

## Flexible cord and cable fittings

### Specifications

#### Ref. CEC Section 4 (conductors)

In the Canadian Electrical Code, flexible cords are known by their trade names "hard service cord," "junior hard service cord" and "vacuum cleaner cord."

Depending on jacket material, flexible cords listed are suitable for use where immersed in water or where occasionally or continuously in contact with oil or immersed in oil, or outdoors and in mobile homes and recreational vehicles.

Flexible cord is permitted by code for use in portable appliances or stationary equipment requiring movement for service and repair and for wiring in cranes, hoists and elevators. Flexible cord is also permitted to be used to prevent transmission of noise or vibration.

Flexible cord is not permitted as a substitute for fixed wiring of structures or where concealed behind building walls, ceilings or floors. Running flexible cord through holes in walls, ceilings, floors or through doorways, windows or similar openings is also prohibited.

CEC Section 4 requires that flexible cords be so connected to devices and to fittings that tension is not transmitted to joints or terminal screws. Use of suitable strain relief fittings designed for the purpose is one of the recommended alternatives.

Please refer to the following for further details and complete information:

1. UL 62, ANSI C33.1 – Safety standard for flexible cord and fixture wire
2. UL 514A and 514B – Safety standard for outlet boxes and fittings

#### 3. CEC Section 4 – Conductors

- 4-012 – Uses of flexible cord
- 4-040 – Uses of portable power cable
- 12-010 (4) – Flexible cords in ducts and plenum chambers
- 22-108 (2) – Bonding conductor for flexible cords for portable equipment
- 44-350 (1) (b) – Flexible cords for portable stage equipment
- 50-018 (2) – Flexible cords suitable for extra-hard usage are permitted on solar photovoltaic systems
- 70-108 – Power supply cord – factory-built relocatable structures and non-relocatable structures
- 76-002 – Temporary wiring
- 76-010 – Feeders
- 78-058 (2) – Marinas and yacht clubs
- 78-104 (2) – Marine wharves, structures and fishing harbours
- 4. CSA C22.2 No. 49 – Safety standards for flexible cords and cables and fixture wires
- 5. CSA C22.2 No. 18.1 and 18.3 – Safety standards for outlet boxes, conduit boxes and fittings

#### Please note

The excerpts and other material herein, whether relating to the Canadian Electrical Code 2012 Part I, the Underwriters Laboratories, Inc. listing, to industry practice or otherwise, are not intended to provide all relevant information required for use and installation. Reference to original or primary source material and data is mandatory before any application or use is made of the product.

Following is a brief description of the three cords:

Type of cord	Hard service cord	Junior hard service cord	Vacuum cleaner cord
1. Use	Extra hard pendant, portable	Hard pendant, portable	Light pendant, portable
2. Voltage rating	Up to 600 volts	Up to 300 volts	Up to 300 volts
3. Conductor material	Copper (stranded)	Copper (stranded)	Copper (stranded)
4. Type designation (depends on jacket material)			
i. Rubber jacket	Type S	Type SJ	Type SV
ii. Oil-resistant rubber jacket	Type SO	Type SJO	Type SVO
iii. Thermoplastic jacket	Type ST	Type SJT	Type SVT
iv. Oil-resistant thermoplastic jacket	Type STO	Type SJTO	Type SVTO

## Flexible cord and cable fittings

### Suggested specifications

—  
01 2520 and 2530 series  
liquidtight flexible  
cord and cable fittings  
—

02 2920NM Series  
nonmetallic liquidtight  
flexible cord and  
cable fittings the  
Ranger™ series  
—

03 2631 Series  
liquidtight flexible  
cord and cable fittings  
—

04 2920AL Series  
aluminum liquidtight  
flexible cord and cable  
fittings the Ranger series  
—

05 2672 Series  
flexible cord fittings  
(plastic)  
—

06 2920S Series  
steel liquidtight  
flexible cord and cable  
fittings the Ranger series  
—

07 TCF Series  
aluminum tray/  
cord fitting  
—

08 2920SST Series  
stainless steel  
liquidtight flexible cord  
and cable fittings

- Flexible cord or cable and associated fittings shall be suitable for conditions of use and location and approved for the purpose by a nationally recognized testing laboratory, inspection agency or product evaluation organization.
- Flexible cord or cable shall be so connected to the device or fitting that tension will not be transmitted to joints or terminal screws. Sufficient slack shall be provided to avoid sharp flexing and straining. Cord or cable shall be installed in such a manner that liquid will tend to run off the surface instead of draining towards the fitting.
- Where flexible cord or cable exposed to intermittent or constant moisture and subjected to mechanical strain is terminated into a threaded or threadless opening, terminating fittings shall be of watertight strain-relief type such as series 2920, 2920AL, 2920NM, 2520, 2631 or 2672. Fittings shall be equipped with a beveled moisture-resistant/oil-resistant synthetic rubber bushing.
- Where space is limited inside the enclosure, a female hub type fitting such as series 2631 shall be furnished. A captive resilient sealing O-ring shall be included to positively protect against damage from overtorquing.



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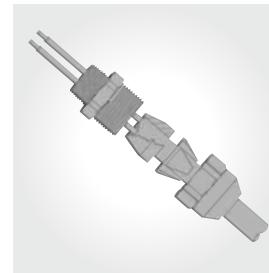
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## Flexible cord and cable fittings

### Suggested specifications

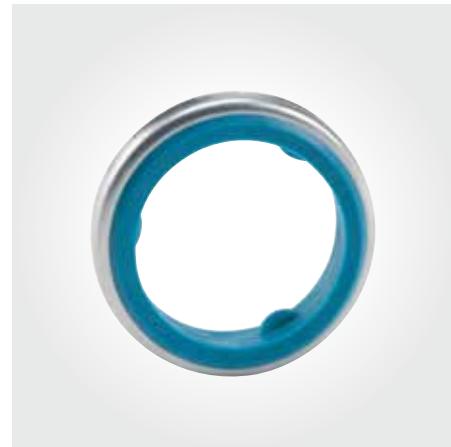
- 01 Series 3300  
nonmetallic sheathed  
cable and flexible  
cord fitting
- 02 Series 5262  
sealing gasket
- 03 Series 1942  
insulated nipple
- 04 Series 3210  
knockout bushing

- Where flexible cord or cable exposed to moisture is terminated into a threadless opening using male threaded hub-type fittings such as series 2520 or 2920, a suitable moisture-resistant/oil-resistant synthetic rubber gasket such as series 5262 shall be provided between the outside of box or enclosure and fitting shoulder. Resilient gasket shall be adequately protected by and permanently bonded to a metallic retainer.
- Where exposed to environmental conditions that are more than normally corrosive, watertight strain relief fittings shall be of high impact thermoplastic construction such as series 2672 or 2920NM.

