EF3H
Passive harmonic filter

132 kW up to 2600 kW

Approvals

CE RoHS UL*

Technical data

Rated power	132-2600 kW
Rated voltage	380-415 V ±10%
Rated frequency	50 Hz
THDi	according to IEEE 519
Overload capability	110% P_n (continuous)
	160% P_n 1 min/h (momentary)
Capacitive power consumption at no load	≤15% Pn (132-2600 kW)
Ambient temperature	40°C – land design
	45°C – maritime design
	≥50°C – heavy duty design
Insulation class	H (180°C)
Winding material	aluminium, copper
Standard equipment	NC temperature switch
Mounting	standing, vertical
Degree of protection	IP00, IP23
Standards compatibility	PN-EN 60076-6

*- UL approved insulation system

Function

Mitigation of harmonics caused by non-linear loads is vital procedure if it comes to energy cost reduction. ElhandHF™ Harmonic filter allows to utilize system power capacity to maximum degree, protects against shortened installation life and equipment malfunction. Due to compact design, filter can be easily integrated with existing system and is ready to use right after installation. Compensation of harmonics by filter application helps to comply with IEEE 519, EN-61000-3 or other energy quality standards.

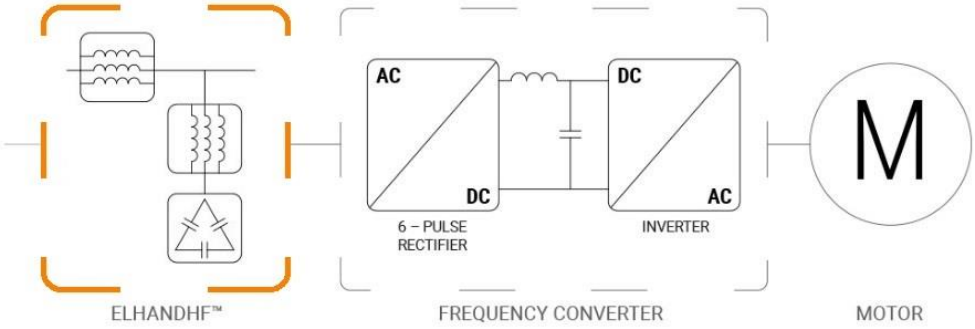
Benefits

- Lower input current RMS value
- Lower power losses
- Increased energy quality
- Extended lifetime of another devices installed in the system
- Very low capacitive input current in no load state

Application

- Electric drives
- 6-pulse rectifiers
- Energy chargers
- Systems sensitive to energy quality
- Light and heavy industry
- Marine equipment
- Oil & Gas

Typical application schematic



Dimensions

Execution A

380-415 V, 50 Hz, IP00

No.	Type of filter	Win. mat.	Drive power	Inductor dimensions							Capacitor dimensions						
				L	B	H	d	e	f	Weight	L	B	H	d	e	f	Weight
			[kW]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[kg]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[kg]
1	**EF3H-132kW**	Cu	132	420	265	778	370	164	4x(13x18)	207	455	300	320	430/370/310	270	12x(11x15)	11
		Al			282	833		174		204							
2	**EF3H-160kW**	Cu	160	420	295	779	370	184	4x(13x18)	253	475	300	320	430/370/310	270	12x(11x15)	13
		Al			307	833		194		235							
3	**EF3H-200kW**	Cu	200	480	323	846	430	194	4x(13x18)	316	620	300	320	570/490/430	270	12x(11x15)	15
		Al			337	904		204		305							
4	**EF3H-250kW**	Cu	250	480	356	848	430	224	4x(13x18)	387	475	400	320	430/370/310	370	12x(11x15)	19
		Al			374	907		234		367							
5	**EF3H-315kW**	Cu	315	540	375	922	490	206	4x(13x18)	431	640	400	320	590/490/430	370	12x(11x15)	23
		Al			388	989		216		412							
6	**EF3H-355kW**	Cu	355	540	406	922	490	226	4x(13x18)	503	640	400	320	590/490/430	370	12x(11x15)	27
		Al			417	989		236		464							
7	**EF3H-400kW**	Cu	400	540	427	920	490	246	4x(13x18)	548	805	400	320	605/490	370	4x(11x30) 4x(11x15)	31
		Al			440	990		256		521							
8	**EF3H-500kW**	Cu	500	690	432	1071	590	238	4x(17x25)	716	640	565	320	590/490/430	535	12x(11x15)	36
		Al			443	1144		248		628							
9	**EF3H-560kW**	Cu	560	690	467	1071	590	258	4x(17x25)	783	640	565	320	590/490/430	535	12x(11x15)	39
		Al			474	1143		268		700							
10	**EF3H-630kW**	Cu	630	690	501	1067	590	278	4x(17x25)	866	805	565	320	605/490	535	4x(11x30) 4x(11x15)	44
		Al			510	1148		288		769							
11	**EF3H-710kW**	Cu	710	720	535	1265	620	278	4x(17x25)	992	805	565	320	605/490	535	4x(11x30) 4x(11x15)	47
		Al			554	1370		298		954							
12	**EF3H-800kW**	Cu	800	720	557	1264	620	298	4x(17x25)	1122	975	565	320	710/605	535	4x(11x30) 4x(11x15)	55
		Al			575	1368		318		1042							

