

PATTON & COOKE CO.

15 kV

CABLE COUPLERS

500 Amp 3 Power + 1 Ground + 1 Pilot

For higher voltage applications Patton & Cooke Co offers the 15 kV, 500 Amp series trailing cable coupler. A rugged and dependable performer, the 15 kV coupler can be configured for interchangeability with other North American couplers. Using our conversion kits, update your threaded body couplers to Patton & Cooke quick flip style in just a few minutes. With its compact and front-end removable contact design, the 15 kV coupler can easily be rebuilt for longer life and long term cost savings.

DESIGN:

Body: Aluminum
Insulator Characteristics: Individual Tubes
Voltage: 15 kV
Current Rating: 500 Amp
Cable Range: 0.82"-3.54" (21 mm - 90 mm)
IP Rating: 67

OPTIONS:

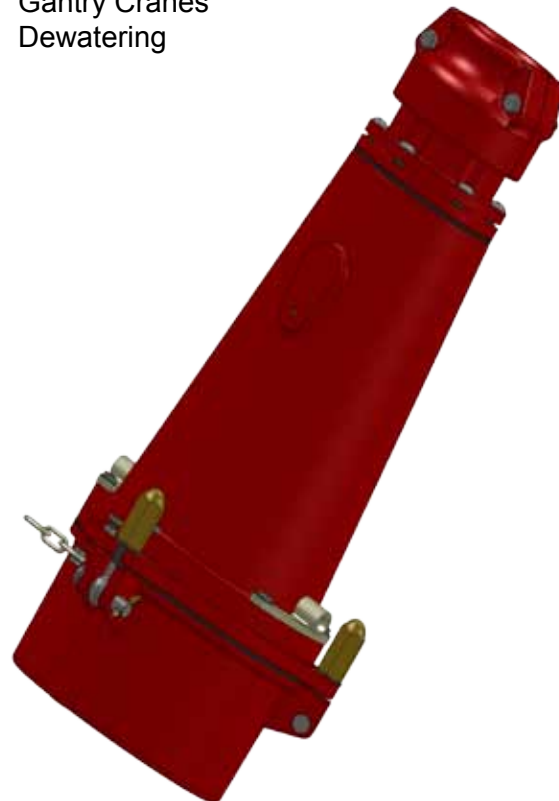
- Powder Coating
- Junction Box
- Closing Tool
- Optical Fiber/Lan Data Channel Support
- Custom Contact Arrangements
- Mounting Brackets
- Light Rings
- Live End Covers
- Shorting Caps

APPLICABLE TEST STANDARD:

- M421
- IEEE 386

APPLICATIONS:

- Mining (Shovels, Draglines)
- Shore to Ship
- Tunneling
- Gantry Cranes
- Dewatering



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PRODUCT FEATURES:



- Easy maintenance with front end removable contacts
- Fire retardant insulators
- Corrosion-resistant, cast aluminum or epoxy powder coated bodies
- Secure three bolt, quick flip connection
- Medially-located grounded surface running through mounting plate
- Accepts conductors to 500 MCM (250 mm²) and diameters up to 3.5" (90 mm)
- Silver-plated male and female phase contacts
- Weatherproof covers

500 AMP COUPLER & JUNCTION BOX

Illustration (not to scale)	Coupler Rating (A)	Catalogue Number	Dimensions					Weight
			A	B	C	D	E	
CABLE MOUNT MALE 	500	C150F1003 C150F1004 C150F1005 C150F1006	20 ¼" 514 mm	24 ½" 267 mm	24 ½" 622 mm			38.0 lb 17.0 kg
EQUIPMENT MOUNT MALE 	500	C150F1007	4 ¾" 121 mm	12 ¼" 311 mm	9" 229 mm	11" 279 mm	1 ½" 38 mm	32.0 lb 14.5 kg
CABLE MOUNT FEMALE 	500	C150F2005 C150F2006 C150F2007 C150F2008	24" 610 mm	11 ½" 292 mm	27" 686 mm			38.0 lb 17.0 kg
EQUIPMENT MOUNT FEMALE 	500	C150F2009	5 ¼" 133 mm	12 ¼" 311 mm	8 ¼" 210 mm	11" 279 mm	4" 102 mm	27.0 lb 12.3 kg
JUNCTION BOX 	500	C150F3002	16 ¼" 413 mm	14 ¼" 362 mm	32" 813 mm			100.0 lb 45.0 kg



