CHANGING
GEA HEAT EXCHANGERS

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Goedhart Systematic customized products

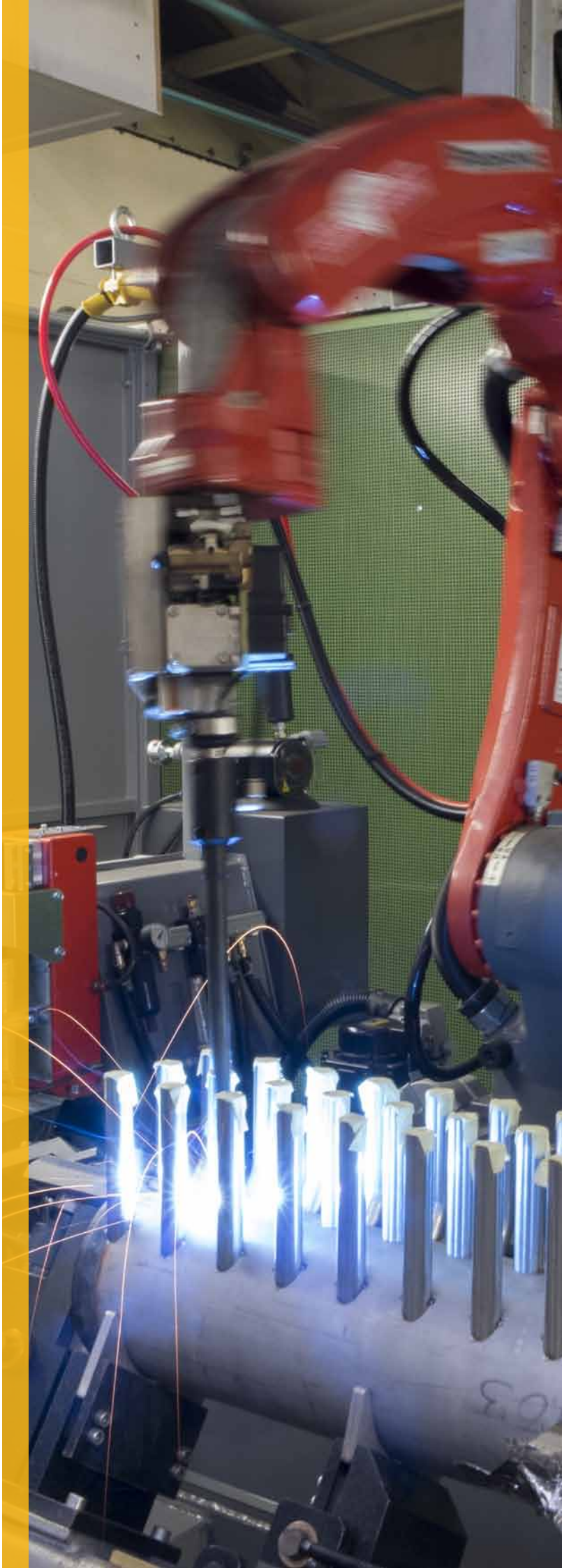
StSt/Al - StSt/StSt

Optimum Care

NH_3 - CO_2 - Coolants

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Welcome at Goedhart

Do not settle for compromise, but go for the best cooling solution to suit your situation. That is the philosophy which Goedhart makes himself hard. Since 1935 we develop, produce and deliver worldwide air coolers, air cooled condensers and composite systems for (semi) industrial applications and various markets. Our products are perfect for projects requiring a technically demanding and involving a great deal of flexibility in terms of design, dimensions, accessories and cooling system types and methods is necessary.

To achieve the most optimal and cost efficient cooling system Goedhart uses three 'levels of engineering:

- Level 1 Fully standarized: standard cooling systems available in different sizes
- Level 2 Systematic customized products: custom made cooling systems built from standard modules;
- Level 3 Designed to order products: extensive cooling systems and applications developed especially for the niche market;

Extensive theoretical and practical project analysis by our professional sales engineers will determine which configuration, materials, and level of engineering best fit your program requirements. Additionally, you can use the innovative 'Goedhart Product Catalogue (GPC), the digital design program for all Level 1 and 2 industrial air coolers and air-cooled condensers.

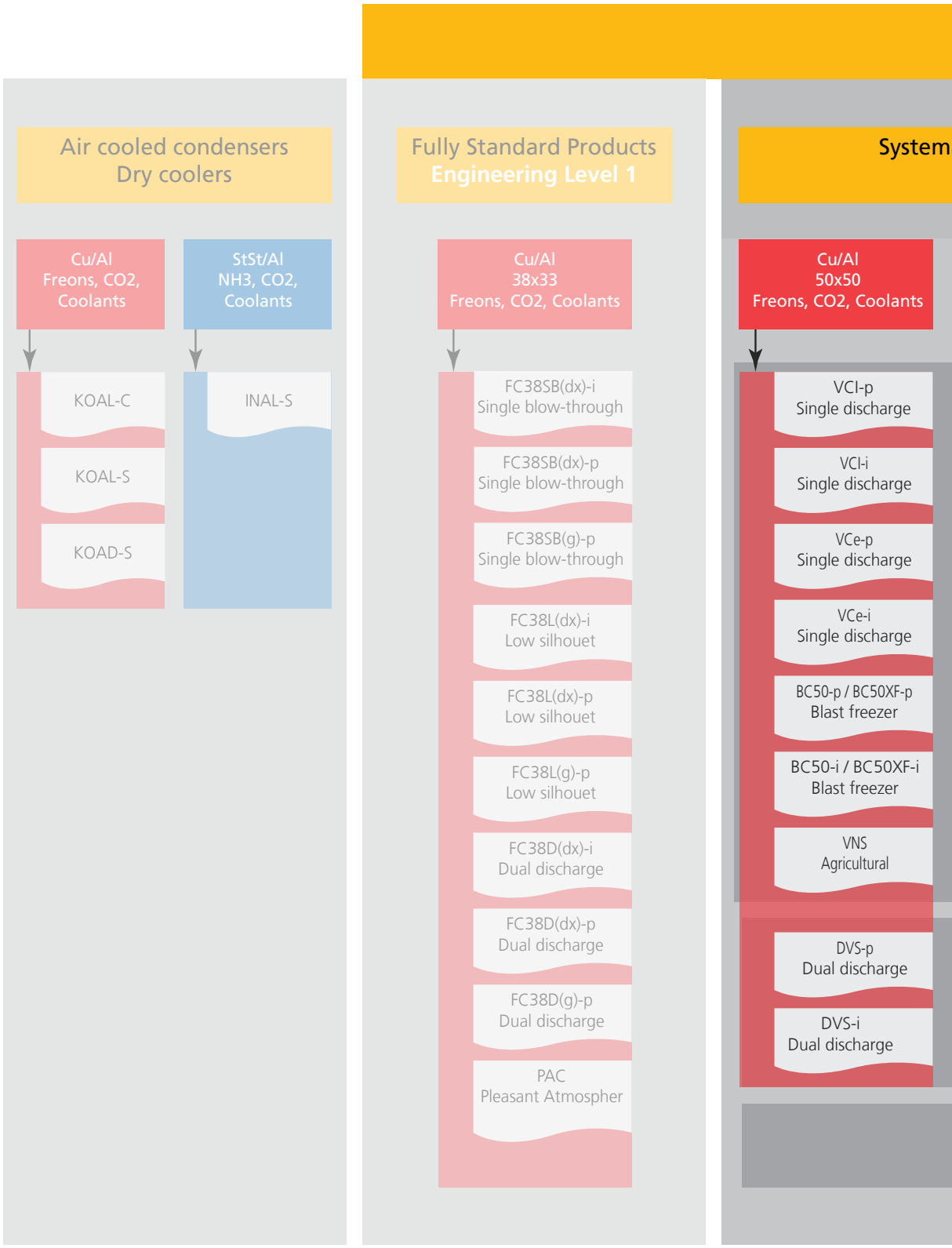
For what level or engineering you choose; Your are with Goedhart in good hands in the field of refrigeration and freezing. This brochure provides information on StSt / Al and StSt/StSt series, a level 2 Systematic customized product.

Do you have any further questions, we are happy to help you personally. We thank you in advance for the interest you have shown in Goedhart and its products.

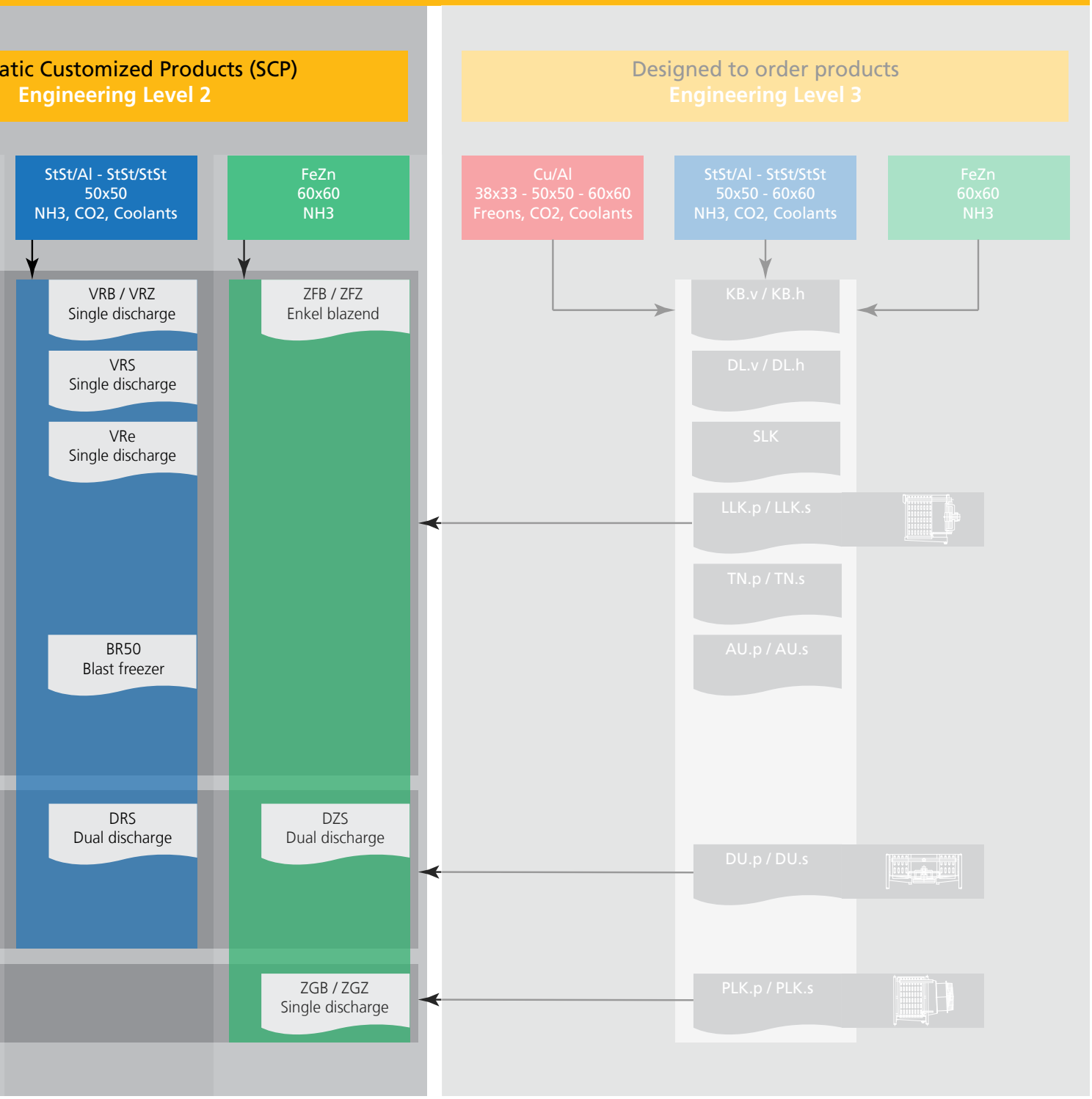




3 Levels of engineering



Goedhart´s 3 Levels of engineering



StSt / Al and StSt/StSt ranges

We can not emphasize often enough that we can meet our “customized production” philosophy to every customer requirements. Common customer requirements lead to innovation of our products. A good example is the energy efficient VCe-p and VCe-i ranges in the copper / aluminum version of our air coolers and air-cooled condensers

Standard flexible
For all StSt / Al and StSt/StSt models and series of the Goedhart air coolers is that your schedule of requirements leading. Depending on the application, our sales team search for the optimal configuration in close cooperation with the customer. You have a free choise in the so-called level 1 and 2 versions:

- dimensions
- Air direction
- blow-through or draw-through
- model: with feet of suspension profiles
- cooling system: natural (NH_3 and C_{02}) and synthetic refrigerants
- materials: copper tubes/aluminium fins, Stainless steel tubes/aluminium fin, Stainless steel tubes and fins or steel tubes and fins / hot dipped galavanized;
- accessories: eg defrost, coatings.

Parametric design
During the design Goedhart makes use of the latest 3D design software, With this software we design your air cooler parametricaly. It is a method to record relationships between variables of a geometrical model. Changing a value of a variable, the whole model changes with this value while the terms of the relationships are maintained.

By making clever use of the latest trends in this area, Goedhart can reduce the duration of the production process up to six weeks and we can keep the initial costs low. In addition you will receive the scaled CAD models and additional design-related information.

Level 2 of engineering - ‘Systematic customized products’
The custom-made cooling systems built from standard product components are so-called “Level 2 Systematic customized products”. Within this level of engineering, you can choose from air coolers consisting of copper tubes with aluminum fins (Cu / Al 50x50), stainless steel tubes with aluminum fins (St / Al 50x50), stainless steel tubes and fins (St/St / Al 50x50) and hot dipped galvanized steel tubes and fins (FeZn 60x60).

Systematic customized StSt/Al - StSt/StSt ranges

In the table below You will find an overview of all systematic customized air coolers executed with stainless steel tubes with aluminium fins and complete stainless coil blocks.

Type		Tube configuration	Description	Cooling system
VRB / VRZ		50x50	Single blow-through / draw-through air cooler for industrial cooling and freezing applications	NH_3, CO_2, de and pump system, coolants
VRe		50x50	Single blow-through / draw-through air cooler with last generation efficient fans and optimized coil block modules	NH_3, CO_2, de and pump system, coolants
DRS		50x50	Dual discharge air cooler for working room applications	NH_3, CO_2, de and pump system, coolants
VRS		50x50	Single blow-through / draw-through air cooler for industrial cooling and freezing applications Compleet Stainless Steel	NH_3, CO_2, de and pump system, coolants
BR50		50x50	Air coolers intended for freezing products. The extra forte (XF) range has reinforced fans for overcoming the air resistance in the room	NH_3, CO_2, de and pump system, coolants



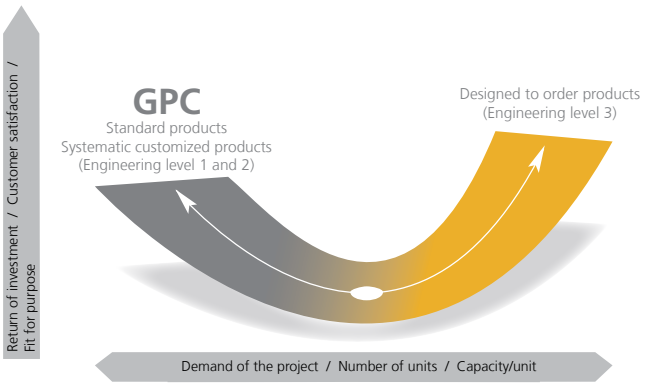
Goedhart SCP air coolers StSt/Al - StSt/StSt

The 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 of shall I go for tailor made?

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

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



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

The Goedhart GPC selection program provides an electronic catalogue covering the majority of product ranges offered by GEA Goedhart.
On **www.goedhart.eu** will find the free download button at the latest, up-to-date version of the GPC Goedhart.

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

- Multilangual
- Pre-select buttons to application
- Spare parts
- Selections including drawings
- An extensive list of accessories
- Accurate capacities: During your selection a sophisticated capacity calculation program optimizes the circuits to the design conditions
- Selections possible on several criteria such as capacity, price, fan variations like noise and speed etc.

Capacity

The listed nominal cooling capacities are are based on R404A, DT1 condition -8/0 (SC2), RH of 85% and 4 pole 3 phase fans connected in Δ for the air cooler ranges VCI, VCe, VNS and DVS. For the BC50 range the listed nominal cooling capacities are are based on R404A, DT1 condition -25/-18 (SC3), RH of 85% and 4 pole 3 phase fans connected in Δ. Other cooling conditions (refrigerant, coolant, another DT1, DTM, etc.) can be selected with the GEA Goedhart GPC program.

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.

Capacity on 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 at the ranges Goedhart VRB/VRZ, VRe, DRS and VRS and -25°C and DT1=7K at the range Goedhart BR50 and light frosting.

Correction factors for various air-on temperatures and temperature differences (DT1) are as indicated in the table beside. 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

Capacities for other refrigerants, coolants and conditions can be calculated with the Goedhart GPC selection program.