Execution B

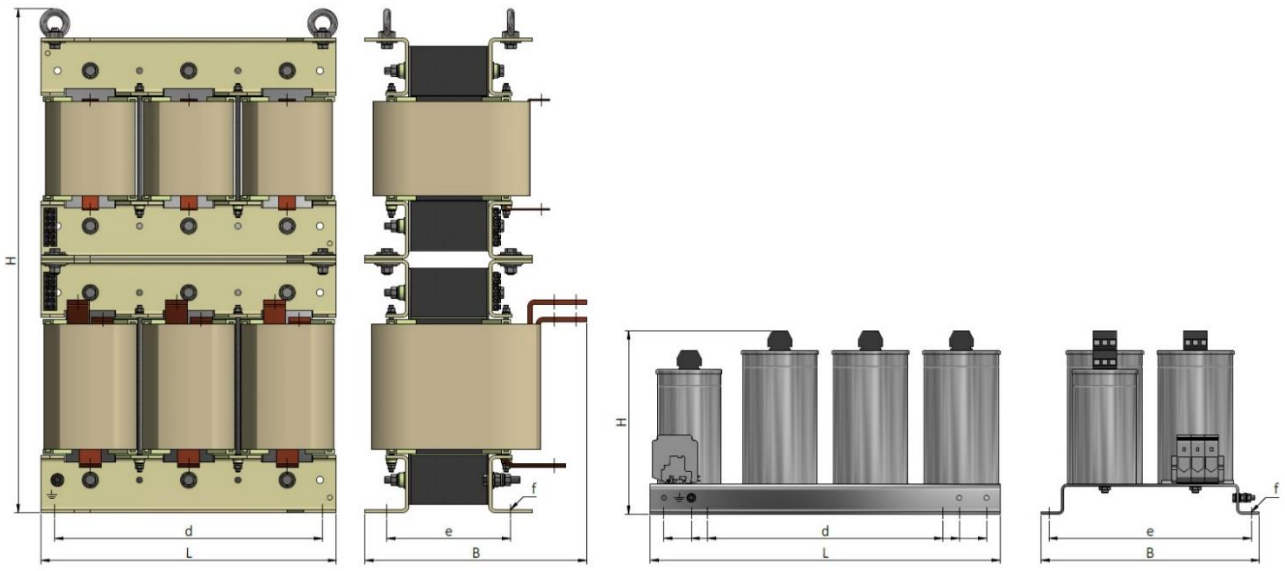
380-415 V, 50 Hz, IP00

No.	Type of filter	Winding material	Power of the drive	L	B	H	d	e	f	Weight
			[kW]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[kg]
13	**EF3H-900kW**	Cu	900	1030	1309	1429	830	1220/1020	8xØ18	1354
		Al			1313					1317
14	**EF3H-1000kW**	Cu	1000	1030	1331	1429	830	1220/1020	8xØ18	1499
		Al			1353					1439
15	**EF3H-1120kW**	Cu	1120	1297	1466	1738	1100	1400/1200/100	12xØ18	1999
		Al			1463					1950
16	**EF3H-1250kW**	Cu	1250	1297	1486	1738	1100	1400/1200/100	12xØ18	2151
		Al			1483					2043
17	**EF3H-1400kW**	Cu	1400	1297	1486	1738	1100	1400/1200/100	12xØ18	225
