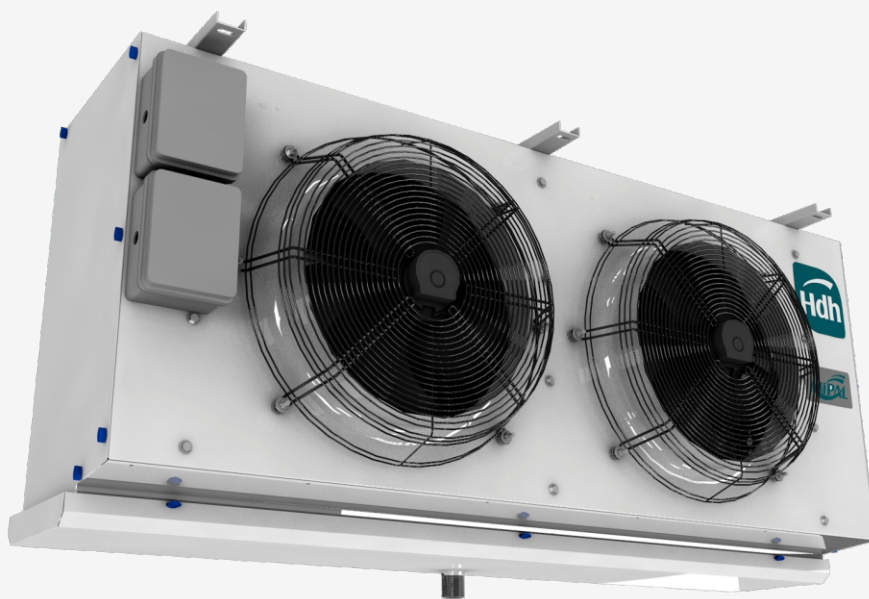
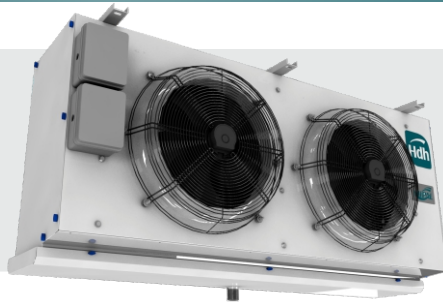




Mid-High Profile Unit Cooler



Mid-High profile unit cooler ideal for commercial and industrial cold rooms with ceiling height up to 8 meters. Ideal for pharmaceuticals, chemicals, petrochemical and food industry. Excellent performance, capacity, flow and air reach, all in compact dimension.



3.329 to 58.037 Kcal/h
3.871 to 67.485 W

INTENSE

Mid-High Profile Unit Cooler

For chambers up to 8m high

Benefits

- Standard Electronic Fans
- Standardized Electrical assembly(NBR5410)
- Greater range of capacities
- 2 levels of protection against harsh environments
- Built-in protection thermostat
- Plug & Play concept: ease of installation and operation
- Longer fan motor life
- Higher thermal and energy efficiency
- Adaptable to all refrigerants
- Quick response electrical defrost system
- Movable drain pan

Standard Version

- 5/8" copper tubes (external diameter)
- 4,5mm aluminum fins spacing (model A) and 8mm (model B)
- Flat plan aluminum outer plate
- Air defrost
- 450mm motor fan
- Safety thermostat

Optionals

- Copper tubes and aluminum fins (Cu/Al) for CO2
- Aluminum fins and tubes (Al/Al) with circuits for R717 (NH3) or glycol solutions
- Copper tubes and aluminum fins (Cu/Al) with circuits for cold water and glycol solutions
- External plate in electrostatic painting of the cabinet in white epoxy
- Anti-corrosion treatment for harsh environments
- Double drain pan with intermediate insulation
- Electric defrost
- Hot gas defrost
- Stainless steel external plating

Applications

- Hdh series evaporator are ideal for those who want an intermediate option between evaporators Hd and Evi.
- Ideal for pharmaceutical, chemical, petrochemical and food industries, offering excellent performance, capacity, flow and air reach, all in compact dimension.

