

# Type C PORCELAIN Cutouts (Standard, Linkbreak, Loadbreak) and Cutout-Arrester Combinations

Catalog 10A October 2015





# **Type C Cutouts**



LINKBREAK cutout, pages 8-10



LOADBREAK cutout with Arc-Chute interrupter, pages 11-13

#### pages 3-7

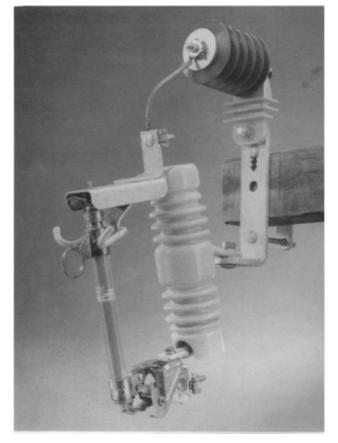
#### **Application**

The primary purpose of any cutout is to provide protection to the lines of your system and the various apparatus on those lines such as transformers and capacitor banks. Chance Type C cutouts provide reliable protection from low-level overloads that just melt the fuse link, intermediate faults, and very high faults, through maximum interrupt capacity.

In addition, Type C cutouts can also be used as a sectionalizing device. With the use of a portable loadbreak tool, Type C cutouts can function much like an overhead disconnect switch. A 300 amp disconnect blade is also available for this purpose.

#### Ratings/Specifications

STANDARD Type C cutouts have maximum design voltage ratings to simplify the confusing ratings of cutouts. There are **no restrictions** on application to grounded wye, ungrounded wye, or delta systems having maximum operating voltages (line-to-line) equal to or less than the cutout maximum design voltage rating. (See the LINKBREAK and LOADBREAK cutouts for their specifications.) Interruption tests have been performed at full system line-to-line voltage. In each voltage class, there are continuous current ratings of 100 amps, 200 amps and 300 amps. See the table on page 6 for other specifications.



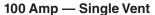
CUTOUT-ARRESTER Combinations, page 14

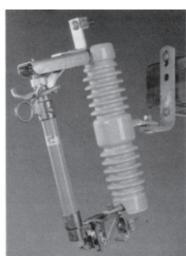
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200 Amp — Single Vent



300 Amp — Disconnect

Chance Type C fuseholders are mutually interchangeable with S&C Type XS and ABB Type ICX cutouts.

#### **Quality Construction**

#### **Efficient Current Transfer**

The Chance Type C cutout has an all copper current path. All contacts are silver-plated. Terminals are tin-plated bronze for use with copper or aluminum conductors.

#### **Loadbreak Hooks**

Galvanized steel hooks are standard on all Type C cutouts, except the arc chute version, for use with a portable loadbreak tool. These sturdy hooks are mounted on the top support and serve to guide the fuseholder into the latch socket when closing at an off-center angle.

#### **Top Contact**

The top contact is attached to the galvanized-steel hood by a stainless rivet to provide a smooth self-aligning action during closing even in severely corrosive environments. The top contact provides a socket-type cavity for latching the fuseholder and prevents any possible "over-travel" of the fuseholder. The top contact is made of a highly conductive copper strip with silver-plated embossments to resist corrosion. The contacts are held under constant pressure designed to maintain firm contact with the fuseholder contact surface until fault interruption is accomplished.

#### Hinge

The hinge on the Type C cutout employs large pivot areas for the fuseholder's trunnion and is cast of a copper alloy chosen for its strength and corrosion resistance. The hinge contacts are highly conductive copper alloy stampings and are plated to assure low resistance current transfer from the trunnion casting. The parallel current paths are backed up by high strength cantilever springs and are riveted to the hinge castings. Fuseholder can be dropped into place and easily lifted up and out. No tricky maneuvering.

#### **Insulators**

The insulators used on Type C cutouts are a sky-glaze gray. The metal to metal leakage distance on the 15 kV cutout insulator is 8.7 inches (220 mm), 12.6 inches (320 mm) on the 27 kV [125 kV LIW (BIL)], 17.3 inches (440 mm) on the 27 kV [150 kV LIW (BIL)], 26 inches (660 mm) on the 36 kV [170 kV LIW (BIL)], and 28.4 inches (720 mm) on the 36 kV [170 kV LIW (BIL)].

#### **Fuseholders**

The solid cap on the single vent fuseholder is silver-plated copper alloy, to provide efficient current transfer. An integral ring is provided in the top tube casting for opening and closing the fuseholder with conventional disconnect tools from the ground, from a bucket truck or from the pole.

The toggle type trunnion casting is a selective silverplated bronze for efficient current transfer to the lower hinge contacts. A cam shaped projection on each side of the trunnion casting provides high pressure parallel current paths to the lower contacts. These projections, or pivot pins, are cast full round for smooth rotational operation in the hinge. The link ejector assists in arc interruption during low fault current or excessive overload conditions. A groove in the center of the link ejector allows the fuse link's pigtail to go directly from the fuse tube to the attachment nut. A curved ejector minimizes bending stresses in the pigtail to prevent broken strands. A stainless steel torsion spring on the link ejector helps to rapidly eject the link from the bore of the fuseholder during interruption. The 200 amp link ejector has a wider groove area and increased spring force to accommodate the larger links.

The **link ejector** is pinned to the trunnion casting with a stainless steel pin to provide resistance to corrosive elements and provide smooth pivotal action. An interlocking feature between the link ejector and tube casting prevents excessive tension on the fuse link during closure, thereby preventing link breakage.

The **link ejector** employs a hammer effect to enhance toggle action of the trunnion during low fault and overload interruptions, hence dropout action is enhanced. The link ejector provides sufficient surface area to facilitate re-fusing by linemen wearing gloves.

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#### **PRODUCT FEATURES**

#### Interchangeability

Chance was the first to design a cutout that could interchange fuseholders and mounting assemblies with those of another manufacture. Chance Type C fuseholders are mutually interchangeable with S&C Type XS and ABB Type ICX cutouts (within the same voltage class).

#### **Fusetube**

The  $^{1}$ / $_{2}$ -inch inside diameter of the Type C cutout's 100 ampere fusetube increases internal pressure giving superior and reliable expulsion action. During frequently encountered intermediate fault ranges this diameter also permits higher TRV (transient recovery voltage) values to be tolerated. This small bore design eliminates any concern related to high impedance phase-to-phase faults on ungrounded wye and delta systems.

The inside liner is constructed of a synthetic arc-quenching material. The tube is made of fiberglass which permits the smaller bore and provides a higher burst strength. It is protected from the weather and environment by a special ultra-violet resistant coating.

Also, the Chance fusetube operates with fuselinks from all major suppliers.

