	6.0	14	3 - 6.5	2 - 5	50
Pg 11	BSEM-E3(PG11T)	18.6	6.0	20	5 - 10	3.5 - 8	50
Pg 13.5	BSEM-E4(PG13.5T)	20.4	6.5	22	6 - 12	4.5 - 10	50
Pg 16	BSEM-E5(PG16T)	22.5	6.5	24	7.5 - 14	5.5 - 11.5	25
Pg 21	BSEM-E6(PG21T)	28.3	7.0	30	10 - 18	7 - 14	25
Pg 29	BSEM-E7(PG29T)	37.0	9.0	40	16 - 25	12 - 20	25
Pg 36	BSEM-E8(PG36T)	47.0	9.0	50	22 - 32	18 - 27	20
Pg 42	BSEM-E9(PG42T)	54.0	12.0	58	30 - 38	26 - 34	10
Pg 48	BSEM-E10(PG48T)	59.3	14.0	64	34 - 44	30 - 40	5

Metric Thread - 4th Generation

Size	Cat. No.	Thread Diameter (mm)	Thread Length (mm)	 (mm)	Clamping Range (mm)	Shield Diameter (mm)	Standard Pack (pieces)
M12 x 1.5	BMEM-ES(M12T)	12	6	14	3 - 6.5	2 - 5	50
M16 x 1.5	BMEM-E1(M16T)	16	6	20	5 - 10	3.5 - 8	50
M20 x 1.5	BMEM-E2S(M20T)	20	6	22	6 - 12	4.5 - 10	50
M20 x 1.5	BMEM-E2(M20T)	20	8	24	7.5 - 14	5.5 - 11.5	50
M25 x 1.5	BMEM-E3(M25T)	25	8	30	10 - 18	7 - 14	25
M32 x 1.5	BMEM-E4(M32T)	32	9	40	16 - 25	12 - 20	25
M40 x 1.5	BMEM-E5(M40T)	40	9	50	22 - 32	18 - 27	20
M50 x 1.5	BMEM-E6(M50T)	50	9	58	32 - 38	26 - 34	10
M63 x 1.5	BMEM-E7(M63T)	63	14	64	34 - 44	30 - 40	5
M63 x 1.5	BMEM-E7L(M63T)	63	10	75	37 - 53	33 - 49	2

NPT Thread - 4th Generation

Size	Cat. No.	Thread Diameter (mm)	Thread Length (mm)	 (mm)	Clamping Range (mm)	Shield Diameter (mm)	Standard Pack (pieces)
NPT 1/4"	BNEM-ES(NPT1/4"T)	13.72	11.5	14	3 - 6.5	2 - 5	50
NPT 3/8"	BNEM-E1(NPT3/8"T)	17.15	11.5	20	5 - 10	3.5 - 8	50
NPT 1/2"	BNEM-E2S(NPT1/2"T)	21.34	15	22	6 - 12	4.5 - 10	50
NPT 1/2"	BNEM-E2(NPT1/2"T)	21.34	15	24	7.5 - 14	5.5 - 11.5	50
NPT 3/4"	BNEM-E3(NPT3/4"T)	26.67	15	30	10 - 18	7 - 14	25
NPT 1"	BNEM-E4(NPT1"T)	33.4	20	40	16 - 25	12 - 20	25
NPT 1 1/4"	BNEM-E5(NPT1 1/4"T)	42.16	20	50	22 - 32	18 - 27	20
NPT 1 1/2"	BNEM-E6(NPT1 1/2"T)	48.26	22	58	32 - 38	26 - 34	10
NPT 2"	BNEM-E7(NPT2"T)	60.33	22	64	34 - 44	30 - 40	5

STANDARD STAINLESS STEEL GLANDS



These stainless steel glands are liquid tight, offer excellent strain relief and have lameller designed plastic inserts for protection against distortion. These glands are suitable for use in tunnel lighting and chemical industry where high mechanical and chemical resistance is required. Available with reduced clamping range and wide clamping range also with long thread.

Technical Details :

Material	Stainless Steel (AISI 303)
	St. Steel (AISI 316L) On Request
Clamping Insert	Polyamide 6 UL94 V2
Protection Class	IP 68-5 Bar, 30 min
Sealing Ring	Chloroprene / Silicone
O Ring	Perbunan (NBR) / Silicone
Oper. Temperature	-20°C to +100°C -40°C to +300°C Intermittent
Threads available	Pg - DIN 40430 Metric - EN 60423 NPT - EN 60423
Approvals	  

Pg Cable Gland

Size	Cat. No.	Thread Diameter (mm)	Thread Length (mm)	⌘ (mm)	Clamping Range (mm)	Standard Pack (pieces)
Pg 7	BSSC-01	12.5	6	14	3 - 6.5	50
Pg 9	BSSC-02	15.2	6	17	4 - 8	50
Pg 11	BSSC-03	18.6	6	22	5 - 10	50
Pg 13.5	BSSC-04	20.4	6.5	22	6 - 12	50
Pg 16	BSSC-05	22.5	6.5	24	10 - 14	25
Pg 21	BSSC-06	28.3	7.2	30	13 - 18	25
Pg 29	BSSC-07	37.0	8	41	18 - 25	20
Pg 36	BSSC-08	47.0	9	50	22 - 32	15
Pg 42	BSSC-09	54.0	12	60	30 - 38	12
Pg 48	BSSC-10	59.3	14	65	34 - 44	12

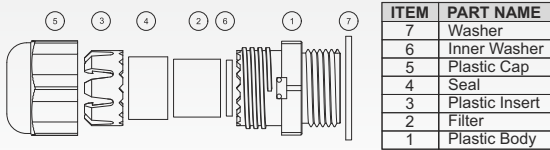
Metric Cable Gland

Size	Cat. No.	Thread Diameter (mm)	Thread Length (mm)	⌘ (mm)	Clamping Range (mm)	Standard Pack (pieces)
M12 x 1.5	BMSC-0S	12	6	14	3 - 6.5	50
M16 x 1.5	BMSC-01	16	7	17	4 - 8	50
M20 x 1.5	BMSC-02	20	8	22	6 - 12	50
M25 x 1.5	BMSC-03	25	8	24	10 - 14	25
M25 x 1.5	BMSC-03S	25	8	24	13 - 18	25
M32 x 1.5	BMSC-04	32	9	30	13 - 18	25
M40 x 1.5	BMSC-05	40	9	41	18 - 25	20
M50 x 1.5	BMSC-06	50	9	50	22 - 32	15
M63 x 1.5	BMSC-07	63	14	65	34 - 44	12

NPT Thread

Size	Cat. No.	Thread Diameter (mm)	Thread Length (mm)	⌘ (mm)	Clamping Range (mm)	Standard Pack (pieces)
NPT 3/8"	BNSD-01S	17.15	11.5	22	3 - 7	50
NPT 3/8"	BNSC-01	17.15	11.5	17	4 - 8	50
NPT 1/2"	BNSC-02	21.34	13.0	22	6 - 12	50
NPT 1/2"	BNSC-02S	21.34	13.0	24	10 - 14	50
NPT 3/4"	BNSC-03	26.67	13.0	30	13 - 18	25
NPT 1"	BNSC-04	33.40	13.0	41	18 - 25	25
NPT 1 1/4"	BNSC-05	42.16	25.6	50	22 - 32	20
NPT 1 1/2"	BNSC-06	48.26	26.0	60	32 - 38	10
NPT 2"	BNSC-07	60.33	27.0	65	34 - 44	5

VENTILATION GLANDS



Ventilation Glands combine the advantages of cable glands with that of ventilation plugs. That is while allowing for true strain relief like cable glands these also act as pressure equalizing devices like ventilation plugs. The same is achieved with the help of a membrane inside the ventilation plug, which allows for gases (air) to pass through it while blocking liquids and particulate solids (dust).

These glands offer higher strain and torsion relief at lower cap nut tightening torque and have lower heights than standard cable glands. They are manufactured according to requirement of DIN EN 62444 / 50262.

Technical Details :

Material	Polyamide 6 Brass Nickel Plated
Colour	RAL 7035 (Light Grey) RAL 9005 (Black)
Temperature Range	-20°C to +100°C Continuous, -30°C to +150°C Intermittent
Protection Class	IP 67
Vent Membrane	PTFE
Seal	Cloroprene
Washer	Nitrile / NBR
Approvals	

Ventilation Gland in Polyamide - Pg Thread

Size	Cat. No. Light Grey	Cat. No. Black	Thread Diameter D (mm)	Thread Length L (mm)	Claming Range (mm)	Air Permeability lt/hour	Water Intrusion Pressure Bar
Pg 9	BSVG-12	BSVG-22	15.2	8	4 - 7	25	0.1
Pg 11	BSVG-13	BSVG-23	18.6	8	4 - 7	25	0.1
Pg 13.5	BSVG-14	BSVG-24	20.4	9	6 - 11	40	0.1

Ventilation Gland in Polyamide - Metric Thread

Size	Cat. No. Light Grey	Cat. No. Black	Thread Diameter D (mm)	Thread Length L (mm)	Claming Range (mm)	Air Permeability lt/hour	Water Intrusion Pressure Bar
M 12 x 1.5	BMVG-1S	BMVG-2S	12	8	4 - 7	25	0.1
M 16 x 1.5	BMVG-11	BMVG-21	16	10	4 - 7	25	0.1
M 20 x 1.5	BMVG-12	BMVG-22	20	10	6 - 11	40	0.1

Ventilation Gland in Brass - Pg Thread

Size	Cat. No.	Thread Diameter D (mm)	Thread Length L (mm)	Claming Range (mm)	Air Permeability lt/hour	Water Intrusion Pressure Bar
Pg 7	BSBCVG-01	12.5	8	4 - 7	25	0.1
Pg 9	BSBCVG-02	15.2	8	4 - 7	25	0.1
Pg 11	BSBCVG-03	18.5	8	5 - 9	35	0.1
Pg 13.5	BSBCVG-04	20.4	9	6 - 11	50	0.1

Ventilation Gland in Brass - Metric Thread

Size	Cat. No.	Thread Diameter D (mm)	Thread Length L (mm)	Claming Range (mm)	Air Permeability lt/hour	Water Intrusion Pressure Bar
M 12 x 1.5	BMBCVG-0S	12	8	4 - 7	25	0.1
M 16 x 1.5	BMBCVG-01	16	8	4 - 7	25	0.1
M 16 x 1.5	BMBCVG-01L	16	8	5 - 9	35	0.1
M 20 x 1.5	BMBCVG-02	20	8	6 - 11	50	0.1

CORROSION PROOF DOUBLE COMPRESSION CABLE GLAND



These glands with hybrid structure (Brass & Polyamide) eliminates the need of a shroud for protection against corrosive environment.

They offer High-quality strain relief and reliable sealing performance for standard industrial applications.

These glands offer Armour earth continuity because of the metal armor ring and body.

They are manufactured according to DIN EN 62444/50262 standard.

Technical Details :

Material	Body & Cap - Polyamide 6 Inner Part - Brass
Sealing Ring	NBR
O Ring	NBR
Flammability	V0 according to UL94
Protection Class	IP66 / IP68
Temperature Range	-20°C to +80°C Continuous -40°C to +150°C Intermittent
Thread Type	Metric (M) ISO Pitch 1.5
Application	SWA & AWA Cable
Approvals	

Size	Cat. No.	Thread Diameter (mm)	Thread Length (mm)	 (mm)	Inner Sheath Ø max mm	Outer Sheath Ø min-max mm
M20x1.5	BCW-21	20	17	27	12	8.0 - 12.0
M20x1.5	BCW-22	20	17	27	12	10.5 - 16.0
M20x1.5	BCW-23	20	17	32	16	15.5 - 21.0
M25x1.5	BCW-25	25	17	41	21	20.5 - 27.5
M32x1.5	BCW-27	32	17	50	28	27.0 - 35.0
M40x1.5	BCW-29	40	22	58	32	33.0 - 41.0
M50x1.5	BCW-30	50	22	72	44	37.0 - 47.0
M50x1.5	BCW-31	50	22	72	44	45.0 - 53.0
M63x1.5	BCW-32	63	22	85	56	50.0 - 60.0
M63x1.5	BCW-33	63	22	85	56	58.0 - 66.0



HIGH PROTECTION CLASS GROMMETS - RUTASEAL



Rutaseal are special grommets which are simple to use and require no tools for installation. They differ from conventional grommets as they provide IP 67 protection. They can be installed from either side of the panel depending upon application without any need for installation of lock nuts from the other side as in conventional cable glands. With these grommets necessity of blind stops is removed as in these grommets the opening is always sealed until the membrane is pushed out by the cable. These are suitable for enclosures with wall thickness from 0.5 to 4.0 mm. They are halogen free, weather proof & resistant to chemicals.

Technical Details :

Material	EPDM
Colour	Grey (RAL 7001) Black (RAL 9005) Light Grey (RAL 7035 - on request)
Temperature Range	-40° C to +110° C
Testing Standard	SEMKO Report 1301727/1009414
Protection Class	IP67 acc. to EN 60529

Pg Size

Size	Cat. No. Grey	Cat. No. Black	Panel Cutout Diameter (mm)	Clamping Range (mm)	Standard Pack (pieces)
Pg 7	TRG P07G	TRG P07B	13	3 - 5	50
Pg 9	TRG P09G	TRG P09B	16	5 - 7	50
Pg 11	TRG P11G	TRG P11B	19	7 - 10	50
Pg 16	TRG P16G	TRG P16B	23	10 - 14	50
Pg 21	TRG P21G	TRG P21B	29	14 - 20	25
Pg 29	TRG P29G	TRG P29B	38	20 - 26	25
Pg 36	TRG P36G	TRG P36B	48	26 - 35	10

Metric

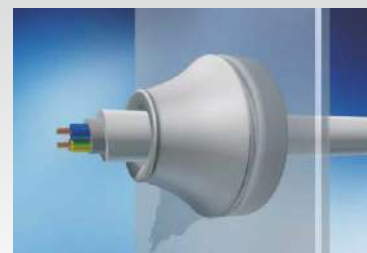
Size	Cat. No. Grey	Cat. No. Black	Panel Cutout Diameter (mm)	Clamping Range (mm)	Standard Pack (pieces)
M12 x 1.5	TRG M12G	TRG M12B	12.5	4 - 7	50
M16 x 1.5	TRG M16G	TRG M16B	16.5	5 - 9	50
M20 x 1.5	TRG M20G	TRG M20B	20.5	8 - 13	50
M25 x 1.5	TRG M25G	TRG M25B	25.5	11 - 17	50
M32 x 1.5	TRG M32G	TRG M32B	32.5	15 - 20	25
M40 x 1.5	TRG M40G	TRG M40B	40.5	19 - 28	25
M50 x 1.5	TRG M50G	TRG M50B	50.5	27 - 35	10
M63 x 1.5	TRG M63G	TRG M63B	63.5	34 - 45	5



Push the grommet into the hole



Pierce the grommet with the cable



The grommet is then locked in position by pulling it back.

HIGH PROTECTION CLASS GROMMETS - SIMPLE SEAL & MULTI SEAL



Simple Seal and Multi Seal are special grommets with single hole and multi hole which are simple to use and require no tools for installation. They have wide clamping range. They differ from conventional grommets as they provide IP 67 protection. They can be installed from one side of the panel without any need for installation of lock nuts from the other side as in conventional cable glands. With these grommets necessity of blind stops is removed as in these grommets the opening is always sealed until the membrane is pushed out by the cable. These are suitable for enclosures with wall thickness from 0.5 to 4.5 mm. They are halogen free, weather proof & resistant to chemicals.

They can be used with cables passing through at an angle since they are equipped with sock that closes tightly around the cable and cable can be moved around like joy stick.

Technical Details :

Material	Thermo Plastic Elastomer
Colour	Black (RAL 9005) Light Grey (RAL 7035)
Temperature Range	-50° C to +125° C
Protection Class	IP 67 acc. to EN 60529

Simple Seal - Pg Size

Size	Cat. No. Light Grey	Cat. No. Black	Panel Cutout Diameter (mm)	Clamping Range (mm)	Standard Pack (pieces)
Pg 9	TSS P09LG	TSS P09B	16	5-10	50
Pg 11	TSS P11LG	TSS P11B	19	6-12	50
Pg 16	TSS P16LG	TSS P16B	23	8-15	50
Pg 21	TSS P21LG	TSS P21B	29	10-20	25
Pg 29	TSS P299LG	TSS P299B	38	18-27	25

Simple Seal - Metric Size

Size	Cat. No. Light Grey	Cat. No. Black	Panel Cutout Diameter (mm)	Clamping Range (mm)	Standard Pack (pieces)
M16 x 1.5	TSS M16LG	TSS M16B	16.5	5-10	50
M20 x 1.5	TSS M20LG	TSS M20B	20.5	6-13	50
M25 x 1.5	TSS M25LG	TSS M25B	25.5	8-17	50
M32 x 1.5	TSS M32LG	TSS M32B	32.5	12-24	25
M40 x 1.5	TSS M40LG	TSS M40B	40.5	19-30	25

Multi Seal - Pg & Metric Size

Size	Cat. No. Light Grey	Cat. No. Black	Panel Cutout (A) Diameter (mm)	No. of Holes & Clamping Range (mm)	Standard Pack (pieces)
M20 x 1.5	TSS M20LGM	TSS M20BM	20.5	3 X 4-7	50
M25 x 1.5	TSS M25LGM	TSS M25BM	25.5	3 X 4-9	50
PG 11	TSS P11LGM	TSS P11BM	19	3 X 4-6	50
PG 16	TSS P16LGM	TSS P16BM	23	3 X 4-8	50



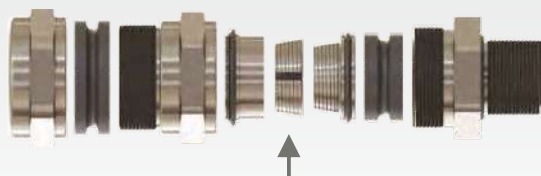
Push the grommet into the hole



Pierce the grommet with the cable



METRIC THREAD BRASS / S.S CABLE GLANDS FOR ALL TYPE OF ARMoured CABLES



With armour reduction cone it can be used for shielded, SWB and STA cable.
When armour reduction cone is taken out it can be used for armoured SWA and AWA cables.

ORION UNIVERSAL

These double compression cable glands are used for all types Armoured cables such as SWA - SWB - STA - PWA - AWA - SHIELDED. Various clamping ranges are available for same size of thread.

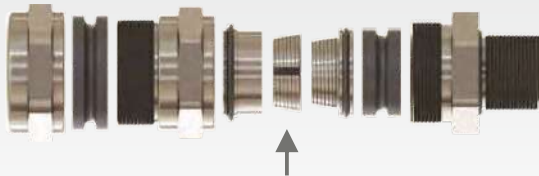
Technical Details :

Material	Brass Nickel Plated (MB Series) Stainless Steel (MX Series)
Protection Class	IP 68 - 5 Bar, 30 Min
Sealing Ring	Chloroprene / Silicone
O Ring	Chloroprene / Silicone
Temperature Range	Chloroprene -40°C to +100°C Silicone -60°C to +130°C
Threads available	Metric

Metric Thread

Size	Cat. No.	Thread Diameter TD (mm)	Thread Length TL (mm)	Clamping Range		Armour Wire Ø min - max mm	Shield Wire Ø min - max mm
				Inner Sheath Ø min-max	Outer Sheath Ø min-max		
M12x1.5	KBAU-E0SLMB	12	15	3.0 - 7.5	6.0 - 12.0	0.70 - 1.20	0.2 - 0.5
M16x1.5	KBAU-E01SMB	16	16	3.0 - 8.5	6.0 - 12.0	0.70 - 1.20	0.2 - 0.5
M16x1.5	KBAU-E01MB	16	16	6.0 - 12.0	8.5 - 16.0	0.70 - 1.25	0.2 - 0.5
M20x1.5	KBAU-E1SMB	20	16	3.0 - 8.5	6.0 - 12.0	0.70 - 1.20	0.2 - 0.5
M20x1.5	KBAU-E1MB	20	16	6.0 - 12.0	8.5 - 16.0	0.70 - 1.25	0.2 - 0.5
M20x1.5	KBAU-E1LMB	20	16	8.5 - 14.5	12.0 - 20.0	0.90 - 1.30	0.2 - 0.5
M25x1.5	KBAU-E2XSMB	25	18	3.0 - 8.5	6.0 - 12.0	0.70 - 1.20	0.2 - 0.5
M25x1.5	KBAU-E2SMB	25	18	6.0 - 12.0	8.5 - 16.0	0.70 - 1.25	0.2 - 0.5
M25x1.5	KBAU-E2MB	25	18	8.5 - 16.0	12.0 - 21.0	0.70 - 1.20	0.5 - 0.7
M25x1.5	KBAU-E2LMB	25	18	12.0 - 20.0	16.0 - 26.0	1.30 - 1.70	0.2 - 0.5
M32x1.5	KBAU-E3XSMB	32	18	6.0 - 12.0	8.5 - 16.0	0.70 - 1.25	0.2 - 0.5
M32x1.5	KBAU-E3SMB	32	18	12.0 - 20.0	16.0 - 26.0	1.30 - 1.70	0.2 - 0.5
M32x1.5	KBAU-E3MB	32	18	15.0 - 26.0	20.0 - 33.0	1.20 - 1.80	0.2 - 0.8
M40x1.5	KBAU-E4XSMB	40	18	12.0 - 20.0	16.0 - 26.0	1.30 - 1.70	0.2 - 0.5
M40x1.5	KBAU-E4SMB	40	18	15.0 - 26.0	20.0 - 33.0	1.20 - 1.80	0.2 - 0.8
M40x1.5	KBAU-E4MB	40	18	20.0 - 32.0	29.0 - 41.0	1.60 - 2.20	0.2 - 0.8
M50x1.5	KBAU-E5XSMB	50	18	15.0 - 26.0	20.0 - 33.0	1.20 - 1.80	0.2 - 0.8
M50x1.5	KBAU-E5XMMB	50	18	20.0 - 32.0	29.0 - 41.0	1.60 - 2.20	0.2 - 0.8
M50x1.5	KBAU-E5SMB	50	18	22.0 - 35.0	33.0 - 48.0	2.00 - 2.80	0.2 - 1.0
M50x1.5	KBAU-E5MB	50	18	27.0 - 41.0	36.0 - 52.0	1.80 - 2.80	0.3 - 1.4
M63x1.5	KBAU-E6XSMB	63	20	22.0 - 35.0	33.0 - 48.0	2.00 - 2.80	0.2 - 1.0
M63x1.5	KBAU-E6XMMB	63	20	27.0 - 41.0	36.0 - 52.0	1.80 - 2.80	0.3 - 1.4
M63x1.5	KBAU-E6SMB	63	20	35.0 - 45.0	43.0 - 57.0	1.80 - 2.80	0.3 - 1.0
M63x1.5	KBAU-E6MB	63	20	40.0 - 52.0	47.0 - 60.0	1.80 - 2.80	0.6 - 1.5
M75x1.5	KBAU-E7XSMB	75	20	35.0 - 45.0	43.0 - 57.0	1.80 - 2.80	0.3 - 1.0
M75x1.5	KBAU-E7SMB	75	20	40.0 - 52.0	47.0 - 60.0	1.80 - 2.80	0.6 - 1.5
M75x1.5	KBAU-E7MB	75	20	45.0 - 60.0	54.0 - 70.0	1.00 - 2.30	0.2 - 1.2
M90x1.5	KBAU-E8XSMB	90	20	40.0 - 52.0	47.0 - 60.0	1.80 - 2.80	0.6 - 1.5
M90x1.5	KBAU-E8SMB	90	20	45.0 - 60.0	54.0 - 70.0	1.00 - 2.30	0.2 - 1.2
M90x1.5	KBAU-E8MB	90	20	60.0 - 72.0	63.0 - 80.0	1.00 - 3.50	0.2 - 1.9
M110x1.5	KBAU-E10SMB	110	20	45.0 - 60.0	54.0 - 70.0	1.00 - 2.30	0.2 - 1.2
M110x1.5	KBAU-E10MB	110	20	60.0 - 72.0	63.0 - 80.0	1.00 - 3.50	0.2 - 1.9
M90x2.0	KBAU-E8LMLTB	90	20	70.0 - 82.0	78.0 - 90.0	1.5 - 4.4	0.2 - 2.4
M100x2.0	KBAU-E9SMLTB	100	20	80.0 - 92.0	88.0 - 100.0	1.2 - 4.0	0.2 - 2.2
M110x2.0	KBAU-E10LMLTB	110	20	90.0 - 101.0	98.0 - 110.0	2.1 - 5.4	0.2 - 3.1
M130x2.0	KBAU-E13MLTB	130	24	100.0 - 115.0	109.0 - 123.0	2.0 - 5.4	0.2 - 3.0

NPT THREAD BRASS / S.S CABLE GLANDS FOR ALL TYPE OF ARMoured CABLES



With armour reduction cone it can be used for shielded, SWB and STA cable.
When armour reduction cone is taken out it can be used for armoured SWA and AWA cables.

ORION UNIVERSAL

These double compression cable glands are used for all types Armoured cables such as SWA - SWB - STA - PWA - AWA - SHIELDED. Various clamping ranges are available for same size of thread.

Technical Details :

Material	Brass Nickel Plated (MB Series) Stainless Steel (MX Series)
Protection Class	IP 68 - 5 Bar, 30 Min
Sealing Ring	Chloroprene / Silicone
O Ring	Chloroprene / Silicone
Temperature Range	Chloroprene -40°C to +100°C Silicone -60°C to +130°C
Threads available	NPT

NPT Thread

Size	Cat. No.	Thread Diameter TD (mm)	Thread Length TL (mm)	Clamping Range		Armour Wire Ø min - max mm	Shield Wire Ø min - max mm
				Inner Sheath Ø min-max	Outer Sheath Ø min-max		
NPT 1/4"	KBAU-E0SLNB	13.72	15.0	3.0 - 8.0	6.0 - 12.0	0.70 - 1.20	0.2 - 0.5
NPT 3/8"	KBAU-E01SNB	17.15	16.0	3.0 - 8.5	6.0 - 12.0	0.70 - 1.20	0.2 - 0.5
NPT 3/8"	KBAU-E01NB	17.15	16.0	6.0 - 12.0	8.5 - 16.0	0.70 - 1.25	0.2 - 0.5
NPT 1/2"	KBAU-E1SNB	21.34	16.0	3.0 - 8.5	6.0 - 12.0	0.70 - 1.20	0.2 - 0.5
NPT 1/2"	KBAU-E1NB	21.34	16.0	6.0 - 12.0	8.5 - 16.0	0.70 - 1.25	0.2 - 0.5
NPT 1/2"	KBAU-E1LNB	21.34	16.0	8.5 - 14.5	12.0 - 20.0	0.90 - 1.30	0.2 - 0.5
NPT 3/4"	KBAU-E2XSNB	26.67	16.0	3.0 - 8.5	6.0 - 12.0	0.70 - 1.20	0.2 - 0.5
NPT 3/4"	KBAU-E2SNB	26.67	18.0	6.0 - 12.0	8.5 - 16.0	0.70 - 1.25	0.2 - 0.5
NPT 3/4"	KBAU-E2NB	26.67	16.0	8.5 - 16.0	12.0 - 21.0	0.70 - 1.20	0.5 - 0.7
NPT 3/4"	KBAU-E2LNB	26.67	16.0	12.0 - 20.0	16.0 - 26.0	1.30 - 1.70	0.2 - 0.5
NPT 1"	KBAU-E3XSNB	33.4	21.0	6.0 - 12.0	8.5 - 16.0	0.70 - 1.25	0.2 - 0.5
NPT 1"	KBAU-E3SNB	33.4	21.0	12.0 - 20.0	16.0 - 26.0	1.30 - 1.70	0.2 - 0.5
NPT 1"	KBAU-E3NB	33.4	21.0	15.0 - 26.0	20.0 - 33.0	1.20 - 1.80	0.2 - 0.8
NPT 1 1/4"	KBAU-E4XSNB	42.16	21.0	12.0 - 20.0	16.0 - 26.0	1.30 - 1.70	0.2 - 0.5
NPT 1 1/4"	KBAU-E4SNB	42.16	21.0	15.0 - 26.0	20.0 - 33.0	1.20 - 1.80	0.2 - 0.8
NPT 1 1/4"	KBAU-E4NB	42.16	18.0	20.0 - 32.0	29.0 - 41.0	1.60 - 2.20	0.2 - 0.8
NPT 1 1/2"	KBAU-E5XSNB	48.26	21.0	15.0 - 26.0	20.0 - 33.0	1.20 - 1.80	0.2 - 0.8
NPT 1 1/2"	KBAU-E5XMNB	48.26	21.0	20.0 - 32.0	29.0 - 41.0	1.60 - 2.20	0.2 - 0.8
NPT 1 1/2"	KBAU-E5SNB	48.26	21.0	22.0 - 35.0	33.0 - 48.0	2.00 - 2.80	0.2 - 1.0
NPT 1 1/2"	KBAU-E5NB	48.26	21.0	27.0 - 41.0	36.0 - 52.0	1.80 - 2.80	0.3 - 1.4
NPT 2"	KBAU-E6XSNB	60.33	21.0	22.0 - 35.0	33.0 - 48.0	2.00 - 2.80	0.2 - 1.0
NPT 2"	KBAU-E6XMNB	60.33	21.0	27.0 - 41.0	36.0 - 52.0	1.80 - 2.80	0.3 - 1.4
NPT 2"	KBAU-E6SNB	60.33	20.0	35.0 - 45.0	43.0 - 57.0	1.80 - 2.80	0.3 - 1.0
NPT 2"	KBAU-E6NB	60.33	21.0	40.0 - 52.0	47.0 - 60.0	1.80 - 2.80	0.6 - 1.5
NPT 2 1/2"	KBAU-E7XSNB	73.03	21.0	35.0 - 45.0	43.0 - 57.0	1.80 - 2.80	0.3 - 1.0
NPT 2 1/2"	KBAU-E7SNB	73.03	21.0	40.0 - 52.0	47.0 - 60.0	1.80 - 2.80	0.6 - 1.5
NPT 2 1/2"	KBAU-E7NB	73.03	20.0	45.0 - 60.0	54.0 - 70.0	1.00 - 2.30	0.2 - 1.2
NPT 3"	KBAU-E8XSNB	88.9	21.0	40.0 - 52.0	47.0 - 60.0	1.80 - 2.80	0.6 - 1.5
NPT 3"	KBAU-E8SNB	88.9	21.0	45.0 - 60.0	54.0 - 70.0	1.00 - 2.30	0.2 - 1.2
NPT 3"	KBAU-E8NB	88.9	21.0	60.0 - 72.0	63.0 - 80.0	1.00 - 3.50	0.2 - 1.9
NPT 3 1/2"	KBAU-E9SNB	101.6	21.0	45.0 - 60.0	54.0 - 70.0	1.00 - 2.30	0.2 - 1.2
NPT 3 1/2"	KBAU-E9NB	101.6	21.0	60.0 - 72.0	63.0 - 80.0	1.00 - 3.50	0.2 - 1.9
NPT 3 1/2"	KBAU-E9MNLTB	101.6	45.0	70.0 - 82.0	78.0 - 90.0	1.5 - 4.4	0.2 - 2.4

INDUSTRIES WE SERVE

POWER & ENERGY



OIL & GAS



TRANSPORTATION



MACHINE BUILDING



BUILDING



MARINE



AUTOMATION



COMPLEMENT THE DESIGN & SAFETY OF YOUR CABLING SYSTEM

No system with cable glands can be complete without the proper range of cable gland accessories.

Some of these accessories like lock nuts, reducers and enlargers are necessary from the point of view of ease of installation, while other accessories like blind stops and protection tabs ensure that proper IP protection class is maintained even in the absence of the cable glands or cables. In addition to the above, accessories like multi-hole sealing inserts ensure proper cable management when multiple cables are made to pass through a single cable gland.

Controlwell offers the complete range of accessories for all types of cable glands, ensuring that we help you **protect - connect - simplify**.

CABLE GLAND ACCESSORIES

ADDED CONVENIENCE AND PROTECTION



POLYAMIDE LOCK NUTS



In standard industrial applications, installing cable glands directly on enclosure or equipment wall surfaces is not possible. In such situations Hexagonal Lock Nuts are used to secure cable glands. They are manufactured according to the requirement of DIN 46320.

Technical Details :

Material	Polyamide 6 30% glass fibre reinforced
Colour	RAL 7001 (Grey) RAL 9005 (Black) RAL 7035 (L. Grey on request)
Temperature Range	-20°C to +100°C Continuous -30°C to +150°C Intermittant
Threads available	Pg, Metric, NPT & G Thread

Pg Thread - DIN 40430

For Gland Size	Cat. No. Grey	Cat. No. Light Grey	Cat. No. Black	(mm)	Height (mm)	Standard Pack (pieces)
Pg 7	BL-01	BL-11	BL-21	19	5	50
Pg 9	BL-02	BL-12	BL-22	22	5	50
Pg 11	BL-03	BL-13	BL-23	24	5	50
Pg 13.5	BL-04	BL-14	BL-24	27	6	50
Pg 16	BL-05	BL-15	BL-25	30	6	50
Pg 21	BL-06	BL-16	BL-26	36	7	25
Pg 29	BL-07	BL-17	BL-27	46	7	20
Pg 36	BL-08	BL-18	BL-28	60	8	10
Pg 42	BL-09	BL-19	BL-29	65	8	10
Pg 48	BL-10	BL-20	BL-30	70	8	10

Metric Thread - EN 60423

For Gland Size	Cat. No. Grey	Cat. No. Light Grey	Cat. No. Black	(mm)	Height (mm)	Standard Pack (pieces)
M 12 x 1.5	BML-0S	BML-1S	BML-2S	18	5	100
M 16 x 1.5	BML-01	BML-11	BML-21	22	5	50
M 20 x 1.5	BML-02	BML-12	BML-22	26	6	50
M 25 x 1.5	BML-03	BML-13	BML-23	32	6	25
M 32 x 1.5	BML-04	BML-14	BML-24	41	7	25
M 40 x 1.5	BML-05	BML-15	BML-25	50	7	10
M 50 x 1.5	BML-06	BML-16	BML-26	60	8	10
M 63 x 1.5	BML-07	BML-17	BML-27	75	8	10
M 75 x 2.0	BML-08	BML-18	BML-28	85	15	10

NPT Thread - ANSI B 1.20.1

For Gland Size	Cat. No. Grey	Cat. No. Light Grey	Cat. No. Black	(mm)	Height (mm)	Standard Pack (pieces)
NPT 3/8"	BPL-01	BPL-11	BPL-21	22	7	50
NPT 1/2"	BPL-02	BPL-12	BPL-22	27	7	50
NPT 3/4"	BPL-03	BPL-13	BPL-23	33	7	25
NPT 1"	BPL-04	BPL-14	BPL-24	42	7	20

G Thread - G ISO 228

For Gland Size	Cat. No. Grey	Cat. No. Light Grey	Cat. No. Black	(mm)	Height (mm)	Standard Pack (pieces)
G 3/8"	BFL-01	BFL-11	BFL-21	22	6	50
G 1/2"	BFL-02	BFL-12	BFL-22	27	6	50
G 3/4"	BFL-03	BFL-13	BFL-23	33	6.4	25
G 1"	BFL-04	BFL-14	BFL-24	42	6.5	20

STANDARD LOCK NUTS - BRASS / STAINLESS STEEL



In certain applications, installing cable glands directly on enclosure or equipment wall surfaces is not possible. In such situations Lock Nuts are used to secure cable glands.

Technical Details :

Material	Brass Nickel Plated, Stainless Steel (303)
Threads available	Pg, Metric, NPT

Pg Threads

For Gland Size	Cat. No. Brass	Cat. No. Stainless Steel	 (mm)	Height (mm)	Standard Pack (pieces)
Pg 7	GBSL-01	BSLS-01	17	2.8	100
Pg 9	GBSL-02	BSLS-02	19	2.8	100
Pg 11	GBSL-03	BSLS-03	22	3.0	100
Pg 13.5	GBSL-04	BSLS-04	24	3.0	100
Pg 16	GBSL-05	BSLS-05	27	3.0	100
Pg 21	GBSL-06	BSLS-06	32	3.5	100
Pg 29	GBSL-07	BSLS-07	41	4.0	50
Pg 36	GBSL-08	BSLS-08	51	5.0	25
Pg 42	GBSL-09	BSLS-09	60	5.0	10
Pg 48	GBSL-10	BSLS-10	64	5.5	10

Metric Threads

For Gland Size	Cat. No. Brass	Cat. No. Stainless Steel	 (mm)	Height (mm)	Standard Pack (pieces)
M 12 x 1.5	GBMBL-01	BMBLS-01	15	2.8	100
M 16 x 1.5	GBMBL-02	BMBLS-02	19	2.8	100
M 20 x 1.5	GBMBL-03	BMBLS-03	24	3.0	100
M 25 x 1.5	GBMBL-04	BMBLS-04	30	3.5	100
M 32 x 1.5	GBMBL-05	BMBLS-05	36	4.0	50
M 40 x 1.5	GBMBL-06	BMBLS-06	46	4.5	50
M 50 x 1.5	GBMBL-07	BMBLS-07	60	5.0	10
M 63 x 1.5	GBMBL-08	BMBLS-08	70	5.5	10
M 72 x 2	BMBL-09	BMBLS-09	77	7.0	10
M 75 x 2	BMBL-10	BMBLS-10	80	7.0	5
M 80 x 2	BMBL-11	BMBLS-11	90	8.0	5
M 85 x 2	BMBL-12	BMBLS-12	95	8.0	5
M 90 x 2	BMBL-13	BMBLS-13	100	8.0	5
M 90 x 1.5	BMBL-13S	-	100	8.0	5

NPT Threads

For Gland Size	Cat. No. Brass	Cat. No. Stainless Steel	 (mm)	Height (mm)	Standard Pack (pieces)
NPT 1/4"	BNLN-01S	BNLNS-01S	17	5	50
NPT 3/8"	BNLN-01	BNLNS-01	24	5	50
NPT 1/2"	BNLN-02	BNLNS-02	24	5	50
NPT 3/4"	BNLN-03	BNLNS-03	35	6	50
NPT 1"	BNLN-04	BNLNS-04	46	6	25
NPT 1 1/4"	BNLN-05	BNLNS-05	55	7	25
NPT 1 1/2"	BNLN-06	BNLNS-06	60	7	25
NPT 2"	BNLN-07	BNLNS-07	74	8	10

EMC BRASS / SS LOCK NUTS



These lock nuts are specifically designed for use with EMC cable glands. These are manufactured with special notches on their corners. On tightening against the body on which the gland is being installed, the notches chip the paint of the body and make excellent electrical contact with the bare metal surface which acts as the grounding for the cable.

Technical Details :

Material	Brass Nickel Plated, Stainless Steel
Threads available	Pg, Metric, NPT

Pg Threads

For Gland Size	Cat. No.	Cat. No. Stainless Steel	(mm)	Height (mm)	Standard Pack (pieces)
Pg 7	BSEL-01	BSELS-01	15	3.3	50
Pg 9	BSEL-02	BSELS-02	18	3.3	50
Pg 11	BSEL-03	BSELS-03	21	3.5	50
Pg 13.5	BSEL-04	BSELS-04	23	3.5	50
Pg 16	BSEL-05	BSELS-05	26	3.5	25
Pg 21	BSEL-06	BSELS-06	32	4.0	25
Pg 29	BSEL-07	BSELS-07	41	4.6	20
Pg 36	BSEL-08	BSELS-08	51	5.6	15
Pg 42	BSEL-09	BSELS-09	60	5.6	12
Pg 48	BSEL-10	BSELS-10	64	6.1	12

Metric Threads

For Gland Size	Cat. No.	Cat. No. Stainless Steel	(mm)	Height (mm)	Standard Pack (pieces)
M 12 x 1.5	BMEL-01	BMELS-01	15	3.3	50
M 16 x 1.5	BMEL-02	BMELS-02	19	3.5	50
M 20 x 1.5	BMEL-03	BMELS-03	24	3.7	50
M 25 x 1.5	BMEL-04	BMELS-04	30	3.7	25
M 32 x 1.5	BMEL-05	BMELS-05	36	4.0	25
M 40 x 1.5	BMEL-06	BMELS-06	46	4.6	20
M 50 x 1.5	BMEL-07	BMELS-07	60	5.6	15
M 63 x 1.5	BMEL-08	BMELS-08	70	6.7	12

NPT Threads

For Gland Size	Cat. No. Brass	Cat. No. Stainless Steel	(mm)	Height (mm)	Standard Pack (pieces)
NPT 1/4"	BNEL-01S	BNELS-01S	17	5.5	50
NPT 3/8"	BNEL-01	BNELS-01	22	5.7	50
NPT 1/2"	BNEL-02	BNELS-02	24	6.7	50
NPT 3/4"	BNEL-03	BNELS-03	30	6.5	50
NPT 1"	BNEL-04	BNELS-04	40	7.6	25
NPT 1 1/4"	BNEL-05	BNELS-05	50	7.6	25
NPT 1 1/2"	BNEL-06	BNELS-06	58	8.7	25
NPT 2"	BNEL-07	BNELS-07	70	10.8	10
NPT 2 1/2"	BNEL-08	BNELS-08	80	10.8	10
NPT 3"	BNEL-09	BNELS-09	95	10.8	10
NPT 3 1/2"	BNEL-10	BNELS-10	115	10.8	10
NPT 4"	BNEL-11	BNELS-11	130	10.8	5
NPT 5"	BNEL-12	BNELS-12	160	13.0	5

FLAT WASHERS / GASKET FOR CABLE GLANDS



Washers are mounted on threaded part of cable gland on the outer side of equipment to ensure IP rating for rough surfaces or through holes.

Technical Details :

Material	Nitrile, Black
Threads Available	Pg & Metric Thread
Temperature Range	-25° C to +100° C Continuous

Pg Thread

Size	Cat. No.	External Diameter (mm)	Internal Diameter (mm)	Thickness (mm)	Standard Pack (pieces)
Pg7	WSH-Pg7	16.8	11.8	1.5	50
Pg9	WSH-Pg9	21.8	14.5	1.5	50
Pg11	WSH-Pg11	25.8	17.5	1.5	50
Pg13.5	WSH-Pg13.5	27.8	19.8	1.5	50
Pg16	WSH-Pg16	29.8	21.8	1.5	50
Pg21	WSH-Pg21	35.8	27.0	1.5	50
Pg29	WSH-Pg29	46.8	35.5	1.5	50
Pg36	WSH-Pg36	59.0	45.5	1.5	50
Pg42	WSH-Pg42	66.8	52.8	1.5	50
Pg48	WSH-Pg48	71.8	57.8	1.5	25

Metric Thread

Size	Cat. No.	External Diameter (mm)	Internal Diameter (mm)	Thickness (mm)	Standard Pack (pieces)
M12 x 1.5	WSH-M12X1.5	15.5	10.3	1.5	50
M16 x 1.5	WSH-M16X1.5	21.5	14.3	1.5	50
M20 x 1.5	WSH-M20X1.5	26.0	18.5	1.5	50
M25 x 1.5	WSH-M25X1.5	31.5	23.3	1.5	50
M32 x 1.5	WSH-M32X1.5	38.5	30.5	1.5	50
M40 x 1.5	WSH-M40X1.5	48.5	38.5	1.5	50
M50 x 1.5	WSH-M50X1.5	58.0	48.0	1.5	50
M63 x 1.5	WSH-M63X1.5	70.0	61.2	1.5	50

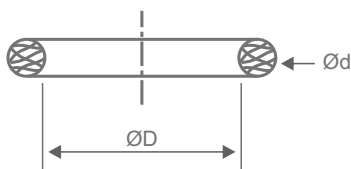
O RING



O Rings are mounted on threaded part of cable gland on the outer side of equipment to ensure IP rating for rough surfaces or through holes.

Technical Details :

Material	NBR, Black
Threads Available	Pg & Metric Thread
Temperature Range	-35°C to +120°C Continuous



Pg Thread

Size	Cat. No.	Internal Diameter D (mm)	Thickness d (mm)	Standard Pack (pieces)
Pg7	OR-P07	10.5	1.5	50
Pg9	OR-P09	14.5	1.5	50
Pg11	OR-P11	16.5	1.5	50
Pg13.5	OR-P13.5	18.5	1.5	50
Pg16	OR-P16	20.5	1.5	50
Pg21	OR-P21	26.0	2.0	50
Pg29	OR-P29	35.0	2.0	50
Pg36	OR-P36	45.0	2.0	50
Pg42	OR-P42	52.1	2.0	50
Pg48	OR-P48	57.0	2.0	50

Metric Thread

Size	Cat. No.	Internal Diameter (mm)	Thickness (mm)	Standard Pack (pieces)
M12 x 1.5	OR-M12	10.3	1.5	50
M16 x 1.5	OR-M16	14.3	1.5	50
M20 x 1.5	OR-M20	18.5	1.5	50
M25 x 1.5	OR-M25	23.3	2.0	50
M32 x 1.5	OR-M32	30.5	2.0	50
M40 x 1.5	OR-M40	38.5	2.0	50
M50 x 1.5	OR-M50	48.0	3.5	50
M63 x 1.5	OR-M63	61.2	3.5	50

DUST COVER / BLIND WASHER



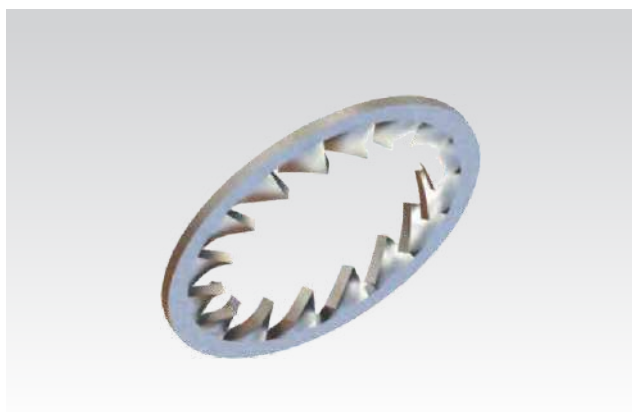
Dust cover is mounted under the cap nut of cable gland to protect the gland from dust entering in cable gland during transport and storage.

Technical Details :

Material	Polyethylene
Colour	Red
Temperature Range	-30° C to +100° C Continuous

For Gland Size	Cat. No. Red	External Diameter (mm)	Thickness (mm)	Standard Pack (pieces)
M12 / Pg 7 / Pg 9	BDC-M12	12	2	50
M16 / Pg 11 / Pg 13.5	BDC-M16	16	2	50
M20 / Pg 16	BDC-M20	20	2	50
M25 / Pg 21	BDC-M25	25	2	50
M32 / Pg 29	BDC-M32	32	2	50
M40 / Pg 36	BDC-M40	40	2	25
M50 / Pg 42	BDC-M50	50	2	25
M63 / Pg 48	BDC-M63	63	2	25

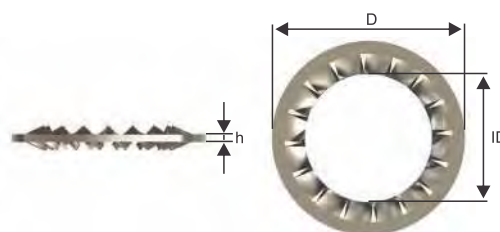
SERRATED WASHER



Serrated washers are used to fix lock nuts where mechanical stress occurs.

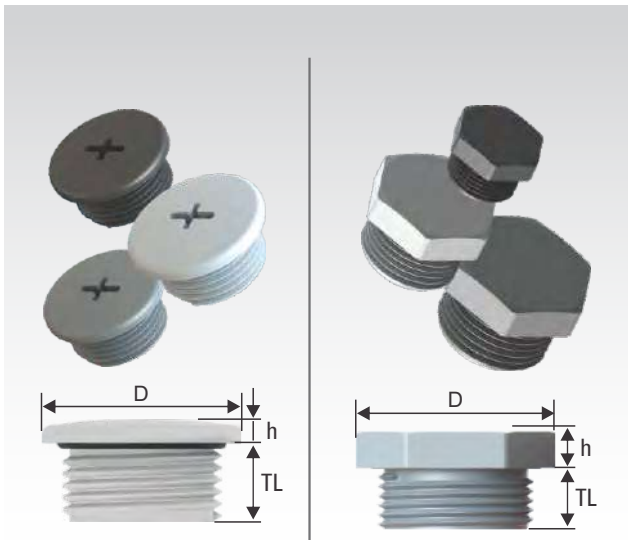
Technical Details :

Material	Brass Nickel Plated / Stainless Steel
----------	---------------------------------------



Cat. No. Brass Nickel Plated	Cat. No. Stainless Steel	Thread Size Metric / NPT	External Diameter (mm)	Thickness (mm)	Standard Pack (pieces)
BMTW-02BN	BMTW-02X	M16 / NPT3/8"	25.5	1.5	1000
BMTW-03BN	BMTW-03X	M20 / NPT1/2"	32.5	1.5	1000
BMTW-04BN	BMTW-04X	M25 / NPT3/4"	40.0	1.5	1000
BMTW-05BN	BMTW-05X	M32 / NPT1"	43.5	1.5	500
BMTW-06BN	BMTW-06X	M40 / NPT1 1/4"	64.5	1.5	500
BMTW-07BN	BMTW-07X	M50 / NPT1 1/2"	80.0	1.5	300
BMTW-08SBN	BMTW-08SX	M60 / -	97.0	1.5	200
BMTW-08BN	BMTW-08X	M63 / NPT2"	100.0	1.5	200
BMTW-09SBN	BMTW-09SX	M70 / -	112.0	1.5	100
BMTW-09BN	BMTW-09X	M75 / NPT2 1/2"	112.0	1.5	100
BMTW-10SBN	BMTW-10SX	M80 / -	121.0	1.5	100
BMTW-10MBN	BMTW-10MX	M85 / -	128.0	1.5	100
BMTW-10BN	BMTW-10X	M90 / NPT3"	135.0	1.5	100
BMTW-11BN	BMTW-11X	M100 / NPT3 1/2"	145.0	1.5	100
BMTW-11MBN	BMTW-11MX	M110 / -	151.0	1.5	100
BMTW-11LBN	BMTW-11LX	M115 / NPT4"	159.0	1.5	100
BMTW-13BN	BMTW-13X	M130 / -	181.5	1.5	50
BMTW-14BN	BMTW-14X	- / NPT5"	185.0	1.5	50

STANDARD POLYAMIDE BLIND STOPS



Blind Stops made of Polyamide 6 are used wherever threads previously cut must be closed for preventing dust, dirt and foreign matters from entering the enclosure or equipment. O rings of Neoprene should be mounted on the threaded part to get the IP 68 protection. They are also available in Hexagonal shape and longer thread length.

Technical Details :

Material	Polyamide 6
Colour	RAL 7001 (Grey) RAL 9005 (Black) RAL 7035 (L. Grey on request)
Threads available	Pg, Metric, (NPT on request)
Protection Class	IP 68 - 5 Bar, 30 m
Temperature Range	-20°C to +100°C Continuous -30°C to +150°C Intermittant

Long threads also available on request.

Pg Thread in Polyamide (Circular)

Size	Cat. No. Black	Cat. No. Grey	Cat. No. Light Grey	h (mm)	Outer Diameter D (mm)	Thread Length TL (mm)	Standard Pack (pieces)
Pg 7	BBS-21(Y)	BBS-01(Y)	BBS-11(Y)	3.0	15.0	6	100
Pg 9	BBS-22(Y)	BBS-02(Y)	BBS-12(Y)	3.0	19.5	6	100
Pg 11	BBS-23(Y)	BBS-03(Y)	BBS-13(Y)	3.0	22.0	6	50
Pg 13.5	BBS-24(Y)	BBS-04(Y)	BBS-14(Y)	3.0	24.7	6	50
Pg 16	BBS-25(Y)	BBS-05(Y)	BBS-15(Y)	3.4	27.0	6	50
Pg 21	BBS-26(Y)	BBS-06(Y)	BBS-16(Y)	4.0	33.0	8	25
Pg 29	BBS-27(Y)	BBS-07(Y)	BBS-17(Y)	3.2	44.0	8	25
Pg 36	BBS-28(Y)	BBS-08(Y)	BBS-18(Y)	3.7	55.0	10	25
Pg 42	-	-	BBS-19(Y)	6.0	-	10	20
Pg 48	-	-	BBS-20(Y)	6.5	-	12	20

Metric Thread in Polyamide (Circular)

Size	Cat. No. Black	Cat. No. Grey	Cat. No. Light Grey	h (mm)	Outer Diameter D (mm)	Thread Length TL (mm)	Standard Pack (pieces)
M 12 x 1.5	BMBS-2S(Y)	BMBS-0S(Y)	BMBS-1S(Y)	3.0	15.0	6	100
M 16 x 1.5	BMBS-21(Y)	BMBS-01(Y)	BMBS-11(Y)	3.4	19.5	6	50
M 20 x 1.5	BMBS-22(Y)	BMBS-02(Y)	BMBS-12(Y)	3.0	25.0	6	50
M 25 x 1.5	BMBS-23(Y)	BMBS-03(Y)	BMBS-13(Y)	4.0	30.0	6	50
M 32 x 1.5	BMBS-24(Y)	BMBS-04(Y)	BMBS-14(Y)	4.0	37.0	8	25
M 40 x 1.5	BMBS-25(Y)	BMBS-05(Y)	BMBS-15(Y)	4.5	46.0	8	10
M 50 x 1.5	BMBS-26(Y)	BMBS-06(Y)	BMBS-16(Y)	3.7	54.9	10	10
M 63 x 1.5	BMBS-27(Y)	BMBS-07(Y)	-	6.0	68.0	12	10

Metric Thread in Polyamide (Hexagonal)

Size	Cat. No. Black	Cat. No. Grey	h (mm)	Outer Diameter D (mm)	Thread Length TL (mm)	Standard Pack (pieces)
M 12 x 1.5	BMBS-2S(A)	-	5.0	17.0	10	50
M 16 x 1.5	BMBS-21(A)	BMBS-01(A)	4.3	22.0	12	50
M 20 x 1.5	BMBS-22(A)	-	6.0	26.0	11	50
M 25 x 1.5	BMBS-23(A)	-	5.8	32.0	10	50
M 32 x 1.5	BMBS-24(A)	-	7.8	41.5	15	10
M 40 x 1.5	BMBS-25(A)	-	8.5	53.0	18	10
M 50 x 1.5	-	BMBS-06(A)	9.5	63.5	18	10

NPT Thread in Polyamide (Hexagonal)

Size	Cat. No. Black	h (mm)	Outer Diameter D (mm)	Thread Length TL (mm)	Standard Pack (pieces)
NPT 1/2"	BNBS-22(A)	6.0	26.0	15	50
NPT 3/4"	BNBS-23(A)	5.8	32.0	15	50
NPT 1"	BNBS-24(A)	7.8	41.0	15	50

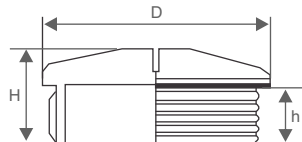
BRASS BLIND STOPS



Blind Stops made of Brass are used wherever threads previously cut must be closed for preventing dust, dirt and foreign matters from entering the enclosure or equipment.

Technical Details :

Material	Brass, Nickel Plated
O Ring	Neoprene
Temperature Range	-40° C to +140° C
Threads available	Pg, Metric
Protection Class	IP 68 - 5 Bar, 30 m



Pg Thread in Brass

Size	Cat. No.	H (mm)	D (mm)	h (mm)	Standard Pack (pieces)
Pg 7	GBBS-01	7.5	15	5	50
Pg 9	GBBS-02	8	18	5	50
Pg 11	GBBS-03	8	22	5	50
Pg 13.5	GBBS-04	9	24	6	50
Pg 16	GBBS-05	9	26	6	50
Pg 21	GBBS-06	10	32	6	25
Pg 29	GBBS-07	12	40	8	25
Pg 36	GBBS-08	15	50	9	20

Metric Thread in Brass

Size	Cat. No.	H (mm)	D (mm)	h (mm)	Standard Pack (pieces)
M 12 x 1.5	GBMBS-0S	7.5	14	5	50
M 16 x 1.5	GBMBS-01	8	18	5	50
M 20 x 1.5	GBMBS-02	9.5	22	6	50
M 25 x 1.5	GBMBS-03	11	28	7	50
M 32 x 1.5	GBMBS-04	12	35	8	25
M 40 x 1.5	GBMBS-05	13	44	8	25
M 50 x 1.5	GBMBS-06	15	54	9	20
M 63 x 1.5	GBMBS-07	16	67	10	20

MULTI-HOLE SEALING INSERTS



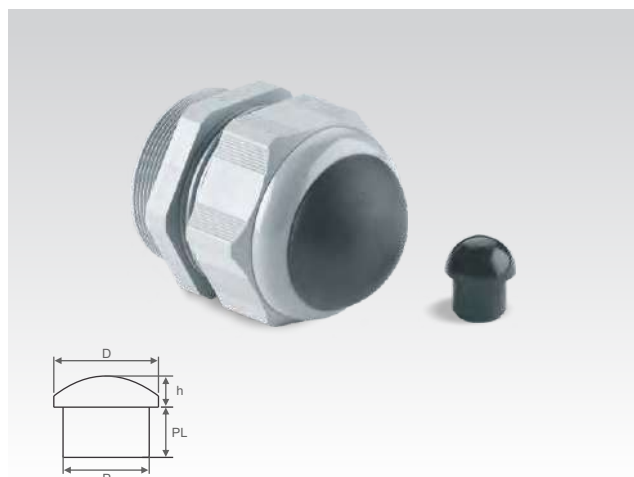
These inserts are used in applications where sealing and strain relief protection is required for multiple cables passing through a single cable gland.

Technical Details :

Material	Perbunan (NBR)
Colour	RAL 9005 (Black)
Application	For Pg, Metric and NPT threaded Cable Glands

For Cable Gland Size in Polyamide	Cat. No.	Number of Holes	Diameter of Hole (mm)	Standard Pack (pieces)
Pg 7 / M 12 (3 - 6.5)	BMS-01A	2	1	50
Pg 9 / M 16 (4 - 8)	BMS-02A	2	3	50
Pg 9 / M 16 (4 - 8)	BMS-02C	4	2	50
Pg 9 / M 16 (4 - 8)	BMS-02D	4	3	50
Pg 9 / M 16 (4 - 8)	BMS-02E	2	4	50
Pg 11 / M 16 (5 - 10)	BMS-03A	2	4	50
M 16 / EX M 16 (4.5 - 10)	BMS-03AA	2	4	50
Pg 11 / M 16 (5 - 10)	BMS-03C	3	4	50
Pg 11 / M 16 (5 - 10)	BMS-03D	3	5	50
Pg 11 / M 16 (5 - 10)	BMS-03E	4	3.5	50
Pg 13.5 / M 20 (6 - 12)	BMS-04A	2	6	50
Pg 13.5 / M 20 (6 - 12)	BMS-04C	3	5	50
Pg 13.5 / M 20 (6 - 12)	BMS-04D	2	2.1	50
Pg 16 / M 20L (10 - 14)	BMS-05A	2	4	50
Pg 16 / M 20 (10 - 14)	BMS-05D	3	6	50
Pg 16 / M 20 (10 - 14)	BMS-05E	4	6	50
Pg 16 / M 20 (10 - 14)	BMS-05F	4	3.5	50
Pg 16 / M 20 (10 - 14)	BMS-05G	2	5 / 8	50
Pg 21 / M 25 (13 - 18)	BMS-06A	2	7	50
Pg 21 / M 25 (13 - 18)	BMS-06B	2	8	50
Pg 21 / M 25 (13 - 18)	BMS-06C	2	9	50
Pg 21 / M 25 (13 - 18)	BMS-06D	3	7	50
Pg 21 / M 25 (13 - 18)	BMS-06E	4	7	50
Pg 21 / M 25 (13 - 18)	BMS-06F	3	4	50
Pg 29 / M 32 (18 - 25)	BMS-07A	3	8.5	50
Pg 29 / M 32 (18 - 25)	BMS-07B	5	8.5	50
Pg 29 / M 32 (18 - 25)	BMS-07C	8	5	50
Pg 29 / M 32 (18 - 25)	BMS-07D	2	10.5 / 12	50
Pg 29 / M 32 (18 - 25)	BMS-07E	9	4	50
Pg 29 / M 32 (18 - 25)	BMS-07F	6	7.5	50
Pg 29 / M 32 (18 - 25)	BMS-07G	2	8	50
Pg 29 / M 32 (18 - 25)	BMS-07H	4	8	50
Pg 29 / M 32 (18 - 25)	BMS-07J	2	7.5 / 10	50
Pg 36 / M 40 (22 - 32)	BMS-08A	6	10	50
Pg 36 / M 40 (22 - 32)	BMS-08B	2	11	50
Pg 36 / M 40 (22 - 32)	BMS-08C	8	8	50
Pg 36 / M 40 (22 - 32)	BMS-08D	6	11	50
Pg 36 / M 40 (22 - 32)	BMS-08E	2	13	50
Pg 36 / M 50 BRASS (22 - 32)	BMS-08F	2	7.5	50
Pg 42 / M 50 (30 - 38)	BMS-09A	3	6.7 / 7.3 / 8.6	50
M 25 (EU) (11 - 17)	BMS-56A	2	6	50
M 25 (EU) (11 - 17)	BMS-56B	6	5	50
M 25 (BRASS) (11 - 17)	BMS-56C	6	5	50
M 40 (EU) (19 - 28)	BMS-89A	2	13	50
M 40 (EU) (19 - 28)	BMS-89B	4	9	50
M 40 (EU) (19 - 28)	BMS-89C	8	5.4	50
M 40 (EU) (19 - 28)	BMS-89D	7	7	50

POLYAMIDE DOME PLUG / PROTECTION TAB



Dome Plugs made of Polyamide 6 are used in assembly work for instruments, machines etc., where only Cable Glands are mounted and cable connection is made later. This prevents dust and moisture from penetrating the enclosure or equipment.

Technical Details :

Material	Polyamide 6
Flammability	UL 94 V2
Colour	RAL 9005 (Black)
Temperature Range	-20°C to +100°C Continuous, -30°C to +150°C Intermittent
Application	For Pg, Metric and NPT threaded Cable Glands

Dome Plugs for Pg Thread Polyamide Cable Glands

Size	Clamping Range	Cat. No.	PL (mm)	D (mm)Ø	h (mm)	P (mm)Ø	Standard Pack (pieces)
9	3 - 6.5	BDP-09-22	12	9.2	4	6.4	100
11	4 - 8	BDP-11-22	13.7	10.5	4.7	8	50
13	5 - 10	BDP-13-22	9	13.3	5.3	9.7	50
16	6 - 12	BDP-16-22	13	15.8	8	12	50
18	10 - 14	BDP-18-22	13.5	18	8.7	13.6	50
22	13 - 18	BDP-22-22	14	22	10	17.8	25
29	18 - 25	BDP-29-22	15	28.5	9.7	25	25
37	22 - 32	BDP-37-22	17	36.8	10.7	31.8	10
45	30 - 38	BDP-45-22	20.2	43.3	11.9	38	10
52	34 - 44	BDP-52-22	22.5	51	16	44.2	10

Dome Plugs for Metric / NPT Thread Polyamide Cable Glands

Cable Gland Size	Clamping Range	Cat. No.	PL (mm)	D (mm)Ø	h (mm)	P (mm)Ø	Standard Pack (pieces)
M 12	3 - 6.5	BDP-09-22	12	9.2	4	6.4	100
M16 (EU)	4 - 8	BDP-11-22	13.7	10.5	4.7	8	50
M 16 / NPT 3/8"	5 - 10	BDP-13-22	9	13.3	5.3	9.7	50
M 20 / NPT 1/2"	6 - 12	BDP-16-22	13	15.8	8	12	50
M 20 / NPT 1/2"	10 - 14	BDP-18-22	13.5	18	8.7	13.6	50
M 25 (EU)	11 - 17	BDP-20-22	14.5	19.9	7.3	16.4	50
M 25 / NPT 3/4"	13 - 18	BDP-22-22	14	22	10	17.8	25
M 32 (EU)	15 - 21	BDP-24-22	15.5	24.1	9.2	20.4	25
M 32 / NPT 1"	18 - 25	BDP-29-22	15	28.5	9.7	25	25
M 40 (EU)	19 - 28	BDP-32-22	15.8	31.5	9.2	27.3	10
M 40	22 - 32	BDP-37-22	17	36.8	10.7	31.8	10
M 50	30 - 38	BDP-45-22	20.2	43.3	11.9	38	10
M 63	34 - 44	BDP-52-22	22.5	51	16	44.2	10

REDUCERS - POLYAMIDE & BRASS



Reducers are used for threaded holes on machines or equipment housing which are too large for the necessary gland.

Technical Details :

Material	Perbunan (NBR)
Colour	RAL 9005 (Black)
Application	For Pg, Metric and NPT threaded Cable Glands

Pg Thread Reducers

Size	External Thread	Internal Thread	Cat. No. Brass	Thread Length Brass (mm)	Cat. No. Polyamide	Thread Length Polyamide (mm)	Standard Pack (pieces)
Pg 9 - Pg 7	Pg9	Pg7	SBBR P9/P7	7	-	-	50
Pg 11 - Pg 9	Pg11	Pg9	SBBR P11/P9	8	-	-	50
Pg 13.5 - Pg 9	Pg13.5	Pg9	SBBR P13.5/P9	8	-	9	50
Pg 13.5 - Pg 11	Pg13.5	Pg11	SBBR P13.5/P11	9	BPR P13.5/P11	9	50
Pg 16 - Pg 9	Pg16	Pg9	-	-	BPR P16/P9	10	25
Pg 16 - Pg 11	Pg16	Pg11	SBBR P16/P11	9	BPR P16/P11	10	25
Pg 16 - Pg 13.5	Pg16	Pg13.5	SBBR P16/P13.5	9	-	-	25
Pg 21 - Pg 13.5	Pg21	Pg13.5	SBBR P21/P13.5	9	BPR P21/P13.5	10.5	25
Pg 21 - Pg 16	Pg21	Pg16	SBBR P21/P16	11.3	BPR P21/P16	10.5	25
Pg 29 - Pg 21	Pg29	Pg21	SBBR P29/P21	12	BPR P29/P21	12	10
Pg 36 - Pg 29	Pg36	Pg29	SBBR P36/P29	14	BPR P36/P29	18	10

Metric Thread Reducers

Size	External Thread	Internal Thread	Cat. No. Brass	Thread Length Brass (mm)	Cat. No. Polyamide	Thread Length Polyamide (mm)	Standard Pack (pieces)
M 16 - M 12	M16 x 1.5	M12 x 1.5	GBBR M16/M12	7	-	-	25
M 20 - M 12	M20 x 1.5	M12 x 1.5	GBBR M20/M12	8	BPR M20/M12	9	25
M 20 - M 16	M20 x 1.5	M16 x 1.5	GBBR M20/M16	9	BPR M20/M16	9	25
M 25 - M 16	M25 x 1.5	M16 x 1.5	GBBR M25/M16	9	BPR M25/M16	10	10
M 25 - M 20	M25 x 1.5	M20 x 1.5	GBBR M25/M20	10	BPR M25/M20	10	10
M 32 - M 16	M32 x 1.5	M16 x 1.5	GBBR M32/M16	11	BPR M32/M16	11	10
M 32 - M 20	M32 x 1.5	M20 x 1.5	GBBR M32/M20	11	BPR M32/M20	11	10
M 32 - M 25	M32 x 1.5	M25 x 1.5	GBBR M32/M25	11	BPR M32/M25	11	10
M 40 - M 20	M40 x 1.5	M20 x 1.5	GBBR M40/M20	11	BPR M40/M20	12	10
M 40 - M 25	M40 x 1.5	M25 x 1.5	GBBR M40/M25	11	BPR M40/M25	12	10
M 40 - M 32	M40 x 1.5	M32 x 1.5	GBBR M40/M32	11	BPR M40/M32	12	10
M 50 - M 25	M50 x 1.5	M25 x 1.5	GBBR M50/M25	12	BPR M50/M25	13	10
M 50 - M 32	M50 x 1.5	M32 x 1.5	GBBR M50/M32	12	BPR M50/M32	13	10
M 50 - M 40	M50 x 1.5	M40 x 1.5	GBBR M50/M40	12	BPR M50/M40	13	10
M 63 - M 40	M63 x 1.5	M40 x 1.5	GBBR M63/M40	12	BPR M63/M40	15	5
M 63 - M 50	M63 x 1.5	M50 x 1.5	GBBR M63/M50	12	BPR M63/M50	15	5

BRASS ENLARGERS



These are used for threaded holes on machines or equipment housing which are too small for the necessary glands.