NH_3 light frost = 0.2 mm RV = 85%

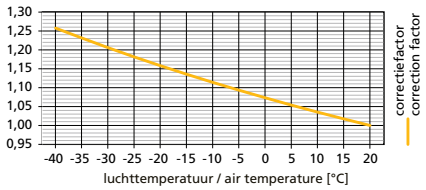
DT1	Evaporation temperature (°C)													
K	0	-2,5	-5	-7,5	-10	-12,5	-15	-20	-22,5	-25	-27,5	-30	-32,5	-35
5	1.63	1.69	1.75	1.80	1.85	1.90	1.95	1.48	1.51	1.54	1.57	1.60	1.63	1.65
6	1.29	1.34	1.39	1.43	1.47	1.50	1.54	1.17	1.20	1.22	1.24	1.26	1.29	1.31
7	1.06	1.11	1.14	1.17	1.21	1.24	1.26	0.97	0.99	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
11	0.61	0.63	0.66	0.68	0.69	0.70	0.71	0.55	0.56	0.57	0.58	0.59	0.60	0.60
12	0.54	0.56	0.59	0.60	0.62	0.63	0.64	0.49	0.50	0.51	0.52	0.53	0.54	0.53

= calculated without frost

NH_3 light frost = 0.5 mm RV = 85%

DT1	Evaporation temperature (°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	0.77	0.78	0.61	0.62	0.63	0.64	0.64	0.65	0.66
12			0.65	0.67	0.68	0.69	0.70	0.55	0.56	0.57	0.58	0.59	0.60	0.61

Fans

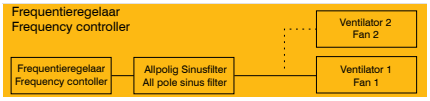


Because of the flexible construction of the Goedhart air cooler, in principle it is possible to deliver with different fans. GEA Goedhart selected a standard fan range of Ziehl Abegg (we reserve the right to alter the manufacturer) which fit perfectly on the Goedhart SCP air coolers. The fans can be 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 ErP2015 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 required.



Tension	: 3x400V-50Hz-3 phase : 1x230V-50Hz-1 phase On request 60Hz is possible in 400V - 460V
Protection class	: IP44 / IP54
Color	: RAL9005 (zwart)
Speed controlling:	: - 3 phase AC-motors are suitable for 2-speed regulation by D-Y reconnection at 3x400/690V-50Hz - 3 phase AC-motors are suitable for frequency controller with all-pole sinus filter - 3 phase EC-motors are available with 0-10V or Modbus - 1 phase AC-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. In our Goedhart GPC selection program also the values in the working point are indicated.

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.

ZAPLus fans

The Goedhart VCE 800 mm fans are fitted as ZAplus fans. The ZAplus is a bionic axial fan in a compact housing made of strong composite material, which integrates the motor and control, and on which a protection guard can be mounted. The special design of the fan wing ensures high efficiency and low noise. If desired, also other Cu / Al Systematic customized air coolers can be delivered with this special fan. Ask your Goedhart contact for the possibilities and applicability.



ZAplus fan optional

Goedhart SCP air coolers StSt/Al - StSt/StSt

Basic information

Fan diameter	Tension	Three phase - 50Hz								Three phase - 60Hz			
		Δ			Y			Δ	Y	Δ			
		Speed	Nominal power	FLC	Speed	Nominal power	FLC	Sound power indication each fan LwA (+/-2dB(A))		Speed	Nominal power	FLC	Sound power indication each fan LwA (+/-2dB(A))
mm	V	min-1	Watt	A	min-1	Watt	A	dB(A)	dB(A)	min-1	Watt	A	dB(A)
4 poles (n=1500 min-1 nom.)													
350	3x400/690	1390	190	0,40	1170	140	0,23	74	69	1630	300	0,46	**
400	3x400/690	1370	230	0,44	1110	170	0,27	76	70,5	1580	370	0,56	**
450	3x400/690	1350	540	1,10	1020	360	0,66	78	70	1560	880	1,40	**
500	3x400/690	1340	840	1,45	940	540	0,96	81	75	1480	1200	2,00	**
560	3x400/690	1280	1050	2,20	920	580	1,10	85	76	1430	1550	2,70	**
630	3x400/690	1360	1500	2,70	1100	1100	1,80	88	83	1640	2900	4,60	**
630XF*	3x230/400				1455	2200	4,80	**	94				
6 poles (n=1000 min-1 nom.)													
450	3x400/690	900	180	0.50	630	100	0.24	67	61	1020	280	0,60	**
500	3x400/690	880	290	0.74	590	150	0.36	72	64	970	440	0,90	**
560	3x400/690	870	340	0.70	630	210	0.38	73	65	980	540	0,88	**
630	3x400/690	900	620	1,25	720	440	0,72	73	67	1040	1000	1,55	**
710	3x400/690	900	940	1,70	690	620	1,05	76	68	1070	1550	2,80	**
800	3x400/690	815	1700	3,50	600	920	1,70	80	-	910	2500	4,20	**

Fan diameter	Tension	Single phase - 50 Hz				Single phase - 60 Hz			
		Speed	Nominal power	FLC	Sound power indication each fan LwA (+/-2dB(A))	Speed	Nominal power	FLC	Sound power indication each fan LwA (+/-2dB(A))
mm	V	min-1	Watt	A	dB(A)	min-1	Watt	A	dB(A)
4 poles (n=1500 min-1 nom.)									
350	1x230	1390	150	0,65	75	1520	230	1,00	**
450	1x230	1390	600	2,90	80	1430	820	3,50	**
500	1x230	1240	720	3,20	81,5	1260	1000	4,40	**
6 poles (n=1000 min-1 nom.)									
400	1x230	950	130	0,60	68	1110	170	0,78	**
500	1x230	900	270	1,25	71,5	900	380	1,75	**

* Special fan for BC50XF

** Ask your Goedhart contact for the sound power indication

The most efficient solution for your project

In good hands at Goedhart

Even before you place an order at Goedhart, a complete and professional team is at your disposal, providing you with thorough advice. We use the latest CAD / CAM developments in the field ofparametric engineering. For less complex projects, please consult the electronic selection program GPC. Our goal is to achieve an optimal and cost efficient cooling system for your business. Flexible, easy to use, quality and safety, which are the key targets of our approach.

Flexible
Every industry and therefore every customer has different requirements and has different needs. That is why we do not believe in mass production of fully standardized products. Depending on your program requirements, you can choose from standardized cooling systems available in different sizes (level 1 series), customized cooling systems consisting of standard product modules (level 2) to fully customized solutions produced (level 3). In order to achieve the objectives of our clients, we use the so-called "customized production philosophy. For that Goedhart has a wide range of materials and a highly efficient and flexible production.

The size of your cooling system and your requirements regarding investment costs and efficiency levels, lifespan and environment are leading to the choice of the type of refrigerant. Goedhart supplies air coolers and air cooled condensers suitable for natural (NH_3 and C_{02}) and synthetic refrigerants. Based on your program requirements our sales engineers will provide a customized advice.

User friendly
Not only the fact that Goedhart delivers high-tech products, makes our customers satisfied. Besides quality, service and ease of use is our top priority. Because each heat exchanger is made on behalf of the customer, additional specifications related to wiring and connections can be achieved during the production process.
Subsequently we deliver the air cooler packed or crated on request, taking into account the mode of installation. Your air cooler or condenser is delivered directly ready for installation, which is the service you can expect from Goedhart.

Quality and safety
Both production sites (Sintmaartensdijk and Nymburk) are certified to ISO 9001, ERP2015 and European PED pressure systems. This means that the products of Goedhart meet the strictest safety standards. Intervention of an external inspector by the PED certification no longer needed. This increases the efficiency of the design and manufacturing process and saves the initial cost.
Additionally Goedhart embraces the Japanese Kaizen philosophy that stands for "do it better, make it better, improve even if it goes well. All employees, from management to the cleaning crew are involved and motivated to suggest improvements. Not once a month or a year, but every day. The quality of this awareness increases work morale and has a positive effect on the efficiency It has to do GEA Goedhart evolve from a traditional metal company into a modern and sustainable industry.




380-420V









Goedhart VRB/VRZ air coolers
Cooling and freezing

The extensive range Goedhart VRB/VRZ single discharge ceiling mounted industrial air coolers are suitable industrial cooling and freezing applications. The possible air direction is blow-through - VRB or draw-through - VRZ (please specify when ordering).

Coil block

Tube distance : 50x50 mm straight
Fin spacing : 4, 6, 7, 8, 10 and 12mm
Material : 15mm o.d stainless tubes 304
: aluminium HT-fins

Goedhart VRB/VRZ coil blocks have stainless tubes expanded into fully collared aluminium fins. 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 dried air. Suitable for NH_3/CO_2- pump system and de system and the most coolants.

Casing

- Construction for ceiling mounting
- Casing material of galvanized sheet steel
- Standard white epoxy spray finishing (RAL 9003)
- Bend/header projection by end covers, easy removed for maintenance
- Standard refrigerant connections are positioned on the left hand side of the unit when looking with the direction of the airflow.
- Cleanable execution optional
- Possible defrost by hot gas spiral or electric defrost elements will be fixed to the bottom side of the coil.
- Stainless steel fasteners

Goedhart VRB/VRZ features

- For cooling and freezing applications
- Blow-through or draw-through execution possible
- Available with internally plain or enhanced copper tubes
- Consisting of 750 models
- Capacity range NH3 pompsysteem from 4,7 tot 244,3 kW.
- EC fan technology possible
- Ventilatoren niet standaard bekabeld op een aansluitdoos (optioneel)
- Suitable for NH_3/CO_2- pump system and de system and the most coolants
- Goedhart VRB/VRZ is delivered on a wooden frame for easy mounting
- Many options and accessories available (see p. 44)

Goedhart SCP air coolers StSt/Al - StSt/StSt

Goedhart VRB / VRZ

Goedhart VRB / VRZ - Air coolers



1	2	3	4		
VR	B	6	3	45	7
				5	6

1. Range : VR
2. Air direction : B=blow-through
   Z=draw-through
3. Number of rows deep : 3, 4 ,6, 8, 10
4. Number of fans : 1 - 8
5. Fan diameter : 400, 450, 560, 630 mm
6. Fan spacing : 4, 6, 7, 8, 10, 12 mm

Goedhart VRB / VRZ - Fan information

Fan diameter	Tension	Δ			Y			Δ	Y	Δ			
		Speed	Nominal power	FLC	Speed	Nominal power	FLC	Sound power indication each fan LwA (+/-2dB(A))		Speed	Nominal power	FLC	Sound power indication each fan LwA (+/-2dB(A))
mm	V	min-1	Watt	A	min-1	Watt	A	dB(A)	dB(A)	min-1	Watt	A	dB(A)
Three phase - 50Hz										**Three phase - 60Hz**			
400	3x400/690	1370	230	0,44	1110	170	0,27	76	70,5	1580	370	0,56	**
450	3x400/690	1350	540	1,10	1020	360	0,66	78	70	1560	880	1,40	**
560	3x400/690	1280	1050	2,20	920	580	1,10	85	76	1430	1550	2,70	**
630	3x400/690	1360	1500	2,70	1100	1100	1,80	88	83	1640	2900	4,60	**
450	3x400/690	900	180	0.50	630	100	0.24	67	61	1020	280	0,60	**
560	3x400/690	870	340	0.70	630	210	0.38	73	65	980	540	0,88	**
630	3x400/690	900	620	1,25	720	440	0,72	73	67	1040	1000	1,55	**
Single phase - 50Hz										**Single phase - 60Hz**			
450	1x230	1390	600	2,90				80		1430	820	3,50	**
400	1x230	950	130	0.60				68		1110	170	0,78	**

** Ask your Goedhart contact for the sound power indication

Goedhart SCP air coolers StSt/Al - StSt/StSt

Goedhart VRB / VRZ

Capacities

Type VRB VRZ	DT1 - SC2 (NH3)																		
	4 mm			6 mm			7 mm			8 mm			10 mm			12 mm			
	DT1 = 8K (SC) air on= 0°C (-8/0)	Air volume	Surface	DT1 = 8K (SC) air on= 0°C (-8/0)	Air volume	Surface	DT1 = 8K (SC) air on= 0°C (-8/0)	Air volume	Surface	DT1 = 8K (SC) air on= 0°C (-8/0)	Air volume	Surface	DT1 = 8K (SC) air on= 0°C (-8/0)	Air volume	Surface	DT1 = 8K (SC) air on= 0°C (-8/0)	Air volume	Surface	LpA @ 3 m (+/- 2 dB(A))
	kW	m³/h	m²	kW	m³/h	m²	kW	m³/h	m²	kW	m³/h	m²	kW	m³/h	m²	kW	m³/h	m²	dB(A)
3.1.40.							4,7	3505	17										54,3
4.1.40.	7,7	2985	38	6,4	3323	26	5,8	3415	22										54,3
6.1.40.	8,6	2687	57	7,8	3105	39	7,4	3234	34	6,9	3330	30	6,2	3455	24				54,3
8.1.40.				8,6	2913	52	8,3	3065	45	8	3183	39	7,3	3346	32	7,1	3448	27	54,3
1.1.40.										8,7	3047	49	8,2	3239	40	8	3363	34	54,3
3.1.45.							7,6	6360	23										56,2
4.1.45.	12,4	5272	52	10,2	5945	35	9,3	6148	31										56,2
6.1.45.	14,1	4723	78	12,7	5503	53	11,9	5758	46	11,2	5957	41	10,1	6238	33				56,2
8.1.45.				14,2	5138	71	13,6	5425	61	13,1	5656	54	12	5993	44	11,6	6221	37	56,2
1.1.45.										14,3	5389	68	13,5	5769	55	13,1	6032	47	56,2
3.1.56.							13	10419	42										62,8
4.1.56.	21,8	9151	95	17,7	9974	65	16,2	10197	56										62,8
6.1.56.	25,2	8392	143	22,2	9447	97	20,7	9760	84	19,4	9988	74	17,3	10293	60				62,8
8.1.56.				25,1	8973	130	23,9	9350	112	22,8	9637	99	20,7	10029	81	19,8	10274	68	62,8
1.1.56.										24,8	9304	124	23,2	9770	101	22,4	10072	86	62,8
3.1.63.							18	14399	57										65,7
4.1.63.	30,8	13104	130	24,4	13934	88	22,2	14163	76										65,7
6.1.63.	36,2	12318	195	31	13403	132	28,8	13717	115	26,8	13949	101	23,8	14263	82				65,7
8.1.63.				35,5	12922	177	33,6	13305	153	31,8	13593	135	28,5	13989	110	27,2	14244	93	65,7
1.1.63.										35,3	13259	169	32,6	13728	137	31,3	14034	117	65,7
3.2.40.							9,5	7005	33										57,0
4.2.40.	15,4	5958	76	12,7	6638	51	11,6	6824	45										57,0
6.2.40.	17,1	5362	114	15,6	6200	77	14,7	6459	67	13,8	6651	59	12,3	6903	48				57,0
8.2.40.				17,2	5814	103	16,6	6119	89	15,9	6355	79	14,6	6684	64	14,1	6888	54	57,0
1.2.40.										17,3	6082	98	16,3	6468	80	15,9	6720	68	57,0
3.2.45.							15,1	12712	46										58,9
4.2.45.	24,7	10525	104	20,3	11875	71	18,5	12282	61										58,9
6.2.45.	28,1	9426	156	25	10987	106	23,7	11503	92	22,4	11902	81	20,2	12464	66				58,9
8.2.45.				28,2	10256	141	27,2	10833	122	26,1	11294	108	24	11973	88	23,1	12429	75	58,9
1.2.45.										28,5	10761	135	26,7	11521	110	26,1	12052	93	58,9
3.2.56.							26,2	20831	84										65,4
4.2.56.	43,6	18284	190	35,4	19936	129	32,3	20384	112										65,4
6.2.56.	50,3	16761	285	44,2	18878	194	41,3	19505	168	38,8	19966	148	34,6	20577	121				65,4
8.2.56.				50,1	17925	258	47,8	18683	224	45,5	19258	197	41,4	20046	161	39,6	20541	136	65,4
1.2.56.										49,6	18591	247	46,4	19527	201	44,8	20133	171	65,4
3.2.63.							35,9	28790	114										68,3
4.2.63.	61,4	26192	259	48,8	27856	176	44,2	28315	152										68,3
6.2.63.	72,3	24615	389	61,9	26792	264	57,5	27421	229	53,6	27886	202	47,6	28518	164				68,3
8.2.63.				70,9	25826	352	67,1	26595	305	63,5	27172	269	56,9	27968	219	54,3	28480	186	68,3
1.2.63.										70,6	26503	336	65,1	27444	274	62,5	28057	233	68,3
3.3.45.							22,6	19062	69										60,4
4.3.45.	36,7	15778	156	30,4	17806	106	27,7	18416	91										60,4
6.3.45.	42,1	14129	233	37,9	16472	159	35,6	17245	137	33,2	17846	121	30,2	18691	99				60,4
8.3.45.				42,3	15374	211	40,4	16240	183	38,8	16935	162	36	17952	132	34,6	18639	112	60,4
1.3.45.										42,8	16133	202	40	17273	164	39,1	18070	140	60,4
3.3.56.							38,8	31244	126										66,8
4.3.56.	65,6	27417	285	53	29899	194	48,2	30571	168										66,8
6.3.56.	75,5	25132	427	66,7	28309	290	61,9	29252	251	58,1	29943	222	51,8	30860	181				66,8
8.3.56.				74,9	26879	387	71,5	28015	335	68	28879	296	62	30063	241	59,3	30807	205	66,8
1.3.56.										75,1	27878	370	70	29284	301	67,6	30194	256	66,8
3.3.63.							53,8	43182	171										69,6
4.3.63.	92,1	39279	389	73,3	41780	264	66,6	42469	228										69,6
6.3.63.	108,5	36910	583	92,7	40179	396	86,2	41125	343	80,3	41824	303	71,3	42772	247				69,6
8.3.63.				106,3	38731	528	100,6	39885	457	95,2	40751	403	86,1	41946	329	81,8	42716	279	69,6
1.3.63.										105,8	39747	504	97,5	41159	411	93,6	42081	349	69,6

