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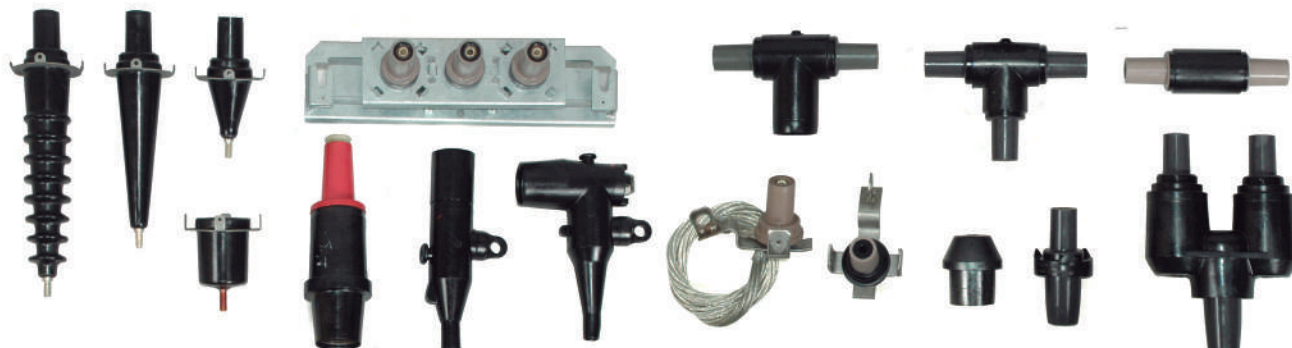
REDES ELÉTRICAS SUBTERRÂNEAS

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**LINHA COMPLETA
DE PRODUTOS
PARA REDES ELÉTRICAS
SUBTERRÂNEAS**



DESCONECTÁVEIS 200A DEADBREAK



Os acessórios desconectáveis 200A DEADBREAK oferecem um meio rápido para conectar e desconectar cabos e equipamentos em sistemas de potência.

Todos os acessórios DEADBREAK devem ser desenergizados antes da operação e devem ser fixados mecanicamente por meio de ferragens fornecidas junto ao componente quando ligados. Os componentes podem ser tamponados e isolados com capuzes, plugues e buchas.

A linha 200A DEADBREAK possui também acessórios para aterrar e derivar o sistema.

Pontos adicionais de conexão podem ser obtidos com o uso de barramentos e plugues by-pass.

Todos os terminais tipo cotovelo e reto deadbreak estão equipados com ponto de teste capacitivo.

Os acessórios 200A DEADBREAK fabricados conforme norma ANSI/IEEE 386 também atendem o padrão europeu IEC/CENELEC classe 250A.

Os acessórios Elastimold são 100% testados em fábrica e atendem todos os ensaios da norma ANSI/IEEE 386 e NBR 11835/EB2134.

ESPECIFICAÇÕES

Especificações de corrente

200A operação contínua
10KA simétricos/10 Ciclos

Especificações de tensão:

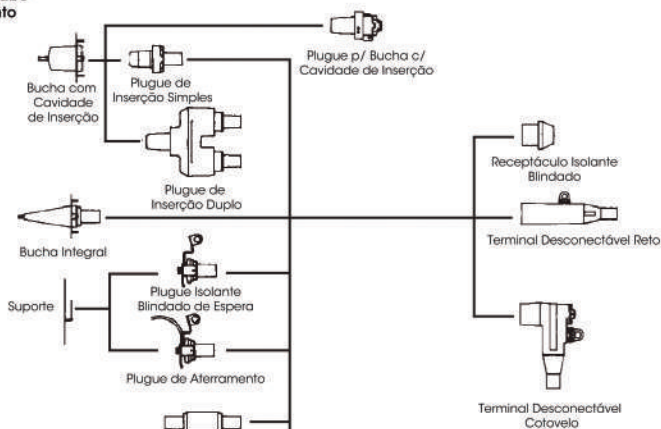
Classe 15kV
Fase-Terra 8.3kV
Fase-Fase 14.4kV
NBI 95KV
Suporta 34kV AC
Suporta 53kV DC
Tensão de Extinção Descargas Parciais (Corona) 11kV

Classe 25kV

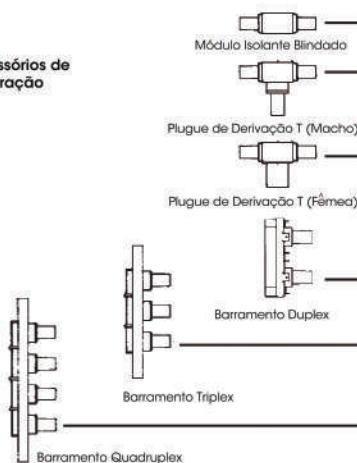
Fase-Terra 15.2kV
Fase-Fase 26.3kV
NBI 125kV
Suporta 40kV AC
Suporta 78kV DC
Tensão de Extinção Descargas Parciais (Corona) 19kV

Componentes 200A Deadbreak

Conexão do cabo ao equipamento



Acessórios de Operação



DESCONECTÁVEIS 600A DEADBREAK



Os acessórios desconectáveis 600A DEADBREAK são usados para conectar cabos e equipamentos em sistemas de potência.

Projetados para aplicação de cabos de grandes bitolas, possuem contatos aparafusados de face plana, para o máximo de confiabilidade, desempenho e versatilidade. Após desenergizados, podem ser rápida e facilmente conectados e desconectados com o uso de ferramentas manuais e equipamentos apropriados para o trabalho.

Acessórios opcionais permitem derivar, isolar, tamponar, aterrar, testar e reduzir interface para acessórios 200A LOADBREAK e 200A DEADBREAK.

Pontos adicionais podem ser obtidos com o uso de barramentos.

Os acessórios Elastimold são 100% testados em fábrica e atendem todos os ensaios da norma ANSI/IEEE 386 e NBR 11835/EB2134.

ESPECIFICAÇÕES

Especificações de corrente

600A operação contínua
25kA simétricos / 10 ciclos

Especificações de tensão:

Classe 15/25kV (até 28kV) (*)
Fase-Terra 16.2kV
Fase-Fase 28kV
NBI 140kV
Suporta 45kV AC
Suporta 84kV DC
Tensão de Extinção Descargas Parciais (Corona) 21.5kV

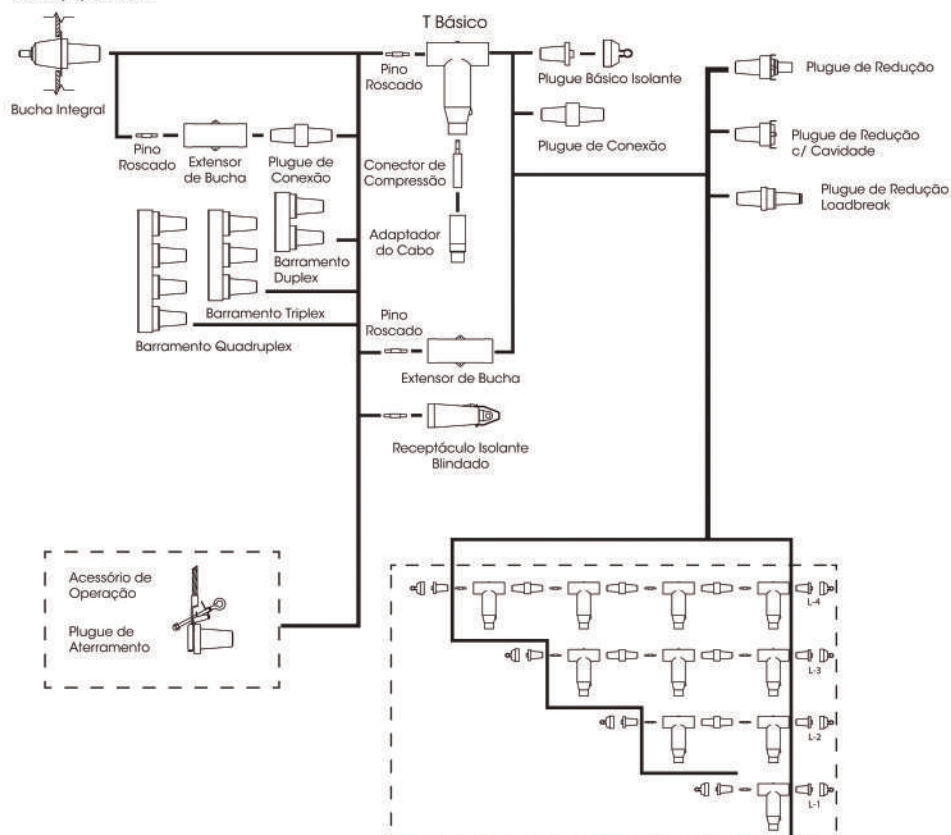
(*)Nota: A Elastimold ultrapassou os níveis de ensaios de produção e design da norma IEEE para a classe 25kV, para tornar possível aplicar os produtos dessa classe de tensão em sistemas de 27kV e 28kV.

Classe 35kV

Fase-Terra 21.1kV
Fase-Fase 36.6kV
NBI 150kV
Suporta 50kV AC
Suporta 103kV DC
Tensão de Extinção Descargas Parciais (Corona) 26kV

600A Deadbreak

Conexão do cabo ao equipamento



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CÓDIGO 25-DBI200

PLUGUE DE INSERÇÃO SIMPLES PIS - 25kV-200A



APPLICATION

The Chardon Deadbreak Bushing Insert threads into a standard 200A bushing well. It is a fully shielded, fully submersible separable connector designed for deadbreak operation. The Chardon Deadbreak Bushing Insert is suitable for 15/25 kV class systems and can be installed in transformers, switchgear or other apparatus when needed to connect with deadbreak connectors.

The Chardon Deadbreak Bushing Insert incorporates an all copper current path. This provides reliable and consistent performance under all conditions. The design meets all the requirements of IEEE standard 386, and is fully interchangeable with competitor's products and all mating products that also meet IEEE Standard 386.

PRODUCTION TESTS

Tests conducted in accordance with IEEE/ANSI Standard 386.

- / Minimum Corona Voltage Level – 19 kV
- / AC 1 Minute Withstand – 40 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	25 kV
Max. Rating Phase to Ground	15.2 kV
AC 1 Minute Withstand	40 kV
DC 15 Minute Withstand	76 kV
BL and Full Wave Crest	125 kV
Minimum Corona Voltage Level	19 kV

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CURRENT RATINGS

Description	Test Parameters
Continuous	200 amperes
Short Time	- 16,000 amps rms symmetrical for 0.17 s - 2,500 amps rms symmetrical for 3.0 s

DETAILED COMPOSITION OF THE CHARDON DEADBREAK BUSHING INSERT

SEMICONDUCTING SHIELD

Precision molded peroxide cured semiconducting shield provides groundability continuity and meets the requirements of IEEE Standard 592.

