

Transformer Components Sidewall Mounted & Cover Mounted Bayonet Fuse Holder



GENERAL

Chardon Bayonet Fuse Holders are used to protect transformers, switchgear, and distribution systems. They are designed for use in oil filled (or approved equivalents) single phase and three phase padmount transformers, switchgear, and submersible transformers. The assemblies combine the ease of hotstick operation with the safety of deadfront construction.

When the inner fuse cartridge holder assembly is removed from a Chardon Bayonet Fuse Holder installed on a padmounted transformer (or other apparatus), the transformer is electrically disconnected. This also allows for convenient fuse element and cartridge inspection and replacement. When using appropriate safety procedures, the Chardon Bayonet Fuse Holder can be loadbreak operated for disconnecting the transformer from the energized line, making changes to dual voltage or tap changer switches, or working on the transformer's secondary connections.

Two options are available on the sidewall mounted Bayonet Fuse Holder.

(1)

A flapper valve is available inside the upper portion of the outer tube (see Figure 2). This flapper valve closes when the inner fuse cartridge assembly is removed. This results in minimal oil leakage from the transformer tank during fuse link replacements, especially when the pressure relief valve fails to remove all built up pressure inside the transformer tank. This reduces potential risk of environmental damage due to oil escaping from the transformer. It also reduces potential oil contamination to the rubber cable accessories mounted on the transformer. The flapper valve also reduces potential spillage due

to pad tilting, or during installation and/or replacement of the transformer, when tilting of the transformer is likely to occur.

(2)

The standard Chardon Bayonet Fuse Holder includes copper contacts for connection to the transformer. Optional silver plated contacts are available (and recommended) with high ampere bayonet fuse links. Silver plated contacts, along with high ampere fuse links, allow the fusing of larger kVA transformers.

Chardon Bayonet Fuse Holders are designed to be used with Current Sensing, Dual Sensing, and Dual Element fuse links. The Chardon Bayonet Fuse Holder must be used in series with a current limiting fuse, or isolation link, to prevent the possibility of a high current fault – even after replacement of a fuse link. Partial range current limiting uses the low current clearing capabilities of the Chardon Bayonet Fuse Holder while protecting the transformer or apparatus from high current internal faults that could cause failure to the specific piece of equipment, as well as other system damage.

INSTALLATION

The Chardon Bayonet Fuse Holder is mounted through transformer tank wall, and is interchangeable with products manufactured by Cooper (RTE) and ABB. The incoming high voltage lead is connected to the isolation link or current limiting fuse. The isolation link or

current limiting fuse is then connected to the lowercontact of the Chardon Bayonet Fuse Holder. The transformer winding is connected to the upper contact on the Chardon Bayonet Fuse Holder to complete the circuit.

RATINGS AND CHARACTERISTICS

kV Electrical Ratings	kV
BIL and Full Wave Crest	150
60Hz, AC, 1minute withstand	50

Maximum Single-Phase Interrupting Ratings in Mineral Oil	kV
3500A rms asymmetrical Cover Mount ; 3500A rms symmetrical Sidewall Mount	8.3
2500A rms asymmetrical Cover Mount ; 2500A rms symmetrical Sidewall Mount	15.5
1000A rms asymmetrical Cover Mount ; 1000A rms symmetrical Sidewall Mount	23.0

