



**PATTON & COOKE CO.**

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# UTILITY PRODUCT ACCESSORIES

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# UTILITY PRODUCT ACCESSORIES

## CABLE RISER BRACKETS

No. Cables to be Supported	Max. Cable Outside Diameter		Epoxy Insert Frame			Mounting Bracket Style	Patton & Cooke Catalogue No.
	(mm)	(in)	Qty per Assembly	Size Diameter			
				(mm)	(in)		
One	47.5	1.870	1	76.2	3.0	Low Profile	5M11B- <u>x</u>
						Extended	5M11- <u>x</u>
	70.0	2.760	1	114.3	4.5	Extended	5M10- <u>x</u>
Three	24.1	0.950	1	76.2	3.0	Low Profile	5M11B-3- <u>y</u>
						Extended	5M11-3- <u>y</u>
	30.1	1.187	1	114.3	4.5	Extended	5M8A- <u>x</u>
	47.5	1.870	3	76.2	3.0	Low Profile	5M8A- <u>x</u>
						Extended	5M8- <u>x</u>

### ORDERING PROCEDURE:

1. Determine the following: A) Number of cables to be supported B) Outside diameter of each cable C) 1 or 3 cable insert style D) Mounting bracket style.
2. Select catalogue number of cable riser bracket.
3. Provide outside diameter of the cable in inches and substitute this dimension for "x" or "y" in catalogue number.
4. Make sure that the outside diameter of the cable does not exceed the maximum cable outside diameter listed.

Example: Three 0.950" outside diameter cables to be supported in a single insert, low profile cable riser bracket.

Catalogue number: **5M11B-3-0950**

Illustration (not to scale)	Patton & Cooke Catalogue No.	Dimensions								Weight	
		a		b		c		d			
		(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(kg)	(lb)
 5M11B-3-y 5M11-x	5M11B-x	114	4.0	105	4.1	140	5.5	133	5.3	2.0	4.5
	5M11B-3-y	114	4.0	105	4.1	140	5.5	133	5.3	2.0	4.5
 5M10-x 5M10-3-y 5M11-x 5M11-3-y	5M10-x	210	8.3	178	7.0	254	10.0	86	3.4	2.3	5.0
	5M10-3-y	210	8.3	178	7.0	254	10.0	86	3.4	2.3	5.0
	5M11-x	279	11.0	105	4.1	140	5.5	137	5.4	2.3	5.0
	5M11-3-y	279	11.0	105	4.1	140	5.5	137	5.4	2.3	5.0
 5M8-x 5M8A-x	5M8A-x	229	9.0	105	4.1	229	9.0	137	5.4	4.5	10.0
	5M8-x	330	13.0	105	4.1	229	9.0	137	5.4	5.0	10.0

For custom cable riser bracket designs contact Patton & Cooke.



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# UTILITY PRODUCT ACCESSORIES

## INSULATED END CAPS

Insulated end caps are used for capping off live conductors. Cast from Patton & Cooke's exclusive thermal setting resin, insulated end caps are rigid cable handling tools with superior insulating properties.

