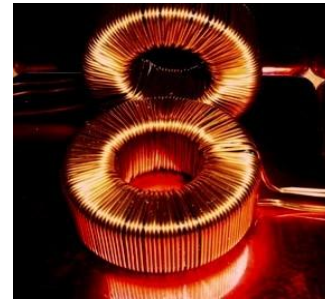


BENEFITS

Experience gained from working with customers for over thirty years, looking for the optimum balance between performance and cost, allows us to offer standard ranges of chokes with well defined inductance and current handling capabilities.

This high storage choke range is based on Hi-Flux powder cores. These have a saturation flux density three times higher than ferrite cores, and a distributed air-gap which gives a controlled hold-up of inductance with bias current.



Hi-Flux cores are made from a nickel-iron alloy, which gives a superior hold-up of inductance with dc bias current - for instance 125u Hi-Flux has a similar hold-up to 60u iron powder.

This allows the use of a higher permeability core, to give almost twice the inductance of a similarly sized iron powder core. The higher ripple flux density that results is offset by a lower core loss, to allow the chokes to be used to 50kHz or 100kHz, depending on the application.

Although of inherently higher cost, a smaller sized core can be used, to minimise the price penalty and to reduce the choke size and resistance.

Their "soft-saturation" characteristic allows a significant inductance to be maintained in overload conditions where gapped ferrites would have saturated.

The toroidal format also gives a lower flux-leakage than gapped ferrite, rod core or drum core chokes, for improved emc performance.

CHOKE RANGES

WH range High inductance chokes, with almost twice the energy storage of an equivalent size of iron powder choke.
Used for compact PFC chokes, PSU output inductors & differential emc chokes.

APPLICATIONS

Powder core chokes are mainly used where an inductance needs to be maintained where the choke is biased with a dc or a low frequency (50-60Hz) ac current.

High frequency currents should be limited to lower levels, such as the ac ripple current on a SMPSU pfc choke or output choke, or high frequency interference currents.

In general they should not be considered for applications where the choke is subject to higher levels of high frequency current, such as in resonant chokes or discontinuous-mode pfc and output chokes, unless these are at relatively low kHz frequencies.

KEY TO TERMS USED

Iac/Idc	Rated current, dc or 50Hz ac	For efficient convection cooling.
L0	Inductance without bias	Nominal, in milliHenries at 10kHz
L1	Inductance when biased with rated current I _{dc}	Nominal, in milliHenries at 10kHz
L1.4	Inductance biased with 1.4 times rated current I _{dc}	Nominal, in milliHenries at 10kHz
DCR	DC resistance of the coil	Nominal, ohms at 25deg.C
Part no.	The basic part number of the choke	Optional leadout variants are available.
dia.	Diameter of the toroidal choke	Nominal, in millimetres.
ht.	Height of the toroidal choke	Nominal, in millimetres.
f 20%	Frequency for 20% peak-peak ripple current	In kHz, based on a calculated
f 30%	Frequency for 30% peak-peak ripple current	20deg.C temperature rise due to core
f 40%	Frequency for 40% peak-peak ripple current	losses.

Specifications and information contained within this data are for guidance only.

Whilst every effort has been made to ensure the accuracy of this information, no liability can be accepted for any errors contained herein.

In all cases the customer should ensure that the chokes are thermally and electrically suitable for use within their equipment.