		Al			1483					2133
18	**EF3H-1700kW**	Cu	1700	1297	1508	1738	1100	1400/1200/100	12xØ18	2529
		Al			1505					2411
19	**EF3H-1850kW**	Cu	1850	1297	1508	1738	1100	1400/1200/100	12xØ18	2670
		Al			1505					2511
20	**EF3H-2100kW**	Cu	2100	1347	1595	1890	1150	1450/1250/100	12xØ18	3023
		Al			1596					2921
21	**EF3H-2250kW**	Cu	2250	1347	1605	1890	1150	1450/1250/100	12xØ18	3179
		Al			1606					3032
22	**EF3H-2600kW**	Cu	2600	1437	1731	1989	1240	1550/1350/100	12xØ18	3770
		Al			1728					3912

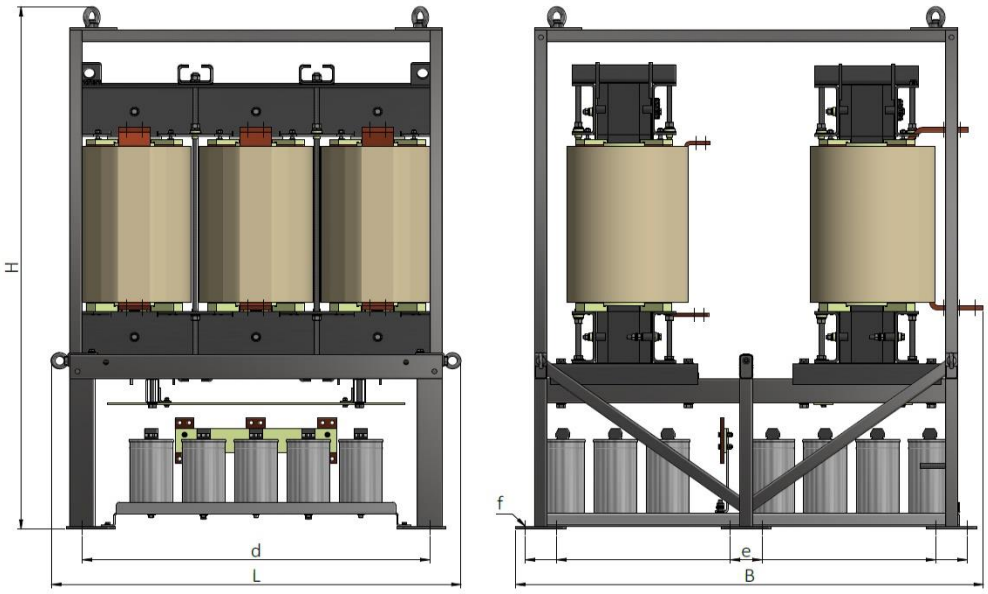
Manufacturer reserves the right to make changes resulting from the continuous development of products offered

