

# VDF SOLUTIONS MOTOR-SIDE

QUALITY AND ENERGY EFFICIENCY  
**Series LC**

## SERIES LC

### Output sine wave filter for VFD

Three-phase sinusoidal voltage filter for the output of motor frequency inverters.

#### MOTOR POWER

0.75 ÷ 630 KW (1 ÷ 855 CV)

#### NOMINAL CURRENT

2 ÷ 1200 A

#### NOMINAL VOLTAGE

400, 480, 690 V (380 ÷ 750 V)

1. Allows distances of up to 1000 m of cable between drive and motor.
2. They prevent premature motor deterioration caused by high dV/dt, overvoltages and wiring reflection, increasing motor life.
3. Eliminate common mode disturbances and interference generated by the cables between the drive and motor.
4. Eliminate PWM pulses from the output voltage of variable frequency drives by restoring the sinusoidal voltage waveform between phases.

### Applications

- Recommended from 25 m cable distance between inverter and motor.
- For general use in machinery motors requiring speed regulation.
- Compressors and air treatment systems in ventilation and air conditioning.
- Ventilation, compressor and air conditioning system applications with long wiring distances.

### Regulatory

IEC/UNE-EN 60076-6  
IEC/UNE-EN 61439-1

### Certifications

CE UK  
CA

# VDF SOLUTIONS

## MOTOR-SIDE

### Connection

**TERMINAL IP20** up to LC/LCB040, LCD/LCDB033. The rest incorporates polycarbonate terminal covers that protect against dangerous direct contact.

### High protection

**AGAINST EXTERNAL AGENTS** such as humidity, dust and corrosion.

### Core

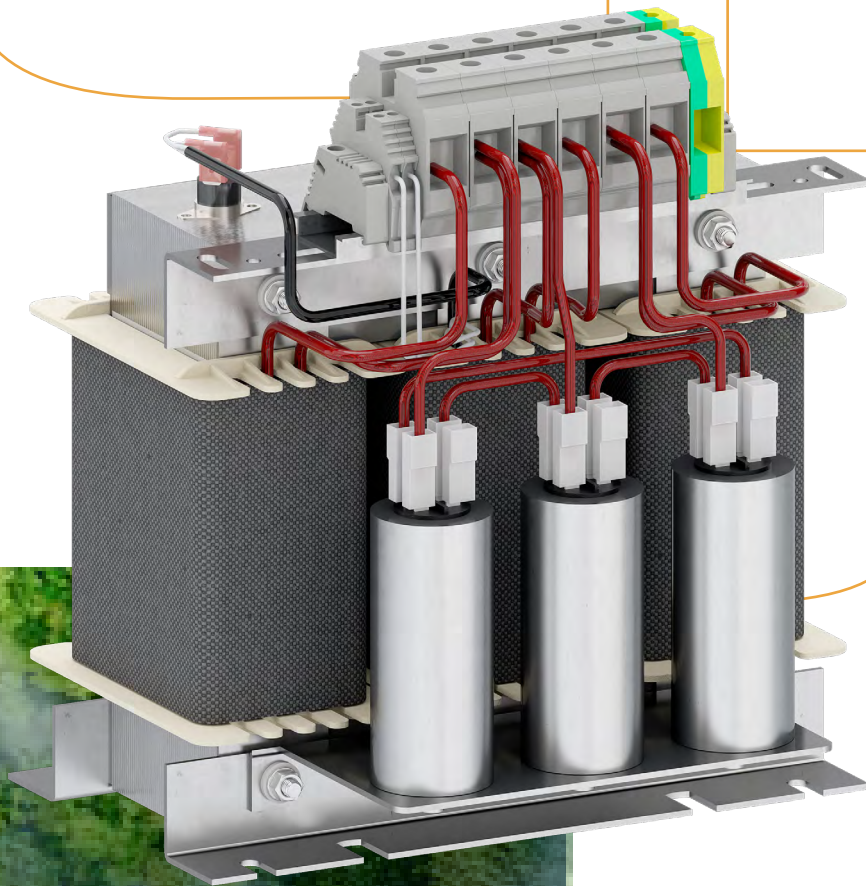
**MAGNETIC** low loss and high permeability.

### Impregnation

**VACUUM** and oven-dried in high-binding epoxy varnish to reduce noise and vibrations.

### Capacitors

**NON-IMPREGNATED SELF-REGENERATING**, with metallised polypropylene dielectric.



# SERIES LC

## Technical specifications

### MOTOR POWER

(Series LC/LCB) (1 ÷ 855 CV) 0.75 ÷ 630 kW  
(Series LCD/LCDB) (60 ÷ 855 CV) 45 ÷ 630 kW

### NOMINAL VOLTAGE

(Series LC/LCB) 400 V (380 ÷ 440 V)  
(Series LCD/LCDB) 480 V (460 ÷ 525 V)  
(Series LCG/LCGB) 690 V (600 ÷ 750 V)

### NOMINAL CURRENT

(Series LC/LCB) 2 ÷ 1200 A  
(Series LCD/LCDB) 2 ÷ 1000 A  
(Series LCG/LCGB) 58 ÷ 696 A

