

Goedhart ZGB / ZGZ

Industrial air coolers for cooling & freezing applications
FeZn

NH_3

engineering for a better world

GEA Heat Exchangers



Goedhart ZGB/ZGZ

The range Goedhart ZGB/ZGZ single discharge floor or ceiling mounted industrial air coolers consists of 528 types with capacities between 2,9 and 142,6 kW. The Goedhart ZGB/ZGZ air coolers are suitable for cooling and freezing applications and with a wide variety of accessories and options available. The coil block is standard build from steel end plates, tubes and fins and will be hot dipped galvanzed totally. The fans are arranged for blow-through air configuration for the Goedhart ZGB and draw-through for the Goedhart ZGZ (please state which is required when ordering).. The modular design incorporates 5 different sizes of fan, with model options of up to 6 fans per cooler

Type-omschrijving

ZGB 63457

- B=Blow-through / Z=Draw-through
- Number of rows deep
- Number of fans
- Fin spacing
- Fan diameter in cm

Coil block

- Tube pitch : 60x60 mm straight
- Fin spacings : 6, 8, 10 and 12 mm
- Material : 22mm o.d steel tubes
- : heavy-gauge steel fins
  The coil will be hot dipped galvanized
- Optimized cooling circuits
- Standard refrigerant connections are positioned on the left hand side of the unit when looking with the direction of the airflow.
- All coolers are pressure tested to 30 bar (lower by cooling mediums) and are supplied with a light over pressure charge of dry nitrogen.
- Standard the air coolers are suitable for NH_3- pumpcirculation (ratio 2/4) and coolants.

Casing

- Construction for floor or ceiling mounting
- Casing material of galvanized sheet steel
- Standard the casing is not spray painted
- Bend/header as standard not protected by end covers
- Removable drip tray.
- Defrost by hot gas spiral or electric defrost elements will be fixed to the bottom side of the coil.
- Divided inner and outer drip tray
- Stainless steel fasteners.

Capacity

The listed nominal cooling capacities are are based on NH_3 pump system, DT1, a RH of 85% with a frost layer of 0.2mm and 4 pole 3 phase fans connected in Δ.

Capacity optimisation
Since Goedhart tries to limit stock products, we are capable of optimising the circuitry of our evaporators. In order to do this, the following information is needed :

- Design capacity
- Air volume
- Refrigerant
- Air on temperature
- Evaporating temperature
- Liquid temperature before expansion valve.

Sound data

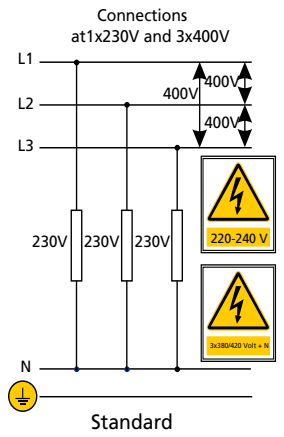
The mean sound pressure (LpA @ 3m ± 2 dB (A)) each air cooler is a calculated indication value according to the EN13487 standard parallel pipe. Goedhart uses the fan manufacturer's sound power level (LwA) at the inlet side of the fan. Changes to or by the fan or the product, affect the sound, in these cases, consult the manufacturer for the new indication value. In critical sound requirements, we advise you to consult an expert.

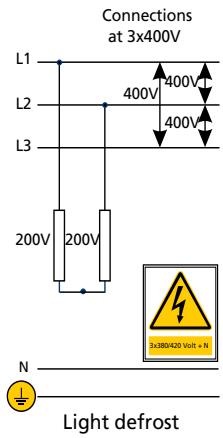
Defrostsystem:

For room temperatures where ice build-up can be expected and where the coilblock can not be defrosted by the room air, electric or hotgas defrost is necessary.
With low temperatures we also advise fan periphery heating.

Electrical defrost:
The Goedhart ZGB and ZGZ can be provided with electric defrost. A distinction can be made here between heavy defrost loads for low temperatures and light defrost load for higher temperatures (room temperature approximately 0 °C).
The stainless steel heater elements are fitted in the coilblock in tubes, which forms a high conductive medium between the heaters and the fins. The driptray heaters are fitted to the underside of the aluminium inner tray with aluminium profiles.The heater elements which are rated for 220/240 V are connected for supply 380/415V with neutral. The coilblock elements are removable from the end opposite to the refrigerant connections, whilst the tray heater elements can be removed once the outer tray has been taken off.

Hotgas defrost:
The coil block can be made suitable for hotgas. At an extra price the drip tray can be provided with a hotgas/cooling medium spiral. The stainless steel tubes of the hotgas spiral are enclosed in special aluminium profiles that are rigidly secured to the underside of the aluminium inner tray, thus providing a good bond for maximum heat transfer.Just as with electric defrost a distinction is made with hotgas defrost between light defrost load (room temperature about 0°C) and heavy defrost load.





Accessories:

Standard available accessories for the Goedhart ZGB/ZGZ air coolers are:

- Electric, hotgas and/or water defrost system.
- Fan periphery heating.
- Insulation within the driptray.
- Insulated hygienic polyester driptray.
- Goedhart ZGZ supplied with bellmouth connection per fan for a longer air throw
- Goedhart ZGB supplied with air diffusor for a longer air throw
- Goedhart ZGB supplied with air diffusor with air operated damper to increase defrost efficiency (airvolume reduced to approx. 90% and capacity reduced to approx. 95%)
- Bend/header protection by end covers

The accessories are included in the price list.

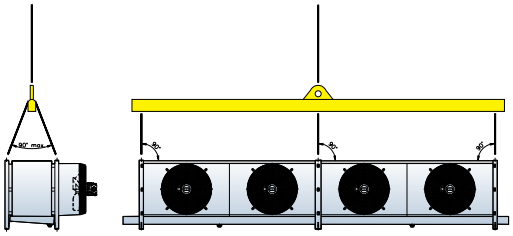
Optional extras:

Various optional extras for the ZGB/ZGZ are available, price and delivery upon request:

- Insulation discs
- Feet for floor mounting
- Fan hood
- 60 Hz motors
- EC-fans
- Single phase motors
- Glycol/water/etc. cooling mediums
- NH3 dx, R22 dx/pumpsystem.
- Other casing materials
- White spray painted casing (RAl9003)
- Other fin spacings

Mounting and Maintenance

Goedhart ZGB/ZGZ can be handled with a lifting crane which makes positioning and installation simple. Refer to our maintenance and installation manual.



Fans

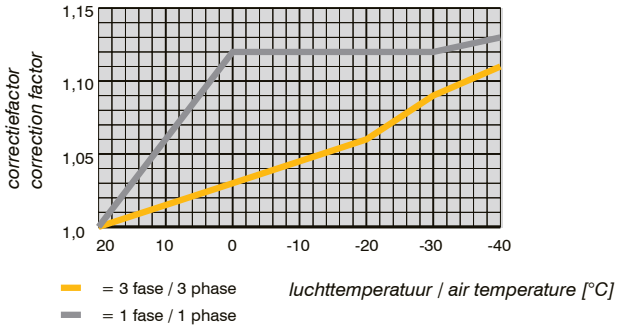
Because of the flexible construction of the Goedhart ZGB/ZGZ air cooler, in principle it is possible to deliver with different fans. GEA Goedhart selected a standard fan range of Ziehl Abegg (we reserve the right to alter the manufacturer) which fit perfectly on the Goedhart ZGB/ZGZ air coolers. The fans can be supplied in both blow-through and draw-through executions. Against an extra price and with extra delivery times stainless steel guards and EC-fans are available.

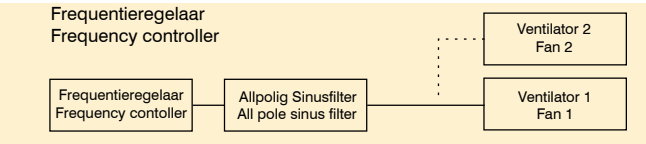
Execution
The fans meet the ErP directive. The fans have very good aerodynamic features because of the special impeller geometry. This special impeller geometry gives the fan a low noise level and an high efficiency.

1x230V fans are suitable for a room temperature till -25°C. 3x400V fans are suitable for a room temperature till -40°C. When lower room temperatures are desired, special fans are need.

Tension : 3x400V-50Hz-3 phase
: 1x230V-50Hz-1 phase
(60Hz execution on request)
Protection class : IP44 / IP54
Color : RAL9005 (black)
Speed controlling : - 3 Phase motors are suitable for 2-speed regulation by Δ-Y reconnection.
- 3 Phase motors are suitable for frequency controller with all-pole sinus filter.
- 1 Phase motors are suitable for phase control and transformator.

The motors are standard executed with a thermo contact (TB) and must be connected to prevent motor damages. The maximum allowable working data in the table and on the name plate of the fans are to operate in an air temperature of 20 °C (air density of ρ = 1,2 kg/m³). For air temperatures lower then +20 °C, the current amperage can be calculated by using the diagram multiplication factor, suitable thermal overloads can then be selected.





