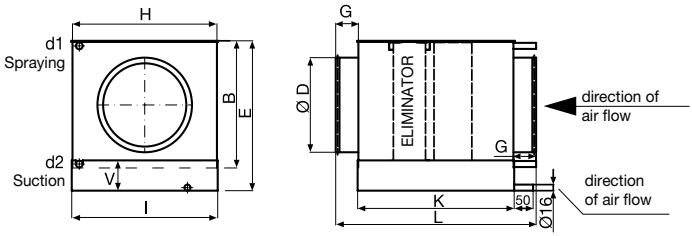
MKF – direct evaporators



Technical parameters

MKF – direct evaporator

- intended for circular pipes
- the cooler shell is made of galvanized sheet metal
- the tray for condensate draining is made of aluminum
- aluminum slats on copper tubes
- the connection is a collet transition with a thread that is not included in the delivery or by soldering (see table)
- designed for refrigerant R410a
- maximum working pressure is 40 bar

Installation and operation

- the recommended frontal air speed for MKF with an integrated droplet eliminator is up to 4 m/s, to calculate the air speed, the flow area of the evaporator is taken into account, higher speeds consult
- with the EDV technical department
- mounting exclusively in a horizontal position
- an air filter must be installed in front of the cooler (protection against pollution)
- we recommend placing the cooler behind the heater
- during assembly, it is necessary to remember to drain and fill the system and ensure access for service
- as part of the projection, the cooler must be designed with regard to the amount of condensate generated
- the condensate drain with the odor siphon must be checked for the possibility of drying out and ensure a sufficient height of the water column to overcome the pressure loss of the siphon
- to determine the minimum safe level difference in the siphon, you can roughly proceed by taking the total fan pressure Pt in mm of the water column, this value will be increased by approx. 50 % (the value thus obtained represents a practical recommended value for the height of the water column in the siphon, so that it cannot the odor barrier is overcome by overpressure blowing or suction by vacuum fan)

Type	Ø D [mm]	H [mm]	B [mm]	Ø d1/d2 [mm]	L [mm]	G [mm]	K [mm]	I [mm]	E [mm]	V [mm]	weight [kg]	Inner volume [dm³]
MKF 100	100	273	208	9.5/9.5	480	40	406	279	248	60	7.9	0.36
MKF 125	125	273	208	9.5/9.5	480	40	406	279	248	60	7.9	0.36
MKF 160	160	303	250	9.5/9.5	480	40	406	309	290	60	9.7	0.44
MKF 200	200	333	280	12/12	480	40	406	339	320	60	11.5	0.8
MKF 250	250	383	335	12/16	515	60	401	389	375	60	14.2	0.8
MKF 315	315	503	437	16/22	515	60	401	509	497	80	19.5	1.6
MKF 355	355	593	437	16/22	565	60	451	599	497	80	25.4	1.8
MKF 400	400	593	437	16/22	585	80	431	599	497	80	25.8	1.8
MKF 450	450	638	539	22/28	585	80	431	643	600	80	31.7	2.6
MKF 500	500	688	640	22/28	585	80	431	694	700	80	37.6	3.5

- passing air must not contain solid, fibrous, sticky and aggressive additives. It must also be free of chemical substances that cause corrosion of the materials used, i.e. destroy aluminum, copper and zinc
- based on consultation with the technical department, it is possible to offer a suitable source of cold

Notice

The cooler must be installed in the duct route with the air flow in the direction of the arrow on the cooler case. If the cooler is mounted upside down, the condensate is not led into the receiver and flows out of the cooler. For the reliable operation of the cooler, it is necessary to ensure protection against freezing, or regulation of performance (defrosting cycle). In the order, it is necessary to state the request for right or left version. Evaporators are produced in a reversible design.

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proposal and consultation tel.: 724 071 506

Evaporator MKF 100 a 125

Front speed [m/s]		1	2	3	4
Air amount [m³/h]		130	260	390	520
Pressure drop in the air [Pa]		19	46	89	150
RV 30%	Performance [kW]	1	1.5	1.9	2.3
(x = 0.009)	Output temperature [°C]	13.8	17.1	18.8	20.3
RV 40%	Performance [kW]	1.2	1.9	2.4	2.9
(x = 0.012)	Output temperature [°C]	14.2	17.6	19.5	20.8
RV 50%	Performance [kW]	1.4	2.3	2.9	3.5
(x = 0.015)	Output temperature [°C]	14.6	18	20	21.3
RV 60%	Performance [kW]	1.7	2.6	3.4	4
(x = 0.018)	Output temperature [°C]	14.9	18.4	20.4	21.7

Applies to Tinlet 32 °C, R410a, t_0 = 5 °C

Evaporator MKF 160

Front speed [m/s]		1	2	3	4
Air amount [m³/h]		175	350	520	690
Pressure drop in the air [Pa]		19	46	89	150
RV 30%	Performance [kW]	1.3	2	2.6	3
(x = 0.009)	Output temperature [°C]	14	17.3	19.1	20.4
RV 40%	Performance [kW]	1.6	2.5	3.2	3.8
(x = 0.012)	Output temperature [°C]	14.5	17.9	19.8	21
RV 50%	Performance [kW]	1.9	3	3.8	4.5
(x = 0.015)	Output temperature [°C]	14.9	18.3	20.2	21.5
RV 60%	Performance [kW]	2.2	3.5	4.4	5.2
(x = 0.018)	Output temperature [°C]	15.2	18.7	20.6	21.9