Technical Details :

Material	Brass Nickel Plated Polyamide (On request)
Threads available	Pg and Metric

Pg Thread Enlargers

Size	External Thread	Internal Thread	Cat. No.	Thread Length (mm)	Standard Pack (pieces)
Pg7 - Pg9	Pg7	Pg9	GBBE P7/P9	5	50
Pg9 - Pg11	Pg9	Pg11	GBBE P9/P11	6	50
Pg9 - Pg13.5	Pg9	Pg13.5	GBBE P9/P13.5	6	-
Pg11 - Pg13.5	Pg11	Pg13.5	GBBE P11/P13.5	6	100
Pg11 - Pg16	Pg11	Pg16	GBBE P11/P16	6	50
Pg13.5 - Pg16	Pg13.5	Pg16	GBBE P13.5/P16	6.5	50
Pg13.5 - Pg21	Pg13.5	Pg21	GBBE P13.5/P21	6.5	50
Pg16 - Pg21	Pg16	Pg21	GBBE P16/P21	6.5	25
Pg21 - Pg29	Pg21	Pg29	GBBE P21/P29	7	100
Pg29 - Pg36	Pg29	Pg36	GBBE P29/P36	8	50
Pg29 - Pg48	Pg29	Pg48	GBBE P29/P48	8	-
Pg36 - Pg42	Pg36	Pg42	GBBE P36/P42 *	9	25

Metric Thread Enlargers

Size	External Thread	Internal Thread	Cat. No.	Thread Length (mm)	Standard Pack (pieces)
M12 - M16	M12	M16	GBBE M12/M16	5	100
M16 - M20	M16	M20	GBBE M16/M20 *	5	100
M16 - M25	M16	M25	GBBE M16/M25	6	-
M20 - M25	M20	M25	GBBE M20/M25 *	6	50
M25 - M32	M25	M32	GBBE M25/M32 *	7	25
M25 - M40	M25	M40	GBBE M25/M40	7	-
M32 - M40	M32	M40	GBBE M32/M40 *	8	25
M32 - M50	M32	M50	GBBE M32/M50	8	-
M40 - M50	M40	M50	GBBE M40/M50	8	25

* Hexagonal Design

BRASS CONVERTERS / ADAPTERS



These are used for threaded holes on machines or equipment housing where the threads are to be changed from Pg to Metric or from Metric to Pg.

Technical Details :

Material	Brass Nickel Plated
Threads Available	Pg, and Metric

Converters - Pg Thread

Size	Cat. No.	External Thread	Internal Thread	Thread Length (mm)	Standard Pack (pieces)
Pg11 - M20	SBBC P11/M20	Pg11	M20	6.5	50
Pg16 - M20	SBBC P16/M20	Pg16	M20	7	20
Pg16 - M25	SBBC P16/M25	Pg16	M25	7	20
Pg21 - M25	SBBC P21/M25 *	Pg21	M25	8	20
Pg29 - M25	SBBC P29/M25 *	Pg29	M25	9	10
Pg29 - M32	SBBC P29/M32 *	Pg29	M32	9	10
Pg36 - M32	SBBC P36/M32 *	Pg36	M32	7	10
Pg36 - M40	SBBC P36/M40 *	Pg36	M40	7	10

Converters - Metric Thread

Size	Cat. No.	External Thread	Internal Thread	Thread Length (mm)	Standard Pack (pieces)
M20 - Pg9	SBBC M20/P9 *	M20	Pg9	6.5	10
M20 - Pg11	SBBC M20/P11 *	M20	Pg11	7	10
M20 - Pg21	SBBC M20/P21	M20	Pg21	7	10
M25 - P11	SBBC M25/P11 *	M25	Pg11	7	10
M25 - P16	SBBC M25/P16 *	M25	Pg16	7	10
M25 - P21	SBBC M25/P21	M25	Pg21	8	10
M32 - P21	SBBC M32/P21	M32	Pg21	8	10
M50 - Pg42	SBBC M50/P42	M50	Pg42	7	10

* Hexagonal design

VENTILATION PLUGS - POLYAMIDE & METAL



Ventilation Plugs are used for equalizing the pressure inside and outside the enclosure. The same is achieved with the help of a membrane inside the ventilation plug, which allows for gases (air) to pass through it while blocking liquids and particulate solids (dust).

Applications / Benefits :

- 1) These prevent components inside the enclosure from being exposed to pressurized gases when the enclosure heats up. (By virtue of pressure equalization)
- 2) These also prevent generation of vacuum inside the enclosure when a heated enclosure cools off. (e.g. In luminaires)
- 3) These help maintain IP 68 rating of the enclosure while allowing for the above benefits.

Technical Details :

Material	Polyamide 6 Stainless Steel
Colour	RAL 7035 (Light Grey) RAL 9005 (Black)
Membrane Material	Acrylic copolymer on nylon support
Membrane Feature	Hydrophobic - Oleophobic
O Ring	Nitrile Rubber (NBR)
Temperature Range	-20° C to +100° C Continuous -30° C to +150° C Intermittent
Protection Class	IP 68 / IP 67 (Pressure 0.1 bar)
Flammability	V2 according to UL 94
Approvals	UL

Ventilation Plug in Polyamide

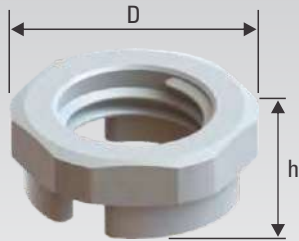
Size	Cat. No. Light Grey	Cat. No. Black	Thread Diameter TD (mm)	Thread Length TL (mm)	Design Type	Avg. Air Flow lt/hour	Water Intrusion Pressure (Bar)
M 12 x 1.5	SBVPB-11L	SBVPB-21L	12	10	A	16	0.9
M 12 x 1.5	HBVPB-11L	HBVPB-21L	12	10	A	120	0.2
M 12 x 1.5	UHBVPB-11L	UHBVPB-21L	12	10	A	300	0.1
M 16 x 1.5	SBVPF-11	SBVPF-21	16	10	A	42	0.9
M 20 x 1.5	UHBVPE-11	UHBVPE-21	20	10	E	750	0.1
M 40 x 1.5	HBVPX-18S	HBVPX-28S	40	18	F	1350	0.2

Ventilation Plug in Stainless Steel

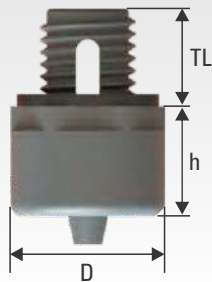
Size	Cat. No.	Cat. No.	Thread Diameter TD (mm)	Thread Length TL (mm)	Design Type	Avg. Air Flow lt/hour	Water Intrusion Pressure (Bar)
M 12 x 1.5	SBBVP-01L	-	12	10	C	16	0.9
M 16 x 1.5	SBBVP-02L	-	16	6	C	16	0.9
M 20 x 1.5	SBBVP-03L	-	20	6	C	16	0.9
M 40 x 1.5	SBBVPX-05	-	40	10	D	120	0.9

POLYAMIDE DRAIN PLUGS

Locknut



Drain Plug



Polyamide Drain Plugs balances pressure difference between inner housing and outside environment. It also prevents the formation of water condensation in tightly sealed housings.

Technical Details :

Material	Polyamide 66
Protection Class	IP 56 / IP 66
Flammability	V2 according to UL 94
Temperature Range	-20° C to +100° C Continuous -30° C to +150° C Intermittent

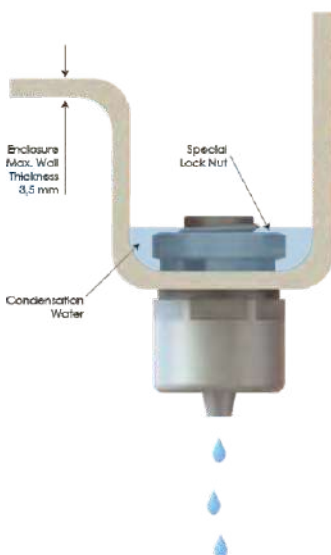
Metric Thread

Size	Cat. No. Light Grey	Cat. No. Black	Outer Diameter D (mm)	Thread Length TL (mm)	Height h (mm)
M 12 x 1.5	BPDRP-11	BPDRP-21	19	12	17

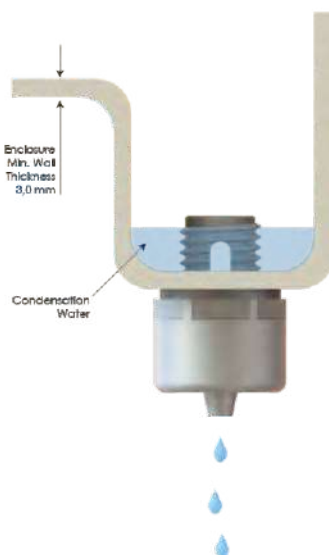
Special Lock Nuts for drain plugs

Size	Cat. No. Light Grey	Cat. No. Black	Outer Diameter D (mm)	(mm)	Height h (mm)
M12 X 1.5	BMDL-1S	BMDL-2S	19.2	18	7

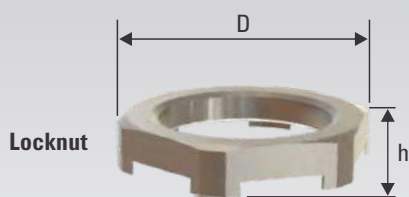
With special lock nut



Without special lock nut



METAL DRAIN PLUGS



Metal Drain Plugs balances pressure difference between inner housing and outside environment. It also prevents the formation of water condensation in tightly sealed housings.

Technical Details :

Material Body	Brass Nickel Plated / Stainless Steel
Bushing	Bronze
O Ring	Silicon
Protection Class	IP 68 - 5 Bar, 30 min IP 66 - 5 Bar, 30 min
Temperature Range	-60° C to +85° C

Metric Thread - Drain Plug - Brass

Size	Cat. No.	Outer Diameter D (mm)	Thread Length TL (mm)	(mm)	Height h (mm)
M 20 x 1.5	IBDRV-1M	27.5	15	25	16
M 25 x 1.5	IBDRV-2M	33.0	15	30	16

NPT Thread - Drain Plug - Brass

Size	Cat. No.	Outer Diameter D (mm)	Thread Length TL (mm)	(mm)	Height h (mm)
NPT 1/2"	IBDRV-1N	27.5	16	25	16
NPT 3/4"	IBDRV-2N	33.0	16	30	16

Special Lock Nuts for drain plugs - Brass

Size	Cat. No.	Outer Diameter D (mm)		(mm)	Height h (mm)
M20 X 1.5	BDRL-03	27.5		25	5
M25 X 1.5	BDRL-04	33.0		30	5
NPT 1/2"	BDRLN-03	27.5		25	5
NPT 3/4"	BDRLN-04	33.0		30	5

Threaded Hole

Non-Threaded Hole



Special Lock Nut for Drain Plug



COMPREHENSIVE SAFETY WITH ATEX BY CONTROLWELL

The use of ATEX cable glands is one of several technical measures to make ignition sources ineffective. The explosion rating plate of a piece of equipment includes the ignition protection type. Versions for increased safety, inherent safety and pressure-resistant enclosure are of particular significance in this context:

- "Ex d" protection - pressure-resistant enclosure
- "Ex i" protection - inherent safety
- "Ex e" protection - increased safety

Controlwell's ATEX explosion-proof products are made of high-quality materials. These items are made of high-quality plastics, nickel-plated brass, and stainless steel, ensuring optimal safety.

The current international regulations for machine manufacturers (94/9/EC) and operators (99/92/EC) prescribe high safety levels. Therefore, in addition to the traditional field of electrical engineering, legally compliant explosion protection also considers all relevant mechanical components - in order to avoid all ignition sources, including sparks, which can result from electrostatic charges, or hot spots. The ATEX – IECEx Directive besides taking into account the electrical sources of explosion, also considers potentially explosive concentration of gas, vapour or mist along with dust in the air.

Explosion protection - the danger zones: According to their risk potential explosion-prone rooms and equipment interiors are divided into zones. For gases, vapours and fogs the zone designations are 0, 1 and 2, for combustible dust they are 20, 21 and 22. Category 1 equipment is safe even in case of rare equipment malfunctions and may be used in zone 0/20. Category 2 equipment must be designed so that safety is assured even in case of expected malfunctions and may be used in zone 1/21. Equipment in protection category 3 is safe in normal operations and suitable for zone 2/22.

EXPLOSION PROOF CABLE GLANDS, CONDUIT GLANDS & ACCESSORIES

THE RIGHT PROTECTION
EVEN IN THE MOST EXTREME ENVIRONMENTS



EXPLOSION PROOF POLYAMIDE CABLE GLAND



BM Series



EHBM Series

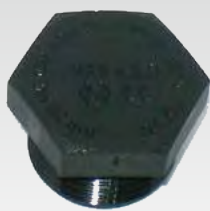
These Glands are for use with electrical equipment in potentially explosive areas, specially in chemical and petro - chemical industries. These Glands are produced in accordance with EN 60079-7:2015

Technical Details :

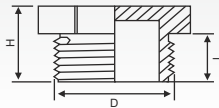
Material	Polyamide 6
Colour	RAL 9005 (Black)
Threads available	Metric - EN 60423
Protection Class	IP 68 - 5 Bar, 30 Min
Sealing Ring	Chloroprene
Dust Guard	Assembled
Temperature Range	-40° C to +70° C
Certificate Number	IMQ 13 ATEX 010 X / IECEx IMQ 13.0003X
Equipment Marking	Ex II 2GD Ex eb IIC Gb Ex tb IIIC Db
Suitable for use in	Group II Gas Group IIC Zone1/Zone2 Group III Dust Group IIIC Zone21/Zone22
Approvals	     

Size	Cat. No. Black	Thread Diameter (mm)	Thread Length (mm)	 (mm)	Clamping Range (mm)	Standard Pack (pieces)
M 12 x 1.5	EHBM-OXS	12	10	15	4 - 6.5	100
M 12 x 1.5	EHBM-XS	12	15	15	4 - 6.5	100
M 16 x 1.5	EHBM-SX1	16	10	19	5 - 8	50
M 20 x 1.5	BM-X2	20	10	24	6 - 12	50
M 20 x 1.5	BM-X2L	20	15	24	6 - 12	50
M 20 x 1.5	BM-X3	20	10	27	10 - 14	50
M 25 x 1.5	BM-X5	25	10	33	13 - 18	25
M 32 x 1.5	BM-X7	32	15	42	18 - 25	20
M 40 x 1.5	BM-X8	40	18	53	22 - 32	10
M 50 x 1.5	BM-X9	50	18	60	30 - 38	10
M 63 x 1.5	BM-X10	63	18	65	34 - 44	10

EXPLOSION PROOF POLYAMIDE HEXAGONAL BLIND STOPS



DRACO



Technical Details :

Material	Polyamide 6
Colour	RAL 9005 (Black)
Protection Class	IP 68 - 5 Bar, 30 Min
Temperature Range	-40° C to +80° C
O Ring	Chloroprene
Certificate Number	IMQ 13 ATEX 010 X / IECEx IMQ 13.0003X
Equipment Marking	Ex II 2GD Ex eb IIC Gb Ex tb IIIC Db
Suitable for use in	Group II Gas Group IIC Zone1/Zone2 Group III Dust Group IIIC Zone21/Zone22
Approvals	     

Metric Thread

Size	Cat. No. Black	Thread Diameter D (mm)	Thread Length L (mm)	 (mm)	Total Height H (mm)	Standard Pack (pieces)
M 12 x 1.5	TP-X02	12	10	15	15	100
M 16 x 1.5	TP-X01	16	11	19	15.3	50
M 20 x 1.5	TP-X1	20	11	23	17	50
M 25 x 1.5	TP-X2	25	10	28	15.8	50
M 32 x 1.5	TP-X3	32	15	36	22.8	25
M 40 x 1.5	TP-X4	40	18	46	26.5	10
M 50 x 1.5	TP-X5	50	18	55	27.5	10
M 63 x 1.5	TP-X6	63	18	69	27.5	10

EXPLOSION PROOF TRIPLE SEAL STANDARD BRASS / S.S CABLE GLANDS

These Glands are produced in accordance to EN 60079-7:2015. Because of triple seal they have wide clamping range they are used in mobile offshore, marine application, chemical & petro chemical industry.

Technical Details :

Material	Brass Nickel Plated (MB / NB Series) Stainless Steel 316L (MX / NX Series)
Protection Class	IP 68 - 5 Bar, 30 Min
Sealing Ring / O Ring	Chloroprene / Silicone
Temperature Range	Chloroprene Silicone
Ex d/tb	-40°C to +80°C -60°C to +80°C
Ex e/tb	-40°C to +80°C -60°C to +140°C
Threads available	Metric, NPT, (Pg available on request)
Certificate No.	IMQ 13 ATEX 018 X / IECEx IMQ 13.0006X
Equipment Marking	Ex II 2GD Ex db IIC Gb Ex eb IIC Gb Ex tb IIIC Db
Suitable for use in	Group II Gas Group IIC Zone1/Zone2 Group III Dust Group IIIC Zone21/Zone22

Metric Thread (* Double Seal)

Size	Cat. No.	Thread Diameter D (mm)	Thread Length L (mm)	(mm)	Clamping Range P (mm)	Standard Pack (pieces)
M12X1.5	EBU0MB *	12	16	20	3.0 - 8	50
M12X1.5	EBU0SMB	12	16	22	4.0 - 8	50
M16X1.5	EBU01MB	16	16	22	4. - 12	50
M20X1.5	EBU1MB	20	16	22	4.0 - 12	50
M20X1.5	EBU12MB	20	16	28	10.0 - 16.0	50
M25X1.5	EBU2MB	25	16	28	10.0 - 18.0	25
M25X1.5	EBU23MB	25	16	35	14.0 - 20.0	25
M32X1.5	EBU3MB	32	16	35	14.0 - 24.0	20
M32X1.5	EBU34MB	32	16	45	22.0 - 28.0	20
M40X1.5	EBU4MB	40	18	45	22.0 - 32.0	10
M40X1.5	EBU45MB	40	18	50	26.0 - 34.0	10
M50X1.5	EBU5MB	50	18	55	26.0 - 35.0	10
M50X1.5	EBU56MB	50	18	64	35.0 - 44.0	10
M63X1.5	EBU6MB	63	18	68	35.0 - 45.0	5
M63X1.5	EBU67MB	63	18	75	46.0 - 56.0	5
M75X1.5	EBU7MB	75	20	80	46.0 - 62.0	2
M75X1.5	EBU78MB	75	20	95	60.0 - 69.0	2
M90X1.5	EBU8MB	90	20	95	60.0 - 75.0	2
M90X1.5	EBU810MB	90	20	105	75.0 - 82.0	2
M100X1.5	EBU10MB	100	20	105	75.0 - 85.0	1
M110X1.5	EBU11MB	110	20	115	85.0 - 95.0	1

NPT Thread (* Double Seal)

NPT 3/8"	EBU01SNB *	17.15	16	22	3.0 - 9	50
NPT 3/8"	EBU01NB	17.15	16	22	4.0 - 12	50
NPT 1/2"	EBU1NB	21.34	16	22	4.0 - 12	50
NPT 1/2"	EBU12NB	21.34	16	28	10.0 - 16.0	50
NPT 3/4"	EBU2NB	26.67	16	28	10.0 - 18.0	25
NPT 3/4"	EBU23NB	26.67	16	35	14.0 - 20.0	25
NPT 1"	EBU3NB	33.40	20	35	14.0 - 24.0	20
NPT 1"	EBU34NB	33.40	20	45	22.0 - 26.0	20
NPT 1 1/4"	EBU4NB	42.16	20	45	22.0 - 32.0	10
NPT 1 1/4"	EBU45NB	42.16	20	50	26.0 - 34.0	10
NPT 1 1/2"	EBU5NB	48.26	20	55	26.0 - 35.0	10
NPT 1 1/2"	EBU56NB	48.26	20	64	35.0 - 41.0	10
NPT 2"	EBU6NB	60.33	20	68	35.0 - 45.0	5
NPT 2"	EBU67NB	60.33	20	75	46.0 - 52.0	5
NPT 2 1/2"	EBU7NB	73.03	21	80	46.0 - 62.0	2
NPT 2 1/2"	EBU78NB	73.03	21	95	60.0 - 64.0	2
NPT 3"	EBU8NB	88.90	21	95	60.0 - 75.0	2
NPT 3"	EBU810NB	88.90	21	105	75.0 - 79.5	2
NPT 4"	EBU10NB	114.30	21	105	75.0 - 85.0	1
NPT 4"	EBU11NB	114.30	21	115	85.0 - 95.0	1



E-OCTANS



EXPLOSION PROOF TRIPLE SEAL EMC BRASS / S.S CABLE GLANDS



E-VELA

These Glands are produced in accordance to EN 60079-7:2015. Because of triple seal they have wide clamping range they are used in mobile offshore, marine application, chemical & petro chemical industry.

Technical Details :

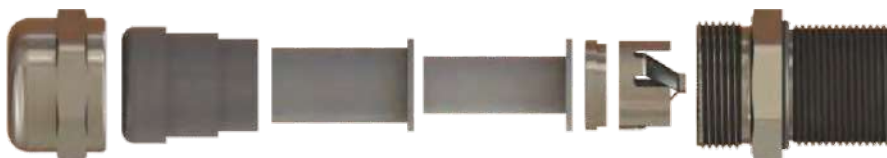
Material	Brass Nickel Plated (MB / NB Series) Stainless Steel 316L (MX / NX Series)
Protection Class	IP 68 - 5 Bar, 30 Min
Sealing Ring	Chloroprene / Silicone
O Ring	Chloroprene / Silicone
Temperature Range	Chloroprene Silicone
Ex d/tb	-40° C to +80° C -60° C to +80° C
Ex e/tb	-60° C to +80° C -60° C to +140° C
Threads available	Metric, NPT, (Pg available on request)
Certificate No.	IMQ 13 ATEX 018 X / IECEx IMQ 13.0006X
Equipment Marking	Ex II 2GD Ex db IIC Gb Ex eb IIC Gb Ex tb IIIC Db
Suitable for use in	Group II Gas Group IIC Zone1/Zone2 Group III Dust Group IIIC Zone21/Zone22
Approvals	

Metric Thread (* Double Seal)

Size	Cat. No.	Thread Diameter D (mm)	Thread Length L (mm)	(mm)	Clamping Range P (mm)	Shield Dia (mm)	Standard Pack (pieces)
M16X1.5	EBS01MB*	16	16	22	4.0 - 8.0	2.5 - 5.0	50
M20X1.5	EBS1MB	20	18	22	4.0 - 12.0	2.5 - 10.0	50
M25X1.5	EBS2MB	25	16	28	10.0 - 18.0	8.0 - 14.0	25
M32X1.5	EBS3MB	32	19	35	14.0 - 24.0	12.0 - 20.0	20
M40X1.5	EBS4MB	40	20	45	22.0 - 32.0	18.0 - 28.0	10
M50X1.5	EBS5MB	50	20	55	26.0 - 35.0	21.0 - 31.0	12
M63X1.5	EBS6MB	63	20	64	35.0 - 45.0	31.0 - 41.0	12
M75X1.5	EBS7MB	75	20	80	46.0 - 62.0	42.0 - 58.0	1
M90X1.5	EBS8MB	90	20	95	60.0 - 70.0	56.0 - 71.0	1
M100X1.5	EBS10MB	100	20	105	75.0 - 85.0	71.0 - 81.0	1
M110X1.5	EBS11MB	110	20	115	85.0 - 95.0	81.0 - 91.0	1

NPT Thread (* Double Seal)

Size	Cat. No.	Thread Diameter D (mm)	Thread Length L (mm)	(mm)	Clamping Range P (mm)	Shield Dia (mm)	Standard Pack (pieces)
NPT 3/8"	EBS01NB*	17.15	16	20	4.0 - 8.0	2.5 - 5.0	50
NPT 1/2"	EBS1NB	21.34	18	22	4.0 - 12.0	2.5 - 10.0	50
NPT 3/4"	EBS2NB	26.67	16	28	10.0 - 18.0	8.0 - 14.0	25
NPT 1"	EBS3NB	33.40	20	35	14.0 - 24.0	12.0 - 20.0	20
NPT 1 1/4"	EBS4NB	42.16	20	45	22.0 - 32.0	18.0 - 28.0	10
NPT 1 1/2"	EBS5NB	48.26	20	55	26.0 - 35.0	22.0 - 31.0	12
NPT 2"	EBS6NB	60.33	20	68	35.0 - 45.0	31.0 - 41.0	12
NPT 2 1/2"	EBS7NB	73.03	21	80	46.0 - 62.0	42.0 - 58.0	1
NPT 3"	EBS8NB	88.90	21	95	62.0 - 75.0	56.0 - 71.0	1
NPT 4"	EBS10NB	114.30	21	115	75.0 - 85.0	71.0 - 81.0	1
NPT 4"	EBS11NB	114.30	21	115	85.0 - 95.0	81.0 - 91.0	1



EXPLOSION PROOF DOUBLE COMPRESSION METRIC THREAD BRASS / S.S CABLE GLANDS



ORION

These double compression explosion proof cable glands are used for securing SWA and AWA armoured cables. Various clamping ranges are available for same size of thread.

Technical Details :

Material	Brass Nickel Plated (MB Series) Stainless Steel (MX Series)
Protection Class	IP 68 - 5 Bar, 30 Min
Sealing Ring	Chloroprene / Silicone
O Ring	Chloroprene / Silicone
Temperature Range	Chloroprene Silicone -40°C to +100°C -60°C to +130°C
Threads available	Metric, NPT, (Pg available on request)
Certificate No.	CESI 13 ATEX 033 X / IECEx CES 13.0013X
Equipment Marking	Ex II 2GD Ex db IIC Gb Ex eb IIC Gb Ex tb IIIC Db
Suitable for use in	Group II Gas Group IIC Zone1/Zone2 Group III Dust Group IIIC Zone21/Zone22
Approvals	    DNV-GL

Metric Thread

Size	Cat. No.	Thread Diameter D (mm)	Thread Length TL (mm)	 (mm)	Inner Sheath Sealing Ring D1 (mm)	Outer Sheath Sealing Ring D2 (mm)	Armour Wire
M16X1.5	KBA01SMB	16	16	26	3.0 - 8.5	6.0 - 12	0.70 - 1.20
M16X1.5	KBA01MB	16	16	29	6.0 - 12	8.5 - 16	0.70 - 1.25
M20X1.5	KBA1SMB	20	16	26	3.0 - 8.5	6.0 - 12	0.70 - 1.20
M20X1.5	KBA1MB	20	16	29	6.0 - 12	8.5 - 16	0.70 - 1.25
M20X1.5	KBA1LMB	20	16	32	8.5 - 14.5	12 - 20	0.90 - 1.30
M25X1.5	KBA2SMB	25	18	29	6.0 - 12	8.5 - 16	0.70 - 1.25
M25X1.5	KBA2MB	25	18	34	8.5 - 16	12 - 21	0.70 - 1.20
M25X1.5	KBA2LMB	25	18	40	12 - 20	16 - 26	1.30 - 1.70
M32X1.5	KBA3SMB	32	18	40	12 - 20	16 - 26	1.30 - 1.70
M32X1.5	KBA3MB	32	18	52	15 - 26	20 - 33	1.20 - 1.80
M40X1.5	KBA4SMB	40	18	52	15 - 26	20 - 33	1.20 - 1.80
M40X1.5	KBA4MB	40	18	60	20 - 32	29 - 41	1.60 - 2.20
M50X1.5	KBA5SMB	50	18	70	22 - 35	33 - 48	2.00 - 2.80
M50X1.5	KBA5MB	50	18	70	27 - 41	36 - 52	1.80 - 2.80
M63X1.5	KBA6SMB	63	20	80	35 - 45	43 - 57	1.80 - 2.80
M63X1.5	KBA6MB	63	20	85	40 - 52	47 - 60	1.80 - 2.80
M75X1.5	KBA7SMB	75	20	85	40 - 52	47 - 60	1.80 - 2.80
M90X1.5	KBA8SMB	90	20	95	45 - 60	54 - 70	1.00 - 2.30
M90X1.5	KBA8MB	90	20	110	60 - 72	63 - 80	1.00 - 3.50
M110X1.5	KBA10SMB	110	20	120	45 - 60	54 - 70	1.00 - 2.30
M110X1.5	KBA10MB	110	20	120	60 - 72	63 - 80	1.00 - 3.50



EXPLOSION PROOF DOUBLE COMPRESSION NPT THREAD BRASS / S.S CABLE GLANDS



ORION

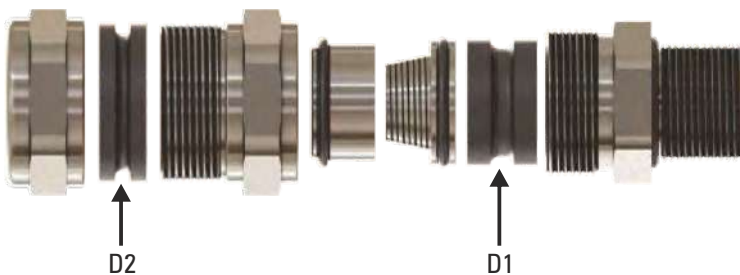
These double compression explosion proof cable glands are used for securing SWA and AWA armoured cables. Various clamping ranges are available for same size of thread.

Technical Details :

Material	Brass Nickel Plated (MB Series) Stainless Steel (MX Series)
Protection Class	IP 68 - 5 Bar, 30 Min
Sealing Ring	Chloroprene / Silicone
O Ring	Chloroprene / Silicone
Temperature Range	Chloroprene Silicone -40°C to +100°C -60°C to +130°C
Threads available	Metric, NPT, (Pg available on request)
Certificate No.	CESI 13 ATEX 033 X / IECEx CES 13.0013X
Equipment Marking	Ex II 2GD Ex db IIC Gb Ex eb IIC Gb Ex tb IIIC Db
Suitable for use in	Group II Gas Group IIC Zone1/Zone2 Group III Dust Group IIIC Zone21/Zone22
Approvals	     DNV-GL

NPT Thread

Size	Cat. No.	Thread Diameter D (mm)	Thread Length TL (mm)	 (mm)	Inner Sheath Sealing Ring D1 (mm)	Outer Sheath Sealing Ring D2 (mm)	Armour Wire
NPT 3/8"	KBA01SNB	17.15	16	26	3.0 - 8.5	6.0 - 12	0.70 - 1.20
NPT 3/8"	KBA01NB	17.15	16	29	6.0 - 12	8.5 - 16	0.70 - 1.25
NPT 1/2"	KBA1SNB	21.34	21	26	3.0 - 8.5	6.0 - 12	0.70 - 1.20
NPT 1/2"	KBA1NB	21.34	21	29	6.0 - 12	8.5 - 16	0.70 - 1.25
NPT 1/2"	KBA1LNB	21.34	21	30	8.5 - 14.5	12 - 20	0.90 - 1.30
NPT 3/4"	KBA2SNB	26.67	21	29	6.0 - 12	8.5 - 16	0.70 - 1.25
NPT 3/4"	KBA2NB	26.67	21	34	8.5 - 16	12 - 21	0.70 - 1.20
NPT 3/4"	KBA2LNB	26.67	21	40	12 - 20	16 - 26	1.30 - 1.70
NPT 1"	KBA3SNB	33.40	26	40	12 - 20	16 - 26	1.30 - 1.70
NPT 1"	KBA3NB	33.40	26	52	15 - 26	20 - 33	1.20 - 1.80
NPT 1 1/4"	KBA4SNB	42.16	28	52	15 - 26	20 - 33	1.20 - 1.80
NPT 1 1/4"	KBA4NB	42.16	28	60	20 - 32	29 - 41	1.60 - 2.20
NPT 1 1/2"	KBA5SNB	48.26	28	70	22 - 35	33 - 48	2.00 - 2.80
NPT 1 1/2"	KBA5NB	48.26	28	70	27 - 41	36 - 52	1.80 - 2.80
NPT 2"	KBA6SNB	60.33	28	80	35 - 45	43 - 57	1.80 - 2.80
NPT 2"	KBA6NB	60.33	28	85	40 - 52	47 - 60	1.80 - 2.80
NPT 2 1/2"	KBA7SNB	73.03	41	85	40 - 52	47 - 60	1.80 - 2.80
NPT 3"	KBA8SNB	88.90	43	95	45 - 60	54 - 70	1.00 - 2.30
NPT 3"	KBA8NB	88.90	43	115	60 - 72	63 - 80	1.00 - 3.50
NPT 3 1/2"	KBA9SNB	101.60	45	95	45 - 60	54 - 70	1.00 - 2.30
NPT 3 1/2"	KBA9NB	101.60	45	115	60 - 72	63 - 80	1.00 - 3.50



EXPLOSION PROOF METRIC THREAD BRASS / S.S CABLE GLANDS FOR ALL TYPE OF ARMoured CABLES



These double compression explosion proof cable glands are used for all types Armoured cables such as SWA - SWB - STA - PWA - AWA - SHIELDED. Various clamping ranges are available for same size of thread.

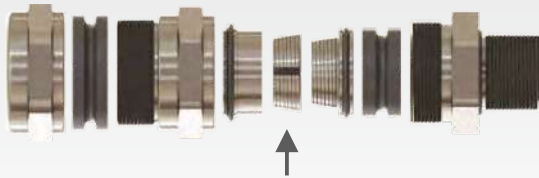
Technical Details :

Material	Brass Nickel Plated (MB Series) Stainless Steel (MX Series)
Protection Class	IP 68 - 5 Bar, 30 Min
Sealing Ring	Chloroprene / Silicone
O Ring	Chloroprene / Silicone
Temperature Range	Chloroprene Silicone -40°C to +100°C -60°C to +130°C
Threads available	Metric
Certificate No.	CESI 13 ATEX 033 X / IECEx CES 13.0013X
Equipment Marking	Ex II 2GD Ex db IIC Gb Ex eb IIC Gb Ex tb IIIC Db
Suitable for use in	Group II Gas Group IIC Zone1/Zone2 Group III Dust Group IIIC Zone21/Zone22
Approvals	

Metric Thread

Size	Cat. No.	Thread Diameter D (mm)	Thread Length TL (mm)	Clamping Range		Armour Wire Ø min - max mm	Shield Wire Ø min - max mm
				Inner Sheath Ø min-max	Outer Sheath Ø min-max		
M12X1.5	KBAU0SLMB	12	15	3.0 - 7.5	6.0 - 12	0.70 - 1.20	0.2 - 0.5
M16X1.5	KBAU01SMB	16	16	3.0 - 8.5	6.0 - 12	0.70 - 1.20	0.2 - 0.5
M16X1.5	KBAU01MB	16	16	6.0 - 12	8.5 - 16	0.70 - 1.25	0.2 - 0.5
M20X1.5	KBAU1SMB	20	16	3.0 - 8.5	6.0 - 12	0.70 - 1.20	0.2 - 0.5
M20X1.5	KBAU1MB	20	16	6.0 - 12	8.5 - 16	0.70 - 1.25	0.2 - 0.5
M20X1.5	KBAU1LMB	20	16	8.5 - 14.5	12 - 20	0.90 - 1.30	0.2 - 0.5
M25X1.5	KBAU2XSMB	25	18	3.0 - 8.5	6.0 - 12	0.70 - 1.20	0.2 - 0.5
M25X1.5	KBAU2SMB	25	18	6.0 - 12	8.5 - 16	0.70 - 1.25	0.2 - 0.5
M25X1.5	KBAU2MB	25	18	8.5 - 16	12 - 21	0.70 - 1.20	0.5 - 0.7
M25X1.5	KBAU2LMB	25	18	12 - 20	16 - 26	1.30 - 1.70	0.2 - 0.5
M32X1.5	KBAU3XSMB	32	18	6.0 - 12	8.5 - 16	0.70 - 1.25	0.2 - 0.5
M32X1.5	KBAU3SMB	32	18	12 - 20	16 - 26	1.30 - 1.70	0.2 - 0.5
M32X1.5	KBAU3MB	32	18	15 - 26	20 - 33	1.20 - 1.80	0.2 - 0.8
M40X1.5	KBAU4XSMB	40	18	12 - 20	16 - 26	1.30 - 1.70	0.2 - 0.5
M40X1.5	KBAU4SMB	40	18	15 - 26	20 - 33	1.20 - 1.80	0.2 - 0.8
M40X1.5	KBAU4MB	40	18	20 - 32	29 - 41	1.60 - 2.20	0.2 - 0.8
M50X1.5	KBAU5XSMB	50	18	15 - 26	20 - 33	1.20 - 1.80	0.2 - 0.8
M50X1.5	KBAU5XMMB	50	18	20 - 32	29 - 41	1.60 - 2.20	0.2 - 0.8
M50X1.5	KBAU5SMB	50	18	22 - 35	33 - 48	2.00 - 2.80	0.2 - 1.0
M50X1.5	KBAU5MB	50	18	27 - 41	36 - 52	1.80 - 2.80	0.3 - 1.4
M63X1.5	KBAU6XSMB	63	20	22 - 35	33 - 48	2.00 - 2.80	0.2 - 1.0
M63X1.5	KBAU6XMMB	63	20	27 - 41	36 - 52	1.80 - 2.80	0.3 - 1.4
M63X1.5	KBAU6SMB	63	20	35 - 45	43 - 57	1.80 - 2.80	0.3 - 1.0
M63X1.5	KBAU6MB	63	20	40 - 52	47 - 60	1.80 - 2.80	0.6 - 1.5
M75X1.5	KBAU7XSMB	75	20	35 - 45	43 - 57	1.80 - 2.80	0.3 - 1.0
M75X1.5	KBAU7SMB	75	20	40 - 52	47 - 60	1.80 - 2.80	0.6 - 1.5
M75X1.5	KBAU7MB	75	20	45 - 60	54 - 70	1.00 - 2.30	0.2 - 1.2
M90X1.5	KBAU8XSMB	90	20	40 - 52	47 - 60	1.80 - 2.80	0.6 - 1.5
M90X1.5	KBAU8SMB	90	20	45 - 60	54 - 70	1.00 - 2.30	0.2 - 1.2
M90X1.5	KBAU8MB	90	20	60 - 72	63 - 80	1.00 - 3.50	0.2 - 1.9
M110X1.5	KBAU10SMB	110	20	45 - 60	54 - 70	1.00 - 2.30	0.2 - 1.2
M110X1.5	KBAU10MB	110	20	60 - 72	63 - 80	1.00 - 3.50	0.2 - 1.9

EXPLOSION PROOF NPT THREAD BRASS / S.S CABLE GLANDS FOR ALL TYPE OF ARMoured CABLES



With armour reduction cone it can be used for shielded, SWB and STA cable.
When armour reduction cone is taken out it can be used for armoured SWA and AWA cables.

ORION UNIVERSAL

These double compression explosion proof cable glands are used for all types Armoured cables such as SWA - SWB - STA - PWA - AWA - SHIELDED. Various clamping ranges are available for same size of thread.

Technical Details :

Material	Brass Nickel Plated (NB Series) Stainless Steel (NX Series)
Protection Class	IP 68 - 5 Bar, 30 Min
Sealing Ring	Chloroprene / Silicone
O Ring	Chloroprene / Silicone
Temperature Range	Chloroprene: -40°C to +100°C Silicone: -60°C to +130°C
Threads available	NPT
Certificate No.	CESI 13 ATEX 033 X / IECEx CES 13.0013X
Equipment Marking	Ex II 2GD Ex db IIC Gb Ex eb IIC Gb Ex tb IIIC Db
Suitable for use in	Group II Gas Group IIC Zone1/Zone2 Group III Dust Group IIIC Zone21/Zone22
Approvals	

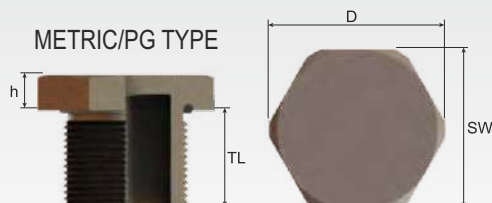
NPT Thread

Size	Cat. No.	Thread Diameter D (mm)	Thread Length TL (mm)	Clamping Range		Armour Wire Ø min - max mm	Shield Wire Ø min - max mm
				Inner Sheath Ø min-max	Outer Sheath Ø min-max		
NPT 1/4"	KBAU0SLNB	13.70	15	3.0 - 8.0	6.0 - 12	0.70 - 1.20	0.2 - 0.5
NPT 3/8"	KBAU01SNB	17.5	16	3.0 - 8.5	6.0 - 12	0.70 - 1.20	0.2 - 0.5
NPT 3/8"	KBAU01NB	17.5	16	6.0 - 12	8.5 - 16	0.70 - 1.25	0.2 - 0.5
NPT 1/2"	KBAU1SNB	21.34	16	3.0 - 8.5	6.0 - 12	0.70 - 1.20	0.2 - 0.5
NPT 1/2"	KBAU1NB	21.34	16	6.0 - 12	8.5 - 16	0.70 - 1.25	0.2 - 0.5
NPT 1/2"	KBAU1LNB	21.34	16	8.5 - 14.5	12 - 20	0.90 - 1.30	0.2 - 0.5
NPT 3/4"	KBAU2XSNB	26.67	16	3.0 - 8.5	6.0 - 12	0.70 - 1.20	0.2 - 0.5
NPT 3/4"	KBAU2SNB	26.67	18	6.0 - 12	8.5 - 16	0.70 - 1.25	0.2 - 0.5
NPT 3/4"	KBAU2NB	26.67	16	8.5 - 16	12 - 21	0.70 - 1.20	0.5 - 0.7
NPT 3/4"	KBAU2LNB	26.67	16	12 - 20	16 - 26	1.30 - 1.70	0.2 - 0.5
NPT 1"	KBAU3XSNB	33.40	21	6.0 - 12	8.5 - 16	0.70 - 1.25	0.2 - 0.5
NPT 1"	KBAU3SNB	33.40	21	12 - 20	16 - 26	1.30 - 1.70	0.2 - 0.5
NPT 1"	KBAU3NB	33.40	21	15 - 26	20 - 33	1.20 - 1.80	0.2 - 0.8
NPT 1 1/4"	KBAU4XSNB	42.16	21	12 - 20	16 - 26	1.30 - 1.70	0.2 - 0.5
NPT 1 1/4"	KBAU4SNB	42.16	21	15 - 26	20 - 33	1.20 - 1.80	0.2 - 0.8
NPT 1 1/4"	KBAU4NB	42.16	18	20 - 32	29 - 41	1.60 - 2.20	0.2 - 0.8
NPT 1 1/2"	KBAU5XSNB	48.26	21	15 - 26	20 - 33	1.20 - 1.80	0.2 - 0.8
NPT 1 1/2"	KBAU5XMNB	48.26	21	20 - 32	29 - 41	1.60 - 2.20	0.2 - 0.8
NPT 1 1/2"	KBAU5SNB	48.26	21	22 - 35	33 - 48	2.00 - 2.80	0.2 - 1.0
NPT 1 1/2"	KBAU5NB	48.26	21	27 - 41	36 - 52	1.80 - 2.80	0.3 - 1.4
NPT 2"	KBAU6XSNB	60.33	21	22 - 35	33 - 48	2.00 - 2.80	0.2 - 1.0
NPT 2"	KBAU6XMNB	60.33	21	27 - 41	36 - 52	1.80 - 2.80	0.3 - 1.4
NPT 2"	KBAU6SNB	60.33	20	35 - 45	43 - 57	1.80 - 2.80	0.3 - 1.0
NPT 2"	KBAU6NB	60.33	21	40 - 52	47 - 60	1.80 - 2.80	0.6 - 1.5
NPT 2 1/2"	KBAU7XSNB	73.03	21	35 - 45	43 - 57	1.80 - 2.80	0.3 - 1.0
NPT 2 1/2"	KBAU7SNB	73.03	21	40 - 52	47 - 60	1.80 - 2.80	0.6 - 1.5
NPT 2 1/2"	KBAU7NB	73.03	20	45 - 60	54 - 70	1.00 - 2.30	0.2 - 1.2
NPT 3"	KBAU8XSNB	88.90	21	40 - 52	47 - 60	1.80 - 2.80	0.6 - 1.5
NPT 3"	KBAU8SNB	88.90	21	45 - 60	54 - 70	1.00 - 2.30	0.2 - 1.2
NPT 3"	KBAU8NB	88.90	21	60 - 72	63 - 80	1.00 - 3.50	0.2 - 1.9
NPT 3 1/2"	KBAU9SNB	101.60	21	45 - 60	54 - 70	1.00 - 2.30	0.2 - 1.2
NPT 3 1/2"	KBAU9NB	101.60	21	60 - 72	63 - 80	1.00 - 3.50	0.2 - 1.9

EXPLOSION PROOF BLIND STOPS BRASS / STAINLESS STEEL



Pg / Metric



AQUILA HEXAGONAL

Blind Stops made of Brass are used wherever threads previously cut must be closed for preventing dust, dirt and foreign matters from entering the enclosure or equipment. These blind stops are produced in accordance with EN 60079-7:2015.

Technical Details :

Material	Brass Nickel Plated (PB & MB Series) Stainless Steel 316L (PX & MX Series)
Protection Class	IP 68 - 5 Bar, 30 Min
Sealing Ring	Chloroprene / Silicone
O Ring	Chloroprene / Silicone
Temperature Range	Chloroprene Silicone -40° C to +100° C -60° C to +130° C
Threads available	Metric, NPT, (Pg available on request)
Certificate No.	CESI 13 ATEX 066 X / IECEx CES 13.0022X
Equipment Marking	Ex II 2GD Ex db IIC Gb Ex eb IIC Gb
Suitable for use in	Group II Gas Group IIC Zone1/Zone2 Group III Dust Group IIIC Zone21/Zone22
Type protection	Ex d/e
Approvals	     DNV·GL

Pg Thread (Hexagonal)

Size	Cat. No. Brass	Thread Diameter D (mm)	Height h (mm)	Spanner Width SW (mm)	Thread Length TL (mm)	Standard Pack (pieces)
Pg 9	B-TS2PB	15.2	5.5	20	16.5	25
Pg 11	B-TS3PB	18.6	5.5	25	16.5	20
Pg 13.5	B-TS4PB	20.4	5.5	25	16.5	20
Pg 16	B-TS5PB	22.5	5.5	27	16.5	10
Pg 21	B-TS6PB	28.3	5.0	35	17	10
Pg 29	B-TS7PB	37	5.0	42	17	10
Pg 36	B-TS8PB	47	5.0	55	17	5
Pg 42	B-TS9PB	54	5.0	60	17	5
Pg 48	B-TS10PB	59.3	5.0	65	17	5

Metric Thread (Hexagonal)

Size	Cat. No. Brass	Thread Diameter D (mm)	Height h (mm)	Spanner Width SW (mm)	Thread Length TL (mm)	Standard Pack (pieces)
M 12 x 1.5	B-TS02MB	12	5.5	17	14	25
M 16 x 1.5	B-TS01MB	16	5.5	22	15.5	25
M 20 x 1.5	B-TS1MB	20	5.5	25	15.5	25
M 25 x 1.5	B-TS2MB	25	5.5	30	15.5	20
M 32 x 1.5	B-TS3MB	32	5.5	37	15.5	20
M 40 x 1.5	B-TS4MB	40	5.5	45	17.5	10
M 50 x 1.5	B-TS5MB	50	5.5	55	17.5	10
M 63 x 1.5	B-TS6MB	63	5.5	70	17.5	10
M 75 x 1.5	B-TS7MB	75	5.0	85	20	5
M 90 x 1.5	B-TS8MB	90	5.0	100	20	5
M 110 x 1.5	B-TS10MB	110	5.0	120	20	5

EXPLOSION PROOF BLIND STOPS BRASS / STAINLESS STEEL



Blind Stops made of Brass are used wherever threads previously cut must be closed for preventing dust, dirt and foreign matters from entering the enclosure or equipment. These blind stops are produced in accordance with EN 60079-7:2015.

Technical Details :

Material	Brass Nickel Plated (NB Series) Stainless Steel 316L (NX Series)
Protection Class	IP 68 - 5 Bar, 30 Min
Sealing Ring	Chloroprene / Silicone
O Ring	Chloroprene / Silicone
Temperature Range	Chloroprene Silicone -40°C to +100°C -60°C to +130°C
Threads available	Metric, NPT, (Pg available on request)
Certificate No.	CESI 13 ATEX 066 X / IECEx CES 13.0022X
Equipment Marking	Ex II 2GD Ex db IIC Gb Ex eb IIC Gb
Suitable for use in	Group II Gas Group IIC Zone1/Zone2 Group III Dust Group IIIC Zone21/Zone22
Type protection	Ex d:Ex e
Approvals	

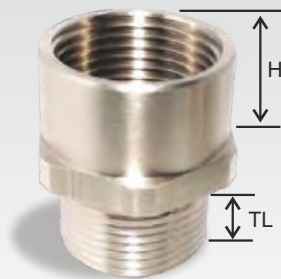
NPT Thread (Circular)

Size	Cat. No. Brass	Thread Diameter D (mm)	Spanner Width SW (mm)	Thread Length TL (mm)	Standard Pack (pieces)
NPT 3/8"	B-TS01NB	17.15	6	15	25
NPT 1/2"	B-TS1NB	21.34	10	20	25
NPT 3/4"	B-TS2NB	26.67	10	20	20
NPT 1"	B-TS3NB	33.40	14	25	20
NPT 1 1/4"	B-TS4NB	42.16	14	25	10
NPT 1 1/2"	B-TS5NB	48.26	14	25	10
NPT 2"	B-TS6NB	60.33	14	25	10
NPT 2 1/2"	B-TS7NB	73.03	14	32	5
NPT 3"	B-TS8NB	88.90	16	32	5
NPT 3 1/2"	B-TS9NB	101.60	16	32	5
NPT 4"	B-TS10NB	114.30	16	33	5

NPT Thread (Hexagonal)

Size	Cat. No. Brass	Thread Diameter D (mm)	Height h (mm)	Spanner Width SW (mm)	Thread Length TL (mm)	Standard Pack (pieces)
NPT 3/8"	NB-TS01NB	17.15	4.0	20	16	25
NPT 1/2"	NB-TS1NB	21.34	4.0	24	18	25
NPT 3/4"	NB-TS2NB	26.67	4.0	28	18	20
NPT 1"	NB-TS3NB	33.40	4.0	35	21	20
NPT 1 1/4"	NB-TS4NB	42.16	4.0	45	21	10
NPT 1 1/2"	NB-TS5NB	48.26	5.0	50	21	10
NPT 2"	NB-TS6NB	60.33	5.0	65	21	10
NPT 2 1/2"	NB-TS7NB	73.03	5.0	75	28	5
NPT 3"	NB-TS8NB	88.90	5.0	95	28	5
NPT 3 1/2"	NB-TS9NB	101.60	5.0	100	28	5
NPT 4"	NB-TS10NB	114.30	5.0	120	28	5

EXPLOSION PROOF ADAPTORS BRASS / STAINLESS STEEL



APUS

These are used for threaded holes on machines or equipment housing where the threads are to be changed from Metric to NPT or from NPT to Metric. They are produced in accordance with EN 60079-7:2015. Enlargers and Reducers in Metric & NPT thread are available on request.

Technical Details :

Material	Brass Nickel Plated (NB & MB Series) Stainless Steel 316L (NX & MX Series)
Protection Class	IP 68 - 5 Bar, 30 Min
O Ring	Chloroprene / Silicone
Temperature Range	Chloroprene Silicone -40° C to +100° C -60° C to +130° C
Certificate No.	CESI 13 ATEX 066 X / IECEx CES 13.0022X
Equipment Marking	Ex II 2GD Ex db IIC Gb Ex eb IIC Gb Ex tb IIIC Db
Suitable for use in	Group II Gas Group IIC Zone1/Zone2 Group III Dust Group IIIC Zone21/Zone22
Approvals	

NPT / Metric Thread

Cat. No.	Male Thread Size	Female Thread Size	Outer Thread Length TL (mm)	Height H (mm)	Standard Pack (pieces)
B-RB01M01NB	NPT 3/8"	M 16 x 1.5	15	33.5	50
B-RB1M01NB	NPT 3/8"	M 20 x 1.5	15	34	50
B-RB1M1NB	NPT 1/2"	M 20 x 1.5	15	34	25
B-RB2M1NB	NPT 1/2"	M 25 x 1.5	15	34	25
B-RB1M2NB	NPT 3/4"	M 20 x 1.5	15	34	25
B-RB2M2NB	NPT 3/4"	M 25 x 1.5	15	34	25
B-RB3M2NB	NPT 3/4"	M 32 x 1.5	15	34	25
B-RB3M3NB	NPT 1"	M 32 x 1.5	15	34	10
B-RB4M3NB	NPT 1"	M 40 x 1.5	15	37	10
B-RB4M4NB	NPT 1 1/4"	M 40 x 1.5	18	40	10
B-RB5M4NB	NPT 1 1/4"	M 50 x 1.5	18	40	10
B-RB5M5NB	NPT 1 1/2"	M 50 x 1.5	18	40	5
B-RB6M5NB	NPT 1 1/2"	M 63 x 1.5	18	40.5	5
B-RB6M6NB	NPT 2"	M 63 x 1.5	18	40.5	5
B-RB7M6NB	NPT 2"	M 75 x 1.5	18	40.5	5
B-RB7M7NB	NPT 2 1/2"	M 75 x 1.5	28	50.5	3
B-RB8M7NB	NPT 2 1/2"	M 90 x 1.5	28	54	3
B-RB8M8NB	NPT 3"	M 90 x 1.5	28	54	2
B-RB10M8NB	NPT 3"	M 110 x 1.5	28	54	2
B-RB10M10NB	NPT 4"	M 110 x 1.5	28	54	2

Metric / NPT Thread

B-RB01N01MB	M 16 x 1.5	NPT 3/8"	15	33.5	50
B-RB1N01MB	M 16 x 1.5	NPT 1/2"	15	34	50
B-RB1N1MB	M 20 x 1.5	NPT 1/2"	15	34	25
B-RB2N1MB	M 20 x 1.5	NPT 3/4"	15	34	25
B-RB2N2MB	M 25 x 1.5	NPT 3/4"	15	34	25
B-RB3N2MB	M 25 x 1.5	NPT 1"	15	34	25
B-RB3N3MB	M 32 x 1.5	NPT 1"	15	34	10
B-RB4N3MB	M 32 x 1.5	NPT 1 1/4"	18	37	10
B-RB4N4MB	M 40 x 1.5	NPT 1 1/4"	18	40	10
B-RB5N4MB	M 40 x 1.5	NPT 1 1/2"	18	40	10
B-RB5N5MB	M 50 x 1.5	NPT 1 1/2"	18	40	5
B-RB6N5MB	M 50 x 1.5	NPT 2"	18	40.5	5
B-RB6N6MB	M 63 x 1.5	NPT 2"	18	40.5	5
B-RB7N6MB	M 63 x 1.5	NPT 2 1/2"	18	50.5	5
B-RB7N7MB	M 75 x 1.5	NPT 2 1/2"	18	50.5	3
B-RB8N7MB	M 75 x 1.5	NPT 3"	18	50.5	3
B-RB8N8MB	M 90 x 1.5	NPT 3"	21	54	2
B-RB10N8MB	M 90 x 1.5	NPT 4"	21	54	2
B-RB10N10MB	M 110 x 1.5	NPT 4"	21	54	2

EXPLOSION PROOF VENTILATION PLUGS IN STAINLESS STEEL



HYDRA

Ventilation Plugs are used for equalizing the pressure inside and outside the enclosure. The same is achieved with the help of a membrane inside the ventilation plug, which allows for gases (air) to pass through it while blocking liquids and particulate solids (dust).

Applications / Benefits :

- 1) These prevent components inside the enclosure from being exposed to pressurized gases when the enclosure heats up. (By virtue of pressure equalization)
- 2) These also prevent generation of vacuum inside the enclosure when a heated enclosure cools off. (e.g. In luminaires)
- 3) These help maintain IP 66 rating of the enclosure while allowing for the above benefits.

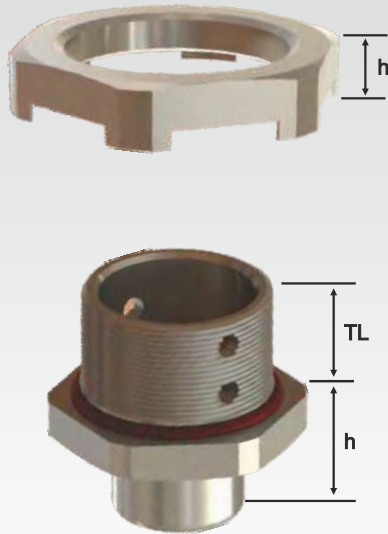
Technical Details :

Material Body, Cap	Stainless Steel 316L
Vent. Membrane	Acrylic co-polymer on nylon-support
O Ring	Chloroprene
Protection Class	IP 66 (EN60529)
Temperature Range	Ex e/tb -40° C to +100° C
Certificate No.	IBExU 10 ATEX 1169 U / TC RU C-TR.AA87.B.00941
Equipment Marking	Ex II 2GD Ex e IIC Gb Ex t IIC Db
Suitable for use in	Group II Gas Group IIC Zone1/Zone2 Group III Dust Group IIIC Zone21/Zone22
Approvals	     

Size	Cat. No.	Thread Diameter D (mm)	Thread Length L (mm)	⌀ (mm)	Air Permeability lt/hour	Water Intrusion Pressure Bar
M 12 x 1.5	MBBVP-X01L	12	10	17	25	0.5

EXPLOSION PROOF DRAIN PLUGS

These explosion proof metal drain plugs balances pressure difference between inner housing and outside environment. It also prevents the formation of water condensation in tightly sealed housings.



VIRGO

Technical Details :

Material	Brass Nickel Plated (NB & MB Series)
Body, Cap	Stainless Steel 316L (NX & MX Series)
Membrane	Bronze
O Ring	Silicone
Protection Class	IP 66 (EN60529)
Temperature Range	Ex e/tb -60°C to +85°C
Certificate No.	IMQ 13 ATEX 030 X / IECEx IMQ 14.0003X
Equipment Marking	Ex II 2GD Ex eb IIC Gb Ex tb IIIC Db
Suitable for use in	Group II Gas Group IIC Zone1/Zone2 Group III Dust Group IIIC Zone21/Zone22
Approvals	

Metric Thread - Drain Plug

Size	Cat. No.	Outer Diameter D (mm)	Thread Length TL (mm)	(mm)	Height h (mm)
M 20 x 1.5	BDRV-1MB	27.5	15	25	16
M 25 x 1.5	BDRV-2MB	33.0	15	30	16

NPT Thread - Drain Plug

Size	Cat. No.	Outer Diameter D (mm)	Thread Length TL (mm)	(mm)	Height h (mm)
NPT 1/2"	BDRV-1NB	27.5	16	25	16
NPT 3/4"	BDRV-2NB	33.0	16	30	16

Special Lock Nuts for drain plugs

Size	Cat. No.	Outer Diameter D (mm)		(mm)	Height h (mm)
M20 X 1.5	BDRL-03	27.5		25	5
M25 X 1.5	BDRL-04	33.0		30	5
NPT 1/2"	BDRLN-03	27.5		25	5
NPT 3/4"	BDRLN-04	33.0		30	5

Threaded Hole

Non-Threaded Hole



EXPLOSION PROOF TRIPLE SEAL LIQUID TIGHT STRAIGHT FITTINGS METRIC & NPT THREAD BRASS / S.S CONDUIT GLANDS



E-HYDRUS

These fittings are used with liquid tight flexible conduits for non-armoured cables. These Conduit Glands are produced in accordance with EN 60079-0:2015.

Technical Details :

Material Body, Cap	Brass Nickel Plated (MB / NB Series) Stainless Steel 316L(MX / NX Series)	
Protection Class	IP 68 - 5 Bar, 30 Min	
Sealing Ring	Chloroprene / For Silicone add suffix S	
O Ring	Chloroprene / For Silicone add suffix S	
Ferrule	Steel zinc plated, Brass nickel plated	
Plastic Ring	Polyamide	
Temperature Range	Chloroprene	Silicone
Ex d/tb	-40° C to +80° C	-60° C to +80° C
Ex e/tb	-40° C to +80° C	-60° C to +140° C
Threads available	Metric, NPT, (Pg available on request)	
Certificate No.	IMQ 13 ATEX 018 X / IECEx IMQ 13.0006X	
Equipment Marking	EII 2GD Ex db IIC Gb Ex eb IIC Gb Ex tb IIIC Db	
Suitable for use in	Group II Gas Group IIC Zone1/Zone2 Group III Dust Group IIIC Zone21/Zone22	
Approvals	    	

Metric Thread

Size	Cat. No.	Suitable for Conduit Size	Thread Diameter D (mm)	Thread Length L (mm)		 (mm)	Clamping Range D1 (mm)
				Ex-e	Ex-d/e		
M12X1.5	EBLS02MB	1/2"	12	9	16	27	4.0 - 8.0
M16X1.5	EBLS01MB	1/2"	16	9	16	27	4.0 - 12.0
M20X1.5	EBLS1MB	1/2"	20	9	16	27	4.0 - 12.0
M25X1.5	EBLS2MB	3/4"	25	9	16	33	10.0 - 18.0
M32X1.5	EBLS3MB	1"	32	9	16	43	14.0 - 24.0
M40X1.5	EBLS4MB	1 1/4"	40	9	18	52	22.0 - 32.0
M50X1.5	EBLS5MB	1 1/2"	50	9	18	60	26.0 - 35.0

NPT Thread

Size	Cat. No.	Suitable for Conduit Size	Thread Diameter D (mm)	Thread Length L (mm)		 (mm)	Clamping Range D1 (mm)
				Ex-e	Ex-d/e		
NPT 1/4"	EBLS02NB	1/2"	13.72	16		27	4.0 - 8.0
NPT 3/8"	EBLS01NB	1/2"	17.15	16		27	4.0 - 12.0
NPT 1/2"	EBLS1NB	1/2"	21.34	16		27	4.0 - 12.0
NPT 3/4"	EBLS2NB	3/4"	26.67	16		33	10.0 - 18.0
NPT 1"	EBLS3NB	1"	33.40	20		43	14.0 - 24.0
NPT 1 1/4"	EBLS4NB	1 1/4"	42.16	20		52	22.0 - 32.0
NPT 1 1/2"	EBLS5NB	1 1/2"	48.26	20		60	26.0 - 35.0



EXPLOSION PROOF TRIPLE SEAL LIQUID TIGHT 90° FITTINGS METRIC & NPT THREAD BRASS / S.S CONDUIT GLANDS



E-LUPUS

These fittings are used with liquid tight flexible conduits for non-armoured cables. These Conduit Glands are produced in accordance with EN 60079-0:2015.

Technical Details :

Material Body, Cap	Brass Nickel Plated (MB / NB Series) Stainless Steel 316L(MX / NX Series)	
Protection Class	IP 68 - 5 Bar, 30 Min	
Sealing Ring	Chloroprene / For Silicone add suffix S	
O Ring	Chloroprene / For Silicone add suffix S	
Ferrule	Steel zinc plated, Brass nickel plated	
Plastic Ring	Polyamide	
Temperature Range	Chloroprene	Silicone
Ex d/tb	-40° C to +80° C	-60° C to +80° C
Ex e/tb	-40° C to +80° C	-60° C to +140° C
Threads available	Metric, NPT, (Pg available on request)	
Certificate No.	IMQ 13 ATEX 018 X / IECEx IMQ 13.0006X	
Equipment Marking	EII 2GD Ex db IIC Gb Ex eb IIC Gb Ex tb IIIC Db	
Suitable for use in	Group II Gas Group IIC Zone1/Zone2 Group III Dust Group IIIC Zone21/Zone22	
Approvals	  	

Metric Thread

Size	Cat. No.	Suitable for Conduit Size	Thread Diameter D (mm)	Thread Length L (mm)		 (mm)	Clamping Range D1 (mm)
				Ex-e	Ex-d/e		
M12X1.5	EBLN02MB	1/2"	12	9	16	27	4.0 - 8.0
M16X1.5	EBLN01MB	1/2"	16	9	16	27	4.0 - 12.0
M20X1.5	EBLN1MB	1/2"	20	9	16	27	4.0 - 12.0
M25X1.5	EBLN2MB	3/4"	25	9	16	33	10.0 - 18.0
M32X1.5	EBLN3MB	1"	32	9	16	42	14.0 - 24.0
M40X1.5	EBLN4MB	1 1/4"	40	9	18	51	22.0 - 32.0
M50X1.5	EBLN5MB	1 1/2"	50	9	18	60	26.0 - 35.0

NPT Thread

Size	Cat. No.	Suitable for Conduit Size	Thread Diameter D (mm)	Thread Length L (mm)		 (mm)	Clamping Range D1 (mm)
				Ex-e	Ex-d/e		
NPT 1/4"	EBLN02NB	1/2"	12	16		27	4.0 - 8.0
NPT 3/8"	EBLN01NB	1/2"	16	16		27	4.0 - 12.0
NPT 1/2"	EBLN1NB	1/2"	20	16		27	4.0 - 12.0
NPT 3/4"	EBLN2NB	3/4"	25	16		33	10.0 - 18.0
NPT 1"	EBLN3NB	1"	32	20		42	14.0 - 24.0
NPT 1 1/4"	EBLN4NB	1 1/4"	40	20		51	22.0 - 32.0
NPT 1 1/2"	EBLN5NB	1 1/2"	50	20		60	26.0 - 35.0



EXPLOSION PROOF TRIPLE SEAL LIQUID TIGHT 45° FITTINGS METRIC & NPT THREAD BRASS / S.S CONDUIT GLANDS



E-SCORPIUS

These fittings are used with liquid tight flexible conduits for non-armoured cables. These Conduit Glands are produced in accordance with EN 60079-0:2015.

Technical Details :

Material Body, Cap	Brass Nickel Plated (MB / NB Series) Stainless Steel 316L(MX / NX Series)	
Protection Class	IP 68 - 5 Bar, 30 Min	
Sealing Ring	Chloroprene / For Silicone add suffix S	
O Ring	Chloroprene / For Silicone add suffix S	
Ferrule	Steel zinc plated, Brass nickel plated	
Plastic Ring	Polyamide	
Temperature Range	Chloroprene	Silicone
Ex d/tb	-40° C to +80° C	-60° C to +80° C
Ex e/tb	-40° C to +80° C	-60° C to +140° C
Threads available	Metric, NPT, (Pg available on request)	
Certificate No.	IMQ 13 ATEX 018 X / IECEx IMQ 13.0006X	
Equipment Marking	EII 2GD Ex db IIC Gb Ex eb IIC Gb Ex tb IIIC Db	
Suitable for use in	Group II Gas Group IIC Zone1/Zone2 Group III Dust Group IIIC Zone21/Zone22	
Approvals	    	

Metric Thread

Size	Cat. No.	Suitable for Conduit Size	Thread Diameter D (mm)	Thread Length L (mm)		 (mm)	Clamping Range D1 (mm)
				Ex-e	Ex-d/e		
M12X1.5	EBLQ02M	1/2"	12	9	16	27	4.0 - 8.0
M16X1.5	EBLQ01MB	1/2"	16	9	16	27	4.0 - 12.0
M20X1.5	EBLQ1MB	1/2"	20	9	16	27	4.0 - 12.0
M25X1.5	EBLQ2MB	3/4"	25	9	16	33	10.0 - 18.0
M32X1.5	EBLQ3MB	1"	32	9	16	42	14.0 - 24.0
M40X1.5	EBLQ4MB	1 1/4"	40	9	18	51	22.0 - 32.0
M50X1.5	EBLQ5MB	1 1/2"	50	9	18	60	26.0 - 35.0

NPT Thread

Size	Cat. No.	Suitable for Conduit Size	Thread Diameter D (mm)	Thread Length L (mm)		 (mm)	Clamping Range D1 (mm)
				Ex-e	Ex-d/e		
NPT 1/4"	EBLQ02NB	1/2"	12	16		27	4.0 - 8.0
NPT 3/8"	EBLQ01NB	1/2"	16	16		27	4.0 - 12.0
NPT 1/2"	EBLQ1NB	1/2"	20	16		27	4.0 - 12.0
NPT 3/4"	EBLQ2NB	3/4"	25	16		33	10.0 - 18.0
NPT 1"	EBLQ3NB	1"	32	20		42	14.0 - 24.0
NPT 1 1/4"	EBLQ4NB	1 1/4"	40	20		51	22.0 - 32.0
NPT 1 1/2"	EBLQ5NB	1 1/2"	50	20		60	26.0 - 35.0



*Your one stop solution partner
for high quality cable protection
and management products.*

5K+ cable management and protection product SKUs

40+ Engineers

10+ International Product Approvals

200+ Dealers

ISO 9001 : 2015 certified systems

1000+ Customers who trust us

A part of Connectwell Group, Controlwell was established in 1998 with the objective of supplying high quality electrical products for industrial & hazardous applications.

Today, Controlwell is well established as a leading provider of cable management and protection solutions.

Our wide product portfolio empowers hundreds of businesses across key industries from automation and transportation to marine engineering and machine building.

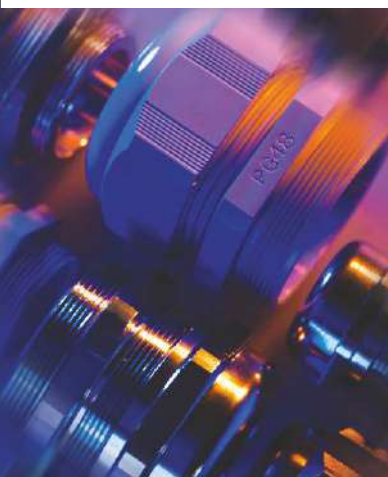
A distribution network of over 200 dealers and a team of technically qualified engineers across India ensure not just availability but also correct product selection, deployment and support.

Our products are certified to stringent global manufacturing and performance standards to ensure that your finished products are globally compliant, including European and US markets.

Controlwell aims to continuously focus on enhancing our supply chain efficiencies, to provide our customers with the right solution, at the right time and the right price.



RoHS



VARIETY TO SUIT ALL YOUR APPLICATION NEEDS

When it comes to variety on Flexible Corrugated Conduits, Controlwell raises the bar with a wide choice of materials and sizes to meet varied applications.

