look into the future

thermofin®
heat exchangers - GERMANY

蒸发器 - 商业系列

evaporator - commercial line

TEB

1.1.1.

命名方式
Nomenclature

TEB040.1-C-1-4-E

德默菲®蒸发器-商业系列
thermofin®evaporator - commercial line

风机直径 [mm]
fan [mm]
020 = 200 / 031 = 315 / 040 = 400
045 = 450 / 050 = 500 / 063 = 630

版本号

风方向管排数
rows of tubes
B, C, E, F

电融霜
electrical defrosting

翅片距
fin spacing
4 = 4,0 mm / 7 = 7,0 mm

风机数量
number of fans
1, 2, 3, 4

功率参数

给出的额定功率适用于制冷剂R404A，并且涉及到进风温度差DT1（蒸发器的进风温度t_{L1}和蒸发温度t_0之间的温度差，$DT1=t_{L1}-t_0$）。

这些条件被标记为TD1，并且符合ENV328的要求以及EUROVENT认证的规定。

Capacity data

The nominal capacities are valid for the refrigerant R404A and are based on the air inlet temperature difference DT1 (difference between air inlet temperature t_{L1} and evaporation temperature t_0, $DT1 = t_{L1} - t_0$).

These conditions are marked with DT1 and comply with the ENV 328 standards and the terms of the Eurovent certification.

		SC2	SC3	[ ]
进风温度 **air inlet temperature**	t_{L1}	0	-18	°C
蒸发温度 **evaporation temperature**	t_0	-8	-25	°C
空气相对湿度 **humidity rel.**	F_{rel}	80	95	%
温度差 **temperature difference**	DT1	8	7	K

本目录参数是根据标准条件（SC2/3）确定的。
The catalogue data are determined based on the standard conditions (SC2/3).

根据Eurovent标准认证的校正系数

Correction factors acc. to Eurovent

$$\dot{Q}_N = \frac{\dot{Q}_0}{F_1 \cdot F_2}$$

$\dot{Q}_N$ = 蒸发器额定功率
$\dot{Q}_0$ = 制冷量
F_1 = 制冷剂的校正系数

$\dot{Q}_N$ = evaporator nominal capacity / catalogue capacity
$\dot{Q}_0$ = evaporative capacity
F_1 = correction factor for refrigerant

制冷剂 **refrigerant**		**R404A**	**R507A**	**R134a**	**R22**
F_1	t_0 = -8 °C	1.0	1.0	0.91	0.95
	t_0 = -25 °C	1.0	1.0	0.85	0.95

F_2 = 翅片材料的校正系数

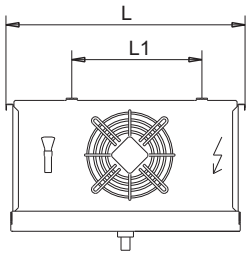
F_2 = correction factor for fin material

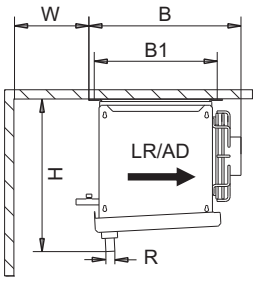
F_2	材质
1.00	铝 aluminium
0.97	环氧树脂 epoxy-coated

技术参数为理论数值，可能会产生技术变化。

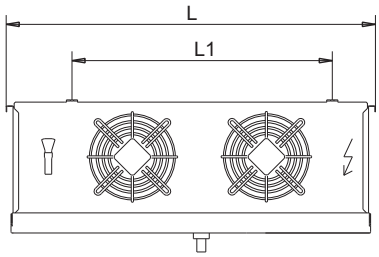
The technical data is acquired by theoretical means. Subject to change without prior notice.