### FREQUENCY CONVERTER OUTPUT

0 ÷ 70 Hz

### SWITCHING FREQUENCY

≤ 100 A 4 ÷ 10 kHz  
> 100 A 2 ÷ 10 kHz

### VOLTAGE DISTORTION

< 5% THDu

### VOLTAGE DROP

< 5% @  $I_N$  50 Hz

### THERMAL CLASS

H (180 °C)

### TRANSIENT OVERLOAD

1.5  $I_N$  1 min x hour

### AMBIENT TEMPERATURE

50 °C

### PROTECTION INDEX

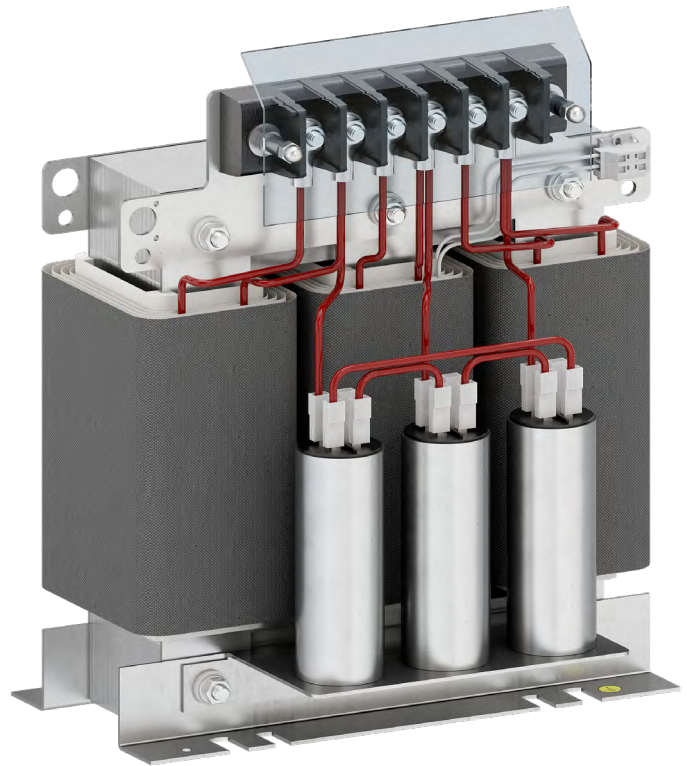
IP00

### THERMAL PROTECTION

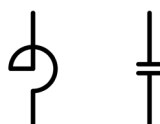
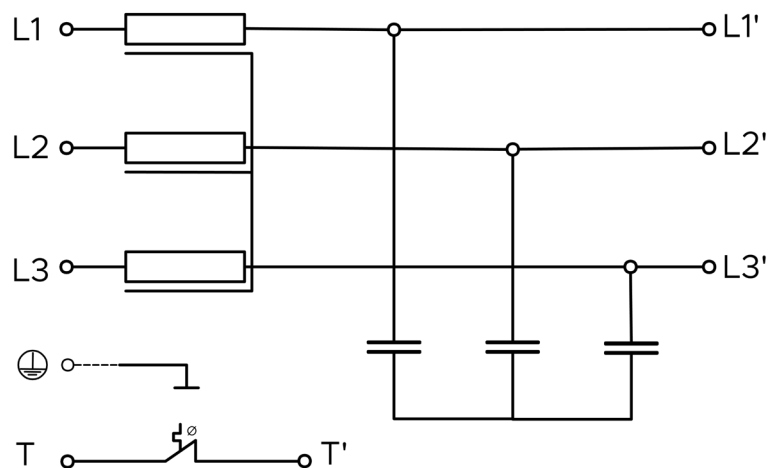
Resettable NC contact 250 V 6 A

Select the series according to the voltage range and the filter intensity equal to or immediately higher than the motor intensity.

# SINEWAVE OUTPUT FILTER FOR VDF

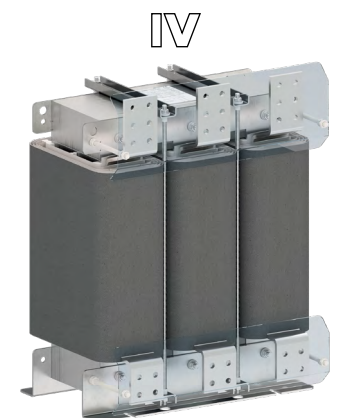
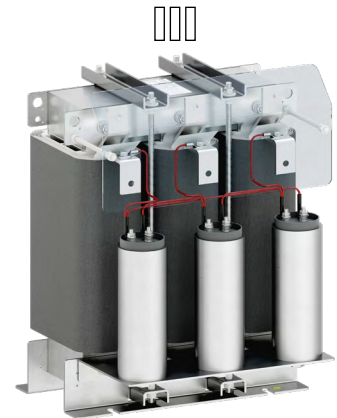
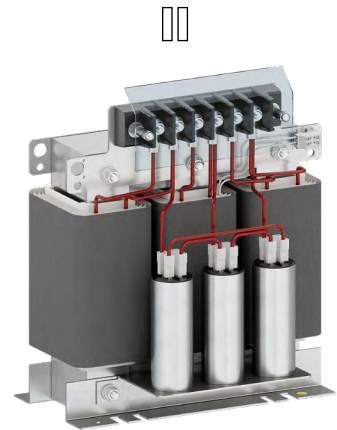
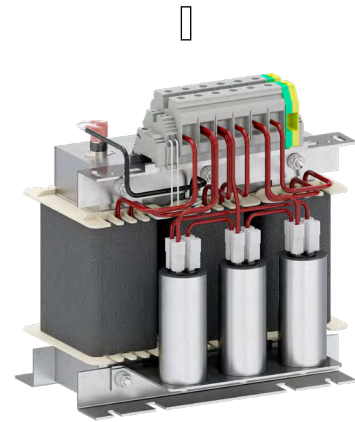


