

AlfaBlue Dry Coolers

General Content

General Features

A dry cooler is a forced convection air-cooled fluid cooler, designed for outdoor installation. Air is forced over a finned coil which contains the working fluid such as water or a water and glycol mix. All products are designed to satisfy both commercial and industrial refrigeration, air conditioning, and retail refrigeration. Dry coolers are available in the following versions:

- Vertical installation (V)
- Horizontal installation (H)

Relative footprint, low consumption and low noise levels are the keys to this series' success.

Certifications and reliability

All Dry coolers are guaranteed by Eurovent "Certify All". Alfa Laval quality systems fully comply with ISO 9001, and all of our products are manufactured in strict accordance with CE regulations.

Capacity

The standard conditions stated in the catalogue are in accordance with EN 1048 (water, T.air= 25°C, Tin= 40°C, Tout= 35°C). All models have many circuiting options which can be selected to optimise duty with required fluid pressure drops and flow rates. Due to the multiple combinations of temperatures, flow rates and working fluids that can be encountered, it is not possible to display all the capacities in the catalogue.

How to determine the dry cooler's capacity:

Capacity required (e.g. 34%) = Nominal Capacity. (water) x 1.07 x F1 x F2

Altitude (m)	0	500	1000	1500	2000
F1	1	1,028	1,06	1,09	1,12

Fin material	Al	Al Prv	Cu
F2	1	1,03	0,97

Against Freezing

Given that the tubes are permanently in a horizontal position, it cannot be guaranteed that they drain completely when stoppages occur. As a result of this, a dry cooler containing water must be protected against freezing with an adequate amount of glycol.

Tube Protection



Due to the thermal expansion of the copper pipes, all metal sheets are equipped with an aluminium plate with collars. This plate supports the tube and therefore the pipes must not come into contact with the metal sheets. With this solution, the vibrations and thermal expansion are absorbed by the aluminium sheet. Leaks caused by friction cannot occur. The rigidity of the coil is sustained effectively.

Energy Efficiency Class

Energy efficiency class of air cooled condensers		
Class	Energy consumption	R
A	Extremely low	R>110
B	Very low	70≤R<110
C	Low	45≤R<70
D	Medium	30≤R<45
E	High	R<30

R = Condenser capacity (ΔT15K) / motor power consumption.

Test and cleaning

Coils are cleaned thoroughly in order to remove any traces of oil. Each heat exchanger undergoes a pressure and leak test with dry air at 10bar (PS= 9bar).



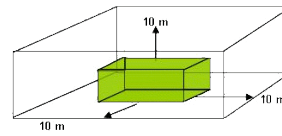
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Sound Data

The sound pressure level is based on the calculation (according to EN 13487) of the sound pressure level on the surface of a cuboid area which is at a 10 metre distance and is parallel to the reference envelope of the sound source. (Standard sound pressure level; annex C EN 13487)



Sound pressure correction for distances other than 10 metres.

Distance (m)	2	3	4	5	7	10	15	20	30	40	50	60	80
Correction dB(A)	11	8,5	7	5	2,5	0	-3	-5,5	-9	-11	-12	-14	-16

Sound pressure level for several fans at nominal speed rating.

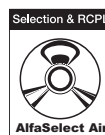
N° units	2	3	4	5	6	7	8	9	10
dB(A)	3	5	6	7	8	8,5	9	9,5	10

To calculate the sound pressure level, take the sound power of the individual fans according to their position, and calculate the sound propagation taking into consideration the local and ambient conditions. Speed change, start-up and control noises are not taken into account.

Fan Model	Speed rpm		Total Lw dB(A)		LW octave band spectrum dB(A)															
					63Hz		125Hz		250Hz		500Hz		1 000Hz		2 000Hz		4 000Hz		8 000Hz	
					Δ	Y	Δ	Y	Δ	Y	Δ	Y	Δ	Y	Δ	Y	Δ	Y	Δ	Y
630 S	1340	1070	90	84	-	-	68	66	76	72	78	74	83	77	81	76	78	72	70	65
630 L	900	690	77	71	-	-	62	55	69	63	72	65	75	68	72	63	64	56	58	50
630 Q	650	480	70	62	-	-	51	48	60	55	63	58	65	59	60	53	53	47	46	45
630 R	430	330	60	54	-	-	46	45	53	47	54	51	53	49	48	43	43	40	42	41
800 S	880	660	83	76	-	-	69	56	67	62	74	69	78	74	79	72	72	64	62	54
800 L	680	530	76	71	-	-	57	49	62	57	69	63	74	68	72	63	65	55	55	45
800 Q	440	340	66	60	-	-	47	42	57	48	59	54	63	56	58	51	50	43	39	34
800 R	380	240	63	52	-	-	47	42	54	44	57	47	59	48	55	42	47	34	35	26
910 T	890	700	90	83	-	-	72	70	79	73	82	76	84	79	82	76	79	73	73	66
910 S	860	660	85	79	-	-	72	70	79	73	82	76	84	79	82	76	79	73	73	66
910 L	640	440	78	70	-	-	68	62	73	68	76	70	77	70	76	70	73	67	66	60
910 Q	440	330	68	62	-	-	57	49	61	58	64	57	67	60	61	53	52	45	43	35
910 R	390	250	65	53	-	-	56	46	59	45	59	46	61	49	56	44	48	35	38	22
1000 L	680	550	86	81	-	-	58	53	68	60	70	63	73	68	75	67	71	62	62	53
1000 Q	425	325	72	65	-	-	50	45	58	50	62	54	65	58	60	50	54	42	44	30
1000 R	390	260	70	61	-	-	50	44	56	45	60	49	64	52	55	44	48	36	37	25

Guarantee

All our products are protected under warranty for 18 months from the shipping date. If a defect should occur within the warranty period, please return the equipment or part to our factory free of charge where we will repair or replace the goods, depending on what is required. Unfortunately, We cannot take responsibility for damage caused by the misuse or incorrect installation of our products. Brochure subject to technical changes without prior notice



We recommend that you use the Alfa Select Air software for a precise thermal and mechanical design.



BDM - Single Fan Row

Product description

Application

Alfa Laval Dry Coolers can be used in refrigeration, air conditioning equipment and in industrial cooling (cooling of water or other different fluids, food, power, process and general industry).

Standard design

Coil

This innovative heat exchanger gives excellent heat transfer with minimal refrigerant charge, as a result of new fin corrugation and smooth tubing developed by Alfa Laval. In the standard execution, the heat exchanger is manufactured from copper tubes and aluminum fins with spacing 2.1 mm. BDM is a Single coil model; each manifold provided with draining and venting nozzles. Each heat exchanger undergoes a pressure and leak test with dry air at 10bar (design pressure is 9bar).

Casing

Casework made with pre-painted galvanized steel sheets. A new frame design provides high rigidity for heavy applications. The new system protects the heat exchanger tubes completely during transportation and against vibration and thermal expansion while in operation. Supports manufactured in galvanized steel, with optimized length to permit uniform air suction in the coil.

Benefits

- Footprint: Optimised footprint with higher capacity.
- 630, 800, 910, 1000 mm fan
 - More performance available
 - Low power consumption fan motor
 - More noise level options
 - Flexible design
- All parts are painted in accordance with RAL 9002
 - No cut edges
 - Higher corrosion resistance, double surface treatment
 - External Corrosion Class C4
- Coil design: Increased heat transfer thanks to innovative fin corrugation
- Casing: Strong casing with new design
- High Energy Efficiency: best performance with low energy consumption

Options

- Non-standard fin spacing: for heavy dusty environment
- Coil treatment: corrosion resistance, ideal for aggressive environments
- Vibration Dampers: for reducing vibrations
- Electrical parts
 - Switch on/off: Local safety switch is wired to isolate the fan, and is also available for EMC switches.
 - Terminal Box: all fans wired for an easy electrical connection
 - Switchboard



- Cabling: ready to install
- Frequency Converter design: units can run under frequency control (when air temperature is below the design, it allows energy saving, noise reduction and longer fan motor life)
- Fan step control:
 - Energy saving
 - Cheapest method of controlling performance
- Fan speed control
 - Energy saving
 - Noise reduction when the air temperature is below the design temperature.
 - Variable and efficient speed control according to the heat rejected
 - Better performance control
- Special fans
 - 480/3ph-60Hz IP54: High adaptability for every market
 - IP 55: High protection fan for use in tropical or desert areas
 - High temperature Electric Motors: Suitable for high temperature fluids when the outlet air is too hot for the standard fan motors.

Fans

On the BDM, four different fan diameters are available: 630, 800, 910, 1000 mm. Diameter 630, 800, 910, 1000 mm with three-phase motor 400V-50Hz, for 630 (L, Q, R) also single-phase 230V-50Hz. The motors come with external rotors, protection class IP 54 according to DIN 40050, while integrated thermo contacts provide reliable protection against any instances of thermal overload. These BDM Dry Coolers are available in five fan motor noise levels: (S) standard, (L) low, (Q) quiet, (R) residential and the new (T) high performance fan. The fans are suitable for operation in air temperatures between -40°C and +40°C.

For air temperatures lower than +20°C, the full load current (FLC) can be calculated using the correction factor table. The overload protection should have a 20% margin to accommodate fan motor supplier variations.