020 / 031 / 040 / 045 / 050 / 063

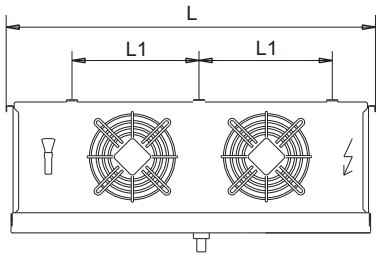




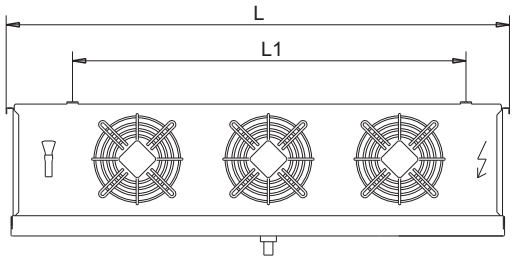
020 / 031 / 040



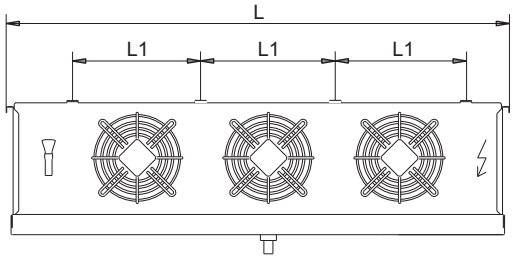
045 / 050 / 063



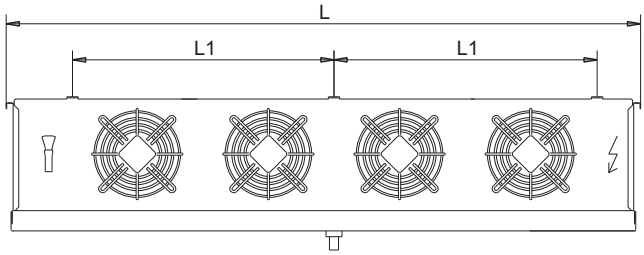
020 / 031 / 040

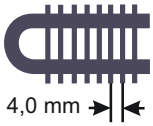


045 / 050 / 063



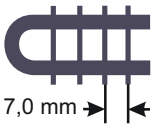
020 / 031 / 040 / 045 / 050 / 063





	额定功率 nominal capacity		面积 surface	风量 airflow	声压级 sound pressure level	无射流器射程 throwing range without streamer	配备射流器的射程 throwing range with streamer	接管 connections		管容积 tube volume	净重 net weight	电加热融霜 el. defrost heating		
	R404A													
	SC2 DT1 = 8 K t_o = -8 °C	SC3 DT1 = 7 K t_o = -25 °C						进口 inlet	出口 outlet			融霜功率 total	盘管 coil	水盘 drip tray
	kW	kW	m²	m³/h	dB(A) 3 m	m	m	mm Ø	mm Ø	l	kg	kW	kW	kW
020.1-B-1-4	1,2	0,9	6	725	46	6	-	16	16	1,1	14	0,76	0,41	0,35
031.1-B-1-4	2,0	1,3	9	1675	49	8	16	16	16	1,7	21	1,12	0,62	0,50
031.1-C-1-4	2,8	2,0	12	1585	49	8	15	16	16	2,3	23	1,74	1,24	0,50
040.1-B-1-4	3,9	2,6	16	3245	53	13	25	16	22	2,9	32	2,06	1,46	0,60
040.1-C-1-4	5,1	3,5	22	3110	53	12	24	16	22	3,9	35	2,06	1,46	0,60
045.1-C-1-4	7,7	5,3	33	5335	57	19	36	16	28	5,8	62	4,74	3,44	1,30
045.1-E-1-4	10,6	7,5	50	4970	57	17	34	16	35	8,7	72	4,74	3,44	1,30
050.1-C-1-4	10,6	7,7	43	6125	59	20	38	16	35	7,4	73	4,90	3,60	1,30
050.1-E-1-4	12,6	8,9	64	5820	59	19	36	16	35	11,1	85	4,90	3,60	1,30
063.1-C-1-4	15,5	11,1	64	9175	53	24	45	16	42	11,0	128	7,20	5,50	1,70
063.1-E-1-4	17,6	12,0	96	8535	53	22	42	16	42	16,4	147	8,30	6,60	1,70
020.1-B-2-4	1,9	1,3	11	1450	49	6	-	16	16	2,0	22	1,33	0,73	0,60
031.1-B-2-4	4,7	3,3	18	3350	51	9	18	16	22	3,2	34	1,51	0,86	0,65
031.1-C-2-4	5,7	4,1	25	3170	51	9	17	16	28	4,3	38	2,37	1,72	0,65
040.1-B-2-4	8,9	6,3	33	6490	56	14	27	16	35	5,6	54	3,80	2,80	1,00
040.1-C-2-4	10,2	7,2	44	6220	56	13	26	16	35	7,4	60	3,80	2,80	1,00
045.1-C-2-4	14,7	9,8	67	10670	60	20	40	16	35	11,2	109	8,30	6,00	2,30