Current Iac/I _{dc} Amps	Inductance vs current			Part number	Resistance DCR ohms	Dimensions		Ripple frequencies			Weight kg.
	L0 mH	L1 mH	L1.4 mH			dia. mm.	ht. mm.	f 20% kHz	f 30% kHz	f 40% kHz	
0.5	10.5	5.5	4.2	WH1853-205	2.4	21	10	115	70	45	0.013
0.63	6.5	3.5	2.7	WH1853-208	1.5	21	10	115	70	45	0.013
0.63	9.3	6.5	4.9	WH2052-208	1.6	26	12	90	50	35	0.02
0.75	4.3	2.3	1.8	WH1853-210	1.1	21	10	115	70	45	0.013
0.75	7.5	5.8	4.1	WH2052-212	1.4	26	12	90	50	35	0.02
0.75	15	10	6.6	WH2352-211	1.7	30	14	80	45	30	0.031
0.75	19	14	12	WH2752-210	1.8	35	17	70	40	26	0.053
1	2.5	1.4	1	WH1853-215	0.58	21	10	115	70	45	0.013
1	4.1	2.8	2.1	WH2052-217	0.72	26	12	90	50	35	0.02
1	7.2	4.8	3.5	WH2352-217	0.86	30	14	80	45	30	0.031
1	16	11	7.8	WH2752-217	1.5	35	17	70	40	26	0.053
1.3	1.6	0.85	0.65	WH1853-220	0.36	21	10	115	70	45	0.013
1.3	2.6	1.8	1.3	WH2052-222	0.47	26	12	90	50	35	0.02
1.3	5.9	3.6	2.4	WH2352-222	0.63	30	14	80	45	30	0.031
1.3	9.8	6.7	4.9	WH2752-222	0.95	35	17	70	40	26	0.053
1.5	1.1	0.59	0.45	WH1853-225	0.27	21	10	115	70	45	0.013
1.5	1.8	1.2	0.92	WH2052-227	0.35	26	12	90	50	35	0.02
1.5	3.6	2.3	1.6	WH2352-227	0.38	30	14	80	45	30	0.031
1.5	6	4.2	3.2	WH2752-227	0.66	35	17	70	40	26	0.05
1.75	0.81	0.44	0.34	WH1853-230	0.21	21	10	115	70	45	0.013
1.75	1.2	0.83	0.63	WH2052-231	0.22	26	12	90	50	35	0.02
1.75	2.6	1.7	1.2	WH2352-225	0.29	30	14	80	45	30	0.031
1.75	4	2.8	2.3	WH2752-232	0.42	35	17	70	40	26	0.051
1.75	7.5	4.9	3.4	WH3352-230	0.53	42	20	58	35	23	0.079
2	0.65	0.35	0.26	WH1853-235	0.15	21	10	115	70	45	0.013
2	0.92	0.64	0.49	WH2052-236	0.18	26	12	90	50	35	0.02
2	2.3	1.4	0.93	WH2352-238	0.25	29	14	80	45	30	0.031
2	3.5	2.4	1.8	WH2752-237	0.36	35	17	70	40	26	0.051
2	5.8	3.7	2.6	WH3352-237	0.4	42	20	58	35	23	0.079
2.5	0.44	0.23	0.18	WH1853-246	0.11	21	10	115	70	45	0.013
2.5	0.58	0.4	0.31	WH2052-247	0.12	26	12	90	50	35	0.018
2.5	1.2	0.8	0.56	WH2352-247	0.16	30	14	80	45	30	0.028
2.5	2.2	1.5	1.2	WH2752-248	0.23	35	17	70	40	26	0.051
2.5	3.8	2.4	1.7	WH3352-247	0.26	42	20	58	35	23	0.079
3	0.15	0.1	0.08	WH1853-250	0.07	21	10	115	70	45	0.012
3	0.35	0.25	0.2	WH2052-250	0.079	26	12	90	50	35	0.018
3	0.71	0.49	0.37	WH2352-252	0.11	30	14	80	45	30	0.027
3	1.6	1.1	0.87	WH2752-252	0.17	35	17	70	40	26	0.051
3	2.6	1.7	1.2	WH3352-252	0.19	42	20	58	35	23	0.079
3	3.9	2.7	2	WH3262-252	0.29	42	30	60	35	23	0.13
3.5	0.13	0.081	0.064	WH1853-255	0.051	21	10	115	70	45	0.012
3.5	0.26	0.19	0.15	WH2052-255	0.06	26	12	90	50	35	0.018
3.5	0.47	0.33	0.26	WH2352-255	0.063	30	14	80	45	30	0.028
3.5	1.08	0.76	0.58	WH2752-256	0.12	35	17	70	40	26	0.049
3.5	2.2	1.3	0.9	WH3352-256	0.15	42	20	60	35	23	0.079
3.5	2.5	1.8	1.5	WH3262-255	0.19	42	30	60	35	23	0.13
4	0.11	0.066	0.052	WH1853-260	0.042	21	10	115	70	45	0.012
4	0.2	0.14	0.11	WH2052-260	0.047	26	12	90	50	35	0.018
4	0.47	0.31	0.21	WH2352-262	0.063	30	14	80	45	30	0.028
4	0.88	0.61	0.46	WH2752-262	0.1	35	17	70	40	26	0.05
4	1.7	1	0.7	WH3352-263	0.12	42	20	60	35	23	0.079
4	2.5	1.7	1.2	WH3262-262	0.19	42	30	60	35	23	0.13