These conduits have an extremely small bending radius and offer high impact resistance. When combined with Controlwell Conduit Glands they offer IP67 protection to cables housed there in.

They come with added benefits of being UV Resistant, Halogen Free, Acid Proof and Flame Retardant in nature.

With approvals like UL, VDE, CSA and CE Mark these conduits are the final word when it comes to cable protection.

Controlwell conduits are available in:

- Polyamide
- Polyethylene
- Polypropylene
- Galvanized Steel
- Stainless Steel
- PVC coated Galvanized Steel
- Anaconda Liquidtite
& Sealtite Conduits

FLEXIBLE METALLIC & NON METALLIC CONDUITS

GOING THE WHOLE LENGTH
TO SAFEGUARD YOUR CABLES



HIGH GRADE POLYAMIDE FLEXIBLE CONDUITS UNSLITTED

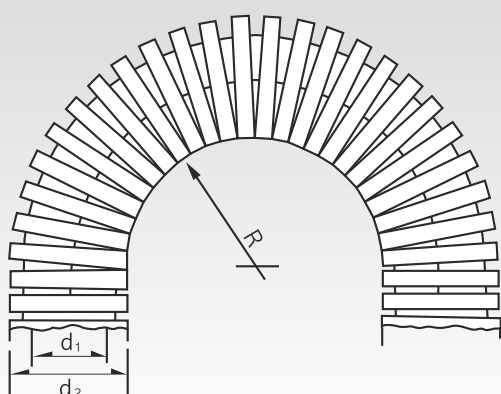


These Conduits are made of high quality flame-retardant Polyamide 12. They are flexible, halogen-free and have a small bending radius. They are suitable for various applications such as high speed machines & industrial Robots etc. These Conduits offer IP 68 protection in combination with Conduit Glands. UV resistant Conduits are also available on request. These Conduits are available in grey, black and yellow colour and comply with EN 60529 and IEC EN 61386 standards.

Technical Details :

Material	Polyamide 12
Flexural Strength	503 kg / cm ²
Flexural Modulus	15,295 kg / cm ²
Tensile Strength	407 kg / cm ²
Impact Strength	15 Kg.cm / cm
Temperature Range	-40° C to +105° C Continuous, +130° C Short Term
Resistant	Alcohol, Benzol, Mineral Oil, Diesel Fuel, etc.
Protection Class	IP 68
Approvals	RoHS CE

Cat. No. Grey	Cat. No. Black	Inner Diameter d1 (mm)	Outer Diameter d2 (mm)	Bending Radius R (mm) ±10%	Standard Pack (metre)
PAR-07G	PAR-07B	6.4	10.0	15	50
PAR-10G	PAR-10B	9.6	13.0	20	50
PAR-12G	PAR-12B	11.8	15.8	30	50
PAR-16G	PAR-16B	15.9	21.2	40	50
PAR-22G	PAR-22B	21.7	28.5	45	50
PAR-28G	PAR-28B	27.8	34.5	55	50
PAR-36G	PAR-36B	36.0	42.5	60	30
PAR-48G	PAR-48B	46.5	54.5	70	30
PAR-56G	PAR-56B	56.3	67.2	110	30
PAR-70G	PAR-70B	70.0	82.5	160	10
PAR-95G	PAR-95B	91.5	106.0	210	10



APPLICATION IMAGE

HIGH GRADE POLYAMIDE FLEXIBLE CONDUITS SLITTED / UNSLITTED

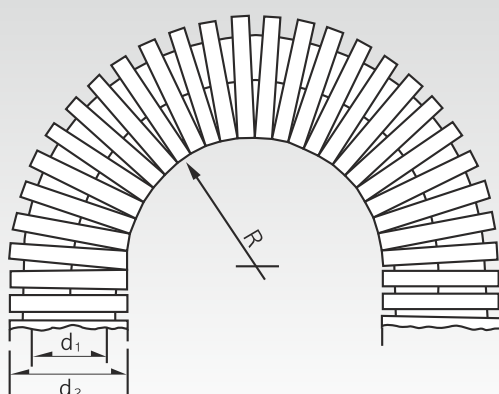


These Conduits are made of high quality flame-retardant Polyamide 6. They are flexible, halogen-free and have a small bending radius. They are suitable for various applications such as railroad cars, machinery, rolling stock, railway and subway etc. Unslitted conduits offer IP 68 protection in combination with Conduit Glands. UV resistant and slitted conduits are also available on request. These Conduits are available in grey and black colour and comply with EN 60529 and IEC EN 61386 standards.

Technical Details :

Material	Polyamide 6
Flexural Strength	1325 kg / cm ²
Flexural Modulus	37,219 kg / cm ²
Tensile Strength	917 kg / cm ²
Impact Strength	6.1 kg.cm / cm
Temperature Range	-40°C to +105°C Continuous, +150°C Short Term
Resistant	Alcohol, Benzol, Greases, Mineral Oil, Diesel Fuel, Sea Water, Petrol, etc.
Protection Class	IP 68
Approvals	 RoHS CE

Cat. No. Grey	Cat. No. Grey Slitted	Cat. No. Black	Cat. No. Black Slitted	Inner Diameter d1 (mm)	Outer Diameter d2 (mm)	Bending Radius R (mm) ±10%	Standard Pack (metre)
RAH-07G	RAHS-07G	RAH-07B	RAHS-07B	6.4	10.0	15	50
RAH-10G	RAHS-10G	RAH-10B	RAHS-10B	9.6	13.0	20	50
RAH-12G	RAHS-12G	RAH-12B	RAHS-12B	11.8	15.8	30	50
RAH-16G	RAHS-16G	RAH-16B	RAHS-16B	15.9	21.2	40	50
RAH-22G	RAHS-22G	RAH-22B	RAHS-22B	21.7	28.5	45	50
RAH-28G	RAHS-28G	RAH-28B	RAHS-28B	27.8	34.5	55	50
RAH-36G	RAHS-36G	RAH-36B	RAHS-36B	36.0	42.5	60	30
RAH-48G	RAHS-48G	RAH-48B	RAHS-48B	46.5	54.5	70	30
RAH-56G	RAHS-56G	RAH-56B	RAHS-56B	56.3	67.2	110	30
RAH-70G	RAHS-70G	RAH-70B	RAHS-70B	70.0	82.5	160	10
RAH-95G	RAHS-95G	RAH-95B	RAHS-95B	91.5	106.0	210	10



APPLICATION IMAGE

STANDARD POLYAMIDE FLEXIBLE CONDUITS SLITTED / UNSLITTED

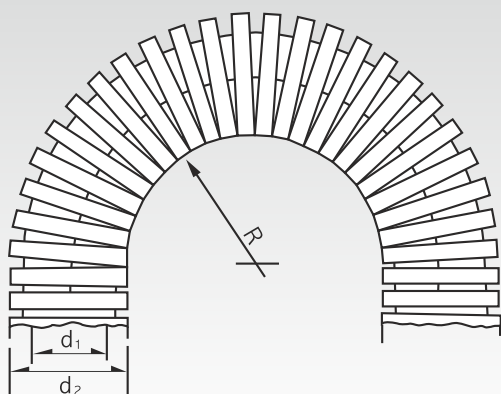


These Conduits are made of self extinguishing Polyamide 6. They are flexible, halogen-free and have a small bending radius. They are suitable for various applications such as machinery, automobile, power plant etc. Unslitted conduits offer IP 68 protection in combination with Conduit Glands. UV resistant Conduits are also available on request. These Conduits are available in grey and black colour and comply with EN 60529 and IEC EN 61386 standards.

Technical Details :

Material	Polyamide 6
Flexural Strength	700 kg / cm ²
Flexural Modulus	18,000 kg / cm ²
Tensile Strength	520 kg / cm ²
Impact Strength	85 kg.cm / cm
Temperature Range	-40° C to +105° C Continuous, +130° C Short Term
Resistant	Alcohol, Benzol, Greases, Mineral Oil, Diesel Fuel, Sea Water, Petrol, etc.
Protection Class	IP 68
Approvals	RoHS CE

Cat. No. Grey	Cat. No. Grey Slitted	Cat. No. Black	Cat. No. Black Slitted	Inner Diameter d1 (mm)	Outer Diameter d2 (mm)	Bending Radius R (mm) ±10%	Standard Pack (metre)
		CPS-4.5B	CPSS-4.5B	5.0	7.1	12	100
CPS-07G	CPSS-07G	CPS-07B	CPSS-07B	6.4	10.0	15	50
CPS-10G	CPSS-10G	CPS-10B	CPSS-10B	9.6	13.0	20	50
CPS-12G	CPSS-12G	CPS-12B	CPSS-12B	11.8	15.8	30	50
CPS-16G	CPSS-16G	CPS-16B	CPSS-16B	15.9	21.2	40	50
CPS-22G	CPSS-22G	CPS-22B	CPSS-22B	21.7	28.5	45	50
CPS-28G	CPSS-28G	CPS-28B	CPSS-28B	27.8	34.5	55	50
CPS-36G	CPSS-36G	CPS-36B	CPSS-36B	36.0	42.5	60	30
CPS-48G	CPSS-48G	CPS-48B	CPSS-48B	46.5	54.5	70	30
CPS-56G	CPSS-56G	CPS-56B	CPSS-56B	56.3	67.2	110	30
CPS-70G	CPSS-70G	CPS-70B	CPSS-70B	70.0	82.5	160	10
CPS-95G	CPSS-95G	CPS-95B	CPSS-95B	91.5	106.0	210	10



APPLICATION IMAGE

POLYETHYLENE FLEXIBLE CONDUITS SLITTED / UNSLITTED

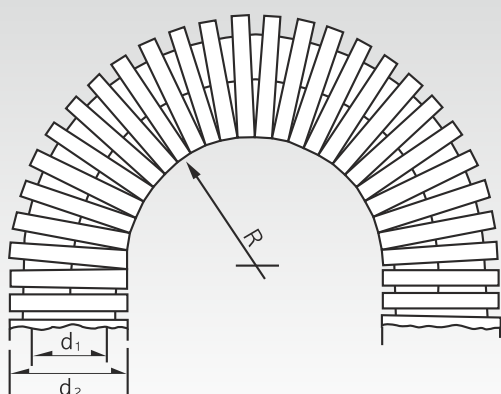


These Conduits are made of soft polyethylene (PE). They are flexible, and have a small bending radius. They are suitable for various applications such as chemical apparatus (acid resistance, alkali resistance) etc. These Conduits offer IP68 protection in combination with Conduit Glands. These Conduits are available in grey and black colour and comply with EN 60529 and IEC EN 61386 standards.

Technical Details :

Material	Polyethylene (PE)
Flexural Strength	498 kg / cm ²
Flexural Modules	14,000 kg / cm ²
Tensile Strength	290 kg / cm ²
Impact Strength	55 kg.cm / cm
Temperature Range	-15 ⁰ C to +60 ⁰ C Continuous, +80 ⁰ C Short Term
Resistant	Acid, Sea Water, Ammonia, etc.
Protection Class	IP 68
Approvals	 RoHS CE

Cat. No. Grey	Cat. No. Grey Slitted	Cat. No. Black	Cat. No. Black Slitted	Inner Diameter d1 (mm)	Outer Diameter d2 (mm)	Bending Radius R (mm) ± 10%	Standard Pack (metre)
		PES-4.5B	PESS-4.5B	5.0	7.1	12	100
PES-07G	PESS-07G	PES-07B	PESS-07B	6.4	10.0	15	50
PES-10G	PESS-10G	PES-10B	PESS-10B	9.6	13.0	20	50
PES-12G	PESS-12G	PES-12B	PESS-12B	11.8	15.8	30	50
PES-16G	PESS-16G	PES-16B	PESS-16B	15.9	21.2	40	50
PES-22G	PESS-22G	PES-22B	PESS-22B	21.7	28.5	45	50
PES-28G	PESS-28G	PES-28B	PESS-28B	27.8	34.5	55	50
PES-36G	PESS-36G	PES-36B	PESS-36B	36.0	42.5	60	30
PES-48G	PESS-48G	PES-48B	PESS-48B	46.5	54.5	70	30
PES-56G	PESS-56G	PES-56B	PESS-56B	56.3	67.2	110	30
PES-70G	PESS-70G	PES-70B	PESS-70B	70.0	82.5	160	10
PES-95G	PESS-95G	PES-95B	PESS-95B	91.5	106.0	210	10



APPLICATION IMAGE

TWIN SLITTED CONDUITS (CLOSABLE PROFILE)



These conduits are perfect solution for retrofit applications for cable protections against external impacts. Preassembled cable harnesses with already installed connector can be accomplished easily and safe. They are halogen free and UV resistant.

Technical Details :

Material	Polyamide 6
Tensile Strength	500 N
Compression Resistance	750 N
Impact Resistance	2 J
Temperature Range	-40° C to +120° C Continuous, +150° C Intermittent
Colour	Black
Protection Class	IP 54
Approvals	RoHS

Size	Cat. No	Inner Diameter (mm)	Outer Diameter (mm)	Bending Radius R (mm)	Standard Pack (metre)
NW-7.5	STSC-7.5	5.6	10.3	25	50
NW-10	STSC-10	8.5	13.3	33	50
NW-13	STSC-13	11.0	16.0	35	50
NW-16	STSC-16	13.0	19.0	42	50
NW-17	STSC-17	15.5	21.5	45	50
NW-22	STSC-22	19.1	25.6	55	50
NW-23	STSC-23	21.9	28.5	68	50
NW-26	STSC-26	24.0	31.7	80	25
NW-29	STSC-29	27.2	35.0	120	25
NW-37	STSC-37	32.0	42.5	145	25
NW-50	STSC-50	43.9	53.9	150	25
NW-70	STSC-70	62.2	79.0	150	10

LOCKABLE FLEXIBLE CONDUITS



These Corrugated Conduits are made from modified Polypropylene. They are very flexible, acid-proof, flame-retardant and have high cold impact strength. It is used in engine compartment, car body interior, machining industry, home appliance industry, heating and air-conditioning installations, ship and train building. Mounting tools are available for opening and closing of these conduits.

Technical Details :

Material	Modified Polypropylene
Colour	RAL 9005 (Black)
Temperature Range	-40° C to +135° C Continuous, +150° C Short Term
Approvals	RoHS

Conduit Cat. No.	Conduit Inner Diameter (mm)	Conduit Outer Diameter (mm)	Bending Radius (mm)	Standard Pack for Conduit (metre)	Opening Tool Cat. No.	Closing Tool Cat. No.	Standard Pack for Tool (pieces)
SPPM-8.5	8.6	13.3	47	50	SPPM1 - 8.5	SPPM2 - 8.5	1
SPPM-10L *	10.2	13.2	47	50	-	-	1
SPPM-11	11.2	16.3	50	50	SPPM1 - 11	SPPM2 - 11	1
SPPM-13	12.2	18.9	50	50	SPPM1 - 13	SPPM2 - 13	1
SPPM-15	14.9	22.0	55	50	SPPM1 - 50	SPPM2 - 50	1
SPPM-19	19.0	26.2	65	50	SPPM1 - 50	SPPM2 - 50	1
SPPM-26	24.6	32.0	70	25	SPPM1 - 50	SPPM2 - 50	1

* Self closing conduit - No tool is required.

MODIFIED POLYAMIDE FLEXIBLE CONDUITS SLITTED / UNSLITTED



These Conduits are made of self extinguishing Polyamide 6. They are flexible, UV resistant, halogen-free and have a small bending radius. They offer good impact resistance and are suitable for various applications such as vehicle industries, body section and chassis etc. These Conduits offer IP 67 protection in combination with Conduit Glands.

Technical Details :

Material	Modified Polyamide 6
Tensile Strength	250 N
Compression Resistance	320 N
Impact Resistance	1 J
Temperature Range	-40° C to +150° C Continuous, +175° C Intermittent
Colour	Black
Protection Class	IP 67
Approvals	RoHS

Size	Cat. No Unslitted	Cat. No Slitted	Inner Diameter (mm)	Outer Diameter (mm)	Standard Pack (metre)
NW4.5	SPAER-4.5	SPAERS-4.5	5	7.1	100
NW-7.5	SPAER-7.5	SPAERS-7.5	6.7	10	50
NW-10	SPAER-10	SPAERS-10	9.9	13	50
NW-12	SPAER-12	SPAERS-12	12.2	15.7	50
NW-13	SPAER-13	SPAERS-13	12.7	15.8	50
NW-17	SPAER-17	SPAERS-17	16.6	21.2	50
NW-22	SPAER-22	SPAERS-22	21.3	25.4	50
NW-23	SPAER-23	SPAERS-23	23.2	28.3	50
NW-26	SPAER-26	SPAERS-26	25.8	31.2	25
NW-29	SPAER-29	SPAERS-29	29	34.5	25
NW-37	SPAER-37	SPAERS-37	36	42.4	25
NW-50	SPAER-50	SPAERS-50	47.7	54.0	25

FLEXI-COVER CONDUITS



Flexi-Cover is a quick and easy system for organizing and protecting pre-connected wires / cables. This system consists of a Conduit and a tool for locking and unlocking. The Conduit is an open tube made of Polyethylene resin which is capable of easily returning back to its normal state. The Conduit can be re-used hundreds of times with guaranteed flexibility. The tool for locking and unlocking operation is made of ABS and has a side opening that allows quick and easy placement of cables in the conduits.

Technical Details :

Material	Polyethylene
Tool Material	ABS
Colour	Ivory & Black
Temperature Range	-15° C to +60° C Continuous

Conduit Cat. No. Ivory	Conduit Cat. No. Black	Inner Diameter (mm)	Standard Pack for Conduit (metre)	Opening / Closing Tool Cat. No.	Standard Pack for Tool (pieces)
EFC 10G	EFC 10B	8.0	50	EFCC10	1
EFC 16G	EFC 16B	15.0	50	EFCC16	1
EFC 22G	EFC 22B	20.0	50	EFCC22	1
EFC 28G	EFC 28B	25.0	50	EFCC28	1
EFC 34G	EFC 34B	30.0	50	EFCC34	1
EFC 40G	EFC 40B	38.0	50	EFCC40	1

PLASTIC SEALTITE CONDUIT WITH SMOOTH COVER - ANMSF



RoHS



Spiral rein-forced PVC

These all-plastic conduits provide good mechanical protection of cables in less demanding applications such as the general machine and apparatus building industries. When used in combination with an polyamide fitting an IP 67 leak-tight cable protection system with a strong pull out strength is achieved.

Technical Details :

Construction	Thick smooth PVC core reinforced with PVC spiral
Temperature Range	-20°C to +80°C Continuous, intermittent up to +100°C
Colour	Grey
Classification	According NEN-EN-IEC 61386.:
Compression Resistance	Class 1, Very Light (125 N)
Impact Resistance	Class 3, Medium (2 J)
Tensile Strength	Class 4, Heavy (1000 N)
Protection Class	IP 67 (dust proof, water tight)

Size (Inch)	Cat. No	Inner Diameter (mm)	Outer Diameter (mm)	Bending Radius Static R (mm)	Bending Radius Dynamic R (mm)	Standard Pack (metre)
3/8"	ANMSF-3/8"	12.6	17.8	70	100	30
1/2"	ANMSF-1/2"	16.0	21.1	100	135	30
3/4"	ANMSF-3/4"	21.1	26.4	130	175	30
1"	ANMSF-1"	26.8	33.1	180	220	30
1 1/4"	ANMSF-1 1/4"	35.4	41.8	225	270	15
1 1/2"	ANMSF-1 1/2"	40.3	47.8	255	320	15
2"	ANMSF-2"	51.6	59.9	310	400	15

PLASTIC SEALTITE CONDUIT WITH CORRUGATED COVER - AMPC



RoHS



Spiral rein-forced PVC

These plastic coated metal spiral conduit with a convoluted cover are very flexible & lightweight. They are designed for applications with a low bending radius requirement. They are typically used in static applications to protect cables on light machinery and equipment in situations where space is limited. These conduit provides good resistance to chemicals. These conduits when used in combination with fittings an IP 67 cable protection system with a strong pull out strength is achieved.

Technical Details :

Construction	Plastic coated metal spiral with PVC cover
Temperature Range	-20°C to +70°C Continuous, intermittent up to +80°C
Colour	Grey
Classification	According NEN-EN-IEC 61386.:
Compression Resistance	Class 3, Medium (750 N)
Impact Resistance	Class 3, Medium (2 J)
Tensile Strength	Class 1, Very Light (100 N)
Protection Class	IP 67 (dust proof, water tight)

Size (DIN)	Cat. No	Inner Diameter (mm)	Outer Diameter (mm)	Bending Radius Static R (mm)	Bending Radius Dynamic R (mm)	Standard Pack (metre)
9	AMPC-9	10	14	14	40	10
11	AMPC-11	13	17	17	48	10
13	AMPC-13	15	19	19	55	10
16	AMPC-16	16	21	21	60	10
21	AMPC-21	21	27	27	75	10
29	AMPC-29	30	36	36	100	10
36	AMPC-36	38	45	45	124	10
42	AMPC-42	44	52	52	143	10
48	AMPC-48	48	56	56	154	10

GALVANISED STEEL FLEXIBLE CONDUITS - BARE METAL



The Square locked, helical Corrugated Bare Metal Conduits are highly flexible and have an angular profile. Their robust construction makes them resistant to high mechanical stresses. These also have high impact resistance. They are used in wiring of machine connections.

Technical Details :

Material	Galvanized Steel
Protection Class	IP40
Temperature Range	-25° to +250°C Continuous
Approvals	RoHS

Size	Cat. No	Inner Diameter (mm)	Outer Diameter (mm)	Bending Radius R (mm)	Standard Pack (metre)
NW-7	MSB-7	8.0	10.0	32	50
NW-9	MSB-9	11.0	14.0	45	50
NW-11	MSB-11	14.0	17.0	50	50
NW-13.5	MSB-13	16.0	19.0	50	50
NW-16	MSB-16	18.0	21.0	55	50
NW-21	MSB-21	23.0	27.0	65	25
NW-29	MSB-29	32.0	36.0	95	25
NW-36	MSB-36	40.0	45.0	105	25
NW-42	MSB-42	45.0	50.0	130	25
NW-48	MSB-48	50.0	56.0	140	25

GALVANISED STEEL FLEXIBLE CONDUITS - PVC SHEATHED



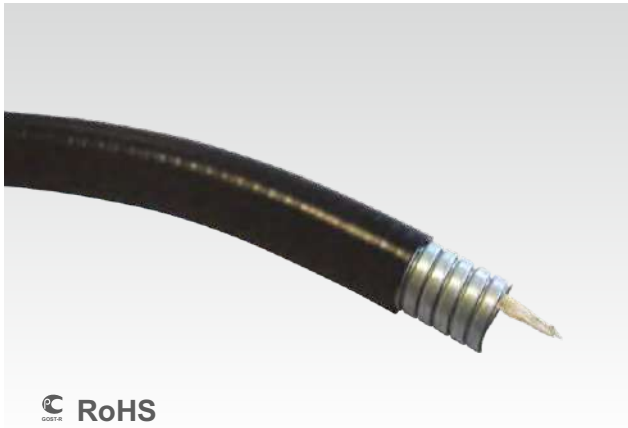
The Square locked, helical Corrugated Flame retardant PVC sheathed metal conduits are highly flexible. They do not contain silicon or cadmium. Their robust construction makes them resistant to high mechanical stresses. These also have high impact resistance. These conduits offer IP67 protection when combined with appropriate Controlwell conduit glands.

Technical Details :

Material	PVC Coated Galvanized Steel
Protection Class	IP 54 / IP 65 in combination with Conduit Gland
Temperature Range	-5° to +60°C Continuous
Approvals	RoHS

Size	Cat. No	Inner Diameter (mm)	Outer Diameter (mm)	Bending Radius R (mm)	Standard Pack (metre)
NW-7	MSP-7	7.0	10.0	25.0	50
NW-9	MSP-9	10.0	14.0	35.0	50
NW-11	MSP-11	13.0	17.0	50.0	50
NW-13.5	MSP-13	15.0	19.0	55.0	50
NW-16	MSP-16	17.0	21.0	60.0	50
NW-21	MSP-21	21.0	27.0	65.0	25
NW-29	MSP-29	28.0	36.0	75.0	25
NW-36	MSP-36	37.0	45.0	90.0	25
NW-42	MSP-42	44.0	52.0	120.0	25
NW-48	MSP-48	48.0	56.0	135.0	25

LIQUID TIGHT PVC COATED SMOOTH CONDUITS - TYPE AEFB



RoHS



Square locked profile with cord packing from 5/16" to 1 1/4"



Fully inter-locked profile for size 1/4", 1 1/2" to 6"

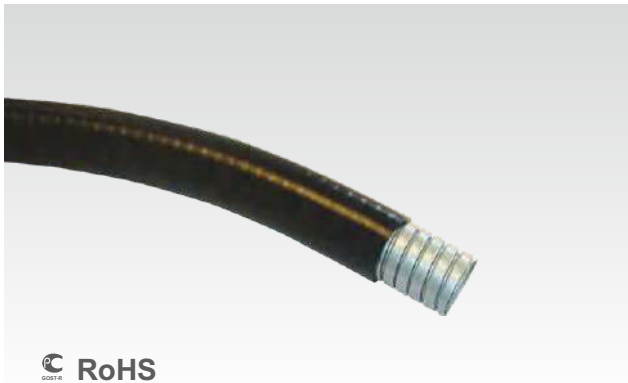
These conduits provides very good mechanical protection to cables on machines and equipment connected to enclosures and control boxes in wide range of industries such as packaging machines, and other transport systems. These conduits are resistant to UV & Sunlight. These conduits have good flexibility in static and semi dynamic applications. They are available up to maximum size of 6".

Technical Details :

Construction	Hot dipped Galvanized steel core, square locked with cord packing and smooth PVC Cover. Size 1/4" & from 1 1/2" till 4" Fully inter-locked
Temperature Range	-25 ^o to +70 ^o C, Intermittent upto +90 ^o C
Protection Class	IP 67
Colour	Black
Compression Resistance	Class 4 Heavy (1250 N)
Impact Resistance	Class 4, Heavy (6 J)
Tensile Strength	Class 4, Heavy (1000 N)
Resistance to Flame propagation	Non Flame Propagating

Size (Inch)	Cat. No	Inner Diameter (mm)	Outer Diameter (mm)	Static Bending Radius R (mm)	Standard Pack (metre)
3/8"	AEFB-3/8"	12.6	17.8	60	75
1/2"	AEFB-1/2"	16.0	21.1	75	10
3/4"	AEFB-3/4"	21.0	26.4	90	10
1"	AEFB-1"	26.5	33.1	120	10
1 1/4"	AEFB-1 1/4"	35.1	41.8	150	10
1 1/2"	AEFB-1 1/2"	40.3	47.8	200	15
2"	AEFB-2"	51.6	59.9	250	15

LIQUID TIGHT PVC COATED SMOOTH CONDUITS - TYPE AEFMB



RoHS



Square locked profile without cord packing

These conduits provides very good mechanical protection to cables on machines and equipment connected to enclosures and control boxes in wide range of industries such as packaging machines, wood cutting and metal working industry. These conduits are resistant to UV & Sunlight. These conduits have good flexibility in static and semi dynamic applications. They are suitable for outdoor use and burial installation.

Technical Details :

Construction	Hot dipped Galvanized steel core, square locked without cord packing and smooth PVC Cover.
Temperature Range	-25 ^o to +70 ^o C, Intermittent upto +80 ^o C
Protection Class	IP 67
Colour	Black
Compression Resistance	Class 3 Medium (750 N)
Impact Resistance	Class 4, Heavy (6 J)
Tensile Strength	Class 4, Heavy (1000 N)
Resistance to Flame propagation	Non Flame Propagating

Size (Inch)	Cat. No	Inner Diameter (mm)	Outer Diameter (mm)	Static Bending Radius R (mm)	Standard Pack (metre)
3/8"	AEFMB-3/8"	12.6	17.8	60	75
1/2"	AEFMB-1/2"	16.0	21.1	75	60
3/4"	AEFMB-3/4"	21.0	26.4	90	30
1"	AEFMB-1"	26.5	33.1	120	30
1 1/4"	AEFMB-1 1/4"	35.1	41.8	150	15
1 1/2"	AEFMB-1 1/2"	40.3	47.8	200	15
2"	AEFMB-2"	51.6	59.9	250	15

LIQUID TIGHT GALVANIZED STEEL PVC COATED SMOOTH CONDUITS - TYPE AHCB



Square locked profile with cord packing from 3/8" to 1 1/4"



Fully inter-locked profile for size 1 1/2" to 4"

These conduits retain its functional integrity equally good in freezing and extremely hot conditions. Some of its applications include transformers, transport systems, wood cutting machines, sewing machines, security systems in energy plants, equipment and cabinets in the chemical, ceramic and construction industries. These conduits are resistant to UV & Sunlight. The PVC cover has good resistance against oil & grease. They are available up to maximum size of 4".

Technical Details :

Construction	Hot dipped Galvanized steel core, square locked with cord packing and smooth PVC Cover from 3/8" to 1 1/4". Fully inter-locked profile from 1 1/2" to 4"
Temperature Range	-45 ⁰ to +105 ⁰ C, Intermittent upto +120 ⁰ C
Protection Class	IP 67
Colour	Black
Compression Resistance	Class 4 Heavy (1250 N)
Impact Resistance	Class 4, Heavy (6 J)
Tensile Strength	Class 4, Heavy (1000 N)

Size (Inch)	Cat. No	Inner Diameter (mm)	Outer Diameter (mm)	Static Bending Radius R (mm)	Standard Pack (metre)
3/8"	AHCB-3/8"	12.6	17.8	60	10
1/2"	AHCB-1/2"	16	21.1	75	10
3/4"	AHCB-3/4"	21	26.4	90	10
1"	AHCB-1"	26.5	33.1	120	10
1 1/4"	AHCB-1 1/4"	35.1	41.8	135	10
1 1/2"	AHCB-1 1/2"	40.3	47.8	165	15
2"	AHCB-2"	51.6	59.9	210	15

LIQUID TIGHT GALVANIZED STEEL PVC COATED SMOOTH CONDUITS - TYPE AORB



Square locked profile with cord packing from 3/8" to 1 1/4"



Fully inter-locked profile for size 1 1/2" to 6"

These conduits provide good mechanical protection of cables and resistance to aggressive oils and greases. When exposed to these substances, the conduit retains its flexibility and does not stiffen or rupture. They are used in many applications including machines where metalworking fluids are used, on diesel-engines, generator-sets and machines and equipment in the metal, paper, chemical and petrochemical industry. They are available upto maximum size of 4".

Technical Details :

Construction	Hot dipped Galvanized steel core, square locked with cord packing and PVC Cover from 3/8" to 1 1/4". Fully inter-locked profile from 1 1/2" to 4"
Temperature Range	-15 ⁰ to +100 ⁰ C, Intermittent upto +120 ⁰ C
Protection Class	IP 67
Colour	Black
Compression Resistance	Class 4 Heavy (1250 N)
Impact Resistance	Class 4, Heavy (6 J)
Tensile Strength	Class 4, Heavy (1000 N)

Size (Inch)	Cat. No	Inner Diameter (mm)	Outer Diameter (mm)	Static Bending Radius R (mm)	Standard Pack (metre)
3/8"	AORB-3/8"	12.6	17.8	60	10
1/2"	AORB-1/2"	16	21.1	75	10
3/4"	AORB-3/4"	21	26.4	90	50
1"	AORB-1"	26.5	33.1	120	30
1 1/4"	AORB-1 1/4"	35.1	41.8	150	30
1 1/2"	AORB-1 1/2"	40.3	47.8	200	15
2"	AORB-2"	51.6	59.9	250	15

LIQUID TIGHT GALVANIZED STEEL PVC COATED SMOOTH CONDUITS - TYPE AHTDL



Square locked profile with copper wire from 3/8" to 1 1/4"



Fully inter-locked for size 1 1/2" to 3"

These conduits with integral grounding copper wire (till 1.1/4") provides EMI / EMP shielding for cables that require electromagnetic protection. These conduits are used to protect cables on machines, equipment, enclosures, internal transport systems, air-traffic-control systems, oil & gas installations and equipment in hazardous areas. They are available up to maximum size of 3". They have good resistance against oil & grease. These conduit are resistant to UV & sun light. They are available upto maximum size of 3".

Technical Details :

Construction	Hot dipped steel core square locked with integral copper grounding wire till 1 1/4" and with smooth PVC cover. Fully inter-locked profile from 1 1/2" to 3"
Temperature Range	-45° to + 105°C, Intermittent upto +120°C
Protection Class	IP 67
Colour	Black
Applications	Used in hazardous environments according to NEC
Special Approval	UL-360 (File No. E18917)

Size (Inch)	Cat. No	Inner Diameter (mm)	Outer Diameter (mm)	Static Bending Radius R (mm)	Standard Pack (metre)
3/8"	AHTDL-3/8"	12.6	17.8	70	10
1/2"	AHTDL-1/2"	16.1	21.1	90	10
3/4"	AHTDL-3/4"	21.1	26.4	115	10
1"	AHTDL-1"	26.8	33.1	145	10
1 1/4"	AHTDL-1 1/4"	35.4	41.8	175	15
1 1/2"	AHTDL-1 1/2"	40.3	47.8	205	15
2"	AHTDL-2"	51.6	59.9	240	15

LIQUID TIGHT STAINLESS STEEL PVC COATED SMOOTH CONDUITS - TYPE AHCI



Square locked profile with cord packing from 3/8" to 1 1/4"



Fully inter-locked for size 1 1/2" to 2"

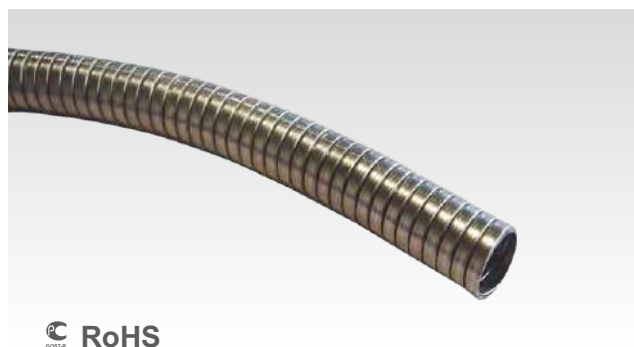
This conduits are designed for use in applications where mechanical, corrosion and thermal protection of cables are required. They are used on equipment and installations in coastal, offshore and other demanding locations where conditions can be extreme. These conduit are resistant to UV & sun light. PVC cover has good resistance against oil & grease.

Technical Details :

Construction	Stainless steel AISI-304 square locked with cord packing and PVC cover from 3/8" to 1 1/4" Fully inter-locked profile from 1 1/2" to 2"
Temperature Range	-45° to +105°C, Intermittent upto +120°C
Protection Class	IP 67
Colour	Black
Compression Resistance	Class 4 Heavy (1250 N)
Impact Resistance	Class 4, Heavy (6 J)
Tensile Strength	Class 4, Heavy (1000 N)

Size (Inch)	Cat. No	Inner Diameter (mm)	Outer Diameter (mm)	Static Bending Radius R (mm)	Standard Pack (metre)
3/8"	AHCI-3/8"	12.6	17.8	60	50
1/2"	AHCI-1/2"	16	21.1	75	10
3/4"	AHCI-3/4"	21	26.4	90	10
1"	AHCI-1"	26.5	33.1	120	10
1 1/4"	AHCI-1 1/4"	35.1	41.8	135	10
1 1/2"	AHCI-1 1/2"	40.3	47.8	165	15
2"	AHCI-2"	51.6	59.9	210	15

STAINLESS STEEL SQUARE LOCKED CONDUITS - TYPE ASLI



RoHS



Square locked profile

These conduits provide high mechanical and chemical protection in applications that require a high degree of corrosion protection. Typical applications include the steel, foundry, marine and ship building industries as well as machine building.

Technical Details :

Construction	Square-Locked Core Stainless Steel (AISI-304), Also available in (AISI-316)
Temperature Range	-100° to +600°C
Protection Class	IP 40
Colour	Metal
Compression Resistance	Class 4 Heavy (1250 N) Heavy (4000 N)*
Impact Resistance	Class 4, Heavy (6 J)
Tensile Strength	Class 4, Heavy (1000 N)

Size (Inch)	Cat. No	Inner Diameter (mm)	Outer Diameter (mm)	Static Bending Radius R (mm)	Standard Pack (metre)
3/16"	ASLI-3/16"	4.8	6.8	23	30
1/4"	ASLI-1/4"	8.0	10.3	45	30
5/16"	ASLI-5/16"	10.1	12.8	50	30
3/8"	ASLI-3/8"	12.6	15.5	60	30
1/2"	ASLI-1/2"	16.0	18.9	75	30
3/4"	ASLI-3/4"	21.0	23.9	90	30
1"	ASLI-1"	26.5	30.0	120	30
1 1/4"	ASLI-1 1/4"	35.1	38.7	135	30
1 1/2"	AUI-1 1/2" *	40.3	44.4	230	15
2"	AUI-2" *	51.6	55.7	285	15

STAINLESS STEEL BRAIDED GALVANIZED STEEL CONDUITS - TYPE ASLB



RoHS



Square locked profile with galvanized steel braiding

These conduits provide mechanical and EMC protection in critical applications. This robust, stainless steel braid cover provides a high level of electromagnetic shielding for cables. Typical applications include the steel, foundry, metalworking and other demanding heavy duty industries.

Technical Details :

Construction	Galvanized Steel, Square-Locked Core with Stainless Steel Braid (AISI 304)
Temperature Range	-55° to +300°C
Protection Class	IP 40
Colour	Metal
Compression Resistance	Class 4 Heavy (1250 N)
Impact Resistance	Class 4, Heavy (6 J)
Tensile Strength	Class 4, Heavy (1000 N)

Size (Inch)	Cat. No	Inner Diameter (mm)	Outer Diameter (mm)	Static Bending Radius R (mm)	Standard Pack (metre)
3/8"	ASLB-3/8"	12.6	15.8	45	30
1/2"	ASLB-1/2"	16.0	20.5	55	30
3/4"	ASLB-3/4"	21.0	25.5	70	30
1"	ASLB-1"	26.5	32.8	95	30
1 1/4"	ASLB-1 1/4"	35.1	40.5	115	30
1 1/2"	ASLB-1 1/2"	40.3	46.5	165	30
2"	ASLB-2"	51.6	58	210	30

OUT OF THE BOX SOLUTIONS FOR YOUR CABLE PROTECTION NEEDS

Controlwell offers an exhaustive range of Conduit Glands (Connectors) and Accessories.

These glands are available in wide variety of sizes and orientation to suit straight, 90° and 45° cable entry. Available with Pg, Metric, PF, NPT and UNEF thread systems this is undeniably the largest range of conduit glands available today.

For applications where the mounting surface is not threaded, glands with flanges can be used.

A wide range of special glands which secure the conduit as well as the cable passing through it are also available.

Accessories like couplers, mounting clips and tube end caps complement the range of Conduit Glands ensuring high IP protection class and ease of installation.

These products carry international approvals like VDE, UL & CE mark which testify the fact that we at Controlwell remain dedicated to our principle of helping you protect - connect - simplify.

CONDUIT GLANDS & ACCESSORIES

ADDED PROTECTION AND CONVENIENCE
FOR YOUR CABLES & CONDUITS



STRAIGHT CONNECTORS (METRIC THREAD)



These straight male thread connectors are made of high quality polyamide 6. They are used for fixing the ends of flexible corrugated conduits to the cable entries on control panels, terminal boxes on electric motors, automatic machinery, rail road cars, etc. with the help of threads in accordance with standard EN 60204 (safety of machinery). They are self extinguishing and free of halogen, phosphorous and cadmium.

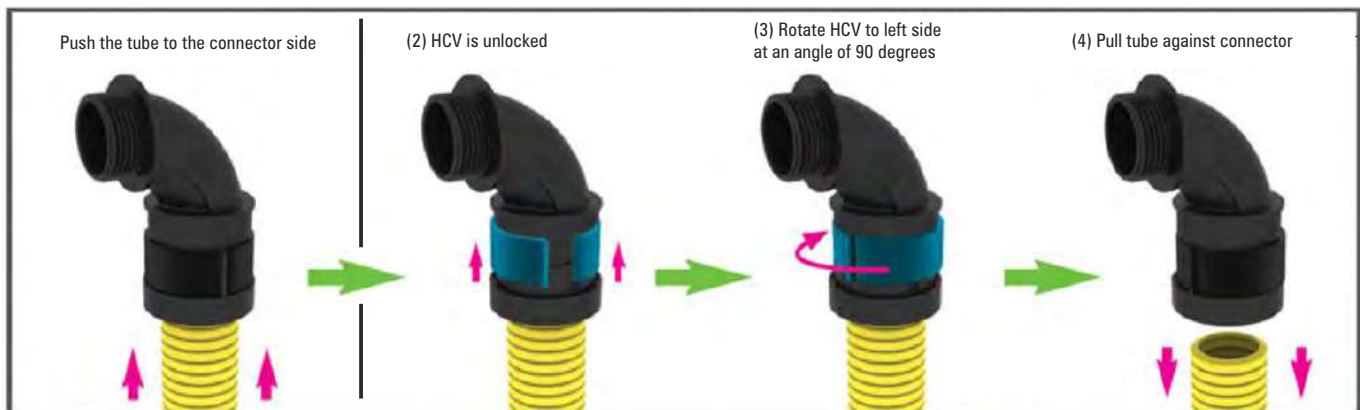
Technical Details :

Material	Polyamide 6
Colour	RAL 7001 (Grey) RAL 9005 (Black)
Temperature Range	-40° C to + 105° C Continuous, + 150° C Short Term
Protection Class	IP 68 (EN 60529)
Threads available	Metric
Approvals	  

Metric Thread - EN 60423

Size	Suitable for Conduit Size	Cat. No. Grey	Cat. No. Black	Thread Diameter (mm)	Thread Length (mm)	Standard Pack (pieces)
M 12 x 1.5	7	PNC-M107G	PNC-M107B	11.8	11	50
M 16 x 1.5	7	PNC-M127G	PNC-M127B	15.8	11	50
M 20 X 1.5	7	PNC-M167G	PNC-M167B	19.8	11	50
M 12 x 1.5	10	PNC-M10G	PNC-M10B	11.8	13	50
M 16 x 1.5	10	PNC-M120G	PNC-M120B	15.8	13	50
M 20 X 1.5	10	PNC-M20G	PNC-M20B	19.8	13	50
M 12 x 1.5	12	PNC-M102G	PNC-M102B	11.8	13	50
M 16 x 1.5	12	PNC-M12G	PNC-M12B	15.8	13	50
M 20 X 1.5	12	PNC-M202G	PNC-M202B	19.8	13	50
M 16 x 1.5	16	PNC-M126G	PNC-M126B	15.8	13	50
M 20 x 1.5	16	PNC-M16G	PNC-M16B	19.8	13	50
M 25 x 1.5	16	PNC-M226G	PNC-M226B	24.7	13	30
M 25 x 1.5	22	PNC-M22G	PNC-M22B	24.7	15	30
M 32 x 1.5	22	PNC-M3222G	PNC-M3222B	31.7	15	30
M 32 x 1.5	28	PNC-M28G	PNC-M28B	31.7	15	30
M 40 x 1.5	28	PNC-M4028G	PNC-M4028B	39.6	15	30
M 40 x 1.5	36	PNC-M36G	PNC-M36B	39.6	19	10
M 50 x 1.5	36	PNC-M5036G	PNC-M5036B	49.6	19	10
M 50 x 1.5	48	PNC-M48G	PNC-M48B	49.6	21	10
M 63 x 1.5	48	PNC-M6348G	PNC-M6348B	62.6	21	10

Connector for easy assembly & dismantling. (No special tool required)



Assembly

Dismantling

STRAIGHT CONNECTORS (PG & PF THREAD)



These straight male thread connectors are made of high quality polyamide 6. They are used for fixing the ends of flexible corrugated conduits to the cable entries on control panels, terminal boxes on electric motors, automatic machinery, rail road cars, etc. with the help of threads in accordance with standard EN 60204 (safety of machinery). They are self extinguishing and free of halogen, phosphorous and cadmium.

Technical Details :

Material	Polyamide 6
Colour	RAL 7001 (Grey) RAL 9005 (Black)
Temperature Range	-40°C to +105°C Continuous, +150°C Short Term
Protection Class	IP 68 (EN 60529)
Threads available	Pg & PF
Approvals	 

Pg Thread - DIN 40430

Size	Suitable for Conduit Size	Cat. No. Grey	Cat. No. Black	Thread Diameter (mm)	Thread Length (mm)	Standard Pack (pieces)
Pg 7	7	PNC-P077G	PNC-P077B	12.2	11	100
Pg 9	7	PNC-P097G	PNC-P097B	14.9	11	50
Pg 11	7	PNC-P117G	PNC-P117B	18.4	11	50
Pg 13.5	7	PNC-P137G	PNC-P137B	20.2	11	50
Pg 7	10	PNC-P070G	PNC-P070B	12.2	13	100
Pg 9	10	PNC-P09G	PNC-P09B	14.9	13	50
Pg 11	10	PNC-P110G	PNC-P110B	18.4	13	50
Pg 13.5	10	PNC-P130G	PNC-P130B	20.2	13	50
Pg 16	10	PNC-P160G	PNC-P160B	22.3	13	50
Pg 9	12	PNC-P0912G	PNC-P0912B	14.9	13	50
Pg 11	12	PNC-P11G	PNC-P11B	18.4	13	50
Pg 13.5	12	PNC-P132G	PNC-P132B	20.2	13	50
Pg 16	12	PNC-P162G	PNC-P162B	22.3	13	50
Pg 13.5	16	PNC-P136G	PNC-P136B	20.2	13	50
Pg 16	16	PNC-P16G	PNC-P16B	22.3	13	50
Pg 21	16	PNC-P216G	PNC-P216B	28	13	50
Pg 16	22	PNC-P163G	PNC-P163B	22.3	15	50
Pg 21	22	PNC-P21G	PNC-P21B	28	15	30
Pg 29	28	PNC-P29G	PNC-P29B	36.8	15	30
Pg 36	36	PNC-P36G	PNC-P36B	46.7	19	10
Pg 48	48	PNC-P48G	PNC-P48B	59	21	10

PF Thread - JIS B0202

Size	Suitable for Conduit Size	Cat. No. Grey	Cat. No. Black	Thread Diameter (mm)	Thread Length (mm)	Standard Pack (pieces)
G 1/4"	7	PNC-G07G	PNC-G07B	12.9	11	50
G 1/2"	10	PNC-G10G	PNC-G10B	20.5	13	50
G 1/2"	12	PNC-G12G	PNC-G12B	20.5	13	50
G 1/2"	16	PNC-G16G	PNC-G16B	20.5	13	50
G 3/4"	22	PNC-G22G	PNC-G22B	26.4	15	50
G 1"	28	PNC-G28G	PNC-G28B	32.6	15	50
G 1 1/4"	36	PNC-G36G	PNC-G36B	41.7	19	30
G 1 1/2"	48	PNC-G42G	PNC-G42B	47.4	21	30
G 2"	48	PNC-G48G	PNC-G48B	59.0	20.7	30

90° ELBOW CONNECTORS



These 90° elbow male thread connectors are made of high quality polyamide 6. They are used for fixing the ends of flexible corrugated conduits to the cable entries on control panels, terminal boxes on electric motors, automatic machinery, rail road cars, etc. with the help of threads in accordance with standard EN 60204 (safety of machinery). This 90° configuration enables perpendicular conduit entry into control panels and equipments. They are self extinguishing and free of halogen, phosphorous and cadmium.

Technical Details :

Material	Polyamide 6
Colour	RAL 7001 (Grey) RAL 9005 (Black)
Temperature Range	-40° C to +105° C Continuous, +150° C Short Term
Protection Class	IP 68 (EN 60529)
Threads available	Pg, Metric & PF
Approvals	  

Pg Thread - DIN 40430

Size	Suitable for Conduit Size	Connector Cat. No. Grey	Connector Cat. No. Black	Thread Diameter (mm)	Thread Length (mm)	Standard Pack (pieces)
Pg 7	7	PWC-P077G	PWC-P077B	12.2	11	100
Pg 9	7	PWC-P097G	PWC-P097B	14.9	11	50
Pg 9	10	PWC-P09G	PWC-P09B	14.9	13	50
Pg 11	10	PWC-P110G	PWC-P110B	18.4	13	30
Pg 13.5	10	PWC-P130G	PWC-P130B	20.2	13	30
Pg 11	12	PWC-P11G	PWC-P11B	18.4	13	30
Pg 13.5	12	PWC-P132G	PWC-P132B	20.2	13	30
Pg 16	12	PWC-P162G	PWC-P162B	22.3	13	30
Pg 13.5	16	PWC-P136G	PWC-P136B	20.2	13	30
Pg 16	16	PWC-P16G	PWC-P16B	22.3	13	30
Pg 16	22	PWC-P163G	PWC-P163B	22.3	15	30
Pg 21	22	PWC-P21G	PWC-P21B	28.0	15	20
Pg 29	28	PWC-P29G	PWC-P29B	36.8	15	10
Pg 36	36	PWC-P36G	PWC-P36B	46.7	19	10
Pg 48	48	PWC-P48G	PWC-P48B	59.0	19	5

Metric Thread - EN 60423

Size	Suitable for Conduit Size	Connector Cat. No. Grey	Connector Cat. No. Black	Thread Diameter (mm)	Thread Length (mm)	Standard Pack (pieces)
M 12 x 1.5	7	PWC-M107G	PWC-M107B	11.8	11	50
M 12 x 1.5	10	PWC-M10G	PWC-M10B	11.8	13	50
M 16 x 1.5	12	PWC-M12G	PWC-M12B	15.8	13	30
M 20 x 1.5	12	PWC-M202G	PWC-M202B	19.8	13	30
M 20 x 1.5	16	PWC-M16G	PWC-M16B	19.8	13	30
M 25 x 1.5	22	PWC-M22G	PWC-M22B	24.7	15	20
M 32 x 1.5	28	PWC-M28G	PWC-M28B	31.7	15	10
M 40 x 1.5	36	PWC-M36G	PWC-M36B	39.6	19	10
M 50 x 1.5	48	PWC-M48G	PWC-M48B	49.6	19	5

PF Thread JIS B0202

Size	Suitable for Conduit Size	Cat. No. Grey	Cat. No. Black	Thread Diameter (mm)	Thread Length (mm)	Standard Pack (pieces)
G 1/2"	10	PWC-G10G	PWC-G10B	20.5	13	50
G 1/2"	12	PWC-G12G	PWC-G12B	20.5	13	30
G 1/2"	16	PWC-G16G	PWC-G16B	20.5	13	30
G 3/4"	22	PWC-G22G	PWC-G22B	26.4	15	20
G 1"	28	PWC-G28G	PWC-G28B	32.6	15	10
G 1 1/4"	28	PWC-G368G	PWC-G368B	41.3	15	10
G 1 1/4"	36	PWC-G36G	PWC-G36B	41.5	19	10
G 1 1/2"	48	PWC-G42G	PWC-G42B	47.4	19	5
G 2"	48	PWC-G48G	PWC-G48B	59.0	19	5

45° ANGULAR CONNECTORS



These 45° angular male thread connectors are made of high quality polyamide 6. They are used for fixing the ends of flexible corrugated conduits to the cable entries on control panels, terminal boxes on electric motors, automatic machinery, rail road cars, etc. with the help of threads in accordance with standard EN 60204 (safety of machinery). This 45° configuration enables angular conduit entry into control panels and equipments. They are self extinguishing and free of halogen, phosphorous and cadmium.

Technical Details :

Material	Polyamide 6
Colour	RAL 7001 (Grey) RAL 9005 (Black)
Temperature Range	-40° C to +105° C Continuous, +150° C Short Term
Protection Class	IP 68 (EN 60529)
Threads available	Pg, Metric & PF
Approvals	 CE

Pg Thread - DIN 40430

Size	Suitable for Conduit Size	Cat. No. Grey	Cat. No. Black	Thread Diameter (mm)	Thread Length (mm)	Standard Pack (pieces)
Pg 9	10	PAC-P09G	PAC-P09B	14.9	13	50
Pg 11	10	PAC-P110G	PAC-P110B	18.4	13	30
Pg 13.5	10	PAC-P130G	PAC-P130B	20.2	13	30
Pg 11	12	PAC-P11G	PAC-P11B	18.4	13	30
Pg 13.5	16	PAC-P136G	PAC-P136B	20.2	13	30
Pg 16	16	PAC-P16G	PAC-P16B	22.3	13	30
Pg 21	22	PAC-P21G	PAC-P21B	28.0	15	20
Pg 29	28	PAC-P29G	PAC-P29B	36.8	15	10
Pg 36	36	PAC-P36G	PAC-P36B	46.7	19	10
Pg 48	48	PAC-P48G	PAC-P48B	59.0	19	5

Metric Thread - EN 60423

Size	Suitable for Conduit Size	Cat. No. Grey	Cat. No. Black	Thread Diameter (mm)	Thread Length (mm)	Standard Pack (pieces)
M 12 x 1.5	10	PAC-M10G	PAC-M10B	11.8	13	50
M 16 x 1.5	12	PAC-M12G	PAC-M12B	15.8	13	30
M 20 x 1.5	12	PAC-M202G	PAC-M202B	19.8	13	30
M 20 x 1.5	16	PAC-M16G	PAC-M16B	19.8	13	30
M 25 x 1.5	22	PAC-M22G	PAC-M22B	24.7	15	20
M 32 x 1.5	28	PAC-M28G	PAC-M28B	31.7	15	10
M 40 x 1.5	36	PAC-M36G	PAC-M36B	39.6	19	10
M 50 x 1.5	48	PAC-M48G	PAC-M48B	49.6	19	5

PF Thread - JIS B0202

Size	Suitable for Conduit Size	Cat. No. Grey	Cat. No. Black	Thread Diameter (mm)	Thread Length (mm)	Standard Pack (pieces)
G 1/2"	10	PAC-G10G	PAC-G10B	20.5	13	50
G 1/2"	12	PAC-G12G	PAC-G12B	20.5	13	30
G 1/2"	16	PAC-G16G	PAC-G16B	20.5	13	30
G 3/4"	22	PAC-G22G	PAC-G22B	26.2	15	20
G 1"	28	PAC-G28G	PAC-G28B	33	15	10
G 1 1/4"	36	PAC-G36G	PAC-G36B	41.6	19	10
G 1 1/2"	48	PAC-G42G	PAC-G42B	41.5	19	5
G 2"	48	PAC-G48G	PAC-G48B	59.0	19	5

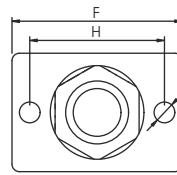
STRAIGHT CONNECTORS WITH FLANGE



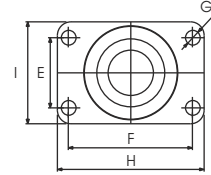
These straight connectors with flange are mounted on control panel, terminal boxes, electric motors with mounting holes and screws directly, instead of threads. They are self extinguishing and free of halogen, phosphorous and cadmium.

Technical Details :

Material	Polyamide 6
Colour	RAL 7001 (Grey) RAL 9005 (Black)
Temperature Range	-40°C to +105°C Continuous, +150°C Short Term
Protection Class	IP 68 (60529)



For PNOC-12/16



For PNOC-22/28/36/48

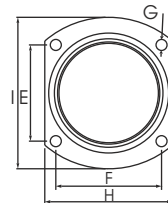
Suitable for Conduit Size	Cat. No. Grey	Cat. No. Black	E (mm)	F (mm)	G (mm)	H (mm)	I (mm)	Standard Pack (pieces)
12	PNOC-12G	PNOC-12B	-	36.5	5.5	46	32	50
16	PNOC-16G	PNOC-16B	-	36.5	5.5	46	32	50
22	PNOC-22G	PNOC-22B	30.5	53.5	5.5	65	45	30
28	PNOC-28G	PNOC-28B	31	54.8	6.5	64.8	45	20
36	PNOC-36G	PNOC-36B	31	73.2	6.5	86.6	60	10
48	PNOC-48G	PNOC-48B	30.5	73.2	6.5	86.6	73	10

STRAIGHT CONNECTORS WITH FLANGE



Technical Details :

Material	Polyamide 6
Colour	RAL 7001 (Grey) RAL 9005 (Black)
Temperature Range	-40°C to +105°C Continuous, +150°C Short Term
Protection Class	IP 55 (EN 60529)



For TNOC-56/70/95

Suitable for Conduit Size	Cat. No. Grey	Cat. No. Black	E (mm)	F (mm)	G (mm)	H (mm)	I (mm)	Standard Pack (pieces)
56	TNOC-56NG	TNOC-56B	67	61	7	96	81	5
70	TNOC-70NG	TNOC-70B	84	78	7	113	98	5
95	TNOC-95NG	TNOC-95B	108	94	8	146	125	5

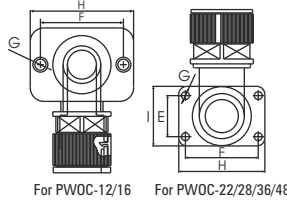
90° ELBOW FLANGE CONNECTORS



These elbow flange connectors are specially used for fixing ends of flexible corrugated conduit to 90° cable entries in the interiors of machines, control panels etc. with mounting holes and screws directly, instead of threads. They are self extinguishing and free of halogen, phosphorous and cadmium.

Technical Details :

Material	Polyamide 6
Colour	RAL 7001 (Grey) RAL 9005 (Black)
Temperature Range	-40° C to +105° C Continuous, +150° C Short Term
Protection Class	IP 68 (60529)



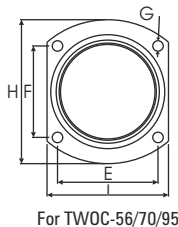
Suitable for Conduit Size	Cat. No. Grey	Cat. No. Black	E (mm)	F (mm)	G (mm)	H (mm)	I (mm)	Standard Pack (pieces)
12	PWOC-12G	PWOC-12B	-	36.5	5.5	45	32	30
16	PWOC-16G	PWOC-16B	-	36.5	5.5	44	32	30
22	PWOC-22G	PWOC-22B	30.5	53.5	5.5	65	45	20
28	PWOC-28G	PWOC-28B	31.0	55	6	65	45	10
36	PWOC-36G	PWOC-36B	30.5	72.6	7	86	64	10
48	PWOC-48G	PWOC-48B	30.5	73.0	7	86	78	10

90° ELBOW FLANGE CONNECTORS



Technical Details :

Material	Polyamide 6
Colour	RAL 7001 (Grey) RAL 9005 (Black)
Temperature Range	-40° C to +105° C Continuous, +150° C Short Term
Protection Class	IP 55 (EN 60529)



Suitable for Conduit Size	Cat. No. Grey	Cat. No. Black	E (mm)	F (mm)	G (mm)	H (mm)	I (mm)	Standard Pack (pieces)
56	TWOC-56NG	TWOC-56B	61	67	7	81	96	5
70	TWOC-70NG	TWOC-70B	78	84	7	98	113	5
95	TWOC-95NG	TWOC-95B	94	108	8	125	146	5

STRAIGHT CONNECTORS WITH FEMALE THREADS



These straight female thread connectors are made of high quality polyamide 6. They are used for fixing the ends of flexible corrugated conduits to the cable entries on control panels, terminal boxes on electric motors, automatic machinery, rail road cars, etc. with the help of threads in accordance with standard EN 60204 (safety of machinery). They are self extinguishing and free of halogen, phosphorous and cadmium.

Technical Details :

Material	Polyamide 6
Colour	Black & Grey
Temperature Range	-40° C to + 105° C Continuous, + 150° C Short Term
Protection Class	IP 68 (EN 60529)
Threads available	Pg, Metric, PF & UNEF

PG Thread - DIN 40430

PG Thread Size	Suitable for Conduit Size	Cat. No. Grey	Cat. No. Black	Inner Thread Length (mm)	Standard Pack (pieces)
Pg 11	12	PIC-P11G	PIC-P11B	10	50
Pg 13.5	12	PIC-P132G	PIC-P132B	10	50
Pg 16	16	PIC-P16G	PIC-P16B	10	50
Pg 21	22	PIC-P21G	PIC-P21B	9.5	50

Metric Thread - EN 60423

Metric Thread Size	Suitable for Conduit Size	Cat. No. Grey	Cat. No. Black	Inner Thread Length (mm)	Standard Pack (pieces)
M16 x 1.5	12	PIC-M12G	PIC-M12B	10	50
M25 x 1.5	16	PIC-M226G	PIC-M226B	10.2	50

PF Thread - JIS B0202

PF Thread Size	Suitable for Conduit Size	Cat. No. Grey	Cat. No. Black	Inner Thread Length (mm)	Standard Pack (pieces)
G 1/2"	16	PIPC-G16G	PIPC-G16B	10	50
G 3/4"	22	PIPC-G22G	PIPC-G22B	10	30
G 1"	28	PIPC-G28G	PIPC-G28B	10	25
G 1 1/4"	36	PIPC-G36G	PIPC-G36B	19.5	10
G 1 1/2"	48	PIPC-G42G	PIPC-G42B	27.6	10
G 2"	48	PIPC-G48G	PIPC-G48B	27.6	10

UNEF Thread - ASME B1.1

UNEF Thread Size	Suitable for Conduit Size	Cat. No. Grey	Cat. No. Black	Inner Thread Length (mm)	Standard Pack (pieces)
1/2-28	10	PIC-U1010G	PIC-U1010B	12.1	50
5/8-24	10	PIC-U1210G	PIC-U1210B	12.1	50
3/4-20	10	PIC-U1410G	PIC-U1410B	12.1	50
5/8-24	12	PIC-U1212G	PIC-U1212B	10	50
3/4-20	12	PIC-U1412G	PIC-U1412B	10	50
1-20	12	PIC-U1812G	PIC-U1812B	10	50
1 3/16-18	12	PIC-U2012G	PIC-U2012B	10	50
7/8-20	16	PIC-U1616G	PIC-U1616B	10	50
1-20	16	PIC-U1816G	PIC-U1816B	10	30
1 3/16-18	16	PIC-U2016G	PIC-U2016B	10	50
1 3/8-8	16	PIC-U2316G	PIC-U2316B	10	30
1 7/16-18	16	PIC-U2816G	PIC-U2816B	10	30
1 3/16-18	22	PIC-U2222G	PIC-U2222B	9.5	30
1 7/16-18	22	PIC-U2822G	PIC-U2822B	9.5	30
2-18	22	PIC-U3622G	PIC-U3622B	9.5	30
1 7/16-18	28	PIC-U2828G	PIC-U2828B	9.2	30
1 3/4-18	28	PIC-U3228G	PIC-U3228B	9.4	30
2-18	28	PIC-U3628G	PIC-U3628B	10	30
2-18	36	PIC-U3636G	PIC-U3636B	11.3	30

CONNECTORS TO SECURE CABLES AND CONDUITS (MALE THREADS)



These male thread straight connectors with strain relief are used to secure conduits with the cable entries on control panels and equipments in accordance with standard EN 60204. They also secure cables with internal IP68 protection.

Technical Details :

Material	Polyamide 6
Colour	RAL 7001 (Grey) RAL 9005 (Black)
Temperature Range	-40° C to +105° C Continuous, +150° C Short Term
Protection Class	IP 68 (EN 60529)
Threads available	Male Thread - Pg, Metric

Pg Thread - DIN 40430

Size	Suitable for Conduit Size	Cat. No. Grey	Cat. No. Black	Thread Length (mm)	Clamping Range (mm)	Standard Pack (pieces)
Pg 7	10	PNCC-P07G	PNCC-P07B	15	3.5 - 6.5	30
Pg 9	10	PNCC-P09G	PNCC-P09B	15	3.5 - 6.5	30
Pg 11	12	PNCC-P11G	PNCC-P11B	15	4 - 8	30
Pg 13.5	12	PNCC-P132G	PNCC-P132B	15	4 - 8	30
Pg 13.5	16	PNCC-P13G	PNCC-P13B	15	7 - 12.3	30
Pg 16	16	PNCC-P16G	PNCC-P16B	15	7 - 12.3	30
Pg 21	22	PNCC-P21G	PNCC-P21B	15	12 - 18	30
Pg 29	28	PNCC-P29G	PNCC-P29B	15	18 - 26	15
Pg 36	36	PNCC-P36G	PNCC-P36B	19	22 - 33	5
Pg 48	48	PNCC-P48G	PNCC-P48B	19	36 - 42	5

* Metric & G Male Thread Connectors available on request.

Metric Thread - EN 60423

Size	Suitable for Conduit Size	Cat. No. Grey	Cat. No. Black	Thread Length (mm)	Clamping Range (mm)	Standard Pack (pieces)
M 12 x 1.5	10	PNCC-M10G	PNCC-M10B	15	3.5 - 6.5	30
M 16 x 1.5	10	PNCC-M120G	PNCC-M120B	15	3.5 - 6.5	30
M 12 x 1.5	12	PNCC-M102G	PNCC-M102B	15	4 - 7.1	30
M 16 x 1.5	12	PNCC-M12G	PNCC-M12B	15	4 - 8	30
M 20 x 1.5	12	PNCC-M162G	PNCC-M162B	15	4 - 8	30
M 16 x 1.5	16	PNCC-M126G	PNCC-M126B	15	7 - 10.9	30
M 20 x 1.5	16	PNCC-M16G	PNCC-M16B	15	7 - 12.3	30
M 25 x 1.5	22	PNCC-M22G	PNCC-M22B	15	12 - 18	30
M 32 x 1.5	28	PNCC-M28G	PNCC-M28B	15	18 - 26	15
M 40 x 1.5	36	PNCC-M36G	PNCC-M36B	19	22 - 33	5
M 50 x 1.5	48	PNCC-M48G	PNCC-M48B	19	36 - 42	5

CONNECTORS TO SECURE CABLES AND CONDUITS (FEMALE THREADS)



These female thread straight connectors with strain relief are used to secure conduits with the cable entries on control panels and equipments in accordance with standard EN 60204. They also secure cables with internal IP68 protection.

Technical Details :

Material	Polyamide 6
Colour	RAL 7001 (Grey) RAL 9005 (Black)
Temperature Range	-40° C to +105° C Continuous, +150° C Short Term
Protection Class	IP 68 (EN 60529)
Threads available	Female Thread - UNEF

UNEF Female Thread - ASME B1.1

UNEF Thread Size	Suitable for Conduit Size	Cat. No. Grey	Cat. No. Black	Inner Thread Length (mm)	Cable Clamping Range (mm)	Standard Pack (pieces)
1/2-28	10	PICC-U1010G	PICC-U1010B	10	3.5-6.5	50
5/8-24	10	PICC-U1210G	PICC-U1210B	10	3.5-6.5	30
3/4-20	10	PICC-U1410G	PICC-U1410B	10	3.5-6.5	30
5/8-24	12	PICC-U1212G	PICC-U1212B	10	4-8	30
3/4-20	12	PICC-U1412G	PICC-U1412B	10	4-8	30
1-20	12	PICC-U1812G	PICC-U1812B	10	4-8	30
7/8-20	16	PICC-U1616G	PICC-U1616B	10	7-12.3	30
1-20	16	PICC-U1816G	PICC-U1816B	10	7-12.3	30
1 3/16-18	16	PICC-U2016G	PICC-U2016B	10	7-12.3	30
1 7/16-18	16	PICC-U2816G	PICC-U2816B	10	7-12.3	30
1 3/16-18	22	PICC-U2222G	PICC-U2222B	10	12-18	30
1 7/16-18	22	PICC-U2822G	PICC-U2822B	10	12-18	30
1 7/16-18	28	PICC-U2828G	PICC-U2828B	10	18-26	20
1 3/4-18	28	PICC-U3228G	PICC-U3228B	10	18-26	10
2-18	28	PICC-U3628G	PICC-U3628B	10	18-26	10
2-18	36	PICC-U3636G	PICC-U3636B	14	22-33	10

STRAIGHT CONNECTORS WITH METALLIC THREADS



These straight connectors are made of high grade polyamide 6 with nickel plated brass male threads. These metallic threads ensure that the threading on the glands does not wear out during installation and also offer a superior mating strength with the female threads in the mounting surface in accordance with standard EN 60204. They are self extinguishing and free of halogen, phosphorous and cadmium.

Technical Details :

Material	High Quality Polyamide 6 with Brass Nickel Plated Threads
Colour	RAL 7001 (Grey) RAL 9005 (Black)
Application	Rolling Stock, Railways, Tramway, Subway
Temperature Range	-40°C to +105°C Continuous, +150°C Short Term
Protection Class	IP 67 (EN 60529)
Threads available	Pg & Metric

Pg Thread - DIN 40430

Size	Suitable for Conduit Size	Cat. No. Grey	Cat. No. Black	Thread Diameter (mm)	Thread Length (mm)	Standard Pack (pieces)
Pg 9	10	SPNC-P09G	SPNC-P09B	15.2	14	50
Pg 11	12	SPNC-P11G	SPNC-P11B	18.6	14	50
Pg 13.5	12	SPNC-P132G	SPNC-P132B	20.4	14	50
Pg 13.5	16	SPNC-P136G	SPNC-P136B	20.4	14	30
Pg 16	16	SPNC-P16G	SPNC-P16B	22.5	16	30
Pg 21	22	SPNC-P21G	SPNC-P21B	28.3	16	30
Pg 29	28	SPNC-P29G	SPNC-P29B	37.0	16	10
Pg 36	36	SPNC-P36G	SPNC-P36B	47.0	20	10
Pg 48	48	SPNC-P48G	SPNC-P48B	59.3	22	10

Metric Thread - EN 60423

Size	Suitable for Conduit Size	Cat. No. Grey	Cat. No. Black	Thread Diameter (mm)	Thread Length (mm)	Standard Pack (pieces)
M 12 x 1.5	10	SPNC-M10G	SPNC-M10B	12.0	14	50
M 16 x 1.5	12	SPNC-M12G	SPNC-M12B	16.0	14	50
M 20 x 1.5	16	SPNC-M16G	SPNC-M16B	20.0	14	50
M 25 x 1.5	22	SPNC-M22G	SPNC-M22B	25.0	16	30
M 32 x 1.5	28	SPNC-M28G	SPNC-M28B	32.0	16	30
M 40 x 1.5	36	SPNC-M36G	SPNC-M36B	40.0	20	10
M 50 x 1.5	48	SPNC-M48G	SPNC-M48B	50.0	22	10

90° ELBOW CONNECTORS WITH METALLIC THREADS



These 90° elbow connectors are made of high quality polyamide 6 with nickel plated brass male threads. They are used for fixing the ends of flexible corrugated conduits to the cable entries on control panels, terminal boxes on electric motors, automatic machinery, rail road cars, etc. with the help of threads in accordance with standard EN 60204 (safety of machinery). This 90° configuration enables perpendicular conduit entry into control panels and equipments. They are self extinguishing and free of halogen, phosphorous and cadmium.