Loadbreak Ratings (at 80% pf)	kV
160A	10.0
150A	15.5
80A	26.7
50A	34.5

DETAILED COMPOSITION OF THE CHARDON BAYONET FUSE HOLDER

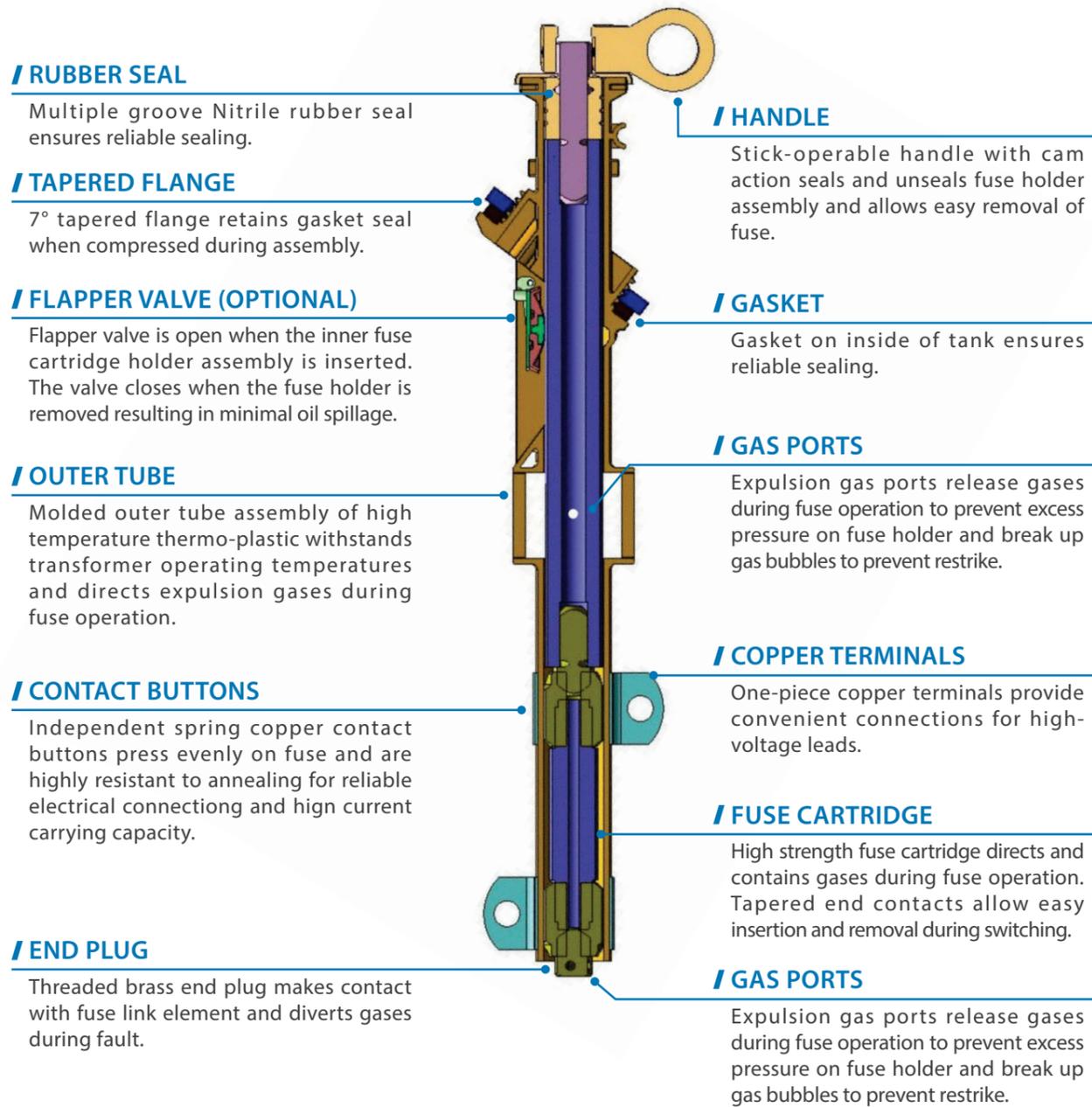


Figure 1
Cutaway illustration of Bayonet Holder with Optional Flapper Valve.