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

Goedhart SCP air coolers StSt/Al - StSt/StSt

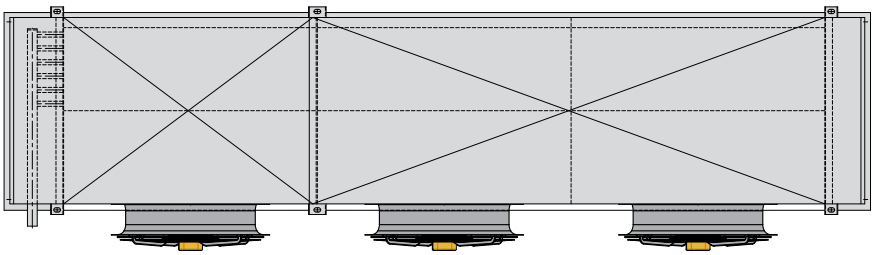
Goedhart VRB / VRZ

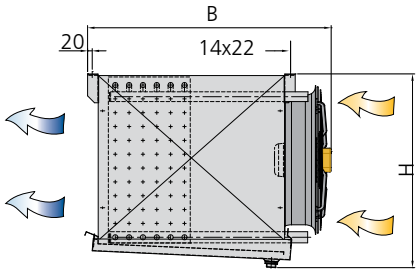
Capacities

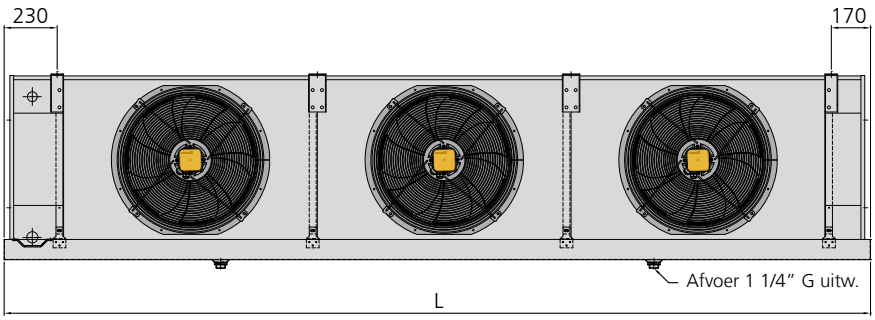
Type VRB VRZ	DT1 - SC2 (NH3)																		LpA @ 3 m (+/- 2 dB(A))
	4 mm			6 mm			7 mm			8 mm			10 mm			12 mm			
	DT1 = 8K (SC2) air on= 0°C (-8/0)	Air volume	Surface	DT1 = 8K (SC2) air on= 0°C (-8/0)	Air volume	Surface	DT1 = 8K (SC2) air on= 0°C (-8/0)	Air volume	Surface	DT1 = 8K (SC2) air on= 0°C (-8/0)	Air volume	Surface	DT1 = 8K (SC2) air on= 0°C (-8/0)	Air volume	Surface	DT1 = 8K (SC2) air on= 0°C (-8/0)	Air volume	Surface	
	kW	m³/h	m²	kW	m³/h	m²	kW	m³/h	m²	kW	m³/h	m²	kW	m³/h	m²	kW	m³/h	m²	dB(A)
3.4.45.							30,1	25414	91										61,3
4.4.45.	49,2	21031	207	40,5	23737	141	36,9	24552	122										61,3
6.4.45.	56	18832	311	50	21957	211	47,3	22989	183	44,7	23789	161	40,3	24917	132				61,3
8.4.45.				56,4	20493	282	54,3	21647	244	52,1	22574	215	48	23931	175	46,1	24848	149	61,3
1.4.45.										57	21504	269	53,3	23025	219	52,1	24090	186	61,3
3.4.56.							52,3	41655	167										67,7
4.4.56.	87,1	36550	380	70,7	39862	258	64,5	40758	223										67,7
6.4.56.	100,6	33501	570	88,4	37741	387	82,6	38997	335	77,6	39920	296	69,1	41144	241				67,7
8.4.56.				100	35831	516	95,5	37349	447	91	38500	394	82,8	40080	321	79,1	41073	273	67,7
1.4.56.										99,1	37166	493	92,7	39041	402	89,6	40255	341	67,7
3.4.63.							71,3	57573	228										70,5
4.4.63.	122,5	52367	518	97,6	55702	352	88,4	56623	304										70,5
6.4.63.	144,6	49208	777	123,1	53568	528	114,8	54830	457	107,2	55762	403	95	57026	329				70,5
8.4.63.				141,7	51636	704	134,1	53174	609	126,8	54330	538	113,8	55925	438	108,5	56950	372	70,5
1.4.63.										141	52990	672	129	54874	548	124,1	56103	465	70,5
3.5.45.							37,7	31764	114										62,1
4.5.45.	61,5	26284	259	50,8	29667	176	46,5	30687	152										62,1
6.5.45.	70	23535	388	62,8	27442	264	59,2	28733	228	55,8	29733	202	50,1	31143	164				62,1
8.5.45.				70,5	25610	352	67,8	27054	304	65	28213	269	60	29911	219	57,3	31057	186	62,1
1.5.45.										71,2	26876	336	66,7	28778	274	65,1	30109	232	62,1
3.5.63.							89,6	71965	285										71,2
4.5.63.	152,2	65455	647	122,2	69626	440	110,3	70776	380										71,2
6.5.63.	180,6	61504	971	154,5	66956	660	143,6	68534	571	133,8	69700	504	119	71281	411				71,2
8.5.63.				176,8	64540	879	167,2	66464	761	158,3	67911	672	143,3	69903	547	136,3	71186	465	71,2
1.5.63.										176,1	66233	840	162,5	68589	684	156,1	70128	581	71,2
3.6.45.							45,2	38115	137										62,6
4.6.45.	73,4	31537	311	60,7	35598	211	55,3	36821	183										62,6
6.6.45.	84,1	28238	466	75	32926	317	70,9	34476	274	67	35677	242	60,4	37370	197				62,6
8.6.45.				84,6	30729	422	80,7	32462	365	77,6	33852	323	72	35891	263	69,2	37266	223	62,6
1.6.45.										85,5	32247	403	80	34531	329	78,1	36128	279	62,6
3.6.63.							107,5	86356	342										71,6
4.6.63.	184,1	78544	776	146,6	83549	528	133,2	84929	456										71,6
6.6.63.	216,8	73800	1165	185,4	80344	791	172,3	82239	685	160,6	83639	605	142,6	85536	493				71,6
8.6.63.				212,5	77445	1055	200,8	79753	913	190	81489	806	171,8	83883	657	163,2	85422	557	71,6
1.6.63.										211,2	79476	1008	194,7	82304	821	186,9	84152	697	71,6
3.7.45.							53	44466	160										63,0
4.7.45.	86,1	36790	362	70,9	41528	246	65,1	42956	213										63,0
6.7.45.	98	32941	544	88,4	38411	369	83,1	40219	320	78,3	41620	282	70,2	43596	230				63,0
8.7.45.				98,7	35847	493	95	37869	426	90	39492	376							63,0
1.7.45.										98,6	37619	470							63,0
3.7.63.							125	100749	399										72,2
4.7.63.	213,8	91635	906	171	97474	615	154,9	99085	533										72,2
6.7.63.	252,9	86101	1359	217,5	93735	923	201,5	95945	799	187	97578	705	166,5	99792	575				72,2
8.7.63.				247,8	90353	1231	234,5	93046	1065	221,9	95071	941	200,8	97864	766	190,9	99659	650	72,2
1.7.63.										244,3	92723	1176	225,7	96022	958	218,6	98178	813	72,2
3.8.45.							59,7	50818	183										63,4
4.8.45.	98,4	42044	414	80,9	47460	281	73,8	49091	243										63,4
6.8.45.	112	37644	621	100,9	43896	422	94,5	45962	365	89,3	47565	323	80,5	49823	263				63,4
8.8.45.				112,7	40965	563	108,5	43277	487	104	45131	430							63,4
1.8.45.										114	42991	538							63,4

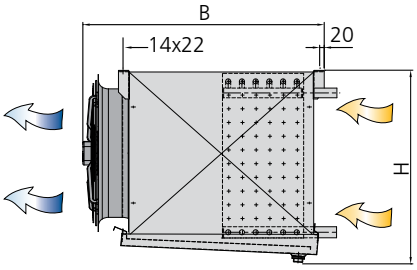
* =Sound pressure indication (LpA) at 3 m distance each air cooler (+/- 2 dB(A)), free field conditions, according EN13487

Drawing

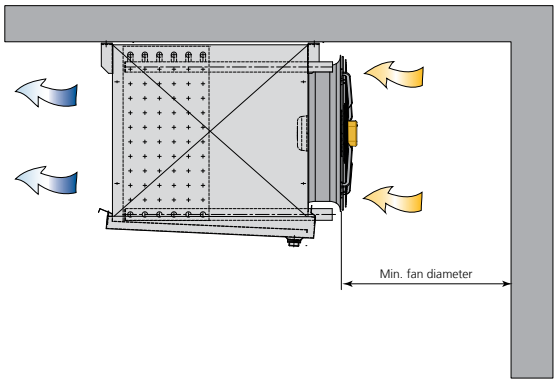




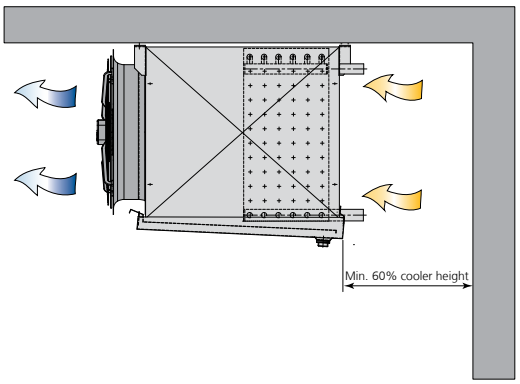




Blow-through Goedhart VRB



Draw-through Goedhart VRZ



The dimensions in the tables are external dimensions of the heat exchanger. Measures such as suspension points, but also internal volume [dm3], other conditions, refrigerants, coolants and materials are available in the Goedhart GPC selection program. Goedhart GPC is free to download from www.goedhart.eu

Goedhart SCP air coolers StSt/Al - StSt/StSt

Goedhart VRB / VRZ

Dimensions

Type VRB / VRZ	Dimensions			Weight					
	L	B	H	4 mm	6 mm	7 mm	8 mm	10 mm	12 mm
	mm	mm	mm	kg	kg	kg	kg	kg	kg
3.1.40.	1156	590	620			56			
4.1.40.	1156	640	620	69	64	62			
6.1.40.	1156	740	620	85	78	76	74	72	
8.1.40.	1156	840	620		92	89	88	85	83
1.1.40.	1156	940	620				100	96	95
3.1.45.	1256	560	720			77			
4.1.45.	1256	610	720	93	87	85			
6.1.45.	1256	710	720	115	105	102	100	96	
8.1.45.	1256	810	720		122	118	115	112	109
1.1.45.	1256	910	720				132	127	124
3.1.56.	1556	780	920			124			
4.1.56.	1556	830	920	154	142	138			
6.1.56.	1556	930	920	189	171	166	162	156	
8.1.56.	1556	1030	920		200	192	188	180	176
1.1.56.	1556	1130	920				214	205	198
3.1.63.	1656	795	1120			162			
4.1.63.	1656	845	1120	200	184	179			
6.1.63.	1656	945	1120	247	222	215	210	203	
8.1.63.	1656	1045	1120		259	250	243	233	226
1.1.63.	1656	1145	1120				277	264	256
3.2.40.	1856	590	620			89			
4.2.40.	1856	640	620	114	104	101			
6.2.40.	1856	740	620	142	128	124	121	116	
8.2.40.	1856	840	620		153	147	144	138	133
1.2.40.	1856	940	620				165	158	153
3.2.45.	2056	560	720			129			
4.2.45.	2056	610	720	160	147	143			
6.2.45.	2056	710	720	199	178	173	169	163	
8.2.45.	2056	810	720		211	202	197	189	183
1.2.45.	2056	910	720				225	215	208
3.2.56.	2656	780	920			216			
4.2.56.	2656	830	920	271	248	240			
6.2.56.	2656	930	920	337	301	291	282	272	
8.2.56.	2656	1030	920		354	340	330	315	306
1.2.56.	2656	1130	920				377	359	346
3.2.63.	2856	795	1120			284			
4.2.63.	2856	845	1120	359	327	318			
6.2.63.	2856	945	1120	446	396	382	372	357	
8.2.63.	2856	1045	1120		467	448	434	414	400
1.2.63.	2856	1145	1120				495	471	454
3.3.45.	2856	560	720			182			
4.3.45.	2856	610	720	230	209	204			
6.3.45.	2856	710	720	285	256	247	241	231	
8.3.45.	2856	810	720		301	289	281	269	260
1.3.45.	2856	910	720				321	306	296
3.3.56.	3756	780	920			306			
4.3.56.	3756	830	920	388	353	343			
6.3.56.	3756	930	920	485	431	415	404	387	
8.3.56.	3756	1030	920		509	488	472	451	436
1.3.56.	3756	1130	920				542	513	496
3.3.63.	4056	795	1120			408			
4.3.63.	4056	845	1120	519	470	456			
6.3.63.	4056	945	1120	647	572	551	535	513	
8.3.63.	4056	1045	1120		675	647	626	596	576
1.3.63.	4056	1145	1120				715	677	652

Type VRB / VRZ	Dimensions			Weight					
	L	B	H	4 mm	6 mm	7 mm	8 mm	10 mm	12 mm
	mm	mm	mm	kg	kg	kg	kg	kg	kg
3.4.45.	3656	560	720			236			
4.4.45.	3656	610	720	296	271	262			
6.4.45.	3656	710	720	370	330	319	311	299	
8.4.45.	3656	810	720		389	373	362	346	336
1.4.45.	3656	910	720				415	395	382
3.4.56.	4856	780	920			397			
4.4.56.	4856	830	920	506	458	445			
6.4.56.	4856	930	920	631	559	539	523	502	
8.4.56.	4856	1030	920		661	634	613	584	564
1.4.56.	4856	1130	920				702	665	641
3.4.63.	5256	795	1120			531			
4.4.63.	5256	845	1120	678	613	595			
6.4.63.	5256	945	1120	851	748	720	699	669	
8.4.63.	5256	1045	1120		882	845	816	777	750
1.4.63.	5256	1145	1120				934	884	851
3.5.45.	4456	560	720			289			
4.5.45.	4456	610	720	365	333	324			
6.5.45.	4456	710	720	455	405	391	381	366	
8.5.45.	4456	810	720		479	461	446	426	413
1.5.45.	4456	910	720				511	486	470
3.5.63.	6456	795	1120			655			
4.5.63.	6456	845	1120	836	755	732			
6.5.63.	6456	945	1120	1046	922	887	861	824	
8.5.63.	6456	1045	1120		1094	1043	1012	957	924
1.5.63.	6456	1145	1120				1158	1091	1049
3.6.45.	5256	560	720			342			
4.6.45.	5256	610	720	434	395	384			
6.6.45.	5256	710	720	542	483	465	453	434	
8.6.45.	5256	810	720		569	547	530	506	490
1.6.45.	5256	910	720				608	578	557
3.6.63.	7656	795	1120			778			
4.6.63.	7656	845	1120	996	898	871			
6.6.63.	7656	945	1120	1246	1098	1055	1024	979	
8.6.63.	7656	1045	1120		1306	1241	1206	1142	1102
1.6.63.	7656	1145	1120				1377	1302	1253
3.7.45.	6056	560	720			397			
4.7.45.	6056	610	720	502	456	443			
6.7.45.	6056	710	720	627	557	538	523	501	
8.7.45.	6056	810	720		658	631	611		
1.7.45.	6056	910	720				700		
3.7.63.	7456	795	1320			881			
4.7.63.	7456	845	1320	1132	1019	986			
6.7.63.	7456	945	1320	1419	1246	1197	1160	1108	
8.7.63.	7456	1045	1320		1483	1408	1362	1293	1246
1.7.63.	7456	1145	1320				1561	1472	1414
3.8.45.	6856	560	720			450			
4.8.45.	6856	610	720	569	517	503			
6.8.45.	6856	710	720	712	632	610	593	569	
8.8.45.	6856	810	720		748	718	695		
1.8.45.	6856	910	720				796		



logistics centers



food & beverage



production shop floors



Stepped fin spacings

GEA Goedhart VRe air coolers
Powerful quiet

The Goedhart VR*e* models are highly effective, for example, for application in food and beverage distribution centers, logistics centers and production shop floors. As required by market demand, models in the Goedhart VR*e* series feature few but large fans. With the newly designed modules the speed of the fans and the air velocity through the coil are reduced!

Coil block

Tube distance	: 50x50 mm straight
Fin spacing	: 4, 6, 7, 8, 10 and 12mm
Material	: 15mm o.d stainless steel tubes 304
	: aluminium HT-fins

Goedhart VRe coil blocks have stainless steel tubes expanded into fully collared aluminium fins. 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 dried air. Suitable for NH_3/CO_2- pump system and de system and the most coolants.