Model A	Kcal/h									Watts								
	Evaporation Temperatures									Evaporation Temperatures								
	-31 °F -35 °C	-22 °F -30 °C	-13 °F -25 °C	-4 °F -20 °C	5 °F -15 °C	14 °F -10 °C	23 °F -5 °C	32 °F 0 °C	41 °F 5 °C	-31 °F -35 °C	-22 °F -30 °C	-13 °F -25 °C	-4 °F -20 °C	5 °F -15 °C	14 °F -10 °C	23 °F -5 °C	32 °F 0 °C	41 °F 5 °C
0072	3999	4515	4967	5483	5934	6450	6674	7095	7289	4650	5250	5775	6375	6900	7500	7761	8250	8475
0086	4700	5306	5837	6443	6974	7580	7844	8338	8565	5465	6170	6787	7492	8109	8814	9121	9695	9960
0097	5307	5992	6591	7276	7875	8560	8858	9416	9673	6171	6967	7664	8460	9157	9953	10300	10949	11247
0145	7998	9030	9933	10965	11868	12900	13349	14190	14577	9300	10500	11550	12750	13800	15000	15522	16500	16950
0171	9399	10612	11673	12886	13947	15160	15688	16676	17131	10929	12340	13573	14984	16218	17628	18241	19391	19920
0193	10614	11984	13182	14552	15750	17120	17716	18832	19346	12342	13935	15328	16921	18314	19907	20600	21898	22495
0217	11997	13545	14900	16448	17802	19350	20023	21285	21866	13950	15750	17325	19125	20700	22500	23283	24750	25425
0256	14099	15918	17510	19329	20921	22740	23531	25014	25696	16394	18509	20360	22476	24327	26442	27362	29086	29879
0290	15922	17976	19774	21828	23626	25680	26574	28248	29018	18513	20902	22993	25381	27472	29860	30900	32847	33742
0341	18798	21224	23346	25772	27894	30320	31375	33352	34262	21859	24679	27147	29967	32435	35256	36483	38781	39839
0386	21229	23968	26365	29104	31501	34240	35432	37664	38691	24685	27870	30657	33842	36629	39814	41199	43795	44990
0426	23498	26530	29183	32215	34868	37900	39219	41690	42827	27323	30849	33934	37459	40544	44070	45603	48477	49799
0483	26536	29960	32956	36380	39376	42800	44289	47080	48364	30856	34837	38321	42302	45786	49767	51499	54744	56237
0511	28198	31836	35020	38658	41842	45480	47063	50028	51392	32788	37019	40720	44951	48653	52884	54724	58172	59759
0579	31843	35952	39547	43656	47251	51360	53147	56496	58037	37027	41805	45985	50763	54943	59721	61799	65693	67485

Model B	Kcal/h									Watts								
	Evaporation Temperatures									Evaporation Temperatures								
	-31 °F -35 °C	-22 °F -30 °C	-13 °F -25 °C	-4 °F -20 °C	5 °F -15 °C	14 °F -10 °C	23 °F -5 °C	32 °F 0 °C	41 °F 5 °C	-31 °F -35 °C	-22 °F -30 °C	-13 °F -25 °C	-4 °F -20 °C	5 °F -15 °C	14 °F -10 °C	23 °F -5 °C	32 °F 0 °C	41 °F 5 °C
0062	3329	3759	4135	4565	4940	5370	5557	5907	6068	3871	4371	4808	5308	5745	6244	6461	6869	7056
0074	3962	4473	4920	5432	5879	6390	6612	7029	7221	4607	5201	5721	6316	6836	7430	7689	8173	8396
0085	4526	5110	5621	6205	6716	7300	7554	8030	8249	5263	5942	6536	7215	7809	8488	8784	9337	9592
0125	6659	7518	8270	9129	9881	10740	11114	11814	12136	7743	8742	9616	10615	11489	12488	12923	13737	14112
0149	7924	8946	9841	10863	11758	12780	13225	14058	14441	9213	10402	11443	12631	13672	14860	15378	16347	16792
0170	9052	10220	11242	12410	13432	14600	15108	16060	16498	10526	11884	13072	14430	15619	16977	17568	18674	19184
0187	9988	11277	12405	13694	14821	16110	16671	17721	18204	11614	13113	14424	15923	17234	18733	19384	20606	21168
0223	11885	13419	14761	16295	17636	19170	19837	21087	21662	13820	15603	17164	18947	20507	22291	23066	24520	25188
0255	13578	15330	16863	18615	20148	21900	22662	24090	24747	15788	17826	19608	21645	23428	25465	26351	28012	28776
0297	15847	17892	19681	21726	23515	25560	26449	28116	28883	18427	20805	22885	25263	27343	29721	30755	32693	33585
0340	18104	20440	22484	24820	26864	29200	30216	32120	32996	21051	23767	26144	28860	31237	33953	35135	37349	38367
0372	19809	22365	24602	27158	29394	31950	33062	35145	36104	23034	26006	28606	31578	34179	37151	38444	40866	41981
0424	22630	25550	28105	31025	33580	36500	37770	40150	41245	26314	29709	32680	36076	39047	42442	43919	46686	47959
0446	23771	26838	29522	32589	35273	38340	39674	42174	43324	27640	31207	34328	37894	41015	44581	46133	49040	50377
0509	27156	30660	33726	37230	40296	43800	45324	48180	49494	31577	35651	39216	43291	46856	50930	52703	56023	57551