045.1-E-2-4	21,3	15,2	100	9940	60	19	37	22	42	16,8	128	8,30	6,00	2,30
050.1-C-2-4	17,0	15,4	86	12245	62	21	41	22	42	14,3	126	9,20	7,00	2,20
050.1-E-2-4	25,3	18,0	128	11635	62	20	39	22	54	21,5	150	9,20	7,00	2,20
063.1-C-2-4	31,3	22,3	128	18350	55	26	49	28	54	21,4	230	12,20	9,50	2,70
063.1-E-2-4	35,6	24,4	193	17065	55	24	46	28	54	32,1	265	14,10	11,40	2,70
020.1-B-3-4	3,4	2,4	17	2170	50	7	-	16	18	2,9	30	1,85	1,15	0,70
031.1-B-3-4	6,1	5,1	28	5020	53	10	19	16	28	4,7	47	2,40	1,40	1,00
031.1-C-3-4	8,2	5,8	37	4750	53	9	18	16	28	6,3	52	3,80	2,80	1,00
040.1-B-3-4	12,0	8,2	49	9735	58	15	29	16	35	8,2	77	4,85	3,60	1,25
040.1-C-3-4	14,8	11,8	65	9330	58	14	28	22	42	10,9	86	4,85	3,60	1,25
045.1-C-3-4	25,0	17,5	100	16005	61	21	42	28	42	16,6	157	13,30	10,00	3,30
045.1-E-3-4	27,7	18,4	150	14910	61	20	39	28	54	24,9	184	13,30	10,00	3,30
050.1-C-3-4	29,5	20,5	128	18365	63	23	43	28	54	21,3	178	13,50	10,40	3,10
050.1-E-3-4	32,2	27,1	193	17450	63	21	41	28	64	31,9	213	16,10	13,00	3,10
063.1-C-3-4	40,9	27,5	193	27525	57	27	52	35	64	31,8	320	19,10	15,50	3,60
063.1-E-3-4	53,5	36,9	289	25595	57	25	48	35	64	47,7	372	22,20	18,60	3,60
020.1-B-4-4	4,0	3,3	23	2895	51	7	-	16	22	3,8	37	2,40	1,40	1,00
031.1-B-4-4	9,0	6,3	37	6695	54	10	20	16	28	6,2	60	3,15	2,00	1,15
031.1-C-4-4	9,9	6,6	49	6335	54	10	19	16	28	8,3	66	5,15	4,00	1,15
040.1-B-4-4	16,7	11,7	65	12980	59	15	30	16	35	10,9	100	6,65	5,00	1,65
040.1-C-4-4	20,6	14,5	87	12440	59	15	29	22	42	14,5	113	6,65	5,00	1,65
045.1-C-4-4	29,7	19,8	133	21335	62	22	44	28	54	22,0	203	16,20	12,40	3,80
045.1-E-4-4	39,3	26,8	200	19880	62	21	41	28	64	33,0	239	16,20	12,40	3,80
050.1-C-4-4	34,3	22,6	171	24485	64	23	45	28	64	28,2	231	17,80	13,80	4,00
050.1-E-4-4	45,9	30,8	257	23265	64	22	43	28	64	42,3	278	21,25	17,25	4,00
063.1-C-4-4	62,7	44,8	257	36700	58	28	54	2x22	2x64	42,2	416	25,30	20,50	4,80
063.1-E-4-4	61,5	57,2	385	34125	58	26	50	2x22	2x64	63,3	485	29,40	24,60	4,80

