

®

MULTISTACK

MULTISTACK INTERNATIONAL LIMITED



**Falling Film Water Cooled
Screw Chiller
MWSF Series**

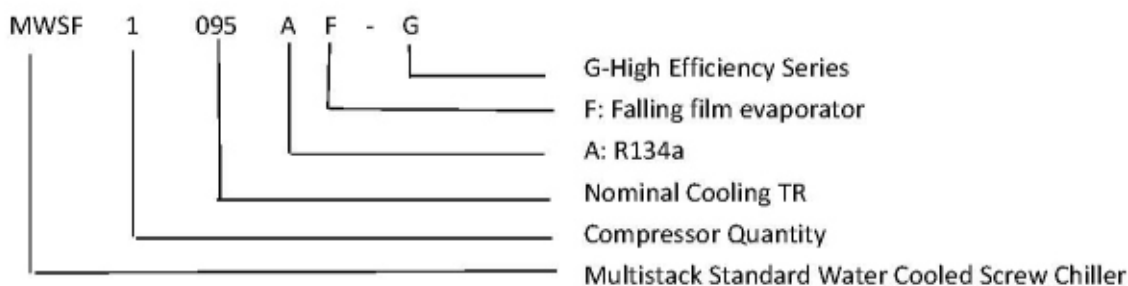


For 50HZ market

Products Overview

Multistack Water Cooled Screw Chiller adopts highly reliable screw compressor and the new type falling film evaporator with high efficiency, the efficiency can reach to 0.65kW/ton, IPLV can reach to 0.6kW/ton, therefore the operation cost for customer can be reduced greatly, and also have positive effect to the environmental protection and energy saving. The screw compressor in this type chiller has the feature of high efficiency, low noise and less wearing parts. Neither has the unbalance inertia force like the reciprocating compressor. Nor the surge and low efficiency problem in centrifugal chiller under low load condition, so this chiller can reliably run under wide load with high efficiency.

Nomination



Application

With a compact structure, intelligent control such advantage, the screw chiller can be widely used in hotel, restaurant. School, theater, shopping mall, office building, and hospital such air conditioning area, also can be used in process cooling procedure such as nuclear, plastic chemistry, precise instrument. Especially suitable for applications like hospital, hotel, restaurant such places where required both cooling and hot water.

Performance Data R134a

Model MWSF		1085AFG	1095AFG	1105AFG	1125AFG	1165AFG	1190AFG	
Cooling Capacity	kW	289.4	323.1	369.5	433.6	572.3	663.2	
	RT	82.3	91.9	105.1	123.3	162.7	188.6	
	Kcal/h	248884	277866	317770	372896	492178	570352	
	KW/RT	0.62	0.62	0.61	0.61	0.60	0.60	
Power Supply		3 Φ -400V-50HZ						
Compressor	Type	5-6dissymmetrical tooth shape semi-hermetic screw compressor						
	Qty	Unit	1	1	1	1	1	
	Starter	Y-△						
	Step	25%-100% stage adjustment						
	Input power	kW	51.3	57	64.4	75.1	98.1	112.6
	Rated Current	A	80.9	88.6	101.4	120.4	155.6	177.5
Evaporator	Type	Falling Film high efficiency heat exchanger (Designed water pressure: 1.6Mpa)						
	Water flow rate	m3/h	45.5	50.8	58.1	68.2	90.0	104.3
	Connection dia.	Dn	100	100	125	125	150	150
	Water pressure drop	kPa	48	50	45	50	50	50
Condenser	Type	Shell and Tube high efficiency heat exchanger (Designed water pressure: 1.0Mpa)						
	Water flow rate	m3/h	56.6	63.2	72.2	84.7	111.9	129.6
	Connection dia.	Dn	100	100	125	125	150	150
	Water pressure drop	kPa	48	48	45	45	45	48
Refrigerant	Type	R134a						
	Charge qty	kg	61	69	95	100	127	136
Dimension	Length	mm	3500	3500	3500	3530	3600	3600
	Width	mm	1380	1400	1450	1480	1550	1600
	Height	mm	1810	1830	1880	1960	2050	2080
Unit Weight		kg	2800	2900	3100	3650	4100	4200
Operation Weight		kg	3000	3050	3300	3850	4350	4350

Note: Cooling condition: Chilled water in&out 54° F /44° F, Cooling water in &out 87° F /97° F.

