Deadbreak - Norma IEC

Acessórios desconectáveis

CATÁLOGO DE PRODUTOS

GRUPO

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REDES ELÉTRICAS SUBTERRÂNEAS

37 ANOS

LINHA COMPLETA DE PRODUTOS PARA REDES ELÉTRICAS SUBTERRÂNEAS

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REDES ELÉTRICAS SUBTERRÂNEAS

37 ANOS EXPERIÊNCIA E INOVAÇÃO CONSTANTE.

CÓDIGO 24-CE250

TERMINAL DESCONECTÁVEL COTOVELO - TDC-17,5/24kV-250A

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APPLICATION

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

The Chardon Deadbreak Elbow meets all the requirements of HD629.1 , EN-50180 , EN-50181 & IEC 60502, and is fully interchangeable with competitor's products and mating products that meet EN-50180 & EN-50181.

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 Connecters a copper probe. Combined with the bi-metal compression lug, this ensures a reliable operating connection.

PRODUCTION TESTS

Tests conducted in accordance with HD 629.1.

- Minimum Corona Voltage Level – 22 kV < 3 pC
- AC 1 Minute Withstand – 60 kV
- Test Point Voltage Test

Tests conducted in accordance with Chardon manufacturing process requirements:

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

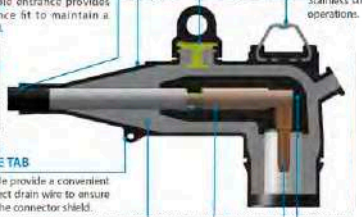
VOLTAGE RATINGS

Maximum Voltage Class (U_m)	24 kV
AC 5 Minute Withstand	57 kV
Minimum Corona Voltage Level	22 kV < 3pC
BIL and Full Wave Crest (Impulse)	125 kV

CURRENT RATINGS

Continuous Current	250 A
Overload Current (8 hour maximum)	300 A

DETAILED COMPOSITION OF THE CHARDON DEADBREAK CONNECTOR



SEMICONDUCTING SHIELD
Precision molded peroxide cured semiconducting shield provides ground shield continuity and meets 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 table 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.

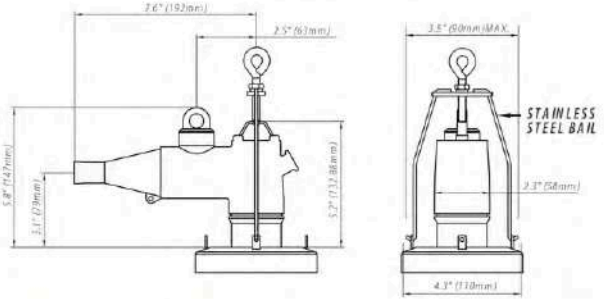
CAPACITIVE TEST POINT
Capacitive test point on molded Elbow with snap-on cap provides a shielded, hotstick operable means to determine circuit condition.

PULLING EYE
Stainless steel pulling eye for hotstick operations.

SEMICONDUCITING 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 CONNECTOR



ORDERING INFORMATION

17.5/24kV Deadbreak Elbow

Each kit Contains:

- Elbow body
- Bi-Metal Compression Lug
- Copper Probe
- Probe Installation Tool
- Bail Assembly
- Silicone Grease
- Installation Instruction Sheet

To order a Chardon 24kV Deadbreak Elbow Kit, follow the steps below:

24-CE250	"W"	"X"	"Y"	"Z"

"W" = Enter T if you need a Capacitive Test Point

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

"Y" = Conductor Code for Compression Connectors (See Conductor Table)

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

If a shear bolt connector (SBC) is selected instead, the part number would be as follows:

24-CE250	"W"	"X"	"C"	SBC CATALOG NO.

Cable Range Table (Insulation Diameter)

Cable Range Code	Inches	Millimeters
AA	0.583 - 0.665	12.0 - 17.4
A	0.643 - 0.807	16.3 - 20.5
B	0.768 - 0.945	19.5 - 24.0
C	0.898 - 1.106	23.0 - 28.1

Conductor Code Table (Compression Connectors)

CONDUCTOR CODE	Concentric or Compressed		Compact or Solid	
	AWG or kcmil	mm²	AWG or kcmil	mm²
01	#6	-	#8	-
02	#4	-	#3	25
03	#3	25	#2	35
04	#2	35	#1	-
05	#1	-	1/0	50
06	1/0	50	2/0	70
07	2/0	70	3/0	-
08	3/0	-	4/0	95
09	4/0	95	250	120
10	250	120	300	-

Shear Bolt Connector Selection Guide

Catalog No.	Conductor Range (mm²)	Remarks
2005BC-25-50/1-AL	25-50	Only suitable for Cable Range Code A
2005BC-70-95/1-AL	70-95	Only suitable for Cable Range Code B and C
2005BC-25-95/1-AL	25-95	Only suitable for Cable Range Code B and C
2005BC-120/1-AL	120	Only suitable for Cable Range Code B and C

2005BC Series

Example:
For Shear Bolt Connector with a conductor Range between 25-50 mm²,
the part number would be: 2005BC-25-50/1-AL

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CÓDIGO 24-CL250

TERMINAL DESCONECTÁVEL RETO - TDR-17,5/24kV-250A

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APPLICATION

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

The Chardon Deadbreak Straight meets all the requirements of HD629.1 , EN-50180 , EN-50181 & IEC 60502, and is fully interchangeable with competitor's products and mating products that meet EN-50180 & EN-50181.

Chardon Deadbreak Straight Connectors are molded using high quality peroxide – cured insulatingand semi-conducting EPDM rubber. All insulating rubber is compounded in house, using Chardon -developed proprietary formulations. Chardon Deadbreak Straight Connector contains a copper or bi-metal conductor contact, this ensures a reliable operating connection.

PRODUCTION TESTS

Tests conducted in accordance with HD 629.1.

- Minimum Corona Voltage Level – 22 kV < 3 pC
- AC 1 Minute Withstand – 60 kV
- Test Point Voltage Test

Tests conducted in accordance with Chardon manufacturing process requirements:

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

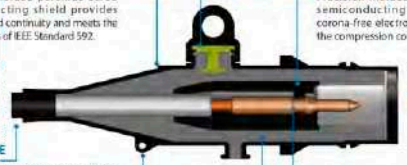
VOLTAGE RATINGS

Maximum Voltage Class (U_m)	24 kV
AC 5 Minute Withstand	57 kV
Minimum Corona Voltage Level	22 kV < 3pC
BIL and Full Wave Crest (Impulse)	125 kV

CURRENT RATINGS

Continuous Current	200 A
Overload Current (8 hour maximum)	300 A

DETAILED COMPOSITION OF THE CHARDON DEADBREAK STRAIGHT CONNECTOR



/ CAPACITIVE TEST POINT
Capacitive test point on molded Straight Connector with snap-on cap provides a shielded, 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.

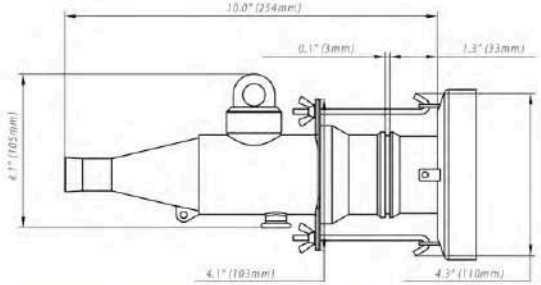
/ CABLE ENTRANCE
The sized cable entrance provides an interference fit to maintain a watertight seal.

/ CONDUCTOR CONTACT
Tin plated copper connector ensures reliable electrical connection.

/ DRAIN WIRE TAB
Drain wire 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.

DETAILED COMPOSITION OF THE CHARDON DEADBREAK STRAIGHT CONNECTOR



ORDERING INFORMATION

17.5/24kV Straight Connector

Each kit Contains:

- Straight Connector body
- Ball Assembly
- Installation Instruction Sheet
- Conductor Contact
- Silicone Grease

To order a Chardon 24kV Deadbreak Straight Connector Kit, follow the steps below:

24-CL250	"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	0.500-0.685	12.9-17.4
A	0.642 - 0.807	16.3 - 20.5
B	0.768 - 0.945	19.5 - 24.0
C	0.906 - 1.106	23.0 - 28.1

Conductor Code Table (Compression Connectors)

CONDUCTOR CODE	Concentric or Compressed		Compact or Solid	
	AWG or kcmil	mm²	AWG or kcmil	mm²
03	#1	35	#2	35
04	#2	35	#1	-
05	#1	-	1/0	50
06	1/0	50	2/0	70
07	2/0	70	3/0	-
08	3/0	-	4/0	95
09	4/0	95	250	120
10	250	120	300	-

Shear Bolt Connector Selection Guide

Catalog No.	Conductor Range (mm²)	Remarks
2005BC-25-50/1-AL	25-50	Only suitable for Cable Range Code A
2005BC-70-95/1-AL	70-95	Only suitable for Cable Range Code B and C
2005BC-25-95/1-AL	25-95	Only suitable for Cable Range Code B and C
2005BC-120/1-AL	120	Only suitable for Cable Range Code B and C

Example:
For Shear Bolt Connector with a conductor Range between 25-50 mm², the part number would be: 2005BC-25-50/1-AL

2005SBC Series

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CÓDIGO 24-DBI250

PLUGUE DE INSERÇÃO SIMPLES - PIS-17,5/24kV-250A

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APPLICATION

The Chardon Deadbreak Bushing Insert threads into a standard 250A bushing well. It is a fully shielded, fully submersible separable connector designed for deadbreak operation. The Chardon Deadbreak Bushing Insert is suitable for 17.4/24 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 HD629.1 , EN-50180 , EN50181 & IEC 60502, and is fully interchangeable with competitor's products and all mating products that also meet EN-50180 & EN-50181.

PRODUCTION TESTS

Tests conducted in accordance with IEEE/ANSI Standard 386.

- Minimum Corona Voltage Level – 22 kV < 3 pC
- AC 1 Minute Withstand – 60 kV
- Test Point Voltage Test

Tests conducted in accordance with Chardon manufacturing process requirements:

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

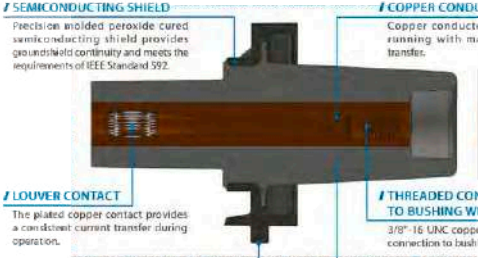
VOLTAGE RATINGS

Maximum Voltage Class (U_m)	24 kV
AC 5 Minute Withstand	57 kV
Minimum Corona Voltage Level	22 kV < 3pC
BIL and Full Wave Crest (Impulse)	125 kV

CURRENT RATINGS

Continuous Current	250 A
Overload Current (8 hour maximum)	300 A

DETAILED COMPOSITION OF THE CHARDON DEADBREAK BUSHING INSERT



SEMICONDUCTING SHIELD
Precision molded peroxide cured semiconducting shield provides groundshield 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 tabs provide a convenient point to connect drain wire to ensure grounding of the connector shield.

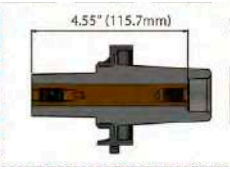
INSULATION LAYER
High quality peroxide cured EPDM insulation is mixed and formulated in-house for complete control of rubber characteristics.

ORDERING INFORMATION

250A, 24 kV Deadbreak Bushing Insert	**24-DBI250**

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 24-DIB250

BUCHA DE LIGAÇÃO DE EQUIPAMENTO - BLE-24kV-250A

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APPLICATION

The Chardon 24kV Interface A1 equipment bushing meets the full requirement of EN 50180, EN 50181&IEC 60137, provides a sliding interface made of quality epoxy. The part is used in equipment insulated with oil fluid, such as transformers, switchgears and capacitors. It equipped with 6 tabs for the ball restraint.