Three phase - 50 Hz

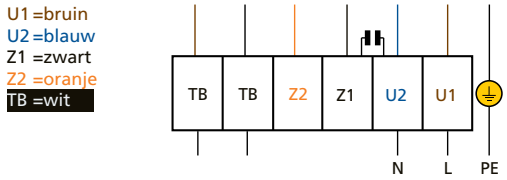
Fan type	Tension	Δ				Y				
		Speed	Input	FLC	Sound power indication each fan LwA (+/-2dB(A))	Seed	Input	FLC	Sound power indication each fan LwA (+/-2dB(A))	Wiring diagram blow-through/ draw-trhough
	V	min⁻¹	Watt	A	dB(A)	min⁻¹	Watt	A	dB(A)	
4 pole (n=1500 min⁻¹ nom.)										
FN040	3x400/690	1370	230	0.44	76	1110	170	0.27	70,5	108B/108A
FN045	3x400/690	1250	350	0.64	78	950	220	0.35	70	108B/108A
FN050	3x400/690	1330	830	1.45	81	940	550	0.97	75	108B/108A
FN056	3x400/690	1280	1050	2.20	85	920	580	1.10	76	108B/108A
FE063	3x400/690	1330	1450	2.60	89	1080	980	1.60	84	108B/108A
6 pole (n=1000 min⁻¹ nom.)										
FN045	3x400/690	860	180	0.39	67	640	100	0.19	61	108B/108A
FN050	3x400/690	870	290	0.74	72	590	150	0.36	64	108B/108A
FN056	3x400/690	870	340	0.70	73	630	210	0.38	65	108B/108A
FN063	3x400/690	900	630	1.25	74	720	440	0.73	69	108B/108A

Single phase - 50 Hz

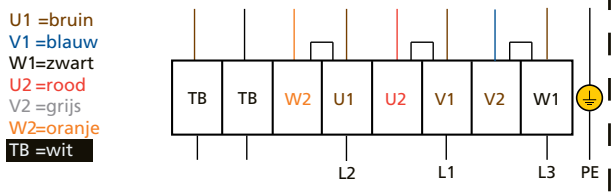
Fan type	Speed	Input	FLC	Sound power indication each fan LwA (+/-2dB(A))	Wiring diagram blow-through/ draw-trhough
	min⁻¹	Watt	A	dB(A)	
4 pole (n=1500 min⁻¹ nom.)					
FN040	1350	240	1.10	76	104B/104A
FN045	1290	390	1.75	80	104B/104A
FN050	1230	750	3.35	81,5	104B/104A
6 pole (n=1000 min⁻¹ nom.)					
FN040	950	130	0.58	68	104B/104A
FN045	860	180	0.82	68,5	104B/104A
FN050	910	300	1.30	71,5	104B/104A

Wiring diagram fans for blow-through air coolers

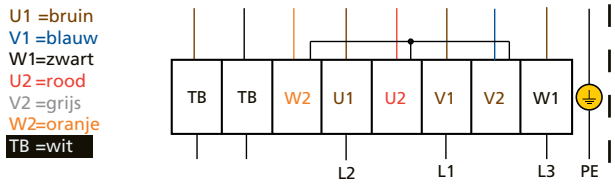
Ziehl Abegg 1x230V-50Hz (104XB)



Ziehl Abegg 3x400V (Δ)-50Hz (108XB)

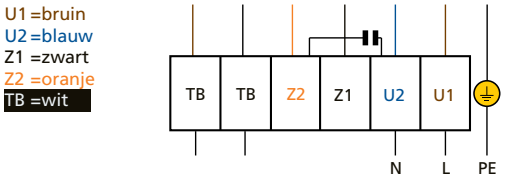


Ziehl Abegg 3x400V (Y)-50Hz (108XB)

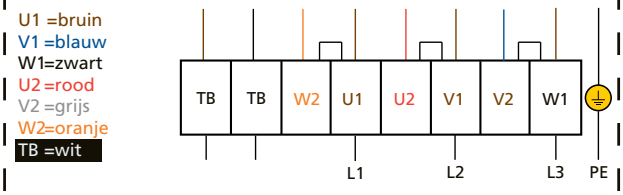


Wiring diagram fans for draw-through air coolers

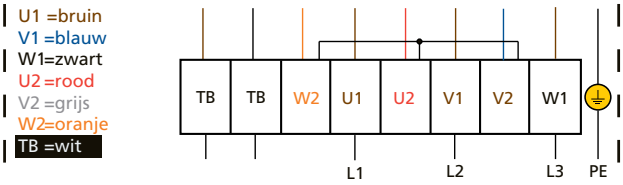
Ziehl Abegg 1x230V-50Hz (104XA)



Ziehl Abegg 3x400V (Δ)-50Hz (108XA)



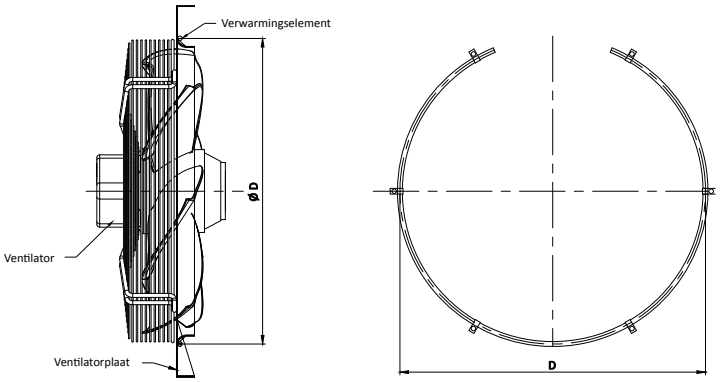
Ziehl Abegg 3x400V (Y)-50Hz (108XA)



Fan heating

To prevent the freezing of the impeller of the fan during the defrost cyclus of the air cooler, a fan heater can be used.

Fan diameter	Diameter element	Power (230V)
mm	D in mm	kW
400	435	0,50
450	485	0,63
500	535	0,63
560	595	0,76
630	665	0,89



Correction factors

Capacities at DT1:

Hereby the capacities are based on NH_3 pump system and DT1. DT1 is the difference between air-on temperature and the evaporation temperature of the cooler. The evaporation temperature is the saturated temperature corresponding to the pressure at the suction outlet of the cooler.The nominal capacities are based on evaporation temperatures of -8°C and DT1=8K and -25°C and DT1=7K and light frosting.
Capacities for other mediums and systems are avalable upon request.

Correction factors for various air-on temperatures and temperature differences (DT1) are as indicated in the table below. The requested capacity must be multiplied by a correction factor from the table, so that a cooler with the resulting nominal capacity can be chosen from the selection tables.

Q nominal = factor x Q requested

NH_3 light frost = 0.2 mm RH = 85%

DT1	Verdampingstemperatuur (°C)													
K	0	-2,5	-5	-7,5	-10	-12,5	-15	-20	-22,5	-25	-27,5	-30	-32,5	-35
5	1.63	1.69	1.75	1.80	1.85	1.90	1.95	1.48	1.51	1.54	1.57	1.60	1.63	1.65
6	1.29	1.34	1.39	1.43	1.47	1.50	1.54	1.17	1.20	1.22	1.24	1.26	1.29	1.31
7	1.06	1.11	1.14	1.17	1.21	1.24	1.26	0.97	0.99	1.00	1.02	1.04	1.06	1.07
8	0.90	0.94	0.97	1.00	1.02	1.04	1.06	0.82	0.83	0.85	0.86	0.88	0.89	0.91
9	0.78	0.80	0.84	0.86	0.88	0.90	0.92	0.70	0.72	0.73	0.75	0.76	0.77	0.78
10	0.68	0.70	0.74	0.76	0.78	0.79	0.80	0.62	0.63	0.64	0.65	0.66	0.67	0.69

= gerekend zonder berijping

NH_3 normal frost = 0.5 mm RH= 85%

DT1	Verdampingstemperatuur (°C)													
K	0	-2,5	-5	-7,5	-10	-12,5	-15	-20	-22,5	-25	-27,5	-30	-32,5	-35
5		1.86	1.92	1.98	2.03	2.08	2.13	1.68	1.71	1.73	1.74	1.76	1.79	1.80
6		1.48	1.52	1.57	1.61	1.65	1.68	1.33	1.34	1.35	1.37	1.38	1.39	1.40
7		1.22	1.26	1.29	1.33	1.36	1.39	1.08	1.09	1.10	1.11	1.12	1.13	1.14
8		1.04	1.07	1.09	1.12	1.14	1.16	0.91	0.92	0.93	0.95	0.96	0.97	0.98
9			0.92	0.95	0.97	0.99	1.00	0.79	0.80	0.81	0.81	0.82	0.83	0.84
10			0.81	0.83	0.85	0.86	0.88	0.69	0.70	0.71	0.71	0.72	0.74	0.74
11			0.72	0.74	0.76									

Attention!

ATTENTION !!!

When making your selection, pay attention to the ratio between the airvolume and capacity. A low volume to capacity ratio results in a wide temperature drop across the coil which cause to dry out (especially on coils with a high number of rows deep).

Moisture carry over from the coil block:

When you select **ZGB** with a Ø500 mm fan in an application with a high relative humidity and/or defrost with room air, Goedhart advises the use of a fan with a low pitch angle or the draw-through execution ZGZ. Thus, you will avoid the risk of moisture carry over from the coil block. The fan with a low pitch angle give a reducing of the capacity of approx. 5% and a reduction of the air volume of approx. 10%.

