

## IEC Separable Connectors 42 kV, 1250A

Front T-Body / Coupling (Rear) T-Body Connector



## **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 (U <sub>m</sub> )	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, 3 sec.)	45 kA
Dynamic Short Circuit	100 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

#### • 42FDT1250-42RDT1250-010323-REV03

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

#### / STUD

Stainless steel studs.



plug provides excellent electrical, thermal and mechanical reliability.

#### / CONDUCTING INSERT

Precision molded peroxide cured conducting insert provides coronafree electrostatic shielding of the compression connector.

#### / INSULATION LAYER

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

#### / CONDUCTING SHIELD

Precision molded peroxide cured conducting shield provides ground shield continuity.

#### **I** CABLE ADAPTER

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

#### / RUBBER END CAP

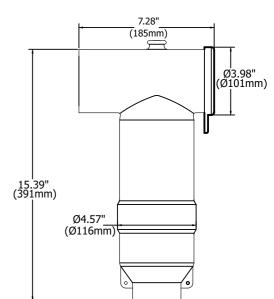
Molded EPDM conducting rubber end cap protects and grounds the insulating plug test point.

#### / COMPRESSION CONNECTOR/ SHEAR BOLT CONNECTOR

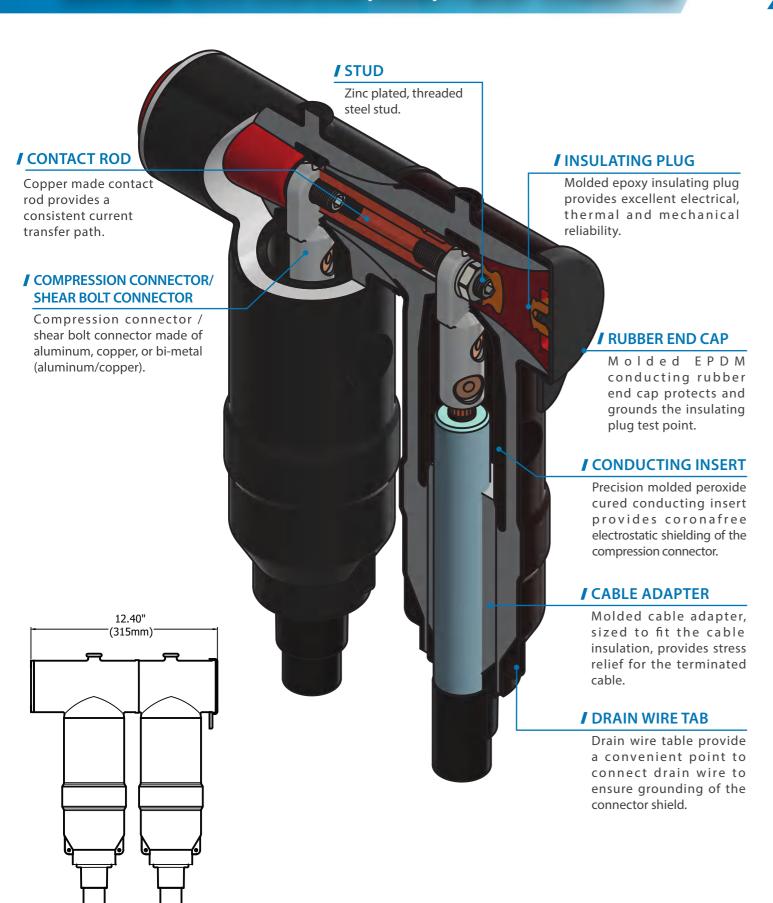
Compression connector/shear bolt connector made of aluminum, copper, or bimetal (aluminum/copper).

#### **/** DRAIN WIRE TAB

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



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



## **ORDERING INFORMATION**

42		1250	_		_
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	19.10 - 25.00
E	23.60 - 26.40
F	24.90 - 28.30
G	26.40 - 29.90
Н	27.80 - 31.50
J	29.50 - 33.20
K	31.00 - 34.90
L	32.60 - 35.40
M	34.40 - 38.60
N	37.70 - 40.50
P	38.90 - 41.70
Q	40.00 - 42.80
R	42.30 - 45.30
S	44.60 - 47.60
Т	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	
В	Bi-metal (Al & Cu)
C	Copper

#### **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 mm<sup>2</sup> with copper compression connector, the part number would be as follows.

42-	FDT	1250	Е	185	C
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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**

Evample

For a Shear Bolt Connector with a conductor Range between 20-50 mm<sup>2</sup>, 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