Drawings

Execution A

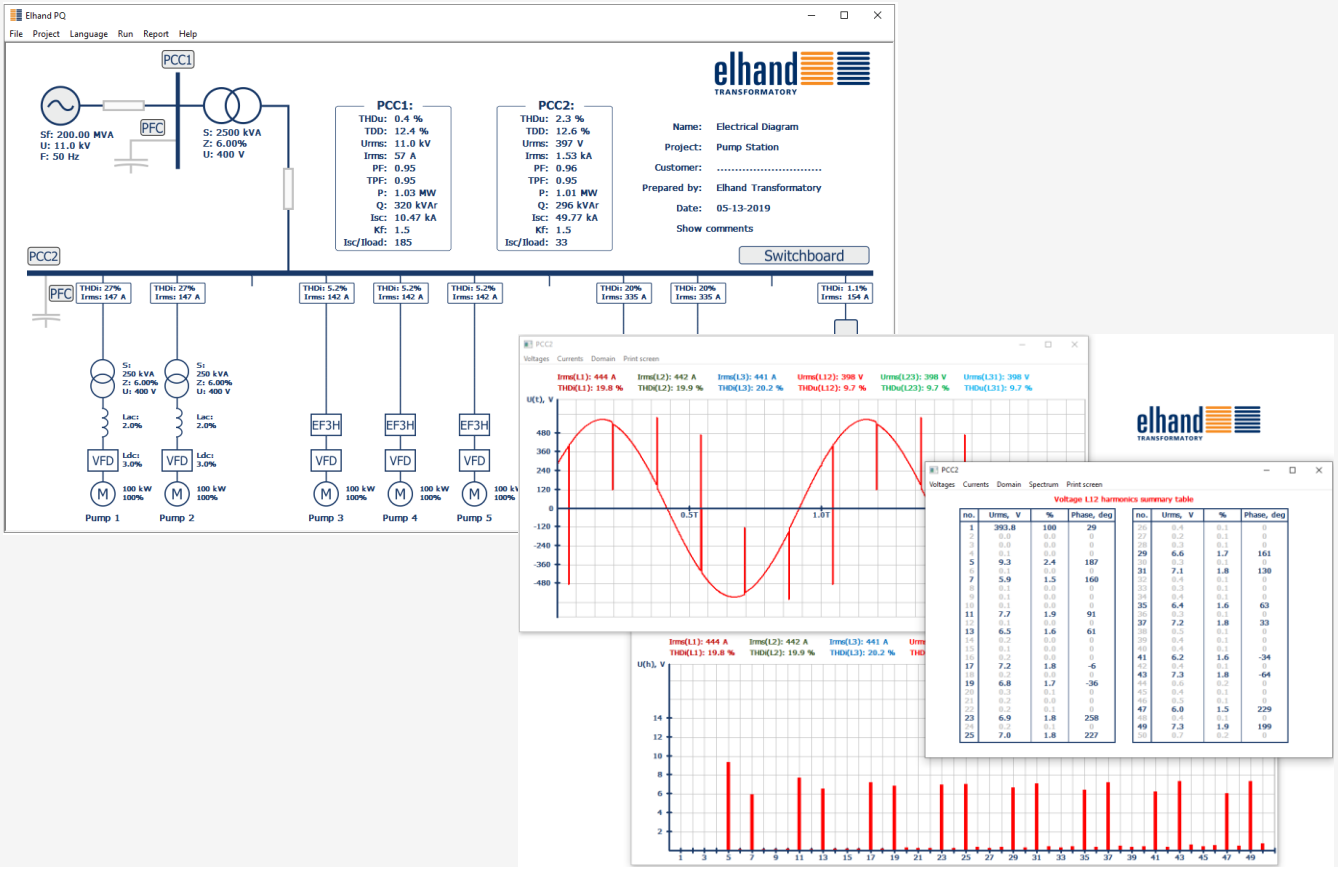


Execution B



Elhand PQ

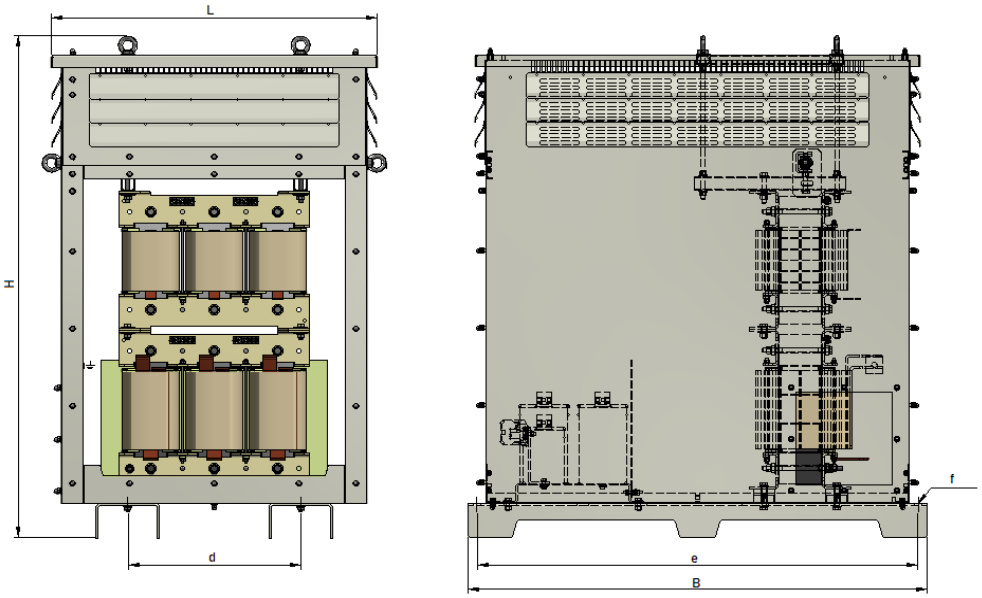
Elhand Power Quality Harmonic Simulation Software - is a unique simulation program, designed to calculate the level of voltage and current distortions in the network with any structure of power supply and loads. The application allows to solve problems with distortions and harmonics, and to quickly and accurately analyse the parameters of the entire power system. It takes into account the negative impact of non-linear loads on the power grid and its parameters at the point of common coupling. EPQ also helps in the selection and optimization of magnetic elements (transformers, reactors, filters).



Dimensions 380-415 V, 50 Hz, IP23

No.	Type of filter	Winding material	Drive power	L	B	H	d	e	f	Weight
			[kW]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[kg]
1	EF3H-132kW	Cu	132	794	1040	1400	370	990	4xØ22	369
		Al								366
2	EF3H-160kW	Cu	160							418
		Al								400
3	EF3H-200kW	Cu	200	794	1170	1400	430	1120	4xØ22	495
		Al								484
4	EF3H-250kW	Cu	250							570
		Al								550
5	EF3H-315kW	Cu	315	924	1300	1460	490	1250	4xØ22	648
		Al								629
6	EF3H-355kW	Cu	355							724
		Al								685
7	EF3H-400kW	Cu	400							773
		Al								746
8	EF3H-500kW	Cu	500	1054	1430	1630	590	1380	4xØ22	984
		Al								896
9	EF3H-560kW	Cu	560							1054
