

Air Conditioning
Cooling



Heating
Ventilation

HVAC air curtains

Type ColdAir

HVAC®

Air curtains

Cooling and Freezer Room air curtain

ColdAir



ColdAir the modern entrance solution for cooling and freezer rooms convinces the owner and operator.

Cold store air curtain of the series **ColdAir** prevent the exchange of air of opened cooling and freezer rooms and thus contribute to significant energy savings for frequently opened doors.

The utilization of the aerodynamic Jet-Flo high-pressure chamber system of the series **ColdAir** results in a high shielding performance at significantly lower energy consumption compared to traditional devices.

Application

At opening the cooling door, the air curtain is switched on via the door contact. Via one or more double-surge radial fans and the aerodynamic Jet-Flo high-pressure chamber system a firm airflow with high shielding capacity is placed in front of the entire door opening. This air barrier reduces the dissipation of cold air up to 90%.

Blow Out System

The airflow is piped through an aerodynamic Jet-Flo high-pressure chamber system. The blow roll can easily be manually adjusted within the range of angles $+40^{\circ}/-40^{\circ}$.

Performance and Width

Depend on the door height and the temperature difference between the anteroom and the cold room as well as the height of the cold room. In addition, the device can be adjusted to the operating conditions by changing the blow angle or airflow (with the speed control). The width of the device should be at least as large as the clearance width.

All our air curtains are TÜV SÜD certified.



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Design:

Housing construction torsion-resistant of stainless steel 1.4301 with bright blasted surface compounded with anodized aluminium sections and plastic and/or high-grade steel caps. Assembly provisions for wall or ceiling mounting with M10 rivet nuts with female thread, 4 up to 2.0 m length, 6 from 2.5 m length onwards



Note: Wall mounting units for mounting without thermal bridges on insulating walls on request.

Blow Out System – the blow angle can be manually adjusted with the aerodynamic Jet Flo high-pressure chamber system via the blow roll within a range of angles $+40^{\circ}/-40^{\circ}$.

Fan, one or more anti-vibration borne, double-surged, direct-driven radial fans, multiple-vaned, low noise level and high discharge pressure. The fan drives are splash-proof, IP 44.

Note: In aggressive atmosphere protected motors can be installed (on request and additional charge).

Control of airflow: Adjustment to different operating conditions via five-stage control.

Operation – Scope of Delivery:

The devices can be delivered with or without electrical control. In the first case, the motor wires and thermal contacts are placed on the attached switch box. The control (5-stage) is located in a steel-sheet housing, completely assembled and ready for operation, with transformer, mains switch and step switch (5-stage), motor protection with thermal contacts, indicator lamps.

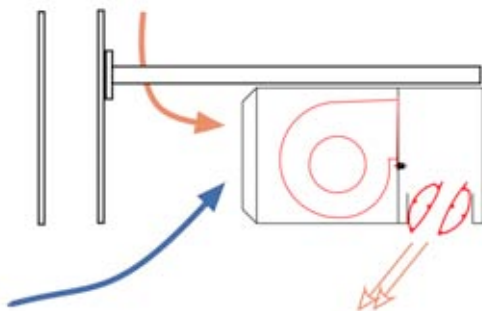
Installation

All devices can be mounted hanging above the door, at the wall or the ceiling. (In addition, a stationary base can be delivered on request).

Maintenance

The cold air do not need a special maintenance. But the intake louver must be cleaned, if it is very dirty (due to the performance drop).

Suspension on cavity walls with PU insulation



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Specifications

ColdAir		1 – max. door height 2.75 m				
Widths	cm	100	150	200	250	300
Air flow max.	m ³ /h	1800	2700	3600	4800	5400
Air velocity max.	m/s	11	11	11	11	11
Electrical Data	V	230	230	230	230	230
	kW	0,48	0,72	1,20	1,29	1,25
	A	1,4	2,1	2,8	4,8	4,2
Weights	kg	23	34	43	56	68

ColdAir		2 – max. door height 3.25 m				
Widths	cm	100	150	200	250	300
Air flow max.	m ³ /h	2700	4500	5400	6300	7200
Air velocity max.	m/s	14	14	14	14	14
Electrical Data	V	230	230	230	230	230
	kW	0,50	1,00	1,25	1,95	2,74
	A	2,1	3,5	4,2	4,9	5,6
Weights	kg	33	50	62	79	95

ColdAir		3 – max. door height 4.0 m				
Widths	cm	100	150	200	250	300
Air flow max.	m ³ /h	4000	6000	8000	10000	12000
Air velocity max.	m/s	17	17	17	17	17
Electrical Data	V	230	230	230	230	230
	kW	0,94	1,88	2,8	3,8	4,7
	A	3,6	7,2	10,8	14,4	18,0
Weights	kg	36	63	84	105	126