#### **Brackets**

C cutouts come packed one per carton including a NEMA Heavy Duty "B" bracket with captive  $1^1\!/_2$ " bolt for crossarm mounting.

Type X brackets, also for crossarm mounting, provides 2<sup>5</sup>/<sub>8</sub>" additional clearance between the crossarm and the cutout.

"D" brackets are used to mount cutouts and/or arresters directly to the pole. Three brackets may be used for three-phase application. Type D brackets provide a clean, quick mounting without crossarm or special pole bands.

All the above brackets are galvanized steel for long lasting service. Cutouts can be ordered without any brackets.

#### **Higher Interrupt Capacities**

By using a copper arc shortening rod inside the top of the fusetube, higher interrupt ratings are obtainable. An arc shortening rod is attached to the cap of some fusetubes and lowers the fuse link within the fusetube. This permits a much shorter arc, resulting in less arc energy, and higher interrupting capacities.

For 200 A tubes, it allows for full voltage rating.

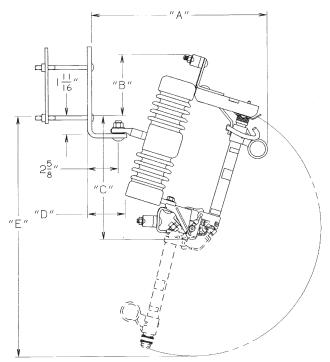
It is necessary to use fuse links with removable buttonheads when arc shortening rods are employed.

#### 170 kV LIW (BIL)

A 170 kV BIL Type C cutout is available for use in areas where the 28.4-inch minimum leakage distance to ground is required. See ordering data, page 6.

#### **Extra Corrosion Protection**

Type C cutouts are available with stainless steel hood, brackets, and hardware and copper alloy loadbreak hooks to offer greater corrosion resistance for environmental areas where corrosion can become a major factor. To order a stainless steel/copper alloy cutout add the suffix "S" to the end of the catalog number with the rating specifications desired. In additon, an optional spring assist may be provided to further enhance the toggle and drop out action in highly corrosive applications.



# STANDARD Type C Cutout with NEMA Type B Bracket Dimensions

kV					
LIW (BIL)	A	В	C	D	E
110	16"	51/2" 103/4"		31/2"	211/2"
110	406 mm	137 mm	273 mm	89 mm	559 mm
125	163/8"	$7^{1}/8$ "	121/2"	31/8"	263/4"
120	416 mm	181 mm	318 mm	79 mm	679 mm
150	163/8"	$7^{1}/8$ "	121/2"	31/8"	263/4"
150	416 mm	181 mm	318 mm	79 mm	679 mm
170	171/4"	81/2"	15"	13/4"	321/2"
170	438 mm	216 mm	381 mm	44 mm	826 mm

#### **Terminals**

Tin-plated bronze parallel groove type terminals are standard on Type C cutouts. They can accommodate aluminum or copper conductor sizes ranging from No. 6 (13.3 mm $^2$ ) solid copper through 4/0 (160.6 mm $^2$ ) ACSR or 250 (167.5 mm $^2$ ) kcmil stranded copper. The parallel groove design is perfect for handling two different sizes of conductor as is the case when arresters are being used. Eyebolts are also available. See ordering data, page 10A-6.



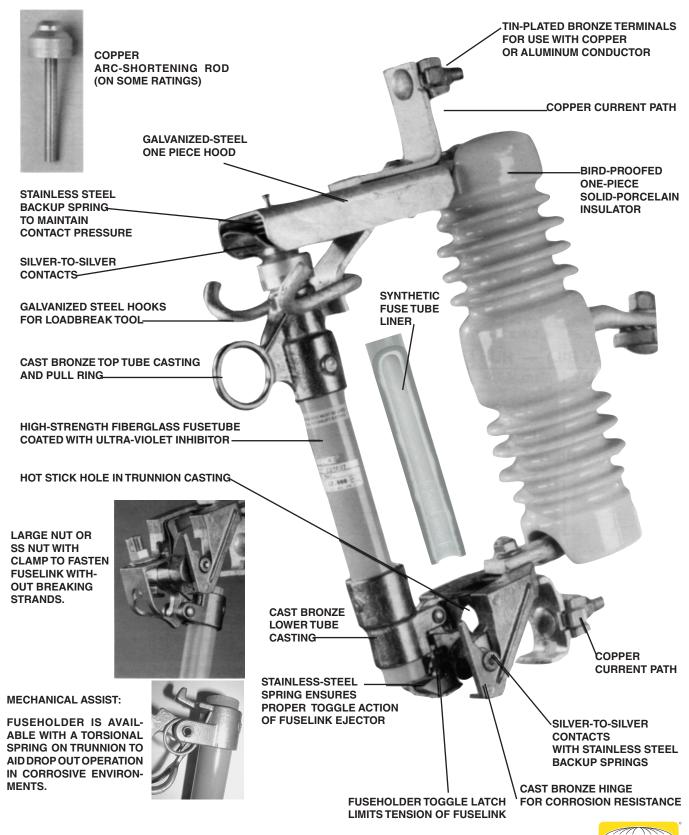
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# Compare Chance® quality and technical expertise Type C STANDARD Cutout

All Type C Cutouts meet or exceed ANSI/NEMA specifications.



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#### **Specifications and Ordering Information**

15 kV - 110 kV LIW (BIL) - RUS Listed

See page 10A-15 for Accessories. See page 10A-16 for Complete Catalog Numbering

*Base Catalog No	suffixes	Maximum Design Voltage	Nominal System Voltage	Continuous & Loadbreak Current (Amps)	Interrupt Capacity (Asym Amps)	Metal t	to Ground o Metal mum)	*Weight (lb./kg.)	Replacement Fusetube Cap/ Cap Assembly	Arc Shorten- ing Rod
C710112	<u>1</u> <u>2</u> <u>3</u>	15 kV	Thru 14.4 kV	100	10,000	8.7"	220 mm	14.23 /6.45	P7001535P	No
C710114	1 2 3	15 kV	Thru 14.4 kV	100	16,000	8.7"	220 mm	14.43 /6.55	E7001767P	$\mathrm{Yes}^{\ddagger}$
C710143	1 2 3	15 kV	Thru 14.4 kV	200	12,000	8.7"	220 mm	15.03 /6.82	E7002146P	$\mathrm{Yes}^{\ddagger}$
C710133	1 2 3	15 kV	Thru 14.4 kV	300	12,000**	8.7"	220 mm	14.53 /6.59	P7001535P	N/A