Capacities (DT=10,8°F / DT1=6°K)

(*) The capacities above are for AC 60Hz and EC 50/60Hz motor fans. For AC 50Hz motor fans, multiply the values by 0,92. Capacities with R-22, for other refrigerants, NH3 or CO2, contact us.

DT1: Difference between the air inlet in the evaporator and the evaporation temperature of the refrigerant.

°K = Kelvin degrees
°F = Fahrenheit degrees

The air inlet temperature in evaporator must be considered the chamber temperature approximately.

Electric data

Hdh A		S	R	V	C	N	EC Motor Fan			AC Motor Fan						Electric Resistances				
		Model	m ²	m ² /m ²	dm ³	Refr. Kg	dB (A) (1m)	1~ 220V			3~ 230V/400V		3~ 230V		3~ 400V		W	3~ 230V		3~ 400V
								Flow rate	W	A	Flow rate	W	A	A	A	A		A		
								m ³ / h	50/60Hz	m ³ / h	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz		50Hz	60Hz	
0072	1	45,51	22,28	7,76	1,55	63	1 x 5720	345	2,20	1 x 5500	430	580	1,40	1,73	0,81	1,00	5x1200	20,40d	10,90d	
0086	1	56,89	22,28	9,70	1,94	64	1 x 5670	345	2,20	1 x 5450	430	580	1,40	1,73	0,81	1,00	6x1200	18,90	11,00	
0097	1	68,27	22,28	11,64	2,33	65	1 x 5620	345	2,20	1 x 5400	430	580	1,40	1,73	0,81	1,00	8x1200	29,80d	16,40d	
0145	2	91,02	22,28	15,52	3,10	66	2 x 5720	690	4,40	2 x 5500	860	1160	2,80	3,46	1,62	2,00	8x1600	39,80d	21,90d	
0171	2	113,78	22,28	19,40	3,88	67	2 x 5670	690	4,40	2 x 5450	860	1160	2,80	3,46	1,62	2,00	9x1600	37,80	21,90	
0193	2	136,53	22,28	23,28	4,66	68	2 x 5620	690	4,40	2 x 5400	860	1160	2,80	3,46	1,62	2,00	12x1600	50,40	29,20	
0217	3	136,53	22,28	23,28	4,66	68	3 x 5720	1035	6,60	3 x 5500	1290	1740	4,20	5,19	2,43	3,00	8x2500	62,10d	34,20d	
0256	3	170,66	22,28	29,10	5,82	69	3 x 5670	1035	6,60	3 x 5450	1290	1740	4,20	5,19	2,43	3,00	9x2500	59,10	34,20	
0290	3	204,80	22,28	34,92	6,98	70	3 x 5620	1035	6,60	3 x 5400	1290	1740	4,20	5,19	2,43	3,00	12x2500	78,80	45,60	
0341	4	227,55	22,28	38,79	7,76	70	4 x 5670	1380	8,80	4 x 5450	1720	2320	5,60	6,92	3,24	4,00	9x3400	80,40	46,50	
0386	4	273,06	22,28	46,55	9,31	71	4 x 5620	1380	8,80	4 x 5400	1720	2320	5,60	6,92	3,24	4,00	12x3400	107,20	62,10	
0426	5	284,44	22,28	48,49	9,70	71	5 x 5670	1725	11,00	5 x 5450	2150	2900	7,00	8,65	4,05	5,00	12x3400	107,20	62,10	
0483	5	341,33	22,28	58,19	11,64	72	5 x 5620	1725	11,00	5 x 5400	2150	2900	7,00	8,65	4,05	5,00	12x3400	107,20	62,10	
0511	6	341,33	22,28	58,19	11,64	72	6 x 5670	2070	13,20	6 x 5450	2580	3480	8,40	10,38	4,86	6,00	12x3400	107,20	62,10	
0579	6	409,60	22,28	69,83	13,97	73	6 x 5620	2070	13,20	6 x 5400	2580	3480	8,40	10,38	4,86	6,00	12x3400	107,20	62,10	