COPPER CONDUCTOR

Copper conductor ensure a cool running with maximum current transfer.

LOUVER CONTACT

The plated copper contact provides a consistent current transfer during operation.

THREADED CONNECTION TO BUSHING WELL

3/8"-16 UNC copper thread provides connection to bushing well.

DRAIN WIRE TAB

Drain wire tab provide 3 convenient point to connect drain wire to ensure grounding of the connector shield.

INSULATION LAYER

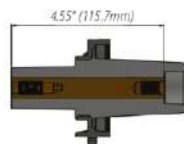
High quality peroxide cured EPDM insulation is molded and formulated in-house for complete control of rubber characteristics.

ORDERING INFORMATION

200A, 15/25 kV Deadbreak Bushing Insert **25-DBI200**

Each portable feed thru kit includes the following:

- / Deadbreak Bushing Insert
- / Shipping Cap (not for energized operation)
- / Silicon Lubricant
- / Installation Instruction Sheet



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CÓDIGO 25-DE200

TERMINAL DESCONECTÁVEL COTOVELO - TDC-25kV-200A



APPLICATION

The Chardon Deadbreak Elbow Connector is a fully shielded and insulated termination for connecting underground cable to transformers, switchgear and other apparatus equipped with deadbreak bushings, junctions, or other deadbreak connectors.

The Chardon Deadbreak Elbow meets all the requirements of IEEE standard 386, and is fully interchangeable with competitor's products and mating products that meet IEEE Standard 386.

Chardon Deadbreak Elbow Connectors are molded using high quality peroxide-cured insulating and semi-conducting EPDM rubber. All insulating rubber is compounded in house, using Chardon-developed proprietary formulations. Chardon Deadbreak Elbow Connectors and copper probe are combined with the bi-metal compression lug, this ensures a reliable operating connection.

PRODUCTION TESTS

Tests conducted in accordance with IEEE/ANSI Standard 386.

- / Minimum Corona Voltage Level – 19 kV
- / AC 1 Minute Withstand – 40 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	25 kV
Max. Rating Phase-to-Ground	15.2kV
AC 1 Minute Withstand	40 kV
DC 15 Minute Withstand	76 kV
BL and Full Wave Crest	125 kV
Minimum Corona Voltage Level	19 kV

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CURRENT RATINGS

Description	Test Parameters
Continuous	200 ampere
Short Time	- 16,000 amps rms symmetrical for 0.17 s - 3,500 amps rms symmetrical for 3.0 s

DETAILED COMPOSITION OF THE CHARDON DEADBREAK ELBOW CONNECTOR

/ SEMICONDUCTING SHIELD

Precision molded peroxide cured semiconducting shield provides ground shield continuity and meet the requirements of IEEE Standard 592.

/ CABLE ENTRANCE

The sized cable entrance provides an interference fit to maintain a watertight seal.

/ DRAIN WIRE TAB

Drain wire tab provide a convenient point to connect drain wire to ensure grounding of the connector shield.

/ INSULATION LAYER

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

/ COMPRESSION CONNECTOR

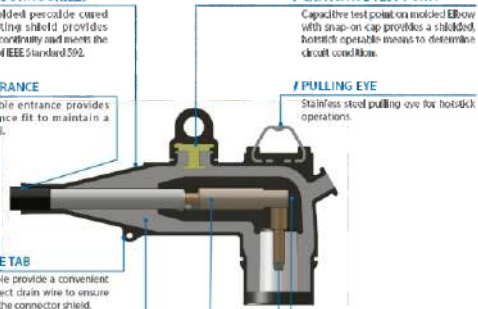
Compression connector is sized to ensure a cool running connection with maximum current transfer.

/ CAPACITIVE TEST POINT

Capacitive test point on molded Elbow with snap-on cap provides a shielded, hermetic operable means to determine circuit condition.

/ PULLING EYE

Stainless steel pulling eye for hoist/hoop operations.



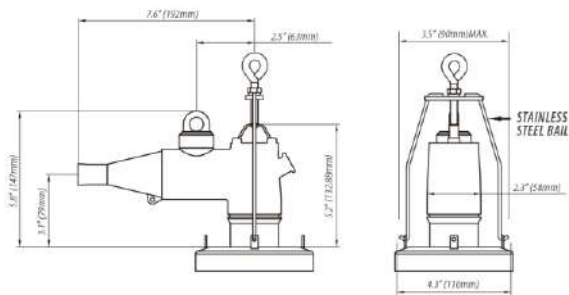
/ SEMICONDUCTING INSERT

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

/ PROBE

Tin plated copper probe ensures reliable electrical connection.

DETAILED COMPOSITION OF THE CHARDON DEADBREAK ELBOW CONNECTOR



ORDERING INFORMATION

15/25kV Deadbreak Elbow

Each kit Contains:

- / Elbow body
- / Bi-Metal Compression Lug
- / Copper Probe
- / Probe Installation Tool
- / Bolt Assembly
- / Silicone Lubricant
- / Installation Instruction Sheet

To order a Chardon 25kV Deadbreak Elbow Kit, follow the steps below:

25-DE200

"W"

"X"

"Y"

"Z"

"W" = Enter **T** if want a Capacitive Test Point

"X" = Cable Range Code (See Cable Range Table)

"Y" = Conductor Code (See Conductor Table)

"Z" = Enter **C** if a Plated Copper Connector is Desired

Cable Range Table (Insulation Diameter)

Cable Range Code	Inches	Millimeters
AA	6.508 - 6.885	120 - 174
A	6.942 - 6.927	163 - 26.5
B	6.768 - 6.942	96.5 - 24.0
C	6.966 - 1.126	23.0 - 28.1

Conductor Code Table (Compression Connectors)

CONDUCTOR CODE	Concentric or Compressed		Compact or Solid	
	AWG or kcmil	mm ²	AWG or kcmil	mm ²
01	#6	-	#1	-
02	#4	-	#3	25
03	#3	25	#2	35
04	#2	35	#1	-
05	#1	-	1/8	30
06	1/2	50	2/8	70
07	3/8	70	3/8	-
08	3/2	-	#10	95
09	#10	95	250	120
10	250	120	300	-

Example:

To order a standard Chardon 25kV Deadbreak Elbow with cable insulation diameter of 0.907", a 3/8" bi-metal compression connector, and a capacitive test point, order the part number 25-DE200T08.

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CÓDIGO **25-DIC200**

RECEPTÁCULO ISOLANTE BLINDADO - RIB - 25kV-200A



APPLICATION

The Chardon 25kV 200A Insulated Protective Cap can be used for temporary or permanent applications and provides a submersible, fully shielded insulated cap for energized bushings. When installed on a IEEE bushing interface or junctions, it is properly grounded using the attached drain wire, and providing physically seal and electrically insulate bushing interfaces.

KEY FEATURES

- Provides a fully shielded and submersible connection when mated with the proper bushings.
- 100% electrical tested at factory.

PRODUCTION TESTS

Tests conducted in accordance with IEEE/ANSI Standard 386.

- Minimum Corona Voltage Level – 19 kV
- AC 1 Minute Withstand – 40kV

Tests conducted in accordance with Chardon manufacturing process requirements:

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

VOLTAGE RATINGS

Max. Rating Phase to Ground	25 kV
AC 60Hz 1 Minute Withstand	40 kV
Minimum Corona Voltage Level	19 kV
BIL and Full Wave Crest	120 kV

The Chardon insulated cap design incorporates peroxide cured, EPDM insulation rubber, and a semi-conducting insert and outer shield. The outer conductive shield maintains ground potential on the cap's surface when a grounding wire is connected to a common ground.

- Mounting can be vertical, horizontal, or any angle in between.
- No minimum phase clearance requirements.
- IEEE/ANSI Standard 386.

Each kit includes the following:

- Insulated Cap
- Silicone Grease
- Installation Instruction Sheet
- Ball Assembly

• Revision 006 (12/22/2022)

DETAILED COMPOSITION OF THE CHARDON 25KV INSULATED CAP

DRAIN WIRE TAB

Drain wire tabs provide a convenient point to connect a drain wire to ensure grounding of the connector shield. A drain wire is included with the product.

SEMICONDUCTING INSERT

Precision molded peroxide cured semi-conducting insert provides corona free electrostatic shielding of the connector.

PROBE

Brass probe provide excellent conductive path with mating female contacts.

PULLING EYE

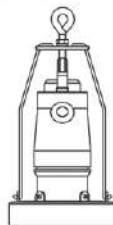
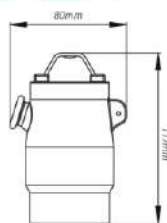
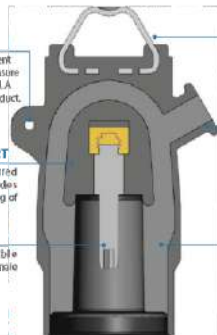
Stainless steel pulling eye for hoist/operations.

SEMICONDUCTING SHIELD

Precision molded peroxide cured semi-conducting shield provides ground shield continuity.

INSULATION LAYER

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



ORDERING INFORMATION

25 kV, 200A Insulated Protective Cap

25-DIC200

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CÓDIGO

25-DIC600

RECEPTÁCULO ISOLANTE BLINDADO - RIB - 25kV-600A



APPLICATION

The Chardon 600 Amp 15/25 kV Insulated Cap meets all requirements of IEEE standard 386 – 2009. It provides insulated, fully shielded submersible protection for 15 and 25 kV class deadbreak interfaces and is fully interchangeable with competitor's products that also meet IEEE standard 386.

The Chardon Insulated Cap design incorporates peroxide cured, EPDM insulation rubber, and a semi-conducting insert and outer shield. The outer conductive shield maintains ground potential on the cap's surface when a grounding wire is connected to a common ground.

PRODUCTION TESTS

Tests conducted in accordance with IEEE/ANSI Standard 386.

- / Minimum Corona Voltage Level – 19 kV
- / AC 1 Minute Withstand – 40 kV

Tests conducted in accordance with Chardon manufacturing process requirements:

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

VOLTAGE RATINGS

Voltage Class	25 kV
Max. Rating Phase to Ground	85.2 kV
AC 60Hz 1 Minute Withstand	40 kV
DC 15 Minute Withstand	76 kV
BIL and Full Wave Crest	128 kV
Minimum Corona Voltage Level	10 kV

- Revision Date: 07-26-2021

DETAILED COMPOSITION OF THE CHARDON 25KV INSULATED CAP

/ SEMICONDUCTING SHIELD

Precision molded peroxide cured semiconducting shield provides ground shield continuity and meets the requirements of IEEE Standard 592.

