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:

- 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

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 extrahard 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 harbourgs

- 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

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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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/oilresistant 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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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.

Step 2.

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

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.



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



SJO, SJT, SJTO, SJ	SV, SO, ST, STO	Diameter	Hub	Cat. no. Hu	
cord sizes	cord sizes	range (in.)	size (in.)	90°	Straight
18-2, 18-3, 18-4, 16-2,	18-2, 18-3*	0.125-0.375	1/2	4960NM	2920NM
16-3, 16-4*, 14-2, 14-3*	18-2, 18-3*	0.125-0.375	3/4	4970NM	2930NM
18-3, 18-4, 18-5, 18-6, 18-7*	18-2, 18-3*	0.125-0.375	1/2	4961NM	2921NM
16-3, 16-4, 16-5, 16-6*, 14-2,	18-3, 18-4*, 18-5, 16-2*	0.310-0.560	3/4	4971NM	2931NM
14–3, 14–4, 12–2, 12–3, 12–4, 10–2	18-3, 18-4*, 18-5, 16-2*	0.310-0.560	1	-	2940NM
14-3, 14-4, 12-2, 12-3, 12-4, 10-2	16-5, 16-6, 14-2, 14-3, 14-4,	0.310-0.560	1/2	-	2922NM
12-4, 10-2, 10-3, 10-4	14-5, 12-2, 12-3, 12-4, 12-5,	0.500-0.750	3/4	4972NM	2932NM
12-4, 10-2, 10-3, 10-4	10-2, 10-3, 10-4, 8-2	0.500-0.750	1	_	2941NM
12-4, 10-2, 10-3, 10-4	10-4, 10-5, 8-3, 8-4	0.700-0.950	1	-	2942NM
10-2*, 10-3, 10-4	14-3*, 14-4, 14-5*, 12-2, 12-3, 12-4*, 10-2, 10-3*	0.560-0.690	1	2688	_
10-4	14-5, 12-4*, 12-5, 10-3*, 10-4	0.660-0.780	1	2685	_
10-4	10-5, 8-2, 8-3*	0.770-0.895	3/4	_	2696
10-4	10-5, 8-2, 8-3*	0.770-0.895	1	2686	_
10-4	8-3*, 8-4*	0.870-1.020	1	2687	2678
10-4	8-4, 8-5*, 6-2, 6-3*, 6-4*, 4-2*	0.890-1.090	1	-	2699
10-4	8-4, 8-5*, 6-2, 6-3*, 6-4*, 4-2*	0.890-1.090	11/4	-	2702
10-4	4-2*, 4-3, 2-2*	0.890-1.090	11/4	_	2703
10-4	4-4, 2-2*	1.270-1.470	11/4	_	2704
10-4	8-4, 8-5, 6-2, 6-3, 6-4*, 4-2*	0.890-1.150	11/2	_	2705
10-4	6-5, 6-4*, 4-2*, 4-3, 4-4*, 2-2, 2-3*	1.140-1.400	11/2	_	2706
10-4	4-4*, 2-3*, 2-4	1.390-1.650	1½	_	2707
10-4	6-5, 4-2*, 4-3, 4-4, 2-2, 2-3, 2-4*	1.190-1.530	2	_	2708
10-4	2-4*	1.520-1.860	2	_	2709
10-4	2–4*	1.850-2.190	2	-	2710

^{*} 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 power cable chart

	Size of		Number of conductors and a	approximate O.D. (in.
Type of cord	conductors (AWG)	2 Conductor	3 Conductor	4 Conducto
SV, SVO, SVT	18	0.250	0.260	
SJ, SJO, SJT, SJTO	18	0.300	0.330	0.36
	16	0.330	0.360	0.39
	14	0.375	0.395	0.42
S, SO, ST, STO, and	18	0.385	0.400	0.430
portable power cables	16	0.400	0.425	0.480
	14	0.530	0.560	0.60
	12	0.600	0.635	0.66
	10	0.640	0.690	0.74
	8	0.700-0.840	0.750-0.910	0.820-0.99
	6	0.820-0.930	0.885-1.010	0.975-1.10
	4	1.080	1.170	1.27
	3	1.170	1.240	1.34
	2	1.270	1.340	1.48
	1	1.440	1.510	1.68
	1/0	1.520	1.650	1.79
	2/0	1.650	1.750	1.93
	3/0	1.770	1.890	2.07
	4/0	1.920	2.070	2.26
	250	2.160	2.390	
	14	-	-	0.41
	12	-	_	0.45
	10	-	-	0.53
Bus drop cables	8	=	=	0.67
	6	-	-	0.85
	4	-	-	0.95
	2	_	_	1.000

