

Project Name:Project

Selection:MHS-TVC105-ZN8TL-B

Unit Information

Chiller Model ----- MHS-TVC105-ZN8TL-B Chiller Series -----Aqua thermal Super 60Hz
Net Weight ----- 2270.76 lb Length ----- 7.51312 ft
Running Weight ----- 2314.85 lb Width ----- 5.15092 ft
Refrigerant Type ----- R32 Height ----- 8.2021 ft
Refrigerant Charge ----- 24.2508|24.2508 lb Sound ----- 71.2 dB(A)
Controller-----MicroComputer Controller Frequency ----- 60 Hz
Voltage ----- 460 V Operating Range ----- T3
Capacity Control -----Variable Frequency Starter Type ----- VFD Starter

***Due to additional options and manufacturing deviation, the weight data and 3D dimension in this report is for reference only, and the actual weight and 3D dimension of the unit is subject to the actual product.**

Barometric Information

Altitude ----- 900 m Barometric Pressure ----- 91.0 kPa

Performance Information

Cooling Condition

Ambient Temperature(DB) ----- 95.0 °F Cooling Capacity ----- 28.71 RT
Leaving Fluid Temperature ----- 44.00 °F Input Power ----- 32.97 kW
Entering Fluid Temperature ----- 54.00 °F COP.R ----- 3.062 kW/kW
Fluid Flow Rate ----- 68.99 gpm IPLV.IP ----- 5.850 kW/kW
Water Pressure Drop----- 2.70 psi

Compressor Information

Type ----- Variable-frequency Oil Model ----- FW68HT
Model ----- Scroll Oil Charge ----- 2.3|2.3 L
Brand ----- HITACHI Number of Compressors ----- 1|1

Water Side Information

Heat Exchanger Type----- Plate Heat Exchanger Code ----- /
Connection Size -----2-1/2 NPT Connection Type -----Threaded
Fluid Type ----- Fresh Water Concentration ----- 0 %
Fouling Factor ----- 0.000100 h*ft²*°F/Btu Water Volume ----- 0.01298 m³

Air Side Data

Heat Exchanger Type----- Fin-Coil Air Flow----- 23530 m³/h
Number of Fans ----- 2 FLA of Fan (Each) ----- 3.0 A
Fan Type ----- BLDC Fan Power Input of Fan(Each) ----- 2.300 kW

Electrical Information

Voltage ----- 460 V Starting Amps ----- ≤25.1|≤25.1 A



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Cooling Full Load Amps ----- 50.2 A Maximum Operating Amps ----- 46.4|47.6 A

Maximum Operating Power --- 30.50|30.50 kW MCA ----- 94 A

MOP ----- 125 A

Final selection of supply wire gauge and branch circuit protection shall be governed by the equipment’ s MCA and MOP ratings in accordance with applicable electrical codes.

When Hydraulic Module Option is selected, the related current and operating power do not include the parameters of water pump of the hydraulic module, please consult the factory for details.

Option Information

Anticorrosive Selection----- Standard Spring Isolator ----- No

Three-phase protector -----No

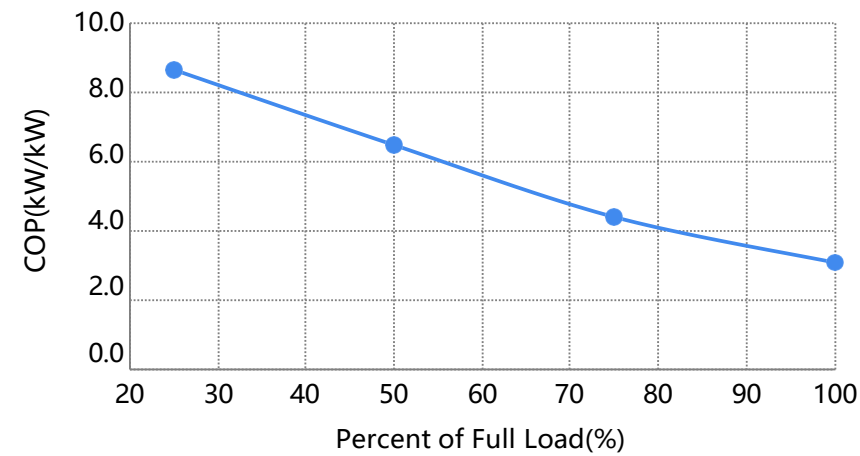
Certified in accordance with the AHRI Air-Cooled Water-Chilling Packages Certification Program, which is based on AHRI Standard 550/590 (I-P) and AHRI Standard 551/591(SI). Certified units may be found in the AHRI Directory at www.ahridirectory.org.