/ PULLING EYE

Stainless steel pulling eye for hotstick operations.

/ DRAIN WIRE TAB

Drain wire tabs enable easy drain wire connection for shield grounding. Drain wire is included with the product.

/ THREADED ALUMINUM INSERT 5/8"-11 UNC 2A

Allows cap to be installed on bushing with a standard 600 A stud.

/ INSULATION LAYER

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

/ DRAIN WIRE TAB

Drain wire tabs enable easy drain wire connection for shield grounding. Drain wire is included with the product.

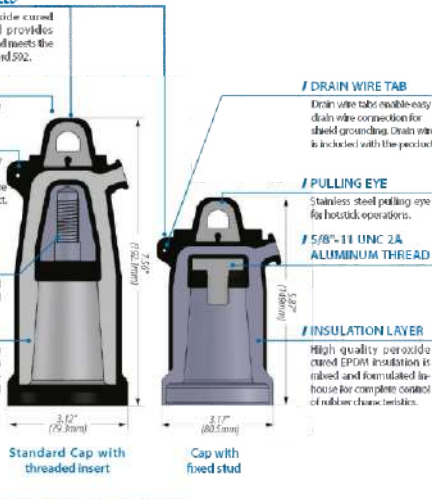
/ PULLING EYE

Stainless steel pulling eye for hotstick operations.

/ 5/8"-11 UNC 2A ALUMINUM THREAD

/ INSULATION LAYER

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



ORDERING INFORMATION

Each kit includes the following:

- / Insulated Cap
- / Silicone Lubricant
- / Installation Instruction Sheet
- / Optional aluminum stud for 25-DIC600-SRV only

Standard Cap without stud	25-DIC600
Standard Cap with removable stud	25-DIC600-SRV
Cap with fixed stud	25-DIC600S

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CÓDIGO **25-DJ600**

BARRAMENTO DERIVAÇÃO **25kV-600/900A**



APPLICATION

The Chardon 600A/900 A, 15/25 kV Class Deadbreak Junction provides two, three or four deadbreak interfaces in an EPDM Insulated rubber body. Deadbreak junctions are used in pad-mounted apparatus, underground vaults, and other installations to connect equipment and cable on primary feeder and network circuits.

Chardon deadbreak connectors feature bolted connections can be easily connected and disconnected. When mated with a comparably

rated product, the junction provides a fully shielded, submersible connection for deadbreak operation. The deadbreak junction is available with stainless steel adjustable brackets for mounting at various operating angles, or with stainless steel "U" straps for direct wall mounting.

Chardon Deadbreak Junctions are rated 900A continuous when copper components are used. To order a 900A product, please see the part number list in page 2.

PRODUCTION TESTS

Tests conducted in accordance with IEEE/ANSI Standard 386™:

- / Minimum Corona Voltage Level – 19 kV
- / AC 60 Hz 1 Minute Withstand – 40 kV

Tests conducted in accordance with Chardon requirements:

- / Physical Inspection
- / Periodic Dissection
- / Periodic Fluoroscopic Analysis

VOLTAGE RATINGS AND CHARACTERISTICS

Voltage Class	25 kV
Max. Rating Phase to Ground	15.2 BT
AC 1 Minute Withstand	40 kV
DC 15 Minute Withstand	78 kV
BIL and Full Wave Crest	125 kV
Minimum Corona Voltage Level	19 kV

CURRENT RATINGS AND CHARACTERISTICS

Description	Amps
Continuous	600 A rms
4 Hour Overload	1,000 A rms
Short Time	<ul style="list-style-type: none"> • 25,000 Amps symmetrical for 0.17s • 10,000 Amps symmetrical for 3.0s

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ORDERING INFORMATION

Each kit Contains:

- / Deadbreak Junction (with mounting bracket or straps, depending on product ordered)
- / Shipping Caps (not for energized operation)
- / Silicone Grease
- / Installation Instruction Sheet

Deadbreak Junction Part Numbers

Description	Junction Only	Junction with Stainless Steel Bracket	Junction with U-Straps
15/25 kV, 600A Deadbreak Junction - 2 Way (SL)	25-D100F2	25-D100F2SS	25-D100F2U
15/25 kV, 900A Deadbreak Junction - 2 Way (CU)	25-D100F2	25-D100F2SS	25-D100F2U
15/25 kV, 600A Deadbreak Junction - 3 Way (SL)	25-D100F3	25-D100F3SS	25-D100F3U
15/25 kV, 900A Deadbreak Junction - 3 Way (CU)	25-D100F3	25-D100F3SS	25-D100F3U
15/25 kV, 600A Deadbreak Junction - 4 Way (SL)	25-D100F4	25-D100F4SS	25-D100F4U
15/25 kV, 900A Deadbreak Junction - 4 Way (CU)	25-D100F4	25-D100F4SS	25-D100F4U

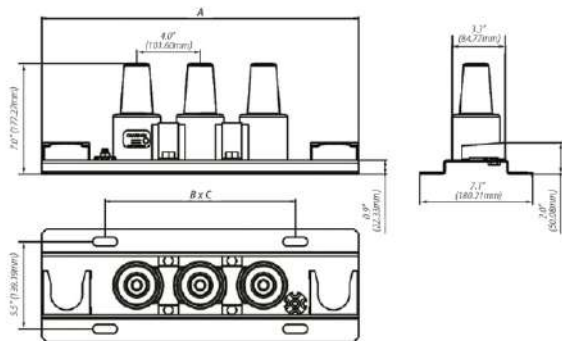
* Chardon provides adjustable brackets. To order a non-adjustable bracket, add "ADJ" to the end of part numbers (for example, 25-D100F2SS-ADJ).

Replacement Parts

Description	Catalog Number
U-Strap kit with Hardware 1 strap	25-D100U
Stainless Steel Bracket Assembly (2-way)	25-D100T2S
Stainless Steel Bracket Assembly (3-way)	25-D100T3S
Stainless Steel Bracket Assembly (4-way)	25-D100T4S

* 1 U-Strap for a 2-way junction, and 2 and 3 U-Straps for a 3-way junction.

JUNCTION WITH BRACKET DIMENSIONAL INFORMATION

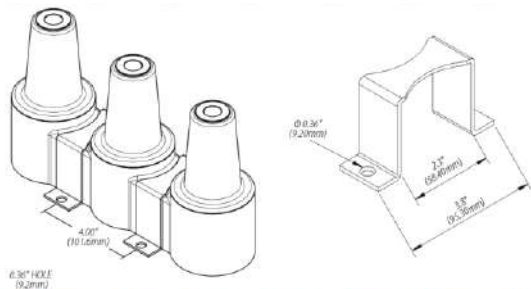


Dimensional Information

Number of Interfaces	Physical Dimensions In./mm		
	A	B	C
3-way	16.0 (406)	6.0 (152)	1
2-way	20.0 (508)	12.0 (304)	1
0-way	24.0 (610)	6.0 (152)	2

Configuration 1: Both feet turned out.
 Configuration 2: One feet turned out, the other in.
 Configuration 3: Both feet turned in.

JUNCTION WITH U-STRAP DIMENSIONAL INFORMATION



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CÓDIGO

25-DS200

TERMINAL DESCONECTÁVEL RETO - TDR-25kV-200A



APPLICATION

The Chardon Deadbreak Straight Connector is a fully shielded and insulated termination for connecting underground cable to transformers, switchgear and other apparatus equipped with deadbreak bushings, junctions, or other deadbreak connectors.

The Chardon Deadbreak Straight meets all the requirements of IEEE standard 386, and is fully interchangeable with competitor's products and mating products that meet IEEE Standard 386.

PRODUCTION TESTS

Tests conducted in accordance with IEEE/ANSI Standard 386.

- / Minimum Corona Voltage Level – 19 kV
- / AC 1 Minute Withstand – 40 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	25 kV
Max. Rating Phase to Ground	15.2 kV
AC 1 Minute Withstand	40 kV
DC 15 Minute Withstand	76 kV
BL and Full Wave Crest	125 kV
Minimum Corona Voltage Level	19 kV

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Chardon Deadbreak Straight Connectors are molded using high quality peroxide – cured insulating and semi-conducting EPDM rubber. All insulating rubber is compounded in house, using Chardon - developed proprietary formulations. Chardon Deadbreak Straight Connectors a copper probe. Combined with the bi-metal compression lug, this ensures a reliable operating connection.

CURRENT RATINGS

Description	Test Parameters
Continuous	200 ampere
Short Time	- 16,000 amps rms symmetrical for 0.17 s - 2,500 amps rms symmetrical for 3.0 s

DETAILED COMPOSITION OF THE CHARDON DEADBREAK STRAIGHT CONNECTOR

/ CAPACITIVE TEST POINT

Capacitive test point on molded Straight Connectors with snap-on cap provides a thin, flat, hotstick operable means to determine circuit condition.

/ SEMICONDUCTING SHIELD

Precision molded peroxide cured semiconducting shield provides ground shield continuity and meets the requirements of IEEE Standard 592.

/ SEMICONDUCTING INSERT

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

/ CABLE ENTRANCE

The sized cable entrance provides an interference fit to maintain a watertight seal.

/ CONDUCTOR CONTACT

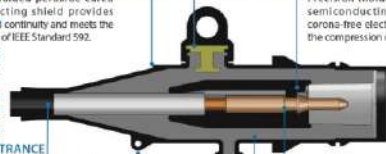
Tin plated copper connector ensures reliable electrical connection.

/ DRAIN WIRE TAB

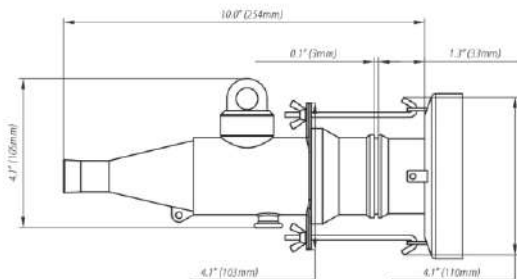
Drain wire tab provides a convenient point to connect drain wire to ensure grounding of the connector shield.