PRODUCTION TESTS

Tests conducted in accordance with IEC 60137

- Minimum Corona Voltage Level - 20.8 kV
- AC 5 Minute Withstand - 55 kV

Tests conducted in accordance with Chardon manufacturing process requirements:

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

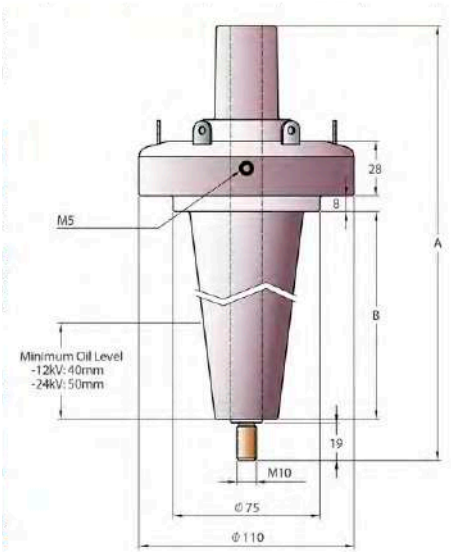
VOLTAGE RATINGS

Voltage Class (U_m)	24 kV
AC 5 Minute Withstand	55 kV
BIL and Full Wave Crest	125 kV
Minimum Corona Voltage Level	20.8 kV < 10 pC

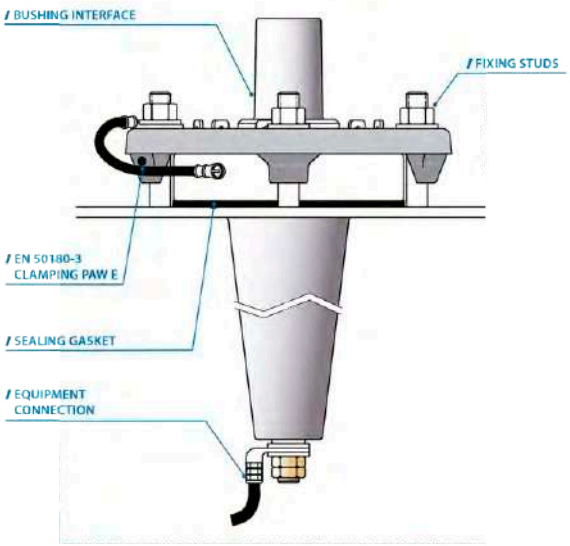
CURRENT RATINGS

Continuous Current	250 A

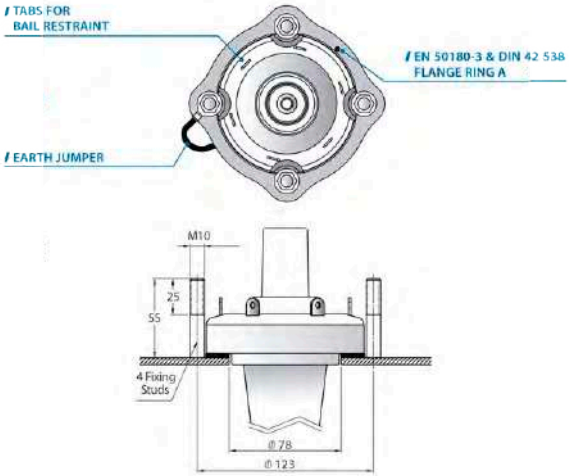
ORDERING INFORMATION



Chardon Part Number	Dimensions	
	A	B
24-DIB250-1-I	284	168
24-DIB250-2-I	322	806
24-DIB250-3-I	171	55



Fixings For Interface A1 Equipment Bushings EN 50180-3 & DIN 42 538



Note:
To order components with the bushing, please follow the chart below:

Earth Lead	Chardon Part Number + EL
Earth Plate	Chardon Part Number + EP
Flange kit (Optional)	Chardon Part Number + EL + FL or EP + FL

Ordering Example:

To order a Chardon Interface A1 Equipment bushing A=284mm, with earth plate and the flange, order the P/N: 24-DIB250-1-EP-FL
To order a Chardon Interface A1 Equipment bushing A=222mm, with earth lead only, P/N will be: 25-DIB-250-2-HEL

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CÓDIGO 24-DIC250

RECEPTÁCULO ISOLANTE BLINDADO - RIB-24kV-250A

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APPLICATION

The Chardon 24kV 250A 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 IEC bushing interface or junctions,it is properly grounded using the attached drain wire,and providing physically seal and electrically insulate bushing interfaces.

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.

KEY FEATURES

- Provides a fully shielded and submersible connection when mated with the proper bushings.
- EN-50180 Type "A" interface.
- Mounting can be vertical, horizontal, or any angle in between.
- No minimum phase clearance requirements.
- 100% electrical tested at factory.

PRODUCTION TESTS

Tests conducted in accordance with IEC60502-4, HD629.1, GB/T12706.4.

- Minimum Corona Voltage Level – 22 kV < 3 pC
- AC 1 Minute Withstand – 60 kV
- Impulse sampling test – 125kV

Tests conducted in accordance with Chardon manufacturing process requirements:

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

VOLTAGE RATINGS

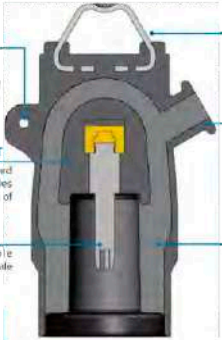
Max. Rating Phase to Ground	24 kV
AC 60Hz 1 Minute Withstand	57 kV
Minimum Corona Voltage Level	22 kV < 10pC
BIL and Full Wave Crest	125 kV

• Revision Date: 12.21.2021

Each kit includes the following:

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

DETAILED COMPOSITION OF THE CHARDON 24KV INSULATED CAP



DRAIN WIRE TAB

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

SEMICONDUCTING INSERT

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

PROBE

Brass probe provid esreliable conductive path with mating female contacts.

PULLING EYE

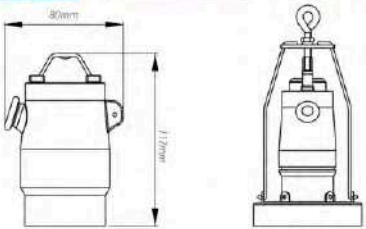
Stainless steel pulling eye for hotstick operations.

SEMICONDUCTING SHIELD

Precision molded peroxide cured semiconducting shield provides ground shield continuity.

INSULATION LAYER

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



ORDERING INFORMATION

24 kV, 250A Insulated Protective Cap	24-DIC250

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REDES ELÉTRICAS SUBTERRÂNEAS

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CÓDIGO 24-DIC630

RECEPTÁCULO ISOLANTE BLINDADO - RIB-24kV-630A

enercom.com.br

APPLICATION

The Chardon 24kV 630A 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 IEC bushing interface or junctions, it is properly grounded using the attached drain wire, and providing physically seal and electrically insulate bushing interfaces.

The Chardon insulated cap design incorporates peroxide cured, EPDM insulation rubber, and a semi-conducting insert and outer shield.

KEY FEATURES

- Provides a fully shielded and submersible connection when mated with the proper bushings.
- EN-50181 Type "C" 630A interface.
- Mounting can be vertical, horizontal, or any angle in between.
- No minimum phase clearance requirements.
- 100% electrical tested at factory.

PRODUCTION TESTS

Tests conducted in accordance with IEC60502-4, HD629.1, GB/T12706.4.

- Minimum Corona Voltage Level – 22 kV < 3 pC
- AC 1 Minute Withstand – 60 kV
- Impulse sampling test – 125 kV

Tests conducted in accordance with Chardon manufacturing process requirements:

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

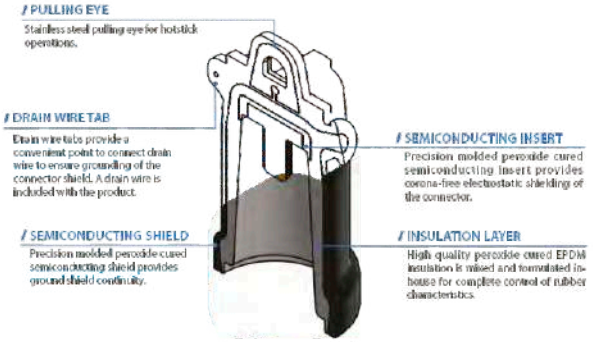
VOLTAGE RATINGS

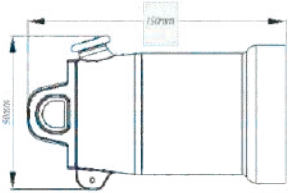
Max. Rating Phase to Ground	24 kV
AC 60Hz 1 Minute Withstand	57 kV
Minimum Corona Voltage Level	22 kV < 3 pC
BIL and Full Wave Crest	125 kV

Each kit includes the following:

- Insulated Cap
- Silicone Grease
- Installation Instruction Sheet

DETAILED COMPOSITION OF THE CHARDON 24KV 630A INSULATED CAP





ORDERING INFORMATION

24 kV, 630A Deadbreak Insulated Cap	24-DIC630

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37 ANOS EXPERIÊNCIA E INOVAÇÃO CONSTANTE.

CÓDIGO 24-FDT630 / 24-RDT630

TERMINAL DESCONECTÁVEL 17,5/24kV-630A

enercom.com.br

APPLICATION

The Chardon T-Body Connectors terminate polymeric cable to dead front apparatus such as transformers, switchgear, and other equipment. Suitable for both indoor and outdoor use, they can be utilized with all polymeric cable types (XLPE, EPR, etc.) and conductors of either copper or aluminum at voltages of 17.5 kV or 24 kV.

KEY FEATURES

- Provides a fully shielded and submersible connection when mated with the proper bushing or plug.
- Type "C" 630A Interface.
- Mounting can be vertical, horizontal, or any angle in between.
- No minimum phase clearance requirements.
- 100% electrical tested at factory.

PRODUCT RATINGS

Maximum Voltage Class (Uw)	24 kV
AC 5 Minute Withstand	54 kV
Minimum Corona Voltage Level	20 kV < 3pC
BIL and Full Wave Crest (Impulse)	125 kV
Thermal Short Circuit (Conductor, 2 sec.)	23 kA / 2s
Dynamic Short Circuit (Conductor, 10 sec.)	82 kA / 10ms
Continuous Current	630 A
Overload Current (8 hours maximum)	900 A

PRODUCTION TESTS

Tests conducted in accordance with IEC 60502-4.

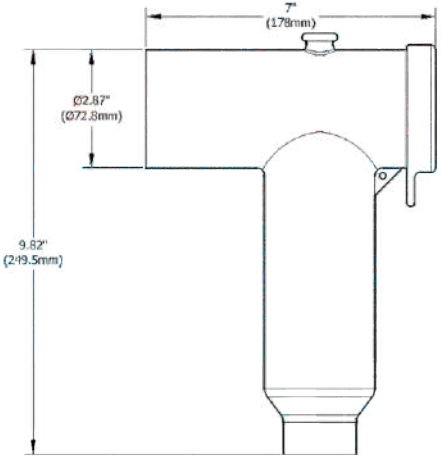
- Minimum Corona Voltage Level – 20 kV < 3pC
- AC 5 Minute Withstand – 54 kV

Tests conducted in accordance with Chardon manufacturing process requirements:

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

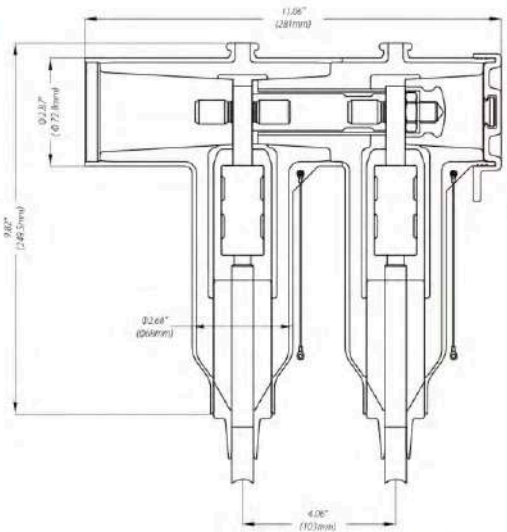
DETAILED COMPOSITION OF THE CHARDON 17.5 KV/24 KV FRONT T-BODY CONNECTOR

DETAILED COMPOSITION OF THE CHARDON 17.5 KV/24 KV FRONT T-BODY CONNECTOR



DETAILED COMPOSITION OF THE CHARDON 17.5 KV/24 KV, COUPLING (REAR) T-BODY CONNECTOR

DETAILED COMPOSITION OF THE CHARDON 17.5 KV/24 KV, COUPLING (REAR) T-BODY CONNECTOR



ORDERING INFORMATION

24-	STEP1	630-	STEP2	STEP3	STEP4

STEP1

Selection of Front / Rear T-body

Code	
FDT	Front T-body
RDT	Coupling (Rear) T-body

STEP2

Selection of Cable Insulation Dimension

Range Code	mm
A	15.5 - 19.0
B	18.0 - 23.0
C	22.0 - 27.0
D	26.0 - 32.0
E	31.0 - 37.0

STEP3

Selection of Conductor Size

Conductor Code	Conductor Size (mm²)
35	35
55	55
50	50
70	70
95	95
120	120
150	150
185	185
240	240
300	300
400	400

STEP4

Selection of Compression Connector Material

Code	
B	Bi-metal (Al & Cu)
C	Copper

Note :
When ordering a shear bolt connector in a kit, use the chart below and add code in the end of the part number, for example, SBC-B-25-50/1.