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Calculation:IPLV(IP)

Percentage of full load	Cooling Capacity	Input Power	Power Input per Capacity	COP	Water Side Data				Air Side Data	Weighting Factor	IPLV(IP)	
					EEFT	ELFT	Flow	Water Pressure Drop	CEFT			
					°F	°F	gpm	psi	°F		kW/Ton	kW/kW
100%	28.90	32.71	1.132	3.106	54.00	44.00	68.97	2.70	95.0	0.01	0.6010	5.850
75%	21.67	17.24	0.7954	4.420	51.50	44.00	68.97	2.70	80.0	0.42		
50%	14.45	7.822	0.5414	6.494	49.00	44.00	68.97	2.70	65.0	0.45		
25%	7.224	2.929	0.4055	8.671	46.50	44.00	68.97	2.70	55.0	0.12		

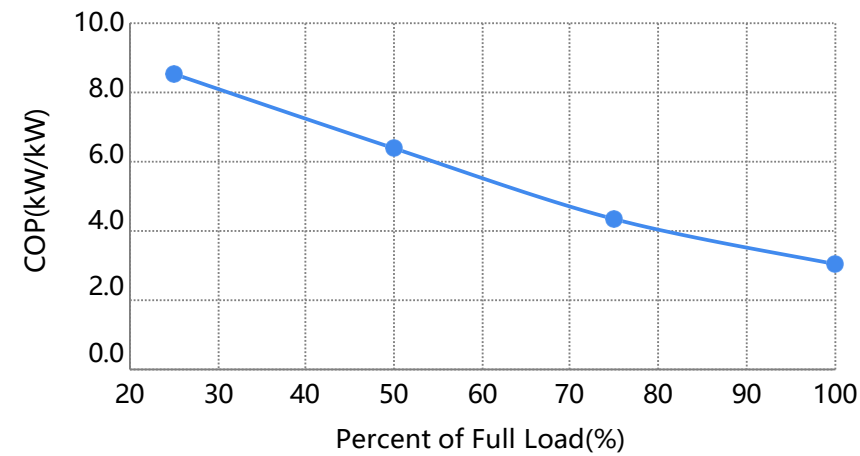


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Calculation:NPLV(IP)

Percentage of full load	Cooling Capacity	Input Power	Power Input per Capacity	COP	Water Side Data				Air Side Data	Weighting Factor	NPLV(IP)	
					EEFT	ELFT	Flow	Water Pressure Drop	CEFT			
					°F	°F	gpm	psi	°F		kW/Ton	kW/kW
100%	28.71	32.97	1.148	3.062	54.00	44.00	68.97	2.70	95.0	0.01	0.6097	5.767
75%	21.53	17.38	0.8069	4.357	51.50	44.00	68.97	2.70	80.0	0.42		
50%	14.36	7.885	0.5493	6.401	49.00	44.00	68.97	2.70	65.0	0.45		
25%	7.178	2.953	0.4114	8.547	46.50	44.00	68.97	2.70	55.0	0.12		