## Electric schematic



### Technical data - 400 V

MOTOR POWER		REFERENCES		INTENSITY	LOSSES
(kW)	(CV)	IP00	IP23	(A)	(W)
0,75	1	LC002	LCB002	2	53,2
1,5	2	LC004	LCB004	4	62,2
2,2	3	LC006	LCB006	6	78,4
3	4	LC008	LCB008	8	94
4	5,5	LC010	LCB010	10	95,1
5,5	7,5	LC015	LCB015	15	108
7,5	10	LC020	LCB020	20	146
11	15	LC025	LCB025	25	141
15	20	LC030	LCB030	30	170
18,5	25	LC040	LCB040	40	162
22	30	LC050	LCB050	50	325
30	40	LC060	LCB060	60	341
37	50	LC080	LCB080	80	407
45	60	LC100	LCB100	100	372
55	75	LC125	LCB125	125	520
75	100	LC150	LCB150	150	666
90	125	LC200	LCB200	200	855
110	150	LC250	LCB250	250	1462
150	200	LC300	LCB300	300	1614
185	255	LC400	LCB400	400	1754
220	300	LC500	LCB500	500	2241
315	430	LC630	LCB630	630	2206
400	545	LC800	LCB800	800	2821
530	720	LC1000	LCB1000	1000	3189
630	855	LC1200	LCB1200	1200	3618



### CAPACITORS



# VDF SOLUTIONS

## MOTOR-SIDE

QUALITY AND ENERGY EFFICIENCY  
Series LC

### Technical data - 480 V

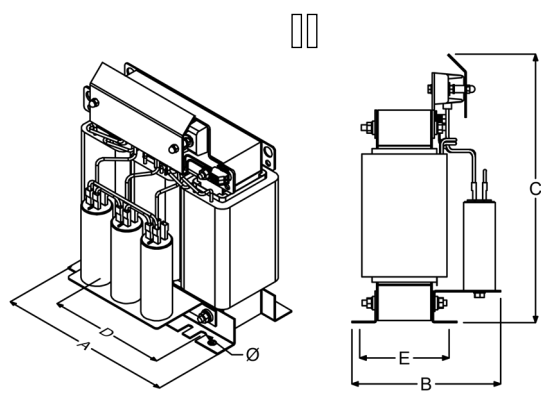
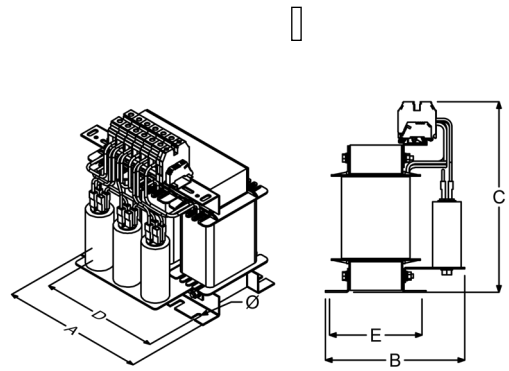
MOTOR POWER		REFERENCES		INTENSITY	LOSSES
(kW)	(CV)	IP00	IP23	(A)	(W)
0,75	1	LCD002	LCDB002	2	53,2
1,5	2	LCD003	LCDB003	3	62,2
2,2	3	LCD005	LCDB005	5	78,4
3	4	LCD007	LCDB007	7	94
4	5,5	LCD008	LCDB008	8	95,1
5,5	7,5	LCD013	LCDB013	12	108
7,5	10	LCD017	LCDB017	17	155
11	15	LCD021	LCDB021	21	141
15	20	LCD025	LCDB025	25	170
18,5	25	LCD033	LCDB033	33	162
22	30	LCD042	LCDB042	42	388
30	40	LCD050	LCDB050	50	341
37	50	LCD067	LCDB067	67	500
45	60	LCD083	LCDB083	83	624
55	75	LCD104	LCDB104	104	440
75	100	LCD125	LCDB125	125	666
90	125	LCD167	LCDB167	167	855
110	150	LCD208	LCDB208	208	1462
150	200	LCD250	LCDB250	250	1614
185	255	LCD333	LCDB333	333	1754
220	300	LCD417	LCDB417	417	2241
315	430	LCD525	LCDB525	525	2206
400	545	LCD667	LCDB667	667	2821
530	720	LCD833	LCDB833	833	3189
630	855	LCD1000	LCDB1000	1000	3618