Technical Details :

Material	High Quality Polyamide 6 with Brass Nickel Plated Threads
Colour	RAL 7001 (Grey) RAL 9005 (Black)
Application	Rolling Stock, Railways, Tramway, Subway
Temperature Range	-40°C to +105°C Continuous, +150°C Short Term
Protection Class	IP 68 (EN 60529)
Threads available	Pg & Metric

Pg Thread - DIN 40430

Size	Suitable for Conduit Size	Connector Cat. No. Grey	Connector Cat. No. Black	Thread Diameter (mm)	Thread Length (mm)	Standard Pack (pieces)
Pg 7	7	SPWC-P077G	SPWC-P077B	12.5	12	30
Pg 9	10	SPWC-P09G	SPWC-P09B	15.2	14	30
Pg 11	12	SPWC-P11G	SPWC-P11B	18.6	14	30
Pg 13.5	16	SPWC-P136G	SPWC-P136B	20.4	14	30
Pg 16	16	SPWC-P16G	SPWC-P16B	22.5	14	30
Pg 21	22	SPWC-P21G	SPWC-P21B	28.3	16	20
Pg 29	28	SPWC-P29G	SPWC-P29B	37.0	16	10
Pg 36	36	SPWC-P36G	SPWC-P36B	47.0	20	10
Pg 48	48	SPWC-P48G	SPWC-P48B	59.3	20	5

Metric Thread - EN 60423

Size	Suitable for Conduit Size	Connector Cat. No. Grey	Connector Cat. No. Black	Thread Diameter (mm)	Thread Length (mm)	Standard Pack (pieces)
M 12 x 1.5	7	SPWC-M107G	SPWC-M107B	12.0	12	50
M 12 x 1.5	10	SPWC-M10G	SPWC-M10B	12.0	14	50
M 16 x 1.5	12	SPWC-M12G	SPWC-M12B	16.0	14	30
M 20 x 1.5	16	SPWC-M16G	SPWC-M16B	20.0	14	30
M 25 x 1.5	22	SPWC-M22G	SPWC-M22B	25.0	16	20
M 32 x 1.5	28	SPWC-M28G	SPWC-M28B	32.0	16	10
M 40 x 1.5	36	SPWC-M36G	SPWC-M36B	40.0	20	10
M 50 x 1.5	48	SPWC-M48G	SPWC-M48B	50.0	20	5

45° ELBOW CONNECTORS WITH METALLIC THREADS



These 45° angular connectors are made of high quality polyamide 6 with nickel plated brass male threads. They are used for fixing the ends of flexible corrugated conduits to the cable entries on control panels, terminal boxes on electric motors, automatic machinery, rail road cars, etc. with the help of threads in accordance with standard EN 60204 (safety of machinery). This 45° configuration enables angular conduit entry into control panels and equipments. They are self extinguishing and free of halogen, phosphorous and cadmium.

Technical Details :

Material	High Quality Polyamide 6 with Brass Nickel Plated Threads
Colour	RAL 7001 (Grey) RAL 9005 (Black)
Application	Rolling Stock, Railways, Tramway, Subway
Temperature Range	-40° C to +105° C Continuous, +150° C Short Term
Protection Class	IP 68 (EN 60529)
Threads available	Pg & Metric

Pg Thread - DIN 40430

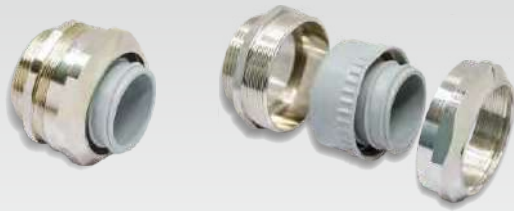
Size	Suitable for Conduit Size	Cat. No. Grey	Cat. No. Black	Thread Diameter (mm)	Thread Length (mm)	Standard Pack (pieces)
Pg 9	10	SPAC-P09G	SPAC-P09B	15.2	14	50
Pg 11	12	SPAC-P11G	SPAC-P11B	18.6	14	30
Pg 13.5	16	SPAC-P136G	SPAC-P136B	20.4	14	30
Pg 16	16	SPAC-P16G	SPAC-P16B	22.5	14	30
Pg 21	22	SPAC-P21G	SPAC-P21B	28.3	16	30
Pg 29	28	SPAC-P29G	SPAC-P29B	37.0	16	10
Pg 36	36	SPAC-P36G	SPAC-P36B	47.0	20	10
Pg 48	48	SPAC-P48G	SPAC-P48B	59.3	20	5

Metric Thread - EN 60423

Size	Suitable for Conduit Size	Cat. No. Grey	Cat. No. Black	Thread Diameter (mm)	Thread Length (mm)	Standard Pack (pieces)
M 12 x 1.5	10	SPAC-M10G	SPAC-M10B	12.0	14	50
M 16 x 1.5	12	SPAC-M12G	SPAC-M12B	16.0	14	30
M 20 x 1.5	16	SPAC-M16G	SPAC-M16B	20.0	14	30
M 25 x 1.5	22	SPAC-M22G	SPAC-M22B	25.0	16	20
M 32 x 1.5	28	SPAC-M28G	SPAC-M28B	32.0	16	10
M 40 x 1.5	36	SPAC-M36G	SPAC-M36B	40.0	20	10
M 50 x 1.5	48	SPAC-M48G	SPAC-M48B	50.0	20	5

METAL CONDUIT GLANDS FOR MSB CONDUITS

3 part design



2 part design



These Conduit Glands are very easy and quick to install. In combination with galvanized steel conduits. They offer IP54 class protection. Manufactured from nickel plated brass they offer excellent resistance to environmental factors.

Technical Details :

Material	Nickel Plated Brass
Protection Class	IP 54
Threads Available	Pg & Metric

Pg Thread for Galvanised Steel Corrugated Flexible Conduit - Bare Metal

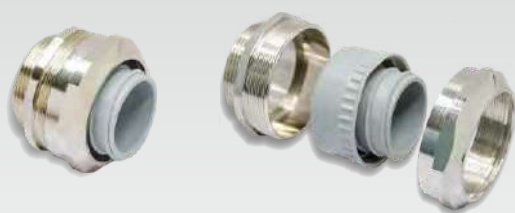
Size	Cat. No.	Cat. No.	TD (mm)	TL (mm)	Suitable for Conduit ID x OD	Type of Design
Pg7	MSBG-P07	-	12.5	5	8 x 10	2 Part
Pg9	MSBG-P09	-	15.2	5	11 x 14	2 Part
Pg11	MSBG-P11	-	18.6	6	14 x 17	2 Part
Pg11	-	SMSBG-P11	18.6	6	14 x 17	3 Part
Pg13.5	-	SMSBG-P13	20.4	6	16 x 19	3 Part
Pg16	MSBG-P16	-	22.5	6	18 x 21	2 Part
Pg21	-	SMSBG-P21	28.3	7	23 x 27	3 Part
Pg29	-	SMSBG-P29	37	8	32 x 36	2 Part
Pg36	MSBG-P36	-	47	8	40 x 45	2 Part

Metric Thread for Galvanised Steel Corrugated Flexible Conduit - Bare Metal

Size	Cat. No.	Cat. No.	TD (mm)	TL (mm)	Suitable for Conduit ID x OD	Type of Design
M20 x 1.5	MSBG-M13	-	20	6	16 x 19	2 Part
M20 x 1.5	-	SMSBG-M13	20	6	16 x 19	2 Part
M20 x 1.5	MSBG-M16	-	20	6	18 x 21	2 Part
M25 x 1.5	MSBG-M21	-	25	7	23 x 27	2 Part
M32 x 1.5	MSBG-M29	-	32	8	32 x 36	2 Part
M40 x 1.5	MSBG-M36	-	40	8	40 x 45	2 Part
M50 x 1.5	-	SMSBG-M42	50	9	45 x 52	3 Part
M63 x 1.5	MSBG-M48	-	63	10	50 x 56	2 Part

METAL CONDUIT GLANDS FOR MSP CONDUITS

3 part design



2 part design



These Conduit Glands are very easy and quick to install. In combination with PVC coated galvanized steel conduits. They offer IP54 class protection. Manufactured from nickel plated brass they offer excellent resistance to environmental factors. Liquid tight conduit glands in Metric threads are also available.

Technical Details :

Material	Nickel Plated Brass
Protection Class	IP 54
Threads Available	Pg & Metric

Pg Thread for Galvanised Steel Corrugated Flexible Conduit - PVC Sheathed

Size	Cat. No.	Cat. No.	TD (mm)	TL (mm)	Suitable for Conduit ID x OD	Type of Design
Pg9	-	SMSPG-P09	16	6	10 x 14	3 Part
Pg11	MSPG-P11	-	18.6	6	13 x 17	2 Part
Pg16	MSPG-P16	-	22.5	6	17 x 21	2 Part
Pg21	-	SMSPG-P21	28.3	7	21 x 27	3 Part
Pg29	MSPG-P29	-	37	8	28 x 36	2 Part
Pg29	-	SMSPG-P29	37	8	28 x 36	3 Part
Pg36	MSPG-P36	-	47	8	37 x 45	2 Part

Metric Thread for Galvanised Steel Corrugated Flexible Conduit - PVC Sheathed

Size	Cat. No.	Cat. No.	TD (mm)	TL (mm)	Suitable for Conduit ID x OD	Type of Design
M16 x 1.5	MSPG-M09	-	16	6	10 x 14	2 Part
M16 x 1.5	MSPG-M11/16	-	16	6	13 x 17	2 Part
M25 x 1.5	MSPG-M21	-	25	7	21 x 27	2 Part
M25 x 1.5	-	SMSPG-M21	25	7	21 x 27	3 Part
M32 x 1.5	MSPG-M29	-	32	8	28 x 36	2 Part
M32 x 1.5	-	SMSPG-M29	32	8	28 x 36	3 Part
M40 x 1.5	MSPG-M36	-	40	8	37 x 45	2 Part
M40 x 1.5	-	SMSPG-P36	40	8	37 x 45	3 Part
M63 x 1.5	MSPG-M48	-	63	10	48 x 56	2 Part

STRAIGHT CONDUIT GLANDS FOR LIQUID TIGHT CONDUITS



These Straight Conduit Glands made of 4 piece fitting are designed to suit all types of liquid tight conduits. The use of nickel-plated brass guarantees high corrosion resistance. In order to maintain a common usage standard for the fittings, small adjustments on the connection sets are necessary. They are also available in stainless steel.

Technical Details :

Material	Body, Cap - Nickel Plated Brass Ferrule - Zinc Plated Steel For SS add suffix 'X' Clamping Ring - Polyamide 6V2 O Ring - NBR
Temperature Range	-45° C to +105° C
Protection Class	IP 66
Threads available	Pg - Blue Bushing Metric - Red Bushing NPT - White Bushing

Liquid Tight Straight Conduit Glands - Pg Thread - DIN 40430

Size	Cat. No.	Suitable for Conduit Size	Internal Diameter (mm)	Thread Diameter (mm)	Thread Length (mm)	Standard Pack (pieces)
Pg 7	BBFB-01	1/4"	5.2	12.5	10	50
Pg 9	BBFB-02(C)	3/8"	10.2	15.2	11.5	50
Pg 11	BBFB-03	3/8"	10.2	18.6	11.5	50
Pg 13.5	BBFB-04	3/8"	10.2	20.4	11.5	50
Pg 16	BBFB-05	1/2"	13.5	22.5	13	50
Pg 21	BBFB-06	3/4"	18.5	28.3	15	25
Pg 29	BBFB-07	1"	23.5	37	15	10
Pg 36	BBFB-08	1 1/4"	31.8	47	16	5
Pg 42	BBFB-09	1 1/2"	36.8	54	18	5
Pg 48	BBFB-10	2"	47.8	59.3	20	4

Liquid Tight Straight Conduit Glands - Metric Thread - EN 60423

Size	Cat. No.	Suitable for Conduit Size	Internal Diameter (mm)	Thread Diameter (mm)	Thread Length (mm)	Standard Pack (pieces)
M 12 x 1.5	BBFM-01	1/4"	5.2	12	10	50
M 16 x 1.5	BBFM-02	3/8"	10.2	16	11.5	50
M 20 x 1.5	BBFM-03(S)	3/8"	10.2	20	13	50
M 20 x 1.5	BBFM-03	1/2"	13.5	20	13	50
M 25 x 1.5	BBFM-04	3/4"	18.5	25	15	25
M 32 x 1.5	BBFM-05	1"	23.5	32	15	10
M 40 x 1.5	BBFM-06	1 1/4"	31.8	40	16	5
M 50 x 1.5	BBFM-07	1 1/2"	36.8	50	18	5
M 63 x 1.5	BBFM-08	2"	47.8	63	20	4

Liquid Tight Straight Conduit Glands - NPT Thread - ANSI B1.20.1 (O-Ring not available)

Size	Cat. No.	Suitable for Conduit Size	Internal Diameter (mm)	Thread Diameter (mm)	Thread Length (mm)	Standard Pack (pieces)
NPT 1/2"	BBFN-02(S)	3/8"	10.2	21.34	13	50
NPT 1/2"	BBFN-02	1/2"	13.5	21.34	13	50
NPT 3/4"	BBFN-03	3/4"	18.5	26.67	15	25
NPT 1"	BBFN-04	1"	23.5	33.4	15	10
NPT 1 1/4"	BBFN-05	1 1/4"	31.8	42.16	16	5
NPT 1 1/2"	BBFN-06	1 1/2"	36.8	48.26	18	5
NPT 2"	BBFN-07	2"	47.8	60.33	20	4

45° CONDUIT GLANDS FOR LIQUID TIGHT CONDUITS



These 45° Conduit Glands made of 4 piece fitting are designed to suit all types of liquid tight conduits. The use of nickel-plated brass guarantees high corrosion resistance. In order to maintain a common usage standard for the fittings, small adjustments on the connection sets are necessary. They are also available in stainless steel.

Technical Details :

Material	Body, Cap - Nickel Plated Brass Ferrule - Zinc Plated Steel For SS add suffix 'X' Clamping Ring - Polyamide 6V2 O Ring - NBR
Temperature Range	-45° C to +105° C
Protection Class	IP 66
Threads available	Pg - Blue Bushing Metric - Red Bushing NPT - White Bushing

Liquid Tight 45° Conduits - Pg Thread - DIN 40430

Size	Cat. No.	Suitable for Conduit Size	Internal Diameter (mm)	Thread Diameter (mm)	Thread Length (mm)	Standard Pack (pieces)
Pg 11	BBFB-03 45	3/8"	10.2	18.6	11.5	50
Pg 13.5	BBFB-04 45	3/8"	10.2	20.4	11.5	50
Pg 16	BBFB-05 45	1/2"	13.5	22.5	13	50
Pg 21	BBFB-06 45	3/4"	18.5	28.3	15	25
Pg 29	BBFB-07 45	1"	23.5	37	15	10
Pg 36	BBFB-08 45	1 1/4"	31.8	47	16	5
Pg 42	BBFB-09 45	1 1/2"	36.8	54	18	5
Pg 48	BBFB-10 45	2"	47.8	59.3	20	4

Liquid Tight 45° Conduit Glands - Metric Thread - EN 60423

Size	Cat. No.	Suitable for Conduit Size	Internal Diameter (mm)	Thread Diameter (mm)	Thread Length (mm)	Standard Pack (pieces)
M 16 x 1.5	BBFM-02 45	3/8"	10.2	16	11.5	50
M 20 x 1.5	BBFM-03(S) 45	3/8"	10.2	20	13	50
M 20 x 1.5	BBFM-03 45	1/2"	13.5	20	13	50
M 25 x 1.5	BBFM-04 45	3/4"	18.5	25	15	25
M 32 x 1.5	BBFM-05 45	1"	23.8	32	15	10
M 40 x 1.5	BBFM-06 45	1 1/4"	31.8	40	16	5
M 50 x 1.5	BBFM-07 45	1 1/2"	36.8	50	18	5
M 63 x 1.5	BBFM-08 45	2"	47.8	63	20	4

Liquid Tight 45° Conduit Glands - NPT Thread - ANSI B1.20.1 (O-Ring not available)

Size	Cat. No.	Suitable for Conduit Size	Internal Diameter (mm)	Thread Diameter (mm)	Thread Length (mm)	Standard Pack (pieces)
NPT 1/2"	BBFN-02(S) 45	3/8"	10.2	21.34	13	50
NPT 1/2"	BBFN-02 45	1/2"	13.5	21.34	13	50
NPT 3/4"	BBFN-03 45	3/4"	18.5	26.67	15	25
NPT 1"	BBFN-04 45	1"	23.5	33.4	15	10
NPT 1 1/4"	BBFN-05 45	1 1/4"	31.8	42.16	16	5
NPT 1 1/2"	BBFN-06 45	1 1/2"	36.8	48.26	18	5
NPT 2"	BBFN-07 45	2"	47.8	60.33	20	4

90° CONDUIT GLANDS FOR LIQUID TIGHT CONDUITS



These 90° Conduit Glands made of 4 piece fitting are designed to suit all types of liquid tight conduits. The use of nickel-plated brass guarantees high corrosion resistance. In order to maintain a common usage standard for the fittings, small adjustments on the connection sets are necessary. They are also available in stainless steel.

Technical Details :

Material	Body, Cap - Nickel Plated Brass Ferrule - Zinc Plated Steel For SS add suffix 'X' Clamping Ring - Polyamide 6V2 O Ring - NBR
Temperature Range	-45° C to +105° C
Protection Class	IP 66
Threads available	Pg - Blue Bushing Metric - Red Bushing NPT - White Bushing

Liquid Tight 90° Conduit Glands (Pg Thread) - DIN 40430

Size	Cat. No.	Suitable for Conduit Size	Internal Diameter (mm)	Thread Diameter (mm)	Thread Length (mm)	Standard Pack (pieces)
Pg 11	BBFB-03 90	3/8"	10.2	18.6	11.5	50
Pg 13.5	BBFB-04 90	3/8"	10.2	20.4	11.5	50
Pg 16	BBFB-05 90	1/2"	13.5	22.5	13	50
Pg 21	BBFB-06 90	3/4"	18.5	28.3	15	25
Pg 29	BBFB-07 90	1"	23.5	37	15	10
Pg 36	BBFB-08 90	1 1/4"	31.8	47	16	5
Pg 42	BBFB-09 90	1 1/2"	36.8	54	18	5
Pg 48	BBFB-10 90	2"	47.8	59.3	20	4

Liquid Tight 90° Conduits (Metric Thread) - EN 60423

Size	Cat. No.	Suitable for Conduit Size	Internal Diameter (mm)	Thread Diameter (mm)	Thread Length (mm)	Standard Pack (pieces)
M 16 x 1.5	BBFM-02(S) 90	5/16"	8.3	16	11.5	50
M 16 x 1.5	BBFM-02 90	3/8"	10.2	16	11.5	50
M 20 x 1.5	BBFM-03(S) 90	3/8"	10.2	20	13	50
M 20 x 1.5	BBFM-03 90	1/2"	13.5	20	13	50
M 25 x 1.5	BBFM-04 90	3/4"	18.5	25	15	25
M 32 x 1.5	BBFM-05 90	1"	23.8	32	15	10
M 40 x 1.5	BBFM-06 90	1 1/4"	31.8	40	16	5
M 50 x 1.5	BBFM-07 90	1 1/2"	36.8	50	18	5
M 63 x 1.5	BBFM-08 90	2"	47.8	63	20	4

Liquid Tight 90° Conduit Glands - NPT Thread - ANSI B1.20.1 (O-Ring not available)

Size	Cat. No.	Suitable for Conduit Size	Internal Diameter (mm)	Thread Diameter (mm)	Thread Length (mm)	Standard Pack (pieces)
NPT 1/2"	BBFN-02(S) 90	3/8"	10.2	21.34	13	50
NPT 1/2"	BBFN-02 90	1/2"	13.5	21.34	13	50
NPT 3/4"	BBFN-03 90	3/4"	18.5	26.67	15	25
NPT 1"	BBFN-04 90	1"	23.5	33.4	15	10
NPT 1 1/4"	BBFN-05 90	1 1/4"	31.8	42.16	16	5
NPT 1 1/2"	BBFN-06 90	1 1/2"	36.8	48.26	18	5
NPT 2"	BBFN-07 90	2"	47.8	60.33	20	4

STRAIGHT AND 90° ELBOW CONDUIT GLANDS FOR ANMSF CONDUITS



These fittings are designed for use with conduit types ANMSF. When used in combination with one of these conduits an IP 67 leak-tight cable protection system with a strong pull strength is achieved.

Technical Details :

Material	Polyamide PA-6, V-2 , halogen free
Construction	Plastic fitting, consisting of 2 parts (Cap and Body)
Temperature Range	-40° C to +120° C Continuous
Colour	Grey
Protection Class	IP 67(Dust proof, Water tight)
Approvals	  

Liquid Tight Straight Conduit Glands (Metric Thread)

Size	Cat. No.	Suitable for Conduit Size	Minimum Internal Bore (mm)	Thread Diameter (mm)	Thread Length (mm)	Standard Pack (pieces)
M16 X 1.5	BBFM-02A	3/8"	10.9	16	14	25
M20 X 1.5	BBFM-03A	1/2"	14.4	20	14	25
M25 X 1.5	BBFM-04A	3/4"	18.0	25	14	10
M32 X 1.5	BBFM-05A	1"	23.9	32	16	5
M40 X 1.5	BBFM-06A	1 1/4"	31.8	40	16	5

Liquid Tight 90° Conduit Glands (Metric Thread)

Size	Cat. No.	Suitable for Conduit Size	Minimum Internal Bore (mm)	Thread Diameter (mm)	Thread Length (mm)	Standard Pack (pieces)
M16 X 1.5	BBFM-02A 90	3/8"	10.9	16	14	10
M20 X 1.5	BBFM-03A 90	1/2"	14.4	20	14	10
M25 X 1.5	BBFM-04A 90	3/4"	18.0	25	14	10
M32 X 1.5	BBFM-05A 90	1"	23.9	32	16	5

Liquid Tight Straight Conduit Glands (NPT Thread)

Size	Cat. No.	Suitable for Conduit Size	Minimum Internal Bore (mm)	Thread Diameter (mm)	Thread Length (mm)	Standard Pack (pieces)
NPT 1/2"	BBFN-02A	3/8"	10.9	21.34	14	25
NPT 1/2"	BBFN-03A	1/2"	14.4	21.34	14	25
NPT 3/4"	BBFN-04A	3/4"	18.0	26.67	16	10
NPT 1"	BBFN-05A	1"	23.9	33.40	16	5
NPT 1 1/4"	BBFN-06A	1 1/4"	30.6	42.16	18	5
NPT 1 1/2"	BBFN-07A	1 1/2"	35.4	48.26	19	1
NPT 2"	BBFN-08A	2"	47.8	60.33	21	1

Liquid Tight 90° Conduit Glands (NPT Thread)

Size	Cat. No.	Suitable for Conduit Size	Minimum Internal Bore (mm)	Thread Diameter (mm)	Thread Length (mm)	Standard Pack (pieces)
NPT 1/2"	BBFN-02A 90	3/8"	10.9	21.34	13	10
NPT 1/2"	BBFN-03A 90	1/2"	14.4	21.34	13	10
NPT 3/4"	BBFN-04A 90	3/4"	18.0	26.67	14	10
NPT 1"	BBFN-05A 90	1"	23.9	33.40	16	5
NPT 1 1/4"	BBFN-06A 90	1 1/4"	30.6	42.16	18	5
NPT 1 1/2"	BBFN-07A 90	1 1/2"	35.4	48.26	19	1
NPT 2"	BBFN-08A 90	2"	47.8	60.33	21	1

STRAIGHT CONDUIT GLANDS FOR AMPC CONDUITS



These fittings are exclusively designed for use with type AMPC conduits. These fittings are lightweight, easy to install and when combined with a type MPC conduit an IP 67 cable protection system with a strong pull out strength is achieved.

Technical Details :

Material	PP (Polypropylene)
Construction	One piece swivel fitting with integrated ferrule
Temperature Range	-10°C to +110°C Continuous
Colour	Grey
Protection Class	IP 54
Approvals	RoHS

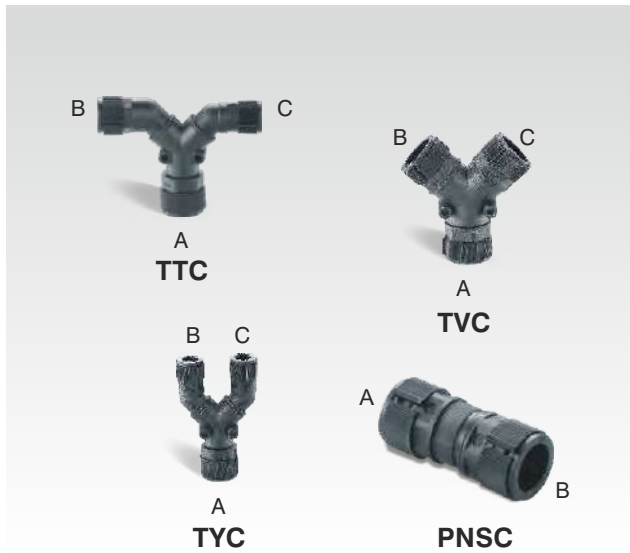
Liquid Tight Straight Conduit Glands (Metric Thread)

Size	Cat. No.	Suitable for Conduit Size (DIN)	Minimum Internal Bore (mm)	Thread Diameter (mm)	Thread Length (mm)	Standard Pack (pieces)
M16 X 1.5	ABFM-9	9	8.8	16	9	50
M20 X 1.5	ABFM-11	11	11.1	20	9	50
M25 X 1.5	ABFM-16	16	14.8	25	10	50
M32 X 1.5	ABFM-21	21	19.4	32	11	25
M40 X 1.5	ABFM-29	29	27.9	40	12	25
M50 X 1.5	ABFM-36	36	35.6	50	13	25
M63 X 1.5	ABFM-48	48	45.9	63	14	10

Liquid Tight Straight Conduit Glands (NPT Thread)

Size	Cat. No.	Suitable for Conduit Size (DIN)	Minimum Internal Bore (mm)	Thread Diameter (mm)	Thread Length (mm)	Standard Pack (pieces)
Pg 9	ABFP-9	9	8.8	15.2	9	50
Pg 11	ABFP-11	11	11.1	18.6	9	50
Pg 13.5	ABFP-13	13	13.0	20.4	10	50
Pg 16	ABFP-16	16	14.8	22.5	10	50
Pg 21	ABFP-21	21	19.4	28.3	11	25
Pg 29	ABFP-29	29	27.9	37.0	12	25
Pg 36	ABFP-36	36	35.6	47.0	13	25
Pg 42	ABFP-42	42	41.9	54.0	13	25
Pg 48	ABFP-48	48	45.9	59.3	14	10

SNAP ON CONDUIT COUPLERS



Distributors made of Polyamide can be used instead of a distribution box. These special connectors are used to clamp standard corrugated conduits. They can be configured into the basic shapes of Y (TYC), T (TTC), V (TVC) and straight through (PNSC). They are free of Halogen Phosphorous Cadmium.

Technical Details :

Material	Polyamide 6
Colour	Black
Temperature Range	-40°C to +105°C Continuous
Protection Class	IP 67

Cat. No. for TYC Configuration	Cat. No. for TTC Configuration	Cat. No. for TVC Configuration	Cat. No. for TNSC Configuration	Suitable for Conduit Size			Standard Pack (pieces)
				A	B	C	
TYC 101010	TTC 101010	TVC 101010	-	10	10	10	10
TYC 121010	TTC 121010	TVC 121010	-	12	10	10	10
TYC 121210	TTC 121210	TVC 121210	-	12	12	10	10
TYC 121212	TTC 121212	TVC 121212	-	12	12	12	10
TYC 161010	TTC 161010	TVC 161010	-	16	10	10	10
TYC 161210	TTC 161210	TVC 161210	-	16	12	10	10
TYC 161212	TTC 161212	TVC 161212	-	16	12	12	10
TYC 161616	TTC 161616	TVC 161616	-	16	16	16	10
TYC 222222	TTC 222222	TVC 222222	-	22	22	22	10
TYC 282222	TTC 282222	TVC 282222	-	28	22	22	10
TYC 282822	TTC 282822	TVC 282822	-	28	28	22	10
TYC 282828	TTC 282828	TVC 282828	-	28	28	28	10
-	-	-	PNSC-10B	10	10	-	10
-	-	-	PNSC-12B	12	12	-	10
-	-	-	PNSC-16B	16	16	-	10
-	-	-	PNSC-22B	22	22	-	10
-	-	-	PNSC-28B	28	28	-	10
-	-	-	PNSC-36B	36	36	-	10
-	-	-	PNSC-48B	48	48	-	10

CONNECTORS FOR FITTING CONDUITS TO SENSORS



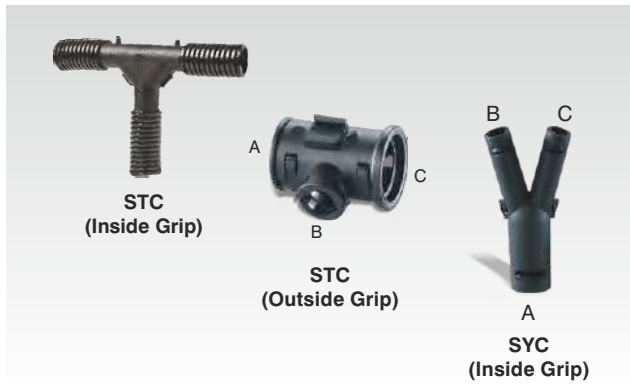
These connectors are used to connect conduits to standard proximity sensors. They are free for Halogen Phosphorous Cadmium.

Technical Details :

Material	High Quality Polycarbonate
Colour	Transparent White
Temperature Range	-40°C to +105°C Continuous + 150°C Short Term
Protection Class	IP 67 (EN 60529)

Proximity Sensor Size	Suitable for Conduit Size	Cat. No.	Total Length (mm)	Standard Pack (pieces)
M8x1	10	TIS-M08T	61.5	100
M12x1	10	TIS-M12T	61.5	50
M18x1	10	TIS-M18T	61.5	50
M30x1.5	10	TIS-M30T	61.5	30

Y & T CONDUIT COUPLERS WITH CLAMP LOCKS



These manifolds are used to join three flexible Conduits of the same size or of different sizes with inside or outside gripping. They are available in 'T' and 'Y' shapes.

Technical Details :

Material	Polyamide 66 (PA)
Colour	RAL 9005 (Black)
Temperature Range	-40° C to + 135° C Continuous, + 150° C Short Term

Y & T Conduit Couplers

Cat. No.	Type of Gripping	Suitable for Conduit OD			Standard Pack (pieces)
		A Ø mm	B Ø mm	C Ø mm	
SYC101010	INSIDE	13	13	13	50
SYC121210	INSIDE	15.7	15.7	13	50
SYC161210	INSIDE	18.9	15.7	13	50
SYC161212	INSIDE	18.9	15.7	15.7	50
SYC161610	INSIDE	18.9	18.9	13	50
SYC161612	INSIDE	18.9	18.9	15.7	50
SYC221616	INSIDE	25.4	18.9	15.7	50
SYC222216	INSIDE	25.4	25.4	18.9	50
SYC222222	INSIDE	25.4	25.4	25.4	50
STC070707/A	OUTSIDE	10	10	10	50
STC080808	OUTSIDE	11.7	11.7	11.7	50
STC100707/A	OUTSIDE	13	10	10	50
STC100410	OUTSIDE	13	7.1	13	50
STC100707/D	OUTSIDE	13	10	10	50
STC100710	OUTSIDE	13	10	13	50
STC100810/A	OUTSIDE	13	11.7	13	50
STC101007	OUTSIDE	13	13	10	50
STC101010	OUTSIDE	13	13	13	50
STC120810/A	OUTSIDE	15.7	11.7	13	50
STC120712/A	OUTSIDE	15.7	10	15.7	50
STC120812/C	OUTSIDE	15.7	11.7	15.7	50
STC121012/B	OUTSIDE	15.7	13	15.7	50
STC121010	OUTSIDE	15.7	13	13	50
STC121207/A	OUTSIDE	15.7	15.7	10	50
STC121210	OUTSIDE	15.7	15.7	13	50
STC121212	OUTSIDE	15.7	15.7	15.7	50
STC161012	OUTSIDE	18.9	13	15.7	50
STC160712/B	OUTSIDE	18.9	10	15.7	50
STC160716/A	OUTSIDE	18.9	10	18.9	50
STC160816	OUTSIDE	18.9	11.7	18.9	50
STC161016	OUTSIDE	18.9	13	18.9	50
STC161212	OUTSIDE	18.9	15.7	15.7	50
STC161216	OUTSIDE	18.9	15.7	18.9	50
STC161607/A	OUTSIDE	18.9	18.9	10	50
STC161612	OUTSIDE	18.9	18.9	15.7	50
STC161616	INSIDE	18.9	18.9	18.9	50
STC162216	OUTSIDE	18.9	25.4	18.9	50
STC220822	OUTSIDE	25.4	11.7	25.4	50
STC221016	OUTSIDE	25.4	13	18.9	50
STC221022	OUTSIDE	25.4	13	25.4	50
STC221212	OUTSIDE	25.4	15.7	15.7	50
STC221216	OUTSIDE	25.4	15.7	18.9	50
STC221612	OUTSIDE	25.4	18.9	15.7	50
STC221222/B	OUTSIDE	25.4	15.7	25.4	50
STC222216	OUTSIDE	25.4	25.4	18.9	50
STC222222	OUTSIDE	25.4	25.4	25.4	50

CONDUIT COUPLERS WITH CLAMP LOCKS - STRAIGHT & ELBOW



These manifolds are used to join two flexible Conduits of the same size or of different sizes with outside gripping. They are available in Straight & Elbow shapes.

Technical Details :

Material	Polyamide 66 (PA)
Protection Class	RAL 9005 (Black)
Temperature Range	-40° C to +135° C Continuous, +150° C Short Term

Straight & Elbow Conduit Coupler

Cat. No.	Type of Gripping	Suitable for Conduit OD		Standard Pack (pieces)
		A Ø mm	B Ø mm	
SSC1007	OUTSIDE	13	10	50
SSC1010	OUTSIDE	13	13	50
SSC1210	OUTSIDE	15.7	13	50
SSC1212	OUTSIDE	15.7	15.7	50
SSC1616	OUTSIDE	18.9	18.9	50
SEC1010	OUTSIDE	13	13	50
SEC1212	OUTSIDE	15.7	15.7	50
SEC1616	OUTSIDE	18.9	18.9	50

'P' TYPE MOUNTING CLIPS



'P' type mounting clips are ideal elements for retaining / holding pipes, cables, cable harnesses, hoses etc. These 'P' clips act as form fitting adjustable bands for ease of assembly & installation. The band ends of these clips are reinforced to prevent any tearing or loosening due to high mechanical loads. These galvanized steel, 'P' clips are fitted with EPDM liners which help achieve a tighter grip on the cable / conduit & also act as dampers for sound & vibration.

Technical Details :

Material	Clip - Zinc Plated Galvanised Steel
Profile	EPDM
Temperature Range	-40° C to +120° C

Size	Cat. No.	Nominal ID (mm)	B Width (mm)	d Screw Size	Standard Pack (pieces)
0542-06-12	FHC-06	06	12	M5	50
0542-08-12	FHC-08	08	12	M5	50
0542-10-12	FHC-10	10	12	M5	50
0542-12-12	FHC-12	12	12	M5	50
0542-15-15	FHC-15	15	15	M6	50
0542-18-15	FHC-18	18	15	M6	50
0542-22-15	FHC-22	22	15	M6	50
0542-25-15	FHC-25	25	15	M6	50
0542-30-15	FHC-30	30	15	M6	50
0542-35-15	FHC-35	35	15	M6	50
0542-40-20	FHC-40	40	20	M8	50
0542-48-25	FHC-48	48	25	M10	50

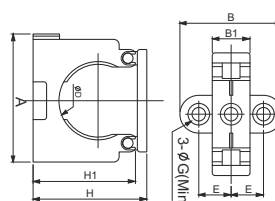
MOUNTING CLIPS



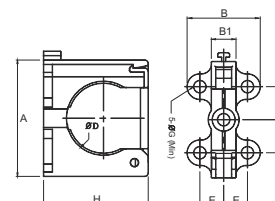
Mounting Clips are used for supporting conduits. These clips are made of High Quality Impact Resistant Polyamide. The mounting clips are stackable and are fixed with the help of screws on to the panel or equipment surface.

Technical Details :

Material	Polyamide 6
Colour	RAL 7001 (Grey) RAL 9005 (Black)
Temperature Range	-40° C to +105° C Continuous, +150° C Short Term



For NFH 56/70/95



For NFH 10 to 48

Suitable for Conduit Size	Cat. No. Black	Cat. No. Grey	Dimensions							
			Ø D	A	H	E	B	B1	Ø G	Bolt
7	NFH-07B	NFH-07NG	10	16.6	20.5	-	14.5	10	5	1-M4
10	NFH-10B	NFH-10NG	13	23	22	-	-	10	5	1-M4
12	NFH-12B	NFH-12NG	16	27.5	25	11.3	33	14	5.4	3-M5
16	NFH-16B	NFH-16NG	21.5	34.3	33	12	35.9	14	5.4	3-M5
22	NFH-22B	NFH-22NG	29	45.5	41.7	12	38	14	6.4	3-M6
28	NFH-28B	NFH-28NG	35	55	49.8	12.5	37	14	6.4	5-M6
36	NFH-36B	NFH-36NG	42	66	59.3	13.5	41.5	14	6.4	5-M6
48	NFH-48B	NFH-48NG	53.6	84.9	72.7	13.5	41.5	14	6.4	5-M6
56	NFH-56B	NFH-56NG	66.8	98.6	86.3	17.75	52	19	6.4	5-M6
70	NFH-70B	NFH-70NG	82	121	105.8	21.5	63	23	8.4	5-M8
95	NFH-95B	NFH-95NG	105.6	155.4	136.3	28	82	30	8.4	5-M8

TUBE END CAPS



Tube End caps provide an IP66 covering at the end of corrugated tubes. The cap can be cut to accommodate pass through of different size wires.

Technical Details :

Material	High Quality Rubber (NBR)
Colour	Black
Protection Class	IP 66 (EN 60529)

Suitable for Conduit Size	Cat. No.	Inner Diameter (mm)	Cable Range Ø min - Ø max (mm)	Total Length (mm)
7	FEC-07B	10.0	2 - 7	24.0
10	FEC-10B	12.5	3 - 10	33.0
12	FEC-12B	16	4.2 - 12	33.0
16	FEC-16B	21.2	6 - 16	34.5
22	FEC-22B	28.5	6 - 22	43.0
28	FEC-28B	34.5	6 - 28	43.0
36	FEC-36B	42.5	6 - 36	58.5
48	FEC-48B	54.5	6 - 48	58.5
56	FEC-56B	67.2	9 - 56	71
70	FEC-70B	82.5	10 - 70	86
95	FEC-95B	106.0	13 - 95	110

METAL FERRULES FOR LIQUID TIGHT CONDUITS



These metal ferrules are used in the combination with clamping ring to maintain the IP 67 grade of protection for liquid tight PVC coated smooth conduits. They are also used as cover at conduit ends to avoid cable damage.

Technical Details :

Material	Nickel Plated Brass
Colour	Metallic

Conduit Size	Cat. No. Nickel Plated Brass	Standard Pack (Pieces)
3/8"	BFER-03	25
1/2"	BFER-04	25
3/4"	BFER-05	25
1"	BFER-06	5
1 1/4"	BFER-07	5
1 1/2"	BFER-08	5
2"	BFER-09	2

METAL CLAMPING RING FOR CONDUITS



For using liquid tight conduit glands with metallic conduits it is recommended to replace the standard polyamide clamping ring inside these glands with metal clamping rings. These clamping rings also increase the pull out strength of the conduit.

Technical Details :

Material	Zinc Plated Steel
Colour	Metallic

Conduit Size	Cat. No. Zinc Plated Steel	Standard Pack (Pieces)
5/16"	ACRB-02	50
3/8"	ACRB-03	50
1/2"	ACRB-04	50
3/4"	ACRB-05	25
1"	ACRB-06	10
1 1/4"	ACRB-07	5
1 1/2"	ACRB-08	5
2"	ACRB-09	4

POLYAMIDE LOCK NUTS



In certain applications, installing cable glands directly on enclosure or equipment wall surfaces is not possible as the entry holes are not threaded. In such situations Hexagonal Lock Nuts are used to secure the cable glands.

Technical Details :

Material	Polyamide 6 30% glass fibre reinforced
Colour	RAL 7001 (Grey) RAL 9005 (Black)
Threads available	Pg, Metric, NPT & PF

Pg Thread (DIN 40430)

For Gland Size	Cat. No. Grey	Cat. No. Black	 (mm)	Height (mm)	Standard Pack (pieces)
Pg 7	FLN P07NG	FLN P07B	19	4	50
Pg 9	FLN P09NG	FLN P09B	22	4	50
Pg 11	FLN P11NG	FLN P11B	24	6	50
Pg 13.5	FLN P13NG	FLN P13B	27	6	50
Pg 16	FLN P16NG	FLN P16B	30.3	6	50
Pg 21	FLN P21NG	FLN P21B	36	6.8	25
Pg 29	FLN P29NG	FLN P29B	46	6.8	20
Pg 36	FLN P36NG	FLN P36B	60	8	10
Pg 48	FLN P48NG	FLN P48B	70.2	8	5

Metric Thread (EN 60423)

For Gland Size	Cat. No. Grey	Cat. No. Black	 (mm)	Height (mm)	Standard Pack (pieces)
M 12 x 1.5	FLN M10NG	FLN M10B	17	6	50
M 16 x 1.5	FLN M12NG	FLN M12B	22	6	50
M 20 x 1.5	FLN M16NG	FLN M16B	26	6	50
M 25 x 1.5	FLN M22NG	FLN M22B	33	6.8	50
M 32 x 1.5	FLN M28NG	FLN M28B	40	6.8	25
M 40 x 1.5	FLN M36NG	FLN M36B	50	8	10
M 50 x 1.5	FLN M48NG	FLN M48B	60	8	10
M 63 x 1.5	BML-07	BML-27	75	8	5

PF(G) Thread (JIS B0202)

For Gland Size	Cat. No. Grey	Cat. No. Black	 (mm)	Height (mm)	Standard Pack (pieces)
G 1/4"	FLN G07NG	FLN G07B	19	6	100
G 1/2"	FLN G10NG	FLN G10B	27.3	6	100
G 1/2"	FLN G12NG	FLN G12B	27.3	6	100
G 1/2"	FLN G16NG	FLN G16B	27.3	6	100
G 3/4"	FLN G22NG	FLN G22B	36	6.8	100
G 1"	FLN G28NG	FLN G28B	44	6.8	50
G 1 1/4"	FLN G36NG	FLN G36B	49	8	50
G 1 1/2"	FLN G42NG	FLN G42B	65	8	50
G 2"	FLN G48NG	FLN G48B	70	8	50

BRASS LOCK NUTS



In certain applications, installing conduit glands directly on enclosure or equipment wall surfaces is not possible as the entry holes are not threaded. In such situations Brass Lock Nuts are used to secure the cable glands.

Technical Details :

Material	Brass, Nickel Plated
Threads available	Pg, Metric

Pg Threads

For Gland Size	Cat. No.	 (mm)	Height (mm)	Standard Pack (pieces)
Pg 7	GBSL-01	17	2.8	50
Pg 9	GBSL-02	19	2.8	50
Pg 11	GBSL-03	22	3.0	50
Pg 13.5	GBSL-04	24	3.0	50
Pg 16	GBSL-05	27	3.0	25
Pg 21	GBSL-06	32	3.5	25
Pg 29	GBSL-07	41	4.0	20
Pg 36	GBSL-08	51	5.0	15
Pg 42	GBSL-09	60	5.0	12
Pg 48	GBSL-10	64	5.5	12

Metric Threads

For Gland Size	Cat. No.	 (mm)	Height (mm)	Standard Pack (pieces)
M 12 x 1.5	GBMBL-01	15	2.8	50
M 16 x 1.5	GBMBL-02	19	3.0	50
M 20 x 1.5	GBMBL-03	24	3.5	50
M 25 x 1.5	GBMBL-04	30	4.0	25
M 32 x 1.5	GBMBL-05	36	5.0	25
M 40 x 1.5	GBMBL-06	46	5.0	20
M 50 x 1.5	GBMBL-07	60	5.0	10
M 63 x 1.5	GBMBL-08	70	6.0	10

ENVIRONMENTAL PROTECTION FOR YOUR CONNECTIONS

Controlwell presents a range of Junction Boxes manufactured from Halogen-free ABS, which offers superior resistance to chemicals and atmospheric agents.

Available with Smooth Walls, Membranes and Nipples to allow wire entry, these junction boxes offer IP65 protection by means of the silicon rubber gasketing. They are available with press-on type, screw type and hinge type lids which may be grey in colour or transparent. Also, available in heavy duty die cast aluminium material.

This range exemplifies the fact that we at Controlwell are dedicated to providing your connections with **The Right Protection.**

JUNCTION BOXES

HOUSINGS FOR
ENVIRONMENTAL
PROTECTION



JUCTION BOXES (WITH SMOOTH WALLS)



Junction Boxes are made of halogen-free thermoplastic, which has high resistance to chemicals and atmospheric agents. By virtue of the design they offer IP 65 protection with the help of silicon rubber gasket in EPDM. They are available with plain walls, knockouts, nipples and membrane. Junction-Boxes are offered with press-on lids, screw lids and hinged lids. Stainless steel screws are also available on request for lid fastening. Choice of grey colour lid or transparent lid is also available on request.

Technical Details :

Material	Thermoplastic
Colour	Grey
Screw	Stainless Steel / Nylon
Gasket	Silicon Rubber EPDM
Lid	Grey Colour / Transparent
Standard	IEC 670, CEI 23-48
Protection Class	IP 65 / IP 66
Temperature Range	-25°C to +60°C
Approvals	CE

Grey cover with Stainless Steel Screws

Cat. No.	Internal Dimension (mm) L x W x H
M003.PL *	80 x 80 x 40
M005.PL	100 x 100 x 50
M006.PL	100 x 100 x 70
M007.PL	123 x 75 x 51
M007.X.PL	110 x 80 x 60
M008.PL	150 x 110 x 70
M009.PL	190 x 145 x 72
M010.PL	243 x 190 x 90
M011.PL	243 x 190 x 110

* Press-on Lid with IP 44 protection

Grey cover with Nylon Hinged Screws

Cat. No.	Internal Dimension (mm) L x W x H
M009.A.PL	190 x 140 x 75
M010.A.PL	238 x 190 x 90
M012.A.PL	300 x 220 x 120
T2356(H)	360 x 250 x 150
M014.A.PL	376 x 300 x 120
M015.A.PL	456 x 380 x 121

Grey High Top cover with Stainless Steel screws

Cat. No.	Internal Dimension (mm) L x W x H
M008.CA.G	150 x 110 x 135
M009.CA.G	190 x 145 x 135
M010.CA.G	243 x 190 x 155
M011.CA.G	243 x 190 x 170
M012.CA.G	310 x 230 x 160
T2256	360 x 250 x 150
M014.CA.G*	376 x 300 x 180
M015.CA.G*	460 x 380 x 182

* Nylon hinged screw with IP 65 protection

Transparent cover with Stainless Steel Screws

Cat. No.	Internal Dimension (mm) L x W x H
M008.PK	150 x 110 x 70
M009.PK	190 x 145 x 72
M011.PK	243 x 190 x 110

Transparent cover with Nylon Screws

Cat. No.	Internal Dimension (mm) L x W x H
M009.A.PK	190 x 140 x 75
M010.A.PK	238 x 190 x 90
M012.A.PK	300 x 220 x 120
T2366(H)	360 x 250 x 150
M014.A.PK	376 x 300 x 120

Transparent High Top cover with Stainless Steel screws

Cat. No.	Internal Dimension (mm) L x W x H
M008.CA.K	150 x 110 x 135
M009.CA.K	190 x 145 x 135
M010.CA.K	240 x 190 x 155
M011.CA.K	243 x 190 x 170
M012.CA.K	310 x 230 x 160
T2266	360 x 250 x 150
M014.CA.K*	376 x 300 x 180
M015.CA.K*	460 x 380 x 182

* Nylon screw with IP 65 protection

JUCTION BOXES (WITH MEMBRANES & NIPPLES)



Specially designed and moulded Membranes in these Junction Boxes, act as a Cable Glands offering IP 65 protection. After piercing the membrane with a sharp instrument, the cable / flexible conduit has to be inserted and slightly pulled out (withdrawn) to achieve a tight wrap around the cable / conduit resulting in positive clamping. Junction Boxes are also available with specially designed Nipples which act as Cable Glands offering IP 65 protection.

Technical Details :

Material	Thermoplastic
Colour	Grey
Screw	Stainless Steel / Nylon
Gasket	Silicon Rubber EPDM
Lid	Grey Colour / Transparent
Standard	IEC 670, CEI 23-48
Protection Class	IP 67
Approvals	CE

Junction Boxes with Membrane - Grey cover

Cat. No.	Internal Dimension (mm) L x W x H	No. of Membranes
M005.CV	94 x 94 x 50	10 + 2
M008.PG*	150 x 110 x 70	10
M009.PG*	190 x 145 x 70	10
M011.PG*	243 x 190 x 110	12

* IP 66 protection

Junction Boxes with Nipples - Grey / Transparent cover with stainless steel / hinged screw (IP 65)

Cat. No.	Internal Dimension (mm) L x W x H	No. of Nipples
M003 *	80 x 80 x 45	6
M005	100 x 100 x 50	6
M006	100 x 100 x 70	6
M007	123 x 75 x 51	6
M008	150 x 110 x 70	10
M009	190 x 145 x 72	10
M010	243 x 190 x 90	12
M011	243 x 190 x 110	12
M009.PKN **	190 x 145 x 170	10
M014.A.CA.K	380 x 300 x 180	12
M014.A.PKN	380 x 300 x 120	12

* Press-on Lid with IP 44 protection

** With transparent Lid

Junction Boxes with Nipples - Grey cover with nylon hinged screws (IP 65)

Cat. No.	Internal Dimension (mm) L x W x H	No. of Nipples
M009.A	190 x 140 x 75	10
M010.A	238 x 190 x 90	12
M012.A	300 x 220 x 120	12
M014.A	376 x 300 x 120	12
M015.A	456 x 380 x 120	14

JUCTION BOXES (WITH KNOCKOUTS)



Junction Boxes with knockouts are made of halogen-free ABS, which has high resistance to chemicals and atmospheric agents. These knockouts can be easily cut out in a wide range of diameters allowing for a selection of cable gland size as per cable diameter. By virtue of the design they offer IP 65 protection with the help of silicon rubber gasket in EPDM. They are available with plain walls, nipples and membrane. Junction-Box are offered with press-on lids, screw lids and hinged lids. Stainless steel screws are also available on request for lid fastening. Choice of grey colour lid or transparent lid is also available on request.

Technical Details :

Material	Thermoplastic
Colour	Grey
Screw	Zinc Plated and Chromate passivated
Gasket	Silicon Rubber EPDM
Lid	Grey Colour / Transparent
Standard	IEC 670, CEI 23-48
Protection Class	IP 67
Approvals	CE

Grey Screwed Lid

Cat. No.	Internal Dimension (mm) L x W x H	No. of Knockouts
T2056M *	90 x 90 x 50	4
T2136M	110 x 110 x 65	8
T1505M	150 x 110 x 70	10
T2176M	210 x 140 x 90	12
T5005M	210 x 210 x 90	12
T2156M	290 x 210 x 90	14

* IP 44

Grey Screwed High Top Lid

Cat. No.	Internal Dimension (mm) L x W x H	No. of Knockouts
T2186	220 x 130 x 140	12
T5205M	210 x 210 x 140	12
T8205M	240 x 190 x 160	12
T2226M	290 x 210 x 140	14
T7205M	290 x 290 x 140	16

Transparent Screwed Lid

Cat. No.	Internal Dimension (mm) L x W x H	No. of Knockouts
T2141M	210 x 110 x 70	12
T2171M	210 x 140 x 90	12
T2141	180 x 110 x 70	12
T2171	220 x 130 x 95	12

WEATHER PROOF ENCLOSURES



These industrial grade Polycarbonate boxes are suited for outside applications. Made of UV resistant plastic, these enclosures can be an excellent solution for making combiner boxes for PV (Solar) applications.

Technical Details :

Material	Polycarbonate
Colour	Grey
Screw	Zinc Plated and Chromate passivated
Gasket	Silicon Rubber EPDM
Lid	Grey Colour / Transparent
Standard	IEC 670, CEI 23-48
Protection Class	IP 66 / IP 67
Approvals	CE

Grey Screwed Lid / High Top Grey Screw Lid

Cat. No.	Internal Dimension (mm) L x W x H
BC-CGS-080806	80 x 80 x 60
BC-CGS-081107	110 x 80 x 70
BC-CGS-101007	100 x 100 x 75
BC-CGS-151507	150 x 150 x 75
BC-CGS-202010	200 x 200 x 100

Transparent Screwed Lid / High Top Transparent Screw Lid

Cat. No.	Internal Dimension (mm) L x W x H
BC-CTS-080806	80 x 80 x 60
BC-CTS-081107	110 x 80 x 70
BC-CTS-101007	100 x 100 x 75
BC-CTS-151507	150 x 150 x 75
BC-CTS-202010	200 x 200 x 100
BC-CTS-192813	280 x 190 x 130
BC-CTS-285613	560 x 280 x 130

DIN RAIL MOUNTED SWITCHES, SOCKETS & SCHUKO SOCKETS



Cat. No.	Descriptions
TSSEB16	16 A Schuko Socket for Europe
CDINS6	6 A Din Rail Mounted Socket
CDINS16	16 A Din Rail Mounted Socket
CDINSUK	16 A Din Rail Mounted Socket for UK
CDINS16	16 A Din Rail Mounted Socket for FRANCE
CDINSW1	16 A Single Pole Din Rail Mounted Switch
CDINSW2	16 A Double Pole Din Rail Mounted Switch
M1412.D	DIN Rail mounted Europe socket
M14121.FR	DIN Rail mounted French socket

ALUMINIUM ENCLOSURES



These Powder coated heavy duty aluminium die cast enclosures made with corrosion resistant alloy provides best stability and long life.

These enclosures offer IP66 level ingress protection with one piece compression moulded rubber compound gasket in neoprene or silicon.

Suitable for Indoor as well as outdoor applications.

Accessories such as mounting plates, external hinges, wall mounting brackets are available on request.

Technical Details :

Material	Aluminium Alloy
Lid Mounting Screws	Stainless Steel 304
Earthing Screws	Copper Coated Steel Screws with Integral inbuilt spring washer
Gasket	Neoprene
Colour	Silver Grey (RAL7001)
Protection Class	IP-66
Temperature Range	-40°C to +130°C
Standards	EN 60529:2001, DIN EN6059
Approvals	RoHS, REACH

Cat. No.	Outer Dimension (mm) L x W x H	MOQ
CTAL01	45 X 50 X 30 mm	5
CTAL02	64 X 58 X 34 mm	5
CTAL03	98 X 64 X 34 mm	5
CTAL04	75 X 80 X 57 mm	5
CTAL05	125 X 80 X 57 mm	5
CTAL06	175 X 80 X 57 mm	5
CTAL07	250 X 80 X 57 mm	5
CTAL08	100 X 100 X 81 mm	5
CTAL09	120 X 122 X 81 mm	5
CTAL10	120 X 122 X 91 mm	5
CTAL11	140 X 140 X 91 mm	5
CTAL12	160 X 160 X 91 mm	5
CTAL13	180 X 180 X 101 mm	5
CTAL15	220 X 120 X 81 mm	5
CTAL16	220 X 120 X 91 mm	5
CTAL17	260 X 160 X 91 mm	5
CTAL19	400 X 230 X 180 mm	5

IP 67 EMPTY COMBINATION BOXES FOR INDUSTRIAL PLUG & SOCKETS



These combination boxes are an ideal choice for combining Industrial Plugs & Sockets (CEE Connectors) & miniature circuit breakers. Various multi pin sockets can be mounted on the front of the box. This in conjunction with the circuit breakers provide an easy solution for mobile power outlet boxes typically required on off site locations as well as factory shop floors.

Cat. No.	Internal Dimension (mm) H x W	Ingress Protection	Type of Modules
M960.10121	340 x 440 x 177	IP 65	14 MCB

DISTRIBUTION BOARDS



These enclosures are used for creating power distribution circuits. Various options are available based on the number of miniature circuit breakers (MCBs), that can be installed inside in an array. Most of these enclosures have hinged lids for easy access to the MCBs installed inside.

Cat. No.	Internal Dimension (mm) H x W	Ingress Protection	Type of Modules	Description
M91.04	100 x 135 x 85	IP 40	2/4 Module	Without Hinged Lid
M91.08	200 x 155 x 90	IP 40	4/8 Module	Without Hinged Lid
M92.04	120 x 160 x 90	IP 65	3/5 Module	With Smoked Hinged Lid
M92.08	200 x 160 x 90	IP 65	4/8 Module	With Smoked Hinged Lid
M92.12	250 x 200 x 110	IP 65	6/12 Module	With Smoked Hinged Lid

DESIGN-A-FLANGE



The Design – A – Flange system is a new and unique concept in which you can have the ease of choosing from a combination of frames and modular inserts to create your very own customized flange for control panels and junction boxes.

The Fiberglass re-enforced Polypropylene Inserts are very rigid and carry soft TPE, push-out membrane seals of various sizes good enough to accommodate wire sizes ranging from 4 mm to 50 mm dia. The push out membranes ensure that an IP65 grade protection level is achieved.

Frames are available in two sizes FL21 and FL13 which can accommodate a combination of inserts. Once the inserts are assembled together and inserted into the frame they lock on to the frame and to each other ensuring that a very rigid patented Flange system is created with IP 65 grade protection.

Material	Fiberglass re-inforced Polypropylene and TPE Halogen Free UL listed materials
Colour	RAL 7035 (Light Grey)
Protection Class	IP 65
Temperature Range	-20°C to +125°C
Test Standards	EN 60529:1991+A1, EN 60670-1:2005

INSERTS FOR FL21 FRAME

Inserts 68 x 68			
FL21/68/M25/M16	FL21/68/KO	FL21/68/714	FL21/68/2030/1020
2 x M25 8-17 mm 2 x M16 5-10 mm	KNOCK OUT M32 M40 M50	9 x 7-14 mm	2 x 20-30 mm 2 x 10-20 mm

Inserts 68 x 34		
FL21/34/817	FL21/34/M20	FL21/34/410
2 x 8-17 mm	2 x M20 6-13 mm	10 x 4-10 mm

INSERTS FOR FL13 FRAME

Inserts 34 x 68			Inserts 34 x 34	
FL13/68/817	FL13/68/M20	FL13/68/410	FL13/34/M20	
2 x 8-17 mm	2 x M20 6-13 mm	10 x 4-10 mm	1 x M20	6-13 mm



Frame Cat. No. & Dimensions			
Cat. No.	L1	L2	H
FL 21	214	90	9
FL 13	134	52	6.5

Combination of Inserts that can be used with Frames					
Combinations		A	B	C	Representative Drawing
FL 21	68 x 68	2	1	-	
	68 x 34	1	3	5	
FL 13	34 x 68	1	-	-	
	34 x 34	1	3	-	

ROBO-KIT



CABLE PROTECTION SYSTEM FOR ROBOTS: ROBO-KIT

ROBO-KIT is a specially designed cable protection system for robots. The system allows for friction and interference free movement of cables connected to the robots. This system if used, allows for free movement of the robot while substantially enhancing the life of the cables.

The system consists of various components (shown below) which are assembled together to provide various different types of joints and terminations for the handling of the data and power cables of the robot as shown in figures 1, 2 & 3.

Product	Description / Part No.	Conduit Size	Width	Height	Length	Outside Diameter
	Abrasions Protector RKTP	22	28	46.4	-	46.4
		28	30	53		53
		36	30	62		62
		48	30	80		80
		56	40	93.2		93.2
		70	40	108		108
		95	45	131.5		131.5
	Connection Ring RKTC	48	50	78	-	78
		56	60	90.2		90.2
		70	60	105		105
		95	65	128.5		128.5
	Clamp RKC	22	30	50	49	45
		28	30	59.5	58.8	53.5
		36	45	88.3	90.2	76
		48	49.5	105	128.2	98
		56	40	138.1	150.1	116.2
		70	40	145.5	164.9	131
		95	50	169.3	190.9	154.5
	Tube Ball Joint RKS	22	50	23	23	23
		28	60	27	27	27
		36	100.3	80.5	80.5	80.5
		48	89	92.3	92.3	92.3
		56	102	105.3	105.3	105.3
		70	102	120.1	120.1	120.1
		95	120	144.2	144.2	144.2
	Tube Ball Joint Sleeve RKD	22	50	23	23	23
		28	60	27	27	27
		36	120	83	83	83
	Strain Relief Insert RKSC	22	10.5	29.5	-	29.5
		28	13	34.5		34.5
		36	20.6	44.6		44.6
		48	22	67.5		67.5
		56	26	81.2		81.2
		70	26	96		96
		95	35	119.5		119.5
	Rotating Connector RKR	22	56	25.7	-	56
		28	56	25.7		56
		36	98	42		98
		48	98	42		98
		56	98	42		98
		70	98	42		98
		95	120	37		120
	Cable manager VCG	22	10.5	25.5	-	25.5
		28	13	30.5		30.5
		36	20.6	40.6		40.6
		48	24	62.5		62.5
		56	34	75.8		75.8
		70	34	90		90
		95	43	113.5		113.5
	Conduits	PAR-22B/G	Inner Dia (mm)	21.7	External Dia (mm)	28.5
		PAR-28B/G		27.8		34.5
		PAR-36B/G		36		42.5
		PAR-48B/G		46.5		54.5
		PAR-56B/G		56.3		67.2
		PAR-70B/G		70		82.5
		PAR-95B/G		91.5		106



FLOATING & MULTIWAY STRIP CONNECTORS



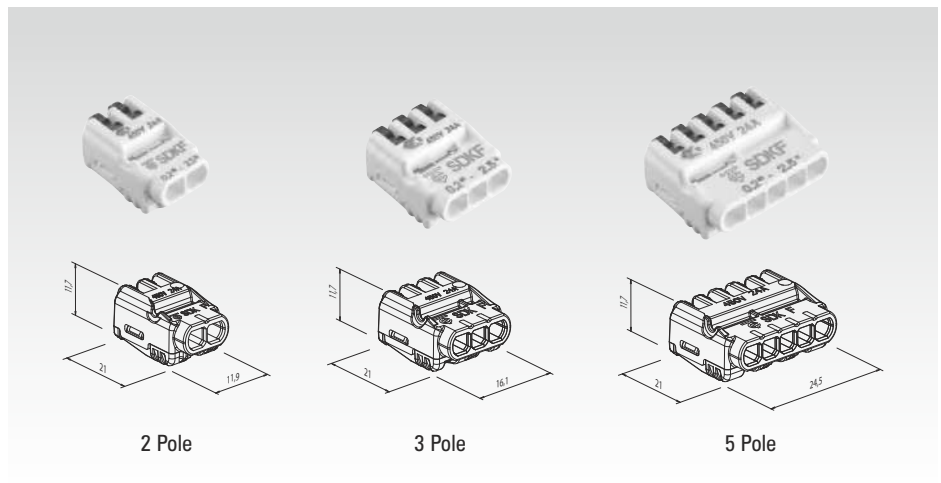
FREE FLOATING CONNECTORS

These connectors are a preferred choice for distribution application in small & confined spaces. This connector has unique "PUSH IN" technology for clamping solid wires or wires with crimped lugs/ferrules.

No tools are required for connecting the wires which make these free floating connectors an ideal solution for small junction boxes & luminaries.

Salient Features of SDKF Connectors

- > Multiple wires can be connected in one single Terminal
- > High Pull-out Force
- > Connection of Solid wires or wires with crimped lugs / ferrules without activating the lever using PUSH IN technology
- > Greater Safety during installations due to viewing window for visual inspection of clamping points.



Standard Colour	White
Wire Clamping Range Stranded / Solid	0.2 - 2.5 mm ²
Wire Stripping Length	9 mm
Nominal Voltage	450 V
Rated Current	24 A
Housing Material	Polycarbonate
Insert Material	Copper
Spring Material	Stainless Steel
Max. Ambient Temperature	85° C
Approvals	CE VDE UL

Ordering Information	Type / Cat. No.	No. of Poles	Dimensions in mm (LxWxH)	Std. Pack
	SDKF2	2 Pole	11.9 x 21.1 x 11.7	100
	SDKF3	3 Pole	16.1 x 21.1 x 11.7	75
	SDKF5	5 Pole	24.5 x 21.1 x 11.7	50



Wire Stripping Length Gauge is available on the top of connector



For Flexible Wire Open the lever and Close when wire is inserted



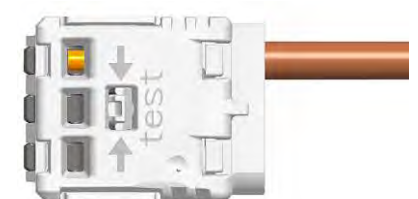
For solid wire it is not required to open the Lever before inserting the wire



Free Floating connectors suitable for smaller size Junction Boxes



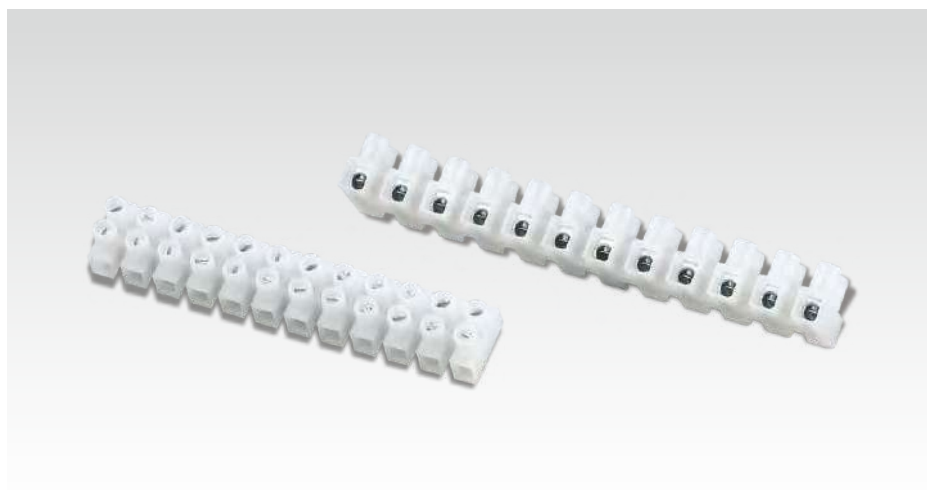
Test point available for checking the Current & Voltage using standard Probes



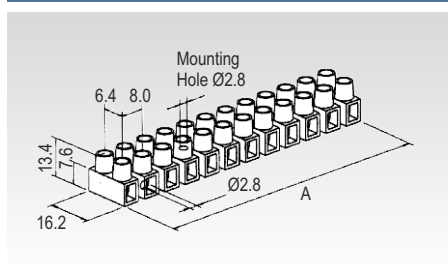
Viewing window to ensure the wire is correctly inserted inside the connector

MULTIWAY STRIP CONNECTORS

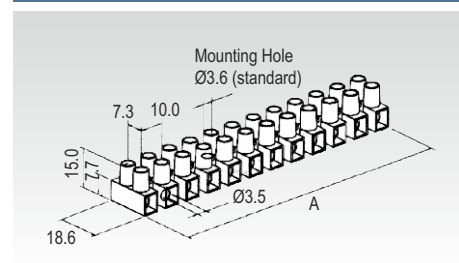
These strip connectors feature tubular screw clamps and wire protectors which are actuated by a screw. They are available in 2.5, 4, 6 & 16 sq.mm. sizes. They are compact & ideal for small spaces. They can be used as free floating connectors or as panel mounted terminal blocks. Available in standard 12-pole strips these can be easily cut into combinations of smaller number of poles. Controlwell also offers pre-cut strips of any number of poles less than 12.