Note: The above dimensions are approximate and may vary depending upon the manufacturer $% \left(1\right) =\left(1\right) \left(1\right)$

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

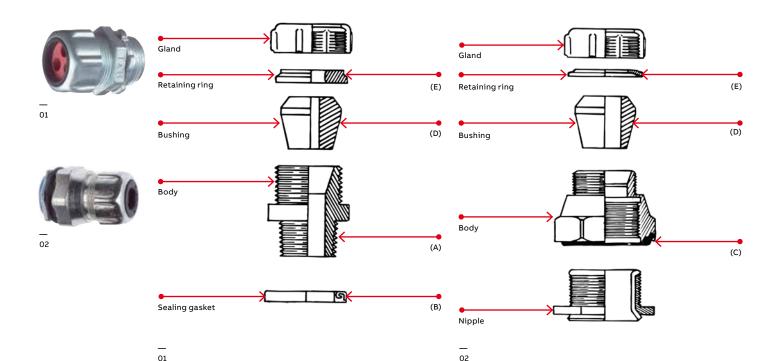
· Electro zinc plated and chromate coated

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

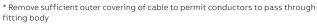




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Liquidtight strain-relief fittings

	Cable size range	Hub size	Throat dia. min		Dir	mension	s (in.)
Cat. no.	minmax. (in.)	(in.)	(in.)	Fig.	Α	В	С
2516 [†]	0.060-0.125	1/4	²³ /64	2	⁵³ /64	17/16	15/32
2517 [†]	0.120-0.250	1/4	²³ /64	2	⁵³ /64	17/16	15/32
2518†	0.060-0.150	3/8	²⁹ /64	2	³¹ / ₃₂	11/2	¹⁵ / ₃₂
2519†**	0.150-0.300	3/8	²⁹ /64	2	31/32	11/2	¹⁵ / ₃₂
2520	0.125-0.250	1/2	9/16	1	15/32	111/16	5/8
2521	0.250-0.375	1/2	9/16	1	15/32	111/16	5/8
2522	0.375-0.500	1/2	9/16	1	15/32	111/16	5/8
2523	0.450-0.560	1/2	9/16	1	15/32	111/16	5/8
2524*	0.500-0.625	1/2	5/8	1	13/8	13/4	5/8
2525*	0.625-0.750	1/2	5/8	1	13/8	13/4	5/8
2530	0.125-0.250	3/4	13/16	1	13/8	13/4	9/16
2531	0.250-0.375	3/4	13/16	1	13/8	13/4	9/16
2532	0.375-0.500	3/4	13/16	1	13/8	13/4	9/16
2534	0.500-0.625	3/4	13/16	1	13/8	13/4	9/16
2535	0.625-0.750	3/4	¹³ / ₁₆	1	13/8	13/4	9/16
2536*	0.750-0.880	3/4	3/4	1	111/16	115/16	5/8
2541	0.250-0.375	1	49/64	1	13/8	1 ²³ / ₃₂	9/16
2542	0.375-0.500	1	⁴⁹ /64	1	13/8	1 ²³ /32	9/16
2544	0.500-0.625	1	⁴⁹ /64	1	13/8	1 ²³ /32	9/16
2545	0.625-0.750	1	⁴⁹ /64	1	13/8	1 ²³ / ₃₂	9/16
2546	0.750-0.875	1	63/64	1	111/16	11/8	23/32
2547	0.875-0.985	1	⁶³ / ₆₄	1	111/16	11/8	9/16
2548*	0.880-1.065	1	29/32	1	23/32	23/8	23/32