DETAILED COMPOSITION OF THE CHARDON BAYONET FUSE HOLDER

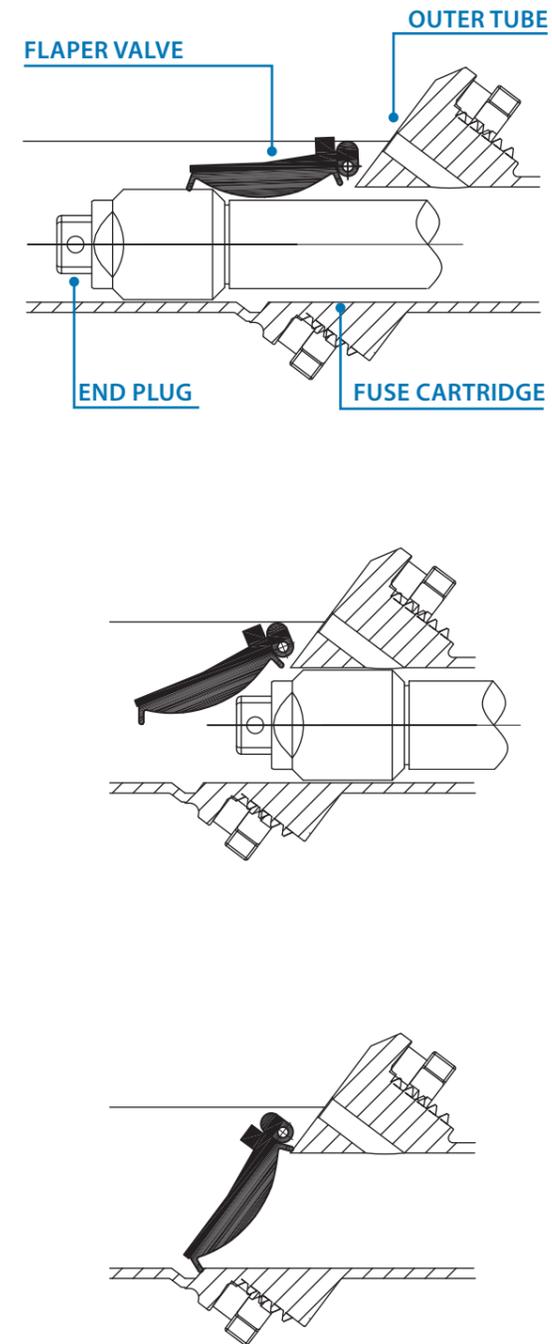


Figure 2
Illustration of Flapper Valve Operation during removal of Inner Fuse Holder.

DETAILED COMPOSITION OF THE CHARDON BAYONET FUSE HOLDER

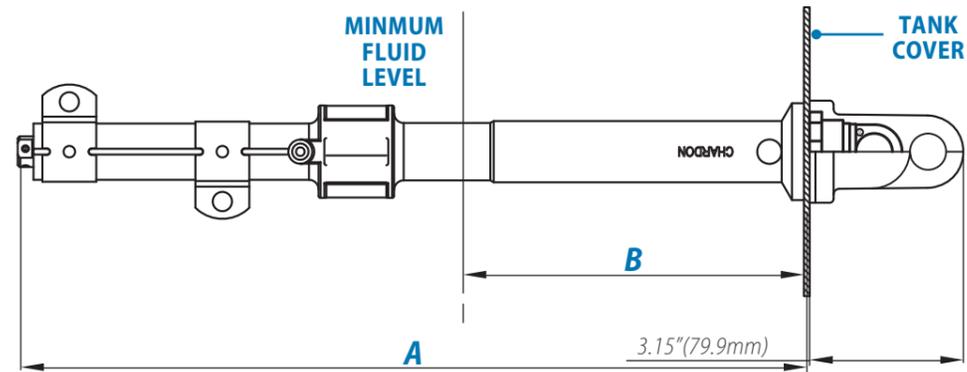


Figure 3
Installation view of the Cover Mount Bayonet Fuse Holder.