Selection of Shear Bolt Connector Material

Catalog No.	Conductor Range (mm²)
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

Ordering Example:

For a CHARDON 24kV Front T-body with cable insulation outer dimension of 26.4mm and a conductor size of 185mm² with copper compression connector, the part number would be as follows.

24-	FDT	630	C	185	C

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

24-	FDT	630	C	SBC-B-25-50/1

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REDES ELÉTRICAS SUBTERRÂNEAS

37 ANOS EXPERIÊNCIA E INOVAÇÃO CONSTANTE.

CÓDIGO

24-TCP630
36-TCP630
42-TCP630
42-TCP1250

PUGUE DE CONEXÃO PC-24/36/42kV-630/1250A

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APPLICATION

The Chardon Connecting Plug is molded from high quality insulating epoxy material. It meets all the requirements of the DIN47636 standard. The interface is type C, per the specification of standard EN50181. The Chardon Connecting Plug is interchangeable with other manufacturer's products that meet the same standard. The Chardon Connecting Plug can be installed in junction boxes or other equipment, and used in conjucntion with T-body connectors and arresters. The product is fully insulated and submersible, designed to be fully funtional in underwater applications.

PRODUCTION TESTS

The following tests are conducted in accordance with IEC60502-4 and GB/T12706.4.
All production tests are conducted on 100% of products manufactured.

Chardon Catalog Number	Voltage Class	Partial Discharge (3pc)	AC Withstand	Impulse Withstand
24-TCP630	17.5 / 24kV	20 kV	54 kV / 5min	125 kV
36-TCP630	36 kV	30 kV	81 kV / 5min	170 kV
42-TCP630	42 kV	45 kV	117 kV / 5min	200 kV
42-TCP1250	42 kV	45 kV	117kV / 5min	200 kV

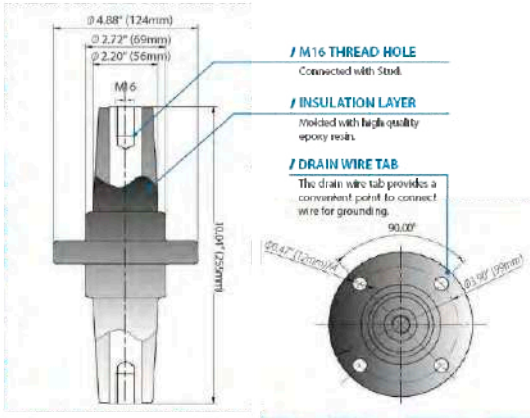
Additional tests conducted in accordance with Chardon manufacturing process requirements:

- / Physical Inspection
- / Periodic Dissection
- / Periodic X-ray Analysis
- / Periodic Impulse Withstand Voltage Test

VOLTAGE RATINGS

Chardon Catalog Number	24-TCP630	36-TCP630	42-TCP630	42-TCP1250
Voltage Class (U_m)	17.5 / 24 kV	36 kV	42 kV	42 kV
AC Withstand Voltage	54 kV / 5 min	81 kV / 5min	117 kV / 5 min	117 kV / 5 min
Partial Discharge	20 kV ≤ 10 pC	30 kV ≤ 10 pC	45 kV ≤ 10 pC	45 kV ≤ 10 pC
Impulse Withstand Voltage (10 times for each polarity)	125 kV	170 kV	200 kV	200 kV
Current Rating	630 A	630 A	630 A	1250 A

DETAILED COMPOSITION OF THE CHARDON CONNECTING PLUG



ORDERING INFORMATION

Interface C Connecting Plug	
17.5/24 kV 630A Connecting Plug	24-TCP630
36 kV 630A Connecting Plug	36-TCP630
42 kV 630A Connecting Plug	42-TCP630
42 kV 1250A Connecting Plug	42-TCP1250

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REDES ELÉTRICAS SUBTERRÂNEAS

37 ANOS EXPERIÊNCIA E INOVAÇÃO CONSTANTE.

CÓDIGO 26-RDTA66
26-RDTA72-10

TERMINAL DESCONECTÁVEL PARA-RAIOS - 26/66/72kV

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APPLICATION

The Chardon T-Body Surge Arrester is an arrester combined within a coupling (rear) T-Body interface. It is designed to protect apparatus, including transformers, switchgear, and other equipment from high voltage surges due to lightning or switching.

KEY FEATURES

- Provides fully shielded deadfront arrester protection.
- Metal (zinc) Oxide Varistor (MOV) gapless design.
- EPDM insulation rubber molded around MOV module.
- Mounting can be vertical, horizontal, or any angle in between.
- No minimum phase clearance requirements.
- 100% electrical tested at factory.

PRODUCT RATINGS

	26-RDTA66	26-RDTA72-10
Rated Voltage Class (Ur)	26 kV	26 kV
Nominal Discharge Current of Arrester	5 kA	10 kA
Residual Voltage or Nominal Discharge Current	≤ 66 kV	≤ 72kV
Maximum Continuous Operating Voltage	20.8 kV	20.8 kV
Voltage of DC 1mA Current	≥ 37 kV	≥ 37 kV

PRODUCTION TESTS

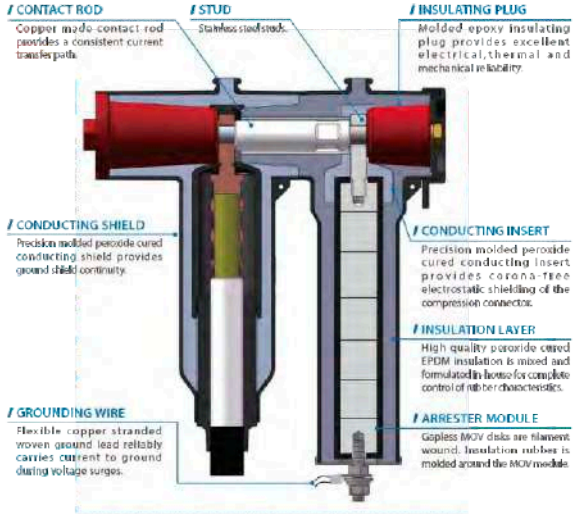
Tests conducted in accordance with IEC 60099-4.

- Minimum Corona Voltage Level – 22kV < 3pc
- Voltage of DC 1mA Current – ≥ 37kV

Tests conducted in accordance with Chardon manufacturing process requirements:

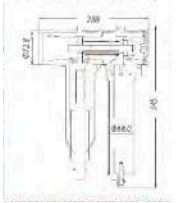
- Physical Inspection
- Periodic Dissection
- Periodic X-ray Analysis

DETAILED COMPOSITION OF THE CHARDON 26 KV/66 KV COUPLING (REAR) T-BODY SURGE ARRESTER



ORDERING INFORMATION

26kV/66kV 5kA Coupling(Rear) T-body Surge Arrester	26-RDTA66
26kV/72kV 10kA Coupling(Rear) T-body Surge Arrester	26-RDTA72-10



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REDES ELÉTRICAS SUBTERRÂNEAS

37 ANOS EXPERIÊNCIA E INOVAÇÃO CONSTANTE.

CÓDIGO 34-RDTA85
34-RDTA95-10

TERMINAL DESCONECTÁVEL COTOVELO PARA-RAIOS - 34/85/95kV

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APPLICATION

The Chardon T-Body Surge Arrester is an arrester combined within a coupling (rear) T-Body interface. It is designed to protect apparatus, including transformers, switchgear, and other equipment from high voltage surges due to lightning or switching.

KEY FEATURES

- Provides fully shielded deadfront arrester protection.
- Metal (zinc) Oxide Varistor (MOV) gapless design.
- EPDM insulation rubber molded around MOV module.
- Mounting can be vertical, horizontal, or any angle in between.
- No minimum phase clearance requirements.
- 100% electrical tested at factory.

PRODUCT RATINGS

	34-RDTA85	34-RDTA95-10
Rated Voltage Class (Ur)	34 kV	34 kV
Nominal Discharge Current of Arrester	5 kA	10 kA
Residual Voltage of Nominal Discharge Current	≤ 85 kV	≤ 95 kV
Maximum Continuous Operating Voltage	27.2 kV	27.2 kV
Voltage of DC 1mA Current	≥ 48 kV	≥ 48 kV

PRODUCTION TESTS

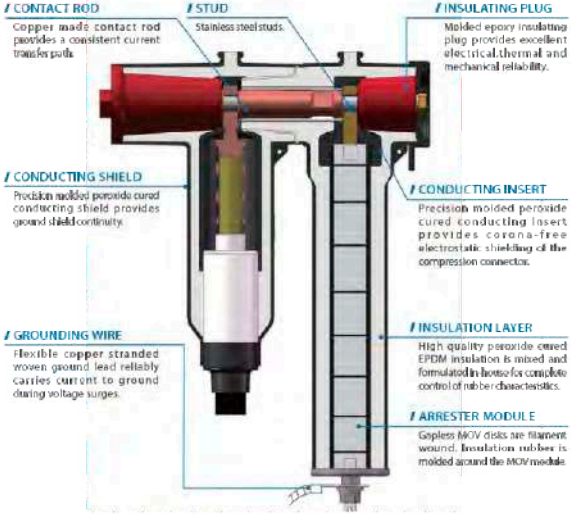
Tests conducted in accordance with IEC 60099-4.

- Minimum Corona Voltage Level – 20kV < 3pc
- Voltage of DC 1mA Current – ≥ 48kV

Tests conducted in accordance with Chardon manufacturing process requirements:

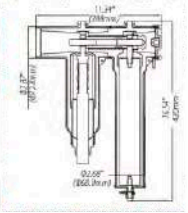
- Physical Inspection
- Periodic Dissection
- Periodic X-ray Analysis

DETAILED COMPOSITION OF THE CHARDON 34 KV/85 KV COUPLING (REAR) T-BODY SURGE ARRESTER



ORDERING INFORMATION

34kV/85kV 5kA Coupling(Rear) T-body Surge Arrester	34-RDTA85
34kV/95kV 10kA Coupling(Rear) T-body Surge Arrester	34-RDTA95-10



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REDES ELÉTRICAS SUBTERRÂNEAS

37 ANOS EXPERIÊNCIA E INOVAÇÃO CONSTANTE.

CÓDIGO 36-DIB400

BUCHA DE LIGAÇÃO DE EQUIPAMENTO BLE - 36kV-400A

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APPLICATION

The Chardon 36 kV Interface B2 equipment bushing provides a plug-in interface made of quality epoxy, meeting the full requirements of CENELEC EN 50180 and IEC 60137. The part is designed for use in equipment utilizing oil as insulating fluid, commonly used in transformers, switch gears and capacitors.

