



Goedhart VCI

Industrial air coolers for cooling & freezing applications

Cu/Al

R404A - CO₂



Goedhart VCI

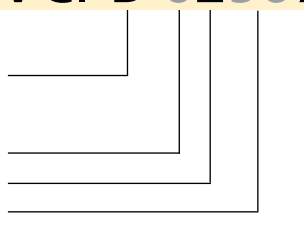
The extensive range Goedhart VCI single discharge ceiling mounted industrial air coolers are available with capacities between 2,8 and 264,4 kW. The Goedhart VCI air coolers are suitable for cooling and freezing applications and with a wide variety of accessories and options available. The coil block is standard build from aluminium end plates, copper tubes and aluminium fins. The fans are arranged for blow-through air configuration for the Goedhart VCI-B and draw-through for the Goedhart VCI-Z (please state which is required when ordering).. The modular design incorporates 5 different sizes of fan, with model options of up to 8 fans per cooler.

Type description

Goedhart VCI-B 62567

B=blow through
Z=draw through

Number of rows deep
Number of fans
Fan diameter [cm]
Fins spacing [mm]



Coil block

- Tube pitch : 50x50 mm straight
- Fin spacing : 4, 6, 7, 8, 10 and 12 mm
- Material : 15mm o.d copper tube
- : aluminium HT-lamellen
- Optimized cooling circuits
- Standard refrigerant connections are positioned on the left hand side of the unit when looking with the direction of the airflow.
- A good thermal contact is achieved by expansion of the tubes into the fin collars, that are also utilised as spacers to provide a constant distance between the fins.
- All coolers are pressure tested to 30 bar (lower by cooling mediums) and are supplied with a light over pressure charge of dry nitrogen.
- Suitable for all known refrigerants and coolants, with the exception of NH3.

Casing

- Construction for ceiling mounting
- The flush mounting protects against and prevents accumulation of dust and dirt.
- Casing material of galvanized sheet steel
- Finishing is standard white epoxy spray (RAL 9003)
- Bend/header projection by end covers, easy removed for maintenance
- Defrost by hot gas spiral or electric defrost elements will be fixed to the bottom side of the coil.
- Stainless steel fasteners

General range features

Capacity

The listed nominal cooling capacities are based on R404A, DT1, RH of 85% and 4 pole 3 phase fans connected in Δ.

Influence of Coating on Capacity

The use of coated fins, or of a fully coated coil will result in a capacity decrease of approximately 3%

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.

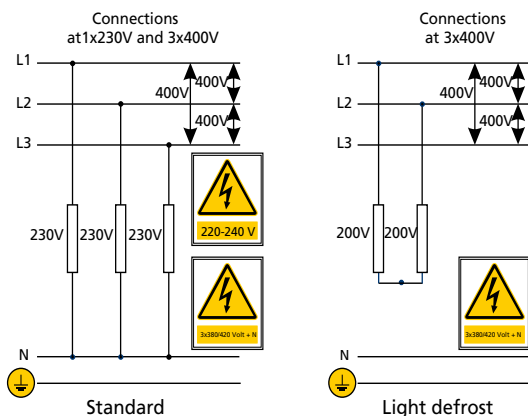
Defrostsystem:

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 VRB and VRZ 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 380/415 V 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.

Hot gas defrost:

The coil block is suited for hot gas defrost (hot gas supply through the suction header). At an extra price the driptray 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 accessories for the Goedhart VCI air coolers are:

- blow-through / draw-through air configuration
- Electric defrost, hot gas defrost and/or water defrost
- Fan periphery heating
- Hinged drip tray.
- Insulated drip tray
- Insulated hygienic polyester drip tray
- Goedhart VCI-Z supplied with bellmouth connection per fan for a longer air throw
- Goedhart VCI-B supplied with air diffusor for a longer air throw
- Goedhart VCI-B supplied with air diffusor with air operated damper to increase defrost efficiency (airvolume reduced to approx. 90% and capacity reduced to approx. 95%)

The accessories are included in the price list.

Optional extras:

Various optional extras for the VCI are available, price and delivery upon request:

- Isulation disks
- Feet for floor mounting
- Coating of the coil block
- Fan hood
- Hinged fan plates
- 60 Hz motors
- EC-fans
- Single phase motors
- Coolants (glycol, water, etc.)
- Pump system
- Other casing materials
- Other fin spacings
- Sea water resistant fins

Mounting and Maintenance

Goedhart VCI is delivered on a wooden frame. When on the frame, Goedhart VCI can be handled by forklift truck, which makes positioning and installation simple. Refer to our maintenance and installation manual.



Fans

Because of the flexible construction of the Goedhart VCI 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 VCI 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.

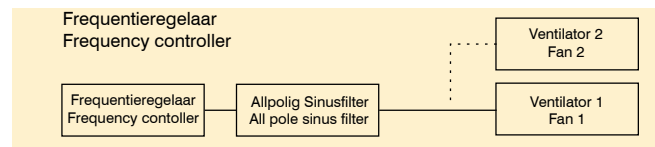
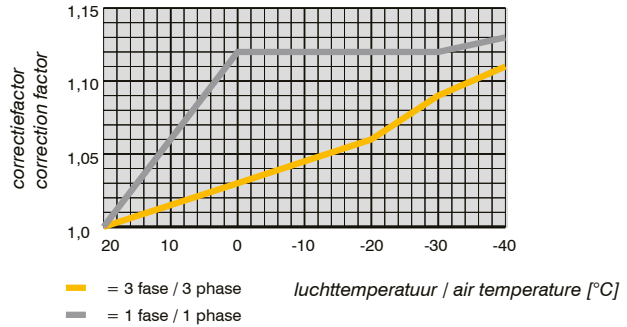
Execution

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 transformer.