技术参数
Technical specification



	额定功率 nominal capacity		面积 surface	风量 airflow	声压级 sound pressure level	无射流器射程 throwing range without streamer	配备射流器的射程 throwing range with streamer	接管 connections		管容积 tube volume	净重 net weight	电加热融霜 el. defrost heating		
	R404A													
	SC2 DT1 = 8 K t_o = -8 °C	SC3 DT1 = 7 K t_o = -25 °C						进口 inlet	出口 outlet			融霜功率 total	盘管 coil	水盘 drip tray
	kW	kW	m²	m³/h	dB(A) 3 m	m	m	mm Ø	mm Ø	l	kg	kW	kW	kW
020.1-B-1-7	0,9	0,7	3	755	46	6	-	16	16	1,1	13	0,76	0,41	0,35
031.1-B-1-7	1,6	1,1	6	1805	49	9	18	16	16	1,7	20	1,12	0,62	0,50
031.1-C-1-7	2,2	1,6	7	1755	49	9	17	16	16	2,3	21	1,74	1,24	0,50
040.1-C-1-7	4,0	2,9	13	3345	53	13	26	16	22	3,9	32	2,06	1,46	0,60
040.1-E-1-7	5,2	3,8	20	3145	53	12	24	16	28	5,8	37	2,79	2,19	0,60
045.1-E-1-7	8,6	6,3	30	5370	57	19	37	16	35	8,7	64	4,74	3,44	1,30
045.1-F-1-7	9,8	7,1	40	5190	57	18	35	16	35	11,6	71	5,60	4,30	1,30
050.1-E-1-7	10,3	7,5	38	6165	59	20	38	16	35	11,1	75	5,80	4,50	1,30
050.1-F-1-7	11,6	8,2	51	5995	59	19	37	16	35	14,8	84	5,80	4,50	1,30
063.1-E-1-7	14,8	10,6	57	9265	53	24	45	16	42	16,4	132	8,30	6,60	1,70
063.1-F-1-7	18,8	13,9	77	8905	53	23	43	22	42	21,9	146	10,50	8,80	1,70
020.1-B-2-7	1,6	1,1	7	1510	49	6	-	16	16	2,0	20	1,33	0,73	0,60
031.1-B-2-7	3,5	2,6	11	3610	51	10	19	16	22	3,2	31	1,51	0,86	0,65
031.1-C-2-7	4,4	3,2	15	3505	51	10	19	16	22	4,3	34	2,37	1,72	0,65
040.1-C-2-7	8,0	5,8	26	6690	56	14	28	16	35	7,4	54	3,80	2,80	1,00
040.1-E-2-7	9,7	6,8	39	6290	56	14	26	16	35	11,1	63	5,20	4,20	1,00
045.1-E-2-7	17,3	12,7	60	10740	60	21	40	22	42	16,8	113	8,30	6,00	2,30
045.1-F-2-7	19,8	14,3	80	10375	60	20	39	22	42	22,4	127	9,80	7,50	2,30
050.1-E-2-7	20,6	15,1	77	12325	62	22	41	22	54	21,5	131	10,95	8,75	2,20
050.1-F-2-7	23,4	16,7	102	11985	62	21	40	28	54	28,6	148	10,95	8,75	2,20