PRODUCTION TESTS

Tests conducted in accordance with IEC 60137

- Minimum Corona Voltage Level - 31.2 kV
- AC 1 Minute Withstand - 77 kV

Tests conducted in accordance with Chardon manufacturing process requirements:

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

VOLTAGE RATINGS

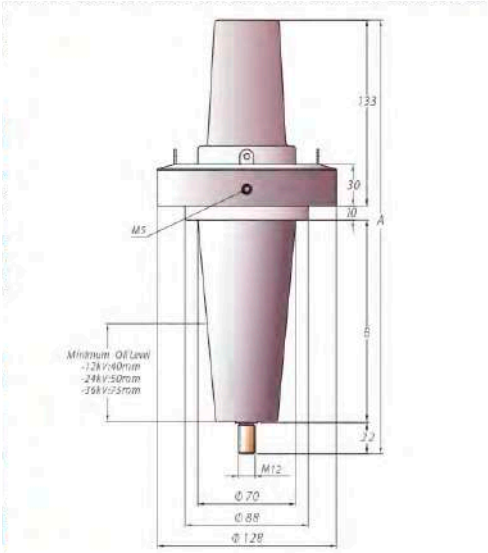
Voltage Class (U_m)	36 kV
AC 1 Minute Withstand	77 kV
BIL and Full Wave Crest	170 kV
Minimum Corona Voltage Level	31.2 kV < 10 pC

CURRENT RATINGS

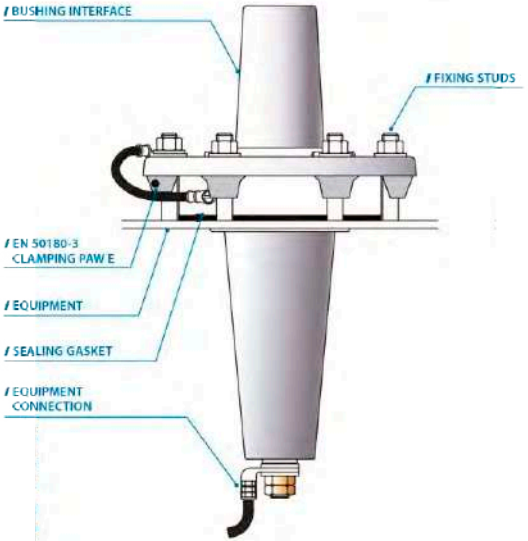
Continuous Current	400 A

- Revision Date: 07.10.2024

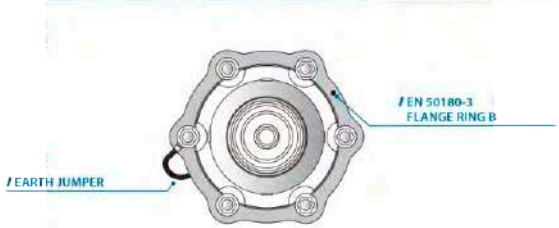
ORDERING INFORMATION

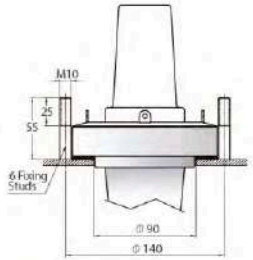


Chardon Part Number	Dimensions	
	A	B
36-DB400-S1	180	213
36-DB400-S4	180	144



Fixings for Interface B2 Equipment Bushings	EN 50180-3 & DIN 42 538





Note:
To order components with the bushing, please follow the chart below:

Earth Lead	Chardon Part Number + EL
Earth Plate	Chardon Part Number + EP
Flange Kit (Optional)	Chardon Part Number + EL+FL or EP+FL

Ordering Example:
To order a Chardon Interface B2 Equipment bushing A=330mm with earthplate and the flange, the P/N will be 36-DIB400-14-EP+FL
To order a Chardon Interface B2 Equipment bushing A=310mm with earth lead only, the P/N will be 36-DIB400-34-EL.

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REDES ELÉTRICAS SUBTERRÂNEAS

37 ANOS EXPERIÊNCIA E INOVAÇÃO CONSTANTE.

CÓDIGO 36-DIB630

BUCHA DE LIGAÇÃO DE EQUIPAMENTO BLE - 36kV-630A

enercom.com.br

APPLICATION

The Chardon 36 kV Interface C1 equipment bushing meets the full requirements of CENELEC EN 50181 and IEC 60137, provides a bolted interface made of quality epoxy. The part is designed for use in equipment utilizing oil as insulating fluid, commonly used in transformers, switch gears and capacitors.

PRODUCTION TESTS

Tests conducted in accordance with IEC 60137

- Minimum Corona Voltage Level - 31.2 kV
- AC 1 Minute Withstand - 77 kV

Tests conducted in accordance with Chardon manufacturing process requirements:

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

VOLTAGE RATINGS

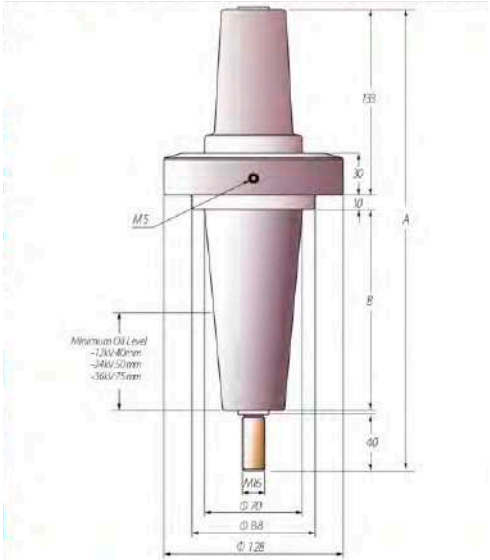
Voltage Class (U_{m})	36 kV
AC 1 Minute Withstand	77 kV
BIL and Full Wave Crest	170 kV
Minimum Corona Voltage Level	31.2 kV < 10 pC

CURRENT RATINGS

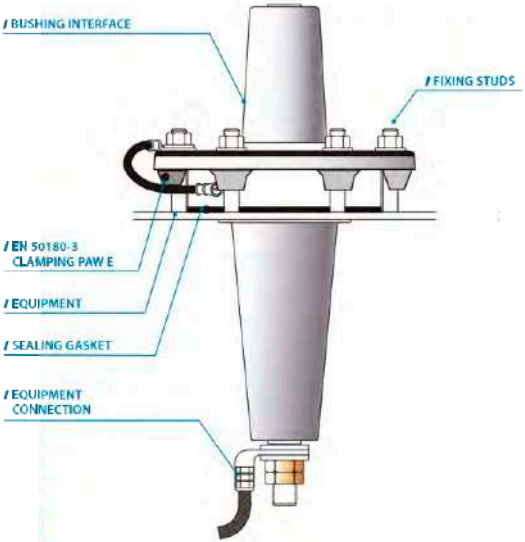
Continuous Current	630 A

- Revision Date: 07.10.2024

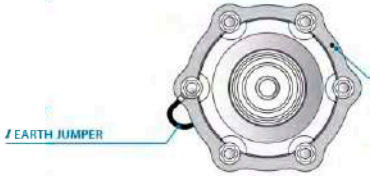
ORDERING INFORMATION

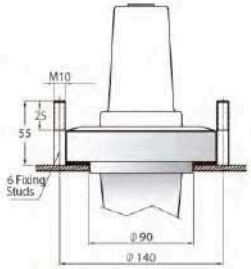


Chardon Part Number	Dimensions	
	A	B
36-DIB630-1-1	398	273
36-DIB400-2-1	419	304



Fixings for Interface C1 Equipment Bushings	EN 50180-3 & DIN 42 538





Note:
To order components with the bushing, please follow the chart below:

Earth Lead	Chardon Part Number + EL
Earth Plate	Chardon Part Number + EP
Flange kit (Optional)	Chardon Part Number + EL+FL or EP+FL

Ordering Example:
To order a Chardon Interface C1 Equipment bushing A=398mm with earth plate and the flange, order the P/N: 36-DB630-1-EP-FL
To order a Chardon Interface C1 Equipment bushing A=340mm with earth lead only, the P/N will be 36-DB630-24-EL

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37 ANOS EXPERIÊNCIA E INOVAÇÃO CONSTANTE.

CÓDIGO 36-DIC630

RECEPTÁCULO ISOLANTE BLINDADO - RIB-36kV-630A

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APPLICATION

The Chardon 36kV 630A 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 IEC bushing interface or junctions, it is properly grounded using the attached drain wire, and providing physically seal and electrically insulate bushing interfaces.

The Chardon insulated cap design incorporates peroxide cured, EPDM insulation rubber, and a semi-conducting insert and outer shield.

KEY FEATURES

- Provides a fully shielded and submersible connection when mated with the proper bushings.
- EN-50181 Type "C" 630A interface.
- Mounting can be vertical, horizontal, or any angle in between.
- No minimum phase clearance requirements.
- 100% electrical tested at factory.

PRODUCTION TESTS

Tests conducted in accordance with IEC60502-4, HD629.1, GB/T12706.4.

- Minimum Corona Voltage Level - 30kV < 10pC
- AC 5 Minute Withstand - 81 kV
- Impulse sampling test - 170 kV

Tests conducted in accordance with Chardon manufacturing process requirements:

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

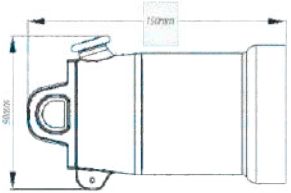
VOLTAGE RATINGS

Maximum Voltage Class (Um)	36 kV
AC 5 Minute Withstand	81 kV
Minimum Corona Voltage Level	30 kV < 10 pC
BIL and Full Wave Crest	170 kV

Each kit includes the following:

- Insulated Cap
- Silicone Grease
- Installation Instruction Sheet

DETAILED COMPOSITION OF THE CHARDON 36KV 630A INSULATED CAP



ORDERING INFORMATION

36 kV, 630A Deadbreak Insulated Cap	36-DIC630

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37 ANOS EXPERIÊNCIA E INOVAÇÃO CONSTANTE.

CÓDIGO 36-FDT400

TERMINAL DESCONECTÁVEL 36kV-400A

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APPLICATION

Chardon 36kV 400A Front T-Body Connectors are fully screened and fully submersible when mated with proper bushings or plugs.The products are used to terminate polymeric cable to dead front apparatus such as transformers, switchgear, and other equipment.

It is designed in accordance with Type B-400A interface as described by EN 50180 and 50181. The Chardon T-body Connectors are suitable for indoor or outdoor applications, and are able to be used for all polymeric cable types (XLPE, ETP, etc.) with copper or aluminum conductors. The design is especially suited for the harsh off-shore or wind farm environment, where long runs and large cable sizes are needed.

KEY FEATURES

- Provides a fully shielded and submersible connection when mated with the proper bushing or plug.
- Type "B" 400A interface.
- Mounting can be vertical, horizontal, or any angle in between.
- No minimum phase clearance requirements.
- 100% electrical tested in production.

PRODUCT RATINGS

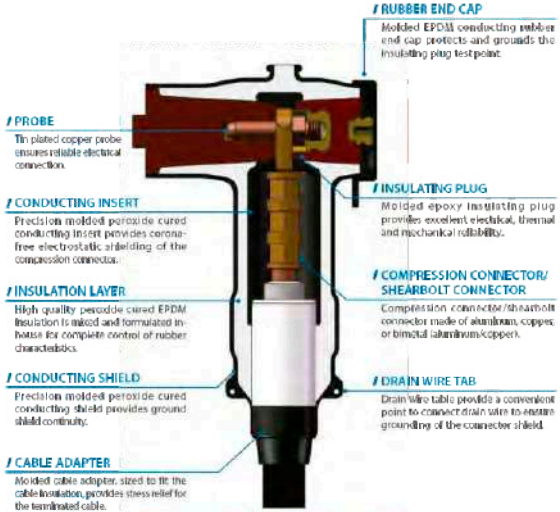
Maximum Voltage Class (U_m)	36 kV
AC 5 Minute Withstand	81 kV
DC 15 Minute Voltage Withstand	72 kV
Minimum Corona Voltage Level	30 kV < 3pC
BIL and Full Wave Crest (Impulse)	170 kV
Thermal Short Circuit (Conductor, 2 sec.)	23 kA
Dynamic Short Circuit	62 kA
Continuous Current	400 A

PRODUCTION TESTS

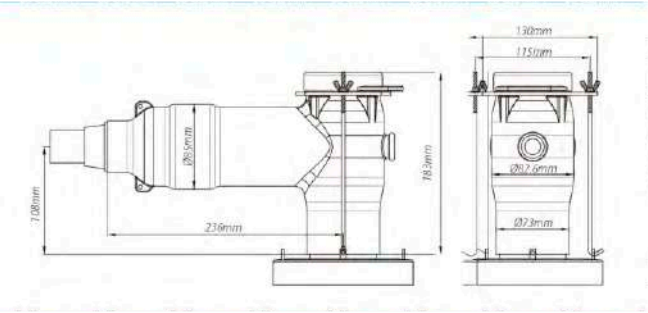
Tests conducted in accordance with IEC 60502-4.