- Where flexible cord or cable passes through either factory or field-punched, cut or drilled holes in metal members, the cord or cable shall be protected by thermoplastic bushing such as series 3210, 3300. Bushing shall be firmly secured in opening. Nylon-bushed metallic fittings such as series 1942 may be substituted as required.
- For wet location, fittings furnished with synthetic rubber bushing such as series 2530 or 2672 shall be installed.



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## Flexible cord and cable fittings

### How to select T&B flexible cord fittings

#### Step 1.

Determine diameter range in chart by using cord size and type or by measuring the diameter of your cord.

This chart can be used as a guide for selecting the proper fitting for the UL Listed and CSA Certified cords. Cords vary in size, and cord diameter should be measured whenever possible.

#### Step 2.

Determine catalogue number by choosing the hub size and type (straight or 90°) for the diameter range determined in step 1.



Cat. no.		Hub size (in.)	Diameter range (in.)	SV, SVO, SVT, SVTO cord sizes
2671	90°	2680	3/8	0.125–0.275 18-2, 18-3



Cat. no.		Hub size (in.)	Diameter range (in.)	SV, SO, ST, STO cord sizes	SJO, SJT, SJTO, SJ cord sizes
2920NM	4960NM	1/2	0.125–0.375	18-2, 18-3*	18-2, 18-3, 18-4, 16-2,
2930NM	4970NM	3/4	0.125–0.375	18-2, 18-3*	16-3, 16-4*, 14-2, 14-3*
2921NM	4961NM	1/2	0.125–0.375	18-2, 18-3*	18-3, 18-4, 18-5, 18-6, 18-7*
2931NM	4971NM	3/4	0.310–0.560	18-3, 18-4*, 18-5, 16-2*	16-3, 16-4, 16-5, 16-6*, 14-2,
2940NM	–	1	0.310–0.560	18-3, 18-4*, 18-5, 16-2*	14-3, 14-4, 12-2, 12-3, 12-4, 10-2
2922NM	–	1/2	0.500–0.750	16-5, 16-6, 14-2, 14-3, 14-4,	14-3, 14-4, 12-2, 12-3, 12-4, 10-2
2932NM	4972NM	3/4	0.500–0.750	14-5, 12-2, 12-3, 12-4, 12-5,	12-4, 10-2, 10-3, 10-4
2941NM	–	1	0.500–0.750	10-2, 10-3, 10-4, 8-2	12-4, 10-2, 10-3, 10-4
2942NM	–	1	0.700–0.950	10-4, 10-5, 8-3, 8-4	12-4, 10-2, 10-3, 10-4
–	2688	1	0.560–0.690	14-3*, 14-4, 14-5*, 12-2, 12-3, 12-4*, 10-2, 10-3*	10-2*, 10-3, 10-4
–	2685	1	0.660–0.780	14-5, 12-4*, 12-5, 10-3*, 10-4	10-4
2696	–	3/4	0.770–0.895	10-5, 8-2, 8-3*	10-4
–	2686	1	0.770–0.895	10-5, 8-2, 8-3*	10-4
2678	2687	1	0.870–1.020	8-3*, 8-4*	10-4
2699	–	1	0.890–1.090	8-4, 8-5*, 6-2, 6-3*, 6-4*, 4-2*	10-4
2702	–	1 1/4	0.890–1.090	8-4, 8-5*, 6-2, 6-3*, 6-4*, 4-2*	10-4
2703	–	1 1/4	0.890–1.090	4-2*, 4-3, 2-2*	10-4
2704	–	1 1/4	1.270–1.470	4-4, 2-2*	10-4
2705	–	1 1/2	0.890–1.150	8-4, 8-5, 6-2, 6-3, 6-4*, 4-2*	10-4
2706	–	1 1/2	1.140–1.400	6-5, 6-4*, 4-2*, 4-3, 4-4*, 2-2, 2-3*	10-4
2707	–	1 1/2	1.390–1.650	4-4*, 2-3*, 2-4	10-4
2708	–	2	1.190–1.530	6-5, 4-2*, 4-3, 4-4, 2-2, 2-3, 2-4*	10-4
2709	–	2	1.520–1.860	2-4*	10-4
2710-TB	–	2	1.850–2.190	2-4*	10-4

\* Actual cord diameter must be determined before proper fitting can be selected.  
Measure cord, if available, or refer to cord manufacturer's catalogue.

## Flexible cord and cable fittings

### Flexible cord and power cable chart

Type of cord	Size of conductors (AWG)	Number of conductors and approximate O.D. (in.)		
		2 Conductor	3 Conductor	4 Conductor
SV, SVO, SVT	18	0.250	0.260	—
SJ, SJO, SJT, SJTO	18	0.300	0.330	0.360
	16	0.330	0.360	0.390
	14	0.375	0.395	0.420
S, SO, ST, STO, and portable power cables	18	0.385	0.400	0.430
	16	0.400	0.425	0.480
	14	0.530	0.560	0.605
	12	0.600	0.635	0.665
	10	0.640	0.690	0.745
	8	0.700-0.840	0.750-0.910	0.820-0.990
	6	0.820-0.930	0.885-1.010	0.975-1.100
	4	1.080	1.170	1.270
	3	1.170	1.240	1.340
	2	1.270	1.340	1.480
	1	1.440	1.510	1.680
	1/0	1.520	1.650	1.790
	2/0	1.650	1.750	1.930
	3/0	1.770	1.890	2.070
	4/0	1.920	2.070	2.260
	250	2.160	2.390	—
Bus drop cables	14	—	—	0.410
	12	—	—	0.450
	10	—	—	0.530
	8	—	—	0.670
	6	—	—	0.850
	4	—	—	0.950
	2	—	—	1.000

Note: The above dimensions are approximate and may vary depending upon the manufacturer

## Flexible cord and cable fittings

### Specifications – Liquidtight fittings

—  
01 2520 Series  
—  
02 2631 Series

#### Application

- A liquidtight fitting to connect flexible cord or power cable to a box or enclosure and provide adequate strain relief.

#### Features

- Liquidtight connection with box or enclosure is assured by:
  - (1) Taper-threaded hub on 2520 series for female hub application (A)
  - (2) Using sealing ring series 5262 with 2520 series for knockout application (B)
  - (3) Captivated sealing O-ring on 2631 series (C)
- Neoprene bushing makes liquidtight installation; applies pressure against cable the full length of bushing (D)
- Thermoplastic or stainless steel retaining ring (E)
  - (1) Will not abrade cord/cable jacket
  - (2) Reduces installing torque effort
- UL Listed for liquidtightness, strain relief and as an outlet bushing; CSA certified watertight

#### Standard material

- Gland, body: Steel/malleable iron/zinc die cast
- Retaining ring: Thermoplastic/stainless steel
- Bushing: Neoprene
- O-ring: Buna N

