

# Sinusoidal output filters for VFD



Three phase sine wave voltage output filters especially designed for frequency converters.

LC filters of TORYTRANS remove pulses generated by the output voltage of the frequency converters PWM (pulse width modulation) at high frequencies and restore sinusoidal waveform at power converter's output.


Avoid the premature motor deterioration caused by high  $dV/dt$ , overvoltage and reflection wiring.

Increase significantly the motor's lifetime, reducing its overheating and eddy current losses.

Mounting into metal enclosure, protection degree of IP-23, coated with a resin polyester-epoxy powder with excellent physical-mechanical and anticorrosive properties. Type II enclosure includes wheels.

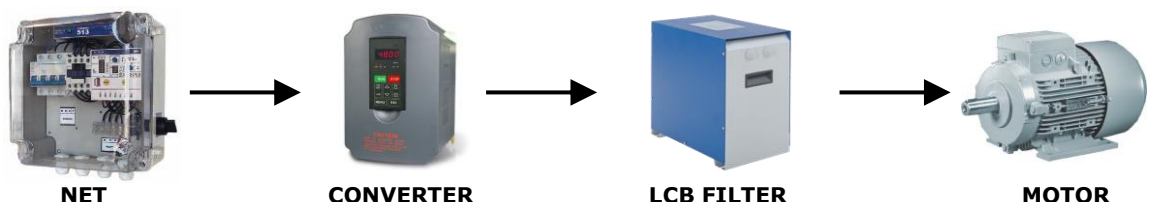
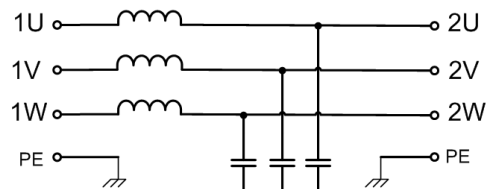
Recommended for installations with cables over 50 meters in length between the frequency converter and motor.

## Technical characteristics

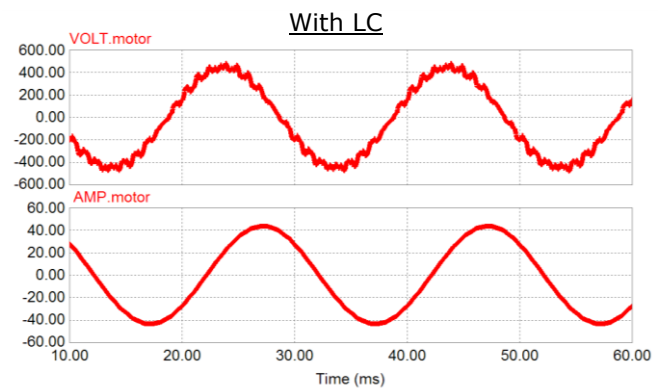
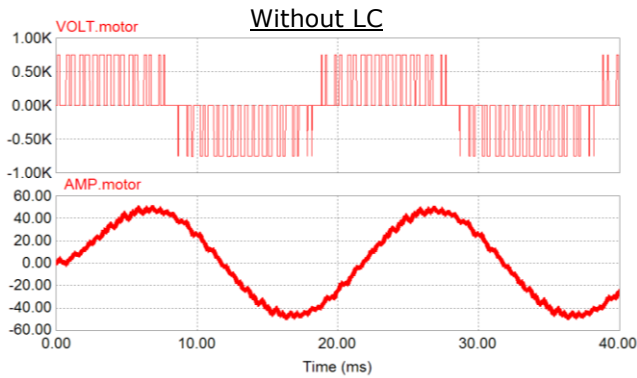
Motor rating	0,37 ÷ 630 kW (0,5 ÷ 855 CV)
Nominal current	1 ÷ 1200 A
Converter output voltage	3 x 400 V ± 20 V
Converter output frequency	0 ÷ 70 Hz
Commutation frequency	5÷8 kHz up to LCB050 3÷5 kHz LCB060 to LCB200 2÷3 kHz from LCB250
Voltage distortion	≈ 8% THD-V
Insulation class	H (180°C)
Transitory overload	1,5 I <sub>N</sub> 1 min x hour
Ambient temperature	40 °C
Protection degree	IP-23 
Safety class	Class I
Standards	IEC/UNE-EN 60076-6 IEC/UNE-EN 61439-1