T [°C]	20	10	0	-10	-15	-20	-25	-30
Fc	1	1,04	1,08	1,12	1,14	1,16	1,18	1,2

Model	Capacity [kW]			Pressure Drop fluid [kPa]		Airflow [m³/h]		Lp [dB(A)]*		Motor (3/400V-50Hz)		Motor (230V-50Hz)	Fans N° x D [mm]	Surface m²	Tube volume dm³	E.E.C.**		Conn. Size				
	Δ	Y	230V 50Hz	Δ	Y	Δ	Y	Δ	Y	Δ	Y					Δ	Y	Inlet	Outlet			
Ø 630																						
BDMS631A	36,0	31,3	-	20,8	16,3	17747	13697	56	50	P=2600W I _n =4,8A n=1310 min-1	P=1600W I _n =2,7A n=100 min-1	-	1X630	88,2	8	E	E	1"1/2	1"1/2			
BDMS631B	48,1	40,7	-	70,0	52,5	17182	13120	56	50				1X630	132,3	11	E	E	1"1/2	1"1/2			
BDMS631C	55,0	45,4	-	53,7	38,3	16576	12555	56	50				1X630	176,5	15	E	D	2"	2"			
BDMS631D	59,3	47,9	-	40,8	28,2	15971	12024	56	50				1X630	220,6	19	E	D	2"	2"			
BDMS632A	73,9	64,3	-	79,0	61,8	35414	27307	59	53				2X630	172,6	15	E	E	1"1/2	1"1/2			
BDMS632B	94,8	80,3	-	59,9	45,0	34227	26108	59	53				2X630	258,9	22	E	E	1"1/2	1"1/2			
BDMS632C	109,7	90,5	-	77,6	55,3	32966	24943	59	53				2X630	345,2	30	E	D	2"	2"			
BDMS632D	118,1	95,4	-	59,3	40,7	31714	23853	59	53				2X630	431,5	37	E	D	2"	2"			
BDMS633A	109,4	95,3	-	54,9	43,0	53078	40914	61	55				3X630	256,9	22	E	E	1"1/2	1"1/2			
BDMS633B	140,5	119,0	-	41,7	31,1	51269	39094	61	55				3X630	385,4	33	E	E	2"	2"			
BDMS633C	163,8	135,1	-	73,3	52,3	49351	37329	61	55				3X630	513,9	44	E	D	2"	2"			
BDMS633D	176,4	142,5	-	58,3	40,0	47454	35680	61	55				3X630	642,4	55	E	D	2"	2"			
BDMS634A	144,2	125,6	-	37,8	29,6	70742	54521	62	56				4X630	341,3	29	E	E	2"	2"			
BDMS634B	185,3	156,9	-	28,7	21,4	68310	52079	62	56				4X630	512	44	E	E	2" 1/2	2" 1/2			
BDMS634C	212,5	175,5	-	22,1	15,7	65736	49713	62	56				4X630	682,6	59	E	D	2" 1/2	2" 1/2			
BDMS634D	234,4	189,5	-	54,1	37,4	63192	47505	62	56				4X630	853,3	74	E	D	2" 1/2	2" 1/2			
BDML631A	26,8	23,99	26,8	51,19	42,04	9778	8175	45	40	P=690W I _n =1,25A n=900 min-1	P=480W I _n =0,78A n=690 min-1	P=780W I _n =3,5A n=900 min-1	1X630	88,2	8	D	C	1"1/2	1"1/2			
BDML631B	32,8	28,61	32,7	35,72	28,13	9504	7855	45	40				1X630	132,3	11	C	C	1"1/2	1"1/2			
BDML631C	36,1	30,87	35,9	25,44	19,25	9232	7552	45	40				1X630	176,5	15	C	B	2"	2"			
BDML631D	37,9	31,78	37,6	18,65	13,67	8968	7268	45	40				1X630	220,6	19	C	B	2"	2"			
BDML632A	53,5	47,86	53,5	74,16	60,88	19515	16299	48	43				2X630	172,6	15	D	C	1"1/2	1"1/2			
BDML632B	65,4	57,08	65,2	51,77	40,71	18945	15638	48	43				2X630	258,9	22	C	C	1"1/2	1"1/2			
BDML632C	72,9	62,16	72,5	83,55	63,04	18383	15014	48	43				2X630	345,2	30	C	B	2"	2"			
BDML632D	76,4	63,91	75,8	68,53	50,04	17837	14433	48	43				2X630	431,5	37	C	B	2"	2"			
BDML633A	79,9	71,49	79,9	70,15	57,59	29251	24423	50	45				3X630	256,9	22	D	C	1"1/2	1"1/2			
BDML633B	98,7	86,13	98,4	92,63	73,3	28385	23421	50	45				3X630	385,4	33	C	C	2"	2"			
BDML633C	108,8	92,71	108,1	65,92	49,73	27531	22475	50	45				3X630	513,9	44	C	B	2"	2"			
BDML633D	114,5	95,7	113,6	80,71	58,88	26705	21596	50	45				3X630	642,4	55	C	B	2"	2"			
BDML634A	106,4	95,11	106,2	68,16	55,96	38987	32547	51	46				4X630	341,3	29	D	C	2"	2"			
BDML634B	130,1	113,49	129,6	47,64	37,49	37825	31203	51	46				4X630	512	44	C	C	2" 1/2	2" 1/2			
BDML634C	145,1	123,64	144,2	76,98	58,06	36680	29935	51	46				4X630	682,6	59	C	B	2" 1/2	2" 1/2			
BDML634D	151,9	127,04	150,8	58,46	42,66	35573	28759	51	46				4X630	853,3	74	C	B	2" 1/2	2" 1/2			
BDMQ631A	21,9	19,01	21,9	36,04	28	7098	5761	38	31	P=330W I _n =0,80A n=650 min-1	P=190W I _n =0,38A n=480 min-1	P=400W I _n =1,8A n=650 min-1	1X630	88,2	8	B	A	1"1/2	1"1/2			
BDMQ631B	25,9	21,8	25,9	23,38	17,33	6868	5497	38	31				1X630	132,3	11	B	A	1"1/2	1"1/2			
BDMQ631C	27,8	22,84	27,8	16,02	11,33	6643	5253	38	31				1X630	176,5	15	B	A	2"	2"			
BDMQ632A	43,7	37,94	43,7	52,23	40,56	14161	11480	41	34				2X630	172,6	15	B	A	1"1/2	1"1/2			
BDMQ632B	51,7	43,49	51,7	33,89	25,1	13683	10935	41	34				2X630	258,9	22	B	A	1"1/2	1"1/2			
BDMQ632C	56,0	45,91	56,0	52,51	36,97	13220	10434	41	34				2X630	345,2	30	B	A	2"	2"			
BDMQ633A	65,3	56,69	65,4	49,45	38,39	21223	17198	43	36				3X630	256,9	22	B	A	1"1/2	1"1/2			
BDMQ633B	77,9	65,54	77,9	60,54	44,84	20497	16372	43	36				3X630	385,4	33	B	A	2"	2"			
BDMQ633C	84,1	68,83	84,1	69,41	48,82	19796	15615	43	36				3X630	513,9	44	B	A	2"	2"			
BDMQ634A	87,0	75,43	87,0	48,06	37,32	28285	22916	44	37				4X630	341,3	29	B	A	2"	2"			
BDMQ634B	104,0	87,48	104,0	75,34	55,79	27312	21810	44	37				4X630	512	44	B	A	2" 1/2	2" 1/2			
BDMQ634C	112,2	91,83	112,2	90,86	63,87	26371	20795	44	37				4X630	682,6	59	B	A	2" 1/2	2" 1/2			
BDMR631A	16,4	13,85	-	21,42	15,86	4662	3735	28	22				P=125W I _n =0,33A n=430 min-1	P=85W I _n =0,14A n=330 min-1	-	1X630	88,2	8	A	A	1"1/2	1"1/2
BDMR631B	18,6	15,26	-	13,05	9,24	4501	3560	28	22							1X630	132,3	11	A	A	1"1/2	1"1/2
BDMR632A	32,7	27,68	-	31,1	23,15	9300	7442	31	25							2X630	172,6	15	A	A	1"1/2	1"1/2
BDMR632B	37,7	30,88	-	80,37	56,7	8964	7080	31	25							2X630	258,9	22	A	A	1"1/2	1"1/2
BDMR633A	49,3	41,74	-	55,65	41,34	13937	11149	33	27	3X630	256,9	22				A	A	1"1/2	1"1/2			
BDMR633B	56,2	46,07	-	56,65	39,97	13427	10600	33	27	3X630	385,4	33				A	A	2"	2"			
BDMR634A	65,8	55,68	-	65,01	48,27	18574	14856	34	28	4X630	341,3	29				A	A	2"	2"			
BDMR634B	75,0	61,48	-	74,17	52,3	17889	14120	34	28	4X630	512	44				A	A	2" 1/2	2" 1/2			

Nominal capacities according to standard EN1048 (water T_{air}=25°C, T_{in}=40°C, T_{out}=35°C).
 *See the General Contents for more details.
 **Energy Efficiency Class: see "General Contents" for more details.

Model	Capacity [kW]			Pressure Drop fluid [kPa]		Airflow [m³/h]		Lp [dB(A)]*		Motor (3/400V-50Hz)		Motor (230V-50Hz)	Fans	Surface m²	Tube volume dm³	E.E.C.**		Conn. Size				
	Δ	Y	230V 50Hz	Δ	Y	Δ	Y	Δ	Y	Δ	Y					Δ	Y	Inlet	Outlet			
Ø 630 LONG																						
BDMS631AL	41,5	36,0	-	32,6	25,4	18073	14071	56	50	P=2600W I _n =4,8A n=1310 min-1	P=1600W I _n =2,7A n=1000 min-1	-	1x630	88,2	8	E	E	1"1/2	1"1/2			
BDMS631BL	52,8	44,7	-	24,3	18,2	17748	13698	56	50				1x630	132,3	11	E	D	1"1/2	1"1/2			
BDMS631CL	61,4	50,6	-	42,5	30,0	17379	13314	56	50				1x630	176,5	15	E	D	2"	2"			
BDMS631DL	66,2	53,5	-	36,7	25,2	16984	12931	56	50				1x630	220,6	19	E	D	2"	2"			
BDMS632AL	83,9	72,7	-	66,3	51,6	36111	28098	59	53				2x630	172,6	15	E	E	1"1/2	1"1/2			
BDMS632BL	106,8	90,2	-	52,8	39,4	35434	27328	59	53				2x630	258,9	22	E	D	1"1/2	1"1/2			
BDMS632CL	123,0	101,3	-	71,3	50,2	34666	26536	59	53				2x630	345,2	30	E	D	2"	2"			
BDMS632DL	132,4	106,9	-	54,6	37,5	33848	25749	59	53				2x630	431,5	37	E	D	2"	2"			
BDMS633AL	126,2	109,5	-	89,1	69,3	54148	42125	61	55				3x630	256,9	22	E	E	2"	2"			
BDMS633BL	160,7	135,6	-	67,0	49,5	53118	40957	61	55				3x630	385,4	33	E	D	2"	2"			
BDMS633CL	183,0	150,8	-	50,5	35,6	51951	39757	61	55				3x630	513,9	44	E	D	2"	2"			
BDMS633DL	197,1	159,3	-	38,7	26,6	50709	38565	61	55				3x630	642,4	55	E	D	2"1/2	2"1/2			
BDML631AL	29,1	26,1	29,2	17,4	14,4	9959	8393	45	40	P=690W I _n =1,25A n=900 min-1	P=480W I _n =0,78A n=690 min-1	P=780W I _n =3,5A n=900 min-1	1x630	88,2	8	C	C	1"1/2	1"1/2			
BDML631BL	36,2	31,6	36,2	51,6	40,8	9779	8175	45	40				1x630	132,3	11	C	B	1"1/2	1"1/2			
BDML631CL	39,6	34,0	39,5	36,4	27,8	9596	7961	45	40				1x630	176,5	15	C	B	2"	2"			
BDML631DL	41,4	35,0	41,2	26,6	19,7	9414	7753	45	40				1x630	220,6	19	C	B	2"	2"			
BDML632AL	59,6	53,3	59,7	68,0	55,6	19897	16760	48	43				2x630	172,6	15	C	C	1"1/2	1"1/2			
BDML632BL	71,9	62,8	71,8	46,2	36,2	19525	16312	48	43				2x630	258,9	22	C	B	1"1/2	1"1/2			
BDML632CL	79,2	67,9	78,9	54,3	41,4	19149	15871	48	43				2x630	345,2	30	C	B	2"	2"			
BDML632DL	82,7	69,8	82,3	39,6	29,4	18773	15445	48	43				2x630	431,5	37	C	B	2"	2"			
BDML633AL	88,6	79,2	88,7	47,7	39,4	29835	25127	50	45				3x630	256,9	22	C	C	2"	2"			
BDML633BL	108,4	94,7	108,2	78,4	62,0	29271	24448	50	45				3x630	385,4	33	C	B	2"	2"			
BDML633CL	118,5	101,6	118,1	52,0	39,7	28701	23781	50	45				3x630	513,9	44	C	B	2"	2"			
BDML633DL	124,5	105,0	123,9	71,2	52,8	28132	23136	50	45				3x630	642,4	55	C	B	2"1/2	2"1/2			
BDMQ631AL	24,3	21,1	24,3	52,5	40,8	7253	5946	38	31	P=330W I _n =0,80A n=650 min-1	P=190W I _n =0,38A n=480 min-1	P=400W I _n =1,8A n=650 min-1	1x630	88,2	8	B	A	1"1/2	1"1/2			
BDMQ631BL	28,3	24,0	28,4	33,6	25,0	7099	5761	38	31				1x630	132,3	11	B	A	1"1/2	1"1/2			
BDMQ631CL	30,3	25,1	30,3	22,7	16,3	6945	5583	38	31				1x630	176,5	15	B	A	2"	2"			
BDMQ632AL	48,6	42,1	48,6	78,2	60,8	14488	11870	41	34				2x630	172,6	15	B	A	1"1/2	1"1/2			
BDMQ632BL	56,7	47,9	56,7	50,0	37,2	14170	11490	41	34				2x630	258,9	22	B	A	1"1/2	1"1/2			
BDMQ632CL	61,0	50,4	61,0	76,1	54,4	13853	11125	41	34				2x630	345,2	30	B	A	2"	2"			
BDMQ633AL	72,7	63,0	72,6	74,9	58,2	21722	17793	43	36				3x630	256,9	22	B	A	2"	2"			
BDMQ633BL	85,4	72,1	85,4	90,1	66,9	21240	17218	43	36				3x630	385,4	33	B	A	2"	2"			
BDMQ633CL	91,1	75,3	91,2	60,9	43,5	20760	16666	43	36				3x630	513,9	44	B	A	2"	2"			
BDMR631AL	17,9	15,1	-	30,3	22,7	4765	3854	28	22				P=125W I _n =0,33A n=430 min-1	P=85W I _n =0,14A n=330 min-1	-	1x630	88,2	8	A	A	1"1/2	1"1/2
BDMR631BL	20,1	16,6	-	18,3	13,0	4662	3735	28	22							1x630	132,3	11	A	A	1"1/2	1"1/2
BDMR632AL	35,7	30,3	-	45,2	33,9	9518	7694	31	25							2x630	172,6	15	A	A	1"1/2	1"1/2
BDMR632BL	40,2	33,1	-	27,2	19,4	9306	7449	31	25	2x630	258,9	22				A	A	1"1/2	1"1/2			
BDMR633AL	53,8	45,6	-	81,5	61,1	14270	11534	33	27	3x630	256,9	22				A	A	2"	2"			
BDMR633BL	60,7	50,0	-	81,9	58,3	13949	11162	33	27	3x630	385,4	33				A	A	2"	2"			