Storage, pfc & series-mode chokes

hi-storage range

Almag

Current Iac/I _{dc} Amps	Inductance vs current			Part number	Resistance DCR ohms	Dimensions		Ripple frequencies			Weight kg.
	L0 mH	L1 mH	L1.4 mH			dia. mm.	ht. mm.	f 20% kHz	f 30% kHz	f 40% kHz	
5	0.055	0.036	0.029	WH1853-271	0.031	21	10	115	70	45	0.012
5	0.1	0.073	0.063	WH2052-270	0.03	26	12	90	50	35	0.017
5	0.25	0.18	0.13	WH2352-272	0.038	30	14	80	45	30	0.028
5	0.44	0.32	0.27	WH2752-272	0.064	35	17	70	40	26	0.046
5	1.05	0.65	0.44	WH3352-273	0.077	42	20	60	35	23	0.078
5	1.5	1.1	0.79	WH3262-272	0.097	42	30	60	35	23	0.13
6	0.034	0.023	0.019	WH1853-281	0.022	21	10	115	70	45	0.012
6	0.074	0.055	0.046	WH2052-280	0.022	26	12	90	50	35	0.017
6	0.18	0.13	0.093	WH2352-282	0.029	30	14	80	45	30	0.027
6	0.25	0.19	0.16	WH2752-284	0.053	35	17	60	35	23	0.044
6	0.66	0.42	0.3	WH3352-283	0.056	42	20	60	35	23	0.073
6	1.1	0.74	0.55	WH3262-284	0.09	42	30	60	35	23	0.13
6	1.6	0.93	0.64	WH4052-280	0.088	50	24	55	32	20	0.14
7	0.05	0.037	0.032	WH2052-292	0.018	26	12	90	50	35	0.017
7	0.13	0.09	0.068	WH2352-292	0.022	30	14	80	45	30	0.027
7	0.19	0.14	0.12	WH2752-294	0.038	35	17	70	40	26	0.046
7	0.44	0.29	0.2	WH3352-292	0.041	42	20	60	35	23	0.073
7	0.83	0.56	0.4	WH3262-292	0.062	42	30	60	35	23	0.13
7	1.3	0.7	0.49	WH4052-290	0.062	50	24	55	32	20	0.15
7	1.9	1.1	0.75	WH5152-291	0.082	59	23	45	26	15	0.26
7	2.3	1.4	0.92	WH4752-291	0.083	57	27	45	26	15	0.25
7	3.8	2.2	1.5	WH5162-293	0.126	59	37	45	26	15	0.38
8	0.03	0.023	0.021	WH2052-302	0.014	26	12	90	50	35	0.017
8	0.076	0.055	0.045	WH2352-302	0.017	30	14	80	45	30	0.024
