Vacuum capacitors overview
Capacitor selection guides

Capacitors by type

Capacitor type	Capacity max. (pF)	Test voltage 60/50 Hz	Model no. series	Page number
Vacuum variable	30	7.5, 10, 15	CVDD-30	18
	100	7.5, 10, 15	CVDD-100	18
	100	7.5, 10, 15	C/GCS-100	19
	250	3, 5	CVCD-250	19
	250	45, 50, 55	CVHP-250	20
	450	45, 50, 55	CVHP-450	20
	500	3, 5	CSV1-500	21
	500	7.5, 10, 15	CVDD-500	21
	500	7.5, 10, 15	M/CSVF-500	22
	500	5, 8	M/CSV5-500	22
	500	15	PV4-500	23
	650	5	CMV1-650	23
	650	8	CMV3-650	23
	650	45, 50, 55	CVHP-650	24
	650	40, 45, 50	CWV3-650	24
	750	7.5, 10, 15	CVDD-750	25
	900	3, 5, 6	CSV4-900	25
	1000	3	CMV1-1000	26
	1000	3, 5	CSV1-1000	26
	1000	7.5, 10, 15	CVDD-1000	27
	1000	40, 45, 50	CVHP-1000	27
	1000	40, 45, 50	CWV5-1000	28
	1000	3, 5	M/CVCJ-1000	28
	1000	3, 5	M/CSV5-1000	28
	1000	5	PV4-1000	29
	1500	3, 5	CVCD-1500	30
	1500	7.5, 10, 15	CVDP-1500	30
	1600	55, 60	CWV1-1600	31
	1600	30, 35, 40	CWV2-1600	31
	1600	35, 40	CWV3-1600	32
	1600	50, 55, 60	CWV4-1600	32
	2000	3, 5	CVCD-2000	29
	2050	40, 45, 50	CWV4-2050	33
	2300	7.5, 10, 15	CVDP-2300	33
	3000	3, 5	CVCD-3000	34
	4000	5	CMV1-4000	34

Capacitors by type

Capacitor type	Capacity max. (pF)	Test voltage 60/50 Hz	Model no. series	Page number
Vacuum fixed	25	35	CKT-25	10
	50	35	CKT-50	10
	100	35	CKT-100	10
	150	30	CKT-150	10
	200	30	CKT-200	10
	250	30	CKT-250	10
	25	25	CKT1-25	11
	50	25	CKT1-50	11
	100	25	CKT1-100	11
	50	15	CF2-50	12
	80	15	CF2-80	12
	100	15	CF2-100	12
	150	15	CF2-150	12
	180	15	CF2-180	12
	210	15	CF2-210	12
	450	45, 50, 55	CFHP-450	13
	500	20, 25, 30	CFED-500	13
	750	40, 45, 50	CFHP-750	14
	750	10, 15, 20, 25	CFED-750	14
	1000	40, 45, 50	CFHP-1000	14
	1000	10, 15, 20, 25, 30	CFED-1000	15
	1500	7.5, 10, 15	CFDP-1500	15
	1500	25, 30, 35	CFFP-1500	15
	2000	7.5, 10, 15	CFDP-2000	16
	2000	25, 30, 35	CFFP-2000	16

Vacuum capacitors overview
Capacitor selection guides

Capacitors alpha listing by model number

Alpha listing by model no.

Vacuum capacitors overview
Jennings vacuum capacitors

Features

- High voltage rating — The dielectric strength of the vacuum permits optimized voltage rating for a given size and capacity, in addition to freedom from contamination, humidity and oxidation.
- High current rating — Low losses and rugged copper construction permit the handling of high RF currents with convection cooling only. Some of our designs offer water and air cooling for extraordinary load conditions.
- Wide tuning ranges — High ratio of maximum to minimum capacity makes Jennings vacuum capacitors desirable for wide tuning ranges.
- Low losses — Losses in a vacuum capacitor are so small that for most applications they can be considered as negligible. Construction materials and the vacuum dielectric permit the handling of large RF currents at high RF frequencies that would destroy capacitors with other dielectrics.
- Self-healing — Jennings vacuum capacitors can withstand momentary overloads that would permanently damage other dielectric materials.
- High altitude operation — Vacuum sealing permits the operation of Jennings vacuum capacitors at high altitudes without the degradation that occurs with other types.

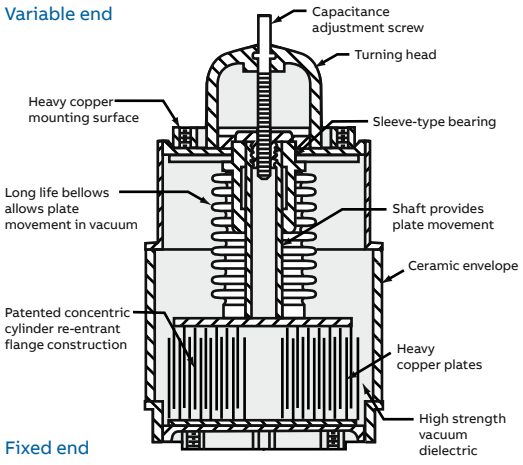


Figure 1 — typical Jennings variable vacuum capacitor

Description and general specification

Figure 1 illustrates the construction of a typical Jennings variable vacuum capacitor. Two sets of concentric cylinder plates, one adjustable and the other fixed, are enclosed in an evacuated ceramic envelope with OFHC copper seals at both ends. A flexible metal bellows, attached to a sleeve-type bearing, maintains vacuum while allowing capacitance to vary.

The linear sliding motion required to vary capacitance is converted to rotary tuning via an adjustment screw; in many capacitors, direct pull tuning is an alternative.

Internal breakdown voltage is primarily determined by the spacing of the opposing plates and a high vacuum level.

The following are general specifications pertaining to Jennings vacuum capacitors. Current ratings are for normal convection cooling in ambient temperature of 25 °C unless otherwise specified.

- Maximum allowable operating temperature — 125 °C (257 °F) for ceramic capacitor
- Cooling — natural convection unless otherwise specified
- Mounting position — any
- Rotation to increase capacity — counterclockwise

If none of our standard catalog models meet your needs, our engineers will work with you to design a custom solution to meet your specific needs.

Current/voltage

Maximum operating current for vacuum capacitors is limited by temperature rise and working voltage. At lower frequencies, a capacitor is a current-limiting device as a result of its capacitive reactance. At some frequencies, the internal generation of heat exceeds the device's heat-sinking capabilities, and its current-carrying capacity is limited by thermal considerations. A current vs. frequency chart is provided for each capacitor listed.

Peak voltage is limited by mechanical design of the capacitor. It does not vary with frequency.

Two voltage ratings are provided in our product specifications: AC test voltage and working voltage.

Vacuum capacitors overview
Jennings vacuum capacitors

Temperature

Jennings Technology vacuum capacitors are rated for a maximum operating temperature of 125 °C (257 °F) with normal convection cooling at an ambient temperature of 25 °C (72 °F).

Capacitance

Fixed capacitors with a nominal capacitance above 50pF shall be within ±5%. Capacitors with a nominal capacitance of 50pF or less shall be within ±10%, or 0.5pF, whichever is greater. For variable capacitors, the low end will be equal to or less than minimum rating. The capacitance change is substantially uniform with rotation, and there are no capacitance reversals. Capacitance is within ±10% of the nominal value of the curves shown (capacity vs. turns), in the linear portion of this curve.

Torque/direct pull

In variable capacitors, the linear sliding motion of the moving electrode assembly is converted to rotary tuning via a threaded shaft. The torque values given in the tables are the maximum torque needed to reach minimum capacitance when rotated with a standard lead screw; the torque required to tune away from minimum may be less than half this value.

For most variable capacitors, direct pull tuning is an available option to rotary tuning. Maximum required direct pull force values are also given in the tables.

Capacitance range end-stops are built into every variable capacitor. It is recommended that the user install their own external stops to prevent damage from gear-reduction drives.

Mechanical life

The mechanical life of variable capacitors is related to length of stroke, speed of operation, bellows material and total number of cycles. Extensive mechanical life tests have been run, operating units for complete cycles from maximum to minimum and back to maximum capacity covering 95% of the full stroke of the movable plates. Capacitors with a large bellows and a short stroke will have the greatest life expectancy under cycling operation. Our most recent variable capacitor models are rated for >2 million cycles, ideal for the semiconductor processing industry.

Testing standards

Factory
All capacitors are tested for dielectric strength on a 100% basis prior to shipment. Upon customer request, certified test reports will be made available.

Dielectric strength is tested using a low current, high potential source at 60 Hz voltage.

Capacitors for applications involving applied DC voltage should be tested on a DC dielectric strength meter for voltage and emission current. Jennings will test capacitors to this measure if specified by the customer.

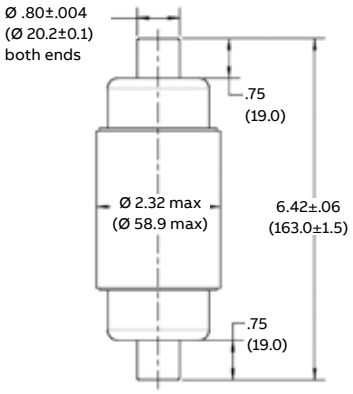
User
Most users will find the 60 Hz dielectric strength test adequate and relatively inexpensive. Jennings does not recommend DC testing being performed by the user because of safety considerations. If DC testing is performed, care should be taken not to exceed 60% of the peak test voltage rating of the capacitor.

Fixed capacitors
CKT series

CKT series vacuum fixed capacitors, 25–250pF

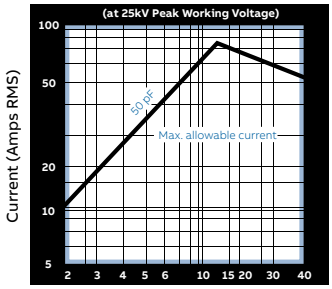
Cat. no.	Capacitance Max.	Capacitance Min.	Voltage peak Test	Voltage peak Working	Current Amps	Nominal dimensions Length (in)	Nominal dimensions Dia. (in)	Nominal dimensions Length (mm)	Nominal dimensions Dia. (mm)	Torque in.-lbs	Weight lb
CKT-25-0035	25	25	35	25	67	6.42	2.32	163	58.9	N/A	1.54
CKT-50-0035	50	50	35	25	77	6.42	2.32	163	58.9	N/A	1.54
CKT-100-0035	100	100	35	25	87	6.42	2.32	163	58.9	N/A	1.54
CKT-150-0030	150	150	30	20	90	6.46	2.66	164	67.5	N/A	1.98
CKT-200-0030	200	200	30	20	95	6.46	2.66	164	67.5	N/A	1.98
CKT-250-0030	250	250	30	20	100	6.46	2.66	164	67.5	N/A	1.98

CKT-50-0035
CKT-100-0035
CKT-200-0030
CKT-250-0030



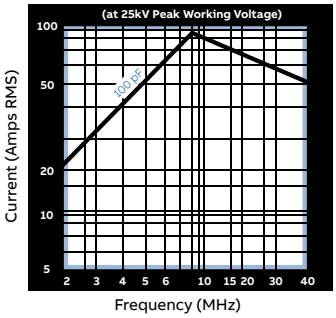
CKT-50-0035
CKT-100-0035

Continuous RMS amperes vs frequency

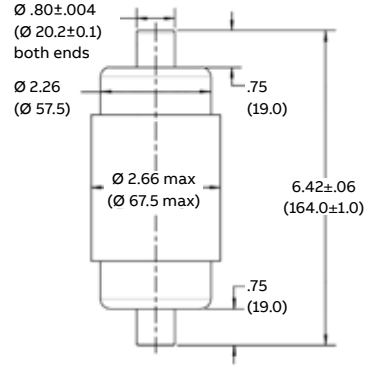


CKT-50-0035

Continuous RMS amperes vs frequency

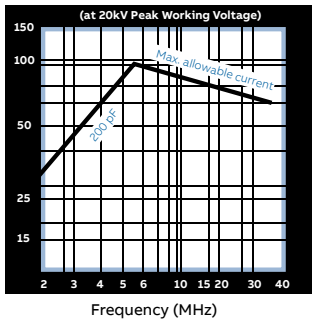


CKT-100-0035



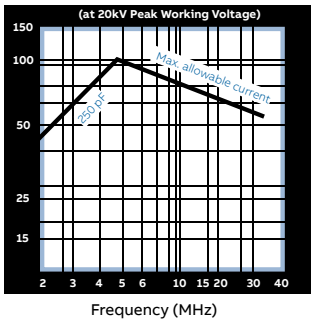
CKT-200-0030
CKT-250-0030

Continuous RMS amperes vs frequency



CKT-200-0030

Continuous RMS amperes vs frequency



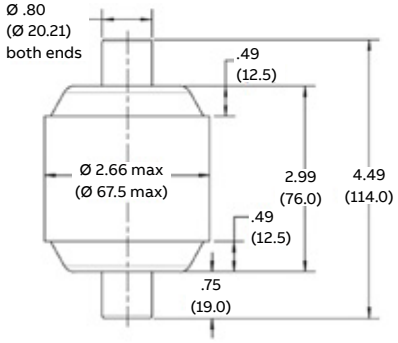
CKT-250-0030

Fixed capacitors
CKT1 series

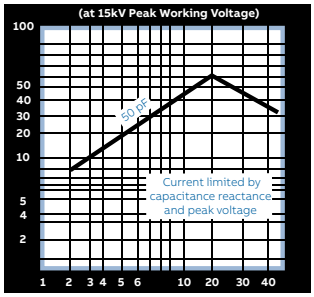
CKT1 series vacuum fixed capacitors, 25–100pF