Unit Operation range: condenser water in range 66.2-91.4° F, evaporator water out range 41-59 F

Performance Data R134a

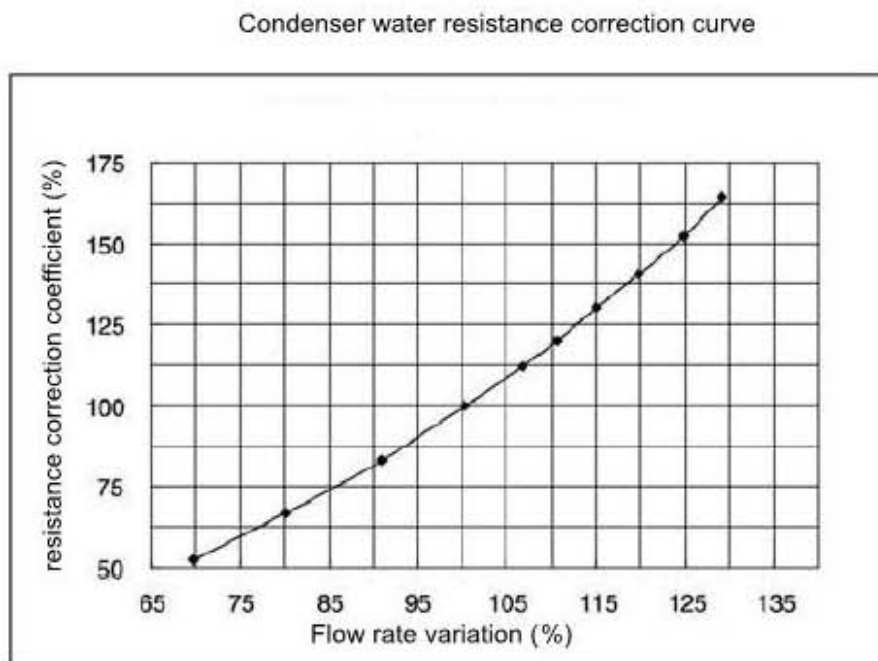
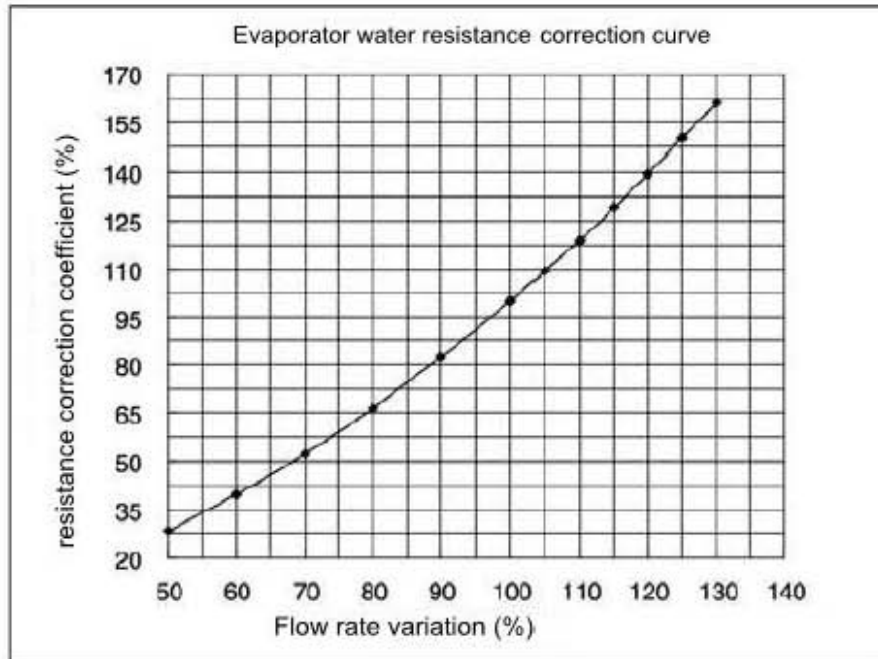
Model MWSF		2170AFG	2190AFG	2210AFG	2250AFG	2330AFG	2380AFG	
Cooling Capacity	kW	578.8	646.2	739	867.2	1144.6	1326.4	
	RT	164.6	183.7	210.1	246.6	325.4	377.1	
	Kcal/h	497768	555732	635540	745792	984356	1140704	
	KW/RT	0.62	0.62	0.61	0.61	0.60	0.60	
Power Supply		3 Φ -400V-50Hz						
Compressor	Type		5-6dissymmetrical tooth shape semi-hermetic screw compressor					
	Qty	Unit	2	2	2	2	2	
	Starter		Y- Δ					
	Step		12.5%-100% stage adjustment					
	Input power	kW	102.6	114	128.8	150.2	196.2	225.2
	Rated Current	A	161.8	177.2	202.8	240.8	311.2	355
Evaporator	Type		Falling Film high efficiency heat exchanger (Designed water pressure: 1.0Mpa)					
	Water flow rate	m ³ /h	91.0	101.6	116.2	136.4	180.0	208.6
	Connection dia.	Dn	150	150	200	200	200	250
	Water pressure drop	kPa	60	55	62	70	80	81
Condenser	Type		Shell and Tube high efficiency heat exchanger (Designed water pressure: 1.0Mpa)					
	Water flow rate	m ³ /h	113.1	126.3	144.4	169.5	223.7	259.3
	Connection dia.	Dn	150	150	200	1500	200	250
	Water pressure drop	kPa	45	45	46	48	50	55
Refrigerant	Type		R134a					
	Charge qty	kg	121	139	189	199	254	296
Dimension	Length	mm	4780	4780	4840	5040	5670	5670
	Width	mm	1500	1500	1520	1560	1610	1640
	Height	mm	1850	1860	1950	2080	2100	2130
Unit Weight		kg	4080	4400	5200	5900	6500	6800
Operation Weight		kg	4280	4600	5500	6350	7000	7400

