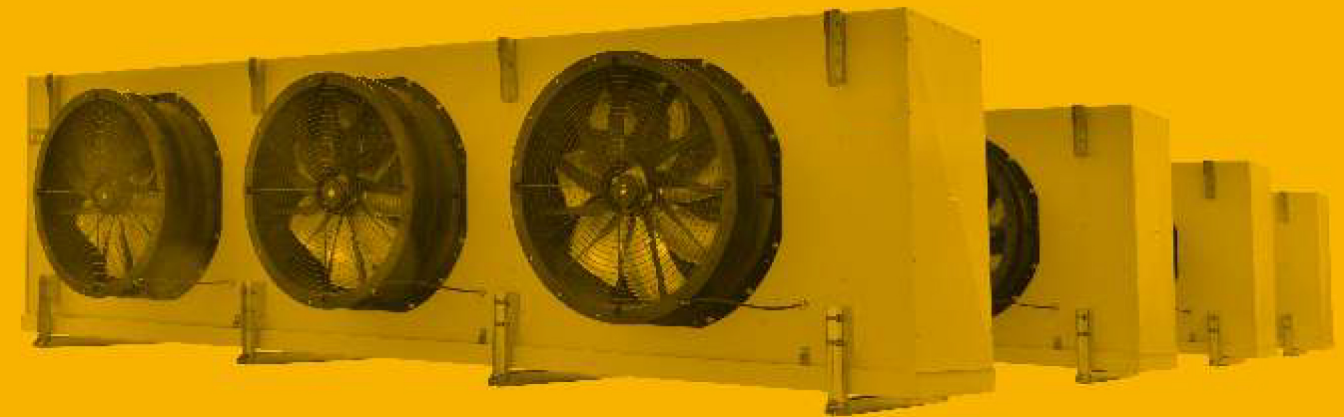


INDUSTRIAL UNIT COOLER

R404A R507 R22 R134A R407C
AMMONIA R744 EG PG ...