	Capacitance		Voltage peak		Current	Nominal dimensions				Torque	Weight
Cat. no.	Max.	Min.	Test	Working	Amps	Length (in)	Dia. (in)	Length (mm)	Dia. (mm)	in.-lbs	lb
CKT1-25-0025	25	25	25	15	58	4.5	2.68	114	67.5	N/A	1.32
CKT1-50-0025	50	50	25	15	68	4.5	2.66	114	67.5	N/A	1.32
CKT1-100-0025	100	100	25	15	80	4.5	2.66	114	67.5	N/A	1.32

CKT1-50-0025
CKT1-100-0025

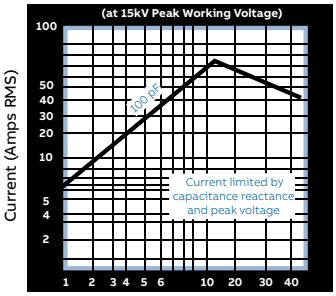


Continuous RMS amperes vs frequency



CKT1-50-0025

Continuous RMS amperes vs frequency



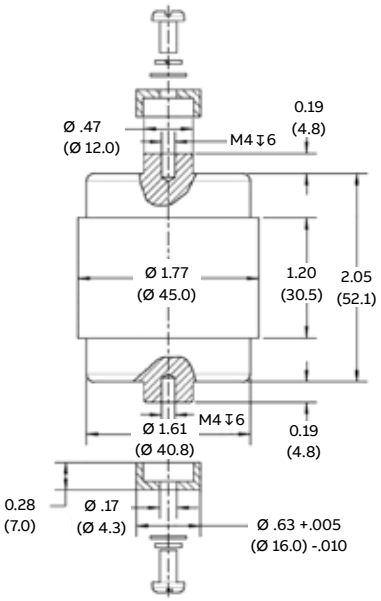
CKT1-100-0025

Fixed capacitors
CF2 series

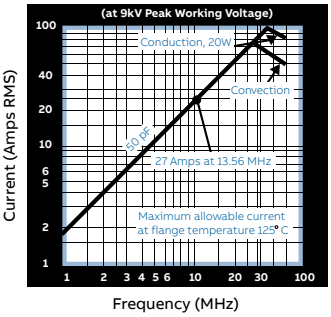
CF2 series compact vacuum fixed capacitors, 50–210pF

Cat. no.	Capacitance Max.	Capacitance Min.	Voltage peak Test	Voltage peak Working	Current Amps	Nominal dimensions Length (in)	Nominal dimensions Dia. (in)	Nominal dimensions Length (mm)	Nominal dimensions Dia. (mm)	Torque in.-lbs	Weight lb
CF2-50-0015	50	50	15	9	27	2.44	1.77	62	45	N/A	0.66
CF2-80-0015	80	80	15	9	76	2.44	1.77	62	45	N/A	0.66
CF2-100-0015	100	100	15	9	80	2.44	1.77	62	45	N/A	0.66
CF2-150-0015	150	150	15	9	75	2.44	1.77	62	45	N/A	0.66
CF2-180-0015	180	180	15	9	90	2.44	1.77	62	45	N/A	0.66
CF2-210-0015	210	210	15	9	76	2.44	1.77	62	45	N/A	0.66

CF2-50-0015
CF2-80-0015
CF2-100-0015
CF2-150-0015
CF2-180-0015
CF2-210-0015

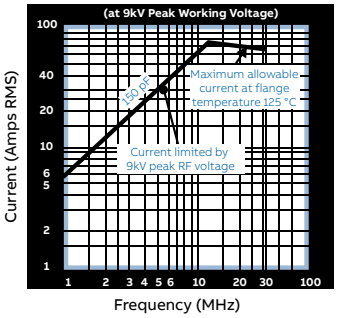


Continuous RMS amperes vs frequency



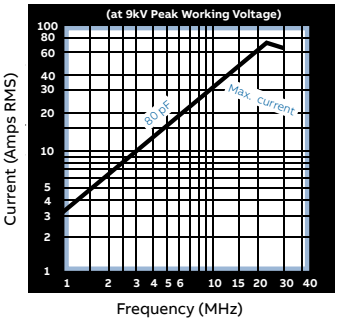
CF2-50-0015

Continuous RMS amperes vs frequency



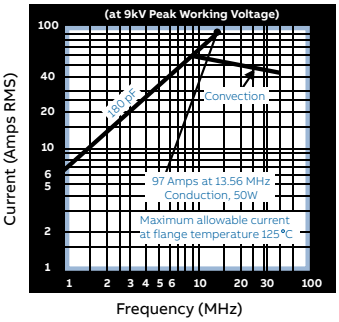
CF2-150-0015

Continuous RMS amperes vs frequency



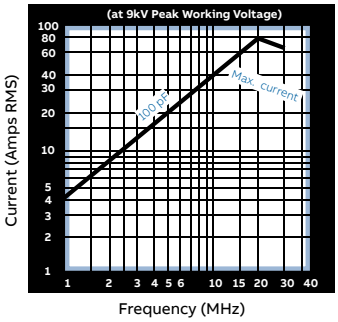
CF2-80-0015

Continuous RMS amperes vs frequency

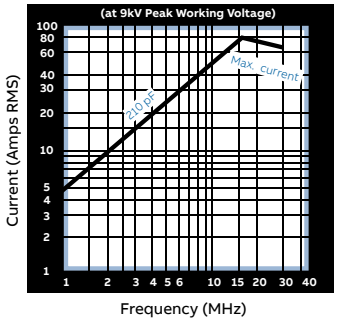


CF2-180-0015

Continuous RMS amperes vs frequency



CF2-100-0015



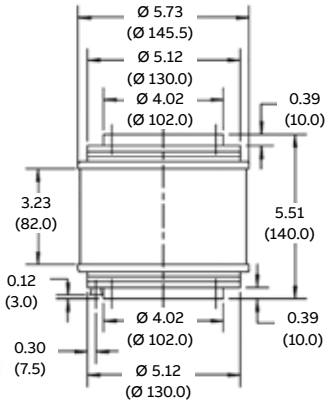
CF2-210-0015

Fixed capacitors
CFHP and CFED series

CFHP and CFED series vacuum fixed capacitors, 300–500pF

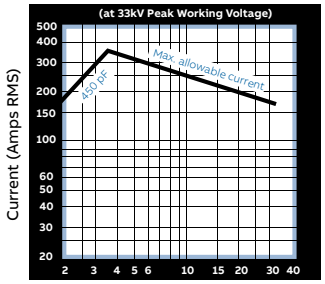
	Capacitance		Voltage peak		Current			Nominal dimensions		Torque	Weight
Cat. no.	Max.	Min.	Test	Working	Amps	Length (in)	Dia. (in)	Length (mm)	Dia. (mm)	in.-lbs	lb
CFHP-450-45S	450	450	45	27	260	5.51	5.73	140	145.5	N/A	11
CFHP-450-50S	450	450	50	30	280	5.51	5.73	140	145.5	N/A	11
CFHP-450-55S	450	450	55	33	300	5.51	5.73	140	145.5	N/A	11
CFED-500-20S	500	500	20	12	150	3.82	4.76	97	121	N/A	4
CFED-500-25S	500	500	25	15	160	3.82	4.76	97	121	N/A	4
CFED-500-30S	500	500	30	18	160	3.82	4.76	97	121	N/A	4

CFHP-450-45S
CFHP-450-50S
CFHP-450-55S

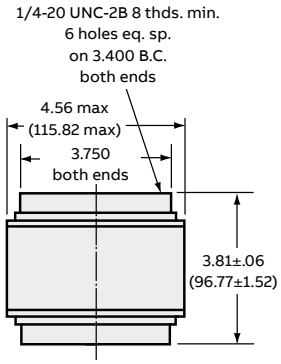


Mounting: Both ends have tapped holes.

Continuous RMS amperes vs frequency

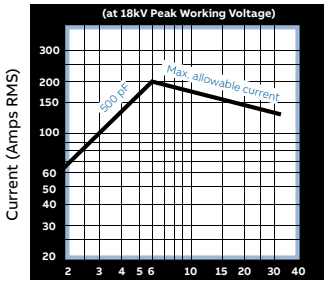


CFED-500



Mounting: Both ends have tapped holes.

Continuous RMS amperes vs frequency

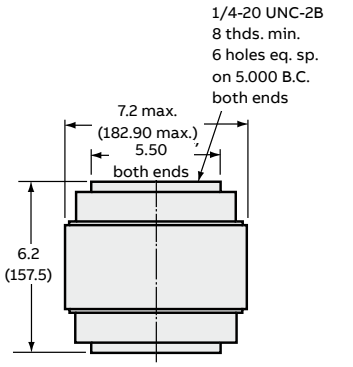


Fixed capacitors
CFHP and CFED series

CFHP and CFED series vacuum fixed capacitors, 750–1000pF

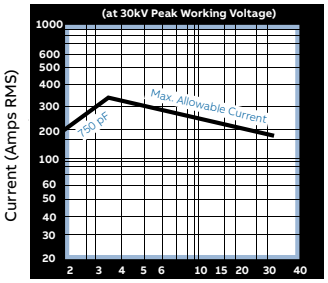
	Capacitance		Voltage peak		Current			Nominal dimensions		Torque	Weight
Cat. no.	Max.	Min.	Test	Working	Amps	Length (in)	Dia. (in)	Length (mm)	Dia. (mm)	in.-lbs	lb
CFHP-750-0040	750	750	40	24	340	6.22	7.2	158	183	N/A	13.0
CFHP-750-0045	750	750	45	24	340	6.22	7.2	158	183	N/A	13.0
CFHP-750-0050	750	75	50	30	340	6.22	7.2	158	183	N/A	13.0
CFED-750-10S	750	750	10	6	145	3.82	4.76	97	121	N/A	5.06
CFED-750-15S	750	750	15	9	150	3.82	4.76	97	121	N/A	5.06
CFED-750-20S	750	750	20	9	150	3.82	4.76	97	121	N/A	5.06
CFED-750-25S	750	750	25	15	225	3.82	4.76	97	121	N/A	5.06
CFHP-1000-40S	1000	1000	40	24	330	6.22	7.2	158	183	N/A	19.8
CFHP-1000-45S	1000	1000	45	27	340	6.22	7.2	158	183	N/A	19.8
CFHP-1000-50S	1000	1000	50	30	350	6.22	7.2	158	183	N/A	19.8

CFHP-750

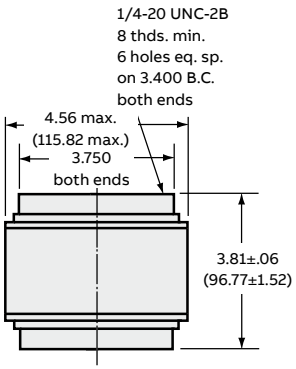


Mounting: Both ends have tapped holes.