#### Standard finish

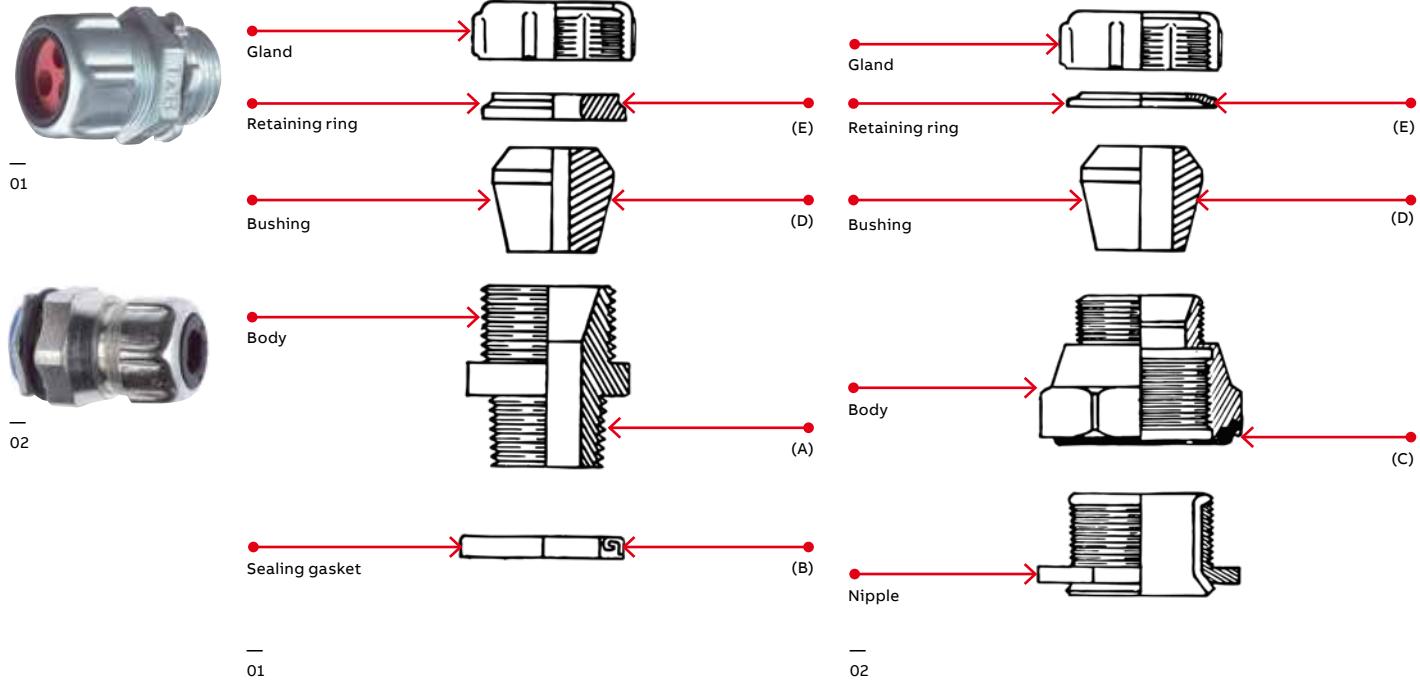
- Electro zinc plated and chromate coated

#### Range

- 2520 Series, straight 0.125 in. outside diameter to 3.200 in. outside diameter cord or cable
- 2200 Series, 45° 0.125 in. outside diameter to 1.485 in. outside diameter cord or cable
- 2267 Series, 90° 0.125 in. outside diameter to 1.875 in. outside diameter cord or cable cord/cable type S, SO, SV, ST, STO, SJ, SJO, SJT, SJTO, SVO and SVT

#### Conformity

- UL 514B
- CSA C22.2 No. 18.3
- NFPA 70-2008 (ANSI)

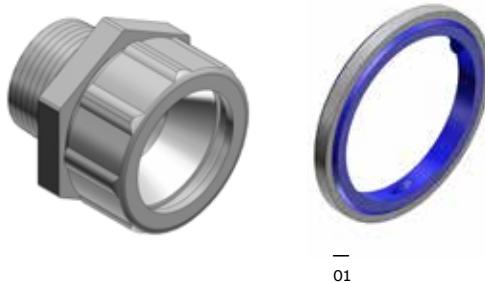


## Liquidtight strain-relief fittings

01 5262 Series  
sealing ring gasket  
sold separately

02 Fig. 1

03 Fig. 2



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### Liquidtight strain-relief fittings

Cat. no.	Cable size range min.-max. (in.)	Hub size min. (in.)	Throat			Dimensions (in.)		
			Fig.	A	B	C		
2516 <sup>†</sup>	0.060–0.125	1/4	23/64	2	53/64	17/16	15/32	
2517 <sup>†</sup>	0.120–0.250	1/4	23/64	2	53/64	17/16	15/32	
2518 <sup>†</sup>	0.060–0.150	3/8	29/64	2	31/32	1 1/2	15/32	
2519 <sup>†**</sup>	0.150–0.300	3/8	29/64	2	31/32	1 1/2	15/32	
2520	0.125–0.250	1/2	9/16	1	1 5/32	1 11/16	5/8	
2521	0.250–0.375	1/2	9/16	1	1 5/32	1 11/16	5/8	
2522	0.375–0.500	1/2	9/16	1	1 5/32	1 11/16	5/8	
2523	0.450–0.560	1/2	9/16	1	1 5/32	1 11/16	5/8	
2524 <sup>*</sup>	0.500–0.625	1/2	5/8	1	1 3/8	1 3/4	5/8	
2525 <sup>*</sup>	0.625–0.750	1/2	5/8	1	1 3/8	1 3/4	5/8	
2530	0.125–0.250	3/4	13/16	1	1 3/8	1 3/4	9/16	
2531	0.250–0.375	3/4	13/16	1	1 3/8	1 3/4	9/16	
2532	0.375–0.500	3/4	13/16	1	1 3/8	1 3/4	9/16	
2534	0.500–0.625	3/4	13/16	1	1 3/8	1 3/4	9/16	
2535	0.625–0.750	3/4	13/16	1	1 3/8	1 3/4	9/16	
2536 <sup>*</sup>	0.750–0.880	3/4	3/4	1	1 11/16	1 15/16	5/8	
2541	0.250–0.375	1	49/64	1	1 3/8	1 23/32	9/16	
2542	0.375–0.500	1	49/64	1	1 3/8	1 23/32	9/16	
2544	0.500–0.625	1	49/64	1	1 3/8	1 23/32	9/16	
2545	0.625–0.750	1	49/64	1	1 3/8	1 23/32	9/16	
2546	0.750–0.875	1	63/64	1	1 11/16	1 7/8	23/32	
2547	0.875–0.985	1	63/64	1	1 11/16	1 7/8	9/16	
2548 <sup>*</sup>	0.880–1.065	1	29/32	1	2 3/32	2 3/8	23/32	
2549 <sup>*</sup>	1.065–1.205	1	29/32	1	2 3/32	2 3/8	23/32	

\* Remove sufficient outer covering of cable to permit conductors to pass through fitting body