063.1-E-2-7	29,8	21,5	115	18525	55	26	49	28	54	32,1	237	14,10	11,40	2,70
063.1-F-2-7	32,9	22,6	153	17805	55	25	48	28	54	42,7	262	17,90	15,20	2,70
020.1-C-3-7	3,0	2,1	13	2235	50	7	-	16	22	3,9	29	1,85	1,15	0,70
031.1-B-3-7	4,9	3,9	17	5415	53	11	20	16	28	4,7	43	2,40	1,40	1,00
031.1-E-3-7	7,8	5,5	33	4830	53	9	18	16	28	9,4	54	3,80	2,80	1,00
040.1-C-3-7	11,8	9,0	39	10030	58	15	30	22	42	10,9	76	6,65	5,40	1,25
040.1-E-3-7	15,7	11,5	59	9435	58	14	28	22	42	16,4	89	6,65	5,40	1,25
045.1-E-3-7	23,6	16,5	89	16105	61	22	42	28	54	24,9	162	13,30	10,00	3,30
045.1-F-3-7	25,5	23,1	119	15560	61	21	41	28	54	33,2	182	15,80	12,50	3,30
050.1-E-3-7	27,6	22,7	115	18485	63	23	44	28	64	31,9	184	16,10	13,00	3,10
050.1-F-3-7	37,3	27,6	153	17980	63	22	43	28	64	42,5	210	16,10	13,00	3,10
063.1-E-3-7	44,9	32,3	172	27790	57	27	52	35	64	47,7	329	22,20	18,60	3,60
063.1-F-3-7	54,0	39,4	230	26705	57	26	50	2x28	2x64	63,6	367	28,40	24,80	3,60
020.1-C-4-7	4,4	3,3	18	2980	51	7	-	16	22	5,1	37	2,40	1,40	1,00
031.1-C-4-7	8,2	5,8	29	7005	54	11	20	16	28	8,3	59	5,15	4,00	1,15
031.1-E-4-7	11,4	8,4	44	6440	54	10	19	16	35	12,4	69	5,15	4,00	1,15
040.1-C-4-7	16,1	11,8	52	13375	59	16	31	22	42	14,5	99	9,15	7,50	1,65
040.1-E-4-7	19,5	15,7	78	12575	59	15	29	22	42	21,7	117	9,15	7,50	1,65
045.1-E-4-7	32,8	23,5	119	21475	62	22	44	28	64	33,0	209	16,20	12,40	3,80
045.1-F-4-7	39,9	28,9	159	20745	62	22	42	28	64	44,0	235	19,30	15,50	3,80
050.1-E-4-7	38,6	27,3	153	24645	64	24	45	28	64	42,3	239	21,25	17,25	4,00
050.1-F-4-7	47,1	33,7	204	23970	64	23	44	35	64	56,4	274	21,25	17,25	4,00
063.1-E-4-7	54,1	46,9	230	37050	58	29	54	2x22	2x64	63,3	428	29,40	24,60	4,80
063.1-F-4-7	66,1	45,6	306	35610	58	27	52	2x28	2x64	84,4	478	37,60	32,80	4,80