/ INSULATION LAYER

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



DETAILED COMPOSITION OF THE CHARDON DEADBREAK STRAIGHT CONNECTOR



ORDERING INFORMATION

15/25kV Straight Connector

Each kit Contains:

- / Straight Connector Body
- / Bi-Metal Compression Lug
- / Silicone Lubricant
- / Copper Probe
- / Ball Assembly
- / Installation Instruction Sheet

To order a Chardon 25kV Deadbreak Straight Connector Kit, follow the steps below:

25-DS200

"W"

"X"

"Y"

"Z"

"W" = Enter T if want a Capacitive Test Point

"X" = Cable Range Code (See Cable Range Table)

"Y" = Conductor Code (See Conductor Table)

"Z" = Enter C if a Plated Copper Connector is Desired

Cable Range Table (Insulation Diameter)

Cable Range Code	Inches	Millimeters
AA	6.500 - 6.800	165.1 - 172.7
A	6.600 - 6.800	167.6 - 172.7
B	6.700 - 6.945	170.1 - 176.4
C	6.800 - 7.100	172.7 - 180.3

Conductor Code Table (Compression Connectors)

CONDUCTOR CODE	Concentric or Compacted		Compact or Solid	
	#kV of Insul.	#mm ²	#kV of Insul.	#mm ²
01	46	-	46	-
02	44	-	45	35
03	43	25	42	35
04	42	25	41	-
05	41	-	39	30
06	37	20	29	20
07	35	26	30	-
08	33	-	29	35
09	40	35	29	120
10	25	120	30	-

EXAMPLE:

To order a steel rod Chardon 25kV Deadbreak Straight Connector with a cable insulation diameter of 6.600" or 167.6 mm, a 3/8" bi-metal compression connector, and a capacitive test point, enter the part number 25-DS200T06.

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CÓDIGO **25-SOB600**

PLUGUE ISOLANTE BLINDADO PIB - 25kV-600A



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APPLICATION

The Chardon 600A 15/25 kV Standoff Bushings fully meet the requirements of IEEE Standard 386-2009. The high quality, insulating epoxy molded bushing, has a single deadbreak interface and is used in pad-mount cabinets, underground vaults and other apparatus to isolate and sectionalize an energized cable.

The Insulated Standoff Bushings are designed to be installed in the parking stand bracket mounted on the transformer or other apparatus. A cable is connected to the system ground when needed. The bushing

provides a fully shielded, submersible temporary or permanent connection for 600A deadbreak operation.

All standoff bushing brackets have a stainless steel eyebolt which secures the standoff bushing to the parking stand. The eyebolt is designed to be used with a hotstick operation.

The Chardon Insulated Standoff Bushing can be used for 900A applications by specifying a copper conductor when ordering.

PRODUCTION TESTS

Tests conducted in accordance with IEEE/ANSI Standard 386TM:

- / Minimum Corona Voltage Level – 19 kV
- / AC 60 Hz 1 Minute Withstand – 40 kV

Tests conducted in accordance with Chardon requirements:

- / Physical Inspection
- / Periodic Dissection
- / Periodic Fluoroscopic Analysis

VOLTAGE RATINGS

Voltage Class	25 kV
Max. Rolling Phase to Ground	15.2 kV
AC 1 Minute Withstand	40 kV
DC 15 Minute Withstand	76 kV
BIL and Full Wave Crest	125 kV
Maximum Corona Voltage Level	19 kV

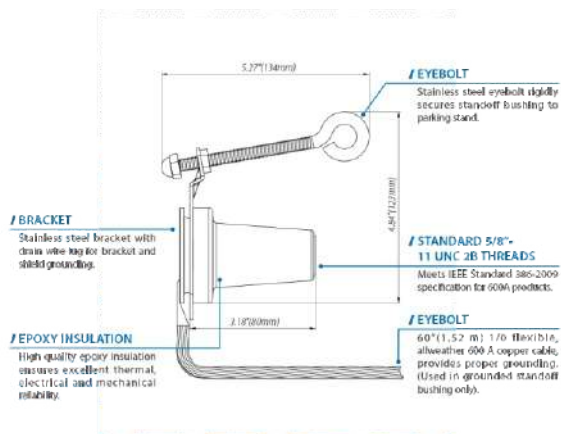
* 2000-0919-1 (V1.12-09/01)

CURRENT RATINGS

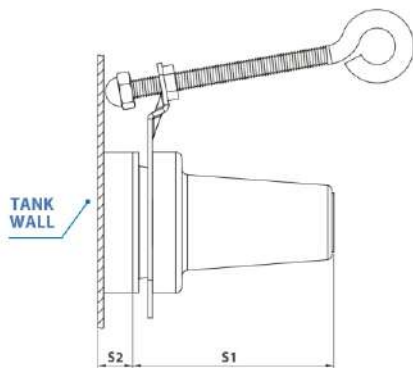
(Grounded Standoff Bushing Only)

Description	Amperes
Short Time	25,000 A, max. operational for 0.1s

DETAILED COMPOSITION OF THE CHARDON STANDOFF BUSHING



**DETAILED COMPOSITION OF THE
CHARDON STANDOFF BUSHING**



	15/25kV
S1	3.44" (87mm)
S2	0.61" (15mm)

ORDERING INFORMATION

Chardon Standoff Bushing

Each kit Contains:

- / Standoff Bushing with Bracket
- / Shipping Cap
- / Silicone Grease
- / Installation instruction Sheet

To order a Chardon 15/25kV Standoff Bushing, follow the steps below:

25-SOB-600

"X"

"Y"

"Z"

"X" = Enter G for grounded bushing, enter I for insulated bushing.

"Y" = Enter A for aluminum conductor, enter C for copper conductor.

"Z" = Leave blank if no stud required, Enter S for an Aluminum stud or C for a copper stud.

Example:

To order an Aluminum insulated standoff bushing with a stud, order the following number: 25020004AS

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35-600A
Replacement Part

CÓDIGO

COMPONENTES DO TERMINAL BÁSICO BLINDADO TBB - 35kV-600A



APPLICATION

Chardon 600A 35kV Class Deadbreak Accessories are used to connect and assemble 600A products to provide fully shielded and submersible connections.

Chardon's products meet all the requirements of IEEE Standard 386, and are fully interchangeable with competitor's products that also meet IEEE standard 386.

PRODUCTION TESTS

Tests conducted in accordance with IEEE/ANSI Standard 386™:

- AC 60 Hz 1 Minute Withstand – 50 kV
- Minimum Corona Voltage Level – 26 kV

VOLTAGE RATINGS AND CHARACTERISTICS

Voltage Class	35 kV
Max. Rating Phase to Ground	21.4 kV
AC 1 Minute Withstand	50 kV
DC 15 Minute Withstand	80 kV
BIL and Full Wave Crest	200 kV
Minimum Corona Voltage Level	26 kV

CURRENT RATINGS AND CHARACTERISTICS

Description	Amps
Continuous	600 A rms
24 Hour Overload	1,000 Arms
Short Time	+ 25,000 A rms symmetrical for 0.17s + 10,000 A rms symmetrical for 2.0s

• Revision Code: 07.10.2024

INSULATING PLUG (EPOXY) AND CAP

A one-inch socket and torque wrench are needed to tighten the insulating plug into a de-energized deadbreak connector and mating apparatus. Refer to Chardon instruction sheet for detail.

Capacitive test point allows circuit testing without interrupting the connection. The one inch-hex head provides easy assembly to the connector and mating parts.

A semi-conducting EPDM rubber cap fits over the insulating plug for a waterproof seal and deadfront shielding.



CONNECTING PLUG (EPOXY)

A spanner wrench is used to tighten the connecting plug into a deenergized deadbreak connector or mating part.

A conductive coating around the center provides continuity of semiconducting shield with EPDM shield of mating parts. Holes in the part allow easy assembly using a spanner wrench.

Chardon connecting plugs can be used for connecting 2 or more 600A deadbreak connectors.



THREADED STUD

The threaded stud is used with a T-Body connector or splices to connect reducing well plugs, deadbreak tap plugs, deadbreak tap plugs, connecting plugs, and insulating plugs to other components or apparatus bushings.



CABLE ADAPTER (EPDM)

Molded cable adapter is available in sizes to fit cables from 0.640" to 1.985" in diameter (16.3 mm to 49.9 mm). The Chardon cable adapter is molded with high quality peroxide cured insulation and semiconductive.



COMPRESSION CONNECTOR

Compression connectors are available in all aluminum, all copper (for 900A applications), or bi-metal designs. All are available with threaded and unthreaded holes. See Conductor Code Table for proper application. All connectors are designed for use with either aluminum or copper conductors.



CHARDON SHEAR BOLT CONNECTOR

Chardon shear bolt connectors are designed for use in low and medium voltage connection. The tool require disastandard ratchet wrench with a hexagonal socket; no crimping tools needed in field operation.



ORDERING INFORMATION

Cable Adapters

These adapters are used on Chardon T-Bodies. To select the correct adapter, determine the minimum and maximum diameter over insulation for the cable as shown in Figure (insert diagram). Then reference the Cable Diameter Range Table to select proper code.

Cable Adapters SS-ADP+Cable Diameter Range Code

Example:

For cable with over insulation diameter of 1.000, select the 35-ADP-E.

Cable Diameter Range Table

Range Code	Inches	mm
D	0.750 - 0.905	19.1 - 23.0
E	0.890 - 1.044	22.6 - 26.4
F	0.900 - 1.115	22.9 - 28.1
G	1.090 - 1.175	27.4 - 29.8
H	1.095 - 1.290	27.8 - 32.5
J	1.180 - 1.309	29.8 - 33.1
K	1.220 - 1.375	31.0 - 34.9
L	1.285 - 1.395	32.6 - 35.4
M	1.350 - 1.520	34.4 - 38.6
N	1.485 - 1.595	37.7 - 40.5
P	1.530 - 1.690	38.9 - 42.7
Q	1.575 - 1.685	40.0 - 42.8
R	1.600 - 1.795	41.3 - 45.2
S	1.775 - 1.875	45.1 - 47.6
T	1.845 - 1.905	46.9 - 48.6
U	1.995 - 2.095	50.1 - 52.2
V	2.005 - 2.145	51.4 - 54.5

ORDERING INFORMATION

Compression Connectors

To order a compression connector, select the connector type and reference to the conductor code table below for desired connector part number.

Bi-Metal Connector	600BMC + Conductor Code
Aluminum Connector	600AC + Conductor Code
Copper Connector	900CC + Conductor Code

Example:

For a 600A Bi-metal compression lug with a conductor code of 35 the part number would be: 600BMC35.

Compression Lug Conductor Code Chart

CONDUCTOR CODE	Concentric or Compressed		Compact or Solid	
	AWG or kcmil	mm ²	AWG or kcmil	mm ²
0092	#2	35	#1	-
0091	#4	-	#2	20
0010	1/0	58	2/0	76
0020	2/0	70	3/0	-
0030	3/0	-	4/0	93
0040	4/0	95	250	120
0230	250	120	300	150
0390	300	150	350	-
0330	350	-	400	185
0430	400	185	450/500	-
0430	450	-	500/550	240
0590	500	240	600	300
0530	550	-	650	-
0690	600	300	700	-
0650	650	-	750	400
0750	750	400	800	-
0890	800	-	900	-
0990	900	-	800*	500
1090	1000	500	-	-

ORDERING INFORMATION

Chardon Shear Bolt Connector

Example:

For a shear bolt connector with a conductor range between 20-90 kcmil, the part number would be: 290-B-23-041.