²⁹/32

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23/32

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

1.065-1.205

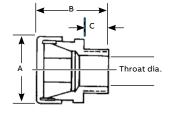


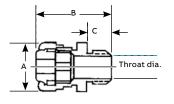
			Throat				
	Cable size	Hub	dia.		Dir	mensior	s (in.)
Cat. no.	range minmax. (in.)	size (in.)	min. (in.)	Fig.	Α	В	c
2558	0.880-1.065	11/4	117/64	1	23/32	25/32	13/16
2559	1.065-1.205	11/4	117/64	1	23/32	25/32	13/16
2556*	1.187-1.375	11/4	11/4	1	211/32	21/2	13/16
2557*	1.375-1.485	11/4	11/4	1	211/32	21/2	13/16
2562	0.812-1.000	11/2	17/16	1	211/32	21/2	11/16
2563	1.000-1.187	11/2	17/16	1	2 ¹¹ /32	27/16	11/16
2564	1.187-1.375	11/2	17/16	1	2 ¹¹ /32	27/16	11/16
2565*	1.375-1.625	11/2	129/64	1	2 ¹³ /16	25/8	¹³ /16
2573	1.125–1.375	2	17/8	1	2 ¹³ /16	25/8	13/16
2574	1.375-1.625	2	17/8	1	2 ¹³ /16	25/8	11/16
2575	1.625-1.875	2	17/8	1	2 ¹³ /16	25/8	11/16
2576*	1.750-1.965	2	1 ²⁹ /32	1	37/32	31/2	27/32
2577*	1.937-2.187	2	1 ²⁹ /32	1	37/32	31/2	27/32
2584	1.750-1.965	21/2	2	1	37/32	3¾	11/32
2585*	1.937-2.187	21/2	2	1	37/32	33/4	11/32
2586*	2.156-2.360	21/2	25/32	1	3 ¹⁵ /16	41/4	11/32
2587*	2.350-2.565	21/2	25/32	1	315/16	41/4	11/32
2592	2.156-2.360	3	213/32	1	3 ¹⁵ / ₁₆	41/4	11/32
2593	2.350-2.565	3	213/32	1	3 ¹⁵ /16	41/4	11/32
2594	2.535-2.750	3	213/32	1	3 ¹⁵ /16	41/4	11/32
2595*	2.735-2.985	3	2 ¹³ / ₁₆	1	411/16	413/16	11/8
2596*	2.970-3.220	3	2 ¹³ /16	1	411/16	413/16	11/8

Diagrams

02

²³/32





[†] UL not applicable

^{**} Not CSA Certified

90° Strain-relief fittings



Swing radius 90°

With neoprene bushings, tapered hub threads, malleable iron.







		Cable size range	Hub		Dimen	sions (in.)	Throa
	Cat. no.	minmax. (in.)	size (in.)	A	В	С	dia. (in.
Piagram	2267	0.125-0.250	1/2	15/32	1 ²³ / ₃₂	5/8	19/3
/	/ 2268	0.250-0.375	1/2	15/32	1 ²³ /32	5/8	19/3
	2269	0.375-0.500	1/2	15/32	1 ²³ / ₃₂	5/8	19/3
	2270	0.450-0.560	1/2	15/32	1 ²³ /32	5/8	19/3
	2250*	0.500-0.625	1/2	13/8	111/16	9/16	39/6
	2251*	0.625-0.750	1/2	13/8	111/16	9/16	39/6
<i>y</i> \	2252	0.125-0.250	3/4	13/8	13/4	41/64	25/3
	2271	0.250-0.375	3/4	13/8	15/8	⁴¹ / ₆₄	25/3
	2272	0.375-0.500	3/4	13/8	15/8	⁴¹ / ₆₄	25/3
	2273	0.500-0.625	3/4	13/8	15/8	⁴¹ / ₆₄	25/3
	2274*	0.620-0.750	3/4	13/8	15/s	41/64	25/3
	2253*	0.750-0.880	3/4	111/16	1 ³¹ /32	9/16	²⁵ / ₃
	2254	0.375-0.500	1	13/8	2	13/16	
	2255	0.500-0.625	1	13/8	2	13/16	:
	2256*	0.625-0.750	1	13/8	2	13/16	:
	2275	0.750-0.875	1	111/16	2	13/16	:
	2276	0.875-0.985	1	111/16	2	13/16	:
	2257*	0.880-1.065	1	2³/ ₃₂	2 ²¹ /32	25/32	15/1
	2258*	1.065-1.205	1	23/32	2 ²¹ / ₃₂	25/32	15/1
	2277	0.880-1.065	11/4	2³/32	27/8	27/32	15/1
	2278	1.065-1.205	11/4	2³/32	27/8	27/32	15/1
	2279*	1.187-1.375	11/4	211/32	2 ¹³ / ₁₆	13/16	111/3
	2280*	1.375-1.485	11/4	211/32	2 ¹³ / ₁₆	13/16	111/3
	2281	0.812-1.000	11/2	211/32	21/8	13/16	1 ¹⁵ /3
	2282	1.000-1.187	11/2	211/32	21/8	13/16	1 ¹⁵ / ₃
	2283*	1.187-1.375	11/2	211/32	21/8	13/16	1 ¹⁵ / ₃
	2284	1.125-1.375	2	2 ¹³ / ₁₆	31/4	27/32	1 ³¹ / ₃
	2285	1.375-1.625	2	2 ¹³ /16	31/4	27/32	1 ³¹ / ₃
	2286	1.625-1.875	2	213/16	31/4	27/32	1 ³¹ / ₃