尺寸
Dimensions

	电加热供电 power supply el. defrost	外形尺寸 dimensions L	B	H	L1	B1	W	排水管 drain	吊钩数量 number of suspensions
		mm	mm	mm	mm	mm	mm	mm Ø	St./U
020.1-B-1-_	1 x 1~ 16 A	650	380	410	350	325	300	3/4	4
031.1-B-1-_	1 x 1~ 16 A	780	500	490	460	390	300	3/4	4
031.1-C-1-_	1 x 1~ 16 A	780	500	490	460	390	300	3/4	4
040.1-B/C-1-_	1 x 1~ 16 A	1030	530	580	680	400	400	1 1/4	4
040.1-C/E-1-_	1 x 1~ 16 A	1030	530	580	680	400	400	1 1/4	4
045.1-C/E-1-_	1 x 3~ 16 A	1270	670	660	890	535	500	1 1/4	4
045.1-E/F-1-_	1 x 3~ 16 A	1270	670	660	890	535	500	1 1/4	4
050.1-C/E-1-_	1 x 3~ 16 A	1430	680	740	1000	535	500	1 1/4	4
050.1-E/F-1-_	1 x 3~ 16 A	1430	680	740	1000	535	500	1 1/4	4
063.1-C/E-1-_	1 x 3~ 16 A	1730	750	910	1200	540	650	1 1/4	4
063.1-E/F-1-_	1 x 3~ 25 A	1730	750	910	1200	540	650	1 1/4	4
020.1-B-2-_	1 x 1~ 16 A	1000	380	410	700	325	300	3/4	4
031.1-B-2-_	1 x 1~ 16 A	1240	500	490	920	390	300	3/4	4
031.1-C-2-_	1 x 1~ 16 A	1240	500	490	920	390	300	3/4	4
040.1-B/C-2-_	1 x 3~ 16 A	1710	530	580	1360	400	400	1 1/4	4
040.1-C/E-2-_	1 x 3~ 16 A	1710	530	580	1360	400	400	1 1/4	4
045.1-C/E-2-_	1 x 3~ 16 A	2160	670	660	890	535	500	1 1/4	6
045.1-E/F-2-_	1 x 3~ 25 A	2160	670	660	890	535	500	1 1/4	6
050.1-C/E-2-_	1 x 3~ 25 A	2430	680	740	1000	535	500	1 1/4	6
050.1-E/F-2-_	1 x 3~ 25 A	2430	680	740	1000	535	500	1 1/4	6
063.1-C/E-2-_	1 x 3~ 25 A	2930	750	910	1200	540	650	1 1/4	6
063.1-E/F-2-_	1 x 1~ 16 A	2930	750	910	1200	540	650	1 1/4	6
020.1-B/C-3-_	1 x 1~ 16 A	1350	380	410	1050	325	300	3/4	4
031.1-B-3-_	1 x 3~ 16 A	1700	500	490	1380	390	300	3/4	4
031.1-C/E-3-_	1 x 3~ 16 A	1700	500	490	1380	390	300	3/4	4
040.1-B/C-3-_	1 x 3~ 16 A	2390	530	580	2040	400	400	1 1/4	4
040.1-C/E-3-_	1 x 3~ 25 A	2390	530	580	2040	400	400	1 1/4	4
045.1-C/E-3-_	1 x 3~ 25 A	3050	670	660	890	535	500	1 1/4	8
045.1-E/F-3-_	1 x 1~ 16 A	3050	670	660	890	535	500	1 1/4	8
050.1-C/E-3-_	1 x 1~ 16 A	3430	680	740	1000	535	500	1 1/4	8
050.1-E/F-3-_	1 x 3~ 16 A	3430	680	740	1000	535	500	1 1/4	8
063.1-C/E-3-_	1 x 3~ 25 A	4130	750	910	1200	540	650	1 1/4	8
063.1-E/F-3-_	1 x 3~ 25 A	4130	750	910	1200	540	650	1 1/4	8
020.1-B/C-4-_	2 x 3~ 25 A	1700	380	410	700	325	300	3/4	6
031.1-B/C-4-_	2 x 3~ 25 A	2160	500	490	920	390	300	3/4	6
031.1-C/E-4-_	2 x 3~ 25 A	2160	500	490	920	390	300	3/4	6
040.1-B/C-4-_	2 x 3~ 25 A	3070	530	580	1360	400	400	1 1/4	6
040.1-C/E-4-_	2 x 3~ 16 A	3070	530	580	1360	400	400	1 1/4	6
045.1-C/E-4-_	2 x 3~ 25 A	3940	670	660	1780	535	500	1 1/4	6
045.1-E/F-4-_	2 x 3~ 25 A	3940	670	660	1780	535	500	1 1/4	6
050.1-C/E-4-_	2 x 3~ 25 A	4430	680	740	2000	535	500	1 1/4	6
050.1-E/F-4-_	3 x 3~ 25 A	4430	680	740	2000	535	500	1 1/4	6
063.1-C/E-4-_	3 x 3~ 25 A	5330	750	910	2400	540	650	1 1/4	6
063.1-E/F-4-_	3 x 3~ 25 A	5330	750	910	2400	540	650	1 1/4	6

