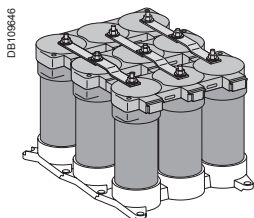


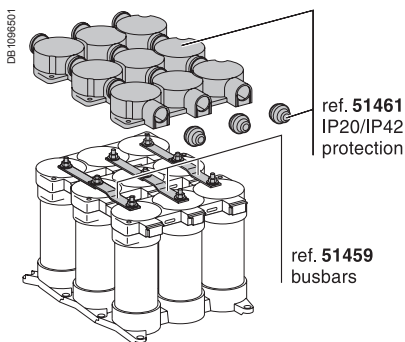
Varplus² modular capacitors allow by their different assembly combination to cover many power ratings (kvar) depending on the voltage (V), frequency (Hz) and harmonic pollution level of the network.



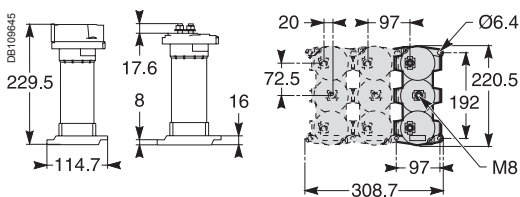
Varplus² IP00



Example of Varplus² IP00 assembly.



Varplus² accessories.



Weight of Varplus² 2.1 kg.

Slightly polluted network (Gh/Sn ≤ 15 %)

Varplus ²		
400 V (kvar)	415 V (kvar)	Reference
6	6.25	51311
7.5	8	51313
9	9	51315
12	13	51317
15	16	51319
18	19	51321
Assembly advised		
24	26	2 x 51317
30	32	2 x 51319
36	38	2 x 51321
45	48	3 x 51319
54	57	3 x 51321
60	64	4 x 51319

Maximum mechanical assembly: 4 capacitors and 65 kvar.
 Assembly > 65 kvar: see conditions to respect in Varplus² user manual.

Technical data

- capacitor rated voltage: 415 V, 3-phase 60 Hz
- HQ protection system built into each single phase element
- high current fault protection by HRC cartridge fuse
- low current fault protection by combination of single phase internal overpressure device with the HRC fuse
- capacitance value tolerance: -5, +10 %
- insulation level:
 - withstand 60 Hz 1 minute: 4 kV
 - impulse wave withstand 1.2/50 μs: 15 kV
- voltage test: 2.15 Un (rated voltage) for 10 s
- maximum permissible overloads at service voltage network as per IEC 60831 1/2:
 - current: 30 % permanently
 - voltage: 10 % (8 hours over 24 hours)
- with internally fitted discharge resistors: residual voltage less than 50 V in 1 minute
- total losses: less than 0.5 Watt/kvar (discharge resistors included)
- temperature class D (+55 °C):
 - maximum: 55 °C
 - average over 24 hours: 45 °C
 - average over 1 year: 35 °C
 - maximum: -25 °C
- colour:
 - elements RAL 9005
 - base and cover RAL 7030
- standards: IEC 60831 1/2, CSA 22-2 N°190, UL 810
- execution: indoor
- protection:
 - IP00 without cover
 - IP20 or IP42 see accessories
- no earth connection is needed
- terminals: 3 M8 rods allowing 360° cable connection (without cover).

Accessories for Varplus ²	Reference
1 set of 3-phase copper bars for connection and assembly of 2 and 3 capacitors	51459
1 set of protective cover (IP20) and cable glands (IP42) for 1, 2 and 3 capacitors	51461

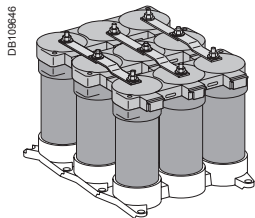
Installation

All positions are convenient except vertical one with connecting terminals upside down. Fixing holes for M6 screws. A kit to replace Varplus by Varplus² is available (ref. 51298).