DUMPLINGS FISH SHRIMP CHICKEN STEAK

STANDARDIZATION

ADV

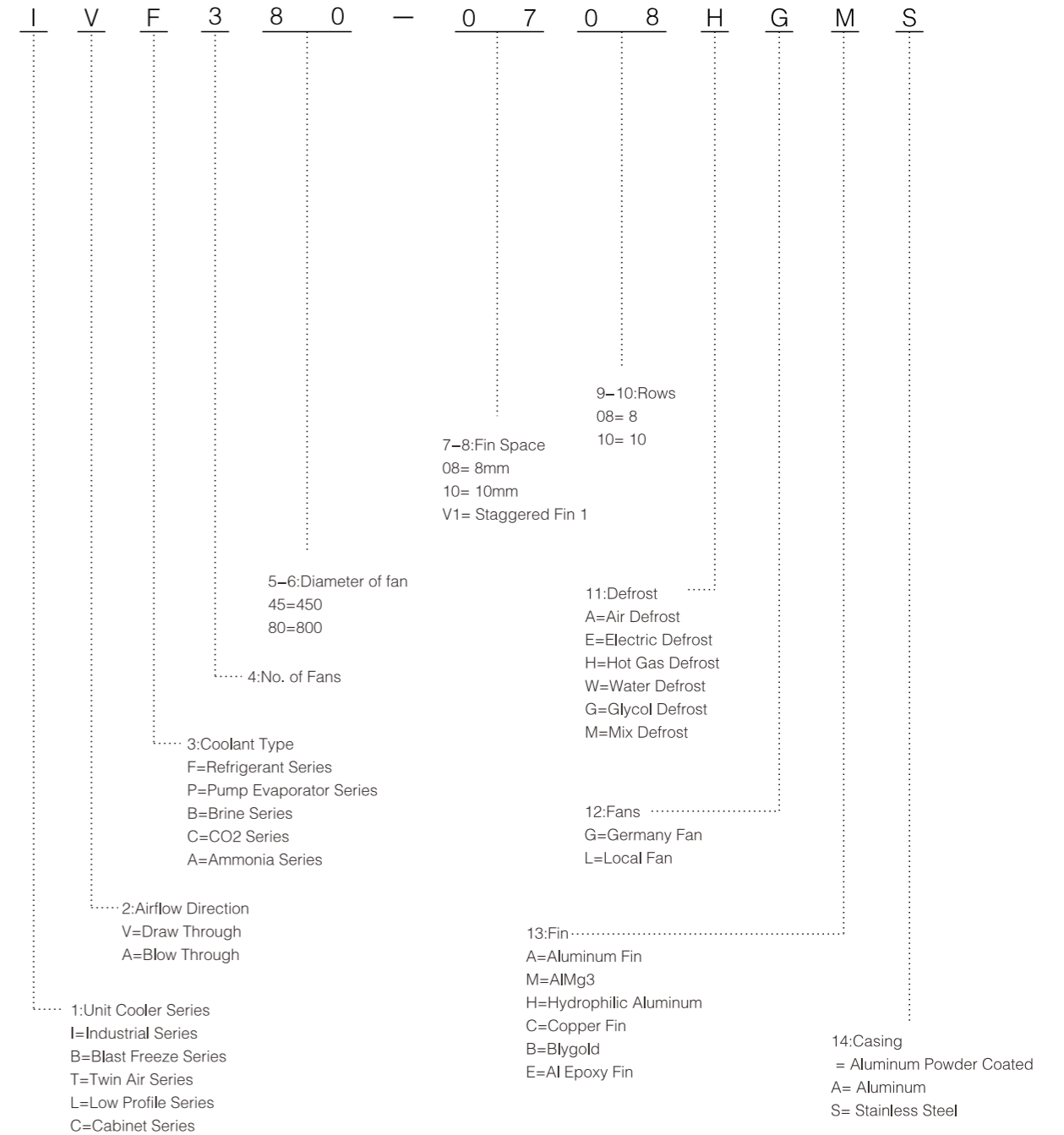
The Heat transfer innovators

The perfect combination of German fans and Italian design software

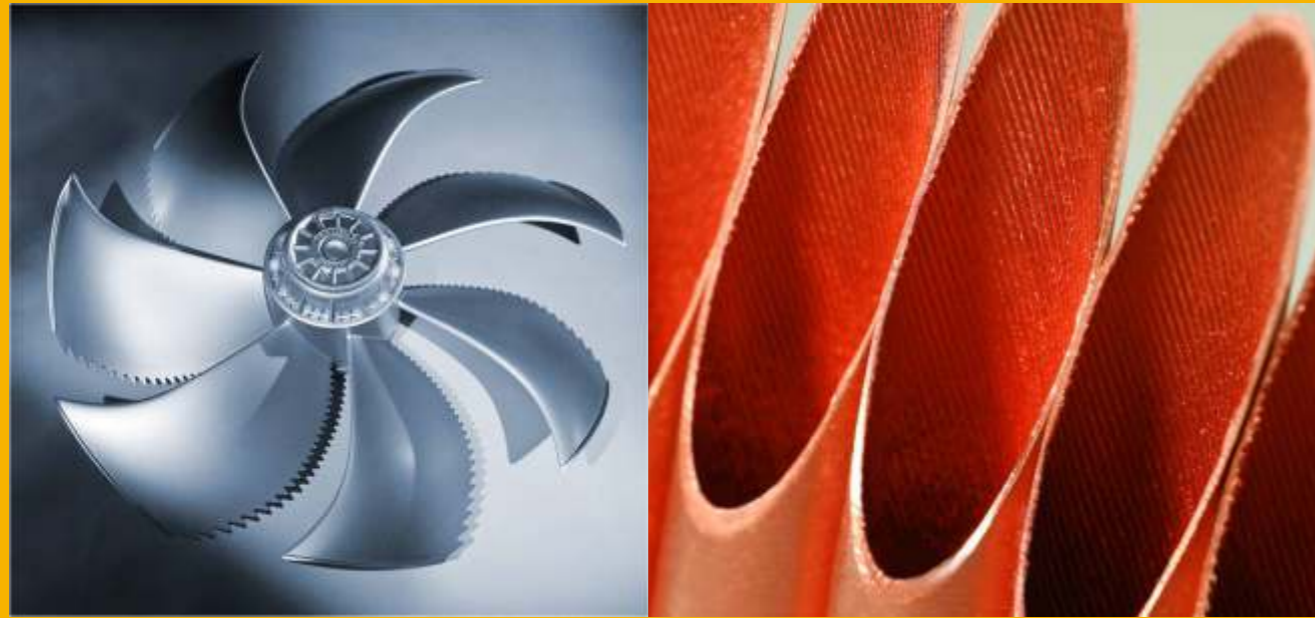
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Evaporator Nomenclature



Unit Cooler Specification and Configuration



Fan

Adopting high quality motor, reasonable gap with the wind vane , guide ring and hyperbolic designed ducting, achieve maximum efficiency of fan.

Copper Pipe

Efficient use of multiple tooth inner thread pipe,Rate of more than 99.9%, increasing of the innertube surface area and improving the efficiency of heat transfer.

The Pipeline Design

Heat exchanger is adopted directly back to the oil and counter current, to avoid accumulation of oil and make full use of heat exchanger area, improving the heat transfer efficiency and ensuring the superheat temperature of heat exchanger.

Casing

Using3003 aluminum alloy shell or DC51-D+180g, Powder coating For outdoor, and after high temperature curing, the material has high strength, and strong corrosion resistance, standard color is RAL7035.

The advantage of industrial unit cooler

Coil Design	Using the mature European design software, according to the actual demand accurate design of heat exchanger, can design the latest refrigerant CO2,R410A, R507A and special low temperature cold agent etc.
Shape	Shape with flexible and changeable, drawing, blowing. Forward air flow ,air flow up, air flow down, precision meet the actual needs of different occasions, the cold quantity to the location of the actual needs, improve efficiency.
Coil	Tube pattern aligned 50x50mm,special copper tubes OD15.88mm, Also use stainless tube. Aluminium Fin spacing4、7、10、12、14and16mm,Fin and copper interface is more sufficient, thermal resistance smaller, more efficient, can also provide copper fin, stainless steel fin and some variety of anti-corrosion treatment scheme
Casing	Sizes 400–450:AlMg3,powder coated,RAL7035,Fan 500–630–800 used galvanized steel powder coated RAL 7035.
Drip tray	AlMg3,powder coated RAL9010, For easy cleaning the drip tray can be folded down or removed.Perfect condensation water drain due to optimal drain design.Drain nozzle mounted at an angle below 45° .
Fans	Low noise axial fans,with maintenance free motors in protection class IP 54,Internal motor protection with thermo contacts。 With precise design, a leading solar or lunar halo forming mould processing, air volume is larger and more efficient, longer air throw.
Heater	The international famous brand, the material of heating tube of SUS304 stainless steel, surface heat load is less than 2.0 W/cm2, longer life

Fan Datas

Fan 400mm,135W-0.44A(400V/3Ph/50Hz)

Fan 450mm,D/Y:350W/220W-0.64A/0.35A(400V/3Ph/50Hz)

Fan 500mm,D/Y:770W/490W-1.7A/0.84A(400V/3Ph/50Hz)

Fan 630mm,D/Y:2700W/1750W-5.0A/3.0A(400V/3Ph/50Hz)

Fan 800mm,D/Y:1850W/1050W-3.8A/2.0A(400V/3Ph/50Hz)

Fan 910mm,D/Y:2020W/1390W-4.62A/2.6A(400V/3Ph/50Hz)

Sound Pressure level is stated at 3m distance.

IVF Series Industrial Unit Cooler Selection Data
(4mm Fin Spacing)