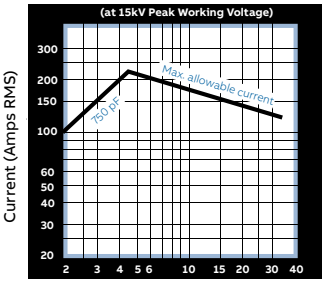
Continuous RMS amperes vs frequency



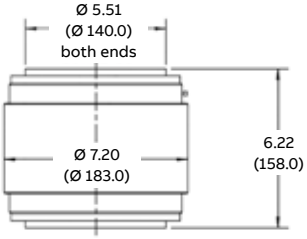
CFED-750



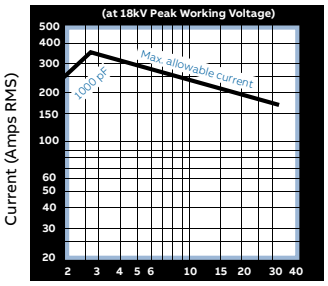
Continuous RMS amperes vs frequency



CFHP-1000-40S
CFHP-1000-45S
CFHP-1000-50S



Continuous RMS amperes vs frequency

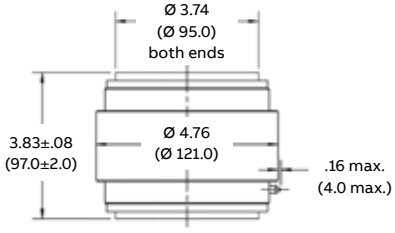


Fixed capacitors
CFED, CFDP and CFFP series

CFED, CFDP and CFFP series vacuum fixed capacitors, 1000–1500pF

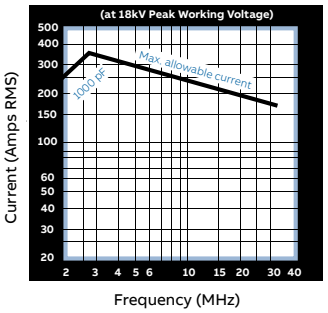
	Capacitance		Voltage peak		Current	Nominal dimensions				Torque	Weight
Cat. no.	Max.	Min.	Test	Working	Amps	Length (in)	Dia. (in)	Length (mm)	Dia. (mm)	in.-lbs	lb
CFED-1000-10S	1000	1000	10	6	150	3.82	4.76	97	121	N/A	7.04
CFED-1000-15S	1000	1000	15	9	155	3.82	4.76	97	121	N/A	7.04
CFED-1000-20S	1000	1000	20	12	160	3.82	4.76	97	121	N/A	7.04
CFED-1000-25S	1000	1000	25	15	180	3.82	4.76	97	121	N/A	7.04
CFED-1000-30S	1000	1000	30	18	180	3.82	4.76	97	121	N/A	7.04
CFDP-1500-7.5S	1500	1500	7.5	4.5	150	3.31	5.61	84	142.5	N/A	8.8
CFDP-1500-10S	1500	1500	10	6	170	3.31	5.61	84	142.5	N/A	8.8
CFDP-1500-15S	1500	1500	15	9	190	3.31	5.61	84	142.5	N/A	8.8
CFFP-1500-25S	1500	1500	25	15	310	5.83	8.19	148	208	N/A	22
CFFP-1500-30S	1500	1500	30	18	330	5.83	8.19	148	208	N/A	22
CFFP-1500-35S	1500	1500	35	21	350	5.83	8.19	148	208	N/A	22

CFED-1000-10S
CFED-1000-15S
CFED-1000-20S
CFED-1000-25S
CFED-1000-30S

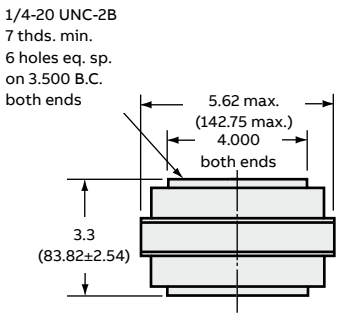


Mounting: Both ends have tapped holes.

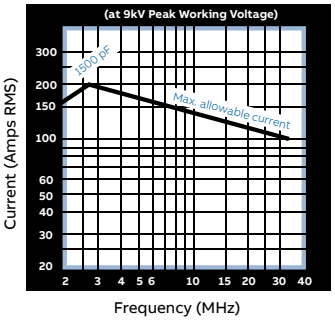
Continuous RMS amperes vs frequency



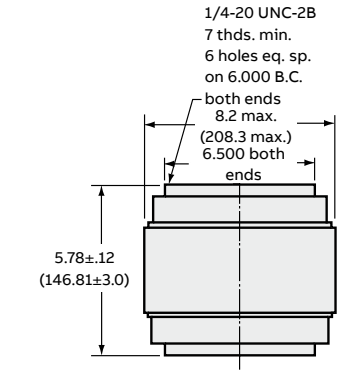
CFDP-1500



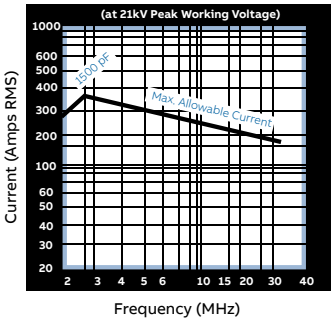
Continuous RMS amperes vs frequency



CFFP-1500



Continuous RMS amperes vs frequency



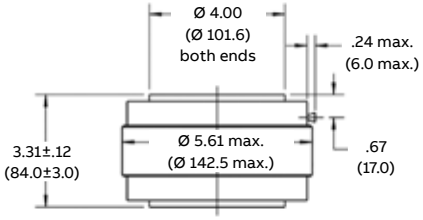
Fixed capacitors
CFDP and CFFP series

CFDP and CFFP series vacuum fixed capacitors, 2000pF

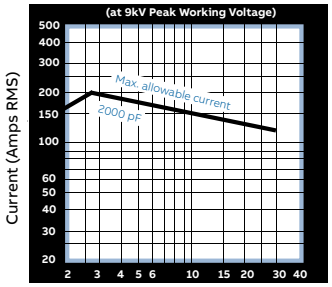
	Capacitance		Voltage peak		Current			Nominal dimensions		Torque	Weight
Cat. no.	Max.	Min.	Test	Working	Amps	Length (in)	Dia. (in)	Length (mm)	Dia. (mm)	in.-lbs	lb
CFDP-2000-7.5S	2000	2000	7.5	4.5	160	3.31	5.61	84	142.5	N/A	9.9
CFDP-2000-10S	2000	2000	10	6	180	3.31	5.61	84	142.5	N/A	9.9
CFDP-2000-15S	2000	2000	15	9	200	3.31	5.61	84	142.5	N/A	9.9
CFFP-2000-25S	2000	2000	25	15	350	5.83	8.19	148	208	N/A	23.32
CFFP-2000-30S	2000	2000	30	18	390	5.83	8.19	148	208	N/A	23.32
CFFP-2000-35S	2000	2000	35	21	390	5.83	8.19	148	208	N/A	23.32

Mounting: Both ends have tapped holes.
CFDM Version has additional M6 Hole pattern.

CFDP-2000-7.5S
CFDP-2000-10S
CFDP-2000-15S

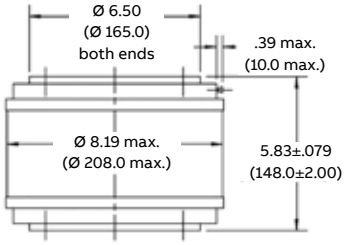


Continuous RMS amperes vs frequency

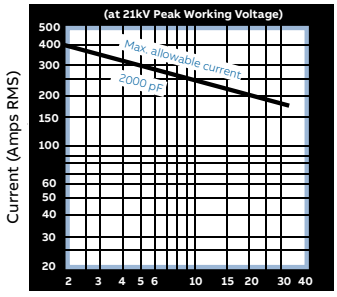


Mounting: Both ends have tapped holes.

CFFP-2000-25S
CFFP-2000-30S
CFFP-2000-35S

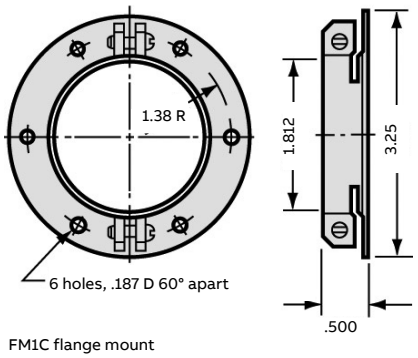


Continuous RMS amperes vs frequency



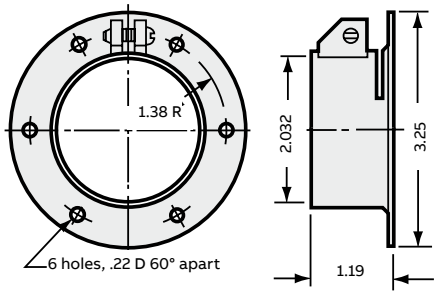
Capacitor accessories
Flanges

MAT. .062 copper/silver



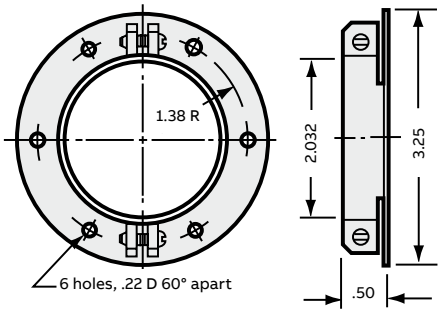
FM1C flange mount

MAT. .062 copper/silver



FM2D flange mount

MAT. .062 copper/silver



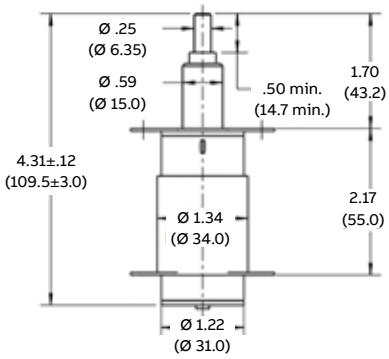
FM2S flange mount

Variable capacitors
CVDD series

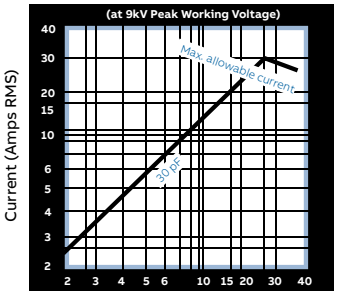
CVDD series vacuum variable capacitors, 30–100pF

Cat. no.	Capacitance Max.	Capacitance Min.	Voltage peak Test	Voltage peak Working	Current Amps	Nominal dimensions Length (in)	Nominal dimensions Dia. (in)	Nominal dimensions Length (mm)	Nominal dimensions Dia. (mm)	Torque in.-lbs	Weight lb
CVDD-30-0007	30	3	7.5	4.5	18	4.31	2.31	109.5	54	1.5	0.44
CVDD-30-0010	30	3	10	6	30	4.31	2.31	109.5	54	1.5	0.44
CVDD-30-0015	30	3	15	9	30	4.31	2.31	109.5	54	1.5	0.44
CVDD-100-7.5S	100	10	7.5	4.5	55	6.36	2.44	168	61.96	1.2	1.98
CVDD-100-10S	100	10	10	6	60	6.36	2.44	168	61.96	1.2	1.98
CVDD-100-15S	100	10	15	9	77	6.36	2.44	168	61.96	1.2	1.98

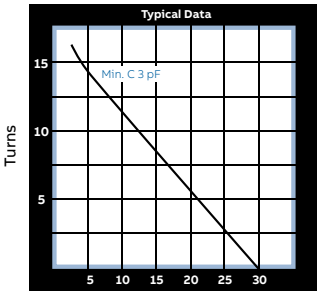
CVDD-30-0007
CVDD-30-0010
CVDD-30-0015



Continuous RMS amperes vs frequency

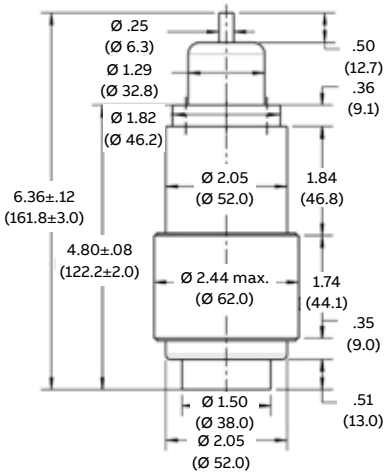


Capacity vs turns

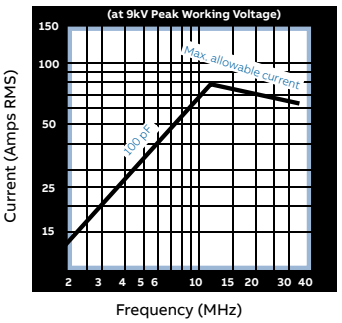


Mounting: Flanges both ends.

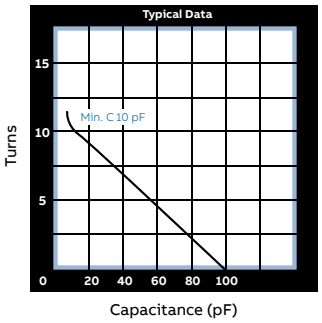
CVDD-100-7.5S
CVDD-100-10S
CVDD-100-15S



Continuous RMS amperes vs frequency



Capacity vs turns



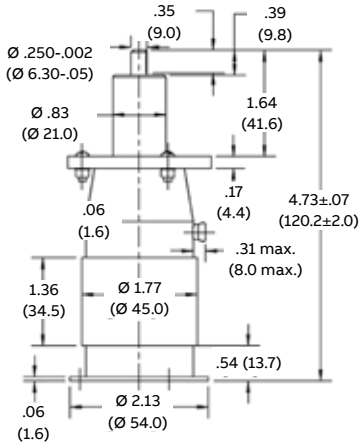
Mounting: Variable end tapped holes.