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 $\rho = 1,2 \text{ kg/m}^3$). 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 V	Δ				Y				Wiring diagram blow-through/ draw-through
		Speed min ⁻¹	Input Watt	FLC A	Sound power indication each fan LwA (+/-2dB(A)) dB(A)	Speed min ⁻¹	Input Watt	FLC A	Sound power indication each fan LwA (+/-2dB(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

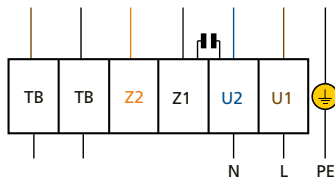
Single phase - 50 Hz

Fan type	Speed min ⁻¹	Input Watt	FLC A	Sound power indication each fan LwA (+/-2dB(A)) dB(A)	Wiring diagram blow-through/ draw-through
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)

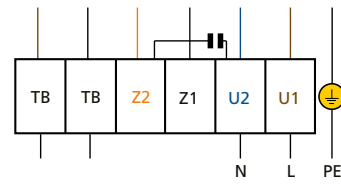
U1 = bruin
 U2 = blauw
 Z1 = zwart
 Z2 = oranje
 TB = wit



Wiring diagram fans for draw-through air coolers

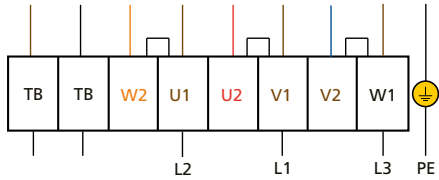
Ziehl Abegg 1x230V-50Hz (104XA)

U1 = bruin
 U2 = blauw
 Z1 = zwart
 Z2 = oranje
 TB = wit



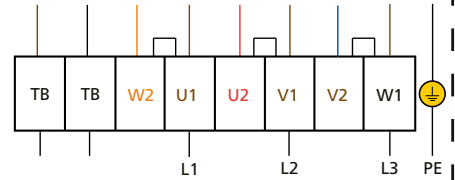
Ziehl Abegg 3x400V (Δ)-50Hz (108XB)

U1 = bruin
 V1 = blauw
 W1 = zwart
 U2 = rood
 V2 = grijs
 W2 = oranje
 TB = wit



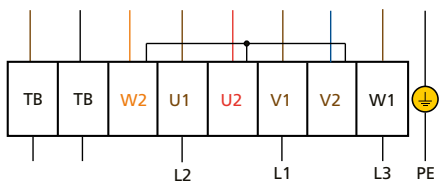
Ziehl Abegg 3x400V (Δ)-50Hz (108XA)

U1 = bruin
 V1 = blauw
 W1 = zwart
 U2 = rood
 V2 = grijs
 W2 = oranje
 TB = wit



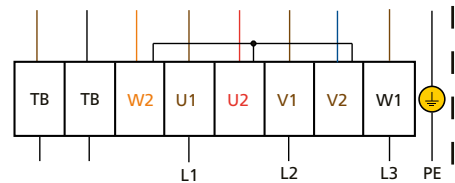
Ziehl Abegg 3x400V (Y)-50Hz (108XB)

U1 = bruin
 V1 = blauw
 W1 = zwart
 U2 = rood
 V2 = grijs
 W2 = oranje
 TB = wit



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

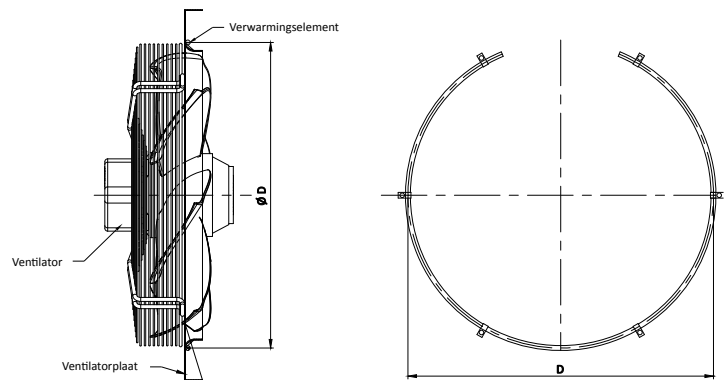
U1 = bruin
 V1 = blauw
 W1 = zwart
 U2 = rood
 V2 = grijs
 W2 = oranje
 TB = wit



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

Correction factors DT1 (=air-on)

The capacities are based on R-404A direct expansion, DT1 and a RH of 85 %. DT1 is the difference between air-on temperature and the evaporation temperature of the cooler. The evaporation temperature is the saturate temperature corresponding to the pressure at the suction outlet of the cooler.

The nominal capacities:

- (SC1) $t_o=0^{\circ}\text{C}$ and $\text{DT1}=10\text{K}$
- (SC2) $t_o=-8^{\circ}\text{C}$ and $\text{DT1}=8\text{K}$
- (SC3) $t_o=-25^{\circ}\text{C}$ and $\text{DT1}=7\text{K}$

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.

$Q_{\text{nominal}} = \text{factor} \times Q_{\text{requested}}$

Cooling

DT1	SC1-DT1 =10K-Air-on=10°C (0/+10)									
	Evaporation temperature (°C)									
K	+7	+6	+5	+4	+3	+2	+1	0	-1	-2
6	1,87	1,87	1,87	1,88	1,88	1,89	1,89	1,89	1,89	1,90
7	1,53	1,53	1,54	1,54	1,54	1,55	1,55	1,55	1,55	1,56
8	1,28	1,28	1,28	1,29	1,29	1,30	1,30	1,30	1,30	1,31
9	1,11	1,11	1,11	1,12	1,12	1,13	1,13	1,13	1,13	1,14
10	0,98	0,98	0,98	0,99	0,99	0,99	1,00	1,00	1,00	1,01
11	0,89	0,89	0,89	0,90	0,90	0,91	0,91	0,91	0,91	0,92
12	0,78	0,79	0,79	0,79	0,80	0,80	0,80	0,80	0,80	0,81

Cooling / Freezing

DT1	SC2-DT1 =8K-Air-on=0°C (-8/0)									
	Evaporation temperature (°C)									
K	-3	-4	-5	-6	-7	-8	-9	-10	-11	-12
6	1,32	1,34	1,39	1,43	1,46	1,46	1,47	1,47	1,48	1,49
7	1,05	1,08	1,12	1,15	1,18	1,19	1,19	1,20	1,20	1,21
8	0,86	0,88	0,91	0,94	0,97	1,00	1,00	1,01	1,01	1,02
9	0,76	0,76	0,78	0,80	0,82	0,86	0,86	0,87	0,87	0,88
10	0,66	0,67	0,69	0,71	0,73	0,74	0,74	0,75	0,75	0,76
11	0,58	0,59	0,59	0,60	0,62	0,64	0,64	0,65	0,66	0,67
12	0,55	0,54	0,54	0,54	0,55	0,55	0,56	0,57	0,58	0,59

