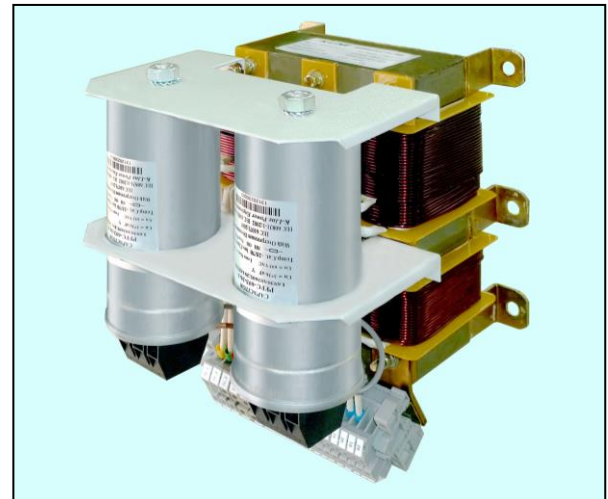


***K-LINE* Harmonic Filters**

Our AHF series low pass harmonic filters are specially designed for mitigation of harmonics produced by 3 phase variable speed drive (VSD) using a 6-pulse diode type rectifier. The filter is intended to be connected in series with the VSD, consisting of an input reactor (stage 1), an output reactor (stage 2), and a properly tuned harmonic absorption circuit (stage 3), offering a three stage harmonic filtering.



Enclosed Type

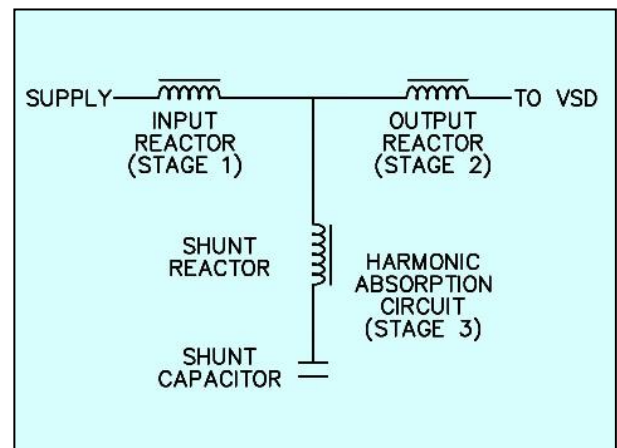


Open Type

Stage 1 – The input reactor is to isolate the filter from other harmonic sources connected to the same supply as well as to increase the input circuit effective impedance in order to reduce the overall harmonics.

Stage 2 – The output reactor is to limit the harmonics produced by the VSD, reducing the burden to the harmonic absorption circuit.

Stage 3 – The harmonic absorption circuit is tuned in such a manner as to absorb most of the remaining harmonics after stage 1 and stage 2 have played their roles.



Basic Schematic Diagram

The reactors used in our filters have inductance balanced within 2% between all three phases and comply with IEC 60076-6:2007. The capacitors used are specially designed and constructed for harmonic filtering applications, suitable for a maximum working frequency of 10 KHz. They are self-healing and fitted with internal overpressure disconnectors, complying with IEC 61071:2007, IEC 60831-1:2002 and IEC 60831-2:1995.

Technical Data

Performance	:	To reduce the THD _I to 10% or better at full load
Supply Voltage	:	380VAC +/- 10%, 3 Phase, 50Hz
Supply Voltage Unbalance	:	1% maximum for declared performance
Supply Voltage Distortion	:	THD _V = 2% maximum for declared performance
Source Impedance	:	1.5 – 6%
Degree of Protection	:	IP00 for open type; IP20 for enclosed type