8	0.17	0.12	0.1	WH2752-304	0.028	35	17	70	40	26	0.046
8	0.34	0.23	0.16	WH3352-302	0.028	42	20	60	35	23	0.076
8	0.66	0.44	0.32	WH3262-302	0.044	42	30	60	35	23	0.14
8	1	0.54	0.38	WH4052-300	0.049	50	24	55	32	20	0.15
8	1.5	0.82	0.57	WH5152-301	0.056	59	23	45	26	15	0.27
8	1.7	1	0.71	WH4752-301	0.065	57	27	45	26	15	0.25
8	2.9	1.6	1.1	WH5162-303	0.085	59	37	45	26	15	0.39
9	0.048	0.036	0.031	WH2352-306	0.014	30	14	80	45	30	0.024
9	0.15	0.11	0.085	WH2752-308	0.027	35	17	70	40	26	0.044
9	0.27	0.18	0.12	WH3352-307	0.022	42	20	60	35	23	0.076
9	0.54	0.35	0.25	WH3262-308	0.036	42	30	60	35	23	0.14
9	0.71	0.42	0.28	WH4052-305	0.037	50	24	55	32	20	0.15
9	1.1	0.65	0.45	WH5152-306	0.044	59	23	45	26	15	0.26
9	1.1	0.69	0.48	WH4752-305	0.055	57	27	45	26	15	0.24
9	2.3	1.3	0.88	WH5162-307	0.065	59	37	45	26	15	0.38
10	0.12	0.089	0.069	WH2752-313	0.021	35	17	70	40	26	0.044
10	0.21	0.14	0.1	WH3352-312	0.022	42	20	60	35	23	0.072
10	0.47	0.3	0.21	WH3262-314	0.03	42	30	60	35	23	0.14
10	0.57	0.33	0.23	WH4052-312	0.036	50	24	55	32	20	0.14
10	0.93	0.52	0.36	WH5152-311	0.04	59	23	45	26	15	0.25
10	1	0.61	0.42	WH4752-310	0.047	57	27	45	26	15	0.24
10	1.9	1	0.72	WH5162-312	0.059	59	37	45	26	15	0.37
11	0.083	0.062	0.051	WH2752-318	0.018	35	17	70	40	26	0.044
11	0.21	0.13	0.09	WH3352-318	0.017	42	20	60	35	23	0.079
11	0.43	0.26	0.18	WH3262-318	0.025	42	30	60	35	23	0.14
11	0.51	0.29	0.2	WH4052-318	0.031	50	24	55	32	20	0.14
11	0.77	0.43	0.3	WH5152-316	0.036	59	23	45	26	15	0.25
11	0.85	0.52	0.36	WH4752-317	0.039	57	27	45	26	15	0.24
11	1.5	0.86	0.6	WH5162-318	0.055	59	37	45	26	15	0.36

