

35 kV Class Fused Loadbreak Elbow



APPLICATION

The Chardon 35 kV Class Fused Loadbreak Elbow Connector combines a fully-shielded and insulated loadbreak elbow with full range current-limiting fuse protection. The Chardon Fused Loadbreak Elbow Connector provides a convenient and cost-effective method to add fusing protection to underground distribution systems utilizing 200 A, 35 kV Class loadbreak bushings. Designed as a hot stick operable switching device, it is tested at the maximum fuse rating in accordance with the IEEE 386-2006 standard. The product is fully sealed and submersible.

The fuse elbows use high-quality peroxide-cured EPDM rubber, manufactured in

Chardon's facilities, under strict quality controls. Standard features include a copper probe adapter, bi-metal connector, plated copper loadbreak probe, and a stainless steel reinforced pulling eye. The product is designed to accept a wide range of cable conductor and insulation sizes

Chardon is currently the only manufacturer offering fused elbows at the 35 kV level, ensuring protection and reliability in critical applications.

PRODUCT TESTS

Tests conducted in accordance with IEEE/ANSI Standard 386.

- / Partial Discharge 26 kV≤5pC
- / AC 1 Minute Withstand 50 kV
- Test Point Voltage Test

Tests conducted in accordance with Chardon manufacturing process requirements:

- / Physical Inspection
- / Periodic Dissection
- Periodic X-ray Analysis

VOLTAGE RATINGS

Voltage Class	35 kV
Max. Rating Phase to Phase	36.6 kV
Max. Rating Phase to Ground	21.1 kV
AC 1 Minute Withstand	50 kV
DC 15 Minute Withstand	103 kV
BIL and Full Wave Crest	150 kV
Partial Discharge	26 kV≤5pC

[•] Revision Date: 12.18.2025

CURRENT RATINGS

Description	Test Parameters
Continuous	Fuse rating
Switching	10 operations at 200 amps rms at 36.3 kV
Fault Close	10,000 amps rms symmetrical at 36.6 kV for 0.17 s after 10 consecutive successful switching operations

DETAILED COMPOSITION OF THE CHARDON 35 kV LOADBREAK FUSE ELBOW

/ LOADBREAK PROBE

Tin plated copper probe with arc extinguishing tip, allows for dependable switching operations.

/ PROBE ADAPTER

Designed to securely thread the loadbreak probe into its corresponding socket.

/ INSULATION LAYER

High quality peroxide cured EPDM insulation is mixed and formulated in-house for complete control of rubber characteristics.

/ BIMETAL CONNECTOR

Customized Bi Metal connector designed for Chardon, CPS and Hi-Tech fuse provides reliable current path.

Fig 1: Detail Chardon Fuse Elbow Composition (Chardon Fuse Installed)

I SEMICONDUCTING INSERT

Precision molded peroxide cured semiconducting insert provides corona-free electrostatic shielding of the compression connector.

/ TEST POINT

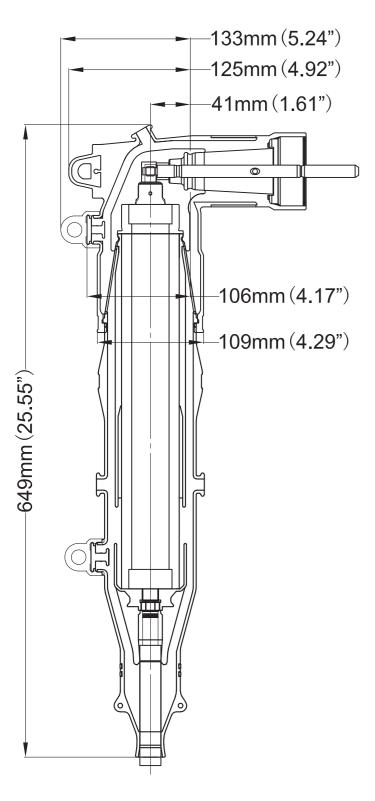
/ CHARDON FUSE

/ SEMICONDUCING SHIELD

Precision molded peroxide cured semiconducting shield provides ground shield continuity and meets IEEE standard 592.