15 kV TERMINATION KITS:

Patton & Cooke Catalogue Number	Approximate Conductor Range for 15kV SHD-GC Cables	Insulation O.D.
11Y08/15-A	#4 - 3/0 AWG	15-25 mm
		0.591-0.984"
11Y08/15-B	1/0 - 350 MCM	20-32 mm
		0.787-1.259"
11Y08/15-C	350 - 500 MCM	27-42 mm
		1.063-1.654"



15 kV POTTING COMPOUND:



GUROFLEX POTTING COMPOUND KITS

OS-J990-MV5 = 304 Sq. Inch Volume

COMPOUND REQUIRED FOR COUPLER

C150F Series = 417 Sq. Inch Volume = 1.5 OS-J990-MV5

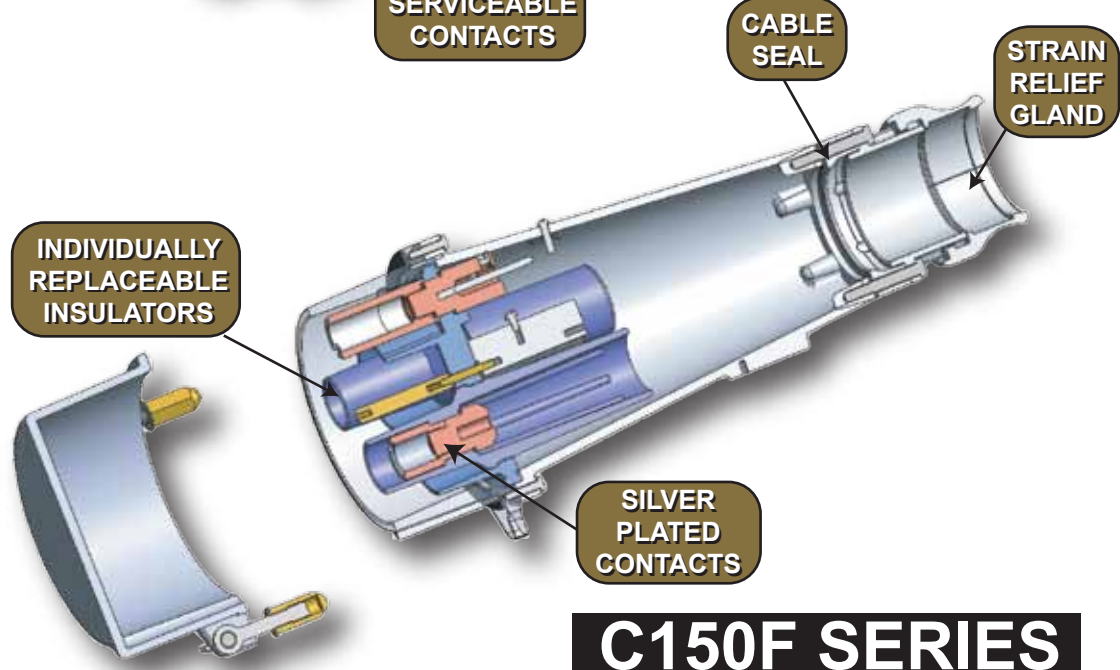
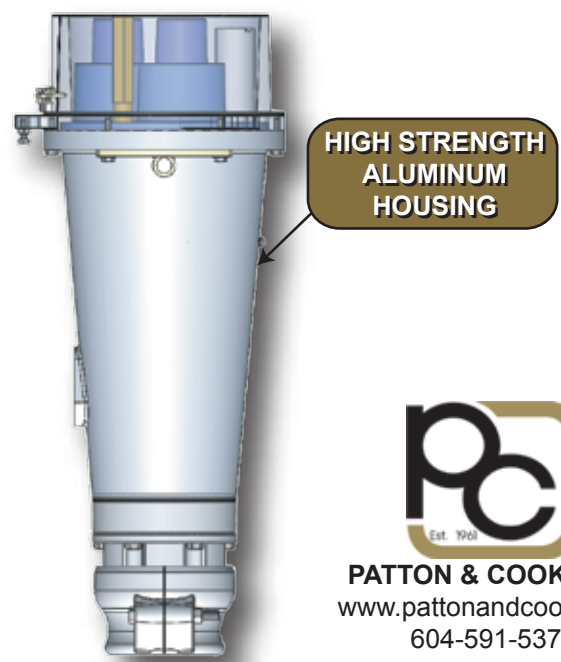
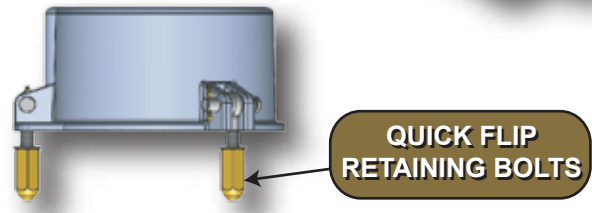
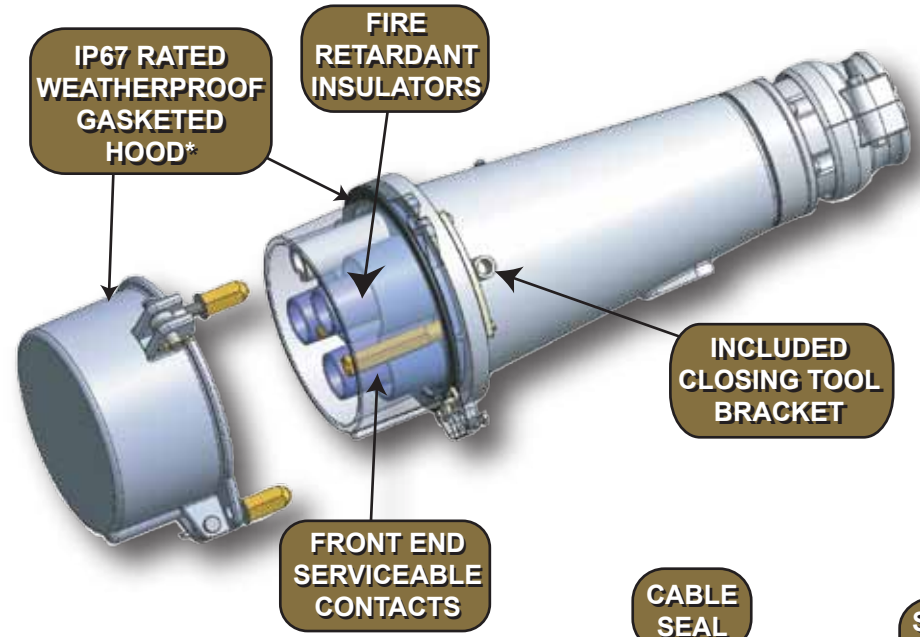
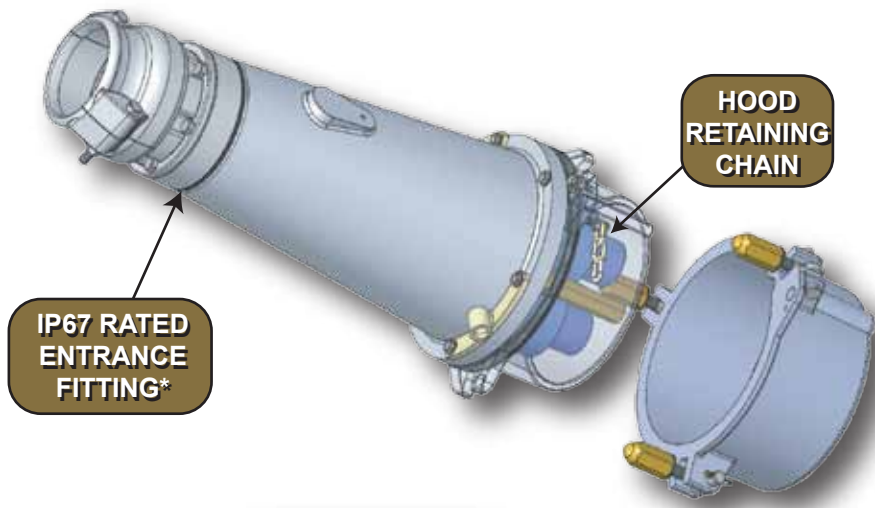
15 kV ENTRANCE FITTING GASKET KITS:

Outside Cable Diameter		Catalogue Number	Outside Cable Diameter		Catalogue Number
(mm)	(in)		(mm)	(in)	
20.8-22.1	0.82-0.87	C150F3004	51.1-53.8	2.01-2.12	C150F3016
22.4-23.9	0.88-0.94		54.1-57.2	2.13-2.25	
24.1-25.7	0.95-1.01	C150F3006	57.4-60.2	2.26-2.37	C150F3018
25.9-26.9	1.02-1.06		60.5-63.5	2.38-2.50	
27.2-28.4	1.07-1.12	C150F3008	63.8-66.5	2.51-2.62	C150F3020
28.7-31.8	1.13-1.25		66.8-69.9	2.63-2.75	
32.0-34.8	1.26-1.37	C150F3010	70.1-72.9	2.76-2.87	C150F3022
35.0-38.1	1.38-1.50		73.2-76.2	2.88-3.00	
38.4-41.1	1.51-1.62	C150F3012	76.5-79.2	3.01-3.12	C150F3024
41.4-44.5	1.63-1.75		79.5-82.6	3.13-3.25	
44.7-47.5	1.76-1.87	C150F3014	82.8-85.6	3.26-3.37	C150F3026
47.8-50.8	1.88-2.00		85.9-88.9	3.38-3.50	

SELECTION REMINDERS:

1. Each kit consists of 2 clamp inserts and 1 cable gasket.
2. Choose the kit to fit the outside diameter of the cable.
3. Make sure that the O/D of the kit chosen falls within the outside cable diameter range of the selected cable mounted coupler.