#### 27 kV - 125 kV LIW (BIL) — RUS Listed

C710211	1	<u>2</u>	<u>3</u>	27 kV		100	8,000	12.6"	320 mm	17.03 / 7.72	P7001535P	No
C710213	2710213 <b>1 2 3</b> 27 kV		$27~\mathrm{kV}$		100	12,000	12.6"	320 mm	17.03 / 7.72	E7001768P	Yes	
C710242	1	<u>2</u>	<u>3</u>	$27~\mathrm{kV}$	Thru $24.9~\mathrm{kV}$	200	10,000	12.6"	320 mm	17.73 / 8.04	E7002479P	Yes
C710243	1	<u>2</u>	<u>3</u>	$27~\mathrm{kV}$		200	12,000	12.6"	320 mm	17.73 / 8.04	PSE7002706P	Yes
C710233	1	<u>2</u>	<u>3</u>	27 kV		300	12,000*	12.6"	320 mm	17.23 / 7.82	P7001535P	N/A

#### 27 kV - 150 kV LIW (BIL) — RUS Listed

C710311	<u>1</u> <u>2</u> <u>3</u>	$27 \; \mathrm{kV}$	27	100	8,000	17.3"	440 mm	22.63 / 10.26	P7001535P	No
C710313	<u>1</u> <u>2</u> <u>3</u>	$27 \; \mathrm{kV}$	No	100	12,000	17.3"	440 mm	22.83 / 10.36	E7001768P	Yes
C710342	<u>1</u> <u>2</u> <u>3</u>	$27 \; \mathrm{kV}$	Restrictions thru 24.9 kV: 26.4	200	10,000	17.3"	440 mm	23.43 / 10.63	E7002479P	Yes
C710343	1 2 3	$27 \; \mathrm{kV}$	thru 34.5kV	200	12,000	17.3"	440 mm	23.43 / 10.63	PSE7002706P	Yes
C710333	1 2 3	$27 \; \mathrm{kV}$	un u o i.ok v	300	12,000*	17.3"	440 mm	23.03 / 10.45	P7001535P	N/A

#### 36 kV - 170 kV LIW (BIL) — RUS Listed

				•	•							
C710613	1	<u>2</u>	<u>3</u>	36 kV	Thru 34.5 kV	100	12,000	26"	660 mm	25.43/11.54	E7001743P	$\mathrm{Yes}^{\ddagger}$
C710643	1	<u>2</u>	<u>3</u>	27 kV	No Restrictions thru 24.9 kV; †26.4 thru 34.5 kV	200	12,000	26"	660 mm	25.83/11.72	E7002117P	$ m Yes^{\ddagger}$
C710633	1	<u>2</u>	<u>3</u>	$36 \; \mathrm{kV}$	Thru 34.5 kV	300	12,000**	26"	660 mm	25.43/11.54	P7001535P	N/A

NOTE: 26" fuse links are recommended.

#### 36 kV - 170 kV LIW (BIL) — RUS Listed

C71071	L3	1	<u>2</u>	<u>3</u>	36 kV	Thru 34.5 kV	100	12,000	28.4"	720 mm	30.73/13.94	E7001743P	$\mathrm{Yes}^{\ddagger}$
C71074	13	1	<u>2</u>	<u>3</u>	27 kV	No Restrictions thru 24.9 kV; †26.4 thru 34.5 kV	200	12,000	28.4"	720 mm	31.13/14.12	E7002117P	$\mathrm{Yes}^{\ddagger}$
C71073	33	1	<u>2</u>	<u>3</u>	36 kV	Thru 34.5 kV	300	12,000**	28.4"	720 mm	30.73/13.94	P7001535P	N/A

**NOTE:** 26" fuse links are recommended.

<sup>†</sup>For application on single-phase to neutral or three-phase solidly-grounded wye-connected circuits where recovery voltage does not exceed the maximum-design voltage of the device.

#### \*Option Suffix 1

Terminal Variations

Suffix 1	Description	*Weight (lb./kg.)
P	Parallel-groove clamps	0.33/0.15
E	Small eyebolts	0.16 /0.07
L	Large eyebolts	0.31/0.14
R	Lower PG Clamp Rotated 90°	0.33/0.15

Must specify one selection for Option 1.

#### \*Option Suffix 2

**Bracket Variations** 

Suffix 2	Description	*Weight (lb./kg.)			
В	B   NEMA Heavy Duty "B" bracket for crossarm (1 <sup>1</sup> / <sub>2</sub> " bolt)				
X	Extended type bracket for crossarm (Horizontal section is $2^5/_8$ " longer than Type B bracket)	3.75/1.70			
D	D-shape bracket (pole)	7.67/3.48			
Z	No bracket (must be used with M in Option $3$ )				
Blank	No bracket (cannot use with M in Option 3) $ \\$				
V	Easy-On bracket (Height: $4\frac{1}{8}$ " to $5\frac{5}{32}$ ", Width: $2\frac{3}{4}$ " to $4$ ")	2.9/1.32			

#### \*Option Suffix 3

Mechanical Assist Fuseholder

Suffix 3	Description
Blank	No option (may <u>not</u> be used with Z in Option 2)
M	Mechanical Assist Fuse- holder (may <u>not</u> be used with Blank in Option 2)
F	Fargo cutout cover (may <u>not</u> be used with Blank in Option 2)
S	Anti- corrosion stainless steel/copper alloy cutout



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<sup>\*</sup>Adjust total weight when selecting Options below. \*\*Momentary rating — Solid blade <sup>‡</sup>Must use removable buttonhead fuse links.



#### **Fuseholders and Mounting Assemblies** Ordering Information

#### 15 kV - 110 kV LIW (BIL)

*Cutout Base Catalog Number	Fuseholder/Blade Catalog Number		Holder/ Weight	Mounting Assembly Base *Catalog Number	Mounting Assembly Weight		
C710112	T710112T	1.8 lb.	0.82 kg.				
C710114	T710114T	2.0 lb.	0.91 kg.	T7101MM	10.01	F 0F 1	
C710143	T710143T	2.6 lb.	1.18 kg.		12.9 lb.	5.85 kg.	
C710133	T710133T	2.1 lb.	0.95 kg.				