/ TEST POINT

CHARDON 35 kV LOADBREAK FUSE ELBOW DRAWING



ORDERING INFORMATION

Chardon Loadbreak Fuse Elbow kits are packaged in a heavy duty plastic bag. Each elbow kit includes the following:

- Fused Elbow, Cable Housing
- Fused Elbow, Elbow Housing
- / Compression Lug Kit
- / Probe

- / Hex Wrench
- Silicone Grease
- / Towel
- Installation Instruction Sheet

Note:

Current-limiting fuses sold separately. See "Electrical Characteristics of the Elbow Fuses" for electrical ratings and catalog numbers.

To order a Chardon 35 kV Fuse Elbow Kit, follow the steps below:

35-LFE200T	"X"	"Y"	"Z"
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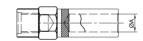
"X" = Enter Cable Range Code (C, D, E or F)

"Y" = Enter "CH" for Chardon Fuses

"Z" = Enter Conductor Code (See Conductor Code Table Below)

Range Code	Inches	Millimeters
С	0.846 - 1.051	21.50 - 26.70
D	0.976 - 1.181	24.80 - 30.00
E	1.087 - 1.311	27.60 - 33.30
F	1.232 - 1.469	31.30 - 37.30

Conductor Code Table



CONDUCTORC	Concentrior Compressed		Compactor Solid		Inner Diameter ØA(mm)	
ODE	AWG or kcmil	mm²	AWG or kcmil	mm²	Bi-metal Lug	
01	#6	-	#4	-	5.13	
02	#4	-	#3	25	6.55	
03	#3	25	#2	35	7.32	
04	#2	35	#1	-	8.13	
05	#1	-	1/0	50	9.09	
06	1/0	50	2/0	70	10.20	
07	2/0	70	3/0	-	11.35	
08	3/0	-	4/0	95	13.33	
09	4/0	95	250	120	14.00	
10	250	120	300	-	15.21	

Example:

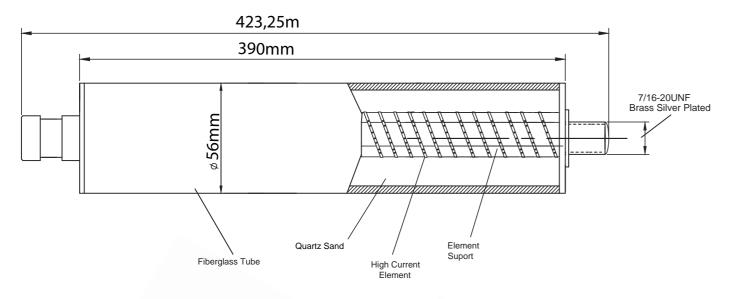
To order a Chardon 35 kv Loadbreak Fused Elbow with a cable insulation diameter of 0.850", using a Chardon fuse, and 3/0 compresion connector, the part number would be: 35-LFE200TCCH08

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Replacement Parts

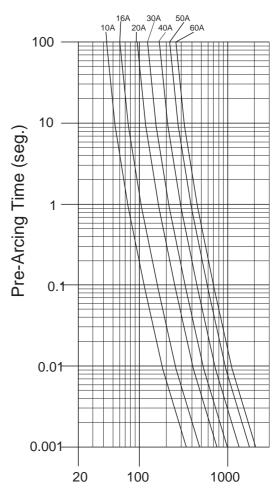
Compression Lug Kit	Part Number		
Chardon Fuse Compression Lug	LFEK-CH + Conductor Code		

CHARDON FUSES





Electrical Characteristics of the Elbow Fuses							
Voltage Class System (kV)	Nominal Fuse Voltage Rating (kV)		Nominal Fuse Current Rating (A)	I ² t (A ² s)		Peaking	Peak arc
		Fuse Catalog Number		Pre-arc I ² t	Clearing I ² t	Capacity (kA)	voltage (kV)
		CHFEF230001	1	18	150	50	64
35 21	CHFEF230003	3	160	787	50	64	
	CHFEF230006	6	600	3150	50	64	
	CHFEF230010	10	900	4650	50	64	
	CHFEF230015	15	1380	11000	50	64	
	CHFEF230020	20	1680	13000	50	64	
		CHFEF230025	25	3660	23800	50	64
		CHFEF230030	30	5390	13800	50	60
		CHFEF230040	40	6240	16856	50	60
		CHFEF230050	50	10000	24900	50	60



Prospective circuit current (RMS)



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