MW2NP / MW2P



MW4NP / MW4P

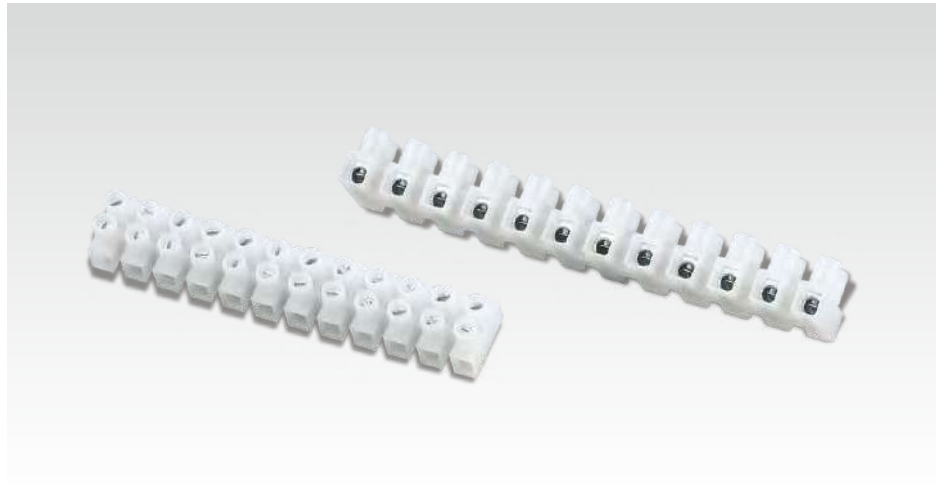


Width x Height		16.2 x 13.4 mm	18.6 x 15 mm
Wire Clamping Range	With Wire Protector Without Wire Protector	0.5 - 2.5 mm ² 0.5 - 4 mm ² (Rigid Wire)	0.5 - 4 mm ² 0.5 - 6 mm ² (Rigid Wire)
Wire Stripping Length		5 mm	6 mm
Nominal Voltage		450 V	450 V
Rated Current	With Wire Protector Without Wire Protector	24 A 32 A	32 A 41 A
Recommended Tightening Torque		0.4 Nm	0.5 Nm
Housing Material		Polyamide 66 / UL94V0	Polyamide 66 / UL94V0
Insert Material		Galvanized Brass	Galvanized Brass
Screw Material & Size		Galvanized Steel M2.6	Galvanized Steel M3
Max. Ambient Temperature	If Used in 1 to 5 Pole configuration If Used in 6 to 12 Pole configuration	110° C 85° C	110° C 85° C
Approvals		CE  	CE  

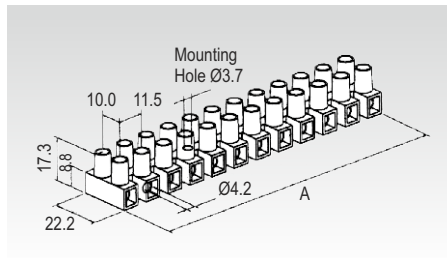
Ordering Information	Without Wire Protector		With Wire Protector		Length A	Without Wire Protector		With Wire Protector		Length A
	Cat. No.	Std. Pkg.	Cat. No.	Std. Pkg.		Cat. No.	Std. Pkg.	Cat. No.	Std. Pkg.	
2 Pole	MW2NP02	300	MW2P02	300	13.6	MW4NP02	150	MW4P02	150	16.3
3 Pole	MW2NP03	200	MW2P03	200	21.6	MW4NP03	100	MW4P03	100	26.3
4 Pole	MW2NP04	150	MW2P04	150	29.6	MW4NP04	75	MW4P04	75	36.4
6 Pole	MW2NP06	100	MW2P06	100	45.6	MW4NP06	50	MW4P06	50	58.5
9 Pole	MW2NP09	100	MW2P09	100	61.2	MW4NP09	50	MW4P09	50	73.35
12 Pole	MW2NP12	50	MW2P12	50	93.6	MW4NP12	25	MW4P12	25	117.0

MULTIWAY STRIP CONNECTORS

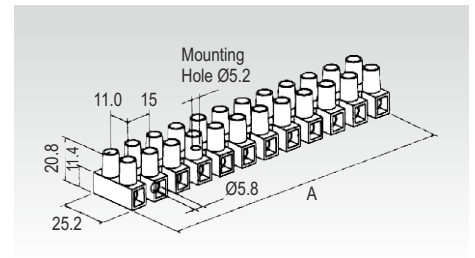
These strip connectors feature tubular screw clamps and wire protectors which are actuated by a screw. They are available in 2.5, 4, 6 & 16 sq.mm. sizes. They are compact & ideal for small spaces. They can be used as free floating connectors or as panel mounted terminal blocks. Available in standard 12-pole strips these can be easily cut into combinations of smaller number of poles. Controlwell also offers pre-cut strips of any number of poles less than 12.



MW6NP / MW6P



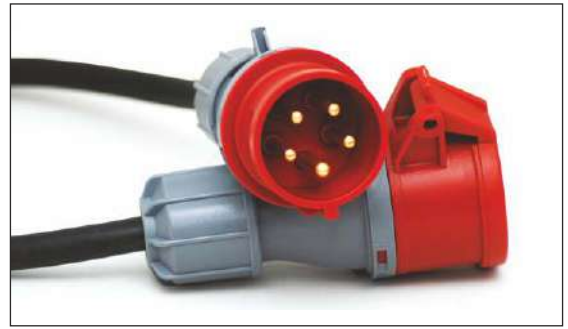
MW16NP / MW16P



Width x Height		22.2 x 17.3 mm	25.2 x 20.6 mm
Wire Clamping Range	With Wire Protector	0.5 - 6 mm ²	6 - 10 mm ²
	Without Wire Protector	0.5 - 10 mm ² (Rigid Wire)	6 - 16 mm ² (Rigid Wire)
Wire Stripping Length		7.5 mm	8.5 mm
Nominal Voltage		450 V	450 V
Rated Current	With Wire Protector	41 A	57 A
	Without Wire Protector	57 A	76 A
Recommended Tightening Torque		0.8 Nm	1.2 Nm
Housing Material		Polyamide 66 / UL94V0	Polyamide 66 / UL94V0
Insert Material		Galvanized Brass	Galvanized Brass
Screw Material & Size		Galvanized Steel M3.5	Galvanized Steel M4
Max. Ambient Temperature	If Used in 1 to 5 Pole configuration	110° C	110° C
	If Used in 6 to 12 Pole configuration	85° C	110° C
Approvals		CE  	CE  

Ordering Information	Without Wire Protector		With Wire Protector		Length A	Without Wire Protector		With Wire Protector		Length A
	Cat. No.	Std. Pkg.	Cat. No.	Std. Pkg.		Cat. No.	Std. Pkg.	Cat. No.	Std. Pkg.	
2 Pole	MW6NP02	150	MW6P02	150	18.7	MW16NP02	150	MW16P02	150	23.78
3 Pole	MW6NP03	100	MW6P03	100	30.1	MW16NP03	100	MW16P03	100	39.8
4 Pole	MW6NP04	75	MW6P04	75	41.5	MW16NP04	75	MW16P04	75	47.56
6 Pole	MW6NP06	50	MW6P06	50	66.3	MW16NP06	50	MW16P06	50	86.95
9 Pole	MW6NP09	50	MW6P09	50	84.15	MW16NP09	50	MW16P09	50	107.01
12 Pole	MW6NP12	25	MW6P12	25	132.7	MW16NP12	25	MW16P12	25	173.9
						MW16NP12 B	25	MW16P12 B	25	173.9

INDUSTRIAL PLUGS & SOCKETS (CEE CONNECTORS)



Industrial Plugs and Sockets from Controlwell provide a versatile and robust connection system for industrial field and factory connection applications. These Plugs and Sockets are designed and manufactured as per IEC 60309-1 and IEC 60309-2 standards and are compliant with the CEE system ensuring that they are 100% cross compatible with products from other manufacturers.

Controlwell Industrial Plugs & Sockets (CEE Connectors) confirm to European norms. These Industrial Plugs & Sockets are CE marked and are RoHS compliant.

The housings of these Industrial Plugs and Sockets are made of halogen free, V0 grade Polyamide 6 material and hence are non-flammable with a very high impact resistance.

The contacts are made from electroplated copper alloy offering high corrosion resistance and very low contact resistance ($<1\text{m}\Omega$). By virtue of their design these Industrial Plugs and Sockets enable low insertion and extraction forces while maintaining excellent electrical contact.

These Plugs & Sockets are available in a choice of IP 44 & IP 67 class of Protection ensuring that your connections always get the optimum level of protection.

They are available in 3, 4 & 5 pin configurations with rated current capacity of upto 125 A.

Position of Earthing Contact and colour coding in CEE system

Controlwell Industrial Plugs & Sockets adhere to the CEE system in which the position of the earthing contact is determined by an 'hour position' based on the number of pins and the voltage rating of the product. Examples of such an 'hour position' are shown in fig. 1.

Red colour indicates a voltage range of **380 to 480 volts**.

Blue colour indicates a voltage range of **200 to 250 volts**.

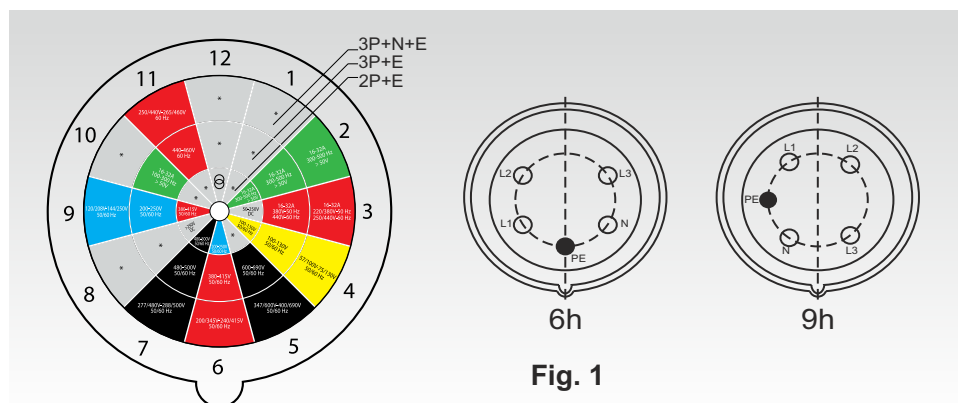


Fig. 1

Product Specifications

Housing & Contact Carrier

Material	Halogen Free Polyamide 6 Plastic Material
Insulation	$>5^{10}\Omega$
Flammability Grade	V0
Environmental Compliance	RoHS
Ingress Protection	IP44 and IP67
Glow wire tested at 850° C	

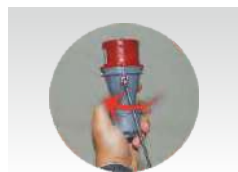
Contacts

Material	Copper Zinc Alloy (MS 58)	
Contact Resistance	$<1\text{m}\Omega$	
Connection Type	Screw Connection	
Suitable Wire Cross Section	Stranded	Solid
16 A	4 mm ²	6 mm ²
32 A	6 mm ²	10 mm ²
63 A	16 mm ²	25 mm ²
125 A	50 mm ²	70 mm ²

Product Features

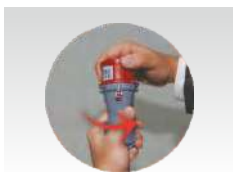
Connectwell Industrial Plugs & Sockets are carefully designed to ensure superb ergonomics, ease of assembly and superior performance.

The screwless locking system of Connectwell Industrial Plugs & Sockets provides a 1 -2 -3 step locking and unlocking of the contact carrier from the housing.



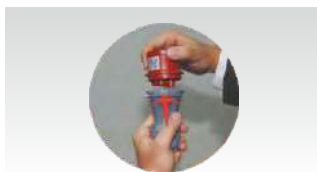
1

The locking system is easily released by inserting screwdriver and turning it counter clockwise.



2

The contact carrier is separated from the main housing by simply turning it counter clockwise.

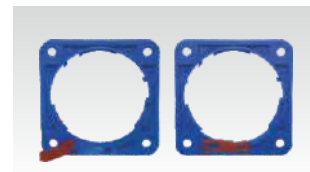


3

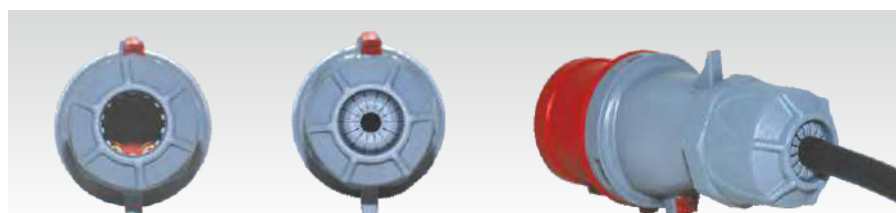
After cable connection, contact carrier is placed according to the position indicator, sealed by turning is clockwise and locked by turning the locking system clockwise with a screwdriver.



The contact carriers are provided with captive screws ensuring that the screws do not fall off when they are loosened.



The unique locking system on the base plates provides an easy and secure connection to the contact carrier.



The inbuilt cable gland system ensures that cables various sizes can be easily accommodated while providing superior strain relief to the contacts.



FEMALE CONNECTORS

These connectors act as floating female connectors and can be mated with either male plugs or male inlets. Controlwell connectors offer a wide internal space for terminating wires into contacts. The female connector housing is provided with a cable gland to sustain the IP protection grade after insertion of cable.

FEMALE CONNECTORS												
		3 PIN			4 PIN				5 PIN			
IP 67	Cat. No.	CS3166	CS3326	CS3636	CS4166	CS4326	CS4636	CS41256	CS5166	CS5326	CS5636	CS51256
	Current Rating (A)	16	32	63	16	32	63	125	16	32	63	125
	Voltage (V)	230	230	230	400	400	400	400	400	400	400	400
IP 44	Cat. No.	CS3164	CS3324	CS3634	CS4164	CS4324	CS4634	-	CS5164	CS5324	CS5634	-
	Current Rating (A)	16	32	63	16	32	63	-	16	32	63	-
	Voltage (V)	230	230	230	400	400	400	-	400	400	400	-



PLUGS

These plugs act as floating male connectors and can be mated with either female connectors or female socket outlets. Connectwell Plugs offer a wide internal space for terminating wires into contacts. The male plug housing is provided with a cable gland to sustain the IP protection grade after insertion of cable.

PLUGS												
		3 PIN			4 PIN				5 PIN			
IP 67	Cat. No.	CP3166	CP3326	CP3636	CP4166	CP4326	CP4636	CP41256	CP5166	CP5326	CP5636	CP51256
	Current Rating (A)	16	32	63	16	32	63	125	16	32	63	125
	Voltage (V)	230	230	230	400	400	400	400	400	400	400	400
IP 44	Cat. No.	CP3164	CP3324	CP3634	CP4164	CP4324	CP4634	-	CP5164	CP5324	CP5634	-
	Current Rating (A)	16	32	63	16	32	63	-	16	32	63	-
	Voltage (V)	230	230	230	400	400	400	-	400	400	400	-



PANEL MOUNTING STRAIGHT SOCKETS

These sockets act as fixed female connectors and can be mated with male plugs. Connectwell straight sockets are suitable for mounting onto panels which have a 'recess' behind them. The straight sockets ensure that on mating the plugs remain perpendicular to the panel surface.

PANEL MOUNTING STRAIGHT SOCKETS

		3 PIN			4 PIN				5 PIN			
IP 67	Cat. No.	CPSS	CPSS	CPSS	CPSS	CPSS	CPSS	CPSS	CPSS	CPSS	CPSS	CPSS
		31667	33267	36368	41667	43267	46368	412568	51667	53268	56368	512568
	Current Rating (A)	16	32	63	16	32	63	125	16	32	63	125
	Voltage (V)	230	230	230	400	400	400	400	400	400	400	400
IP 44	Cat. No.	CPSS	CPSS	CPSS	CPSS	CPSS	CPSS	-	CPSS	CPSS	CPSS	-
		31647	33247	36347	41647	43247	46347	-	51647	53248	56348	-
	Current Rating (A)	16	32	63	16	32	63	-	16	32	63	-
	Voltage (V)	230	230	230	400	400	400	-	400	400	400	-



PANEL MOUNTING INCLINED SOCKETS

These sockets act as fixed female connectors and can be mated with male plugs. Connectwell inclined sockets are suitable for mounting onto panels which have a 'recess' behind them. The inclined sockets ensure that on mating the plugs remain at an angle to the panel surface thereby reducing the total space required for installation.

PANEL MOUNTING INCLINED SOCKETS

		3 PIN			4 PIN				5 PIN			
IP 67	Cat. No.	CPSA	CPSA	CPSA	CPSA	CPSA	CPSA	CPSA	CPSA	CPSA	CPSA	CPSA
		31668	33268	36368	41668	43268	46368	412568	51668	53268	56368	512568
	Current Rating (A)	16	32	63	16	32	63	125	16	32	63	125
	Voltage (V)	230	230	230	400	400	400	400	400	400	400	400
IP 44	Cat. No.	CPSA	CPSA	CPSA	CPSA	CPSA	CPSA	-	CPSA	CPSA	CPSA	-
		31648	33248	36348	41648	43248	46348	-	51648	53248	56348	-
	Current Rating (A)	16	32	63	16	32	63	-	16	32	63	-
	Voltage (V)	230	230	230	400	400	400	-	400	400	400	-



SURFACE MOUNTING SOCKETS

These sockets act as fixed female connectors and can be mated with male plugs. Connectwell surface mounting sockets are suitable for mounting onto surfaces which do not have a 'recess' behind them. The surface mounting sockets ensure that on mating the plugs remain at an angle to the surface thereby reducing the total space required for installation. The surface mount housing is provided with a nipple to sustain the IP protection grade after insertion of cable.

SURFACE MOUNTING SOCKETS

		3 PIN			4 PIN				5 PIN			
IP 67	Cat. No.	CSS	CSS	CSS	CSS	CSS	CSS	CSS	CSS	CSS	CSS	CSS
		31667	33267	36368	41667	43267	46368	412568	51667	53268	56368	512568
	Current Rating (A)	16	32	63	16	32	63	125	16	32	63	125
	Voltage (V)	230	230	230	400	400	400	400	400	400	400	400
IP 44	Cat. No.	CSS	CSS	CSS	CSS	CSS	CSS	-	CSS	CSS	CSS	-
		31647	33247	36347	41647	43247	46347	-	51647	53248	56348	-
	Current Rating (A)	16	32	63	16	32	63	-	16	32	63	-
	Voltage (V)	230	230	230	400	400	400	-	400	400	400	-



PANEL MOUNTING STRAIGHT INLET

These inlets act as fixed male connectors and can be mated with female connectors. Connectwell straight inlets are suitable for mounting onto panels which have a 'recess' behind them. The straight inlets ensure that on mating the plugs remain perpendicular to the panel surface.

PANEL MOUNTING STRAIGHT INLET

		3 PIN			4 PIN				5 PIN			
IP 67	Cat. No.	CPIS	CPIS	CPIS	CPIS	CPIS	CPIS	CPIS	CPIS	CPIS	CPIS	CPIS
		31667	33268	36368	41667	43268	46368	412568	51668	53268	56368	512568
	Current Rating (A)	16	32	63	16	32	63	125	16	32	63	125
IP 44	Voltage (V)	230	230	230	400	400	400	400	400	400	400	400
	Cat. No.	CPIS	CPIS	CPIS	CPIS	CPIS	CPIS	-	CPIS	CPIS	CPIS	-
		31647	33247	36347	41647	43247	46347	-	51647	53248	56348	-
IP 44	Current Rating (A)	16	32	63	16	32	63	-	16	32	63	-
	Voltage (V)	230	230	230	400	400	400	-	400	400	400	-



PANEL MOUNTING INCLINED INLET

These inlets act as fixed male connectors and can be mated with female connectors. Connectwell inclined inlets are suitable for mounting onto panels which have a 'recess' behind them. The inclined inlets ensure that on mating the plugs remain at an angle to the panel surface thereby reducing the total space required for installation.

PANEL MOUNTING INCLINED INLET

		3 PIN			4 PIN				5 PIN			
IP 67	Cat. No.	CPIA	CPIA	CPIA	CPIA	CPIA	CPIA	CPIA	CPIA	CPIA	CPIA	CPIA
		31668	33268	36368	41668	43268	46368	412568	51668	53268	56368	512568
	Current Rating (A)	16	32	63	16	32	63	125	16	32	63	125
IP 44	Voltage (V)	230	230	230	400	400	400	400	400	400	400	400
	Cat. No.	CPIA	CPIA	CPIA	CPIA	CPIA	CPIA	-	CPIA	CPIA	CPIA	-
		31648	33248	36348	41648	43248	46348	-	51648	53248	56348	-
IP 44	Current Rating (A)	16	32	63	16	32	63	-	16	32	63	-
	Voltage (V)	230	230	230	400	400	400	-	400	400	400	-



SURFACE MOUNTING INLET

These inlets act as fixed male connectors and can be mated with female connectors. Connectwell surface mounting inlets are suitable for mounting onto surfaces which do not have a 'recess' behind them. The surface mounting inlets ensure that on mating the connectors remain at an angle to the surface thereby reducing the total space required for installation. The surface mount housing is provided with a nipple to sustain the IP protection grade after insertion of cable.

SURFACE MOUNTING INLET

		3 PIN			4 PIN				5 PIN			
IP 67	Cat. No.	CSI	CSI	CSI	CSI	CSI	CSI	CSI	CSI	CSI	CSI	CSI
		31667	33268	36368	41667	43268	46368	412568	51668	53268	56368	512568
	Current Rating (A)	16	32	63	16	32	63	125	16	32	63	125
IP 44	Voltage (V)	230	230	230	400	400	400	400	400	400	400	400
	Cat. No.	CSI	CSI	CSI	CSI	CSI	CSI	-	CSI	CSI	CSI	-
		31647	33247	36348	41647	43247	46348	-	51647	53248	56348	-
IP 44	Current Rating (A)	16	32	63	16	32	63	-	16	32	63	-
	Voltage (V)	230	230	230	400	400	400	-	400	400	400	-

TIME TO SPEED UP YOUR INDUSTRIAL CONNECTIONS

A modern day field wiring requires quick & easy wiring methodologies. Controlwell's range of Heavy Duty Industrial Connectors facilitate just that.

Once the wires are terminated into the male & female inserts made of polycarbonate material and housed in their respective enclosures, these connectors are ready for Plug N' Play applications.

To ensure ruggedness of these connections along with speed, the inserts are housed in epoxy-polyester powder coated, aluminum die casted enclosures with single or double locking systems.

With ratings upto 80 A, 500 V and IP65 environmental protection, these Heavy Duty Industrial Connectors help in various field wiring applications.

Additional Features:

- Fully Captive Screws
- Monoblock metal levers for prolonged life without damage.
- Riveted pegs in stainless steel to prevent corrosion.
- Innovative design of enclosures for improved aesthetics and functionality.
- Fully cross compatible with other makes.
- UL, CSA and CE Mark approved electrical inserts
- RoHS compliant

HEAVY DUTY CONNECTORS

FOR LIGHTENING QUICK INDUSTRIAL CONNECTIONS



GENERAL SPECIFICATIONS FOR MULTIPOLE INDUSTRIAL CONNECTORS

INSERTS:

- Made from self-extinguishing glass fibre reinforced thermoplastic resin UL 94 V0, GMT 960°.
- Temperature range from -40° C to +125° C.
- Silver plated brass contacts to ensure low contact resistance.
- The screw terminals are provided with captive screws in stainless steel to prevent corrosion.
- Contact number (pin) marking by laser printing or moulding.
- Suitable for use with alternate or direct current
- Polarized by provision of asymmetric guide rails hence preventing incorrect mating.
- Inter changeability for male and female inserts in hoods and housing
- Captive screws with anti-loosening washers for fitting into the enclosure.
- Rated for mechanical working life equal to or greater than 500 mating cycles.
- Connection technologies possible include : screw terminals, crimp terminals and screw terminals housed in terminal blocks.
- Manufactured in conformity with EN 61984, VDE 0110, VDE 0627 standards.
- Certified and identified with UL, CSA & CE Marking.

TYPES OF CONDUCTOR TERMINATIONS:

- Screw terminals with wire protector
- Crimp terminals
- Screw terminals with Terminal Block

ENCLOSURES:

- Available in two parts 1. Hoods 2. Housings.
- Housings available in bulk head mounting design or surface mounting design.
- Die cast aluminium alloy body with epoxy-polyester powder coated finish or self-extinguishing thermoplastic body (square type).
- High resistance to impact and mechanical stress.
- Special sealing gaskets made from anti-ageing, oil-resistant and fuel resistant vinyl nitrile elastomer
- Monoblock galvanized steel or stainless steel or self extinguishing glass filled thermoplastic material closure levers guarantee a perfect closure and sealing.
- Two types of Locking arrangements, single (with one lever) or double (with 2 levers).
- IP65 Degree of protection (EN 60529)
- Electrical connection with protective ground via contact with mounting surface.
- Available with or without spring-loaded lockable metal covers or mobile covers.
- The enclosures are provided with riveted stainless steel pegs which ensure structural stability and prevent corrosion.
- Enclosures for 500 V are provided with two tabs which ensure that inserts of 830 V rating can not be fixed into them.

CABLE GLANDS:

Cable Glands with Pg threads in nickel plated brass offer IP 65 protection.

(Can be replaced with Controlwell's range of IP 68 Standard Cable Glands with Pg or Metric threads.)

CODE PINS:

Code pins protect against incorrect mating of similar series inserts.

REMARKS:

- All of the components of Multipole Industrial Connectors are RoHS compliant in accordance with European Directive 2002/95/EC
- Connectors should not be coupled and de-coupled under electrical load.

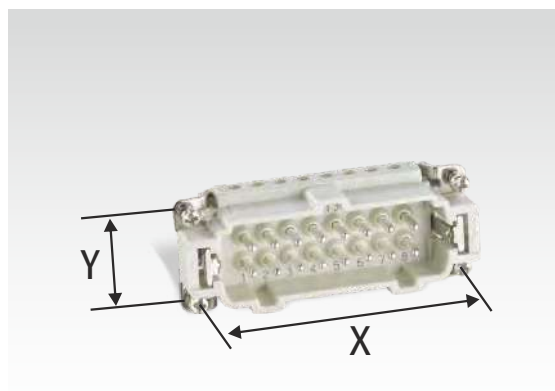
ENCLOSURE SELECTION

A large number of permutations and combinations are possible between the inserts and enclosures.

To ease the task of enclosure selection the enclosures are divided into the following types, which indicate the housing space inside them.

Enclosure Type	Housing space for inserts with screw fixing center distance x-y (mm)
3A	21 x 21 *
10A	49 x 16
16A	66 x 16
32A	66 x 40 (2 inserts)
6B	44 x 27
10B	57 x 27
16B	77 x 27
24B	104 x 27
32B	77 x 62 (2 inserts)
48B	104 x 62 (2 inserts)

* The screw fixing center distance cannot be given because this insert has only one screw.
21 x 21 indicates the size of sectioned inserts.



COMPACT SQUARE TYPE MALE INSERTS



These smaller 3A size square male inserts are available in 21 x 21 mm size and provide a most compact connection. These inserts are available from 3 pole to 12 pole configurations.

Technical Details :

Insulation Material	Polycarbonate
Contact Material	Silver-Plated Copper Alloy
Wire Size	0.5 - 2.5 sq.mm
Flammability	UL 94 V0
Temperature Range	-40° C to +125° C
Approvals	UL CE RoHS

Male Inserts

Cat. No. Male Insert	No. of Poles	Current Rating Amp	Voltage Rating Volt	Wire Size sq.mm	Connection Type
W03MT/10A3	3 + ⊕	10	230 / 400	0.5 - 2.5	Screw
W04MT/10A3	4 + ⊕	10	230 / 400	0.5 - 2.5	Screw
W05MCC/16A3	5 + ⊕	16	230 / 400	0.14 - 2.5	Crimp Contact
W07MCC/10A3/250	7 + ⊕	10	250	0.14 - 2.5	Crimp Contact
W08MCC/10A3	8	10	50	0.14 - 2.5	Crimp Contact
W12MCC/10A3	12 + ⊕	10	400	0.14 - 2.5	Crimp Contact

COMPACT SQUARE TYPE FEMALE INSERTS



These smaller 3A size square female inserts are available in 21 x 21 mm size and provide a most compact connection. These inserts are available from 3 pole to 12 pole configurations

Technical Details :

Insulation Material	Polycarbonate
Contact Material	Silver-Plated Copper Alloy
Wire Size	0.5 - 2.5 sq.mm
Flammability	UL 94 V0
Temperature Range	-40° C to +125° C
Approvals	UL CE RoHS

Female Inserts

Cat. No. Female Insert	No. of Poles	Current Rating Amp	Voltage Rating Volt	Wire Size sq.mm	Connection Type
W03FT/10A3	3 + ⊕	10	230 / 400	0.5 - 2.5	Screw
W04FT/10A3	4 + ⊕	10	230 / 400	0.5 - 2.5	Screw
W05FCC/16A3	5 + ⊕	16	230 / 400	0.14 - 2.5	Crimp Contact
W07FCC/10A3/250	7 + ⊕	10	250	0.14 - 2.5	Crimp Contact
W08FCC/10A3	8	10	50	0.14 - 2.5	Crimp Contact
W12FCC/10A3	12 + ⊕	10	400	0.14 - 2.5	Crimp Contact

COMPACT SQUARE TYPE HOODS



These hoods are suitable for housing compact square type male or female inserts. They are available with options of top wire entry, side wire entry and top wire entry with lever for cable to cable connection.

Technical Details :

Material	Die cast Alluminium alloy Thermoplastic- Polyamide
Protection Class	IP 65
Voltage	For Inserts upto 500V
Thread	Pg, Metric
Gasket	Vinyl Nitrite Elastomer (NBR)
Size of Enclosure	3A / 21 x 21

Cat. No. Plastic	Cat. No. Metal	Cable Gland Size	Type of Wire Entry
W03/4CTPP11	W03/4CTMP11	Pg 11	Top
W03/4CSPP11	W03/4CSMP11	Pg 11	Side
W03/4CTPLP11	W03/4CTMLP11	Pg 11	Top Entry with Lever
W03/4CTPM20	W03/4CTMM20	M 20 X 1.5	Top
W03/4CSPM20	W03/4CSMM20	M 20 X 1.5	Side
W03/4CTPLM20	W03/4CTMLM20	M 20 X 1.5	Top Entry with Lever

COMPACT SQUARE TYPE SURFACE MOUNT HOUSINGS

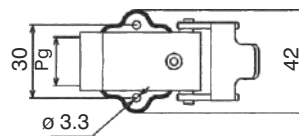


These surface mount housings are suitable for housing compact square type male or female inserts. They are available with side wire entry option only.

Technical Details :

Material	Die cast Alluminium alloy Thermoplastic- Polyamide
Protection Class	IP 65
Voltage	For Inserts upto 500V
Thread	Pg, Metric
Gasket	Vinyl Nitrite Elastomer (NBR)
Size of Enclosure	3A / 21 x 21

Dimensions (mm)



Cat. No. Plastic	Cat. No. Metal	Cable Gland Size
W03/4HSPP11	W03/4HSMP11	Pg 11
W03/4HSMP20	W03/4HSMM20	M 20 x 1.5

COMPACT SQUARE TYPE BULK HEAD MOUNT HOUSINGS

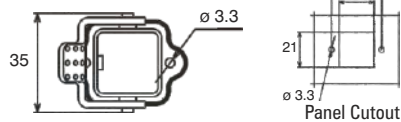


These bulk head mounting type straight housings are suitable for hoods which are connected perpendicular to the mounting surface. They can house male or female compact square type inserts.

Technical Details :

Material	Die cast Alluminium alloy Thermoplastic- Polyamide
Protection Class	IP 65
Voltage	For Inserts upto 500V
Gasket	Vinyl Nitrite Elastomer (NBR)
Size of Enclosure	3A / 21 x 21

Dimensions (mm)



Cat. No. Plastic

W03/4HBSP

Cat. No. Metal

W03/4HBSM

COMPACT SQUARE TYPE BULK HEAD MOUNT RIGHT ANGLED HOUSINGS

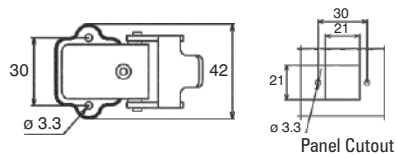


These bulk head mounting type right angled housings are suitable for hoods which are connected parallel to the mounting surface. They can house male or female compact square type inserts.

Technical Details :

Material	Die cast Alluminium alloy Thermoplastic- Polyamide
Protection Class	IP 65
Voltage	For Inserts upto 500V
Gasket	Vinyl Nitrite Elastomer (NBR)
Size of Enclosure	3A / 21 x 21

Dimensions (mm)



Cat. No. Plastic

W03/4HBRP

Cat. No. Metal

W03/4HBRM

SCREW TERMINAL TYPE RECTANGULAR MALE AND FEMALE INSERTS



Male



Female

These inserts are available from 4 to 48 poles. These are polarized to prevent incorrect coupling between the male and the female inserts. The screw terminals are provided with wire protectors to prevent damage to the conductors.

Technical Details :

Insulation Material	Polycarbonate
Contact Material	Silver Plated Copper Alloy
Flammability	UL 94 V0
Temperature Range	-40° C to +125° C
Approvals	UL CE RoHS CCC

Male Inserts

Cat. No.	No. of Poles + ⊕	Current Rating Amp		Voltage Rating Volt		Wire Size sq.mm		Enclosure Size (mm)	Suitable Enclosure Type
W04MT/80B16	4	80		500		1.5 - 16.0		77 x 27	16B
W06MT/16B6	6	16		500		0.5 - 4.0		44 x 27	6B
W06MT/35B16	6	35		830		1.5 - 6.0		77 x 27	16B
W10MT/16A10	10	16		250		0.5 - 4.0		49 x 16	10A
W10MT/16B10	10	16		500		0.5 - 4.0		57 x 27	10B
W16MT/16A16	16	16		250		0.5 - 4.0		66 x 16	16A
W16MT/16B16	16	16		500		0.5 - 4.0		77 x 27	16B
W24MT/16B24	24	16		500		0.5 - 4.0		104 x 27	24B
W32MT/16B32	32	16		500		0.5 - 4.0		77 x 62	32B
W48MT/16B48	48	16		500		0.5 - 4.0		104 x 62	48B
W4/2MT/(80/16)B16	6 (4+2)	Pins 1-4	Pins 5-6	Pins 1-4	Pins 5-6	Pins 1-4	Pins 5-6	77 x 27	16B
		80	16	500	830	1.5 - 16.0	0.5 - 4.0		
W4/8MT/(80/16)B24	12 (4+8)	Pins 1-4	Pins 5-12	Pins 1-4	Pins 5-12	Pins 1-4	Pins 5-12	104 x 27	24B
		80	16	500	830	1.5 - 16.0	0.5 - 4.0		

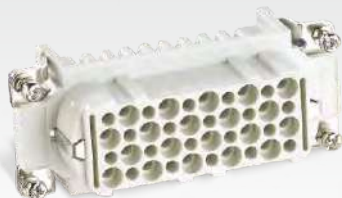
Female Inserts

Cat. No.	No. of Poles + ⊕	Current Rating Amp		Voltage Rating Volt		Wire Size sq.mm		Enclosure Size (mm)	Suitable Enclosure Type
W04FT/80B16	4	80		500		1.5 - 16.0		77 x 27	16B
W06FT/16B6	6	16		500		0.5 - 4.0		44 x 27	6B
W06FT/35B16	6	35		830		1.5 - 6.0		77 x 27	16B
W10FT/16A10	10	16		250		0.5 - 4.0		49 x 16	10A
W10FT/16B10	10	16		500		0.5 - 4.0		57 x 27	10B
W16FT/16A16	16	16		250		0.5 - 4.0		66 x 16	16A
W16FT/16B16	16	16		500		0.5 - 4.0		77 x 27	16B
W24FT/16B24	24	16		500		0.5 - 4.0		104 x 27	24B
W32FT/16B32	32	16		500		0.5 - 4.0		77 x 62	32B
W48FT/16B48	48	16		500		0.5 - 4.0		104 x 62	48B
W4/2FT/(80/16)B16	6 (4+2)	Pins 1-4	Pins 5-6	Pins 1-4	Pins 5-6	Pins 1-4	Pins 5-6	77 x 27	16B
		80	16	500	830	1.5 - 16.0	0.5 - 4.0		
W4/8FT/(80/16)B24	12 (4+8)	Pins 1-4	Pins 5-12	Pins 1-4	Pins 5-12	Pins 1-4	Pins 5-12	104 x 27	24B
		80	16	500	830	1.5 - 16.0	0.5 - 4.0		

RECTANGULAR MALE AND FEMALE CONTACT CARRIERS FOR CRIMP CONTACTS



Male



Female

These inserts are available from 6 to 216 poles. These are polarized to prevent incorrect coupling between the male and the female inserts. The conductors need to be crimped with appropriate female crimp contacts and then made to enter the insert where they are held in place with the help of a flexible locking device.

Technical Details :

Insulation Material	Polycarbonate
Contact Material	Silver Plated Copper Alloy
Flammability	UL 94 V0
Temperature Range	-40° C to +125° C
Approvals	UL CE

Cat. No.	No. of Poles + ⊕	Current Rating Amp	Voltage Rating Volt	Enclosure Size (mm)	Suitable Enclosure Type
W06MCC/16B6	6	16	500	44 x 27	6B
W10MCC/16B10	10	16	500	57 x 27	10B
W15MCC/10A10	15	10	250	49 x 16	10A
W24MCC/10B6	24	10	250	44 x 27	6B
W24MCC/16B24	24	16	500	104 x 27	24B
W25MCC/10A16	25	10	250	66 x 16	16A
W32MCC/16B16	32	16	500	77 x 27	16B
W40MCC/10B16	40	10	250	77 x 27	16B
W42MCC/10B10	42	10	250	57 x 27	10B
W46MCC/16B24	46	16	500	104 x 27	24B
W64MCC/10B24	64	10	250	104 x 27	24B
W72MCC/10B16	72	10	250	77 x 27	16B
W108MCC/10B24	108	10	250	104 x 27	24B
W216MCC/10B48	216	10	250	104 x 62	48B

Cat. No.	No. of Poles + ⊕	Current Rating Amp	Voltage Rating Volt	Enclosure Size (mm)	Suitable Enclosure Type
W06FCC/16B6	6	16	500	44 x 27	6B
W10FCC/16B10	10	16	500	57 x 27	10B
W15FCC/10A10	15	10	250	49 x 16	10A
W24FCC/10B6	24	10	250	44 x 27	6B
W24FCC/16B24	24	16	500	104 x 27	24B
W25FCC/10A16	25	10	250	66 x 16	16A
W32FCC/16B16	32	16	500	77 x 27	16B
W40FCC/10B16	40	10	250	77 x 27	16B
W42FCC/10B10	42	10	250	57 x 27	10B
W46FCC/16B24	46	16	500	104 x 27	24B
W64FCC/10B24	64	10	250	104 x 27	24B
W72FCC/10B16	72	10	250	77 x 27	16B
W108FCC/10B24	108	10	250	104 x 27	24B
W216FCC/10B48	216	10	250	104 x 62	48B

MALE AND FEMALE CRIMP CONTACTS FOR CONTACTS CARRIERS



**Female
Crimp Contacts**

10A

16 / 40A



**Male
Crimp Contacts**

10A

16 / 40A

These male and female crimp contacts are available in 10 Amp and 16 Amp versions. The 10 Amp crimp contacts are suitable for conductor size upto 2.5 sq.mm. and the 16 Amp crimp contact are suitable for conductor size upto 4 sq.mm.

Technical Details :

Material	Turned / Machined Copper Alloy
Surface Material	Hard Silver Hard Gold on request
Current Capacity	10 A, 16 A & 40 A

Female Crimp Contacts - Turned

Cat. No.	Current Capacity Amp	Wire Size in sq.mm	Stripping Length mm
WFCT0.5/10A	10	0.5	8
WFCT0.75/10A	10	0.75	8
WFCT1.0/10A	10	1.0	8
WFCT1.5/10A	10	1.5	8
WFCT2.50/10A	10	2.5	6
WFCT0.37/16A	16	0.37	7.5
WFCT0.5/16A	16	0.5	7.5
WFCT0.75/16A	16	0.75	7.5
WFCT1.0/16A	16	1.0	7.5
WFCT1.5/16A	16	1.5	7.5
WFCT2.5/16A	16	2.5	7.5
WFCT4.0/16A	16	4.0	7.5
WFCT6.0/40A	40	4.0	9.6

Male Crimp Contacts - Turned

Cat. No.	Current Capacity Amp	Wire Size in sq.mm	Stripping Length mm
WMCT0.5/10A	10	0.5	8
WMCT0.75/10A	10	0.75	8
WMCT1.0/10A	10	1.0	8
WMCT1.5/10A	10	1.5	8
WMCT2.50/10A	10	2.5	6
WMCT0.37/16A	16	0.37	7.5
WMCT0.5/16A	16	0.5	7.5
WMCT0.75/16A	16	0.75	7.5
WMCT1.0/16A	16	1.0	7.5
WMCT1.5/16A	16	1.5	7.5
WMCT2.5/16A	16	2.5	7.5
WMCT4.0/16A	16	4.0	7.5
WMCT6.0/40A	40	4.0	9.6

HOODS - STANDARD / HIGH CONSTRUCTION TOP ENTRY - WITH 2 PEGS / 1 LEVER



These hoods are suitable for conductors which run perpendicular to the surface on which the appropriate hood and housing are mounted. The spring loaded single locking system ensures a perfect mating between the male and the female inserts while providing them with IP 66 protection.

Technical Details :

Material	Powder Coated Die cast Alluminium alloy
Protection Class	IP 66
Voltage	For Inserts upto 500 V
Thread	Pg, Metric
Gasket	Vinyl Nitrile Elastomer (NBR)

Cat. No. For Hood with 2 Pegs	Cat. No. For Hood with 1 Lever	Enclosure Type	Enclosure Size (mm)	Cable Gland Size
W06CT1P16/B6	WR06CT1P16/B6	6B	44 x 27	Pg 16
W06CT1M20/B6	-	6B	44 x 27	M 20 x 1.5
W10CT1M20/A10	-	10A	49 x 16	M 20 x 1.5
W10CT1P16/B10	WR10CT1P16/B10	10B	57 x 27	Pg 16
W16CT1P16/A16	-	16A	66 x 16	Pg 16
W16CT1M20/A16	-	16A	66 x 16	M 20 x 1.5
W16CT1M25/A16	-	16A	66 x 16	M 25 x 1.5
W16CT1P21/B16	WR16CT1P21/B16	16B	77 x 27	Pg 21
W16CT1M25/B16	-	16B	77 x 27	M 25 x 1.5
W24CT1P21/B24	-	24B	104 x 27	Pg 21
W24CT1M25/B24	-	24B	104 x 27	M 25 x 1.5
W24CT1M32/B24	WR24CT1M32/B24	24B	104 x 27	M 32 x 1.5

Cat. No. For High Const. With Fitting	Cat. No. For High Const. Without Fitting	Enclosure Type	Enclosure Size (mm)	Cable Gland Size
W06HCT1P21/B6	-	6B	44 x 27	Pg 21
-	W16HCT1M25/A16W	16A	66 x 16	M 25 x 1.5
-	W16HCT1P29/B16W	16B	77 x 27	Pg 29
-	W16HCT1M32/B16W	16B	77 x 27	M 32 x 1.5
W16HCT1M40/B16	-	16B	77 x 27	M 40 x 1.5
W32HCT1P36/B32	-	32B	77 x 62	Pg 36
W48HCT1P36/B48	-	48B	104 x 62	Pg 36
W48HCT1M50/B48	-	48B	104 x 62	M 50 x 1.5



HOODS - STANDARD / HIGH CONSTRUCTION TOP ENTRY - WITH 4 PEGS / 2 LEVER



These hoods are suitable for conductors which run perpendicular to the surface on which the appropriate hood and housing are mounted. The spring loaded double locking system ensures a perfect mating between the male and the female inserts even if accidentally one of the locks opens up.

Technical Details :

Material	Die cast Alluminium alloy
Protection Class	IP 66
Voltage	For Inserts upto 830 V
Thread	Pg, Metric
Gasket	Vinyl Nitrile Elastomer (NBR)

Cat. No. For Hood with 4 Pegs	Cat. No. For Hood with 2 Lever	Enclosure Type	Enclosure Size (mm)	Cable Gland Size
W10CT2M20/B10	-	10B	57 x 27	M 20 x 1.5
W10CT2P16/B10	WR10CT2P16/B10	10B	57 x 27	Pg 16
W16CT2P21/B16	WR16CT2P21/B16	16B	77 x 27	Pg 21
W16CT2M25/B16	WR16CT2M25/B16	16B	77 x 27	M 25 x 1.5
W24CT2P21/B24	-	24B	104 x 27	Pg 21
W24CT2P29/B24	WR24CT2P29/B24	24B	104 x 27	Pg 29
W24CT2M32/B24	-	24B	104 x 27	M 32 x 1.5

Cat. No. For High Const. With Fitting	Cat. No. For High Const. Without Fitting	Enclosure Type	Enclosure Size (mm)	Cable Gland Size
-	W16HCT2M25X2/B16W	16B	77 x 27	2 x M25 x 1.5
W24HCT2M32/B24	-	24B	104 x 27	M 32 x 1.5
-	W24HCT2M32X2/B24W	24B	104 x 27	2 x M32 x 1.5
-	W24HCT2P29/B24W	24B	104 x 27	Pg 29
W32HCT2P29/B32	-	32B	77 x 62	Pg 29
-	W32HCT2M32/A32W	32A	66 x 40	M 32 x 1.5



HOODS - STANDARD / HIGH CONSTRUCTION SIDE ENTRY - WITH 2 PEGS



These hoods are suitable for conductors which run parallel to the surface on which the appropriate hood and housing are mounted. The spring loaded single locking system ensures a perfect mating between the male and the female inserts while providing them with IP 65 protection.

Technical Details :

Material	Die cast Alluminium alloy
Protection Class	IP 66
Voltage	For Inserts upto 500 V
Thread	Pg, Metric
Gasket	Vinyl Nitrile Elastomer (NBR)

Cat. No.	Enclosure Type	Enclosure Size (mm)	Cable Gland Size
W06CS1P16/B6	6B	44 x 27	Pg 16
W06CS1M20/B6	6B	44 x 27	M 20 x 1.5
W10CS1P16/A10	10A	49 x 16	Pg 16
W10CS1P16/B10	10B	57 x 27	Pg 16
W10CS1M25/B10	10B	57 x 27	M 25 x 1.5
W16CS1P16/A16	16A	66 x 16	Pg 16
W16CS1P21/B16	16B	77 x 27	Pg 21
W16CS1P29/B16	16B	77 x 27	Pg 29
W16CS1M20/A16	16A	66 x 16	M 20 x 1.5
W16CS1M25/B16	16B	77 x 27	M 25 x 1.5
W24CS1P21/B24	24B	104 x 27	Pg 21
W24CS1P29/B24	24B	104 x 27	Pg 29
W24CS1M32/B24	24B	104 x 27	M 32 x 1.5

Cat. No. For High Const. With Fitting	Cat. No. For High Const. Without Fitting	Enclosure Type	Enclosure Size (mm)	Cable Gland Size
W16HCS1P21/B16	-	16B	77 x 27	Pg 21
-	W16HCS1M25/A16W	16A	66 x 16	M 25 x 1.5
W16HCS1M32/B16	-	16B	77 x 27	M 32 x 1.5
W24HCS1P29/B24	W24HCS1P29/B24W	24B	104 x 27	Pg 29
W32HCS1P29/B32	W32HCS1P29/B32W	32B	77 x 62	Pg 29
W32HCS1P36/B32	-	32B	77 x 62	Pg 36
W48HCS1P29/B48	-	48B	104 x 62	Pg 29
W48HCS1P36/B48	-	48B	104 x 62	Pg 36
-	W48HCS1P42/B48W	48B	104 x 62	Pg 42



HOODS - STANDARD / HIGH CONSTRUCTION SIDE ENTRY - WITH 4 PEGS



These hoods are suitable for conductors which run parallel to the surface on which the appropriate hood and housing are mounted. The spring loaded double locking system ensures a perfect mating between the male and the female inserts even if accidentally one of the locks opens up.

Technical Details :

Material	Die cast Alluminium alloy
Protection Class	IP 66
Voltage	For Inserts upto 830 V
Thread	Pg, Metric
Gasket	Vinyl Nitrile Elastomer (NBR)

Cat. No.	Enclosure Type	Enclosure Size (mm)	Cable Gland Size
W10CS2P16/B10	10B	57 x 27	Pg 16
W10CS2M20/B10	10B	57 x 27	M 20 x 1.5
W10CS2M25/B10	10B	57 x 27	M 25 x 1.5
W16CS2P21/B16	16B	77 x 27	Pg 21
W16CS2M25/B16	16B	77 x 27	M 25 x 1.5
W24CS2P21/B24	24B	104 x 27	Pg 21
W24CS2P29/B24	24B	104 x 27	Pg 29
W24CS2M32/B24	24B	104 x 27	M 32 x 1.5
W32CS2P21/A32	32A	66 x 40	Pg 21
W32CS2M32/A32	32A	66 x 40	M 32 x 1.5

Cat. No. For High Const. With Fitting	Cat. No. For High Const. Without Fitting	Enclosure Type	Enclosure Size (mm)	Cable Gland Size
W10HCS2M32/B10	-	10B	57 x 27	M 32 x 1.5
W16HCS2M32/B16	-	16B	77 x 27	M 32 x 1.5
-	W24HCS2M32/B24W	24B	104 x 27	M 32 x 1.5
W32HCS2P29/B32	-	32B	77 x 62	Pg 29



SURFACE MOUNT HOUSINGS WITH 1 LEVER / 1 LEVER WITH COVER

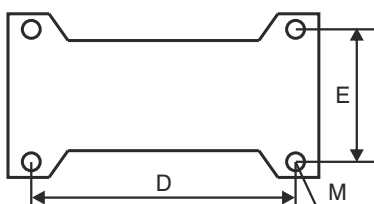


Surface mount type housings are used where a cable terminates into the male or female insert housed inside it. i.e. It is mounted on a plain surface with a cable coming into the housing via a cable gland mounted on the body of the housing. In housings with covers, the cover closes over the opening of the housing when the hood is disconnected from the housing. In this case a single lock mechanism ensures IP 66 class protection to the inserts after mating with the appropriate hood. High construction housings are also available on request.

Technical Details :

Material	Die cast Alluminium alloy
Protection Class	IP 66
Voltage	For Inserts upto 500 V
Thread	Pg, Metric
Gasket	Vinyl Nitrile Elastomer (NBR)

Hole Drilling Dimension



Surface Mount Housing with 1 Lever

Cat. No.	Enclosure Type	Enclosure Size (mm)	Cable Gland Size	D (mm)	E (mm)	M (Ømm)
W06HS1P16/B6	6B	44 x 27	Pg 16	70	40	4.5
W06HS1M20/B6	6B	44 x 27	M 20 x 1.5	70	40	4.5
W10HS1P16/A10	10A	49 x 16	Pg 16	48	40	3.5
W10HS1P16/B10	10B	57 x 27	Pg 16	82	40	4.5
W16HS1P21/A16	16A	66 x 16	Pg 21	64	40	3.5
W16HS1P21/B16	16B	77 x 27	Pg 21	105	45	4.5
W16HS1M25/A16	16A	66 x 16	M 25x 1.5	64	40	3.5
W16HS1M25/B16	16B	77 x 27	M 25x 1.5	105	45	4.5
W24HS1P21/B24	24B	104 x 27	Pg 21	132	45	4.5
W32HS1P29/B32	32B	77 x 62	Pg 29	112	67	5.5
W48HS1P29x2/B48	48B	104 x 62	Pg 29 x 2	111	106	4.5

Surface Mount Housing with 1 Lever & Cover

Cat. No.	Enclosure Type	Enclosure Size (mm)	Cable Gland Size	D (mm)	E (mm)	M (Ømm)
W06HSC1P16/B6	6B	44 x 27	Pg 16	70	40	4.5
W06HSC1M20/B6	6B	44 x 27	M 20 x 1.5	70	40	4.5
W10HSC1P16/B10	10B	57 x 27	Pg 16	82	40	4.5
W16HSC1M25/A16	16A	66 x 16	M 25 x 1.5	64	40	3.5
W16HSC1P21/B16	16B	77 x 27	Pg 21	105	45	4.5
W24HSC1P21/B24	24B	104 x 27	Pg 21	132	45	4.5
W32HSC1P29/B32	32B	77 x 62	Pg 29	112	67	5.5
W32HSC1P36/B32	32B	77 x 62	Pg 36	112	67	5.5

SURFACE MOUNT HOUSINGS - 2 LEVER / 4 PEGS STANDARD / HIGH CONSTRUCTION

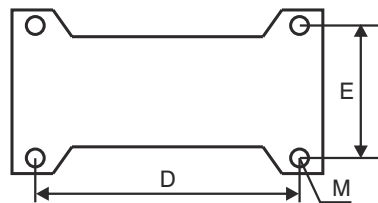


Surface mount type housings are used where a cable terminates into the male or female insert housed inside it. i.e. It is mounted on a plain surface with a cable coming into the housing via a cable gland mounted on the body of the housing. In this case the double locking mechanism ensures IP 66 class protection to the inserts even if one of the locks accidentally opens up.

Technical Details :

Material	Die cast Alluminium alloy
Protection Class	IP 66
Voltage	For Inserts upto 500 V
Thread	Pg, Metric
Gasket	Vinyl Nitrile Elastomer (NBR)

Hole Drilling Dimension



Cat. No. For Housing with 2 Levers	Cat. No. For Housing with 4 Pegs	Enclosure Type	Enclosure Size (mm)	Cable Gland Size	D (mm)	E (mm)	M (Ømm)
W10HS2P16/B10	-	10B	57 x 27	Pg 16	82	40	4.5
W10HS2M20/B10	WR10HS2M20/B10	10B	57 x 27	M 20 x 1.5	82	40	4.5
W16HS2P21/B16	-	16B	77 x 27	Pg 21	105	45	4.5
W24HS2M25/B24	-	24B	104 x 27	M 25 x 1.5	132	45	4.5
W24HS2P21/B24	-	24B	104 x 27	Pg 21	132	45	4.5
W32HS2P29/A32	-	32A	66 x 40	Pg 29	94	46	5.5
W32HS2M32/A32	-	32A	66 x 40	M 32 x 1.5	94	46	5.5
W32HS2P36/B32	-	32B	77 x 62	Pg 36	112	67	5.5

Cat. No. For High Construction Housing with 2 Levers	Cat. No. For Housing with 4 Pegs & Cover	Enclosure Type	Enclosure Size (mm)	Cable Gland Size	D (mm)	E (mm)	M (Ømm)
W10HHS2M32X2/B10	-	10B	57 x 27	M 32 x 1.5	82	40	4.5
W16HHS2M40X2/B16	-	16B	77 x 27	M 40 x 1.5	105	45	4.5
-	WR32HSC2P21/A32	A32	66 x 40	Pg 21	94	46	5.5

BULK HEAD MOUNT HOUSINGS - WITH 1 LEVER & 1 LEVER & COVER

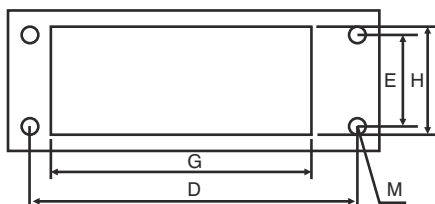


Bulk head mount housings are mounted over cut-outs in the electrical control panels where the conductors approach the inserts fixed inside the housings through the cut-outs. In this case the bulk head mount housings are provided with a hinged cover which closes over the housing in the absence of the hood to be mounted on it.

Technical Details :

Material	Die cast Alluminium alloy
Protection Class	IP 66
Voltage	For Inserts upto 500 V
Gasket	Vinyl Nitrile Elastomer (NBR)

Panel Cutout



Bulk Head Mount Housings with 1 Lever

Bulk Head Mount Housings with 1 Level

Cat. No.	Enclosure Type	Enclosure Size (mm)	D (mm)	E (mm)	G (mm)	H (mm)	M (Ømm)
W06HB1/B6	6B	44 x 27	70	32	53	36	4.5
W10HB1/A10	10A	49 x 16	70	17.5	57	24	3.5
W10HB1/B10	10B	57 x 27	83	32	66.5	36	4.5
W16HB1/A16	16A	66 x 16	86	17.5	73	24	3.5
W16HB1/B16	16B	77 x 27	103	32	86.5	36	4.5
W24HB1/B24	24B	104 x 27	130	32	113	36	4.5
W32HB1/B32	32B	77 x 62	110	65	87.5	76.5	5.5
W48HB1/B48	48B	104 x 62	148	70	122.5	79.5	5.5

Bulk Head Mount Housings with 1 Level & Cover

Cat. No.	Enclosure Type	Enclosure Size (mm)	D (mm)	E (mm)	G (mm)	H (mm)	M (Ømm)
W06HBC1/B6	6B	44 x 27	70	32	53	36	4.5
W10HBC1/A10	10A	49 x 16	70	17.5	57	24	3.5
W10HBC1/B10	10B	57 x 27	83	32	66.5	36	4.5
W16HBC1/A16	16A	66 x 16	86	17.5	73	24	3.5
W16HBC1/B16	16B	77 x 27	103	32	86.5	36	4.5
W24HBC1/B24	24B	104 x 27	130	32	113	36	4.5
W32HBC1/B32	32B	77 x 62	110	65	87.5	76.5	5.5
W48HBC1/B48	48B	104 x 62	148	70	122.5	79.5	5.5

BULK HEAD MOUNT HOUSINGS WITH 2 LEVERS / 4 PEGS AND GASKET

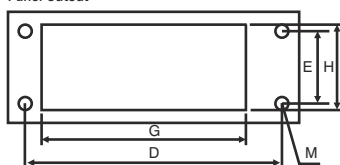


In this case the bulk head mount housings are provided with double locking mechanisms which ensure IP 65 class protection even in the case of one lock accidentally opening up.

Technical Details :

Material	Die cast Aluminium alloy
Protection Class	IP 66
Voltage	For Inserts upto 500 V
Gasket	Vinyl Nitrile Elastomer (NBR)

Panel Cutout



Cat. No. For Housing with 2 Levers	Cat. No. For Housing with 4 Pegs	Cat. No. For Housing with 4 Pegs & Cover	Enclosure Type	Enclosure Size (mm)	D (mm)	E (mm)	G (mm)	H (mm)	M (Ømm)
W10HB2/B10	WR10HB2/B10	-	10B	57 x 27	83	32	66.5	36	4.5
W16HB2/B16	WR16HB2/B16	-	16B	77 x 27	103	32	86.5	36	4.5
W24HB2/B24	-	WR24HBC2/B24	24B	104 x 27	130	32	113	36	4.5
W32HB2/A32	-	-	32A	66 x 40	92	42	75	58.6	4.5
W32HB2/B32	-	-	32B	77 x 62	110	65	87.5	76.5	5.5

METAL CABLE GLANDS FOR MULTIPOLE INDUSTRIAL CONNECTOR



These cable glands provide IP 65 protection and are available in a wide range of Pg threads. For Metric threaded enclosures Controlwell's range of standard cable glands can be utilized. For complete list of cable glands with Metric & Pg threads refer pages 4 to 8 of this catalogue.

Technical Details :

Material	Nickel-Plated Brass
Washer	Zinc-Plated Steel
Gasket	Elastomer
Protection Class	IP 65
Threads	Pg, Metric

Cat. No.	Size	(mm)	Cable Clamping Range (mm)
WCG03	Pg 11	18	7 - 12
WCG04	Pg 13.5	20	7 - 12
WCG05	Pg 16	22	7 - 14.5
WCG06	Pg 21	28	9.5 - 18.5
WCG07	Pg 29	37	17.5 - 26.5
WCG08	Pg 36	47	23.5 - 32.5
WCG09	Pg 42	54	29.5 - 38.5
WCGM20	M 20 x 1.5	20	3.5 - 12.5

Application:

- For MIC Hoods and Housings with Pg & Metric Threads.
- For other sealed enclosures and boxes to protect parts of mechanism and equipment from external influence

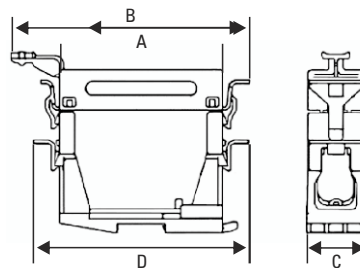
DIN RAIL SUPPORTS FOR INSERTS SIZE "B"



DIN Rail supports are used for housing of high connection density contact carriers or inserts within control cabinets / panels. No tools are needed for installing these products. The inserts / contact carriers can be snapped into the DIN Rail supports with hands. Also the DIN Rail supports can be snapped on to the DIN Rails without tools. These DIN Rail supports are fully cross compatible with inserts of other makes. The inserts and hence the contacts are fully secured by locking the male inserts with the female inserts. This is achieved by using locking levers.

Technical Details :

Material	Polycarbonate
Colour	Grey
Flammability	UL-94 V0
Mounting on	DIN 35 Rail (7.5 mm & 15 mm Deep)
Approvals	CE RoHS



Cat. No.	Enclosure Type	Enclosure Size (mm)	A (mm)	B (mm)	C (mm)	D (mm)
WDIN/B06	6B	44 x 27	57	113.3	42	146
WDIN/B10	10B	57 x 27	70	126	42	146
WDIN/B16	16B	77 x 27	90.6	146.3	42	146
WDIN/B24	24B	104 x 27	117	173	42	146

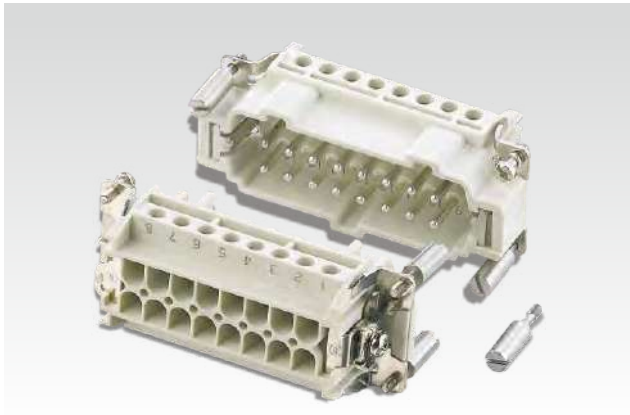
Top Support Assembly



Base Support Assembly



SINGLE CODE PINS

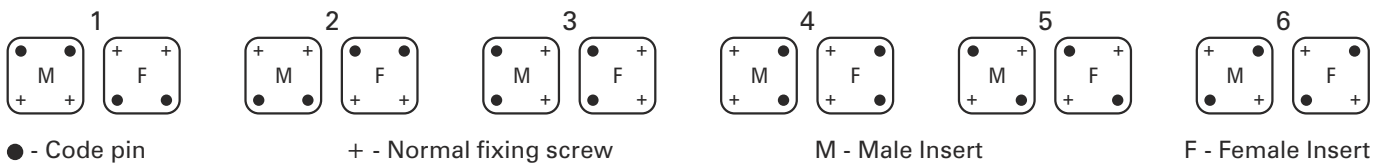


In various applications a bank (group) of male or female identical connectors are placed side by side. In such applications it is difficult to couple the connectors in the right sequence.

Coding pins are used to prevent such false coupling possibilities. Coding pins are used in place of normal insert fixing screws. In this way coupling of correct connectors is ensured.

Single code pins offer coding possibilities for a maximum of 6 identical connectors placed side by side.

Application with single code pins for 6 connectors side by side



Cat. No.	Type	Material		
WCPS	Single Code Pin	Zinc Plated Steel		

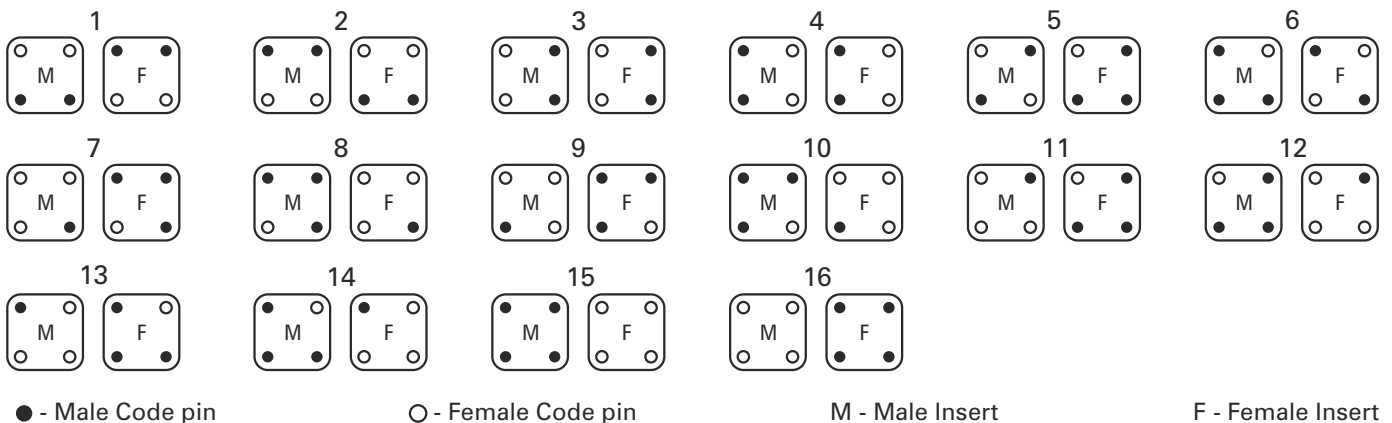
DOUBLE CODE PINS



Coding pins are used to prevent false coupling between male & female inserts. To codify more than 6 identical connectors placed besides each other it is necessary to use double code pins.

Double code pins are available in a combination of Male & Female code pins. By using Double code pins a maximum of 16 identical connectors can be codified.

Application with double code pin for 16 connectors side by side



Cat. No.	Type	Material		
WCPDM	Double Code Pin Male	Zinc Plated Steel		
WCPDF	Double Code Pin Female	Zinc Plated Steel		

COVERS FOR HOUSINGS *

In case housings with hinged covers are not procured initially, the covers can be separately purchased and retro fitted onto the housings. These covers help maintain the IP protection grade by closing onto the housings when the hoods are disconnected from the housings.



* Available on Request.

Cat. No.	Description	Enclosure Type	Enclosure Size (mm)
W03/4CFM/A3	Metal cover with Gasket for Female Insert	A3	21 x 21
W03/4CMM/A3W	Metal cover without Gasket for Male Insert	A3	21 x 21
WCP1/B6W	Metal cover with 2 Pegs for B6 size without gasket	B6	44 x 27
WCP/B10W	Metal cover with 4 Pegs for B10 size without gasket	B10	57 x 27
WCP/B16W	Metal cover with 4 Pegs for B16 size without gasket	B16	77 x 27
WCP/B24W	Metal cover with 4 Pegs for B24 size without gasket	B24	104 x 27
WCP/A32W	Metal cover with 4 Pegs for A32 size without gasket	B32	77 x 62
WCL/B16	Metal cover with 2 levers & gasket for B16 size	B16	77 x 27
WCL/B24	Metal cover with 2 levers & gasket for B24 size	B24	104 x 27

POWER INTERFACE 2 POLE SOCKET FOR GERMANY & ITALY

WSG/I

(2000.3013.0)

These 2 pole 250V, 16 Amp F Type sockets are suitable to be used as per German and Italian standards. These sockets have two earth clips on the top & bottom side and is available in 99 x 40 mm size.



SPECIAL CRIMPING HAND TOOLS FOR TURNED CRIMP CONTACTS

WCT

(8500.6251.0)

Economical crimping tool for turned contacts with ratchet for

- 1) Wire section 0.5 - 6 sq.mm
- 2) Contact Dia 1.6 (10 A)
Dia 2.5 (16 A)
Dia 4 (40 A)



HI-TECH SOLUTIONS FOR CABLE PROTECTION IN MOTION

Controlwell presents a vast range of cable drag chains in glass fibre reinforced polyamide.

These drag chains are available in a wide range of basic designs like:

- **Open Type**
- **Semi Enclosed Type**
- **Fully Enclosed Type**
- **Sliding Type**

With the introduction of 'SABIN' cable drag chains which offer speeds as high as 15 m/s, noise as low as 30 dB and extremely low mote, Controlwell is one of the few suppliers across India to be able to offer solutions for sensitive environments.

SABIN chains are available in a wide range of basic designs like:

- **Open Type**
- **Fully Enclosed Type**
- **Sliding Type**

We at Controlwell work along with you to design and deploy solutions for all your needs of cable protection in motion.