Hdh B		S	R	V	C	N	EC Motor Fans			AC Motor Fans						Electric Resistances				
		Model	m ²	m ² /m ²	dm ³	Refr. Kg	dB (A) (1m)	1~ 220V			3~ 230V/400V		3~ 230V		3~ 400V		W	3~ 230V		3~ 400V
								Flow rate	W	A	Flow rate	W	A	A	A	A				
								m ³ / h	50/60Hz	m ³ / h	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz				
0062	1	26,46	12,53	7,76	1,55	63	1 x 5800	345	2,20	1 x 5600	430	580	1,40	1,73	0,81	1,00	3x1200	9,50	5,50	
0074	1	33,07	12,53	9,70	1,94	64	1 x 5750	345	2,20	1 x 5550	430	580	1,40	1,73	0,81	1,00	4x1200	14,90d	10,90d	
0085	1	39,68	12,53	11,64	2,33	65	1 x 5700	345	2,20	1 x 5500	430	580	1,40	1,73	0,81	1,00	5x1200	20,40d	10,90d	
0125	2	52,91	12,53	15,52	3,10	66	2 x 5800	690	4,40	2 x 5600	860	1160	2,80	3,46	1,62	2,00	5x1600	27,20d	14,60d	
0149	2	66,14	12,53	19,40	3,88	67	2 x 5750	690	4,40	2 x 5550	860	1160	2,80	3,46	1,62	2,00	6x1600	25,2	14,6	
0170	2	79,37	12,53	23,28	4,66	68	2 x 5700	690	4,40	2 x 5500	860	1160	2,80	3,46	1,62	2,00	8x1600	39,80d	21,90d	
0187	3	79,37	12,53	23,28	4,66	68	3 x 5800	1035	6,60	3 x 5600	1290	1740	4,20	5,19	2,43	3,00	5x2500	42,40d	22,80d	
0223	3	99,21	12,53	29,10	5,82	69	3 x 5750	1035	6,60	3 x 5550	1290	1740	4,20	5,19	2,43	3,00	6x2500	39,40	22,80	
0255	3	119,05	12,53	34,92	6,98	70	3 x 5700	1035	6,60	3 x 5500	1290	1740	4,20	5,19	2,43	3,00	8x2500	62,10d	34,20d	
0297	4	132,28	12,53	38,79	7,76	70	4 x 5750	1380	8,80	4 x 5550	1720	2320	5,60	6,92	3,24	4,00	6x3400	53,60	31,00	
0340	4	158,73	12,53	46,55	9,31	71	4 x 5700	1380	8,80	4 x 5500	1720	2320	5,60	6,92	3,24	4,00	8x3400	84,50d	46,50d	
0372	5	165,34	12,53	48,49	9,70	71	5 x 5750	1725	11,00	5 x 5550	2150	2900	7,00	8,65	4,05	5,00	9x3400	80,40	46,50	
0424	5	198,41	12,53	58,19	11,64	72	5 x 5700	1725	11,00	5 x 5500	2150	2900	7,00	8,65	4,05	5,00	9x3400	80,40	46,50	
0446	6	198,41	12,53	58,19	11,64	72	6 x 5750	2070	13,20	6 x 5550	2580	3480	8,40	10,38	4,86	6,00	9x3400	80,40	46,50	
0509	6	238,10	12,53	69,83	13,97	73	6 x 5700	2070	13,20	6 x 5500	2580	3480	8,40	10,38	4,86	6,00	12x3400	107,20	62,10	

Subtitles

S = Total heat exchange surface area R = Secondary heat exchange surface ratio/ primary heat exchange surface V = Internal volume C = approximate charge of refrigerant N = Noise level obtained in open field conditions at a distance by 1 meter (The actual noise level depends on factors such as: chamber construction, type of load and number of devices installed). m³/h = Air flow measured the density of 1,2 M³/Kg d = unbalanced consumption.