Note: Cooling condition: Chilled water in&out 54° F /44° F, Cooling water in &out 87° F /97° F.

Unit Operation range: condenser water in range 66.2-91.4° F, evaporator water out range 41-59 F

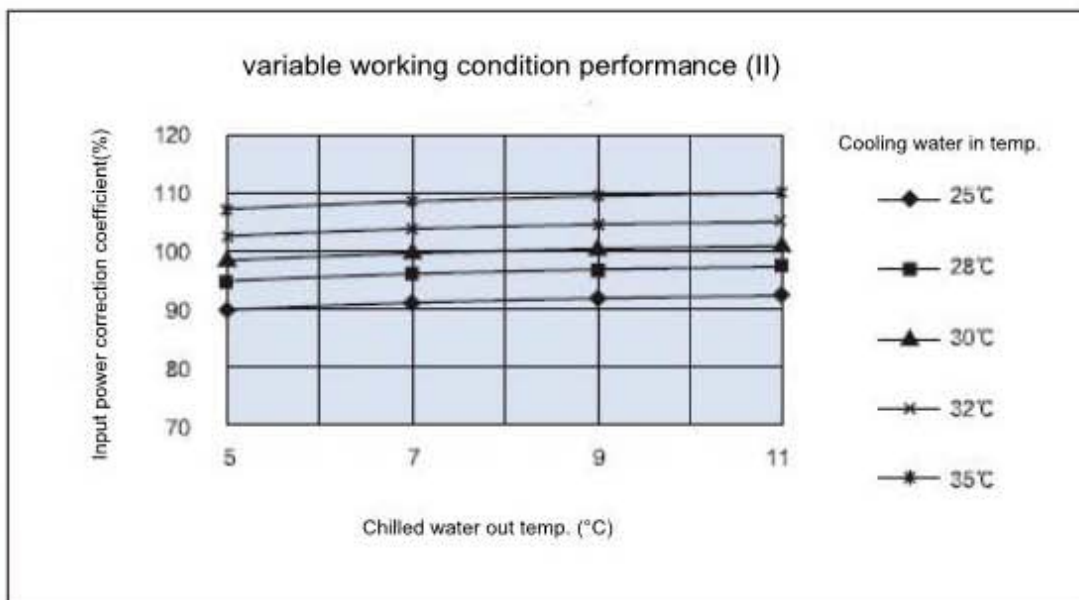
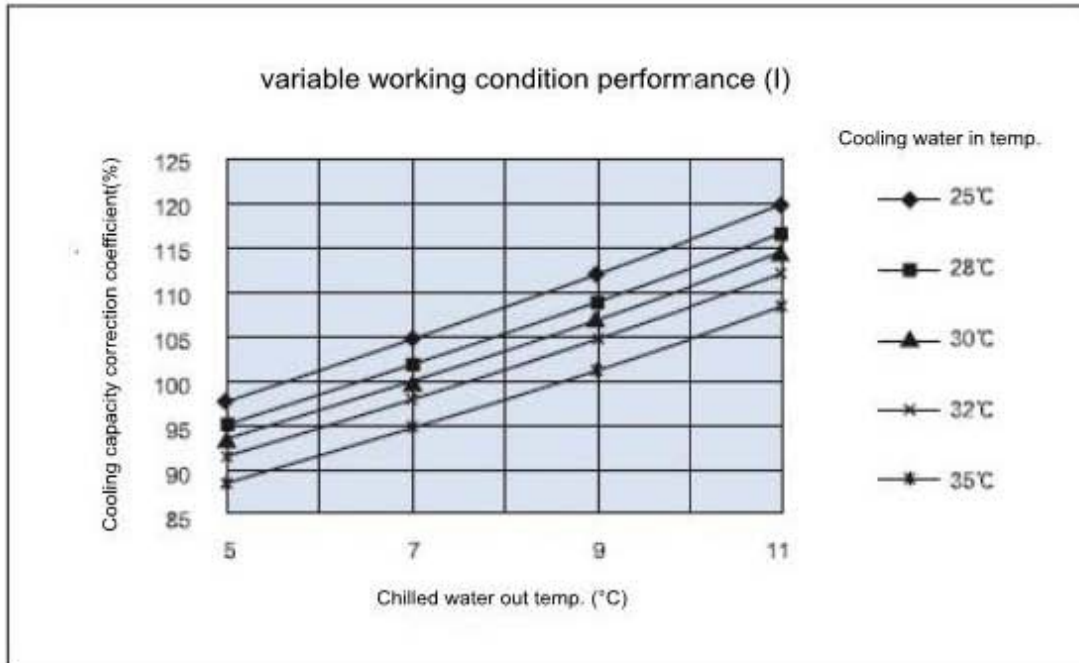