Freezing

DT1	SC3-DT1 =7K-Air-on=-18°C (-25/-18)									
	Evaporation temperature (°C)									
K	-21	-22	-23	-24	-25	-26	-27	-28	-29	-30
6	1,20	1,20	1,21	1,21	1,22	1,22	1,23	1,23	1,24	1,24
7	0,99	0,99	0,99	1,00	1,00	1,00	1,01	1,01	1,02	1,02
8	0,83	0,84	0,84	0,84	0,85	0,85	0,85	0,85	0,86	0,86
9	0,72	0,72	0,72	0,73	0,73	0,73	0,73	0,74	0,74	0,74
10	0,63	0,63	0,63	0,64	0,64	0,64	0,64	0,65	0,65	0,65
11	0,56	0,56	0,56	0,57	0,57	0,57	0,50	0,58	0,58	0,58
12	0,50	0,51	0,51	0,51	0,51	0,51	0,52	0,52	0,52	0,52

Calculation example

Fin spacing	: 6 mm	-	DT1 = +3- (+10) = 7K
Required capacity	: 30 kW	-	Correction factor = 1,54
Air-on temperature	: +10 °C	-	Multiply required capacity with correction factor.
Refrigeration temp.	: +3 °C		30 kW x 1,54 = 46,2 kW
Condition	: SC1		
Refrigerant	: R-404A	-	Select air cooler from the table (SC1 type VCI-B 63506=47,5 kW)

Attention!

Moisture carry over from the coil block:

When you select VCI-B 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 VCI-Z. 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%.

Air throw** (only draw-through execution)

The air throw mentioned in the selection table indicated with ** is based on an air temperature of 20°C, blowing under a flat ceiling without any obstruction. The height and air circulation fold of the room can influence the air throw. The air speed at the end of the throw-length is 0,25 m/sec

Goedhart VCI 8mm

	Type VCI	3x400V-50H-4pole (1500 min ⁻¹ nom.)						Dimensions										Connections				
		R404A			Air volume m ³ /h	LpA @ 3 m (+/- 2 dB(A))*	Surface m ²	Internal volume dm ³	Weight kg	L mm	B mm	H mm	C mm	E E1 mm	E2 mm	E3 mm	D1 mm	D2 mm	Refrigerant			
		DT1 = 10K (SC1) air on= 0°C (0/+10)	DT1 = 8K (SC2) air on= 0°C (-8/0)	DT1 = 7K (SC3) air on= -18°C (-25/-18)															In mm	Uit mm	Hot gas mm	Air throw** m
1x	6.1.40.8	4,6	3,5	3330	54,3	30	9	85	1156	740	620	600	756			578		15	15	19	20	
	8.1.40.8	5,9	4,3	3183	54,3	39	11	98	1156	840	620	700	756			578		12	22	19	20	
	1.1.40.8	6,6	4,6	3047	54,3	49	14	112	1156	940	620	800	756			578		12	22	19	20	
	6.1.45.8	7,2	5,1	5038	56,2	41	12	101	1256	710	720	600	856			628		12	22	19	22,5	
	8.1.45.8	8,5	6,2	4794	56,2	54	16	117	1256	810	720	700	856			628		12	22	19	22,5	
	1.1.45.8	9,6	6,8	4575	56,2	68	19	135	1256	910	720	800	856			628		12	22	19	22,5	
	6.1.50.8	9,6	6,9	7130	59,1	51	15	130	1456	830	720	700	1056			728		12	22	19	25	
	8.1.50.8	11,5	8,4	6856	59,1	67	19	150	1456	930	720	800	1056			728		12	28	19	25	
	1.1.50.8	13,2	9,4	6608	59,1	84	24	170	1456	1030	720	900	1056			728		12	28	19	25	
	6.1.56.8	13,9	9,9	10120	62,8	74	21	173	1556	930	920	800	1156			778		12	28	19	27,5	
	8.1.56.8	15,9	10,9	9811	62,8	99	28	200	1556	1030	920	900	1156			778		12	28	19	27,5	
	1.1.56.8	18,4	13,3	9536	62,8	124	35	226	1556	1130	920	1000	1156			778		12	28	19	27,5	
	6.1.63.8	18,0	13,0	12577	66,6	101	29	222	1656	945	1120	800	1256			828		12	28	19	27,5	
	8.1.63.8	21,3	15,6	12294	66,6	135	38	257	1656	1045	1120	900	1256			828		16	35	19	27,5	
1.1.63.8	24,9	17,7	12018	66,6	169	47	291	1656	1145	1120	1000	1256			828		16	35	19	27,5		
2x	6.2.40.8	10,0	7,1	6651	57,0	59	17	135	1856	740	620	600	1456			928		12	22	19	20	
	8.2.40.8	11,9	8,5	6355	57,0	79	22	158	1856	840	620	700	1456			928		12	28	19	20	
	1.2.40.8	13,2	9,5	6082	57,0	98	28	180	1856	940	620	800	1456			928		12	28	19	20	
	6.2.45.8	14,4	10,1	10065	58,9	81	23	164	2056	710	720	600	1656			1028		12	28	19	22,5	
	8.2.45.8	17,0	12,4	9575	58,9	108	30	194	2056	810	720	700	1656			1028		16	28	19	22,5	
	1.2.45.8	19,2	13,6	9134	58,9	135	38	222	2056	910	720	800	1656			1028		16	35	19	22,5	
	6.2.50.8	19,2	13,9	14249	61,7	101	29	219	2456	830	720	700	2056			1228		16	35	19	25	
	8.2.50.8	22,9	16,7	13700	61,7	135	38	254	2456	930	720	800	2056			1228		16	35	19	25	
	1.2.50.8	26,3	18,8	13203	61,7	168	47	289	2456	1030	720	900	2056			1228		16	35	35	25	
	6.2.56.8	27,9	19,8	20231	65,4	148	42	293	2656	930	920	800	2256			1328		16	35	35	27,5	
	8.2.56.8	32,3	21,8	19610	65,4	197	55	341	2656	1030	920	900	2256			1328		16	42	35	27,5	
	1.2.56.8	37,1	26,6	19057	65,4	247	69	389	2656	1130	920	1000	2256			1328		16	42	35	27,5	
	6.2.63.8	36,1	25,9	25147	69,2	202	57	387	2856	945	1120	800	2456			1428		16	42	35	27,5	
	8.2.63.8	42,6	31,2	24579	69,2	269	75	449	2856	1045	1120	900	2456			1428		22	42	35	27,5	
1.2.63.8	47,8	35,2	24021	69,2	336	94	511	2856	1145	1120	1000	2456			1428		22	42	35	27,5		
3x	6.3.45.8	21,7	15,3	15091	60,4	121	34	231	2856	710	720	600	2456			1428		16	35	19	22,5	
	8.3.45.8	25,8	18,3	14355	60,4	161	45	272	2856	810	720	700	2456			1428		16	35	19	22,5	
	1.3.45.8	28,9	20,7	13694	60,4	202	57	312	2856	910	720	800	2456			1428		16	35	35	22,5	
	6.3.50.8	29,2	20,8	21370	63,1	151	43	310	3456	830	720	700	1028	2028		864	1728	16	35	35	25	
	8.3.50.8	34,3	25,0	20544	63,1	202	57	362	3456	930	720	800	1028	2028		864	1728	16	42	35	25	
	1.3.50.8	39,5	28,2	19798	63,1	252	71	413	3456	1030	720	900	1028	2028		864	1728	16	42	35	25	
	6.3.56.8	42,1	29,7	30341	66,8	222	62	414	3756	930	920	800	1128	2228		939	1878	16	42	35	27,5	
	8.3.56.8	50,5	36,1	29410	66,8	296	83	484	3756	1030	920	900	1128	2228		939	1878	22	42	35	27,5	
	1.3.56.8	57,0	41,2	28579	66,8	370	103	552	3756	1130	920	1000	1128	2228		939	1878	22	54	35	27,5	
	6.3.63.8	54,6	38,1	37717	70,6	302	85	551	4056	945	1120	800	1228	2428		1014	2028	22	54	35	27,5	
	8.3.63.8	65,9	46,5	36863	70,6	403	113	642	4056	1045	1120	900	1228	2428		1014	2028	22	54	35	27,5	
	1.3.63.8	74,5	53,3	36024	70,6	504	141	731	4056	1145	1120	1000	1228	2428		1014	2028	22	54	35	27,5	






