

Environmental declaration for BETA

Coiltech has adopted a resource sparing operation and an integrated environmental concept according to Environmental and Quality Management systems ISO 14001 and ISO 9001.

Manufactured products are mostly made of metal. Producing and refining metal is associated with various processes with environmental influence and a high-energy consumption.

In order to minimise influence on the environment we commit ourselves that the material used in our products shall be possible to recycle in an effective and environment friendly way when they are scrapped. One of our ways to achieve this is a constant and thorough development of our products. We are also participating in the REPA register for metals, plastic materials and corrugated cardboard.

Product components

The product is built up from modules divided into the following groups:

1. Finned heat exchanger body including tube plates
2. Headers
3. Casing including mounting brackets
4. Roof section including motor and fan

Weights and included material percentage of total weight for variant f=1
(aluminium fins and aluminium tubes)

Table 1. Included material percentage of total weight for Transformer Cooler, variant f=1

Size	Weight (kg)	Percentage of total weight					Total
		Aluminium	Steel, galvanised	Steel, painted	Steel	Copper	
BETA-13	328	15%	57%	21%	5%	0,8%	98,8%
BETA-14	340	18%	55%	20%	5%	0,7%	98,7%
BETA-15	352	21%	53%	20%	4,5%	0,7%	99,2%
BETA-16	364	23%	52%	19%	4,5%	0,7%	99,2%
BETA-23	472	21%	53,5%	15,5%	7%	1%	98,0%
BETA-24	496	25%	51%	14,5%	6,5%	1%	98,0%
BETA-25	519	28%	49%	14%	6%	1%	98,0%
BETA-26	543	31,5%	46,5%	13,5%	6%	0,9%	98,4%
BETA-33	618	24%	51,5%	12%	8%	1,2%	96,7%
BETA-34	654	28%	48,5%	11,5%	7,5%	1,1%	96,6%
BETA-35	690	32%	46%	11%	7%	1,1%	97,1%
BETA-36	726	35%	44%	10%	7%	1,0%	97,0%
BETA-43	753	26%	51%	10%	9%	1,3%	97,3%
BETA-44	801	31,5%	48%	9,5%	8%	1,2%	98,2%
BETA-45	849	34,5%	45%	9%	8%	1,2%	97,7%
BETA-46	896	38%	43%	8,5%	7,5%	1,1%	98,1%

Weights and included material percentage of total weight for variant f=2
(aluminium fins and copper tubes)

Table 3. Included material percentage of total weight for Transformer Cooler, variant f=2

Size	Weight (kg)	Percentage of total weight						Total
		Aluminium	Steel galv.	Steel paint.	Steel	Brass	Copper	
BETA-13	355	11,5%	23,5%	19,5%	4,5%	25%	14%	98%
BETA-14	375	12%	22%	18,5%	4,5%	24%	17,5%	98,5%
BETA-15	396	13,5%	21%	17,5%	4%	23%	19,5%	98,5%
BETA-16	418	15%	20%	16,5%	4%	21,5%	22%	99%
BETA-23	525	15,5%	30%	13,5%	3%	17%	20%	99%
BETA-24	567	16,5%	28,5%	12,5%	3%	16%	22%	98,5%
BETA-25	609	18%	26,5%	11,5%	2,5%	15%	25%	98,5%
BETA-26	651	19%	24%	11%	2,5%	14%	27,5%	98%
BETA-33	699	16,5%	34,5%	10%	2,5%	13%	21,5%	98%
BETA-34	762	18,5%	30,5%	9%	2%	12%	27%	99%
BETA-35	823	20%	28%	8,5%	2%	11%	29%	98,5%
BETA-36	886	21,5%	26,5%	8%	2%	10%	31%	99%
BETA-43	861	18%	34%	8%	2%	10,5%	25,5%	98%
BETA-44	944	20%	32%	7,5%	1,5%	9,5%	28,5%	99%
BETA-45	1027	21,5%	28,5%	7%	1,5%	9%	31%	98,5%
BETA-46	1111	22,5%	26%	6,5%	1,5%	8%	34,5%	99%

Weight and included material percentage of total weight for variant f=3
(copper fins and copper tubes)

Table 2. Included material percentage of total weight for Transformer Cooler variant f=3

Size	Weight (kg)	Procentuell share of total weight						Total
		Aluminium	Steel galv.	Steel paint.	Steel	Brass	Copper	
BETA-13	381	3,5%	22%	18,5%	4,5%	26%	24%	98,5%
BETA-14	410	3,5%	20%	17%	4%	24%	29,5%	98%
BETA-15	440	3%	19%	16%	3,5%	22,5%	34%	98%
BETA-16	469	3%	18%	15%	3,5%	21%	38,5%	99%
BETA-23	577	4,5%	27,5%	12,5%	5,5%	17%	31%	98%
BETA-24	637	4%	25,5%	11,5%	5%	15,5%	37,5%	99%
BETA-25	696	4%	23%	10,5%	4,5%	14%	43%	99%
BETA-26	755	3,5%	20,5%	9,5%	4,5%	13%	47,5%	98,5%
BETA-33	777	5%	31%	9,5%	6,5%	12,5%	34,5%	99%
BETA-34	866	4,5%	27%	8,5%	5,5%	11,5%	41,5%	98,5%
BETA-35	954	4%	24%	8%	5%	10,5%	46,5%	98%
BETA-36	1043	4%	22,5%	7%	4,5%	9,5%	51,5%	99%
BETA-43	965	5,5%	30,5%	8%	7%	10,5%	37%	98,5%
BETA-44	1083	5%	28%	7%	6%	9%	44%	99%
BETA-45	1201	4,5%	24,5%	6,5%	5,5%	8%	49,5%	98,5%
BETA-46	1320	4%	22%	6%	5%	7,5%	54%	98,5%

Power consumption, fan motor

The table below shows maximum power consumption at highest engine speed without speed regulation

Table 4. Power consumption at highest engine speed

Power consumption for each motor size (eee) [kW]					
6-pole 50Hz	8-pole 50Hz	12-pole 50Hz	6-pole 60Hz	8-pole 60Hz	12-pole 60Hz
1,2	0,55	0,15	2,13	1,0	0,25

Packing

The product is packed on a wooden loading stool made of 100 % recycled fibres. To protect the transformer cooler towards dirt and damp during transportation, a protective plastic wrapping made of LD polythene covers the fan outlet. The weight of the packing is shown for each size in the table below.

Table 5. Packing weights for each size

Packing weights for each size [kg]			
BETA-13--16	BETA-23--26	BETA-33--36	BETA-43--46
84	117	150	197

Environmental aspects on the manufacture of transformer coolers

In the manufacture of transformer coolers as well as in all other manufacture carried out by plastic- and piece & chip separating processing, all utilised material can not possibly be assimilated by the product. The waste products are recycled by means of re-melting and being included in new products later on.

Recycling of the product

When the transformer cooler is scrapped, it is your duty to arrange that the constituent parts are being sent to a recycling company, where the coil is broken into pieces and melted down. The different metals are separated gravimetrically and each material reprocessed to be included in new products.



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