† UL not applicable

\*\* Not CSA Certified

Complies with JIC standards

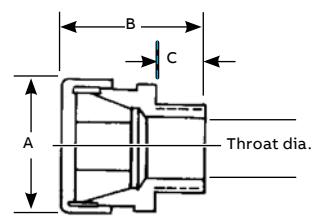
UL Listed as liquidtight strain-relief, and outlet bushing. CSA certified watertight when used with 5262 series sealing ring. gasket (sold separately)

Temperature rating: 105 °C

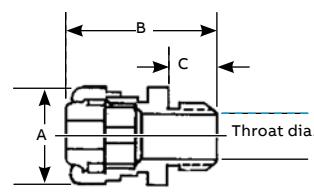
For wiremesh grips, refer to page B104

Cat. no.	Cable size range min.-max. (in.)	Hub size min. (in.)	Throat			Dimensions (in.)		
			Fig.	A	B	C		
2558	0.880–1.065	1 1/4	1 17/64	1	2 3/32	2 5/32	13/16	
2559	1.065–1.205	1 1/4	1 17/64	1	2 3/32	2 5/32	13/16	
2556*	1.187–1.375	1 1/4	1 1/4	1	2 11/32	2 1/2	13/16	
2557*	1.375–1.485	1 1/4	1 1/4	1	2 11/32	2 1/2	13/16	
2562	0.812–1.000	1 1/2	1 7/16	1	2 11/32	2 1/2	11/16	
2563	1.000–1.187	1 1/2	1 7/16	1	2 11/32	2 7/16	11/16	
2564	1.187–1.375	1 1/2	1 7/16	1	2 11/32	2 7/16	11/16	
2565*	1.375–1.625	1 1/2	1 29/64	1	2 13/16	2 5/8	13/16	
2573	1.125–1.375	2	1 7/8	1	2 13/16	2 5/8	13/16	
2574	1.375–1.625	2	1 7/8	1	2 13/16	2 5/8	11/16	
2575	1.625–1.875	2	1 7/8	1	2 13/16	2 5/8	11/16	
2576*	1.750–1.965	2	1 29/32	1	3 7/32	3 1/2	27/32	
2577*	1.937–2.187	2	1 29/32	1	3 7/32	3 1/2	27/32	
2584	1.750–1.965	2 1/2	2	1	3 7/32	3 3/4	1 1/32	
2585*	1.937–2.187	2 1/2	2	1	3 7/32	3 3/4	1 1/32	
2586*	2.156–2.360	2 1/2	2 3/32	1	3 15/16	4 1/4	1 1/32	
2587*	2.350–2.565	2 1/2	2 3/32	1	3 15/16	4 1/4	1 1/32	
2592	2.156–2.360	3	2 13/32	1	3 15/16	4 1/4	1 1/32	
2593	2.350–2.565	3	2 13/32	1	3 15/16	4 1/4	1 1/32	
2594	2.535–2.750	3	2 13/32	1	3 15/16	4 1/4	1 1/32	
2595*	2.735–2.985	3	2 13/16	1	4 11/16	4 13/16	1 1/8	
2596*	2.970–3.220	3	2 13/16	1	4 11/16	4 13/16	1 1/8	

### Diagrams



02



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## 90° Strain-relief fittings



### Swing radius 90°

With neoprene bushings, tapered hub threads, malleable iron.

### 90° Strain-relief fittings



Diagram	Cat. no.	Cable size range min.-max. (in.)	Hub size (in.)	Dimensions (in.)			Throat dia. (in.)
				A	B	C	
	2267	0.125-0.250	1/2	1 5/32	1 23/32	5/8	19/32
	2268	0.250-0.375	1/2	1 5/32	1 23/32	5/8	19/32
	2269	0.375-0.500	1/2	1 5/32	1 23/32	5/8	19/32
	2270	0.450-0.560	1/2	1 5/32	1 23/32	5/8	19/32
	2250*	0.500-0.625	1/2	1 3/8	1 11/16	9/16	39/64
	2251*	0.625-0.750	1/2	1 3/8	1 11/16	9/16	39/64
	2252	0.125-0.250	3/4	1 3/8	1 3/4	41/64	25/32
	2271	0.250-0.375	3/4	1 3/8	1 5/8	41/64	25/32
	2272	0.375-0.500	3/4	1 3/8	1 5/8	41/64	25/32
	2273	0.500-0.625	3/4	1 3/8	1 5/8	41/64	25/32
	2274*	0.620-0.750	3/4	1 3/8	1 5/8	41/64	25/32
	2253-TB*	0.750-0.880	3/4	1 11/16	1 31/32	9/16	25/32
	2254	0.375-0.500	1	1 3/8	2	13/16	1
	2255-TB	0.500-0.625	1	1 3/8	2	13/16	1
	2256-TB*	0.625-0.750	1	1 3/8	2	13/16	1
	2275	0.750-0.875	1	1 11/16	2	13/16	1
	2276	0.875-0.985	1	1 11/16	2	13/16	1
	2257*	0.880-1.065	1	2 3/32	2 21/32	25/32	15/16
	2258*	1.065-1.205	1	2 3/32	2 21/32	25/32	15/16
	2277	0.880-1.065	1 1/4	2 3/32	2 7/8	27/32	15/16
	2278	1.065-1.205	1 1/4	2 3/32	2 7/8	27/32	15/16
	2279*	1.187-1.375	1 1/4	2 11/32	2 13/16	13/16	1 11/32
	2280*	1.375-1.485	1 1/4	2 11/32	2 13/16	13/16	1 11/32
	2281	0.812-1.000	1 1/2	2 11/32	2 7/8	19/16	1 15/32
	2282	1.000-1.187	1 1/2	2 11/32	2 7/8	13/16	1 15/32
	2283*	1.187-1.375	1 1/2	2 11/32	2 7/8	13/16	1 15/32
	2284	1.125-1.375	2	2 13/16	3 1/4	27/32	1 31/32
	2285	1.375-1.625	2	2 13/16	3 1/4	27/32	1 31/32
	2286	1.625-1.875	2	2 13/16	3 1/4	27/32	1 31/32

\* Remove sufficient outer covering of cable to permit conductors to pass through fitting body  
Complies with JIC standards and Federal Specs W-F-406B, W-F-408B

For wiremesh grips, refer to page B104

## 45° Strain-relief fittings



### Swing radius 45°

With neoprene bushings, tapered hub threads, malleable iron.