Unit Water Resistance Curve

When the water flow rate of the condenser and evaporator deviate the nominal water flow rate, pls correct according to the below curves

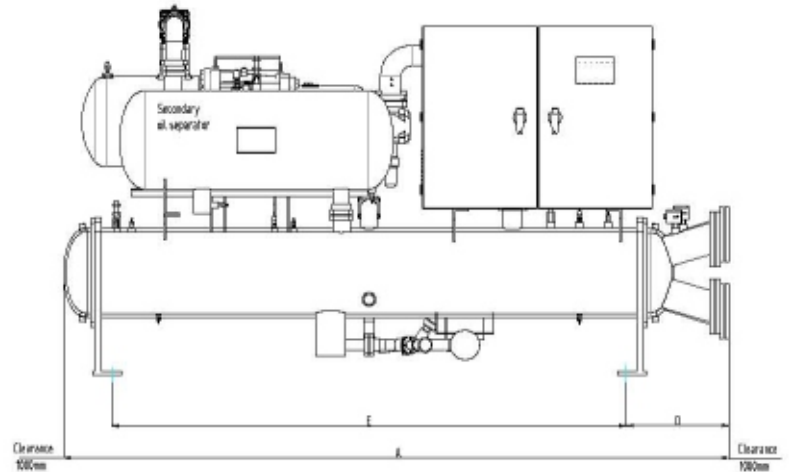
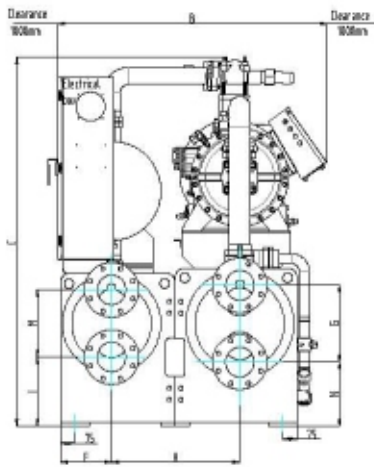