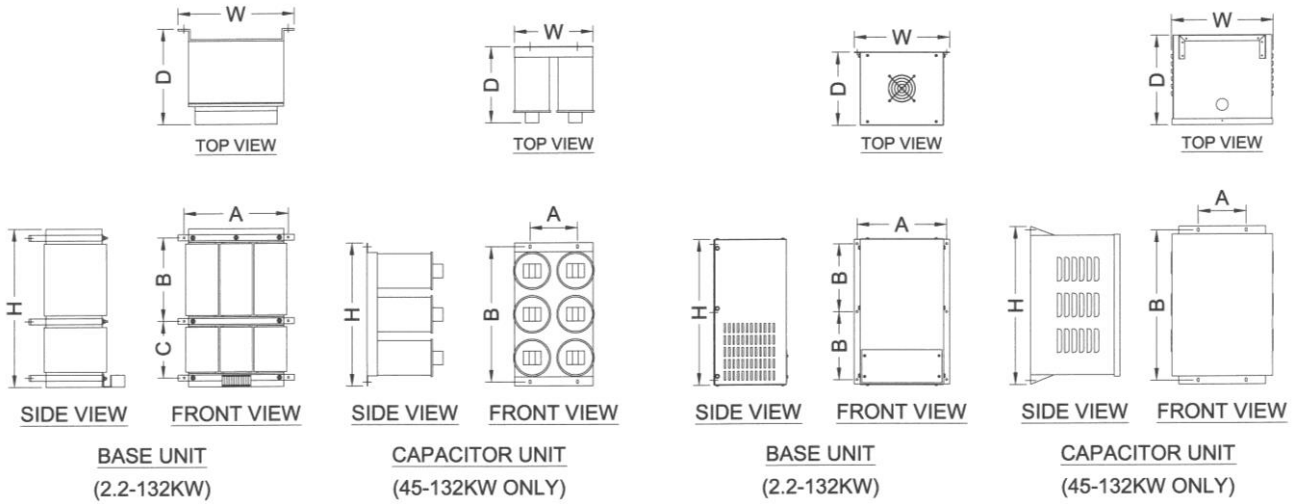
Model No.		Rated Current (A)	VSD (KW)	Capacitor Circuit (A)	Losses (W)	Open Type		Enclosed Type		
Open Type	Enclosed Type					Weight (kg)		Weight (kg)	Cooling Air (CFM)	
						Base Unit	Cap. Unit	Base Unit		Cap. Unit
AHF-0022-O	AHF-0022-E	5	2.2	1.5	71	13.5	Not applicable, capacitors are mounted on top of the base unit.	29.5	Not applicable, capacitors are mounted inside the base unit enclosure.	/
AHF-0040-O	AHF-0040-E	9	4	2.3	119	18		34		30
AHF-0055-O	AHF-0055-E	13	5.5	3	156	22		38		43
AHF-0075-O	AHF-0075-E	18	7.5	4.5	184	25.5		41.5		66
AHF-0110-O	AHF-0110-E	23	11	6	206	28.5		44.5		66
AHF-0150-O	AHF-0150-E	31	15	9	199	38		53.5		66
AHF-0185-O	AHF-0185-E	34	18.5	9	219	43.5		59.5		66
AHF-0220-O	AHF-0220-E	41	22	12	248	46		62		75
AHF-0300-O	AHF-0300-E	54	30	18	282	53.5		70		75
AHF-0370-O	AHF-0370-E	67	37	24	337	60	62.5	91		
AHF-0450-O	AHF-0450-E	80	45	27	350	71	8	95.5	17.5	91
AHF-0550-O	AHF-0550-E	98	55	27	450	90	8	114.5	17.5	125
AHF-0750-O	AHF-0750-E	137	75	36	545	106	11	130.5	20	170
AHF-0900-O	AHF-0900-E	158	90	45	650	120	13.5	144.5	21.5	170
AHF-1100-O	AHF-1100-E	187	110	54	710	142	16.5	169.5	29	190
AHF-1320-O	AHF-1320-E	224	132	72	745	160	18.5	187.5	36	190

- Notes: 1. Filters with a higher rating or a better performance are available upon request.
2. Specifications are subject to change without notice in advance.

Outline Dimensions

OPEN TYPE

ENCLOSED TYPE

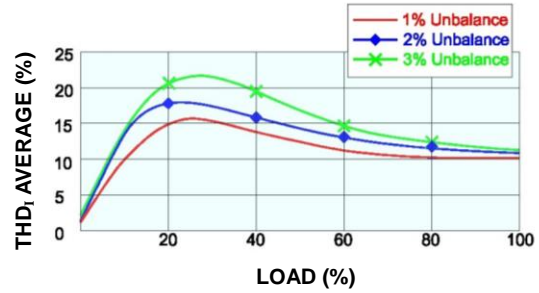


Model No.	Dimensions (mm)																				
	Open Type											Enclosed Type									
	Base Unit						Capacitor Unit					Base Unit				Capacitor Unit					
	W	H	D	A	B	C	W	H	D	A	B	W	H	D	A	B	W	H	D	A	B
AHF-0022	210	260	225	185	100	75	Not applicable, capacitors are mounted on top of the base unit.					340	390	275	320	175	Not applicable, capacitors are mounted inside the base unit enclosure.				
AHF-0040	210	290	230	185	130	75						340	440	285	320	200					
AHF-0055	210	300	240	185	138	75						340	400	285	320	200					
AHF-0075	210	320	260	185	158	75						360	460	315	340	210					
AHF-0110	210	320	270	185	158	75						360	460	315	340	210					
AHF-0150	260	340	290	230	138	95						380	500	335	360	230					
AHF-0185	260	350	290	230	148	95						380	500	335	360	230					
AHF-0220	260	360	300	230	158	95						420	520	355	400	240					
AHF-0300	260	370	310	230	163	97						420	520	355	400	240					
AHF-0370	260	390	330	230	168	107						430	540	375	410	250					
AHF-0450	310	420	170	280	180	107	110	450	310	-	420	370	560	230	350	260	160	440	400	-	415
AHF-0550	310	380	240	280	195	117	110	450	310	-	420	390	540	330	370	250	160	440	400	-	415
AHF-0750	310	410	250	280	232	117	220	335	310	100	305	390	630	340	370	295	280	320	400	150	295
AHF-0930	310	440	250	280	252	128	220	380	310	100	350	390	630	340	370	295	280	440	400	150	415
AHF-1100	360	480	250	330	275	135	220	450	310	100	420	440	670	340	420	315	280	440	400	150	415
AHF-1320	360	490	260	330	275	145	230	480	310	100	450	440	700	350	420	330	300	460	400	150	435