### 45° Strain-relief fittings



Diagram	Cat. no.	Cable size range min. max. (in.)	Hub size (in.)	Dimensions (in.)			Throat dia. (in.)
				A	B	C	
	2200	0.125–0.250	1/2	1 5/32	1 1/32	9/16	37/64
	2201	0.250–0.375	1/2	1 5/32	1 1/32	9/16	37/64
	2202	0.375–0.500	1/2	1 5/32	1 1/32	9/16	37/64
	2203	0.450–0.560	1/2	1 5/32	1 1/32	9/16	37/64
	2204*	0.500–0.625	1/2	1 3/8	1 19/32	9/16	37/64
	2205*	0.625–0.750	1/2	1 3/8	1 19/32	9/16	37/64
	2206TB	0.125–0.250	3/4	1 3/8	1 19/32	5/8	25/32
	2207TB	0.250–0.375	3/4	1 3/8	1 19/32	5/8	25/32
	2208TB	0.375–0.500	3/4	1 3/8	1 19/32	5/8	25/32
	2209	0.500–0.625	3/4	1 3/8	1 19/32	5/8	25/32
	2210-TB	0.625–0.750	3/4	1 3/8	1 19/32	5/8	25/32
	2211*	0.750–0.880	3/4	1 11/16	1 1/2	1 1/2	3/4
	2213	0.375–0.500	1	1 3/8	1 1/2	25/32	15/16
	2214	0.500–0.625	1	1 3/8	1 1/2	25/32	15/16
	2215	0.625–0.750	1	1 3/8	1 1/2	25/32	15/16
	2216	0.750–0.875	1	1 11/16	1 15/32	25/32	15/16
	2217*	0.875–0.985	1	1 11/16	1 15/32	25/32	15/16
	2218*	0.880–1.065	1	2 3/32	1 31/32	25/32	15/16
	2219*	1.065–1.205	1	2 3/32	1 31/32	25/32	15/16
	2222*	1.187–1.375	1 1/4	2 11/32	2 1/4	13/16	1 21/64
	2223*	1.375–1.485	1 1/4	2 11/32	2 1/4	13/16	1 21/64

\* Remove sufficient outer covering of cable to permit conductors to pass through fitting body

UL Listed as liquidtight strain-relief, and outlet bushing

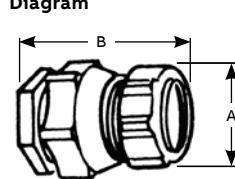
CSA certified watertight

For wiremesh grips, refer to page B104

## CHASE fittings and multi-hole grips



CHASE liquidtight cord fittings



CSA certified watertight.  
UL Listed as liquidtight strain-relief, and outlet bushing  
Temperature rating: 105 °C

CHASE liquidtight cord fittings are ideal for installation where space is limited inside the enclosure.

Diagram	Cat. no.	Cable size range min. max. (in.)	Hub size (in.)	Throat dia. (in.)	Dimensions (in.)	
					A	B
	2631	0.125–0.250	1/2	9/16	1 1/16	1 1/8
	2632	0.250–0.375	1/2	9/16	1 1/16	1 1/8
	2633	0.375–0.500	1/2	9/16	1 1/16	1 1/8
	2634	0.450–0.560	1/2	9/16	1 1/16	1 1/8
	2637	0.125–0.250	5/8	25/32	1 3/8	1 3/16
	2638	0.250–0.375	5/8	25/32	1 3/8	1 3/16
	2639	0.375–0.500	5/8	25/32	1 3/8	1 3/16
	2640	0.500–0.625	5/8	25/32	1 3/8	1 3/16
	2641	0.625–0.750	5/8	25/32	1 3/8	1 3/16



Multi-hole cord grips

Diagram	Cat. no.	Hub size (in.)	No. of holes	Cord dia. (in.)	Dimensions (in.)		
					A	B	C
	2520-2	1/2	2	0.220	1.125	1.687	0.625
	2530-2	5/8	2	0.220	1.375	1.750	0.625
	2531-2	5/8	2	0.260	1.375	1.750	0.625
	2531-3	5/8	3	0.260	1.375	1.750	0.625
	2541-2*	1	2	0.300	1.625	1.718	0.781
	2542-2*	1	2	0.375	1.625	1.718	0.781
	2540-3	1	3	0.225	1.625	1.718	0.781
	2541-3	1	3	0.300	1.625	1.718	0.781
	2540-4	1	4	0.220	1.625	1.718	0.781
	2555-2	1 1/4	2	0.500	2.093	2.375	0.812

Range of cord diameter  $\pm 0.010$  in.

\*UL Listed only

Temperature rating: 105 °C

In many applications you have only room for one fitting but you need to run two cables, for example, proximity switches. Now you can provide strain relief and liquidtight protection with ABB's multi-hole liquidtight strain-relief fittings. With the ever-increasing number of signal cables, now you have a solution to the problem of how to strain relieve multiple cables in one fitting.

## The Ranger series – Liquidtight strain-relief fittings

The fitting that takes a 0.250 inch cable range.

New materials and computer aided designs helped ABB develop a strain relief fitting that will take twice the cable range of ordinary strain-relief fittings.

### Application

- A liquidtight fitting to secure flexible cord or power cable to a box or enclosure and provide strain relief.

### Features

- Extended range with superior strain relief
- Reduced overall size, fits into tighter spaces
- Gland nut designed to restrict cable bending

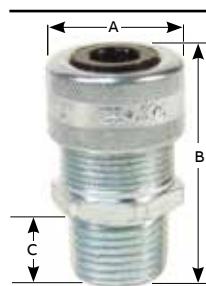
#### Range

	Series	Hub size (in.)
0.125 in. through 0.950 in.	2920S	1/2-1
	4920	1/2-1
	4960	1/2-1
	2920AL	1/2-1
	4960AL	1/2-1
	2920NM	1/2-1
0.125 in. through 0.750 in.	4960NM	1/2-3/4

#### Standard material/finish

	2920S Series		
	4920 Series	2920NM Series	2920AL Series
Body	Steel (ST) 45° and 90° (malleable iron)	Nylon (weather stabilized)	Aluminum (ST) Malleable iron (90°)
Gland	Steel	Nylon (weather stabilized)	Aluminum
Grip	Plastic	Nylon (weather stabilized)	Aluminum
Bushing	Santoprene	Oil-resistant elastomer	Aluminum

#### Liquidtight strain-relief fittings – Straight

	Cat. no.	Hub size (in.)	Throat dia.	Cord range min.-max. (in.)	Dimensions (in.)		
					A	B	C
	2920S	1/2	9/16	0.125-0.375	1 1/8	1 3/4	5/8
	2921S	1/2	9/16	0.310-0.560	1 1/8	1 3/4	5/8
	2922S*	1/2	9/16	0.500-0.750	1 3/8	1 3/4	5/8
	2930S	3/4	1 3/16	0.125-0.375	1 3/8	1 25/32	3/4
	2931S	3/4	1 3/16	0.310-0.560	1 3/8	1 25/32	3/4
	2932S	3/4	1 3/16	0.500-0.750	1 3/8	1 25/32	3/4
	2940S	1	1 1/16	0.310-0.560	1 3/8	1 3/4	13/16
	2941S	1	1 1/16	0.500-0.750	1 3/8	1 3/4	13/16
	2942S	1	3 1/32	0.700-0.950	1 3/8	1 1/8	13/16

\*It may be necessary to remove sufficient outer covering of cable to permit conductors to pass through the fitting body