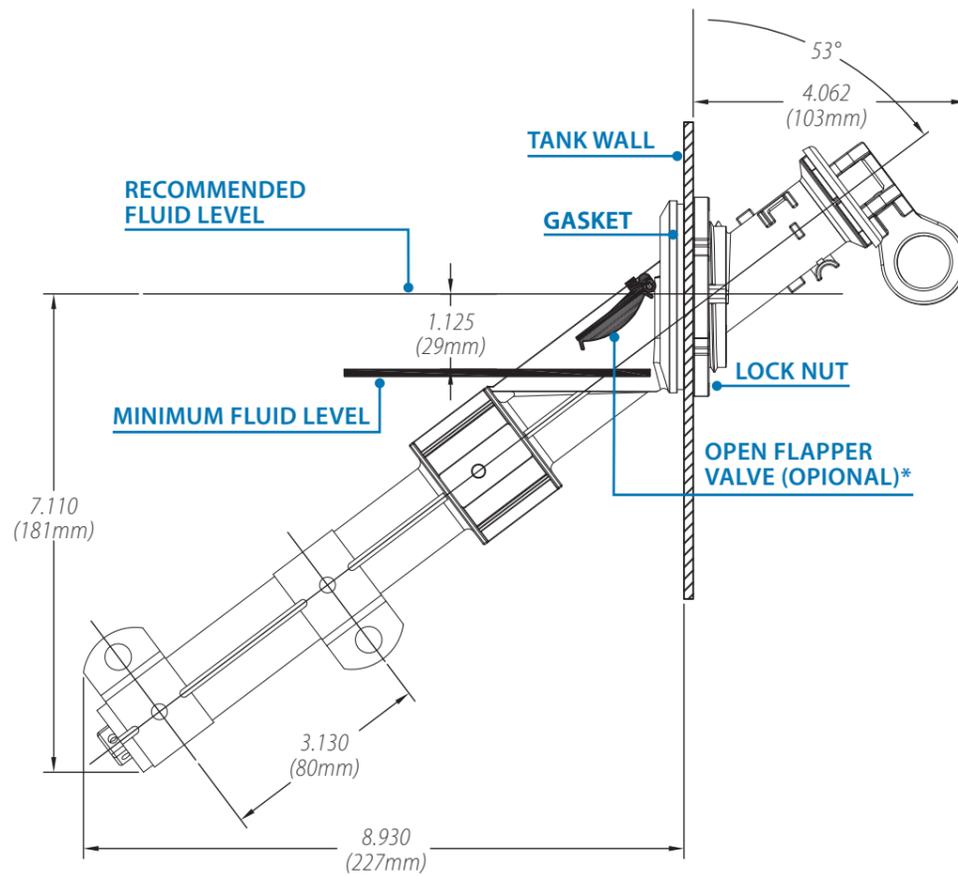


Figure 4
Installation view of the Sidewall Mount Bayonet Fuse Holder.

DETAILED COMPOSITION OF THE CHARDON BAYONET FUSE HOLDER

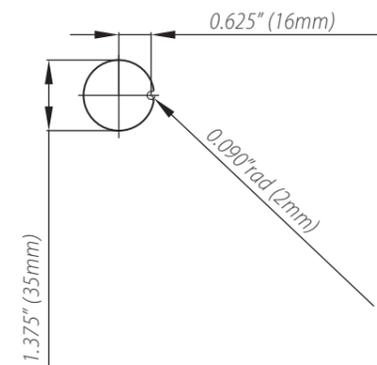


Figure 5
Cover Mounted Bayonet Fuse Holder
Mounting Hole Dimensions.

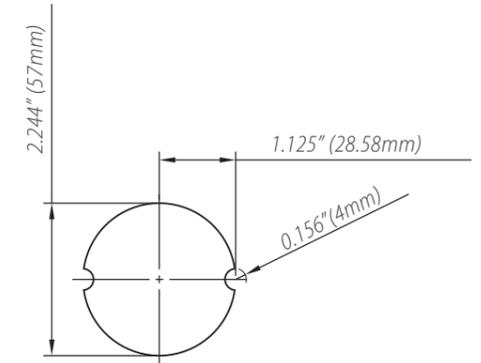


Figure 6
Sidewall Mount Bayonet Fuse Holder
Mounting Hole Dimensions.

Cover Mounted Bayonet Fuse Holder Dimensional Information

Type	Length in. / (mm)	
	A	B
Short	13.32" (338.4)	4.21" (107)
Long	16.08" (408.4)	6.97" (177)

ORDERING INFORMATION

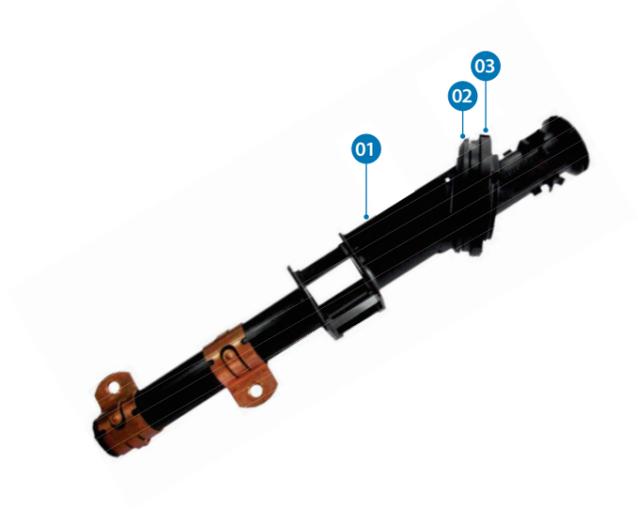


Figure 7
Outer Tube with Contacts Gasket and Tightening Nut.