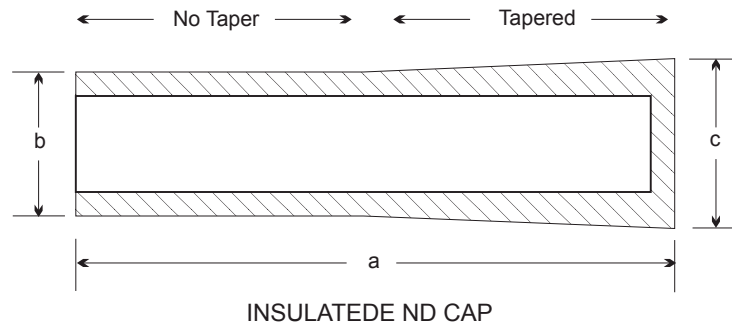
Voltage Class (kV)	Cable Type	Conductor Size	Patton & Cooke Catalogue No.	Dimensions					
				a		b		c	
				(mm)	(in)	(mm)	(in)	(mm)	(in)
13	Compact Sector	#3/0 AWG	<b>CAP-015</b>	102	4	25	0.97	29	1.16
		300 MCM	<b>CAP-014</b>	110	4.31	32	1.25	36	1.41
		400 MCM	<b>CAP-006</b>	110	4.31	44	1.72	49	1.94
		500 MCM	<b>CAP-013</b>	110	4.31	35	1.38	39	1.54
		600 MCM	<b>CAP-005</b>	110	4.31	47	1.84	53	2.10
	Round	#2 AWG	<b>CAP-001</b>	102	4	25	0.97	29	1.16
15	Compact Sector	#2/0 AWG	<b>CAP-TH3</b>	110	4.31	35	1.25	40	1.41
		350 MCM	<b>CAP-012</b>	110	4.31	38	1.50	42	1.66
		500 MCM	<b>CAP-TH4</b>	110	4.31	49	1.84	53	2.10
	Round	#2/0 AWG	<b>CAP-TH1</b>	110	4.31	30	1.17	35	1.34
		350 MCM	<b>CAP-010</b>	110	4.31	32	1.25	36	1.41
		500 MCM	<b>CAP-011</b>	110	4.31	35	1.38	39	1.54
			<b>CAP-TH2</b>	110	4.31	49	1.57	53	1.73
25	Compact Sector	350 MCM	<b>CAP-005</b>	110	4.31	47	1.84	53	2.10
		500 MCM	<b>CAP-007</b>	110	4.31	52	2.06	58	2.28

### ORDERING PROCEDURE:

1. Determine the following: A) Number of cables to be supported B) Outside diameter of each cable C) 1 or 3 cable insert style D) Mounting bracket style.
2. Select catalogue number of cable riser bracket.
3. Provide outside diameter of the cable in inches and substitute this dimension for "x" or "y" in catalogue number.
4. Make sure that the outside diameter of the cable does not exceed the maximum cable outside diameter listed.

Example: Three 0.950" outside diameter cables to be supported in a single insert, low profile cable riser bracket.

Catalogue number: **5M11B-3-0950**





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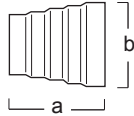
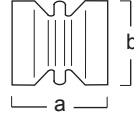
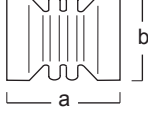
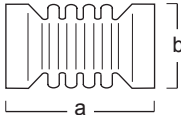
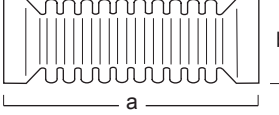
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# UTILITY PRODUCT ACCESSORIES

## STAND OFF INSULATORS

Patton & Cooke stand off insulators are cast from thermal setting resin, and suitable for indoor applications. Stand off insulators are designed for spacing bus or connectors

Illustration (not to scale)	Voltage Class (kV)	Impulse Voltage (kV BIL)	Patton & Cooke Catalogue No.	Dimensions				Weight	
				a		b			
				(mm)	(in)	(mm)	(in)	(kg)	(lb)
	2.5	45	IN-2.5EN- <u>x</u> <u>y</u>	64	2.50	51	2.00	0.23	0.50
	5	60	IN-5NE- <u>x</u> <u>y</u>	89	3.50	102	4.00	1.14	2.50
	7.5	75	IN-7NE- <u>x</u> <u>y</u>	114	4.50	102	4.00	1.36	3.00
	15	95	IN-15LNE- <u>x</u> <u>y</u>	152	6.00	102	4.00	1.82	4.00
		110	IN-15HNE- <u>x</u> <u>y</u>	191	7.50	102	4.00	2.04	4.50
	25	150	IN-25NE- <u>x</u> <u>y</u>	267	10.50	102	4.00	2.72	6.00

### SELECTION REMINDERS:

1. Metric sizes are available. Contact factory.
2. Insulators with unique bolt patterns and insulators equipped with studs are available. Contact factory.
3. When inserts are ordered for each end of the insulator, the insulator will be supplied with the bolt pattern in line. If inserts are required at 90°, add -90 to the catalogue number.