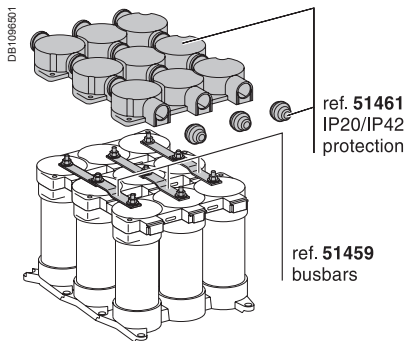
Varplus² modular capacitors allow by their different assembly combination to cover many power ratings (kvar) depending on the voltage (V), frequency (Hz) and harmonic pollution level of the network.



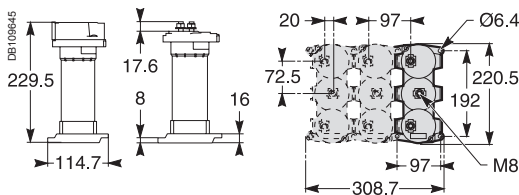
Varplus² IP00



Example of Varplus² IP00 assembly.



Varplus² accessories.



Weight of Varplus² 2.1 kg.

Polluted network (15 % < Gh/Sn ≤ 25 %)

Capacitors rated 480 V are necessary.

Usefull powers		Rated values		
400 V (kvar)	415 V (kvar)	440 V (kvar)	480 V (kvar)	Reference
6	6.25	7.3	8.6	51325
7.5	8	9.1	10.8	51327
9	9	10.5	12.5	51329
12.75	13.5	15.6	18.6	51331
14	15	17.1	20.4	51333
18.5		22.9		51335
Assembly advised				
25.5	27		2 x	51331
32.5				51333 + 51335
37			2 x	51335
42	45		3 x	51333
51			2 x	51335 + 51333
55			3 x	51335
61			3 x	51335 + 51325

Maximum mechanical assembly: 4 capacitors and 61/60 kvar 400/415 V.
Assembly > 60 kvar: see conditions to respect in Varplus² user manual.

Technical data

- capacitor rated voltage: 480 V, 3-phase 60 Hz
- HQ protection system built into each single phase element
- high current fault protection by HRC cartridge fuse
- low current fault protection by combination of single phase internal overpressure device with the HRC fuse
- capacitance value tolerance: -5, +10 %
- insulation level:
 - withstand 60 Hz 1 minute: 4 kV
 - impulse wave withstand 1.2/50 μs: 15 kV
- voltage test: 2.15 Un (rated voltage) for 10 s
- maximum permissible overloads at service voltage network as per IEC 60831 1/2:
 - current: 30 % permanently
 - voltage: 10 % (8 hours over 24 hours)
- with internally fitted discharge resistors: residual voltage less than 50 V in 1 minute
- total losses: less than 0.5 Watt/kvar (discharge resistors included)
- temperature class D (+55 °C):
 - maximum: 55 °C
 - average over 24 hours: 45 °C
 - average over 1 year: 35 °C
 - minimum: -25 °C
- colour:
 - elements: RAL 9005
 - base and cover: RAL 7030
- standards: IEC 60831 1/2, CSA 22-2 No190, UL 810
- execution: indoor
- protection:
 - IP00 without cover
 - IP20 or IP42 see accessories
 - no earth connection is needed
 - terminals: 3 M8 rods allowing 360° cable connection (without cover).

Accessories for Varplus ²	Reference
1 set of 3-phase copper bars for connection and assembly of 2 and 3 capacitors	51459
1 set of protective cover (IP20) and cable glands (IP42) for 1, 2 and 3 capacitors	51461

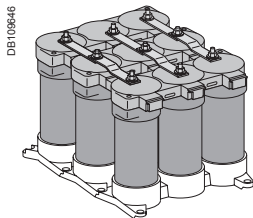
Installation

All positions are convenient except vertical one with connecting terminals upside down. Fixing holes for M6 screws. A kit to replace Varplus by Varplus² is available (ref. 51298).

