

Instructions for Capacitor Rack

Catalog Numbers: CCR-1, CCR-3, CCR-3/4, CCR-6, CCR-9/12

Keep these instructions and warnings with the product for future reference.

 WARNING	
	Failure to follow all instructions and hazard warnings could result in death, severe injury or damage to equipment.
	Read, understand and follow all of the information presented here and with the associated capacitors before installing and using this equipment.

APPLICATION:

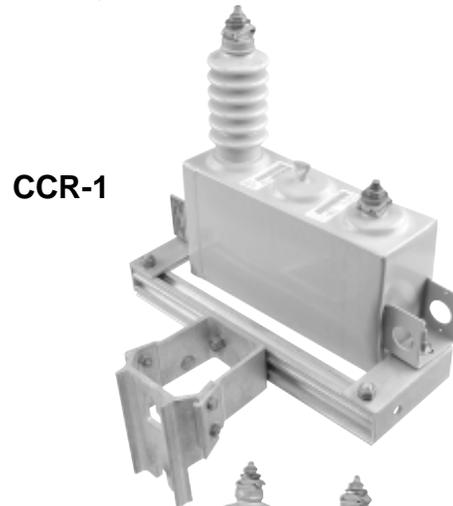
Capacitor racks are intended to be installed on a pole and hold from one to twelve capacitors, depending on capacitor rack used. The capacitor racks are supplied assembled (with exception of CCR-1). Model CCR-1 is attached to the pole with a $\frac{5}{8}$ inch through bolt and lag bolt (not supplied). Models CCR-3, CCR-3/4 and CCR-6 are attached to the pole with two $\frac{5}{8}$ inch through bolts (not supplied). Model CCR-9/12 is attached to the pole with two $\frac{3}{4}$ inch through bolts (not supplied). Capacitor racks are intended for use with capacitors only. **DO NOT** use with other types of equipment.

The photos below illustrate capacitors that are properly installed in models CCR-1 and CCR-3. Install capacitors in a similar position between the respective hold down bolts for models CCR-3/4, CCR-6 and CCR-9/12.

Model CCR-1

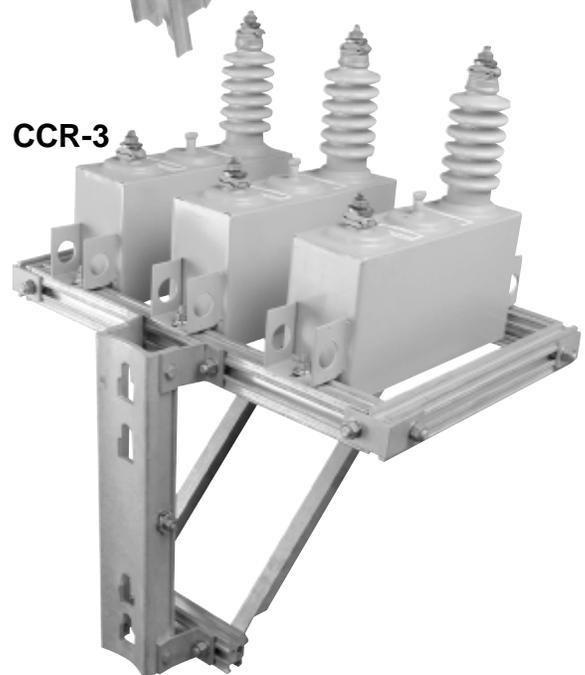
The unit weighs 4.5 pounds, mounts one capacitor having $15\frac{5}{8}$ inch lug spacing. It is rated to hold one 200 kvar capacitor (approximately 80 pounds total.) Ground wire clamp and $\frac{3}{8}$ inch bolts for capacitor mounting included. Attaches to pole with $\frac{5}{8}$ inch through bolt and lag bolt (not included). Mounts capacitor 6 inches from pole.

To Assemble: Loosen two $\frac{1}{2}$ inch bolts holding angles to crossbar. Swing angles to position 90° to crossbar as shown in photo at right. Tighten bolts securely. Mount capacitor on $\frac{3}{8}$ inch carriage bolts in end of angles.



Model CCR-3

The unit weighs 17 pounds, can mount up to three capacitors having $15\frac{5}{8}$ inch lug spacing. It is rated to hold three 200 kvar capacitors (approximately 240 pounds total.) Ground wire clamp and $\frac{3}{8}$ inch bolts for capacitor mounting included. Attaches to pole with two $\frac{5}{8}$ inch through bolts (not included). Mounts capacitors $3\frac{1}{4}$ inches from pole.