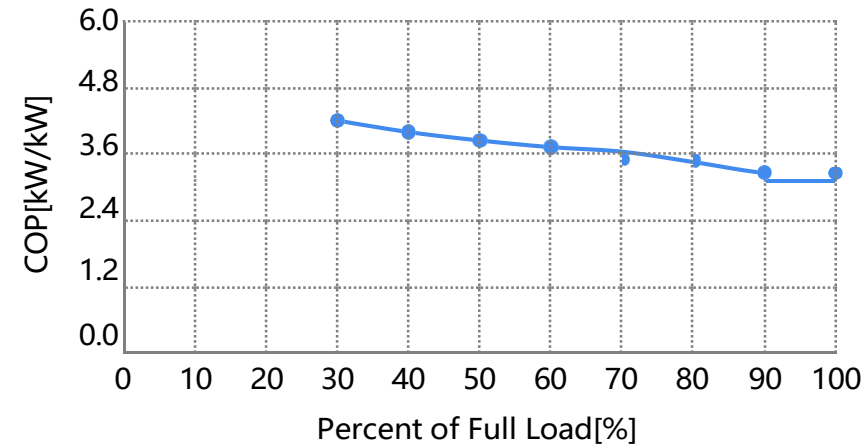


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Calculation:Loadline

Percentage of full load	Cooling Capacity	Input Power	Power Input per Capacity	COP	Water Side Data				Air Side Data	Weighting Factor	PLV/NPLV/CPLV
					EEFT	ELFT	Flow	Water Pressure Drop	CEFT		
	RT	kW	kW/Ton	kW/kW	°F	°F	gpm	psi	°F		kW/kW
100%	28.71	32.97	1.148	3.062	54.00	44.00	68.97	2.70	95.0	0	0.000
90%	25.84	29.02	1.123	3.131	53.00	44.00	68.97	2.70	95.0	0	
80%	22.97	24.25	1.056	3.330	52.00	44.00	68.97	2.70	95.0	0	
70%	20.10	20.11	1.000	3.515	51.00	44.00	68.97	2.70	95.0	0	
60%	17.23	16.84	0.9777	3.596	50.00	44.00	68.97	2.70	95.0	0	
50%	14.36	13.58	0.9460	3.717	49.00	44.00	68.97	2.70	95.0	0	
40%	11.48	10.44	0.9089	3.869	48.00	44.00	68.97	2.70	95.0	0	
30%	8.614	7.433	0.8630	4.074	47.00	44.00	68.97	2.70	95.0	0	
20%	5.742	NaN	NaN	NaN	NaN	44.00	68.97	NaN	95.0	0	
10%	2.871	NaN	NaN	NaN	NaN	44.00	68.97	NaN	95.0	0	