^{*} 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 Meets Coast Guard CG293 For wiremesh grips, refer to page B104

45° Strain-relief fittings



Swing radius 45°

With neoprene bushings, tapered hub threads, malleable iron.







		Cable size range	Hub		Dimen	sions (in.)	Throat
	Cat. no.	min. max. (in.)	size (in.)	Α	В	С	dia. (in.)
Diagram	2200	0.125-0.250	1/2	15/32	1%32	9/16	37/64
	/ 2201	0.250-0.375	1/2	15/32	1%2	9/16	37/64
Carried Contraction of the Contr	2202	0.375-0.500	1/2	15/32	1%2	9/16	37/64
	2203	0.450-0.560	1/2	15/32	1%2	9/16	37/64
	B 2204*	0.500-0.625	1/2	13/8	1 ¹³ / ₃₂	9/16	37/64
A	2205*	0.625-0.750	1/2	13/8	1 ¹³ / ₃₂	9/16	37/64
	2206TB	0.125-0.250	3/4	13/8	113/32	5/8	25/32
	2207TB	0.250-0.375	3/4	13/8	113/32	5/8	25/3
	2208TB	0.375-0.500	3/4	13/8	1 ¹³ / ₃₂	5/8	25/32
	2209	0.500-0.625	3/4	13/8	113/32	5/8	²⁵ /32
	2210	0.625-0.750	3/4	13/8	1 ¹³ / ₃₂	5/8	25/32
	2211*	0.750-0.880	3/4	111/16	11/2	11/2	3/2
	2213	0.375-0.500	1	13/8	11/2	²⁵ / ₃₂	15/10
	2214	0.500-0.625	1	13/8	11/2	25/32	15/10
	2215	0.625-0.750	1	13/8	11/2	25/32	15/10
	2216	0.750-0.875	1	111/16	1 ¹⁵ /32	25/32	15/10
	2217*	0.875-0.985	1	111/16	1 ¹⁵ /32	25/32	15/10
	2218*	0.880-1.065	1	2³/ ₃₂	1 ³¹ / ₃₂	25/32	15/10
	2219*	1.065-1.205	1	23/32	1 ³¹ / ₃₂	25/32	15/16
	2222*	1.187-1.375	11/4	2 ¹¹ /32	21/4	13/16	1 ²¹ /6
	2223*	1.375-1.485	11/4	211/32	21/4	13/16	121/64

^{*} 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 are ideal for installation where space is limited inside the enclosure.

CHASE liquidtight cord fittings





	'	Cable size range	Hub	Throat	Dime	nsions (in.)
	Cat. no.	min. max. (in.)	size (in.)	dia. (in.)	Α	В
Diagram	2631	0.125-0.250	1/2	9/16	11/16	15/8
 ← B →	2632	0.250-0.375	1/2	9/16	11/16	15/8
A A	2633	0.375-0.500	1/2	9/16	11/16	15/8
	2634	0.450-0.560	1/2	9/16	11/16	15/8
	2637	0.125-0.250	3/4	25/32	13/8	13/16
	2638	0.250-0.375	3/4	25/32	13/8	13/16
	2639	0.375-0.500	3/4	25/32	13/8	13/16
	2640	0.500-0.625	3/4	25/32	13/8	13/16
	2641	0.625-0.750	3/4	25/32	13/8	13/16

CSA certified watertight. UL Listed as liquidtight strain-relief, and outlet bushing Temperature rating: 105 $^{\circ}\text{C}$



Multi-hole cord grips

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 multihole liquidtight strain-relief fittings. With the everincreasing number of signal cables, now you have a solution to the problem of how to strain relieve multiple cables in one fitting.