Model	Diameter of fan	No. of fans	Capacity R404A Tr=10°C/10k	Capacity R404A Tr=0°C/8k	Tube volume L	Exchange surface m ²	Air flow m ³ /h	Air throw m	noise pressure level dB(A) 3m	Coil Heater kW	Drain Pan Heater kW	Total kW
			kW	kW								
IVF140-0404	400	1	5.6	3.8	4.5	29	2660	10	52	1.64	1.1	2.74
IVF140-0406		1	7.0	4.4	6.8	43	2300	9	52	2.46	1.1	3.56
IVF240-0404		2	11.4	7.6	9.0	57	5320	11	54	2.78	1.68	4.46
IVF240-0406		2	14.4	9.6	13.5	86	4600	10	54	4.17	1.68	5.85
IVF340-0404		3	16.8	11.1	13.5	86	7980	12	55	3.94	2.11	6.05
IVF340-0406		3	21.5	14.3	20.3	129	6900	11	55	5.91	2.11	8.02
IVF440-0404		4	22.6	14.9	18.0	115	10640	13	56	5.08	2.5	7.58
IVF440-0406		4	28.8	19.5	27.0	172	9200	12	56	7.62	2.5	10.12
IVF145-0404	450	1	12.1	8.0	8.1	52	6088	15	56	2.2	1.39	3.59
IVF145-0406		1	15.4	10.5	12.2	77	5506	14	56	3.3	1.39	4.69
IVF245-0404		2	24.6	16.5	16.2	103	12156	17	58	5.91	2.26	8.17
IVF245-0406		2	31.3	21.3	24.3	155	11012	16	58	7.88	2.26	10.14
IVF345-0404		3	36.6	24.7	24.3	155	18224	18	59	6.95	3.08	10.03
IVF345-0406		3	47.2	32.1	36.5	232	16518	17	59	11.12	3.08	14.2
IVF445-0404		4	49.6	33.2	32.4	207	24312	20	60	9.1	3.94	13.04
IVF445-0406		4	62.1	42.1	48.7	310	22221	19	60	14.56	3.94	18.5
IVF150-0404	500	1	13.2	9.0	9.5	60	7423	19	57	3.3	2.78	6.08
IVF150-0406		1	17.5	11.9	14.2	90	6818	17	56	4.4	2.78	7.18
IVF250-0404		2	26.8	18.1	18.9	120	14846	21	59	5.91	4.52	10.43
IVF250-0406		2	38.3	25.5	28.4	181	13386	19	58	7.88	4.52	12.4
IVF350-0404		3	44.9	29.5	28.4	181	21977	22	60	8.34	6.16	14.5
IVF350-0406		3	56.8	38.4	40.5	271	20058	20	59	12.51	6.16	18.67
IVF450-0404		4	59.5	39.1	36.5	241	29303	23	61	10.92	7.88	18.8
IVF450-0406		4	77.0	51.3	56.8	361	26772	21	60	16.38	7.88	24.26
IVF163-0404	630	1	32.0	21.7	21.6	138	17773	32	70	6.95	3.36	10.31
IVF163-0406		1	43.0	29.2	32.4	207	16798	30	69	9.73	3.36	13.09
IVF263-0404		2	64.1	43.2	43.3	275	35562	35	72	12.7	5	17.7
IVF263-0406		2	85.3	58.4	64.9	413	33567	33	71	17.78	5	22.78
IVF363-0404		3	97.2	65.8	64.9	413	53320	38	73	18.2	7.88	26.08
IVF363-0406		3	130.0	87.4	97.3	620	47359	36	72	27.3	7.88	35.18
IVF463-0404		4	129.0	86.7	86.5	551	70214	39	74	24	102.56	126.56
IVF463-0406		4	171.6	117.5	129.8	826	65873	37	73	36	102.56	138.56
IVF180-0404	800	1	40.6	27.4	28.8	184	21715	34	68	8.4	3.94	12.34
IVF180-0406		1	53.5	36.7	43.3	275	19943	31	66	11.76	3.94	15.7
IVF280-0404		2	82.8	56.3	57.7	367	43388	37	70	16.8	7.28	24.08
IVF280-0406		2	108.5	74.3	86.5	551	39884	34	68	23.52	7.28	30.8
IVF380-0404		3	122.5	82.6	86.5	551	65145	39	71	24	10.16	34.16
IVF380-0406		3	162.2	111.4	129.8	826	59830	36	69	36	10.16	46.16

IVF Series Industrial Unit Cooler Selection Data
(7mm Fin Spacing)

Model	Diameter of fan	No. of fans	Capacity R404A Tr=0°C/8k	Capacity R404A Tr=-18°C/7k	Tube volume L	Exchange surface m ²	Air flow m ³ /h	Air throw m	noise pressure level dB(A) 3m	Coil Heater kW	Drain Pan Heater kW	Total kW
			kW	kW								
IVF140-0704	400	1	2.8	2.1	4.5	17	2840	11	54	1.64	1.1	2.74
IVF140-0706		1	4.1	3.1	6.8	25	2580	10	54	2.46	1.1	3.56
IVF240-0704		2	6.1	4.6	9.0	34	5680	12	56	2.78	1.68	4.46
IVF240-0706		2	8.3	6.3	13.5	51	5160	11	56	4.17	1.68	5.85
IVF340-0704		3	9.3	7.1	13.5	51	8520	13	57	3.94	2.11	6.05
IVF340-0706		3	12.5	9.5	20.3	76	7740	12	57	5.91	2.11	8.02
IVF440-0704		4	12.2	9.3	18.0	68	11360	14	58	5.08	2.5	7.58
IVF440-0706		4	16.7	12.6	27.0	102	10320	13	58	7.62	2.5	10.12
IVF145-0704	450	1	5.8	4.8	8.1	30	6538	15	59	2.2	1.39	3.59
IVF145-0706		1	8.5	6.6	12.2	46	6140	14	59	3.3	1.39	4.69
IVF245-0704		2	12.5	10.1	16.2	61	13076	17	61	5.91	2.26	8.17
IVF245-0706		2	17.3	13.5	24.3	91	12281	16	61	7.88	2.26	10.14
IVF345-0704		3	17.5	14.4	24.3	91	19614	18	62	6.95	3.08	10.03
IVF345-0706		3	26.0	20.4	36.5	137	18421	17	62	9.73	3.08	12.81
IVF445-0704		4	25.7	20.4	32.4	122	26152	20	63	9.1	3.94	13.04
IVF445-0706		4	35.1	27.7	48.7	183	24561	19	63	14.56	3.94	18.5
IVF150-0704	500	1	7.4	5.9	9.5	36	7847	20	60	3.3	2.78	6.08
IVF150-0706		1	10.1	7.9	14.2	53	7395	19	60	4.4	2.78	7.18
IVF250-0704		2	14.9	11.9	18.9	71	15694	22	62	5.91	4.52	10.43
IVF250-0706		2	20.4	15.9	28.4	107	14790	21	62	7.88	4.52	12.4
IVF350-0704		3	21.8	16.9	28.4	107	23541	23	63	8.34	6.16	14.5
IVF350-0706		3	30.2	23.6	42.6	160	22248	22	63	12.51	6.16	18.67
IVF450-0704		4	29.2	23.4	37.8	142	31458	24	64	10.92	7.88	18.8
IVF450-0706		4	39.8	31.6	54.1	213	29664	23	64	16.38	7.88	24.26
IVF163-0704	630	1	15.4	12.9	21.6	81	18485	33	71	6.95	3.36	10.31
IVF163-0706		1	22.6	17.6	32.4	122	17810	32	70	9.73	3.36	13.09
IVF263-0704		2	32.3	25.7	43.3	162	36970	36	73	12.7	5	17.7
IVF263-0706		2	45.2	35.8	64.9	244	35620	35	72	17.78	5	22.78
IVF363-0704		3	48.6	38.8	64.9	244	55454	39	74	18.2	7.88	26.08
IVF363-0706		3	68.0	53.9	97.3	366	53430	38	73	27.3	7.88	35.18
IVF463-0704		4	64.9	51.8	86.5	325	73939	40	75	24	102.56	126.56
IVF463-0706		4	90.8	72.1	129.8	487	71240	39	74	36	102.56	138.56
IVF180-0706	800	1	31.2	24.1	43.3	162	21673	34	69	11.76	3.94	15.7
IVF180-0708		1	37.3	29.5	57.7	217	20534	32	67	16.8	3.94	20.74
IVF280-0706		2	49.6	49.6	86.5	325	43346	37	71	23.52	7.28	30.8
IVF280-0708		2	74.9	59.4	115.3	433	41068	35	69	31.92	7.28	39.2
IVF380-0706		3	94.2	73.3	129.8	487	65019	39	77	36	10.16	46.16
IVF380-0708		3	111.7	88.1	173.0	650	61601	37	72	45.6	10.16	55.76