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

** = Air throw see remark page 5

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 VCI 8mm

Type VCI		3x400V-50H-4pole (1500 min ⁻¹ nom.)					Dimensions											Connections				
		R404A																Refrigerant				
		DT1 = 10K (SC1) air on= 0°C (0/+10)	DT1 = 8K (SC2) air on= 0°C (-8/0)	DT1 = 7K (SC3) air on= -18°C (-25/-18)	Air volume m ³ /h	LpA @ 3 m (+/- 2 dB(A))*	Surface m ²	Internal volume dm ³	Weight kg	L mm	B mm	H mm	C mm	E E1 mm	E2 mm	E3 mm	D1 mm	D2 mm	In mm	Uit mm	Hot gas mm	Air throw** m
	6.4.45.8		29,1	20,7	20117	61,3	161	45	295	3656	710	720	600	1628	1628		914	1828	16	35	35	22,5
	8.4.45.8		34,0	24,7	19136	61,3	215	60	349	3656	810	720	700	1628	1628		914	1828	16	42	35	22,5
	1.4.45.8		38,5	27,5	18253	61,3	269	75	400	3656	910	720	800	1628	1628		914	1828	16	42	35	22,5
	6.4.50.8		38,6	27,7	28490	64,0	202	57	399	4456	830	720	700	2028	2028		1114	2228	16	42	35	25
	8.4.50.8		46,4	33,3	27388	64,0	269	75	464	4456	930	720	800	2028	2028		1114	2228	16	42	35	25
	1.4.50.8		52,7	37,6	26392	64,0	336	94	530	4456	1030	720	900	2028	2028		1114	2228	22	54	35	25
	6.4.56.8		56,4	39,6	40452	67,7	296	83	534	4856	930	920	800	2228	2228		1214	2428	22	54	35	27,5
	8.4.56.8		65,8	43,6	39208	67,7	394	110	625	4856	1030	920	900	2228	2228		1214	2428	22	54	35	27,5
	1.4.56.8		75,5	53,1	38100	67,7	493	137	713	4856	1130	920	1000	2228	2228		1214	2428	22	54	35	27,5
	8.4.63.8		73,1	51,8	50285	71,5	403	113	717	5256	945	1120	800	2428	2428		1314	2628	22	54	35	27,5
	6.4.63.8		85,2	62,4	49147	71,5	537	150	834	5256	1045	1120	900	2428	2428		1314	2628	28	54	42	27,5
	1.4.63.8		96,3	70,4	48029	71,5	672	187	950	5256	1145	1120	1000	2428	2428		1314	2628	22	64	42	27,5
	6.5.45.8		36,0	25,9	25144	62,1	202	57	360	4456	710	720	600	1628	2428		1114	2228	16	42	35	22,5
	8.5.45.8		43,1	30,6	23916	62,1	269	75	426	4456	810	720	700	1628	2428		1114	2228	16	42	35	22,5
	1.5.45.8		48,2	34,0	22813	62,1	336	94	492	4456	910	720	800	1628	2428		1114	2228	22	42	35	22,5
	6.5.50.8		48,7	33,4	35609	64,7	252	71	489	5456	830	720	700	2028	3028		1364	2728	22	42	35	25
	8.5.50.8		58,7	40,4	34233	64,7	336	94	570	5456	930	720	800	2028	3028		1364	2728	22	54	35	25
	1.5.50.8		66,4	47,2	32987	64,7	420	117	649	5456	1030	720	900	2028	3028		1364	2728	22	54	35	25
	6.5.63.8		91,4	64,7	62855	72,1	504	141	880	6456	945	1120	800	2428	2428	1200	1076	2x2152	22	54	42	27,5
	8.5.63.8		110,4	77,9	61430	72,1	671	187	1027	6456	1045	1120	900	2428	2428	1200	1076	2x2152	28	64	42	27,5
1.5.63.8		125,2	88,2	60032	72,1	839	234	1170	6456	1145	1120	1000	2428	2428	1200	1076	2x2152	28	64	42	27,5	
	6.6.45.8		43,9	30,4	30171	62,6	242	68	426	5256	710	720	600	2428	2428		1314	2628	16	42	35	22,5
	8.6.45.8		52,0	36,7	28697	62,6	322	90	505	5256	810	720	700	2428	2428		1314	2628	22	54	35	22,5
	1.6.45.8		57,8	41,4	27372	62,6	403	113	582	5256	910	720	800	2428	2428		1314	2628	22	54	35	22,5
	6.6.50.8		58,0	41,6	42729	65,2	302	85	579	6456	830	720	700	2028	2028	2000	1076	2x2152	22	54	35	25
	8.6.50.8		68,8	50,0	41076	65,2	403	113	675	6456	930	720	800	2028	2028	2000	1076	2x2152	22	54	35	25
	1.6.50.8		79,8	56,3	39581	65,2	504	141	769	6456	1030	720	900	2028	2028	2000	1076	2x2152	22	54	42	25
	6.6.63.8		110,1	76,2	75424	72,6	604	169	1044	7656	945	1120	800	2428	2428	2400	1276	2x2552	28	64	42	27,5
	8.6.63.8		132,6	93,0	73713	72,6	806	225	1219	7656	1045	1120	900	2428	2428	2400	1276	2x2552	28	64	42	27,5
	1.6.63.8		150,0	106,6	72036	72,6	1007	281	1390	7656	1145	1120	1000	2428	2428	2400	1276	2x2552	28	76	42	27,5
		6.7.45.8		50,2		35198	63,0	282	79	490	6056	710	720	600	2428	2428	800	1514	3028	22	42	35
8.7.45.8			60,1		33477	63,0	376	105	580	6056	810	720	700	2428	2428	800	1514	3028	22	54	35	22,5
1.7.45.8			67,5		31932	63,0	470	131	670	6056	910	720	800	2428	2428	800	1514	3028	22	54	35	22,5
6.7.63.8			128,4	89,3	87995	73,2	705	197	1171	7456	945	1320	800	2028	2028	3000	1243	2x2485	28	64	42	27,5
8.7.63.8			154,4	109,0	85999	73,2	940	262	1367	7456	1045	1320	900	2028	2028	3000	1243	2x2485	28	76	42	27,5
1.7.63.8			174,3	124,7	84042	73,2	1175	327	1561	7456	1145	1320	1000	2028	2028	3000	1243	2x2485	28	76	42	27,5
	6.8.45.8		58,1		40224	63,4	322	90	555	6856	710	720	600	2428	2428	1600	1143	2x2285	22	54	35	22,5
	8.8.45.8		68,2		38258	63,4	430	120	658	6856	810	720	700	2428	2428	1600	1143	2x2285	22	54	35	22,5
	1.8.45.8		77,5		36491	63,4	537	150	760	6856	910	720	900	2428	2428	1600	1143	2x2285	22	54	35	22,5