		Hub	No. of	Cord		Dimensions (in.)	
	Cat. no.	size (in.)	holes	dia. (in.)	A	В	С
Diagram	2520-2	1/2	2	0.220	1.125	1.687	0.625
← B →	2530-2	3/4	2	0.220	1.375	1.750	0.625
	2531-2	3/4	2	0.260	1.375	1.750	0.625
A 22/2/	2531-3	3/4	3	0.260	1.375	1.750	0.625
	2541-2*	1	2	0.300	1.625	1.718	0.781
A H	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	11/4	2	0.500	2.093	2.375	0.812

Range of cord diameter ±0.010 in.

*UL Listed only

Temperaturer: 105 °C

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.	2920S	1/2-1
through	4920	1/2-1
0.950 in.	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 4960 Series	2920NM Series 4960NM Series	2920AL Series 4960AL 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



		Hub	Throat	Cord range		Dimensions (in.)		
	Cat. no.	size (in.)	dia.	minmax. (in.)	Α	В	С	
A—	2920S	1/2	9/16	0.125-0.375	11/8	13/4	5/8	
	2921S	1/2	9/16	0.310-0.560	11/8	13/4	5/8	
	2922S*	1/2	9/16	0.500-0.750	13/8	13/4	5/8	
24,374	2930S	3/4	13/16	0.125-0.375	13/8	1 ²⁵ / ₃₂	3/4	
В	2931S	3/4	¹³ / ₁₆	0.310-0.560	13/8	1 ²⁵ / ₃₂	3/4	
1	2932S	3/4	13/16	0.500-0.750	13/8	1 ²⁵ / ₃₂	3/4	
	2940S	1	11/16	0.310-0.560	13/8	13/4	13/16	
T C	2941\$	1	11/16	0.500-0.750	13/8	13/4	13/16	
¥	29425	1	31/32	0.700-0.950	15/s	17/8	13/16	

^{*}It may be necessary to remove sufficient outer covering of cable to permit conducters to pass through the fitting body

Liquidtight strain relief fittings



	'	Hub	Throat	Cord range	Dimensions (in.)		
	Cat. no.	size (in.)	dia. (in.)	minmax. (in.)	Α	В	С
	2920	1/2	9/16	0.125-0.375	11/8	13/4	5/8
A	2921	1/2	9/16	0.310-0.560	11/8	13/4	5/8
	2922*	1/2	9/16	0.500-0.750	13/8	13/4	5/8
	2930	3/4	13/16	0.125-0.375	13/8	1 ²⁵ /32	3/4
B	2931	3/4	¹³ /16	0.310-0.560	13/8	1 ²⁵ /32	3/4
	2932	3/4	¹³ / ₁₆	0.500-0.750	13/8	1 ²⁵ /32	3/4
	2940	1	11/16	0.310-0.560	13/8	13/4	13/16
C C	2941	1	11/16	0.500-0.750	13/8	13/4	13/16
	2942	1	31/32	0.700-0.950	15/8	11/8	13/16

^{*}It may be necessary to remove sufficient outer covering of cable to permit conducters 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

01







02

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°

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
- Beveled, 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 – ¼ in.–¾ in. hub sizes



	Hub	Cord dia.			Dimensions (in.)
Cat. no.	size (in.)	range (in.)	Α	В	С
2918SST	1/4	0.118-0.256	1.000	0.250	0.625
2919SST	3/8	0.157-0.315	1.313	0.438	0.750

Ranger stainless steel cord fittings – ½ in.-1 in. hub sizes





	Hub	Cord dia.			Dimensions (in.)
Cat. no.	size (in.)	range (in.)	A	В	С
2920SST	1/2	0.125-0.375	1.935	0.610	1.125
2921SST	1/2	0.310-0.560	1.935	0.610	1.125
2922SST*	1/2	0.500-0.750	2.003	0.610	1.125
2930SST	3/4	0.125-0.375	2.063	0.630	1.125
2931SST	3/4	0.310-0.560	2.063	0.630	1.125
2932SST	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 conducters to pass through the fitting body