#### Liquidtight strain relief fittings

	Cat. no.	Hub size (in.)	Throat dia. (in.)	Cord range min.-max. (in.)	Dimensions (in.)		
					A	B	C
	2920-TB	1/2	9/16	0.125-0.375	1 1/8	1 3/4	5/8
	2921	1/2	9/16	0.310-0.560	1 1/8	1 3/4	5/8
	2922*	1/2	9/16	0.500-0.750	1 3/8	1 3/4	5/8
	2930	3/4	1 3/16	0.125-0.375	1 3/8	1 25/32	3/4
	2931	3/4	1 3/16	0.310-0.560	1 3/8	1 25/32	3/4
	2932	3/4	1 3/16	0.500-0.750	1 3/8	1 25/32	3/4
	2940	1	1 1/16	0.310-0.560	1 3/8	1 3/4	13/16
	2941	1	1 1/16	0.500-0.750	1 3/8	1 3/4	13/16
	2942	1	3 1/32	0.700-0.950	1 3/8	1 1/8	13/16

\*It may be necessary to remove sufficient outer covering of cable to permit conductors to pass through the fitting body



## The Ranger series – Stainless steel liquidtight cord fittings

—  
01 Pharmaceutical processing, food processing, pulp and paper mills, wastewater treatment, saltwater and petrochemical refining applications

—  
02 Bevelled rubber bushing ensures superior compression and sealing

Also available in other materials to meet all your cord-fitting needs.



—  
2920 Series steel/malleable iron in straight, 45° and 90°



—  
2920AL Series aluminum in straight and 90°



—  
2920NM Series nonmetallic in straight and 90°



—  
01



—  
02



### Type 304 stainless steel construction for harsh environments.

Until now, there has been no ideal solution for liquidtight connections of portable cord to a box or enclosure in corrosive environments. Steel fittings rust and nonmetallic fittings cannot withstand high temperatures or ultraviolet exposure.

In response to customer demand, ABB has developed the latest addition to its high-performance line of Ranger cord fittings. Made of type 304 stainless steel, Ranger stainless steel liquidtight cord fittings stand up to highly corrosive environments – such as washdown areas in food and beverage or pharmaceutical processing – as well as high temperatures and UV exposure.

Like all Ranger liquidtight cord fittings, the stainless steel fittings offer twice the cord diameter range of similar fittings, so you can do more with fewer sizes to order and stock. They form a non-slip mechanical grip, providing a liquidtight seal and the strain relief required for flexible portable cord connections.

- Each fitting covers a 0.25 in. cord diameter range – twice that of ordinary strain relief fittings
- Superior corrosion resistance in washdown areas and other corrosive environments
- Stands up to heat and UV exposure better than nonmetallic fittings
- Bevelled, moisture- and oil-resistant synthetic rubber bushing system ensures superior compression and sealing of fitting to cord
- Bushing marked with cord range for easy identification out of the box

### Ranger stainless steel cord fittings – $\frac{1}{4}$ in.– $\frac{3}{8}$ in. hub sizes

Cat. no.	Hub size (in.)	Cord dia. range (in.)	Dimensions (in.)		
			A	B	C
2918SST	$\frac{1}{4}$	0.118–0.256	1.000	0.250	0.625
2919SST	$\frac{3}{8}$	0.157–0.315	1.313	0.438	0.750

### Ranger stainless steel cord fittings – $\frac{1}{2}$ in.–1 in. hub sizes

Cat. no.	Hub size (in.)	Cord dia. range (in.)	Dimensions (in.)		
			A	B	C
2920SST	$\frac{1}{2}$	0.125–0.375	1.935	0.610	1.125
2921SST	$\frac{1}{2}$	0.310–0.560	1.935	0.610	1.125
2922SST*	$\frac{1}{2}$	0.500–0.750	2.003	0.610	1.125
2930SST	$\frac{3}{4}$	0.125–0.375	2.063	0.630	1.125
2931SST	$\frac{3}{4}$	0.310–0.560	2.063	0.630	1.125
2932SST	$\frac{3}{4}$	0.500–0.750	2.063	0.630	1.125
2940SST	1	0.310–0.560	2.178	0.785	1.500
2941SST	1	0.500–0.750	2.218	0.785	1.500
2942SST	1	0.700–0.950	2.218	0.785	1.500

\*It may be necessary to remove sufficient outer covering of cable to permit conductors to pass through the fitting body



## The Ranger series – Steel fittings



Liquidtight strain-relief fittings – 45° angle



Diagram	Cat. no.	Hub size (in.)	Throat dia. (in.)	Cord range (in.)	Dimensions (in.)		
					A	B	C
	4920	1/2	37/64	0.125–0.375	1 1/8	1 5/16	5/16
	4921	1/2	37/64	0.310–0.560	1 1/8	1 5/16	5/16
	4922*	1/2	37/64	0.500–0.750	1 3/8	1 7/16	5/16
	4932	3/4	25/32	0.500–0.750	1 3/8	1 7/16	5/8
	4933	3/4	25/32	0.700–0.950	1 5/8	1 17/32	1 1/2

\*It may be necessary to remove sufficient outer covering of cable to permit conductors to pass through the fitting body



Liquidtight strain-relief fittings – 90° angle



Diagram	Cat. no.	Hub size (in.)	Throat dia. (in.)	Cord range (in.)	Dimensions (in.)		
					A	B	C
	4960	1/2	19/32	0.125–0.375	1 1/8	1 3/4	5/8
	4961	1/2	19/32	0.310–0.560	1 1/8	1 3/4	5/8
	4962*	1/2	19/32	0.500–0.750	1 3/8	1 25/64	5/8
	4970-TB	3/4	25/32	0.125–0.375	1 3/8	1 25/32	11/16
	4971	3/4	25/32	0.310–0.560	1 3/8	1 25/32	11/16
	4972	3/4	25/32	0.500–0.750	1 5/8	1 25/32	11/16

### Swing radius

\*It may be necessary to remove sufficient outer covering of cable to permit conductors to pass through the fitting body

## The Ranger series – Aluminum fittings



Body and gland nut are aluminum.

Aluminum liquidtight strain-relief fittings – Straight



Diagram	Cat. no.	Hub size (in.)	Throat dia. (in.)	Cord range (in.)	Dimensions (in.)		
					A	B	C
	2920AL	1/2	9/16	0.125–0.375	1 1/8	1 3/4	5/8
	2921AL	1/2	9/16	0.310–0.560	1 1/8	1 3/4	5/8
	2922AL*	1/2	9/16	0.500–0.750	1 5/16	1 3/4	5/8
	2930AL	3/4	13/16	0.125–0.375	1 5/16	1 25/32	3/8
	2931AL	3/4	13/16	0.310–0.560	1 5/16	1 25/32	3/8
	2932AL	3/4	13/16	0.500–0.750	1 5/16	1 25/32	3/8
	2940AL	1	1 1/16	0.310–0.560	1 5/16	1 3/4	1 1/16
	2941AL	1	1 1/16	0.500–0.750	1 5/16	1 3/4	1 1/16
	2942AL	1	31/32	0.700–0.950	1 9/16	1 7/8	31/32

\* It may be necessary to remove sufficient outer covering of cable to permit conductors to pass through fitting body



Body and gland nut are aluminum.