- Minimum Corona Voltage Level – 30 kV ≦ 3pC
- AC 5 Minute Withstand – 81 kV

DETAILED COMPOSITION OF THE CHARDON 36 KV 400A FRONT T-BODY CONNECTOR



DETAILED COMPOSITION OF THE CHARDON 36 KV 400A FRONT T-BODY CONNECTOR



ORDERING INFORMATION

36	___	400	_	___	_
	STEP1		STEP2	STEP3	STEP4

STEP1 ___

Selection of Front T-body

Code	
FDT	Front T-body

STEP2 _

Selection of Cable Insulation Dimension

Range Code	Inches	mm
LA	0.610 - 0.748	15.5 - 19.0
LB	0.799 - 0.827	18.0 - 21.0
LC	0.797 - 0.905	20.0 - 23.0
LD	0.866 - 0.984	22.0 - 25.0
LE	0.945 - 1.063	24.0 - 27.0
LF	1.024 - 1.142	26.0 - 29.0
LG	1.102 - 1.260	28.0 - 32.0
LH	1.220 - 1.339	31.0 - 34.0
LI	1.299 - 1.457	33.0 - 37.0
LJ	1.417 - 1.535	36.0 - 39.0
LK	1.496 - 1.654	38.0 - 42.0

STEP3 ___

Selection of Conductor Size

Conductor Code	Conductor Size (mm²)
25	25
35	35
50	50
70	70
95	95
120	120
150	150
185	185
240	240
300	300
400	400

STEP4 _

Selection of Compression Connector Material

Code	
B	Bi-metal (Al & Cu)
C	Copper

Selection of Shear Bolt Connector Material

Catalog No.	Conductor Range (mm²)
TSBC-B-25-50/1	25 - 50
TSBC-B-70-95/1	70 - 95
TSBC-B-70-120/2	70 - 120
TSBC-B-150-240/2	150 - 240

Ordering Example:

For a CHARDON 36 KV 400A Front T-body with cable insulation outer dimension of 26.4 mm and a conductor size of 85 mm² with copper compression connector, the part number would be as follows:

36-	FDT	400	LE	185	C

If using Shear Bolt Connectors, the part number would be as follows:

36-	FDT	400	LE	185	T-SBC-B-150-240/2

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REDES ELÉTRICAS SUBTERRÂNEAS

37 ANOS EXPERIÊNCIA E INOVAÇÃO CONSTANTE.

CÓDIGO 36-FDT630 / 36-RDT630

TERMINAL DESCONECTÁVEL 36kV-630A

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APPLICATION

Chardon Front T-Body / Coupling (Rear) T-Body Connectors are fully screened and fully submersible when mated with proper bushings or plugs. The products are used to terminate polymeric cable to dead front apparatus such as transformers, switchgear, and other equipment. They can be used for 36kV applications.

The Chardon T-body Connectors are suitable for indoor or outdoor applications, and are able to be used for all polymeric cable types (XLPE, ETP, etc.) with copper or aluminum conductors. The design is especially suited for the harsh off-shore or wind farm environment, where long runs and large cable sizes are needed.

KEY FEATURES

- Provides a fully shielded and submersible connection whenmated with the proper bushing or plug.
- Type "C" 630A interface in accordance with EN 50181-2010.
- Mounting can be vertical, horizontal, or any angle in between.
- No minimum phase clearance requirements.
- 100% electrical tested at factory.

PRODUCT RATINGS

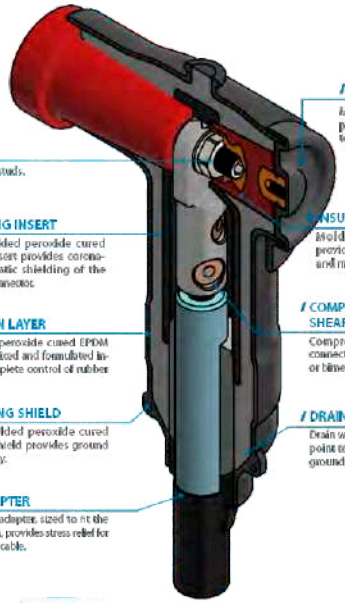
Maximum Voltage Class (U_m)	36 kV
AC 5 Minute Withstand	81 kV
DC 15 Minute Voltage Withstand	72 kV
Minimum Corona Voltage Level	30 kV < 3pC
BIL and Full Wave Crest (Impulse)	170 kV
Thermal Short Circuit (Conductor, 2 sec.)	23 kA
Dynamic Short Circuit	62 kA
Continuous Current	630 A

PRODUCTION TESTS

Tests conducted in accordance with IEC 60502-4.

- Minimum Corona Voltage Level – 30 kV ≤ 3pC
- AC 5 Minute Withstand – 81 kV

DETAILED COMPOSITION OF THE CHARDON 36 KV FRONT T-BODY CONNECTOR



RUBBER END CAP
Molded EPDM conducting rubber end cap protects and grounds the insulating plug test point.

STUD
Stainless steel studs.

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

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

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

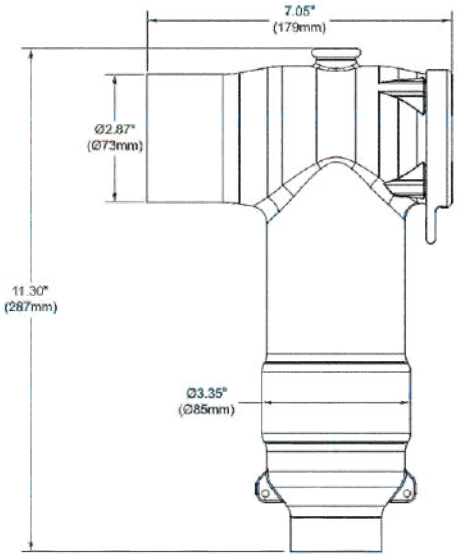
COMPRESSION CONNECTOR/ SHEARBOLT CONNECTOR
Compression connector/shearbolt connector made of aluminum, copper, or bimetal (aluminum/copper).

CONDUCTING SHIELD
Precision molded peroxide cured conducting shield provides ground shield continuity.

DRAIN WIRE TAB
Drain wire table provide a convenient point to connect drain wire to ensure grounding of the connector shield.

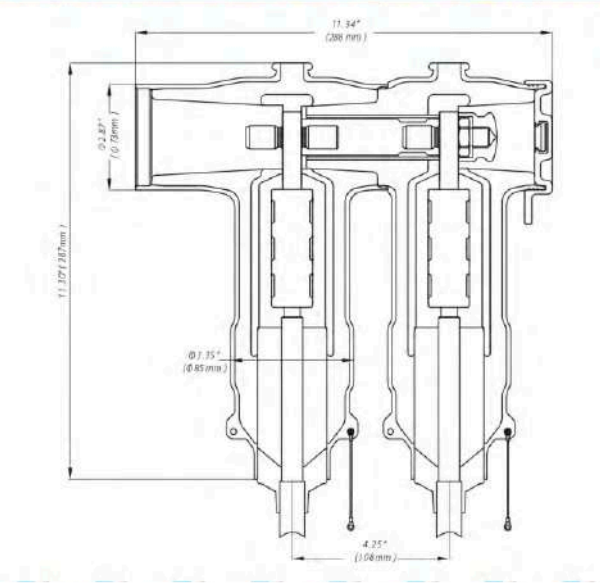
CABLE ADAPTER
Molded cable adapter, sized to fit the cable insulation, provides stress relief for the terminated cable.

DETAILED COMPOSITION OF THE CHARDON 36 KV FRONT T-BODY CONNECTOR



DETAILED COMPOSITION OF THE CHARDON 36 KV COUPLING (REAR) T-BODY CONNECTOR

DETAILED COMPOSITION OF THE CHARDON 36 KV COUPLING (REAR) T-BODY CONNECTOR



ORDERING INFORMATION

36-	STEP1	630-	STEP2	STEP3	STEP4

STEP1 — Selection of Front / Rear T-body

Code	
FDT	Front T-body
RDT	Coupling (Rear) T-body

STEP2 — Selection of Cable Insulation Dimension

Range Code	mm (Inch)
LA	15.5 - 19.0 (0.610 - 0.748)
LB	18.0 - 21.0 (0.709 - 0.827)
LC	20.0 - 23.0 (0.787 - 0.905)
LD	22.0 - 25.0 (0.865 - 0.984)
LE	24.0 - 27.0 (0.945 - 1.063)
LF	29.0 - 29.0 (1.078 - 1.142)
LG	30.0 - 33.0 (1.181 - 1.260)
LH	31.0 - 34.0 (1.220 - 1.339)
LJ	33.0 - 37.0 (1.299 - 1.457)
LJ	36.0 - 39.0 (1.417 - 1.535)
LK	38.0 - 42.0 (1.496 - 1.653)

STEP3 — Selection of Conductor Size

Conductor Code	Conductor Size (mm²)
25	25
35	35
50	50
70	70
95	95
120	120
150	150
185	185
240	240
300	300
400	400

STEP4 — Selection of Compression Connector Material

Code	
B	Bi-metal (Al & Cu)
C	Copper

Ordering Example:

For a CHARDON 36 kV Front T-body with cable insulation outer dimension of 33.9 mm and a conductor size of 185 mm² with copper compression connector, the part number would be as follows.

36-	FDT	630	LH	185	C

If a shear bolt connector is selected in this kit, the part number would be 36-FDT630LH-SBC-B-150-240/2.

36-	FDT	630	LH	SBC-B-150-240/2

Chardon Shear Bolt Connector

Example:
Peak shear bolt connector with a conductor range between 25-50 mm², the part number would be: SBC-B-25-50/1.

CATALOG NO.	Conductor Range(mm²)
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-300-400/3	300 - 400

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CÓDIGO 36-RDTA102-10

TERMINAL DESCONECTÁVEL PARA-RAIOS - 36/102kV

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APPLICATION

The Chardon T-Body Surge Arrester is an arrester combined within a coupling (rear) T-Body interface. It is designed to protect apparatus, including transformers, switchgear, and other equipment from high voltage surges due to lightning or switching.

KEY FEATURES

- Provides fully shielded deadfront arrester protection.
- Metal (zinc) Oxide Varistor (MOV) gapless design.
- EPDM insulation rubber molded around MOV module.
- Mounting can be vertical, horizontal, or any angle in between.
- No minimum phase clearance requirements.
- 100% electrical tested at factory.

PRODUCT RATINGS

	36-RDTA102
Rated Voltage Class (Ur)	36kV
Nominal Discharge Current of Arrester	10kA
Residual Voltage of Nominal Discharge Current	<102 kV
Maximum Continuous Operating Voltage	28.8 kV
Voltage of DC 1mA Current	≥51.6 kV

PRODUCTION TESTS

Tests conducted in accordance with IEC 60099-4.

- Partial Discharge – 30.24kV<3pC
- Voltage of DC 1mA Current – ≥ 51.6 kV

Tests conducted in accordance with Chardon manufacturing process requirements:

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

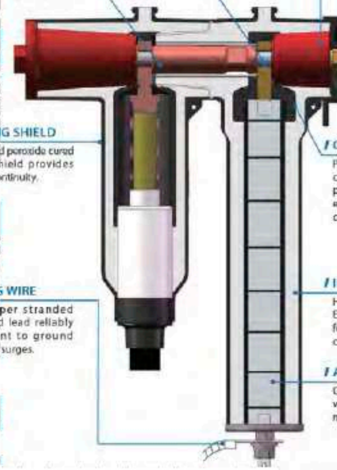
- 36-RDTA102-0801-2023-REV01

DETAILED COMPOSITION OF THE CHARDON 36 KV/102KV COUPLING (REAR) T-BODY SURGE ARRESTER

/ CONTACT ROD
Copper made contact rod provides a consistent current transfer path.

/ STUD
Stainless steel studs.

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



/ CONDUCTING SHIELD
Precision molded peroxide cured conducting shield provides ground shield continuity.

/ CONDUCTING INSERT
Precision molded peroxide cured conducting insert provides corona-free electrostatic shielding of the compression connector.

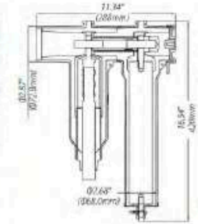
/ GROUNDING WIRE
Flexible copper stranded woven ground lead reliably carries current to ground during voltage surges.

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

/ ARRESTER MODULE
Gapless MOV disks are filament wound. Insulation rubber is molded around the MOV module

ORDERING INFORMATION

IEC 36/102 kV 10kA Rear T-body Surge Arrester	36-RDTA102-10



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CÓDIGO 42-BE1250

EXTENSOR DE BUCHA
BE - 42kV-1250A

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APPLICATION

The Chardon 42kV 1250A Bushing Extender can be used for temporary or permanent applications and provides a submersible, fully shielded insulated connection between energized bushings and Chardon 42kV rear T-body product (42-RDT1250).

When installed between an IEC bushing and Chardon 42kV Front T, it is properly grounded using the attached drain wire, and providing physically seal and electrically insulate bushing interfaces.

The Chardon Bushing Extender design incorporates peroxide cured, EPDM insulation rubber, and a semi-conducting insert and outer shield.