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Storage, pfc & series-mode chokes

high storage range

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Current Iac/I _{dc} Amps	Inductance vs current			Part number	Resistance DCR ohms	Dimensions		Ripple frequencies			Weight kg
	L0 mH	L1 mH	L1.4 mH			dia. mm.	ht. mm.	f 20% kHz	f 30% kHz	f 40% kHz	
13	0.14	0.09	0.062	WH3352-324	0.013	42	20	60	35	23	0.073
13	0.33	0.2	0.13	WH3262-328	0.018	42	30	60	35	23	0.14
13	0.39	0.21	0.15	WH4052-325	0.021	50	24	55	32	20	0.15
13	0.6	0.32	0.23	WH5152-326	0.026	59	23	45	26	15	0.25
13	0.65	0.39	0.26	WH4752-325	0.024	57	27	45	26	15	0.25
13	1.2	0.64	0.45	WH5162-327	0.04	59	37	45	26	15	0.37
15	0.093	0.062	0.045	WH3352-336	0.01	42	20	60	35	23	0.072
15	0.23	0.14	0.1	WH3262-338	0.015	42	31	60	35	23	0.14
15	0.3	0.16	0.11	WH4052-342	0.015	50	24	55	32	20	0.15
15	0.48	0.25	0.18	WH5152-343	0.019	59	23	45	26	15	0.26
15	0.54	0.31	0.21	WH4752-340	0.022	57	27	45	26	15	0.25
15	1	0.49	0.35	WH5162-342	0.028	59	37	45	26	15	0.38
15	1.9	1.1	0.8	WH7651-340	0.057	90	40	65	35	25	0.85
18	0.046	0.033	0.027	WH3352-364	0.008	42	20	60	35	23	0.07
18	0.13	0.088	0.062	WH3262-363	0.01	42	30	60	35	23	0.13
18	0.22	0.11	0.081	WH4052-363	0.01	50	24	55	32	20	0.15
18	0.36	0.21	0.15	WH4752-363	0.013	57	27	45	26	15	0.25
18	0.37	0.18	0.13	WH5152-361	0.013	59	23	45	26	15	0.28
18	0.73	0.35	0.26	WH5162-360	0.019	59	37	45	26	15	0.4
18	1.5	0.8	0.57	WH7651-360	0.041	90	40	65	35	25	0.88
20	0.033	0.024	0.02	WH3352-373	0.006	42	20	60	35	23	0.07
20	0.082	0.058	0.046	WH3262-373	0.009	43	31	60	35	23	0.12
20	0.15	0.086	0.059	WH4052-372	0.009	50	24	55	32	20	0.14
20	0.25	0.16	0.11	WH4752-371	0.011	57	27	45	26	15	0.24
20	0.27	0.14	0.1	WH5152-376	0.011	59	23	45	26	15	0.26
20	0.54	0.28	0.2	WH5162-377	0.016	59	37	45	26	15	0.38
20	1.2	0.62	0.46	WH7651-370	0.029	90	40	65	35	25	0.94
20	2	1	0.74	WH7751-370	0.045	91	54	60	30	23	1.29
22	0.11	0.064	0.043	WH4052-381	0.008	50	24	55	32	20	0.13
22	0.18	0.12	0.083	WH4752-382	0.01	57	27	45	26	16	0.23
22	0.2	0.11	0.077	WH5152-381	0.01	59	23	45	26	16	0.26
22	0.4	0.22	0.16	WH5162-383	0.014	59	37	45	26	15	0.37
22	1.1	0.54	0.4	WH7651-380	0.025	90	40	65	35	25	0.97
22	1.8	0.92	0.63	WH7751-380	0.038	91	54	60	30	23	1.33
24	0.81	0.45	0.32	WH7651-390	0.021	90	40	65	35	25	0.9
24	1.4	0.73	0.5	WH7751-390	0.03	91	54	60	30	23	1.32
30	0.5	0.28	0.21	WH7651-420	0.015	87	38	65	35	25	0.86
30	0.74	0.4	0.3	WH7751-420	0.019	87	52	60	30	23	1.22
35	0.4	0.22	0.16	WH7651-445	0.011	90	40	65	35	25	0.9
35	0.6	0.32	0.23	WH7751-445	0.014	91	54	60	30	23	1.28
40	0.34	0.17	0.12	WH7651-470	0.0088	90	40	65	35	25	0.92
40	0.5	0.26	0.19	WH7751-470	0.011	91	54	60	30	23	1.29
45	0.27	0.14	0.1	WH7651-495	0.0063	90	40	65	35	25	0.96
45	0.4	0.21	0.15	WH7751-495	0.0082	91	54	60	30	23	1.36
50	0.2	0.11	0.076	WH7651-520	0.0054	90	40	65	35	25	0.88
50	0.3	0.16	0.12	WH7751-520	0.0071	91	54	60	30	23	1.28
55	0.21	0.12	0.092	WH7751-545	0.006	91	54	60	30	23	1.2
60	0.15	0.09	0.07	WH7751-570	0.005	91	54	60	30	23	1.13

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