Aluminum liquidtight strain-relief fittings – 90° elbow



Diagram	Cat. no.	Trade or hub size (in.)	Throat diam. (in.)	Cord range (in.)	Dimensions (in.)			
					A	B	C	D
	4960AL	1/2	9/16	0.125–0.375	1 1/8	1 3/4	5/8	1 5/16
	4961AL	1/2	9/16	0.360–0.560	1 1/8	1 3/4	5/8	1 5/16
	4970AL	3/4	25/32	0.125–0.375	1 5/16	1 25/32	11/16	1 15/32
	4971AL	3/4	25/32	0.310–0.560	1 5/16	1 25/32	11/16	1 15/32
	4972AL	3/4	25/32	0.500–0.750	1 5/16	1 25/32	11/16	1 15/32
	4980AL	1	15/16	0.310–0.560	1 5/16	2 1/32	13/16	1 3/4
	4981AL	1	15/16	0.500–0.750	1 5/16	2 1/32	13/16	1 3/4
	4982AL	1	15/16	0.700–0.950	1 9/16	2 11/16	13/16	2

## The Ranger series – Nylon cord grip fittings



### A Ranger exclusive smaller shape:

**30% smaller envelope. Wide range: twice the cable range.**

- Reduced size means fittings can be placed closer together
- Wider range means one fitting can cover twice the cable range of others
- Nonmetallic means corrosion resistance

- Weather-stabilized nylon
- UL 94V-2
- Temperature rating: -34 °C to 105 °C
- New reduced size
- Smaller footprint

### Nonmetallic liquidtight strain-relief fittings – Straight



Diagram	Cat. no.	Trade or hub size (in.)	Throat diam. (in.)	Cord range (in.)	Dimensions (in.)		
					A	B	C
	2920NM	1/2	9/16	0.125–0.375	1 7/32	2 1/8	5/8
	2921NM	1/2	9/16	0.310–0.560	1 7/32	2 1/8	5/8
	2922NM*	1/2	9/16	0.500–0.750	1 13/32	2 5/32	5/8
	2930NM	3/4	3/4	0.125–0.375	1 13/32	2 9/16	5/8
	2931NM	3/4	3/4	0.310–0.560	1 13/32	2 9/16	5/8
	2932NM	3/4	3/4	0.500–0.750	1 13/32	2 9/16	5/8
	2940NM	1	29/32	0.310–0.560	1 13/32	2 11/32	25/32
	2941NM	1	29/32	0.500–0.750	1 13/32	2 11/32	25/32
	2942NM	1	29/32	0.700–0.950	1 43/64	2 3/8	25/32

\*It may be necessary to remove sufficient outer covering of cable to permit conductors to pass through the fitting body



- Weather-stabilized nylon
- UL 94V-2
- Temperature rating: -34 °C to 105 °C

### Nonmetallic liquidtight strain-relief fittings – 90° elbow



Diagram	Cat. no.	Trade or hub size (in.)	Throat diam. (in.)	Cord range (in.)	Dimensions (in.)		
					A	B	C
	4960NM	1/2	9/16	0.125–0.375	1 7/32	1 1/4	5/8
	4961NM	1/2	9/16	0.310–0.560	1 7/32	1 1/4	5/8
	4970NM	3/4	3/4	0.125–0.375	1 13/32	1 3/8	5/8
	4971NM	3/4	3/4	0.310–0.560	1 13/32	1 3/8	5/8
	4972NM	3/4	3/4	0.500–0.750	1 13/32	1 3/8	5/8

90° elbow, new reduced size, smaller footprint

## Silver Grip – TCF series tray-cord fittings

- 01 Large tapered bushing and high-performance chuck grip
- 02 Tray cable applications
- 03 Portable cord applications



### One heck of a grip.

#### Increased safety for hazardous locations.

The Silver Grip tray cord fitting is the safe, yet cost-efficient choice for increased safety when terminating portable cord and tray cable in hazardous locations.

Designed for use in Class I gas and vapour environments, the Silver Grip tray cord fitting provides efficient strain relief for cables entering enclosures and raceways, and for cords used on portable equipment.

- Corrosion-resistant, non-magnetic aluminum construction
- Tapered neoprene bushing and O-ring seal out moisture and dirt ingress
- Chuck grip provides high mechanical pull-out performance, exceeding applicable requirements
- Hand-tightens — no tools required
- Now available in 316 stainless steel
- 90 °C temperature rating



01



02



03

## Silver Grip – TCF series tray-cord fittings

### Ordering information



Cat. no aluminum	Cat. No stainless steel	Hub size NPT (in.)	Throat dia. (in.)	Minimum cable dia. (in.)	Maximum opening (in.)
TCF050-27AL	TCF050-27SS6	½	0.330	0.150	0.270
TCF050-40AL	TCF050-40SS6	½	0.540	0.250	0.400
TCF050-54AL	TCF050-54SS6	½	0.540	0.400	0.540
TCF050-67AL	TCF050-67SS6	½	0.540*	0.540	0.670
TCF050-78AL	TCF050-78SS6	½	0.540*	0.660	0.780
TCF075-40AL	TCF075-40SS6	¾	0.540	0.250	0.400
TCF075-54AL	TCF075-54SS6	¾	0.540	0.400	0.540
TCF075-67AL	TCF075-67SS6	¾	0.780	0.540	0.670
TCF075-78AL	TCF075-78SS6	¾	0.780	0.660	0.780
TCF075-88AL	TCF075-88SS6	¾	0.765*	0.770	0.880
TCF100-78AL	TCF100-78SS6	1	0.980	0.660	0.780
TCF100-88AL	TCF100-88SS6	1	0.980	0.770	0.880
TCF100-100AL	TCF100-100SS6	1	0.980*	0.870	1.000
TCF100-109AL	TCF100-109SS6	1	0.980	0.940	1.090
TCF125-109AL	–	1¼	1.255	0.890	1.090
TCF125-128AL	–	1¼	1.255*	1.080	1.280
TCF125-147AL	–	1¼	1.255*	1.270	1.470
TCF150-115AL	–	1½	1.470	0.890	1.150
TCF150-140AL	–	1½	1.470	1.140	1.400
TCF150-165AL	–	1½	1.470*	1.390	1.650
TCF200-153AL	–	2	1.896	1.190	1.530
TCF200-186AL	–	2	1.896	1.520	1.860
TCF200-219AL	–	2	2.062*	1.850	2.190
TCF250-252AL	–	2½	2.466*	2.120	2.520
TCF300-278AL	–	3	2.780	2.380	2.780
TCF300-304AL	–	3	3.050	2.640	3.040
TCF300-330AL	–	3	3.068*	2.900	3.300

\*When cord will not fit through body, strip cord jacket and trim fillers if required. Insert cable, ensuring the outer jacket reaches the end of the bushing as shown. Tighten gland nut onto body.