Casing

- Construction for ceiling mounting
- Casing material of galvanized sheet steel
- Standard white epoxy spray finishing (RAL 9003)
- Bend/header projection by end covers, easy removed for maintenance
- Standard refrigerant connections are positioned on the left hand side of the unit when looking with the direction of the airflow.
- Cleanable execution optional
- Possible defrost by hot gas spiral or electric defrost elements will be fixed to the bottom side of the coil.
- Stainless steel fasteners

Goedhart VRe features

- For cooling and freezing applications
- Blow-through or draw-through execution possible
- Consisting of 66 models
- Capacity range NH3 pump system from 10,6 tot 203,7 kW at SC2
- EC fan technology possible
- Highly effective air cooler due to new designed modules and fans
- Up to 6 fans, fan diameter 500, 630, 710 and 800 mm
- Suitable for NH_3/CO_2- pump system and de system and the most coolants.
- ZAplus fan optional (most energy efficient fan on the market today)

- Goedhart VRe is delivered on a wooden frame for easy mounting

Goedhart SCP air coolers StSt/Al - StSt/StSt

Goedhart VRe

Goedhart VRe - Air coolers



1	2	3	4		
VRe	B	6	3	63	7
				5	6

1. Range : VRe
2. Air direction : B=blow-through
   Z=draw-through
3. Number of rows deep : 6, 8, 10
4. Number of fans : 1 - 6
5. Fan diameter : 500, 630, 710, 800
6. Fin spacing : 4, 6, 7, 8, 10, 12

Goedhart VRe- Fan information

Fan diameter	Tension	Δ			Y			Δ	Y	Δ			
		Speed	Nominal power	FLC	Speed	Nominal power	FLC	Sound power indication each fan LwA (+/-2dB(A))		Speed	Nominal power	FLC	Sound power indication each fan LwA (+/-2dB(A))
mm	V	min^{-1}	Watt	A	min^{-1}	Watt	A	dB(A)	dB(A)	min^{-1}	Watt	A	dB(A)
Three phase - 50Hz										**Three phase - 60Hz**			
500	3x400/690	1340	840	1,45	940	540	0,96	81	75	1480	1200	2,00	**
630	3x400/690	1360	1500	2,70	1100	1100	1,80	88	83	1640	2900	4,60	**
500	3x400/690	880	290	0,74	590	150	0.36	72	64	970	440	0,90	**
630	3x400/690	900	620	1,25	720	440	0,72	73	67	1040	1000	1,55	**
710	3x400/690	900	940	1,70	690	620	1,05	76	68	1070	1550	2,80	**
800	3x400/690	815	1700	3,50	600	920	1,70	80	-	910	2500	4,20	**
Single phase - 50Hz										**Single phase - 60Hz**			
500	1x230	1240	720	3,20				81,5		1260	1000	4,40	**
500	1x230	900	270	1,25				71,5		900	380	1,75	**

** Ask your Goedhart contact for the sound power indication

Goedhart SCP air coolers StSt/Al - StSt/StSt

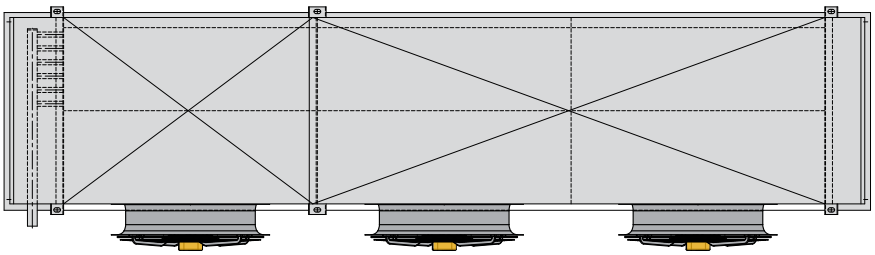
Goedhart VRe

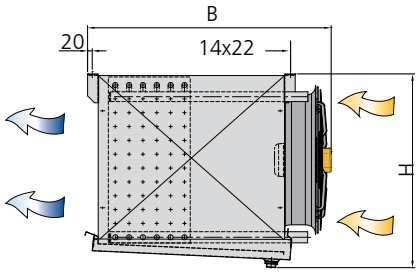
Capacities

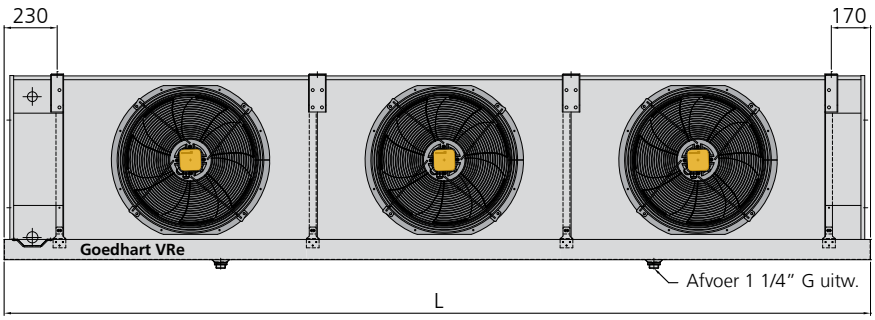
Type VRe	DT1 - SC2 (NH3)																					LpA @ 3 m (+/- 2 dB(A))
	4 mm			5 mm			6 mm			7 mm			8 mm			10 mm			12 mm			
	DT1 = 8K (SC2) air on= 0°C (-8/0)	Air volume	Surface	DT1 = 8K (SC2) air on= 0°C (-8/0)	Air volume	Surface	DT1 = 8K (SC2) air on= 0°C (-8/0)	Air volume	Surface	DT1 = 8K (SC2) air on= 0°C (-8/0)	Air volume	Surface	DT1 = 8K (SC2) air on= 0°C (-8/0)	Air volume	Surface	DT1 = 8K (SC2) air on= 0°C (-8/0)	Air volume	Surface	DT1 = 8K (SC2) air on= 0°C (-8/0)	Air volume	Surface	
	kW	m³/h	m²				kW	m³/h	m²	kW	m³/h	m²	kW	m³/h	m²	kW	m³/h	m²	kW	m³/h	m²	dB(A)
3.1.50.*										10,6	8598	33										56,0
4.1.50.*	17,6	7428	76				14,3	8193	52	13,1	8398	45										56,0
6.1.50.*	20,2	6737	114				18	7703	77	16,8	7994	67	15,7	8207	59	14,1	8484	48				56,0
8.1.50.*							20,2	7264	103	19,3	7613	89	18,4	7879	79	16,9	8244	64	16,1	8468	54	56,0
1.1.50.*													20,3	7571	98	19	8004	80	18,4	8284	68	56,0
4.1.63.*				20,2	9217	88				16,7	9804	64										51,7
6.1.63.*				24	8550	131				21,1	9335	96				17,7	9906	69	16,8	10106	58	51,7
8.1.63.*										24,1	8902	127				21	9623	92	33,4	20207	116	51,7
4.1.71.*				27,7	12267	126				22,6	12792	92										53,5
6.1.71.*				33,2	11649	189				28,9	12374	138				23,8	12885	99	22,6	13066	84	53,5
8.1.71.*										33	11979	183				28,4	12630	132	27,2	12867	112	53,5
4.1.80.*				42	20305	168				34,2	21322	122										57,2
6.1.80.*				50,1	19091	252				44,1	20514	183				36,6	21496	132	34,6	21832	112	57,2
8.1.80.*										51	19740	244				44	21012	176	41,7	21464	149	57,2
3.2.50.*										21,1	17187	67										58,7
4.2.50.*	35,2	14838	151				28,7	16375	103	26,1	16786	89										58,7
6.2.50.*	40,3	13452	227				35,9	15390	154	33,6	15974	133	31,3	16402	118	28,1	16961	96				58,7
8.2.50.*							40,3	14508	206	38,6	15207	178	36,8	15743	157	33,7	16476	128	32,2	16928	109	58,7
1.2.50.*													40,5	15123	196	37,9	15995	160	36,7	16556	136	58,7
4.2.63.*				40,3	18415	175				33,1	19596	127										54,4
6.2.63.*				47,9	17077	262				42	18653	191				35,1	19805	137	50,2	30305	174	54,4
8.2.63.*										48	17784	254				42	19232	183	66,8	40404	232	54,4
4.2.71.*				55,4	24521	251				45,2	25575	183										56,1
6.2.71.*				66,4	23281	377				57,3	24735	274				47,4	25761	197	44,9	26127	167	56,1
8.2.71.*										66	23945	366				56,6	25251	263	54,3	25727	223	56,1
4.2.80.*				83,9	40591	335				68,4	42630	244										59,7
6.2.80.*				100,1	38157	502				88,1	41010	366				73	42982	263	69,1	43655	223	59,7
8.2.80.*										101,9	39458	487				88	42011	351	83,3	42916	298	59,7
3.3.50.*										31,6	25779	100										60
4.3.50.*	52,8	22249	227				42,9	24556	154	39	25174	133										60
6.3.50.*	60,4	20169	340				53,9	23076	231	50,4	23953	200	47,3	24597	177	42,2	25437	144				60
8.3.50.*							60,4	21753	308	57,9	22803	267	55,2	23607	235	50,6	24708	192	48,3	25388	163	60
1.3.50.*													60,8	22675	294	56,9	23985	240	55,1	24830	203	60
4.3.63.*				60,2	27615	262				49,9	29388	190										55,8
6.3.63.*				71	25606	392				62,9	27973	286				52,8	29701	206	20,2	9888	78	55,8
8.3.63.*										71,9	26667	381				62,9	28841	274	40,4	19766	155	55,8
4.3.71.*				83,1	36775	377				67,2	38359	274										57,4
6.3.71.*				99,6	34913	565				85,8	37096	411				71	38639	296	67,3	39186	251	57,4
8.3.71.*										98,9	35910	548				85	37872	394	81,5	38587	335	57,4
4.3.80.*				125,9	60877	502				102,6	63941	365										61
6.3.80.*				150,1	57223	753				132,1	61506	548				109,8	64468	394	103,6	65478	335	61
8.3.80.*										152,8	59177	731				132	63009	526	125,9	64369	446	61
3.4.50.*										42	34369	133										60,9
4.4.50.*	70,3	29659	302				57,4	32738	205	52,2	33563	178										60,9
6.4.50.*	80,5	26884	453				71,9	30762	308	67,2	31934	266	63	32792	235	56,2	33913	192				60,9
8.4.50.*							80,5	28998	411	77,1	30399	355	73,6	31471	314	67,3	32940	256	64,3	33848	217	60,9
1.4.50.*													81	30229	392	75,8	31975	320	73,4	33102	271	60,9
4.4.63.*				80,6	36815	349				66,2	39181	254										56,7
6.4.63.*				95,8	34134	523				84	37292	381				70,2	39598	274	60,5	29643	232	56,7
8.4.63.*										96	35550	507				83,9	38450	365	80,7	39520	310	56,7
4.4.71.*				110,7	49030	502				90,4	51142	365										58,3
6.4.71.*				132,7	46546	753				114,6	49459	548				94,7	51516	394	89,7	52247	335	58,3
8.4.71.*										131,9	47875	731				113,2	50493	526	108,6	51446	446	58,3
4.4.80.*				167,7	81163	669				136,8	85250	487										61,8
6.4.80.*				203,6	76289	1003				176	82002	730				146,6	85952	526	138,2	87302	446	61,8
8.4.80.*										203,7	78895	974				175,9	84008	701	166,5	85822	595	61,8
3.5.50.*										53	42959	166										61,6
4.5.50.*	87,8	37069	378				71,5	40919	257	65,4	41951	222										61,6
6.5.50.*	100,6	33600	566				89,3	38449	385	83,6	39913	333	78,4	40987	294	70,3	42390	240				61,6
8.5.50.*							100,6	36242	513	95,6	37993	444	91,5	39334	392	83,7	41173	319	80	42308	271	61,6
1.5.50.*													101,2	37781	490	94,8	39964	399	91	41375	339	61,6
3.6.50.*										63,5	51548	200										62,1
4.6.50.*	105,5	44480	453				85,7	49100	308	78	50340	266										62,2
6.6.50.*	120,7	40315	680				107,7	46135	462	100,4	47894	399	94,5	49183	353	84,3	50865	287				62,1
8.6.50.*							120,5	43486	616	115,4	45589	533	110,3	47197	470	101	49405	383	96,5	50769	325	62,1
1.6.50.*													121,3	45334	588	113,7	47955	479	110,1	49647	406	62,1

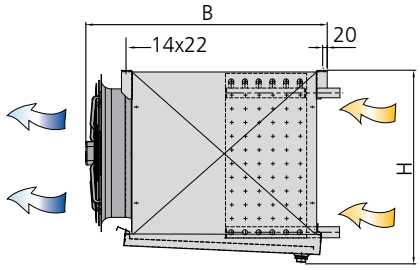
* =Sound pressure indication (LpA) at 3 m distance each air cooler (+/- 2 dB(A)), free field conditions, according EN13487

Drawing

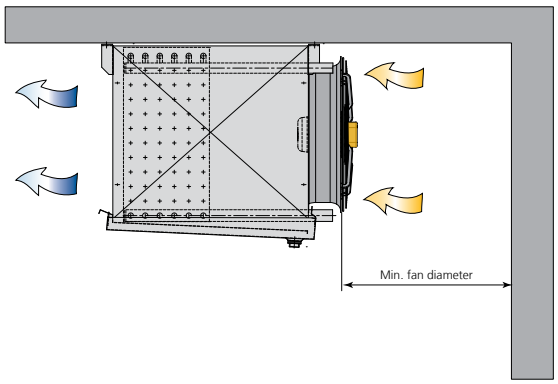




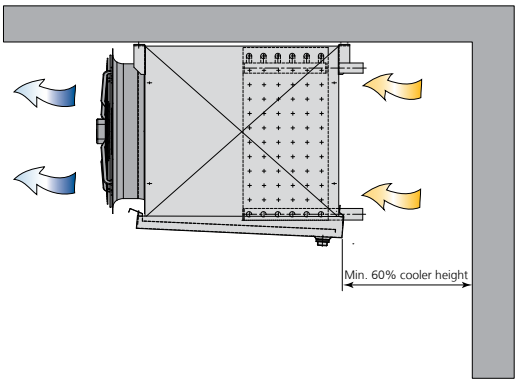




Blow-through Goedhart VRe-B / VRS-B



Draw-through Goedhart VRe-Z / VRS-Z



The dimensions in the tables are external dimensions of the heat exchanger. Measures such as suspension points, but also internal volume [dm3], other conditions, refrigerants, coolants and materials are available in the Goedhart GPC selection program. Goedhart GPC is free to download from www.goedhart.eu

Goedhart SCP air coolers StSt/Al - StSt/StSt

Goedhart VRe

Dimensions

Type VRe	Dimensions			Gewicht						
	L	B	H	4 mm	5 mm	6 mm	7 mm	8 mm	10 mm	12 mm
	mm	mm	mm	kg	kg	kg	kg	kg	kg	kg
3.1.50.*	1456	730	820				100			
4.1.50.*	1456	780	820	123		113	111			
6.1.50.*	1456	880	820	152		138	134	131	126	
8.1.50.*	1456	980	820			162	157	153	147	143
1.1.50.*	1456	1080	820					174	167	162
4.1.63.*	1456	840	1120		153		144			
6.1.63.*	1456	940	1120		188		174		163	159
8.1.63.*	1456	1040	1120				205		190	185
4.1.71.*	1656	940	1320		213		200			
6.1.71.*	1656	1040	1320		262		242		226	221
8.1.71.*	1656	1140	1320				282		261	254
4.1.80.*	2056	1170	1320		301		283			
6.1.80.*	2056	1270	1320		363		336		316	308
8.1.80.*	2056	1370	1320				388		361	351
3.2.50.*	2456	730	820				171			
4.2.50.*	2456	780	820	215		196	191			
6.2.50.*	2456	880	820	269		240	231	225	217	
8.2.50.*	2456	980	820			284	272	264	253	244
1.2.50.*	2456	1080	820					303	288	278
4.2.63.*	2456	840	1120		267		248			
6.2.63.*	2456	940	1120		331		303		282	274
8.2.63.*	2456	1040	1120				357		329	318
4.2.71.*	2856	940	1320		377		351			
6.2.71.*	2856	1040	1320		468		428		397	385
8.2.71.*	2856	1140	1320				503		462	446
4.2.80.*	3656	1170	1320		549		514			
6.2.80.*	3656	1270	1320		668		613		572	557
8.2.80.*	3656	1370	1320				713		658	637
3.3.50.*	3456	730	820				243			
4.3.50.*	3456	780	820	310		282	273			
6.3.50.*	3456	880	820	389		345	333	324	311	
8.3.50.*	3456	980	820			409	392	380	362	351
1.3.50.*	3456	1080	820					436	415	401
4.3.63.*	3456	840	1120		381		354			
6.3.63.*	3456	940	1120		477		434		403	390
8.3.63.*	3456	1040	1120				515		473	456
4.3.71.*	4056	940	1320		541		501			
6.3.71.*	4056	1040	1320		674		613		568	550
8.3.71.*	4056	1140	1320				725		664	640
4.3.80.*	5256	1170	1320		798		744			
6.3.80.*	5256	1270	1320		972		890		829	806
8.3.80.*	5256	1370	1320				1036		954	922
3.4.50.*	4456	730	820				314			
4.4.50.*	4456	780	820	401		364	353			
6.4.50.*	4456	880	820	503		445	429	417	399	
8.4.50.*	4456	980	820			528	506	489	465	451
1.4.50.*	4456	1080	820					562	533	514
4.4.63.*	4456	840	1120		495		458			
6.4.63.*	4456	940	1120		618		562		519	504
8.4.63.*	4456	1040	1120				666		609	586
4.4.71.*	5256	940	1320		706		652			
6.4.71.*	5256	1040	1320		881		799		738	715
8.4.71.*	5256	1140	1320				946		864	832
4.4.80.*	6856	1170	1320		1055		984			
6.4.80.*	6856	1270	1320		1285		1176		1096	1064
8.4.80.*	6856	1370	1320				1371		1262	1220
3.5.50.*	5456	730	820				386			
4.5.50.*	5456	780	820	494		446	434			
6.5.50.*	5456	880	820	622		549	529	516	492	
8.5.50.*	5456	980	820			652	625	603	574	554
1.5.50.*	5456	1080	820					693	656	632
3.6.50.*	6456	730	820				458			
4.6.50.*	6456	780	820	592		530	514			
6.6.50.*	6456	880	820	741		651	627	612	582	
8.6.50.*	6456	980	820			774	740	715	680	657
1.6.50.*	6456	1080	820					821	778	748



GEA Goedhart DRS air coolers
Staggered air distribution

The Goedhart DRS range of dual discharge ceiling mounted air coolers are especially suitable for cooling and working room applications. The height of the aircooler is low, so the maximum space in the chill room can be utilised. The fans are mounted to the outside of the air cooler. The fans are as standard not wired on a junction box to the connection side. Wiring is available against an extra price.