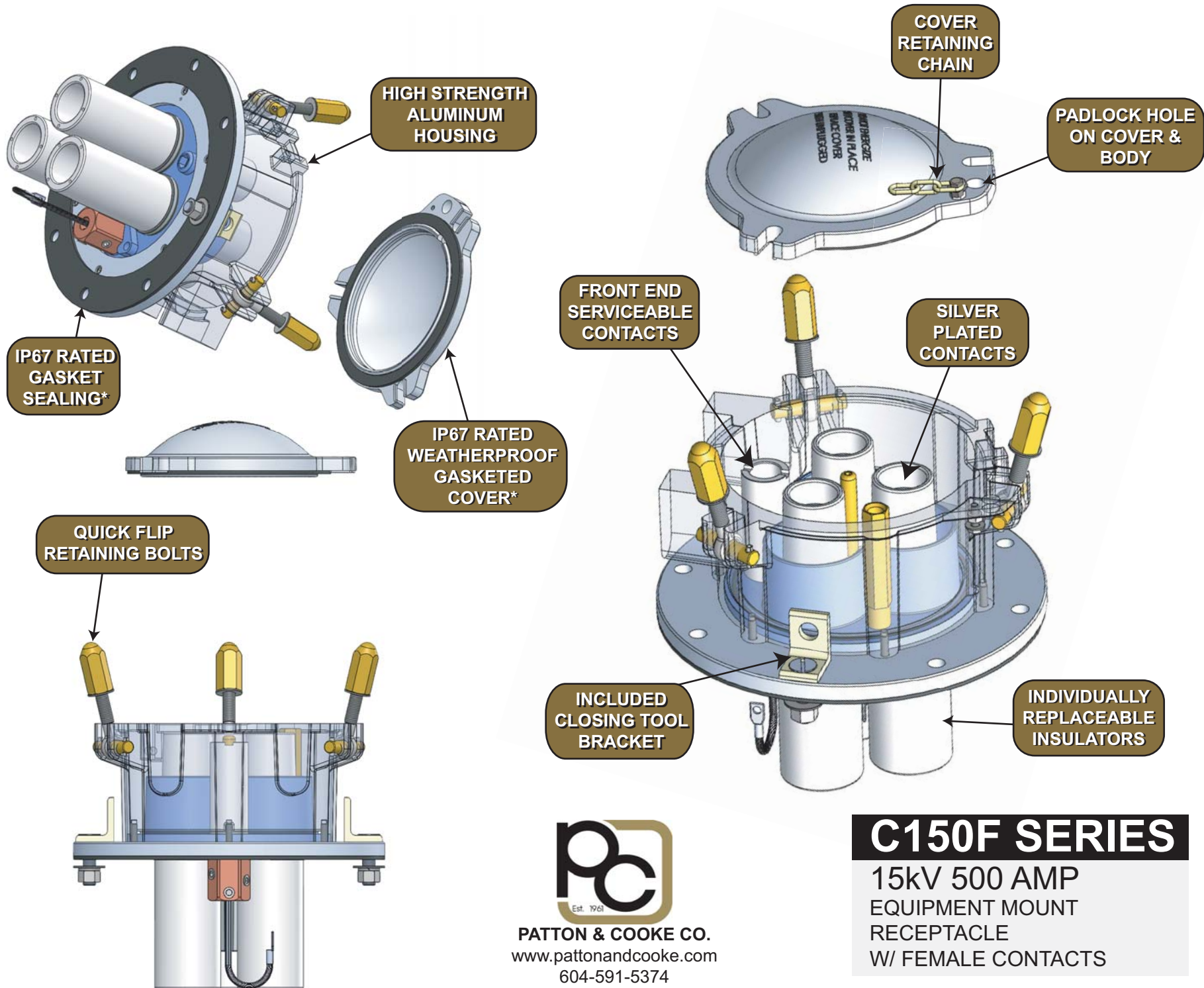




PATTON & COOKE CO.
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C150F SERIES
15kV 500 AMP
CABLE MOUNT PLUG
W/ MALE CONTACTS

*IP67 rating achievable only with proper installation of sealing components. Contact factory for further details on proper installation.



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15 kV COUPLERS C150 SERIES

C150F - 500 AMP MALE & FEMALE COUPLERS

C150F - 500 AMP JUNCTION BOX

INDEX

PAGE	DESCRIPTION
C150 -1	COUPLER CATALOGUE NUMBERS
C150 - 2	JUNCTION BOXES
C150 - 3	OPTIONS
C150 - 4	CATALOGUE NUMBER COMBINATION GUIDE
C150 - 5	ACCESSORIES



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15 kV COUPLERS C150 SERIES

500 AMP COUPLER CATALOGUE NUMBERS Contact Structure: 3 Power + 1 Ground + 1 Pilot

Coupler Rating (A)	Male/Female	Mounting Options	Outside Cable Diameter		Catalogue Number
			(mm)	(in)	
500	M	Cable Mount	20.8-47.5	0.82-1.87	C150F1003 <u>x</u>
			47.8-60.2	1.88-2.37	C150F1004 <u>x</u>
			60.5-69.9	2.38-2.75	C150F1005 <u>x</u>
			70.1-88.9	2.76-3.50	C150F1006 <u>x</u>
	F		20.8-47.5	0.82-1.87	C150F2005 <u>x</u>
			47.8-60.2	1.88-2.37	C150F2006 <u>x</u>
			60.5-69.9	2.38-2.75	C150F2007 <u>x</u>
			70.1-88.9	2.76-3.50	C150F2008 <u>x</u>
	M F	Equipment Mount	N/A		C150F1007 <u>x</u>
			N/A		C150F2009 <u>x</u>

ORDERING PROCEDURE:

- Determine the following:
 - Male (Plug) or Female (Receptacle) contacts.
 - Cable or equipment mounting
- For equipment mounting, select catalogue number of coupler.
- For cable mounting, determine outside cable diameter and select catalogue number of coupler. Clamp inserts and cable gasket must be purchased separately as a kit for the entrance fitting, see Table B on page 2.
- Determine conductor size and substitute appropriate code from Table A on page 2 for "x" in the catalogue number.

Example: Male Plug, Cable Mount, #2 Cable, Outside Cable Diameter 2.54"

Catalogue Number: C150C1005F

Entrance Fitting Gasket Kit: C150F3020

TABLE A: 500 AMP COUPLER CATALOGUE SUFFIX - x

Max. Cable Size SHD-GC 5 or 8 kV		x - Cat. No. Suffix	Max. Cable Size SHD-GC 5 or 8 kV		x - Cat. No. Suffix
(mm ²)	(AWG)		(mm ²)	(AWG)	
34	#2	F	127	250 MCM	M
42	#1	G	152	300 MCM	N
54	1/0	H	178	350 MCM	O
67	2/0	J	203	400 MCM	P
85	3/0	K	228	450 MCM	Q
107	4/0	L	254	500 MCM	R

Available options refer to Table B on page 3. Available accessories refer to page 5.

All couplers and junction boxes are supplied with cover, attachment chain and provision for padlocking two mated couplers and/or covers. Termination kits and potting compound can be purchased separately, refer to page 5. Potting compound is also available as an option. Refer to Table C on page 3. Standard terminations for phase, pilot and ground conductors are designed for soldering. Potting compound is recommended for 15 kV couplers and junction boxes.