### Technical data - 690 V

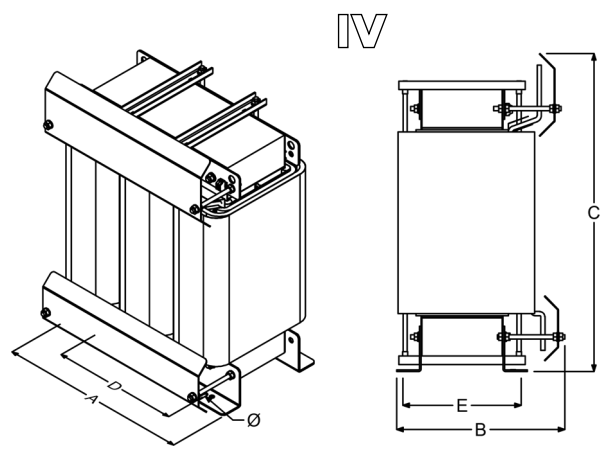
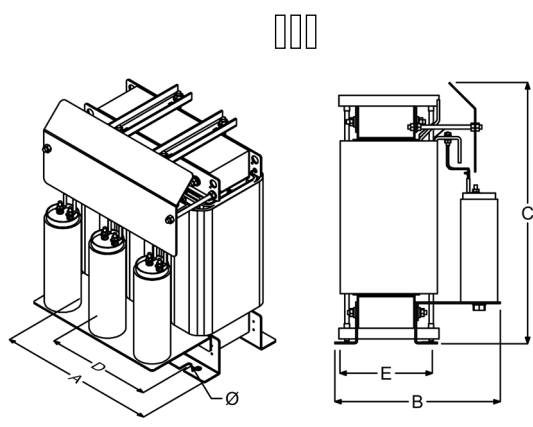
MOTOR POWER		REFERENCES		INTENSITY	LOSSES
(kW)	(CV)	IP00	IP23	(A)	(W)
45	60	LCG058	LCGB058	58	584
55	75	LCG072	LCGB072	72	537
75	100	LCG087	LCGB087	87	397
90	125	LCG116	LCGB116	116	449
110	150	LCG145	LCGB145	145	1208
150	200	LCG174	LCGB174	174	1617
185	255	LCG232	LCGB232	232	1666
220	300	LCG290	LCGB290	290	2284
315	430	LCG365	LCGB365	365	2736
400	545	LCG464	LCGB464	464	2774
530	720	LCG580	LCGB580	580	3356
630	855	LCG696	LCGB696	696	3331

### Dimensions - 400 V (IP00)

REF.	DIMENSIONS (mm)						WEIGHT (kg)	TYPE
	A	B	C	D	E	Ø		
LC002	150	120	180	100	45	7	2,7	I
LC004	150	135	180	100	60	7	4,1	I
LC006	150	135	180	100	60	7	4,2	I
LC008	180	130	200	140	60	7	4,9	I
LC010	180	150	200	140	80	7	7,4	I
LC015	180	155	200	140	80	7	9,1	I
LC020	240	170	270	200	100	7	14,6	I
LC025	240	170	270	200	100	7	14,4	I
LC030	240	195	270	200	125	7	20,3	I
LC040	240	195	270	200	125	7	21,4	I
LC050	300	195	385	200	105	11	29,4	II
LC060	300	215	385	200	125	11	36,3	II
LC080	300	215	435	200	125	11	41,8	II
LC100	300	240	415	200	125	11	48,3	III
LC125	300	270	415	200	145	11	55,9	III
LC150	300	295	415	200	175	11	72,1	III
LC200	360	315	500	240	175	11	87,4	III
LC250	420	315	565	280	170	11	110	III
LC300	420	310	565	280	190	11	134	III
LC400	480	325	635	320	180	11	143	III
LC500	530	365	635	320	220	11	198	III
LC630	480	320	1175	320	225	11	200	IV*
LC800	480	385	695	320	265	11	256	IV*
LC1000	540	370	755	360	240	11	273	IV*
LC1200	540	405	755	360	280	11	352	IV*



\* Type IV, has independent capacitor tray. See dimensions in table.



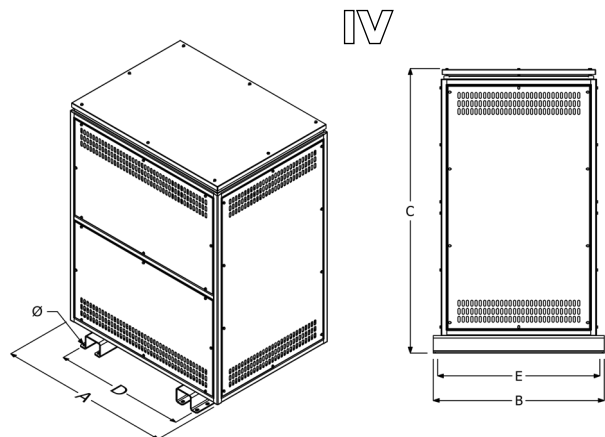
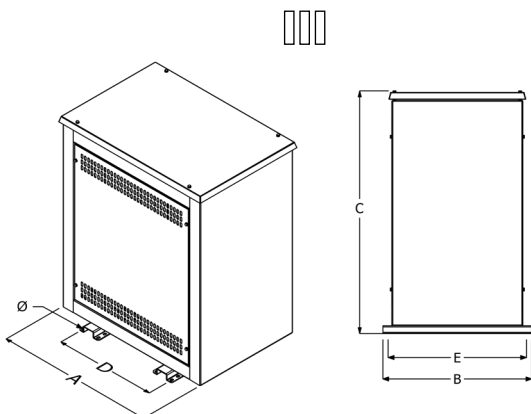
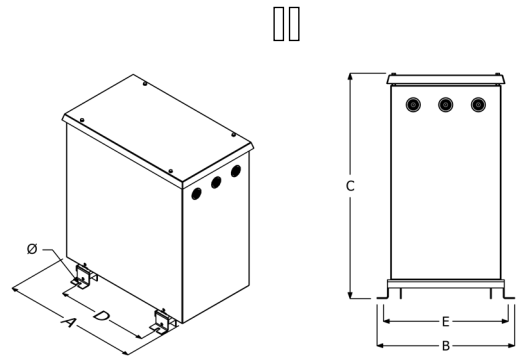
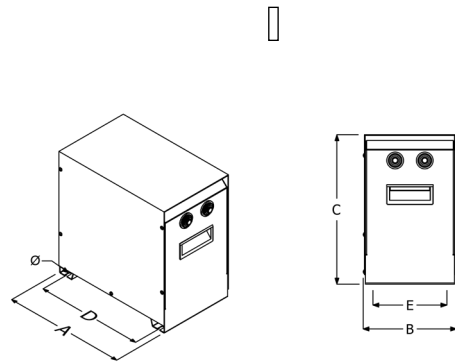
# VDF SOLUTIONS