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

** = Air throw see remark page 5

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 VCI 10mm

Type VCI	3x400V-50H-4pole (1500 min ⁻¹ nom.)						Dimensions										Connections				
	R404A			Air volume m ³ /h	LpA @ 3 m (+/- 2 dB(A))*	Surface m ²	Internal volume dm ³	Weight kg	L mm	B mm	H mm	C mm	E E1 mm	E2 mm	E3 mm	D1 mm	D2 mm	Refrigerant			
	DT1 = 10K (SC1) air on= 0°C (0/+10)	DT1 = 8K (SC2) air on= 0°C (-8/0)	DT1 = 7K (SC3) air on= -18°C (-25/-18)															In mm	Uit mm	Hot gas mm	
	kW	kW	kW																		Air throw** m
1x	6.1.40.10	4,0	3,0	3455	54,3	24	9	82	1156	740	620	600	756			578		15	15	19	20
	8.1.40.10	5,4	3,9	3346	54,3	32	11	95	1156	840	620	700	756			578		12	15	19	20
	1.1.40.10	6,2	4,3	3239	54,3	40	14	108	1156	940	620	800	756			578		12	22	19	20
	6.1.45.10	6,5	4,6	5255	56,2	33	12	98	1256	710	720	600	856			628		12	22	19	22,5
	8.1.45.10	7,7	5,6	5066	56,2	44	16	114	1256	810	720	700	856			628		12	22	19	22,5
	1.1.45.10	9,0	6,4	4886	56,2	55	19	129	1256	910	720	800	856			628		12	22	19	22,5
	6.1.50.10	8,5	6,2	7378	59,1	41	15	126	1456	830	720	700	1056			728		12	22	19	25
	8.1.50.10	10,5	7,5	7162	59,1	55	19	145	1456	930	720	800	1056			728		12	22	19	25
	1.1.50.10	12,2	8,7	6959	59,1	69	24	164	1456	1030	720	900	1056			728		12	28	19	25
	6.1.56.10	12,4	8,9	10410	62,8	60	21	167	1556	930	920	800	1156			778		12	28	19	27,5
	8.1.56.10	14,8	10,2	10158	62,8	81	28	192	1556	1030	920	900	1156			778		12	28	19	27,5
	1.1.56.10	17,3	12,0	9926	62,8	101	35	217	1556	1130	920	1000	1156			778		12	28	19	27,5
6.1.63.10	16,0	11,4	12814	66,6	82	29	215	1656	945	1120	800	1256			828		12	28	19	27,5	
8.1.63.10	18,7	13,8	12609	66,6	110	38	247	1656	1045	1120	900	1256			828		12	35	19	27,5	
1.1.63.10	22,7	16,3	12404	66,6	137	47	277	1656	1145	1120	1000	1256			828		16	35	19	27,5	
2x	6.2.40.10	8,9	6,4	6903	57,0	48	17	131	1856	740	620	600	1456			928		12	22	19	20
	8.2.40.10	10,7	7,8	6684	57,0	64	22	152	1856	840	620	700	1456			928		12	22	19	20
	1.2.40.10	12,3	8,8	6468	57,0	80	28	172	1856	940	620	800	1456			928		12	28	19	20
	6.2.45.10	12,9	9,2	10503	58,9	66	23	159	2056	710	720	600	1656			1028		12	28	19	22,5
	8.2.45.10	15,4	11,2	10121	58,9	88	30	185	2056	810	720	700	1656			1028		16	28	19	22,5
	1.2.45.10	18,0	12,8	9758	58,9	110	38	212	2056	910	720	800	1656			1028		16	28	19	22,5
	6.2.50.10	16,9	12,4	14751	61,7	82	29	212	2456	830	720	700	2056			1228		16	28	19	25
	8.2.50.10	21,0	15,0	14314	61,7	110	38	244	2456	930	720	800	2056			1228		16	35	19	25
	1.2.50.10	24,4	17,4	13907	61,7	137	47	275	2456	1030	720	900	2056			1228		16	35	19	25
	6.2.56.10	24,7	17,8	20813	65,4	121	42	282	2656	930	920	800	2256			1328		16	35	19	27,5
	8.2.56.10	29,8	20,5	20304	65,4	161	55	326	2656	1030	920	900	2256			1328		16	35	35	27,5
	1.2.56.10	34,5	24,0	19842	65,4	201	69	370	2656	1130	920	1000	2256			1328		16	42	35	27,5
6.2.63.10	31,9	22,8	25621	69,2	164	57	372	2856	945	1120	800	2456			1428		16	42	35	27,5	
8.2.63.10	37,8	27,6	25210	69,2	219	75	429	2856	1045	1120	900	2456			1428		16	42	35	27,5	
1.2.63.10	42,6	31,6	24798	69,2	274	94	486	2856	1145	1120	1000	2456			1428		22	42	35	27,5	
3x	6.3.45.10	19,4	13,8	15751	60,4	99	34	222	2856	710	720	600	2456			1428		16	35	19	22,5
	8.3.45.10	23,6	16,9	15176	60,4	131	45	260	2856	810	720	700	2456			1428		16	35	19	22,5
	1.3.45.10	26,8	19,3	14632	60,4	164	57	297	2856	910	720	800	2456			1428		16	35	35	22,5
	6.3.50.10	25,9	18,5	22121	63,1	123	43	299	3456	830	720	700	1028	2028		864	1728	16	35	19	25
	8.3.50.10	31,1	22,5	21465	63,1	164	57	347	3456	930	720	800	1028	2028		864	1728	16	42	35	25
	1.3.50.10	36,6	26,1	20854	63,1	205	71	393	3456	1030	720	900	1028	2028		864	1728	16	42	35	25
	6.3.56.10	37,1	26,7	31214	66,8	181	62	397	3756	930	920	800	1128	2228		939	1878	16	42	19	27,5
	8.3.56.10	45,2	32,8	30451	66,8	241	83	462	3756	1030	920	900	1128	2228		939	1878	22	42	35	27,5
	1.3.56.10	52,7	37,7	29756	66,8	301	103	524	3756	1130	920	1000	1128	2228		939	1878	22	42	35	27,5
	6.3.63.10	48,0	34,1	38430	70,6	246	85	529	4056	945	1120	800	1228	2428		1014	2028	22	42	35	27,5
	8.3.63.10	58,8	42,2	37810	70,6	328	113	611	4056	1045	1120	900	1228	2428		1014	2028	22	54	35	27,5
	1.3.63.10	67,7	48,9	37192	70,6	411	141	693	4056	1145	1120	1000	1228	2428		1014	2028	22	54	35	27,5