Goedhart ZGB/ZGZ 6mm

Type ZGB ZGZ	3x400V-50H-4 pole (1500 min⁻¹ nom.)				Surface	Internal volume	Weight	Dimensions							Connections					
	NH3														Refrigerant				Water-defrost	
	DT1 = 8K (SC2) air on= 0°C	DT1 = 7K (SC3) air on= -18°C	Air volume	LpA @ 3 m (+/- 2 dB(A))				L	B	H	C	E1	E2	E3	In	Out	Hot gas	Drain	In	Drain
	kW	kW	m³/h	dB(A)	m²	dm³	kg	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	NW"	NW"	NW"
4.1.40.6	4,8	3,4	3323	54,3	24	9	130	1006	775	690	456	606			21,3	21,3	22	1¼	1¼	1¼
6.1.40.6	6,2	4,4	3100	54,3	36	13	170	1006	895	690	576	606			21,3	21,3	22	1¼	1¼	1¼
8.1.40.6	7,1	5,0	2906	54,3	48	18	200	1006	1015	690	696	606			21,3	21,3	22	1¼	1¼	1¼
4.1.45.6	7,3	5,2	5162	56,2	36	12	170	1206	800	750	456	806			21,3	21,3	22	1¼	1¼	1¼
6.1.45.6	9,5	6,9	4838	56,2	55	18	220	1206	920	750	576	806			21,3	21,3	22	1¼	1¼	2
8.1.45.6	11,0	7,9	4554	56,2	73	24	280	1206	1040	750	696	806			21,3	26,9	22	1¼	1¼	2
4.1.50.6	9,8	7,1	7298	59,1	47	15	204	1256	795	870	456	856			21,3	26,9	22	1¼	1¼	1¼
6.1.50.6	12,9	9,2	6940	59,1	70	23	274	1256	915	870	576	856			21,3	26,9	22	1¼	1¼	2
8.1.50.6	15,1	10,8	6623	59,1	93	30	344	1256	1035	870	696	856			21,3	26,9	22	1¼	1¼	2
4.1.56.6	13,5	9,9	10196	62,8	64	19	262	1556	910	870	456	1156			21,3	26,9	22	1¼	1¼	2
6.1.56.6	18,0	12,9	9754	62,8	96	29	352	1556	1030	870	576	1156			21,3	33,7	22	1¼	1¼	2
8.1.56.6	21,2	15,3	9374	62,8	128	39	442	1556	1150	870	696	1156			21,3	33,7	22	1¼	1¼	2
4.1.63.6	18,3	13,2	12748	66,6	93	28	362	1656	905	1110	456	1256			21,3	33,7	22	1¼	1¼	2
6.1.63.6	24,3	17,4	12396	66,6	140	41	492	1656	1025	1110	576	1256			21,3	33,7	22	1¼	1¼	2
8.1.63.6	28,5	20,3	12046	66,6	186	55	622	1656	1145	1110	696	1256			21,3	42,4	22	1¼	1¼	2x2
4.2.40.6	9,5	6,9	6636	57,0	48	15	210	1556	775	690	456	1156			21,3	21,3	22	1¼	1¼	1¼
6.2.40.6	12,3	8,8	6187	57,0	72	22	280	1556	895	690	576	1156			21,3	26,9	22	1¼	1¼	2
8.2.40.6	14,1	10,1	5796	57,0	96	29	350	1556	1015	690	696	1156			21,3	26,9	22	1¼	1¼	2
4.2.45.6	14,6	10,3	10313	58,9	73	21	280	1956	800	750	456	1556			21,3	26,9	22	1¼	1¼	2
6.245.6	18,9	13,7	9662	58,9	109	31	380	1956	920	750	576	1556			21,3	33,7	22	1¼	1¼	2
8.2.45.6	21,9	15,7	9092	58,9	145	42	480	1956	1040	750	696	1556			21,3	33,7	22	1¼	1¼	3
4.2.50.6	19,5	14,2	14584	61,7	93	26	348	2056	795	870	456	1656			21,3	33,7	22	1¼	1¼	2
6.2.50.6	25,8	18,5	13864	61,7	139	40	478	2056	915	870	576	1656			21,3	33,7	22	1¼	1¼	2
8.2.50.6	30,2	21,9	13228	61,7	186	53	598	2056	1035	870	696	1656			21,3	42,4	22	1¼	1¼	2x2
4.2.56.6	27,0	19,7	20381	65,4	128	35	474	2656	910	870	456	2256			21,3	42,4	22	1¼	1¼	2x2
6.2.56.6	35,8	26,0	19492	65,4	192	52	654	2656	1030	870	576	2256			21,3	42,4	34	1¼	1¼	2x2
8.2.56.6	42,3	30,6	18733	65,4	255	70	824	2656	1150	870	696	2256			26,9	42,4	34	1¼	1¼	2x2
4.2.63.6	36,6	26,4	25489	69,2	186	50	664	2856	905	1110	456	2456			21,3	42,4	34	1¼	1¼	2x2
6.2.63.6	48,5	34,8	24779	69,2	279	75	914	2856	1025	1110	576	2456			26,9	42,4	34	1¼	1¼	3
8.2.63.6	57,0	40,5	24079	69,2	372	100	1164	2856	1145	1110	696	2456			26,9	48,3	34	1¼	1¼	3
4.3.45.6	21,8	16,0	15464	60,4	109	30	410	2706	800	750	456	2306			21,3	33,7	22	1¼	1¼	2
6.3.45.6	28,4	20,5	14486	60,4	163	45	560	2706	920	750	576	2306			21,3	42,4	22	1¼	1¼	2x2
8.3.45.6	32,7	23,5	13629	60,4	218	60	700	2706	1040	780	696	2306			21,3	42,4	34	1¼	1¼	2x2
4.3.50.6	29,2	21,2	21870	63,1	139	38	512	2856	795	870	456	2456			21,3	42,4	22	1¼	1¼	2x2
6.3.50.6	38,6	28,0	20790	63,1	209	57	692	2856	915	870	576	2456			21,3	42,4	34	1¼	1¼	2x2
8.3.50.6	45,3	32,5	19834	63,1	279	78	882	2856	1035	870	696	2456			26,9	42,4	34	1¼	1¼	3
4.356.6	40,5	29,6	30567	66,8	191	53	696	3756	910	870	456	3356	1143	2213	21,3	42,4	34	2x1¼	2x1¼	2x2
6.356.6	53,7	38,6	29233	66,8	287	80	956	3756	1030	870	576	3356	1143	2213	26,9	48,3	34	2x1¼	2x1¼	3
8.3.56.6	63,4	45,8	28092	66,8	383	106	1216	3756	1150	870	696	3356	1143	2213	26,9	48,3	42	2x1¼	2x1¼	3
4.3.63.6	54,9	39,4	38230	70,6	278	76	976	4056	905	1110	482	3636	1243	2393	26,9	48,3	34	2x1¼	2x1¼	3
6.3.63.6	72,7	52,4	37165	70,6	418	114	1346	4056	1025	1110	602	3636	1243	2393	33,7	60,3	42	2x1¼	2x1¼	2x3
8.3.63.6	85,6	61,6	36111	70,6	557	152	1706	4056	1145	1110	722	3636	1243	2393	33,7	60,3	42	2x1¼	2x1¼	2x3
4.4.45.6	29,1	20,7	20615	61,3	145	39	520	3456	800	750	456	3056			21,3	42,4	22	2x1¼	2x1¼	2x2
6.4.45.6	37,8	27,4	19309	61,3	218	58	680	3456	920	750	576	3056			21,3	42,4	34	2x1¼	2x1¼	2x2
8.4.45.6	43,7	31,4	18166	61,3	290	77	840	3456	1040	750	696	3056			26,9	42,4	34	2x1¼	2x1¼	3
4.4.50.6	39,0	28,6	29156	64,0	186	49	666	3656	795	870	456	3256	1628	1628	21,3	42,4	34	2x1¼	2x1¼	2x2
6.4.50.6	51,5	36,9	27714	64,0	278	74	866	3656	915	870	576	3256	1628	1628	26,9	42,4	34	2x1¼	2x1¼	3
8.4.50.6	60,4	43,7	26439	64,0	371	98	1066	3656	1035	870	696	3256	1628	1628	26,9	48,3	34	2x1¼	2x1¼	3
4.4.56.6	54,0	39,4	40753	67,7	255	69	888	4856	910	870	456	4456	2228	2228	26,9	48,3	34	2x1¼	2x1¼	3
6.4.56.6	71,6	51,9	38972	67,7	383	103	1178	4856	1030	870	576	4456	2228	2228	33,7	48,3	42	2x1¼	2x1¼	2x3
8.4.56.6	84,5	61,1	37451	67,7	510	137	1458	4856	1150	870	696	4456	2228	2228	33,7	60,3	42	2x1¼	2x1¼	2x3
4.4.63.6	73,1	52,8	50971	71,5	371	99	1248	5256	905	1110	482	4836	2418	2418	33,7	60,3	34	2x1¼	2x1¼	2x3
6.4.63.6	96,9	69,7	49549	71,5	557	148	1658	5256	1025	1110	602	4836	2418	2418	33,7	60,3	42	2x1¼	2x1¼	2x3
8.4.63.6	113,9	81,0	48144	71,5	742	198	2058	5256	1145	1110	722	4836	2418	2418	42,4	60,3	48	2x1¼	2x1¼	3x3
4.5.50.6	48,7	35,9	36441	64,7	232	63	830	4456	795	870	456	4056	1637	2419	26,9	42,4	34	2x1¼	2x1¼	2x2
6.5.50.6	64,3	46,8	34639	64,7	348	95	1130	4456	915	870	576	4056	1637	2419	26,9	48,3	34	2x1¼	2x1¼	3
8.5.50.6	75,5	54,5	33044	64,7	464	126	1430	4456	1035	870	696	4056	1637	2419	33,7	60,3	42	2x1¼	2x1¼	3
4.5.56.6	67,5	49,6	50938	68,2	319	84	1120	5956	910	870	456	5556	2204	1148	26,9	48,3	34	2x1¼	3x1¼	3
6.5.56.6	89,5	65,1	48712	68,2	478	126	1540	5956	1030	870	576	5556	2204	1148	33,7	60,3	42	2x1¼	3x1¼	2x3
8.5.56.6	105,6	75,9	46809	68,2	638	169	1960	5956	1150	870	696	5556	2204	1148	33,7	60,3	48	2x1¼	3x1¼	2x3
4.5.63.6	91,5	67,0	63712	72,1	464	122	1570	6456	905	1110	482	6036	2396	1244	33,7	60,3	42	3x1¼	3x1¼	2x3
6.5.63.6	121,1	88,0	61933	72,1	696	182	2170	6456	1025	1110	602	6036	2396	1244	42,4	60,3	48	3x1¼	3x1¼	2x3
8.5.63.6	142,6	102,8	60175	72,1	927	243	2770	6456	1145	1110	722	6036	2396	1244	42,4	76,1	48	3x1¼	3x1¼	3x3
4.6.50.6	58,4	42,4	43728	65,2	278	74	984	5256	795	870	456	4856	2428	2428	26,9	48,3	34	2x1¼	2x1¼	3
6.6.50.6	77,2	55,9	41564	65,2	417	112	1344	5256	915	870	576	4856	2428	2428	33,7	60,3	48	2x1¼	2x1¼	2x3
8.6.50.6	90,5	65,0	39650	65,2	557	149	1704	5256	1035	870	696	4856	2428	2428	33,7	60,3	48	2x1¼	2x1¼	2x3

* = Sound pressure indication (LpA) at 3 m distance each air cooler (+/- 2 dB(A)) , free field conditions, according EN13487

For moisture carry over see remark pag 5

Capacities and air volumes with 60 Hz fans on request or in our GPC selection program available.