## MOTOR-SIDE

QUALITY AND ENERGY EFFICIENCY  
Series LC

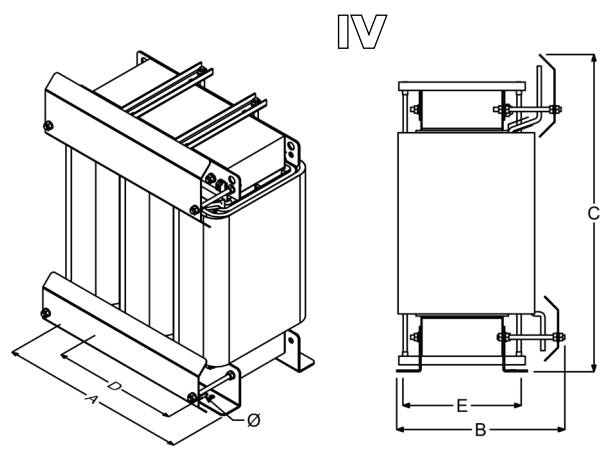
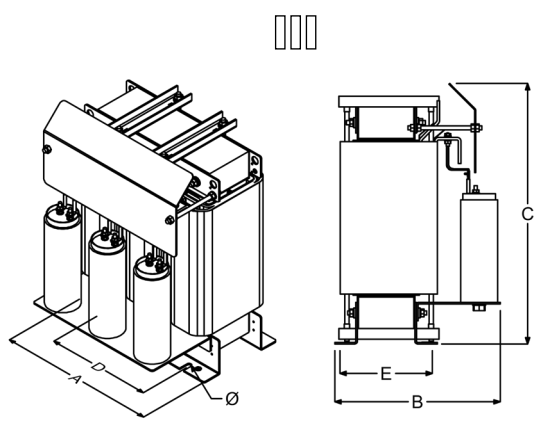
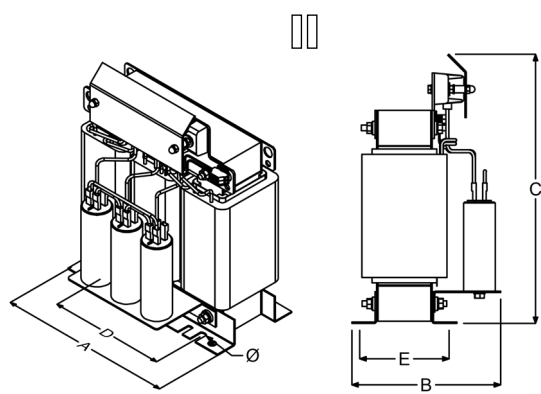
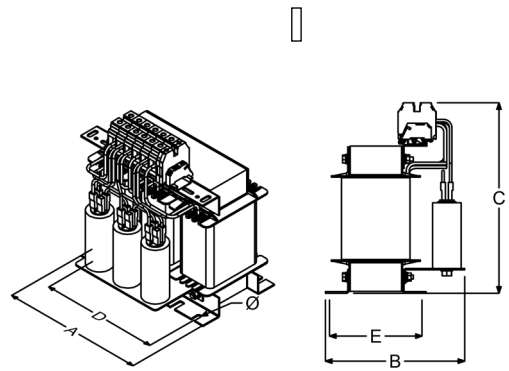
### Dimensions - 400 V (IP23)