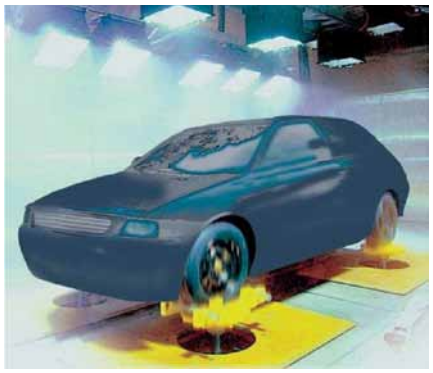
Coil block

Tube distance	: 50x50 mm straight
Fin spacing	: 4, 7, 10 mm
Material	: 15mm stainless steel tubes 304
	: aluminium HT-fins

Goedhart DRS coil blocks have stainless steel tubes expanded into fully collared aluminium fins. 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 dried air.Suitable for NH_3/CO_2- pump system and de system and the most coolants.

Casing

- Construction for ceiling mounting
- Casing material of galvanized sheet steel
- corrosiebestendige witte afwerklaag (RAL 9003)
- Aansluit- en bochtenzijde zijn voorzien van afneembare afschermkappen t.b.v. onderhoud.
- Hinged drip tray.(only construction without feet)
- Possible defrost by hot gas spiral or electric defrost elements will be fixed to the bottom side of the coil.
- Stainless steel fasteners



Goedhart DRS features

- Especially for working room applications.
- Consisting of 240 models
- Capacity range from van 3,8 tot 199,6kW at SC2
- EC fan technology possible
- The fans are mounted to the outside of the air cooler. easy for maintenance
- The fans are as standard not wired on a junction box (optional)
- Suitable for NH_3/CO_2- pump system and de system and the most coolants.Goedhart
- Goedhart DRS is delivered on a wooden frame for easy mounting
- Many options and accessories available (see p. 48)



Goedhart DRS

Goedhart DRS - Air coolers



1	2	3		
DRS	6	3	45	7
			4	5

1. Range : DRS
2. Number of rows deep : 3, 4 ,6, 8, 10
3. Number of fans : 1 - 6
4. Fan diameter : 400, 450, 560, 630
5. Fin spacing : 4, 7, 10

Goedhart DRS - Fan information

Fan diameter	Tension	Δ			Y			Δ	Y	Δ			
		Speed	Nominal power	FLC	Speed	Nominal power	FLC	Sound power indication each fan LwA (+/-2dB(A))		Speed	Nominal power	FLC	Sound power indication each fan LwA (+/-2dB(A))
mm	V	min-1	Watt	A	min-1	Watt	A	dB(A)	dB(A)	min-1	Watt	A	dB(A)
Three phase - 50Hz										**Three phase - 60Hz**			
400	3x400/690	1370	230	0,44	1110	170	0,27	76	70,5	1580	370	0,56	**
450	3x400/690	1350	540	1,10	1020	360	0,66	78	70	1560	880	1,40	**
500	3x400/690	1340	840	1,45	940	540	0,96	78	75	1480	1200	2,00	**
560	3x400/690	1280	1050	2,20	920	580	1,10	85	76	1430	1550	2,70	**
630	3x400/690	1360	1500	2,70	1100	1100	1,80	88	83	1640	2900	4,60	**
450	3x400/690	900	180	0,50	630	100	0.24	67	61	1020	280	0,60	**
500	3x400/690	880	290	0,74	590	150	0.36	72	64	970	440	0,90	**
560	3x400/690	870	340	0,70	630	210	0.38	73	65	980	540	0,88	**
630	3x400/690	900	620	1,25	720	440	0,72	73	67	1040	1000	1,55	**
Single phase - 50Hz										**Single phase - 60Hz**			
450	1x230	1390	600	2,90				80		1430	820	3,50	**
500	1x230	1240	720	3,20				81,5		1260	1000	4,40	**
400	1x230	950	130	0,60				68		1110	170	0,78	**
500	1x230	900	270	1,25				71.5		900	380	1,75	**

** Ask your Goedhart contact for the sound power indication

Capacities

Type DRS	4 mm					7 mm					10 mm					4p	6p
	4 polig 1500 min⁻¹ (nom)		6 polig 1000 min⁻¹ (nom)			4 polig 1500 min⁻¹ (nom)		6 polig 1000 min⁻¹ (nom)			4 polig 1500 min⁻¹ (nom)		6 polig 1000 min⁻¹ (nom)				
	DT1 = 8K (SC) air on= 0°C (-8/0)	Air volume	DT1 = 8K (SC) air on= 0°C (-8/0)	Air volume	Surface	DT1 = 8K (SC) air on= 0°C (-8/0)	Air volume	DT1 = 8K (SC) air on= 0°C (-8/0)	Air volume	Surface	DT1 = 8K (SC) air on= 0°C (-8/0)	Air volume	DT1 = 8K (SC) air on= 0°C (-8/0)	Air volume	Surface	LpA @ 3 m (+/- 2 dB(A))	LpA @ 3 m (+/- 2 dB(A))
	kW	m³/h	kW	m³/h	m²	kW	m³/h	kW	m³/h	m²	kW	m³/h	kW	m³/h	m²	dB(A)	dB(A)
3.1.40.	6,9	3168	5,4	2119	29	4,8	3474	3,8	2301	17						54,3	46,3
4.1.40.	7,8	2998	6	2021	39	5,9	3394	4,6	2252	23						54,3	46,3
6.1.40.	8,7	2713	6,4	1852	59	7,4	3229	5,7	2156	35	6,2	3428	4,7	2273	25	54,3	46,3
8.1.40.						8,4	3073	6,3	2066	46	7,4	3331	5,5	2215	33	54,3	46,3
1.1.40.											8,2	3234	6,1	2159	41	54,3	46,3
3.1.45.	11,7	5883	9,3	3876	46	8,2	6451	6,5	4277	27						56,2	45,2
4.1.45.	13,6	5590	10,3	3668	61	10,1	6293	7,9	4167	36						56,2	45,2
6.1.45.	15,5	5099	11,2	3327	91	13	5994	9,9	3954	54	10,8	6361	8,2	4214	39	56,2	45,2
8.1.45.						14,8	5720	11	3761	72	12,9	6177	9,7	4084	51	56,2	45,2
1.1.45.											14,5	6001	10,7	3959	64	56,2	45,2
3.1.50.	15,4	7832	12,1	5127	59	10,6	8516	8,5	5568	34						59,1	50,1
4.1.50.	17,9	7446	13,6	4882	78	13,2	8337	10,3	5450	46						59,1	50,1
6.1.50.	20,5	6788	14,9	4464	117	17	7971	12,9	5216	69	14,2	8415	10,7	5501	50	59,1	50,1
8.1.50.						19,5	7619	14,5	4992	92	16,9	8199	12,6	5361	66	59,1	50,1
1.1.50.											19,1	7981	14	5221	83	59,1	50,1
3.1.56.	20,2	9800	16	6571	81	13,8	10423	11,1	6981	48						62,9	50,9
4.1.56.	40,1	19587	18	6334	162	17,1	10258	13,5	6874	64						62,9	50,9
6.1.56.	60,5	29374	20	5906	243	22	9928	16,9	6654	96	18,2	10329	13,9	6921	69	62,9	50,9
8.1.56.						25,4	9604	19	6440	127	21,8	10133	16,4	6791	92	62,9	50,9
1.1.56.											24,5	9935	18,3	6660	115	62,9	50,9
3.1.63.	26,1	13392	21,5	9513	98	17,8	14205	14,9	10118	57						65,8	51,8
4.1.63.	30,6	12960	24,6	9163	130	22	13978	18,1	9959	76						65,8	51,8
6.1.63.	36	12200	27,7	8528	195	28,6	13550	23	9637	115	23,6	14075	19	10028	83	65,8	51,8
8.1.63.						33,3	13154	26,2	9321	153	28,5	13812	22,5	9838	110	65,8	51,8
1.1.63.											32,3	13561	25,2	9646	138	65,8	51,8
3.2.40.	13,7	6324	10,7	4234	58	9,5	6942	7,6	4599	34						57,1	49,1
4.2.40.	15,6	5982	11,9	4035	78	11,7	6782	9,1	4501	46						57,1	49,1
6.2.40.	17,3	5411	12,9	3695	117	14,8	6449	11,3	4307	69	12,4	6852	9,4	4543	49	57,1	49,1
8.2.40.						16,8	6133	12,6	4124	92	14,7	6655	11	4426	66	57,1	49,1
1.2.40.											16,4	6458	12,1	4312	82	57,1	49,1
3.2.45.	23,5	11752	18,5	7742	91	16,4	12893	13,1	8549	53						59,0	48,0
4.2.45.	27,1	11159	20,6	7324	121	20,1	12577	15,8	8326	71						59,0	48,0
6.2.45.	31	10177	22,4	6639	182	25,8	11972	19,7	7898	107	21,6	12712	16,5	8423	77	59,0	48,0
8.2.45.						29,6	11422	22	7508	142	25,8	12342	19,3	8160	103	59,0	48,0
1.2.45.											29	11988	21,4	7909	128	59,0	48,0
3.2.50.	30,8	15647	24,2	10244	117	21,3	17024	16,9	11130	69						61,7	52,7
4.2.50.	35,7	14873	27,2	9752	156	26,3	16665	20,6	10895	92						61,7	52,7
6.2.50.	40,9	13554	29,8	8914	234	33,9	15928	25,8	10423	137	28,2	16822	21,4	10997	99	61,7	52,7
8.2.50.						38,9	15219	28,9	9972	183	33,8	16385	25,2	10715	132	61,7	52,7
1.2.50.											38,2	15947	28	10434	165	61,7	52,7
3.2.56.	80	39161	31,9	13133	324	27,6	20838	22,2	13960	95						65,6	53,6
4.2.56.	100,8	48948	36,1	12657	405	34,1	20508	27	13741	127						65,6	53,6
6.2.56.	121	58735	39,8	11799	485	43,7	19842	33,8	13302	191	36,1	20651	27,8	13837	137	65,6	53,6
8.2.56.						50,2	19193	38	12872	254	43,5	20254	32,8	13574	183	65,6	53,6
1.2.56.											48,6	19859	36,5	13313	229	65,6	53,6
3.2.63.	51,9	26770	42,9	19014	195	35,6	28401	29,7	20228	114						68,5	54,5
4.2.63.	61	25901	48,6	18309	259	44,1	27946	36,2	19911	152						68,5	54,5
6.2.63.	71,8	24374	55,3	17038	389	57	27086	46	19263	229	47,2	28140	37,7	20048	165	68,5	54,5
8.2.63.						66,6	26290	52,3	18627	305	56,9	27612	45	19665	219	68,5	54,5
1.2.63.											64	27107	50,4	19280	274	68,5	54,5
3.3.45.	35,2	17620	27,7	11607	136	24,5	19336	19,6	12822	80						60,5	49,5
4.3.45.	40,6	16730	31	10980	182	30,3	18859	23,7	12486	107						60,5	49,5
6.3.45.	46,4	15255	33,6	9952	272	38,7	17952	29,5	11842	160	32,4	19064	24,6	12631	115	60,5	49,5
8.3.45.						44,4	17124	32,9	11257	213	38,7	18507	28,9	12236	154	60,5	49,5
1.3.45.											43,5	17974	32	11858	192	60,5	49,5
3.3.50.	46,1	23463	36,2	15360	175	32,1	25532	25,3	16692	103						63,2	54,2
4.3.50.	53,4	22300	40,7	14623	233	39,4	24993	30,8	16340	137						63,2	54,2
6.3.50.	61,2	20319	44,7	13363	350	50,9	23884	38,3	15628	206	42,3	25227	32,1	16492	148	63,2	54,2
8.3.50.						58,4	22820	43,3	14953	274	50,8	24572	37,8	16068	197	63,2	54,2
1.3.50.											57,2	23913	41,6	15647	247	63,2	54,2