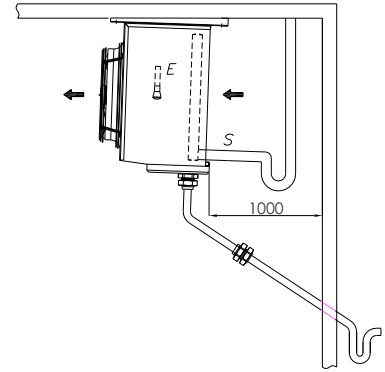
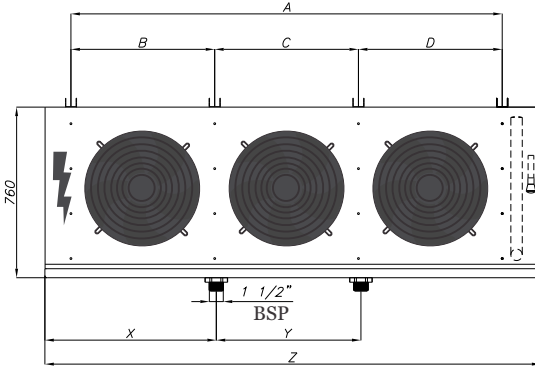
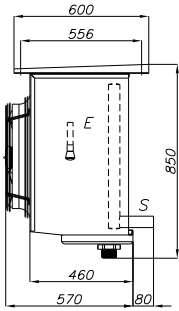
Air range by 21 m (Hdh A) and 24 m (Hdh B), with final speed of 0,25m/s.

The final speed of 0,25m/s is obtained in open field conditions. The air range can't be considered an absolutely value due to many factors that influence this distance.

We recommend the use of this model for cold rooms with ceiling height up to 10 meters.



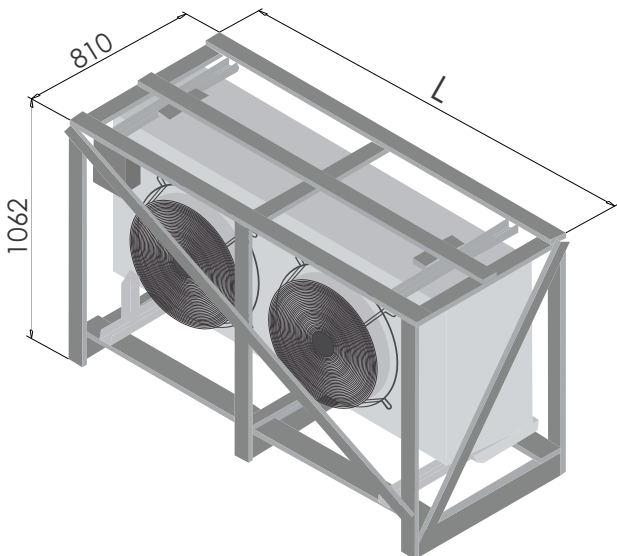
Dimensional



Hdh A	Hdh B	Fan	mm					Ø		mm		Weight HdhA		Weight HdhB	
			A	B	C	D	Z	E	S	X	Y	Net	Gross	Net	Gross
0072	0062	1	730	-	-	-	1048	1/2"	1 1/8"	524	-	45,2	54,4	38,7	46,4
0086	0074	1	730	-	-	-	1048	1/2"	1 1/8"	524	-	48,4	58,1	41,9	50,3
0097	0085	1	730	-	-	-	1048	1/2"	1 1/8"	524	-	51,6	61,9	45,1	54,1
0145	0125	2	1430	700	-	730	1748	1/2"	1 1/4"	868	-	90,3	108,4	77,3	92,8
0171	0149	2	1430	700	-	730	1748	5/8"	1 1/4"	868	-	96,7	116,0	83,7	100,4
0193	0170	2	1430	700	-	730	1748	5/8"	1 1/4"	868	-	103,2	123,8	90,2	108,2
0217	0187	3	2130	700	700	730	2448	5/8"	1 1/2"	1124	-	135,4	162,5	115,9	139,1
0256	0223	3	2130	700	700	730	2448	5/8"	1 1/2"	1124	-	145,1	174,1	125,6	150,7
0290	0255	3	2130	700	700	730	2448	5/8"	1 1/2"	1124	-	154,8	185,8	135,3	162,4
0341	0297	4	2830	700	700(2x)	730	3148	5/8"	2"	874	1400	193,5	232,2	167,5	201,0
0386	0340	4	2830	700	700(2x)	730	3148	7/8"	2"	874	1400	206,4	247,7	180,4	216,5
0426	0372	5	3530	700	700(3x)	730	3848	7/8"	2"	1124	1600	241,8	290,2	209,3	251,2
0483	0424	5	3530	700	700(3x)	730	3848	7/8"	2"	1124	1600	258,0	309,6	225,5	270,6
0511	0446	6	4230	700	700(4x)	730	4548	7/8"	2"	1274	2000	290,2	348,2	251,2	301,4
0579	0509	6	4230	700	700(4x)	730	4548	7/8"	2"	1274	2000	309,6	371,5	270,6	324,7