REF.	DIMENSIONS (mm)						WEIGHT (kg)	TYPE
	A	B	C	D	E	Ø		
LCB002	240	150	245	205	125	7	5,7	I
LCB004	310	190	305	265	165	7	9,1	I
LCB006	310	190	305	265	165	7	9,2	I
LCB008	310	190	305	265	165	7	9,9	I
LCB010	310	190	305	265	165	7	12,4	I
LCB015	310	190	305	265	165	7	14,1	I
LCB020	380	230	375	325	205	7	22,6	I
LCB025	380	230	375	325	205	7	22,4	I
LCB030	380	230	375	325	205	7	28,3	I
LCB040	380	230	375	325	205	7	29,4	I
LCB050	475	345	525	320	320	10	42,4	II
LCB060	475	345	525	320	320	10	49,3	II
LCB080	545	385	620	350	360	10	57,8	II
LCB100	545	385	620	350	360	10	64,3	II
LCB125	615	425	695	400	400	10	75,9	II
LCB150	615	425	695	400	400	10	92,1	II
LCB200	775	575	940	480	550	10x15	125	III
LCB250	775	575	940	480	550	10x15	148	III
LCB300	775	575	940	480	550	10x15	172	III
LCB400	775	575	940	480	550	10x15	181	III
LCB500	775	575	940	480	550	10x15	236	III
LCB630	930	710	1275	605	680	13x17	265	III
LCB800	1080	880	1460	815	840	15x20	376	IV
LCB1000	1080	880	1460	815	840	15x20	393	IV
LCB1200	1080	880	1460	815	840	15x20	472	IV



### Dimensions - 480 V (IP00)

REF.	DIMENSIONS (mm)						WEIGHT (kg)	TYPE
	A	B	C	D	E	Ø		
LCD002	150	120	180	100	45	7	2,8	I
LCD003	150	135	180	100	60	7	4,3	I
LCD005	150	135	180	100	60	7	4,3	I
LCD007	180	130	200	140	60	7	4,9	I
LCD008	180	150	200	140	80	7	7,6	I
LCD012	180	155	200	140	80	7	8,4	I
LCD017	240	170	270	200	100	7	13,8	I
LCD021	240	170	270	200	100	7	14,3	I
LCD025	240	195	270	200	125	7	21	I
LCD033	240	195	270	200	125	7	22,1	I
LCD042	300	220	435	200	115	11	34,1	II
LCD050	300	230	435	200	125	11	3,2	II
LCD067	300	235	435	200	130	11	42,5	II
LCD083	300	245	435	200	140	11	51,2	II
LCD104	300	245	435	200	110	11	41,7	III
LCD125	300	310	435	200	175	11	72,2	III
LCD167	360	315	500	240	175	11	87,2	III
LCD208	420	315	565	280	170	11	110	III
LCD250	420	305	565	280	190	11	131	IV*
LCD333	480	320	650	320	180	11	136	IV*
LCD417	480	365	650	320	220	11	192	IV*
LCD525	480	320	1175	320	225	11	200	IV*
LCD667	480	385	695	320	265	11	256	IV*
LCD833	540	370	755	360	240	11	273	IV*
LCD1000	540	405	755	360	280	11	352	IV*



\* Type IV, has independent capacitor tray. See dimensions in table.