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

Goedhart SCP air coolers StSt/Al - StSt/StSt

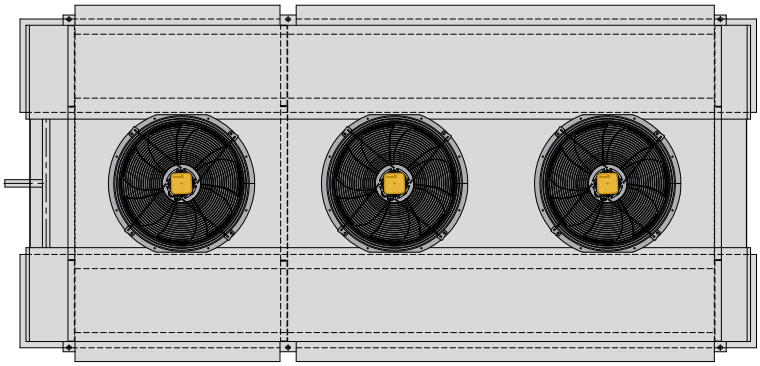
Goedhart DRS

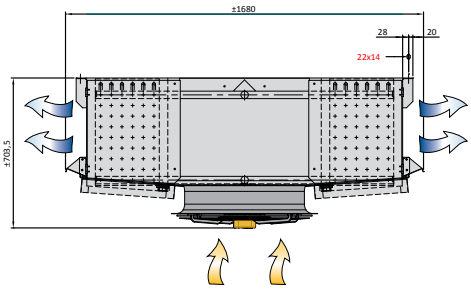
Capacities

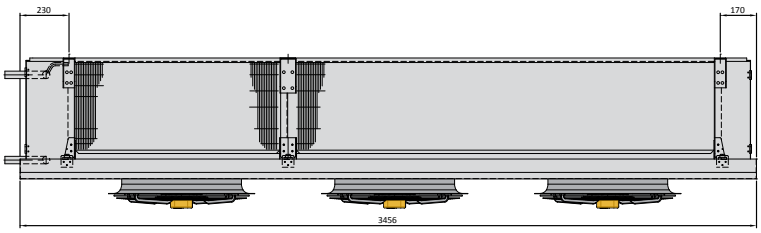
Type DRS	4 mm					7 mm					10 mm					4p	6p
	4 polig 1500 min⁻¹ (nom)		6 polig 1000 min⁻¹ (nom)			4 polig 1500 min⁻¹ (nom)		6 polig 1000 min⁻¹ (nom)			4 polig 1500 min⁻¹ (nom)		6 polig 1000 min⁻¹ (nom)				
	DT1 = 8K (SC2) air on= 0°C (-8/0)	Air volume	DT1 = 8K (SC2) air on= 0°C (-8/0)	Air volume	Surface	DT1 = 8K (SC2) air on= 0°C (-8/0)	Air volume	DT1 = 8K (SC2) air on= 0°C (-8/0)	Air volume	Surface	DT1 = 8K (SC2) air on= 0°C (-8/0)	Air volume	DT1 = 8K (SC2) air on= 0°C (-8/0)	Air volume	Surface	LpA @ 3 m (+/- 2 dB(A))	LpA @ 3 m (+/- 2 dB(A))
	kW	m³/h	kW	m³/h	m²	kW	m³/h	kW	m³/h	m²	kW	m³/h	kW	m³/h	m²	dB(A)	dB(A)
3.3.56.	23,4	9442	47,9	19695	108	41,5	31255	33	20939	143						67,0	55,0
4.3.56.	46,8	18869	54,1	18980	216	51,1	30758	40,4	20610	190						67,0	55,0
6.3.56.	69,7	28294	59,7	17692	324	65,6	29758	50,2	19948	286	54,3	30972	41,6	20753	206	67,0	55,0
8.3.56.						75,9	28782	57	19302	381	65,2	30378	49,2	20359	274	67,0	55,0
1.3.56.											73,4	29783	54,7	19966	343	67,0	55,0
3.3.63.	78,1	40147	64,3	28514	292	53,4	42597	44,5	30341	171						69,9	55,9
4.3.63.	91,5	38842	73,5	27456	389	66,1	41914	54,2	29862	228						69,9	55,9
6.3.63.	107,6	36548	82,8	25545	583	85,5	40622	69	28889	343	70,8	42204	56,8	30070	247	69,9	55,9
8.3.63.						99,8	39427	78,5	27934	457	84,7	41412	67,1	29494	329	69,9	55,9
1.3.63.											96,1	40654	75,6	28914	411	69,9	55,9
3.4.45.	46,9	23488	36,9	15472	181	32,8	25779	26,1	17094	107						61,5	50,5
4.4.45.	54,2	22300	41,2	14635	242	40,1	25144	31,6	16646	142						61,5	50,5
6.4.45.	61,9	20332	44,7	13263	363	51,6	23930	39	15786	213	43,1	25416	32,9	16837	153	61,5	50,5
8.4.45.						59,1	22827	43,9	15005	284	51,6	24672	38,6	16312	205	61,5	50,5
1.4.45.											57,9	23960	42,2	15807	256	61,5	50,5
3.4.50.	61,3	31279	48	20478	233	42,5	34041	33,6	22255	137						64,1	55,1
4.4.50.	71,3	29727	54,4	19493	311	52,6	33321	41,1	21785	183						64,1	55,1
6.4.50.	81,6	27085	59,6	17813	466	67,7	31842	51,5	20836	274	56,4	33634	42,8	21989	197	64,1	55,1
8.4.50.						77,8	30421	57,7	19933	365	67,6	32758	50,4	21422	263	64,1	55,1
1.4.50.											76,3	31878	55,9	20859	329	64,1	55,1
3.4.56.	93,5	37719	63,8	26257	432	55	41670	44,4	27917	190						67,9	55,9
4.4.56.	116,7	47146	72,1	25303	539	68,2	41008	53,7	27479	254						67,9	55,9
6.4.56.	139,3	56572	79,6	23585	647	87,9	39673	67,6	26595	381	72,5	41295	55,3	27669	274	67,9	55,9
8.4.56.						100,3	38370	76	25734	507	86,9	40501	65,6	27143	365	67,9	55,9
1.4.56.											98	39707	72,9	26618	456	67,9	55,9
3.4.63.	103,8	53524	85,8	38015	388	71,2	56794	59,3	40451	228						70,8	56,8
4.4.63.	121,9	51784	97,1	36602	518	88	55882	72,4	39814	304						70,8	56,8
6.4.63.	143,5	48724	108,4	34054	777	114	54158	91,9	38516	457	93,7	56270	75,4	40090	329	70,8	56,8
8.4.63.						133	52562	104,5	37240	609	113,7	55211	90	39322	438	70,8	56,8
1.4.63.											127,9	54200	100,8	38549	548	70,8	56,8
3.5.50.	76,9	39093	60,3	25595	291	53,4	42548	42,3	27818	171						64,8	55,8
4.5.50.	88,7	37154	67,9	24363	388	65,9	41649	51,4	27228	228						64,8	55,8
6.5.50.	102	33850	74,4	22263	583	84,4	39798	64,4	26042	343	70,6	42042	53,4	27485	246	64,8	55,8
8.5.50.						97,3	38021	72,2	24913	457	84,7	40945	63	26775	329	64,8	55,8
1.5.50.											94,7	39844	70	26072	411	64,8	55,8
3.5.56.	27	8798	79,3	32819	163	68,8	52087	55,4	34896	238						68,6	56,6
4.5.56.	53,9	17574	89,9	31627	324	84,9	51258	67,3	34347	317						68,6	56,6
6.5.56.	80,9	26350	99,5	29478	486	109,9	49588	84,4	33243	476	90,6	51616	69,4	34585	342	68,6	56,6
8.5.56.						126,5	47959	93,6	32165	634	107,7	50624	82	33927	456	68,6	56,6
1.5.56.											122,5	49630	91,2	33270	570	68,6	56,6
3.5.63.	128,9	66901	106,8	47515	485	88,8	70990	73,8	50563	285						71,5	57,5
4.5.63.	151,2	64725	122,6	45749	647	109,9	69850	90,3	49766	381						71,5	57,5
6.5.63.	179,4	60898	138,1	42563	971	142	67695	114,1	48141	571	117,9	70336	94,2	50112	411	71,5	57,5
8.5.63.						164,8	65699	130,7	46546	761	142,2	69012	112,5	49149	548	71,5	57,5
1.5.63.											159,4	67747	125,9	48183	684	71,5	57,5
3.6.50.	92,1	46909	72,4	30711	350	64,2	51058	50,4	33381	205						65,4	56,4
4.6.50.	106,7	44581	81,4	29233	466	78,7	49977	61,6	32674	274						65,4	56,4
6.6.50.	122,4	40616	89,3	26712	699	101,7	47755	76,6	31249	411	84,7	50448	64,1	32980	296	65,4	56,4
8.6.50.						116,7	45621	86,6	29894	548	101,6	49133	75,6	32130	394	65,4	56,4
1.6.50.											114,4	47811	83,1	31285	493	65,4	56,4
3.6.56.	107,9	35126	95,7	39382	647	83,3	62503	66,4	41875	285						69,1	57,1
4.6.56.	134,9	43903	108,1	37950	809	102	61509	80,7	41216	380						69,1	57,1
6.6.56.	161,7	52680	119,4	35371	971	131	59504	101,3	39890	571	108,7	61938	83,3	41501	411	69,1	57,1
8.6.56.						151,6	57547	114	38595	761	130,3	60746	98,4	40712	547	69,1	57,1
1.6.56.											147	59554	109,4	39923	684	69,1	57,1
3.6.63.	155,6	80278	128,6	57016	582	106,8	85187	88,9	60675	342						72,0	58,0
4.6.63.	182,9	77666	147	54895	777	132,2	83817	108,3	59716	457						72,0	58,0
6.6.63.	215,2	73073	165,6	51071	1165	171	81230	137,9	57767	685	141,6	84400	113,1	60133	493	72,0	58,0
8.6.63.						199,6	78835	156,8	55852	913	169,3	82812	134,1	58979	657	72,0	58,0
1.6.63.											191,8	81293	151,1	57816	821	72,0	58,0

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

Drawing







Attention!



The fans are mounted to the outside of the air cooler. The fans are as standard not wired on a junction box to the connection side. Wiring is available against an extra price.

The dimensions in the tables are external dimensions of the heat exchanger. Measures such as suspension points, but also internal volume [dm3], other conditions, refrigerants, coolants and materials are available in the Goedhart GPC selection program. Goedhart GPC is free to download from www.goedhart.eu

Goedhart SCP air coolers StSt/Al - StSt/StSt

Goedhart DRS

Dimensions

Type DRS	Dimensions			Gewicht		
	L	B	H	4 mm	7 mm	10 mm
	mm	mm	mm	kg	kg	kg
3.1.40.*	1056	1220	420	85	80	
4.1.40.*	1056	1320	420	96	90	
6.1.40.*	1056	1520	420	118	108	104
8.1.40.*	1056	1720	420		127	122
1.1.40.*	1056	1920	420			140
3.1.45.*	1156	1270	590	116	109	
4.1.45.*	1156	1370	590	131	120	
6.1.45.*	1156	1570	590	160	145	139
8.1.45.*	1156	1770	590		169	162
1.1.45.*	1156	1970	590			184
3.1.50.*	1356	1320	590	139	129	
4.1.50.*	1356	1420	590	157	144	
6.1.50.*	1356	1620	590	192	172	164
8.1.50.*	1356	1820	590		202	192
1.1.50.*	1356	2020	590			218
3.1.56.*	1456	1380	705	166	153	
4.1.56.*	1456	1480	705	187	170	
6.1.56.*	1456	1680	705	233	207	196
8.1.56.*	1456	1880	705		244	229
1.1.56.*	1456	2080	705			263
3.1.63.*	1456	1450	835	192	176	
4.1.63.*	1456	1550	835	218	197	
6.1.63.*	1456	1750	835	271	239	226
8.1.63.*	1456	1950	835		281	264
1.1.63.*	1456	2150	835			299
3.2.40.*	1656	1220	420	137	126	
4.2.40.*	1656	1320	420	154	141	
6.2.40.*	1656	1520	420	193	173	165
8.2.40.*	1656	1720	420		203	192
1.2.40.*	1656	1920	420			222
3.2.45.*	1856	1270	590	190	175	
4.2.45.*	1856	1370	590	216	197	
6.2.45.4	1856	1570	590	268	238	227
8.2.45.*	1856	1770	590		282	266
1.2.45.*	1856	1970	590			303
3.2.50.*	2256	1320	590	235	216	
4.2.50.*	2256	1420	590	267	241	
6.2.50.*	2256	1620	590	333	294	278
8.2.50.*	2256	1820	590		344	324
1.2.50*	2256	2020	590			371
3.2.56.*	2456	1380	705	281	256	
4.2.56.*	2456	1480	705	325	289	
6.2.56.*	2456	1680	705	409	355	333
8.2.56.*	2456	1880	705		420	392
1.2.56.*	2456	2080	705			453
3.2.63.*	2456	1450	835	330	298	
4.2.63.*	2456	1550	835	379	337	
6.2.63.*	2456	1750	835	477	412	386
8.2.63.*	2456	1950	835		488	453
1.2.63.*	2456	2150	835			520
3.3.45.*	2556	1270	590	266	244	
4.3.45.*	2556	1370	590	303	273	
6.3.45.*	2556	1570	590	379	334	316
8.3.45.*	2556	1770	590		392	368
1.3.45.*	2556	1970	590			422
3.3.50.*	3156	1320	590	331	302	
4.3.50.*	3156	1420	590	378	340	
6.3.50.*	3156	1620	590	474	415	392
8.3.50.*	3156	1820	590		491	460
1.3.50.*	3156	2020	590			527
3.3.56.*	3456	1380	705	409	369	
4.3.56.*	3456	1480	705	471	418	
6.3.56.*	3456	1680	705	594	513	481
8.3.56.*	3456	1880	705		611	568
1.3.56.*	3456	2080	705			654
3.3.63.*	3456	1450	835	479	431	
4.3.63.*	3456	1550	835	550	486	
6.3.63.*	3456	1750	835	695	598	559
8.3.63.*	3456	1950	835		708	656
1.3.63.*	3456	2150	835			752

Type DRS	Dimensions			Gewicht		
	L	B	H	4 mm	7 mm	10 mm
	mm	mm	mm	kg	kg	kg
3.4.45.*	3256	1270	590	343	313	
4.4.45.*	3256	1370	590	391	352	
6.4.45.*	3256	1570	590	489	429	405
8.4.45.*	2856	1770	590		507	474
1.4.45.*	3256	1970	590			542
3.4.50.*	4056	1320	590	432	393	
4.4.50.*	4056	1420	590	495	443	
6.4.50.*	4056	1620	590	619	541	511
8.4.50.*	4056	1820	590		639	596
1.4.50.*	4056	2020	590			681
3.4.56.*	4456	1380	705	525	472	
4.4.56.*	4456	1480	705	606	535	
6.4.56.*	4456	1680	705	768	661	618
8.4.56.*	4456	1880	705		787	729
1.4.56.*	4456	2080	705			839
3.4.63.*	4456	1450	835	616	552	
4.4.63.*	4456	1550	835	709	624	
6.4.63.*	4456	1750	835	896	767	715
8.4.63.*	4456	1950	835		911	842
1.4.63.*	4456	2150	835			968
3.5.50.*	4956	1320	590	529	481	
4.5.50.*	4956	1420	590	606	542	
6.5.50.*	4956	1620	590	760	663	624
8.5.50.*	4956	1820	590		781	728
1.5.50.*	4956	2020	590			833
3.5.56.*	5456	1380	705	643	577	
4.5.56.*	5456	1480	705	743	655	
6.5.56.*	5456	1680	705	946	811	758
8.5.56.*	5456	1880	705		966	893
1.5.56.*	5456	2080	705			1029
3.5.63.*	5456	1450	835	756	676	
4.5.63.*	5456	1550	835	870	764	
6.5.63.*	5456	1750	835	1104	942	878
8.5.63.*	5456	1950	835		1121	1034
1.5.63.*	5456	2150	835			1191
3.6.50.*	5856	1320	590	627	570	
4.6.50.*	5856	1420	590	717	640	
6.6.50.*	5856	1620	590	902	784	737
8.6.50.*	5856	1820	590		925	861
1.6.50.*	5856	2020	590			985
3.6.56.*	6456	1380	705	767	687	
4.6.56.*	6456	1480	705	886	779	
6.6.56.*	6456	1680	705	1127	965	901
8.6.56.*	6456	1880	705		1149	1061
1.6.56.*	6456	2080	705			1221
3.6.63.*	6456	1450	835	901	805	
4.6.63.*	6456	1550	835	1039	911	
6.6.63.*	6456	1750	835	1316	1122	1045
8.6.63.*	6456	1950	835		1334	1230
1.6.63.*	6456	2150	835			1413







GEA Goedhart VRS air coolers
Complete stainless steel

The extensive range Goedhart VRS single discharge ceiling mounted industrial air coolers are suitable industrial cooling and freezing applications. The possible air direction is blow-through or draw-through (please specify when ordering).

Coil block

Tube distance	: 50x50 mm straight
Fin spacing	: 4 and 7 mm
Material	: 15mm o.d stainless steel tubes
	: stainless steel fins

Goedhart VRS coil blocks have stainless steel tubes expanded into fully collared stainless steel fins. 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 dried air. Suitable for NH_3/CO_2- pump system and de system and the most coolants.

Casing

- Construction for ceiling mounting
- Casing material of stainless steel 304 sheetl
- Bend/header projection by end covers, easy removed for maintenance
- Standard refrigerant connections are positioned on the left hand side of the unit when looking with the direction of the airflow.
- Cleanable execution optional
- Possible defrost by hot gas spiral or electric defrost elements will be fixed to the bottom side of the coil.
- Stainless steel fasteners

Goedhart VRS features

- Complete stainless steel execution
- For cooling and freezing applications
- Blow-through or draw-through execution possible
- Consisting of 24models
- Capacity range from 5,7 to 54,7 kW at SC2 NH3
- EC fan technology possible
- Fans not standard wired to a junction box (optional)
- Suitable for NH_3/CO_2- pump system and de system and the most coolants.
- Goedhart VRS is delivered on a wooden frame for easy mounting
- Many options and accessories available (see p. 44)

Goedhart VRS - Air coolers



1	2	3	4		
VRS	B	6	3	45	7
				5	6

1. Range : VRS
2. Air direction : B=blow-through
   Z=draw-through
3. Number of rows deep : 4, 6, 8
4. Number of fans : 1 - 4
5. Fan diameter : 500 and 630 mm
6. Fin spacing : 4, 7 mm

Goedhart VRS - Fan information

Fan diameter	Tension	Δ			Y			Δ	Y	Δ			
		Speed	Nominal power	FLC	Speed	Nominal power	FLC	Sound power indication each fan LwA (+/-2dB(A))		Speed	Nominal power	FLC	Sound power indication each fan LwA (+/-2dB(A))
mm	V	min-1	Watt	A	min-1	Watt	A	dB(A)	dB(A)	min-1	Watt	A	dB(A)
Three phase - 50Hz										**Three phase - 60Hz**			
500	3x400/690	1340	840	1,45	940	540	0,96	81	75	**	**	**	**
630	3x400/690	1360	1500	2,70	1100	1100	1,80	88	83	**	**	**	**
500	3x400/690	880	290	0.74	590	150	0.36	72	64	970	440	0,90	
630	3x400/690	900	620	1,25	720	440	0,72	73	67	1040	1000	1,55	
Single phase - 50Hz										**Single phase - 60Hz**			
500	1x230	1240	720	3.20				81.5		1260	1000	4.40	
500	1x230	900	270	1.25				71.5		900	380	1.75	

** Ask your Goedhart contact for the sound power indication

Goedhart SCP air coolers StSt/Al - StSt/StSt

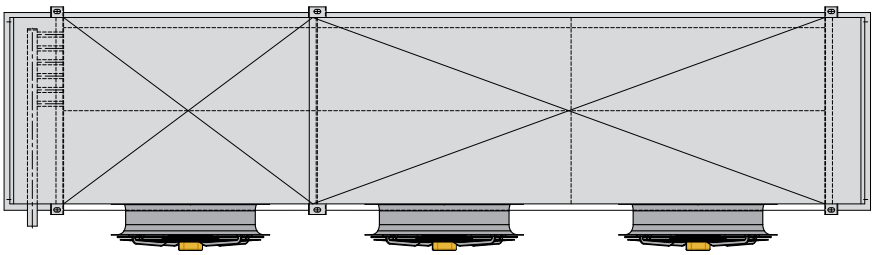
Goedhart VRS

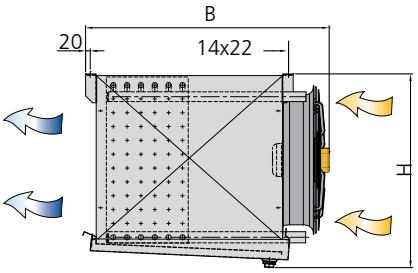
Capacities

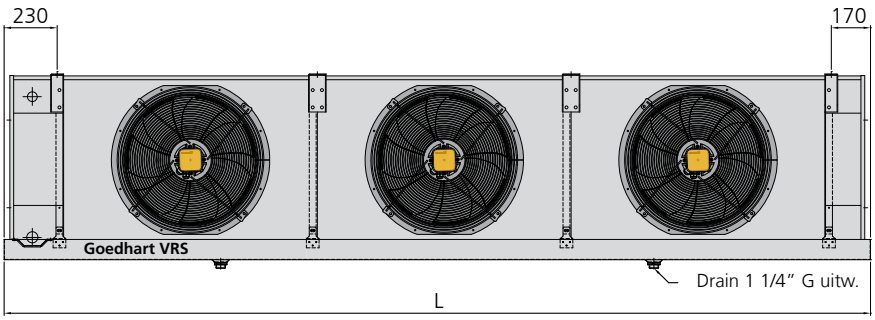
Type VRS	DT1 - SC2 (NH3)						LpA @ 3 m (+/- 2 dB(A))
	4 mm			7 mm			
	DT1 = 8K (SC2) air on= 0°C (-8/0)	Air volume	Surface	DT1 = 8K (SC2) air on= 0°C (-8/0)	Air volume	Surface	
	kW	m³/h	m²	kW	m³/h	m²	dB(A)
4.1.50.	5,7	7428	76				56,0
6.1.50.	7,8	6737	114	5,7	7994	67	56,0
8.1.50.				7,2	7613	89	56,0
4.1.63.	9,9	13104	130				63,7
6.1.63.	13,7	12318	195	9,8	13717	115	63,7
8.1.63.				12,5	13305	153	63,7
4.2.50.	11,4	14838	151				58,6
6.2.50.	15,5	13452	227	11,5	15974	133	58,6
8.2.50.				14,5	15207	178	58,6
4.2.63.	19,7	26192	259				66,2
6.2.63.	27,4	24615	389	19,6	27421	229	66,2
8.2.63.				25,0	26595	305	66,2
4.3.50.	17,1	22249	227				60,1
6.3.50.	23,3	20169	340	17,2	23953	200	60,1
8.3.50.				21,6	22803	267	60,1
4.3.63.	29,7	39279	389				67,6
6.3.63.	41,0	36910	583	29,4	41125	343	67,6
8.3.63.				37,5	39885	457	67,6
4.4.50.	22,8	29659	302				60,9
6.4.50.	31,0	26884	453	22,9	31934	266	60,9
8.4.50.				28,9	30399	355	60,9
4.4.63.	39,4	52367	518				68,5
6.4.63.	54,7	49208	777	39,3	54830	457	68,5
8.4.63.				49,9	53174	609	68,5