KEY FEATURES

- Provides a fully shielded and submersible connection.
- No minimum phase clearance requirements.
- EN-50181 Type "C" 630A interface and Chardon 42kV Front T mating interface.
- 100% electrical tested at factory.

PRODUCTION TESTS

Tests conducted in accordance with IEC60502-4, HD629.1, GB/T12706.4.

- Minimum Corona Voltage Level – 45 kV < 10 pC
- AC 5 Minute Withstand – 117 kV
- Impulse sampling test – 200 kV

Tests conducted in accordance with Chardon manufacturing process requirements:

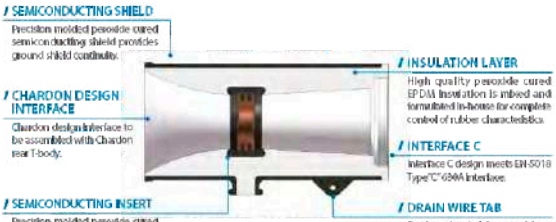
- Physical Inspection
- Periodic Dissection
- Periodic X-ray Analysis

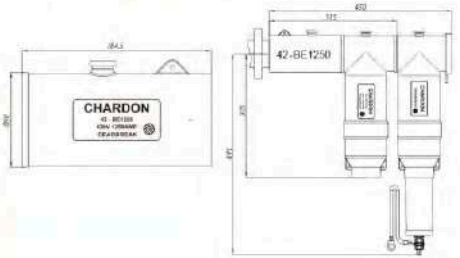
VOLTAGE RATINGS

Max. Rating Phase to Ground	42 kV
AC 60Hz 5 Minute Withstand	117 kV
Minimum Corona Voltage Level	45 kV < 10 pC
BIL and Full Wave Crest	200 kV

- 42BE1250-001410-REV01

DETAILED COMPOSITION OF THE CHARDON 42KV 1250A BUSHING EXTENDER





ORDERING INFORMATION

42KV Bushing Extender Part Number	42-BE1250

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37 ANOS EXPERIÊNCIA E INOVAÇÃO CONSTANTE.

CÓDIGO 42-DJ1250

BARRAMENTO DE DERIVAÇÃO 42kV-1250A

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APPLICATION

The Chardon 42 kV I 250 A Interface C Junction provides three or four interfaces in an EPDM insulated rubber body. Interface C Junctions are used in pad-mounted apparatus, underground vaults, and other installations to connect equipment and cable on primary feeder and network circuits.

Chardon connectors feature bolted connections that can be easily connected and disconnected. When mated with a comparably rated product, the junction provides a fully shielded, submersible connection. The Interface C Junction is available with stainless steel "U" straps for direct wall mounting.

PRODUCTION TESTS

Tests conducted in accordance with BS HD 629.1

- Minimum corona voltage level – 42 kV ≤ 10pC
- AC 5 Minute Withstand – 93.5 kV

Tests conducted in accordance with Chardon manufacturing process requirements:

- Physical Inspection
- Periodic Dissection
- Periodic Fluoroscopic Analysis

PRODUCT RATINGS

Maximum Voltage Class (Um)	42 kV
AC 5 Minute Withstand	93.5 kV
Minimum Corona Voltage Level	42 kV ≤ 10pC
BIL and Full Wave Crest (Impulse)	200 kV
Thermal Short Circuit (Conductor, 3 sec.)	40 kA
Dynamic Short Circuit	100 kA
Continuous Current	1250 A

- Revision date: 03.01.2024

ORDERING INFORMATION

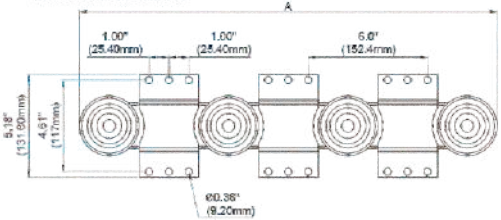
Each kit Contains:

- Interface C Junction (with straps, depending on product ordered)
- Shipping Caps (not for energized operation)
- Silicone Grease
- Installation Instruction Sheet

Interface C Junction Part Numbers

Description	Junction Only	Junction with U-Straps
42kV 1250A Interface C - 2-way	42-DJ1250F2	42-DJ1250F2U
42kV, 1250A Interface C - 3-way	42-DJ1250F3	42-DJ1250F3U
42kV, 1250A Interface C - 4-way	42-DJ1250F4	42-DJ1250F4U

Dimensional Information



Number of Interfaces	Physical Dimensions in./mm
	A
2-way	9.0 [228.6]
3-way	15.0 [381.0]
4-way	21.0 [533.4]

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CÓDIGO 42-FDT630 / 42-RDT630

TERMINAL DESCONECTÁVEL 42kV-630A

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APPLICATION

Chardon Front T-Body / Coupling (Rear) T-Body Connectors are fully screened and fully submersible when mated with proper bushings or plugs. The products are used to terminate polymeric cable to dead front apparatus such as transformers, switchgear, and other equipment. They can be used for 42kV applications.

The Chardon T-body Connectors are suitable for indoor or outdoor applications, and are able to be used for all polymeric cable types (XLPE, ETP, etc.) with copper or aluminum conductors. The design is especially suited for the harsh off-shore or wind farm environment, where long runs and large cable sizes are needed.

KEY FEATURES

- Provides a fully shielded and submersible connection whenmated with the proper bushing or plug.
- Type "C" 630A Interface.
- Mounting can be vertical, horizontal, or any angle in between.
- No minimum phase clearance requirements.
- 100% electrically tested at factory.

PRODUCT RATINGS

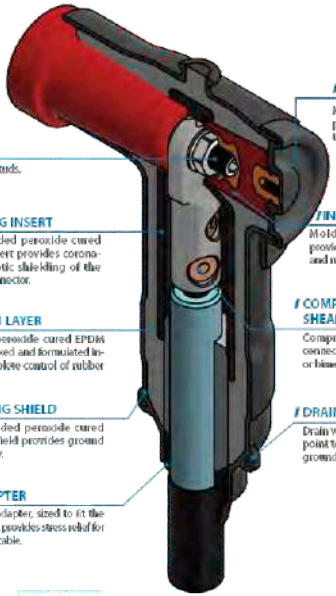
Maximum Voltage Class (U_m)	42 kV
AC 5 Minute Withstand	117 kV
DC 15 Minute Voltage Withstand	125 kV
Minimum Corona Voltage Level	45 kV < 3 pC
BIL and Full Wave Crest (Impulse)	200 kV
Thermal Short Circuit (Conductor, 2 sec twice)	24.1 kA
Dynamic Short Circuit (Conductor, 10ms)	65.3 kA
Continuous Current	630 A

PRODUCTION TESTS

Tests conducted in accordance with IEC 60502-4.

- Minimum Corona Voltage Level – 45 kV ≤ 3pC
- AC 5 Minute Withstand – 117 kV

DETAILED COMPOSITION OF THE CHARDON 42 KV FRONT T-BODY CONNECTOR



RUBBER END CAP
Molded EPDM conducting rubber end cap protects and grounds the insulating plug test point.

STUD
Stainless steel studs.

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

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

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

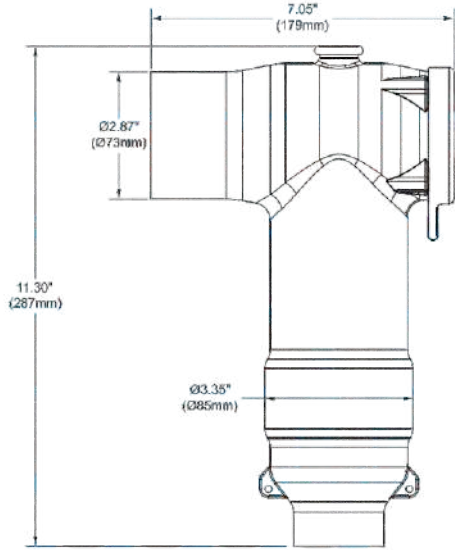
COMPRESSION CONNECTOR/ SHEARBOLT CONNECTOR
Compression connector/shearbolt connector made of aluminum, copper, or bimetal (aluminum/copper).

CONDUCTING SHIELD
Precision molded peroxide cured conducting 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.

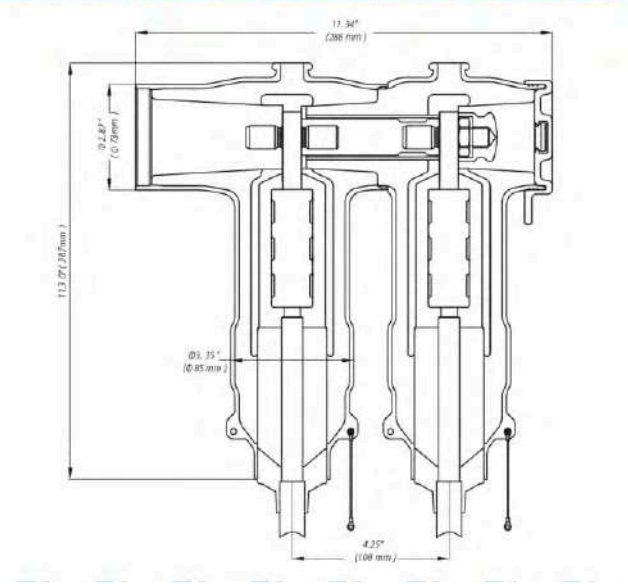
CABLE ADAPTER
Molded cable adapter, sized to fit the cable insulation, provides stress relief for the terminated cable.

DETAILED COMPOSITION OF THE CHARDON 42 KV FRONT T-BODY CONNECTOR



DETAILED COMPOSITION OF THE CHARDON 42 KV COUPLING (REAR) T-BODY CONNECTOR

DETAILED COMPOSITION OF THE CHARDON 42 KV COUPLING (REAR) T-BODY CONNECTOR



ORDERING INFORMATION

42-	STEP1	630-	STEP2	STEP3	STEP4

STEP1

Selection of Front / Rear T-body

Code	
FDT	Front T-body
RDT	Coupling (Rear) T-body

STEP2

Selection of Cable Insulation Dimension

Range Code	mm (inch)
LA	15.5 - 19.0 (0.610 - 0.748)
LB	18.0 - 21.0 (0.709 - 0.827)
LC	20.0 - 23.0 (0.787 - 0.905)
LD	23.0 - 25.0 (0.905 - 0.984)
LE	24.0 - 27.0 (0.945 - 1.063)
LF	29.0 - 29.0 (1.024 - 1.142)
LG	30.0 - 33.0 (1.181 - 1.260)
LH	31.0 - 34.0 (1.220 - 1.339)
LJ	33.0 - 37.0 (1.299 - 1.457)
LJ	36.0 - 39.0 (1.417 - 1.535)
LK	38.0 - 42.0 (1.496 - 1.654)

STEP3

Selection of Conductor Size

Conductor Code	Conductor Size (mm²)
25	25
35	35
50	50
70	70
95	95
120	120
150	150
185	185
240	240
300	300
400	400

STEP4

Selection of Compression Connector Material

Code	
B	Bi-metal (Al & Cu)
C	Copper

Ordering Example:

For a CHARDON 42 kV Front T-body with cable insulation outer dimension of 39.0 mm and a conductor size of 185 mm² with copper compression connector, the part number would be as follows.

42-	FDT	630	LK	185	C

If a shear bolt connector is selected in this kit, the part number would be 42-FDT630LK-SBC-B-150-240/2.

42-	FDT	630	LK	SBC-B-150-240/2

Chardon Shear Bolt Connector

Example:
For a Shear Bolt Connector with a conductor range between 25-50 mm², the part number would be: SBC-B-25-50/1.

CATALOG NO.	Conductor Range(mm²)
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-300-400/3	300 - 400

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CÓDIGO 42-FDT1250 / 42-RDT1250

TERMINAL DESCONECTÁVEL 42kV-1250A

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APPLICATION

Chardon Front T-Body / Coupling (Rear) T-Body Connectors are fully screened and fully submersible when mated with proper bushings or plugs. The products are used to terminate polymeric cable to dead front apparatus such as transformers, switchgear, and other equipment. They can be used for 36kV and 42 kV applications.

The Chardon T-body Connectors are suitable for indoor or outdoor applications, and are able to be used for all polymeric cable types (XLPE, ETP, etc.) with copper or aluminum conductors. The design is especially suited for the harsh off-shore or wind farm environment, where long runs and large cable sizes are needed.