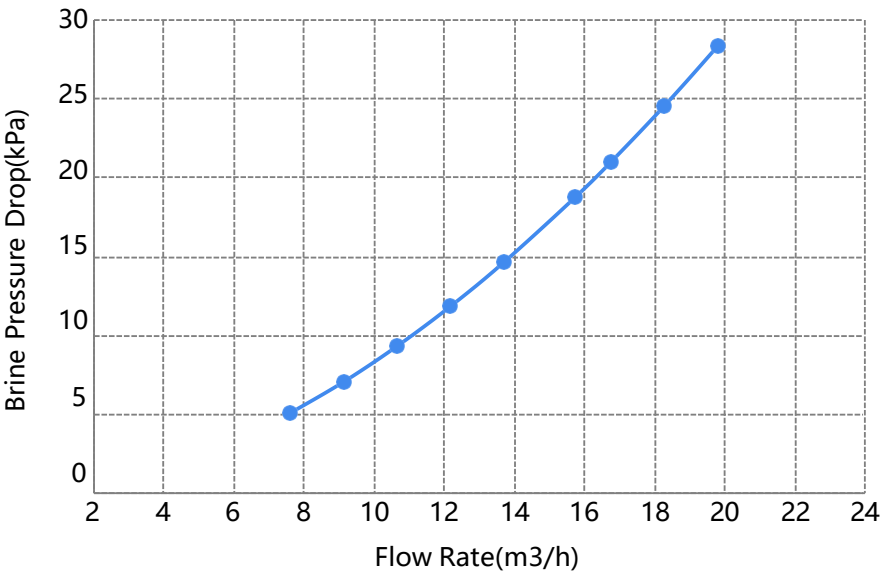


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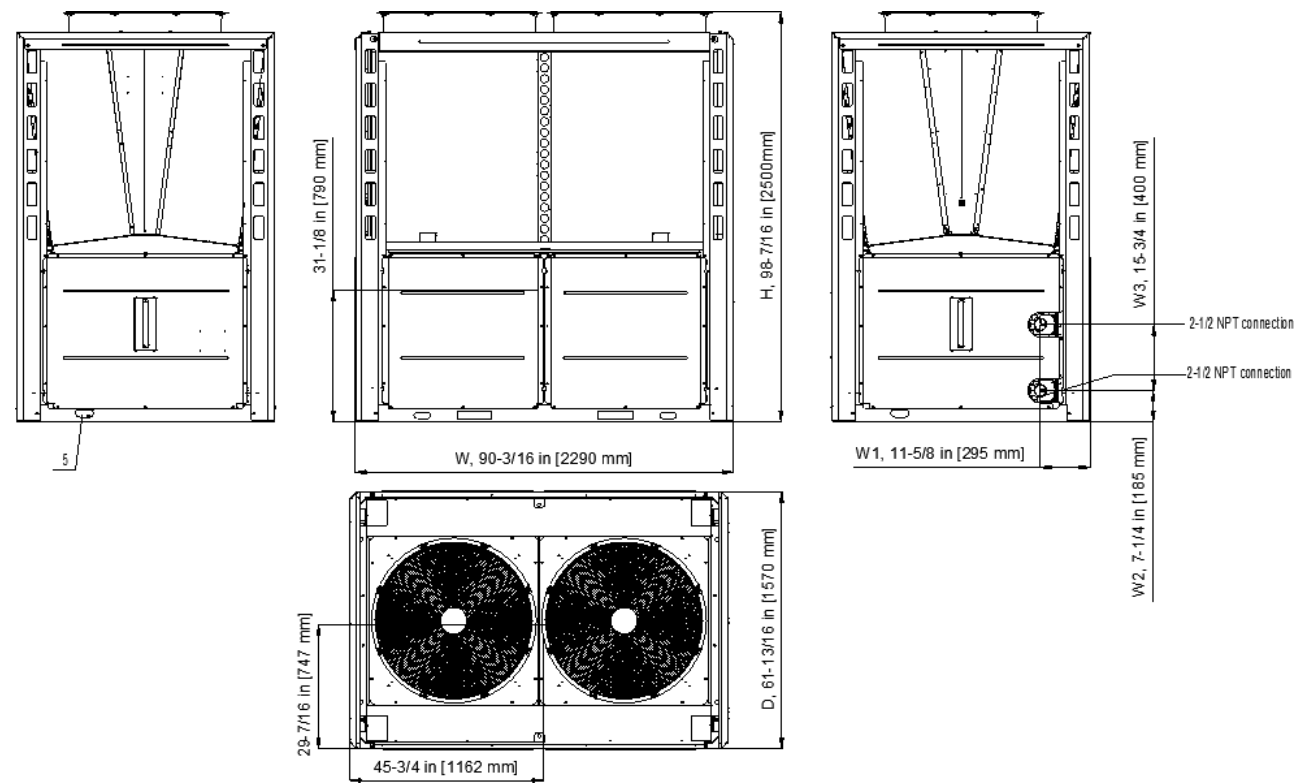
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Fluid Pressure Drop Map

Standard Fluid Pressure Drop Map



Chiller Outline Drawing



Location points of outline drawing (unit mm)						
Chiller Model	A	B	C	D	E	F
MHS-TVC105-ZN8TL-B	2290	1570	2500	295	185	400