Nominal capacities according to standard EN1048 (water T_{air}=25°C, T_{in}=40°C, T_{out}=35°C).

*See the General Contents for more details.

**Energy Efficiency Class: see "General Contents" for more details.

Model	Capacity [kW]		Pressure Drop fluid [kPa]		Airflow [m³/h]		Lp [dB(A)]*		Motor (3/400V-50Hz)		Fans	Surface	Tube volume	E.E.C.**		Conn. Size			
	Δ	Y	Δ	Y	Δ	Y	Δ	Y	Δ	Y	N° x D [mm]	m²	dm³	Δ	Y	Inlet	Outlet		
Ø 800																			
BDMS801A	56,5	49,1	49,0	38,2	22304	17616	51	46	P=2000W I _n =4,0A n=880min-1	P=1250W I _n =2,3A n=660min-1	1X800	167,2	14	D	D	1"1/2	1"1/2		
BDMS801B	70,2	59,3	35,3	26,1	21676	16962	51	46			1X800	250,8	22	D	D	1"1/2	1"1/2		
BDMS801C	79,5	65,6	58,3	41,6	21055	16334	51	46			1X800	334,3	29	D	C	2"	2"		
BDMS801D	84,3	68,0	46,5	31,9	20452	15742	51	46			1X800	417,9	36	C	C	2"	2"		
BDMS802A	112,0	97,3	44,1	34,4	44548	35169	54	49			2X800	329,7	28	D	D	1"1/2	1"1/2		
BDMS802B	141,5	119,5	72,7	53,8	43262	33832	54	49			2X800	494,5	43	D	D	2"	2"		
BDMS802C	158,0	130,2	52,7	37,6	41993	32551	54	49			2X800	659,4	57	D	D	2"	2"		
BDMS802D	168,6	136,0	74,3	50,9	40762	31347	54	49			2X800	824,2	71	C	C	2"	2"		
BDMS803A	167,5	145,6	42,5	33,2	66791	52721	56	51			3X800	492,2	42	D	D	2"	2"		
BDMS803B	208,5	176,2	30,7	22,7	64848	50701	56	51			3X800	738,3	64	D	D	2"1/2	2"1/2		
BDMS803C	237,5	195,7	71,1	50,7	62929	48767	56	51			3X800	984,5	85	D	D	2"1/2	2"1/2		
BDMS803D	251,4	202,8	53,2	36,4	61071	46951	56	51			3X800	1230,6	106	C	C	2"1/2	2"1/2		
BDMS804A	226,8	197,0	95,7	74,6	89034	70272	57	52			4X800	654,8	57	D	D	2"1/2	2"1/2		
BDMS804B	282,0	238,1	68,9	51,0	86432	67570	57	52			4X800	982,1	85	D	D	3"	3"		
BDMS804C	314,8	259,5	50,0	35,6	83865	64983	57	52			4X800	1309,5	113	D	D	3"	3"		
BDMS804D	333,4	269,1	37,4	25,6	81380	62554	57	52			4X800	1636,9	141	C	C	3"	3"		
BDMS805A	274,8	238,9	24,2	18,9	111277	87824	58	53			5X800	817,3	71	D	D	3"	3"		
BDMS805B	342,4	289,5	17,5	13,0	108017	84438	58	53			5X800	1225,9	106	D	D	3"	3"		
BDMS805C	396,6	326,7	93,2	66,4	104800	81199	58	53			5X800	1634,6	141	D	C	4"	4"		
BDMS805D	419,8	338,5	69,7	47,7	101688	78158	58	53			5X800	2043,2	176	C	C	4"	4"		
BDML801A	49,0	43,5	84,8	69,0	17152	14190	44	40	P=1050W I _n =2,4A n=680min-1	P=770W I _n =1,5A n=530min-1	1X800	167,2	14	C	C	1"1/2	1"1/2		
BDML801B	59,8	51,6	82,2	62,5	16689	13645	44	40			1X800	250,8	22	C	B	1"1/2	1"1/2		
BDML801C	65,2	55,0	41,2	30,5	16224	13128	44	40			1X800	334,3	29	C	B	2"	2"		
BDML801D	68,5	56,7	56,3	40,4	15767	12645	44	40			1X800	417,9	36	B	B	2"	2"		
BDML802A	97,3	86,3	76,6	62,4	34261	28327	47	43			2X800	329,7	28	C	C	1"1/2	1"1/2		
BDML802B	118,2	102,0	52,8	40,5	33311	27213	47	43			2X800	494,5	43	C	B	2"	2"		
BDML802C	130,8	110,2	76,1	56,3	32359	26160	47	43			2X800	659,4	57	C	B	2"	2"		
BDML802D	136,9	113,2	85,4	61,1	31426	25179	47	43			2X800	824,2	71	B	B	2"	2"		
BDML803A	143,2	127,0	32,3	26,1	51369	42463	49	45			3X800	492,2	42	C	C	2"	2"		
BDML803B	177,9	153,3	71,9	54,7	49933	40781	49	45			3X800	738,3	64	C	B	2"1/2	2"1/2		
BDML803C	194,9	164,3	50,3	37,3	48493	39192	49	45			3X800	984,5	85	C	B	2"1/2	2"1/2		
BDML803D	204,9	169,4	82,5	59,0	47084	37712	49	45			3X800	1230,6	106	B	B	2"1/2	2"1/2		
BDML804A	193,9	172,0	72,6	59,1	68476	56599	50	46			4X800	654,8	57	C	C	2"1/2	2"1/2		
BDML804B	235,5	203,2	50,0	38,4	66554	54348	50	46			4X800	982,1	85	C	B	3"	3"		
BDML804C	258,4	217,9	35,4	26,2	64627	52223	50	46			4X800	1309,5	113	C	B	3"	3"		
BDML804D	272,9	225,6	81,0	58,0	62741	50244	50	46			4X800	1636,9	141	B	B	3"	3"		
BDML805A	235,1	208,5	18,4	14,9	85584	70735	51	47			5X800	817,3	71	C	C	3"	3"		
BDML805B	297,1	256,0	94,2	71,6	83175	67916	51	47			5X800	1225,9	106	C	B	3"	3"		
BDML805C	325,4	274,3	65,9	48,8	80760	65254	51	47			5X800	1634,6	141	C	B	4"	4"		
BDML805D	339,3	280,7	47,9	34,3	78399	62777	51	47			5X800	2043,2	176	B	B	4"	4"		
BDMQ801A	35,9	30,1	49,0	36,2	10678	8384	35	28	P=370W I _n =1,2A n=440min-1	P=200W I _n =0,5A n=340min-1	1X800	167,2	14	B	A	1"1/2	1"1/2		
BDMQ801B	41,6	33,8	43,0	29,9	10335	8013	35	28			1X800	250,8	22	A	A	1"1/2	1"1/2		
BDMQ801C	44,3	35,1	64,1	42,6	9994	7674	35	28			1X800	334,3	29	A	A	2"	2"		
BDMQ802A	71,2	59,9	44,3	32,8	21323	16731	38	31			2X800	329,7	28	B	A	1"1/2	1"1/2		
BDMQ802B	83,5	67,8	87,9	61,0	20621	15976	38	31			2X800	494,5	43	A	A	2"	2"		
BDMQ802C	88,0	69,8	58,1	38,6	19923	15287	38	31			2X800	659,4	57	A	A	2"	2"		
BDMQ803A	107,2	90,1	59,9	44,2	31968	25077	40	33			3X800	492,2	42	B	A	2"	2"		
BDMQ803B	125,0	101,5	84,9	58,9	30906	23938	40	33			3X800	738,3	64	A	A	2"1/2	2"1/2		
BDMQ803C	131,8	104,4	56,2	37,3	29852	22899	40	33			3X800	984,5	85	A	A	2"1/2	2"1/2		
BDMQ804A	142,0	119,4	42,0	31,1	42613	33424	41	34			4X800	654,8	57	B	A	2"1/2	2"1/2		
BDMQ804B	166,5	135,2	83,5	57,9	41191	31900	41	34			4X800	982,1	85	A	A	3"	3"		
BDMQ804C	175,6	139,1	55,2	36,6	39780	30510	41	34			4X800	1309,5	113	A	A	3"	3"		
BDMQ805A	179,0	150,4	78,5	57,9	53258	41770	42	35			5X800	817,3	71	B	A	3"	3"		
BDMQ805B	206,9	168,1	49,3	34,2	51476	39862	42	35			5X800	1225,9	106	A	A	3"	3"		
BDMQ805C	218,3	173,1	32,7	21,7	49708	38122	42	35			5X800	1634,6	141	A	A	4"	4"		
BDMR801A	32,2	22,9	40,5	22,1	9184	5851	31	20			P=250W I _n =0,62A n=380min-1	P=110W I _n =0,27A n=240min-1	1X800	167,2	14	A	A	1"1/2	1"1/2
BDMR801B	36,7	24,8	34,4	17,2	8840	5560	31	20					1X800	250,8	22	A	A	1"1/2	1"1/2
BDMR802A	64,0	45,5	36,6	20,0	18335	11674	34	23					2X800	329,7	28	A	A	1"1/2	1"1/2
BDMR802B	73,6	49,6	70,4	35,1	17632	11080	34	23					2X800	494,5	43	A	A	2"	2"
BDMR803A	96,3	68,4	49,5	27,0	27485	17496	36	25					3X800	492,2	42	A	A	2"	2"
BDMR803B	110,2	74,2	68,0	33,9	26423	16599	36	25	3X800	738,3			64	A	A	2"1/2	2"1/2		
BDMR804A	127,6	90,7	34,7	19,0	36636	23318	37	26	4X800	654,8			57	A	A	2"1/2	2"1/2		
BDMR804B	146,7	98,8	66,8	33,3	35214	22118	37	26	4X800	982,1			85	A	A	3"	3"		
BDMR805A	160,8	114,2	64,9	35,4	45786	29140	38	27	5X800	817,3			71	A	A	3"	3"		
BDMR805B	182,4	123,0	39,5	19,7	44005	27637	38	27	5X800	1225,9			106	A	A	3"	3"		

Nominal capacities according to standard EN1048 (water Tair=25°C, Tin=40°C, Tout=35°C).
*See the General Contents for more details.