Goedhart ZGB/ZGZ 8mm

Type ZGB ZGZ	3x400V-50H-4 pole (1500 min⁻¹ nom.) NH3				Surface	Internal volume	Weight	Dimensions							Connections					
															Refrigerant				Water-defrost	
	DT1 = 8K (SC2) air on= 0°C	DT1 = 7K (SC3) air on= -18°C	Air volume	LpA @ 3 m (+/- 2 dB(A))				L	B	H	C	E1	E2	E3	In	Out	Hot gas	Drain	In	Drain
	kW	kW	m³/h	dB(A)	m²	dm³	kg	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	NW"	NW"	NW"
4.1.40.8	4,0	2,9	3380	54,3	18	9	120	1006	775	690	456	606			21,3	21,3	22	1¼	1¼	1¼
6.1.40.8	5,3	3,8	3177	54,3	28	13	150	1006	895	690	576	606			21,3	21,3	22	1¼	1¼	1¼
8.1.40.8	6,3	4,5	2996	54,3	37	18	180	1006	1015	690	696	606			21,3	21,3	22	1¼	1¼	1¼
4.1.45.8	6,1	4,4	5243	56,2	28	12	150	1206	800	750	456	806			21,3	21,3	22	1¼	1¼	1¼
6.1.45.8	8,2	5,9	4952	56,2	42	18	200	1206	920	750	576	806			21,3	21,3	22	1¼	1¼	1¼
8.1.45.8	9,7	7,0	4685	56,2	56	24	240	1206	1040	750	696	806			21,3	26,9	22	1¼	1¼	2
4.1.50.8	8,2	5,9	7390	59,1	36	15	184	1256	795	870	456	856			21,3	21,3	22	1¼	1¼	1¼
6.1.50.8	11,1	8,1	7064	59,1	54	23	244	1256	915	870	576	856			21,3	26,9	22	1¼	1¼	2
8.1.50.8	13,3	9,5	6770	59,1	71	30	304	1256	1035	870	696	856			21,3	26,9	22	1¼	1¼	2
4.1.56.8	11,3	8,4	10315	62,8	49	19	232	1556	910	870	456	1156			21,3	26,9	22	1¼	1¼	1¼
6.1.56.8	15,4	10,9	9905	62,8	74	29	312	1556	1030	870	576	1156			21,3	26,9	22	1¼	1¼	2
8.1.56.8	18,5	13,5	9549	62,8	98	39	392	1556	1150	870	696	1156			21,3	33,7	22	1¼	1¼	2
4.1.63.8	15,3	10,9	12831	66,6	71	28	322	1656	905	1110	456	1256			21,3	26,9	22	1¼	1¼	2
6.1.63.8	20,8	15,2	12522	66,6	107	41	432	1656	1025	1110	576	1256			21,3	33,7	22	1¼	1¼	2
8.1.63.8	25,0	17,8	12213	66,6	142	55	542	1656	1145	1110	696	1256			21,3	33,7	22	1¼	1¼	2
4.2.40.8	8,0	5,7	6749	57,0	37	15	190	1556	775	690	456	1156			21,3	21,3	22	1¼	1¼	1¼
6.2.40.8	10,6	7,7	6343	57,0	55	22	250	1556	895	690	576	1156			21,3	26,9	22	1¼	1¼	2
8.2.40.8	12,5	9,0	5976	57,0	74	29	310	1556	1015	690	696	1156			21,3	26,9	22	1¼	1¼	2
4.2.45.8	12,2	8,9	10478	58,9	56	21	250	1956	800	750	456	1556			21,3	26,9	22	1¼	1¼	2
6.245.8	16,4	11,8	9888	58,9	83	31	340	1956	920	750	576	1556			21,3	33,7	22	1¼	1¼	2
8.2.45.8	19,4	14,0	9355	58,9	111	42	420	1956	1040	750	696	1556			21,3	33,7	22	1¼	1¼	2
4.2.50.8	16,4	11,7	14769	61,7	71	26	318	2056	795	870	456	1656			21,3	33,7	22	1¼	1¼	2
6.2.50.8	22,1	16,1	14114	61,7	107	40	418	2056	915	870	576	1656			21,3	33,7	22	1¼	1¼	2
8.2.50.8	26,5	19,2	13525	61,7	142	53	528	2056	1035	870	696	1656			21,3	42,4	22	1¼	1¼	2
4.2.56.8	22,6	16,7	20620	65,4	98	35	424	2656	910	870	456	2256			21,3	33,7	22	1¼	1¼	2
6.2.56.8	30,7	22,4	19796	65,4	147	52	574	2656	1030	870	576	2256			21,3	42,4	22	1¼	1¼	2x2
8.2.56.8	37,0	26,9	19085	65,4	195	70	724	2656	1150	870	696	2256			21,3	42,4	34	1¼	1¼	2x2
4.2.63.8	30,6	21,8	25658	69,2	142	50	594	2856	905	1110	456	2456			21,3	42,4	22	1¼	1¼	2x2
6.2.63.8	41,6	30,3	25036	69,2	213	75	804	2856	1025	1110	576	2456			26,9	42,4	34	1¼	1¼	2x2
8.2.63.8	50,0	35,6	24414	69,2	284	100	1004	2856	1145	1110	696	2456			26,9	42,4	34	1¼	1¼	3
4.3.45.8	18,3	13,4	15713	60,4	83	30	370	2706	800	750	456	2306			21,3	33,7	22	1¼	1¼	2
6.3.45.8	24,5	17,6	14826	60,4	125	45	490	2706	920	750	576	2306			21,3	33,7	22	1¼	1¼	2
8.3.45.8	29,0	20,7	14025	60,4	167	60	610	2706	1040	780	696	2306			21,3	42,4	22	1¼	1¼	2x2
4.3.50.8	24,5	17,9	22148	63,1	107	38	452	2856	795	870	456	2456			21,3	33,7	22	1¼	1¼	2
6.3.50.8	33,1	24,1	21165	63,1	160	57	612	2856	915	870	576	2456			21,3	42,4	22	1¼	1¼	2x2
8.3.50.8	39,8	28,9	20279	63,1	213	76	762	2856	1035	870	696	2456			21,3	42,4	34	1¼	1¼	2x2
4.356.8	33,9	25,0	30925	66,8	146	51	616	3756	910	870	456	3356	1143	2213	21,3	42,4	22	2x1¼	2x1¼	2x2
6.356.8	46,0	33,4	29689	66,8	220	76	826	3756	1030	870	576	3356	1143	2213	26,9	42,4	34	2x1¼	2x1¼	2x2
8.3.56.8	55,5	40,3	28620	66,8	293	101	1036	3756	1150	870	696	3356	1143	2213	26,9	48,3	34	2x1¼	2x1¼	3
4.3.63.8	46,0	33,8	38484	70,6	213	76	866	4056	905	1110	482	3636	1243	2393	26,9	42,4	34	2x1¼	2x1¼	2x2
6.3.63.8	62,4	45,4	37548	70,6	320	114	1166	4056	1025	1110	602	3636	1243	2393	26,9	48,3	34	2x1¼	2x1¼	3
8.3.63.8	75,1	54,5	36614	70,6	426	152	1476	4056	1145	1110	722	3636	1243	2393	33,7	60,3	42	2x1¼	2x1¼	2x3
4.4.45.8	24,4	17,8	20947	61,3	111	39	480	3456	800	750	456	3056			21,3	33,7	22	2x1¼	2x1¼	2
6.4.45.8	32,7	23,7	19763	61,3	166	58	640	3456	920	750	576	3056			21,3	42,4	22	2x1¼	2x1¼	2x2
8.4.45.8	38,7	28,0	18695	61,3	222	77	800	3456	1040	750	696	3056			21,3	42,4	34	2x1¼	2x1¼	2x2
4.4.50.8	32,7	24,1	29527	64,0	142	49	596	3656	795	870	456	3256	1628	1628	21,3	42,4	22	2x1¼	2x1¼	2x2
6.4.50.8	44,2	32,1	28214	64,0	213	74	796	3656	915	870	576	3256	1628	1628	26,9	42,4	34	2x1¼	2x1¼	2x2
8.4.50.8	53,0	38,4	27033	64,0	284	98	996	3656	1035	870	696	3256	1628	1628	26,9	48,3	34	2x1¼	2x1¼	3
4.4.56.8	45,2	33,4	41229	67,7	195	69	808	4856	910	870	456	4456	2228	2228	26,9	42,4	34	2x1¼	2x1¼	2x2
6.4.56.8	61,3	44,8	39581	67,7	293	103	1098	4856	1030	870	576	4456	2228	2228	26,9	48,3	34	2x1¼	2x1¼	3
8.4.56.8	74,0	53,7	38155	67,7	390	137	1378	4856	1150	870	696	4456	2228	2228	33,7	60,3	42	2x1¼	2x1¼	3
4.4.63.8	61,2	43,6	51310	71,5	284	99	1128	5256	905	1110	482	4836	2418	2418	26,9	48,3	34	2x1¼	2x1¼	3
6.4.63.8	83,1	60,5	50062	71,5	426	148	1538	5256	1025	1110	602	4836	2418	2418	33,7	60,3	42	2x1¼	2x1¼	2x3
8.4.63.8	100,0	71,2	48815	71,5	568	198	1938	5256	1145	1110	722	4836	2418	2418	33,7	60,3	48	2x1¼	2x1¼	2x3
4.5.50.8	40,8	30,2	36908	64,7	177	61	730	4456	795	870	456	4056	1637	2419	26,9	42,4	34	2x1¼	2x1¼	2x2
6.5.50.8	55,2	40,2	35265	64,7	266	91	970	4456	915	870	576	4056	1637	2419	26,9	48,3	34	2x1¼	2x1¼	2x2
8.5.50.8	66,3	47,8	33786	64,7	355	121	1220	4456	1035	870	696	4056	1637	2419	26,9	48,3	34	2x1¼	2x1¼	2x3
4.5.56.8	56,5	41,5	51534	68,2	244	84	990	5956	910	870	456	5556	2204	1148	26,9	48,3	34	2x1¼	3x1¼	3x2
6.5.56.8	76,6	55,9	49473	68,2	366	126	1340	5956	1030	870	576	5556	2204	1148	33,7	60,3	42	2x1¼	3x1¼	3x2
8.5.56.8	92,5	66,0	47689	68,2	488	169	1690	5956	1150	870	696	5556	2204	1148	33,7	60,3	42	2x1¼	3x1¼	2x3
4.5.63.8	76,6	56,2	64135	72,1	355	121	1380	6456	905	1110	482	6036	2396	1244	33,7	60,3	34	3x1¼	3x1¼	3
6.5.63.8	103,8	75,3	62576	72,1	532	182	1880	6456	1025	1110	602	6036	2396	1244	33,7	60,3	42	3x1¼	3x1¼	2x3
8.5.63.8	125,0	89,9	61015	72,1	710	243	2380	6456	1145	1110	722	6036	2396	1244	42,4	60,3	48	3x1¼	3x1¼	2x3
4.6.50.8	49,0	35,9	44287	65,2	213	74	874	5256	795	870	456	4856	2428	2428	26,9	42,4	34	2x1¼	2x1¼	2x2
6.6.50.8	66,2	48,2	42315	65,2	319	112	1174	5256	915	870	576	4856	2428	2428	26,9	48,3	34	2x1¼	2x1¼	2x3
8.6.50.8	79,5	57,7	40540	65,2	426	149	1474	5256	1035	870	696	4856	2428	2428	33,7	60,3	42	2x1¼	2x1¼	2x3

* = Sound pressure indication (LpA) at 3 m distance each air cooler (+/- 2 dB(A)) , free field conditions, according EN13487

For moisture carry over see remark pag 5

Capacities and air volumes with 60 Hz fans on request or in our GPC selection program available.

