

## 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

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
(F5)Correction factor	0.69	0.75	0.81	0.87	0.93	1.00	1.10	1.21	1.28
Max. KTD	6	6	6	7	8	8	8	10	10
Min.KTD	4	4	4	4	4	4	4	4	4

SSTC =Te Evaporation temperature

### Example

1. Demand cooling capacity: 30kW      Qn=28kw
2. Room temperature: -40° C      T1=-40° C
3. Evaporation temperature -47° C      Te=-47° C
4. Refrigerant:      R22

### Calculation

1. Actual temperature difference      TD1=T1-Te=-40-(-47)=7KTD      TD1=7K
2. Evaporating temperatur factor      0,87      T2=0.87
3. Refrigerant factor      0,94      T3=0.94
4. Standard product temperature difference SCX      SC5=Δ6K      TD=6K

$Q = Q_n / T2 / T3 / TD1 * TD$   
 $Q = 28 / 0.87 / 0.94 / 7 * 6 = 29.34KW$       check:  $29.34 * 0.87 * 0.94 / 6 * 7 = 28KW$   
 The cooling capacity is close to 31KW from THE SC5 product  
 WEBF-263-10/250      SC5=29.1KW  
 WEBF-280-10/250      SC5=30.65KW

# WONGSO EVAPORATOR BLAST FREEZER



*The perfect combination  
of German fans and  
Italian design software*

#### FAN TECHNOLOGY

Adopting high quality motor with IP54, reasonable gap with the wind vane, guide ring and hyperbolic designed ducting, achieve maximum efficiency of fan.

#### PIPELINE DESAIN

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.

#### 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.

#### CASING BODY

Using 3003 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.