### ORDERING PROCEDURE:

1. Determine the A) Voltage class B) Impulse Voltage.
  2. Select the catalogue number of the stand off insulator.
  3. Determine the bolt pattern for the inserts on the top (x) and bottom (y) of the insulator. From this information and Table A below, substitute the appropriate catalogue numbers for suffixes x and y.
- Example: 15 kV, 95 kV BIL application with a 1/2" - NC insert in the center of the top and two 1/2" - NC, 3" bolt circle insert on the bottom of the insulator.

Stand Off Insulator Catalogue Number: **IN-15LNE-AL**

Table A: Insert Bolt Patterns

No. of Holes	Bolt Size	Bolt Circle		Catalogue No. Suffix x or y
		(mm)	(in)	
1	1/2" - 13 NC			<b>A</b>
	3/4" - 10 NC			<b>F</b>
	3/8" - 16 NC			<b>D</b>
	5/8" - 11 NC			<b>M</b>
2	3/8" - 16 NC	29	1 1/8"	<b>T</b>

No. of Holes	Bolt Size	Bolt Circle		Catalogue No. Suffix x or y
		(mm)	(in)	
2	3/8" - 16 NC	51	2	<b>B</b>
	1/2" - 13 NC	76	3	<b>L</b>
	3/8" - 16 NC	76	3	<b>V</b>
4	3/8" - 16 NC	51	2	<b>C</b>
	1/2" - 13 NC	76	3	<b>E</b>



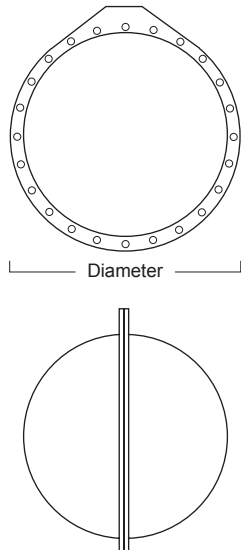
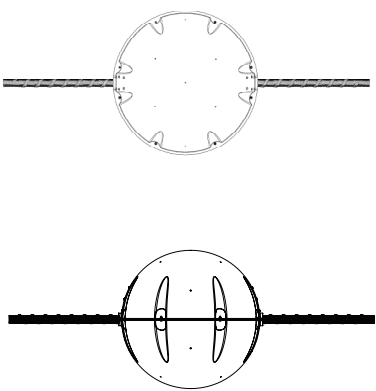
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# UTILITY PRODUCT ACCESSORIES

## AIRCRAFT WARNING MARKERS

Patton & Cooke aircraft warning markers have many years of field proven service making transmission and distribution lines clearly visible. Aircraft warning markers are manufactured of light weight, ultra-violet and weather resistant fiberglass.

Illustration (not to scale)	Voltage Class (kV)	Diameter		Colour	Patton & Cooke Catalogue No.	Weight	
		(mm)	(in)			(kg)	(lb)
	138	762	30	White	<b>10C10-30-WH</b>	10	23
				Orange	<b>10C10-30-OR</b>		
		1321	52	White	<b>10C3-52-WH</b>	32	70
				Orange	<b>10C3-52-OR</b>		
	230	762	30	White	<b>10C3-30-WH/S</b>	12	27
				Orange	<b>10C3-30-OR/S</b>		
		1321	52	White	<b>10C3-52-WH/S</b>	34	74
				Orange	<b>10C3-52-OR/S</b>		
	500	762	30	White	<b>10C3-30-WH/S5</b>	14	30
				Orange	<b>10C3-30-OR/S5</b>		
		1321	52	White	<b>10C3-52-WH/S5</b>	35	78
				Orange	<b>10C3-52-OR/S5</b>		
	Static Line 230	915	36	White	<b>10C3-36-WH/S</b>	14	30
				Orange	<b>10C3-36-OR/S</b>		
				Yellow	<b>10C3-36-Y/S</b>		

### SELECTION REMINDERS:

1. For 230 and 500 kV lines, the aircraft warning markers are shielded. Shielding is a result of a special "concloth" inside the sphere making it semi-conducting.
2. The 138 kV aircraft warning markers are suitable for mounting on de-energized or grounded lines only.
3. A full range of suspension clamps to cover many conductor sizes are available. Contact factory.