Connector resistant to temperature variations, vibration and shock. Spring-loaded technology reduces the time for electrical installations without the need for special tools.

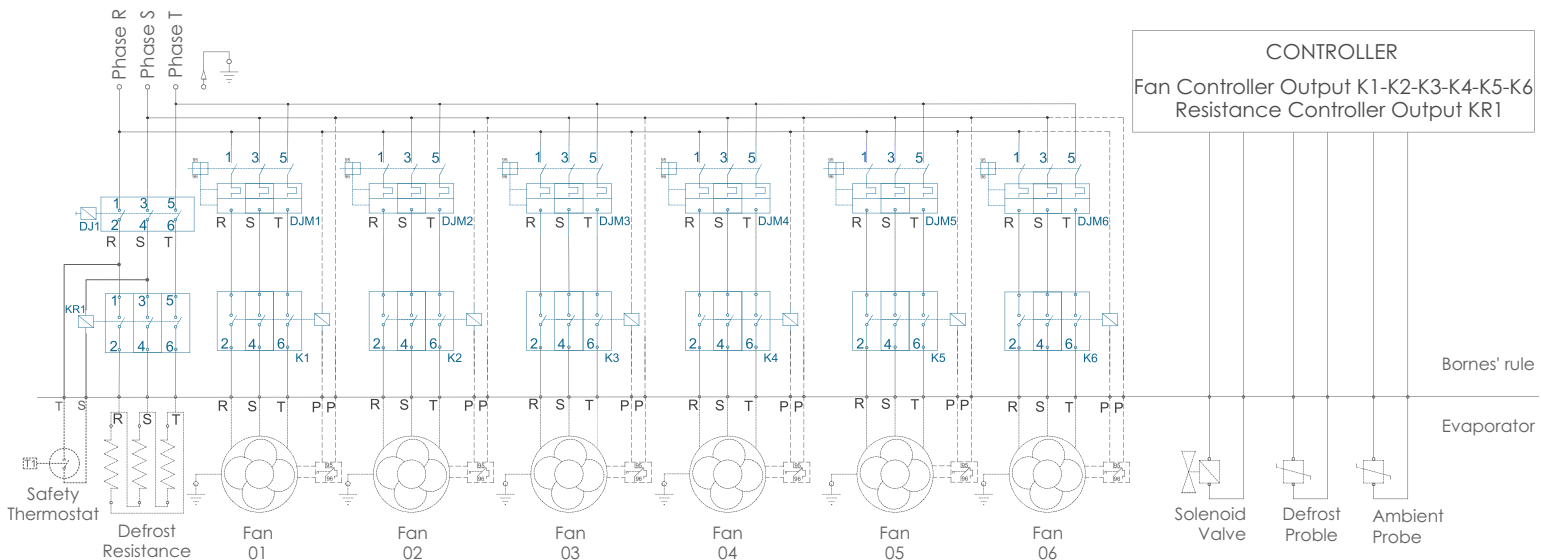
Packing



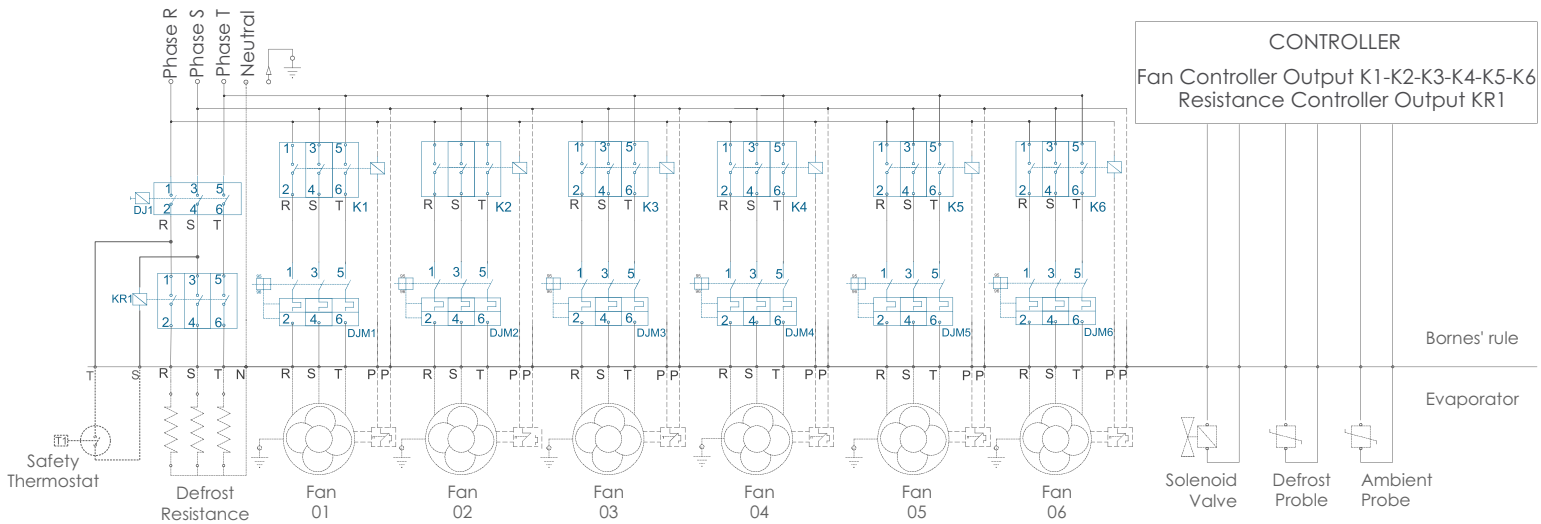
Hdh A	Hdh B	Fan	L	Gross Weight Kg	
				HdhA	HdhB
072	062	1	1160	54,4	46,4
086	074	1	1160	58,1	50,3
097	085	1	1160	61,9	54,1
145	125	2	1810	108,4	92,8
171	149	2	1810	116,0	100,4
193	170	2	1810	123,8	108,2
217	187	3	2540	162,5	139,1
256	223	3	2540	174,1	150,7
290	255	3	2540	185,8	162,4
341	297	4	3240	232,2	201,0
386	340	4	3240	247,7	216,5
426	372	5	3940	290,2	251,2
483	424	5	3940	309,6	270,6
511	446	6	4670	348,2	301,4
579	509	6	4670	371,5	324,7

Model	Description	Available Options
HDH	Medium-High Profile Air Forced Evaporator	HDH • Model Hdh
H	Spacing between fins	C • 4,5mm (model A) H • 8,0mm (model B)
E	Defrost	A • By Air E • Electric in the core and drain pan F • Air in the core and electric in the drain pan G • Gas in the core and drain pan H • Gas in the core and electric in the drain pan J • By water K • By water and electric in the drain pan L • By water, hot gas in the core and drain pan M • By water, hot gas in the core and electric in the drain pan N • By water and electric in the core and drain pan