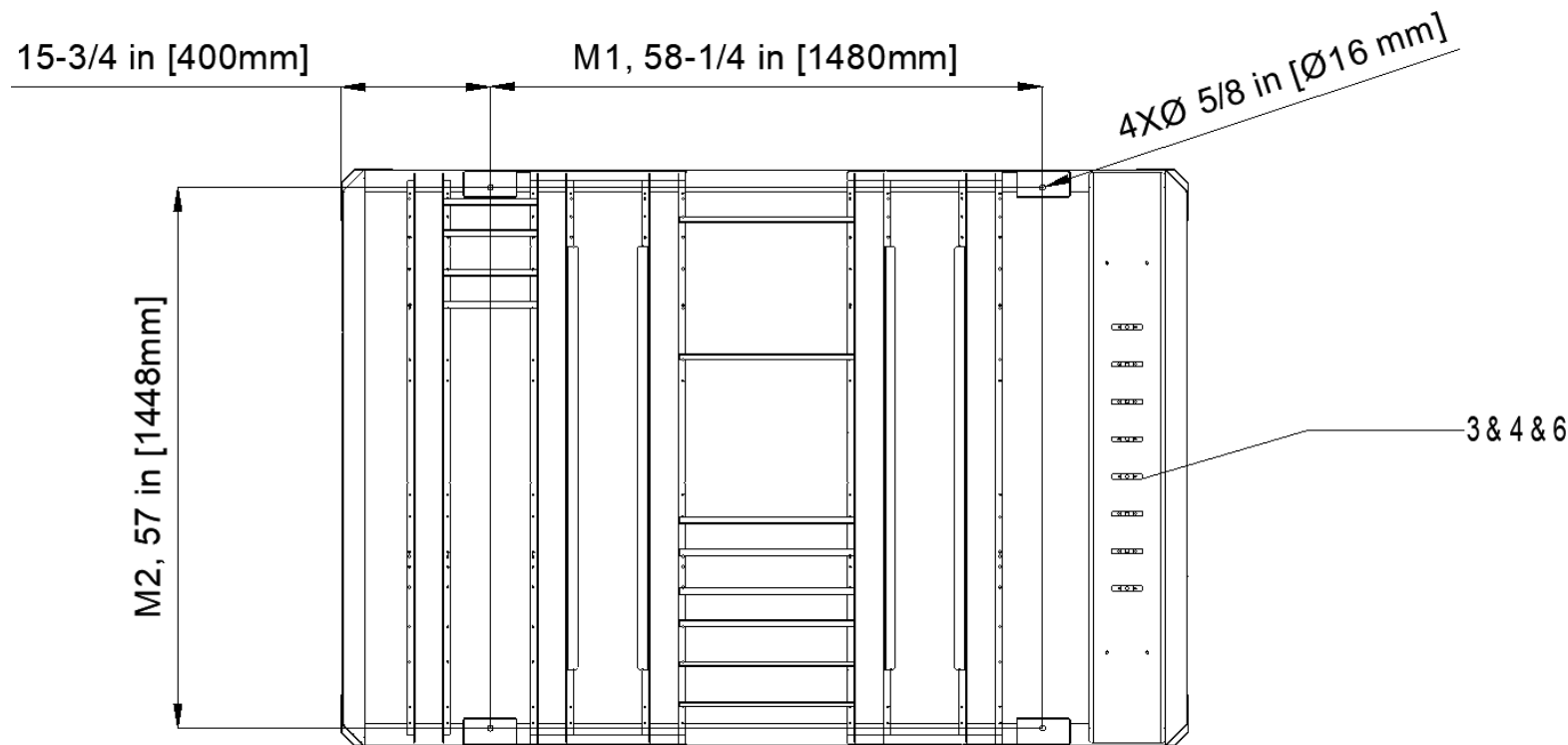


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Explanation				
Chiller Model	1	2	5	7
MHS-TVC105-ZN8TL-B	Chilled water outlet	Chilled water inlet	Power incoming line	Installation foundation

Chiller Foundation Drawing



Location point of foundation map (unit mm)		
Chiller Model	A	B
MHS-TVC105-ZN8TL-B	2290	1570

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Load bearing position point of spring isolator				
Chiller Model	P1	P2	P3	P4
MHS-TVC105-ZN8TL-B	MHD-B-320	MHD-B-320	MHD-B-320	MHD-B-320

Explanation				
Chiller Model	3	4	6	8
MHS-TVC105-ZN8TL-B	Control panel	VFD	Electric control box	Spring isolator installation hole

1. Spring isolator is optional. 2. The value in the spring isolator represents the allowable weight, unit kg. 3.If a custom hydraulic module option is selected, a set of spring dampers with the serial number P0 will be added. 4. If A1 is present in the above table, this dimension represents the length of the unit after customizing the hydraulic module. 5. The area within the frame in the drawing shows the unit diagram after customizing the hydraulic module, for reference only.

*In case of any changes to the product or algorithm upgrades resulting from software selection parameter changes, the output parameters of the latest software version shall take precedence. The manufacturer reserves the right to make the final interpretation.