CABLE DRAG CHAINS

CABLE PROTECTION
IN MOTION



CABLE DRAG CHAINS IN GLASS FIBRE REINFORCED POLYAMIDE

CPS Chain - N Type (Both Side Open)



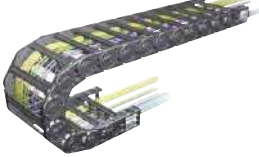
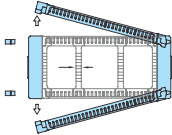
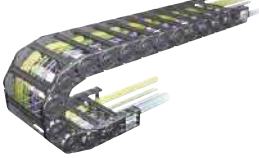
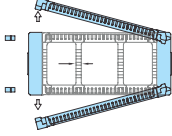
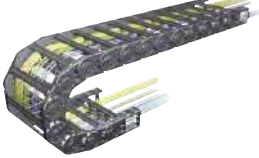
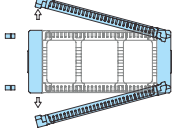
	Type	Bending Radius (mm)	Outer Width (mm) A	Outer Height (mm) B	Inner Width (mm) C	Inner Height (mm) D	Chain Cross Section
	CPS015.06	18, 28, 38	12.6	13	6	10	 Attached Side Band
	CPS015.10		16.6	13	10	10	
	CPS015.15		21.6	13	15	10	
	CPS015.20		26.6	13	20	10	
	CPS020.15	28, 38, 48	24	20	15	14.5	 Hinged Side Band
	CPS020.20		29	20	20	14.5	
	CPS020.30		39	20	30	14.5	
	CPS020.40		49	20	40	14.5	
	CPS030.15	38,48,75,100	29	26	15	19	 Hinged Side Band
	CPS030.25		39	26	25	19	
	CPS030.35		49	26	35	19	
	CPS030.50		64	26	50	19	
	CPS033.27	35, 45, 75, 100, 120	45	31	27	23	 Separated Side Band
	CPS033.37		55	31	37	23	
	CPS033.47		65	31	47	23	
	CPS033.67		85	31	67	23	
	CPS033.77		95	31	77	23	

Shift Chain - N Type (Both Side Open)

	Type	Bending Radius (mm)	Outer Width (mm) A	Outer Height (mm) B	Inner Width (mm) C	Inner Height (mm) D	Chain Cross Section
	ST044N.035	50, 70, 90, 120, 150	56	38	35	26	
	ST044N.050		71	38	50	26	
	ST044N.055		76	38	55	26	
	ST044N.075		96	38	75	26	
	ST044N.100		121	38	100	26	
	ST044N.125		146	38	125	26	
	ST044N.150		171	38	150	26	
	ST044N.175		196	38	175	26	
	ST044N.200		221	38	200	26	
	ST055N.035	65,75,100,125,150,200	56	52	35	40	
	ST055N.050		71	52	50	40	
	ST055N.055		76	52	55	40	
	ST055N.075		96	52	75	40	
	ST055N.100		121	52	100	40	
	ST055N.125		146	52	125	40	
	ST055N.150		171	52	150	40	
	ST055N.175		196	52	175	40	
	ST055N.200		221	52	200	40	
	ST072N.050	72,100,120,145,200,250,300	82	66	50	45	
	ST072N.075		107	66	75	45	
	ST072N.100		132	66	100	45	
	ST072N.125		157	66	125	45	
	ST072N.150		182	66	150	45	
	ST072N.175		207	66	175	45	
	ST072N.200		232	66	200	45	
	ST072N.250		282	66	250	45	
	ST072N.300		332	66	300	45	

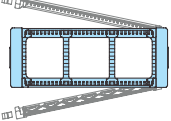
CABLE DRAG CHAINS IN GLASS FIBRE REINFORCED POLYAMIDE

Shift Chain - N Type (Both Side Open)

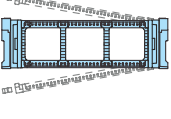
	Type	Bending Radius (mm)	Outer Width (mm) A	Outer Height (mm) B	Inner Width (mm) C	Inner Height (mm) D	Chain Cross Section
	ST095N.075	135,150,200,230,280,400	113	82	75	56	
	ST095N.100		138	82	100	56	
	ST095N.125		163	82	125	56	
	ST095N.150		188	82	150	56	
	ST095N.175		213	82	175	56	
	ST095N.200		238	82	200	56	
	ST095N.250		288	82	250	56	
	ST095N.300		338	82	300	56	
	ST095N.350		388	82	350	56	
	ST095N.400		438	82	400	56	
	ST120N.075	180,200,250,300,350,400,500	117	108	75	78	
	ST120N.100		142	108	100	78	
	ST120N.125		167	108	125	78	
	ST120N.150		192	108	150	78	
	ST120N.175		217	108	175	78	
	ST120N.200		242	108	200	78	
	ST120N.250		292	108	250	78	
	ST120N.300		324	108	300	78	
	ST120N.350		392	108	350	78	
	ST120N.400		442	108	400	78	
	ST120N.450		492	108	450	78	
	ST120N.500		542	108	500	78	
	ST120N.550		592	108	550	78	
	ST120N.600		642	108	600	78	
	ST150N.075	205,305,405,505,605	121	140	75	110	
	ST150N.100		146	140	100	110	
	ST150N.125		171	140	125	110	
	ST150N.150		196	140	150	110	
	ST150N.175		221	140	175	110	
	ST150N.200		246	140	200	110	
	ST150N.250		296	140	250	110	
	ST150N.300		346	140	300	110	
	ST150N.350		396	140	350	110	
	ST150N.400		446	140	400	110	
	ST150N.450		496	140	450	110	
	ST150N.500		546	140	500	110	
	ST150N.550		596	140	550	110	
	ST150N.600		646	140	600	110	

CABLE DRAG CHAINS IN GLASS FIBRE REINFORCED POLYAMIDE

Shift Chain - E Type (Both Side Enclosed)

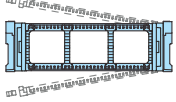
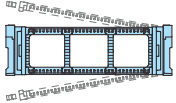
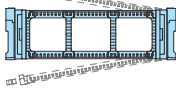
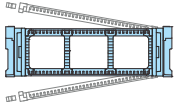
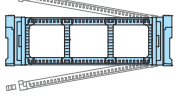
	Type	Bending Radius (mm)	Outer Width (mm) A	Outer Height (mm) B	Inner Width (mm) C	Inner Height (mm) D	Chain Cross Section
	ST044E.035	70,90,120,150	56	38	35	24.5	
	ST044E.055		76	38	55	24.5	
	ST044E.075		96	38	75	24.5	
	ST044E.100		121	38	100	24.5	
	ST055E.050	100,125,150,200	71	52	50	38.5	
	ST055E.075		96	52	75	38.5	
	ST055E.100		121	52	100	38.5	
	ST055E.125		146	52	125	38.5	
	ST055E.150		171	52	150	38.5	
	ST072E.050	120,145,200,250,300	82	66	50	44	
	ST072E.075		107	66	75	44	
	ST072E.100		132	66	100	44	
	ST072E.125		157	66	125	44	
	ST072E.150		182	66	150	44	
	ST095E.100	150,200,230,280,400	138	82	100	55	
	ST095E.125		163	82	125	55	
	ST095E.150		188	82	150	55	
	ST095E.175		213	82	175	55	
	ST095E.200		238	82	200	55	
	ST120E.150	200,250,300,350,400,500	192	108	150	76	
	ST120E.200		142	108	200	76	
	ST120E.250		292	108	250	76	
	ST120E.300		342	108	300	76	
	ST150E.200	305,405,505,605	246	141	200	110	
	ST150E.250		296	141	250	110	
	ST150E.300		346	141	300	110	
	ST150E.350		396	141	350	110	
	ST150E.400		446	141	400	110	

Shift Chain - S Type (Sliding with Skid)

	Type	Bending Radius (mm)	Outer Width (mm) A	Outer Height (mm) B	Inner Width (mm) C	Inner Height (mm) D	Chain Cross Section
	ST044S.035	70,90,120,150	74	38.5	35	26	
	ST044S.050		89	38.5	50	26	
	ST044S.055		94	38.5	55	26	
	ST044S.075		114	38.5	75	26	
	ST044S.100		139	38.5	100	26	
	ST044S.125		164	38.5	125	26	
	ST044S.150		189	38.5	150	26	
	ST044S.175		214	38.5	175	26	
	ST044S.200		239	38.5	200	26	

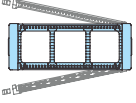
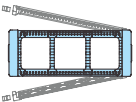
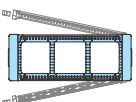
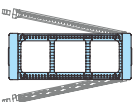
CABLE DRAG CHAINS IN GLASS FIBRE REINFORCED POLYAMIDE

Shift Chain - RS Type (Sliding with Roller Skid)

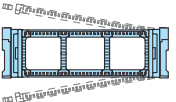
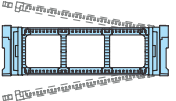
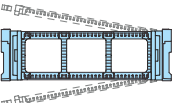
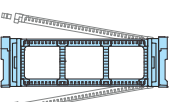
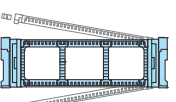
	Type	Bending Radius (mm)	Outer Width (mm) A	Outer Height (mm) B	Inner Width (mm) C	Inner Height (mm) D	Chain Cross Section
	ST044RS.035	70,90,120,150	73	40.5	35	26	
	ST044RS.050		88	40.5	50	26	
	ST044RS.055		93	40.5	55	26	
	ST044RS.075		113	40.5	75	26	
	ST044RS.100		138	40.5	100	26	
	ST044RS.125		163	40.5	125	26	
	ST044RS.150		188	40.5	150	26	
	ST044RS.175		213	40.5	175	26	
	ST044RS.200		238	40.5	200	26	
	ST072RS.050	100,120,145,200,250,300	104	69	50	45	
	ST072RS.075		129	69	75	45	
	ST072RS.100		154	69	100	45	
	ST072RS.125		179	69	125	45	
	ST072RS.150		204	69	150	45	
	ST072RS.175		229	69	175	45	
	ST072RS.200		254	69	200	45	
	ST072RS.250		304	69	250	45	
	ST072RS.300		354	69	300	45	
	ST095RS.075	135,150,200,230,280,400	143	90	75	56	
	ST095RS.100		168	90	100	56	
	ST095RS.125		193	90	125	56	
	ST095RS.150		218	90	150	56	
	ST095RS.175		243	90	175	56	
	ST095RS.200		268	90	200	56	
	ST095RS.250		318	90	250	56	
	ST095RS.300		368	90	300	56	
	ST095RS.350		418	90	350	56	
	ST120RS.075	180,200,250,300,350,400,500	143	117	75	78	
	ST120RS.100		168	117	100	78	
	ST120RS.125		193	117	125	78	
	ST120RS.150		218	117	150	78	
	ST120RS.175		243	117	175	78	
	ST120RS.200		268	117	200	78	
	ST120RS.250		318	117	250	78	
	ST120RS.300		368	117	300	78	
	ST120RS.350		418	117	350	78	
	ST120RS.400		468	117	400	78	
	ST120RS.450		518	117	450	78	
	ST120RS.500		568	117	500	78	
	ST120RS.550		618	117	550	78	
	ST120RS.600		668	117	600	78	
	ST150RS.075	305,405,505,605	162	145	75	110	
	ST150RS.100		187	145	100	110	
	ST150RS.125		212	145	125	110	
	ST150RS.150		237	145	150	110	
	ST150RS.175		262	145	175	110	
	ST150RS.200		287	145	200	110	
	ST150RS.250		337	145	250	110	
	ST150RS.300		387	145	300	110	
	ST150RS.350		437	145	350	110	
	ST150RS.400		487	145	400	110	
	ST150RS.450		537	145	450	110	
	ST150RS.500		587	145	500	110	
	ST150RS.550		637	145	550	110	
	ST150RS.600		687	145	600	110	

CABLE DRAG CHAINS IN GLASS FIBRE REINFORCED POLYAMIDE

Shift Chain - ES Type (Enclosed Sliding Type)

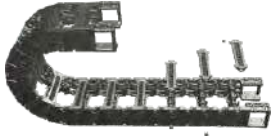
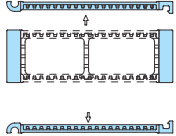
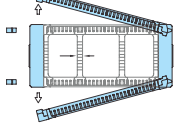
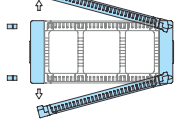
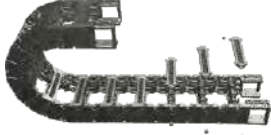
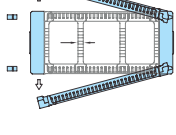
	Type	Bending Radius (mm)	Outer Width (mm) A	Outer Height (mm) B	Inner Width (mm) C	Inner Height (mm) D	Chain Cross Section
	ST044ES.035	70,90,120,150	74	38.5	35	26	
	ST044ES.055		94	38.5	55	26	
	ST044ES.075		114	38.5	75	26	
	ST044ES.100		139	38.5	100	26	
	ST072ES.050	120,145,200,250,300	105	71.8	50	44	
	ST072ES.075		130	71.8	75	44	
	ST072ES.100		155	71.8	100	44	
	ST072ES.125		180	71.8	125	44	
	ST072ES.150		205	71.8	150	44	
	ST095ES.100	150,200,230,280,400	162	89	100	55	
	ST095ES.125		187	89	125	55	
	ST095ES.150		212	89	150	55	
	ST095ES.175		237	89	175	55	
	ST095ES.200		262	89	200	55	
	ST0120ES.150	200,250,300,350,400,500	218	115	150	76	
	ST0120ES.200		268	115	200	76	
	ST0120ES.250		318	115	250	76	
	ST0120ES.300		368	115	300	76	

Shift Chain - ERS Type (Enclosed Sliding with Roller Skid)

	Type	Bending Radius (mm)	Outer Width (mm) A	Outer Height (mm) B	Inner Width (mm) C	Inner Height (mm) D	Chain Cross Section
	ST044ERS.035	70,90,120,150	73	40.5	35	24.5	
	ST044ERS.055		93	40.5	55	24.5	
	ST044ERS.075		113	40.5	75	24.5	
	ST044ERS.100		138	40.5	100	24.5	
	ST072ERS.050	120,145,200,250,300	104	69	50	44	
	ST072ERS.075		129	69	75	44	
	ST072ERS.100		154	69	100	44	
	ST072ERS.125		179	69	125	44	
	ST072ERS.150		204	69	150	44	
	ST095ERS.100	150,200,230,280,400	168	85	100	55	
	ST095ERS.125		193	85	125	55	
	ST095ERS.150		218	85	150	55	
	ST095ERS.175		243	85	175	55	
	ST095ERS.200		268	85	200	55	
	ST120ERS.150	200,250,300,350,400,500	218	112	150	76	
	ST120ERS.200		268	112	200	76	
	ST120ERS.250		318	112	250	76	
	ST120ERS.300		368	112	300	76	
	ST150ERS.200	305,405,505,605	287	145	200	110	
	ST150ERS.250		337	145	250	110	
	ST150ERS.300		387	145	300	110	
	ST150ERS.350		437	145	350	110	
	ST150ERS.400		487	145	400	110	

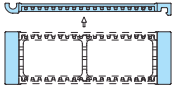
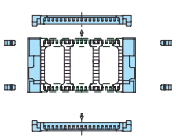
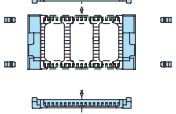
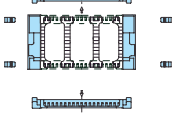
CABLE DRAG CHAINS IN GLASS FIBRE REINFORCED POLYAMIDE

SABIN Chain - N Type (BOTH SIDE OPEN)

	Type	Bending Radius (mm)	Outer Width (mm) A	Outer Height (mm) B	Inner Width (mm) C	Inner Height (mm) D	Chain Cross Section
	NSB028N.035	46, 66, 86, 116, 146	55	38	35	26	
	NSB028N.050		70	38	50	26	
	NSB028N.055		75	38	55	26	
	NSB028N.075		95	38	75	26	
	NSB028N.100		120	38	100	26	
	NSB028N.125		145	38	125	26	
	NSB028N.150		170	38	150	26	
	NSB028N.175		195	38	175	26	
	NSB028N.200		220	38	200	26	
	NSB035N.035	55, 65, 90, 115, 140, 190	55	52	35	40	
	NSB035N.050		70	52	50	40	
	NSB035N.055		75	52	55	40	
	NSB035N.075		95	52	75	40	
	NSB035N.100		120	52	100	40	
	NSB035N.125		145	52	125	40	
	NSB035N.150		170	52	150	40	
	NSB035N.175		195	52	175	40	
	NSB035N.200		220	52	200	40	
	NSB045N.050	90, 110, 135, 165, 185, 235, 285	80	66	50	45	
	NSB045N.075		105	66	75	45	
	NSB045N.100		130	66	100	45	
	NSB045N.125		155	66	125	45	
	NSB045N.150		180	66	150	45	
	NSB045N.175		205	66	175	45	
	NSB045N.200		230	66	200	45	
	NSB045N.250		280	66	250	45	
	NSB045N.300		330	66	300	45	
	NSB060N.075	125, 135, 150, 180, 230, 270, 340	115	82	75	56	
	NSB060N.100		140	82	100	56	
	NSB060N.125		165	82	125	56	
	NSB060N.150		190	82	150	56	
	NSB060N.175		215	82	175	56	
	NSB060N.200		240	82	200	56	
	NSB060N.250		290	82	250	56	
	NSB060N.300		340	82	300	56	
	NSB060N.350		390	82	350	56	
	NSB075N.075	160, 180, 230, 280, 330, 380, 480	115	108	75	78	
	NSB075N.100		140	108	100	78	
	NSB075N.125		165	108	125	78	
	NSB075N.150		190	108	150	78	
	NSB075N.175		215	108	175	78	
	NSB075N.200		240	108	200	78	
	NSB075N.250		290	108	250	78	
	NSB075N.300		340	108	300	78	
	NSB075N.350		390	108	350	78	
	NSB075N.400		440	108	400	78	
	NSB075N.450		490	108	450	78	
	NSB075N.500		540	108	500	78	
	NSB075N.550		590	108	550	78	
	NSB075N.600		640	108	600	78	

CABLE DRAG CHAINS IN GLASS FIBRE REINFORCED POLYAMIDE

SABIN Chain - E Type (BOTH SIDE ENCLOSED)

	Type	Bending Radius (mm)	Outer Width (mm) A	Outer Height (mm) B	Inner Width (mm) C	Inner Height (mm) D	Chain Cross Section
	NSB028E.035	66, 86, 116, 146	55	38	35	26	
	NSB028E.055		75	38	55	26	
	NSB028E.075		95	38	75	26	
	NSB028E.100		120	38	100	26	
	NSB035E.050	90, 115, 140, 190	70	52	50	40	
	NSB035E.075		95	52	75	40	
	NSB035E.100		120	52	100	40	
	NSB035E.125		145	52	125	40	
	NSB035E.150		170	52	150	40	
	NSB045E.075	90, 110, 135, 165, 185, 235, 285	105	66	75	45	
	NSB045E.100		130	66	100	45	
	NSB045E.125		155	66	125	45	
	NSB045E.150		180	66	150	45	
	NSB060E.100	125, 135, 150, 180, 230, 270, 340	140	82	100	56	
	NSB060E.150		190	82	150	56	
	NSB060E.200		240	82	200	56	
	NSB075E.150	160, 180, 230, 280, 330, 380, 480	190	108	150	78	
	NSB075E.200		240	108	200	78	
	NSB075E.300		340	108	300	78	

SABIN Chain - S Type (Sliding with Skid)

	Type	Bending Radius (mm)	Outer Width (mm) A	Outer Height (mm) B	Inner Width (mm) C	Inner Height (mm) D	Chain Cross Section
	NSB050S.050	110, 135, 165, 185, 235, 285	104	71.5	50	45	
	NSB050S.075		129	71.5	75	45	
	NSB050S.100		154	71.5	100	45	
	NSB050S.125		179	71.5	125	45	
	NSB050S.150		204	71.5	150	45	
	NSB050S.175		229	71.5	175	45	
	NSB050S.200		254	71.5	200	45	
	NSB050S.250		304	71.5	250	45	
	NSB050S.300		354	71.5	300	45	
	NSB065S.075	140, 190, 220, 270, 390	137	89	75	56	
	NSB065S.100		162	89	100	56	
	NSB065S.125		187	89	125	56	
	NSB065S.150		212	89	150	56	
	NSB065S.175		237	89	175	56	
	NSB065S.200		262	89	200	56	
	NSB065S.250		312	89	250	56	
	NSB065S.300		362	89	300	56	
	NSB065S.350		412	89	350	56	
	NSB065S.400		462	89	400	56	
	NSB080S.075	180, 200, 250, 300, 350, 400, 500	143	115	75	78	
	NSB080S.100		168	115	100	78	
	NSB080S.125		193	115	125	78	
	NSB080S.150		218	115	150	78	
	NSB080S.175		243	115	175	78	
	NSB080S.200		268	115	200	78	
	NSB080S.250		318	115	250	78	
	NSB080S.300		368	115	300	78	
	NSB080S.350		418	115	350	78	
	NSB080S.400		468	115	400	78	
	NSB080S.450		518	115	450	78	
	NSB080S.500		568	115	500	78	
	NSB080S.550		618	115	550	78	
	NSB080S.600		668	115	600	78	

CPS CABLE DRAG CHAINS - N TYPE CPS015 / CPS020 (BOTH SIDE OPEN)



Technical Details :

Chain Material	Glass fibre reinforced Polyamide, UL 94-HB
Noise	40 dB (DIN EN 61672-1)
Applications	Printing Machine, Feeder Unit and Counting Machine
Speed	6m / sec
Temperature Range	-30° C to +130° C Continuous
Vertical Installation Lengths CPS015	Vertical Standing = max. 0.8 m Vertical Hanging = max. 3 m Side mounted, Unsupported = max. 0.2 m
Vertical Installation Lengths CPS020	Vertical Standing = max. 1.0 m Vertical Hanging = max. 5 m Side mounted, Unsupported = max. 0.5 m
Approvals	ATEX(Ex) RoHs2

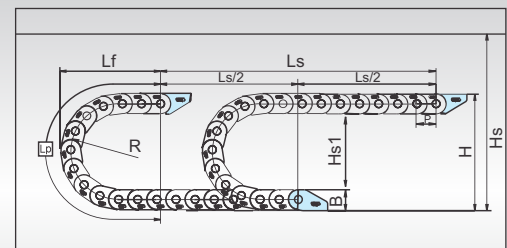
CPS015

Bending Radius R	18	28	38
Lp	117	148	180
Lf	55	65	75
H	49	69	89

CPS020

Bending Radius R	28	38	48
Lp	170	200	230
Lf	78	88	98
H	76	96	116

Technical Dimensions (mm)



Ls : Stroke
Total Length $L = Ls / 2 + Lp$
Safe space $Hs \geq H + 10 \text{ mm}$

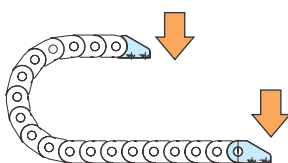
Chain Cross Section

Cat. No.	Outer Width (mm) A	Outer Height (mm) B	Inner Width (mm) C	Inner Height (mm) D	Bending Radius
CPS015.06	12.6	13	6	10	
CPS015.10	16.6	13	10	10	18, 28, 38
CPS015.15	21.6	13	15	10	
CPS015.20	26.6	13	20	10	
CPS020.15	24	20	15	14.5	
CPS020.20	29	20	20	14.5	28, 38, 48
CPS020.30	39	20	30	14.5	
CPS020.40	49	20	40	14.5	

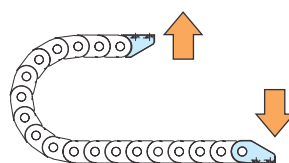
End Bracket (Polyamide)

Cat. No.	End Bracket Type	Suitable for Chain Size
S-TEB015	Tiewrap	CPS015
S-TEB020	Tiewrap	CPS020

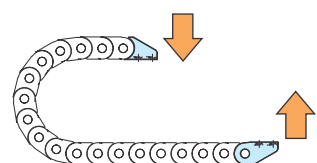
End Bracket Mounting Method



B1



B2



B3

CPS CABLE DRAG CHAINS - N TYPE CPS030 / CPS033 (BOTH SIDE OPEN)



Technical Details :

Chain Material	Glass fibre reinforced Polyamide, UL 94-HB
Noise	40 dB (DIN EN 61672-1)
Applications	Gantry Robot, Machine Center, Textile Machine, Welding Machine, Wood Work Machine and Fabric Machine
Speed	10m / sec
Temperature Range	-30° C to +130° C Continuous
Vertical Installation Lengths	Vertical Standing = max. 1.5 m Vertical Hanging = max. 10 m Side mounted, Unsupported = max. 0.6 m
Approvals	CE ATEX(Ex) RoHs2

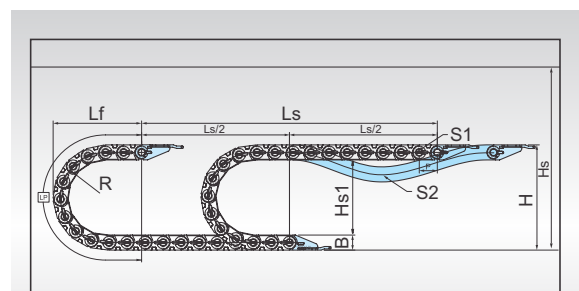
CPS030

Bending Radius R	38	48	75	100
Lp	240	271	356	434
Lf	110	119	148	173
H	101	121	175	225

CPS033

Bending Radius R	35	45	75	100	120
Lp	242	274	368	446	509
Lf	117	127	157	182	202
H	101	121	181	231	271

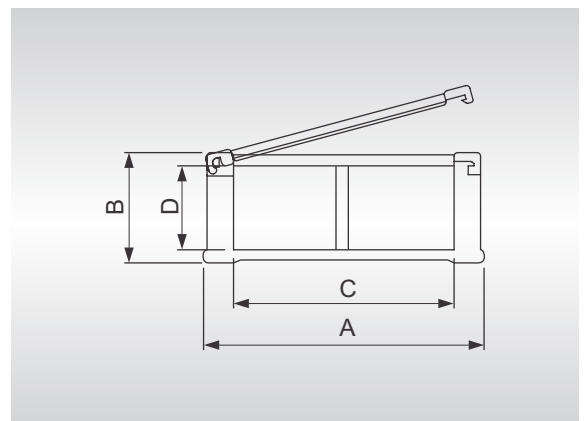
Technical Dimensions (mm)



Ls : Stroke
Total Length $L = Ls / 2 + Lp$
Safe space $Hs \geq H + 30 \text{ mm}$

Chain Cross Section

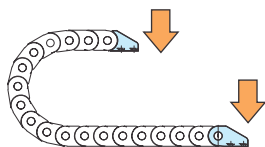
Cat. No.	Outer Width (mm) A	Outer Height (mm) B	Inner Width (mm) C	Inner Height (mm) D	Bending Radius
CPS030.15	29	26	15	19	38, 48, 75, 100
CPS030.25	39	26	25	19	
CPS030.35	49	26	35	19	
CPS030.50	64	26	50	19	
CPS033.27	45	31	27	23	35, 45, 75, 100, 120
CPS033.37	55	31	37	23	
CPS033.47	65	31	47	23	
CPS033.67	85	31	67	23	
CPS033.77	95	31	77	23	



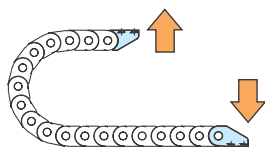
End Bracket (Polyamide)

Cat. No.	End Bracket Type	Suitable for Chain Size
S-TEB030	Tiewrap (B1/B2/B3)	CPS030
S-EEB033	Easy (B0)	CPS033

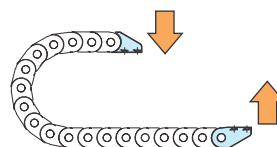
End Bracket Mounting Method



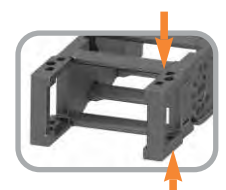
B1



B2



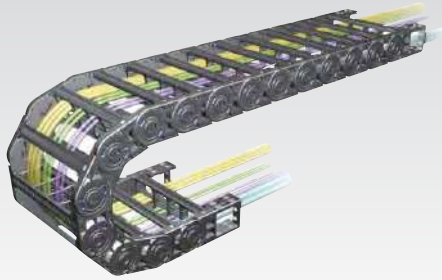
B3



Easy End Bracket B0

Fixing holes at upper & lower side

SHIFT CABLE DRAG CHAINS - N TYPE ST044N (BOTH SIDE OPEN)



Technical Details :

Chain Material	Glass fibre reinforced Polyamide, UL 94-HB
Noise	40 dB (DIN EN 61672-1)
Applications	Gantry Robot, Machine Center, Textile Machine, Welding Machine, Wood Work Machine and Fabric Machine
Speed	6m / sec
Temperature Range	-30° C to +130° C Continuous
Vertical Installation Lengths	Vertical Standing = max. 2 m Vertical Hanging = max. 40 m Side mounted, Unsupported = max. 1 m
Approvals	CE ATEX(Ex) RoHs2

ST044N

Bending Radius R	50	70	90	120	150
Lp	333	396	459	553	648
Lf	157	177	197	227	257
H	138	178	218	278	338

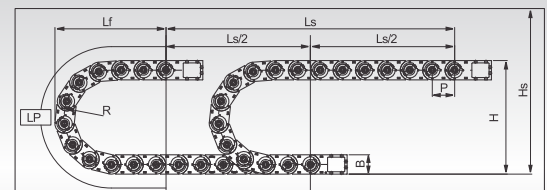
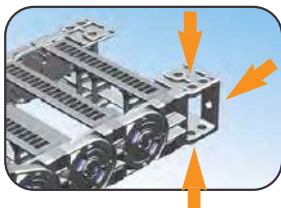
Chain Cross Section

Cat. No.	Outer Width (mm) A	Outer Height (mm) B	Inner Width (mm) C	Inner Height (mm) D	Bending Radius
ST044N.035	56	38	35	26	50, 70, 90, 120, 150
ST044N.050	71	38	50	26	
ST044N.055	76	38	55	26	
ST044N.075	96	38	75	26	
ST044N.100	121	38	100	26	
ST044N.125	146	38	125	26	
ST044N.150	171	38	150	26	
ST044N.175	196	38	175	26	
ST044N.200	221	38	200	26	

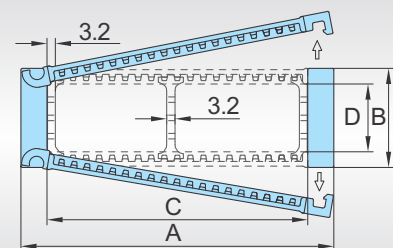
End Bracket (Polyamide)

Cat. No.	End Bracket Type	Suitable for Chain Size
ST-FEB044N/S	Free	ST044

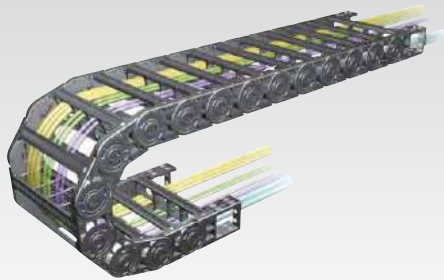
End Bracket



Ls : Stroke
Total Length $L = Ls / 2 + Lp$
Safe space $Hs \geq H + 30 \text{ mm}$



SHIFT CABLE DRAG CHAINS - N TYPE ST055N (BOTH SIDE OPEN)



Technical Details :

Chain Material	Glass fibre reinforced Polyamide, UL 94-HB
Noise	40 dB (DIN EN 61672-1)
Applications	Gantry Robot, Machine Center, Textile Machine, Welding Machine, Wood Work Machine and Fabric Machine
Speed	6m / sec
Temperature Range	-30° C to +130° C Continuous
Vertical Installation Lengths	Vertical Standing = max. 3 m Vertical Hanging = max. 50 m Side mounted, Unsupported = max. 1 m
Approvals	CE ATEX(Ex) RoHs2

ST055N

Bending Radius R	65	75	100	125	150	200
Lp	424	456	535	613	692	849
Lf	201	211	236	261	286	336
H	182	202	252	302	352	452

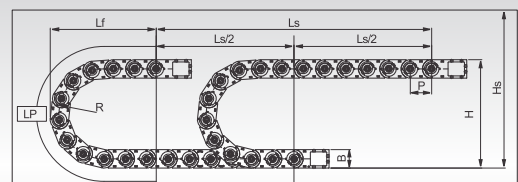
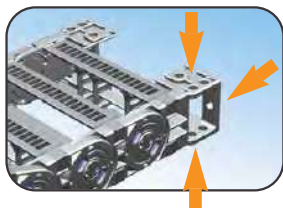
Chain Cross Section

Cat. No.	Outer Width (mm) A	Outer Height (mm) B	Inner Width (mm) C	Inner Height (mm) D	Bending Radius
ST055N.035	56	52	35	40	65,75,100, 125,150,200
ST055N.050	71	52	50	40	
ST055N.055	76	52	55	40	
ST055N.075	96	52	75	40	
ST055N.100	121	52	100	40	
ST055N.125	146	52	125	40	
ST055N.150	171	52	150	40	
ST055N.175	196	52	175	40	
ST055N.200	221	52	200	40	

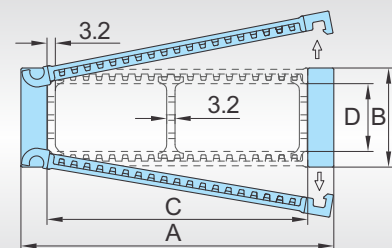
End Bracket (Polyamide)

Cat. No.	End Bracket Type	Suitable for Chain Size
ST-FEB055N/E	Free	ST055N

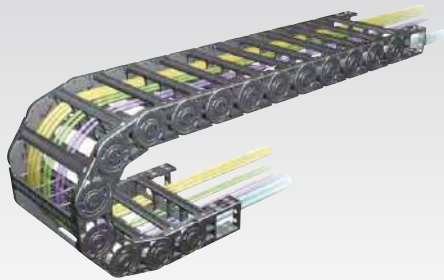
End Bracket



Ls : Stroke
Total Length $L = Ls / 2 + Lp$
Safe space $Hs \geq H + 35 \text{ mm}$



SHIFT CABLE DRAG CHAINS - N TYPE ST072N (BOTH SIDE OPEN)



Technical Details :

Chain Material	Glass fibre reinforced Polyamide, UL 94-HB
Noise	40 dB (DIN EN 61672-1)
Applications	Gantry Robot, Machine Center, Textile Machine, Welding Machine, Wood Work Machine and Fabric Machine
Speed	6m / sec
Temperature Range	-30° C to +130° C Continuous
Vertical Installation Lengths	Vertical Standing = max. 6 m Vertical Hanging = max. 100 m Side mounted, Unsupported = max. 2.5 m
Approvals	CE ATEX(Ex) RoHs2

ST072N

Bending Radius R	72	100	120	145	200	250	300
Lp	514	603	665	743	916	1074	1230
Lf	249	277	297	322	377	427	477
H	210	266	306	356	466	566	666

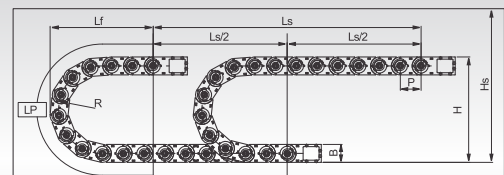
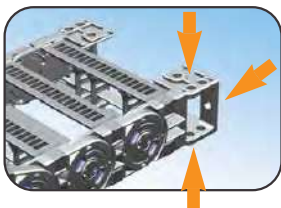
Chain Cross Section

Cat. No.	Outer Width (mm) A	Outer Height (mm) B	Inner Width (mm) C	Inner Height (mm) D	Bending Radius
ST072N.050	82	66	50	45	
ST072N.075	107	66	75	45	
ST072N.100	132	66	100	45	
ST072N.125	157	66	125	45	72,100,
ST072N.150	182	66	150	45	120,145,
ST072N.175	207	66	175	45	200,250,300
ST072N.200	232	66	200	45	
ST072N.250	282	66	250	45	
ST072N.300	332	66	300	45	

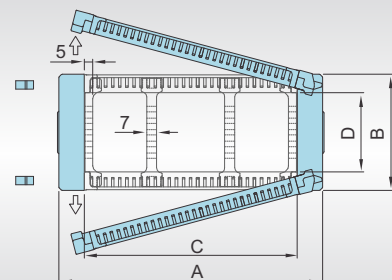
End Bracket (In Polyamide with Steel Spacers)

Cat. No.	End Bracket Type	Suitable for Chain Size
ST-FEB072N/S	Free	ST072N

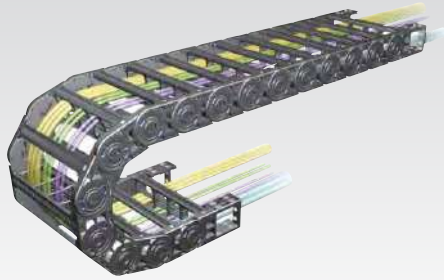
End Bracket



L_s : Stroke
 Total Length $L = L_s / 2 + L_p$
 Safe space $H_s \geq H + 40 \text{ mm}$



SHIFT CABLE DRAG CHAINS - N TYPE ST095N (BOTH SIDE OPEN)



Technical Details :

Chain Material	Glass fibre reinforced Polyamide, UL 94-HB
Noise	40 dB (DIN EN 61672-1)
Applications	Gantry Robot, Machine Center, Textile Machine, Welding Machine, Wood Work Machine and Fabric Machine
Speed	6m / sec
Temperature Range	-30° C to +130° C Continuous
Vertical Installation Lengths	Vertical Standing = max. 6 m Vertical Hanging = max. 100 m Side mounted, Unsupported = max. 3 m
Approvals	CE ATEX(Ex) RoHs2

ST095N

Bending Radius R	135	150	200	230	280	400
Lp	805	855	1010	1110	1260	1640
Lf	364	374	428	459	505	629
H	352	382	482	542	642	882

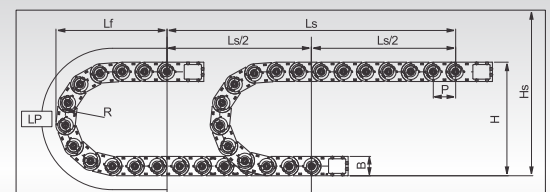
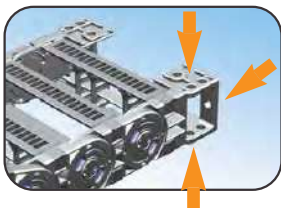
Chain Cross Section

Cat. No.	Outer Width (mm) A	Outer Height (mm) B	Inner Width (mm) C	Inner Height (mm) D	Bending Radius
ST095N.075	113	82	75	56	135,150,200, 230,280,400
ST095N.100	138	82	100	56	
ST095N.125	163	82	125	56	
ST095N.150	188	82	150	56	
ST095N.175	213	82	175	56	
ST095N.200	238	82	200	56	
ST095N.250	288	82	250	56	
ST095N.300	338	82	300	56	
ST095N.350	388	82	350	56	
ST095N.400	438	82	400	56	

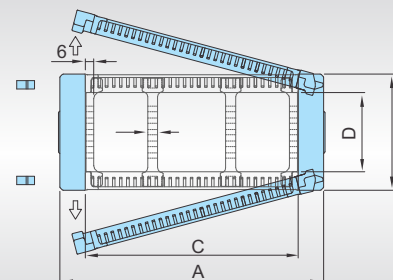
End Bracket (In Polyamide with Steel Spacers)

Cat. No.	End Bracket Type	Suitable for Chain Size
ST-FEB095N/S	Free	ST095N

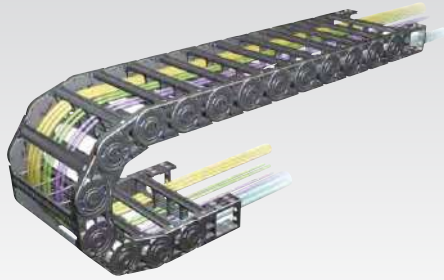
End Bracket



Ls : Stroke
Total Length $L = Ls / 2 + Lp$
Safe space $Hs \geq H + 50 \text{ mm}$



SHIFT CABLE DRAG CHAINS - N TYPE ST120N (BOTH SIDE OPEN)



Technical Details :

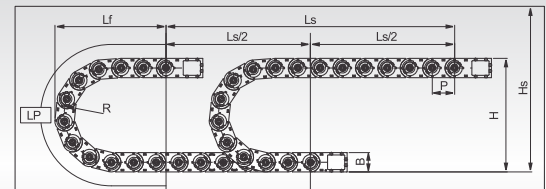
Chain Material	Glass fibre reinforced Polyamide, UL 94-HB
Noise	40 dB (DIN EN 61672-1)
Applications	Gantry Robot, Machine Center, Textile Machine, Welding Machine, Wood Work Machine and Fabric Machine
Speed	6m / sec
Temperature Range	-30°C to +130°C Continuous
Vertical Installation Lengths	Vertical Standing = max. 6 m Vertical Hanging = max. 120 m Side mounted, Unsupported = max. 3 m
Approvals	CE ATEX(Ex) RoHs2

ST120N

Bending Radius R	180	200	250	300	350	400	500
Lp	1046	1109	1266	1423	1580	1737	2051
Lf	474	494	544	594	644	694	794
H	468	508	608	708	808	908	1108

Chain Cross Section

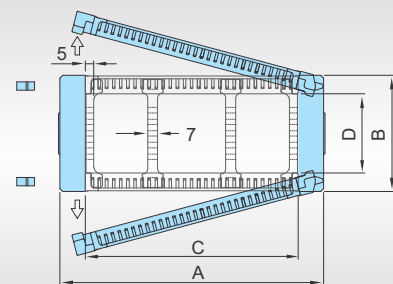
Cat. No.	Outer Width (mm) A	Outer Height (mm) B	Inner Width (mm) C	Inner Height (mm) D	Bending Radius
ST120N.075	117	108	75	78	
ST120N.100	142	108	100	78	
ST120N.125	167	108	125	78	
ST120N.150	192	108	150	78	
ST120N.175	217	108	175	78	
ST120N.200	242	108	200	78	180,200,
ST120N.250	292	108	250	78	250,300,
ST120N.300	342	108	300	78	350,400,
ST120N.350	392	108	350	78	500
ST120N.400	442	108	400	78	
ST120N.450	492	108	450	78	
ST120N.500	542	108	500	78	
ST120N.550	592	108	550	78	
ST120N.600	642	108	600	78	



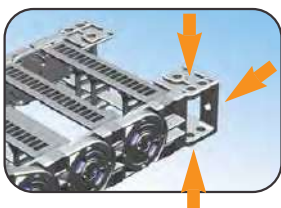
Ls : Stroke
Total Length $L = Ls / 2 + Lp$
Safe space $Hs \geq H + 60 \text{ mm}$

End Bracket (In Polyamide with Steel Spacers)

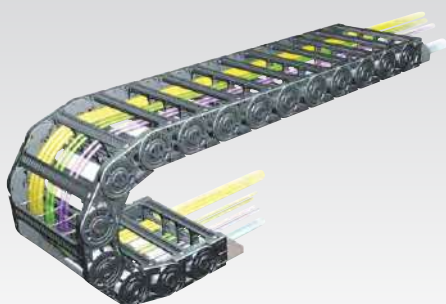
Cat. No.	End Bracket Type	Suitable for Chain Size
ST-FEB120N/S	Free	ST120N



End Bracket



SHIFT CABLE DRAG CHAINS - N TYPE ST150N (BOTH SIDE OPEN)



Technical Details :

Chain Material	Glass fibre reinforced Polyamide, UL 94-HB
Noise	40 dB (DIN EN 61672-1)
Applications	Gantry Robot, Machine Center, Textile Machine, Welding Machine, Wood Work Machine and Fabric Machine
Speed	6m / sec
Temperature Range	-30°C to +130°C Continuous
Vertical Installation Lengths	Vertical Standing = max. 7 m Vertical Hanging = max. 150 m Side mounted, Unsupported = max. 4 m
Approvals	CE ATEX(Ex) RoHs2

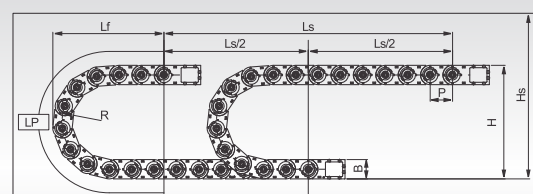
ST150N

Bending Radius R	205	305	405	505	605
Lp	1215	1510	1807	2106	2405
Lf	561	651	743	835	928
H	550	750	950	1150	1350

Chain Cross Section

Cat. No.	Outer Width (mm) A	Outer Height (mm) B	Inner Width (mm) C	Inner Height (mm) D	Bending Radius
ST150N.075	121	140	75	110	
ST150N.100	146	140	100	110	
ST150N.125	171	140	125	110	
ST150N.150	196	140	150	110	
ST150N.175	221	140	175	110	
ST150N.200	246	140	200	110	
ST150N.250	296	140	250	110	
ST150N.300	346	140	300	110	
ST150N.350	396	140	350	110	
ST150N.400	446	140	400	110	
ST150N.450	496	140	450	110	
ST150N.500	546	140	500	110	
ST150N.550	596	140	550	110	
ST150N.600	646	140	600	110	

205,305,
405,505,
605

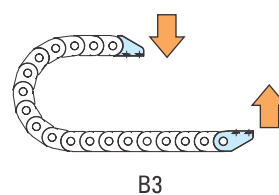
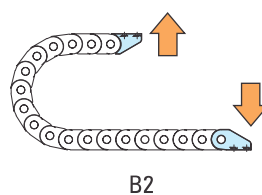
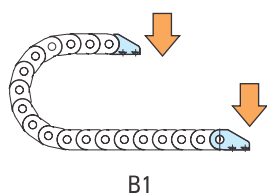
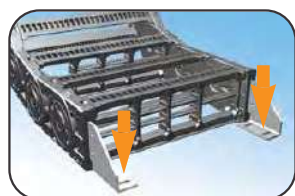


Ls : Stroke
Total Length $L = Ls / 2 + Lp$
Safe space $H_s \geq H + 80 \text{ mm}$

End Bracket in Steel

Cat. No.	End Bracket Type	Suitable for Chain Size
ST-SEB150/B1-B2-B3	B1/B2/B3	ST150N

End Bracket



SHIFT CABLE DRAG CHAINS - E TYPE ST044E / ST055E (BOTH SIDE ENCLOSED)



Technical Details :

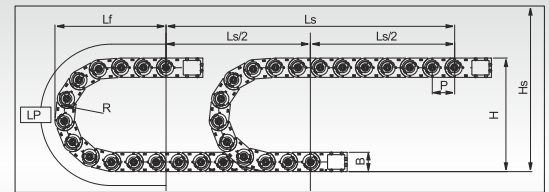
Chain Material	Glass fibre reinforced Polyamide, UL 94-HB
Noise	40 dB (DIN EN 61672-1)
Applications	Gantry Robot, Machine Center, Textile Machine, Welding Machine, Wood Work Machine and Fabric Machine
Speed	6m / sec
Temperature Range	-30° C to +130° C Continuous
Vertical Installation Lengths ST044E	Vertical Standing = max. 2 m Vertical Hanging = max. 40 m Side mounted, Unsupported = max. 1.0 m
Vertical Installation Lengths ST055E	Vertical Standing = max. 3 m Vertical Hanging = max. 50 m Side mounted, Unsupported = max. 1.0 m
Approvals	CE ATEX(Ex) RoHs2

ST044E

Bending Radius R	70	90	120	150
Lp	396	459	553	648
Lf	177	197	227	257
H	178	218	278	338

ST055E

Bending Radius R	100	125	150	200
Lp	535	613	602	849
Lf	236	261	286	336
H	252	302	352	452



L_s : Stroke
 Total Length $L = L_s / 2 + L_p$
 Safe space $H_s \geq H + 35 \text{ mm}$

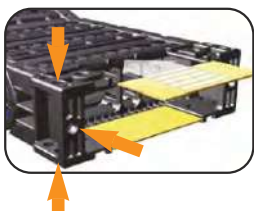
Chain Cross Section

Cat. No.	Outer Width (mm) A	Outer Height (mm) B	Inner Width (mm) C	Inner Height (mm) D	Bending Radius
ST044E.035	56	38	35	24.5	
ST044E.055	76	38	55	24.5	70, 90,
ST044E.075	96	38	75	24.5	120, 150
ST044E.100	121	38	100	24.5	
ST055E.050	71	52	50	38.5	
ST055E.075	96	52	75	38.5	100, 125,
ST055E.100	121	52	100	38.5	150, 200
ST055E.125	146	52	125	38.5	
ST055E.150	171	52	150	38.5	

End Bracket (Polyamide)

Cat. No.	End Bracket Type	Suitable for Chain Size
ST-FEB044E	Free	ST044E
ST-FEB055N/E	Free	ST055E

End Bracket



SHIFT CABLE DRAG CHAINS - E TYPE ST072E / ST095E (BOTH SIDE ENCLOSED)



Technical Details :

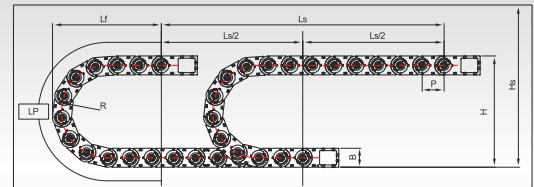
Chain Material	Glass fibre reinforced Polyamide, UL 94-HB
Noise	40 dB (DIN EN 61672-1)
Applications	Gantry Robot, Machine Center, Textile Machine, Welding Machine, Wood Work Machine and Fabric Machine
Speed	6m / sec
Temperature Range	-30° C to +130° C Continuous
Vertical Installation Lengths ST072E	Vertical Standing = max. 6 m Vertical Hanging = max. 100 m Side mounted, Unsupported = max. 2.5 m
Vertical Installation Lengths ST095E	Vertical Standing = max. 6 m Vertical Hanging = max. 100 m Side mounted, Unsupported = max. 3.0 m
Approvals	CE ATEX(Ex) RoHs2

ST072E

Bending Radius R	120	145	200	250	300
Lp	665	743	916	1074	1230
Lf	297	322	377	427	477
H	306	356	466	566	666

ST095E

Bending Radius R	150	200	230	280	400
Lp	855	1010	1110	1260	1640
Lf	374	428	459	505	629
H	382	482	542	642	882



Ls : Stroke

Total Length $L = Ls / 2 + Lp$

For 72E Safe space $H_s = H + 40 \text{ mm}$

For 95E Safe space $H_s = H + 50 \text{ mm}$

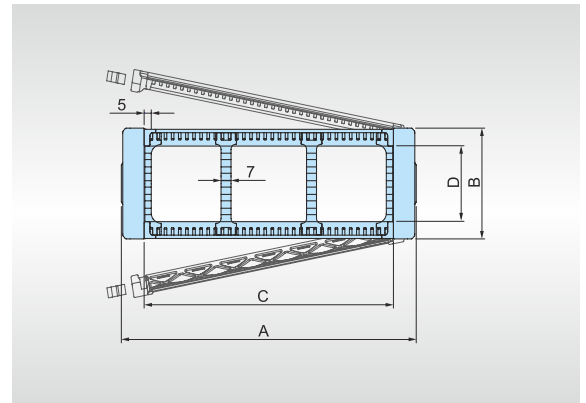
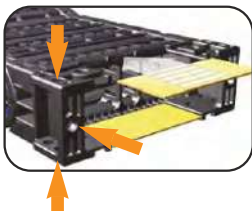
Chain Cross Section

Cat. No.	Outer Width (mm) A	Outer Height (mm) B	Inner Width (mm) C	Inner Height (mm) D	Bending Radius
ST072E.050	82	66	50	44	120,145, 200,250,300
ST072E.075	107	66	75	44	
ST072E.100	132	66	100	44	
ST072E.125	157	66	125	44	
ST072E.150	182	66	150	44	
ST095E.100	138	82	100	55	150,200,230, 280,400
ST095E.125	163	82	125	55	
ST095E.150	188	82	150	55	
ST095E.175	213	82	175	55	
ST095E.200	238	82	200	55	

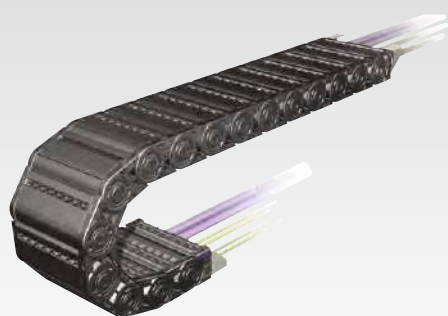
End Bracket (In Polyamide with Steel Washers)

Cat. No.	End Bracket Type	Suitable for Chain Size
ST-FEB072E	Free	ST072E
ST-FEB095E	Free	ST095E

End Bracket



SHIFT CABLE DRAG CHAINS - E TYPE ST120E / ST150E (BOTH SIDE ENCLOSED)



Technical Details :

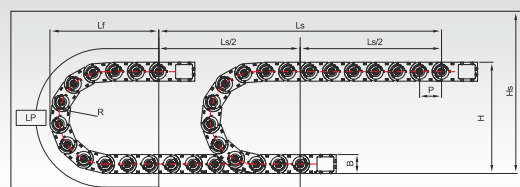
Chain Material	Glass fibre reinforced Polyamide, UL 94-HB
Noise	40 dB (DIN EN 61672-1)
Applications	Gantry Robot, Machine Center, Textile Machine, Welding Machine, Wood Work Machine and Fabric Machine
Speed	6m / sec
Temperature Range	-30° C to +130° C Continuous
Vertical Installation Lengths ST120E	Vertical Standing = max. 6 m Vertical Hanging = max. 120 m Side mounted, Unsupported = max. 3.0 m
Vertical Installation Lengths ST150E	Vertical Standing = max. 7 m Vertical Hanging = max. 150 m Side mounted, Unsupported = max. 4.0 m
Approvals	ATEX(Ex) RoHs2

ST120E

Bending Radius R	200	250	300	350	400	500
Lp	1109	1266	1423	1580	1737	2051
Lf	494	544	594	644	694	794
H	508	608	708	808	908	1108

ST150E

Bending Radius R	305	405	505	605
Lp	1510	1807	2106	2405
Lf	651	743	835	928
H	752	952	1152	1352



Ls : Stroke

Total Length $L = Ls / 2 + Lp$

For 120E Safe space $Hs = H + 60 \text{ mm}$

For 150E Safe space $Hs = H + 80 \text{ mm}$

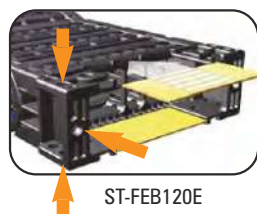
Chain Cross Section

Cat. No.	Outer Width (mm) A	Outer Height (mm) B	Inner Width (mm) C	Inner Height (mm) D	Bending Radius
ST120E.150	192	108	150	76	200,250,300, 350,400,500
ST120E.200	242	108	200	76	
ST120E.250	292	108	250	76	
ST120E.300	342	108	300	76	
ST150E.200	246	141	200	110	305,405, 505,605
ST150E.250	296	141	250	110	
ST150E.300	346	141	300	110	
ST150E.350	396	141	350	110	
ST150E.400	446	141	400	110	

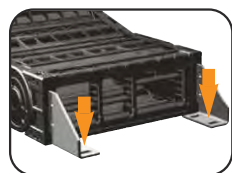
End Bracket with Steel Washers

Cat. No.	Material	End Bracket Type	Suitable for Chain Size
ST-FEB120E	Polyamide	Free	ST120E
ST-SEB150E/B1-B2-B3	Steel	B1/B2/B3	ST150E

End Bracket



ST-FEB120E



ST-SEB150E

SHIFT CABLE DRAG CHAINS - S TYPE ST044S (SLIDING WITH SKID)



Technical Details :

Chain Material	Glass fibre reinforced Polyamide, UL 94-HB
Noise	40 dB (DIN EN 61672-1)
Applications	Gantry Robot, Machine Center, Textile Machine, Welding Machine, Wood Work Machine and Fabric Machine having long stroke length
Coefficient of Friction	0.02 - 0.07 μ
Speed	6m / sec
Temperature Range	-30°C to +130°C Continuous
Approvals	 CE ATEX(Ex) RoHs2

ST044S

Bending Radius R	70	90	120	150
Lp	544	662	926	1190
Lf	249	289	393	497
H	110	110	110	110

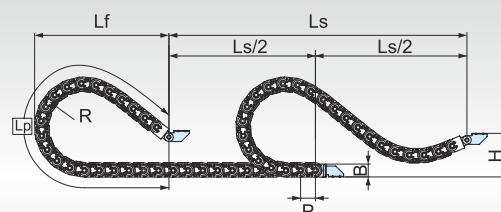
Chain Cross Section

Cat. No.	Outer Width (mm) A	Outer Height (mm) B	Inner Width (mm) C	Inner Height (mm) D	Bending Radius
ST044S.035	74	38.5	35	26	
ST044S.050	89	38.5	50	26	
ST044S.055	94	38.5	55	26	
ST044S.075	114	38.5	75	26	
ST044S.100	139	38.5	100	26	70,90,
ST044S.125	164	38.5	125	26	120,150
ST044S.150	189	38.5	150	26	
ST044S.175	214	38.5	175	26	
ST044S.200	239	38.5	200	26	

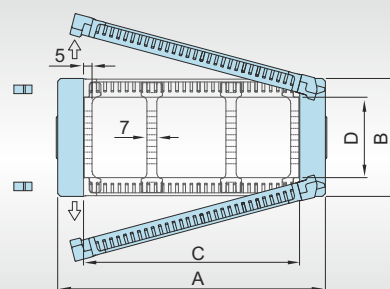
End Bracket in Polyamide

Cat. No.	End Bracket Type	Suitable for Chain Size
ST-FEB044N/S	Free	ST044S

End Bracket



Ls : Stroke
Total Length $L = Ls / 2 + Lp$
Safe space $Hs \geq H + 40 \text{ mm}$



SHIFT CABLE DRAG CHAINS - RS TYPE ST044RS (SLIDING WITH ROLLER SKID)



Technical Details :

Chain Material	Glass fibre reinforced Polyamide, UL 94-HB
Noise	40 dB (DIN EN 61672-1)
Applications	Gantry Robot, Machine Center, Textile Machine, Welding Machine, Wood Work Machine and Fabric Machine having long stroke length
Coefficient of Friction	0.02 - 0.07 μ
Speed	6m / sec
Temperature Range	-30°C to +130°C Continuous
Approvals	ATEX(Ex) RoHs2

ST044RS

Bending Radius R	70	90	120	150
Lp	544	662	926	1190
Lf	249	289	393	497
H	110	110	110	110

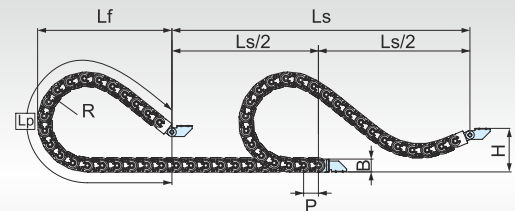
Chain Cross Section

Cat. No.	Outer Width (mm) A	Outer Height (mm) B	Inner Width (mm) C	Inner Height (mm) D	Bending Radius
ST044RS.035	73	40.5	35	26	
ST044RS.050	88	40.5	50	26	
ST044RS.055	93	40.5	55	26	
ST044RS.075	113	40.5	75	26	
ST044RS.100	138	40.5	100	26	70,90,
ST044RS.125	163	40.5	125	26	120,150
ST044RS.150	188	40.5	150	26	
ST044RS.175	213	40.5	175	26	
ST044RS.200	238	40.5	200	26	

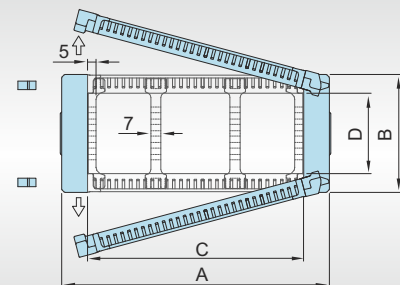
End Bracket in Polyamide

Cat. No.	End Bracket Type	Suitable for Chain Size
ST-FEB044N/S	Free	ST044RS

End Bracket



Ls : Stroke
Total Length $L = Ls / 2 + Lp$
Safe space $Hs \geq H + 40 \text{ mm}$



SHIFT CABLE DRAG CHAINS - RS TYPE ST072RS (SLIDING WITH ROLLER SKID)



Technical Details :

Chain Material	Glass fibre reinforced Polyamide, UL 94-HB
Noise	40 dB (DIN EN 61672-1)
Applications	Gantry Robot, Machine Center, Textile Machine, Welding Machine, Wood Work Machine and Fabric Machine having long stroke length
Coefficient of Friction	0.02 - 0.07 μ
Speed	6m / sec
Temperature Range	-30°C to +130°C Continuous
Approvals	ATEX(Ex) RoHs2

ST072RS

Bending Radius R	100	120	145	200	250	300
Lp	806	917	1063	1400	1840	2280
Lf	380	420	470	580	752	924
H	180	180	180	180	180	180

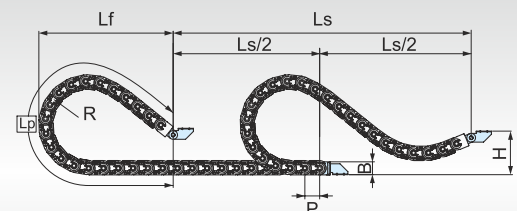
Chain Cross Section

Cat. No.	Outer Width (mm) A	Outer Height (mm) B	Inner Width (mm) C	Inner Height (mm) D	Bending Radius
ST072RS.050	104	69	50	45	
ST072RS.075	129	69	75	45	
ST072RS.100	154	69	100	45	
ST072RS.125	179	69	125	45	100,120,145,
ST072RS.150	204	69	150	45	200,250,300
ST072RS.175	229	69	175	45	
ST072RS.200	254	69	200	45	
ST072RS.250	304	69	250	45	
ST072RS.300	354	69	300	45	

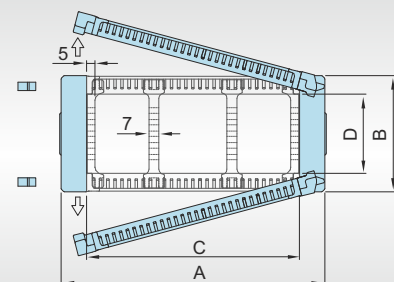
End Bracket (In Polyamide with Steel Washer)

Cat. No.	End Bracket Type	Suitable for Chain Size
ST-FEB072N/S	Free	ST072RS

End Bracket



Ls : Stroke
Total Length $L = Ls / 2 + Lp$
Safe space $Hs \geq H + 40 \text{ mm}$



SHIFT CABLE DRAG CHAINS - RS TYPE ST095RS (SLIDING WITH ROLLER SKID)



Technical Details :

Chain Material	Glass fibre reinforced Polyamide, UL 94-HB
Noise	40 dB (DIN EN 61672-1)
Applications	Gantry Robot, Machine Center, Textile Machine, Welding Machine, Wood Work Machine and Fabric Machine having long stroke length
Coefficient of Friction	0.02 - 0.07 μ
Speed	6m / sec
Temperature Range	-30°C to +130°C Continuous
Approvals	CE ATEX(Ex) RoHs2

ST095RS

Bending Radius R	135	150	200	230	280	400
Lp	1091	1178	1479	1666	2146	3232
Lf	504	534	634	694	889	1319
H	210	210	210	210	210	210

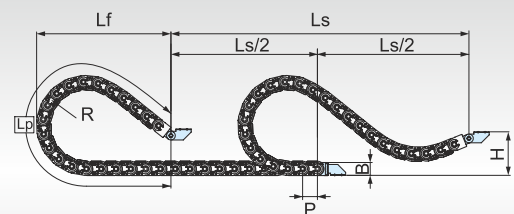
Chain Cross Section

Cat. No.	Outer Width (mm) A	Outer Height (mm) B	Inner Width (mm) C	Inner Height (mm) D	Bending Radius
ST095RS.075	143	90	75	56	135,150,200, 230,280,400
ST095RS.100	168	90	100	56	
ST095RS.125	193	90	125	56	
ST095RS.150	218	90	150	56	
ST095RS.175	243	90	175	56	
ST095RS.200	268	90	200	56	
ST095RS.250	318	90	250	56	
ST095RS.300	368	90	300	56	
ST095RS.350	418	90	350	56	
ST095RS.400	468	90	400	56	

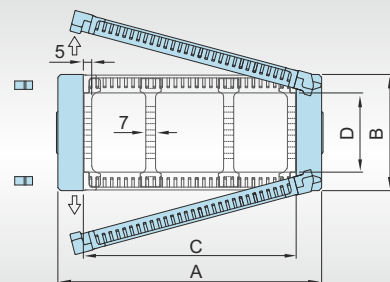
End Bracket (In Polyamide with Steel Washer)

Cat. No.	End Bracket Type	Suitable for Chain Size
ST-FEB095N/S	Free	ST095RS

End Bracket



Ls : Stroke
Total Length $L = Ls/2 + Lp$
Safe space $Hs \geq H + 40 \text{ mm}$



SHIFT CABLE DRAG CHAINS - RS TYPE ST120RS (SLIDING WITH ROLLER SKID)



Technical Details :

Chain Material	Glass fibre reinforced Polyamide, UL 94-HB
Noise	40 dB (DIN EN 61672-1)
Applications	Gantry Robot, Machine Center, Textile Machine, Welding Machine, Wood Work Machine and Fabric Machine having long stroke length
Coefficient of Friction	0.02 - 0.07 μ
Speed	6m / sec
Temperature Range	-30°C to +130°C Continuous
Approvals	ATEX(Ex) RoHs2

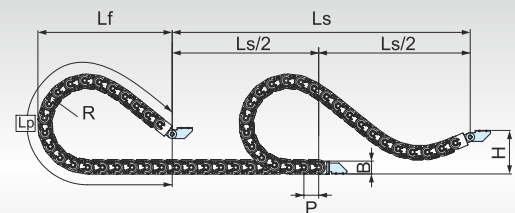
ST120RS

Bending Radius R	180	200	250	300	350	400	500
Lp	1441	1559	1864	2178	2701	3225	4062
Lf	654	694	794	894	1114	1334	1654
H	260	260	260	260	260	260	260

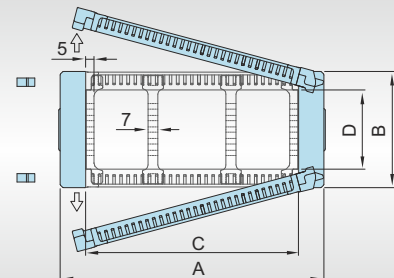
Chain Cross Section

Cat. No.	Outer Width (mm) A	Outer Height (mm) B	Inner Width (mm) C	Inner Height (mm) D	Bending Radius
ST120RS.075	143	117	75	78	
ST120RS.100	168	117	100	78	
ST120RS.125	193	117	125	78	
ST120RS.150	218	117	150	78	
ST120RS.175	243	117	175	78	
ST120RS.200	268	117	200	78	
ST120RS.250	318	117	250	78	
ST120RS.300	368	117	300	78	
ST120RS.350	418	117	350	78	
ST120RS.400	468	117	400	78	
ST120RS.450	518	117	450	78	
ST120RS.500	568	117	500	78	
ST120RS.550	618	117	550	78	
ST120RS.600	668	117	600	78	

180,200,250,
300,350,400,
500



Ls : Stroke
Total Length $L = L_s / 2 + L_p$
Safe space $H_s \geq H + 40 \text{ mm}$



End Bracket (In Polyamide with Steel Washer)

Cat. No.	End Bracket Type	Suitable for Chain Size
ST-FEB120N/S	Free	ST120RS

End Bracket



SHIFT CABLE DRAG CHAINS - RS TYPE ST150RS (SLIDING WITH ROLLER SKID)



Technical Details :

Chain Material	Glass fibre reinforced Polyamide, UL 94-HB
Noise	40 dB (DIN EN 61672-1)
Applications	Gantry Robot, Machine Center, Textile Machine, Welding Machine, Wood Work Machine and Fabric Machine having long stroke length
Coefficient of Friction	0.02 - 0.07 μ
Speed	6m / sec
Temperature Range	-30°C to +130°C Continuous
Approvals	ATEX(Ex) RoHs2

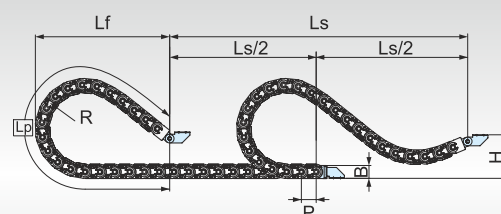
ST150RS

Bending Radius R	305	405	505	605
Lp	2272	3161	4050	4940
Lf	985	1335	1685	2035
H	400	400	400	400

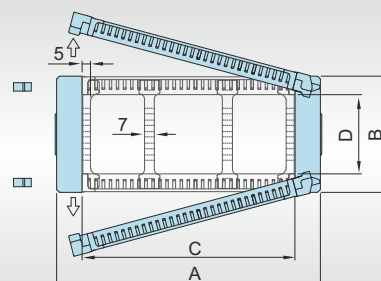
Chain Cross Section

Cat. No.	Outer Width (mm) A	Outer Height (mm) B	Inner Width (mm) C	Inner Height (mm) D	Bending Radius
ST150RS.075	162	145	75	110	
ST150RS.100	187	145	100	110	
ST150RS.125	212	145	125	110	
ST150RS.150	237	145	150	110	
ST150RS.175	262	145	175	110	
ST150RS.200	287	145	200	110	
ST150RS.250	337	145	250	110	
ST150RS.300	387	145	300	110	
ST150RS.350	437	145	350	110	
ST150RS.400	487	145	400	110	
ST150RS.450	537	145	450	110	
ST150RS.500	587	145	500	110	
ST150RS.550	637	145	550	110	
ST150RS.600	687	145	600	110	