风机参数
Nominal fan ratings

风机参数

t_R = 室温

Nominal fan ratings

t_R = room temperature

TEB	室温为20℃时的风机参数 t_R = 20 °C nominal fan rating at t_R = 20 °C			
	功率* capacity	电流 current	供电方式 type of motor current	声功率级 sound power level
	W	A		dB(A)
020	68	0,31	230 V 1 ~ 50 Hz	67
031	97	0,43		70
040	200	0,98		75
045	550	2,50		79
050	550	1,35	400 V 3 ~ 50 Hz	Δ 81
063	630	1,25		Δ 74

风机型号及配件

射流器**

射流器可以改善被风机吹动的空气的射流特性。
从而不需要额外的能耗就能够显著提高气流的射程。

风管连接件***

风管连接件或者纺织软管在操作车间以及储藏室提供无直接吹风制冷。
接管匹配设备的外壳材质以及喷涂颜色。在使用风管连接件时可以同时使用射流器来减缓纺织接管中的空气流动。此外需要注意的是，由此产生的压力损失会降低空气流量，蒸发功率也会因此而降低。

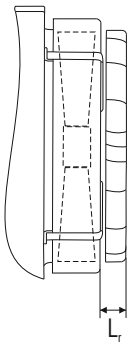
Fan types and accessoires

Streamer (air-throw unit)**

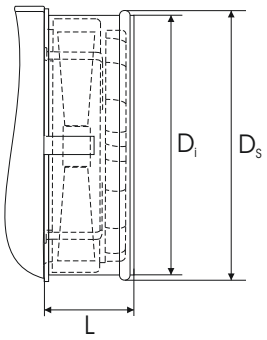
Streamers are used to improve the air-throw characteristics of the air moved by the fan.
Thereby an increase of the throwing range of the airflow is reached without any additional energy expenditure.

Air hose connection (textile hose connection)***

Air hoses offer a draught-free refrigeration in workspaces or storerooms.
The connections are adapted to the housing material and the colouring of the unit. Using air hose connections can be combined with using air streamers to slow down the airflow inside the textile hoses. It must be pointed out that the airflow drops through the emerging drop in pressure and the capacity of the evaporator decreases consequently.



风机额定直径 nominal fan diameter [mm]	射流器尺寸 dimensions [mm]			
	D_s	D_i	L_r	L
315	-	-	55	-
400	-	-	55	-
450	530	510	80	200
500	575	555	90	200
630	717	697	100	325



* 在较低的室温下，风机的耗电量会增加
** 可提供直径在315mm以上的风机
*** 可提供直径在450mm以上的风机

* The electrical power consumption of the fans increases at lower room temperatures.
** available for fan diameter of at least 315 mm.
*** available for fan diameter of at least 450 mm.

设备外壳：
外形尺寸为020，031，040，045以及050的设备外壳是由铝制成；外形尺寸为063的设备外壳是由镀锌钢板制成，并喷涂RAL9010粉末涂料。

换热器盘管：
管子排列方式为错排布置。管径为12mm的内螺纹铜管。翅片由纯铝制成且翅片距离为4mm或7mm。
制冷剂接管位于风方向右侧。为了避免氧化，换热器将在惰性气体中进行钎焊。
可选择替代方案：有环氧树脂涂层的铝制翅片