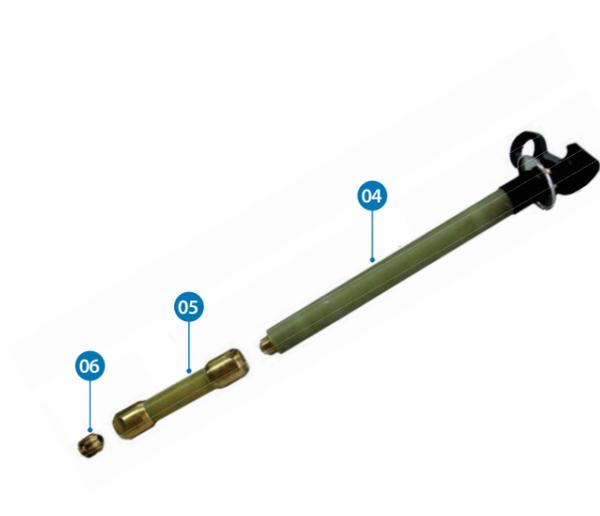


Figure 8
Inner Fuse Holder Assembly with Cartridge and End Plug.



Figure 9
Outer Tube Nut, Gasket and Cap.

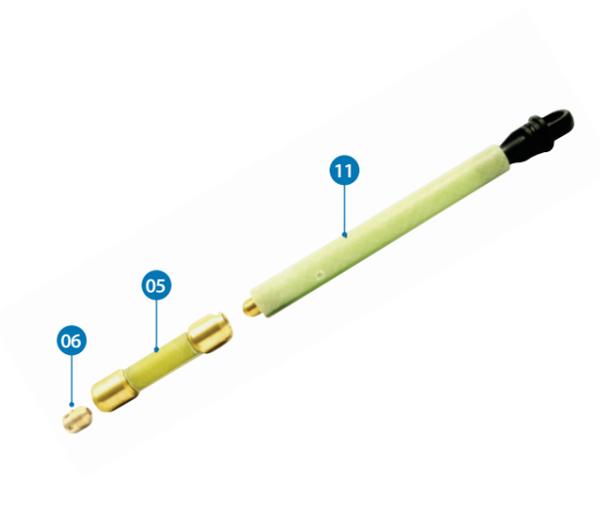


Figure 10
Inner Fuse Cartridge Holder Assembly.

ORDERING INFORMATION

Sidewall Mounted Bayonet Fuse Holder

Description	Catlog no.	Figures no.
Sidewall Mounted Bayonet Fuse Holder	CHBONFV	Figure 7+8
(Bay-O-Net Fuse Holder Assembly w/o Flapper Valve)	CHBON	Figure 7+8
Outer Tube (with Flapper Valve) (with Contacts, Gasket and Nut)	CHBONFVOT	Figure 7 1+2+3
Outer Tube (w/o Flapper Valve) (with Contacts, Gasket and Nut)	CHBONOT	Figure 7 1+2+3
Lock Nut	CHBONLN	Figure 7 3
Tank Wall Gasket	CHBONG	Figure 7 2
Inner Fuse Cartridge Holder Assembly (with Fuse Cartridge and End Plug)	CHBONIHFC	Figure 8 4+5+6
Inner Holder Only	CHBONIH	Figure 8 4
Fuse Cartridge	CHBONFC	Figure 8 5
End Plug	CHBONEP	Figure 8 6