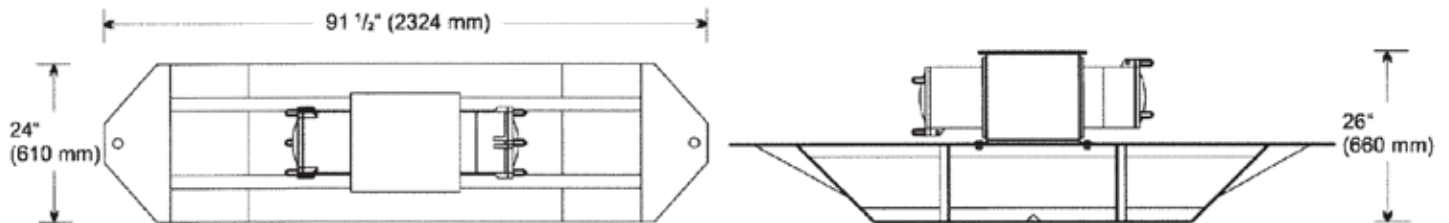
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**15 kV COUPLERS
 C150 SERIES**

500 AMP JUNCTION BOX CATALOGUE NUMBERS

Coupler Rating (A)	Description	Mounting Options	Catalogue Number
500	Two female receptacles with phase transposing compartment. To join cables equipped with male plugs on both ends.	Less Skid Skid Mount	C150F3002 C150F3003



Available options refer to Table B page 3. Available accessories refer to page 5.

All couplers and junction boxes are supplied with cover, attachment chain and provision for padlocking two mated couplers and/or covers. Termination kits and potting compound can be purchased separately, refer to page 5. Potting compound is also available as an option. Refer to table C on page 3.

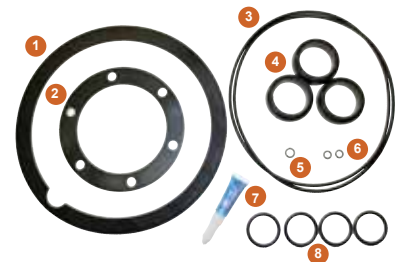
Standard terminations for phase, pilot and grounds conductors are designed for soldering.

Potting compound is recommended for 15 kV couplers and junction boxes.

C150/C80 - 500 Amp Series

Each Patton & Cooke GA-V195 Gasket Kit includes all the gaskets and seals required for any one C150 or C80F coupler series.

C150F - 500 Amp Series & C80F - 500 Amp Series	
1. (1) Cover/Hood Gasket	5. (1) Pilot Stem Gasket (Large Style)
2. (1) Entrance Fitting Gasket	6. (2) Body Ground & Pilot Stem (Small Style)
3. (2) Phase Insulator Plate Gasket	7. (1) Adhesive
4. (3) Insulator Tube Seals	8. (4) Phase & Ground Stem Gasket





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15 kV COUPLERS C150 SERIES

TABLE C: 500 AMP COUPLER & JUNCTION BOX OPTIONS

This table lists options that may be requested with this product class.

Use of this table is not required for standard configurations.

Description	
1. Corrosion Resistant Option Includes: Hypalon Gaskets and Seals, all Stainless Steel Hardware and Extra Heavy Epoxy Coating. Add to price of Epoxy Coating Option.	
2. Elbow Adaptor. Change right angle equipment to 45°.	
3. Entrance Fitting, Conduit Coupling. Specify Size and Type.	
4. Entrance Fitting, Steel Wire Armour Clamp. Specify Size and Type.	
5. Entrance Fitting, Teck Cable. Specify Size and Type.	
6. Electrostatic Application of Epoxy Powder Coating. Available on: Cable Mount Equipment Mount Junction Boxes	Color/Code
	Blue (EB) Grey (EGR)
	Orange (EO) Brown (EBR)
	White (EW) Black (EBK)
	Yellow (EY) Violet (EV)
	Green (EG) Blue Grey (EBG)
	Red (ER)
7. Ground Contacts (0-3) Specify: One Additional, Two Additional, No Pilot (See Note 1)	
8. Ground Lug, External	
9. Interlocks, Mechanical provision for (does not include interlocks, e.g. Kirk type)	
10. Leg Mounting, Three mounting feet.	
11. Live End Cover, Equipped with End-of-Line Diode.	
12. Neutral Contact, One isolated. Max. one extra.	
13. Pilot Contact, None.	
14. Pilot Contacts (0-4) Specify: One Additional, Two Additional, Three Additional (See Note 1)	
15. Potting Compound	

SELECTION REMINDERS:

1. Standard Contact Structure: 3 Power + 1 Ground + 1 Pilot
2. Additional ground contacts and/or additional pilot contacts may be selected as an option.

