



Vertical Line Trap Mounting on CCVTs

Technical Bulletin # 107

Coupling Capacitor Voltage Transformers (CCVTs) are commonly used to couple Power Line Carrier communication signals to high-voltage transmission lines.

Line Traps used for Power Line Carrier systems come a variety of ratings, sizes, and mounting configurations. If Line Traps are mounted vertically (single-point mounting) on top of a CCVT, then care must be taken not to exceed the strength rating of the CCVT's insulator.

The following charts show allowable Line Trap vertical mounting on top of Ritz CCVTs based on the current rating of the Line Trap and the rated wind speed for the installation based on the manufacturer of the Line Trap. Note that horizontal mounting of Line Traps where one side the Line Trap is mounted on a post insulator and the other side is mounted on top of the CCVT is allowed for all designs through 550kV class.

	Ritz-TEEE						
Line Trap Rated Current (0.265 mH Design)	400A	800A	1200A	1600A	2000A	3000A	4000A
Diameter (in)	23.8	34	46	37.8	40.7	42.7	52.2
Height (in)	25	25.6	30.8	36.8	37.4	42.2	47
Pedestal Height (in)	6	6	10	10	15	15	15
Wind Loading	Maximum Voltage Class CVO#### (IHC Capacitor Design) - Polymer Insulator						
100 mph	550 kV	550 kV	362 kV	362 kV	362 kV	362 kV	245 kV
120 mph	550 kV	362 kV	245 kV	245 kV	245 kV	170 kV	170 kV
150 mph	362 kV	245 kV	170 kV	170 kV	170 kV	123 kV	NONE
Wind Loading	Maximum Voltage Class CVO####E (EHC Capacitor Design) - Polymer Insulator						
100 mph	550 kV	550 kV	550 kV	550 kV	550 kV	550 kV	362 kV
120 mph	550 kV	550 kV	362 kV	362 kV	362 kV	362 kV	245 kV
150 mph	362 kV	362 kV	245 kV	245 kV	245 kV	170 kV	145 kV



	GE Grid Solutions						
Line Trap Rated Current (0.265 mH Design)	400A	800A	1200A	1600A	2000A	3000A	4000A
Diameter (in)	21.5	31.3	31.3	41.2	41.9	55	72.7
Height (in)	23.6	25.3	41.5	53.5	55.5	74	70
Pedestal Height (in)	9.8	14.8	14.8	19.7	19.7	26.6	31.5
Wind Loading	Maximum Voltage Class CVO#### (IHC Capacitor Design) - Polymer Insulator						
100 mph	550 kV	550 kV	362 kV	245 kV	245 kV	NONE	NONE
120 mph	550 kV	362 kV	245 kV	170 kV	145 kV	NONE	NONE
150 mph	362 kV	245 kV	170 kV	NONE	NONE	NONE	NONE
Wind Loading	Maximum Voltage Class CVO#### (EHC Capacitor Design) - Polymer Insulator						
100 mph	550 kV	550 kV	550 kV	362 kV	362 kV	170 kV	72 kV
120 mph	550 kV	550 kV	362 kV	245 kV	245 kV	NONE	NONE
150 mph	362 kV	362 kV	245 kV	145 kV	145 kV	NONE	NONE

	Trench						
Line Trap Rated Current (0.265 mH Design)	400A	800A	1200A	1600A	2000A	3000A	4000A
Diameter (in)	25.3	34.1	46	36.9	40	43.1	51.9
Height (in)	26.8	30.5	34	37.3	41.3	42.8	48
Pedestal Height (in)	6	6	10	10	15	15	15
Wind Loading	Maximum Voltage Class CVO#### (IHC Capacitor Design) - Polymer Insulator						
100 mph	550 kV	550 kV	362 kV	362 kV	362 kV	362 kV	245 kV
120 mph	362 kV	362 kV	245 kV	245 kV	245 kV	170 kV	145
150 mph	362 kV	245 kV	170 kV	170 kV	145 kV	123 kV	NONE
Wind Loading	Maximum Voltage Class CVO#### (EHC Capacitor Design) - Polymer Insulator						
100 mph	550 kV	550 kV	550 kV	550 kV	550 kV	362 kV	362 kV
120 mph	550 kV	550 kV	362 kV	362 kV	362 kV	362 kV	245 kV
150 mph	362 kV	362 kV	245 kV	245 kV	170 kV	170 kV	145 kV

** Competitor line trap dimensions are taken from best available published information. Customer should confirm the size of the line trap being used.