

Aluminum Core

Type ABRH



Type ABRH

This non-jacketed flexible aluminum conduit has many universal wiring applications.

Construction

Type ABRH is formed from a heavy gauge aluminum strip. Its profile and helical shape allow it to withstand substantial impact and crushing forces.

Applications

This conduit is intended as a metal raceway for wires and cable where CSA Certification is required. Suitable for use with connectors intended for FMC (Flexible Metal Conduit).

Certified

 Conforms to CSA 22.2 No. 56 for use per the Canadian Electrical Code C22.1 Section 12-1300

Trade Size	CSA Metric Desig.	Cat. No.	Internal Diameter (in.)		Outer Diameter (in.)		Inside Bend Radius	WT. Lbs. per 100 Ft.	Coil Length Mtr.
			Min.	Max.	Min.	Max.			
3/8	12	ABRH038	0.375	0.393	0.560	0.610	2	7	30, 150, 300
7/16	14	ABRH716	0.437	0.457	-	0.675	2.25	8	30, 150, 300
1/2	16	ABRH050	0.625	0.645	0.860	0.920	3	16	30, 150, 300
3/4	21	ABRH075	0.812	0.835	1.045	1.105	4	18	30, 150, 300
1	27	ABRH100	1.000	1.040	1.300	1.380	5	35	15, 120
1-1/4	35	ABRH125	1.250	1.300	1.550	1.630	6.2	43	15, 120
1-1/2	41	ABRH150	1.500	1.575	1.850	1.950	7.5	55	8, 15, 30
2	53	ABRH200	2.000	2.080	2.350	2.454	10	73	8, 15
2-1/2	63	ABRH250	2.500	2.700	2.860	3.060	12.5	90	8, 15
3	78	ABRH300	3.000	3.200	3.360	3.560	15	107	8, 15
4	103	ABRH400	4.000	-	4.360	4.560	20	142	8, 15

Aluminum Core

Type ACEA — Non-Halogen, Low Smoke, Flame Retardant



Type ACEA

This liquidtight flexible aluminum conduit is designed for applications where safety concerns exist regarding a material's reaction in a fire situation.

Trade Size (in.)	Cat. No.	Min. Jacket Thick. (min.)	Inside Bend Radius (mm)	Weight Kilogram 30 m	Carton				Reel			
					Length (m)	Cat. No.	Length (m)	Cat. No.	Length (m)	Cat. No.	Length (m)	Cat. No.
3/8	ACEA038	0.8	50.8	5	30	ACEA038-30	-	-	300	ACEA038-300	-	-
1/2	ACEA050	0.8	63.5	7	30	ACEA050-30	-	-	300	ACEA050-300	-	-
3/4	ACEA075	0.9	76.2	9	30	ACEA075-30	45	ACEA075-45	150	ACEA075-150	-	-
1	ACEA100	0.9	101.6	13	30	ACEA100-30	-	-	120	ACEA100-120	-	-
1-1/4	ACEA125	0.9	114.3	18	15	ACEA125-15	-	-	75	ACEA125-75	-	-
1-1/2	ACEA150	1.0	139.7	25	15	ACEA150-15	-	-	45	ACEA150-45	-	-
2	ACEA200	1.0	177.8	33	15	ACEA200-15	-	-	30	ACEA200-30	-	-
2-1/2	ACEA250	1.3	241.3	47	8	ACEA250-8	-	-	-	-	-	-
3	ACEA300	1.3	330.2	60	8	ACEA300-8	-	-	-	-	-	-
4	ACEA400	1.5	355.6	87	8	ACEA400-8	-	-	-	-	-	-
5	ACEA500	2.5	508.0	114	8	**	-	-	-	-	-	-
6	ACEA600	2.5	571.5	143	8	**	-	-	-	-	-	-

See Chart on p. G28 for dimensions and tolerances

See p. G27 for label and packaging detail

**Available on request

Construction

The flexible inner core of this product is made from an aluminum strip. As in type CEA, this core contains string packing between the helical convolutions in trade sizes 3/8 in. through 1-1/4 in. The specially formulated thermoplastic polyurethane jacket has excellent flame retardant characteristics as well as low smoke and toxicity generation characteristics. Acidic gases such as hydrogen chloride, hydrogen fluoride and hydrogen bromide are virtually eliminated as products of combustion.