The Ranger series – Steel fittings



Liquidtight strain-relief fittings – 45° angle





		Hub	Throat	Cord	Dimensions (i			
	Cat. no.	size (in.)	dia. (in.)	range (in.)	Α	В	С	
Diagram /	4920	1/2	37/64	0.125-0.375	11/8	15/16	9/16	
7 c /	4921	1/2	³⁷ /64	0.310-0.560	1 ¹ /8	15/16	9/16	
	4922*	1/2	³⁷ /64	0.500-0.750	13/8	17/16	9/16	
	4932	3/4	²⁵ / ₃₂	0.500-0.750	13/8	17/16	5/8	
	4933	3/4	²⁵ / ₃₂	0.700-0.950	15/8	117/32	11/2	

 $^{^{\}star}\text{It may be necessary to remove sufficient outer covering of cable to permit conducters to pass through the fitting body}$



Liquidtight strain-relief fittings – 90° angle





		Hub	Throat	Cord		Dimensions (in.)	
	Cat. no.	size (in.)	dia. (in.)	range (in.)	A	В	С
Diagram	4960	1/2	19/32	0.125-0.375	11/8	13/4	5/8
	4961	1/2	19/32	0.310-0.560	11/8	1¾	5/8
	4962*	1/2	19/32	0.500-0.750	13/8	124/64	5/8
	4970	3/4	²⁵ / ₃₂	0.125-0.375	13/8	1 ²⁵ /32	11/16
A DEFULL B	4971	3/4	²⁵ / ₃₂	0.310-0.560	13/8	1 ²⁵ / ₃₂	11/16
	4972	3/4	25/32	0.500-0.750	13/8	125/32	11/16
Swing radius							

^{*}It may be necessary to remove sufficient outer covering of cable to permit conducters to pass through the fitting body

The Ranger series – Aluminum fittings



Body and gland nut are aluminum.







	,	Hub	Throat	Cord		Dimensio	ons (in.)
	Cat. no.	size (in.)	dia. (in.)	range (in.)	Α	В	С
Diagram	2920AL	1/2	9/16	0.125-0.375	11/8	1¾	5/8
← C→	2921AL	1/2	9/16	0.310-0.560	11/8	13/4	5/8
1	2922AL*	1/2	9/16	0.500-0.750	15/16	13/4	5/8
	2930AL	3/4	13/16	0.125-0.375	15/16	1 ²⁵ / ₃₂	3/8
	2931AL	3/4	13/16	0.310-0.560	15/16	1 ²⁵ / ₃₂	3/4
	2932AL	3/4	13/16	0.500-0.750	15/16	1 ²⁵ /32	3/4
The second secon	2940AL	1	11/16	0.310-0.560	15/16	13/4	11/16
в —	2941AL	1	11/16	0.500-0.750	15/16	13/4	11/16
'	2942AL	1	31/32	0.700-0.950	1%16	11/8	31/32

 $^{{}^{\}star}\,\text{It may be necessary to remove sufficient outer covering of cable to permit conductors to pass through fitting body}$



Body and gland nut are aluminum.

Aluminum liquidtight strain-relief fittings – 90° elbow





	,	Trade or hub size	Throat	Cord			Dimens	sions (in.)
	Cat. no.	(in.)	diam. (in.)	range (in.)	Α	В	С	D
Diagram	4960AL	1/2	9/16	0.125-0.375	11/8	13/4	5/8	15/16
	4961AL	1/2	9/16	0.360-0.560	1½	13/4	5/8	15/16
↓ ^c	4970AL	3/4	25/32	0.125-0.375	15/16	1 ²⁵ /32	11/16	115/32
P mm	4971AL	3/4	25/32	0.310-0.560	15/16	1 ²⁵ / ₃₂	11/16	115/32
	4972AL	3/4	25/32	0.500-0.750	15/16	1 ²⁵ / ₃₂	11/16	115/32
	4980AL	1	15/16	0.310-0.560	15/16	21/32	13/16	13/4
	4981AL	1	¹⁵ /16	0.500-0.750	15/16	21/32	13/16	13/4
← B →	4982AL	1	15/16	0.700-0.950	1%16	211/16	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
- Meets Coast Guard CG293
- · New reduced size
- · Smaller footprint