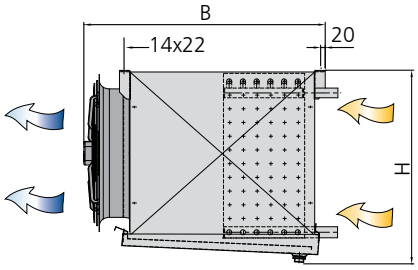
* =Sound pressure indication (LpA) at 3 m distance each air cooler (+/- 2 dB(A)), free field conditions, according EN13487

Drawing

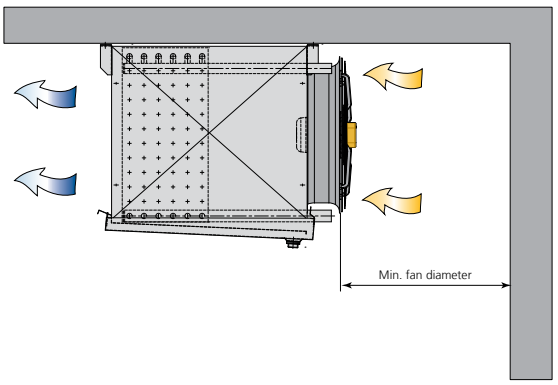




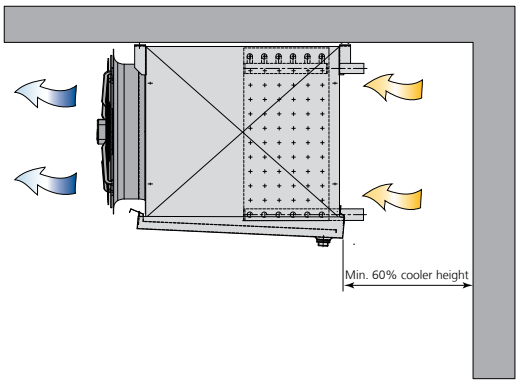




Blow-through Goedhart VRe-B / VRS-B



Draw-through Goedhart VRe-Z / VRS-Z



The dimensions in the tables are external dimensions of the heat exchanger. Measures such as suspension points, but also internal volume [dm3], other conditions, refrigerants, coolants and materials are available in the Goedhart GPC selection program. Goedhart GPC is free to download from www.goedhart.eu

Dimensions

Type VRS	Dimensions			Gewicht	
	L	B	H	 4 mm	 7 mm
	mm	mm	mm	kg	kg
4.1.50.*	1456	780	820	158	
6.1.50.*	1456	880	820	205	166
8.1.50.*	1456	980	820		199
4.1.63.*	1456	840	1120	258	
6.1.63.*	1456	940	1120	332	265
8.1.63.*	1456	1040	1120		317
4.2.50.*	2456	780	820	286	
6.2.50.*	2456	880	820	373	294
8.2.50.*	2456	980	820		355
4.2.63.*	2456	840	1120	475	
6.2.63.*	2456	940	1120	617	483
8.2.63.*	2456	1040	1120		582
4.3.50.*	3456	780	820	417	
6.3.50.*	3456	880	820	545	427
8.3.50.*	3456	980	820		518
4.3.63.*	3456	840	1120	693	
6.3.63.*	3456	940	1120	903	704
8.3.63.*	3456	1040	1120		847
4.4.50.*	4456	780	820	543	
6.4.50.*	4456	880	820	712	555
8.4.50.*	4456	980	820		671
4.4.63.*	5256	840	1120	909	
6.4.63.*	5256	940	1120	1188	920
8.4.63.*	5256	1040	1120		1112



GEA Goedhart BR50/BR50XF air coolers Blastfreezing

The Goedhart BR50/BR50XF blast freezers are a range of floor mounted air coolers specially designed for quick freezing of food products with a best performance due to special tubes. The Goedhart BC50/BC50XF is a high-quality Goedhart aircooler with a lot of possible optional extras.

The Goedhart BR50/BR50XF air coolers are very suitable for the use in 'large scale kitchens' (ready-to-serve meals). Besides this it can be used for quick freezing of bakery products, meat, fish, poultry, milk products and the production of ice cream. The working temperature is usually between -10°C and -30°C. The air cooler design is optimized for the use in confined spaces.

The process of quick freezing is very important to minimize the weight loss and conserving the qualities of the food product. The nutritional value is maintained, as well as the original taste. The fans on our Goedhart BR50/BR50XF air coolers have respectively standard 50 and 100 Pa external pressure available to enable the quick freezing process.



Staggered fin spacings

Coil block

Tube distance	: 50x50 mm straight
Fin spacing	: 7, 10 en 12mm
Material	: 15mm o.d stainless steel 304 tubes
	: aluminium HT-fins

Goedhart BR50 coil blocks have stainless steel tubes expanded into fully collared aluminium fins. 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 dried air.. Suitable for NH_3/CO_2- pump system and de system and the most coolants.



Hinged fan plates

Casing

- Construction for floor / ceiling mounting
- Casing material of galvanized sheet steel (epoxy spray finishing RAL 9003 optional)
- Standard refrigerant connections are positioned on the left hand side of the unit when looking with the direction of the airflow.
- Possible defrost by hot gas spiral or electric defrost elements will be fixed to the bottom side of the coil.
- Stainless steel fasteners



Goedhart BR50/BR50XF features

- Blastfreezer
- Suitable for floor or ceiling mounting
- Blow-through or draw-through execution possible
- Consisting of 24 models
- Capacity range from 27,2 to 117,7 kW SC3 NH3 pump system.
- Suitable for NH_3/CO_2- pump system and de system and the most coolants.
- Many options and accessories available (see p. 44)

Goedhart SCP air coolers StSt/Al - StSt/StSt

Goedhart BR50 / BR50XF

Goedhart BR50 / BR50XF - Air coolers



1	2	3			
BR50	XF	6	4	63	7
			4	5	6

1. Range : BR50
2. External pressure : = 50Pa XF=100Pa
3. Number of rows deep : 6, 8
4. Number of fans : 2, 4, 6
5. Fan diameter : 630, 630XF
6. Fin spacing : 7, 10, 12 mm

Goedhart BR50/BR50XF - Fan information

Ventilatordiameter	Spanning	Δ			Y			Δ	Y	Δ			
		Toerental	Nominaal vermogen	FLC	Toerental	Nominaal vermogen	FLC	Geluidsvermogen indicatie per vent. LwA (+/-2dB(A))		Toerental	Nominaal vermogen	FLC	
mm	V	min^{-1}	Watt	A	min^{-1}	Watt	A	dB(A)	dB(A)	min^{-1}	Watt	A	
Drie fase - 50Hz										**Drie fase - 60Hz**			
630	3x400/690	1360	1500	2,70	1100	1100	1,80	88	83	1640	2900	4,60	**
630XF*	3x230/400				1455	2200	4,80	-	94				
630	3x400/690	900	620	1,25	720	440	0,72	73	67	1040	1000	1,55	**

** Ask your Goedhart contact for the sound power indication

Goedhart SCP air coolers StSt/Al - StSt/StSt

Goedhart BR50

Capacities 50 Pa external pressure

Type BR50	DT1 - SC3 (NH3)									LpA @ 3 m (+/- 2 dB(A))
	7 mm			10 mm			12 mm			
	DT1 = 8K (SC3) air on= -18°C (-25/-18)	Air volume 50 Pa externe druk	Surface	DT1 = 8K (SC3) air on= -18°C (-25/-18)	Air volume 50 Pa externe druk	Surface	DT1 = 8K (SC3) air on= -18°C (-25/-18)	Air volume 50 Pa externe druk	Surface	
	kW	m³/h	m²	kW	m³/h	m²	kW	m³/h	m²	dB(A)
6.2.63.	34,3	23790	172	28,9	25372	124	27,2	25988	105	66,2
8.2.63.	39,6	22689	229							66,2
6.4.63.	67,6	47538	343	57,6	50713	247	54,4	51951	209	68,8
8.4.63.	79,1	45329	457							68,8
6.6.63.	102,8	71286	514	86,4	76055	370	81,6	77916	314	70,3
8.6.63.	117,7	67969	685							70,3

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

Goedhart SCP air coolers StSt/Al - StSt/StSt

Goedhart BR50XF

Capacities 100 Pa external pressure

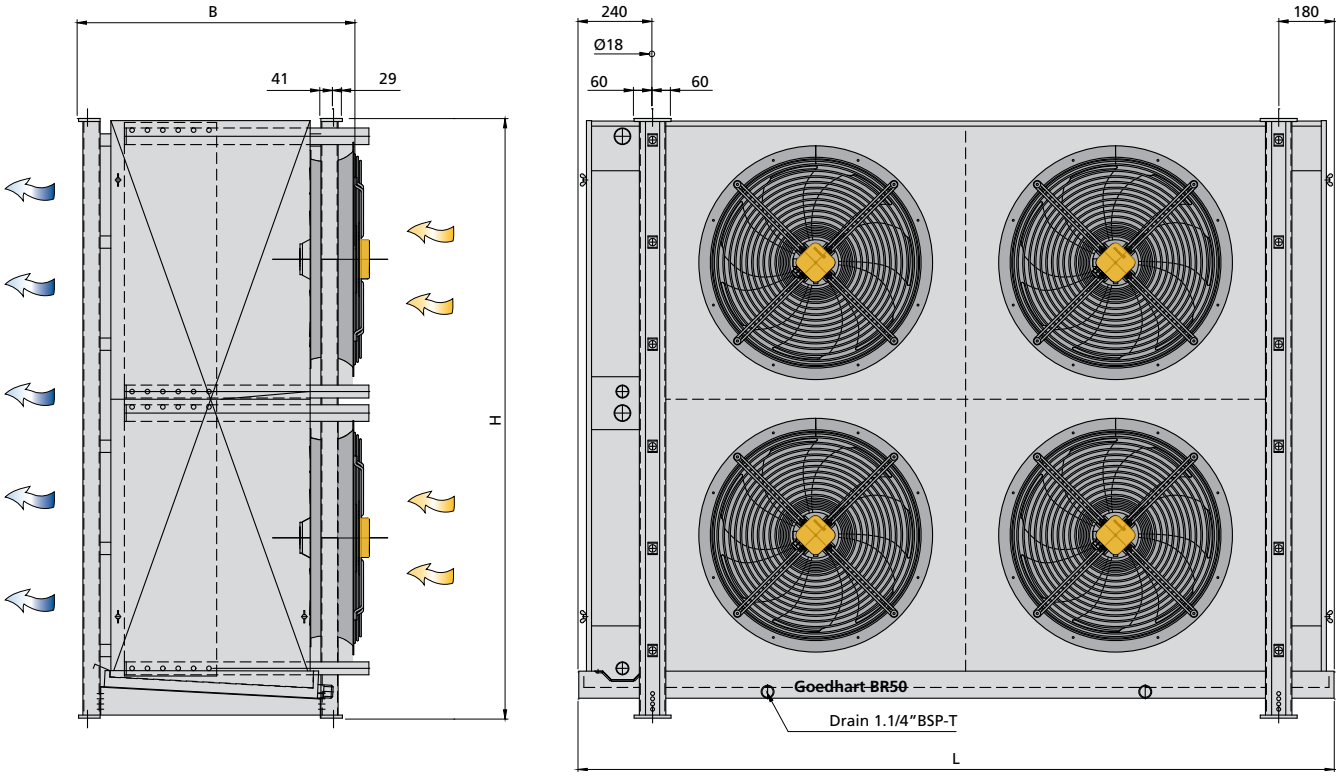
Type BR50XF	DT1 - SC3 (NH3)									LpA @ 3 m (+/- 2 dB(A))
	7 mm			10 mm			12 mm			
	DT1 = 8K (SC3) air on= -18°C (-25/-18)	Air volume 50 Pa externe druk	Surface	DT1 = 8K (SC3) air on= -18°C (-25/-18)	Air volume 50 Pa externe druk	Surface	DT1 = 8K (SC3) air on= -18°C (-25/-18)	Air volume 50 Pa externe druk	Surface	
	kW	m³/h	m²	kW	m³/h	m²	kW	m³/h	m²	dB(A)
6.2.63.	33,0	22396	172	27,8	23886	124	26,3	24465	105	74,1
8.2.63.	38,0	21354	229							74,1
6.4.63.	65,0	44753	343	55,6	47745	247	52,5	48906	209	76,7
8.4.63.	75,9	42664	457							76,7
6.6.63.	98,8	67110	514	83,3	71602	370	78,6	73348	314	78,1
8.6.63.	112,9	63972	685							78,1

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

Goedhart SCP air coolers StSt/Al - StSt/StSt

Goedhart BR50

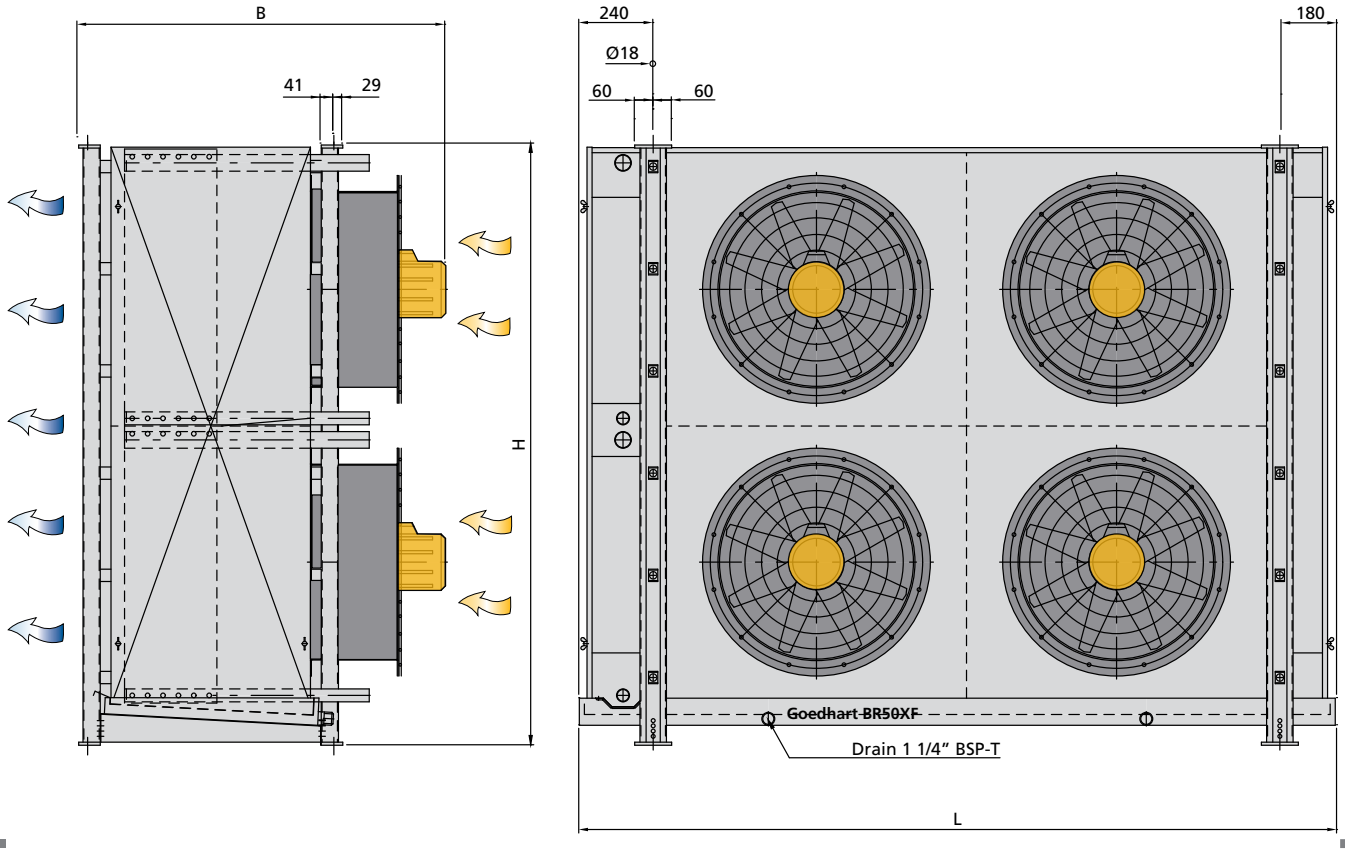
Drawing



Goedhart SCP air coolers StSt/Al - StSt/StSt

Goedhart BR50XF

Drawing



Goedhart SCP air coolers StSt/Al - StSt/StSt

Goedhart BR50

Dimensions

Type	Dimensions			Weight (empty)		
	L	B	H	7 mm	10 mm	12 mm
BR50	**mm**	**mm**	**mm**	**kg**	**kg**	**kg**
6.2.63.	1456	902	1950	338	319	318
8.2.63.	1456	1002	1950	386		
6.4.63.	2456	902	1950	568	529	529
8.4.63.	2456	1002	1950	635		
6.6.63.	3456	902	1950	794	737	736
8.6.63.	3456	1002	1950	925		