**Energy Efficiency Class: see "General Contents" for more details.

Model	Capacity [kW]		Pressure Drop fluid [kPa]		Airflow [m³/h]		Lp [dB(A)]*		Motor (3/400V-50Hz)		Fans	Surface	Tube volume	E.E.C.**		Conn. Size	
	Δ	Y	Δ	Y	Δ	Y	Δ	Y	Δ	Y	N° x D [mm]	m²	dm³	Δ	Y	Inlet	Outlet
Ø 1000																	
BDML1001A	72,2	63,2	28,6	22,6	30920	24495	54	49	P=2200W I _n =4,2A n=670min-1	P=1500W I _n =2,7A n=530min-1	1X1000	199,7	17	D	D	1"1/2	1"1/2
BDML1001B	92,3	78,5	66,9	50,1	29511	23164	54	49			1X1000	299,5	26	C	C	1"1/2	1"1/2
BDML1001C	102,6	85,3	48,4	34,8	28118	21918	54	49			1X1000	399,4	34	C	C	2"	2"
BDML1001D	135,1	110,1	52,8	36,8	36229	27579	54	49			1X1000	499,2	43	C	B	2"	2"
BDML1002A	147,3	128,8	84,8	66,9	61730	48882	57	52			2X1000	394,7	34	D	D	2"	2"
BDML1002B	183,2	155,9	61,2	45,9	58853	46172	57	52			2X1000	592,1	51	C	C	2"1/2	2"1/2
BDML1002C	203,7	169,3	44,3	31,8	56020	43647	57	52			2X1000	789,4	68	C	C	2"1/2	2"1/2
BDML1002D	216,3	176,3	73,5	51,2	53371	41370	57	52			2X1000	986,8	85	C	C	2"1/2	2"1/2
BDML1003A	220,3	192,7	82,2	64,9	92539	73268	59	54			3X1000	589,7	51	D	D	2"1/2	2"1/2
BDML1003B	274,2	233,3	59,4	44,5	88193	69179	59	54			3X1000	884,6	76	C	C	3"	3"
BDML1003C	304,8	253,3	43,0	30,9	83920	65375	59	54			3X1000	1179,5	102	C	C	3"	3"
BDML1003D	320,0	261,1	31,4	21,9	79929	61948	59	54			3X1000	1474,4	127	C	C	3"	3"
BDML1004A	285,0	249,6	24,9	19,7	123347	97654	60	55			4X1000	784,8	68	D	D	3"	3"
BDML1004B	355,2	302,9	17,9	13,6	117532	92186	60	55			4X1000	1177,2	102	D	C	4"	4"
BDML1004C	411,2	341,3	96,7	69,0	111820	87102	60	55			4X1000	1569,6	135	C	C	4"	4"
BDML1004D	431,0	351,3	70,2	48,9	106488	82525	60	55			4X1000	1961,9	169	C	C	4"	4"
BDMQ1001A	58,0	47,6	59,9	42,5	20337	14996	40	33	P=860W I _n =1,2A n=420 min-1	P=500W I _n =0,97A n=320 min-1	1X1000	199,7	17	E	D	1"1/2	1"1/2
BDMQ1001B	68,8	53,8	39,9	25,7	19174	13827	40	33			1X1000	299,5	26	D	D	1"1/2	1"1/2
BDMQ1001C	74,3	55,9	60,7	36,7	18131	12821	40	33			1X1000	399,4	34	D	D	2"	2"
BDMQ1002A	115,1	94,5	54,8	39,0	40569	29893	43	36			2X1000	394,7	34	E	D	2"	2"
BDMQ1002B	138,3	108,1	82,8	53,3	38221	27523	43	36			2X1000	592,1	51	D	D	2"1/2	2"1/2
BDMQ1002C	147,7	110,9	55,6	33,6	36094	25496	43	36			2X1000	789,4	68	D	D	2"1/2	2"1/2
BDMQ1003A	172,2	141,4	53,1	37,8	60801	44789	45	38			3X1000	589,7	51	E	D	2"1/2	2"1/2
BDMQ1003B	204,5	159,9	35,5	22,8	57267	41219	45	38			3X1000	884,6	76	D	D	3"	3"
BDMQ1003C	221,8	166,5	75,3	45,4	54056	38170	45	38			3X1000	1179,5	102	D	D	3"	3"
BDMQ1004A	223,1	183,4	16,1	11,4	81033	59684	46	39			4X1000	784,8	68	E	D	3"	3"
BDMQ1004B	275,7	215,4	79,1	50,9	76313	54914	46	39			4X1000	1177,2	102	D	D	4"	4"
BDMQ1004C	294,3	221,0	53,1	32,1	72018	50844	46	39			4X1000	1569,6	135	D	D	4"	4"
BDMR1001A	53,69	40,04	52,33	31,26	18021	11682	38	29	P=670W I _n =1,4A n=380 min-1	P=330W I _n =0,67A n=250 min-1	1X1000	199,7	17	E	E	1"1/2	1"1/2
BDMR1001B	62,89	44,38	33,69	18,25	16984	10833	38	29			1X1000	299,5	26	D	D	1"1/2	1"1/2
BDMR1002A	106,62	79,53	47,91	28,64	35951	23289	41	32			2X1000	394,7	34	E	E	2"	2"
BDMR1002B	126,46	89,09	70,22	37,89	33851	21573	41	32			2X1000	592,1	51	D	D	2"1/2	2"1/2
BDMR1003A	159,53	119,01	46,45	27,78	53881	34895	43	34			3X1000	589,7	51	E	E	2"1/2	2"1/2
BDMR1003B	190,04	133,81	95,09	51,3	50716	32313	43	34			3X1000	884,6	76	D	D	3"	3"
BDMR1004A	215,54	160,49	105,03	62,15	71810	46501	44	35			4X1000	784,8	68	E	E	3"	3"
BDMR1004B	252,08	177,58	67,1	36,2	67581	43053	44	35			4X1000	1177,2	102	D	D	4"	4"

Nominal capacities according to standard EN1048 (water T_{air}=25°C, T_{in}=40°C, T_{out}=35°C).

*See the General Contents for more details.

**Energy Efficiency Class: see "General Contents" for more details.

BDM - Single Fan Row

Drawings

Serie	Weight [kg]	Dimensions (mm)					N° feet	
		A	B	C	B	G	V	H
Ø 630								
BDM_631A	115	1475	1525	1065(V)/944(H)	-	1255(V)/1220(H)	2	4
BDM_631B	125	1475	1525	1065(V)/944(H)	-	1255(V)/1220(H)	2	4
BDM_631C	135	1475	1525	1065(V)/944(H)	-	1255(V)/1220(H)	2	4
BDM_631D	145	1475	1525	1065(V)/944(H)	-	1255(V)/1220(H)	2	4
BDM_632A	230	2565	2615	2155(V)/2084(H)	-	1255(V)/1220(H)	2	4
BDM_632B	250	2565	2615	2155(V)/2084(H)	-	1255(V)/1220(H)	2	4
BDM_632C	270	2565	2615	2155(V)/2084(H)	-	1255(V)/1220(H)	2	4
BDM_632D	290	2565	2615	2155(V)/2084(H)	-	1255(V)/1220(H)	2	4
BDM_633A	345	3655	3705	3245(V)/3174(H)	-	1255(V)/1220(H)	2	4
BDM_633B	375	3655	3705	3245(V)/3174(H)	-	1255(V)/1220(H)	2	4
BDM_633C	405	3655	3705	3245(V)/3174(H)	-	1255(V)/1220(H)	2	4
BDM_633D	435	3655	3705	3245(V)/3174(H)	-	1255(V)/1220(H)	2	4
BDM_634A	460	4745	4795	2155(V)/2084(H)	2180	1255(V)/1220(H)	3	6
BDM_634B	500	4745	4795	2155(V)/2084(H)	2180	1255(V)/1220(H)	3	6
BDM_634C	540	4745	4795	2155(V)/2084(H)	2180	1255(V)/1220(H)	3	6
BDM_634D	580	4745	4795	2155(V)/2084(H)	2180	1255(V)/1220(H)	3	6
Ø 630 LONG								
BDM_631A L	145	1785	1835	1375(V)/1304(H)	-	1255(V)/1220(H)	2	4
BDM_631B L	160	1785	1835	1375(V)/1304(H)	-	1255(V)/1220(H)	2	4
BDM_631C L	175	1785	1835	1375(V)/1304(H)	-	1255(V)/1220(H)	2	4
BDM_631D L	190	1785	1835	1375(V)/1304(H)	-	1255(V)/1220(H)	2	4
BDM_632A L	290	3185	3235	2775(V)/2104(H)	-	1255(V)/1220(H)	2	4
BDM_632B L	320	3185	3235	2775(V)/2104(H)	-	1255(V)/1220(H)	2	4
BDM_632C L	350	3185	3235	2775(V)/2104(H)	-	1255(V)/1220(H)	2	4
BDM_632D L	380	3185	3235	2775(V)/2104(H)	-	1255(V)/1220(H)	2	4
BDM_633A L	435	4585	4635	4175(V)/4104(H)	-	1255(V)/1220(H)	2	4
BDM_633B L	480	4585	4635	4175(V)/4104(H)	-	1255(V)/1220(H)	2	4
BDM_633C L	525	4585	4635	4175(V)/4104(H)	-	1255(V)/1220(H)	2	4
BDM_633D L	570	4585	4635	4175(V)/4104(H)	-	1255(V)/1220(H)	2	4

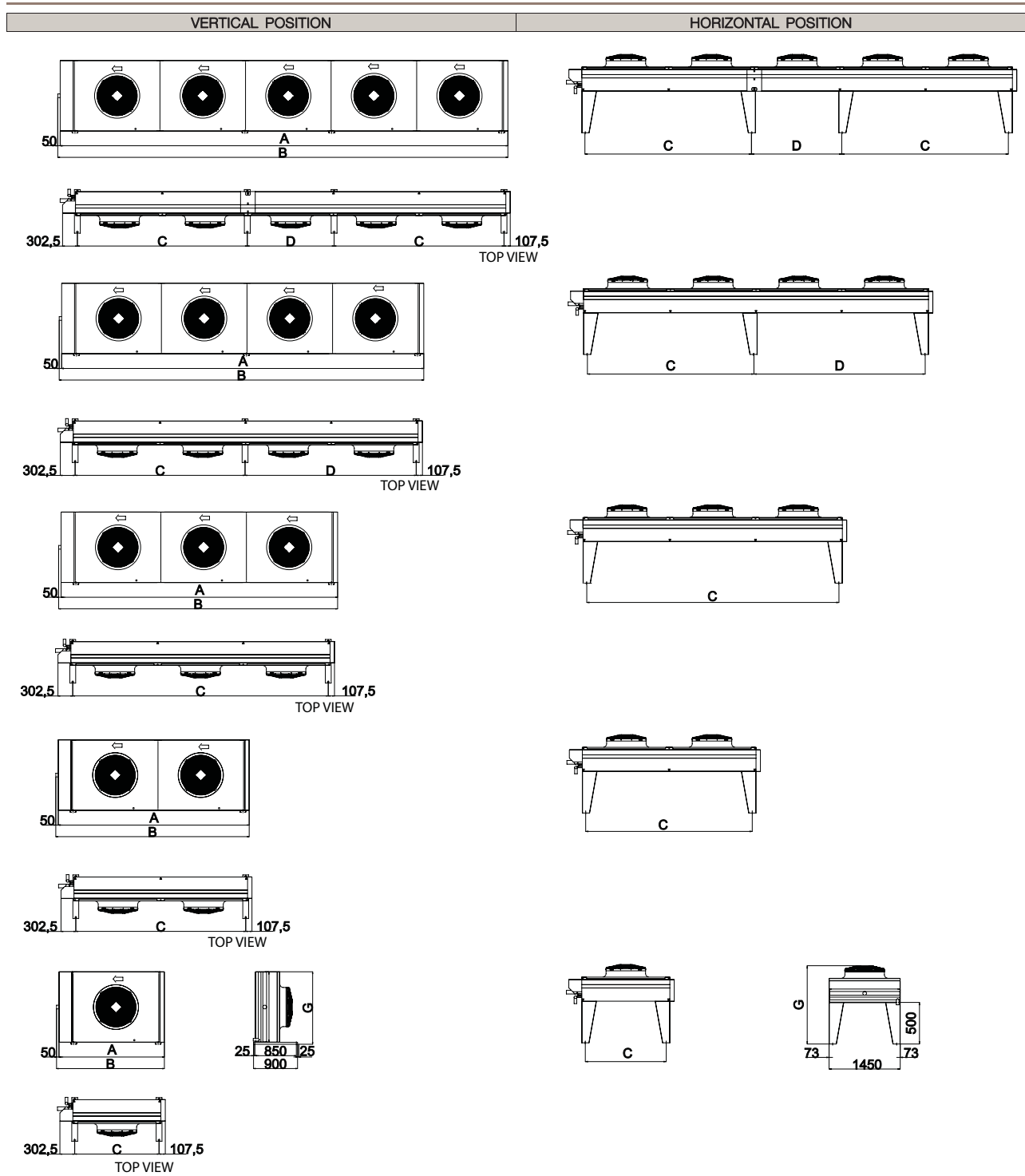
Standard Feet 500 mm.