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

** = Air throw see remark page 5

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 VCI 10mm

Type VCI	3x400V-50H-4pole (1500 min ⁻¹ nom.)						Surface	Internal volume	Weight	Dimensions								Connections			
	R404A			Air volume	LpA @ 3 m (+/- 2 dB(A))*	L				B	H	C	E1	E2	E3	D1	D2	Refrigerant			
	DT1 = 10K (SC1) air on= 0°C (0/+10)	DT1 = 8K (SC2) air on= 0°C (-8/0)	DT1 = 7K (SC3) air on= -18°C (-25/-18)															In	Uit	Hot gas	Air throw**
	kW	kW	kW															m ³ /h	dB(A)	m ²	dm ³
 4x	6.4.45.10	26,0	18,5	20998	61,3	131	45	283	3656	710	720	600	1628	1628		914	1828	16	35	35	22,5
	8.4.45.10	30,7	22,5	20230	61,3	175	60	332	3656	810	720	700	1628	1628		914	1828	16	42	35	22,5
	1.4.45.10	35,9	25,5	19504	61,3	219	75	380	3656	910	720	800	1628	1628		914	1828	16	42	35	22,5
	6.4.50.10	34,7	24,7	29492	64,0	164	57	384	4456	830	720	700	2028	2028		1114	2228	16	42	35	25
	8.4.50.10	42,5	30,1	28618	64,0	219	75	444	4456	930	720	800	2028	2028		1114	2228	16	42	35	25
	1.4.50.10	48,9	34,3	27801	64,0	274	94	503	4456	1030	720	900	2028	2028		1114	2228	22	42	35	25
	6.4.56.10	49,6	35,5	41615	67,7	241	83	511	4856	930	920	800	2228	2228		1214	2428	16	42	35	27,5
	8.4.56.10	60,5	40,9	40597	67,7	321	110	595	4856	1030	920	900	2228	2228		1214	2428	22	54	35	27,5
	1.4.56.10	70,0	48,1	39673	67,7	401	137	676	4856	1130	920	1000	2228	2228		1214	2428	22	54	35	27,5
	6.4.63.10	64,2	45,5	51237	71,5	328	113	686	5256	945	1120	800	2428	2428		1314	2628	22	54	42	27,5
 5x	8.4.63.10	76,9	55,2	50412	71,5	438	150	794	5256	1045	1120	900	2428	2428		1314	2628	22	54	42	27,5
	1.4.63.10	89,4	63,2	49586	71,5	547	187	899	5256	1145	1120	1000	2428	2428		1314	2628	22	54	42	27,5
	6.4.45.10	32,5	23,0	26246	62,1	164	57	346	4456	710	720	600	1628	2428		1114	2228	16	42	35	22,5
	8.4.45.10	39,5	27,7	25286	62,1	219	75	406	4456	810	720	700	1628	2428		1114	2228	16	42	35	22,5
	1.4.45.10	45,0	31,9	24377	62,1	274	94	466	4456	910	720	800	1628	2428		1114	2228	22	42	35	22,5
	6.4.50.10	43,7	30,2	36863	64,7	205	71	470	5456	830	720	700	2028	3028		1364	2728	16	42	35	25
	8.4.50.10	53,4	37,4	35769	64,7	274	94	545	5456	930	720	800	2028	3028		1364	2728	22	54	35	25
	1.4.50.10	61,2	43,4	34749	64,7	342	117	619	5456	1030	720	900	2028	3028		1364	2728	22	54	35	25
	6.4.63.10	80,7	56,5	64044	72,1	410	141	843	6456	945	1120	800	2428	2428	1200	1076	2x2152	22	54	35	27,5
	8.4.63.10	98,8	70,0	63012	72,1	547	187	976	6456	1045	1120	900	2428	2428	1200	1076	2x2152	28	64	42	27,5
1.4.63.10	113,5	81,3	61979	72,1	684	234	1106	6456	1145	1120	1000	2428	2428	1200	1076	2x2152	28	64	42	27,5	
 6x	6.6.45.10	39,1	27,7	31493	62,6	197	68	408	5256	710	720	600	2428	2428		1314	2628	16	42	35	22,5
	8.6.45.10	47,2	33,8	30341	62,6	263	90	480	5256	810	720	700	2428	2428		1314	2628	22	42	35	22,5
	1.6.45.10	53,5	38,7	29250	62,6	410	113	551	5256	910	720	800	2428	2428		1314	2628	22	54	35	22,5
	6.6.50.10	51,0	37,0	44235	65,2	246	85	556	6456	830	720	700	2028	2028	2000	1076	2x2152	22	54	35	25
	8.6.50.10	62,9	45,1	42921	65,2	328	113	644	6456	930	720	800	2028	2028	2000	1076	2x2152	22	54	35	25
	1.6.50.10	73,6	52,1	41697	65,2	328	141	731	6456	1030	720	900	2028	2028	2000	1076	2x2152	22	54	35	25
	6.6.63.10	96,7	68,3	76853	72,6	492	169	999	7656	945	1120	800	2428	2428	2400	1276	2x2552	28	64	35	27,5
	8.6.63.10	118,2	84,3	75613	72,6	656	225	1158	7656	1045	1120	900	2428	2428	2400	1276	2x2552	28	64	42	27,5
	1.6.63.10	136,3	97,7	74373	72,6	820	281	1314	7656	1145	1120	1000	2428	2428	2400	1276	2x2552	28	64	42	27,5
	 7x	6.7.63.10	112,4	79,9	89662	73,2	574	197	1118	7456	945	1320	800	2028	2028	3000	1243	2x2485	28	64	35
8.7.63.10		137,1	98,5	88215	73,2	766	262	1296	7456	1045	1320	900	2028	2028	3000	1243	2x2485	28	64	42	27,5
1.7.63.10		159,5	113,9	86769	73,2	957	327	1472	7456	1145	1320	1000	2028	2028	3000	1243	2x2485	28	76	42	27,5