Selection table by operating condition

Model calculated for 1 m Door width for larger door widths, broader or more Devices use	Suspension Height and/or Door height m	Temp. difference Anteroom/Cold room ▲ T - 15°C (exactly +5/+20°C) emerging Cross flow force	Temp. difference Anteroom/Cold room ▲ T - 20°C (exactly 0/+20°C) emerging Cross flow force	Temp. difference Anteroom/Cold room ▲ T - 30°C (exactly -10/+20°C) emerging Cross flow force	Temp. difference Anteroom/Cold room ▲ T - 50°C (exactly -30/+20°C) emerging Cross flow force
		I _q [N]	I _q [N]	I _q [N]	I _q [N]
ColdAir 1 Max. shielding capacity I _A = 4.5 N	≤ 2	≤ 0,92	≤ 2,4	≤ 2,8	9,5
	2	0,93	2,49	2,84	
	2,5	1,517	3,9	4,54	
	3	2,22	5,7	6,6	
	3,5	3,09	/	/	
ColdAir 2 Max. shielding capacity I _A = 7.5 N	≤ 2	≤ 0,7	≤ 2,2	≤ 2,6	9,5
	2	0,79	2,3	2,65	14,6
	2,5	1,27	3,57	4,15	
	3	1,88	5,16	6,03	
	3,5	2,63	7,16	8,34	
ColdAir 3 Max. shielding capacity I _A = 16.8 N	≤ 2			≤ 2	≤ 2
	2			1,88	7,8
	2,5	too powerful not suitable		3	12,6
	3			4,4	18,3
	3,5			6,2	25,2

*

possible applications - compare: Shielding capacity - cross flow force

Note:

To calculate the cross flow force device-specific properties, such as blow velocity, air-flow, clearance angle and inductivity are taken into account. Therefore the calculated cross flow forces I_q are only valid for a certain model.

Depending on the door width and blow width one or more devices can be used. Only 1 m of a certain model has the specified shielding capacity.



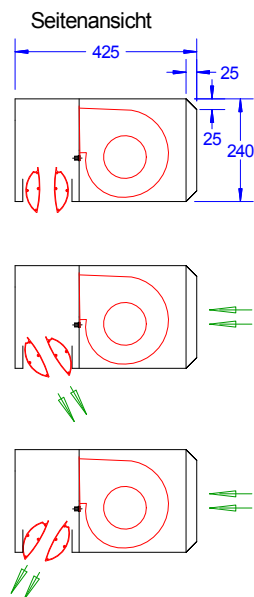
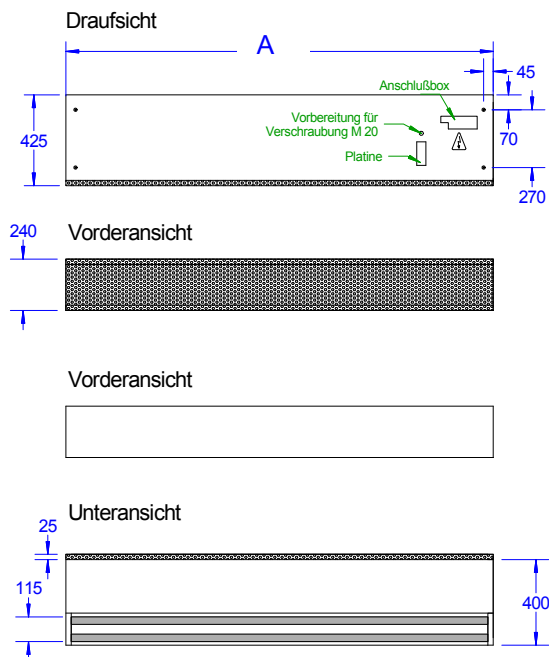
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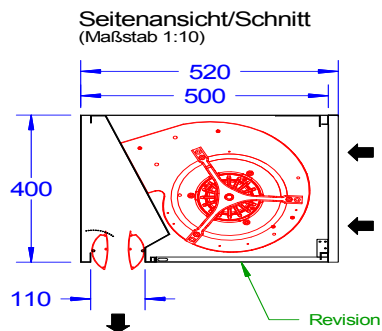
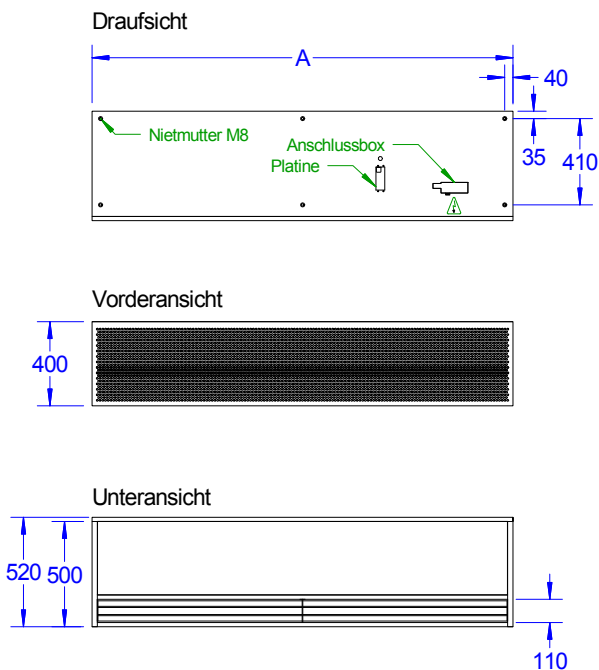
Model ColdAir

ColdAir			1	2	3
Width	A	mm	1000-3000	1000-3000	1000-3000
Height	H	mm	240	240	400
Depth	D	mm	425	425	520

Model -1 and -2



Model -3





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