We reserve the right to change our technical data without prior notice.

Serie	Weight [kg]	Dimensions (mm)					N° feet	
		A	B	C	D	G	V	H
Ø 800								
BDM_801A	180	2135	2185	1725(V)/1664(H)	-	1495(V)/1250(H)	2	4
BDM_801B	200	2135	2185	1725(V)/1664(H)	-	1495(V)/1250(H)	2	4
BDM_801C	220	2135	2185	1725(V)/1664(H)	-	1495(V)/1250(H)	2	4
BDM_801D	240	2135	2185	1725(V)/1664(H)	-	1495(V)/1250(H)	2	4
BDM_802A	360	3885	3935	3475(V)/3404(H)	-	1495(V)/1250(H)	2	4
BDM_802B	400	3885	3935	3475(V)/3404(H)	-	1495(V)/1250(H)	2	4
BDM_802C	440	3885	3935	3475(V)/3404(H)	-	1495(V)/1250(H)	2	4
BDM_802D	480	3885	3935	3475(V)/3404(H)	-	1495(V)/1250(H)	2	4
BDM_803A	540	5635	5685	5225(V)/5154(H)	-	1495(V)/1250(H)	2	4
BDM_803B	600	5635	5685	5225(V)/5154(H)	-	1495(V)/1250(H)	2	4
BDM_803C	660	5635	5685	5225(V)/5154(H)	-	1495(V)/1250(H)	2	4
BDM_803D	720	5635	5685	5225(V)/5154(H)	-	1495(V)/1250(H)	2	4
BDM_804A	720	7385	7435	3475(V)/3404(H)	3500	1495(V)/1250(H)	3	6
BDM_804B	800	7385	7435	3475(V)/3404(H)	3500	1495(V)/1250(H)	3	6
BDM_804C	880	7385	7435	3475(V)/3404(H)	3500	1495(V)/1250(H)	3	6
BDM_804D	960	7385	7435	3475(V)/3404(H)	3500	1495(V)/1250(H)	3	6
BDM_805A	900	9135	9185	3475(V)/3404(H)	1775(V)/1846(H)	1495(V)/1250(H)	4	8
BDM_805B	1000	9135	9185	3475(V)/3404(H)	1775(V)/1846(H)	1495(V)/1250(H)	4	8
BDM_805C	1100	9135	9185	3475(V)/3404(H)	1775(V)/1846(H)	1495(V)/1250(H)	4	8
BDM_805D	1200	9135	9185	3475(V)/3404(H)	1775(V)/1846(H)	1495(V)/1250(H)	4	8
Ø 910								
BDM_901A	215	2485	2535	2075(V)/2004(H)	-	1495(V)/1290(H)	2	4
BDM_901B	240	2485	2535	2075(V)/2004(H)	-	1495(V)/1290(H)	2	4
BDM_901C	265	2485	2535	2075(V)/2004(H)	-	1495(V)/1290(H)	2	4
BDM_901D	290	2485	2535	2075(V)/2004(H)	-	1495(V)/1290(H)	2	4
BDM_902A	430	4585	4635	4175(V)/4104(H)	-	1495(V)/1290(H)	2	4
BDM_902B	480	4585	4635	4175(V)/4104(H)	-	1495(V)/1290(H)	2	4
BDM_902C	530	4585	4635	4175(V)/4104(H)	-	1495(V)/1290(H)	2	4
BDM_902D	580	4585	4635	4175(V)/4104(H)	-	1495(V)/1290(H)	2	4
BDM_903A	645	6685	6735	6275(V)/6204(H)	-	1495(V)/1290(H)	2	4
BDM_903B	720	6685	6735	6275(V)/6204(H)	-	1495(V)/1290(H)	2	4
BDM_903C	795	6685	6735	6275(V)/6204(H)	-	1495(V)/1290(H)	2	4
BDM_903D	870	6685	6735	6275(V)/6204(H)	-	1495(V)/1290(H)	2	4
BDM_904A	860	8785	8835	4175(V)/4104(H)	4200	1495(V)/1290(H)	3	6
BDM_904B	960	8785	8835	4175(V)/4104(H)	4200	1495(V)/1290(H)	3	6
BDM_904C	1060	8785	8835	4175(V)/4104(H)	4200	1495(V)/1290(H)	3	6
BDM_904D	1160	8785	8835	4175(V)/4104(H)	4200	1495(V)/1290(H)	3	6
Ø 1000								
BDM_1001A	215	2485	2535	2075(V)/2004(H)	-	1495(V)/1290(H)	2	4
BDM_1001B	240	2485	2535	2075(V)/2004(H)	-	1495(V)/1290(H)	2	4
BDM_1001C	265	2485	2535	2075(V)/2004(H)	-	1495(V)/1290(H)	2	4
BDM_1001D	290	2485	2535	2075(V)/2004(H)	-	1495(V)/1290(H)	2	4
BDM_1002A	430	4585	4635	4175(V)/4104(H)	-	1495(V)/1290(H)	2	4
BDM_1002B	480	4585	4635	4175(V)/4104(H)	-	1495(V)/1290(H)	2	4
BDM_1002C	530	4585	4635	4175(V)/4104(H)	-	1495(V)/1290(H)	2	4
BDM_1002D	580	4585	4635	4175(V)/4104(H)	-	1495(V)/1290(H)	2	4
BDM_1003A	645	6685	6735	6275(V)/6204(H)	-	1495(V)/1290(H)	2	4
BDM_1003B	720	6685	6735	6275(V)/6204(H)	-	1495(V)/1290(H)	2	4
BDM_1003C	795	6685	6735	6275(V)/6204(H)	-	1495(V)/1290(H)	2	4
BDM_1003D	870	6685	6735	6275(V)/6204(H)	-	1495(V)/1290(H)	2	4
BDM_1004A	860	8785	8835	4175(V)/4104(H)	4200	1495(V)/1290(H)	3	6
BDM_1004B	960	8785	8835	4175(V)/4104(H)	4200	1495(V)/1290(H)	3	6
BDM_1004C	1060	8785	8835	4175(V)/4104(H)	4200	1495(V)/1290(H)	3	6
BDM_1004D	1160	8785	8835	4175(V)/4104(H)	4200	1495(V)/1290(H)	3	6

Standard Feet 500 mm.

We reserve the right to change our technical data without prior notice.



BDM - Single Fan Row

Options

Motor fans



(a) Fan motor 400 V/3ph - 60Hz, IP54: Q/R for Ø 630/800/910/1000 and also S/L for Ø 630/800/910
 (b) Fan motor 460 V/3ph - 60Hz, IP54: Q/R for Ø 630/800/910/1000 and also S/L for Ø 630/800/910
 (c) Fan motor 230V/1ph - 50/60Hz, IP54: L/Q for Ø 630

Model:
 Ø 630(a,b,c)
 Ø 630 Long(a,b,c)
 Ø 800 (a,b)
 Ø 910(a,b)
 Ø1000 (a,b)

Local safety switch wired



Local safety switch and cabling for each electric fan motor. Plastic covering box, IP65, nominal current 16A – 3 phases, insulated voltage 600V. Material / Colour: Polycarbonate grey (yellow-red handle)
 Mechanical duration: 20,000 operations. Operating temperature: -10°C, + 50°C Reference and standard CE/UL/CSA. Per unit.

Model:
 All Models

Local safety switch EMC



See Electrical Data Page.

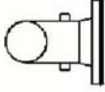

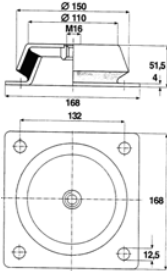
Model:
 All Models

Terminal Box

See Electrical Data Page.

Model:
 All Models

Switchboard and cabling		
	<p>Function</p> <p>Switchboard for supply and control of fan motors.</p> <p>A switchboard can supply up to 8 individual motors or 8 paired motors (i.e. max. of 16 motors).</p> <p>Switchboard and cabling are supplied as standard for vertical installation of the unit.</p> <p>If you have different needs, please specify these when placing your order.</p> <p>Operating conditions</p> <p>Type of installation: External wall mounted</p> <p>Protection degree: IP55 door closed</p> <p>Climate: Normal</p> <p>Operating temperature: $-10 \div +35^{\circ}\text{C}$ (base) $-25 \div +50^{\circ}\text{C}$ (with optional)</p> <p>Ambient relative humidity: <95%</p> <p>Altitude: <1000metres above sea level</p> <p>Electrical data</p> <p>Insulating nominal voltage: 690V</p> <p>Operating voltage: 3Ph. 400Vac</p> <p>Frequency: 50Hz</p> <p>Auxiliaries voltage: 24-230V</p> <p>Nominal current: Max 80A</p> <p>Mechanical data</p> <p>Material: Pre-painted galvanized steel</p> <p>Fixing plate: Sheet of steel (min. thickness 15/10 Sendzimir galvanized)</p> <p>Gasket: Polyurethane</p> <p>Door: opening more than 180°.</p> <p>Colour: RAL 7035</p> <p>Cable gland: metric ISO</p>	<p>Model: BDM</p> <p>All Models</p>
Switchboard Options		
	<p>R Anti-condensate resistor 230Vac (operating temperature $-25 \div + 35^{\circ}\text{C}$)</p> <p>C Cooling fan 230VAC (operating temperature $-10 \div + 50^{\circ}\text{C}$)</p> <p>F Cooling fan + anti-condensate resistor</p>	<p>Model: All Models</p>
Switchboard with Fan Speed control		
	<p>Switchboard and cabling, including an electronic fan speed controller (equipment that checks and regulates the speed rotation of the fan's motor, keeping the temperature for dry coolers within the range of pre-defined values). Constant control of the fan speed is achieved by variation of the electrical supply by phase-cut, as determined by the probe signal. The fan speed controller comes pre-connected to the switchboard. If you have different needs, please specify these when placing your order.</p>	<p>Model: All Models</p>
Switchboard with Fan Step control		
	<p>Switchboard and cabling, including an automatic on/off switch that checks and regulates the speed rotation of the fan's motor, keeping the temperature for dry coolers within the range of preset values. Control of the fan speed is achieved by variation of the electrical supply by the ON/OFF device, as determined by the probe signal. The fan step controller comes pre-connected to the switchboard. If you have different needs, please specify these when placing your order.</p>	<p>Model: All Models</p>
Switchboard with Frequency Converter (Inverter)		
	<p>See Electrical Data Page.</p>	<p>Model: All Models</p>
Coil Treatment / Material		
	<p>Thermoguard for industrial or sea coast application.</p> <p>Aluminium fins, pre-coated.</p> <p>Copper fins.</p> <p>Application Use: More information on corrosion prevention can be found in the Miscellaneous section.</p>	<p>Model: All Models</p>