Model CCR-3/4

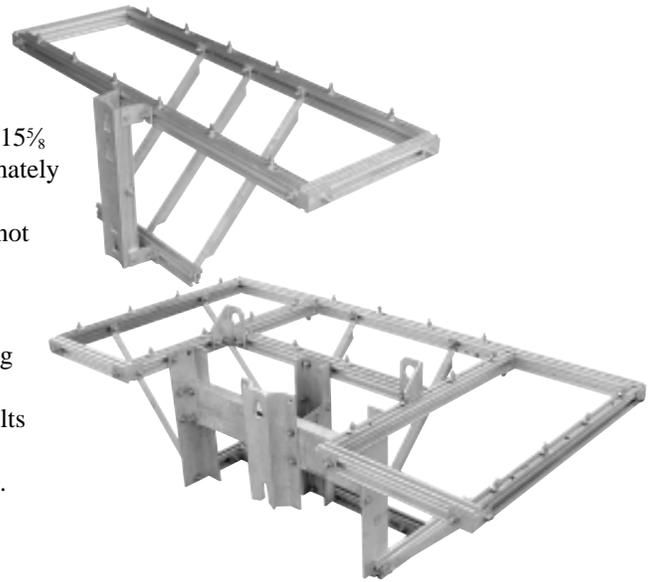
The unit weighs 18 pounds, can mount up to four capacitors having $15\frac{5}{8}$ inch lug spacing. It is rated to hold four 200 kvar capacitors (approximately 320 pounds total.) Ground wire clamp and $\frac{3}{8}$ inch bolts for capacitor mounting included. Attaches to pole with two $\frac{5}{8}$ inch through bolts (not included). Mounts capacitors $3\frac{1}{4}$ inches from pole.

Model CCR-6

The unit weighs 22.5 pounds, can mount up to six capacitors having 15 $\frac{5}{8}$ inch lug spacing. It is rated to hold six 200 kvar capacitors (approximately 480 pounds total.) Ground wire clamp and $\frac{3}{8}$ inch bolts for capacitor mounting included. Attaches to pole with two $\frac{5}{8}$ inch through bolts (not included). Mounts capacitors 3 $\frac{1}{4}$ inches from pole.

Model CCR-9/12

The unit weighs 85 pounds, can mount up to twelve capacitors having 15 $\frac{5}{8}$ inch lug spacing. It is rated to hold twelve 200 kvar capacitors (approximately 960 pounds total.) Ground wire clamp and $\frac{3}{8}$ inch bolts for capacitor mounting included. Attaches to pole with two $\frac{3}{4}$ inch through bolts (not included). Mounts capacitors 9 $\frac{1}{2}$ inches from pole.



INSTALLATION INSTRUCTIONS:

1. Examine assembled capacitor rack making sure there are no damaged parts. Damaged parts must be replaced before installation. If damaged parts are found, contact your Hubbell Power Systems representative or the factory at (573) 682-5521 for replacement parts.

! WARNING	
	<p>Improper installation can allow capacitor rack and/or capacitors to fall.</p> <p>Can cause death, severe personal injury or property damage.</p> <p>Read, understand and follow all instructions when installing and using this equipment.</p>

2. Drill necessary through hole(s) in pole at desired rack height. Be sure holes are vertically aligned so capacitor rack will be level when installed. The CCR-1 requires one hole for a $\frac{5}{8}$ inch through bolt (the lag bolt used with CCR-1 doesn't require a drilled hole). The CCR-3, CCR-3/4 and CCR-6 require two holes for $\frac{5}{8}$ inch through bolts. CCR-3, CCR-3/4 and CCR-6 provide the choice of 12 or 11 $\frac{1}{4}$ inch bolt spacing. Capacitor rack strength is the same for either 12 or 11 $\frac{1}{4}$ inch bolt spacing. The CCR-9/12 requires two holes for $\frac{3}{4}$ inch through bolts spaced at 10 $\frac{1}{4}$ inches.

! DANGER		
	<p>Electrical contact hazard.</p> <p>Capacitor rack will conduct electricity.</p> <p>Contact with energized power line will cause death or severe personal injury.</p> <p>Do not let capacitor rack touch power lines.</p> <p>Maintain approved electrical clearances.</p>	

3. Place through bolt(s) in pole leaving approximately $\frac{1}{2}$ to $\frac{3}{4}$ inch space between bolt head and pole. Using approved safety procedures, lift and place capacitor rack on through bolt(s). Be sure bolt heads are trapped in slots of capacitor rack. After confirming rack is level, tighten through bolt(s) to hold capacitor rack firmly to pole. If installing CCR-1, drive lag bolt in bottom slot being sure lag bolt head engages slot.
4. Install capacitors in rack using supplied $\frac{3}{8}$ inch hold down bolts. Tighten hold down bolts securely using flat washer, lock washer and nut supplied.
NOTE: The capacitors must be spaced evenly in the rack for proper load distribution.
5. Do a final check of the installation. Be sure all bolts are tight and the rack is level.

NOTE: Because Hubbell has a policy of continuous product improvement, we reserve the right to change design and specifications without notice.



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Printed in USA

P216-0243 Rev C

3/01