305,405,
505,605



Ls : Stroke
Total Length $L = L_s / 2 + L_p$
Safe space $H_s \geq H + 40 \text{ mm}$



End Bracket (In Polyamide with Steel Washer)

Cat. No.	End Bracket Type	Suitable for Chain Size
ST-SEB150N/S B1-B2	B1/B2	ST150RS

End Bracket



SHIFT CABLE DRAG CHAINS - ES TYPE ST044ES / ST072ES (ENCLOSED SLIDING WITH SKID)



Technical Details :

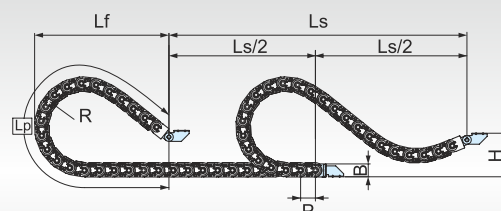
Chain Material	Glass fibre reinforced Polyamide, UL 94-HB
Noise	40 dB (DIN EN 61672-1)
Applications	Gantry Robot, Machine Center, Textile Machine, Welding Machine, Wood Work Machine and Fabric Machine having long stroke length
Coefficient of Friction	0.02 - 0.04 μ
Speed	6m / sec
Temperature Range	-30°C to +130°C Continuous
Approvals	 CE ATEX(Ex) RoHs2

ST044ES

Bending Radius R	70	90	120	150
Lp	544	662	926	1190
Lf	249	289	393	497
H	110	110	110	110

ST072ES

Bending Radius R	120	145	200	250	300
Lp	917	1063	1400	1840	2280
Lf	420	470	580	752	924
H	180	180	180	180	180



Ls : Stroke
Total Length $L = Ls / 2 + Lp$
Safe space $H_s \geq H + 40 \text{ mm}$

Chain Cross Section

Cat. No.	Outer Width (mm) A	Outer Height (mm) B	Inner Width (mm) C	Inner Height (mm) D	Bending Radius
ST044ES.035	74	38.5	35	26	70,90, 120,150
ST044ES.055	94	38.5	55	26	
ST044ES.075	114	38.5	75	26	
ST044ES.100	139	38.5	100	26	
ST072ES.050	105	71.8	50	44	
ST072ES.075	130	71.8	75	44	120,145,200, 250,300
ST072ES.100	155	71.8	100	44	
ST072ES.125	180	71.8	125	44	
ST072ES.150	205	71.8	150	44	

End Bracket (In Polyamide with Steel Washer)

Cat. No.	End Bracket Type	Suitable for Chain Size
ST-FEB044ES	Free	ST044ES
ST-FEB072ES	Free	ST072ES

End Bracket



SHIFT CABLE DRAG CHAINS - ES TYPE ST095ES / ST120ES (ENCLOSED SLIDING WITH SKID)



Technical Details :

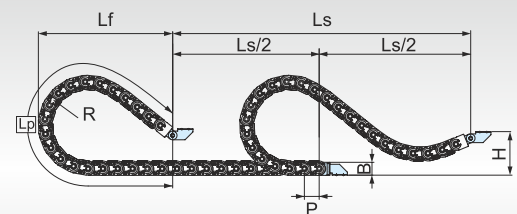
Chain Material	Glass fibre reinforced Polyamide, UL 94-HB
Noise	40 dB (DIN EN 61672-1)
Applications	Gantry Robot, Machine Center, Textile Machine, Welding Machine, Wood Work Machine and Fabric Machine having long stroke length
Coefficient of Friction	0.3 - 0.4 μ
Speed	6m / sec
Temperature Range	-30°C to +130°C Continuous
Approvals	 CE ATEX(Ex) RoHs2

ST095ES

Bending Radius R	150	200	230	280	400
Lp	1178	1479	1666	2146	3232
Lf	534	634	694	889	1319
H	210	210	210	210	210

ST120ES

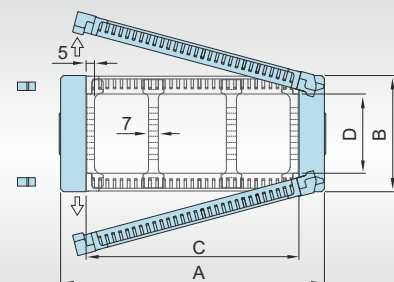
Bending Radius R	200	250	300	350	400	500
Lp	1559	1864	2178	2701	3225	4062
Lf	694	794	894	1114	1334	1654
H	260	260	260	260	260	260



Ls : Stroke
Total Length $L = L_s / 2 + L_p$
Safe space $H_s \geq H + 40 \text{ mm}$

Chain Cross Section

Cat. No.	Outer Width (mm) A	Outer Height (mm) B	Inner Width (mm) C	Inner Height (mm) D	Bending Radius
ST095ES.100	162	89	100	55	150,200,230,280,400
ST095ES.125	187	89	125	55	
ST095ES.150	212	89	150	55	
ST095ES.175	237	89	175	55	
ST095ES.200	262	89	200	55	
ST120ES.150	218	115	150	76	200,250,300,350,400,500
ST120ES.200	268	115	200	76	
ST120ES.250	318	115	250	76	
ST120ES.300	368	115	300	76	



End Bracket (In Polyamide with Steel Washer)

Cat. No.	End Bracket Type	Suitable for Chain Size
ST-FEB095ES	Free	ST095ES
ST-FEB120ES	Free	ST120ES

End Bracket



SHIFT CABLE DRAG CHAINS - ERS TYPE ST44ERS / ST072ERS (ENCLOSED SLIDING WITH ROLLER SKID)



Technical Details :

Chain Material	Glass fibre reinforced Polyamide, UL 94-HB
Noise	40 dB (DIN EN 61672-1)
Applications	Gantry Robot, Machine Center, Textile Machine, Welding Machine, Wood Work Machine and Fabric Machine having long stroke length
Coefficient of Friction	0.02 - 0.07 μ
Speed	6m / sec
Temperature Range	-30°C to +130°C Continuous
Approvals	ATEX(Ex) RoHs2

ST044ERS

Bending Radius R	70	90	120	150
Lp	544	662	926	1190
Lf	249	289	393	497
H	110	110	110	110

ST072ERS

Bending Radius R	120	145	200	250	300
Lp	917	1063	1400	1840	2280
Lf	420	470	580	752	924
H	180	180	180	180	180

Chain Cross Section

Cat. No.	Outer Width (mm) A	Outer Height (mm) B	Inner Width (mm) C	Inner Height (mm) D	Bending Radius
ST044ERS.035	73	40.5	35	24.5	70,90,120,150
ST044ERS.055	93	40.5	55	24.5	
ST044ERS.075	113	40.5	75	24.5	
ST044ERS.100	138	40.5	100	24.5	
ST072ERS.050	104	69	50	44	120,145,200,250,300
ST072ERS.075	129	69	75	44	
ST072ERS.100	154	69	100	44	
ST072ERS.125	179	69	125	44	
ST072ERS.150	204	69	150	44	

End Bracket in Polyamide

Cat. No.	End Bracket Type	Suitable for Chain Size
ST-FEB044E	Free	ST044ERS
ST-FEB072E	Free (With Steel Washer)	ST072ERS

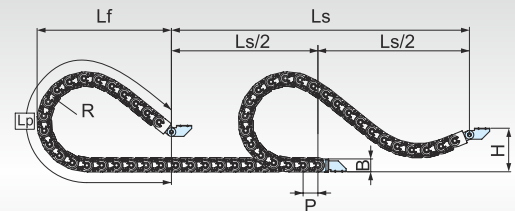
End Bracket



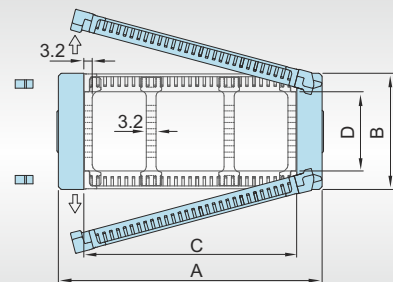
ST-FEB044E



ST-FEB072E



Ls : Stroke
Total Length $L = Ls / 2 + Lp$
Safe space $Hs \geq H + 40 \text{ mm}$



SHIFT CABLE DRAG CHAINS - ERS TYPE ST095ERS / ST120ERS (ENCLOSED SLIDING WITH ROLLER SKID)



Technical Details :

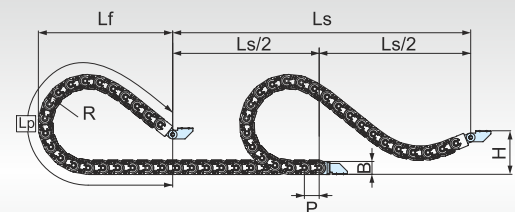
Chain Material	Glass fibre reinforced Polyamide, UL 94-HB
Noise	40 dB (DIN EN 61672-1)
Applications	Gantry Robot, Machine Center, Textile Machine, Welding Machine, Wood Work Machine and Fabric Machine having long stroke length
Coefficient of Friction	0.02 - 0.07 μ
Speed	6m / sec
Temperature Range	-30°C to +130°C Continuous
Approvals	  ATEX(Ex) RoHs2

ST095ERS

Bending Radius R	150	200	230	280	400
Lp	1178	1479	1666	2146	3232
Lf	534	634	694	889	1319
H	210	210	210	210	210

ST120ERS

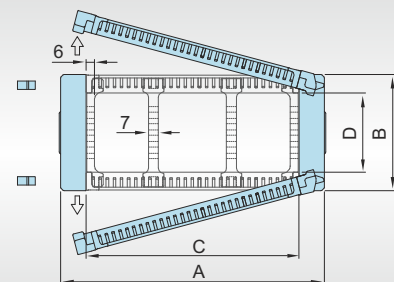
Bending Radius R	200	250	300	350	400	500
Lp	1559	1864	2178	2701	3225	4062
Lf	694	794	894	1114	1334	1654
H	260	260	260	260	260	260



L_s : Stroke
 Total Length $L = L_s / 2 + L_p$
 Safe space $H_s \geq H + 40 \text{ mm}$

Chain Cross Section

Cat. No.	Outer Width (mm) A	Outer Height (mm) B	Inner Width (mm) C	Inner Height (mm) D	Bending Radius
ST095ERS.100	168	85	100	55	150,200,230, 280,400
ST095ERS.125	193	85	125	55	
ST095ERS.150	218	85	150	55	
ST095ERS.175	243	85	175	55	
ST095ERS.200	268	85	200	55	
ST120ERS.150	218	112	150	76	200,250,300, 350,400,500
ST120ERS.200	268	112	200	76	
ST120ERS.250	318	112	250	76	
ST120ERS.300	368	112	300	76	



End Bracket (In Polyamide with Steel Washer)

Cat. No.	End Bracket Type	Suitable for Chain Size
ST-FEB095E	Free	ST095ERS
ST-FEB120E	Free	ST120ERS

End Bracket



SHIFT CABLE DRAG CHAINS - ERS TYPE ST150ERS (ENCLOSED SLIDING WITH ROLLER SKID)



Technical Details :

Chain Material	Glass fibre reinforced Polyamide, UL 94-HB
Noise	40 dB (DIN EN 61672-1)
Applications	Gantry Robot, Machine Center, Textile Machine, Welding Machine, Wood Work Machine and Fabric Machine having long stroke length
Coefficient of Friction	0.02 - 0.07 μ
Speed	6m / sec
Temperature Range	-30°C to +130°C Continuous
Approvals	 CE ATEX(Ex) RoHs2

ST150ERS

Bending Radius R	305	405	505	605
Lp	2272	3161	4050	4940
Lf	985	1335	1685	2035
H	400	400	400	400

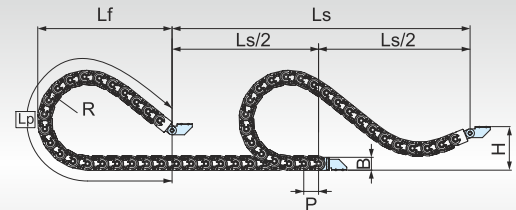
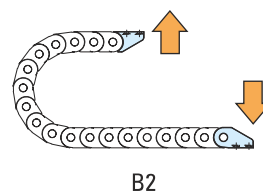
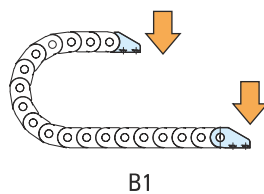
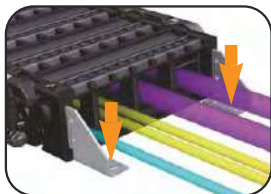
Chain Cross Section

Cat. No.	Outer Width (mm) A	Outer Height (mm) B	Inner Width (mm) C	Inner Height (mm) D	Bending Radius
ST150ERS.200	287	145	200	110	305,405, 505,605
ST150ERS.250	337	145	250	110	
ST150ERS.300	387	145	300	110	
ST150ERS.350	437	145	350	110	
ST150ERS.400	487	145	400	110	

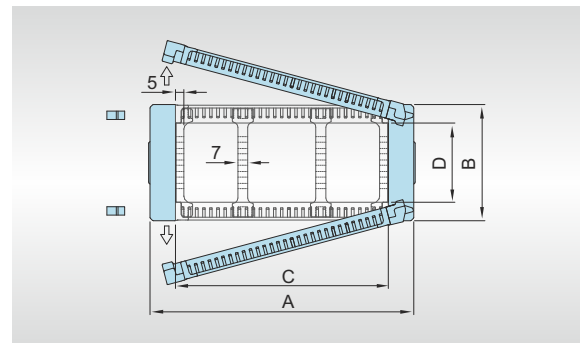
End Bracket in Steel

Cat. No.	End Bracket Type	Suitable for Chain Size
ST-SEB150E/B1-B2	Free B1/B2	ST150ERS

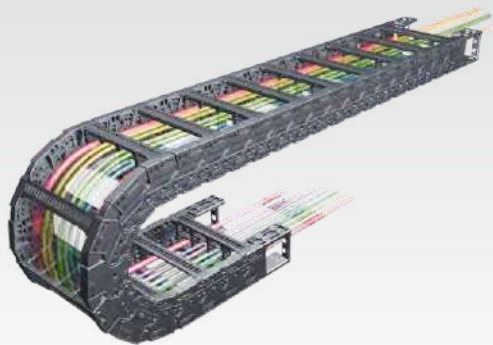
End Bracket



Ls : Stroke
Total Length $L = Ls / 2 + Lp$
Safe space $Hs \geq H + 40 \text{ mm}$



SABIN CABLE DRAG CHAIN - N TYPE NSB028N / NSB035N (BOTH SIDE OPEN)



Technical Details :

Chain Material	CPS-amide UL 94-HB
Applications	Gantry Robot, Machining Center, Textile Machine, Welding Machine, Feeder Unit, Assembly Loader, Woodworking Machines, Lathes, Fabric Machines, etc.
Speed	10m / sec
Temperature Range	-30°C to +130°C Continuous
Vertical Installation Lengths	Vertical Standing = max. 2.0 m Vertical Hanging = max. 40 m Side mounted, Unsupported = max. 1.0
Approvals	CE ATEX(Ex) RoHs2

NSB028N

Bending Radius R	46	66	86	116	146
Lp	257	320	383	477	571
Lf	125	145	165	195	225
H	138	178	218	278	338

NSB035N

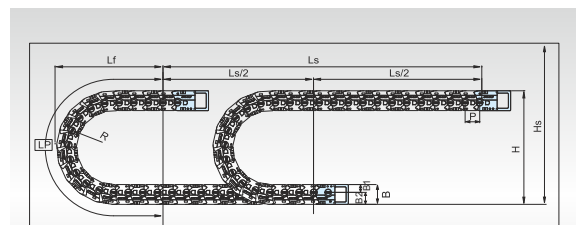
Bending Radius R	55	65	90	115	140	190
Lp	313	345	423	502	280	737
Lf	159	169	194	219	244	294
H	178	198	248	298	348	448

Chain Cross Section

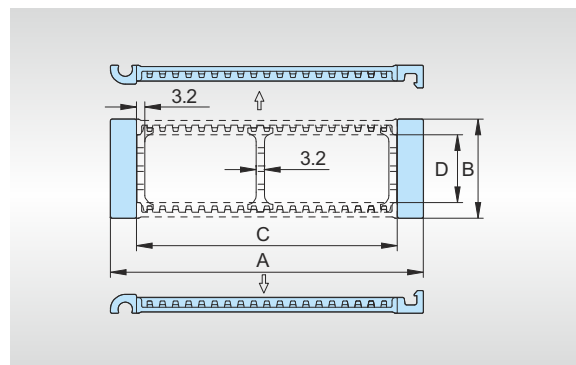
Cat. No.	Outer Width (mm) A	Outer Height (mm) B	Inner Width (mm) C	Inner Height (mm) D	Bending Radius
NSB028N.035	55	38	35	26	46, 66, 86, 116, 146
NSB028N.050	70	38	50	26	
NSB028N.055	75	38	55	26	
NSB028N.075	95	38	75	26	
NSB028N.100	120	38	100	26	
NSB028N.125	145	38	125	26	
NSB028N.150	170	38	150	26	
NSB028N.175	195	38	175	26	
NSB028N.200	220	38	200	26	55, 65, 90, 115, 140, 190
NSB035N.035	55	52	35	40	
NSB035N.050	70	52	50	40	
NSB035N.055	75	52	55	40	
NSB035N.075	95	52	75	40	
NSB035N.100	120	52	100	40	
NSB035N.125	145	52	125	40	
NSB035N.150	170	52	150	40	
NSB035N.175	195	52	175	40	
NSB035N.200	220	52	200	40	

End Bracket (Polyamide)

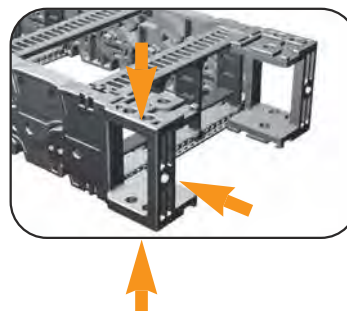
Cat. No.	End Bracket Type	Suitable for Chain Size
NSB-FEB028N/E	Free	NSB028N
NSB-FEB035N/E	Free	NSB035N



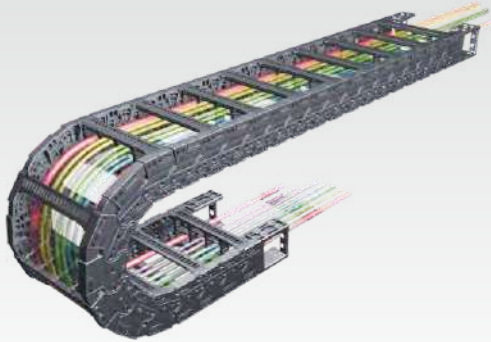
Ls : Stroke
Total Length $L = Ls / 2 + Lp$
Safe space $Hs \geq H + 30 \text{ mm}$



End Bracket



SABIN CABLE DRAG CHAIN - N TYPE NSB045N / NSB060N (BOTH SIDE OPEN)



Technical Details :

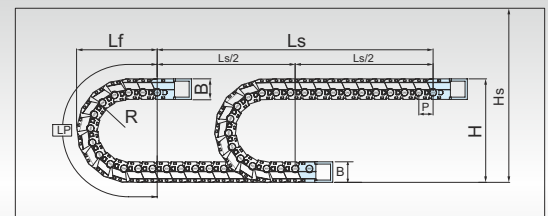
Chain Material	Glass fibre reinforced Polyamide, UL 94-HB
Noise	30 dB (DIN EN 61672-1)
Mote (IPA)	VDI 2083 Class 2 DIN EN 14644-1 ISO CALSS 4
Applications	Gantry Robot, Machining Center, Textile Machine, Welding Machine, Feeder Unit, Assembly Loader, Woodworking Machines, Lathes, Fabric Machines, etc.
Speed	10m / sec
Temperature Range	-30°C to +130°C Continuous
Vertical Installation Lengths NSB045N	Vertical Standing = max. 6 m Vertical Hanging = max. 100 m Side mounted, Unsupported = max. 2.5
Vertical Installation Lengths NSB060N	Vertical Standing = max. 6 m Vertical Hanging = max. 100 m Side mounted, Unsupported = max. 3.0
Approvals	CE ATEX(Ex) RoHs2

NSB045N

Bending Radius R	90	110	135	165	185	235	285
Lp	633	695	774	868	931	1,088	1,245
Lf	553	616	694	789	851	1,008	1,165
H	266	306	356	416	456	556	656

NSB060N

Bending Radius R	125	135	150	180	230	270	340
Lp	753	784	831	926	1,083	1,208	1,428
Lf	359	369	384	414	464	504	574
H	357	377	407	467	567	647	787



Ls : Stroke

Total Length $L = Ls / 2 + Lp$

For NSB045N Safe space $Hs \geq H + 40 \text{ mm}$

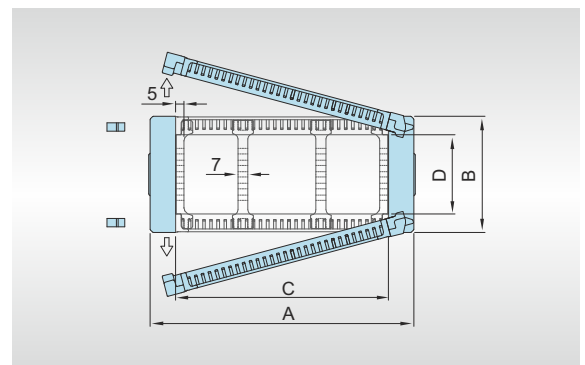
For NSB060N Safe space $Hs \geq H + 50 \text{ mm}$

Chain Cross Section

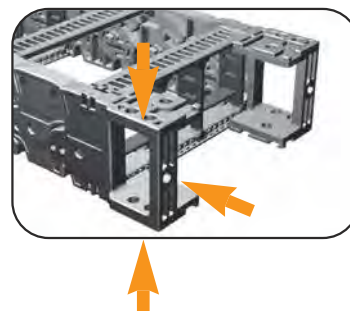
Cat. No.	Outer Width (mm) A	Outer Height (mm) B	Inner Width (mm) C	Inner Height (mm) D	Bending Radius
NSB045N.050	80	66	50	45	90, 110, 135, 165 185, 235, 285
NSB045N.075	105	66	75	45	
NSB045N.100	130	66	100	45	
NSB045N.125	155	66	125	45	
NSB045N.150	180	66	150	45	
NSB045N.175	205	66	175	45	
NSB045N.200	230	66	200	45	
NSB045N.250	280	66	250	45	
NSB045N.300	330	66	300	45	125, 135, 150, 180, 230, 270, 340
NSB060N.075	115	82	75	56	
NSB060N.100	140	82	100	56	
NSB060N.125	165	82	125	56	
NSB060N.150	190	82	150	56	
NSB060N.175	215	82	175	56	
NSB060N.200	240	82	200	56	
NSB060N.250	290	82	250	56	
NSB060N.300	340	82	300	56	
NSB060N.350	390	82	350	56	
NSB060N.400	440	82	400	56	

End Bracket (Polyamide)

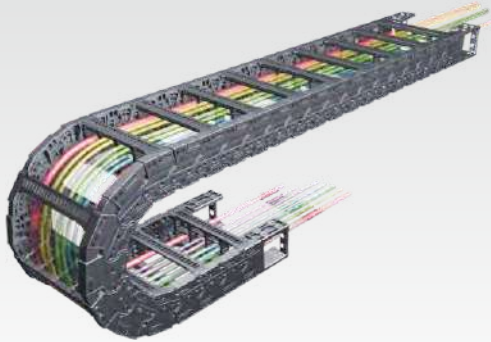
Cat. No.	End Bracket Type	Suitable for Chain Size
NSB-FEB045N/E	Free	NSB045N
NSB-FEB060N/E	Free	NSB060N



End Bracket



SABIN CABLE DRAG CHAIN - N TYPE NSB075N (BOTH SIDE OPEN)



Technical Details :

Chain Material	Glass fibre reinforced Polyamide, UL 94-HB
Noise	30 dB (DIN EN 61672-1)
Mote (IPA)	VDI 2083 Class 2 DIN EN 14644-1 ISO CALSS 4
Applications	Gantry Robot, Machining Center, Textile Machine, Welding Machine, Feeder Unit, Assembly Loader, Woodworking Machines, Lathes, Fabric Machines, etc.
Speed	10m / sec
Temperature Range	-30° C to + 130° C Continuous
Vertical Installation Lengths	Vertical Standing = max. 6 m Vertical Hanging = max. 100 m Side mounted, Unsupported = max. 3.0m
Approvals	CE ATEX(Ex) RoHs2

NSB075N

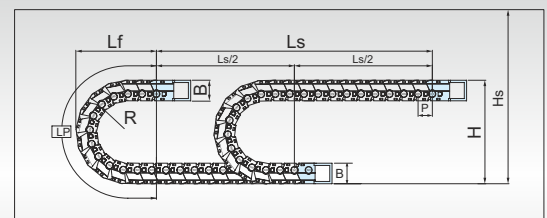
Bending Radius R	160	180	230	280	330	380	480
Lp	953	1,016	1,173	1,330	1,487	1,644	1,958
Lf	457	477	527	577	627	677	777
H	464	504	604	704	804	904	1,104

Chain Cross Section

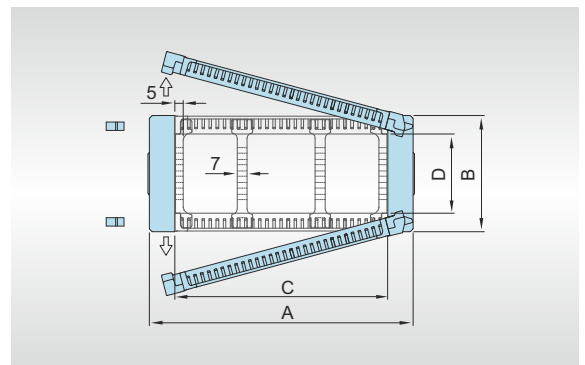
Cat. No.	Outer Width (mm) A	Outer Height (mm) B	Inner Width (mm) C	Inner Height (mm) D	Bending Radius
NSB075N.075	115	108	75	78	
NSB075N.100	140	108	100	78	
NSB075N.125	165	108	125	78	
NSB075N.150	190	108	150	78	
NSB075N.175	215	108	175	78	
NSB075N.200	240	108	200	78	
NSB075N.250	290	108	250	78	
NSB075N.300	340	108	300	78	160, 180, 230, 280,
NSB075N.350	390	108	350	78	330, 380, 480
NSB075N.400	440	108	400	78	
NSB075N.450	490	108	450	78	
NSB075N.500	540	108	500	78	
NSB075N.550	590	108	550	78	
NSB075N.600	640	108	600	78	

End Bracket (Polyamide)

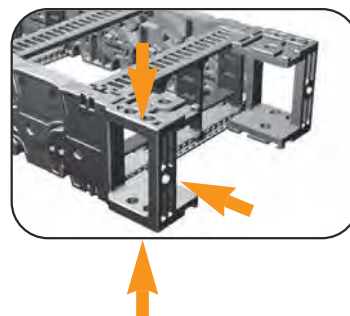
Cat. No.	End Bracket Type	Suitable for Chain Size
NSB-FEB075N/E	Free	NSB075N



Ls : Stroke
Total Length $L = Ls / 2 + Lp$
Safe space $Hs \geq H + 60 \text{ mm}$



End Bracket



SABIN CABLE DRAG CHAIN - E TYPE NSB028E / NSB035E (BOTH SIDE ENCLOSED)



Technical Details :

Chain Material	Glass fibre reinforced Polyamide, UL 94-HB
Noise	30 dB (DIN EN 61672-1)
Mote (IPA)	Class II - VDE2083 ISO Class IV-DIN EN 14644-1
Applications	Semi conductor production line which requires dust regulation minimum class 10, industrial zone which requires cable protection from dust or foreign substance.
Speed	10m / sec
Temperature Range	-30° C to +130° C Continuous
Vertical Installation Lengths NSB028E	Vertical Standing = max. 2 m Vertical Hanging = max. 40 m Side mounted, Unsupported = max. 1.0m
Vertical Installation Lengths NSB035E	Vertical Standing = max. 3 m Vertical Hanging = max. 50 m Side mounted, Unsupported = max. 1.0m
Approvals	CE ATEX(Ex) RoHs2

NSB028E

Bending Radius R	66	86	116	146
Lp	320	383	477	571
Lf	145	165	195	225
H	178	218	278	338

NSB035E

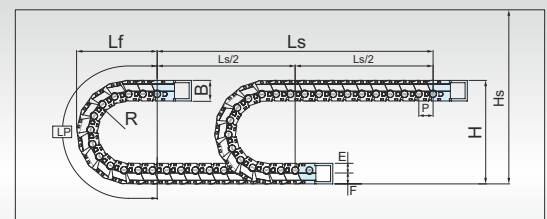
Bending Radius R	90	115	140	190
Lp	423	502	580	737
Lf	194	219	244	294
H	248	298	348	448

Chain Cross Section

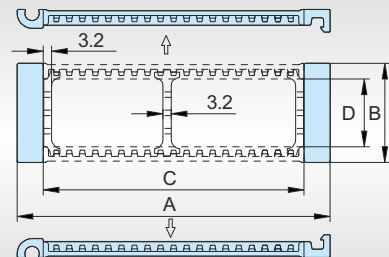
Cat. No.	Outer Width (mm) A	Outer Height (mm) B	Inner Width (mm) C	Inner Height (mm) D	Bending Radius
NSB028E.035	55	38	35	26	66,86,116,146
NSB028E.055	75	38	55	26	
NSB028E.075	95	38	75	26	
NSB028E.100	120	38	100	26	
NSB035E.050	70	52	50	40	90,115,140,190
NSB035E.075	95	52	75	40	
NSB035E.100	120	52	100	40	
NSB035E.125	145	52	125	40	
NSB035E.150	170	52	150	40	

End Bracket (Polyamide)

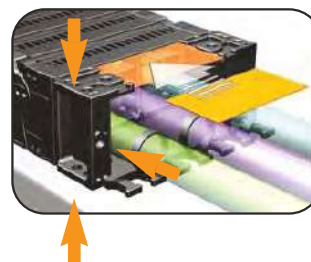
Cat. No.	End Bracket Type	Suitable for Chain Size
NSB-FEB028N/E	Free	NSB028E
NSB-FEB035N/E	Free	NSB035E



Ls : Stroke
Total Length $L = Ls / 2 + Lp$
Safe space $Hs = H + 30 \text{ mm}$



End Bracket



SABIN CABLE DRAG CHAIN - E TYPE NSB045E / NSB060E / NSB075E (BOTH SIDE ENCLOSED)



Technical Details :

Chain Material	Glass fibre reinforced Polyamide, UL 94-HB
Noise	30 dB (DIN EN 61672-1)
Mote (IPA)	Class II - VDE2083 ISO Class IV-DIN EN 14644-1
Applications	Semi conductor production line which requires dust regulation minimum class 10, industrial zone which requires cable protection from dust or foreign substance.
Speed	10m / sec
Temperature Range	-30°C to +130°C Continuous
Vertical Installation Lengths	Vertical Standing = max. 6 m Vertical Hanging = max. 100 m (045E & 060E) = max. 120 m (075E) Side mounted, Unsupported = max. 2.5m (045E) = max. 3.0m (060E & 075E)
Approvals	CE ATEX(Ex) RoHs2

NSB045E

Bending Radius R	90	110	135	165	185	235	285
Lp	553	616	694	789	851	1,008	1,165
Lf	272	292	317	347	367	417	467
H	266	306	356	416	456	556	656

NSB060E

Bending Radius R	125	135	150	180	230	270	340
Lp	753	784	831	926	1,083	1,208	1,427
Lf	359	369	384	414	464	504	574
H	357	377	407	467	567	647	787

NSB075E

Bending Radius R	160	180	230	280	330	380	480
Lp	953	1,016	1,172	1,329	1,487	1,644	1,958
Lf	457	477	527	577	627	677	777
H	464	504	604	704	804	904	1,104

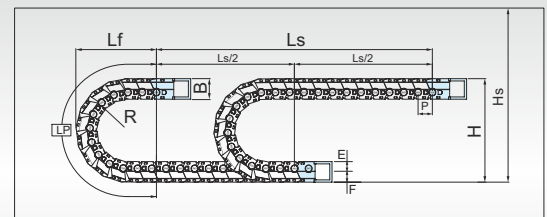
Technical Dimensions (mm)

Chain Cross Section

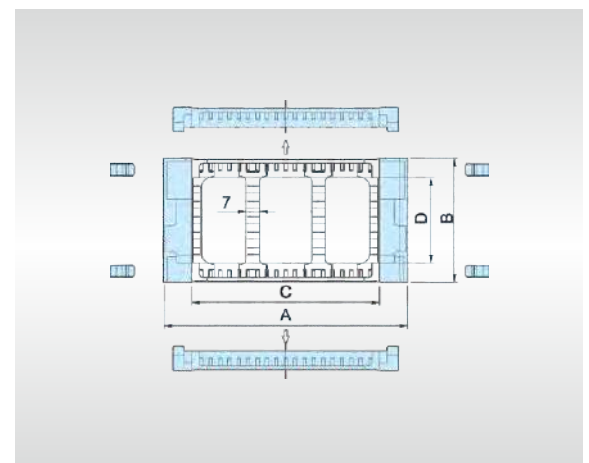
Cat. No.	Outer Width (mm) A	Outer Height (mm) B	Inner Width (mm) C	Inner Height (mm) D	Bending Radius
NSB045E.075	105	66	75	45	90, 110, 135, 165 185, 235, 285
NSB045E.100	130	66	100	45	
NSB045E.125	155	66	125	45	
NSB045E.150	180	66	150	45	125, 135, 150, 180, 230, 270, 340
NSB060E.100	140	82	100	56	
NSB060E.150	190	82	150	56	
NSB060E.200	240	82	200	56	160, 180, 230, 280, 330, 380, 480
NSB075E.150	190	108	150	78	
NSB075E.200	240	108	200	78	
NSB075E.300	340	108	300	78	

End Bracket (Polyamide)

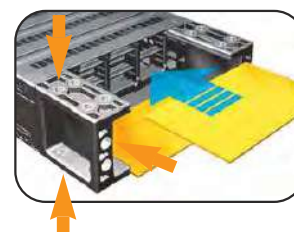
Cat. No.	End Bracket Type	Suitable for Chain Size
NSB-FEB045N/E	Free	NSB045E
NSB-FEB060N/E	Free	NSB060E
NSB-FEB075N/E	Free	NSB075E



Ls : Stroke
Total Length $L = Ls / 2 + Lp$
Safe space $Hs = H + 40$ mm



End Bracket



SABIN CABLE DRAG CHAIN - S TYPE NSB050S / NSB065S (SLIDING WITH SKID)



Technical Details :

Chain Material	Glass fibre reinforced Polyamide 6 CPS-AMIDE
Noise	30 dB (DIN EN 61672-1)
Mote (IPA)	VDI 2083 Class 2 DIN EN 14644-1 ISO CALSS 4
Applications	Gantry Robot, Machining Center, Textile Machine, Welding Machine, Feeder Unit, Assembly Loader, Woodworking Machines, Lathes, Fabric Machines, etc.
Speed	6m / sec
Temperature Range	-30°C to +130°C Continuous
Approvals	CE ATEX(Ex) RoHs2

NSB050S

Bending Radius R	110	135	165	185	235	285
Lp	916	1,068	1,255	1,385	1,703	2,029
Lf	380	430	490	530	630	730
H	180	180	180	180	180	180

NSB065S

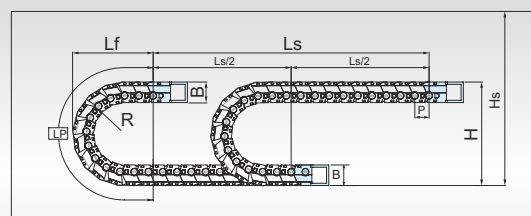
Bending Radius R	140	190	220	270	390
Lp	1,225	1,543	1,734	2,052	2,814
Lf	615	715	775	875	1,115
H	210	210	210	210	210

Chain Cross Section

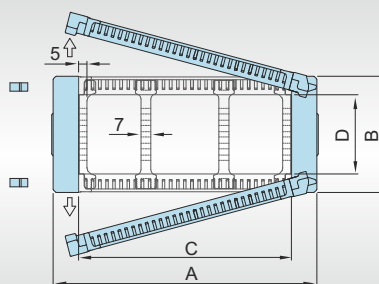
Cat. No.	Outer Width (mm) A	Outer Height (mm) B	Inner Width (mm) C	Inner Height (mm) D	Bending Radius
NSB050S.050	104	71.5	50	45	110,135,165, 185,235,285
NSB050S.075	129	71.5	75	45	
NSB050S.100	154	71.5	100	45	
NSB050S.125	179	71.5	125	45	
NSB050S.150	204	71.5	150	45	
NSB050S.175	229	71.5	175	45	
NSB050S.200	254	71.5	200	45	
NSB050S.250	304	71.5	250	45	
NSB050S.300	354	71.5	300	45	140,190,220, 270,390
NSB065S.075	137	89	75	56	
NSB065S.100	162	89	100	56	
NSB065S.125	187	89	125	56	
NSB065S.150	212	89	150	56	
NSB065S.175	237	89	175	56	
NSB065S.200	262	89	200	56	
NSB065S.250	312	89	250	56	
NSB065S.300	362	89	300	56	
NSB065S.350	412	89	350	56	
NSB065S.400	462	89	400	56	

End Bracket (Polyamide)

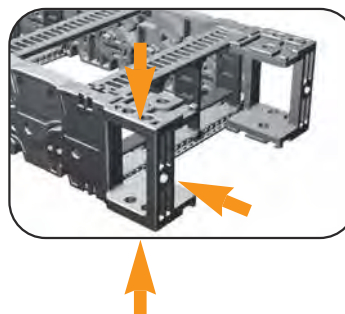
Cat. No.	End Bracket Type	Suitable for Chain Size
NSB-FEB050S	Free	NSB050S
NSB-FEB065S	Free	NSB065S



Ls : Stroke
Total Length $L = Ls / 2 + Lp$
Safe space $Hs \geq H + 40 \text{ mm}$



End Bracket



SABIN CABLE DRAG CHAIN - S TYPE NSB080S (SLIDING WITH SKID)



Technical Details :

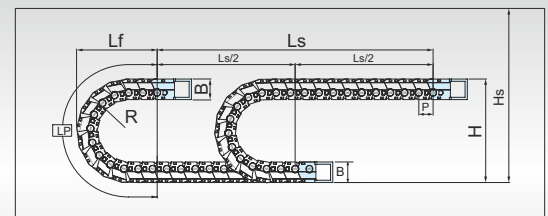
Chain Material	Glass fibre reinforced Polyamide 6 CPS-AMIDE
Noise	30 dB (DIN EN 61672-1)
Mote (IPA)	VDI 2083 Class 2 DIN EN 14644-1 ISO CALSS 4
Applications	Gantry Robot, Machining Center, Textile Machine, Welding Machine, Feeder Unit, Assembly Loader, Woodworking Machines, Lathes, Fabric Machines, etc.
Speed	6m / sec
Temperature Range	-30°C to +130°C Continuous
Approvals	CE ATEX(Ex) RoHs2

NSB080S

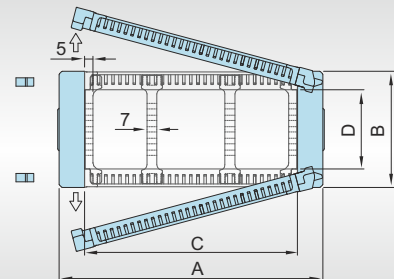
Bending Radius R	180	200	250	300	350	400	500
Lp	1,490	1,617	1,935	2,253	2,571	2,889	3,524
Lf	690	730	830	930	1,030	1,130	1,330
H	260	260	260	260	260	260	260

Chain Cross Section

Cat. No.	Outer Width (mm) A	Outer Height (mm) B	Inner Width (mm) C	Inner Height (mm) D	Bending Radius
NSB080S.075	143	115	75	78	180,200,250, 300,350, 400,500
NSB080S.100	168	115	100	78	
NSB080S.125	193	115	125	78	
NSB080S.150	218	115	150	78	
NSB080S.175	243	115	175	78	
NSB080S.200	268	115	200	78	
NSB080S.250	318	115	250	78	
NSB080S.300	368	115	300	78	
NSB080S.350	418	115	350	78	
NSB080S.400	468	115	400	78	
NSB080S.450	518	115	450	78	
NSB080S.500	568	115	500	78	
NSB080S.550	618	115	550	78	
NSB080S.600	668	115	600	78	



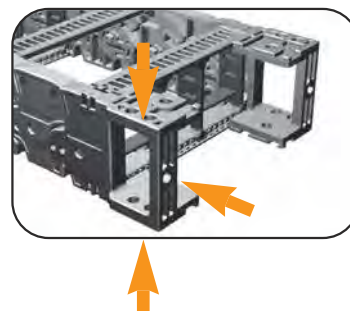
Ls : Stroke
Total Length $L = Ls / 2 + Lp$
Safe space $Hs \geq H + 40 \text{ mm}$



End Bracket (Polyamide)

Cat. No.	End Bracket Type	Suitable for Chain Size
NSB-FEB080S	Free	NSB080S

End Bracket



CABLE DRAG CHAIN ACCESSORIES - DIVIDERS



DV-M

DV-S



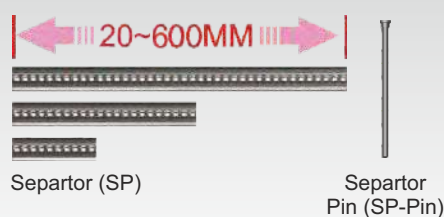
Accessories like Dividers help in the management of the cables within the Cable Drag Chain.

Dividers DV-M type act like vertical partitions which help differentiate the cables into different columns within the Cable Drag Chain.

The Dividers DV-S act like self supporting partitions at both sides of inner chain to support the Separators.

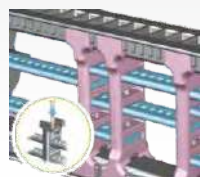
Cat. No.	Description
S-DV 030	Divider for 30 Series CPS Cable Drag Chains
S-DV 033	Divider for 33 Series CPS Cable Drag Chains
SB-DV028/044M	Divider for Sabin 028 & Shift 044 Series Chains
SB-DV035/055M	Divider for Sabin 035 & Shift 055 Series Chains
SB-DV045/072M	Divider for Sabin 045 & Shift 072 Series Chains
SB-DV060/095M	Divider for Sabin 060 & Shift 095 Series Chains
SB-DV075/120M	Divider for Sabin 075 & Shift 120 Series Chains
SB-DV100M	Divider for Shift 150 Series Chains

CABLE DRAG CHAIN ACCESSORIES - HORIZONTAL SEPARATORS



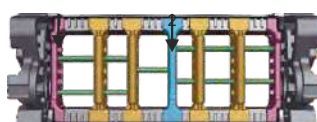
Separator (SP)

Separator Pin (SP-Pin)



Accessories like Separators Holders help in the management of the cables within the Cable Drag Chain.

Separators act like horizontal partitions which help manage different 'rows' of cables within the Cable Drag Chain. The Separators are locked in to place at each end by fixing pin passing through divider and separator.



1 DV-S



Cat. No.	Description
S-SP/M.35	Separator for NSB 028,035 & ST 044,055 Series Cable Drag Chain
S-SP/M.50	Separator for NSB 028,035 & ST 044,055 Series Cable Drag Chain
S-SP/M.75	Separator for NSB 028,035 & ST 044,055 Series Cable Drag Chain
S-SP/M.100	Separator for NSB 028,035 & ST 044,055 Series Cable Drag Chain
S-SP/M.125	Separator for NSB 028,035 & ST 044,055 Series Cable Drag Chain
S-SP/M.150	Separator for NSB 028,035 & ST 044,055 Series Cable Drag Chain
S-SP/M.175	Separator for NSB 028,035 & ST 044,055 Series Cable Drag Chain
S-SP/M.200	Separator for NSB 028,035 & ST 044,055 Series Cable Drag Chain
SB-SP/400.300	Separator for NSB 045,060,075 & ST 072,095,120 Series Cable Drag Chain
SB-SP/400.400	Separator for NSB 045,060,075 & ST 072,095,120 Series Cable Drag Chain
SB-SP/600.600	Separator for ST 150 Series Cable Drag Chain

CABLE DRAG CHAIN ACCESSORIES - TIE WRAP / SYSTEM TIE WRAP



CPS Series



NSB & ST Series

The cables passing through the Cable Drag Chain need to be fixed at the ends of the drag chain by means of tie wraps. Upon installation the Tie Wrap Holder provides a location for the cables to be tied to. Once the cables are tied to the Tie Wrap Holder they are prevented from tangling and the subsequent possibility of cable disconnection.

Tie Wrap

Cat. No.	Description
S-TW033.27	Tie Wrap Holder for CPS 33 Series Cable Drag Chains
S-TW033.37	Tie Wrap Holder for CPS 33 Series Cable Drag Chains
S-TW033.47	Tie Wrap Holder for CPS 33 Series Cable Drag Chains
S-TW033.67	Tie Wrap Holder for CPS 33 Series Cable Drag Chains
S-TW033.77	Tie Wrap Holder for CPS 33 Series Cable Drag Chains
S-TW028/044.35	Tie Wrap Holder for NSB 028 & ST 044 Series Cable Drag Chains
S-TW028/044.55	Tie Wrap Holder for NSB 028 & ST 044 Series Cable Drag Chains
S-TW028/044.75	Tie Wrap Holder for NSB 028 & ST 044 Series Cable Drag Chains
S-TW028/044.100	Tie Wrap Holder for NSB 028 & ST 044 Series Cable Drag Chains
S-TW028/044.125	Tie Wrap Holder for NSB 028 & ST 044 Series Cable Drag Chains
S-TW035/055.50	Tie Wrap Holder for NSB 035 & ST 055 Series Cable Drag Chains
S-TW035/055.75	Tie Wrap Holder for NSB 035 & ST 055 Series Cable Drag Chains
S-TW035/055.100	Tie Wrap Holder for NSB 035 & ST 055 Series Cable Drag Chains
S-TW035/055.125	Tie Wrap Holder for NSB 035 & ST 055 Series Cable Drag Chains
S-TW035/055.150	Tie Wrap Holder for NSB 035 & ST 055 Series Cable Drag Chains
S-TW035/055.175	Tie Wrap Holder for NSB 035 & ST 055 Series Cable Drag Chains
S-TW035/055.200	Tie Wrap Holder for NSB 035 & ST 055 Series Cable Drag Chains
S-TW50	Tie Wrap Holder for NSB 050S, 060S, 080S Series & ST 72, 95, 120 & 150 Series Cable Drag Chains
S-TW75	Tie Wrap Holder for NSB 050S, 060S, 080S Series & ST 72, 95, 120 & 150 Series Cable Drag Chains
S-TW100	Tie Wrap Holder for NSB 050S, 060S, 080S Series & ST 72, 95, 120 & 150 Series Cable Drag Chains
S-TW125	Tie Wrap Holder for NSB 050S, 060S, 080S Series & ST 72, 95, 120 & 150 Series Cable Drag Chains
S-TW150	Tie Wrap Holder for NSB 050S, 060S, 080S Series & ST 72, 95, 120 & 150 Series Cable Drag Chains

System Tie Wrap

Cat. No.	Description
S-TW.EB028	System Tie Wrap for NSB 028 & ST 044 Series Cable Drag Chains
S-TW.EB035	System Tie Wrap for NSB 035 & ST 055 Series Cable Drag Chains
S-TW.EB045	System Tie Wrap for NSB 045, 050S & ST 072 Series Cable Drag Chains
S-TW.EB050	System Tie Wrap for NSB 060, 060S & ST 095 Series Cable Drag Chains
S-TW.EB075	System Tie Wrap for NSB 075, 080S & ST 120 Series Cable Drag Chains

Alphabetical Part Index

The Index gives ready reference of Cat. No. / Type and cross reference of page number.

Cat. No	Pg. No	Cat. No	Pg. No	Cat. No	Pg. No	Cat. No	Pg. No
ABFM-11	93	AMPC-42	67	BBFM-02A 90	92	BBS-03(Y)	31
ABFM-16	93	AMPC-48	67	BBFM-03	89	BBS-04(Y)	31
ABFM-21	93	AMPC-9	67	BBFM-03 45	90	BBS-05(Y)	31
ABFM-29	93	ANMSF-1 1/2"	67	BBFM-03 90	91	BBS-06(Y)	31
ABFM-36	93	ANMSF-1 1/4"	67	BBFM-03(S)	89	BBS-07(Y)	31
ABFM-48	93	ANMSF-1"	67	BBFM-03(S) 45	90	BBS-08(Y)	31
ABFM-9	93	ANMSF-1/2"	67	BBFM-03(S) 90	91	BBS-11(Y)	31
ABFP-11	93	ANMSF-2"	67	BBFM-03A	92	BBS-12(Y)	31
ABFP-13	93	ANMSF-3/4"	67	BBFM-03A 90	92	BBS-13(Y)	31
ABFP-16	93	ANMSF-3/8"	67	BBFM-04	89	BBS-14(Y)	31
ABFP-21	93	AORB-1 1/2"	70	BBFM-04 45	90	BBS-15(Y)	31
ABFP-29	93	AORB-1 1/4"	70	BBFM-04 90	91	BBS-16(Y)	31
ABFP-36	93	AORB-1"	70	BBFM-04A	92	BBS-17(Y)	31
ABFP-42	93	AORB-1/2"	70	BBFM-04A 90	92	BBS-18(Y)	31
ABFP-48	93	AORB-2"	70	BBFM-05	89	BBS-19(Y)	31
ABFP-9	93	AORB-3/4"	70	BBFM-05 45	90	BBS-20(Y)	31
Abrasions Protector RKTP	110	AORB-3/8"	70	BBFM-05 90	91	BBS-21(Y)	31
ACRB-02	98	ASLB-1 1/2"	72	BBFM-05A	92	BBS-22(Y)	31
ACRB-03	98	ASLB-1 1/4"	72	BBFM-05A 90	92	BBS-23(Y)	31
ACRB-04	98	ASLB-1"	72	BBFM-06	89	BBS-24(Y)	31
ACRB-05	98	ASLB-1/2"	72	BBFM-06 45	90	BBS-25(Y)	31
ACRB-06	98	ASLB-2"	72	BBFM-06 90	91	BBS-26(Y)	31
ACRB-07	98	ASLB-3/4"	72	BBFM-06A	92	BBS-27(Y)	31
ACRB-08	98	ASLB-3/8"	72	BBFM-07	89	BBS-28(Y)	31
ACRB-09	98	ASLI-1 1/4"	72	BBFM-07 45	90	BC-CGS-080806	106
AEFB-1 1/2"	69	ASLI-1"	72	BBFM-07 90	91	BC-CGS-081107	106
AEFB-1 1/4"	69	ASLI-1/2"	72	BBFM-08	89	BC-CGS-101007	106
AEFB-1"	69	ASLI-1/4"	72	BBFM-08 45	90	BC-CGS-151507	106
AEFB-1/2"	69	ASLI-3/16"	72	BBFM-08 90	91	BC-CGS-202010	106
AEFB-2"	69	ASLI-3/4"	72	BBFN-02	89	BC-CTS-080806	106
AEFB-3/4"	69	ASLI-3/8"	72	BBFN-02 45	90	BC-CTS-081107	106
AEFB-3/8"	69	ASLI-5/16"	72	BBFN-02 90	91	BC-CTS-101007	106
AEFMB-1 1/2"	69	AUI-1 1/2"	72	BBFN-02(S)	89	BC-CTS-151507	106
AEFMB-1 1/4"	69	AUI-2"	72	BBFN-02(S) 45	90	BC-CTS-192813	106
AEFMB-1"	69	BBFB-01	89	BBFN-02(S) 90	91	BC-CTS-202010	106
AEFMB-1/2"	69	BBFB-02(C)	89	BBFN-02A	92	BC-CTS-285613	106
AEFMB-2"	69	BBFB-03	89	BBFN-02A 90	92	BCW-21	17
AEFMB-3/4"	69	BBFB-03 45	90	BBFN-03	89	BCW-22	17
AEFMB-3/8"	69	BBFB-03 90	91	BBFN-03 45	90	BCW-23	17
AHCB-1 1/2"	70	BBFB-04	89	BBFN-03 90	91	BCW-25	17
AHCB-1 1/4"	70	BBFB-04 45	90	BBFN-03A	92	BCW-27	17
AHCB-1"	70	BBFB-04 90	91	BBFN-03A 90	92	BCW-29	17
AHCB-1/2"	70	BBFB-05	89	BBFN-04	89	BCW-30	17
AHCB-2"	70	BBFB-05 45	90	BBFN-04 45	90	BCW-31	17
AHCB-3/4"	70	BBFB-05 90	91	BBFN-04 90	91	BCW-32	17
AHCB-3/8"	70	BBFB-06	89	BBFN-04A	92	BCW-33	17
AHCI-1 1/2"	71	BBFB-06 45	90	BBFN-04A 90	92	BD-16	7
AHCI-1 1/4"	71	BBFB-06 90	91	BBFN-05	89	BD-17	7
AHCI-1"	71	BBFB-07	89	BBFN-05 45	90	BD-18	7
AHCI-1/2"	71	BBFB-07 45	90	BBFN-05 90	91	BDC-M12	30
AHCI-2"	71	BBFB-07 90	91	BBFN-05A	92	BDC-M16	30
AHCI-3/4"	71	BBFB-08	89	BBFN-05A 90	92	BDC-M20	30
AHCI-3/8"	71	BBFB-08 45	90	BBFN-06	89	BDC-M25	30
AHTDL-1 1/2"	71	BBFB-08 90	91	BBFN-06 45	90	BDC-M32	30
AHTDL-1 1/4"	71	BBFB-09	89	BBFN-06 90	91	BDC-M40	30
AHTDL-1"	71	BBFB-09 45	90	BBFN-06A	92	BDC-M50	30
AHTDL-1/2"	71	BBFB-09 90	91	BBFN-06A 90	92	BDC-M63	30
AHTDL-2"	71	BBFB-10	89	BBFN-07	89	BDF-16	7
AHTDL-3/4"	71	BBFB-10 45	90	BBFN-07 45	90	BDF-17	7
AHTDL-3/8"	71	BBFB-10 90	91	BBFN-07 90	91	BDF-18	7
AMPC-11	67	BBFM-01	89	BBFN-07A	92	BDP-09-22	34
AMPC-13	67	BBFM-02	89	BBFN-07A 90	92	BDP-09-22	34
AMPC-16	67	BBFM-02 45	90	BBFN-08A	92	BDP-11-22	34
AMPC-21	67	BBFM-02 90	91	BBFN-08A 90	92	BDP-11-22	34
AMPC-29	67	BBFM-02(S) 90	91	BBS-01(Y)	31	BDP-13-22	34
AMPC-36	67	BBFM-02A	92	BBS-02(Y)	31	BDP-13-22	34

Cat. No	Pg. No	Cat. No	Pg. No	Cat. No	Pg. No	Cat. No	Pg. No
BDP-16-22	34	BFL-14	25	BL-25	25	BMBCVG-01L	16
BDP-16-22	34	BFL-21	25	BL-26	25	BMBCVG-02	16
BDP-18-22	34	BFL-22	25	BL-27	25	BMBCVG-0S	16
BDP-18-22	34	BFL-23	25	BL-28	25	BMBD-04S	9
BDP-20-22	34	BFL-24	25	BL-29	25	BMBE-01	9
BDP-22-22	34	BI-01	4	BL-30	25	BMBE-01S	9
BDP-22-22	34	BI-01L	4	BM-01	4	BMBE-02	9
BDP-24-22	34	BI-02	4	BM-01L	4	BMBE-03	9
BDP-29-22	34	BI-02L	4	BM-02	4	BMBE-04	9
BDP-29-22	34	BI-03	4	BM-02L	4	BMBE-04S	9
BDP-32-22	34	BI-04	4	BM-03	4	BMBE-04SR	9
BDP-37-22	34	BI-05	4	BM-04	4	BMBE-05	9
BDP-37-22	34	BI-06	4	BM-05	4	BMBE-05S	9
BDP-45-22	34	BI-07	4	BM-06	4	BMBE-06	9
BDP-45-22	34	BI-08	4	BM-07	4	BMBE-07	9
BDP-52-22	34	BI-09	4	BM-08	4	BMBE-07S	9
BDP-52-22	34	BI-0S	4	BM-09	4	BMBE-0S	9
BDRL-03	40	BI-10	4	BM-0S	4	BMBE-E3	9
BDRL-03	54	BI-11	4	BM-10	4	BMBE-E4	9
BDRL-04	40	BI-11L	4	BM-11	4	BMBE-E5	9
BDRL-04	54	BI-12	4	BM-11L	4	BMBE-E6	9
BDRLN-03	40	BI-12L	4	BM-12	4	BMBL-09	26
BDRLN-03	54	BI-13	4	BM-12L	4	BMBL-10	26
BDRLN-04	40	BI-14	4	BM-13	4	BMBL-11	26
BDRLN-04	54	BI-15	4	BM-14	4	BMBL-12	26
BDRV-1MB	54	BI-16	4	BM-15	4	BMBL-13	26
BDRV-1NB	54	BI-17	4	BM-16	4	BMBL-13S	26
BDRV-2MB	54	BI-18	4	BM-17	4	BMBLS-01	26
BDRV-2NB	54	BI-19	4	BM-18	4	BMBLS-02	26
BDSM-01	10	BI-1S	4	BM-19	4	BMBLS-03	26
BDSM-02	10	BI-20	4	BM-1S	4	BMBLS-04	26
BDSM-03	10	BI-21	4	BM-20	4	BMBLS-05	26
BDSM-04	10	BI-21L	4	BM-21	4	BMBLS-06	26
BDSM-05	10	BI-22	4	BM-21L	4	BMBLS-07	26
BDSM-07	10	BI-22L	4	BM-22	4	BMBLS-08	26
BDSM-08	10	BI-23	4	BM-22L	4	BMBLS-09	26
BDSM-09	10	BI-24	4	BM-23	4	BMBLS-10	26
BDSM-0S	10	BI-25	4	BM-24	4	BMBLS-11	26
BDSM-10	10	BI-26	4	BM-25	4	BMBLS-12	26
BDSM-10R	10	BI-27	4	BM-26	4	BMBLS-13	26
BDSM-11	10	BI-28	4	BM-27	4	BMBS-01(A)	31
BDSM-11R	10	BI-29	4	BM-28	4	BMBS-01(Y)	31
BDSM-12	10	BI-2S	4	BM-29	4	BMBS-02(Y)	31
BDSM-13	10	BI-30	4	BM-2S	4	BMBS-03(Y)	31
BDSP-01	10	BL-01	25	BM-30	4	BMBS-04(Y)	31
BDSP-02	10	BL-02	25	BM-B02	4	BMBS-05(Y)	31
BDSP-03	10	BL-03	25	BM-B12	4	BMBS-06(A)	31
BDSP-04	10	BL-04	25	BM-B22	4	BMBS-06(Y)	31
BDSP-05	10	BL-05	25	BMBC-01	9	BMBS-07(Y)	31
BDSP-06	10	BL-06	25	BMBC-02	9	BMBS-0S(Y)	31
BDSP-07	10	BL-07	25	BMBC-02S	9	BMBS-11(Y)	31
BDSP-08	10	BL-08	25	BMBC-03	9	BMBS-12(Y)	31
BDSP-09	10	BL-09	25	BMBC-03S	9	BMBS-13(Y)	31
BDSP-10	10	BL-10	25	BMBC-04	9	BMBS-14(Y)	31
BFER-03	98	BL-11	25	BMBC-04S	9	BMBS-15(Y)	31
BFER-04	98	BL-12	25	BMBC-05	9	BMBS-16(Y)	31
BFER-05	98	BL-13	25	BMBC-05S	9	BMBS-1S(Y)	31
BFER-06	98	BL-14	25	BMBC-06	9	BMBS-21(A)	31
BFER-07	98	BL-15	25	BMBC-06S	9	BMBS-21(Y)	31
BFER-08	98	BL-16	25	BMBC-07	9	BMBS-22(A)	31
BFER-09	98	BL-17	25	BMBC-07S	9	BMBS-22(Y)	31
BFL-01	25	BL-18	25	BMBC-0S	9	BMBS-23(A)	31
BFL-02	25	BL-19	25	BMBC-E1	9	BMBS-23(Y)	31
BFL-03	25	BL-20	25	BMBC-E3	9	BMBS-24(A)	31
BFL-04	25	BL-21	25	BMBC-E4	9	BMBS-24(Y)	31
BFL-11	25	BL-22	25	BMBC-E5	9	BMBS-25(A)	31
BFL-12	25	BL-23	25	BMBC-E6	9	BMBS-25(Y)	31
BFL-13	25	BL-24	25	BMBCVG-01	16	BMBS-26(Y)	31

Cat. No	Pg. No	Cat. No	Pg. No	Cat. No	Pg. No	Cat. No	Pg. No
BMBS-27(Y)	31	BM-EN-15	4	BMS-08B	33	BMVG-11	16
BMBS-2S(A)	31	BM-EN-21	4	BMS-08C	33	BMVG-12	16
BMBS-2S(Y)	31	BM-EN-23	4	BMS-08D	33	BMVG-1S	16
BMDL-1S	39	BM-EN-24	4	BMS-08E	33	BMVG-21	16
BMDL-2S	39	BM-EN-25	4	BMS-08F	33	BMVG-22	16
BMEL-01	27	BML-01	25	BMS-09A	33	BMVG-2S	16
BMEL-02	27	BML-02	25	BMS-56A	33	BM-X10	43
BMEL-03	27	BML-03	25	BMS-56B	33	BM-X2	43
BMEL-04	27	BML-04	25	BMS-56C	33	BM-X2L	43
BMEL-05	27	BML-05	25	BMS-89A	33	BM-X3	43
BMEL-06	27	BML-06	25	BMS-89B	33	BM-X5	43
BMEL-07	27	BML-07	25	BMS-89C	33	BM-X7	43
BMEL-08	27	BML-07	99	BMS-89D	33	BM-X8	43
BMELS-01	27	BML-08	25	BMSC-01	15	BM-X9	43
BMELS-02	27	BML-0S	25	BMSC-02	15	BNBC-01	8
BMELS-03	27	BML-11	25	BMSC-03	15	BNBC-01S	8
BMELS-04	27	BML-12	25	BMSC-03S	15	BNBC-02	8
BMELS-05	27	BML-13	25	BMSC-04	15	BNBC-02S	8
BMELS-06	27	BML-14	25	BMSC-05	15	BNBC-03	8
BMELS-07	27	BML-15	25	BMSC-06	15	BNBC-04	8
BMELS-08	27	BML-16	25	BMSC-07	15	BNBC-05	8
BMEM-01	12	BML-17	25	BMSC-0S	15	BNBC-06	8
BMEM-01S	12	BML-18	25	BMSP-01	6	BNBC-07	8
BMEM-02	12	BML-1S	25	BMSP-02	6	BNBS-22(A)	31
BMEM-03	12	BML-21	25	BMSP-03	6	BNBS-23(A)	31
BMEM-03S	12	BML-22	25	BMSP-05	6	BNBS-24(A)	31
BMEM-04	12	BML-23	25	BMSP-0S	6	BNEL-01	27
BMEM-04S	12	BML-24	25	BMSP-21	6	BNEL-01S	27
BMEM-05	12	BML-25	25	BMSP-22	6	BNEL-02	27
BMEM-05S	12	BML-26	25	BMSP-23	6	BNEL-03	27
BMEM-06	12	BML-27	25	BMSP-25	6	BNEL-04	27
BMEM-07	12	BML-27	99	BMSP-2S	6	BNEL-05	27
BMEM-09	12	BML-28	25	BMTW-02BN	30	BNEL-06	27
BMEM-0S	12	BML-2S	25	BMTW-02X	30	BNEL-07	27
BMEM-E1	13	BMS-01A	33	BMTW-03BN	30	BNEL-08	27
BMEM-E1(M16T)	14	BMS-02A	33	BMTW-03X	30	BNEL-09	27
BMEM-E2	13	BMS-02C	33	BMTW-04BN	30	BNEL-10	27
BMEM-E2(M20T)	14	BMS-02D	33	BMTW-04X	30	BNEL-11	27
BMEM-E2S(M20T)	14	BMS-02E	33	BMTW-05BN	30	BNEL-12	27
BMEM-E3	13	BMS-03A	33	BMTW-05X	30	BNELS-01	27
BMEM-E3(M25T)	14	BMS-03AA	33	BMTW-06BN	30	BNELS-01S	27
BMEM-E4	13	BMS-03C	33	BMTW-06X	30	BNELS-02	27
BMEM-E4(M32T)	14	BMS-03D	33	BMTW-07BN	30	BNELS-03	27
BMEM-E5	13	BMS-03E	33	BMTW-07X	30	BNELS-04	27
BMEM-E5(M40T)	14	BMS-04A	33	BMTW-08BN	30	BNELS-05	27
BMEM-E6	13	BMS-04C	33	BMTW-08SBN	30	BNELS-06	27
BMEM-E6(M50T)	14	BMS-04D	33	BMTW-08SX	30	BNELS-07	27
BMEM-E7	13	BMS-05A	33	BMTW-08X	30	BNELS-08	27
BMEM-E7(M63T)	14	BMS-05D	33	BMTW-09BN	30	BNELS-09	27
BMEM-E7L(M63T)	14	BMS-05E	33	BMTW-09SBN	30	BNELS-10	27
BMEM-ES	13	BMS-05F	33	BMTW-09SX	30	BNELS-11	27
BMEM-ES(M12T)	14	BMS-05G	33	BMTW-09X	30	BNELS-12	27
BMEN-01	12	BMS-06A	33	BMTW-10BN	30	BNEM-01	12
BM-EN-01	4	BMS-06B	33	BMTW-10MBN	30	BNEM-02	12
BMEN-02	12	BMS-06C	33	BMTW-10MX	30	BNEM-03?	12
BMEN-03	12	BMS-06D	33	BMTW-10SBN	30	BNEM-04	12
BM-EN-03	4	BMS-06E	33	BMTW-10SX	30	BNEM-E1(NPT3/8" T)	14
BMEN-04	12	BMS-06F	33	BMTW-10X	30	BNEM-E2(NPT1/2" T)	14
BM-EN-04	4	BMS-07A	33	BMTW-11BN	30	BNEM-E2S(NPT1/2" T)	14
BMEN-05	12	BMS-07B	33	BMTW-11LBN	30	BNEM-E3(NPT3/4" T)	14
BM-EN-05	4	BMS-07C	33	BMTW-11LX	30	BNEM-E4(NPT1" T)	14
BMEN-06	12	BMS-07D	33	BMTW-11MBN	30	BNEM-E5(NPT1 1/4" T)	14
BMEN-07	12	BMS-07E	33	BMTW-11MX	30	BNEM-E6(NPT1 1/2" T)	14
BMEN-0S	12	BMS-07F	33	BMTW-11X	30	BNEM-E7(NPT2" T)	14
BM-EN-0SL	4	BMS-07G	33	BMTW-13BN	30	BNEM-ES(NPT1/4" T)	14
BM-EN-11	4	BMS-07H	33	BMTW-13X	30	BNLN-01	26
BM-EN-13	4	BMS-07J	33	BMTW-14BN	30	BNLN-01S	26
BM-EN-14	4	BMS-08A	33	BMTW-14X	30	BNLN-02	26