		Al								971
10	EF3H-630kW	Cu	630							1142
		Al								1045
11	EF3H-710kW	Cu	710	1054	1560	1930	620	1510	4xØ22	1297
		Al								1258
12	EF3H-800kW	Cu	800							1435
		Al								1355
13	EF3H-900kW	Cu	900	1310	1700	2085	830	1650	4xØ22	1699
		Al								1662
14	EF3H-1000kW	Cu	1000							1844
		Al								1784
15	EF3H-1120kW	Cu	1120	1760	1900	2344	1100	1850	4xØ22	2479
		Al								2430
16	EF3H-1250kW	Cu	1250							2631
		Al								2523
17	EF3H-1400kW	Cu	1400							2734
		Al								2613
18	EF3H-1700kW	Cu	1700							3009
		Al								2891
19	EF3H-1850kW	Cu	1850							3150
		Al								2991
20	EF3H-2100kW	Cu	2100	1860	2000	2344	1150	1950	4xØ22	3528
		Al								3426
21	EF3H-2250kW	Cu	2250							3684
		Al								3537
22	EF3H-2600kW	Cu	2600	1960	2150	2364	1240	2100	4xØ22	4472
		Al								4330

Drawings IP23



Product code

E	F	3	H	900kW	380-415V	50Hz	T40H	AL	
Manufacturer symbol	Instrument type	Number of phases	Application type	Rated power of filter	Rated supply voltage	Rated frequency	Insulation class	Winding material Blank if copper	Protection degree Blank if IP00

Special execution

Products with parameters exceeding the catalogue card can be made upon prior contact.

Contact

Elhand Transformatory Sp. z o.o.

ul. Klonowa 60
42-700 Lubliniec
Śląskie, Polska

+48 (34) 34 73 100

info@elhand.pl

https://www.linkedin.com/company/elhand-transformatory/

V01.21