Applies to Tinlet 32 °C, R410a, t_0 = 5 °C

Evaporator MKF 200

Front speed [m/s]		1	2	3	4
Air amount [m³/h]		230	460	680	910
Pressure drop in the air [Pa]		19	46	89	150
RV 30%	Performance [kW]	1.6	2.5	3.2	3.8
(x = 0.009)	Output temperature [°C]	14.5	17.7	19.6	20.8
RV 40%	Performance [kW]	2	3.15	4	4.7
(x = 0.012)	Output temperature [°C]	15	18.4	20.3	21.4
RV 50%	Performance [kW]	2.4	3.8	4.7	5.6
(x = 0.015)	Output temperature [°C]	15.4	18.9	20.8	21.9
RV 60%	Performance [kW]	2.8	4.4	5.5	6.5
(x = 0.018)	Output temperature [°C]	15.8	19.3	21.2	22.4

Applies to Tinlet 32 °C, R410a, t_0 = 5 °C

Evaporator MKF 250

Front speed [m/s]		1	2	3	4
Air amount [m³/h]		330	660	1,000	1,330
Pressure drop in the air [Pa]		19	46	89	150
RV 30%	Performance [kW]	2.3	3.7	4.8	5.6
(x = 0.009)	Output temperature [°C]	14.4	17.7	19.5	20.8
RV 40%	Performance [kW]	2.9	4.6	6	7.1
(x = 0.012)	Output temperature [°C]	14.8	18.2	20.1	21.4
RV 50%	Performance [kW]	3.5	5.5	7.1	8.4
(x = 0.015)	Output temperature [°C]	15.2	18.6	20.6	21.8
RV 60%	Performance [kW]	4.1	6.4	8.2	9.7
(x = 0.018)	Output temperature [°C]	15.5	19	21	22.2

Applies to Tinlet 32 °C, R410a, t_0 = 5 °C

Evaporator MKF 315

Front speed [m/s]		1	2	3	4
Air amount [m³/h]		606	1,213	1,820	2,426
Pressure drop in the air [Pa]		19	46	89	150
RV 30%	Performance [kW]	4.3	6.8	8.7	10.4
(x = 0.009)	Output temperature [°C]	14.4	17.5	19.4	20.7
RV 40%	Performance [kW]	5.4	8.5	10.9	13
(x = 0.012)	Output temperature [°C]	14.8	18.1	20	21.3
RV 50%	Performance [kW]	6.5	10.2	13	15.5
(x = 0.015)	Output temperature [°C]	15.1	18.5	20.5	21.7
RV 60%	Performance [kW]	7.5	11.9	15	17.8
(x = 0.018)	Output temperature [°C]	15.5	18.9	20.9	22.1

Applies to Tinlet 32 °C, R410a, t_0 = 5 °C

Evaporatory MKF 355 a 400

Front speed [m/s]		1	2	3	4
Air amount [m³/h]		750	1,500	2,250	3,000
Pressure drop in the air [Pa]		19	46	89	150
RV 30%	Performance [kW]	5.4	8.6	11	13.1
(x = 0.009)	Output temperature [°C]	14.3	17.5	19.3	20.5
RV 40%	Performance [kW]	6.7	10.7	13.7	16.3
(x = 0.012)	Output temperature [°C]	14.6	18	19.9	21.1
RV 50%	Performance [kW]	8	12.8	16.3	19.4
(x = 0.015)	Output temperature [°C]	15	18.4	20.4	21.7
RV 60%	Performance [kW]	9.3	14.4	18.8	22.3
(x = 0.018)	Output temperature [°C]	15.3	18.8	20.8	22.1

Applies to Tinlet 32 °C, R410a, t_0 = 5 °C

Evaporator MKF 450

Front speed [m/s]		1	2	3	4
Air amount [m³/h]		1,000	2,000	3,000	4,000
Pressure drop in the air [Pa]		19	46	89	150
RV 30%	Performance [kW]	7.1	11.4	14.6	17.4
(x = 0.009)	Output temperature [°C]	14.2	17.4	19.4	20.4
RV 40%	Performance [kW]	8.9	14.3	18.3	21.8
(x = 0.012)	Output temperature [°C]	14.6	17.9	19.9	21.1
RV 50%	Performance [kW]	10.7	17.1	21.8	25.9
(x = 0.015)	Output temperature [°C]	15	18.4	20.3	21.6
RV 60%	Performance [kW]	12.5	19.8	25.2	29.8
(x = 0.018)	Output temperature [°C]	15.3	18.8	20.7	22

Applies to Tinlet 32 °C, R410a, t_0 = 5 °C

Evaporator MKF 500

Front speed [m/s]		1	2	3	4
Air amount [m³/h]		1,300	2,600	3,900	5,200
Pressure drop in the air [Pa]		19	46	89	150
RV 30%	Performance [kW]	9.2	14.7	18.9	22.5
(x = 0.009)	Output temperature [°C]	14.1	17.4	19.2	20.5
RV 40%	Performance [kW]	11.6	18.4	23.7	28.2
(x = 0.012)	Output temperature [°C]	14.6	18	19.9	21.1
RV 50%	Performance [kW]	13.9	22.1	28.3	33.5
(x = 0.015)	Output temperature [°C]	14.9	18.4	20.3	21.6
RV 60%	Performance [kW]	16.2	25.7	32.7	38.7
(x = 0.018)	Output temperature [°C]	15.3	18.8	20.7	22

Applies to Tinlet 32 °C, R410a, t_0 = 5 °C