### ORDERING PROCEDURE:

1. Determine the following: A) Voltage class, B) Diameter of sphere, C) Colour, D) Size of conductor.
2. Select catalogue number.

Example: 230 kV, 1321 mm, orange

Catalogue number: **10C3-52-OR/S**



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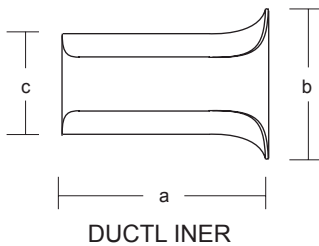
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# UTILITY PRODUCT ACCESSORIES

## DUCT LINERS

Patton & Cooke duct liners provide a barrier between cable and duct entrances in vault installations. Duct liners protect cable from abrasion damage caused by contact with duct's rough surface. The edge design of the duct also provides strain relief. For maximum cable strain relief, Patton & Cooke duct clamps should be used with Patton & Cooke duct liners as illustrated in Figure 1 below.

Duct Size		Patton & Cooke Catalogue No.	Dimensions					
(mm)	(in)		a		b		c	
			(mm)	(in)	(mm)	(in)	(mm)	(in)
102	4	5M52-32	165	6.50	159	6.25	117	4.63
137	5	5M52-40	300	11.81	240	9.45	150	5.91



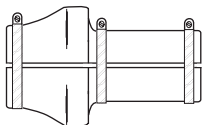
### ORDERING PROCEDURE:

1. Determine the A) Duct size.
2. Select the catalogue number of duct liner.

## DUCT CLAMPS

Installation of Patton & Cooke duct clamps on cable protruding from a duct reduces the cable strain associated with an installation of this type. Duct clamps are molded from urethane and securely fastened with hose clamps for excellent cable grip.

Cable Diameter		Patton & Cooke Catalogue No. Duct Size													
(mm)	(in)	51 mm	2"	64 mm	2.5"	76 mm	3"	89 mm	3.5"	102 mm	4"	127 mm	5"	152 mm	6"
15.9-22.2	0.625-0.875	<b>DU-037A</b>		<b>DU-038A</b>		<b>DU-039A</b>		<b>DU-041A</b>		<b>DU-042A</b>		<b>DU-043A</b>		<b>DU-044A</b>	
22.3-28.5	0.876-1.125	<b>DU-037B</b>		<b>DU-038B</b>		<b>DU-039B</b>		<b>DU-041B</b>		<b>DU-042B</b>		<b>DU-043B</b>		<b>DU-044B</b>	
28.6-34.9	1.126-1.375	<b>DU-037C</b>		<b>DU-038C</b>		<b>DU-039C</b>		<b>DU-041C</b>		<b>DU-042C</b>		<b>DU-043C</b>		<b>DU-044C</b>	
35.0-41.2	1.376-1.625	-----		<b>DU-038D</b>		<b>DU-039D</b>		<b>DU-041D</b>		<b>DU-042D</b>		<b>DU-043D</b>		<b>DU-044D</b>	
41.3-47.6	1.626-1.875	-----		<b>DU-038E</b>		<b>DU-039E</b>		<b>DU-041E</b>		<b>DU-042E</b>		<b>DU-043E</b>		<b>DU-044E</b>	
47.7-53.9	1.876-2.125	-----		-----		<b>DU-039F</b>		<b>DU-041F</b>		<b>DU-042F</b>		<b>DU-043F</b>		<b>DU-044F</b>	
54.0-60.3	2.126-2.375	-----		-----		<b>DU-039G</b>		<b>DU-041G</b>		<b>DU-042G</b>		<b>DU-043G</b>		<b>DU-044G</b>	
60.4-66.6	2.376-2.625	-----		-----		-----		<b>DU-041H</b>		<b>DU-042H</b>		<b>DU-043H</b>		<b>DU-044H</b>	
66.7-73.0	2.626-2.875	-----		-----		-----		<b>DU-041J</b>		-----		<b>DU-043J</b>		<b>DU-044J</b>	
73.1-79.3	2.876-3.125	-----		-----		-----		-----		-----		<b>DU-043K</b>		<b>DU-044K</b>	
79.4-85.7	3.126-3.375	-----		-----		-----		-----		-----		<b>DU-043L</b>		<b>DU-044L</b>	