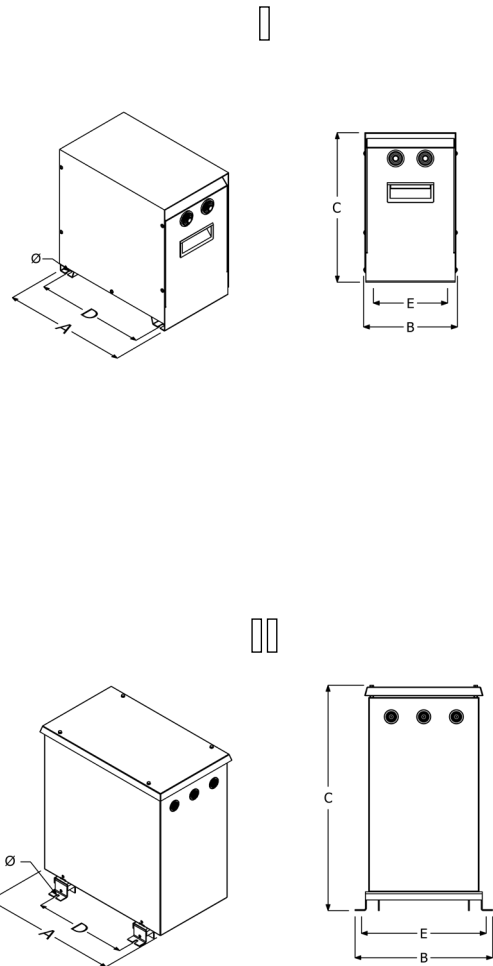
# VDF SOLUTIONS

## MOTOR-SIDE

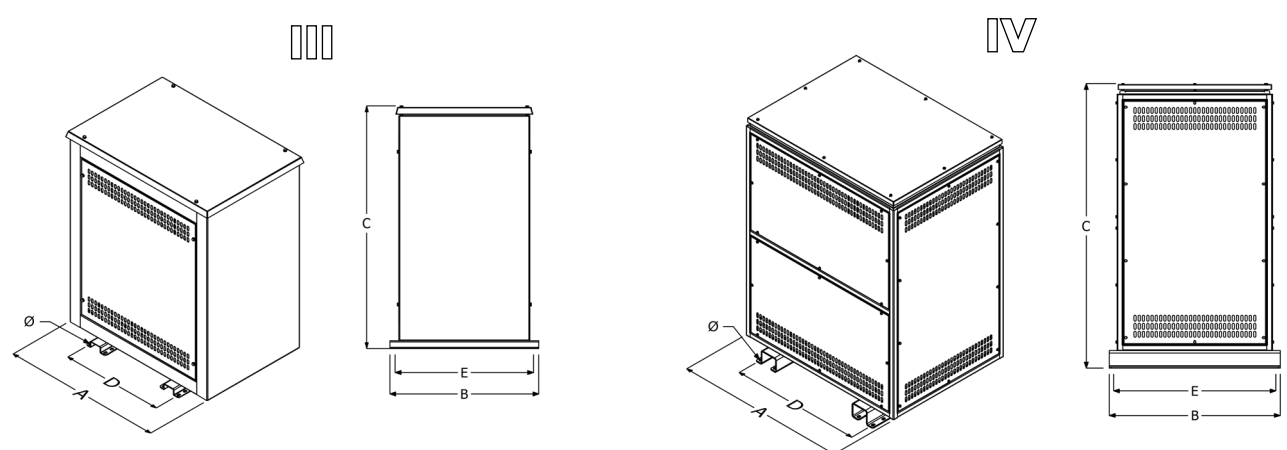
QUALITY AND ENERGY EFFICIENCY  
Series LC

### Dimensions - 480 V (IP23)

REF.	DIMENSIONS (mm)						WEIGHT (kg)	TYPE
	A	B	C	D	E	Ø		
LCDB002	240	150	245	205	125	7	5,8	I
LCDB003	310	190	305	265	165	7	9,3	I
LCDB005	310	190	305	265	165	7	9,3	I
LCDB007	310	190	305	265	165	7	9,9	I
LCDB008	310	190	305	265	165	7	12,6	I
LCDB012	310	190	305	265	165	7	13,4	I
LCDB017	380	230	375	325	205	7	21,8	I
LCDB021	380	230	375	325	205	7	22,3	I
LCDB025	380	230	375	325	205	7	29	I
LCDB033	380	230	375	325	205	7	30,1	I
LCDB042	475	345	525	320	320	10	47,1	II
LCDB050	475	345	525	320	320	10	16,2	II
LCDB067	475	345	525	320	320	10	55,5	II
LCDB083	545	385	620	350	360	10	67,2	II
LCDB104	545	385	620	350	360	10	57,7	II
LCDB125	615	425	695	400	400	10	92,2	II
LCDB167	775	575	940	480	550	10x15	125	III
LCDB208	775	575	940	480	550	10x15	148	III
LCDB250	775	575	940	480	550	10x15	169	III
LCDB333	775	575	940	480	550	10x15	174	III
LCDB417	775	575	940	480	550	10x15	230	III
LCDB525	930	710	1275	605	680	13x17	265	III
LCDB667	930	710	1275	605	680	13x17	321	III
LCDB833	1080	880	1460	815	840	15x20	393	IV
LCDB1000	1080	880	1460	815	840	15x20	472	IV



\* Type IV, has independent capacitor tray. See dimensions in table.

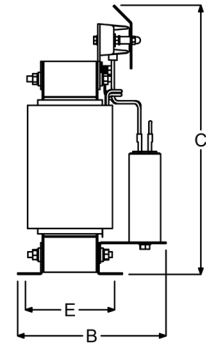
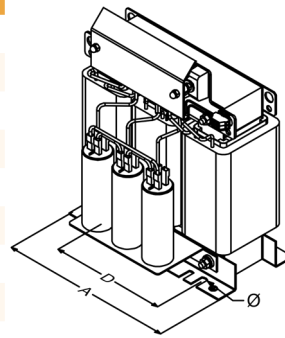


### Dimensions - 690 V (IP00)

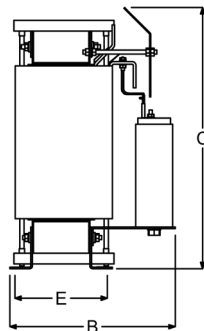
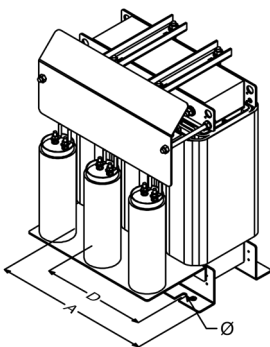
REF.	DIMENSIONS (mm)						WEIGHT (kg)	TYPE
	A	B	C	D	E	Ø		
LCG058	300	250	435	200	130	11	56,8	II
LCG072	300	250	435	200	130	11	57,7	II
LCG087	360	310	500	240	170	11	92,4	III
LCG116	360	330	500	240	190	11	104	III
LCG145	420	290	565	280	145	11	94,1	III
LCG174	420	325	565	280	180	11	125	III
LCG232	480	320	650	320	180	11	142	III
LCG290	480	365	650	320	220	11	199	III
LCG365	480	330	670	320	235	11	223	IV*
LCG464	480	335	675	320	240	11	224	IV*
LCG580	540	395	755	360	265	11	338	IV*
LCG696	540	405	755	360	280	13	359	IV*

\* Type IV, has independent capacitor tray. See dimensions in table.