Goedhart ZGB/ZGZ 10mm

Type ZGB ZGZ	3x400V-50H-4 pole (1500 min⁻¹ nom.)				Surface	Internal volume	Weight	Dimensions							Connections					
	NH3														Refrigerant				Water-defrost	
	DT1 = 8K (SC2) air on= 0°C	DT1 = 7K (SC3) air on= -18°C	Air volume	LpA @ 3 m (+/- 2 dB(A))				L	B	H	C	E1	E2	E3	In	Out	Hot gas	Drain	In	Drain
	kW	kW	m³/h	dB(A)	m²	dm³	kg	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	NW"	NW"	NW"
6.1.40.10	4,7	3,4	3226	54,3	23	13	140	1006	895	690	576	606			21,3	21,3	22	1¼	1¼	1¼
8.1.40.10	5,7	4,1	3053	54,3	30	18	170	1006	1015	690	696	606			21,3	21,3	22	1¼	1¼	1¼
1.1.40.10	6,4	4,6	2898	54,3	38	22	210	1006	1135	690	816	606			21,3	21,3	22	1¼	1¼	1¼
6.1.45.10	7,3	5,2	5021	56,2	34	18	180	1206	920	750	576	806			21,3	21,3	22	1¼	1¼	1¼
8.1.45.10	8,7	6,4	4770	56,2	46	24	230	1206	1040	750	696	806			21,3	21,3	22	1¼	1¼	1¼
1.1.45.10	9,9	7,1	4544	56,2	57	30	270	1206	1160	750	816	806			21,3	26,9	22	1¼	1¼	1¼
6.1.50.10	9,8	7,1	7141	59,1	44	23	224	1256	915	870	576	856			21,3	26,9	22	1¼	1¼	1¼
8.1.50.10	11,9	8,5	6863	59,1	58	30	274	1256	1035	870	696	856			21,3	26,9	22	1¼	1¼	2
1.1.5010	13,6	9,7	6612	59,1	73	38	334	1256	1155	870	816	856			21,3	26,9	22	1¼	1¼	2
6.1.56.10	13,6	9,7	10000	62,8	60	29	292	1556	1030	870	576	1156			21,3	26,9	22	1¼	1¼	2
8.1.56.10	16,6	12,0	9661	62,8	80	39	362	1556	1150	870	696	1156			21,3	33,7	22	1¼	1¼	2
1.1.56.10	19,0	13,6	9360	62,8	100	48	432	1556	1270	870	816	1156			21,3	33,7	22	1¼	1¼	2
6.1.63.10	18,4	13,4	12599	66,6	87	41	402	1656	1025	1110	576	1256			21,3	33,7	22	1¼	1¼	2
8.1.63.10	22,5	16,0	12315	66,6	116	55	502	1656	1145	1110	696	1256			21,3	33,7	22	1¼	1¼	2
1.1.63.10	25,8	18,4	12033	66,6	145	69	602	1656	1265	1110	816	1256			21,3	42,4	22	1¼	1¼	3
6.2.40.10	9,4	6,9	6440	57,0	45	22	230	1556	895	690	576	1156			21,3	21,3	22	1¼	1¼	1¼
8.2.40.10	11,3	8,1	6091	57,0	60	29	280	1556	1015	690	696	1156			21,3	26,9	22	1¼	1¼	2
1.2.40.10	12,8	9,1	5782	57,0	75	37	340	1556	1135	690	816	1156			21,3	26,9	22	1¼	1¼	2
6.2.45.10	14,5	10,3	10029	58,9	68	31	310	1956	920	750	576	1556			21,3	26,9	22	1¼	1¼	2
8.2.45.10	17,4	12,7	9523	58,9	91	42	390	1956	1040	750	696	1556			21,3	33,7	22	1¼	1¼	2
1.2.45.10	19,7	14,1	9071	58,9	113	52	460	1956	1160	750	816	1556			21,3	33,7	22	1 ¼	1¼	2
6.2.50.10	19,5	14,3	14269	61,7	87	40	388	2056	915	870	576	1656			21,3	33,7	22	1¼	1¼	2
8.2.50.10	23,8	17,2	13711	61,7	116	53	478	2056	1035	870	696	1656			21,3	33,7	22	1¼	1¼	2
1.2.50.10	27,2	19,4	13206	61,7	145	66	578	2056	1155	870	816	1656			21,3	42,4	22	1¼	1¼	2
6.2.56.10	27,1	19,8	19988	65,4	120	52	524	2656	1030	870	576	2256			21,3	42,4	22	1¼	1¼	2
8.2.56.10	33,1	24,0	19308	65,4	159	70	654	2656	1150	870	696	2256			21,3	42,4	22	1¼	1¼	2x2
1.2.56.10	38,0	27,3	18706	65,4	199	87	784	2656	1270	870	816	2256			21,3	42,4	34	1¼	1¼	2x2
6.2.63.10	36,7	26,8	25189	69,2	174	75	734	2856	1025	1110	576	2456			21,3	42,4	34	1¼	1¼	2x2
8.2.63.10	44,8	32,0	24617	69,2	232	100	914	2856	1145	1110	696	2456			26,9	42,4	34	1¼	1¼	2x2
1.2.63.10	51,5	36,8	24052	69,2	290	125	1104	2856	1265	1110	816	2456			26,9	48,3	34	1¼	1¼	3
6.3.45.10	21,7	15,5	15038	60,4	102	45	450	2706	920	750	576	2306			21,3	33,7	22	1¼	1¼	2
8.3.45.10	26,1	18,7	14277	60,4	136	60	560	2706	1040	750	696	2306			21,3	33,7	22	1¼	1¼	2
1.3.45.10	29,5	21,3	13599	60,4	170	74	670	2706	1160	780	816	2306			21,3	42,4	22	1¼	1¼	2x2
6.3.50.10	29,3	21,4	21396	63,1	130	57	562	2856	915	870	576	2456			21,3	42,4	22	1¼	1¼	2
8.3.50.10	35,7	25,9	20559	63,1	174	76	692	2856	1035	870	696	2456			21,3	42,4	34	1¼	1¼	2x2
1.3.50.10	40,7	29,5	19799	63,1	217	94	834	2856	1155	870	816	2456			26,9	42,4	34	1¼	1¼	2x2
6.3.56.10	40,6	29,6	29975	66,8	179	76	756	3756	1030	870	576	3356	1143	2213	21,3	42,4	34	2x1¼	2x1¼	2x2
8.3.56.10	49,6	36,0	28954	66,8	239	101	946	3756	1150	870	696	3356	1143	2213	26,9	42,4	34	2x1¼	2x1¼	2x3
1.3.56.10	56,9	40,7	28052	66,8	299	126	1136	3756	1270	870	816	3356	1143	2213	26,9	48,3	42	2x1¼	2x1¼	3
6.3.63.10	55,1	40,2	37779	70,6	261	114	1066	4056	1025	1110	602	3636	1243	2393	26,9	48,3	34	2x1¼	2x1¼	3
8.3.63.10	67,2	48,9	36918	70,6	348	152	1336	4056	1145	1110	722	3636	1243	2393	33,7	48,3	42	2x1¼	2x1¼	2x3
1.3.63.10	77,2	55,7	36071	70,6	434	191	1616	4056	1265	1110	842	3636	1243	2393	33,7	60,3	42	2x1¼	2x1¼	2x3
6.4.45.10	29,0	21,1	20045	61,3	136	58	580	3456	920	750	576	3056			21,3	42,4	22	2x1¼	2x1¼	2x2
8.4.45.10	34,8	25,3	19031	61,3	181	77	720	3456	1040	750	696	3056			21,3	42,4	34	2x1¼	2x1¼	2x2
1.4.45.10	39,4	28,5	18127	61,3	226	97	870	3456	1160	750	816	3056			21,3	42,4	34	2x1¼	2x1¼	2x2
6.4.50.10	39,0	28,5	28525	64,0	174	74	726	3656	915	870	576	3256	1628	1628	21,3	42,4	34	2x1¼	2x1¼	2x2
8.4.50.10	47,5	34,3	27406	64,0	232	98	906	3656	1035	870	696	3256	1628	1628	26,9	42,4	34	2x1¼	2x1¼	2x2
1.4.50.10	54,3	38,8	26394	64,0	290	123	1086	3656	1155	870	816	3256	1628	1628	26,9	48,3	34	2x1¼	2x1¼	3
6.4.56.10	54,1	39,5	39963	67,7	239	99	988	4856	1030	870	576	4456	2228	2228	26,9	48,3	34	2x1¼	2x1¼	2x2
8.4.56.10	66,2	47,9	38601	67,7	319	132	1238	4856	1150	870	696	4456	2228	2228	26,9	48,3	34	2x1¼	2x1¼	3
1.4.56.10	75,9	54,6	37396	67,7	398	165	1488	4856	1270	870	816	4456	2228	2228	33,7	60,3	42	2x1¼	2x1¼	3
6.4.63.10	73,4	53,6	50370	71,5	347	148	1398	5256	1025	1110	602	4836	2418	2418	33,7	60,3	34	2x1¼	2x1¼	2x3
8.4.63.10	89,6	63,9	49221	71,5	463	198	1748	5256	1145	1110	722	4836	2418	2418	33,7	60,3	42	2x1¼	2x1¼	2x3
1.4.63.10	102,8	73,5	48090	71,5	579	247	2108	5256	1265	1110	842	4836	2418	2418	33,7	60,3	48	2x1¼	2x1¼	2x3
6.5.50.10	48,8	35,3	35653	64,7	217	91	890	4456	915	870	576	4056	1637	2419	26,9	42,4	34	2x1¼	2x1¼	2x2
8.5.50.10	59,4	42,5	34254	64,7	290	121	1200	4456	1035	870	696	4056	1637	2419	26,9	48,3	34	2x1¼	2x1¼	3
1.5.50.10	67,8	49,2	32987	64,7	362	151	1330	4456	1155	870	816	4056	1637	2419	33,7	48,3	42	2x1¼	2x1¼	3
6.5.56.10	67,6	49,1	49950	68,2	299	126	1220	5956	1030	870	576	5556	2204	1148	26,9	48,3	34	2x1¼	3x1¼	3
8.5.56.10	82,7	58,9	48247	68,2	398	169	1530	5956	1150	870	696	5556	2204	1148	33,7	60,3	42	2x1¼	3x1¼	2x3
1.5.56.10	94,8	68,5	46741	68,2	498	211	1840	5956	1270	870	816	5556	2204	1148	33,7	60,3	42	2x1¼	3x1¼	2x3
6.5.63.10	91,7	66,0	62961	72,1	434	182	1700	6456	1025	1110	602	6036	2396	1244	33,7	60,3	42	3x1¼	3x1¼	2x3
8.5.63.10	111,9	80,0	61524	72,1	579	243	2140	6456	1145	1110	722	6036	2396	1244	42,4	60,3	48	3x1¼	3x1¼	2x3
1.5.63.10	128,5	93,0	60109	72,1	724	304	2590	6456	1265	1110	842	6036	2396	1244	42,4	76,1	48	3x1¼	3x1¼	3x3
6.6.50.10	58,5	42,7	42780	65,2	261	108	1054	5256	915	870	576	4856	2428	2428	26,9	48,3	34	2x1¼	2x1¼	3
8.6.50.10	71,3	51,8	41101	65,2	347	144	1324	5256	1035	870	696	4856	2428	2428	33,7	60,3	34	2x1¼	2x1¼	3
1.6.50.10	81,3	58,9	39581	65,2	434	180	1584	5256	1155	870	816	4856	2428	2428	33,7	60,3	42	2x1¼	2x1¼	2x3