CATALOG NO.	Conductor Range(mm ²)
SBC-B-25-50/1	35 - 50
SBC-B-70-95/1	70 - 95
SBC-B-70-120/2	70 - 120
SBC-B-150-240/2	150 - 240
SBC-B-300-450/3	300 - 450
SBC-B-500/3	500
SBC-B-500-630/3	500 - 630

Insulating Plugs

35 kV, 600A Insulating Plug (AL)	35-IP300
35 kV, 600A Insulating Plug (AL) + End Cap	35-IP400C
35 kV, 600A Insulating Plug (AL) + End Cap + Stud	35-IP300C

Connecting Plugs

35 kV, 600A Deadbreak Connecting Plug (AL)	35-DCP600
35 kV, 900A Deadbreak Connecting Plug (CU)	35-DCP900

Threaded Studs

35 kV 600A Threaded Stud (AL)	35-STUD000
35 kV 900A Threaded Stud (CU)	35-STUD000

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35-DIC600

RECEPTÁCULO ISOLANTE BLINDADO - RIB - 35kV-600A



APPLICATION

The Chardon 600 Amp 35 kV Insulated Cap meets all the requirements of IEEE standard 386-2009. It provides insulated, fully shielded submersible protection for 35 kV class deadbreak interfaces and is fully interchangeable with competitor's products that also meet IEEE standard 386.

The Chardon Insulated Cap design incorporates peroxide cured, EPDM insulation rubber, and a semi-conducting insert and outer shield. The outer conductive shield maintains ground potential on the cap's surface when a grounding wire is connected to a common ground.

PRODUCTION TESTS

Tests conducted in accordance with IEEE/ANSI Standard 386.

- Minimum Corona Voltage Level – 50 kV
- AC 1 Minute Withstand – 26 kV

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 Ground	21.1 kV
AC 60Hz 1 Minute Withstand	50 kV
DC 15 Minute Withstand	100 kV
BIL and Fall Wave Crest	200 kV
Minimum Corona Voltage Level	26 kV

• Revision Date: 07/24/2014

DETAILED COMPOSITION OF THE CHARDON 35KV INSULATED CAP

SEMICONDUCTING SHIELD

Precision molded peroxide cured semi-conducting shield provides ground shield continuity and meets the requirements of IEEE Standard 992.

PULLING EYE

Stainless steel pulling eye for hotstick operations.

DRAIN WIRE TAB

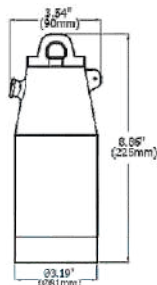
Drain wire tab provides a convenient point to connect drain wire to ensure grounding of the connector shield. A drain wire is included with the product.

THREADED ALUMINUM INSERT 5/8"-11 UNC 2A

Allows cap to be installed on bushing with a standard 600A stud.

INSULATION LAYER

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



ORDERING INFORMATION

Each kit includes the following:

- Insulated Cap
- Silicone Lubricant
- Installation Instruction Sheet
- Optional aluminum stud for 35-DIC600-SRV only

Standard Cap without stud	35-DIC600
Standard Cap with removable stud	35-DIC600-SRV

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35-DJ600

BARRAMENTO DERIVAÇÃO 35kV-600/900A



APPLICATION

The Chardon 600A/900A, 35 kV Class Deadbreak Junction provides two, three or four deadbreak interfaces in an EPDM insulated rubber body. Deadbreak junctions are used in pad-mounted apparatus, underground vaults, and other installations to connect equipment and cable on primary feeder and network circuits.

Chardon deadbreak connectors feature bolted connections can be easily connected and disconnected. When mated with a comparably rated product, the junction provides a

fully shielded, submersible connection for deadbreak operation. The deadbreak junction is available with stainless steel adjustable brackets for mounting at various operating angles, or with stainless steel "U" straps for direct wall mounting.

Chardon deadbreak junctions are rated 900A continuous when copper components are used. To order a 900A product, please see the part number list in page 2.

PRODUCTION TESTS

Tests conducted in accordance with IEEE/ANSI Standard 386™:

- / AC 60 Hz 1 Minute Withstand – 50kV
- / Minimum Corona Voltage Level – 26 kV

Tests conducted in accordance with Chardon requirements:

- / Physical Inspection
- / Periodic Dissection
- / Periodic Fluoroscopic Analysis

VOLTAGE RATINGS AND CHARACTERISTICS

Voltage Class	35 kV
Max. Ruling Phase to Phase	31.1 MV
AC 1 Minute Withstand	50 kV
DC 15 Minute Withstand	100 kV
BIL and Full Wave Crest	200 kV
Minimum Corona Voltage Level	26 kV

CURRENT RATINGS AND CHARACTERISTICS

Description	Amps
Continuous	600 & up
4 Hour Overload	3,000 & up
Short Time	<ul style="list-style-type: none"> • 25,000 Amps symmetrical for 0.17s • 10,000 Amps symmetrical for 3.0s

• Revision Date: 07.10.2024

ORDERING INFORMATION

Each kit Contains:

- / Deadbreak Junction (with mounting bracket or straps, depending on product ordered)
- / Shipping Caps (not for energized operation)
- / Silicone Grease
- / Installation Instruction Sheet

Deadbreak Junction Part Numbers

Description	Junction Only	Junction with Stainless Steel Bracket	Junction with U-Straps
35 kV, 600A Deadbreak Junction - 2Way (AL)	35-D100F2	35-D100F2SS	35-D100F2U
35 kV, 900A Deadbreak Junction - 2Way (CU)	35-D300F2	35-D300F2SS	35-D300F2U
35 kV, 600A Deadbreak Junction - 3Way (AL)	35-D100F3	35-D100F3SS	35-D100F3U
35 kV, 900A Deadbreak Junction - 3Way (CU)	35-D300F3	35-D300F3SS	35-D300F3U
28 kV, 900A Deadbreak Junction - 4Way (AL)	25-D700F4	25-D700F4SS	25-D700F4U
35 kV, 900A Deadbreak Junction - 4Way (CU)	35-D300F4	35-D300F4SS	35-D300F4U

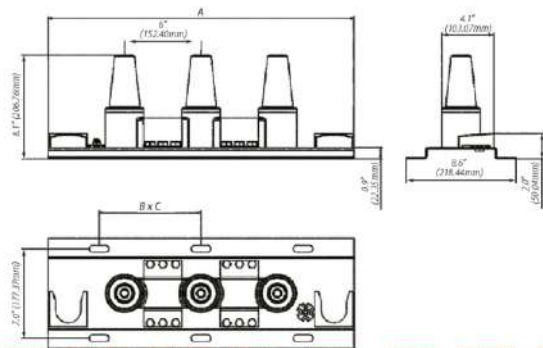
* Chardon provides adjustable brackets. To order a non-adjustable bracket, add "ADJ" to the end of part numbers. (for example, 35-D100F2SS-ADJ).

Replacement Parts

Description	Catalog Number
U-Strap kit with Hardware 1 strap	35-D100U
Stainless Steel Bracket Assembly (2-way)	35-D100T2S
Stainless Steel Bracket Assembly (3-way)	35-D100T3S
Stainless Steel Bracket Assembly (4-way)	35-D100T4S

* 1 U-Strap for a 2-way junction, and 2 and 3 U-Straps for a 3 or 4-way junction.

JUNCTION WITH BRACKET DIMENSIONAL INFORMATION

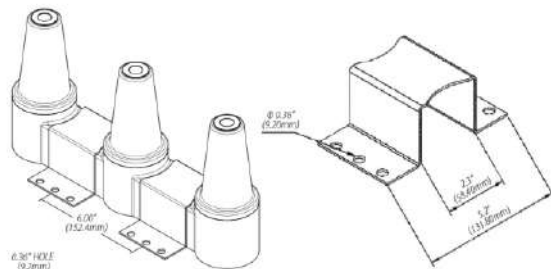


Dimensional Information

Number of Interfaces	Physical Dimensions In./mm		
	A	B	C
3-way	18.0 (457.2)	8.0 (203.2)	1
2-way	14.0 (355.6)	8.0 (203.2)	2
0-way	10.0 (254.0)	8.0 (203.2)	3

Configuration 1: Both feet turned out.
 Configuration 2: One feet turned out, the other in.
 Configuration 3: Both feet turned in.

JUNCTION WITH U-STRAP DIMENSIONAL INFORMATION



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35-TB600

TERMINAL BÁSICO BLINDADO

TBB - 35kV-600/900A



APPLICATION

The Chardon 600A/ 900A, 35kV Class T-Body Deadbreak Connector is used to terminate high-voltage underground cables to deadfront apparatus such as transformers, switches and switchgear. It is fully shielded, submersible, and meets the requirements of IEEE Std 386™ Standard- Separable Insulated Connector Systems.

The capacitive test point on the insulating plug provides a means of testing the circuit without disturbing the bolted connection. In addition to the capacitive test point feature on the insulating plug, Chardon offers an optional capacitive test point on the T-Body connector. This allows the use of fault indicators, and

provides a hotstick operable means of determining circuit condition when used with high impedance voltage sensing devices designed for test points.

T-Body Connectors are designed for use on solid dielectric cable (XLPE or EPR) with extruded semi-conductive shields and concentric neutral, with or without a jacket. Installation on jacketed concentric neutral cable may require additional sealing material. Special grounding adapter is available for tape shield, linear corrugated, unshield, and drain wire cables for use with Deadbreak connectors.

KEY FEATURES

- 100% factory production testing for partial discharge and AC withstand per IEEE 386.
- Peroxide cured EPDM rubber provides low tension set and high dielectric strength.
- Optional selection of test point installed to provide voltage indication.
- Molded semiconducting shield provides ground shield continuity per the requirements of IEEE 592.
- Grounding Tab and Stress Relief Cone design provide operational safety.
- Fully meets IEEE 386-2006 specifications.

PRODUCT RATINGS

Voltage Class	35 kV
Max. Rating Phase to Ground	23.1 kV
AC 1 Minute Withstand	50 kV
DC 15 Minute Withstand	100 kV
BIL and Full Wave Crest	300 kV
Minimum Corona Level	24 kV (1pC)
Continous	600 Arms
24 Hour Overload	1,000 Arms
Momentary	25,000A symmetrical 10 cycles / 10,000A symmetrical 3.00 sec

Voltage/Current ratings and characteristics are in accordance with IEEE Std 386 standard.

• Rev No 090 C7.10.2011

PRODUCTION TESTS

Tests conducted in accordance with IEEE Standard 386.