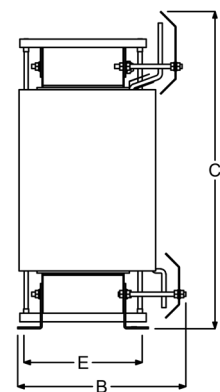
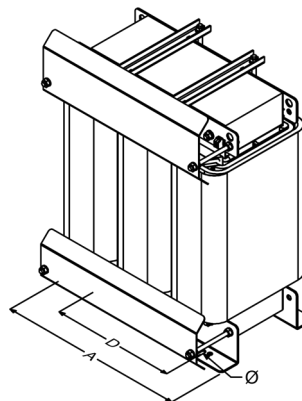
II



III



IV



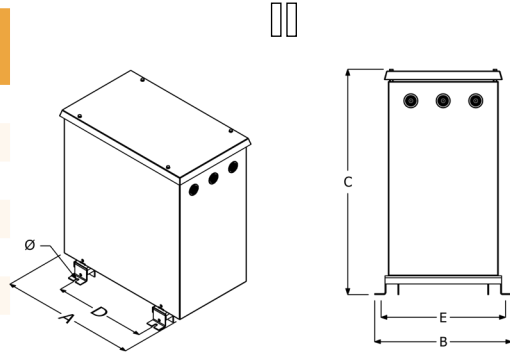
# VDF SOLUTIONS

## MOTOR-SIDE

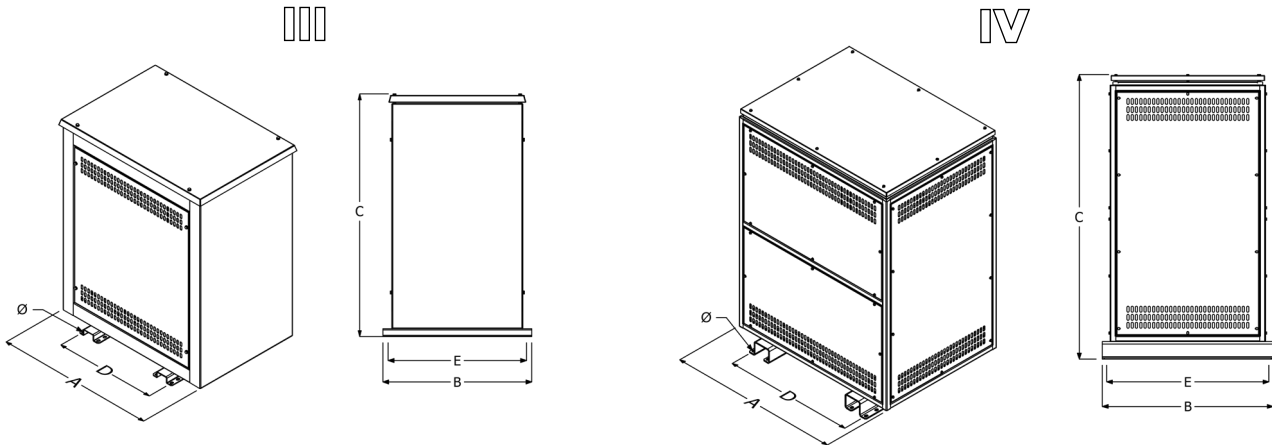
QUALITY AND ENERGY EFFICIENCY  
Series LC

### Dimensions - 690 V (IP23)

REF.	DIMENSIONS (mm)						WEIGHT (kg)	TYPE
	A	B	C	D	E	Ø		
LCGB058	615	425	695	400	400	10	76,8	II
LCGB072	615	425	695	400	400	10	77,7	II
LCGB087	775	575	940	480	550	10x15	130	III
LCGB116	775	575	940	480	550	10x15	142	III
LCGB145	775	575	940	480	550	10x15	132	III
LCGB174	775	575	940	480	550	10x15	163	III
LCGB232	775	575	940	480	550	10x15	180	III
LCGB290	775	575	940	480	550	10x15	237	III
LCGB365	930	710	1275	605	680	13x17	288	III
LCGB464	930	710	1275	605	680	13x17	289	III
LCGB580	1080	880	1460	815	840	15x20	458	IV
LCGB696	1080	880	1460	815	840	15x20	479	IV



\* Type IV, has independent capacitor tray. See dimensions in table.



### Connections

CONNECTION		MAX SECTION CONDUCTOR (mm <sup>2</sup> )	MAX. TIGHTENING TORQUE (Nm)	INTENSITY (A)		
Type	Size			LC/LCB	LCD/LCDB	LCG/LCGB
B3	2,5 mm <sup>2</sup>	4	0,4-0,6		2-3	
	4 mm <sup>2</sup>	6	0,5-0,8	2-4	5	
	6 mm <sup>2</sup>	10	0,8-1,2	6	7	
	10 mm <sup>2</sup>	16	1,2-1,8	8-10	8-12	
	16 mm <sup>2</sup>	25	1,2-2	15-20	17-21	
	25 mm <sup>2</sup>	35	2,0-3,0	25-30	25-33	
	35 mm <sup>2</sup>	50	2,5-3,5	40		
R1	M6	35	14	50-80	42-83	58-72
P1	30 mm (x1)Ø9 mm	150	14 (M8)	100-300	104-250	87-290
	40 mm (x1)Ø11 mm	200	27 (M10)	400	333	365
	50 mm (x1)Ø11 mm	250	27 (M10)	500	417	464
P2	60 mm (x2)Ø13 mm	360	45 (M12)	630	525-667	580-696
P3	80 mm (x4)Ø13 mm	640	45 (M12)	800-1200	833-1000	