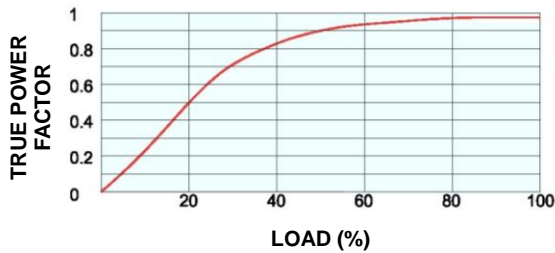
Performance and Characteristics



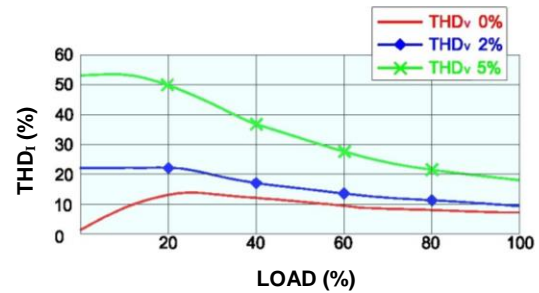
Typical Harmonic Current Spectrum



Typical Performance Against Supply Voltage Unbalance

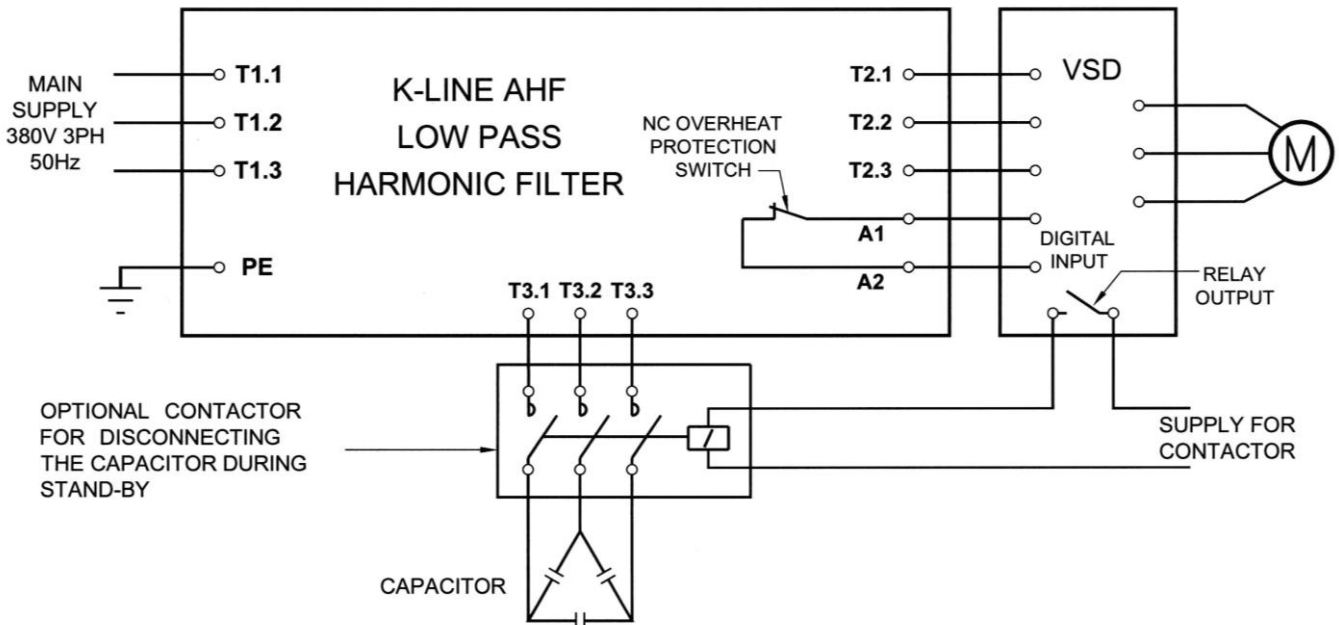


Typical Value of Power Factor



Typical Performance Against Total Harmonic Voltage Distortion (THD_v)

Connection Diagram



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