## Silver Grip – TCF series tray-cord fittings

—  
01 Maximum opening

### Applications

#### Tray cable

Complies with IEC requirements for Class I, Zone 2 locations when used with enclosures containing no arcing or sparking devices. For enclosures with arcing or sparking devices, TCF fittings must be used in combination with a certified Class I hazardous location sealing fitting.

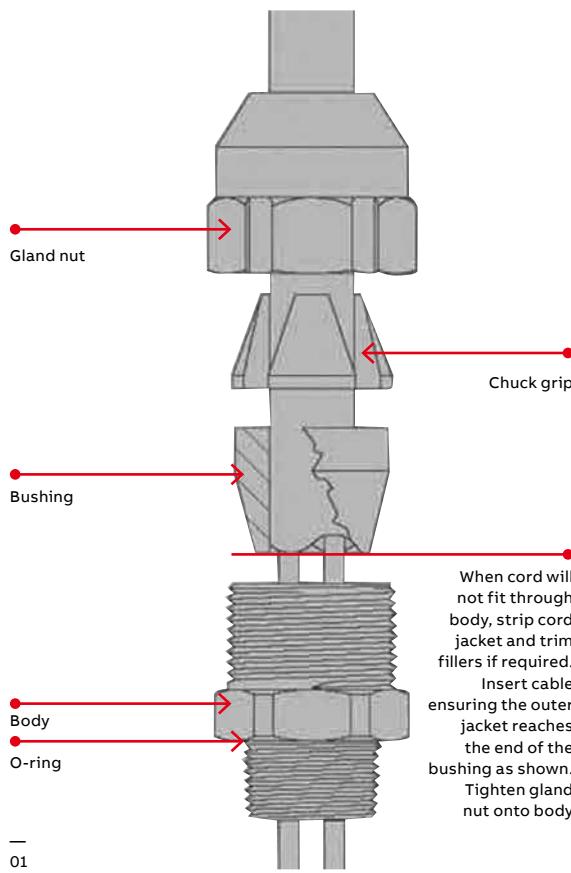
#### Portable cord

Complies with IEC requirements for Class I, Zone 1 locations when used with enclosures containing no arcing or sparking devices. For enclosures with arcing or sparking devices, TCF fittings must be used in combination with a certified Class I hazardous location sealing fitting.

- CSA Class 4418-05 fittings for hazardous locations Class I, Zone 1 Ex e II, IP66; Type 4/4X, (CSA)
- CSAus Class 4418-85 fittings for hazardous locations Class I, Zone 1, A Ex e II, IP66; Type 4/4X, (CSAus)
- Note: Tray cable is not suitable for use in Zone 1 locations. Portable cord can be used in Zone 1 applications only when installed on portable equipment.

### Utilisation

- For use with unarmored cable types suitable for use in Class I, Zone 1 (e.g. extra hard usage cord)
- Series TCF cable glands, when used with tray cables are suitable to be installed in Class I, Zone 2/Div. 2 classified hazardous locations according to CEC/NEC wiring method, or subject to local inspection authority having jurisdiction



## Black Beauty™ fittings



- Weather-stabilized nylon
- UL 94V-2
- Temperature rating: -34 °C to 105 °C

Black Beauty liquidtight strain-relief fittings – Straight



Diagram	Cat. no.	Trade or hub size (in.)	Throat dia. (in.)	Cord range (in.)	Dimensions (in.)		
					A	B	C
	2671	3/8	0.33	0.125–0.275	2	29/32	15/32
	2690	1/2	0.33	0.125–0.275	2 1/4	29/32	19/32
	2672	1/2	0.55	0.250–0.400	2 19/32	19/32	19/32
	2673*	1/2	0.55	0.400–0.560	2 19/32	19/32	19/32
	2691*	1/2	0.54	0.560–0.690	3	1 1/16	19/32
	2692*	1/2	0.54	0.660–0.780	3	1 1/16	19/32
	2693	3/4	0.55	0.250–0.400	2 11/16	1 1/32	5/8
	2694*	3/4	0.55	0.400–0.560	2 11/16	1 1/32	5/8
	2674	3/4	0.79	0.560–0.690	3	1 1/16	5/8
	2675	3/4	0.79	0.660–0.780	3	1 1/16	5/8
	2696*	3/4	0.76	0.770–0.895	3 3/16	1 7/8	5/8
	2676	1	0.98	0.660–0.780	3 5/16	1 7/8	25/32
	2677	1	0.98	0.770–0.895	3 5/16	1 7/8	25/32
	2678*	1	0.98	0.870–1.020	3 5/16	1 7/8	25/32
	2699	1	0.98	0.890–1.090	3 3/16	2 19/32	25/32
	2702	1 1/4	1.25	0.890–1.090	3 5/16	1 7/8	25/32
	2703	1 1/4	1.25	1.080–1.280	4	2 19/32	19/16
	2704	1 1/4	1.25	1.270–1.470	4	2 19/32	13/16
	2705TB	1 1/2	1.47	0.890–1.150	4 3/16	2 31/32	13/16
	2706	1 1/2	1.47	1.140–1.400	4 5/16	2 31/32	13/16
	2707	1 1/2	1.47	1.390–1.650	4 5/16	2 31/32	13/16
	2708	2	1.89	1.190–1.530	5 3/32	3 1/2	27/32
	2709	2	1.89	1.520–1.860	4 29/32	3 1/2	27/32
	2710-TB*	2	1.89	1.850–2.190	4 29/32	3 1/2	27/32

\* Remove sufficient outer covering of cable to permit conductors to pass through fitting body

## Black Beauty fittings



- Weather-stabilized nylon
- UL 94V-2
- Temperature rating: -34 °C to 105 °C

Black Beauty liquidtight strain-relief fittings – 90° elbow



Diagram	Cat. no.	Trade or hub size (in.)	Throat dia. (in.)	Cord range (in.)	Dimensions (in.)		
					A	B	C
	2680	1	0.33	0.125–0.275	0.90	1.8	0.460
	2681	$\frac{1}{2}$	0.55	0.250–0.400	1.27	2.5	0.610
	2682*	$\frac{1}{2}$	0.55	0.400–0.560	1.27	2.5	0.610
	2683	$\frac{3}{4}$	0.78	0.560–0.690	1.57	2.8	0.610
	2684	$\frac{3}{4}$	0.78	0.660–0.780	1.57	2.8	0.610
	2688	1	0.98	0.560–0.690	1.89	3.0	0.770
	2685	1	0.98	0.660–0.780	1.89	3.2	0.770
90° angle, standard size body.	2686	1	0.98	0.770–0.895	1.89	3.2	0.770
	2687*	1	0.98	0.870–1.020	1.89	3.2	0.770

\* Remove sufficient outer covering of cable to permit conductors to pass through fitting body.  
90° angle, standard size body.