风机
(200 / 315 / 400 / 450 / 500 / 630)
使用了节能的风机类型，超过了欧盟ErP指令的要求（欧盟法规327/2011）。静音轴流风机配备了绝缘等级为F，防护等级为IP54的免维护的外转子马达。
该马达是根据EN60624-1标准，在接线盒上进行连接的（最大预熔丝：单相马达1*13A/三相马达1*3~13A）。允许的操作范围是从零下30℃至65℃。
吸风式风机。通过集成在马达绕组中的热接触对马达进行保护。根据不同的风机类型，马达的参数可能会有变动。请注意在空气温度低以及存在其它空气阻力的情况下，功率消耗的情况会有改变。我们保留使用来自不同生产厂家的风机的权利。相应的设备参数请参考设备铭牌。

融霜：
换热盘管中以及水盘中的电融霜是根据EN60204-1标准在接线盒上进行连接的。为了更好的热传导以及可替换性，加热电阻被放置在铝制的接管中。

水盘：
所有设备的水盘都是铝制的并且喷涂RAL9010粉末涂料。冷凝水排水管是由聚酰胺纤维制成的。接管是带螺纹的。为便于清洁，水盘是可打开的。

声压级：
根据DIN45635，第14部分的规定，声压在3米的距离内无反射。由于冷藏室的吸声能力很低，我们建议在不同的距离中稍微降低声压级来进行计算。给出的参数值仅供参考。实际的声压级必须根据现场的条件以及声功率进行计算。

配件：
-电加热融霜
-射流器
-风管连接件

Housing
The standard housing is made of aluminium (lines 020, 031, 040, 045, 050) or galvanized steel sheet (line 063) with powder coating in RAL 9010.

Heat exchanger coil
The tube system is staggered with inner-grooved copper tubes, Ø 12 mm. Fins are made of pure aluminium with a distance of 4 mm or 7 mm between the fins.
The refrigerant connection is located on the right side in air direction. To avoid oxidation the heat exchangers are generally brazed under inert gas.
Optional: Fins made of epoxy-coated aluminium.

Fans
(200 / 315 / 400 / 450 / 500 / 630)
The devices are equipped with energy-efficient fans which exceed the requirements of the Ecodesign Directive (EU regulation No 327/2011). The silent axial fans are equipped with maintenance-free external motors of insulation class F, protection class IP 54. These motors are wired ready for connection on a terminal box according to EN 60204-1 (maximum pre-fuse: single-phase motor 1 x 13 A / three-phase motor 1 x 3~ 13 A). The admissible operation conditions range from -30 °C to 65 °C.
Draw through air direction. The motor protection is performed via the thermo contacts integrated in the windings. Depending on the fan type, the motor data may vary. Please note that the power consumption will change at low air temperatures and other pressure drops. We reserve the right to use fans from different manufactures.
For the corresponding electrical data please refer to the type plate.

Defrosting
Electrical defrosting in heat exchanger coil and drip tray is wired ready for connection on a terminal box according to EN 60204-1. For a better heat transfer and replaceability the heating resistors are placed in contact tubes made of aluminium.

Drip tray
All drip trays are made of aluminium with a powder coating in RAL 9010.
The condensation drainage is made of polyamide.
The connection is threaded. The drip trays are tiltable for cleaning purposes.

Sound pressure levels
The sound pressure level is indicated at 3 m distance according to DIN 45635, part 14 without reflection. Since cold storages have only a very low absorbing capacity, we recommend anticipating a small decrease at other distances.
The indicated value is only a reference value.
The actual sound pressure level must be calculated on basis of the sound power level and taking prevailing conditions into account.

Accessories
- electrical defrost heating
- streamer (air-throw unit)
- air hose connection (textile hose connection)

thermofin® GmbH
Am Windrad 1
08468 Heinsdorfergrund
Germany
Geschäftsführer: Bernd Löffler

Tel.: +49(0)3765 / 38 00 - 0
Fax: +49(0)3765 / 38 00 - 80 38
e-mail: info@thermofin.de

www.thermofin.de

... so finden Sie uns:
- Autobahn A 72
- Ausfahrt Reichenbach
- Richtung Reichenbach, 500 m links

... how to find us:
- A72 motorway
- Exit Reichenbach
- Direction Reichenbach, 500 m left side