- AC 60 Hz 1 Minute Withstand - 50kV
- Minimum Corona Voltage Level - 26kV

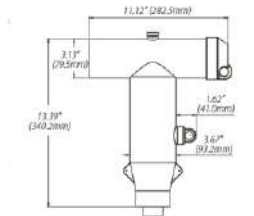
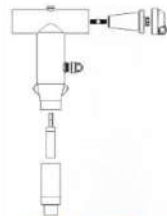
Tests conducted in accordance with Chardon Manufacturing Process requirements:

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

T-BODY KIT CONTENT

Tests conducted in accordance with IEEE Standard 386.

- T-Body
- Insulating Plug (AI for 600A, CI for 900A)
- Cable Adapter
- Stud
- Compression Lug (AI for 600A, CI for 900A)
- Silicone Grease



DETAILED COMPOSITION OF THE CHARDON T-BODY DEADBREAK CONNECTOR

T-BODY CONNECTOR BODY

Molded T-body adapts to all cable sizes and provides a dead front shielded connection.

SEMICONDUCTING INSERT

Precision molded peroxide cured semiconducting insert provides cone-like electrostatic shielding of the compression connector.

INSULATION LAYER

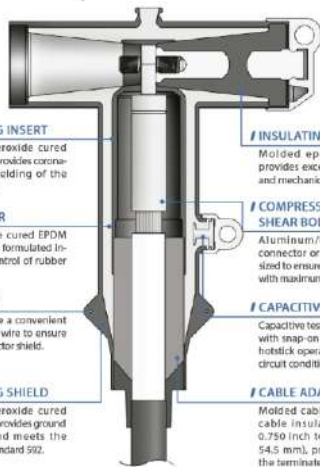
High quality peroxide cured EPDM insulation is mixed and formulated in-house for complete control of rubber characteristics.

DRAIN WIRE TABS

Drain wire tabs provide a convenient point to connect drain wire to ensure grounding of the connector shield.

SEMICONDUCTING SHIELD

Precision molded peroxide cured semiconducting shield provides ground shield continuity and meets the requirements of IEEE Standard 592.



INSULATING PLUG

Molded epoxy insulating plug provides excellent electrical, thermal and mechanical reliability.

COMPRESSION CONNECTOR/ SHEAR BOLT CONNECTOR

Aluminum/Copper compression connector or shear bolt connector is used to ensure a conforming connector with maximum current transfer.

CAPACITIVE TEST POINT

Capacitive test point on molded T-body with snap-on cap provides a SHIMMER hotstick operable means to determine circuit condition.

CABLE ADAPTER

Molded cable adapter, sized to fit cable insulation diameters from 0.750 inch to 2.145 inches (19.1 to 54.5 mm), provides stress relief for the terminated cable.

ORDERING INFORMATION

35-TB

STEP1

STEP2

STEP3

STEP1

Selection of Current Rating and test Point

Code	
600	600AMP WITHOUT Test Point
600T	600AMP WITH Test Point
900	900AMP WITHOUT Test Point
900T	900AMP WITH Test Point

Note:

- (1) 900A compression plugs are made from aluminum.
- (2) 900A insulating plugs include an aluminum conductor.
- (3) 900A compression plugs are made from copper.
- (4) 900A insulating plugs include a copper conductor.

STEP2

Selection of Cable Insulation Dimension

Range Code	Inches	mm
D	0.750 - 0.925	19.1 - 23.5
E	0.938 - 1.040	23.8 - 26.4
F	0.960 - 1.115	24.3 - 28.3
G	1.040 - 1.125	26.4 - 28.9
H	1.025 - 1.240	27.2 - 31.5
J	1.166 - 1.265	29.5 - 32.1
K	1.220 - 1.175	31.0 - 34.0
L	1.265 - 1.395	32.0 - 35.4
M	1.255 - 1.520	34.4 - 38.6
N	1.485 - 1.595	37.7 - 40.5
P	1.550 - 1.640	39.3 - 41.7
Q	1.375 - 1.665	46.0 - 42.8
R	1.665 - 1.795	42.3 - 45.3
S	1.725 - 1.825	43.3 - 47.0
T	1.810 - 1.925	45.9 - 49.0
U	1.925 - 2.055	49.3 - 52.2
V	2.025 - 2.145	51.4 - 54.5

ORDERING INFORMATION

15/25-TB

STEP 1

STEP 2

STEP 3

STEP 3

Selection of Conductor Size (Al or Cu) When selecting a shear bolt connector, use "shear bolt connector conductor code chart" and add

Conductor Code Table

SBC in the end of part number. For example, SBC-B-25-50/1.

CONDUCTOR CODE	Concentric or Compressed		Compact or Solid	
	AWG or kcmil	mm ²	AWG or kcmil	mm ²
0092	#2	35	#1	-
0091	#1	-	1/0	50
0010	1/0	90	3/0	70
0020	2/0	70	3/0	-
0030	3/0	-	4/0	95
0040	4/0	95	250	120
0210	250	130	300	130
0390	300	150	350	-
0310	350	-	400	105
0490	400	185	450/500	-
0430	450	-	500/550	240
0590	500	240	600	130
0510	550	-	600	-
0690	600	300	700	-
0630	650	-	750	400
0750	750	410	800	-
0800	800	-	900	-
0900	900	-	900/9	500
1000	1000	500	-	-

Note:
Aluminum lug and terminal for use on copper and aluminum conductors; copper lug for use on copper conductors only.

ORDERING INFORMATION

Chardon Shear Bolt Connector

D191916
For 2 Piece Bolt Connector with a conductor range between 20-50 mm², the part number would be: 35-50-1.

CATALOG NO.	Conductor Range(mm ²)
SBC-B-25-50/1	25 - 50
SBC-B-70-95/1	70 - 95
SBC-B-70-120/2	70 - 120
SBC-B-150-240/2	150 - 240
SBC-B-300-400/2	300 - 400
SBC-B-500-600/2	500 - 600



ORDERING EXAMPLE

For a Chardon 35 kV-Body Connector with a test point, cable insulation outer dimension of 1.65 inches, and a compression connector size of 550, the part number would be as follows:

35 - TB

600T

Q

0550

If a shear bolt connector is selected in this kit, the part number would be as follows:

35 - TB

600T

Q

SBC-B-25-50/1

The part number includes the insulating plug, cap, and stud.

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REDES ELÉTRICAS SUBTERRÂNEAS

15/25-600A
Replacement Part

CÓDIGO

COMPONENTES DO TERMINAL BÁSICO BLINDADO TBB - 25kV-600A



APPLICATION

Chardon 600A 15 and 25kV Class Deadbreak Accessories are used to connect and assemble 600A products to provide fully shielded and submersible connections.

Chardon's products meet all the requirements of IEEE Standard 386, and are fully interchangeable with competitor's products that also meet IEEE standard 386.

PRODUCTION TESTS

Tests conducted in accordance with IEEE/ANSI Standard 386™:

- / AC 60 Hz 1 Minute Withstand – 40 kV
- / Minimum Corona Voltage Level – 19 kV

VOLTAGE RATINGS AND CHARACTERISTICS

Voltage Class	25 kV
Max. Rating Phase-to-Ground	56.3 kV
AC 1 Minute Withstand	40 kV
DC 15 Minute Withstand	76 kV
80% and Full Wave Crest	123 kV
Minimum Corona Voltage Level	19 kV

CURRENT RATINGS AND CHARACTERISTICS

Description	Amps
Continuous	600 A (B)
24 Hour Overload	1,000 Ams
Short Time	+ 25,000 A max (symmetrical for 0.175) + 19,000 A max (asymmetrical for 2.0)

+ 0216-0004-REPLACEMENT PART 0011 10-REV03

INSULATING PLUG (EPOXY) AND CAP

A one-inch socket and torque wrench are needed to tighten the insulating plug into a de-energized deadbreak connector and mating apparatus. Refer to Chardon instruction sheet for detail.

Capacitive test point allows circuit testing without interrupting the connection. The one inch-hex head provides easy assembly to the connector and mating parts.

A semi-conducting EPDM rubber cap fits over the insulating plug for a waterproof seal and deadfront shielding.



CONNECTING PLUG (EPOXY)

A spanner wrench is used to tighten the connecting plug into a deenergized deadbreak connector or mating part.

A conductive coating around the center provides continuity of semiconducting shield with EPDM shield of mating parts. Holes in the part allow easy assembly using a spanner wrench.

Chardon connecting plugs can be used for connecting 2 or more 600A deadbreak connectors.



THREADED STUD

The threaded stud is used with a T-Body connector or splices to connect reducing well plugs, deadbreak tap plugs, deadbreak tap plugs, connecting plugs, and insulating plugs to other components or apparatus bushings.



CABLE ADAPTER (EPDM)

Molded cable adapter is available in sizes to fit cables from 0.640" to 1.985" in diameter (16.3 mm to 49.9 mm). The Chardon cable adapter is molded with high quality peroxide cured insulation and semiconductive.



COMPRESSION CONNECTOR

Compression connectors are available in all aluminum, all copper (for 900A applications), or bi-metal designs. All are available with threaded and unthreaded holes. See Conductor Code Table for proper application. All connectors are designed for use with either aluminum or copper conductors.



CHARDON SHEAR BOLT CONNECTOR

Chardon shear bolt connectors are designed for use in low and medium voltage connection. The tool require disastandard ratchet wrench with a hexagonal socket; no crimping tools needed in field operation.



ORDERING INFORMATION

Cable Adapters

These adapters are used on Chardon T-Bodies. To select the correct adapter, determine the minimum and maximum diameter over insulation for the cable as shown in Figure (insert diagram). Then reference the Cable Diameter Range Table to select proper code.

Cable Adapters 25-ADP+Cable Diameter Range Code

Example

For cable with nominal insulation diameter of 1.400", select the 25-ADP-L.

Cable Diameter Range Table

Range Code	Inches	mm
A	0.640 - 0.760	16.3 - 19.3
B	0.720 - 0.845	18.3 - 21.5
C	0.700 - 0.970	17.8 - 24.6
D	0.810 - 1.065	20.6 - 27.1
E	0.900 - 1.140	22.9 - 29.0
F	1.080 - 1.280	27.4 - 32.5
G	1.220 - 1.420	31.0 - 36.1
H	1.380 - 1.560	35.0 - 39.6
J	1.450 - 1.750	36.8 - 44.3
K	1.840 - 1.840	46.7 - 46.7
L	1.780 - 1.965	45.2 - 49.9

ORDERING INFORMATION

Compression Connectors

To order a compression connector, select the connector type and reference to the conductor code table below for desired connector part number.

Bi-Metal Connector	600BMC + Conductor Code
Aluminum Connector	600AC + Conductor Code
Copper Connector	900CC + Conductor Code

Details:

For a 600A Bi-metal compression lug with a conductor code of 500, the part number would be 600BMC503.