Variable capacitors
C/GCS and CVCD series

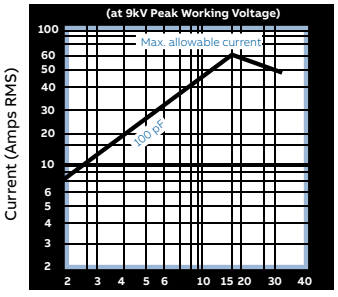
C/GCS and CVCD series vacuum variable capacitors, 100–250pF

	Capacitance		Voltage peak		Current			Nominal dimensions		Torque	Weight
Cat. no.	Max.	Min.	Test	Working	Amps	Length (in)	Dia. (in)	Length (mm)	Dia. (mm)	in.-lbs	lb
C/GCS-100-7.5S	100	5	7.5	4.5	40	4.73	2.13	120.2	54	0.75	0.88
C/GCS-100-10S	100	5	10	6	40	4.73	2.13	120.2	54	0.75	0.88
C/GCS-100-15S	100	5	15	9	45	4.73	2.13	120.2	54	0.75	0.88
CVCD-250-3S	250	5	3	1.8	50	6	2.44	152.4	61.98	2.6	1.98
CVCD-250-5S	250	5	5	3.5	50	6	2.44	152.4	61.98	2.6	1.98

C/GCS-100-7.5S
C/GCS-100-10S
C/GCS-100-15S

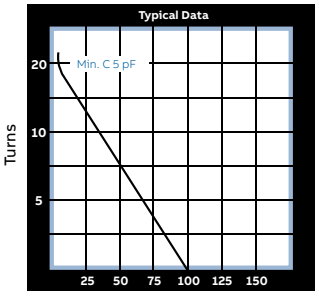


Continuous RMS amperes vs frequency



Frequency (MHz)

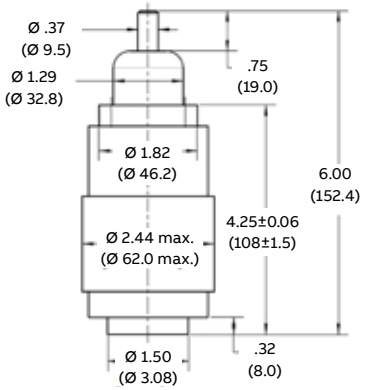
Capacity vs turns



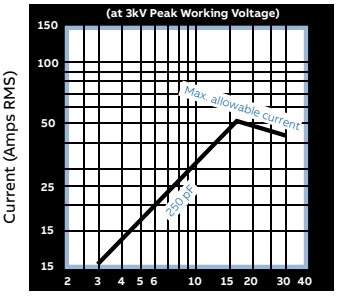
Capacitance (pF)

Mounting: Both ends have tapped holes.

CVCD-250-3S
CVCD-250-5S

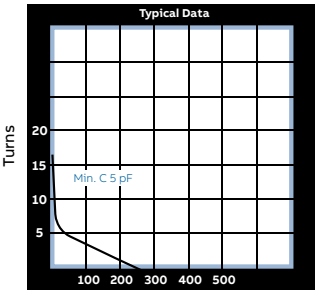


Continuous RMS amperes vs frequency



Frequency (MHz)

Capacity vs turns



Capacitance (pF)

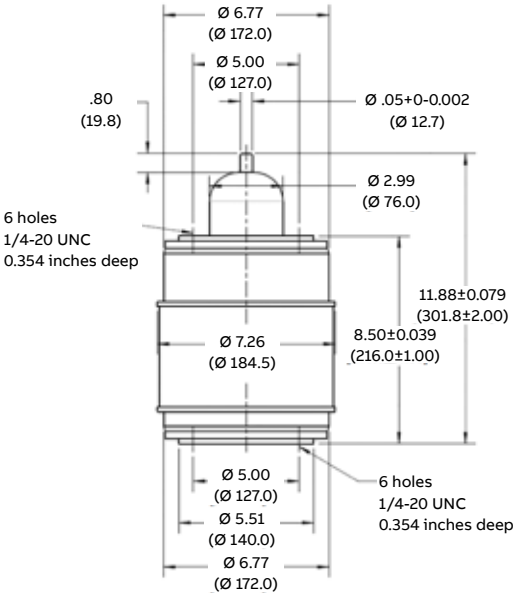
Mounting: Variable end tapped holes.

Variable capacitors
CVHP series

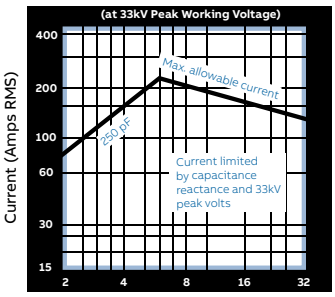
CVHP series vacuum variable capacitors, 250–450pF

Cat. no.	Capacitance Max.	Capacitance Min.	Voltage peak Test	Voltage peak Working	Current Amps	Nominal dimensions Length (in)	Nominal dimensions Dia. (in)	Nominal dimensions Length (mm)	Nominal dimensions Dia. (mm)	Torque in.-lbs	Weight lb
CVHP-250-45S	250	10	45	27	190	11.88	7.26	302	185	12.9	26.4
CVHP-250-50S	250	10	50	30	200	11.88	7.26	302	185	12.9	26.4
CVHP-250-55S	250	10	55	33	210	11.88	7.26	302	185	12.9	26.4
CVHP-450-45S	450	25	45	27	200	11.88	7.28	302	185	13.2	24.5
CVHP-450-50S	450	25	50	30	210	11.88	7.28	302	185	13.2	24.5
CVHP-450-55S	450	25	55	33	220	11.88	7.28	302	185	13.2	24.5

CVHP-250-45S
CVHP-250-50S
CVHP-250-55S



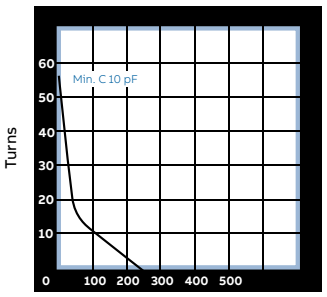
Continuous RMS amperes vs frequency



Frequency (MHz)

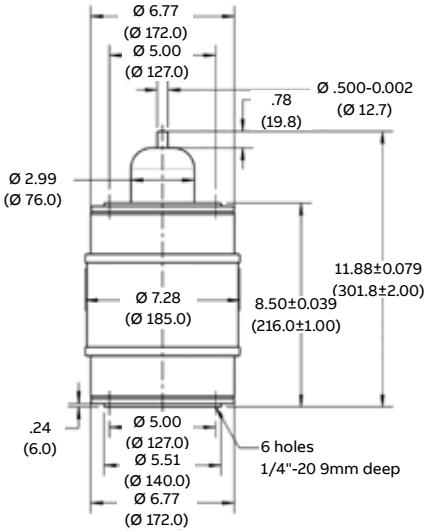
Mounting: Both ends have tapped holes.

Capacity vs turns

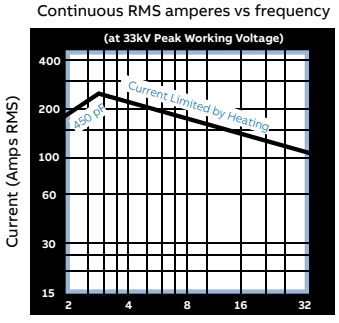


Capacitance (pF)

CVHP-450-45S
CVHP-450-50S
CVHP-450-55S



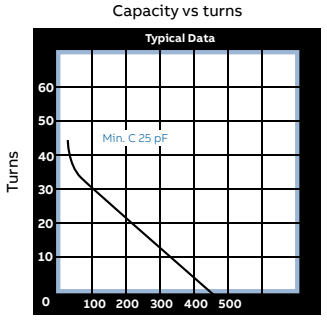
Continuous RMS amperes vs frequency



Frequency (MHz)

Mounting: Both ends have tapped holes.

Capacity vs turns



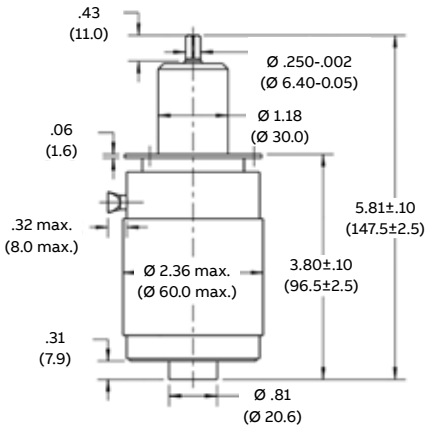
Capacitance (pF)

Variable capacitors
CSV1 and CVDD series

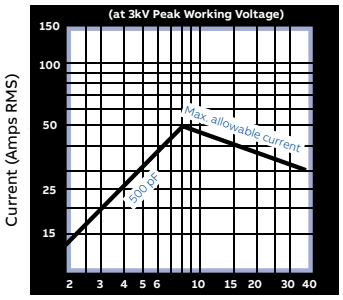
CSV1 and CVDD series vacuum variable capacitors, 500pF

Cat. no.	Capacitance Max.	Capacitance Min.	Voltage peak Test	Voltage peak Working	Current Amps	Nominal dimensions Length (in)	Nominal dimensions Dia. (in)	Nominal dimensions Length (mm)	Nominal dimensions Dia. (mm)	Torque in.-lbs	Weight lb
CSV1-500-0003	500	5	3	1.8	40	5.75	2.35	147.5	60	2	1.76
CSV1-500-0005	500	5	5	3	45	5.81	2.36	147.5	60	2	1.76
CVDD-500-7.5S	500	20	7.5	4.5	80	7.51	3.39	190.7	86	1.8	3.96
CVDD-500-10S	500	20	10	6	90	7.51	3.39	190.7	86	1.8	3.96
CVDD-500-15S	500	20	15	9	95	7.51	3.39	190.7	86	1.8	3.96

CSV1-500-0003
CSV1-500-0005

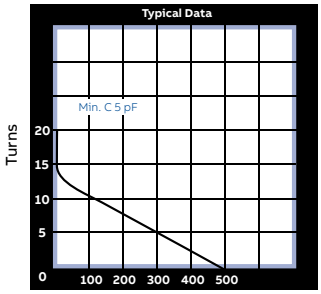


Continuous RMS amperes vs frequency



Frequency (MHz)

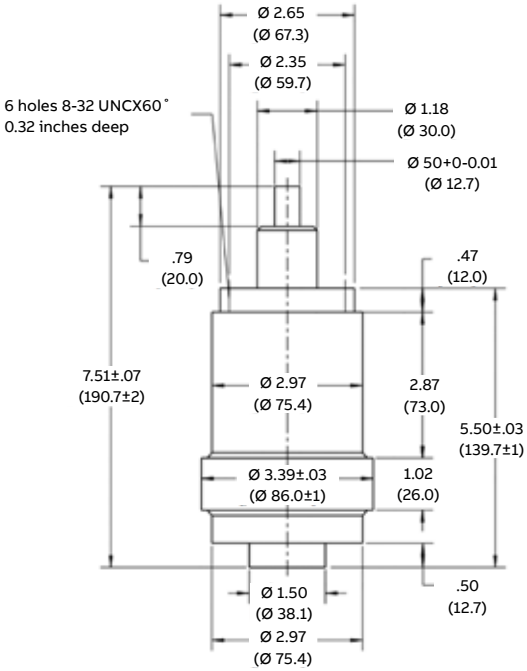
Capacity vs turns



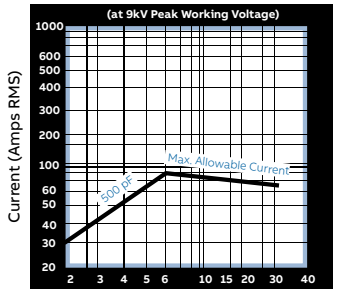
Capacitance (pF)

Mounting: Variable end has flange soldered on.

CVDD-500-7.5S
CVDD-500-10S
CVDD-500-15S

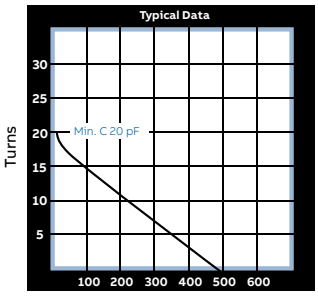


Continuous RMS amperes vs frequency



Frequency (MHz)

Capacity vs turns



Capacitance (pF)

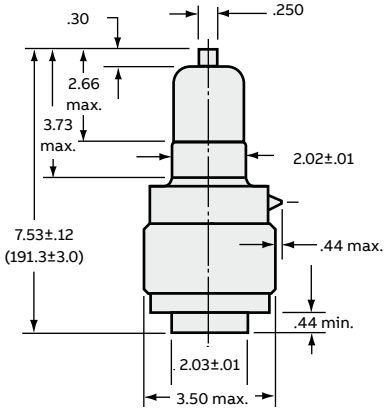
Mounting: Tapped holes on variable end.