300A **Fuseholders Blade** 



27 kV - 12.6" leakage **T7102MMPB** 



27 kV - 17.3" leakage **T7103MMPB** 



C710211	T710211T	2.1 lb.	0.95 kg			
C710213	T710213T	2.3 lb.	1.14 kg			
C710242	T710242T	2.7 lb.	1.22 kg	T7102MM	15.6 lb	7.08 kg
C710243	T710243T	2.7 lb.	1.22 kg			
C710233	T710342T	2.5 lb.	1.13 kg			

#### 27 kV - 150 kV LIW (BIL)

C710311	T710311T	1.9 lb.	0.86 kg			
C710313	T710313T	2.0 lb.	0.91 kg			
C710342	T710342T	2.5 lb.	1.13 kg	T7103MM	21.3 lb	9.66 kg
C710343	T710343T	2.5 lb.	1.13 kg			
C710333	T710333T	2.1 lb.	0.97 kg			

#### 36 kV - 170 kV LIW (BIL)

C710613	T710613T	2.8lb.	1.27 kg.			
C710643	T710643T	3.2 lb.	1.45 kg.	T7106MM	23.4 lb.	10.61 kg.
C710633	T710633T	2.8 lb.	1.27 kg.			

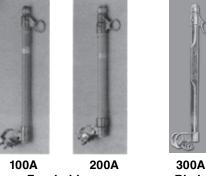
NOTE: 26" fuse links are recommended.

#### 36 kV - 170 kV LIW (BIL)

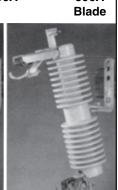
C710713	T710713T	2.8lb.	1.27 kg.			
C710743	T710743T	3.2 lb.	1.45 kg.	T7107MM	28.7 lb.	13.02 kg.
C710733	T710733T	2.8 lb.	1.27 kg.			

NOTE: 26" fuse links are recommended.

#### 300A **Fuseholders** Blade **■** 15 kV 8.7" leakage Catalog No. T7101MM Mounting Assembly only



**Fuseholders** 



36 kV - 26" leakage **T7106MMPB** 

36 kV - 28.4" leakage **T7107MMPB** 

#### **Universal Cutout Tool**

Ideal for Standard and Linkbreak 100 amp fuse holders (ABB, Chance S&C) to easily lift out, place, \*open and close. Inverted, secure method also fits Chance Electronic Sectionalizers.

Cat. No. PSC4033484 (Wt. 4 oz.) See Tools Catalog Section 2100.

\*When opening a cutout, follow all work rules and OSHA regulations. Not for use with Loadbreak cutouts.

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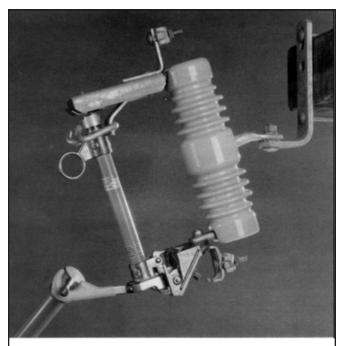


# Type C 100-Amp LINKBREAK Cutout

15 kv - 110 kV LIW (BIL) 15/27 kV - 125 kV LIW (BIL)

**22/36.4 kV - 170 kV LIW (BIL)**All standard non-loadbreak fuseholders and the linkbreak fuseholders are interchangeable and fit into both the non-loadbreak and Type C LINKBREAK cutout mounting assemblies produced after January 1985. Mounting assemblies are same as Type C STANDARD cutouts, shown

22/36.4 kV - 150 kV LIW (BIL)



A sharp downward pull on the lever with a hookstick breaks the fuselink.

#### 15 kV - 110 kV LIW (BIL) unit

#### **Application**

The Chance Type C 100 amp LINKBREAK cutout provides short circuit protection to utility lines with the added feature of mechanical linkbreak capability in a loadbreaking function. Linkbreak cutouts provide reliable protection from overloads that just melt the fuselink through the maximum interrupt capacity of the fuseholder and also provide inductive and capacitive loadbreak capability. For loadbreak ratings see chart, next page.

The unit will also accept the Type C 200 amp non-loadbreak fuseholder or a 300 amp disconnect blade. Each LINK-BREAK cutout includes standard loadbreak hooks to use with portable loadbreak tools. This method is particularly useful for switching of the 200 amp fuseholder and 300 amp disconnect blade.

#### **Design / Product Features**

Construction and product details shown on page 10A-3 apply to the LINKBREAK cutout except that the link-ejector on the linkbreak fuseholder is a copper-alloy casting instead of a stainless-steel stamping.

The unit utilizes a stainless-steel linkbreak lever to mechanically break fuselink elements thereby obtaining load interruption within the fuseholder. The long lever is positioned directly in-line with the cutout, rather than on one side or in back of the cutout for convenient pull-down operation.

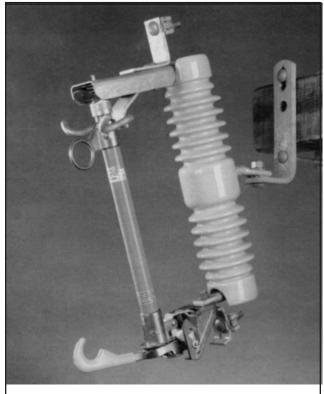
#### **Ratings / Specifications**

on page 10A-7.

The 15 kV Type C LINKBREAK cutout has a maximum design voltage rating of 15 kV. There are no voltage restrictions on application to grounded wye, ungrounded wye, or delta systems having maximum operating voltages (line to line) equal to or less than the cutout maximum design voltage rating.

The 15/27 and 22/36.4 kV Type C LINKBREAK cutouts have maximum design slant voltage ratings. These cutouts are to be used on systems which have phase-to-ground voltages no greater than the value listed to the left of the slant (/) and which have phase-to-phase voltages no greater than the value listed to the right of the slant.

The Type C LINKBREAK cutout is to be used with only Chance, McGraw-Edison and Kearney fuselinks. S&C Electric fuselinks and other fuselinks which require more than 1 inch elongation before breaking must not be used with the Type C LINKBREAK cutout.



15/27 kV - 125 kV LIW (BIL) unit

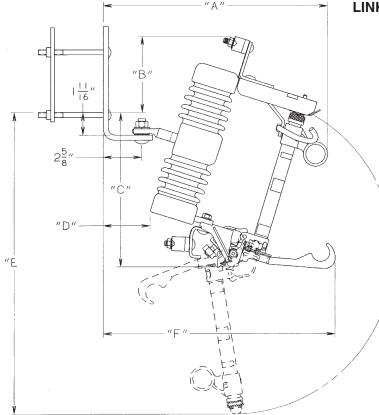


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# Type C 100-Amp LINKBREAK Cutout



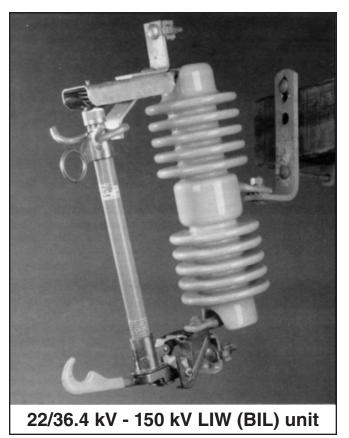
# LINKBREAK Cutout with NEMA Type B Bracket Dimensions