KEY FEATURES

- Provides a fully shielded and submersible connection when mated with the proper bushing or plug.
- Type "C" 1250A interface.
- Mounting can be vertical, horizontal, or any angle in between.
- No minimum phase clearance requirements.
- 100% electrical tested at factory.

PRODUCT RATINGS

Maximum Voltage Class (Um)	42 kV
AC 5 Minute Withstand	117 kV
DC 15 Minute Voltage Withstand	125 kV
Minimum Corona Voltage Level	45 kV < 10 pC
BIL and Full Wave Crest (Impulse)	200 kV
Thermal Short Circuit (Conductor, 2 sec.)	45 kA
Dynamic Short Circuit	108 kA
Continuous Current	1250 A

PRODUCTION TESTS

Tests conducted in accordance with IEC 60502-4.

- Minimum Corona Voltage Level – 45 kV ≤ 10pC
- AC 5 Minute Withstand – 117 kV

- 45-DT1250-42RD-1250-0-X923-EN90

DETAILED COMPOSITION OF THE CHARDON 36 KV AND 42 KV FRONT T-BODY CONNECTOR

STUD
Stainless steel studs.

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

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

RUBBER END CAP
Molded EPDM conducting rubber end cap protects and grounds the insulating plug test point.

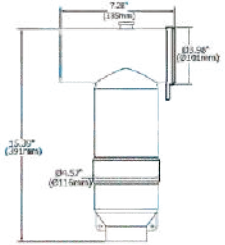
INSULATION LAYER
High quality peroxide cured EPDM insulation is mixed and formulated in-house for complete control of rubber characteristics.

COMPRESSION CONNECTOR/ SHEAR BOLT CONNECTOR
Compression connector/shear bolt connector made of aluminum, copper, or bimetal (aluminum/copper).

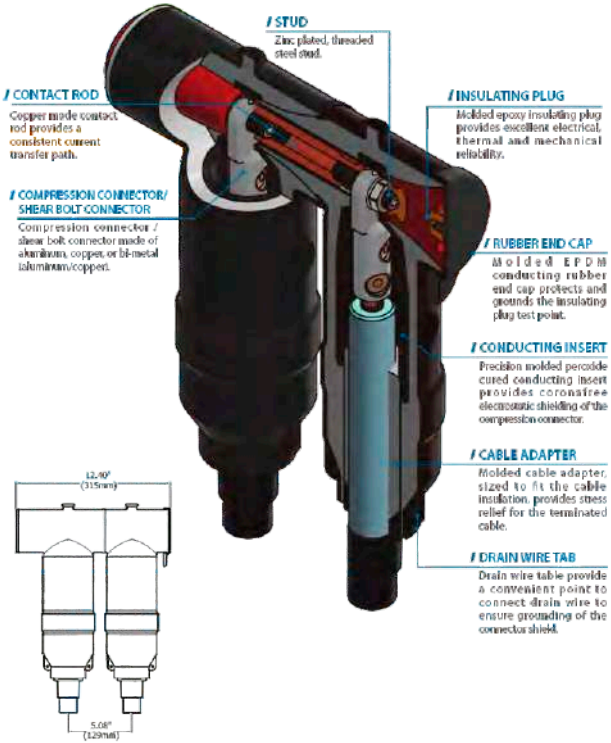
CONDUCTING SHIELD
Precision molded peroxide cured conducting shield provides ground shield continuity.

DRAIN WIRE TAB
Drain wire table provide a convenient point to connect drain wire to ensure grounding of the connector shield.

CABLE ADAPTER
Molded cable adapter, sized to fit the cable insulation, provides stress relief for the terminated cable.



DETAILED COMPOSITION OF THE CHARDON 36 KV AND 42 KV COUPLING (REAR) T-BODY CONNECTOR



ORDERING INFORMATION

42-	STEP1	1250-	STEP2	STEP3	STEP4

STEP1

Selection of Front / Rear T-body

Code	
FDT	Front T-body
RDT	Coupling (Rear) T-body

STEP2

Selection of Cable Insulation Dimension

Code	mm
D	18.10 - 25.00
E	23.60 - 28.40
F	31.60 - 38.10
G	36.60 - 43.30
H	27.99 - 31.50
J	29.99 - 33.20
K	31.60 - 34.90
L	32.60 - 35.40
M	34.49 - 38.60
N	37.70 - 40.30
P	38.90 - 44.70
Q	43.00 - 47.80
R	42.50 - 45.30
S	44.60 - 47.60
T	46.90 - 49.90
U	49.20 - 52.20
V	51.40 - 54.50

STEP3

Selection of Conductor Size

Conductor Code	Conductor Size (mm²)
25	25
35	35
50	50
70	70
95	95
120	120
150	150
185	185
240	240
300	300
400	400
500	500
630	630

STEP4

Selection of Compression Connector Material

Code	
B	Bi-metal (Al & Cu)
C	Copper

ORDERING INFORMATION

Ordering Example:

For a CHARDON 42 kV Front T-body with cable insulation outer dimension of 26.4 mm and a conductor size of 185 mm² with copper compression connector, the part number would be as follows.

42-	FDT	1250	E	185	C

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

42-	FDT	1250	E	SBC-B-25-50/1

Chardon Shear Bolt Connector

Example:
For a Shear Bolt Connector with a conductor Range becomes 25-50 mm², the part number would be : SBC-B-25-50/1.

CATALOG NO.	Conductor Range(mm²)
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-300-400/3	300 - 400
SBC-B-500-630/3	500 - 630

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CÓDIGO 51-RDTA134

TERMINAL DESCONECTÁVEL 51kV/134kV

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APPLICATION

The Chardon T-Body Surge Arrester is an arrester combined within a coupling (rear) T-Body interface. It is designed to protect apparatus, including transformers, switchgear, and other equipment from high voltage surges due to lightning or switching.

KEY FEATURES

- Provides fully shielded deadfront arrester protection.
- Metal (zinc) Oxide Varistor (MOV) gapless design.
- EPDM insulation rubber molded around MOV module.
- Mounting can be vertical, horizontal, or any angle in between.
- No minimum phase clearance requirements.
- 100% electrical tested at factory.

PRODUCT RATINGS

Maximum Voltage Class (U_r)	51 kV
Nominal Discharge Current of Arrester	5 kA / 10 kA
Residual Voltage of Nominal Discharge Current	≤ 134 kV
Maximum Continuous Operating Voltage	40 kV
Voltage of DC 1mA Current	≥ 73 kV

PRODUCTION TESTS

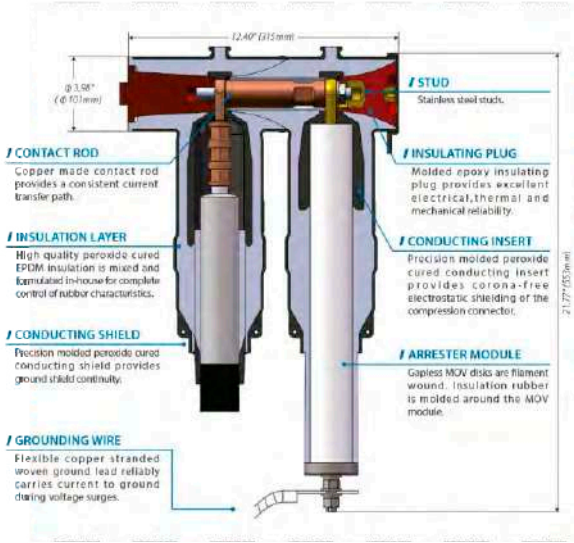
Tests conducted in accordance with IEC 60099-4.

- Minimum Corona Voltage Level – 43kV < 3pc
- Voltage of DC 1mA Current – ≥ 73kV

Tests conducted in accordance with Chardon manufacturing process requirements:

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

DETAILED COMPOSITION OF THE CHARDON 54 KV/134 KV FRONT T-BODY SURGE ARRESTER



ORDERING INFORMATION

51kV / 134kV 5kA Coupling (Rear) T-body Surge Arrester	51-RDTA134

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CÓDIGO 72.5-RDTA196

TERMINAL DESCONECTÁVEL PARA-RAIOS - 72.5/196kV-10kA

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APPLICATION

The Chardon T-body Surge Arreter, a fully screened and submersible arrester combined within a coupling (rear) T-body interface, is designed to protect apparatus such as transformers, switchgear, and other equipment from high voltage surges due to ligthning or switching. Suitable for 72.5 kV applications, the T-body Surge Arrester is ideal for indoor or outdoor use and can be utilized with all polymeric cable types (XLPE etc.) featuring copper or aluminum conductors. They are especially suited for demanding environments such as offshore platforms or wind farms, where long runs and large cable sizes are required. Fully submersible when mated with proper bushings or plugs, the Chardon T-body Arrester offers reliable protection and performance for utility systems.

KEY FEATURES

- Provides a fully shielded and submersible connection when mated with the proper bushing or plug.
- Type "F" 1250A Interface.
- Mounting can be vertical, horizontal, or any angle in between.
- No minimum phase clearance requirements.
- 100% electrical tested at factory.

PRODUCT RATINGS

Rated Voltage	72.5 kV
Continuous Operating Voltage(U	60 kV
DC 1 mA Reference Voltage	≥ 103 kV
Leak Current at 0.75U 1mA	≤ 50 uA
Nominal Discharge Current	10 kA
Charge Transfer Rating Qrs	1.3 C
Arrester Class	5L
Short Circuit Current	31.5 kA
High Current Impulse 4/10 us	100 kA
Steep Current Residual Voltage Test at 10 kA	225 kV
Lightning current residual voltage at 10 kA	196 kV
Switching Impulse Residual Voltage at 500A	169 kV

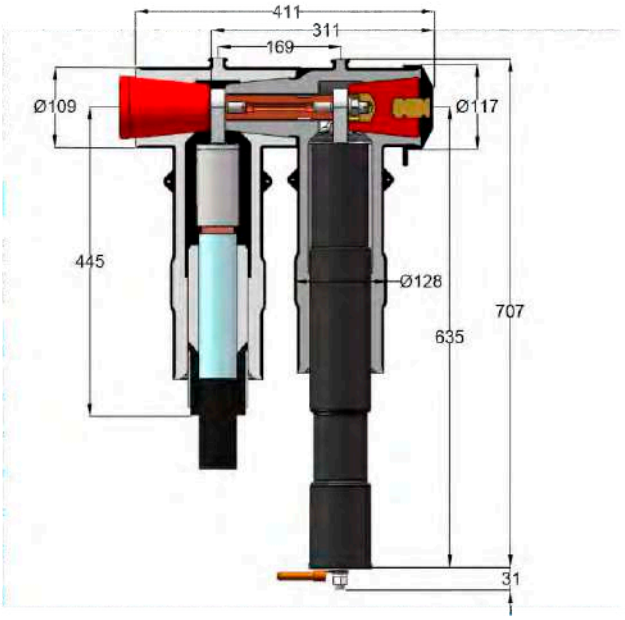
Tests conducted in accordance with IEC 60099-4 and GB/T 11032.

PRODUCTION TESTS

- Minimum Corona Voltage Level – 63 kV < 10pC
- Voltage of DC 1mA Current - ≥ 103 kV

DIMENSIONS OF THE CHARDON 72.5 kV T-BODY ARRESTER

mm



ORDERING INFORMATION

72.5 kV/196kV 10kA Coupling (Rear) T-body Surge Arrester	72.5-RDTA196

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CÓDIGO 72-FDT1250 / 72-RDT1250

TERMINAL DESCONECTÁVEL 72kV-1250A

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APPLICATION

Chardon Front T-Body / Coupling (Rear) T-Body Connectors are fully screened and fully submersible when mated with proper bushings or plugs. The products are used to terminate polymeric cable to dead front apparatus such as transformers, switchgear, and other equipment. They can be used for 72 kV applications.

The Chardon T-body Connectors are suitable for indoor or outdoor applications, and are able to be used for all polymeric cable types (XLPE, EPR, etc.) with copper or aluminum conductors. The design is especially suited for the harsh off-shore or wind farm environment, where long runs and large cable sizes are needed.

KEY FEATURES

- Provides a fully shielded and submersible connection when mated with the proper bushing or plug.
- Type "F" 1250A interface.
- Mounting can be vertical, horizontal, or any angle in between.
- No minimum phase clearance requirements.
- 100% electrical tested at factory.