Applications

This product is ideally suited for installation in confined or enclosed areas where construction materials must generate very little smoke, and have a low flame spread as well as low toxic gas emissions in the event of fire. Such applications include mass transit vehicles where ACEA is extensively used for wiring harnesses within and under passenger rail cars. Other applications include use in underground subway structures and tunnels.

Working Temperatures

-40°C to 80°C

Standard Colour

Machine tool grey. Other colours available upon request.

Type ACEA Combustion & Flammability Properties

Combustion & Flammability Properties**	Test	Value
-Vertical Burn (Material)	UL94	V-0 Rating No Flaming Drips
-Vertical Burn (Conduit)	UL360	Pass No Flaming Drips
-Oxygen Index %	D2863	28.5
-Flame Spread Index	ASTM E162	20; No Flaming Drips
-Flame Propagation	ASTM C542 (NFPA-130)	Pass No Flaming Drips
-Smoke Generation (Flaming)	ASTM E662 (NFPA 258)	Ds 50 @ 1.5 min Ds 102 @ 4.0 min
-Smoke Generation (Non-Flaming)	ASTM E662 (NFPA 258)	Ds 5 @ 1.5 min Ds 26 @ 4.0 min
-Toxic Gas Generation	SMP 801	Pass
-Toxicity Index	NES 713	3.9

**Test data is based on controlled laboratory conditions and does not necessarily reflect performance in actual fire conditions

Additional product information available upon request

Aluminum Core

Type ABR



Trade Size (in.)	Cat. No.	Coil Length (m)	Cat. No.	Coil Length (m)	Cat. No.	Coil Length (m)	Cat. No.	Reel Content* (m)	Weight kg/30m
-	-	-	-	-	ABR716-30	30	ABR716-300	300	-
3/8	ABR038-8†	8	ABR038-15†	15	ABR038-30†	30	ABR038-300†	300	7.0
1/2	ABR050-8	8	ABR050-15	15	ABR050-30	30	ABR050-300	300	9.5
3/4	ABR075-8	8	ABR075-15	15	ABR075-30	30	ABR075-150	150	13.5
1	-	-	ABR100-15	15	-	-	ABR100-120	120	24.0
1-1/4	-	-	ABR125-15	15	-	-	ABR125-120	120	31.0
1-1/2	-	-	ABR150-8	8	-	-	ABR150-90	90	47.0
2	-	-	ABR200-8	8	-	-	ABR200-45	45	67.0
2-1/2	-	-	ABR250-8	8	-	-	-	-	92.0
3	-	-	ABR300-8	8	-	-	-	-	107.0
3-1/2	-	-	ABR350-8	8	-	-	-	-	122.0
4	-	-	ABR400-8	8	-	-	-	-	142.0

See Chart on p. G28 for dimensions and tolerances

* See p. G27 for label and packaging detail

Note: Dimensions and Bend Radii are identical to Type BR, p. G14
† CSA Certified

Type ABR

This non-jacketed flexible aluminum conduit has many universal wiring applications. It is often referred to as “Greenfield” or “Reduced Wall Flex”.

Construction

Type ABR is formed using a high strength aluminum alloy strip. The result is a conduit with similar characteristics to those of type BR steel but at about 1/3 the weight.

Applications

General Use: In accordance with CEC Rule 12-1002 (1) the flexible metal conduit is permitted in or on buildings of either combustible or non-combustible constructions.