Goedhart SCP air coolers StSt/Al - StSt/StSt

Goedhart BR50XF

Dimensions

Type	Dimensions			Weight (empty)		
	L	B	H	7 mm	10 mm	12 mm
BR50XF	**mm**	**mm**	**mm**	**kg**	**kg**	**kg**
6.2.63.	1456	1192	1950	362	343	342
8.2.63.	1456	1292	1950	410		
6.4.63.	2456	1192	1950	616	577	577
8.4.63.	2456	1292	1950	684		
6.6.63.	3456	1192	1950	866	809	808
8.6.63.	3456	1292	1950	997		

The dimensions in the tables are external dimensions of the heat exchanger. Measures such as suspension points, but also internal volume [dm3], other conditions, refrigerants, coolants and materials are available in the Goedhart GPC selection program. Goedhart GPC is free to download from www.goedhart.eu

Goedhart SCP air coolers StSt/Al - StSt/StSt

Accessoiries / Options

Accessories					
	VRB / VRZ	**VRe**	**DRS**	**VRS**	**BR50**
Blazend	X	X	X	X	X
Zuigend	X	X		X	
Elektrische ontdooiing	X	X	X	X	X
Heetgas ontdooiing	X	X	X	X	X
Water ontdooiing	X	X	X	X	X
Secundaire ontdooiing	X	X		X	X
Anti-condensatieverwarming lekbak	X	X	X	X	X
Ventilatorringverwarming	X	X	X	X	X
Scharnierbare ventilator	X	X	X	X	
Scharnierbare lekbak	X	X	X	X	
Geisoleerde lekbak	X	X	X	X	X
Geisoleerde ventilatorplaat			X		
Polyester lekbak	X	X	X	X	X
Uitblaaskoker *	X	X		X	
Uitblaaskoker met luchtrichter *	X	X		X	
Ontdooisok *	X	X		X	
Diffusor	X	X		X	X
Diffusor met ontdooiklep	X	X		X	X
Options					
Insulation disks	X	X	X	X	X
Feet for floor mounting	X	X	X	X	
Suction hood over fan	X	X		X	
Suction hood fin side *	X	X		X	
Fans 60Hz	X	X	X	X	X
Fans EC	X	X	X	X	X
Fans 1x230V	X		X	X	X
Coolants	X	X	X	X	X
Pump system	X	X	X	X	X
CO_2	X	X	X	X	X
Other casing material	X	X	X	X	X
Other fin spacings	X	X	X	X	X
Fins Almg	X	X	X	X	X
Fins Goldlack	X	X	X	X	X

*= Only draw-through air coolers

Defrost system

For room temperatures where ice-build up can be expected and where the coil can not be defrosted by the room air, electric or hot gas defrost is necessary. Also water defrost is available

Electrical defrost
On request Goedhart SCP air coolers StSt/Al and StSt/StSt can be provided with electrical 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 heating elements are fitted in the coil block within aluminium tubes, which forms a highly conductive medium between the heaters and the fins. In the drip tray heater elements are fitted to the underside of the aluminium inner tray. The elements are rated for 220/240 V and are connected (IP55) for 380/415 V (with neutral) supply. The heater elements in the coil block are removable from the bend side, whilst the tray heater elements can be removed once the outer tray has been removed.

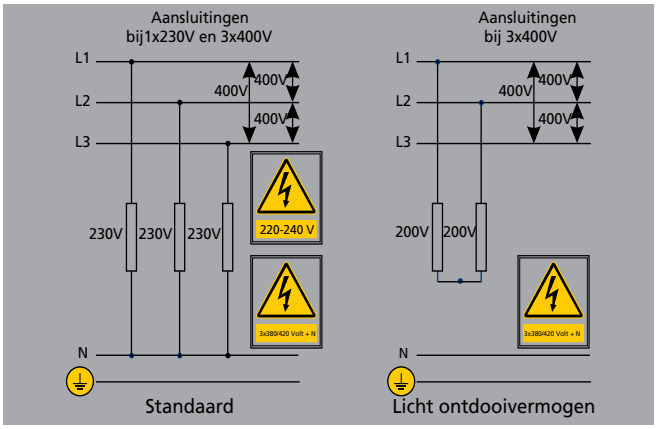
The exact number of elements and electrical power for light and heavy defrost each air cooler, you can find in our Goedhart GPC selection program.

Heating section
The air cooler can be carried out with a heating section with electric heating elements to heat up again dehumidified air The heating section is compared to the air flow placed after the coil block. The heating elements can be placed with holders against the coil block or completely integrated in the casing

Hot gas defrost
The coil block is as standard suited for hot gas defrost (hot gas supply through the suction header). Against an extra price the drip tray can be provided with a stainless steel hot gas spiral. This is enclosed in aluminium profiles that are rigidly secured to the under side of the aluminium inner drip tray. As a result, a very good heat transfer is realized. As with electric defrost a distinction is made with light defrost (room temperature around 0 ° C) and heavy defrost.

Water defrost
On top of the coil block a removable water defrost tray is mounted. The height of the water defrost tray is 80 mm, which increases the total height of the air cooler. The standard discharge head of the water in the water defrost tray is 25 mm, the maximum speed in the water supply line is 5m / sec. For an optimal functioning of the water defrost, the temperature of the defrost water must be between + 15 ° C and at + 30 ° C. The water defrost tray is executed with handles, easy for disassemble and cleaning





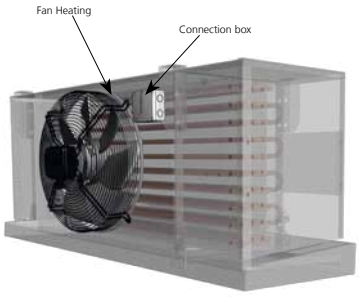


Fan heating

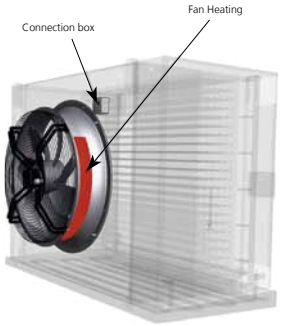
The fan fan heating prevents ice build-up between the fan impeller and fan bellmouth during the defrost cycle. This prevent damaging of the fan.

Delivery
- Is mounted and connected to a junction box
- Can also be retrofitted

Fan diameter	Power 230V
mm	kW
400	0,50
450	0,31
500	0,31
560	0,48
630	0,48
710	0,48
800	0,63



Execution 400 mm fan



Execution other fan diameters

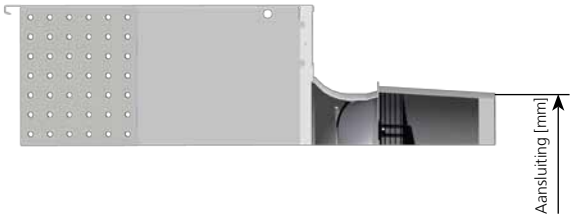
Prepared for textile hoses:

With textile/PVC air hoses, the air flow can be optimized
- Applications in work and production
- Sensitive refrigerated products (eg flowers, cheese ripening)

Advantages:
By using air hoses a very even distribution of air at low air speed is possible.
- Lower absenteeism through draft-free workplaces
- Optimal climate for sensitive products
- No condensation, because of the breathable fabric no dew point exceedance occurs.



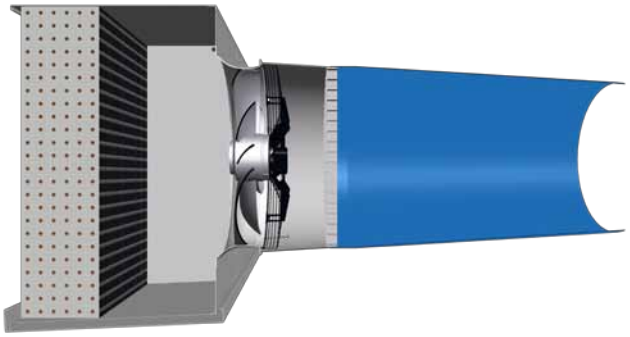
Goedhart VCI-Z / VCe-Z	
Fan diameter	Connection
mm	mm
400	450
450	500
500	550
560	637
630	637
710	716
800	817



Attention!!
When selecting the air cooler, you need to take pressure loss into account.

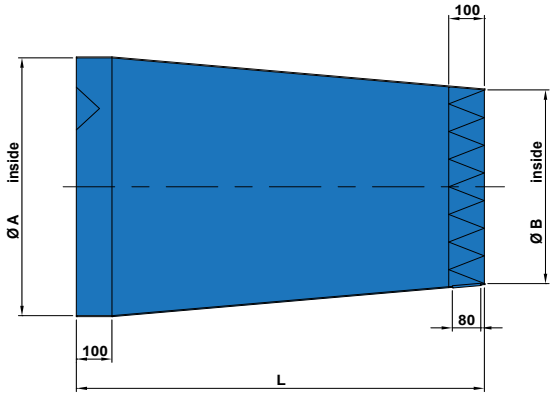
Defrost socks (draw-through air coolers)

The defrost socks may be used at draw-through air coolers and optimizes defrosting in particular freezing applications.
In the cooling phase and activated fans, the defrost sock is inflated. In the defrost phase, when the fans are turned off, the defrost sock close the the fan hole and supports the defrost process of the coil block.



Execution
Suitable for food industry, 100% polyester endless fiber, washable at 40 ° C, suitable for temperatures -60 to 110 ° C, very flexible, Fire resistance E (EN13501-1: 2003), double stitched, tear resistant.

Advantage:
The defrost sock prevent draw in the air cooler during the defrost process. The heat remains in the air cooler and ensures that the defrosting time is considerably shortened.

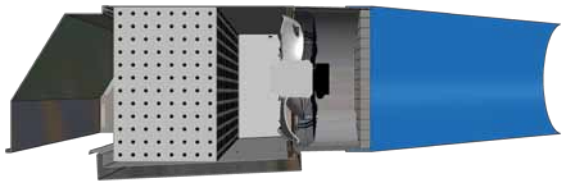


Goedhart VCI-Z / VCe-Z				
Fan diameter	C onnection	A	B	L
mm	mm	mm	mm	mm
400	450	465	340	685
450	500	515	380	760
500	550	565	425	835
560	637	650	480	925
630	637	650	540	1030
710	716	720	595	1135
800	817	820	680	1285

Suction hood (draw-through air coolers)

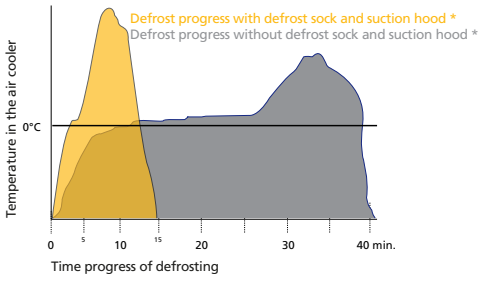
The suction hood is applied when used for freezing applications from -18 ° C. It supports the alternate defrost fot the air cooler in the freezing room. The suction hood is carried out with 13 mm insulation.

- The suction hood is equal to the casing Material of the air cooler.
- Suction hood is supplied separately and is easy to assemble



Advantages (in combination with a defrost sock)
The defrost sock and suction hood prevent draw in the air cooler during defrosting. The heat remains on this way in the cooler and that means:

- Shorten the defrosting time by over 50%
- Significant energy savings
- No frost formation on the ceiling of the room and to the products with minimum vapor formation

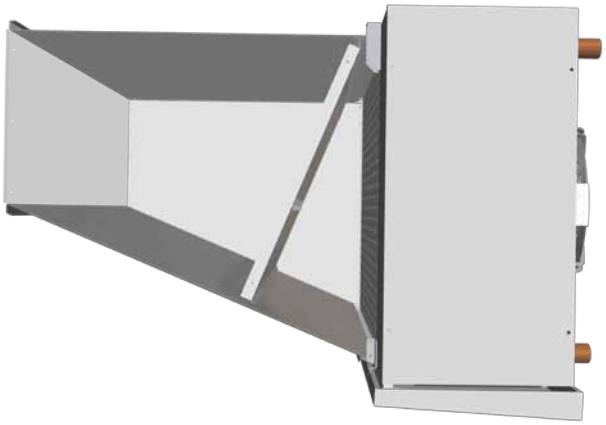


Note:
Due to extra external pressure, the air volume and the capacity of the air cooler changes:

- When using a defrost sock the air volume is reduced with -10% and the capacity with -5%.
- When using a defrost sock and suction hood the air volume is reduced with -20% and the capacity with -10%.
- Per fan is 1 defrost sock is needed. Defrost socks are delivered assembled.

Diffusor with air operated damper (blow-through air coolers)

The diffusor with air opereted damper may be used at blow-through air coolers and optimizes defrosting in particular freezing applications. In the cooling phase and activated fans, the air operated damper is blown open. In the defrost phase, when the fans are turned off, the air operated damper close the the fin side of the coil block and supports the defrost process of the coil block.



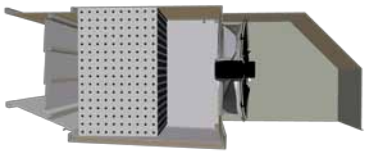
Execution
The Goedhart damper is air operated and has few mechanical parts. The damper is delivered in open possition to prevent damage during transport.

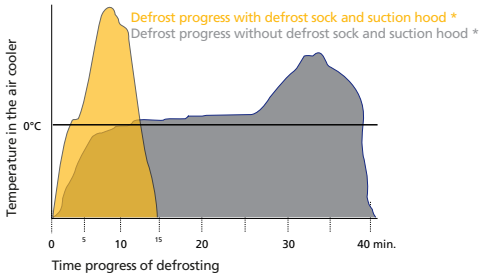
Advantage:
The diffusor with air operated damper prevent draw in the air cooler during the defrost process. The heat remains in the air cooler and ensures that the defrosting time is considerably shortened. In addition, the diffusor provides improved air throw.

Suction hood over the fans (blow-through air coolers)

The suction hood over the fans is applied when used for freezing applications from -18 ° C. It supports the alternate defrost fot the air cooler in the freezing room. It is possible to execute the suction with 13 mm insulation.

- The material of the suction hood is equal to the casing material of the air cooler.
- Suction hood is supplied separately and is easy to assemble





Advantages (in combination with a diffor with damper)
The diffusor with damper and suction hood prevent draw in the air cooler during defrosting. The heat remains on this way in the cooler and that means:

- Shorten the defrosting time by over 50%
- Significant energy savings
- No frost formation on the ceiling of the room and to the products with minimum vapor formation

Note:
Due to extra external pressure, the air volume and the capacity of the air cooler changes:

- When using a diffusor with damper the air volume is reduced with -10% and the capacity with -5%.
- When using a diffusor with damper and suction hood over the fans the air volume is reduced with -20% and the capacity with -10%.

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.



Pressure Equipment Directive (P.E.D)

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

Lifting instructions

Lifting instructions are supplied with every product. Lifting and moving heat exchangers must be carried out by skilled personnel. Safety must always be assured. Contact GEA Goedhart B.V. if in doubt about any lifting or moving instruction.

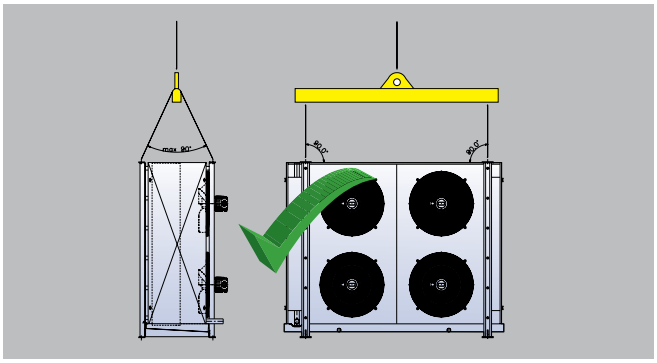
These instructions must always be followed in order to guarantee safety and to prevent any damage occurring to our product.

Heat exchangers mounted on a wooden frame can be unloaded by a forklift truck. When doing so, stacked heat exchangers may only be lifted off one at a time. A crane can also be used for unloading by positioning slings under the wooden frame.

Heat exchangers with transport legs must be unloaded using a crane with a balancer (see lifting instructions).







CHANGING
GEA HEAT EXCHANGERS

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