Capacity Correction sheet

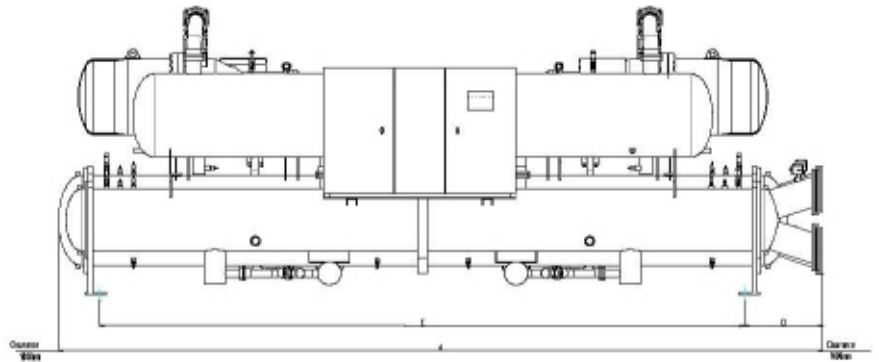
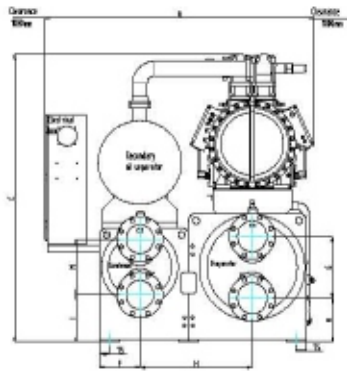
When there is change in working condition, pls correct the unit cooling capacity, input power according to the below curves



Unit Dimension Drawing:



Model	Dimension mm											Connection	
	A	B	C	D	E	F	G	H	L	M	N	Evaporator	Condenser
MWSF1085AFG	3500	1380	1810	2705	535	248	400	620	320	350	295	Dn100	Dn100
MWSF1095AFG	3500	1400	1830	2705	535	248	400	620	320	350	295	Dn100	Dn100
MWSF1105AFG	3500	1450	1880	2705	562	248	400	620	320	350	295	Dn125	Dn125
MWSF1125AFG	3530	1480	1960	2705	564	268	400	672	320	350	295	Dn125	Dn125
MWSF1165AFG	3600	1550	2050	2705	564	288	400	753	320	350	295	Dn150	Dn150
MWSF1190AFG	3600	1600	2080	2705	506	288	400	753	295	400	295	Dn150	Dn150



Model	Dimension mm											Connection	
	A	B	C	D	E	F	G	H	L	M	N	Evaporator	Condenser
MWSF2170AFG	4780	1500	1850	522	3980	290	350	760	314	350	277	Dn150	Dn150
MWSF2190AFG	4780	1500	1860	522	3980	290	430	760	334	350	317	Dn150	Dn150
MWSF2210AFG	4840	1520	1950	526	3983	290	420	815	319	380	290	Dn200	Dn200
MWSF2250AFG	5040	1560	2080	526	4183	290	420	815	319	380	290	Dn200	Dn200
MWSF2330AFG	5670	1610	2100	518	4783	335	420	905	410	380	355	Dn200	Dn200
MWSF2380AFG	5670	1640	2130	635	4769	345	500	885	418	500	296	Dn250	Dn250