Variable capacitors
M/CSVF and M/CSV5 series

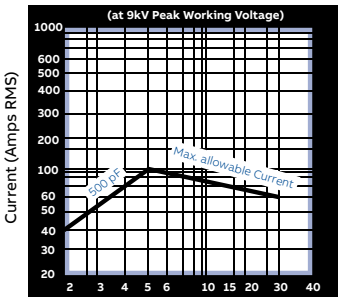
M/CSVF and M/CSV5 series vacuum variable capacitors, 500pF

Cat. no.	Capacitance Max.	Capacitance Min.	Voltage peak Test	Voltage peak Working	Current Amps	Nominal dimensions Length (in)	Nominal dimensions Dia. (in)	Nominal dimensions Length (mm)	Nominal dimensions Dia. (mm)	Torque in.-lbs	Weight lb
M/CSVF-500-0007	500	12	7	4.2	100	7.53	3.39	191.3	86	2.3	3.3
M/CSVF-500-0010	500	12	10	6	100	7.53	3.39	191.3	86	2.3	3.3
M/CSVF-500-0015	500	12	15	9	100	7.53	3.39	191.3	86	2.3	3.3
M/CSV5-500-0005	500	50	5	3	47	5.18	2.17	131.6	55	1.8	1.1
M/CSV5-500-0008	500	50	8	4.8	47	5.18	2.17	131.6	55	1.8	1.1

M/CSVF-500

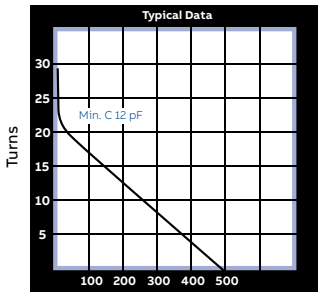


Continuous RMS amperes vs frequency

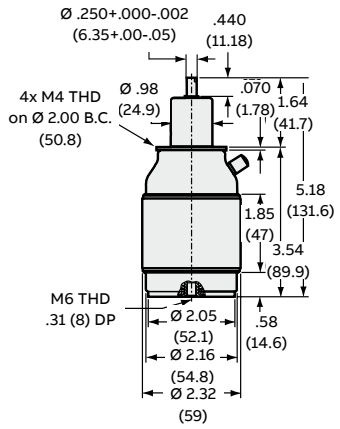


Mounting: Use flange FM2S on fixed end.

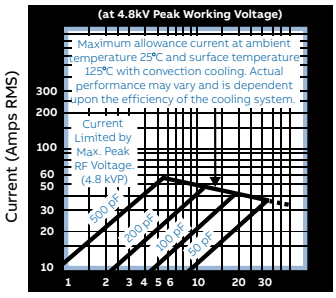
Capacity vs turns



M/CSV5-500

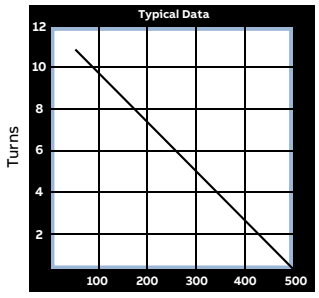


Continuous RMS amperes vs frequency



Mounting: Both ends have tapped holes.

Capacity vs turns

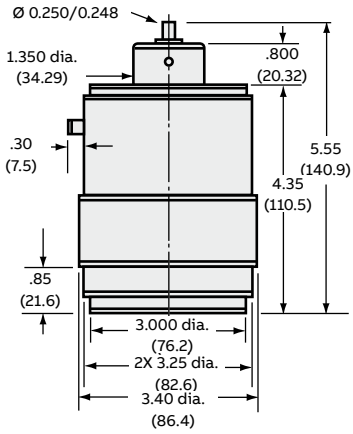


Variable capacitors
PV4, CMV1 and CMV3 series

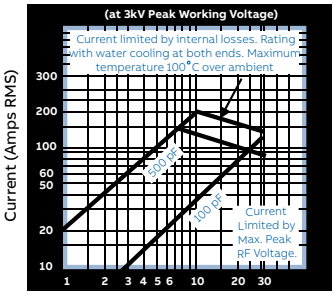
PV4, CMV1 AND CMV3 series vacuum variable capacitors, 500–650pF

Cat. no.	Capacitance Max.	Capacitance Min.	Voltage peak Test	Voltage peak Working	Current Amps	Nominal dimensions Length (in)	Nominal dimensions Dia. (in)	Nominal dimensions Length (mm)	Nominal dimensions Dia. (mm)	Torque in.-lbs	Weight lb
PV4-500-15S	500	40	15	9	110	5.55	3.4	141	86	2.0625	3.3
CMV1-650-0005	650	8	5	3	35	5.24	1.81	133	46	1.1	0.88
CMV3-650-0008	650	10	8	4.8	40	4.5	1.76	114.3	44.7	1.1	0.88

PV4-500

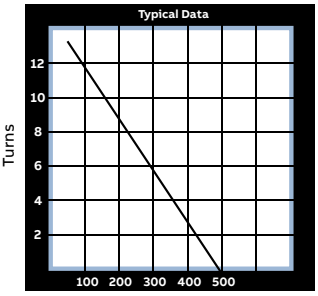


Continuous RMS amperes vs frequency



Frequency (MHz)

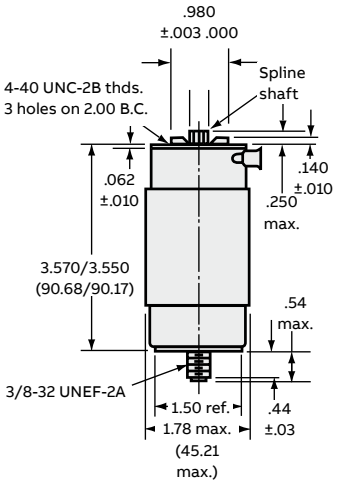
Capacity vs turns



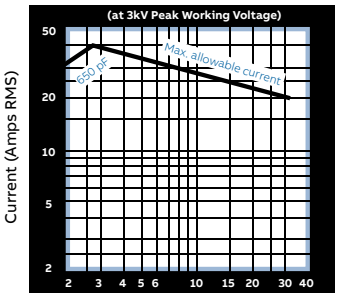
Capacitance (pF)

Mounting: Both ends have tapped holes.
6X M5 Thread on 2.350 B.C.
6X M4 Thread on 2.350 B.C.
Both Ends.
Water cooling disk available: FMWPV, 1 each end.
Conservative limit with unit in dead airspace.
Maximum temperature 100 °C over ambient.

CMV1-650

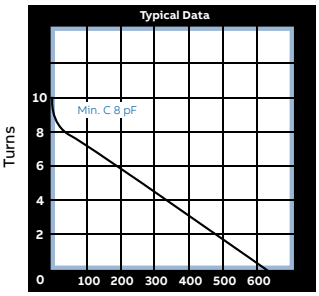


Continuous RMS amperes vs frequency



Frequency (MHz)

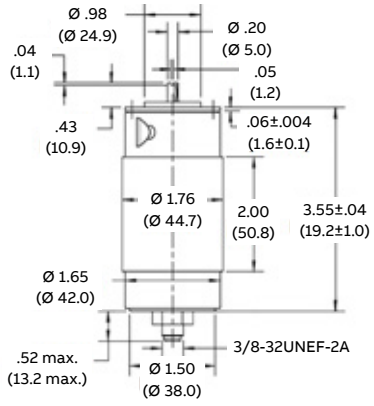
Capacity vs turns



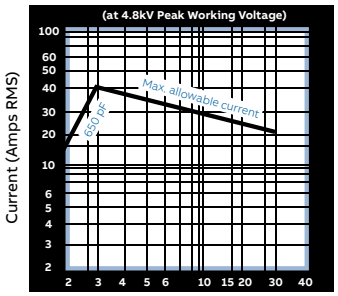
Capacitance (pF)

Mounting: Fixed end threaded stud. Variable end tapped holes.

CMV3-650-0008

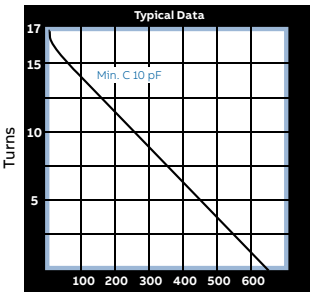


Continuous RMS amperes vs frequency



Frequency (MHz)

Capacity vs turns



Capacitance (pF)

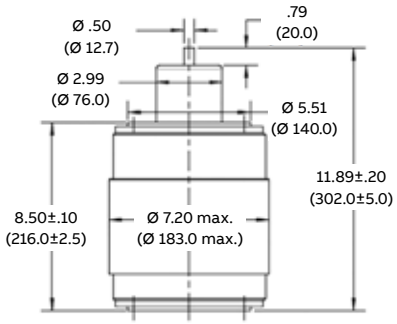
Mounting: Both ends have tapped holes.

Variable capacitors
CVHP and CWV3 series

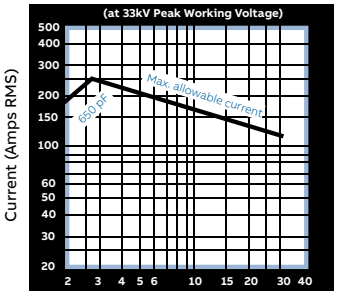
CVHP and CWV3 series vacuum variable capacitors, 650pF

Cat. no.	Capacitance Max.	Capacitance Min.	Voltage peak Test	Voltage peak Working	Current Amps	Nominal dimensions Length (in)	Nominal dimensions Dia. (in)	Nominal dimensions Length (mm)	Nominal dimensions Dia. (mm)	Torque in.-lbs	Weight lb
CVHP-650-45S	650	30	45	27	220	11.89	7.28	302	185	13	24.2
CVHP-650-50S	650	30	50	30	230	11.89	7.28	302	185	13	24.2
CVHP-650-55S	650	30	55	33	240	11.89	7.28	302	185	13	24.2
CWV3-650-0140	650	30	40	24	760	16.5	7.28	420	185	17	26.4
CWV3-650-0145	650	30	45	27	780	16.5	7.28	420	185	17	26.4
CWV3-650-0150	650	30	50	30	800	16.5	7.28	420	185	17	26.4

CVHP-650-45S
CVHP-650-50S
CVHP-650-55S

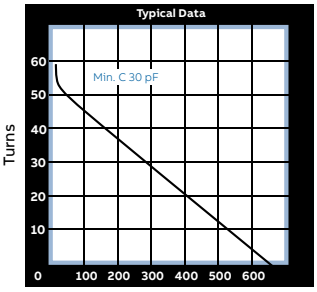


Continuous RMS amperes vs frequency



Frequency (MHz)

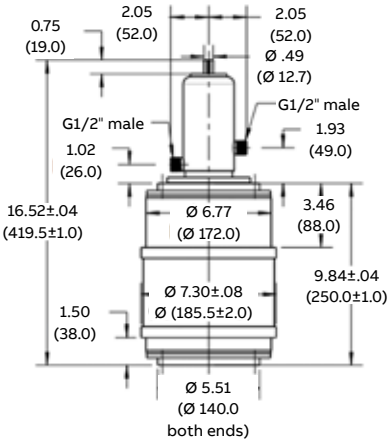
Capacity vs turns



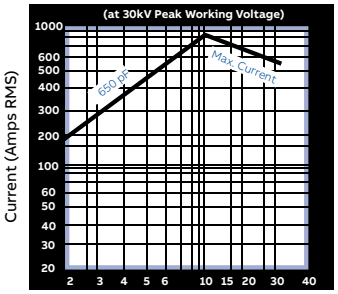
Capacitance (pF)

Mounting: Both ends have tapped holes.

CWV3-650-0140
CWV3-650-0145
CWV3-650-0150

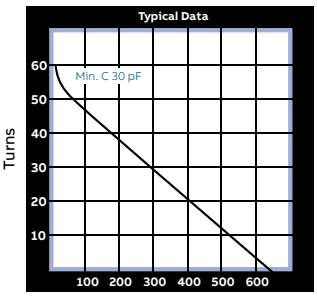


Continuous RMS amperes vs frequency



Frequency (MHz)

Capacity vs turns



Capacitance (pF)

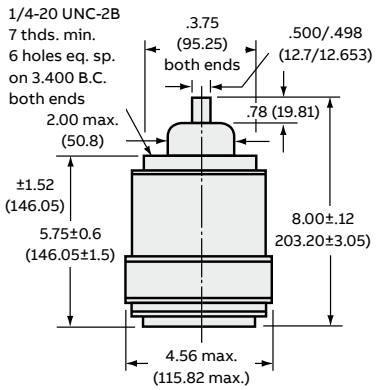
Mounting: Both ends have tapped holes.