0062	Model	HDH 0062 to 0579
C	Tubes	A • Aluminum B • Copper for Co2 C • Copper
A	Connection and Tray	A • Direct Expansion B • 2 Collectors C • 2 Collectors with Flanges D • 2 Collectors with Nipples E • 2 Collectors Screwed (Al) F • Direct Expansion and Double Isolated Drain Pan G • 2 Collectors and Double Isolated Drain Pan H • 2 Collectors with Flanges and Double Isolated Drain Pan I • 2 Collectors with Nipples and Double Isolated Drain Pan J • 2 Collectors Screwed (Al) and Double Isolated Drain Pan
00	Accessories	00 • Without accessories 10 • 1 + 2 + 3 01 • Expansion valve 11 • 1 + 2 02 • Solenoid valve 12 • 2 + 3 03 • Drain Resistance 13 • 1 + 3
A	Finishing	A • Aluminum Cabinet B • Aluminum cabinet and fins N1 protection C • Aluminum cabinet and fins N2 protection D • Aluminum cabinet protected E • Al. cabinet protected and fins N1 protection F • Al. cabinet protected and fins N1 protection G • Stainless steel cabinet H • Stainless steel cabinet and fins N1 protection I • Stainless steel cabinet and fins N1 protection
MEC	Motor	MAC • AC Motor Fan MEC • EC Motor Fan
G	Voltage and Frequency	G • Motor = 230V/1F/50Hz H • Motor = 230V/3F/50Hz E • Motor = 380V/3F/50Hz N • Motor = 230V/1F/50Hz Q • Motor = 230V/3F/60Hz V • Motor = 380V/3F/60Hz
1	Packing	1 • Crate 2 • Box