Cover Mounted Bayonet Fuse Holder w/o Flapper Valve

Description	Catlog no.	Figures no.
Cover Mounted Bayonet Fuse Holder (short)	CHBONCM-S	Figure 9+10
Cover Mounted Bayonet Fuse Holder (long)	CHBONCM-L	Figure 9+10
Outer Tube (short) (with Nut, Gasket and Cap)	CHBONCMOT-S	Figure 9 7+8+9+10
Outer Tube (long) (with Nut, Gasket and Cap)	CHBONCMOT-L	Figure 9 7+8+9+10
Sealing Cap	CHBONCMSC	Figure 9 7
Lock Nut	CHBONCMLN	Figure 9 8
Sealing Gasket	CHBONCMG	Figure 9 9
Inner Fuse Cartridge Holder Assembly (short)	CHBONCMIHFC-S	Figure 10 11+5+6
Inner Fuse Cartridge Holder Assembly (long)	CHBONCMIHFC-L	Figure 10 11+5+6
Inner Holder Only (short)	CHBONCMIH-S	Figure 10 11
Inner Holder Only (long)	CHBONCMIH-L	Figure 10 11
Fuse Cartridge	CHBONFC	Figure 10 5
End Plug	CHBONEP	Figure 10 6

ORDERING INFORMATION

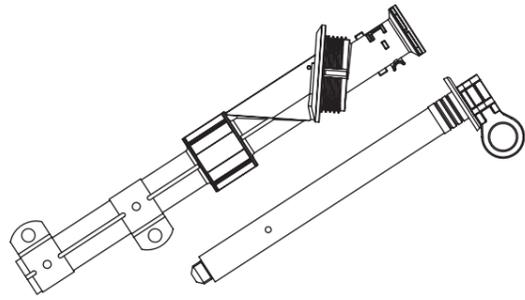


Figure 11

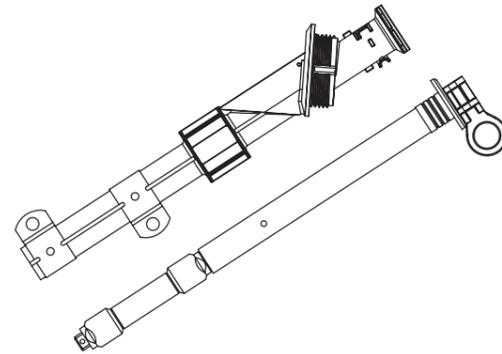


Figure 12

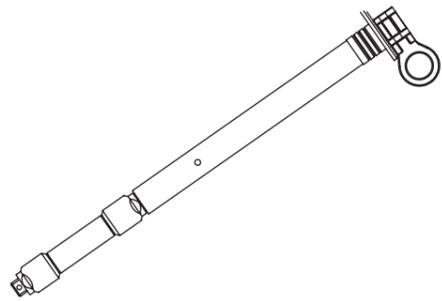


Figure 13

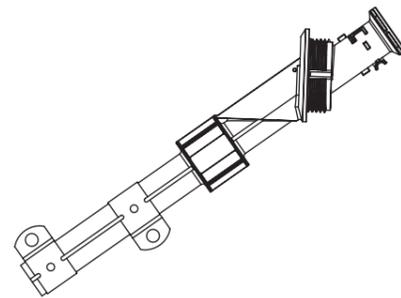


Figure 14

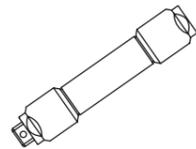


Figure 15

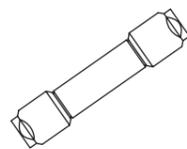


Figure 16

ORDERING INFORMATION

Silver Plated Bayonet Holder Assembly Parts*

Description	Catlog no.	Figures no.
Silver Plated Bayonet with Inner Fuse Holder (with Flapper Valve)	CHBONNFCAG CHBONNFCVAG	Figure 11
Silver Plated Bayonet with Inner Holder, Fuse Cartridge and End Plug (with Flapper Valve)	CHBONAG CHBONFVAG	Figure 12
Inner Holder with Silver Plated Fuse Cartridge and End Plug	CHBONIHFCAG	Figure 13
Silver Plated Bayonet not including Inner Holder, Fuse Cartridge and End Plug (with Flapper Valve)	CHBONNIHFCAG CHBONNIHFCVAG	Figure 14
Silver Plated Fuse Cartridge including End Plug	CHBONFCAG	Figure 15
Silver Plated Fuse Cartridge without End Plug	CHBONFCNEPAG	Figure 16

* This is the recommended holder for use with high Ampere Overload links. These integral cartridge fuse links have been designed for high kVA transformer application.



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