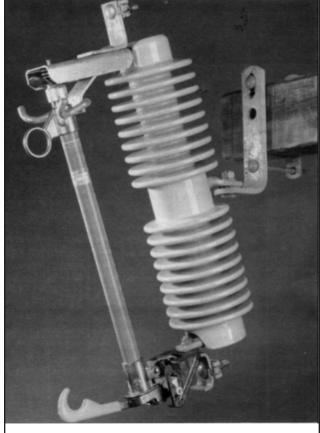
LIW (BIL) kV	Α	В	С	D	Е	F
	16"	53/8"	103/4"	31/2"	22"	165/8"
110	406	137	273	89	559	422
	mm	mm	mm	mm	mm	mm
	163/8"	71/8"	121/2"	31/8"	263/4"	16"
125	416	181	318	79	679	406
	mm	mm	mm	mm	mm	mm
	163/8"	71/8"	121/2"	31/8"	263/4"	16"
150	416	181	318	79	679	406
	mm	mm	mm	mm	mm	mm
	171/4"	81/2"	15"	13/4"	321/2"	141/2"
170	438	216	381	416	826	368
	mm	mm	mm	mm	mm	mm

#### **Loadbreak Ratings**

	*Base Cutout	kV,		
1	Catalog	Nominal	Inductive	Capacitive
1	Number	System Voltage	Amperes	Amperes
	C720112	14.4	100	100
/	C720114	14.4	100	100
	$C720211^{\dagger}$	24.9	100	100
	$C720213^{\dagger}$	24.9	100	100
	$C720311^{\dagger}$	34.5	100	50
	$C720313^{\dagger}$	34.5	100	50
	$C720613^{\dagger}$	34.5	100	50

\*Specifications and ordering information on next page.
†Limited to grounded-wye systems with grounded-wye





22/36.4 kV - 170 kV LIW (BIL) unit

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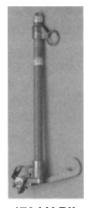
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# Type C 100-Amp LINKBREAK Cutout







#### \*Fuseholders (100 Amp only)

kV	Cutout	Fuseholder	We	ight
& BIL	Catalog Number	Catalog No.	lb.	kg.
15 kV	C720112PB	T720112T	2.5	1.13
110 kV BIL		T720114T	2.7	1.22
15/27 kV	C720211PB	T720211T	2.7	1.22
125 kV BIL	C720213PB	T720213T	2.9	1.32
22/36.4 kV	C720311PB	T720311T	2.7	1.22
150 kV BIL	C720313PB	T720313T	2.9	1.32
22/36.4 kV	C720613PB	T720613T	3.5	1.59
170 kV BIL	C7200151 D	17200131	0.0	1.59

<sup>\*</sup>Mounting assemblies are same as Type C STANDARD cutouts, shown on page 10A-7.

110 kV BIL

125 & 150 kV BIL

170 kV BII

# Specifications and Ordering Information 15 kV - 110 kV LIW (BIL) — RUS Listed

See page 10A-14 for Arrester Cutout Combinations See page 10A-15 for Accessories. See page 10A-16 for Complete Catalog Numbering

*Base Catalog No.	suffi	xes	Maximum Design Voltage	Nominal System Voltage	Continuous Current (Amps)	Interrupt Capacity (Asym Amps)	Metal t	to Ground o Metal mum)	*Weight	Replacement Fusetube Cap/ Cap Assembly	
C720112	1 2	<u>3</u>	15 kV	Thru 14.4 kV	100	10,000	8.7"	220 mm	14.53 /6.59	P7001469P	No
C720114	1 2	3	15 kV	Thru 14.4 kV	100	16,000	8.7"	220 mm	14.73 /6.68	E7001784P	$\mathrm{Yes}^{\ddagger}$

#### 15/27 kV - 125 kV LIW (BIL) — RUS Listed

C720211	1	2 3	15/27 kV	No Restrictions thru 14.9 kV:	100	8,000	12.6"	320 mm	17.23 /7.82	P7001469P	No
C720213	1	2 3	15/27 kV	†20.8 thru 24.9 kV	100	12,000	12.6"	320 mm	17.43 /7.91	E7001785P	$\mathrm{Yes}^{\ddagger}$

#### 22/36.4 kV - 150 kV LIW (BIL) — RUS Listed

C72031	1	1	<u>2</u> <u>3</u>	22/36.4 kV	No Restrictions thru 20.8 kV:	100	8,000	17.3"	440 mm	23.03/10.45	P7001469P	No
C72031	.3	1	<u>2</u> <u>3</u>	22/36.4 kV	†22.8 thru 34.5 kV	100	12,000	17.3"	440 mm	23.23/10.54	E7001785P	Yes‡

#### 22/36.4 kV -170 kV LIW (BIL) — RUS Listed

C720613 <b>1 2 3</b> 22/36.4 kV No Restrictions thru 20.8 kV; 100	11,200 26.0"	660 mm 26.13/11.85 PE7001787P Yes <sup>‡</sup>
---	--------------	--

NOTE: 26" fuse links are recommended.

<sup>†</sup>For application on single-phase to neutral circuits with phase-to-ground voltages not exceeding the value to the left of the slant; and for application on three-phase solidly-grounded-wye systems with solidly-grounded loads with line-to-line voltages not exceeding the value to the right of the slant.

## \*Option Suffix 1 Terminal Variations

Suffix 1	Description	*Weight (lb./kg.)
P	Parallel-groove clamps	0.33/0.15
E	Small eyebolts	0.16 /0.07
L	Large eyebolts	0.31/0.14
R	Lower PG Clamp Rotated 90°	0.33/0.15

Must specify one selection for Option 1.

#### \*Option Suffix 2

Bracket Variations

Suffix 2	Description	*Weight (lb./kg.)
В	NEMA Heavy Duty "B" bracket for crossarm (11/2" bolt)	2.84/1.29
X	Extended type bracket for crossarm (Horizontal section is $2^{5/8}$ " longer than Type B bracket)	3.75/1.70
D	D-shape bracket (pole)	7.67/3.48
Z	No bracket (must be used with M in Option 3)	
Blank	No bracket (cannot use with M in Option 3)	
V	Easy-On bracket (Height: $4\frac{1}{8}$ " to $5\frac{5}{32}$ ", Width: $2\frac{3}{4}$ " to $4$ ")	2.9/1.32

#### \*Option Suffix 3

Mechanical Assist Fuseholder

Suffix 3	Description
Blank	
	used with Z in Option 2)
M	Mechanical Assist Fuse-
	holder (may <u>not</u> be used
	with Blank in Option 2)
F	Fargo cutout cover (may <u>not</u> be used with Blank in Option 2)
S	Anti- corrosion stainless steel/copper alloy cutout



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<sup>\*</sup>Must use removable buttonhead fuse links.