* = Sound pressure indication (LpA) at 3 m distance each air cooler (+/- 2 dB(A)) , free field conditions, according EN13487

For moisture carry over see remark pag 5

Capacities and air volumes with 60 Hz fans on request or in our GPC selection program available.

Goedhart ZGB/ZGZ 12mm

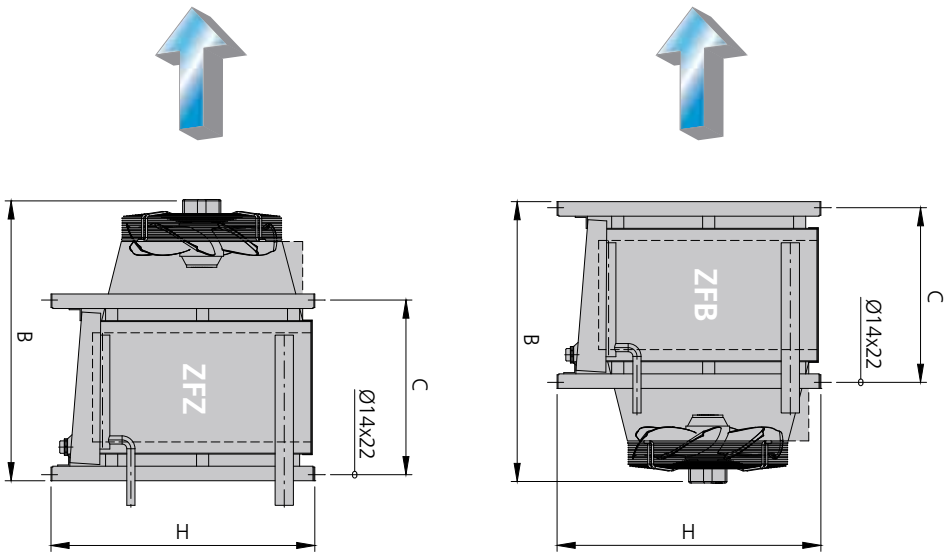
Type ZGB ZGZ	3x400V-50H-4 pole (1500 min^{-1} nom.)							Dimensions							Connections					
	NH3														Refrigerant				Water-defrost	
	DT1 = 8K (SC2) air on= 0°C	DT1 = 7K (SC3) air on= -18°C	Air volume	LpA @ 3 m (+/- 2 dB(A))	Surface	Internal volume	Weight	L	B	H	C	E1	E2	E3	In	Out	Hot gas	Drain	In	Drain
	kW	kW	m³/h	dB(A)	m²	dm³	kg	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	NW"	NW"	NW"
8.1.40.12	5,2	3,7	3093	54,3	26	18	160	1006	1015	690	576	606			21,3	21,3	22	1¼	1¼	1¼
1.1.40.12	5,9	4,2	2943	54,3	32	22	200	1006	1135	690	696	606			21,3	21,3	22	1¼	1¼	1¼
2.1.40.12	6,5	4,6	2810	54,3	38	26	220	1006	1255	690	816	606			21,3	21,3	22	1¼	1¼	1¼
8.1.45.12	8,0	5,8	4827	56,2	39	24	210	1206	1040	750	576	806			21,3	21,3	22	1¼	1¼	1¼
1.1.45.12	9,1	6,5	4609	56,2	48	30	260	1206	1160	750	696	806			21,3	21,3	22	1¼	1¼	1¼
2.1.45.12	10,0	7,2	4413	56,2	58	36	300	1206	1280	750	816	806			21,3	26,9	22	1¼	1¼	2
8.1.50.12	10,9	7,8	6926	59,1	49	30	264	1256	1035	870	576	856			21,3	26,9	22	1¼	1¼	1¼
1.1.50.12	12,5	9,0	6684	59,1	62	38	314	1256	1155	870	696	856			21,3	26,9	22	1¼	1¼	2
2.1.5010	13,9	10,0	6463	59,1	74	45	364	1256	1275	870	816	856			21,3	26,9	22	1¼	1¼	2
8.1.56.12	15,1	10,9	9737	62,8	68	39	342	1556	1150	870	576	1156			21,3	26,9	22	1¼	1¼	2
1.1.56.12	17,5	12,5	9446	62,8	85	48	402	1556	1270	870	696	1156			21,3	33,7	22	1¼	1¼	2
2.1.56.12	19,5	13,9	9185	62,8	102	58	472	1556	1390	870	816	1156			21,3	33,7	22	1¼	1¼	2
8.1.63.12	20,5	14,6	12382	66,6	99	55	462	1656	1145	1110	576	1256			21,3	33,7	22	1¼	1¼	2
1.1.63.12	23,7	16,9	12115	66,6	123	69	562	1656	1265	1110	696	1256			21,3	33,7	22	1¼	1¼	2
2.1.63.12	26,4	18,9	11857	66,6	148	83	640	1656	1385	1110	816	1256			21,3	42,4	22	1¼	1¼	2
8.2.40.12	10,4	7,4	6171	57,0	51	29	260	1556	1015	690	576	1156			21,3	26,9	22	1¼	1¼	1¼
1.2.40.12	11,8	8,5	5870	57,0	64	37	320	1556	1135	690	696	1156			21,3	26,9	22	1¼	1¼	2
2.2.40.12	12,9	9,2	5603	57,0	76	44	360	1556	1255	690	816	1156			21,3	26,9	22	1¼	1¼	2
8.2.45.12	16,0	11,6	9638	58,9	77	42	360	1956	1040	750	576	1556			21,3	26,9	22	1¼	1¼	2
1.2.45.12	18,2	13,0	9200	58,9	96	52	430	1956	1160	750	696	1556			21,3	33,7	22	1¼	1¼	2
2.2.45.12	20,0	14,3	8809	58,9	116	63	500	1956	1280	750	816	1556			21,3	33,7	22	1¼	1¼	2
8.2.50.12	21,7	15,6	13839	61,7	99	53	448	2056	1035	870	576	1656			21,3	33,7	22	1¼	1¼	2
1.2.50.12	25,0	17,9	13351	61,7	123	66	538	2056	1155	870	696	1656			21,3	33,7	22	1¼	1¼	2
2.2.50.12	27,7	19,9	12907	61,7	148	79	618	2056	1275	870	816	1656			21,3	42,4	22	1¼	1¼	2
8.2.56.12	30,2	21,7	19461	65,4	135	70	614	2656	1150	870	576	2256			21,3	42,4	22	1¼	1¼	3
1.2.56.12	34,9	25,0	18878	65,4	169	87	734	2656	1270	870	696	2256			21,3	42,4	34	1¼	1¼	3
2.2.56.12	38,8	27,8	18354	65,4	203	105	844	2656	1390	870	816	2256			21,3	42,4	34	1¼	1¼	3
8.2.63.12	40,9	29,2	24753	69,2	197	100	844	2856	1145	1110	576	2456			26,9	42,4	34	1¼	1¼	3
1.2.63.12	47,4	33,8	24219	69,2	246	126	1024	2856	1265	1110	696	2456			26,9	42,4	34	1¼	1¼	3
2.2.63.12	52,7	37,7	23697	69,2	296	151	1184	2856	1385	1110	816	2456			26,9	48,3	34	1¼	1¼	3
8.3.45.12	23,9	17,1	14451	60,4	115	60	520	2706	1040	750	576	2306			21,3	33,7	22	1¼	1¼	2
1.3.45.12	27,3	19,6	13792	60,4	144	74	620	2706	1160	750	696	2306			21,3	42,4	22	1¼	1¼	2x2
2.3.45.12	29,9	21,5	13204	60,4	173	89	720	2706	1280	780	816	2306			21,3	42,4	22	1¼	1¼	2x2
8.3.50.12	32,5	23,6	20751	63,1	148	76	642	2856	1035	870	576	2456			21,3	42,4	22	1¼	1¼	2x2
1.3.50.12	37,5	27,1	20017	63,1	185	94	772	2856	1155	870	696	2456			21,3	42,4	34	1¼	1¼	2x2
2.3.50.12	41,5	29,8	19351	63,1	222	113	902	2856	1275	870	816	2456			26,9	42,4	34	1¼	1¼	2x2
8.3.56.12	45,2	32,6	29186	66,8	203	101	876	3756	1150	870	576	3356	1143	2213	26,9	42,4	34	2x1¼	2x1¼	2x2
1.3.56.12	52,3	37,4	28309	66,8	254	126	1056	3756	1270	870	696	3356	1143	2213	26,9	42,4	34	2x1¼	2x1¼	2x2
2.3.56.12	58,2	42,0	27522	66,8	305	152	1216	3756	1390	870	816	3356	1143	2213	26,9	48,3	34	2x1¼	2x1¼	3
8.3.63.12	61,3	44,4	37124	70,6	295	146	1216	4056	1145	1110	602	3636	1243	2393	26,9	48,3	34	2x1¼	2x1¼	3
1.3.63.12	71,0	51,1	36321	70,6	369	182	1466	4056	1265	1110	722	3636	1243	2393	33,7	60,3	42	2x1¼	2x1¼	3
2.3.63.12	78,9	56,5	35539	70,6	443	219	1706	4056	1385	1110	842	3636	1243	2393	33,7	60,3	42	2x1¼	2x1¼	2x3
8.4.45.12	31,9	23,1	19262	61,3	154	77	670	3456	1040	750	576	3056			21,3	42,4	22	2x1¼	2x1¼	2x2
1.4.45.12	36,4	26,3	18384	61,3	192	97	810	3456	1160	750	696	3056			21,3	42,4	34	2x1¼	2x1¼	2x2
2.4.45.12	39,9	28,6	17600	61,3	231	116	940	3456	1280	750	816	3056			21,3	42,4	34	2x1¼	2x1¼	2x2
8.4.50.12	43,3	31,1	27663	64,0	197	98	836	3656	1035	870	576	3256	1628	1628	26,9	42,4	34	2x1¼	2x1¼	2x2
1.4.50.12	50,0	35,7	26685	64,0	246	123	1006	3656	1155	870	696	3256	1628	1628	26,9	42,4	34	2x1¼	2x1¼	2x2
2.4.50.12	55,4	39,7	25794	64,0	295	147	1166	3656	1275	870	816	3256	1628	1628	26,9	48,3	34	2x1¼	2x1¼	3
8.4.56.12	60,3	43,4	38909	67,7	271	137	1168	4856	1150	870	576	4456	2228	2228	26,9	48,3	34	2x1¼	2x1¼	3
1.4.56.12	69,7	50,0	37741	67,7	338	172	1398	4856	1270	870	696	4456	2228	2228	33,7	48,3	42	2x1¼	2x1¼	3
2.4.56.12	77,6	55,5	36691	67,7	406	206	1618	4856	1390	870	816	4456	2228	2228	33,7	60,3	42	2x1¼	2x1¼	3
8.4.63.12	81,7	58,4	49494	71,5	394	198	1618	5256	1145	1110	602	4836	2418	2418	33,7	60,3	42	2x1¼	2x1¼	2x3
1.4.63.12	94,6	67,6	48424	71,5	492	247	1948	5256	1265	1110	722	4836	2418	2418	33,7	60,3	42	2x1¼	2x1¼	2x3
2.4.63.12	105,3	75,3	47379	71,5	590	297	2268	5256	1385	1110	842	4836	2418	2418	33,7	60,3	48	2x1¼	2x1¼	2x3
8.5.50.12	54,2	38,7	34574	64,7	246	121	1020	4456	1035	870	576	4056	1637	2419	26,9	48,3	34	2x1¼	2x1¼	3
1.5.50.12	62,4	45,2	33351	64,7	308	151	1230	4456	1155	870	696	4056	1637	2419	26,9	48,3	34	2x1¼	2x1¼	3
2.5.50.12	69,2	49,5	32238	64,7	369	181	1420	4456	1275	870	816	4056	1637	2419	33,7	60,3	42	2x1¼	2x1¼	3
8.5.56.12	75,4	53,7	48633	68,2	338	169	1420	5956	1150	870	576	5556	2204	1148	33,7	60,3	42	2x1¼	3x1¼	3
1.5.56.12	87,2	62,7	47172	68,2	423	211	1720	5956	1270	870	696	5556	2204	1148	33,7	60,3	42	2x1¼	3x1¼	2x3
2.5.56.12	97,0	69,4	45860	68,2	507	253	1990	5956	1390	870	816	5556	2204	1148	33,7	60,3	42	2x1¼	3x1¼	2x3
8.5.63.12	102,0	73,0	61865	72,1	492	243	1980	6456	1145	1110	602	6036	2396	1244	33,7	60,3	42	3x1¼	3x1¼	2x3
1.5.63.12	118,2	85,4	60527	72,1	615	304	2390	6456	1265	1110	722	6036	2396	1244	42,4	60,3	48	3x1¼	3x1¼	2x3
2.5.63.12	131,6	94,2	59221	72,1	738	365	2780	6456	1385	1110	842	6036	2396	1244	42,4	76,1	48	3x1¼	3x1¼	3x3
8.6.50.12	65,0	47,2	41486	65,2	295	144	1224	5256	1035	870	576	4856	2428	2428	26,9	48,3	34	2x1¼	2x1¼	3
1.6.50.12	74,9	54,1	40017	65,2	369	180	1464	5256	1155	870	696	4856	2428	2428	33,7	60,3	42	2x1¼	2x1¼	2x3
2.6.50.12	83,0	59,6	38682	65,2	443	216	1704	5256	1275	870	816	4856	2428	2428	33,7	60,3	42	2x1¼	2x1¼	2x3

