



CLF3

A new super compact low frequency capacitor



Celem introduces a new super compact, low frequency capacitor - CLF3.

The CLF3 series goes up to 240 μF , it enables smart tapping, and can run up to 1800 V_{rms} .

CLF3 is a new capacitor built with a new patented concept, that continues the tradition of Celem to supply high power capacitors at a very small volume and weight.

The volume of the CLF3 is 3000 cm^3 (3 liter) for a power of 1500 kVA_r , and its weight is only 6 Kg, well below the equivalent capacitors in the market.

CLF3 comes in $5 \times 3 = 15$ standard capacitance and voltage values, however, it can be customized to the customer requirements.

For very large capacitance values we can extend the height and the footprint of the capacitor to supply up to 700 μF units.

The CLF3 comes with anodized aluminum electrodes. This makes the capacitor very light in weight and reduces the price of the capacitor.

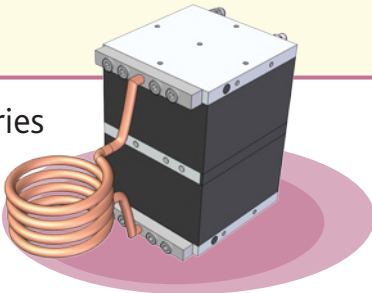
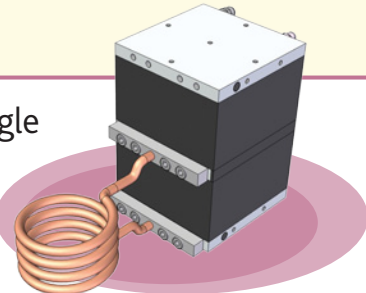
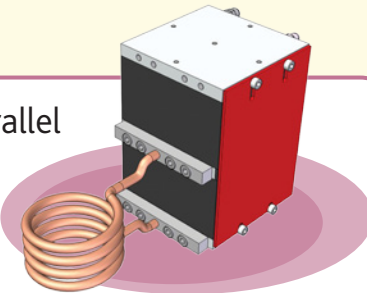
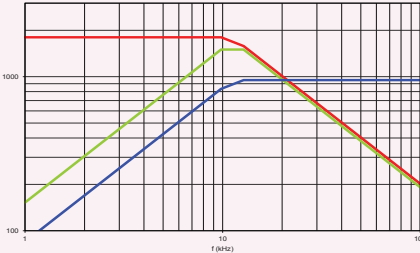
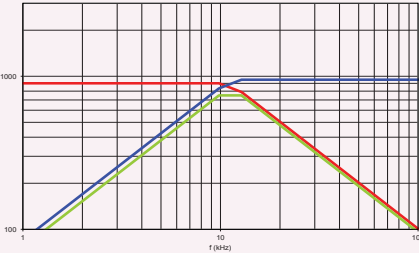
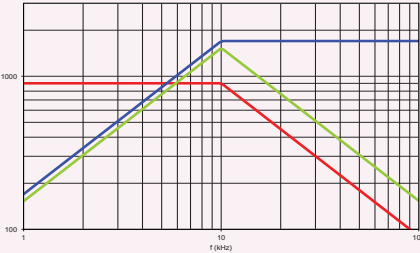
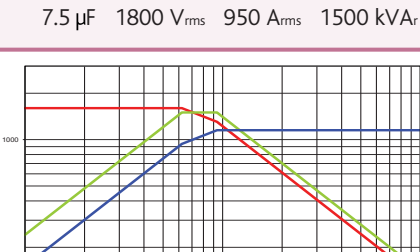
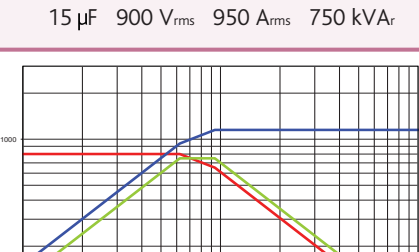
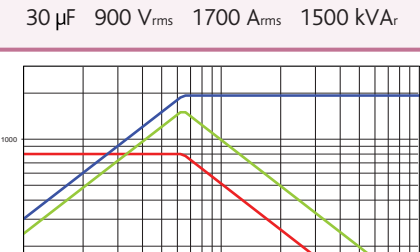
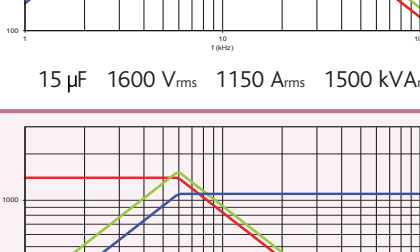
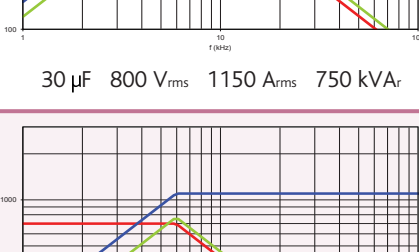
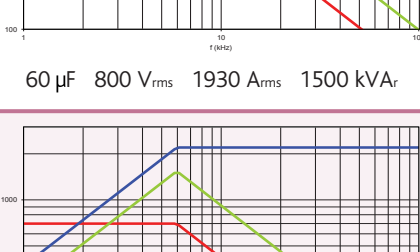
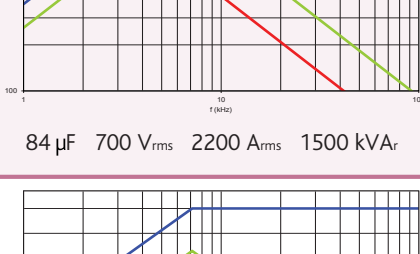
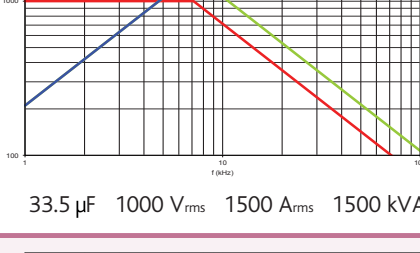
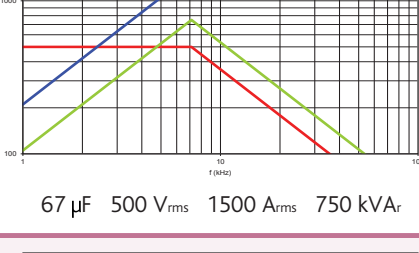
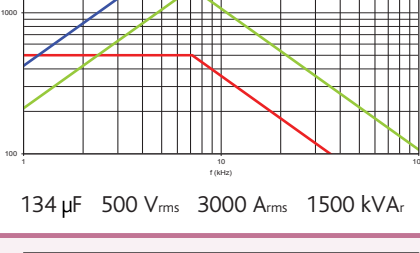
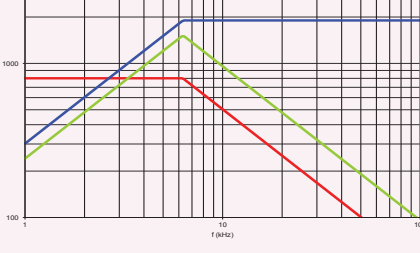
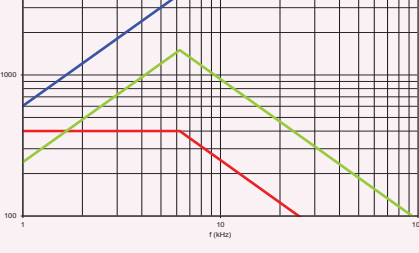
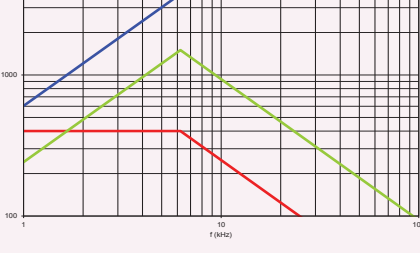
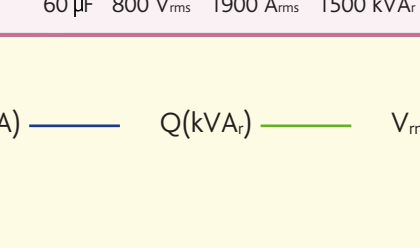
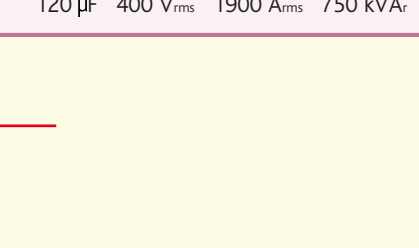
Copper electrodes are available as well.