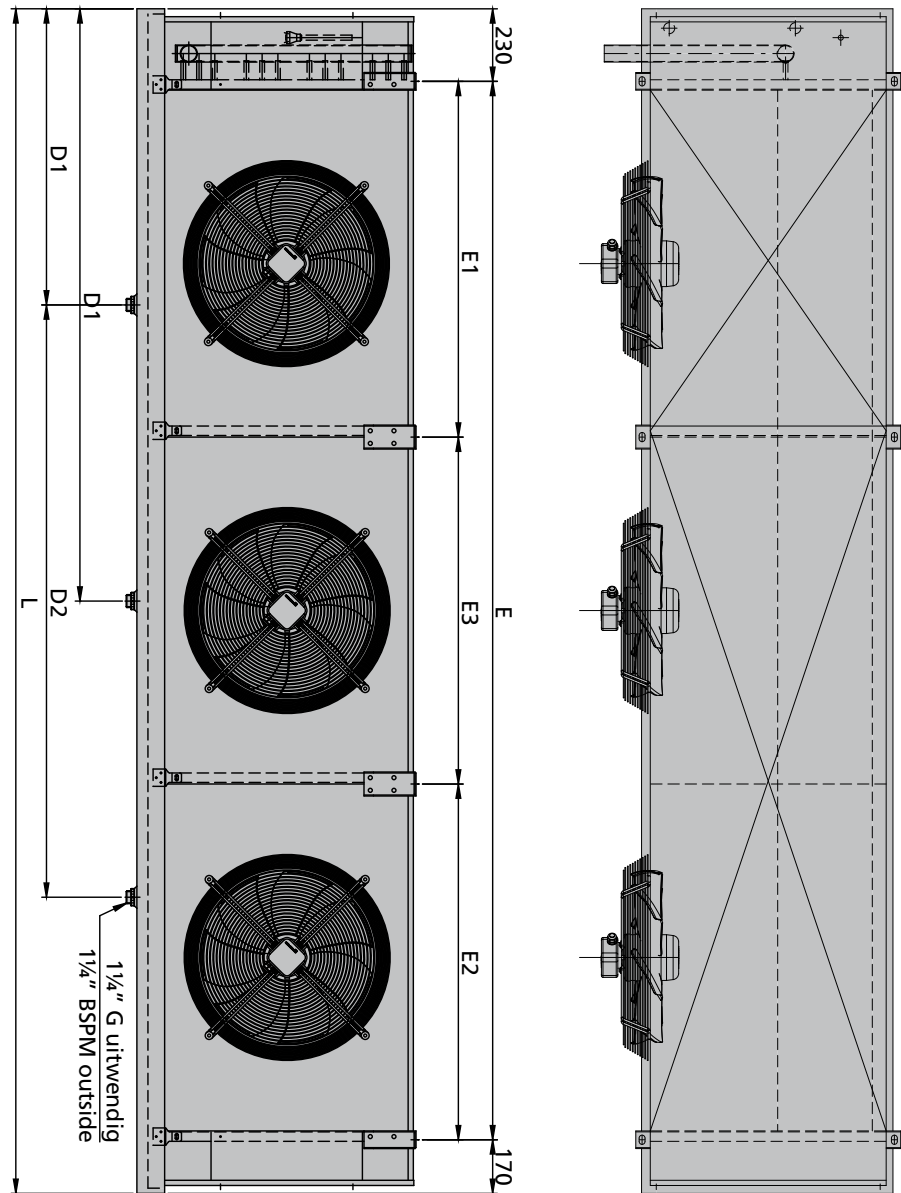
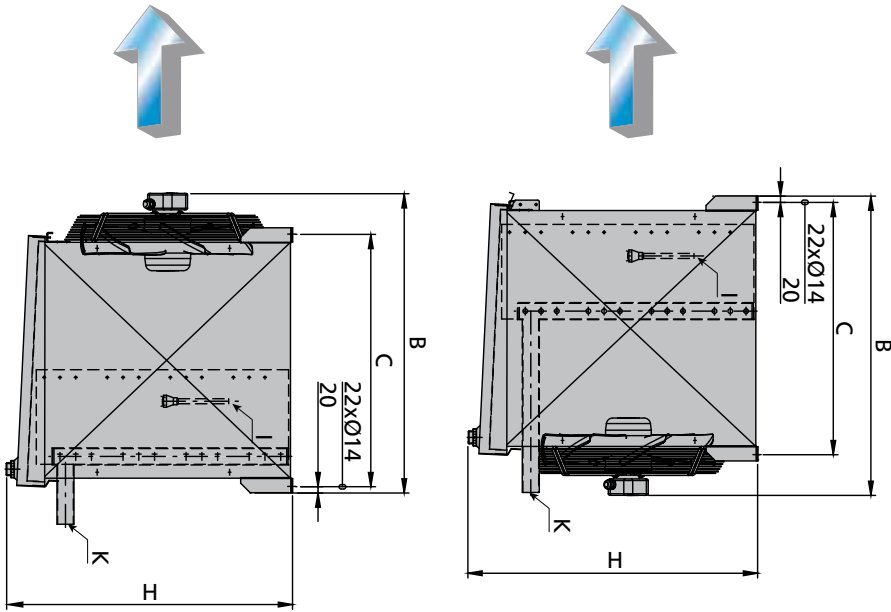
* = Sound pressure indication (LpA) at 3 m distance each air cooler (+/- 2 dB(A)), free field conditions, according EN13487