Compression Lug Conductor Code Chart

CONDUCTOR CODE	Concentric or Compressed		Compact or Solid	
	AWG or kcmil	mm ²	AWG or kcmil	mm ²
0092	42	33	41	-
0091	46	-	1/0	58
0010	1/0	39	2/0	76
0020	2/0	79	3/0	-
0030	3/0	-	4/0	93
0040	4/0	95	250	120
0240	250	130	300	150
0340	300	150	350	-
0330	350	-	400	185
0490	400	185	450/500	-
0430	450	-	500/550	240
0540	500	240	600	300
0530	550	-	650	-
0690	600	300	700	-
0640	650	-	750	400
0750	750	400	800	-
0890	800	-	900	-
0990	900	-	900B	500
0690	1000	500	-	-

ORDERING INFORMATION

Chardon Shear Bolt Connector

Example:

For a shear bolt connector with a conductor range between 20-90 kcmil, the part number would be 19C-B-23-041.

CATALOG NO.	Conductor Range(mm ²)
SBC-B-35-50/1	25 - 50
SBC-B-70-95/1	70 - 95
SBC-B-70-120/2	70 - 120
SBC-B-150-240/2	150 - 240
SBC-B-300-400/3	300 - 400
SBC-B-500/3	500
SBC-B-500-620/3	500 - 620

Insulating Plugs

15/25 kV, 600A Insulating Plug (AL)	25-IP600
15/25 kV, 600A Insulating Plug (AL) + End Cap	25-IP600C
15/25 kV, 600A Insulating Plug (AL) + End Cap + Stud	25-IP600S

Connecting Plugs

15/25 kV, 600A Deadbreak Connecting Plug (AL)	25-DCP60
15/25 kV, 600A Deadbreak Connecting Plug (CU)	25-DCP600

Threaded Studs

15/25 kV 600A Threaded Stud (AL)	25-STUD600
15/25 kV 900A Threaded Stud (CU)	25-STUD900

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CÓDIGO **15/25-AB600**

BUCHA DE LIGAÇÃO DE EQUIPAMENTO - BLE - 25kV-600A



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APPLICATION

The Chardon 15/25kV 600A Apparatus Bushing meets all requirements of IEEE Standard 386-2016 (separable insulated connector system). It is designed for the termination of primary winding leads at the face plate of SF6 oil filled (or approved equivalents) single phase and three phase transformers and switchgear rated at

8.3/14.4kV, 15.2/26.3kV. The bushing is externally mounted and clamped in place with stainless steel 4 hole mounting clamps. It fits in a 2.875inch (73.0mm) hole on the apparatus tank wall. All 600 A separable connectors manufactured according to IEEE Std 386-2016 standard will operate with this bushing.

INSTALLATION

The Chardon bushing is installed on the tank wall of the SF6 gas filled (or approved equivalents) transformer or switchgear. The rubber gasket is placed in the groove on the rear side of the bushing well (facing

the transformer or switchgear). The steel clamp is then placed over the bushing, and through the threaded studs mounted on the tank wall. The clamp is then bolted in place.

PRODUCTION TESTS

- / AC 60Hz 1 Minute Withstand – 40kV
- / Minimum Corona Voltage – 19kV (3pC)

Internal CHARDON Quality assurance requirements:

- / Physical inspection
- / Periodic Fluoroscopic (X-ray) Inspection

VOLTAGE RATINGS

Standard Voltage Class	25kV
Maximum Rating Phase-to-ground	15.2kV
AC 60Hz 1 Minute Withstand	40kV
BIL and Full Wave Cest	125kV
Minimum Corona Voltage Level	19kV

CURRENT RATINGS

Description	Test Parameters
Continuous	600 amps rms
Short Time	<ul style="list-style-type: none">• 25,000 amps rms symmetrical for 0.17 s• 10,000 amps rms symmetrical for 3.0 s

ORDERING INFORMATION

15/25kV 600A Apparatus Bushing w/o Stud, Nut, Gasket and Clamp	15/25-AB600
15/25kV 600A Apparatus Bushing w/ Stud, Nut, Gasket and 4 Hole clamp	15/25-AB600 4SS

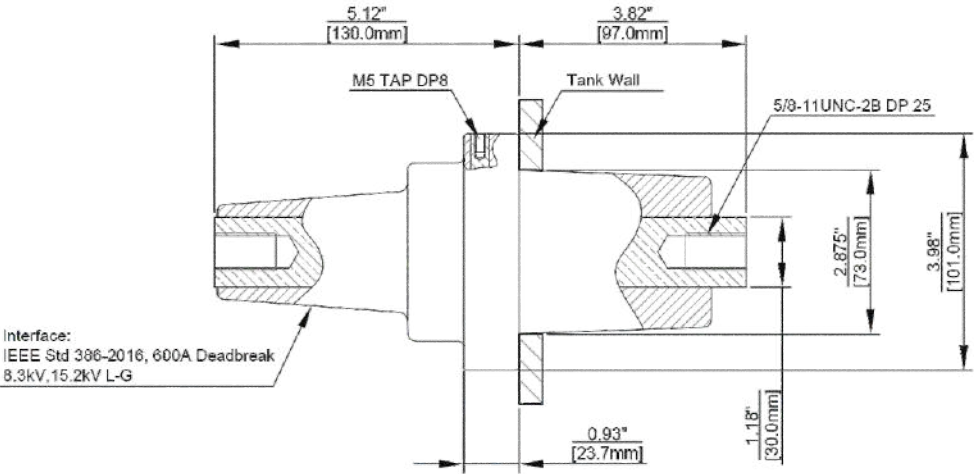


Figure 1. 15/25kV 600A Apparatus Bushing

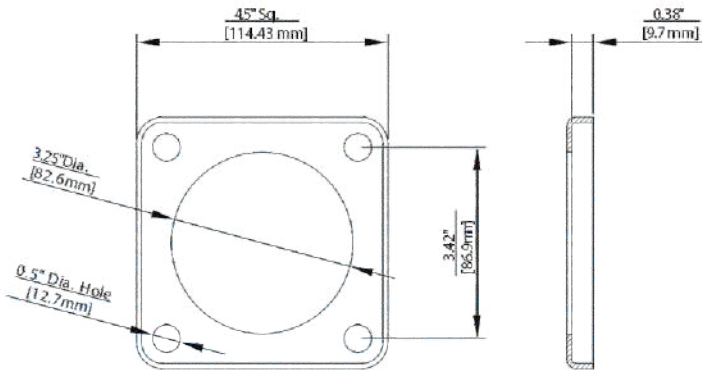


Figure 2. 4 Hole Clamp

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CÓDIGO **15/25-TB600**

TERMINAL BÁSICO BLINDADO

TBB - 25kV-600/900A



Chardon 15/25-TB-600 and 15/25-TB-600T elbows are designed to terminate underground cables to high-voltage apparatus such as transformers and switchgear. They are fully shielded fully submersible and meet the requirements of IEEE Standard 386. They are interchangeable with other manufacturers products that conform with this industry standard.

The capacitive test point on the insulating plug provides a means of testing the circuit without disturbing the bolted connection. In addition to the capacitive test point feature on the insulating plug, Chardon offers an optional capacitive test point on the T-Body connector.

KEY FEATURES

- / 100% factory production testing for partial discharge and AC withstand per IEEE 386.
- / Peroxide cured EPDM rubber provides low tension set and high dielectric strength.
- / Optional selection of test point installed to provide voltage indication.

PRODUCT RATINGS

Voltage Class	25 kV
Max. Rating Phase to Ground	15.1kV
AC 1 Minute Withstand	40 kV
DC 15 Minute Withstand	78 kV
Bitand Full Wave Crest	125 kV
Minimum Corona Level	21.5W (3pC)
Continuous	400Arms
24 Hour Overload	1,000Arms
Momentary	25,000A symmetrical 10 cycles / 10,000A symmetrical 3.00 sec.

Voltage/Current ratings and characteristics are in accordance with IEEE Std 386 standard.

- 15/25-TB00-000410-REV05

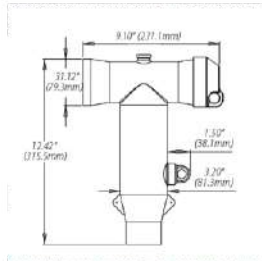
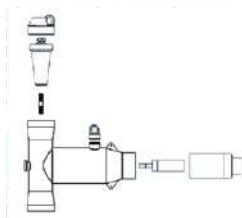
This allows the use of the fault indicators, and provides a hotstick operable means of determining circuit condition when used with high impedance voltage sensing devices designed for test points.

T-Body Connectors are designed for use on solid dielectric cable (XLPE or EPR) with extruded semi-conductive shields and concentric neutral, with or without a jacket. Installation on jacketed concentric neutral cable may require additional sealing material. A special grounding adapter is available for tape shield, linear corrugated, unshield, and drain wire cables for use with Deadbreak connectors.

- / Molded semiconducting shield provides ground shield continuity per the requirements of IEEE 592.
- / Grounding Tab and Stress Relief Cone design provide operational safety.
- / Fully meets IEEE 386-2006 specicate

Tests conducted in accordance with IEEE Standard 386.

- / T-Body
- / Insulating Plug (AI for 600A, Cu for 900A)
- / Cable Adapter
- / Stud
- / Compression Lug (AI for 600A, Cu for 900A)
- / Silicone Grease
- / Installation Instructions Sheet



PRODUCTION TESTS

Tests conducted in accordance with IEEE Standard 386.

- / Minimum Corona Voltage Level - 19kV (3pC)
- / AC 1 Minute Withstand - 40kV

Tests conducted in accordance with Chardon Manufacturing Process requirements:

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

DETAILED COMPOSITION OF THE CHARDON 15/25KV 600A T-BODY DEADBREAK CONNECTOR

T-BODY CONNECTOR BODY

Molded T-body adapts to all cable sizes and provides a dead front shielded connection.

SEMICONDUCTING INSERT

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

INSULATION LAYER

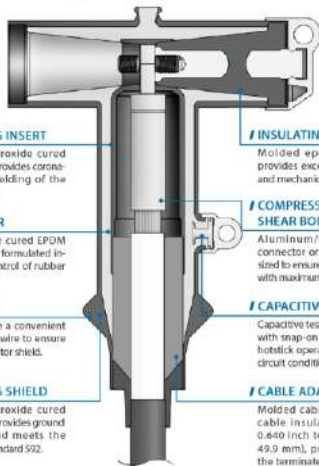
High quality peroxide cured EPDM insulation is mixed and formulated in-house for complete control of rubber characteristics.

DRAIN WIRE TABS

Drain wire tabs provide a convenient point to connect drain wire to ensure grounding of the connector shield.