Non-standard fin spacing																					
The standard fin spacing is 2.1mm. Alternative: 2.5mm and 3.2mm						Model: All Models															
Flanges AISI																					
						Model: All Models															
Feet																					
 <p>H Horizontal Position (500 and 850mm) A Feet adjustable from 350-950cm V Vertical Position</p>						Model: All Models															
Vibration Dampers																					
						<table border="1"> <thead> <tr> <th>Type</th> <th>H mm</th> <th>A mm</th> <th>B mm</th> <th>C mm</th> <th>D mm</th> <th>Weight Kg</th> </tr> </thead> <tbody> <tr> <td>Single Row</td> <td>51.5</td> <td>132</td> <td>168</td> <td>M16</td> <td>12.5</td> <td>2.15</td> </tr> </tbody> </table> <p>Nuts and bolts are not included with these dampers.</p>		Type	H mm	A mm	B mm	C mm	D mm	Weight Kg	Single Row	51.5	132	168	M16	12.5	2.15
Type	H mm	A mm	B mm	C mm	D mm	Weight Kg															
Single Row	51.5	132	168	M16	12.5	2.15															
						Model: BDM All Models															

BDM - Single Fan Row

Electrical Data

Safety Switch

Function

Local safety switch and cabling for each electric fan motor.

General data

Power Supply:

- 400VAC, 50/60Hz
- Max fuse 16A

Number of poles: 3PCabinet Material: Plastic Case

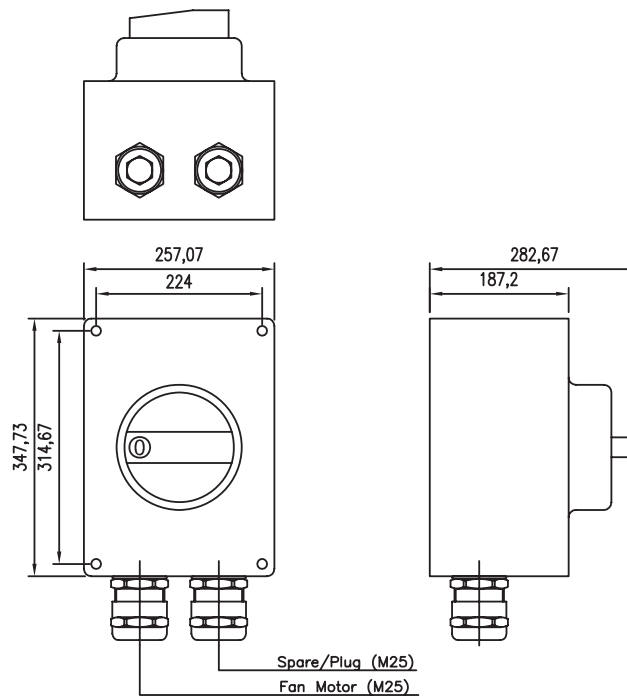
Cabinet Colour: Grey (Yellow-Red Knob)

Protection Class: Min IP65

Ambient Temp.: min. -25°C, max. +50°C

Weight: Approx. 0.4Kg

Dimensions



Safety Switch EMC

Function

Local safety switch and cabling for each electric fan motor.

General data

Power Supply:

- 400VAC, 50/60Hz
- Max fuse 16A

Number of poles: 3P

Cabinet Material: Plastic case with internal copper-painted

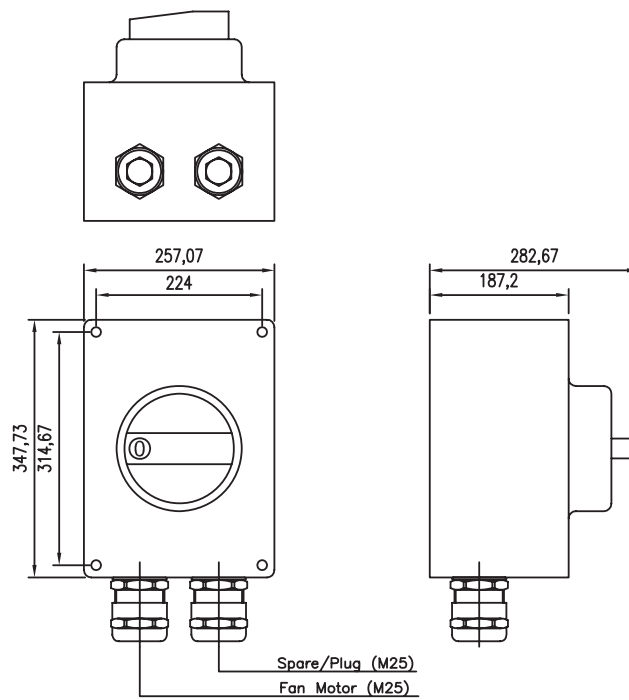
Cabinet Colour: Grey (Yellow-Red Knob)

Protection Class: Min IP65

Ambient Temp.: min. -25°C, max. +50°C

Weight: Approx. 0.4Kg

Dimensions



Terminal Box

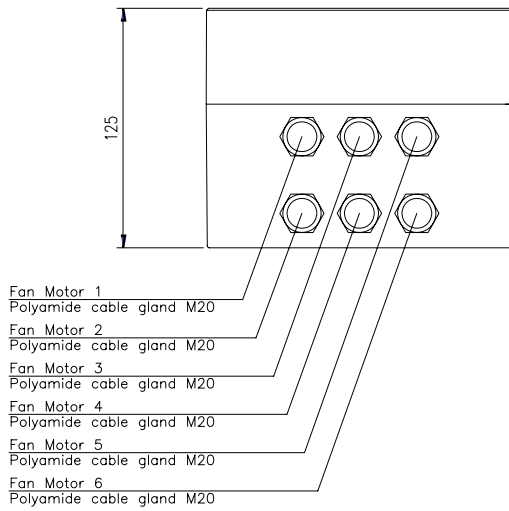
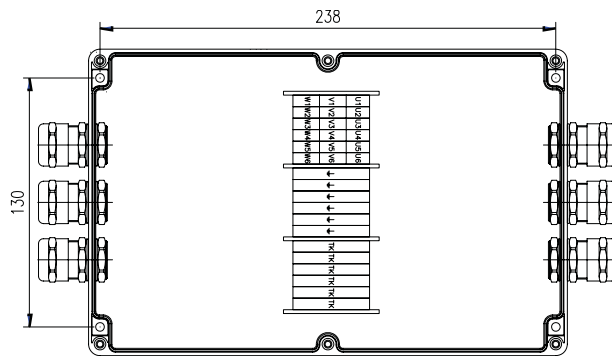
Function

Connection box for electric fan motor

General data

Material: Plastic
 IP Protection Class: Min RAL 7035
 Colour: Grey RAL 7035
 Insulation Class: II
 Ambient Temp.: min. -40°C, max. +80°C
 Weight: Approx. 0.5Kg.

Dimensions



Switch Board (Control Panel)

Function

Basic Version for Horizontal Installation

General data

Cabinet Material: Sheet steel 15/10mm zinc-coated

Internal Plate: Sheet steel 20/10mm zinc-coated

Protection Class: IP 55

Cabinet Colour: RAL 7035, light grey polyester paint

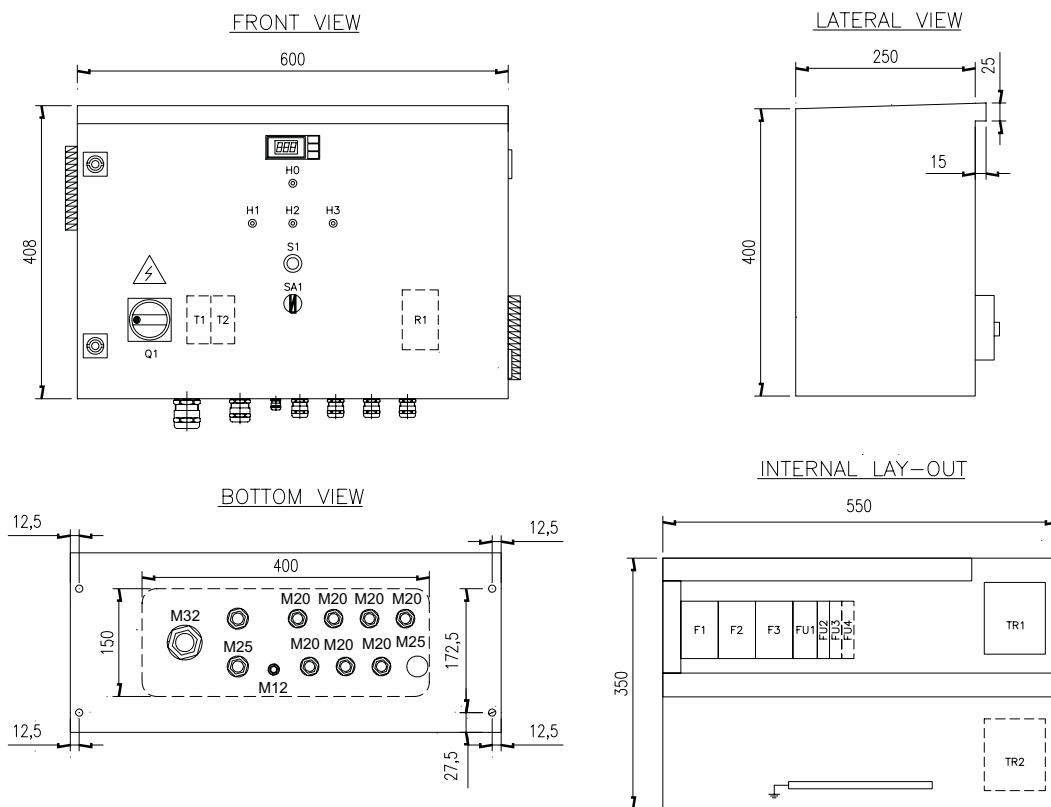
Cabinet Doors: Opening angle 110°

Ambient Temp.:

- min. -10°C, max. +35°C standard
- min. -25°C, max. +35°C with electrical heater
- min. -10°C, max. +50°C with cooling fan
- min. -25°C, max. +50°C with heater and fan

Cables included: Bottom position with cable glands.