<sup>\*</sup>Adjust total weight when selecting Options below.



# Type C LOADBREAK Cutout

#### with Arc Chute type interrupter

• 15 kv • 15/27 kV • 20/34.5 kV

#### **Application**

The Type C Loadbreak Cutout is available for application on 15, 25 and 35 kV distribution systems. The addition of the arc chute expands the flexibility of the Chance protective devices family by providing loadbreak capability for cutouts and disconnect solid blade units. The loadbreak cutout provides short circuit protection to utility lines with the added feature of a loadbreaking function.

The loadbreak cutout is applicable for transformer and capacitor bank switching or line sectionalizing. Loadbreak cutouts provide protection from overloads that just melt the fuselink through the maximum interrupt capacity of the fuseholder. They also provide loadbreak capability through 300 amperes.

#### Design

All design features and most components of the loadbreak unit are identical to those incorporated in the Type C standard cutout. The loadbreak portion of the Type C Loadbreak cutout is a heavy duty, reliable load interrupter that provides a positive visible loadbreak. A common loadbreak mounting assembly will accept the Chance Type C 100 amp and 200 amp loadbreak fuseholders or a 300 amp loadbreak disconnect blade. The Type C LOADBREAK fuseholder is not designed to be interchangeable with any other manufacturer's cutout.

#### Ratings/Specifications

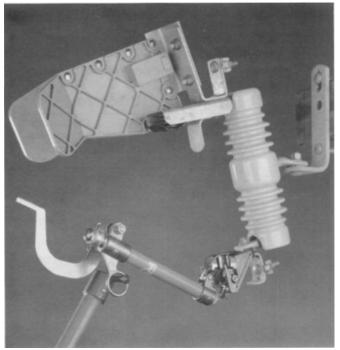
The 15kV Type C loadbreak cutout has a maximum design voltage rating of 15kV. There are no voltage restrictions on application to grounded wye, ungrounded wye, or delta systems having maximum operating voltages (line to line) equal to or less than the cutout maximum design voltage rating.

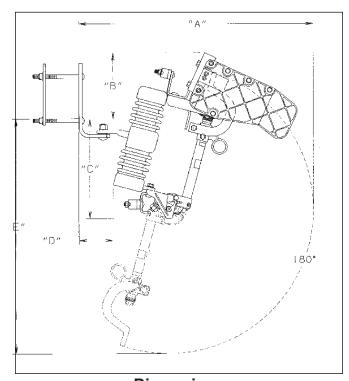
The 15/27 and 20/34.5 kV Type C loadbreak cutouts have maximum design slant voltage ratings. These cutouts are to be used on systems which have phase-to-ground voltages no greater than the value listed to the left of the slant (/) and which have phase-to-phase voltages no greater than the value listed to the right of the slant.

Fuseholders and mounting assemblies from other manufacturers' loadbreak cutouts are not interchangeable with Chance loadbreak cutouts. Likewise, Chance fuseholders and mountings are not interchangeable with other manufacturers' loadbreak cutouts.

#### Operation

The self-contained loadbreak device enables the lineman to interrupt load current by means of a simple hookstick operation. To break the current, the lineman inserts a hookstick into the operating ring and rapidly opens the device. Upon opening, a spring-loaded stainless steel blade mechanism snaps out through a gray arc chute and elongates, cools and extinguishes the confined arc. The loadbreaking operation is independent of the operating speed of the lineman. The fuse remains undamaged. No special or portable tools are required to operate the unit. In the open position, the fuse-holder or blade hangs in an approximate vertical position for the visible-break.





Dimensions									
kV LIW (BIL	) A	В	С	D	E				
110	25 <sup>1</sup> / <sub>4</sub> "	6 <sup>7</sup> / <sub>8</sub> "	10 <sup>3</sup> / <sub>4</sub> "	3 <sup>1</sup> / <sub>2</sub> "	25 <sup>5</sup> / <sub>8</sub> "				
	642 mm	175 mm	273 mm	89 mm	651 mm				
125	28 <sup>1</sup> / <sub>4</sub> "	8 <sup>5</sup> / <sub>8</sub> "	12 <sup>1</sup> / <sub>2</sub> "	3 <sup>1</sup> / <sub>8</sub> "	30 <sup>7</sup> / <sub>8</sub> "				
	719 mm	219 mm	318 mm	79 mm	784 mm				
150	28 <sup>1</sup> / <sub>4</sub> "	8 <sup>5</sup> / <sub>8</sub> "	12 <sup>1</sup> / <sub>2</sub> "	3 <sup>1</sup> / <sub>8</sub> "	30 <sup>7</sup> / <sub>8</sub> "				
	719 mm	219 mm	318 mm	79 mm	784 mm				

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# Type C LOADBREAK Cutout with Arc Chute Interrruper

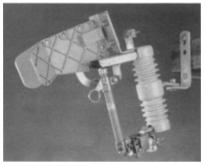
## **Specifications and Ordering Information**

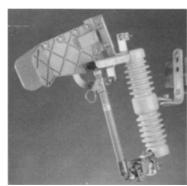
15 kV - 110 kV LIW (BIL) — RUS Listed

See page 10A-14 for Arrester Cutout Combinations See page 10A-15 for Accessories. See page 10A-16 for Complete Catalog Numbering

		suffixes	Maximum Design Voltage	Nominal System Voltage	Continuous & Loadbreak Current (Amps)		Interrupt Capacity (Asym Amps)	G M	kage to round etal to Metal nimum)	*Weight	Replacement Fusetube Cap/ Cap Assembly	ening
C7	30112	1 2 3	15 kV	Thru 14.4 kV	100	200	10,000	8.7"	220 mm	19.33/8.77	P7001535P	No
C7	30114	1 2 3	15 kV	Thru 14.4 kV	100	200	16,000	8.7"	220 mm	19.53/8.86	E7001767P	Yes <sup>‡</sup>
C7	30143	1 2 3	15 kV	Thru 14.4 kV	200	200	12,000	8.7"	220 mm	20.13/9.13	E7002146P	Yes‡
C7	30133	1 2 3	15 kV	Thru 14.4 kV	300	50	12,000**	8.7"	220 mm	19.63/8.90	P7001535P	N/A

#### **▼**15 kV, 110 kV LIW (BIL)





**1**5/27 kV, 125 kV LIW (BIL)

20/34.5 kV, 150 kV LIW (BIL)