Nonmetallic liquidtight strain-relief fittings – Straight





		Trade or	Throat	Cord		Dimensions (in.)		
	Cat. no.	hub size (in.)	diam. (in.)	range (in.)	Α	В	С	
Diagram	2920NM	1/2	9/16	0.125-0.375	17/32	21/8	5/8	
	2921NM	1/2	9/16	0.310-0.560	17⁄32	21/8	5/8	
	2922NM*	1/2	9/16	0.500-0.750	113/32	25/32	5/8	
	2930NM	3/4	3/4	0.125-0.375	113/32	23/16	5/8	
	2931NM	3/4	3/4	0.310-0.560	113/32	23/16	5/8	
B	2932NM	3/4	3/4	0.500-0.750	113/32	23/16	5/8	
1	2940NM	1	29/32	0.310-0.560	113/32	211/32	25/32	
	2941NM	1	29/32	0.500-0.750	113/32	211/32	25/32	
	2942NM	1	²⁹ / ₃₂	0.700-0.950	1 ⁴³ / ₆₄	23/8	25/32	

^{*}It may be necessary to remove sufficient outer covering of cable to permit conducters to pass through the fitting body



- Weather-stabilized nylon
- UL 94V-2
- Temperature rating: -34 °C to 105 °C
- Meets Coast Guard CG293

Nonmetallic liquidtight strain-relief fittings – 90° elbow





		Trade or	Throat	Cord	Dimensions (i		
	Cat. no.	hub size (in.)	diam. (in.)	range (in.)	Α	В	С
Diagram	4960NM	1/2	9/16	0.125-0.375	17/32	11/4	5/8
	4961NM	1/2	9/16	0.310-0.560	17/32	11/4	5/8
	4970NM	3/4	3/4	0.125-0.375	1 ¹³ /32	1³⁄s	5/8
	4971NM	3/4	3/4	0.310-0.560	1 ¹³ / ₃₂	13/s	5/8
	4972NM	3/4	3/4	0.500-0.750	113/32	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

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Silver Grip – TCF series tray-cord fittings

Ordering information



		Hub	Throat	Minimum	Maximum
Cat. no	Cat. No	size	dia.	cable dia.	opening
aluminum	stainless steel	NPT (in.)	(in.)	(in.)	(in.)
TCF050-27AL	TCF050-27SS6	1/2	0.330	0.150	0.270
TCF050-40AL	TCF050-40SS6	1/2	0.540	0.250	0.400
TCF050-54AL	TCF050-54SS6	1/2	0.540	0.400	0.540
TCF050-67AL	TCF050-67SS6	1/2	0.540*	0.540	0.670
TCF050-78AL	TCF050-78SS6	1/2	0.540*	0.660	0.780
TCF075-40AL	TCF075-40SS6	3/4	0.540	0.250	0.400
TCF075-54AL	TCF075-54SS6	3/4	0.540	0.400	0.540
TCF075-67AL	TCF075-67SS6	3/4	0.780	0.540	0.670
TCF075-78AL	TCF075-78SS6	3/4	0.780	0.660	0.780
TCF075-88AL	TCF075-88SS6	3/4	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	_	11/4	1.255	0.890	1.090
TCF125-128AL	-	11/4	1.255*	1.080	1.280
TCF125-147AL	-	11/4	1.255*	1.270	1.470
TCF150-115AL	_	11/2	1.470	0.890	1.150
TCF150-140AL	_	11/2	1.470	1.140	1.400
TCF150-165AL	-	11/2	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	_	21/2	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.