Restriction and Exception:

CEC Rule 12-1004 (a) states: “12 (3/8) trade size flexible metal conduit shall be permitted to be used for runs of not more than 1.5 m (5 ft.) for the connection of equipment.” and CEC Rule 12-1004 (b) states: “12 (3/8) trade size liquidtight flexible conduit may be used as permitted by this code.”

Securements with straps:

CEC Rule 12-1010 (3) states: “When flexible metal conduit is installed, it shall be secured at intervals not exceeding 1.5 m (5 ft.) and within 300 mm (12 in.) on each side of every outlet box or fitting except where flexible metal conduit is fished and except for lengths of not over 900 mm (3 ft.) at terminals where flexibility is necessary.”

Conductor fill:

CEC Rule 12-1014 defines the maximum number of conductor, the CEC Tables 6 provides the maximum number of conductors of one size in trade sizes of conduit, CEC Table 8 provides the maximum allowable per cent conduit fill, and CEC Table 9 provides the cross-sectional areas of conduit.

Applications

Refer to Type BR, p. G14

Listing / Certification



Certified. (3/8 and 7/16 in. size only). Conforms to CSA 22.2 No. 56 for use per CEC C22.1 Section 12-1300.

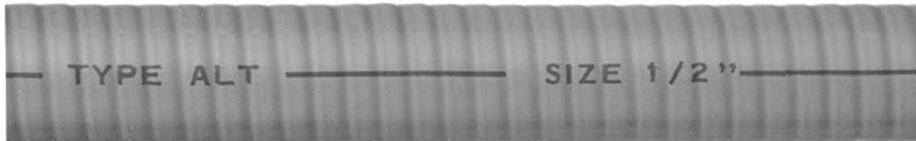


Listed. (sizes 3/8 through 3 in.). Conforms to UL Standard ANSI/UL-1 for Flexible Metal Conduit.

Meets Federal Specification WW-C-566c Type II

Aluminum Core

Type ALT – Lightweight Aluminum



Trade Size (in.)	Cat. No.	Carton Content* (m)	Cat. No.	Reel Content* (m)	Cat. No.	Reel Content* (m)	Inside Bend Radius		Weight kg/30m
							in.	(mm)	
3/8	ALT038-30	30	ALT038-150	150	ALT038-300	300	2.0	(50.8)	5
1/2	ALT050-30	30	ALT050-150	150	ALT050-300	300	2.5	(63.5)	7
3/4	ALT075-30	30	ALT075-150	150	ALT075-300	300	3.0	(76.2)	9
1	ALT100-30	30	ALT100-120	120	-	-	4.0	(101.6)	13
1-1/4	ALT125-15	15	ALT125-60	60	-	-	4.5	(114.3)	18
1-1/2	ALT150-15	15	ALT150-45	45	-	-	5.5	(139.7)	25
2	ALT200-15	15	ALT200-30	30	-	-	7.0	(177.8)	33
2-1/2	ALT250-8	8	-	-	-	-	9.5	(241.3)	47
3	ALT300-8	8	-	-	-	-	11.5	(292.1)	60
3-1/2	ALT350-8	8	-	-	-	-	13.0	(330.2)	74
4	ALT400-8	8	-	-	-	-	14.0	(355.6)	81
5	ALT500-8	8	-	-	-	-	20.0	(508.0)	114
6	ALT600-8	8	-	-	-	-	22.5	(571.5)	143

See Chart on p. G28 for dimensions and tolerances
 * See p. G27 for label and packaging detail

Type ALT

This version of Liquidtight Flexible Conduit is similar to our standard type LT but weighs considerably less due to the use of an aluminum inner core instead of steel.

Applications

Type ALT is often used where weight or corrosive atmospheres are an issue. When comparing identical trade sizes, Type ALT weighs approximately 37% less than type LT. Uses standard liquidtight fittings.

Working Temperatures

-20°C to 80°C

Standard Colours

Machine tool grey and black. Other colours available upon request. Part numbers listed designate grey jacket.