Variable capacitors
CVDD and CSV4 series

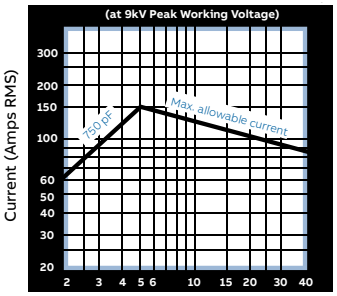
CVDD and CSV4 series vacuum variable capacitors, 750–900pF

Cat. no.	Capacitance Max.	Capacitance Min.	Voltage peak Test	Voltage peak Working	Current Amps	Nominal dimensions Length (in)	Nominal dimensions Dia. (in)	Nominal dimensions Length (mm)	Nominal dimensions Dia. (mm)	Torque in.-lbs	Weight lb
CVDD-750-7.5S	750	25	7.5	4.5	130	7.99	4.53	203	115	4.2	6.6
CVDD-750-10S	750	25	10	6	140	7.99	4.53	203	115	4.2	6.6
CVDD-750-15S	750	25	15	9	150	7.99	4.53	203	115	4.2	6.6
CSV4-900-0103	900	500	3	1.8	40	6.24	2.17	159.2	55	25	1.32
CSV4-900-0106	900	500	5	3	40	6.27	2.17	159.2	55	1.5	1.32
CSV4-900-0206	900	10	6	3.6	45	6.27	2.17	159.2	55	1.5	1.32

CVDD-750

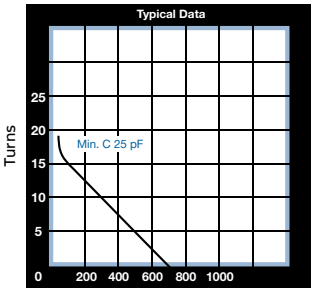


Continuous RMS amperes vs frequency

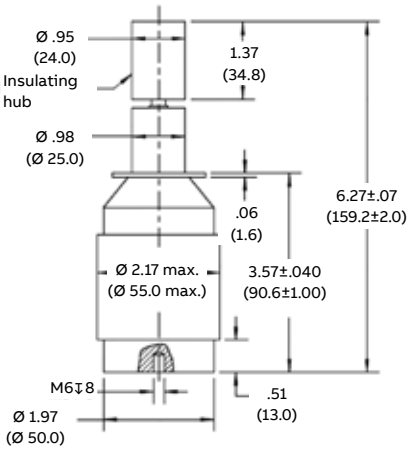


Mounting: Both ends have tapped holes.

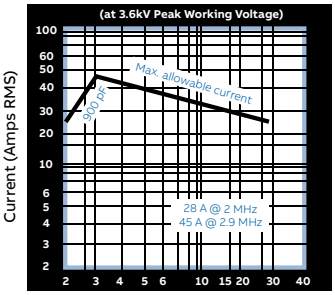
Capacity vs turns



CSV4-900-0103
CSV4-900-0106
CSV4-900-0206

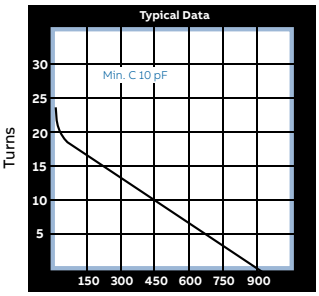


Continuous RMS amperes vs frequency



Mounting: Both ends have tapped holes.

Capacity vs turns

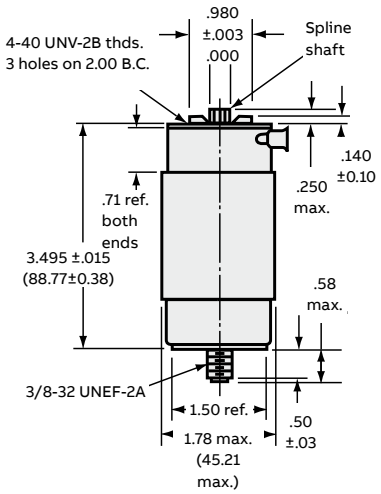


Variable capacitors
CMV1 and CSV1 series

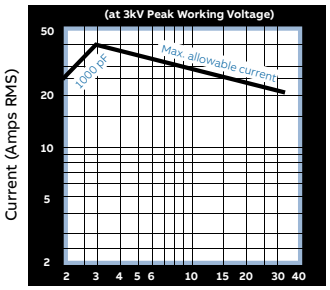
CMV1 and CSV1 series vacuum variable capacitors, 1000pF

Cat. no.	Capacitance Max.	Capacitance Min.	Voltage peak Test	Voltage peak Working	Current Amps	Nominal dimensions Length (in)	Nominal dimensions Dia. (in)	Nominal dimensions Length (mm)	Nominal dimensions Dia. (mm)	Torque in.-lbs	Weight lb
CMV1-1000-0003	1000	8	3	1.8	25	3.495	1.78	88.9	45.21	18	0.88
CSV1-1000-0003	1000	10	3	1.8	65	5	3.12	127	79.2	2.5	1.32
CSV1-1000-0005	1000	10	5	3	70	5	3.12	127	79.2	2.5	1.32

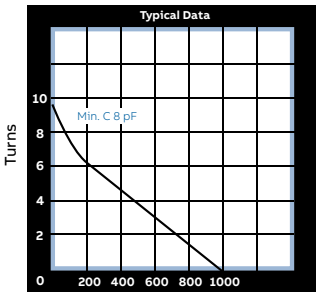
CMV1-1000



Continuous RMS amperes vs frequency

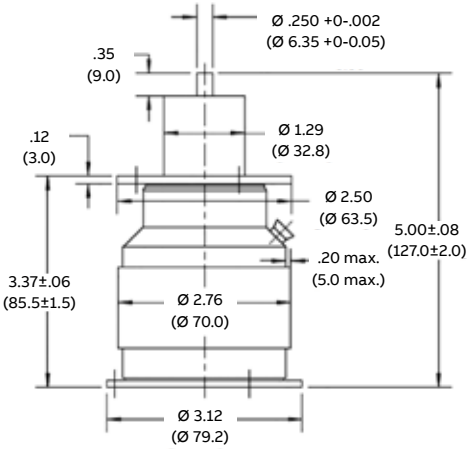


Capacity vs turns

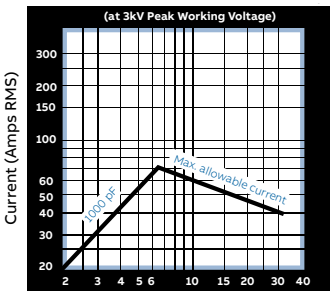


Mounting: Fixed end threaded stud. Variable end tapped holes.

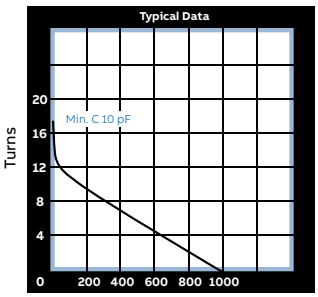
CSV1-1000-0003
CSV1-1000-0005



Continuous RMS amperes vs frequency



Capacity vs turns



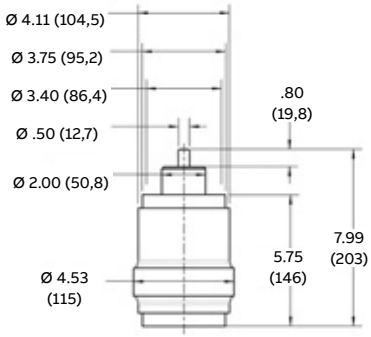
Mounting: Both ends have flanges soldered on.

Variable capacitors
CVDD and CVHP series

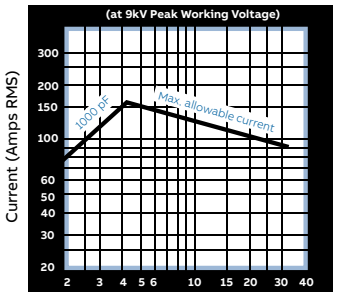
CVDD and CVHP series vacuum variable capacitors, 1000pF

Cat. no.	Capacitance Max.	Capacitance Min.	Voltage peak Test	Voltage peak Working	Current Amps	Nominal dimensions Length (in)	Nominal dimensions Dia. (in)	Nominal dimensions Length (mm)	Nominal dimensions Dia. (mm)	Torque in.-lbs	Weight lb
CVDD-1000-7.5S	1000	25	7.5	4.5	130	7.99	4.53	203	115	1.6	6.6
CVDD-1000-10S	1000	25	10	6	140	7.99	4.53	203	115	1.6	6.6
CVDD-1000-15S	1000	25	15	9	150	7.99	4.53	203	115	1.6	6.6
CVHP-1000-40S	1000	60	40	24	230	14.57	8.19	370	210	11.7	29.92
CVHP-1000-45S	1000	60	45	27	240	14.57	8.19	370	210	11.7	29.92
CVHP-1000-50S	1000	60	50	30	250	14.57	8.19	370	210	11.7	29.92

CVDD-1000-7.5S
CVDD-1000-10S
CVDD-1000-15S

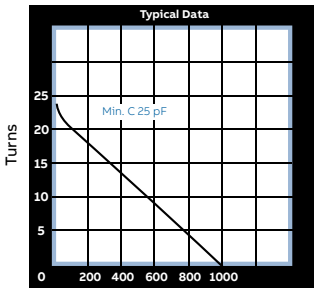


Continuous RMS amperes vs frequency

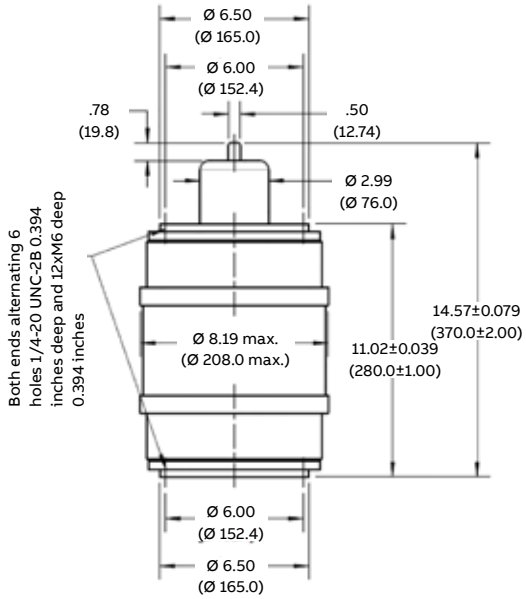


Mounting: Both ends have tapped holes.

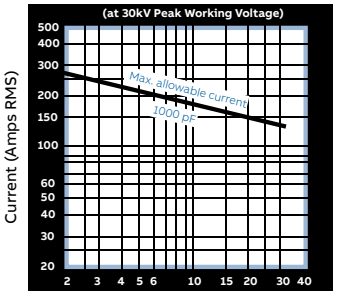
Capacity vs turns



CVHP-1000-40S
CVHP-1000-45S
CVHP-1000-50S

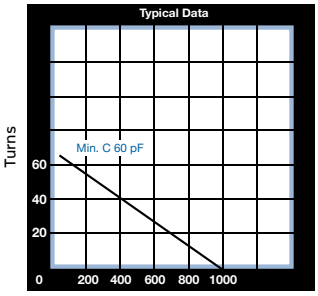


Continuous RMS amperes vs frequency



Mounting: Both ends have tapped holes.