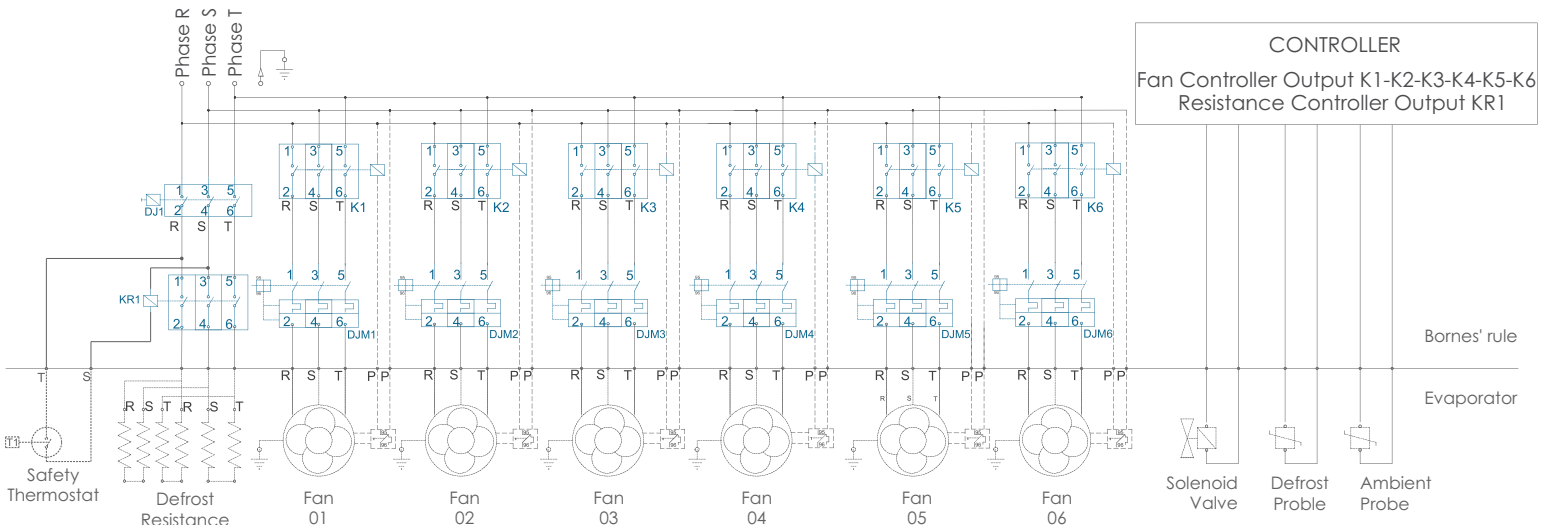
220V 50/60Hz 3Ø



380V 50/60Hz 3Ø



440V 50/60Hz 3Ø



Subtitles

Subtitles:

- R = Fase 1
- S = Fase 2
- T = Fase 3
- PP = Thermal Protector

- K1-K2-K3-K4 = Fans Contactor
- KR = Resistances Contactor
- DJ = Circuit Breaker
- DJM = Motor Circuit Breaker

Attention

- When dimensioning installation components, refer to the catalog data table
- In case of change factory power, contact Mipal engineering
- The safety thermostat must be connected in series with the contactor coil and the controller heating
- Always use the ground wire
- Connect the fan thermal protector in series with the contactor coil and drive the controller(PP)

Since 1956 Mipal are writing the history of refrigeration. With a complete line of condensers, evaporators and fins for the most varied commercial and industrial applications, stands out in the market by the high quality and efficiency in our products.

That's why it's growing in large scale it's presence in other countries.

This is the result of dedication for innovation and attention to our customers. That's why the Mipal brand it's too strong, becoming a synonym of technology and reliability.

INTENSE

Mipal developed the Intense system with electronic motor fans and the concept of intense thermal exchange, improving the efficiency in finned equipments. This represents one more innovation from Mipal, aligned with world trends for maximum performance and low energy consumption.