IVF Series Industrial Unit Cooler Selection Data
(10mm Fin Spacing)

Model	Diameter of fan	No. of fans	Capacity R404A Tr=-18°C/7k	Capacity R404A Tr=-25°C/6k	Tube volume	Exchange surface	Air flow	Air throw	noise pressure level	Coil Heater	Drain Pan Heater	Total
			kW	kW								
IVF140-1004	400	1	1.8	1.5	4.5	12	2890	11	55	1.64	1.10	2.74
IVF140-1006		1	2.7	2.2	6.8	18	2740	11	54	2.46	1.10	3.56
IVF240-1004		2	3.7	2.9	9.0	24	5780	12	57	2.78	1.68	4.46
IVF240-1006		2	5.5	4.5	13.5	37	5480	12	56	4.17	1.68	5.85
IVF340-1004		3	6.1	5.0	13.5	37	8670	13	58	3.94	2.11	6.05
IVF340-1006		3	8.4	6.8	20.3	55	8220	13	57	5.91	2.11	8.02
IVF440-1004		4	7.4	5.8	18.0	49	11560	14	59	5.08	2.50	7.58
IVF440-1006		4	10.8	8.7	27.0	73	10960	14	58	7.62	2.50	10.12
IVF145-1006	450	1	5.7	4.6	12.2	33	6390	16	60	3.30	1.39	4.69
IVF145-1008		1	6.6	5.5	16.2	44	6088	15	59	4.40	1.39	5.79
IVF245-1006		2	11.5	9.3	24.3	66	12780	18	62	7.88	2.26	10.14
IVF245-1008		2	13.6	10.9	32.4	88	12176	17	61	9.85	2.26	12.11
IVF345-1006		3	17.3	14.0	36.5	99	19170	19	63	11.12	3.08	14.20
IVF345-1008		3	21.0	17.1	48.7	132	18263	18	62	13.90	3.08	16.98
IVF445-1006		4	22.0	18.3	48.7	132	25560	21	64	14.56	3.94	18.50
IVF445-1008		4	27.4	22.0	64.9	176	24351	20	63	18.20	3.94	22.14
IVF150-1006	500	1	6.4	5.3	14.2	38	7687	19	61	4.40	2.78	7.18
IVF150-1008		1	7.7	6.1	18.9	51	7329	18	61	5.50	2.78	8.28
IVF250-1006		2	12.7	10.1	28.4	77	15347	21	63	7.88	4.52	12.40
IVF250-1008		2	16.2	13.0	37.8	103	14658	20	63	11.82	4.52	16.34
IVF350-1006		3	20.5	16.6	42.6	115	23020	22	64	12.51	6.16	18.67
IVF350-1008		3	24.9	20.6	56.8	154	21987	21	64	16.68	6.16	22.84
IVF450-1006		4	26.8	22.2	54.1	153	30693	23	65	16.38	7.88	24.26
IVF450-1008		4	32.6	26.1	75.7	205	29316	22	65	21.84	7.88	29.72
IVF163-1006	630	1	16.0	12.9	32.4	88	18177	33	70	9.73	3.36	13.09
IVF163-1008		1	19.7	16.0	43.3	117	17641	32	70	12.51	3.36	15.87
IVF263-1006		2	32.3	26.1	64.9	176	36354	36	72	17.78	5.00	22.78
IVF263-1008		2	39.7	32.2	86.5	235	35283	35	72	25.40	5.00	30.40
IVF363-1006		3	48.6	39.3	97.3	264	54530	39	73	27.30	7.88	35.18
IVF363-1008		3	59.7	48.5	129.8	352	52924	38	73	36.40	7.88	44.28
IVF463-1006		4	64.9	52.6	129.8	352	72472	40	74	36.00	102.56	138.56
IVF463-1008		4	79.7	64.8	173.0	469	70566	39	74	48.00	102.56	150.56
IVF180-1006	800	1	20.6	17.2	43.3	117	22474	35	70	11.76	3.94	15.70
IVF180-1008		1	25.1	20.8	57.7	156	21483	34	68	16.80	3.94	20.74
IVF280-1006		2	41.5	34.3	86.5	235	44949	38	72	23.52	7.28	30.80
IVF280-1008		2	50.3	41.8	115.3	313	42966	37	70	31.92	7.28	39.20
IVF380-1006		3	62.5	52.2	129.8	352	67423	40	77	36.00	10.16	46.16
IVF380-1008		3	76.9	63.8	173.0	469	64449	39	73	48.00	10.16	58.16

IVF Series Industrial Unit Cooler Selection Data
(12mm Fin Spacing)