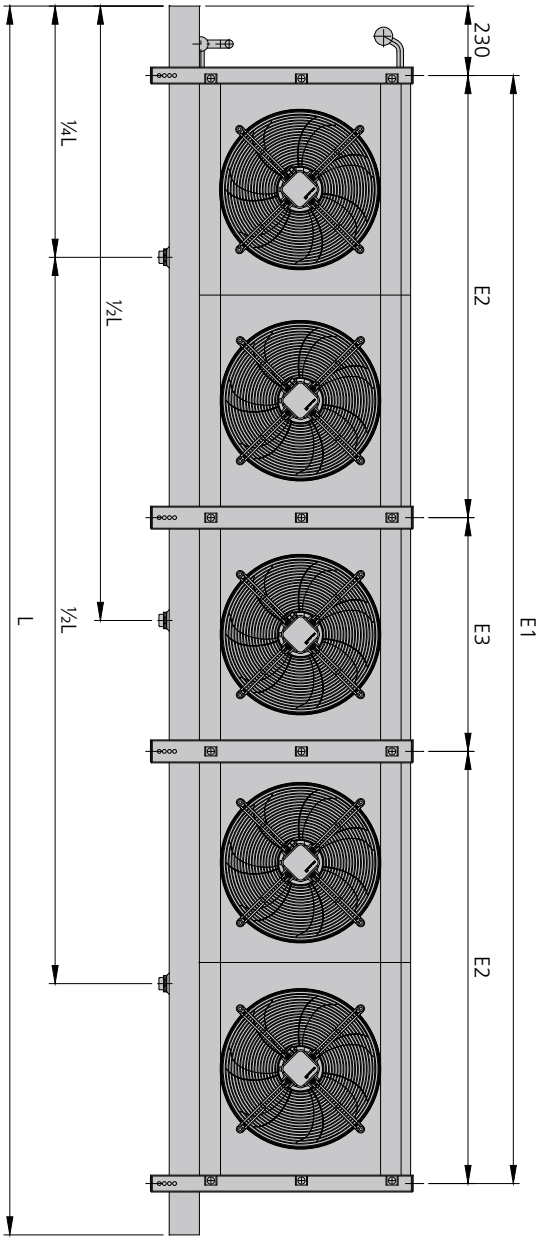
* = Sound pressure indication (LpA) at 3 m distance each air cooler (+/- 2 dB(A)) , free field conditions, according EN13487

For moisture carry over see remark pag 5

Capacities and air volumes with 60 Hz fans on request or in our GPC selection program available.

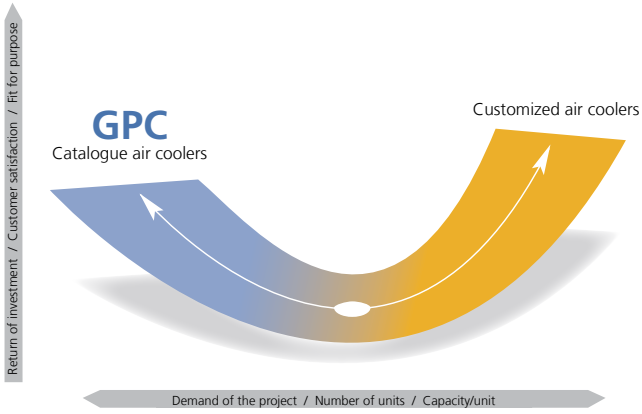
Goedhart ZGB/ZGZ Drawing







Best of both worlds



One question which always is in the mind of an industrial refrigeration engineer is the following:
Do I ask for standard or shall I go for tailor made?

There are good reasons for both choices. In some cases, the solution needed is beyond the boundaries of the standard program. In other occasions, tailor made can even offer a more economical solution. In again other situations standard would be the logical choice to go for.