ORDERING PROCEDURE (WITH OPTIONS):

Example: 15 kV, male plug, cable mount, 2/0 cable, outside cable diameter 2.89", provision for mechanical interlock.

Basic Catalogue Number: C150F1006

Gasket Kit Catalogue Number: C150F3023

Provision for mechanical interlock

Catalogue Number: Will be assigned by Patton & Cooke at time of order entry. Contact factory if preassigned number is required. If other options are required which are not listed, please contact Patton & Cooke.



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**15 kV COUPLERS
 C150 SERIES**

**COUPLER CATALOGUE NUMBER
 COMBINATION GUIDE**

Conductor Size	
#2 AWG	F
#1 AWG	G
1/0 AWG	H
2/0 AWG	J
3/0 AWG	K
4/0 AWG	L
250 MCM	M
300 MCM	N
350 MCM	O
400 MCM	P
450 MCM	Q
500 MCM	R

Voltage	
15000 V	150

Configuration	
Plug	1
Receptacle	2
Accessories	3

C 150 F 1 0 0 7 M EY

Product Class
Trailing Cable Coupler

Current Rating	
Amps	Code
500A	F

Coupler Options
Consult Factory for Details

Color Options	
Blue	EB
Green	EG
Orange	EO
White	EW
Yellow	EY
Red	ER
Grey	EGR
Brown	EBR
Black	EBK
Violet	EV
Blue Grey	EBG



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**15 kV COUPLERS
 C150 SERIES**

500 AMP COUPLER & JUNCTION BOX KITS & ACCESSORIES

CONVERSION KITS

The kits listed below are designed to replace the threaded front body system of PLM, TJB, Ensign Hubble and Line Power 15 kV couplers with the Patton & Cooke 3 bolt, "quick flip" connection system. Both plug (male) and receptacle (female) must be converted to permit couplers to be joined. Each kit contains front body with 3 bolt, "quick flip" system, hood, chain and mounting hardware. These kits can be installed on PLM series 154, 155, 375, 415, 475, 515 and 575. PLM couplers fitted with these kits can be joined to Patton & Cooke C150 series couplers.

Description	Catalogue Number
Kit for plug (male)	11F-050
Kit for receptacle (female)	11F-051
Kit for one plug and one receptacle	11F-050/051

Note 1. Conversion kits can be epoxy powder coated. Refer to Table B on page 3 for available colours.

COUPLER/JUNCTION BOX SKID

Description	Catalogue Number
Stone boat style skid	STA-015B

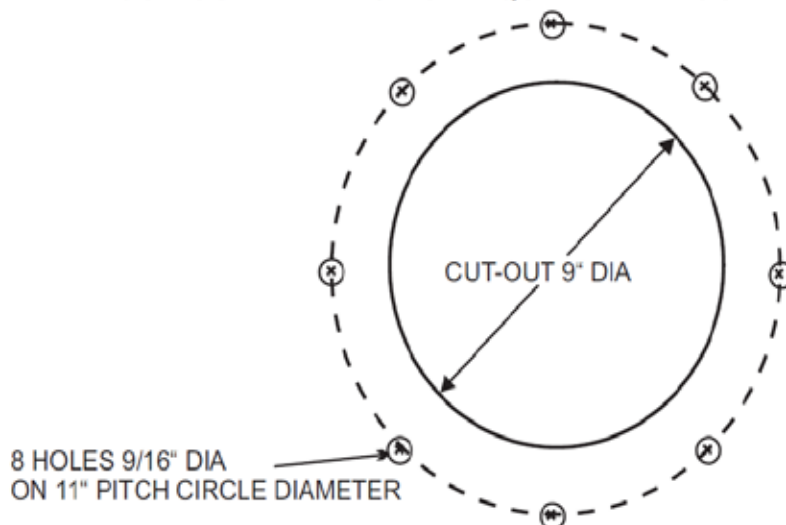
POTTING COMPOUND

Description	Catalogue Number
One (1) 3,330 gram kit is required for each cable mounted coupler.	OS-J990-MV5