Capacity vs turns



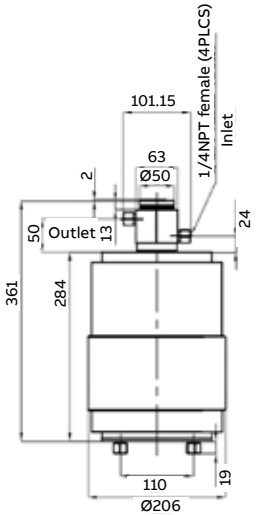
Variable capacitors

CWV5, M/CVCJ and M/CSV5 series

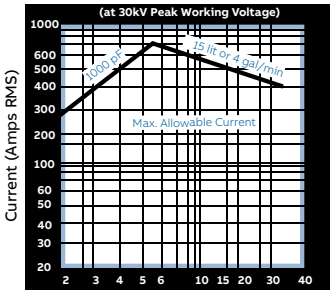
CWV5, M/CVCJ and M/CSV5 series vacuum variable capacitors, 1000pF

Cat. no.	Capacitance Max.	Capacitance Min.	Voltage peak Test	Voltage peak Working	Current Amps	Nominal dimensions Length (in)	Nominal dimensions Dia. (in)	Nominal dimensions Length (mm)	Nominal dimensions Dia. (mm)	Torque in.-lbs	Weight lb
CWV5-1000-0040	1000	100	40	24	700	18.03	8.54	458	217	13.3	46.2
CWV5-1000-0045	1000	100	45	27	700	18.03	8.54	458	217	13.3	46.2
CWV5-1000-0050	1000	100	50	30	700	18.03	8.54	458	217	13.3	46.2
M/CVCJ-1000-3S	1000	7	3	1.8	70	7.29	2.76	185.1	70	2.6	2.86
M/CVCJ-1000-5S	1000	7	5	3	70	7.29	2.76	185.1	70	2.6	2.86
M/CSV5-1000-0003	1000	100	3	1.8	89	5.17	2.17	131.6	55	1.8	1.32
M/CSV5-1000-0005	1000	100	5	3	89	5.17	2.17	131.6	55	1.8	1.32

CWV5-1000-0040
CWV5-1000-0045
CWV5-1000-0050

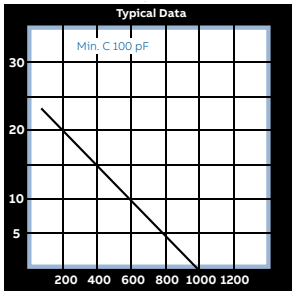


Continuous RMS amperes vs frequency

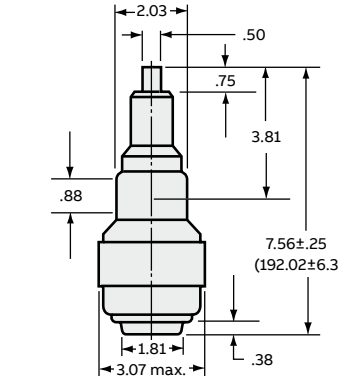


Mounting: Both ends have tapped holes.

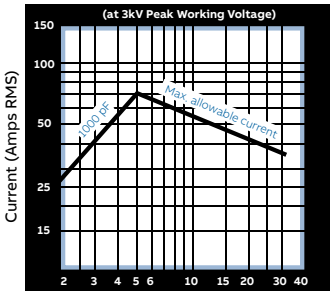
Capacity vs turns



M/CVCJ-1000

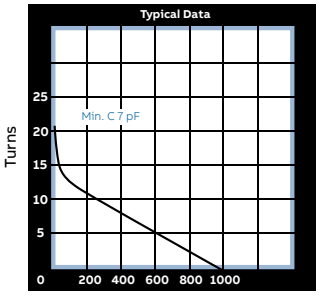


Continuous RMS amperes vs frequency

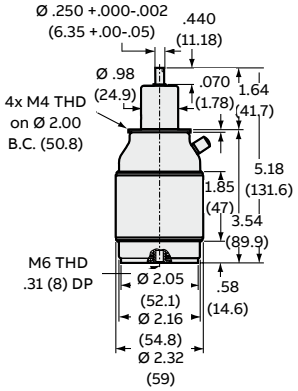


Mounting: Use flange FM1C on fixed end.

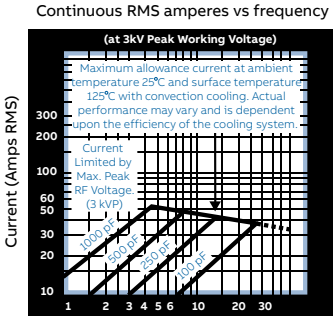
Capacity vs turns



M/CSV5-1000

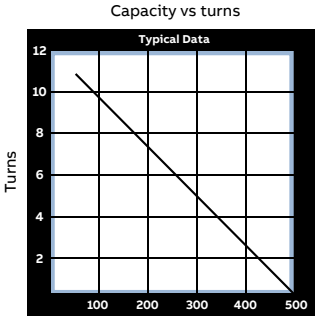


Continuous RMS amperes vs frequency



Mounting: Both ends have tapped holes.

Capacity vs turns

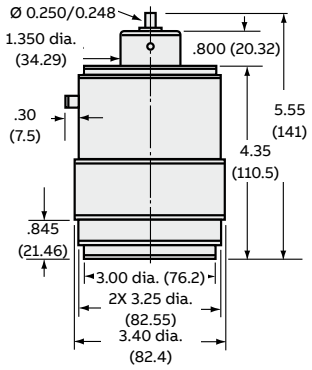


Variable capacitors
PV4 and CVCD series

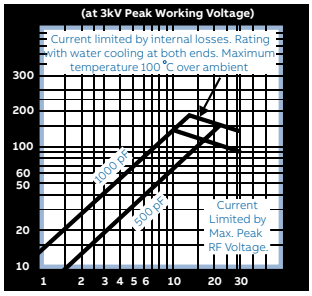
PV4 and CVCD series vacuum variable capacitors, 1000–2000pF

Cat. no.	Capacitance Max.	Capacitance Min.	Voltage peak Test	Voltage peak Working	Current Amps	Nominal dimensions Length (in)	Nominal dimensions Dia. (in)	Nominal dimensions Length (mm)	Nominal dimensions Dia. (mm)	Torque in.-lbs	Weight lb
PV4-1000-05	1000	80	5	3	180	5.55	3.4	141	86	2.0625	3.3
CVCD-2000-3S	2000	20	3	1.8	63	7.1	3.39	180	86	2.6	3.52
CVCD-2000-5S	2000	20	5	3	63	7.1	3.39	180	86	2.6	3.52

PV4-1000

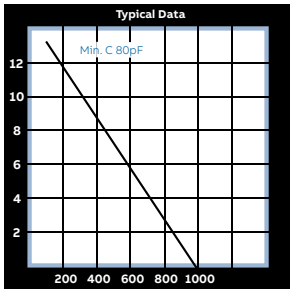


Continuous RMS amperes vs frequency



Frequency (MHz)

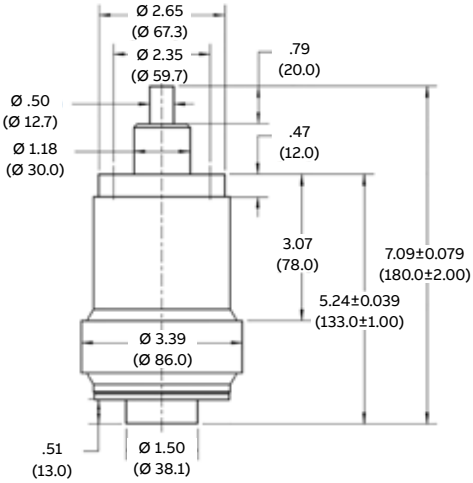
Capacity vs turns



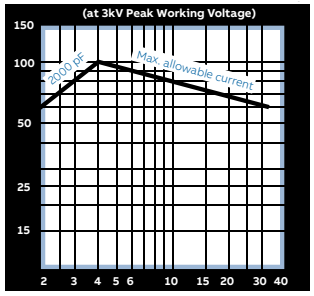
Capacitance (pF)

Mounting: Both ends have tapped holes.

CVCD-2000-3S
CVCD-2000-5S



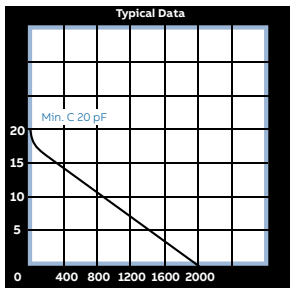
Continuous RMS amperes vs frequency



Frequency (MHz)

Mounting: Variable end tapped holes.

Capacity vs turns



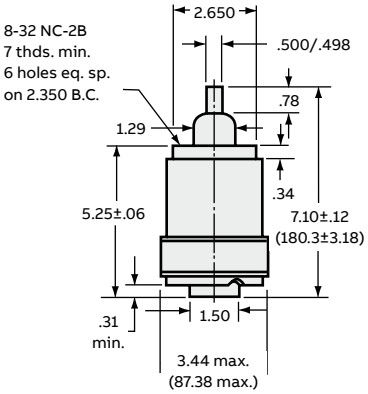
Capacitance (pF)

Variable capacitors
CVCD and CVDP series

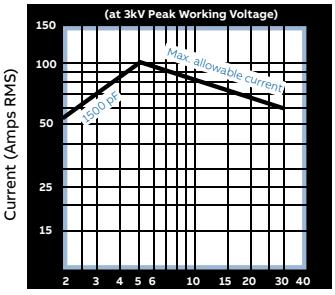
CVCD and CVDP series vacuum variable capacitors, 1500pF

Cat. no.	Capacitance Max.	Capacitance Min.	Voltage peak Test	Voltage peak Working	Current Amps	Nominal dimensions Length (in)	Nominal dimensions Dia. (in)	Nominal dimensions Length (mm)	Nominal dimensions Dia. (mm)	Torque in.-lbs	Weight lb
CVCD-1500-3S	1500	10	3	1.8	80	7.1	3.46	180	86	1.8	3.52
CVCD-1500-5S	1500	10	5	3	109	7.1	3.46	180	86	1.8	3.52
CVDP-1500-7.5S	1500	35	7.5	4.5	150	9.84	5.61	250	142.5	6.6	13.2
CVDP-1500-10S	1500	35	10	6	155	9.84	5.61	250	142.5	6.6	13.2
CVDP-1500-15S	1500	35	15	9	108	9.84	5.61	250	142.5	6.6	13.2

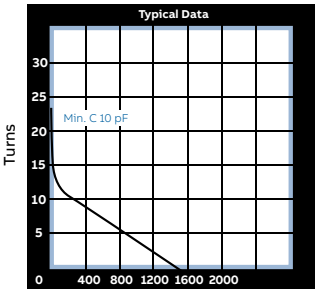
CVCD-1500



Continuous RMS amperes vs frequency

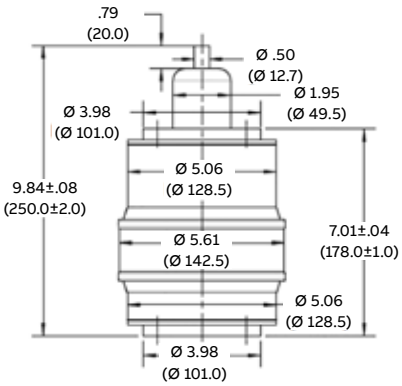


Capacity vs turns

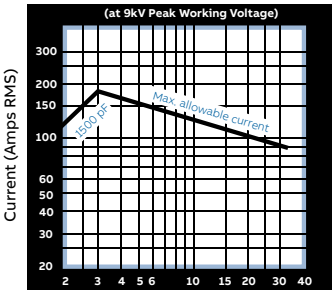


Mounting: Variable end tapped holes.

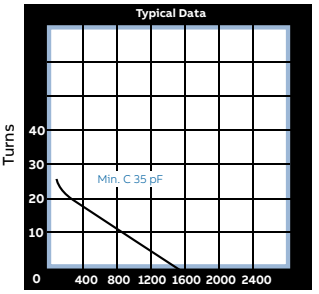
CVDP-1500-7.5S
CVDP-1500-10S
CVDP-1500-15S



Continuous RMS amperes vs frequency



Capacity vs turns



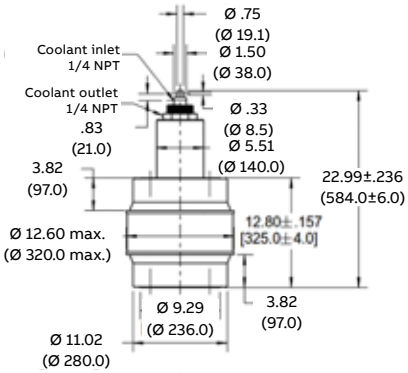
Mounting: Both ends have tapped holes.