#### 15/27 kV -125 kV LIW (BIL) — RUS Listed

C730211	1 2 3	15/27 kV	No	100	200	8,000	12.6"	320 mm	21.93 / 9.95	P7001535P	No
C730213	1 2 3	15/27 kV	Restrictions	100	200	12,000	12.6"	320 mm	22.13/10.04	E7001768P	Yes
C730242	1 2 3	15/27 kV	thru	200	200	10,000	12.6"	320 mm	22.83/10.36	E7002479P	Yes
C730243	1 2 3	15/27 kV	14.4 kV; †20.8	200	200	12,000	12.6"	320 mm	22.83/10.36	PSE7002706	Yes
C730233	1 2 3	15/27 kV	thru 24.9 kV	300	50	12,000*	12.6"	320 mm	22.33/10.13	P7001535P	N/A

#### 20/34.5 kV -150 kV LIW (BIL) — RUS Listed

C730311	1	<u>2</u>	<u>3</u>	20/34.5 kV	No	100	100	8,000	17.3"	440 mm	27.73/12.58	P7001535P	No	
C730313	1	<u>2</u>	<u>3</u>	20/34.5 kV	Restrictions thru 14.4 kV; †20.8 thru 34.5 kV	100	100	12,000*	17.3"	440 mm	27.93/12.67	E7001768P	Yes	

<sup>\*\*</sup>Momentary rating — Solid blade 

\*Must use removable buttonhead fuse links. \*Adjust total weight when selecting Options below.

\*For application on single-phase to neutral circuits with phase-to-ground voltages not exceeding the value to the left of the slant; and for application on three-phase solidly-grounded-wye systems with solidly-grounded loads with line-to-line voltages not exceeding the value to the right of the slant.

#### \*Option Suffix 1 Terminal Variations

	TOTAL TOTAL	•		
Suffix 1	Description	*Weight (lb./kg.)		
P	Parallel-groove clamps	0.33/0.15		
E	Small eyebolts	0.16 /0.07		
L	Large eyebolts	0.31/0.14		
R	Lower PG Clamp Rotated 90°	0.33/0.15		

#### Must specify one selection for Option 1.

#### \*Option Suffix 2

Bracket Variations

Suffix 2	Description	*Weight (lb./kg.)			
В	NEMA Heavy Duty "B" bracket for crossarm (11/2" bolt)	2.84/1.29			
X	Extended type bracket for crossarm (Horizontal section is $2^{5/8}$ " longer than Type B bracket)	3.75/1.70			
D	D D-shape bracket (pole)				
Z	No bracket (must be used with M in Option 3)				
Blank	No bracket (cannot use with M in Option 3)				
V	Easy-On bracket (Height: $4\frac{1}{8}$ " to $5\frac{3}{2}$ ", Width: $2\frac{3}{4}$ " to $4$ ")	2.9/1.32			

#### \*Option Suffix 3

Mechanical Assist Fuseholder

Suffix 3	Description
Blank	No option (may <u>not</u> be used with Z in Option 2)
M	Mechanical Assist Fuse- holder (may <u>not</u> be used with Blank in Option 2)
F	Fargo cutout cover (may not be used with Blank in Option 2)
S	Anti- corrosion stainless steel/copper alloy cutout



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# Type C LOADBREAK Cutout

#### **Fuseholders and Mounting Assemblies**

15 kV - 110 kV LIW (BIL)

Cutout Base Catalog Number	Fuseholder/ Blade Catalog Number	Fuse Holder/ Blade Weight		Mounting Assembly Base Catalog Number	Mounting Assembly Weight	
C730112	T730112T	3.3 lb.	1.5 kg.			
C730114	T730114T	3.5 lb.	1.6 kg.	T7301MM	18.6 lb.	8.4 kg.
C730143	T730143T	4.1 lb.	1.9 kg.			
C730133	T730133T	3.6 lb.	1.6 kg.			

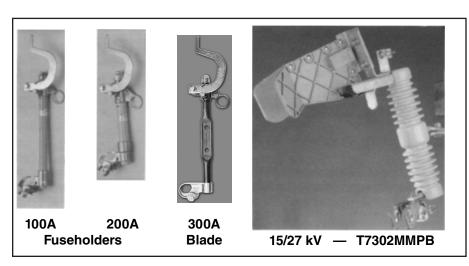
#### 15/27 kV - 125 kV LIW (BIL)

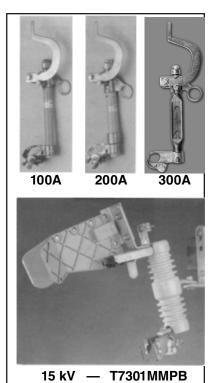
C730211	T730211T	3.6 lb.	1.6 kg			
C730213	T730213T	3.8 lb.	1.7 kg			
C730242	T730242T	4.4 lb.	2.0 kg	T7302MM	20.8 lb	9.4 kg
C730243	T730243T	4.4 lb.	2.0 kg			
C730233	T730342T	4.0 lb.	1.8 kg			

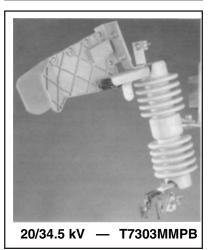
#### 20/34.5 kV - 150 kV LIW (BIL)

C730311	T730311T	3.6 lb.	1.6 kg	T7303MM	26.6 lb	12.1 kg
C730313	T730313T	3.8 lb.	1.7 kg	1100011111	20.0 10	12.1 Kg

Replacement Arc Chute Interrupter: Catalog No. T7300080 (1.2 lb. / 0.54 kg.)







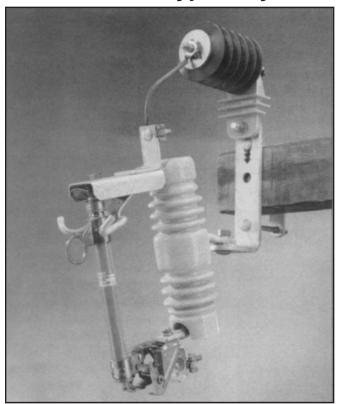
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# Type C Cutout-Arrester Combinations

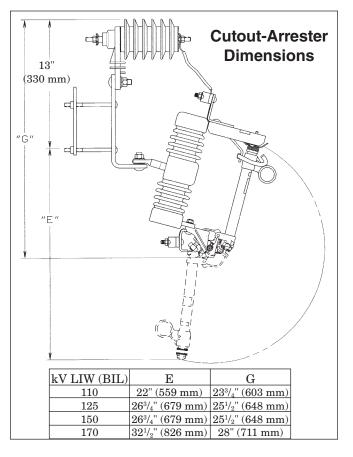
#### **Over-the-Arm Type only**



15 kV cutout with direct-connected Ohio Brass largeblock, MOV, polymer 9 kV lightning arrester

#### **Advantages of combination**

Chance cutout-arrester combinations cost less than the total cost of separately purchased components. The combination units install faster, more economically and take up less space in storage, transit and service. Each combined unit takes up a minimum of space on the crossarm and has a favorable weight distribution for minimal off-center loading. The field-proven quality of both cutout and arrester assure consistent



high performance for the combinations.