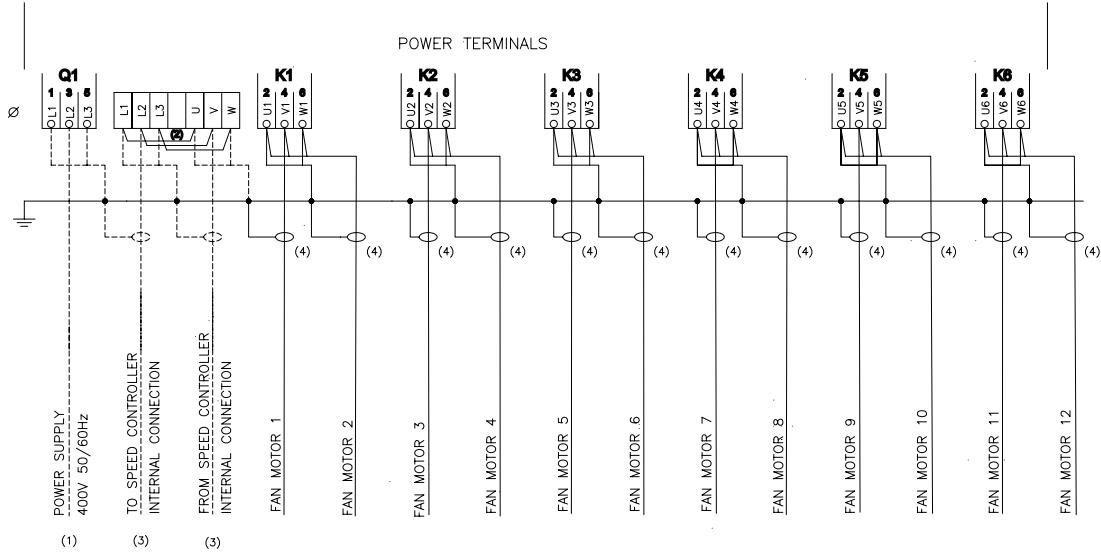
Dimensions



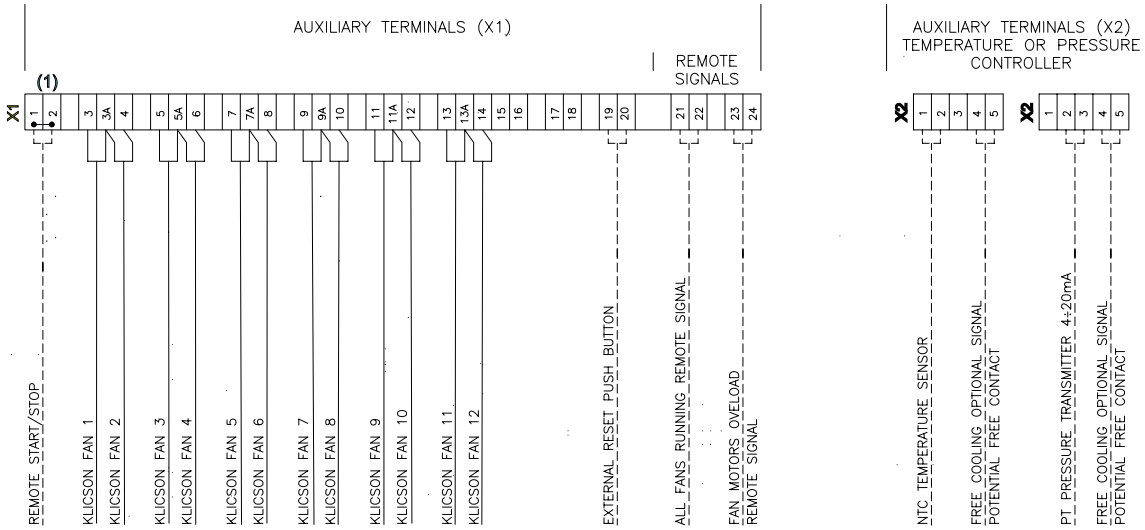
Labels list

- | | |
|-----------------------------------|--|
| H0 VOLTAGE BOARD ON | Q1 MAIN SWITCH |
| H1 FAN MOTOR 1-2 RUNNING (OPTION) | TC1 TEMPERATURE/PRESSURE CONTROLLER (OPTION) |
| H2 FAN MOTOR 3-4 RUNNING (OPTION) | S1 RESET (OPTION) |
| H3 FAN MOTOR 5-6 RUNNING (OPTION) | SA1 MAN - AUT SELECTION (OPTION) |

Electric wiring diagram



- NOTE:**
- (1) EXTERNAL SHORT CIRCUIT PROTECTION MAX FUSE
 - (2) REMOVE JUMPERS WHEN SPEED CONTROLLER IS ORDERED
 - (3) NOT MOUNTED WHEN FAN SPEED CONTROLLER IS ORDERED
 - (4) SHIELDED CABLE TO BE USED ONLY WHEN EMC CABLING OPTION IS REQUESTED
- CABLE NOT INCLUDED IN ALFA LAVAL DELIVERY
 _____ CABLE INCLUDED IN ALFA LAVAL DELIVERY



- NOTE:**
- (1) REMOVE JUMPER WHEN USED

Switch Board (Control Panel)

Function

Basic Version for Vertical Installation

General data

Cabinet Material: Sheet steel 15/10mm zinc-coated

Internal Plate: Sheet steel 20/10mm zinc-coated

Protection Class: IP 55

Cabinet Colour: RAL 7035, light grey polyester paint

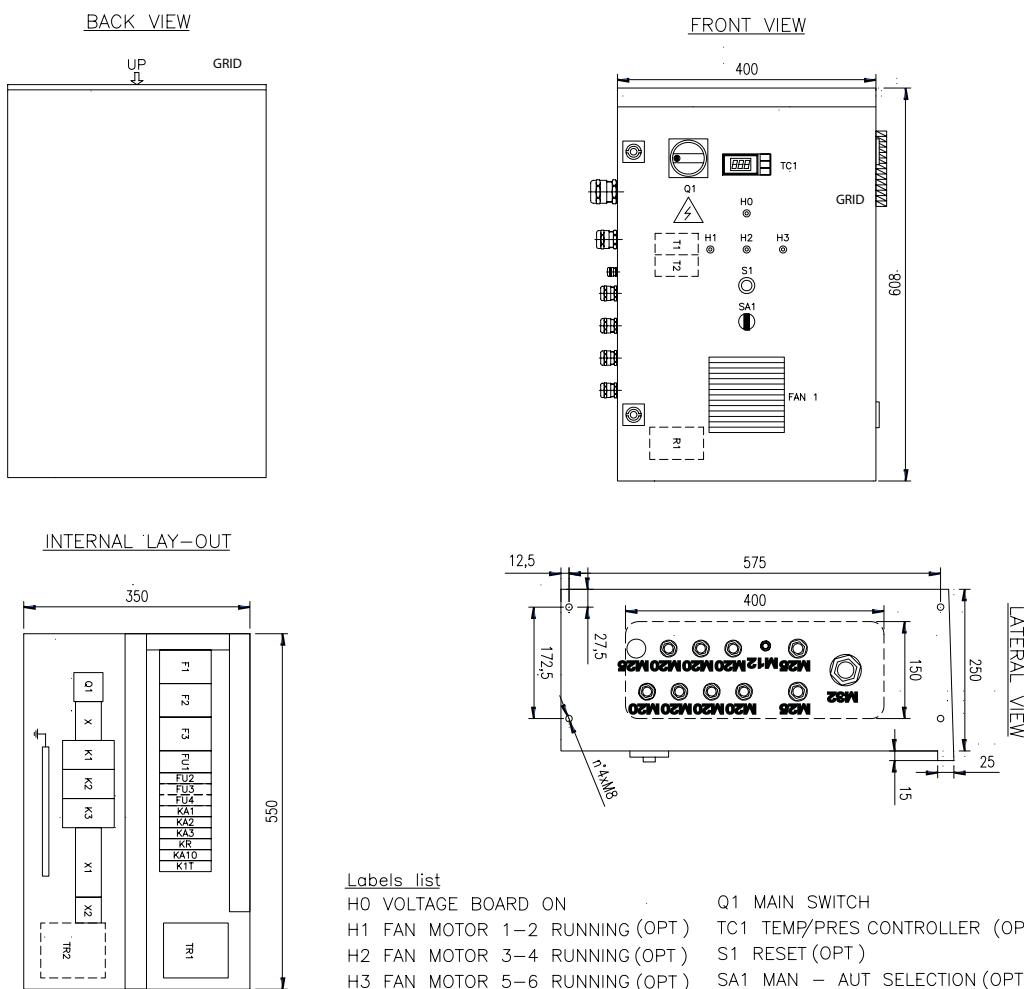
Cabinet Doors: Opening angle 110°

Ambient Temp.:

- min. -10°C, max. +35°C standard
- min. -25°C, max. +35°C with electrical heater
- min. -10°C, max. +50°C with cooling fan
- min. -25°C, max. +50°C with heater and fan

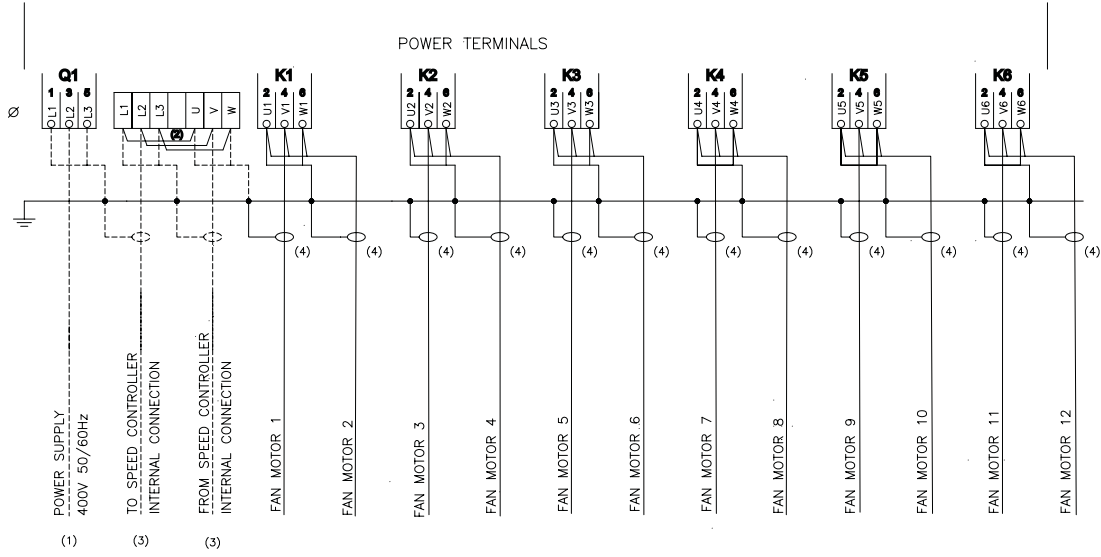
Cables included: Bottom position with cable glands.