DUCT CLAMP

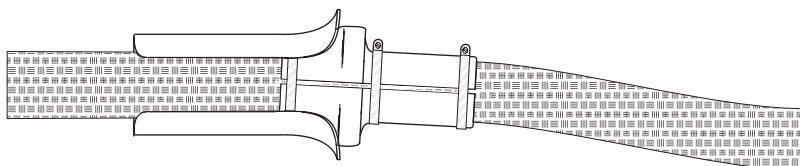
### ORDERING PROCEDURE:

1. Determine the A) Cable diameter, B) Duct size.
2. Select the catalogue number of the duct clamp.

Example: 35 mm cable, 4" duct

Duct clamp catalogue number: **DU-042D**

**Figure 1: Adjacent installation of a Duct Clamp and Duct Liner for maximum cable strain relief.**





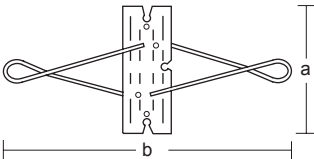
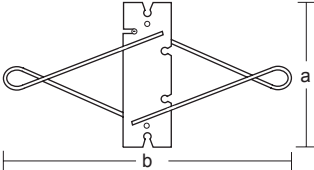
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## MID SPAN BRACKETS

Patton & Cooke mid span brackets are used to support secondary power lines to residences from overhead power lines.

Illustration (not to scale)	Description	Patton & Cooke Catalogue No.	Dimensions				Weight	
			a		b			
			(mm)	(in)	(mm)	(in)	(kg)	(lb)
	For use with three (3) conductor lines. Molded black polycarbonate base with stainless steel bails.	SSB-375A	419	16.5	390	15.4	0.5	1.1
	For use with four (4) conductor lines. Clear acrylic base with stainless steel bails.	SSB-465	533	21.0	457	18.0	0.5	1.7

### ORDERING PROCEDURE:

1. Determine the A) Number of conductors in the secondary line.
2. Select the catalogue number.

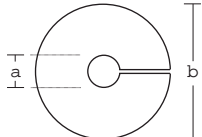
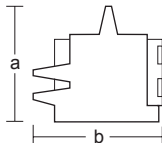


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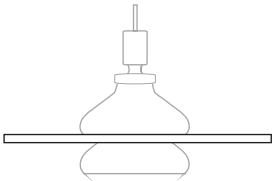
## WILDLIFE PROTECTORS

Patton & Cooke wildlife protectors deter the contact of birds, squirrels, etc. with transformer bushings. Wildlife protectors cover the top of transformer bushings, thereby protecting wildlife from harm and preventing possible power outages.

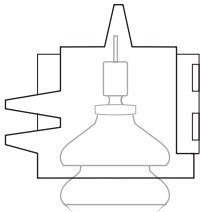
Illustration (not to scale)	Description	Patton & Cooke Catalogue No.	Dimensions				Weight	
			a		b			
			(mm)	(in)	(mm)	(in)	(kg)	(lb)
	Molded acetate "plate" style protector is inserted between transformer bushing skirts.	PAT-11D-LSH	62	2.44	298	11.75	0.11	0.23
	Molded acetate "cover" style protector consists of two halves joined by a hinge for easy placement over the top of the transformer bushing.	PAT-11D-FA	152	6.00	178	7.00	0.18	0.39

### ORDERING PROCEDURE:

1. Determine the A) the style, B) transformer bushing size.
2. Select the catalogue number.



**Figure 1: Plate style wildlife protector shown installed on transformer bushing.**



**Figure 2: Cover style wildlife protector shown installed on transformer bushing.**







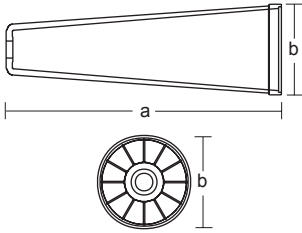
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**UTILITY PRODUCT  
 ACCESSORIES**

**STOP TUBE INSULATORS**

Patton & Cooke stop tube insulators are used in high voltage cable terminations. The internal structure of the stop tube insulator allows easy migration of oil along the tape used for the installation. This ensures that the tape remains saturated and the cable is protected. The stop tube insulator acts as a hydraulic stop to isolate oil pressure from one side of the joint to the other.