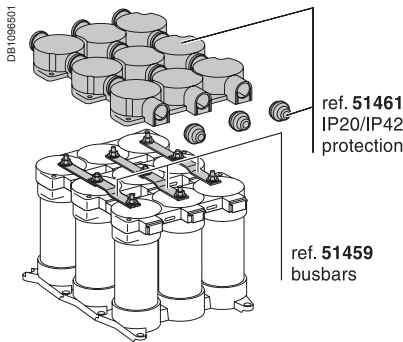
Varplus² modular capacitors allow by their different assembly combination to cover many power ratings (kvar) depending on the voltage (V), frequency (Hz) and harmonic pollution level of the network.



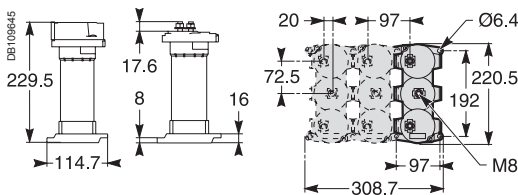
Varplus² IP00



Example of Varplus² IP00 assembly.



Varplus² accessories.



Weight of Varplus² 2.1 kg.

Highly polluted network (15 % < Gh/Sn ≤ 25 %)

Capacitors rated 480 V will be used with detuned reactor.

Varplus ²					
Usefull powers tuning order	400 V (kvar)	415 V (kvar)	Rated values		Reference
			440 V (kvar)	480 V (kvar)	
2.7 (135 Hz - 13.7 %)	7.75	8.25	8	9.6	51337
	15	16.25	15.6	18.6	51331

Assembly advised

Maximum mechanical assembly: 4 capacitors and 60/65 kvar 400/415 V.
Assembly > 60 kvar: see conditions to respect in Varplus² user manual.

Usefull powers tuning order	400 V (kvar)	415 V (kvar)	Rated values		Reference
			440 V (kvar)	480 V (kvar)	
3.8 (190 Hz - 6.92 %) or 4.3 (215 Hz - 5.4 %)	7.75	8.3	9.1	10.8	51327
	9.25	10	10.5	12.5	51329
	12	13	14.1	16.8	51345
	15	16	17.1	20.4	51333
	20		22.9		51335

Assembly advised

Maximum mechanical assembly: 4 capacitors and 60/65 kvar 400/415 V.
Assembly > 60 kvar: see conditions to respect in Varplus² user manual.

Technical data

- capacitor rated voltage: 480 V, 3-phase 60 Hz
- HQ protection system built into each single phase element
- high current fault protection by HRC cartridge fuse
- low current fault protection by combination of single phase internal overpressure device with the HRC fuse
- capacitance value tolerance: -5, +10 %
- insulation level:
 - withstand 60 Hz 1 minute: 4 kV
 - impulse wave withstand 1.2/50 μs: 15 kV
- voltage test: 2.15 Un (rated voltage) for 10 s
- maximum permissible overloads at service voltage network as per IEC 60831 1/2:
 - current: 30 % permanently
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- total losses: less than 0.5 Watt/kvar (discharge resistors included)
- temperature class D (+55 °C):
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 - minimum: -25 °C
- colour:
 - elements: RAL 9005
 - base and cover: RAL 7030
- standards: IEC 60831 1/2, CSA 22-2 No190, UL 810
- execution: indoor
- protection:
 - IP00 without cover
 - IP20 or IP42 see accessories
 - no earth connection is needed
 - terminals: 3 M8 rods allowing 360° cable connection (without cover).

Accessories for Varplus²

Accessories for Varplus ²	Reference
1 set of 3-phase copper bars for connection and assembly of 2 and 3 capacitors	51459
1 set of protective cover (IP20) and cable glands (IP42) for 1, 2 and 3 capacitors	51461

Installation

All positions are convenient except vertical one with connecting terminals upside down. Fixing holes for M6 screws. A kit to replace Varplus by Varplus² is available (ref. 51298).