## Electrical diagram

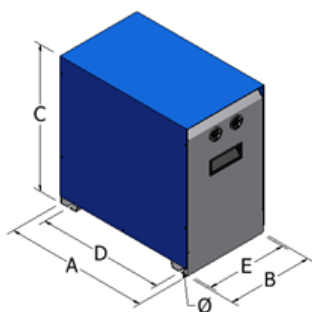


## Output voltage-current comparative waveform of frequency converter

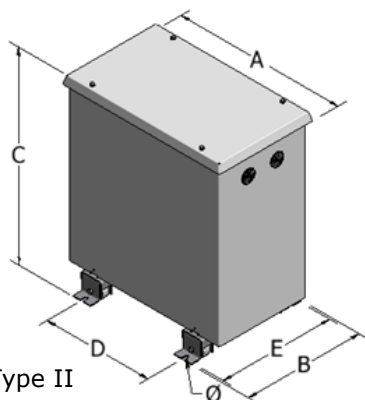


Select filter current according to motor rating

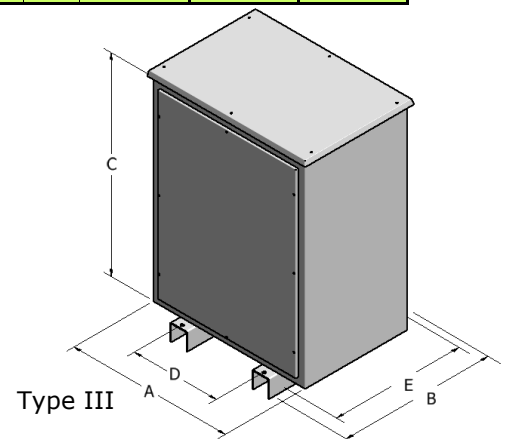
Motor rating		Rated current A	Reference	Dimensions mm						Weight kg	Losses W	Type
kW	CV			A	B	C	D	E	Ø			
0,37	0,5	1	LCB001	230	145	245	205	125	7	6,9	37	I
0,75	1	2	LCB002	230	145	245	205	125	7	6,3	39	I
1,5	2	4	LCB004	300	185	305	265	165	7	7,2	46	I
2,2	3	6	LCB006	300	185	305	265	165	7	8,7	61	I
3	4	8	LCB008	300	185	305	265	165	7	8	73	I
4	5,5	10	LCB010	300	185	305	265	165	7	16	78	I
5,5	7,5	15	LCB015	300	185	305	265	165	7	17	96	I
7,5	10	20	LCB020	370	225	375	325	205	7	23	79	I
11	15	25	LCB025	370	225	375	325	205	7	24	127	I
15	20	30	LCB030	370	225	375	325	205	7	29	135	I
18,5	25	40	LCB040	370	225	375	325	205	7	30	141	I
22	30	50	LCB050	475	345	520	320	320	10	42	279	II
30	40	60	LCB060	475	345	520	320	320	10	49	320	II
37	50	80	LCB080	475	345	520	320	320	10	56	420	II
45	60	100	LCB100	545	385	615	350	360	10	65	308	II
55	75	125	LCB125	615	425	690	400	400	10	90	541	II
75	100	150	LCB150	615	425	690	400	400	10	100	579	II
90	125	200	LCB200	775	575	940	400	550	10	125	762	II
110	150	250	LCB250	775	575	940	400	550	10	150	1086	II
150	200	300	LCB300	775	575	940	400	550	10	158	1124	II
185	250	400	LCB400	775	575	940	400	550	10	185	1223	II
220	300	500	LCB500	775	575	940	400	550	10	230	1491	II
300	410	600	LCB600	930	710	1275	480	670	16	270	1513	III
400	545	800	LCB800	930	710	1275	480	670	16	300	1614	III
530	720	1000	LCB1000	930	710	1275	480	670	16	342	2016	III
630	855	1200	LCB1200	930	710	1275	480	670	16	415	2241	III



Type I



Type II



Type III

\* Other features, power, voltage, etc., on request.

\* Torytrans reserves the right to modify the information in any time and without prior notice.