COUPLER TOOLS

Description	Catalogue Number
Male contact installation tool	11F-028A
Female contact installation tool	11F-028C
Complete coupler assembly tool kit. Includes contact insertion tool, main phase nut installation tool, 7/16" A/F hex screwdriver, 3/16" A/F hex allen key and 10" adjustable wrench assembled complete in tool box.	C150F3001

CUT-OUT DETAILS FOR EQUIPMENT MOUNT COUPLERS



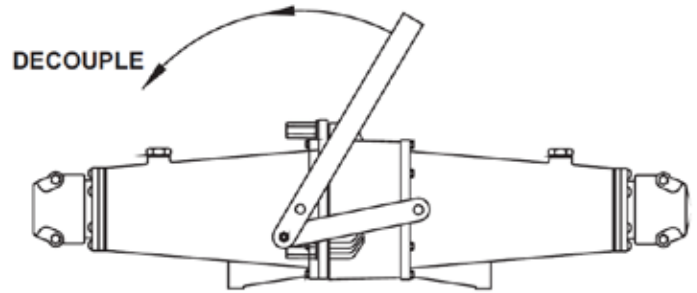
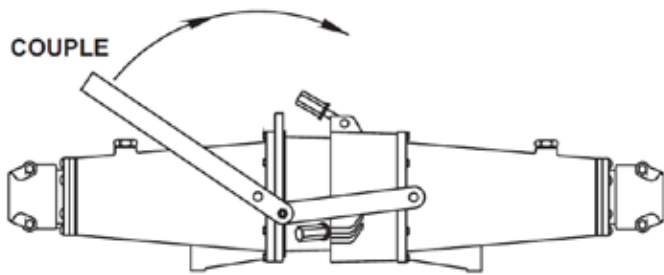


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**15 kV COUPLERS
 C150 SERIES**

CLOSING TOOL



CLOSING TOOL & HANDLE ASSEMBLY SHOWN IN USE ON 15 kV COUPLER

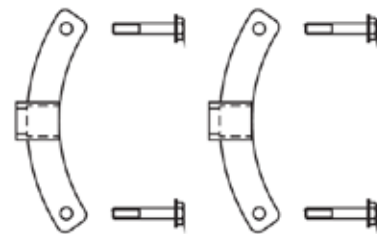
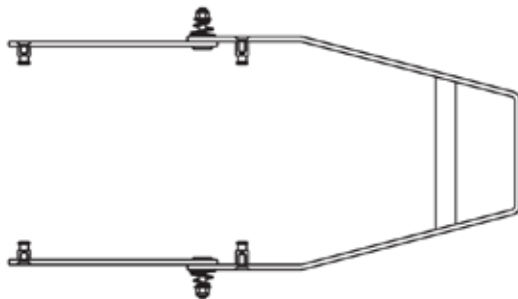
Assists in coupling and decoupling of 15 kV trailing cable couplers fitted with Patton & Cooke three bolt quick connection system.

By simply adding the bracket sets (C150F3049) to cable mounted plugs and receptacles, coupling and decoupling now becomes a simple, one person operation. No threads, no collars, no hassles.

The closing tool has a positive locking pin and sleeve that can easily be unclipped for handle removal; freeing the handle for safe storage or for use on the rest of the power distribution system.

Manufactured from heavy duty steel with corrosion resistant hardware and pivot parts. Finished in durable, highly visible baked on epoxy powder coating.

Also, this closing tool can be mounted on competitors' couplers, which have been converted to the Patton & Cooke 3 bolt quick connect front end.



HANDLE ASSEMBLY (C150F3050)

BRACKET ASSEMBLY (C150F3049)

Patton & Cooke Catalogue Number	Description
C150F3050	Handle Assembly for use with bracket kit, C150F3049.
C150F3049	Bracket assembly consisting of two brackets and stainless steel mounting hardware for use on either cable mounted plug or receptacle. (Kit will adapt one cable end).
C150F3066	Bracket assembly consisting of two brackets and stainless steel mounting hardware for use on either equipment mounted plug or receptacle. (Kit will adapt one cable end).