Cat. No	Pg. No	Cat. No	Pg. No	Cat. No	Pg. No	Cat. No	Pg. No
BNLN-03	26	BPL-01	25	B-RB7N7MB	52	BSBC-04	8
BNLN-04	26	BPL-02	25	B-RB8M7NB	52	BSBC-05	8
BNLN-05	26	BPL-03	25	B-RB8M8NB	52	BSBC-06	8
BNLN-06	26	BPL-04	25	B-RB8N7MB	52	BSBC-07	8
BNLN-07	26	BPL-11	25	B-RB8N8MB	52	BSBC-08	8
BNLNS-01	26	BPL-12	25	BS-01	3	BSBC-09	8
BNLNS-01S	26	BPL-13	25	BS-01R	3	BSBC-10	8
BNLNS-02	26	BPL-14	25	BS-02	3	BSBCVG-01	16
BNLNS-03	26	BPL-21	25	BS-02R	3	BSBCVG-02	16
BNLNS-04	26	BPL-22	25	BS-03	3	BSBCVG-03	16
BNLNS-05	26	BPL-23	25	BS-03R	3	BSBCVG-04	16
BNLNS-06	26	BPL-24	25	BS-04	3	BSBE-01	8
BNLNS-07	26	BPR M20/M12	35	BS-04R	3	BSBE-02	8
BNSC-01	15	BPR M20/M16	35	BS-05	3	BSBE-03	8
BNSC-02	15	BPR M25/M16	35	BS-05R	3	BSBE-04	8
BNSC-02S	15	BPR M25/M20	35	BS-06	3	BSBE-05	8
BNSC-03	15	BPR M32/M16	35	BS-06R	3	BSBE-06	8
BNSC-04	15	BPR M32/M20	35	BS-07	3	BSBE-07	8
BNSC-05	15	BPR M32/M25	35	BS-07R	3	BSBE-08	8
BNSC-06	15	BPR M40/M20	35	BS-08	3	BSBE-09	8
BNSC-07	15	BPR M40/M25	35	BS-08R	3	BSBE-10	8
BNSD-01S	15	BPR M40/M32	35	BS-09	3	BSEL-01	27
BNSPA-01	6	BPR M50/M25	35	BS-09R	3	BSEL-02	27
BNSPA-21	6	BPR M50/M32	35	BS-10	3	BSEL-03	27
BNSPB-02	6	BPR M50/M40	35	BS-10R	3	BSEL-04	27
BNSPB-22	6	BPR M63/M40	35	BS-11	3	BSEL-05	27
BNSPC-02	6	BPR M63/M50	35	BS-11R	3	BSEL-06	27
BNSPC-22	6	BPR P13.5/P11	35	BS-12	3	BSEL-07	27
BNSPD-03	6	BPR P16/P11	35	BS-12R	3	BSEL-08	27
BNSPD-23	6	BPR P16/P9	35	BS-13	3	BSEL-09	27
BPDRP-11	39	BPR P21/P13.5	35	BS-13R	3	BSEL-10	27
BPDRP-21	39	BPR P21/P16	35	BS-14	3	BSELS-01	27
BPF-01	5	BPR P29/P21	35	BS-14R	3	BSELS-02	27
BPF-02	5	BPR P36/P29	35	BS-15	3	BSELS-03	27
BPF-03	5	B-RB01M01NB	52	BS-15R	3	BSELS-04	27
BPF-04	5	B-RB01N01MB	52	BS-16	3	BSELS-05	27
BPF-05	5	B-RB10M10NB	52	BS-16R	3	BSELS-06	27
BPF-0S	5	B-RB10M8NB	52	BS-17	3	BSELS-07	27
BPF-11	5	B-RB10N10MB	52	BS-17R	3	BSELS-08	27
BPF-12	5	B-RB10N8MB	52	BS-18	3	BSELS-09	27
BPF-13	5	B-RB1M01NB	52	BS-18R	3	BSELS-10	27
BPF-14	5	B-RB1M1NB	52	BS-19	3	BSEM-01	11
BPF-15	5	B-RB1M2NB	52	BS-19R	3	BSEM-02	11
BPF-1S	5	B-RB1N01MB	52	BS-20	3	BSEM-03	11
BPF-21	5	B-RB1N1MB	52	BS-20R	3	BSEM-04	11
BPF-22	5	B-RB2M1NB	52	BS-21	3	BSEM-05	11
BPF-23	5	B-RB2M2NB	52	BS-21R	3	BSEM-06	11
BPF-24	5	B-RB2N1MB	52	BS-22	3	BSEM-07	11
BPF-25	5	B-RB2N2MB	52	BS-22R	3	BSEM-08	11
BPF-2S	5	B-RB3M2NB	52	BS-23	3	BSEM-09	11
BPFR-01	5	B-RB3M3NB	52	BS-23R	3	BSEM-10	11
BPFR-02	5	B-RB3N2MB	52	BS-24	3	BSEM-E1(PG7T)	14
BPFR-03	5	B-RB3N3MB	52	BS-24R	3	BSEM-E10(PG48T)	14
BPFR-04	5	B-RB4M3NB	52	BS-25	3	BSEM-E3(PG11T)	14
BPFR-05	5	B-RB4M4NB	52	BS-25R	3	BSEM-E4(PG13.5T)	14
BPFR-0S	5	B-RB4N3MB	52	BS-26	3	BSEM-E5(PG16T)	14
BPFR-11	5	B-RB4N4MB	52	BS-26R	3	BSEM-E6(PG21T)	14
BPFR-12	5	B-RB5M4NB	52	BS-27	3	BSEM-E7(PG29T)	14
BPFR-13	5	B-RB5M5NB	52	BS-27R	3	BSEM-E8(PG36T)	14
BPFR-14	5	B-RB5N4MB	52	BS-28	3	BSEM-E9(PG42T)	14
BPFR-15	5	B-RB5N5MB	52	BS-28R	3	BSEN-01	11
BPFR-1S	5	B-RB6M5NB	52	BS-29	3	BSEN-02	11
BPFR-21	5	B-RB6M6NB	52	BS-29R	3	BSEN-03	11
BPFR-22	5	B-RB6N5MB	52	BS-30	3	BSEN-04	11
BPFR-23	5	B-RB6N6MB	52	BS-30R	3	BSEN-05	11
BPFR-24	5	B-RB7M6NB	52	BSBC-01	8	BSEN-06	11
BPFR-25	5	B-RB7M7NB	52	BSBC-02	8	BSEN-07	11
BPFR-2S	5	B-RB7N6MB	52	BSBC-03	8	BSEN-08	11

Cat. No	Pg. No	Cat. No	Pg. No	Cat. No	Pg. No	Cat. No	Pg. No
BSEN-09	11	BSVG-23	16	CPIA412568	118	CPS-56B	63
BSEN-10	11	BSVG-24	16	CPIA41648	118	CPS-56G	63
BSLS-01	26	B-TS01MB	50	CPIA41668	118	CPS-70B	63
BSLS-02	26	B-TS01NB	51	CPIA43248	118	CPS-70G	63
BSLS-03	26	B-TS02MB	50	CPIA43268	118	CPS-95B	63
BSLS-04	26	B-TS10MB	50	CPIA46348	118	CPS-95G	63
BSLS-05	26	B-TS10NB	51	CPIA46368	118	CPSA31648	117
BSLS-06	26	B-TS10PB	50	CPIA512568	118	CPSA31668	117
BSLS-07	26	B-TS1MB	50	CPIA51648	118	CPSA33248	117
BSLS-08	26	B-TS1NB	51	CPIA51668	118	CPSA33268	117
BSLS-09	26	B-TS2MB	50	CPIA53248	118	CPSA36348	117
BSLS-10	26	B-TS2NB	51	CPIA53268	118	CPSA36368	117
BSP-04	5	B-TS2PB	50	CPIA56348	118	CPSA412568	117
BSP-04R	5	B-TS3MB	50	CPIA56368	118	CPSA41648	117
BSP-14	5	B-TS3NB	51	CPIS31647	118	CPSA41668	117
BSP-14R	5	B-TS3PB	50	CPIS31667	118	CPSA43248	117
BSP-24	5	B-TS4MB	50	CPIS33247	118	CPSA43268	117
BSP-24R	5	B-TS4NB	51	CPIS33268	118	CPSA46348	117
BSPA-01	5	B-TS4PB	50	CPIS36347	118	CPSA46368	117
BSPA-01R	5	B-TS5MB	50	CPIS36368	118	CPSA512568	117
BSPA-11	5	B-TS5NB	51	CPIS412568	118	CPSA51648	117
BSPA-11R	5	B-TS5PB	50	CPIS41647	118	CPSA51668	117
BSPA-21	5	B-TS6MB?	50	CPIS41667	118	CPSA53248	117
BSPA-21R	5	B-TS6NB?	51	CPIS43247	118	CPSA53268	117
BSPB-02	5	B-TS6PB	50	CPIS43268	118	CPSA56348	117
BSPB-02R	5	B-TS7MB	50	CPIS46347	118	CPSA56368	117
BSPB-12	5	B-TS7NB	51	CPIS46368	118	CPSS-07B	63
BSPB-12R	5	B-TS7PB	50	CPIS512568	118	CPSS-07G	63
BSPB-22	5	B-TS8MB	50	CPIS51647	118	CPSS-10B	63
BSPB-22R	5	B-TS8NB	51	CPIS51668	118	CPSS-10G	63
BSPC-02	5	B-TS8PB	50	CPIS53248	118	CPSS-12B	63
BSPC-02R	5	B-TS9NB	51	CPIS53268	118	CPSS-12G	63
BSPC-12	5	B-TS9PB	50	CPIS56348	118	CPSS-16B	63
BSPC-12R	5	Cable manager VCG	110	CPIS56368	118	CPSS-16G	63
BSPC-22	5	CDINS16	106	CPS015.06	148	CPSS-22B	63
BSPC-22R	5	CDINS6	106	CPS015.10	148	CPSS-22G	63
BSPD-03	5	CDINSD	106	CPS015.15	148	CPSS-28B	63
BSPD-03R	5	CDINSUK	106	CPS015.20	148	CPSS-28G	63
BSPD-13	5	CDINSW1	106	CPS020.15	148	CPSS31647	117
BSPD-13R	5	CDINSW2	106	CPS020.20	148	CPSS31667	117
BSPD-23	5	Clamp RKC	110	CPS020.30	148	CPSS33247	117
BSPD-23R	5	Connection Ring RKTC	110	CPS020.40	148	CPSS33267	117
BSSC-01	15	CP3164	116	CPS030.15	149	CPSS36347	117
BSSC-02	15	CP3166	116	CPS030.25	149	CPSS36368	117
BSSC-03	15	CP3324	116	CPS030.35	149	CPSS-36B	63
BSSC-04	15	CP3326	116	CPS030.50	149	CPSS-36G	63
BSSC-05	15	CP3634	116	CPS033.27	149	CPSS-4.5B	63
BSSC-06	15	CP3636	116	CPS033.37	149	CPSS412568	117
BSSC-07	15	CP41256	116	CPS033.47	149	CPSS41647	117
BSSC-08	15	CP4164	116	CPS033.67	149	CPSS41667	117
BSSC-09	15	CP4166	116	CPS033.77	149	CPSS43247	117
BSSC-10	15	CP4324	116	CPS-07B	63	CPSS43267	117
BSSP-01	6	CP4326	116	CPS-07G	63	CPSS46347	117
BSSP-02	6	CP4634	116	CPS-10B	63	CPSS46368	117
BSSP-03	6	CP4636	116	CPS-10G	63	CPSS-48B	63
BSSP-04	6	CP51256	116	CPS-12B	63	CPSS-48G	63
BSSP-05	6	CP5164	116	CPS-12G	63	CPSS512568	117
BSSP-06	6	CP5166	116	CPS-16B	63	CPSS51647	117
BSSP-21	6	CP5324	116	CPS-16G	63	CPSS51667	117
BSSP-22	6	CP5326	116	CPS-22B	63	CPSS53248	117
BSSP-23	6	CP5634	116	CPS-22G	63	CPSS53268	117
BSSP-24	6	CP5636	116	CPS-28B	63	CPSS56348	117
BSSP-25	6	CPIA31648	118	CPS-28G	63	CPSS56368	117
BSSP-26	6	CPIA31668	118	CPS-36B	63	CPSS-56B	63
BSVG-12	16	CPIA33248	118	CPS-36G	63	CPSS-56G	63
BSVG-13	16	CPIA33268	118	CPS-4.5B	63	CPSS-70B	63
BSVG-14	16	CPIA36348	118	CPS-48B	63	CPSS-70G	63
BSVG-22	16	CPIA36368	118	CPS-48G	63	CPSS-95B	63

Cat. No	Pg. No	Cat. No	Pg. No	Cat. No	Pg. No	Cat. No	Pg. No
CPSS-95G	63	CTAL08	107	EBS6MB	45	FEC-22B	97
CS3164	116	CTAL09	107	EBS6NB	45	FEC-28B	97
CS3166	116	CTAL10	107	EBS7MB	45	FEC-36B	97
CS3324	116	CTAL11	107	EBS7NB	45	FEC-48B	97
CS3326	116	CTAL12	107	EBS8MB	45	FEC-56B	97
CS3634	116	CTAL13	107	EBS8NB	45	FEC-70B	97
CS3636	116	CTAL15	107	EBU01MB	44	FEC-95B	97
CS41256	116	CTAL16	107	EBU01NB	44	FHC-06	96
CS4164	116	CTAL17	107	EBU01SNB	44	FHC-08	96
CS4166	116	CTAL19	107	EBU0MB	44	FHC-10	96
CS4324	116	EBLN01MB	56	EBU0SMB	44	FHC-12	96
CS4326	116	EBLN01NB	56	EBU10MB	44	FHC-15	96
CS4634	116	EBLN02MB	56	EBU10NB	44	FHC-18	96
CS4636	116	EBLN02NB	56	EBU11MB	44	FHC-22	96
CS51256	116	EBLN1MB	56	EBU11NB	44	FHC-25	96
CS5164	116	EBLN1NB	56	EBU12MB	44	FHC-30	96
CS5166	116	EBLN2MB	56	EBU12NB	44	FHC-35	96
CS5324	116	EBLN2NB	56	EBU1MB	44	FHC-40	96
CS5326	116	EBLN3MB	56	EBU1NB	44	FHC-48	96
CS5634	116	EBLN3NB	56	EBU23MB	44	FL 13	109
CS5636	116	EBLN4MB	56	EBU23NB	44	FL 21	109
CSI31647	118	EBLN4NB	56	EBU2MB	44	FL13/34/M20	109
CSI31667	118	EBLN5MB	56	EBU2NB	44	FL13/68/410	109
CSI33247	118	EBLN5NB	56	EBU34MB	44	FL13/68/817	109
CSI33268	118	EBLQ01MB	57	EBU34NB	44	FL13/68/M20	109
CSI36348	118	EBLQ01NB	57	EBU3MB	44	FL21/34/410	109
CSI36368	118	EBLQ02M	57	EBU3NB	44	FL21/34/817	109
CSI412568	118	EBLQ02NB	57	EBU45MB	44	FL21/34/M20	109
CSI41647	118	EBLQ1MB	57	EBU45NB	44	FL21/68/2030/1020	109
CSI41667	118	EBLQ1NB	57	EBU4MB	44	FL21/68/714	109
CSI43247	118	EBLQ2MB	57	EBU4NB	44	FL21/68/KO	109
CSI43268	118	EBLQ2NB	57	EBU56MB	44	FL21/68/M25/M16	109
CSI46348	118	EBLQ3MB	57	EBU56NB	44	FLN G07B	99
CSI46368	118	EBLQ3NB	57	EBU5MB	44	FLN G07NG	99
CSI512568	118	EBLQ4MB	57	EBU5NB	44	FLN G10B	99
CSI51647	118	EBLQ4NB	57	EBU67MB	44	FLN G10NG	99
CSI51668	118	EBLQ5MB	57	EBU67NB	44	FLN G12B	99
CSI53248	118	EBLQ5NB	57	EBU6MB	44	FLN G12NG	99
CSI53268	118	EBLS01MB	55	EBU6NB	44	FLN G16B	99
CSI56348	118	EBLS01NB	55	EBU78MB	44	FLN G16NG	99
CSI56368	118	EBLS02MB	55	EBU78NB	44	FLN G22B	99
CSS31647	117	EBLS02NB	55	EBU7MB	44	FLN G22NG	99
CSS31667	117	EBLS1MB	55	EBU7NB	44	FLN G28B	99
CSS33247	117	EBLS1NB	55	EBU810MB	44	FLN G28NG	99
CSS33267	117	EBLS2MB	55	EBU810NB	44	FLN G36B	99
CSS36347	117	EBLS2NB	55	EBU8MB	44	FLN G36NG	99
CSS36368	117	EBLS3MB	55	EBU8NB	44	FLN G42B	99
CSS412568	117	EBLS3NB	55	EFC 10B	66	FLN G42NG	99
CSS41647	117	EBLS4MB	55	EFC 10G	66	FLN G48B	99
CSS41667	117	EBLS4NB	55	EFC 16B	66	FLN G48NG	99
CSS43247	117	EBLS5MB	55	EFC 16G	66	FLN M10B	99
CSS43267	117	EBLS5NB	55	EFC 22B	66	FLN M10NG	99
CSS46347	117	EBS01MB	45	EFC 22G	66	FLN M12B	99
CSS46368	117	EBS01NB	45	EFC 28B	66	FLN M12NG	99
CSS512568	117	EBS10MB	45	EFC 28G	66	FLN M16B	99
CSS51647	117	EBS10NB	45	EFC 34B	66	FLN M16NG	99
CSS51667	117	EBS11MB	45	EFC 34G	66	FLN M22B	99
CSS53248	117	EBS11NB	45	EFC 40B	66	FLN M22NG	99
CSS53268	117	EBS1MB	45	EFC 40G	66	FLN M28B	99
CSS56348	117	EBS1NB	45	EG-21	7	FLN M28NG	99
CSS56368	117	EBS2MB	45	EG-22	7	FLN M36B	99
CTAL01	107	EBS2NB	45	EHIBM-0XS	43	FLN M36NG	99
CTAL02	107	EBS3MB	45	EHIBM-SX1	43	FLN M48B	99
CTAL03	107	EBS3NB	45	EHIBM-XS	43	FLN M48NG	99
CTAL04	107	EBS4MB	45	FEC-07B	97	FLN P07B	99
CTAL05	107	EBS4NB	45	FEC-10B	97	FLN P07NG	99
CTAL06	107	EBS5MB	45	FEC-12B	97	FLN P09B	99
CTAL07	107	EBS5NB	45	FEC-16B	97	FLN P09NG	99

Cat. No	Pg. No	Cat. No	Pg. No	Cat. No	Pg. No	Cat. No	Pg. No
FLN P11B	99	GBMBL-05	100	KBA4SNB	47	KBAU7NB	49
FLN P11NG	99	GBMBL-06	26	KBA5MB	46	KBAU7SMB	48
FLN P13B	99	GBMBL-06	100	KBA5NB	47	KBAU7SNB	49
FLN P13NG?	99	GBMBL-07	26	KBA5SMB	46	KBAU7XSMB	48
FLN P16B	99	GBMBL-07	100	KBA5SNB	47	KBAU7XSNB	49
FLN P16NG	99	GBMBL-08	26	KBA6MB	46	KBAU8MB	48
FLN P21B	99	GBMBL-08	100	KBA6NB	47	KBAU8NB	49
FLN P21NG	99	GBMBS-01	32	KBA6SMB	46	KBAU8SMB	48
FLN P29B	99	GBMBS-02	32	KBA6SNB	47	KBAU8SNB	49
FLN P29NG	99	GBMBS-03	32	KBA7SMB	46	KBAU8XSMB	48
FLN P36B	99	GBMBS-04	32	KBA7SNB	47	KBAU8XSNB	49
FLN P36NG	99	GBMBS-05	32	KBA8MB	46	KBAU9NB	49
FLN P48B	99	GBMBS-06	32	KBA8NB	47	KBAU9SNB	49
FLN P48NG	99	GBMBS-07	32	KBA8SMB	46	KBAU-E01MB	20
GBBE M12/M16	36	GBMBS-0S	32	KBA8SNB	47	KBAU-E01NB	21
GBBE M16/M20	36	GBSL-01	26	KBA9NB	47	KBAU-E01SMB	20
GBBE M16/M25	36	GBSL-01	100	KBA9SNB	47	KBAU-E01SNB	21
GBBE M20/M25 *	36	GBSL-02	26	KBAU01MB	48	KBAU-E0SLMB	20
GBBE M25/M32	36	GBSL-02	100	KBAU01NB	49	KBAU-E0SLNB	21
GBBE M25/M40	36	GBSL-03	26	KBAU01SMB	48	KBAU-E10MLTB	20
GBBE M32/M40	36	GBSL-03	100	KBAU01SNB	49	KBAU-E10MB	20
GBBE M32/M50	36	GBSL-04	26	KBAU0SLMB	48	KBAU-E10SMB	20
GBBE M40/M50	36	GBSL-04	100	KBAU0SLNB	49	KBAU-E13MLTB	20
GBBE P11/P13.5	36	GBSL-05	26	KBAU10MB	48	KBAU-E1LMB	20
GBBE P11/P16	36	GBSL-05	100	KBAU10SMB	48	KBAU-E1LNB	21
GBBE P13.5/P16	36	GBSL-06	26	KBAU1LMB	48	KBAU-E1MB	20
GBBE P13.5/P21	36	GBSL-06	100	KBAU1LNB	49	KBAU-E1NB	21
GBBE P16/P21	36	GBSL-07	26	KBAU1MB	48	KBAU-E1SMB	20
GBBE P21/P29	36	GBSL-07	100	KBAU1NB	49	KBAU-E1SNB	21
GBBE P29/P36	36	GBSL-08	26	KBAU1SMB	48	KBAU-E2LMB	20
GBBE P29/P48	36	GBSL-08	100	KBAU1SNB	49	KBAU-E2LNB	21
GBBE P36/P42	36	GBSL-09	26	KBAU2LMB	48	KBAU-E2MB	20
GBBE P7/P9	36	GBSL-09	100	KBAU2LNB	49	KBAU-E2NB	21
GBBE P9/P11	36	GBSL-10	26	KBAU2MB	48	KBAU-E2SMB	20
GBBE P9/P13.5	36	GBSL-10	100	KBAU2NB	49	KBAU-E2SNB	21
GBBR M16/M12	35	HBVPB-11L	38	KBAU2SMB	48	KBAU-E2XSMB	20
GBBR M20/M12	35	HBVPB-21L	38	KBAU2SNB	49	KBAU-E2XSNB	21
GBBR M20/M16	35	HBVPX-18S	38	KBAU2XSMB	48	KBAU-E3MB	20
GBBR M25/M16	35	HBVPX-28S	38	KBAU2XSNB	49	KBAU-E3NB	21
GBBR M25/M20	35	IBDRV-1M	40	KBAU3MB	48	KBAU-E3SMB	20
GBBR M32/M16	35	IBDRV-1N	40	KBAU3NB	49	KBAU-E3SNB	21
GBBR M32/M20	35	IBDRV-2M	40	KBAU3SMB	48	KBAU-E3XSMB	20
GBBR M32/M25	35	IBDRV-2N	40	KBAU3SNB	49	KBAU-E3XSNB	21
GBBR M40/M20	35	KBA01MB	46	KBAU3XSMB	48	KBAU-E4MB	20
GBBR M40/M25	35	KBA01NB	47	KBAU3XSNB	49	KBAU-E4NB	21
GBBR M40/M32	35	KBA01SMB	46	KBAU4MB	48	KBAU-E4SMB	20
GBBR M50/M25	35	KBA01SNB	47	KBAU4NB	49	KBAU-E4SNB	21
GBBR M50/M32	35	KBA10MB	46	KBAU4SMB	48	KBAU-E4XSMB	20
GBBR M50/M40	35	KBA10SMB	46	KBAU4SNB	49	KBAU-E4XSNB	21
GBBR M63/M40	35	KBA1LMB	46	KBAU4XSMB	48	KBAU-E5MB	20
GBBR M63/M50	35	KBA1LNB	47	KBAU4XSNB	49	KBAU-E5NB	21
GBBS-01	32	KBA1MB	46	KBAU5MB	48	KBAU-E5SMB	20
GBBS-02	32	KBA1NB	47	KBAU5NB	49	KBAU-E5SNB	21
GBBS-03	32	KBA1SMB	46	KBAU5SMB	48	KBAU-E5XMMB	20
GBBS-04	32	KBA1SNB	47	KBAU5SNB	49	KBAU-E5XMNB	21
GBBS-05	32	KBA2LMB	46	KBAU5XMMB	48	KBAU-E5XSMB	20
GBBS-06	32	KBA2LNB	47	KBAU5XMNB	49	KBAU-E5XSNB	21
GBBS-07	32	KBA2MB	46	KBAU5XSMB	48	KBAU-E6MB	20
GBBS-08	32	KBA2NB	47	KBAU5XSNB	49	KBAU-E6NB	21
GBMBL-01	26	KBA2SMB	46	KBAU6MB	48	KBAU-E6SMB	20
GBMBL-01	100	KBA2SNB	47	KBAU6NB	49	KBAU-E6SNB	21
GBMBL-02	26	KBA3MB	46	KBAU6SMB	48	KBAU-E6XMMB	20
GBMBL-02	100	KBA3NB	47	KBAU6SNB	49	KBAU-E6XMNB	21
GBMBL-03	26	KBA3SMB	46	KBAU6XMMB	48	KBAU-E6XSMB	20
GBMBL-03	100	KBA3SNB	47	KBAU6XMNB	49	KBAU-E6XSNB	21
GBMBL-04	26	KBA4MB	46	KBAU6XSMB	48	KBAU-E7MB	20
GBMBL-04	100	KBA4NB	47	KBAU6XSNB	49	KBAU-E7NB	21
GBMBL-05	26	KBA4SMB	46	KBAU7MB	48	KBAU-E7SMB	20

Cat. No	Pg. No	Cat. No	Pg. No	Cat. No	Pg. No	Cat. No	Pg. No
KBAU-E7SNB	21	M015.CA.K	103	MW2NP04	113	NSB028E.055	173
KBAU-E7XSMB	20	M1412.D	106	MW2NP06	113	NSB028E.075	173
KBAU-E7XSMB	21	M14121.FR	106	MW2NP09	113	NSB028E.100	173
KBAU-E8MLTB	20	M91.04	108	MW2NP12	113	NSB028N.035	170
KBAU-E8MB	20	M91.08	108	MW2P02	113	NSB028N.050	170
KBAU-E8NB	21	M92.04	108	MW2P03	113	NSB028N.055	170
KBAU-E8SMB	20	M92.08	108	MW2P04	113	NSB028N.075	170
KBAU-E8SNB	21	M92.12	108	MW2P06	113	NSB028N.100	170
KBAU-E8XSMB	20	M960.10121	108	MW2P09	113	NSB028N.125	170
KBAU-E8XSMB	21	MBBVP-X01L	53	MW2P12	113	NSB028N.150	170
KBAU-E9MNLTB	21	MSB-11	68	MW4NP02	113	NSB028N.175	170
KBAU-E9NB	21	MSB-13	68	MW4NP03	113	NSB028N.200	170
KBAU-E9SMLTB	20	MSB-16	68	MW4NP04	113	NSB035E.050	173
KBAU-E9SNB	21	MSB-21	68	MW4NP06	113	NSB035E.075	173
M003	104	MSB-29	68	MW4NP09	113	NSB035E.100	173
M003.PL	103	MSB-36	68	MW4NP12	113	NSB035E.125	173
M005	104	MSB-42	68	MW4P02	113	NSB035E.150	173
M005.CV	104	MSB-48	68	MW4P03	113	NSB035N.035	170
M005.PL	103	MSB-7	68	MW4P04	113	NSB035N.050	170
M006	104	MSB-9	68	MW4P06	113	NSB035N.055	170
M006.PL	103	MSBG-M13	87	MW4P09	113	NSB035N.075	170
M007	104	MSBG-M16	87	MW4P12	113	NSB035N.100	170
M007.PL	103	MSBG-M21	87	MW6NP02	114	NSB035N.125	170
M007.X.PL	103	MSBG-M29	87	MW6NP03	114	NSB035N.150	170
M008	104	MSBG-M36	87	MW6NP04	114	NSB035N.175	170
M008.CA.G	103	MSBG-M48	87	MW6NP06	114	NSB035N.200	170
M008.CA.K	103	MSBG-P07	87	MW6NP09	114	NSB045E.075	174
M008.PG	104	MSBG-P09	87	MW6NP12	114	NSB045E.100	174
M008.PK	103	MSBG-P11	87	MW6P02	114	NSB045E.125	174
M008.PL	103	MSBG-P16	87	MW6P03	114	NSB045E.150	174
M009	104	MSBG-P29	87	MW6P04	114	NSB045N.050	171
M009.A	104	MSBG-P36	87	MW6P06	114	NSB045N.075	171
M009.A.PK	103	MSP-11	68	MW6P09	114	NSB045N.100	171
M009.A.PL	103	MSP-13	68	MW6P12	114	NSB045N.125	171
M009.CA.G	103	MSP-16	68	NB-TS01NB	51	NSB045N.150	171
M009.CA.K	103	MSP-21	68	NB-TS10NB	51	NSB045N.175	171
M009.PG	104	MSP-29	68	NB-TS1NB	51	NSB045N.200	171
M009.PK	103	MSP-36	68	NB-TS2NB	51	NSB045N.250	171
M009.PKN	104	MSP-42	68	NB-TS3NB	51	NSB045N.300	171
M009.PL	103	MSP-48	68	NB-TS4NB	51	NSB050S.050	175
M010	104	MSP-7	68	NB-TS5NB	51	NSB050S.075	175
M010.A	104	MSP-9	68	NB-TS6NB?	51	NSB050S.100	175
M010.A.PK	103	MSPG-M09	88	NB-TS7NB	51	NSB050S.125	175
M010.A.PL	103	MSPG-M11/16	88	NB-TS8NB	51	NSB050S.150	175
M010.CA.G	103	MSPG-M21	88	NB-TS9NB	51	NSB050S.175	175
M010.CA.K	103	MSPG-M29	88	NFH-07B	97	NSB050S.200	175
M010.PL	103	MSPG-M36	88	NFH-07NG	97	NSB050S.250	175
M011	104	MSPG-M48	88	NFH-10B	97	NSB050S.300	175
M011.CA.G	103	MSPG-P11	88	NFH-10NG	97	NSB060E.100	174
M011.CA.K	103	MSPG-P16	88	NFH-12B	97	NSB060E.150	174
M011.PG	104	MSPG-P29	88	NFH-12NG	97	NSB060E.200	174
M011.PK	103	MSPG-P36	88	NFH-16B	97	NSB060N.075	171
M011.PL	103	MW16NP02	114	NFH-16NG	97	NSB060N.100	171
M012.A	104	MW16NP03	114	NFH-22B	97	NSB060N.125	171
M012.A.PK	103	MW16NP04	114	NFH-22NG	97	NSB060N.150	171
M012.A.PL	103	MW16NP06	114	NFH-28B	97	NSB060N.175	171
M012.CA.G	103	MW16NP09	114	NFH-28NG	97	NSB060N.200	171
M012.CA.K	103	MW16NP12	114	NFH-36B	97	NSB060N.250	171
M014.A	104	MW16NP12 B	114	NFH-36NG	97	NSB060N.300	171
M014.A.CA.K	104	MW16P02	114	NFH-48B	97	NSB060N.350	171
M014.A.PK	103	MW16P03	114	NFH-48NG	97	NSB060N.400	171
M014.A.PKN	104	MW16P04	114	NFH-56B	97	NSB065S.075	175
M014.A.PL	103	MW16P06	114	NFH-56NG	97	NSB065S.100	175
M014.CA.G	103	MW16P09	114	NFH-70B	97	NSB065S.125	175
M014.CA.K	103	MW16P12	114	NFH-70NG	97	NSB065S.150	175
M015.A	104	MW16P12 B	114	NFH-95B	97	NSB065S.175	175
M015.A.PL	103	MW2NP02	113	NFH-95NG	97	NSB065S.200	175
M015.CA.G	103	MW2NP03	113	NSB028E.035	173	NSB065S.250	175

Cat. No	Pg. No	Cat. No	Pg. No	Cat. No	Pg. No	Cat. No	Pg. No
NSB065S.300	175	PAC-G12G	78	PAR-48G	61	PICC-U1812B	83
NSB065S.350	175	PAC-G16B	78	PAR-56B	61	PICC-U1812G	83
NSB065S.400	175	PAC-G16G	78	PAR-56B/G	110	PICC-U1816B	83
NSB075E.150	174	PAC-G22B	78	PAR-56G	61	PICC-U1816G	83
NSB075E.200	174	PAC-G22G	78	PAR-70B	61	PICC-U2016B	83
NSB075E.300	174	PAC-G28B	78	PAR-70B/G	110	PICC-U2016G	83
NSB075N.075	172	PAC-G28G	78	PAR-70G	61	PICC-U2222B	83
NSB075N.100	172	PAC-G36B	78	PAR-95B	61	PICC-U2222G	83
NSB075N.125	172	PAC-G36G	78	PAR-95B/G	110	PICC-U2816B	83
NSB075N.150	172	PAC-G42B	78	PAR-95G	61	PICC-U2816G	83
NSB075N.175	172	PAC-G42G	78	PES-07B	64	PICC-U2822B	83
NSB075N.200	172	PAC-G48B	78	PES-07G	64	PICC-U2822G	83
NSB075N.250	172	PAC-G48G	78	PES-10B	64	PICC-U2828B	83
NSB075N.300	172	PAC-M10B	78	PES-10G	64	PICC-U2828G	83
NSB075N.350	172	PAC-M10G	78	PES-12B	64	PICC-U3228B	83
NSB075N.400	172	PAC-M12B	78	PES-12G	64	PICC-U3228G	83
NSB075N.450	172	PAC-M12G	78	PES-16B	64	PICC-U3628B	83
NSB075N.500	172	PAC-M16B	78	PES-16G	64	PICC-U3628G	83
NSB075N.550	172	PAC-M16G	78	PES-22B	64	PICC-U3636B	83
NSB075N.600	172	PAC-M202B	78	PES-22G	64	PICC-U3636G	83
NSB080S.075	176	PAC-M202G	78	PES-28B	64	PIC-M12B	81
NSB080S.100	176	PAC-M22B	78	PES-28G	64	PIC-M12G	81
NSB080S.125	176	PAC-M22G	78	PES-36B	64	PIC-M226B	81
NSB080S.150	176	PAC-M28B	78	PES-36G	64	PIC-M226G	81
NSB080S.175	176	PAC-M28G	78	PES-4.5B	64	PIC-P11B	81
NSB080S.200	176	PAC-M36B	78	PES-48B	64	PIC-P11G	81
NSB080S.250	176	PAC-M36G	78	PES-48G	64	PIC-P132B	81
NSB080S.300	176	PAC-M48B	78	PES-56B	64	PIC-P132G	81
NSB080S.350	176	PAC-M48G	78	PES-56G	64	PIC-P16B	81
NSB080S.400	176	PAC-P09B	78	PES-70B	64	PIC-P16G	81
NSB080S.450	176	PAC-P09G	78	PES-70G	64	PIC-P21B	81
NSB080S.500	176	PAC-P110B	78	PES-95B	64	PIC-P21G	81
NSB080S.550	176	PAC-P110G	78	PES-95G	64	PIC-U1010B	81
NSB080S.600	176	PAC-P11B	78	PESS-07B	64	PIC-U1010G	81
NSB-FEB028N/E	170	PAC-P11G	78	PESS-07G	64	PIC-U1210B	81
NSB-FEB028N/E	173	PAC-P130G	78	PESS-10B	64	PIC-U1210G	81
NSB-FEB035N/E	170	PAC-P130G	78	PESS-10G	64	PIC-U1212B	81
NSB-FEB035N/E	173	PAC-P136B	78	PESS-12B	64	PIC-U1212G	81
NSB-FEB045N/E	171	PAC-P136G	78	PESS-12G	64	PIC-U1410B	81
NSB-FEB045N/E	174	PAC-P16B	78	PESS-16B	64	PIC-U1410G	81
NSB-FEB050S	175	PAC-P16G	78	PESS-16G	64	PIC-U1412B	81
NSB-FEB060N/E	171	PAC-P21B	78	PESS-22B	64	PIC-U1412G	81
NSB-FEB060N/E	174	PAC-P21G	78	PESS-22G	64	PIC-U1616B	81
NSB-FEB065S	175	PAC-P29B	78	PESS-28B	64	PIC-U1616G	81
NSB-FEB075N/E	172	PAC-P29G	78	PESS-28G	64	PIC-U1812B	81
NSB-FEB075N/E	174	PAC-P36B	78	PESS-36B	64	PIC-U1812G	81
NSB-FEB080S	176	PAC-P36G	78	PESS-36G	64	PIC-U1816B	81
OR-M12	29	PAC-P48B	78	PESS-4.5B	64	PIC-U1816G	81
OR-M16	29	PAC-P48G	78	PESS-48B	64	PIC-U2012B	81
OR-M20	29	PAR-07B	61	PESS-48G	64	PIC-U2012G	81
OR-M25	29	PAR-07G	61	PESS-56B	64	PIC-U2016B	81
OR-M32	29	PAR-10B	61	PESS-56G	64	PIC-U2016G	81
OR-M40	29	PAR-10G	61	PESS-70B	64	PIC-U2222B	81
OR-M50	29	PAR-12B	61	PESS-70G	64	PIC-U2222G	81
OR-M63	29	PAR-12G	61	PESS-95B	64	PIC-U2316B	81
OR-P07	29	PAR-16B	61	PESS-95G	64	PIC-U2316G	81
OR-P09	29	PAR-16G	61	PICC-U1010B	83	PIC-U2816B	81
OR-P11	29	PAR-22B	61	PICC-U1010G	83	PIC-U2816G	81
OR-P13.5	29	PAR-22B/G	110	PICC-U1210B	83	PIC-U2822B	81
OR-P16	29	PAR-22G	61	PICC-U1210G	83	PIC-U2822G	81
OR-P21	29	PAR-28B	61	PICC-U1212B	83	PIC-U2828B	81
OR-P29	29	PAR-28B/G	110	PICC-U1212G	83	PIC-U2828G	81
OR-P36	29	PAR-28G	61	PICC-U1410B	83	PIC-U3228B	81
OR-P42	29	PAR-36B	61	PICC-U1410G	83	PIC-U3228G	81
OR-P48	29	PAR-36B/G	110	PICC-U1412B	83	PIC-U3622B	81
PAC-G10B	78	PAR-36G	61	PICC-U1412G	83	PIC-U3622G	81
PAC-G10G	78	PAR-48B	61	PICC-U1616B	83	PIC-U3628B	81
PAC-G12B	78	PAR-48B/G	110	PICC-U1616G	83	PIC-U3628G	81

Cat. No	Pg. No	Cat. No	Pg. No	Cat. No	Pg. No	Cat. No	Pg. No
PIC-U3636B	81	PNC-G36B	76	PNC-P137B	76	PWC-M22G	77
PIC-U3636G	81	PNC-G36G	76	PNC-P137G	76	PWC-M28B	77
PIPC-G16B	81	PNC-G42B	76	PNC-P160B	76	PWC-M28G	77
PIPC-G16G	81	PNC-G42G	76	PNC-P160G	76	PWC-M36B	77
PIPC-G22B	81	PNC-G48B	76	PNC-P162B	76	PWC-M36G	77
PIPC-G22G	81	PNC-G48G	76	PNC-P162G	76	PWC-M48B	77
PIPC-G28B	81	PNC-M102B	75	PNC-P163B	76	PWC-M48G	77
PIPC-G28G	81	PNC-M102G	75	PNC-P163G	76	PWC-P077B	77
PIPC-G36B	81	PNC-M107B	75	PNC-P16B	76	PWC-P077G	77
PIPC-G36G	81	PNC-M107G	75	PNC-P16G	76	PWC-P097B	77
PIPC-G42B	81	PNC-M10B	75	PNC-P216B	76	PWC-P097G	77
PIPC-G42G	81	PNC-M10G	75	PNC-P216G	76	PWC-P09B	77
PIPC-G48B	81	PNC-M120B	75	PNC-P21B	76	PWC-P09G	77
PIPC-G48G	81	PNC-M120G	75	PNC-P21G	76	PWC-P110B	77
PNCC-M102B	82	PNC-M126B	75	PNC-P29B	76	PWC-P110G	77
PNCC-M102G	82	PNC-M126G	75	PNC-P29G	76	PWC-P11B	77
PNCC-M10B	82	PNC-M127B	75	PNC-P36B	76	PWC-P11G	77
PNCC-M10G	82	PNC-M127G	75	PNC-P36G	76	PWC-P130B	77
PNCC-M120B	82	PNC-M12B	75	PNC-P48B	76	PWC-P130G	77
PNCC-M120G	82	PNC-M12G	75	PNC-P48G	76	PWC-P132B	77
PNCC-M126B	82	PNC-M167B	75	PNOC-12B	79	PWC-P132G	77
PNCC-M126G	82	PNC-M167G	75	PNOC-12G	79	PWC-P136B	77
PNCC-M12B	82	PNC-M16B	75	PNOC-16B	79	PWC-P136G	77
PNCC-M12G	82	PNC-M16G	75	PNOC-16G	79	PWC-P162B	77
PNCC-M162B	82	PNC-M202B	75	PNOC-22B	79	PWC-P162G	77
PNCC-M162G	82	PNC-M202G	75	PNOC-22G	79	PWC-P163B	77
PNCC-M16B	82	PNC-M20B	75	PNOC-28B	79	PWC-P163G	77
PNCC-M16G	82	PNC-M20G	75	PNOC-28G	79	PWC-P16B	77
PNCC-M22B	82	PNC-M226B	75	PNOC-36B	79	PWC-P16G	77
PNCC-M22G	82	PNC-M226G	75	PNOC-36G	79	PWC-P21B	77
PNCC-M28B	82	PNC-M22B	75	PNOC-48B	79	PWC-P21G	77
PNCC-M28G	82	PNC-M22G	75	PNOC-48G	79	PWC-P29B	77
PNCC-M36B	82	PNC-M28B	75	PNOC-10B	94	PWC-P29G	77
PNCC-M36G	82	PNC-M28G	75	PNOC-12B	94	PWC-P36B	77
PNCC-M48B	82	PNC-M3222B	75	PNOC-16B	94	PWC-P36G	77
PNCC-M48G	82	PNC-M3222G	75	PNOC-22B	94	PWC-P48B	77
PNCC-P07B	82	PNC-M36B	75	PNOC-28B	94	PWC-P48G	77
PNCC-P07G	82	PNC-M36G	75	PNOC-36B	94	PWOC-12B	80
PNCC-P09B	82	PNC-M4028B	75	PNOC-48B	94	PWOC-12G	80
PNCC-P09G	82	PNC-M4028G	75	PWC-G10B	77	PWOC-16B	80
PNCC-P11B	82	PNC-M48B	75	PWC-G10G	77	PWOC-16G	80
PNCC-P11G	82	PNC-M48G	75	PWC-G12B	77	PWOC-22B	80
PNCC-P132B	82	PNC-M5036B	75	PWC-G12G	77	PWOC-22G	80
PNCC-P132G	82	PNC-M5036G	75	PWC-G16B	77	PWOC-28B	80
PNCC-P13B	82	PNC-M6348B	75	PWC-G16G	77	PWOC-28G	80
PNCC-P13G	82	PNC-M6348G	75	PWC-G22B	77	PWOC-36B	80
PNCC-P16B	82	PNC-P070B	76	PWC-G22G	77	PWOC-36G	80
PNCC-P16G	82	PNC-P070G	76	PWC-G28B	77	PWOC-48B	80
PNCC-P21B	82	PNC-P077B	76	PWC-G28G	77	PWOC-48G	80
PNCC-P21G	82	PNC-P077G	76	PWC-G368B	77	RAH-07B	62
PNCC-P29B	82	PNC-P0912B	76	PWC-G368G	77	RAH-07G	62
PNCC-P29G	82	PNC-P0912G	76	PWC-G36B	77	RAH-10B	62
PNCC-P36B	82	PNC-P097B	76	PWC-G36G	77	RAH-10G	62
PNCC-P36G	82	PNC-P097G	76	PWC-G42B	77	RAH-12B	62
PNCC-P48B	82	PNC-P09B	76	PWC-G42G	77	RAH-12G	62
PNCC-P48G	82	PNC-P09G	76	PWC-G48B	77	RAH-16B	62
PNC-G07B	76	PNC-P110B	76	PWC-G48G	77	RAH-16G	62
PNC-G07G	76	PNC-P110G	76	PWC-M107B	77	RAH-22B	62
PNC-G10B	76	PNC-P117B	76	PWC-M107G	77	RAH-22G	62
PNC-G10G	76	PNC-P117G	76	PWC-M10B	77	RAH-28B	62
PNC-G12B	76	PNC-P11B	76	PWC-M10G	77	RAH-28G	62
PNC-G12G	76	PNC-P11G	76	PWC-M12B	77	RAH-36B	62
PNC-G16B	76	PNC-P130B	76	PWC-M12G	77	RAH-36G	62
PNC-G16G	76	PNC-P130G	76	PWC-M16B	77	RAH-48B	62
PNC-G22B	76	PNC-P132B	76	PWC-M16G	77	RAH-48G	62
PNC-G22G	76	PNC-P132G	76	PWC-M202B	77	RAH-56B	62
PNC-G28B	76	PNC-P136B	76	PWC-M202G	77	RAH-56G	62
PNC-G28G	76	PNC-P136G	76	PWC-M22B	77	RAH-70B	62

Cat. No	Pg. No	Cat. No	Pg. No	Cat. No	Pg. No	Cat. No	Pg. No
RAH-70G	62	SBVPF-21	38	SPAERS-23	66	SPWC-P136B	85
RAH-95B	62	SDKF2	112	SPAERS-26	66	SPWC-P136G	85
RAH-95G	62	SDKF3	112	SPAERS-29	66	SPWC-P16B	85
RAHS-07B	62	SDKF5	112	SPAERS-37	66	SPWC-P16G	85
RAHS-07G	62	S-DV 030	177	SPAERS-4.5	66	SPWC-P21B	85
RAHS-10B	62	S-DV 033	177	SPAERS-50	66	SPWC-P21G	85
RAHS-10G	62	SEC1010	96	SPAERS-7.5	66	SPWC-P29B	85
RAHS-12B	62	SEC1212	96	SPNC-M10B	84	SPWC-P29G	85
RAHS-12G	62	SEC1616	96	SPNC-M10G	84	SPWC-P36B	85
RAHS-16B	62	S-EEB033	149	SPNC-M12B	84	SPWC-P36G	85
RAHS-16G	62	SMSBG-M13	87	SPNC-M12G	84	SPWC-P48B	85
RAHS-22B	62	SMSBG-M42	87	SPNC-M16B	84	SPWC-P48G	85
RAHS-22G	62	SMSBG-P11	87	SPNC-M16G	84	SSC1007	96
RAHS-28B	62	SMSBG-P13	87	SPNC-M22B	84	SSC1010	96
RAHS-28G	62	SMSBG-P21	87	SPNC-M22G	84	SSC1210	96
RAHS-36B	62	SMSPG-M21	88	SPNC-M28B	84	SSC1212	96
RAHS-36G	62	SMSPG-M29	88	SPNC-M28G	84	SSC1616	96
RAHS-48B	62	SMSPG-P09	88	SPNC-M36B	84	S-SP/M.100	177
RAHS-48G	62	SMSPG-P21	88	SPNC-M36G	84	S-SP/M.125	177
RAHS-56B	62	SMSPG-P29	88	SPNC-M48B	84	S-SP/M.150	177
RAHS-56G	62	SMSPG-P36	88	SPNC-M48G	84	S-SP/M.175	177
RAHS-70B	62	SPAC-M10B	86	SPNC-P09B	84	S-SP/M.200	177
RAHS-70G	62	SPAC-M10G	86	SPNC-P09G	84	S-SP/M.35	177
RAHS-95B	62	SPAC-M12B	86	SPNC-P11B	84	S-SP/M.50	177
RAHS-95G	62	SPAC-M12G	86	SPNC-P11G	84	S-SP/M.75	177
Rotating Connector RKR	110	SPAC-M16B	86	SPNC-P132B	84	ST044E.035	156
SBBC M20/P11	37	SPAC-M16G	86	SPNC-P132G	84	ST044E.055	156
SBBC M20/P21	37	SPAC-M22B	86	SPNC-P136B	84	ST044E.075	156
SBBC M20/P9	37	SPAC-M22G	86	SPNC-P136G	84	ST044E.100	156
SBBC M25/P11	37	SPAC-M28B	86	SPNC-P16B	84	ST044ERS.035	167
SBBC M25/P16	37	SPAC-M28G	86	SPNC-P16G	84	ST044ERS.055	167
SBBC M25/P21	37	SPAC-M36B	86	SPNC-P21B	84	ST044ERS.075	167
SBBC M32/P21	37	SPAC-M36G	86	SPNC-P21G	84	ST044ERS.100	167
SBBC M50/P42	37	SPAC-M48B	86	SPNC-P29B	84	ST044ES.035	165
SBBC P11/M20	37	SPAC-M48G	86	SPNC-P29G	84	ST044ES.055	165
SBBC P16/M20	37	SPAC-P09B	86	SPNC-P36B	84	ST044ES.075	165
SBBC P16/M25	37	SPAC-P09G	86	SPNC-P36G	84	ST044ES.100	165
SBBC P21/M25	37	SPAC-P11B	86	SPNC-P48B	84	ST044N.035	150
SBBC P29/M25	37	SPAC-P11G	86	SPNC-P48G	84	ST044N.050	150
SBBC P29/M32	37	SPAC-P136B	86	SPPM-10L	65	ST044N.055	150
SBBC P36/M32	37	SPAC-P136G	86	SPPM-11	65	ST044N.075	150
SBBC P36/M40	37	SPAC-P16B	86	SPPM-13	65	ST044N.100	150
SBBR P11/P9	35	SPAC-P16G	86	SPPM-15	65	ST044N.125	150
SBBR P13.5/P11	35	SPAC-P21B	86	SPPM-19	65	ST044N.150	150
SBBR P13.5/P9	35	SPAC-P21G	86	SPPM-26	65	ST044N.175	150
SBBR P16/P11	35	SPAC-P29B	86	SPPM-8.5	65	ST044N.200	150
SBBR P16/P13.5	35	SPAC-P29G	86	SPWC-M107B	85	ST044RS.035	160
SBBR P21/P13.5	35	SPAC-P36B	86	SPWC-M107G	85	ST044RS.050	160
SBBR P21/P16	35	SPAC-P36G	86	SPWC-M10B	85	ST044RS.055	160
SBBR P29/P21	35	SPAC-P48B	86	SPWC-M10G	85	ST044RS.075	160
SBBR P36/P29	35	SPAC-P48G	86	SPWC-M12B	85	ST044RS.100	160
SBBR P9/P7	35	SPAER-10	66	SPWC-M12G	85	ST044RS.125	160
SBBVP-01L	38	SPAER-12	66	SPWC-M16B	85	ST044RS.150	160
SBBVP-02L	38	SPAER-13	66	SPWC-M16G?	85	ST044RS.175	160
SBBVP-03L	38	SPAER-17	66	SPWC-M22B	85	ST044RS.200	160
SBBVPX-05	38	SPAER-22	66	SPWC-M22G	85	ST044S.035	159
SB-DV028/044M	177	SPAER-23	66	SPWC-M28B	85	ST044S.050	159
SB-DV035/055M	177	SPAER-26	66	SPWC-M28G	85	ST044S.055	159
SB-DV045/072M	177	SPAER-29	66	SPWC-M36B	85	ST044S.075	159
SB-DV060/095M	177	SPAER-37	66	SPWC-M36G	85	ST044S.100	159
SB-DV075/120M	177	SPAER-4.5	66	SPWC-M48B	85	ST044S.125	159
SB-DV100M	177	SPAER-50	66	SPWC-M48G	85	ST044S.150	159
SB-SP/400.300	177	SPAER-7.5	66	SPWC-P077B	85	ST044S.175	159
SB-SP/400.400	177	SPAERS-10	66	SPWC-P077G	85	ST044S.200	159
SB-SP/600.600	177	SPAERS-12	66	SPWC-P09B	85	ST055E.050	156
SBVPB-11L	38	SPAERS-13	66	SPWC-P09G	85	ST055E.075	156
SBVPB-21L	38	SPAERS-17	66	SPWC-P11B	85	ST055E.100	156
SBVPF-11	38	SPAERS-22	66	SPWC-P11G	85	ST055E.125	156

Cat. No	Pg. No	Cat. No	Pg. No	Cat. No	Pg. No	Cat. No	Pg. No
ST055E.150	156	ST095RS.075	162	ST150N.350	155	ST-FEB072E	157
ST055N.035	151	ST095RS.100	162	ST150N.400	155	ST-FEB072E	167
ST055N.050	151	ST095RS.125	162	ST150N.450	155	ST-FEB072ES	165
ST055N.055	151	ST095RS.150	162	ST150N.500	155	ST-FEB072N/S	152
ST055N.075	151	ST095RS.175	162	ST150N.550	155	ST-FEB072N/S	161
ST055N.100	151	ST095RS.200	162	ST150N.600	155	ST-FEB095E	157
ST055N.125	151	ST095RS.250	162	ST150RS.075	164	ST-FEB095E	168
ST055N.150	151	ST095RS.300	162	ST150RS.100	164	ST-FEB095ES	166
ST055N.175	151	ST095RS.350	162	ST150RS.125	164	ST-FEB095N/S	153
ST055N.200	151	ST095RS.400	162	ST150RS.150	164	ST-FEB095N/S	162
ST072E.050	157	ST120E.150	158	ST150RS.175	164	ST-FEB120E	158
ST072E.075	157	ST120E.200	158	ST150RS.200	164	ST-FEB120E	168
ST072E.100	157	ST120E.250	158	ST150RS.250	164	ST-FEB120ES	166
ST072E.125	157	ST120E.300	158	ST150RS.300	164	ST-FEB120N/S	154
ST072E.150	157	ST120ERS.150	168	ST150RS.350	164	ST-FEB120N/S	163
ST072ERS.050	167	ST120ERS.200	168	ST150RS.400	164	Strain Relief Insert RKSC	110
ST072ERS.075	167	ST120ERS.250	168	ST150RS.450	164	STSC-10	65
ST072ERS.100	167	ST120ERS.300	168	ST150RS.500	164	STSC-13	65
ST072ERS.125	167	ST120ES.150	166	ST150RS.550	164	STSC-16	65
ST072ERS.150	167	ST120ES.200	166	ST150RS.600	164	STSC-17	65
ST072ES.050	165	ST120ES.250	166	STC070707/A	95	STSC-22	65
ST072ES.075	165	ST120ES.300	166	STC080808	95	STSC-23	65
ST072ES.100	165	ST120N.075	154	STC100410	95	STSC-26	65
ST072ES.125	165	ST120N.100	154	STC100707/A	95	STSC-29	65
ST072ES.150	165	ST120N.125	154	STC100707/D	95	STSC-37	65
ST072N.050	152	ST120N.150	154	STC100710	95	STSC-50	65
ST072N.075	152	ST120N.175	154	STC100810/A	95	STSC-7.5	65
ST072N.100	152	ST120N.200	154	STC101007	95	STSC-70	65
ST072N.125	152	ST120N.250	154	STC101010	95	ST-SEB150/B1-B2-B3	155
ST072N.150	152	ST120N.300	154	STC120712/A	95	ST-SEB150E/B1-B2	169
ST072N.175	152	ST120N.350	154	STC120810/A	95	ST-SEB150E/B1-B2-B3	158
ST072N.200	152	ST120N.400	154	STC120812/C	95	ST-SEB150N/S B1-B2	164
ST072N.250	152	ST120N.450	154	STC121010	95	S-TW.EB028	178
ST072N.300	152	ST120N.500	154	STC121012/B	95	S-TW.EB035	178
ST072RS.050	161	ST120N.550	154	STC121207/A	95	S-TW.EB045	178
ST072RS.075	161	ST120N.600	154	STC121210	95	S-TW.EB050	178
ST072RS.100	161	ST120RS.075	163	STC121212	95	S-TW.EB075	178
ST072RS.125	161	ST120RS.100	163	STC160712/B	95	S-TW028/044.100	178
ST072RS.150	161	ST120RS.125	163	STC160716/A	95	S-TW028/044.125	178
ST072RS.175	161	ST120RS.150	163	STC160816	95	S-TW028/044.35	178
ST072RS.200	161	ST120RS.175	163	STC161012	95	S-TW028/044.55	178
ST072RS.250	161	ST120RS.200	163	STC161016	95	S-TW028/044.75	178
ST072RS.300	161	ST120RS.250	163	STC161212	95	S-TW033.27	178
ST095E.100	157	ST120RS.300	163	STC161216	95	S-TW033.37	178
ST095E.125	157	ST120RS.350	163	STC161607/A	95	S-TW033.47	178
ST095E.150	157	ST120RS.400	163	STC161612	95	S-TW033.67	178
ST095E.175	157	ST120RS.450	163	STC161616	95	S-TW033.77	178
ST095E.200	157	ST120RS.500	163	STC162216	95	S-TW035/055.100	178
ST095ERS.100	168	ST120RS.550	163	STC220822	95	S-TW035/055.125	178
ST095ERS.125	168	ST120RS.600	163	STC221016	95	S-TW035/055.150	178
ST095ERS.150	168	ST150E.200	158	STC221022	95	S-TW035/055.175	178
ST095ERS.175	168	ST150E.250	158	STC221212	95	S-TW035/055.200	178
ST095ERS.200	168	ST150E.300	158	STC221216	95	S-TW035/055.50	178
ST095ES.100	166	ST150E.350	158	STC221222/B	95	S-TW035/055.75	178
ST095ES.125	166	ST150E.400	158	STC221612	95	S-TW100	178
ST095ES.150	166	ST150ERS.200	169	STC222216	95	S-TW125	178
ST095ES.175	166	ST150ERS.250	169	STC222222	95	S-TW150	178
ST095ES.200	166	ST150ERS.300	169	S-TEB015	148	S-TW50	178
ST095N.075	153	ST150ERS.350	169	S-TEB020	148	S-TW75	178
ST095N.100	153	ST150ERS.400	169	S-TEB030	149	SYC101010	95
ST095N.125	153	ST150N.075	155	ST-FEB044E	156	SYC121210	95
ST095N.150	153	ST150N.100	155	ST-FEB044E	167	SYC161210	95
ST095N.175	153	ST150N.125	155	ST-FEB044ES	165	SYC161212	95
ST095N.200	153	ST150N.150	155	ST-FEB044N/S	150	SYC161610	95
ST095N.250	153	ST150N.175	155	ST-FEB044N/S	159	SYC161612	95
ST095N.300	153	ST150N.200	155	ST-FEB044N/S	160	SYC221616	95
ST095N.350	153	ST150N.250	155	ST-FEB055N/E	151	SYC222216	95
ST095N.400	153	ST150N.300	155	ST-FEB055N/E	156	SYC222222	95

Cat. No	Pg. No	Cat. No	Pg. No	Cat. No	Pg. No	Cat. No	Pg. No
T1505M	105	TSS M16LG	19	TYC 222222	94	W10CT1P16/B10	128
T2056M	105	TSS M20B	19	TYC 282222	94	W10CT2M20/B10	129
T2136M	105	TSS M20BM	19	TYC 282822	94	W10CT2P16/B10	129
T2141	105	TSS M20LG	19	TYC 282828	94	W10FCC/16B10	126
T2141M	105	TSS M20LGM	19	UHBVPB-11L	38	W10FT/16A10	125
T2156M	105	TSS M25B	19	UHBVPB-21L	38	W10FT/16B10	125
T2171	105	TSS M25BM	19	UHBVPE-11	38	W10HB1/A10	134
T2171M	105	TSS M25LG	19	UHBVPE-21	38	W10HB1/B10	134
T2176M	105	TSS M25LGM	19	W03/4CFM/A3	138	W10HB2/B10	135
T2186	105	TSS M32B	19	W03/4CMM/A3W	138	W10HBC1/A10	134
T2226M	105	TSS M32LG	19	W03/4CSMM20	123	W10HBC1/B10	134
T2256	103	TSS M40B	19	W03/4CSMP11	123	W10HCS2M32/B10	131
T2266	103	TSS M40LG	19	W03/4CSPM20	123	W10HHS2M32X2/B10	133
T2356(H)	103	TSS P09B	19	W03/4CSPP11	123	W10HS1P16/A10	132
T2366(H)	103	TSS P09LG	19	W03/4CTMLM20	123	W10HS1P16/B10	132
T5005M	105	TSS P11B	19	W03/4CTMLP11	123	W10HS2M20/B10	133
T5205M	105	TSS P11BM	19	W03/4CTMM20	123	W10HS2P16/B10	133
T7205M	105	TSS P11LG	19	W03/4CTMP11	123	W10HSC1P16/B10	132
T8205M	105	TSS P11LGM	19	W03/4CTPLM20	123	W10MCC/16B10	126
TIS-M08T	94	TSS P16B	19	W03/4CTPLP11	123	W10MT/16A10	125
TIS-M12T	94	TSS P16BM	19	W03/4CTPM20	123	W10MT/16B10	125
TIS-M18T	94	TSS P16LG	19	W03/4CTPP11	123	W12FCC/10A3	122
TIS-M30T	94	TSS P16LGM	19	W03/4HBRM	124	W12MCC/10A3	122
TNOC-56B	79	TSS P21B	19	W03/4HBRP	124	W15FCC/10A10	126
TNOC-56NG	79	TSS P21LG	19	W03/4HBSM	124	W15MCC/10A10	126
TNOC-70B	79	TSS P299B	19	W03/4HBSP	124	W16CS1M20/A16	130
TNOC-70NG	79	TSS P299LG	19	W03/4HSMM20	123	W16CS1M25/B16	130
TNOC-95B	79	TSSEB16	106	W03/4HSMP11	123	W16CS1P16/A16	130
TNOC-95NG	79	TTC 101010	94	W03/4HSMP20	123	W16CS1P21/B16	130
TP-X01	43	TTC 121010	94	W03/4HSPP11	123	W16CS1P29/B16	130
TP-X02	43	TTC 121210	94	W03FT/10A3	122	W16CS2M25/B16	131
TP-X1	43	TTC 121212	94	W03MT/10A3	122	W16CS2P21/B16	131
TP-X2	43	TTC 161010	94	W04FT/10A3	122	W16CT1M20/A16	128
TP-X3	43	TTC 161210	94	W04FT/80B16	125	W16CT1M25/A16	128
TP-X4	43	TTC 161212	94	W04MT/10A3	122	W16CT1M25/B16	128
TP-X5	43	TTC 161616	94	W04MT/80B16	125	W16CT1P16/A16	128
TP-X6	43	TTC 222222	94	W05FCC/16A3	122	W16CT1P21/B16	128
TRG M12B	18	TTC 282222	94	W05MCC/16A3	122	W16CT2M25/B16	129
TRG M12G	18	TTC 282822	94	W06CS1M20/B6	130	W16CT2P21/B16	129
TRG M16B	18	TTC 282828	94	W06CS1P16/B6	130	W16FT/16A16	125
TRG M16G	18	Tube Ball Joint RKS	110	W06CT1M20/B6	128	W16FT/16B16	125
TRG M20B	18	Tube Ball Joint Sleeve RKD	110	W06CT1P16/B6	128	W16HB1/A16	134
TRG M20G	18	TVC 101010	94	W06FCC/16B6	126	W16HB1/B16	134
TRG M25B	18	TVC 121010	94	W06FT/16B6	125	W16HB2/B16	135
TRG M25G	18	TVC 121210	94	W06FT/35B16	125	W16HBC1/A16	134
TRG M32B	18	TVC 121212	94	W06HB1/B6	134	W16HBC1/B16	134
TRG M32G	18	TVC 161010	94	W06HBC1/B6	134	W16HCS1M25/A16W	130
TRG M40B	18	TVC 161210	94	W06HCT1P21/B6	128	W16HCS1M32/B16	130
TRG M40G	18	TVC 161212	94	W06HS1M20/B6	132	W16HCS1P21/B16	130
TRG M50B	18	TVC 161616	94	W06HS1P16/B6	132	W16HCS2M32/B16	131
TRG M50G	18	TVC 222222	94	W06HSC1M20/B6	132	W16HCT1M25/A16W	128
TRG M63B	18	TVC 282222	94	W06HSC1P16/B6	132	W16HCT1M32/B16W	128
TRG M63G	18	TVC 282822	94	W06MCC/16B6	126	W16HCT1M40/B16	128
TRG P07B	18	TVC 282828	94	W06MT/16B6	125	W16HCT1P29/B16W	128
TRG P07G	18	TWOC-56B	80	W06MT/35B16	125	W16HCT2M25X2/B16W	129
TRG P09B	18	TWOC-56NG	80	W07FCC/10A3/250	122	W16HHS2M40X2/B16	133
TRG P09G	18	TWOC-70B	80	W07MCC/10A3/250	122	W16HS1M25/A16	132
TRG P11B	18	TWOC-70NG	80	W08FCC/10A3	122	W16HS1M25/B16	132
TRG P11G	18	TWOC-95B	80	W08MCC/10A3	122	W16HS1P21/A16	132
TRG P16B	18	TWOC-95NG	80	W108FCC/10B24	126	W16HS1P21/B16	132
TRG P16G	18	TYC 101010	94	W108MCC/10B24	126	W16HS2P21/B16	133
TRG P21B	18	TYC 121010	94	W10CS1M25/B10	130	W16HSC1M25/A16	132
TRG P21G	18	TYC 121210	94	W10CS1P16/A10	130	W16HSC1P21/B16	132
TRG P29B	18	TYC 121212	94	W10CS1P16/B10	130	W16MT/16A16	125
TRG P29G	18	TYC 161010	94	W10CS2M20/B10	131	W16MT/16B16	125
TRG P36B	18	TYC 161210	94	W10CS2M25/B10	131	W216FCC/10B48	126
TRG P36G	18	TYC 161212	94	W10CS2P16/B10	131	W216MCC/10B48	126
TSS M16B	19	TYC 161616	94	W10CT1M20/A10	128	W24CS1M32/B24	130

Cat. No	Pg. No	Cat. No	Pg. No	Cat. No	Pg. No	Cat. No	Pg. No
W24CS1P21/B24	130	W48HCS1P29/B48	130	WR16CT2P21/B16	129		
W24CS1P29/B24	130	W48HCS1P36/B48	130	WR16HB2/B16	135		
W24CS2M32/B24	131	W48HCS1P42/B48W	130	WR24CT1M32/B24	128		
W24CS2P21/B24	131	W48HCT1M50/B48	128	WR24CT2P29/B24	129		
W24CS2P29/B24	131	W48HCT1P36/B48	128	WR24HBC2/B24	135		
W24CT1M25/B24	128	W48HS1P29x2/B48	132	WR32HSC2P21/A32	133		
W24CT1M32/B24	128	W48MT/16B48	125	WSG/I	138		
W24CT1P21/B24	128	W64FCC/10B24	126	WSH-M12X1.5	28		
W24CT2M32/B24	129	W64MCC/10B24	126	WSH-M16X1.5	28		
W24CT2P21/B24	129	W72FCC/10B16	126	WSH-M20X1.5	28		
W24CT2P29/B24	129	W72MCC/10B16	126	WSH-M25X1.5	28		
W24FCC/10B6	126	WCG03	135	WSH-M32X1.5	28		
W24FCC/16B24	126	WCG04	135	WSH-M40X1.5	28		
W24FT/16B24	125	WCG05	135	WSH-M50X1.5	28		
W24HB1/B24	134	WCG06	135	WSH-M63X1.5	28		
W24HB2/B24	135	WCG07	135	WSH-Pg11	28		
W24HBC1/B24	134	WCG08	135	WSH-Pg13.5	28		
W24HCS1P29/B24	130	WCG09	135	WSH-Pg16	28		
W24HCS1P29/B24W	130	WCGM20	135	WSH-Pg21	28		
W24HCS2M32/B24W	131	WCL/B16	138	WSH-Pg29	28		
W24HCT2M32/B24	129	WCL/B24	138	WSH-Pg36	28		
W24HCT2M32X2/B24W	129	WCP/A32W	138	WSH-Pg42	28		
W24HCT2P29/B24W	129	WCP/B10W	138	WSH-Pg48	28		
W24HS1P21/B24	132	WCP/B16W	138	WSH-Pg7	28		
W24HS2M25/B24	133	WCP/B24W	138	WSH-Pg9	28		
W24HS2P21/B24	133	WCP1/B6W	138				
W24HSC1P21/B24	132	WCPDF	137				
W24MCC/10B6	126	WCPDM	137				
W24MCC/16B24	126	WCPS	137				
W24MT/16B24	125	WCT	138				
W25FCC/10A16	126	WDIN/B06	136				
W25MCC/10A16	126	WDIN/B10	136				
W32CS2M32/A32	131	WDIN/B16	136				
W32CS2P21/A32	131	WDIN/B24	136				
W32FCC/16B16	126	WFCT0.37/16A	127				
W32FT/16B32	125	WFCT0.5/10A	127				
W32HB1/B32	134	WFCT0.5/16A	127				
W32HB2/A32	135	WFCT0.75/10A	127				
W32HB2/B32	135	WFCT0.75/16A	127				
W32HBC1/B32	134	WFCT1.0/10A	127				
W32HCS1P29/B32	130	WFCT1.0/16A	127				
W32HCS1P29/B32W	130	WFCT1.5/10A	127				
W32HCS1P36/B32	130	WFCT1.5/16A	127				
W32HCS2P29/B32	131	WFCT2.5/16A	127				
W32HCT1P36/B32	128	WFCT2.50/10A	127				
W32HCT2M32/A32W	129	WFCT4.0/16A	127				
W32HCT2P29/B32	129	WFCT6.0/40A	127				
W32HS1P29/B32	132	WMCT0.37/16A	127				
W32HS2M32/A32	133	WMCT0.5/10A	127				
W32HS2P29/A32	133	WMCT0.5/16A	127				
W32HS2P36/B32	133	WMCT0.75/10A	127				
W32HSC1P29/B32	132	WMCT0.75/16A	127				
W32HSC1P36/B32	132	WMCT1.0/10A	127				
W32MCC/16B16	126	WMCT1.0/16A	127				
W32MT/16B32	125	WMCT1.5/10A	127				
W4/2FT/(80/16)B16	125	WMCT1.5/16A	127				
W4/2MT/(80/16)B16	125	WMCT2.5/16A	127				
W4/8FT/(80/16)B24	125	WMCT2.50/10A	127				
W4/8MT/(80/16)B24	125	WMCT4.0/16A	127				
W40FCC/10B16	126	WMCT6.0/40A	127				
W40MCC/10B16	126	WR06CT1P16/B6	128				
W42FCC/10B10	126	WR10CT1P16/B10	128				
W42MCC/10B10	126	WR10CT2P16/B10	129				
W46FCC/16B24	126	WR10HB2/B10	135				
W46MCC/16B24	126	WR10HS2M20/B10	133				
W48FT/16B48	125	WR10HS2M20/B10	133				
W48HB1/B48	134	WR16CT1P21/B16	128				
W48HBC1/B48	134	WR16CT2M25/B16	129				

Note: The product information is carefully compiled and is accurate for most of the application. New findings in materials and process technology necessitate modification of the products. We reserve the right to change / modify the product without intimation. However the changes that take place without notice in no way reduce function or performance of the product.

MKT/8.2/07 JANUARY 2022 x 1000