** = Air throw see remark page 5

For moisture carry over see remark pag 5

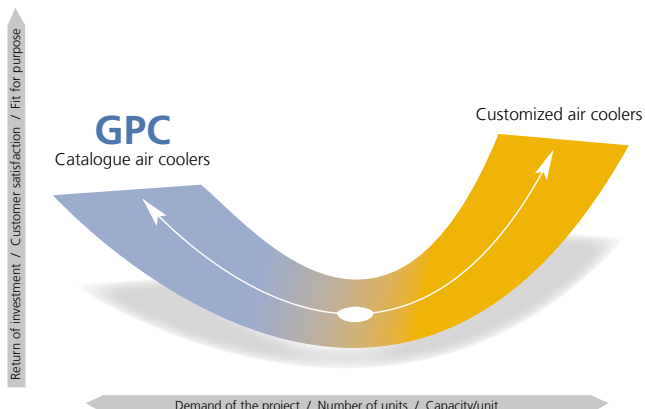
Capacities and air volumes with 60 Hz fans on request or in our GPC selection program available.

Goedhart VCI 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 VCI 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!



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.)

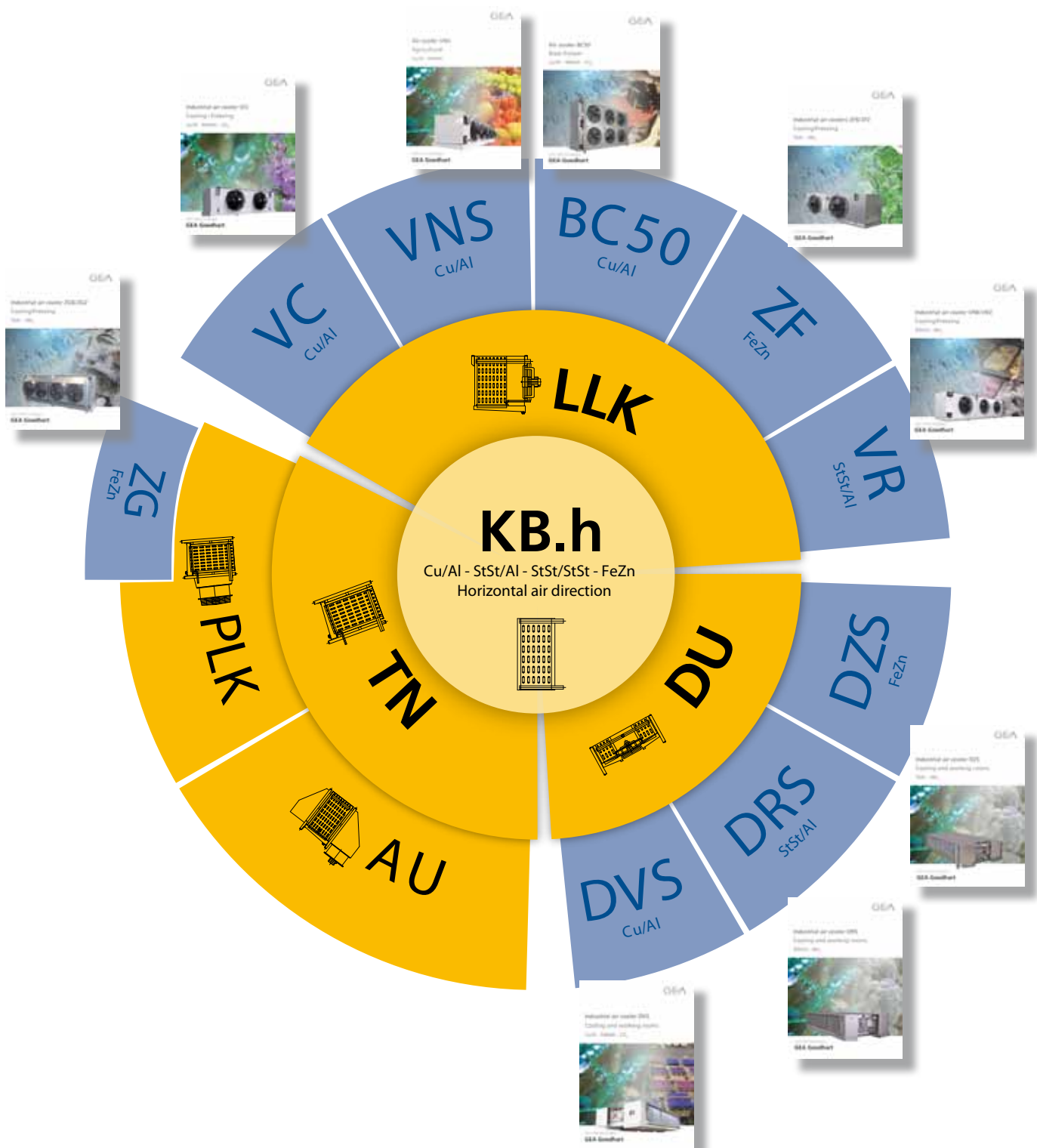
All aircoolers produced by Goedhart comply with the Pressure Equipment Directive 97/23/EC. PED certificates can be downloaded from www.goedhart.nl.

GEA Goedhart air coolers for every application



Goedhart industrial air coolers

Catalogue ranges





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

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