SEMICONDUCTING SHIELD

Precision molded peroxide cured semiconducting shield provides ground shield continuity and meets the requirements of IEEE Standard 592.



INSULATING PLUG

Molded epoxy insulating plug provides excellent electrical, thermal and mechanical reliability.

COMPRESSION CONNECTOR/ SHEAR BOLT CONNECTOR

Aluminum/Copper compression connector or shear bolt connector is sized to ensure a cool running connector with maximum current transfer.

CAPACITIVE TEST POINT

Capacitive test point on molded T-body with snap-on cap provides a SIMPLE, hotstick operable means to determine circuit condition.

CABLE ADAPTER

Molded cable adapter, sized to fit cable insulation diameters from 0.840 inch to 1.995 inches (16.3 to 49.9 mm), provides stress relief for the terminated cable.

ORDERING INFORMATION

15/25-TB

STEP1

STEP2

STEP3

STEP1

Selection of Current Rating and test Point

Code	
600	600AMP WITHOUT Test Point
600T	600AMP WITH Test Point
900	900AMP WITHOUT Test Point
900T	900AMP WITH Test Point

Note

- (1) 600A compression lugs are made from aluminum.
- (2) 900A insulating plugs and caps are aluminum. (3) 900A compression lugs are made from copper.
- (3) 900A insulating plugs and caps are copper conductors.

STEP2

Selection of Cable Insulation Dimension

Range Code	Inches	mm
A	0.640 - 0.750	16.3 - 19.3
B	0.720 - 0.945	18.3 - 21.5
C	0.705 - 0.970	18.0 - 24.6
D	0.910 - 1.065	23.1 - 27.1
E	0.980 - 1.140	24.9 - 29.0
F	1.000 - 1.200	27.4 - 32.5
G	1.220 - 1.420	31.0 - 36.1
H	1.360 - 1.560	34.5 - 39.6
J	1.400 - 1.700	37.0 - 45.2
K	1.040 - 1.340	41.7 - 46.7
L	1.700 - 1.955	45.2 - 49.9

ORDERING INFORMATION

15/25-TB	STEP 1	STEP 2	STEP 3
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STEP 3

Selection of Conductor Size (Al, Cu or Bi-Metal), add BMC in end of part number if a bi-metal lug is required. For example, 0002BMC; add CC in end of part number if a Copper lug is required. For example, 0002CC; add Al in end of

part number if a Aluminum lug is required. For example, 0002Al. When selecting a shear bolt connector, use shear bolt connector conductor code chart and add SBC in the end of part number. For example, SBC-B-25-50/1.

Conductor Code Table

CONDUCTOR CODE	Concentric or Compacted		Compact or Solid	
	AWG or (cmil)	mm ²	AWG or (cmil)	mm ²
0002	42	55	41	-
0004	40	-	1/0	56
0010	1/0	50	2/0	76
0020	2/0	70	3/0	-
0030	3/0	-	4/0	95
0040	4/0	95	250	120
0210	250	120	300	150
0300	300	150	350	-
0350	350	-	400	185
0400	400	185	450/500	-
0450	450	-	500/550	240
0500	500	240	600	300
0550	550	-	650	-
0600	600	300	700	-
0650	650	-	750	400
0700	750	400	800	-
0800	800	-	900	-
0900	900	-	900	500
1000	1000	500	-	-

Notes:
Aluminum lug and Bi-Metal Lug for use on copper and aluminum conductors (Copper lug for use on copper conductors only)

ORDERING INFORMATION

Chardon Shear Bolt Connector

0109 516
Part 2 Shear Bolt Connector with a conductor range between 20-50 mm², 1/4" part number see table (SBC-B-25-50).

CATALOG NO.	Conductor Range(mm ²)
SBC-B-25-50/1	25 - 50
SBC-B-70-95/1	70 - 95
SBC-B-70-120/2	70 - 120
SBC-B-150-240/2	150 - 240
SBC-B-300-400/2	300 - 400
SBC-B-500/3	500



ORDERING EXAMPLE

An 15/25 kV Elbow, with a test point, and with copper lug required cable insulation dimension of 1.45 inch, and the compressed cable conductor size type is 550, the part number would be as follows:

15/25-TB	900T	H	0550CC
----------	------	---	--------

If a shear bolt connector is selected in this kit, the part number would be as follows:

15/25-TB	900T	H	SBC-B-25-50/1
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The part number includes the insulating plug, cap, and stud.

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25-BE600/900
35-BE600/900

CÓDIGO

EXTENSOR DE BUCHA BE - 25/35kV-600/900A



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APPLICATION

The Chardon 25/35 kV 600/900A bushing Extender allows for coupling reducing tap plugs, connecting plugs and apparatus bushings. When assembled to mating apparatus, it provides a completely submersible, fully shielded and insulated connection for deadbreak applications that meet the requirements of IEEE Std 386™ standard.

KEY FEATURES

- Provides a fully shielded and submersible connection.
- No minimum phase clearance requirements.

PRODUCTION TESTS

Tests conducted in accordance with IEEE 386:

- Partial Discharge
- AC Withstand
- Impulse Withstand

Tests conducted in accordance with Chardon manufacturing process requirements:

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

PRODUCT RATINGS

Voltage Ratings	25 kV	35 kV	Current Ratings	600 A	900 A
Voltage Class, Phase-to-Phase	25 kV	35 kV	Continuous	600 A rms	900 A rms
Max. Op. Voltage - (phase-to-ground)	15.2 kV	21.1 kV	4 Hours Overload	900 A rms	1200 A rms
Corona Voltage Level	19 kV	26 kV	Continuous	25,000 rms rms/phase for 0.17 s	40,000 rms rms/phase for 0.17 s
AC Withstand (1 minute)	40 kV	50 kV		15,000 rms rms/phase for 300 s	18,000 rms rms/phase for 300 s
Impulse Withstand Voltage (BIL)	125 kV	200 kV			

DETAILED COMPOSITION OF THE CHARDON 25KV 600/900A BUSHING EXTENDER

SEMICONDUCTING SHIELD

Precision molded peroxide cured semiconducting shield provides ground shield continuity.

DRAIN WIRE TAB

Drain wire tabs provide a convenient point to connect drain wire to ensure grounding of the connector shield.

INSULATION LAYER

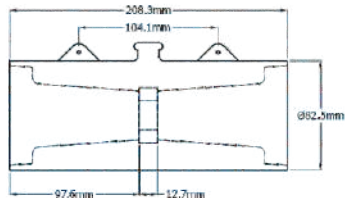
High quality peroxide cured EPDM insulation is mated and formulated in-house for complete control of rubber characteristics.

SEMICONDUCTING INSERT

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

METAL

600A for aluminum and 900A for copper conductors



ORDERING INFORMATION

25 kV 600A Bushing Extender

25-BE600

25 kV 900A Bushing Extender

25-BE900

**DETAILED COMPOSITION OF THE CHARDON
35kV 600/900A BUSHING EXTENDER**

ORDERING INFORMATION

SEMICONDUCTING SHIELD

Precision molded peroxide cured semiconducting shield provides ground shield continuity.

DRAIN WIRE TAP

Drain wire tabs provide a convenient point to connect drain wire to ensure grounding of the connector shield.

INSULATION LAYER

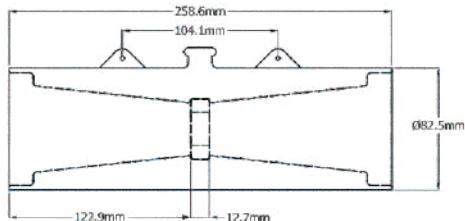
High quality peroxide cured EPDM insulation is mixed and formulated in-house for complete control of rubber characteristics.

SEMICONDUCTING INSERT

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

METAL

600A for aluminum and 900 A for copper conductors



35 kV 600A Bushing Extender

35-BE600

35 kV 900A Bushing Extender

35-BE900

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CÓDIGO **28-DJ200**

PLUG DE DERIVAÇÃO T - 25kV-200A



APPLICATION

The Chardon 28 kV 200A Deadbreak Splice provides a fully shielded, submersible and separable cable connection. The Deadbreak Splice provides a convenient method for connecting, looping and tapping 200A deadbreak elbows and other accessories at locations where space, cable organization, flexibility and operability are important. Its design incorporates a lightweight, damage resistant EPDM rubber developed in-house. The Chardon Deadbreak Splice fully meets the requirements of ANSI/IEEE Standard 386, and is available at a voltage class of 28 kV.

PRODUCTION TESTS

Tests conducted in accordance with IEEE/ANSI Standard 386.

- / Minimum Corona Voltage Level – 21.5 kV
- / AC 1 Minute Withstand – 45 kV

Tests conducted in accordance with Chardon manufacturing process requirements:

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

VOLTAGE RATINGS

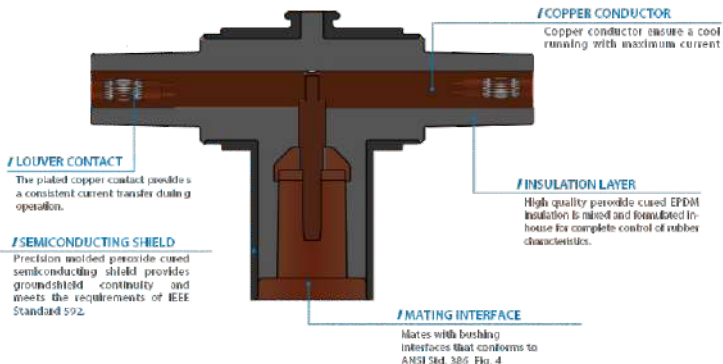
Voltage Class	28 kV
Max. Rating Phase to Ground	16.2 kV
AC 1 Minute Withstand	45 kV
RL and RLL Withstand	125 kV
Minimum Corona Voltage Level	21.5

• 38-D320-7021 (104-907)

CURRENT RATINGS

Description	Test Parameters
Continuous	200 amps rms
Short Time	• 10,000 amps rms symmetrical for 0.1 s • 1,500 amps rms symmetrical for 3.0 s

DETAILED COMPOSITION OF THE CHARDON DEADBREAK SPLICE

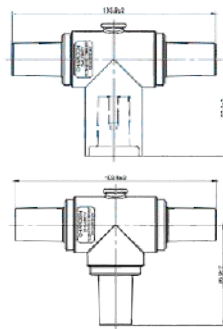


ORDERING INFORMATION

Item	Ordering Code
Deadbreak Splice 2-way (Male Interface)	28-D320-S2
Deadbreak Splice 2-way (Two Male + One Female)	28-D320-T2
Deadbreak Splice 3-way (Three Male Interfaces)	28-D320-T3



2-way Splice (2-way)





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