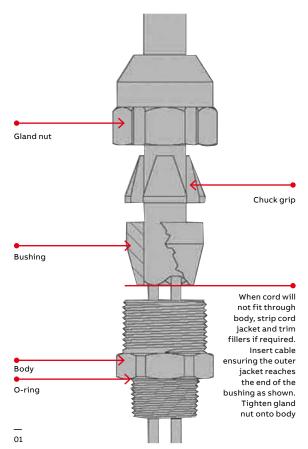
Portable cord

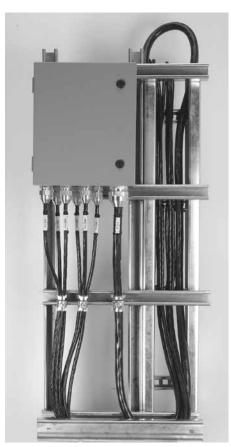
Complies with IEC requirements for Class I, Zone 1 locations when used with enclosures containing no arcing or sparking devices. For enclosures with arcing or sparking devices, TCF fittings must be used in combination with a certified Class I hazardous location sealing fitting.

- 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





- UL 94V-2
- Temperature rating: -34 °C to 105 °C
- Meets Coast Guard CG293







		Trade or	Throat	Cord		Dimen	sions (in.)
	Cat. no.	hub size (in.)	dia. (in.)	range (in.)	Α	В	C
Diagram	2671	3/8	0.33	0.125-0.275	2	29/32	15/3:
1 1	2690	1/2	0.33	0.125-0.275	21/4	29/32	19/32
A	2672	1/2	0.55	0.250-0.400	2 ¹⁹ / ₃₂	19/32	19/3
	2673*	1/2	0.55	0.400-0.560	2 ¹⁹ / ₃₂	19/32	19/3;
→ c ←	B 2691*	1/2	0.54	0.560-0.690	3	1%16	19/3;
	₹ 2692*	1/2	0.54	0.660-0.780	3	1%16	19/32
	2693	3/4	0.55	0.250-0.400	2 ¹¹ / ₁₆	1%2	5/6
	2694*	3/4	0.55	0.400-0.560	211/16	1%2	5/8
	2674	3/4	0.79	0.560-0.690	3	1%16	5/8
	2675	3/4	0.79	0.660-0.780	3	1%16	5/8
	2696*	3/4	0.76	0.770-0.895	33/16	11/8	5/8
	2676	1	0.98	0.660-0.780	35/16	11/8	25/32
	2677	1	0.98	0.770-0.895	35/16	11/8	25/32
	2678*	1	0.98	0.870-1.020	35/16	11/8	²⁵ /32
	2699	1	0.98	0.890-1.090	33/16	2 19/32	²⁵ /32
	2702	11/4	1.25	0.890-1.090	35/16	11/8	25/32
	2703	11/4	1.25	1.080-1.280	4	219/32	13/16
	2704	11/4	1.25	1.270-1.470	4	219/32	13/10
	2705TB	11/2	1.47	0.890-1.150	43/16	231/32	13/16
	2706	11/2	1.47	1.140-1.400	45/16	2 ³¹ / ₃₂	13/16
	2707	1½	1.47	1.390-1.650	45/16	2 ³¹ / ₃₂	13/10
	2708	2	1.89	1.190-1.530	5³/32	3½	27/32
	2709	2	1.89	1.520-1.860	429/32	31/2	27/3:
	2710*	2	1.89	1.850-2.190	429/32	31/2	27/3

 $^{{}^{\}star}\operatorname{Remove}\operatorname{sufficient}\operatorname{outer}\operatorname{covering}\operatorname{of}\operatorname{cable}\operatorname{to}\operatorname{permit}\operatorname{conductors}\operatorname{to}\operatorname{pass}\operatorname{through}\operatorname{fitting}\operatorname{body}$

BLACK BEAUTY FITTINGS B103

Black Beauty fittings



• Weather-stabilized nylon

• UL 94V-2

- Temperature rating: -34 $^{\circ}\text{C}$ to 105 $^{\circ}\text{C}$

• Meets Coast Guard CG293

Black Beauty liquidtight strain-relief fittings – 90° elbow





	Cat. no.	Trade or hub size (in.)	Throat dia. (in.)	Cord range (in.)	Dimensions (in.)		
					Α	В	С
Diagram C B B 90° angle, standard size body.	2680	1	0.33	0.125-0.275	0.90	1.8	0.460
	2681	1/2	0.55	0.250-0.400	1.27	2.5	0.610
	2682*	1/2	0.55	0.400-0.560	1.27	2.5	0.610
	2683	3/4	0.78	0.560-0.690	1.57	2.8	0.610
	2684	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
	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.