PRODUCT RATINGS

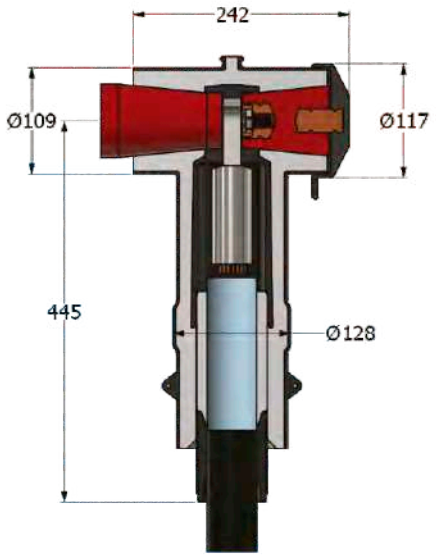
Maximum System Voltage	72.5 kV
Rated Voltage U_o	66 kV
Value of Uo for Determination of Test Voltage	56 kV
Continuous Current Rating	1250 A
Lightning Impulse Withstand Level	325 kV
Partial Discharge Test	54 kV
Heating Cycle Voltage Test 2 U_o	72 kV
AC 60Hz 30 min Withstand	90 kV
Cable Insulation Diameter	27mm - 70mm
Conductor Cross-Section Range	70mm2 - 1200mm2

Tests conducted in accordance with IEC 60840.

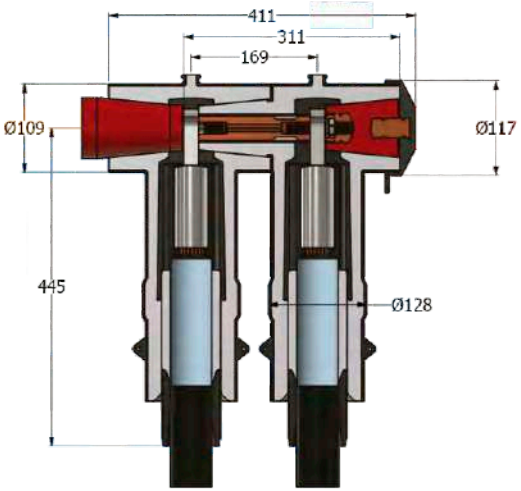
PRODUCTION TESTS

- Minimum Corona Voltage Level – 72kV < 5pC
- AC 60Hz 30 min Withstand - 90 kV

DIMENSIONS OF THE CHARDON 72 kV FRONT T-BODY CONNECTOR



DIMENSIONS OF THE CHARDON 72 kV FRONT & COUPLING (REAR) T-BODY CONNECTOR



ORDERING INFORMATION

72-		1250-				
	STEP 1		STEP 2	STEP 3	STEP 4	STEP 5

STEP 1

Selection of Front / Rear T-body

Code	
FDT	Front T-body
RDT	Coupling (Rear) T-body

STEP 2

Selection of Cable Insulation Diameter

Code	mm
B	27.00 - 31.00
C	29.50 - 35.00
D	33.50 - 40.00
E	38.50 - 45.50
F	43.00 - 52.00
G	50.50 - 58.50
H	57.00 - 64.00
J	62.50 - 68.00

ORDERING INFORMATION

STEP3

Selection of Conductor Size: Compression Connectors

Conductor Code	Conductor Size (mm²)
70	70
95	95
120	120
150	150
185	185
240	240
300	300
400	400
500	500
630	630
800	800
1000	1000
1200	1200

Selection of Conductor Size: Shear Bolt Connector

CATALOG NO.	Conductor Range(mm²)
SBC-F-25-95/1	25-95
SBC-F-120-300/2	120-300
SBC-F-400-630/2	400-630
SBC-F-800/1200/4	800-1200

STEP4

Selection of Compression Connector Material

Code	
C	Copper

STEP5

Cable Specification

If the accessory is installed with a submarine cable, please add "SC" to the product code.

Ordering Example:

For a Chardon 72 kV Front T-body with a submarine cable insulation diameter of 28 mm and a conductor size of 185 mm², equipped with a copper compression connector, the part number would be as follows:

72-	FDT	1250	B	185	C	SC

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CÓDIGO

- 24-FDT630 / 24-RDT630
- 36-FDT630 / 36-RDT630
- 24/36-LFDT1250 / 24/36-LRDT1250

TERMINAL DESCONECTÁVEL 24/36kV-1250A

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APPLICATION

The Chardon T-Body Connectors are designed to integrate polymeric cables into dead front apparatus such as transformers, switchgear, and other critical equipment, meeting the electrical standards set by IEC 60502 & HD 629. Suitable for both indoor and outdoor applications, these connectors comply with the interface requirements of EN 50180 and are compatible with all polymeric cable types and conductors made of either copper or aluminum. With an operational voltage capacity of up to 36 kV, these connectors are equipped with high-performance adapters that allow for an extensive range of compatibility with various cable sizes.

KEY FEATURES

- Provides a fully shielded and submersible connection when mated with proper bushings or plugs.
- Advanced adapter with optimized electrical stress dispersion for a wide range of cable sizes.
- Adheres to EN 50180 Interface C standard.
- Mounting can be vertical, horizontal, or any angle in between.
- No minimum phase clearance requirements.
- 100% electrical tested at factory.

PRODUCT RATINGS

	24-RDT630 24-RDT630	36-RDT630 36-RDT630	24/36-LRDT1250 24/36-LRDT1250
Maximum Voltage Class (U_m)	24 kV	36 kV	36 kV
AC 5 Minute Withstand	54 kV	81 kV	81 kV
Minimum Corona Voltage Level	28 kV < 10pC	38 kV < 10pC	38 kV < 10pC
BIL and Full Wave Cert (Impulse)	125 kV	170 kV	170 kV
Thermal Short Circuit (Conductor, 2 sec.)	23 kA / 2s	23 kA / 2s	23 kA / 2s
Dynamic Short Circuit (Conductor, 10 sec.)	62kA / 10ms	62kA / 10ms	62kA / 10ms
Continuous Current	630 A	630A	1250A

PRODUCTION TESTS

Routine tests conducted in accordance with IEC 60502-4:

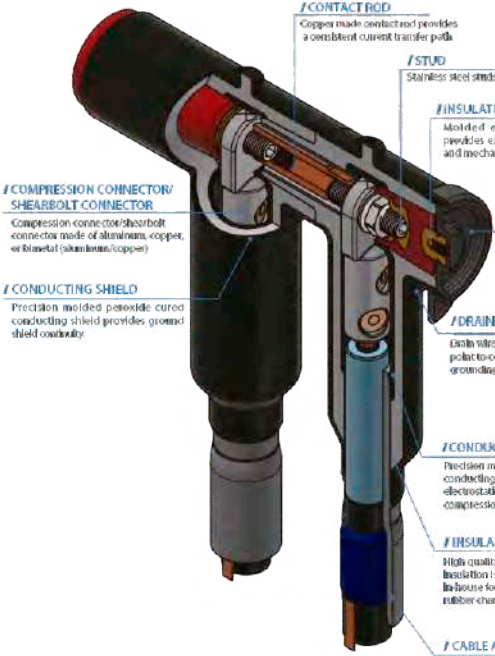
- Minimum Corona Voltage Level
- AC 5 Minute Withstand

Tests conducted in accordance with Chardon manufacturing process requirements:

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

Revision Date: 09.2024

SECTIONAL VIEW OF THE CHARDON FRONT & REAR T-BODY CONNECTOR



DRAWINGS OF THE FRONT & REAR T-BODY CONNECTORS

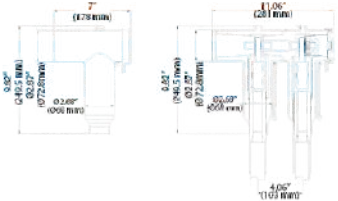


Fig.1:
24-FDT630
24-RDT630

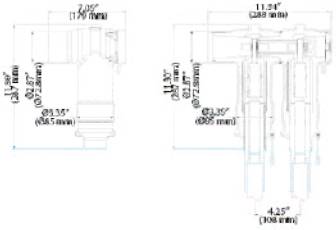


Fig.2:
36-FDT630
36-RDT630

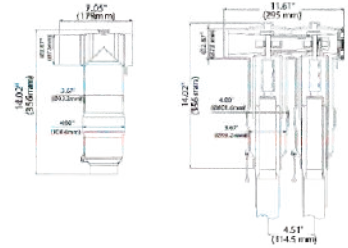


Fig.3:
24/36-LFDT1250
24/36-LRDT1250

ORDERING INSTRUCTIONS

STEP 1: Voltage & Current Class

Select the required voltage and current class for your cable application.

STEP 2: T-Body Type

Decide on the T-Body configuration needed: Front T-Body (FDT) or Rear T-Body (RDT).

STEP 3: Cable Adapter Code

Identify the cable insulation outer diameter to determine the appropriate cable adapter code.

Voltage & Current	Front or Rear T-Body	Cable Insulation Outer Diameter (mm)	Cable Adapter Code	*Compatible Cable Cross Section (mm²)		
				12 kV Cable Class	24 kV Cable Class	36 kV Cable Class
24 kV, 630A	24-FDT630 (Front) 24-RDT630 (Rear)	12.5 – 19.5	A1	25 – 95	X	X
		17.0 – 25.1	A2	X	25 – 95	X
		19.0 – 29.0	B1	95 – 300	X	X
		23.6 – 34.0	B2	X	95 – 300	X
36 kV, 630A	36-FDT630 (Front) 36-RDT630 (Rear)	21.0 – 30.0	A1	X	X	25 – 95
		27.3 – 38.5	B3	X	X	95 – 300
24 & 36 kV, 1250A	24/36-LFDT1250 (Front) 24/36-LRDT1250 (Rear)	30.0 – 38.5	C1	400 – 630	X	X
		34.0 – 45.0	C2	X	400 – 630	X
		38.5 – 50.0	D1/C3	800 – 1000	X	400 – 630
		44.0 – 56.0	E1/D2	1000 – 1200	800 – 1000	X
		51.4 – 58.5	E2/D3	X	1000 – 1200	800

*Note: The compatible cable cross-section range is provided for reference purposes only. Please check the actual dimensions of your cable to ensure proper selection of the shear bolt lug cross-section range.

STEP 4: Shear Bolt Lug

Determine the cable conductor cross section to select the suitable shear bolt lug size.

Shear Bolt Lug Code	Cable Conductor Cross-Section (mm²)	Note
SBC-B-25-120/1L	25-120	Suitable for 630A T-body
SBC-B-95-300/2L	95-300	Suitable for 630A T-body
SBC-LB-400-630/4L	400-630	Suitable for 1250A T-body

Part Number Ordering Example:

For a Chaedon 36 kV Front T-body with cable insulation outer diameter of 28 mm and a conductor size of 95 mm² with shear bolt connector the part number would be as follows:

36-	FDT630	A3	SBC-B-25-120/1L

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CÓDIGO VTR

HASTE PARA TESTE DE TENSÃO - VTR

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APPLICATION

Medium voltage test rods are designed to accurately find cable fault location, phase checking and cable testing. When installed at the back of a T-body or elbow connector, test rods can monitor the electrical condition of both the separable connector and the power system it is attached to. Connections can be made with a cable lug, spring clips or 4mm plug.

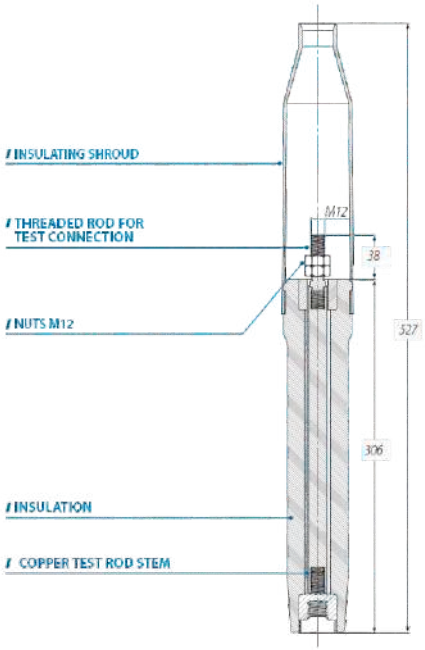
VOLTAGE RATINGS

Test Rod Type	VTR
Maximum A.C. Test Voltage (50 Hz-1min)	36 kV
Maximum D.C. Test Voltage (8 x Uo -30min)	96 kV
Impulse Voltage (1.2 x 50µs) min	95 kV

ORDERING INFORMATION

Interface C Voltage Test Rod	VTR

DETAILED COMPOSITION OF THE CHARDON INTERFACE C VOLTAGE TEST ROD



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