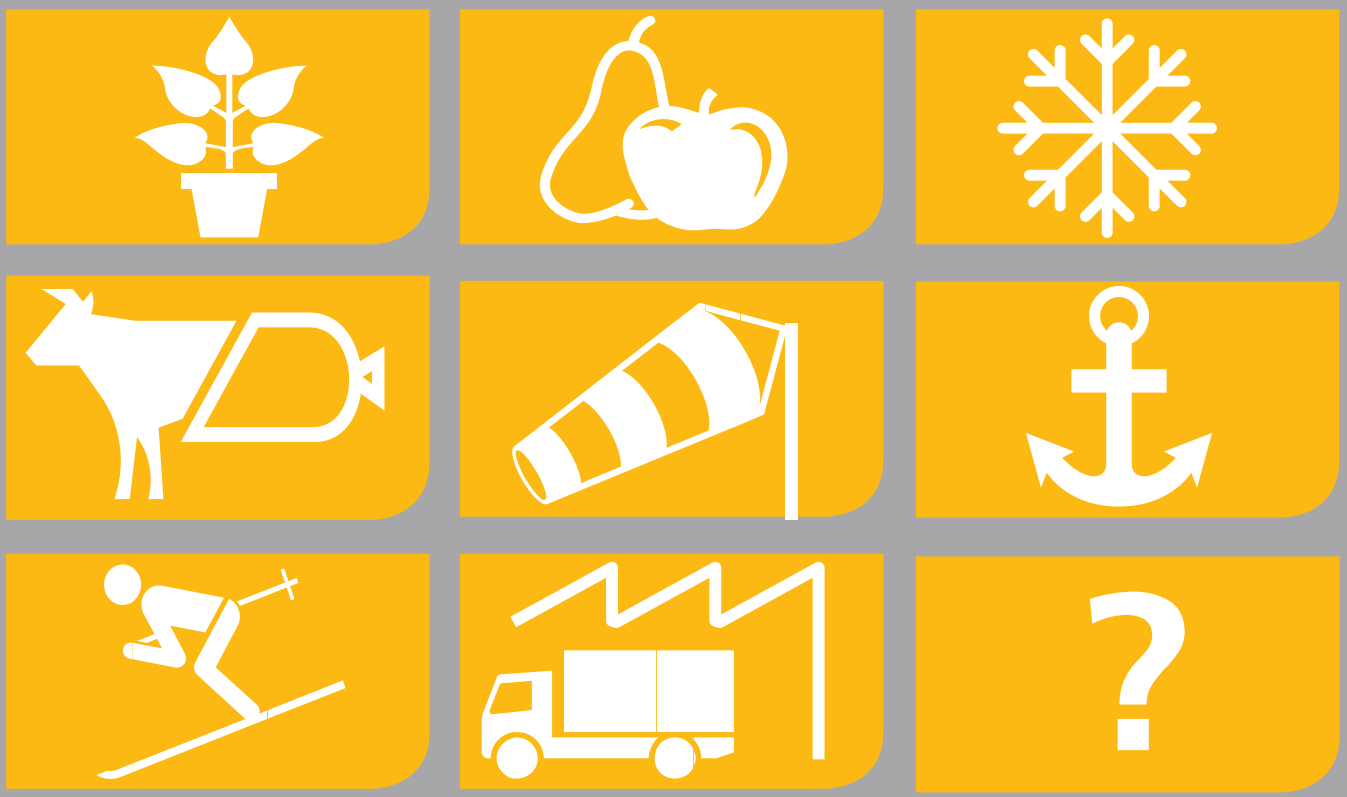
In any of the cases GEA Goedhart can offer you the right solution. With the standard selection software GPC finding the right heat exchanger is just a few mouse clicks away. On other cases the GEA Goedhart engineers are happy to help you out!

Goedhart GPC Program, **your selection software** for air coolers and air cooled condensers!

Goedhart ZGB/ZGZ air cooler selections are available in the Goedhart Product Catalogue or GPC.
On the tool section of **www.goedhart.nl** you will find the download button for the latest version of the GPC.

The GPC program is an easy to use tool for contractors, consultants and every other thinkable user and gives you access to many advantages such as:

- Multilingual
- The whole range of GEA Goedhart standard air coolers and air cooled condensers
- Pre-select buttons to application
- Selections including drawings and an extensive list of accessories
- Spare parts
- Accurate capacities: Under the GPC shell hides a sophisticated capacity calculation program which optimizes circuits to the design conditions as you work!



GEA Goedhart
air coolers
for every application

For Contractors and Original Equipment Manufacturers (OEM) related to the industrial refrigeration industry, GEA Goedhart B.V. offers an unlimited range of air coolers and air cooled condensers in several configurations.

Depending on the application, the optimum configuration will be selected in close cooperation with our customers.

Configurations
The following material combinations are available in various tube pitches and various fin spacing:

Tube material	Fin material
Copper (Cu)	Aluminium (Al)
Stainless steel (Stst)	Aluminium (Al)
Stainless steel (Stst)	Stainless steel (Stst)
Aluminium (Al)	Aluminium (Al)
Hot dipped galvanized steel (FeZn)	Hot dipped galvanized steel (FeZn)

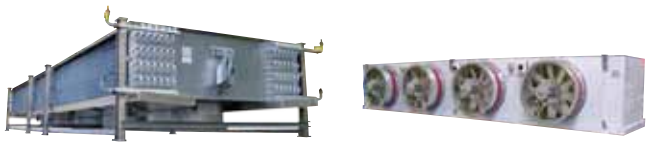
Options on aluminium fins
- Goldlack coated fins
- Seawater resistant aluminium fins (AlMg)

Applications

Cooling	Freezing
Cold stores / Distribution centres	Cold stores / Distribution centres
Food processing rooms	Tunnel / spiral freezers
Fruit storage	Slaughter houses
Banana ripening storage	Automotive testing rooms
Greenhouse conditioning	Ski domes

Pressure Equipment Directive (P.E.D.)
All aircoolers produced by Goedhart comply with the Pressure Equipment Directive 97/23/EC. PED certificates can be downloaded from www.goedhart.nl.





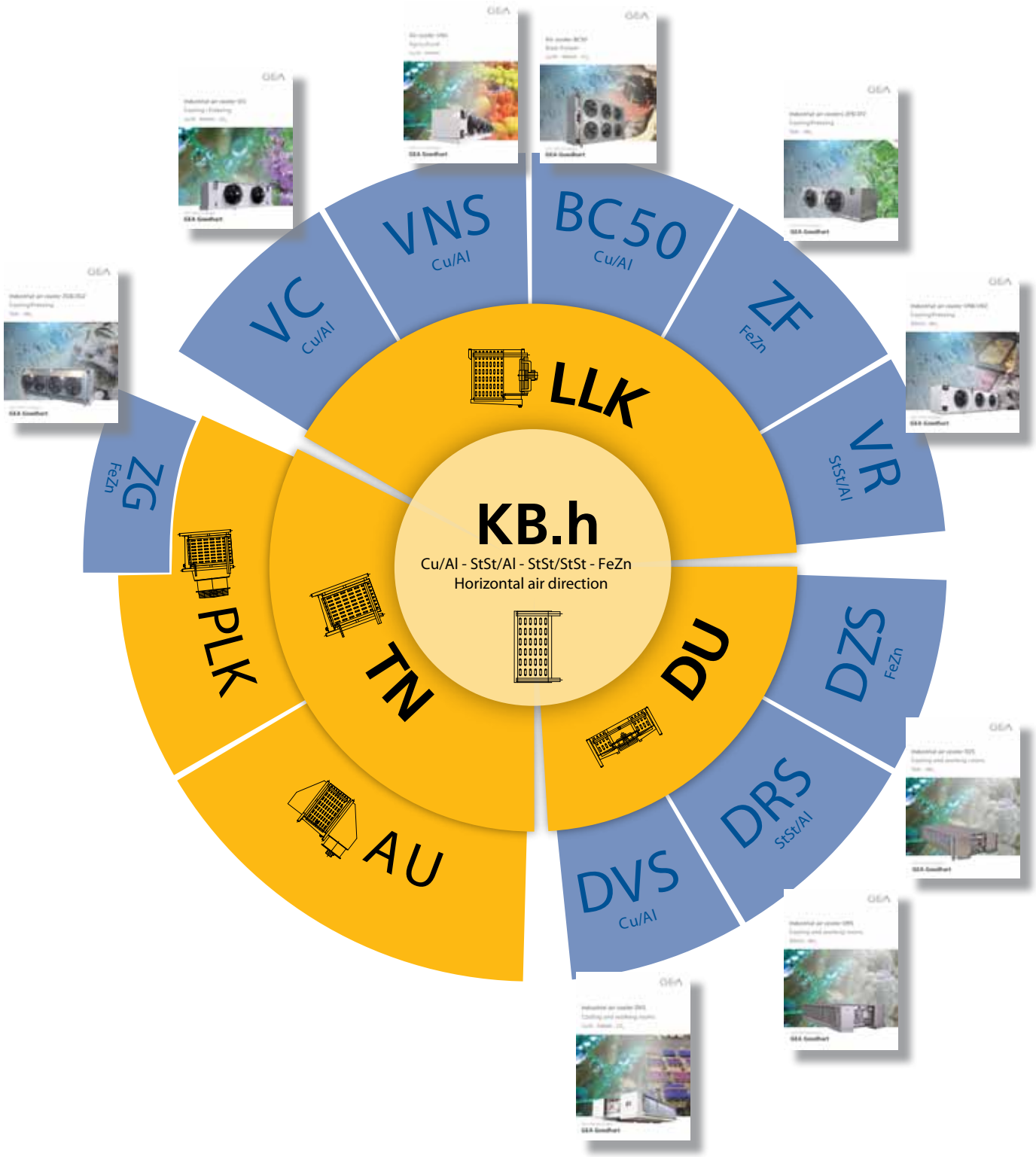


LLOYD'S REGISTER QUALITY ASSURANCE · ISO9001

Lloyd's Register
PRESSURE EQUIPMENT

Goedhart industrial air coolers

Catalogue ranges



Notes

Excellence Passion Integrity Responsibility GEA-versity

GEA Group is a global mechanical engineering company with multi-billion euro sales and operations in more than 50 countries. Founded in 1881 the company is one of the largest providers of innovative equipment and process technology. GEA Group is listed in the STOXX Europe 600 Index.

GEA Heat Exchangers

GEA Goedhart B.V.

Nijverheidsweg 6, 4695 RC Sint Maartensdijk
The Netherlands
Phone +31 (0)166 665 665, Fax+31 (0)166 663 698
www.goedhart.nl,
info.goedhart.nl@geagroup.com

GEA Heat Exchangers

GEA Goedhart s.r.o.

Kostomlátecká 180, 288 26 Nymburk
Czech Republic
Phone +420 325 519 951, Fax+420 325 519 952
www.goedhart.cz,
goedhart.cz@geagroup.com

© GEA Group AG. All rights reserved
Version: 07.03.2.006.dok - 2011-12. Subject to modification.