CHICKEN



MEAT



FISH



SHRIMP



SAUSAGE



DUMPLINGS



FRUITS



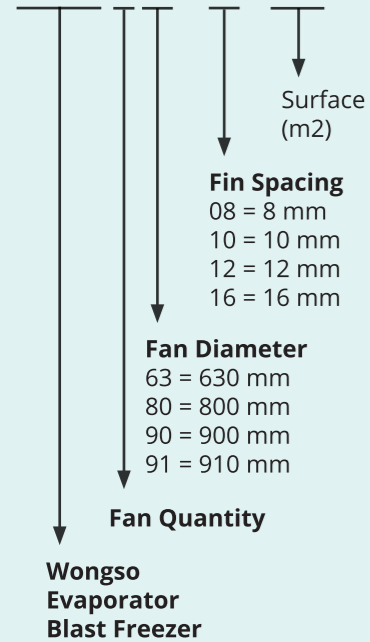
VEGGIES



VACCINE

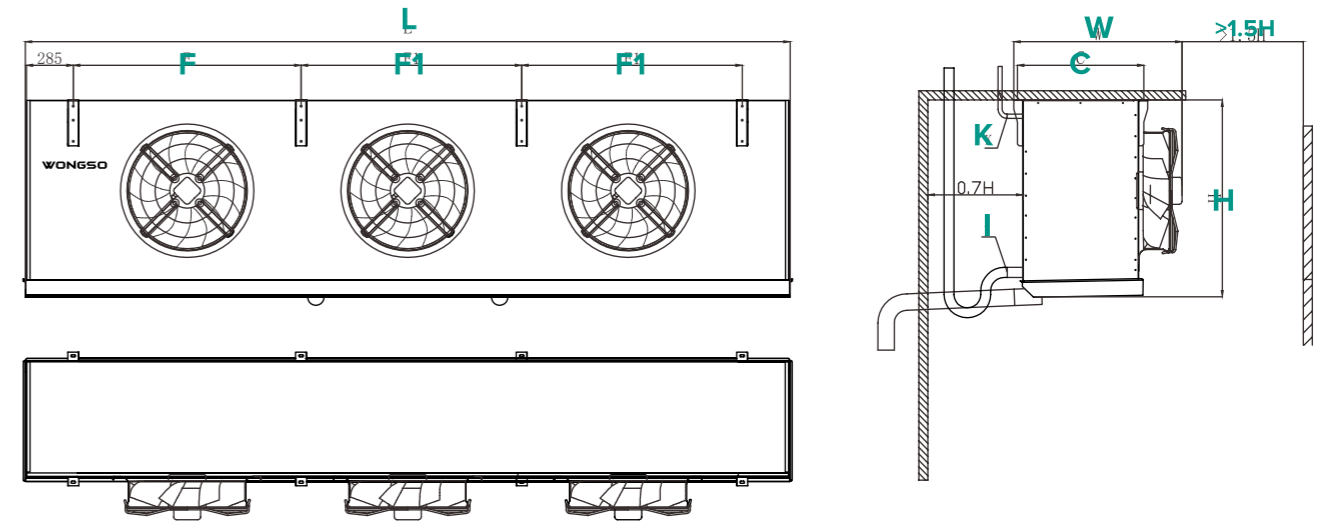
## Nomenclatur

### WEBF 2 63 - 10 / 250

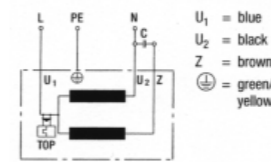


## WEBF Advantages as Industrial Unit Cooler

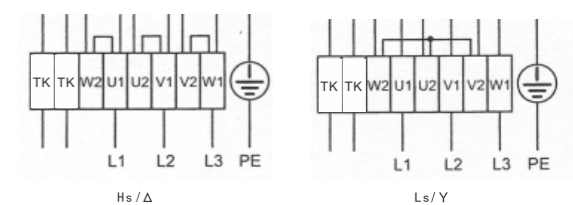
- DESIGN** Using the European design software ,according to the actual demand accurate design of heat exchanger, can design the latest refrigerant as: R404a, CO<sub>2</sub>, R410A, R507A and other special low-temperature cold equipments etc.
- SHAPE** Shape with flexible and changeable, drawing, blowing. Forward airflow, airflow up, airflow 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 OD 15.88 mm, also can use stainless tube. Aluminium fin spacing with 7,8,9, 10, 12, 14, and 16 mm. 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 Fan 630-800-900 used galvanized steel powder coated RAL 7035 and plastic material.
- 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 degrees.
- HEATER** The international famous brand, the material of heating tube of SUS304 stainless steel, the surface heat load is less than 2.0 W/cm<sup>2</sup>, longer life.



Single Phase Fan Wiring



Three Phase Fan Wiring



## WEBF Evaporator Freezer Series (Fin Spacing 10 mm)

Model	Diameter of Fan	No. of fans	R404a				Tube Volume	Ex-change surface	Air flow	Air throw	Noise pressure level	Coil Heater	Drain Pan Heater	The Motor Power	Total
			SC3 A7K TR = -18°C TE = -25°C	SC4 A6K TR = -25°C TE = -31°C	SC5 A6K TR = -34°C TE = -40°C	SC5 A6K -100PA									
WEBF 163-10/88	630	1	16	12,9	11,2	10,4	32,4	88	18177	33	70	9,73	3,36	1 x 2.7	15,79
WEBF 163-10/117		1	19,7	16	14,13	12,78	43,3	117	17641	32	70	12,5	3,36	1 x 2.7	18,56
WEBF 263-10/176		2	32,3	26,1	23,72	21,68	64,9	176	36354	36	72	17,78	5	2 x 2.7	28,18
WEBF 263-10/250		2	39,7	32,2	29,51	26,22	86,5	235	35283	35	72	26,4	5	2 x 2.7	36,8
WEBF 363-10/264		3	48,6	39,3	35,63	32,75	97,3	264	54530	39	73	27,3	7,88	3 x 2.7	43,28
WEBF 363-10/352		3	59,7	48,5	44,54	39,84	129,8	352	52924	38	73	36,4	7,88	3 x 2.7	52,38
WEBF 463-10/352		4	64,9	52,6	47,72	43,64	129,8	352	72472	40	74	36	12,56	4 x 2.7	59,36
WEBF 463-10/469		4	79,7	64,8	59,42	52,75	173	469	70566	39	74	48	12,56	4 x 2.7	71,36
WEBF 180-10/117		800	1	20,6	17,2	15,37	13,2	43,3	117	22474	35	70	11,76	3,94	1 x 1.85
WEBF 180-10/156	1		25,1	20,8	19,01	15,88	57,7	156	21483	34	68	16,8	3,94	1 x 1.85	22,59
WEBF 280-10/250	2		41,5	34,3	30,65	25,75	86,5	235	44949	38	72	23,52	7,28	2 x 1.85	34,5
WEBF 280-10/313	2		50,3	41,8	38,59	32,12	115,3	313	42966	37	70	31,92	7,28	2 x 1.85	39,2
WEBF 380-10/352	3		62,5	52,2	46,1	38,7	129,8	352	67423	40	77	36	10,16	3 x 1.85	51,71
WEBF 380-10/469	3		76,9	63,8	56,88	47,9	173	469	64449	39	73	48	10,16	3 x 1.85	63,71

Model	Inlet I	Outlet K	Hot gas in/out	Drain	Dimensions in mm waterspray defrost* dimension H+100						Weight
					L	W	H	F	F1	C	
WEBF 163-10/88	28,6	54	22,23	1*DN65	1820	960	1080	1240	1200	688	220
WEBF 163-10/117	28,6	54	22,23	1*DN65	1820	1060	1080	1240	1200	788	235
WEBF 263-10/176	28,6	67	22,23	1*DN65	3020	960	1080	1240	1200	688	346
WEBF 263-10/250	28,6	67	22,23	1*DN65	3020	1060	1080	1240	1200	788	367
WEBF 363-10/264	41,3	76	34,9	1*DN65	4220	960	1080	1240	1200	688	518
WEBF 363-10/352	41,3	76	34,9	1*DN65	4220	1060	1080	1240	1200	788	580
WEBF 463-10/352	41,3	76	34,9	2*DN65	5420	960	1080	1240	1200	688	671
WEBF 463-10/469	41,3	76	34,9	2*DN65	5420	1060	1080	1240	1200	788	753
WEBF 180-10/117	28,6	54	22,23	1*DN65	2020	1038	1280	1450	1400	708	278
WEBF 180-10/156	28,6	54	22,23	1*DN65	2020	1138	1280	1450	1400	808	314
WEBF 280-10/250	28,6	76	28,6	1*DN65	3420	1038	1280	1450	1400	708	582
WEBF 280-10/313	34,9	76	34,9	1*DN65	3420	1138	1280	1450	1400	808	637
WEBF 380-10/352	41,8	76	34,9	2*DN65	4820	1036	1280	1450	1400	708	712
WEBF 380-10/469	41,8	76	34,9	2*DN65	4820	1138	1280	1450	1400	808	836