Variable capacitors
CWV1 and CWV2 series

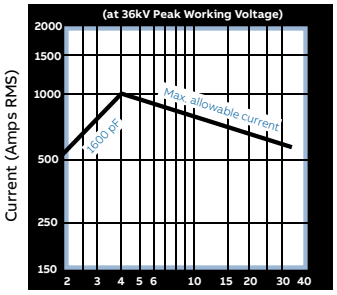
CWV1 and CWV2 series vacuum variable capacitors, 1600pF

Cat. no.	Capacitance Max.	Capacitance Min.	Voltage peak Test	Voltage peak Working	Current Amps	Nominal dimensions Length (in)	Nominal dimensions Dia. (in)	Nominal dimensions Length (mm)	Nominal dimensions Dia. (mm)	Torque in.-lbs	Weight lb
CWV1-1600-0055	1600	100	55	33	1000	23	12.9	584	330	13	145.2
CWV1-1600-0060	1600	100	60	36	1000	23	12.9	584	330	13	145.2
CWV2-1600-0030	1600	100	30	18	633	25	8.35	635	212	13	53.0
CWV2-1600-0035	1600	100	35	21	633	25	8.35	635	212	13	53.0
CWV2-1600-0040	1600	100	40	24	633	25	8.35	635	212	13	53.0

CWV1-1600-0055
CWV1-1600-0060

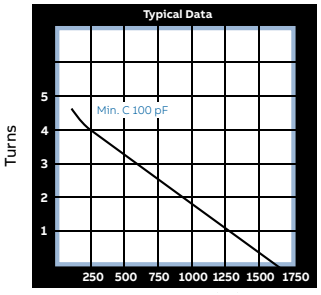


Continuous RMS amperes vs frequency



Frequency (MHz)

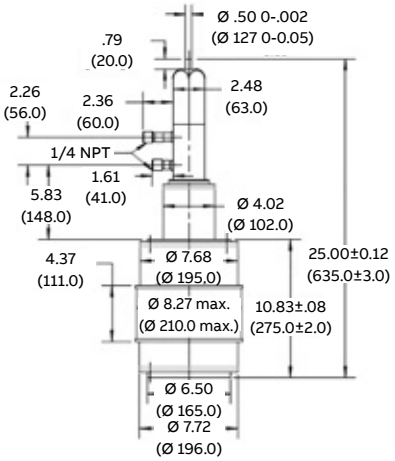
Capacity vs turns



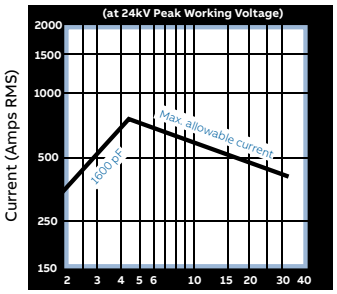
Capacitance (pF)

Mounting: Both ends have tapped holes.

CWV2-1600-0030
CWV2-1600-0035
CWV2-1600-0040

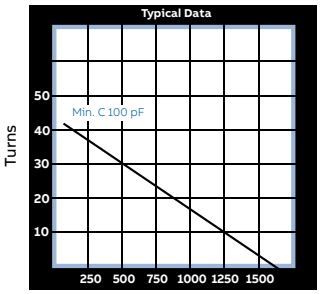


Continuous RMS amperes vs frequency



Frequency (MHz)

Capacity vs turns



Capacitance (pF)

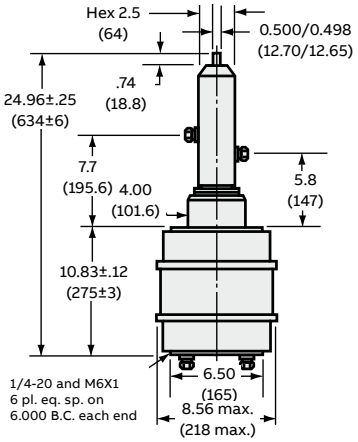
Mounting: Both ends have tapped holes.

Variable capacitors
CWV3 and CWV4 series

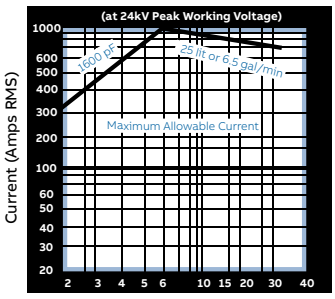
CWV3 and CWV4 series vacuum variable capacitors, 1600pF

Cat. no.	Capacitance Max.	Capacitance Min.	Voltage peak Test	Voltage peak Working	Current Amps	Nominal dimensions Length (in)	Nominal dimensions Dia. (in)	Nominal dimensions Length (mm)	Nominal dimensions Dia. (mm)	Torque in.-lbs	Weight lb
CWV3-1600-0035	1600	100	35	24	633	25	8.35	635	212	13	123.2
CWV3-1600-0040	1600	100	40	24	633	25	8.35	635	212	13	123.2
CWV4-1600-0050	1600	100	50	30	700	21.5	12.91	546	328	15	123.2
CWV4-1600-0055	1600	100	55	33	700	21.5	12.91	546	328	15	123.2
CWV4-1600-0060	1600	100	60	36	700	21.5	12.91	546	328	15	123.2

CWV3-1600

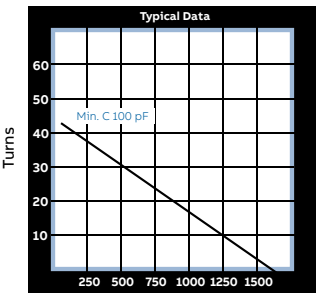


Continuous RMS amperes vs frequency



Frequency (MHz)

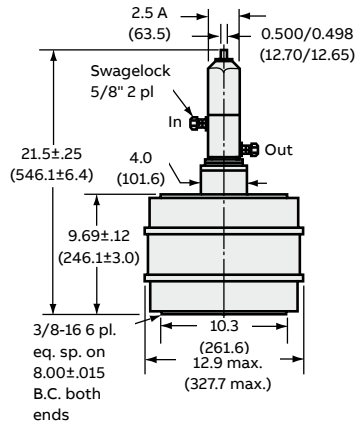
Capacity vs turns



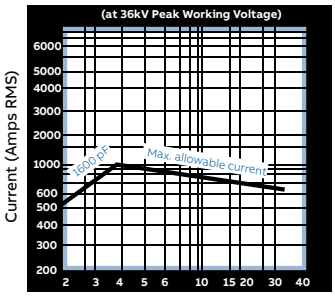
Capacitance (pF)

Mounting: Both ends have tapped holes.

CWV4-1600

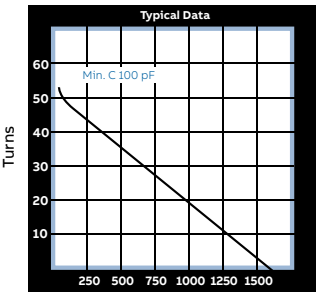


Continuous RMS amperes vs frequency



Frequency (MHz)

Capacity vs turns



Capacitance (pF)

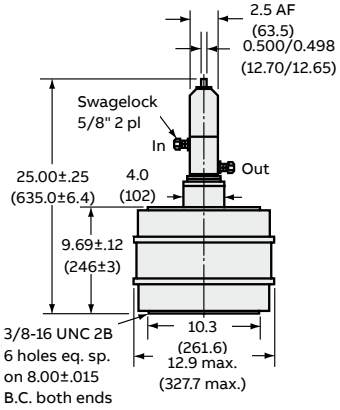
Mounting: Both ends have tapped holes.

Variable capacitors
CWV4 and CVDP series

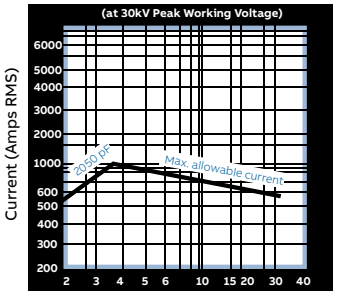
CWV4 and CVDP series vacuum variable capacitors, 2050–2300pF

Cat. no.	Capacitance Max.	Capacitance Min.	Voltage peak Test	Voltage peak Working	Current Amps	Nominal dimensions Length (in)	Nominal dimensions Dia. (in)	Nominal dimensions Length (mm)	Nominal dimensions Dia. (mm)	Torque in.-lbs	Weight lb
CWV4-2050-0040	2050	100	40	24	940	24	12.9	610	330	18	132
CWV4-2050-0045	2050	100	45	27	960	24	12.9	610	330	18	132
CWV4-2050-0050	2050	100	50	30	1000	24	12.9	610	330	18	132
CVDP-2300-7.5S	2300	50	7.5	4.5	160	9.84	5.69	250	144.5	6	12.1
CVDP-2300-10S	2300	50	10	60	180	9.84	5.69	250	144.5	6	12.1
CVDP-2300-15S	2300	50	15	9	200	9.84	5.69	250	144.5	6	12.1

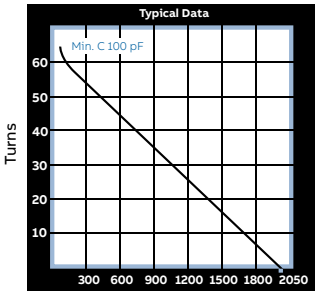
CWV4-2050



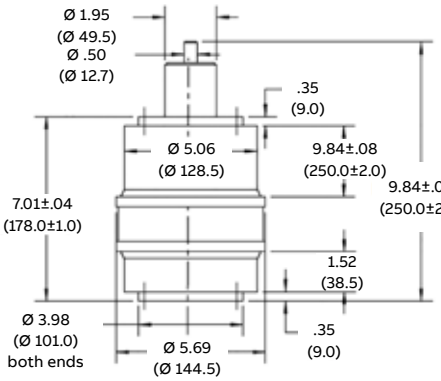
Continuous RMS amperes vs frequency



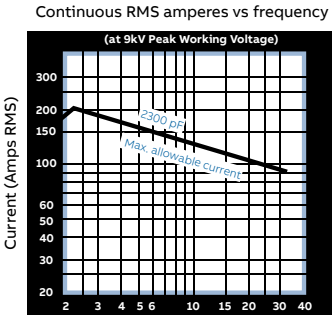
Capacity vs turns



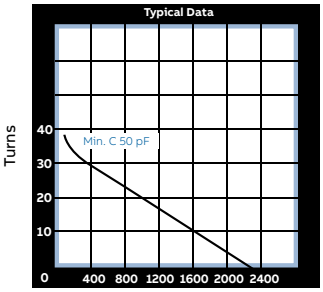
CVDP-2300-7.5S
CVDP-2300-10S
CVDP-2300-15S



Continuous RMS amperes vs frequency



Capacity vs turns

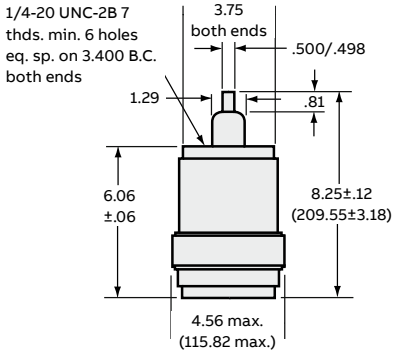


Variable capacitors
CVCD and CMV1 series

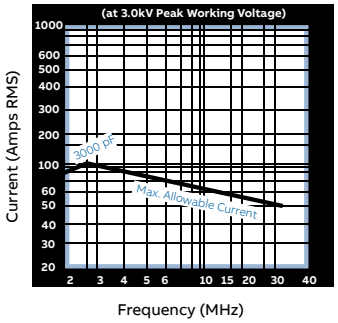
CVCD and CMV1 series vacuum variable capacitors, 3000–4000pF

Cat. no.	Capacitance Max.	Capacitance Min.	Voltage peak Test	Voltage peak Working	Current Amps	Nominal dimensions Length (in)	Nominal dimensions Dia. (in)	Nominal dimensions Length (mm)	Nominal dimensions Dia. (mm)	Torque in.-lbs	Weight lb
CVCD-3000-3S	3000	50	3	1.8	100	8.19	4.53	208	115	1.6	6.6
CVCD-3000-5S	3000	50	5	3	100	8.19	4.53	208	115	1.6	6.6
CMV1-4000-0005	4000	25	5	3	45	5.5	3.39	139.7	86	1.875	4.4

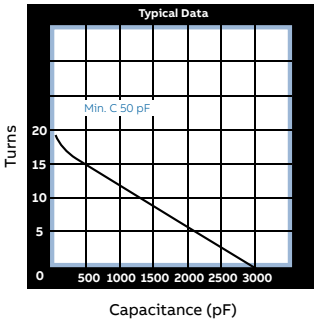
CVCD-3000



Continuous RMS amperes vs frequency

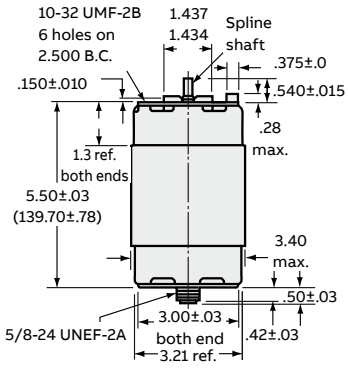


Capacity vs turns

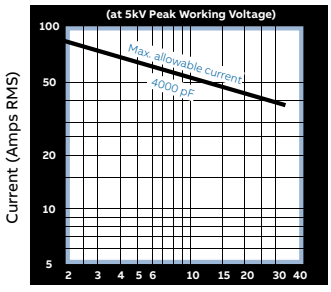


Mounting: Both ends have tapped holes.

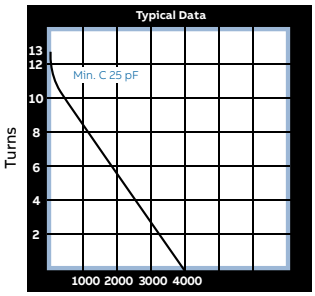
CMV1-4000



Continuous RMS amperes vs frequency



Capacity vs turns



Mounting: Fixed end threaded stud. Variable end tapped hole.