CLF3 has internally two capacitor elements which can be connected by simple external bridging either in parallel, or in series. A single element can also be connected.

This unique structure provides a flexibility of voltage current and capacitance in a single capacitor unit. We call this feature smart tapping.

Direct water cooling of the electrodes prevents the need of immersing the capacitor in oil, enabling mounting in any angle and position for limited space designs.

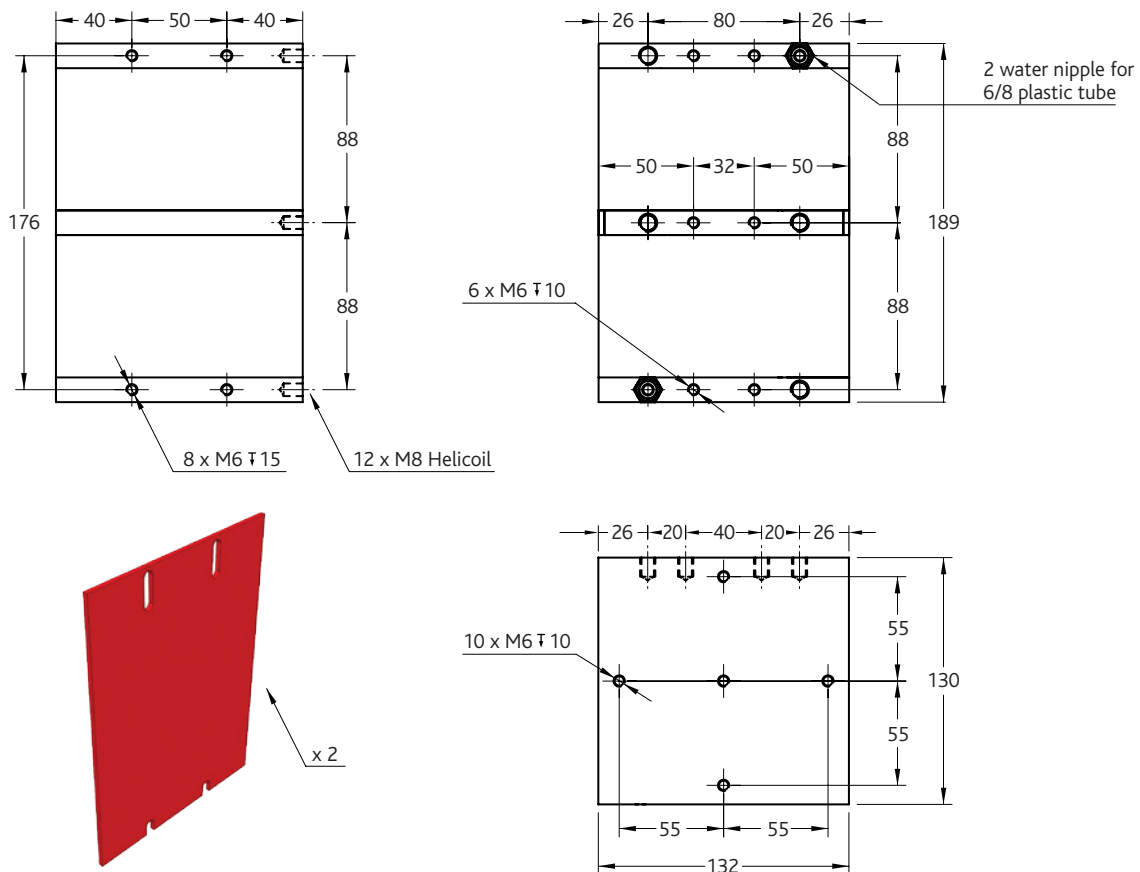
The CLF3 can even be connected directly to the work-coil from any side of the capacitor.

	Specifications	Capacitance [±10%] (μF)	Configuration	Sinusoidal Voltage (V _{rms})	Peak Voltage (V)	Max. Current (A _{rms})	Max. Power (kVA _r)	Half power freq. range (kHz)	Dimensions [L x W x H] (mm)	Weight Al (kg)	Weight Cu (kg)	Series	Single	Parallel
CLF3 30		7.5	series	1800	2520	950	1500	5-26	130 x 131 x 189	4.9	8.7			
		15	single	900	1260	950	750	5-26						
		30	parallel	900	1260	1700	1500	5-20						
CLF3 60		15	series	1600	2240	1150	1500	3-19		5.0	8.8			
		30	single	800	1120	1150	750	3-19						
		60	parallel	800	1120	1930	1500	3-13						
CLF3 84		21	series	1400	1960	1100	1500	3-12		5.2	9.0			
		42	single	700	980	1100	750	3-12						
		84	parallel	700	980	2200	1500	3-12						
CLF3 134		33.5	series	1000	1400	1500	1500	4-14		5.4	9.2			
		67	single	500	700	1500	750	4-14						
		134	parallel	500	700	3000	1500	4-14						
CLF3 240		60	series	800	1120	1900	1500	3-13		5.6	9.4			
		120	single	400	560	1900	750	3-13						
		240	parallel	400	560	3750	1500	3-12						

I(A) ——— Q(kVA_r) ——— V_{rms} ———

CLF3

- Extremely small volume (3000 cm^3) per power (1500 kVA_r).
- 1500 kVA_r in less than 6 Kg.
- Up to 1800 V in a single unit.
- Between 7.5-240 μF .
- Toggle between three different capacitances in a single unit.
- Easy to toggle between different capacitances, double or quadruple capacitance by connecting/removing 4 screws.
- Capacitor can be mounted in all directions to suit any design.
- No need for connecting cables from capacitor to work coil, minimizes reactive energy loss.



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