Model	Diameter of fan	No. of fans	Capacity R404A Tr=-18°C/7k	Capacity R404A Tr=-34°C/6k	Tube volume	Exchange surface	Air flow	Air throw	noise pressure level	Coil Heater	Drain Pan Heater	Total
			kW	kW								
IVF140-1204	400	1	1.6	1.3	4.5	10	2920	11	55	1.64	1.10	2.74
IVF140-1206		1	2.5	1.9	6.8	16	2780	11	54	2.46	1.10	3.56
IVF240-1204		2	3.2	2.6	9.0	21	5840	12	57	2.78	1.68	4.46
IVF240-1206		2	5.1	4.2	13.5	31	5560	12	56	4.17	1.68	5.85
IVF340-1204		3	5.5	4.2	13.5	31	8760	13	58	5.91	2.11	8.02
IVF340-1206		3	7.6	5.9	20.3	47	8340	13	57	7.88	2.11	9.99
IVF440-1204		4	7.0	5.2	18.0	42	11680	14	59	7.62	2.50	10.12
IVF440-1206		4	9.8	7.4	27.0	62	11120	14	58	10.16	2.50	12.66
IVF145-1206	450	1	5.1	4.0	12.2	28	6357	16	60	4.40	1.39	5.79
IVF145-1208		1	6.1	4.9	16.2	37	6045	15	59	5.50	1.39	6.89
IVF245-1206		2	10.4	8.1	24.3	56	12714	18	62	7.88	2.26	10.14
IVF245-1208		2	12.3	9.9	32.4	75	12090	17	61	9.85	2.26	12.11
IVF345-1206		3	15.6	12.2	36.5	84	19072	19	63	11.12	3.08	14.20
IVF345-1208		3	19.2	15.1	48.7	112	18135	18	62	15.29	3.08	18.37
IVF445-1206		4	20.2	16.0	48.7	112	25429	21	64	16.38	3.94	20.32
IVF445-1208		4	24.7	19.8	64.9	150	24180	20	63	20.02	3.94	23.96
IVF150-1206	500	1	6.1	4.6	14.2	33	7802	19	61	4.40	2.78	7.18
IVF150-1208		1	6.9	5.6	18.9	44	7486	18	61	6.60	2.78	9.38
IVF250-1206		2	12.1	9.3	27.0	65	15604	21	63	9.85	4.52	14.37
IVF250-1208		2	15.1	11.8	36.5	87	14972	20	63	11.82	4.52	16.34
IVF350-1206		3	18.6	14.2	42.6	98	23406	22	64	13.90	6.16	20.06
IVF350-1208		3	23.1	17.9	56.8	131	22458	21	64	18.07	6.16	24.23
IVF450-1206		4	24.9	19.3	56.8	131	31208	23	65	18.20	7.88	26.08
IVF450-1208		4	30.7	24.0	74.3	174	29944	22	65	23.66	7.88	31.54
IVF163-1206	630	1	13.0	10.4	32.4	75	18338	33	70	9.73	3.36	13.09
IVF163-1208		1	17.9	14.1	43.3	100	17839	32	70	13.90	3.36	17.26
IVF163-1210		1	21.0	16.2	54.1	125	17378	31	69	16.68	3.36	20.04
IVF263-1206		2	28.9	22.7	64.9	150	36750	35	72	17.78	5.00	22.78
IVF263-1208		2	36.1	28.5	86.5	199	35767	34	72	20.32	5.00	25.32
IVF263-1210		2	41.8	33.3	108.1	249	34858	33	71	27.94	5.00	32.94
IVF363-1206		3	43.4	34.2	97.3	224	55014	36	73	27.30	7.88	35.18
IVF363-1208		3	54.0	41.8	129.8	299	53650	35	73	32.76	7.88	40.64
IVF363-1210	3	63.8	49.8	162.2	374	52132	34	72	30.94	7.88	38.82	
IVF463-1206	800	4	56.8	43.6	129.8	299	73499	37	74	31.20	102.56	133.76
IVF463-1208		4	71.6	55.3	173.0	399	71534	36	74	40.80	102.56	143.36
IVF463-1210		4	84.3	65.4	216.3	499	69715	35	73	50.40	102.56	152.96
IVF180-1206		1	17.9	14.6	43.3	100	22812	35	70	13.44	3.94	17.38
IVF180-1208		1	21.0	17.8	57.7	133	21926	34	68	18.48	3.94	22.42
IVF280-1206		2	34.2	28.8	86.5	199	45624	38	72	26.88	7.28	34.16
IVF280-1208		2	42.0	35.8	115.3	266	43852	37	70	35.28	7.28	42.56
IVF380-1206		3	53.9	44.3	129.8	299	68436	40	76	40.80	10.16	50.96
IVF380-1208	3	66.2	55.2	173.0	399	65778	39	73	52.80	10.16	62.96	

IVB Series Industrial Brine Unit Cooler Selection Data
(4mm Fin Spacing)

Model	Diameter of fan	No. of fans	Capacity Water	Fluid Flowrate	Capacity EG25%	Fluid Flowrate	Tube volume	Exchange surface	Air flow	Air throw	noise pressure level	Coil Heater	Drain Pan Heater	Total
			Tr=16°C Tin=4°C Tout=8°C	m³/h	Tr=0°C Tin=-10°C Tout=-7°C	m³/h	L	m²	m³/h	m	dB(A) 3m	kW	kW	kW
IVB140-0404	400	1	8.3	1.8	5.4	1.6	4.5	29	2660	10	52	1.64	1.1	2.74
IVB140-0406		1	9.0	1.9	6.3	1.9	6.8	43	2300	9	52	2.46	1.1	3.56
IVB240-0404		2	16.5	3.5	10.6	3.2	9.0	57	5320	11	54	2.78	1.68	4.46
IVB240-0406		2	17.8	4.1	12.4	3.8	13.5	86	4600	10	54	4.17	1.68	5.85
IVB340-0404		3	20.6	4.7	14.8	4.5	13.5	86	7980	12	55	3.94	2.11	6.05
IVB340-0406		3	32.3	6.9	25.4	5.8	20.3	129	6900	11	55	5.91	2.11	8.02
IVB440-0404		4	31.2	6.7	30.4	6.9	18.0	115	10640	13	56	5.08	2.5	7.58
IVB440-0406		4	41.5	8.9	38.6	8.8	27.0	172	9200	12	56	7.62	2.5	10.12
IVB145-0404	450	1	16.4	3.5	10.4	3.2	8.1	52	6088	15	56	2.2	1.39	3.59
IVB145-0406		1	21.2	4.5	12.8	3.9	12.2	77	5506	14	56	3.3	1.39	4.69
IVB245-0404		2	32.7	7.0	20.4	6.3	16.2	103	12156	17	58	5.91	2.26	8.17
IVB245-0406		2	44.3	9.5	27.0	8.3	24.3	155	11012	16	58	7.88	2.26	10.14
IVB345-0404		3	48.9	10.5	30.4	9.3	24.3	155	18224	18	59	6.95	3.08	10.03
IVB345-0406		3	63.2	13.5	37.5	11.5	36.5	232	16518	17	59	11.12	3.08	14.2
IVB445-0404		4	68.6	14.7	40.4	12.4	32.4	207	24312	20	60	9.1	3.94	13.04
IVB445-0406		4	88.9	19.0	59.6	18.2	48.7	310	22221	19	60	14.56	3.94	18.5
IVB150-0404	500	1	20.2	4.3	11.7	3.6	9.5	60	7423	19	57	3.3	2.78	6.08
IVB150-0406		1	26.3	5.6	17.2	5.3	14.2	90	6818	17	56	4.4	2.78	7.18
IVB250-0404		2	40.1	8.6	25.1	7.7	18.9	120	14846	21	59	5.91	4.52	10.43
IVB250-0406		2	50.5	10.8	30.3	9.3	28.4	181	13386	19	58	7.88	4.52	12.4
IVB350-0404		3	57.9	12.4	36.2	11.1	28.4	181	21977	22	60	8.34	6.16	14.5
IVB350-0406		3	75.5	16.2	55.5	17.0	40.5	271	20058	20	59	12.51	6.16	18.67
IVB450-0404		4	81.3	17.4	52.8	16.2	36.5	241	29303	23	61	10.92	7.88	18.8
IVB450-0406		4	105.7	22.6	71.0	21.7	56.8	361	26772	21	60	16.38	7.88	24.26
IVB163-0404	630	1	44.5	9.5	26.0	8.0	21.6	138	17773	32	70	6.95	3.36	10.31
IVB163-0406		1	59.4	12.7	32.5	10.0	32.4	207	16798	30	69	9.73	3.36	13.09
IVB263-0404		2	88.6	19.0	51.2	15.7	43.3	275	35562	35	72	12.7	5	17.7
IVB263-0406		2	127.4	27.3	63.2	19.4	64.9	413	33567	33	71	17.78	5	22.78
IVB363-0404		3	143.4	30.7	76.2	23.3	64.9	413	53320	38	73	18.2	7.88	26.08
IVB363-0406		3	184.4	39.5	105.1	32.2	97.3	620	47359	36	72	27.3	7.88	35.18
IVB463-0404		4	175.5	37.6	100.3	30.7	86.5	551	70214	39	74	24	10.16	34.16
IVB463-0406		4	251.6	53.9	151.7	46.5	129.8	826	65873	37	73	36	10.16	46.16
IVB180-0404	800	1	60.2	12.9	40.2	12.3	28.8	184	21715	34	68	8.4	3.94	12.34
IVB180-0406		1	78.3	16.8	51.0	15.6	43.3	275	19943	31	66	11.76	3.94	15.7
IVB280-0404		2	119.9	25.7	79.9	24.5	57.7	367	43388	37	70	16.8	7.28	24.08
IVB280-0406		2	156.2	33.4	101.3	31.0	86.5	551	39884	34	68	23.52	7.28	30.8
IVB380-0404		3	169.3	36.3	94.8	29.0	86.5	551	65145	39	71	24	10.16	34.16
IVB380-0406		3	238.3	51.0	159.6	48.9	129.8	826	59830	36	69	36	10.16	46.16