These units include Chance cutouts fitted with **only** Ohio Brass®MOV arresters, superseding previous silicon-carbide units. For easy conversion to the new arrester designation system, refer to the Cutout Cross-Reference Guide, Bulletin 10-0203.

Arrester Manufacturer	uty Cycle g	Metal	Oxid	e Var	ister (M	IOV)	Operating Design
Mar	uty (	tion		Pol	ymer		— Housing
rrester	MCOV Dut kV Rating	rrester onnect ethod	11	10	125 & 150	150	_ kV LIW (BIL) for Cutout
<b>4</b>	≥≥	ĀŬŽ	9	10	18	27	— kV Rating
ass	Small Block Normal Duty 5 kA	Direct	DL	DM	DN	DP	
nio Brass	Large Block Heavy Duty 10 kA	Direct	EL	EM	EN	EP	

FL

Direct

FM

FN

FP

#### **Ordering Information**

To specify a Cutout-Arrester Combination:

- 1. Select a two-letter designation for the appropriate arrester from the shaded section of the Table at left.
- 2. Substitute the two letters for the "0" in the Base Catalog No. for the appropriate Cutout listed on page 6, 10 or 12.

Riser Pole

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#### **Accessories**

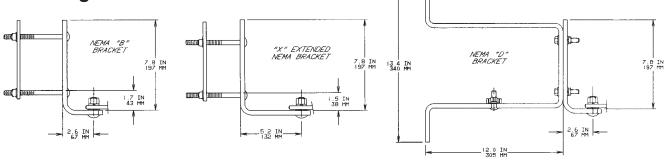
#### **Terminal Connectors**

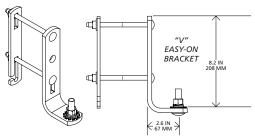
Cat. No.	Description	Wt. (lb./kg.)	Min. Order Qty.
T7001325	Parallel-Groove Clamp, tin-plated bronze for No. 6 sol. thru 4/0 ACSR or 250 kcmil stranded	0.33 / 0.15	10
T7001326	Small Eyebolt for No. 8 solid thru 2/0 stranded	0.16 / 0.07	10
T7001327	Large Eyebolt for No. 6 solid thru 4/0 ACSR or 250 kcmil stranded	0.40 / 0.14	10

#### **Mounting Brackets**

C2060283	NEMA Heavy Duty "B" Bracket with 1½" captive bolt for crossarm mounting	2.84 / 1.29	_
C2060280	Extended Crossarm Bracket (Horizontal section is 2 <sup>5</sup> / <sub>8</sub> " longer than NEMA "B" bracket)	3.75 / 1.70	_
C2060299	"D" Pole Mounting Bracket	7.67 / 3.48	_
C2060632	Cutout/Arrester Bracket complete with carriage bolts and backstrap	4.00 / 1.81	_
PSC2060887	"V" Easy-On bracket (Height: $4\frac{1}{2}$ " to $5\frac{1}{3}$ 2", Width: $2\frac{1}{4}$ " to $4$ ")	2.9 / 1.32	_

#### **Mounting Bracket Dimensions**





# Fargo Cutout Cover ONE PIECE WILDLIFE PROTECTOR

Fastener installation locations (2 fasteners per assembly) 

√

Available as an Option on Standard and Linkbreak Type C-Porcelain Cutouts (see pages 10A-6 and 10A-10), Cover also may be ordered as a separate line item as **Catalog No. CC101**. **Material:** Proprietary low track vinyl that is UV stabilized for long-term performance. Gray color.

- $\bullet$  Designed to provide protection for cutouts from accidental contact by squirrels, birds or other wildlife.
- Universal one-piece design for easy installation or retrofit. Fits Chance 15 kV Standard and Linkbreak Cutouts, both Polymer and Porcelain types.



#### **Universal Cutout Tool**

Ideal for Standard and Linkbreak 100 amp fuse holders (ABB, Chance, S&C) to easily lift out, place, \*open and close. Inverted, secure method also fits Chance Electronic Sectionalizers.

Cat. No. PSC4033484 (Wt. 4 oz.) See Tools Catalog Section 2100.

\*When opening a cutout, follow all work rules and OSHA regulations. Not for use with Loadbreak cutouts.

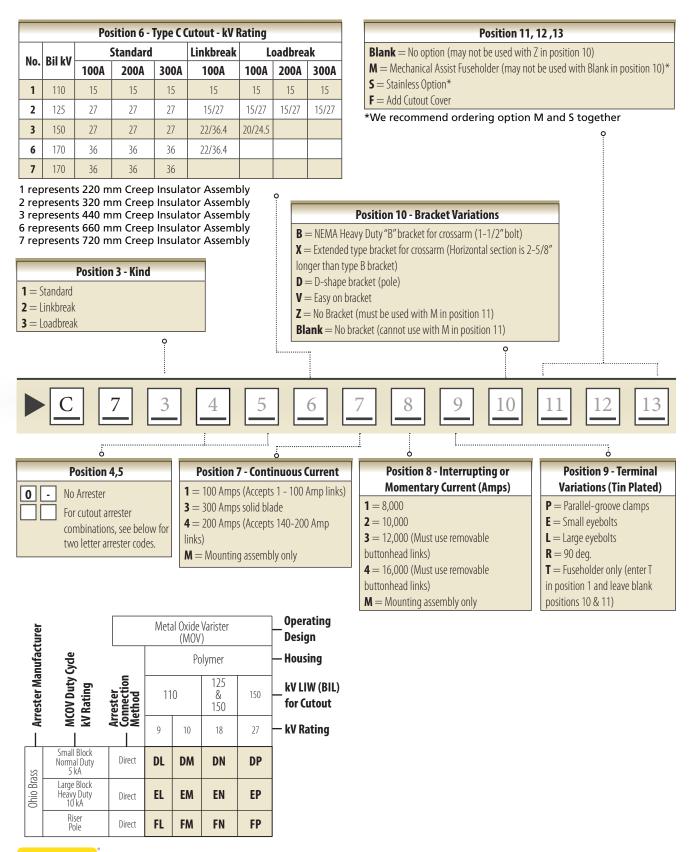




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# Type C Cutouts Catalog Numbering System



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