Illustration (not to scale)	Description	Patton & Cooke Catalogue No.	Dimensions				Weight	
			a		b			
			(mm)	(in)	(mm)	(in)	(kg)	(lb)
	Vacuum cast from silica based thermal setting resin.  For use with single conductor, fluid filled, low pressure cable stop joints up to 161 kV.	IN-136	627	24.684	206	8.125	8	18

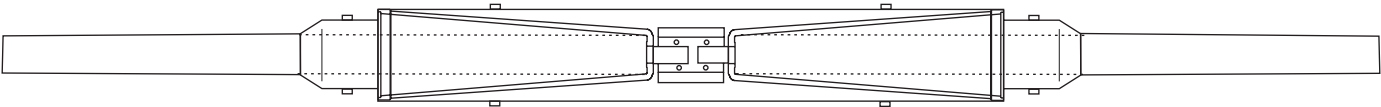


Figure1 :S topT ubel nsulators showni nstalleda ta cablej oint.



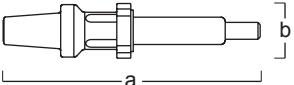
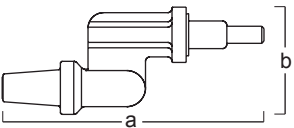


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# UTILITY PRODUCT ACCESSORIES

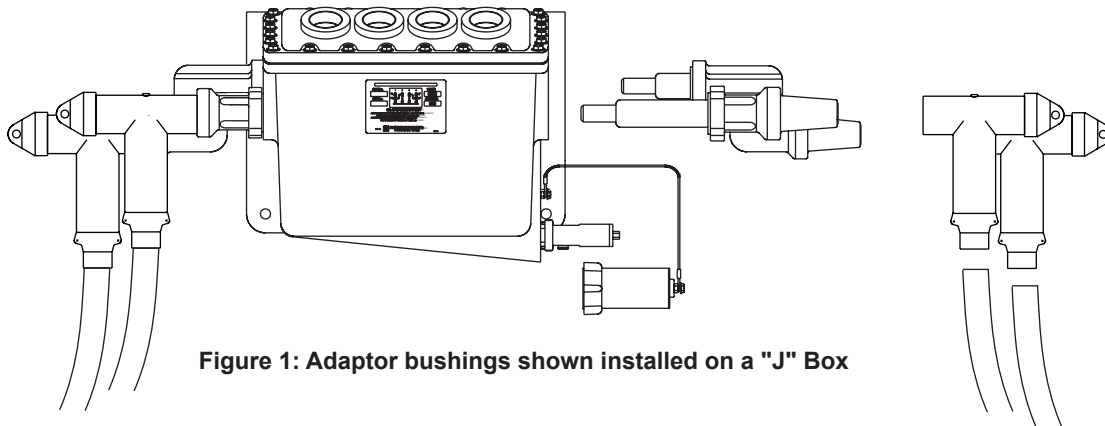
## ADAPTOR BUSHINGS

Patton & Cooke adaptor bushings allow XLP or EPR cable connection to devices originally designed for use with PILC cable only. Specifically, the Judson subway oil-break disconnect (J Box) can be installed with lead cable for which it was designed or on XLP or EPR cable with the use of Patton & Cooke adaptor bushings. Adaptor bushings are available in straight or offset mounting for rubber elbow installation ease.

Illustration (not to scale)	Description	Patton & Cooke Catalogue No.	Dimensions				Weight	
			a		b			
			(mm)	(in)	(mm)	(in)	(kg)	(lb)
	5 kV, 600 Amp Straight mounting plane	BU-035	373	14.7	376	3.0	2.8	6.3
	5 kV, 600 Amp Offset mounting plane	BU-036	376	14.8	152	6.0	3.0	7.0

### ORDERING PROCEDURE:

1. Determine the mounting plane, straight or offset, required.
2. Select the catalogue number of the adaptor bushing.



**Figure 1: Adaptor bushings shown installed on a "J" Box**