IVC Series Industrial Pump Unit Cooler Selection Data
(10mm Fin Spacing)

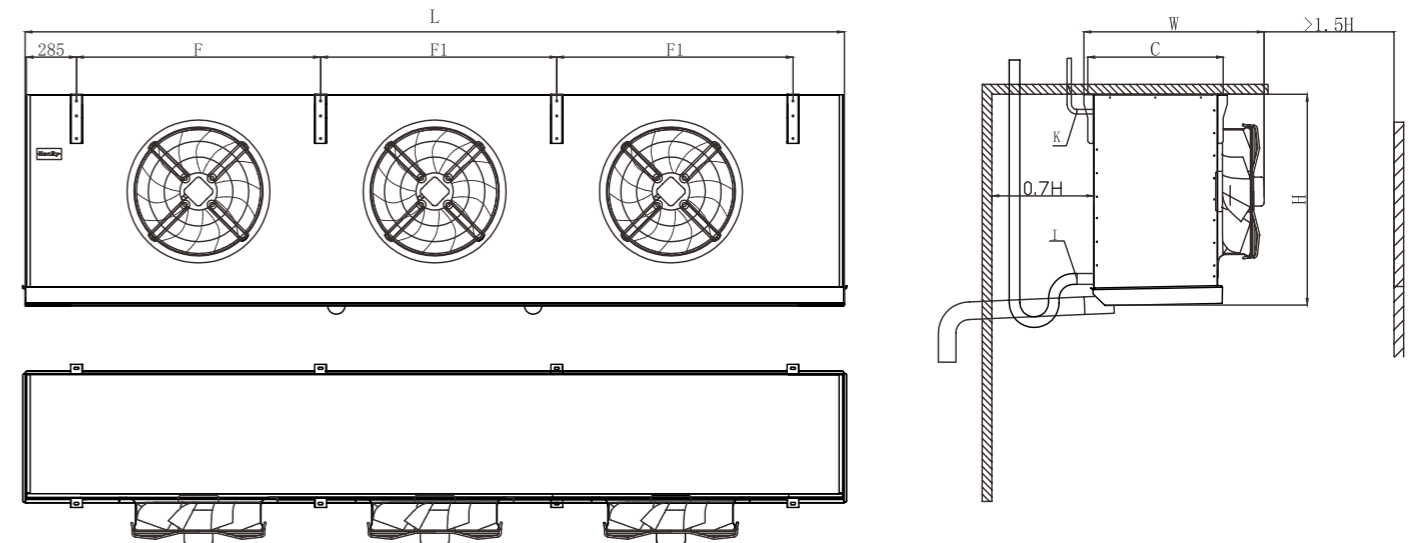
Only Stainless Tube

Model	Diameter of fan	No. of fans	Capacity R744	Capacity R744	Tube volume	Exchange surface	Air flow	Air throw	noise pressure level	Coil Heater	Drain Pan Heater	Total
			Tr=-18°C/7k	Tr=-25°C/6k	L	m²	m³/h	m	dB(A) 3m	kW	kW	kW
IVC140-1004	400	1	2.5	2.1	4.5	12	2890	11	55	1.64	1.10	2.74
IVC140-1006		1	3.5	2.9	6.8	18	2740	11	54	2.46	1.10	3.56
IVC240-1004		2	5.2	4.3	9.0	24	5780	12	57	2.78	1.68	4.46
IVC240-1006		2	7.1	5.8	13.5	37	5480	12	56	4.17	1.68	5.85
IVC340-1004		3	7.8	6.4	13.5	37	8670	13	58	3.94	2.11	6.05
IVC340-1006		3	10.7	8.8	20.3	55	8220	13	57	5.91	2.11	8.02
IVC440-1004		4	10.5	8.6	18.0	49	11560	14	59	5.08	2.50	7.58
IVC440-1006		4	14.3	11.7	27.0	73	10960	14	58	7.62	2.50	10.12
IVC145-1006	450	1	7.3	6.0	12.2	33	6390	16	60	3.30	1.39	4.69
IVC145-1008		1	9.0	7.4	16.2	44	6088	15	59	4.40	1.39	5.79
IVC245-1006		2	14.9	12.2	24.3	66	12780	18	62	7.88	2.26	10.14
IVC245-1008		2	18.0	14.9	32.4	88	12176	17	61	9.85	2.26	12.11
IVC345-1006		3	22.2	18.3	36.5	99	19170	19	63	11.12	3.08	14.20
IVC345-1008		3	27.9	22.9	48.7	132	18263	18	62	13.90	3.08	16.98
IVC445-1006		4	29.6	24.4	48.7	132	25560	21	64	14.56	3.94	18.50
IVC445-1008		4	36.0	29.6	64.9	176	24351	20	63	18.20	3.94	22.14
IVC150-1006	500	1	8.8	7.2	14.2	38	7687	19	61	4.40	2.78	7.18
IVC150-1008		1	10.4	8.5	18.9	51	7329	18	61	5.50	2.78	8.28
IVC250-1006		2	17.5	14.4	28.4	77	15347	21	63	7.88	4.52	12.40
IVC250-1008		2	21.4	17.6	37.8	103	14658	20	63	11.82	4.52	16.34
IVC350-1006		3	26.3	21.6	42.6	115	23020	22	64	12.51	6.16	18.67
IVC350-1008		3	32.0	26.3	56.8	154	21987	21	64	16.68	6.16	22.84
IVC450-1006		4	34.9	28.8	54.1	153	30693	23	65	16.38	7.88	24.26
IVC450-1008		4	42.6	35.2	75.7	205	29316	22	65	21.84	7.88	29.72
IVC163-1006	630	1	20.1	16.5	32.4	88	18177	33	70	9.73	3.36	13.09
IVC163-1008		1	24.7	20.2	43.3	117	17641	32	70	12.51	3.36	15.87
IVC263-1006		2	41.0	33.7	64.9	176	36354	36	72	17.78	5.00	22.78
IVC263-1008		2	50.4	41.4	86.5	235	35283	35	72	25.40	5.00	30.40
IVC363-1006		3	61.3	50.5	97.3	264	54530	39	73	27.30	7.88	35.18
IVC363-1008		3	76.9	63.3	129.8	352	52924	38	73	36.40	7.88	44.28
IVC463-1006		4	84.6	69.7	129.8	352	72472	40	74	36.00	10.16	46.16
IVC463-1008		4	104.2	85.9	173.0	469	70566	39	74	48.00	10.16	58.16
IVC180-1006	800	1	26.2	21.5	43.3	117	22474	35	70	11.76	3.94	15.70
IVC180-1008		1	31.9	26.2	57.7	156	21483	34	68	16.80	3.94	20.74
IVC280-1006		2	52.9	43.5	86.5	235	44949	38	72	23.52	7.28	30.80
IVC280-1008		2	64.3	52.9	115.3	313	42966	37	70	31.92	7.28	39.20
IVC380-1006		3	81.2	67.0	129.8	352	67423	40	77	36.00	10.16	46.16
IVC380-1008		3	98.6	81.3	173.0	469	64449	39	73	48.00	10.16	58.16

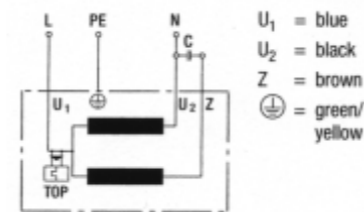
IVF Series Industrial Unit Cooler
Dimensional Figures

Model	number of fans	no. of fans	inlet I	outlet K	hotgae in/out	drain	dimensions in mm						weight
							waterspray defrost*dimension H+100						
							L	W	H	F	F1	C	
							mm						kg
IV 140-FP04	400	1	15.88	22.23	15.88	1-G1*	1420	745	550	850	800	610	43
IV 140-FP06		1	15.88	22.23	15.88	1-G1*	1420	745	550	850	800	610	58
IV 240-FP04		2	15.88	28.6	15.88	1-G1*	2220	745	550	850	800	610	76
IV 240-FP06		2	15.88	34.9	15.88	1-G1*	2220	745	550	850	800	610	103
IV 340-FP04		3	15.88	34.9	15.88	1-G1*	3020	745	550	850	800	610	106
IV 340-FP06		3	22.23	41.3	22.23	1-G1*	3020	745	550	850	800	610	145