Dimensions

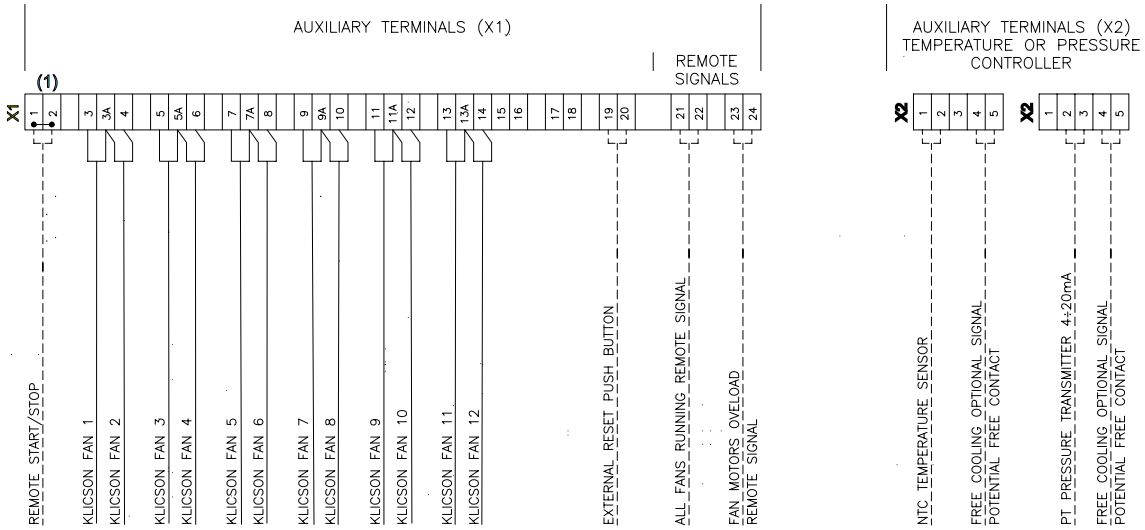


- Labels list
- | | |
|--------------------------------|--------------------------------|
| HO VOLTAGE BOARD ON | Q1 MAIN SWITCH |
| H1 FAN MOTOR 1-2 RUNNING (OPT) | TC1 TEMP/PRES CONTROLLER (OPT) |
| H2 FAN MOTOR 3-4 RUNNING (OPT) | S1 RESET (OPT) |
| H3 FAN MOTOR 5-6 RUNNING (OPT) | SA1 MAN - AUT SELECTION (OPT) |

Electric wiring diagram



- NOTE:**
- (1) EXTERNAL SHORT CIRCUIT PROTECTION MAX FUSE
 - (2) REMOVE JUMPERS WHEN SPEED CONTROLLER IS ORDERED
 - (3) NOT MOUNTED WHEN FAN SPEED CONTROLLER IS ORDERED
 - (4) SHIELDED CABLE TO BE USED ONLY WHEN EMC CABLING OPTION IS REQUESTED
- CABLE NOT INCLUDED IN ALFA LAVAL DELIVERY
 _____ CABLE INCLUDED IN ALFA LAVAL DELIVERY



- NOTE:**
- (1) REMOVE JUMPER WHEN USED

Current Distribution

Function

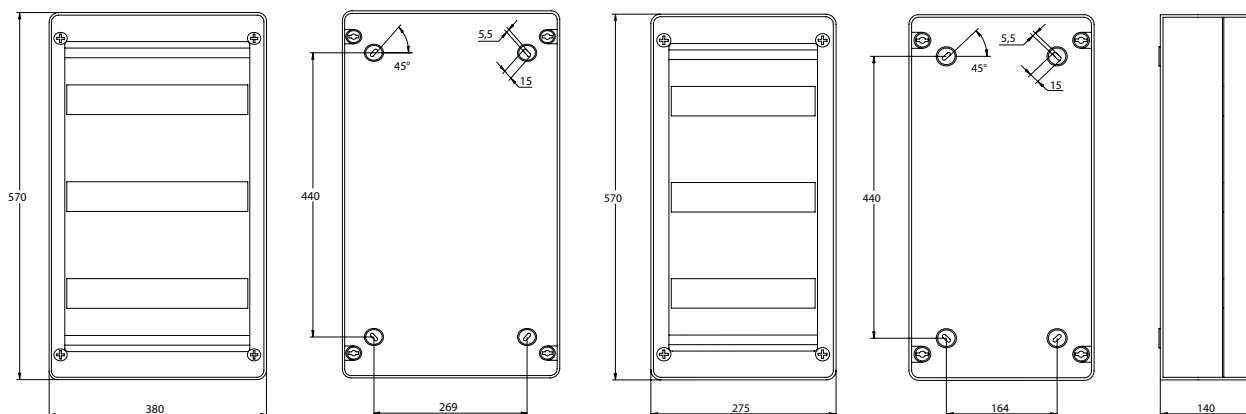
Current distributors are available as optional accessories. Numerous fans can be connected. In combination with Fcontrol frequency inverters, we can deliver the current distribution with both main switch and bypass function. Features: The current distributor is equipped with plastic housing IP54 and motor protection units STDT16E with status signal contacts ZB. It is possible to lock the motor protection units with a padlock and use them as repair switches. Fans are directly connected to the motor protection units. Line protection is guaranteed through the integrated short-circuit release. Terminals for supplying the controller output are also integrated. The current distributors are suitable for external mounting (e.g. direct mounting at refrigeration units). It's easy to see the switch position of the motor protection units through the coloured, transparent plastic door.

General data

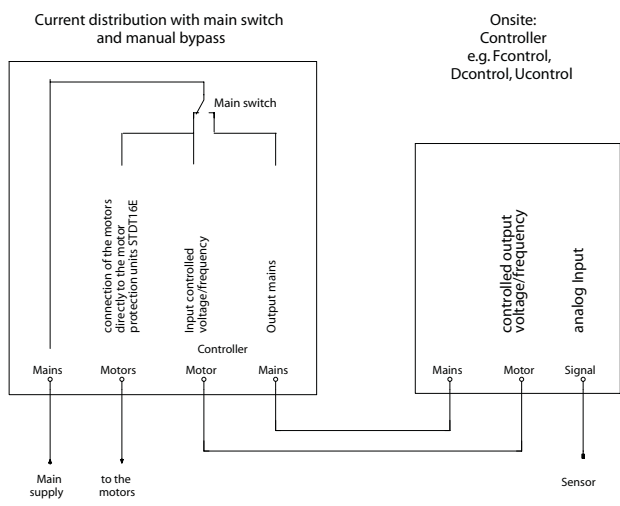
Current distributor with main switch and bypass function:

- The controller is supplied by the current distributor
- Main switch: 100% - 0 -1
- In position 100%, the connection to the controller output is switched off. This version is for Fcontrol frequency inverters .
- Rated current: Up to 80A

Dimensions



Electric wiring diagram



Frequency Converter (Inverter)

Function

Frequency inverter (incl. sine filter) for 3~ motors. Universal controller for refrigeration and air conditioning line input 3~ 208-480V, housing IP54, internal display.

- Speed controller with manual adjustment of output voltage at the unit or via external signal, 2-step operation;
- Temperature control for liquid coolers;
- Pressure control refrigeration (input for refrigerant) for: condensers, dual-circuit condensers;

General data

Equipment/Function

- Integrated SINEFILTER between phase to phase and phase to earth.
- Absolute parallel operation of fans, with no risk of damage to the motor. **Screened motor cables are not required.**
- Integrated process controller (PID free programmable).
- LCD multifunction display with plain language text.
- 2x Analogue Input (0-10 V, 0-20 mA, 4-20 mA, temperature sensor type TF):
 - Analogue 1 for setting of sensor signal.
 - Analogue 2 programmable function for: external set-point, difference value to sensor 1, comparison value (dual-circuit condenser), averaging, and setpoint lowering according to outdoor temperature.
- 1x output 0-10V, programmable function: Constant voltage, proportional modulation, proportional input signal, group control, controller 2.
- 2x digital inputs, programmable function: enable (on / off), external fault, limit output, input 1/2, set-point 1/2, setting internal / external, automatic control / speed manual, reverse control function ("heating" / "cooling"), reset, setting max. speed.
- 2x relay outputs, programmable function: operating indication, fault indication, external fault from digital input, limit modulation, limit input signal, limit offset (deviation actual value setpoint), group control .
- Total motor protection using thermocontact / thermistor connection.
- Interface system with RS485 Interface (MODBUS) or LON® is another alternative option.

Technical data

- Line voltage 3~ 208 BND_480V (-15% / +10%), 50/60Hz.

Rated current*/A	4	8	13	18	22	32	40
Max. line fuse/A	10	10	16	20	25	35	50
Max. heat dissipation*/W	130	210	350	440	540	950	1.100
Weight/Kg	8.8	9.0	22.8	25.4	28.1	29.5	31.8

*at line voltage 400V / 50Hz (for FXDM40A rated current - only possible for fans with $\cos \phi < 0.8$).

- Maximum output frequency 100Hz (for FXDM40, max. 60Hz).
- Clock frequency 16 kHz.
- Max. permissible ambient temperature 40°C (up to 55°C with derating).
- Voltage supply for sensors +24V \pm 20% (I_{max} 120 mA).
- Permissible rel. humidity 85% with no condensation .
- Interference emission EN 61000-6-3 1 (unshielded motor cable).
- Interference immunity EN 61000-6-2.

Settings

- Quick start-up with pre-programming modes.
- Set-point 1, set-point 2, manual mode.
- Min. and max. speed, speed limitation e.g. for night operation.
- Group control (via relay or 0-10V signal output).
- Limits: Modulation, input signal, offset (deviation set to actual value).
- Set protection, save user settings.
- Readout events memory (checking the fault log).
- Masking up to 3 settable speed ranges.
- Minimum rate of air on / off.
- Edge frequency, max. frequency / voltage, start voltage.
- U/f characteristics: quadratic or linear.
- Menu language: English, German, Italian, Swedish, etc.
- Inverting: Inputs analogue and digital, analogue out, relays.

BDM - Single Fan Row

Code description

Code No.

	1	2	3	4
BDM	S	63	2	A

1) Type of noise level (number of dB(A) to reduce compared with "base" version)

	Turbo noise level	Standard noise level	Low noise level	Quiet noise level	Residential noise level
	T	S*	L*	Q*	R*
Fan diameter Ø 630mm (normal / long)	-	base	-10	-18	-29
Fan diameter Ø 800mm	-	base	-7	-16	-20
Fan diameter Ø 910 mm	base	-2	-9	-19	-20
Fan diameter Ø 1 000 mm	-	-	base	-14	-16

2) Fan diameter Ø

63	630 mm
80	800 mm
90	910 mm
100	1 000 mm

3) Number of Fans (* available in this version)

	Fan diameter Ø 630mm	Fan diameter Ø 630 mm	Fan diameter Ø 800mm	Fan diameter Ø 910 mm	Fan diameter 1000mm
1	*	*	*	*	*
2	*	*	*	*	*
3	*	*	*	*	*
4	-	*	*	*	*
5	-	-	*	-	-

4) Number of coil rows

A	2
B	3
C	4
D	5

General Alfa Select Air Legend

Description 1		Description 2	
D	D fan cabling (three phase)	AL	Aluminium fin
Y	Y fan cabling (three phase)	CU	Copper fin
D/Y	D/Y fan cabling (three phase), single speed fan motor	PR	Pre-coated fin
S	Single phase	SS	Stainless steel tube
P	Packaged on a pallet	TH	Thermoguard treatment
CR	Packaged in a crate	CF	Cataphoresis treatment
BO	Packaged in a box	SC	Sub-cooling circuit
Feet	Feet-mounted	KW	Spray water kit
SW	Safety Switch	FL	Flanges
CB	Terminal Box	FH	Fan ring heater
B	Basic Switch Board	IS	Insulated Drip Tray
BS	Basic Switch Board + Signal	RH	Reheating coil
BP	Basic Switch Board + Step Control Pressure	SR	Air socket adapter ring
PT	Basic Switch Board + Step Control Temperature	CW	Air throw fan cowling
BSP	Basic Switch Board + Step Control Pressure + Signal	ER	120° elbow reducer
BST	Basic Switch Board + Step Control Temp. + Signal	HN	Hinged fan cowling
BFP	Basic Switch Board + Speed Control Pressure		
BFT	Basic Switch Board + Speed Control Temperature		
BSFP	Basic Switch Board + Speed Control Pres. + Signal		
BSFT	Basic Switch Board + Speed Control Temp. + Signal		
BI	Basic Switch Board + Frequency Converter (Inverter)		
BSI	Basic Switch Board + Frequency Converter (Inverter) + Signal		
C	Switch Board + Cooling fan		
R	Switch Board + Resistor		
F	Switch Board + Cooling fan + Resistor		
PT	Ammonia pump top		
PB	Ammonia pump bottom		
AL	Aluminium casing		
SS	Stainless Steel casing		
AP	Pre-painted Aluminium casing		
PL	Plastic casing		
E	Electrical defrost		
LE	Low Electrical defrost		
A	Air Defrost		
HG	Hot Gas Defrost		
HG+E	Hot Gas Defrost + Electrical Defrost on drip tray		
W	Water Defrost		
W+E	Water Defrost + Electrical Defrost on drip tray		

Note: valid for the entire product range

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