IV 440-FP04		4	22.23	41.3	22.23	2-G1*	3820	745	550	850	800	610	148
IV 440-FP06		4	22.23	41.3	22.23	2-G1*	3820	745	550	850	800	610	179
IV 145-FP04	450	1	15.88	22.23	15.88	1-G1*	1520	775	650	950	900	640	55
IV 145-FP06		1	15.88	28.6	15.88	1-G1*	1520	775	650	950	900	640	67
IV 145-FP08		1	15.88	28.6	15.88	1-G1*	1520	875	650	950	900	740	76
IV 245-FP04		2	15.88	34.9	15.88	1-G1*	2420	795	650	950	900	660	97
IV 245-FP06		2	22.23	41.3	15.88	1-G1*	2420	795	650	950	900	660	122
IV 245-FP08		2	22.23	41.3	22.23	1-G1*	2420	895	650	950	900	760	138
IV 345-FP04		3	22.23	41.3	22.23	2-G1*	3320	775	650	950	900	640	136
IV 345-FP06		3	22.23	41.3	22.23	2-G1*	3320	775	650	950	900	640	172
IV 345-FP08		3	22.23	41.3	22.23	2-G1*	3320	875	650	950	900	740	195
IV 445-FP04		4	22.23	41.3	22.23	3-G1*	4220	775	650	950	900	640	184
IV 445-FP06		4	22.23	54	22.23	3-G1*	4220	775	650	950	900	640	232
IV 445-FP08		4	28.6	54	22.23	3-G1*	4220	875	650	950	900	740	262
IV 150-FP04	500	1	15.88	28.6	15.88	1-G1*	1620	790	650	1050	1000	660	73
IV 150-FP06		1	15.88	34.9	15.88	1-G1*	1620	790	650	1050	1000	660	83
IV 150-FP08		1	22.23	34.9	15.88	1-G1*	1620	890	650	1050	1000	760	96
IV 250-FP04		2	22.23	41.3	22.23	1-G1*	2620	790	650	1050	1000	660	97
IV 250-FP06		2	28.6	54	22.23	1-G1*	2620	790	650	1050	1000	660	122
IV 250-FP08		2	28.6	54	22.23	1-G1*	2620	890	650	1050	1000	760	139
IV 350-FP04		3	28.6	54	22.23	2-G1*	3620	790	650	1050	1000	660	185
IV 350-FP06		3	28.6	54	22.23	2-G1*	3620	790	650	1050	1000	660	219
IV 350-FP08		3	28.6	54	22.23	2-G1*	3620	890	650	1050	1000	760	254
IV 450-FP04		4	28.6	54	22.23	3-G1*	4620	790	650	1050	1000	660	251
IV 450-FP06		4	28.6	64	22.23	3-G1*	4620	790	650	1050	1000	660	306
IV 450-FP08		4	34.9	64	28.6	3-G1*	4620	890	650	1050	1000	760	354
IV 163-FP04	630	1	22.23	41.3	22.23	1-G1*	1820	960	1080	1250	1200	700	177
IV 163-FP06		1	28.6	54	22.23	1-G1*	1820	960	1080	1250	1200	700	220
IV 163-FP08		1	28.6	54	22.23	1-G1*	1820	1060	1080	1250	1200	800	235
IV 163-FP10		1	28.6	67	22.23	1-G1*	1820	1160	1080	1250	1200	900	262
IV 263-FP04		2	28.6	67	22.23	2-G1*	3020	960	1080	1250	1200	700	316
IV 263-FP06		2	28.6	67	22.23	2-G1*	3020	960	1080	1250	1200	700	346
IV 263-FP08		2	28.6	67	22.23	2-G1*	3020	1060	1080	1250	1200	800	387
IV 263-FP10		2	34.9	76	34.9	2-G1*	3020	1160	1080	1250	1200	900	426
IV 363-FP04		3	34.9	76	34.9	3-G1*	4220	960	1080	1250	1200	700	436
IV 363-FP06		3	41.3	76	34.9	3-G1*	4220	960	1080	1250	1200	700	518
IV 363-FP08		3	41.3	76	34.9	3-G1*	4220	1060	1080	1250	1200	800	580
IV 363-FP10		3	41.3	76	34.9	3-G1*	4220	1160	1080	1250	1200	900	647
IV 463-FP04	4	34.9	76	34.9	4-G1*	5420	960	1080	1250	1200	700	611	
IV 463-FP06	4	41.3	76	34.9	4-G1*	5420	960	1080	1250	1200	700	671	
IV 463-FP08	4	41.3	76	34.9	4-G1*	5420	1060	1080	1250	1200	800	753	
IV 463-FP10	4	41.3	76	34.9	4-G1*	5420	1160	1080	1250	1200	900	831	
IV 180-FP04	800	1	22.23	54	22.23	1-G2*	2020	1038	1280	1450	1400	720	254
IV 180-FP06		1	28.6	54	22.23	1-G2*	2020	1038	1280	1450	1400	720	278
IV 180-FP08		1	28.6	54	22.23	1-G2*	2020	1138	1280	1450	1400	820	314
IV 280-FP04		2	28.6	67	22.23	1-G2*	3420	1038	1280	1450	1400	720	424
IV 280-FP06		2	28.6	76	28.6	1-G2*	3420	1038	1280	1450	1400	720	582
IV 280-FP08		2	34.9	76	34.9	1-G2*	3420	1138	1280	1450	1400	820	637
IV 380-FP04		3	34.9	76	34.9	2-G2*	4820	1038	1280	1450	1400	720	596
IV 380-FP06		3	41.3	76	34.9	2-G2*	4820	1038	1280	1450	1400	720	712
IV 380-FP08		3	41.3	76	34.9	2-G2*	4820	1138	1280	1450	1400	820	836

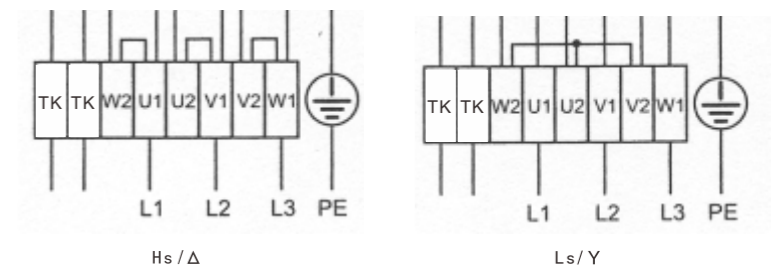
Outline drawing



Single Phase Fan Wiring



Three Phase Fan Wiring



Selection Correction Factors													
Refrigerant correction factors													
Refrigerant	R404A	R507	R22	R134a	R407C								
Factor(F1)	1.0	1.0	0.94	0.89	0.98								
Fin correction factors													
Fin Material	AL	AL Hydrophilic	AL Epoxy	Cu	Iron	Stainless Steel							
Factor(F2)	1.0	0.97	0.92	1.03	0.75	0.48							
Correction factors for SC1													
SST°C	-14	-12	-10	-8	-6	-4	-2	0	2	4	6	8	12
(F5)Correction factor	0.75	0.77	0.79	0.85	1.02	0.87	0.94	1.00	1.04	1.09	1.15	1.21	1.25
Max. KTD	8	8	9	10	10	10	10	10	10	10	10	10	10
Min.KTD	4	4	4	4	4	4	4	5	5	5	5	6	6
Correction factors for SC2													
SST°C	-14	-12	-10	-8	-6	-4	-2	0	2	4	6	8	12
(F5)Correction factor	0.88	0.90	0.92	1.00	1.02	1.06	1.10	1.17	1.22	1.27	1.35	1.41	1.46
Max. KTD	8	8	9	10	10	10	10	10	10	10	10	10	10
Min.KTD	4	4	4	4	4	4	4	5	5	5	5	6	6
Correction factors for SC3													
SST°C	-40	-36	-30	-25	-20	-15	-12	-8	-4				
(F5)Correction factor	0.75	0.82	0.91	1.00	1.09	1.18	1.26	1.36	1.46				
Max. KTD	8	8	10	10	10	10	11	12	12				
Min.KTD	4	4	4	4	4	4	4	4	4				

Selection Correction Factors										
Correction factors for SC4										
SST°C	-47	-44	-40	-36	-31	-25	-20	-15	-12	
(F5)Correction factor	0.68	0.75	0.82	0.91	1.00	1.09	1.17	1.26	1.38	
Max. KTD	6	8	8	8	10	10	10	10	11	
Min.KTD	4	4	4	4	4	4	4	4	4	
Correction factors for SC5										
SST°C	-55	-52	-50	-47	-44	-40	-36	-31	-25	-20
(F5)Correction factor	0.69	0.75	0.81	0.87	0.93	1.00	1.10	1.21	1.28	1.40
Max. KTD	6	6	6	7	8	8	8	10	10	10
Min.KTD	4	4	4	4	4	4	4	4	4	4

Air Cooler Selection Example

Known:

Capacity-----Q=25kW
 Inlet air temperature-----T1=-20°C
 Evaporating temperature-----Te=-28°C(near- by SC3)
 Refrigerant-----R22

Calculation:

Actual temperature difference -----TD1=T1-Te=8KTD
 Evaporating temperature factor -----0.95
 Refrigerant factor -----0.94
 Standard temperature difference -----TD=7KTD

Q=Qn ÷ factors ÷ actual TD1 × standard TD
 =25 ÷ 0.95 ÷ 0.94 ÷ 8 × 7
 Accordingly we choose Industrial Unit Cooler: IVF350-1008=24.9kW or IVF263-0706=25.7kW.