

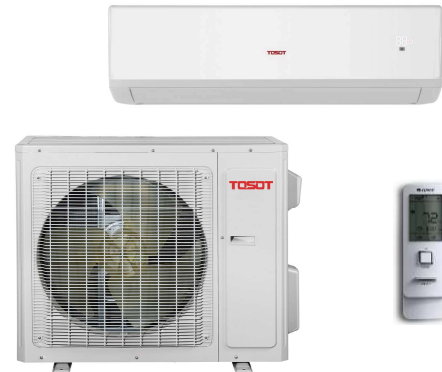


# SAPPHIRE



## SINGLE ZONE WALL MOUNTED HEAT PUMP SYSTEM

<b>TW12HQ3D6D</b>		
Indoor Unit		TW12HQ3D6DI
Outdoor Unit		TW12HQ3D6DO
<b>Performance</b>		
Cooling Rated Capacity	Btu/h	12,000
Cooling Cap. Range Min-Max	Btu/h	2,900~15,354
SEER/EER		30.5/15.3
Heating Rated Capacity(47°F)	Btu/h	12,200
Heating Rated Capacity(17°F)	Btu/h	8,100
Heating Cap. Range Min-Max	Btu/h	3,071~18,766
HSPF/COP		14.0/3.8
<b>Electrical</b>		
Voltage, Phase, Cycle	V-Ph-Hz	208/230-1-60
Voltage Range	V	187~253
MCA	A	9.0
MOP	A	15
Compressor RLA	A	6.9
Fan Motor FLA	A	0.24
Cooling Power Input	W	784
Heating Power Input	W	940
<b>Piping</b>		
Pipe Length Min-Max	ft	10~98
Piping Lift	ft	49
Liquid Line	in	1/4
Vapor Line	in	1/2
Connection Type		Flare



<b>Operating Range</b>		
Cooling Outdoor DB	°F	0~129
Heating Outdoor DB	°F	-22~75
<b>System Data</b>		
Compressor Type		DC Inverter Driven 2 Stage Rotary
Refrigerant Type		R410A
Pre-Charge	oz	49.4
Pre-Charge Length	ft	25
Additional Charge	oz/ft	0.2
Refrigerant Control		EXV
ODU Sound Pressure	dB(A)	53
IDU Sound Pressure (Cooling Low/High)	dB(A)	22/49
IDU Sound Pressure (Heating Low/High)	dB(A)	22/49
IDU Airflow (Low/High)	cfm	235/500
Dehumidification	pts/hr	3.0



Job Name:		Date:	
Reference #:			
Signature:			

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Features	
Inverter Type	G10
Ultra Low Frequency Torque Control	Standard
Power Factor Correction	Standard
Compressor Type	High Eff. Two Stage Rotary
Refrigerant Type	R410A
Basepan With Electric Heater	Standard
Compressor With Electric Heater	Standard
Indoor & Outdoor Fin Coating	Acrylic Resin/ Anti-Corrosion
Intelligent Defrosting	Standard
Intelligent Preheating	Standard
Low Voltage Startup	Standard
Memory/Power Failure Recovery	Standard
Self Diagnosis	Standard
Wired Controller Interface	Not Available
Wi-Fi Interface Capable	Standard
Indoor Fan Type	Crossflow
Multi Fan Speeds	7 Speeds
Indoor Unit Display	Standard
Advance Filter	Optional
Auxiliary Electrical Heater	Not Available
Ventilation (Outdoor Air)	Not Available

Remote Controller Functions	
Auto Mode	Standard
Auto Fan	Standard
Auto Swing - Horizontal	Standard
Auto Swing - Vertical	Standard
Clock on Remote Controller	Standard
Dry Mode	Standard
Dry Anti-Mildew (X-Fan) Mode	Standard
Energy Saving Mode	Not Available
Dirty Filter Alert	Not Available
Fan Speed Control (7 Speeds)	Standard
I Feel Function	Standard
PrivacyLock on Remote Controller	Standard
Quiet Mode	Standard
Room Temperature Display	Not Available
Sleep Mode	Standard
4 Sleep Modes Options	Standard
Timer Mode	Standard
Turbo Mode	Standard
Display On/Off Control	Standard
Freeze Guard Mode	Standard
Power Failure Mode	Standard

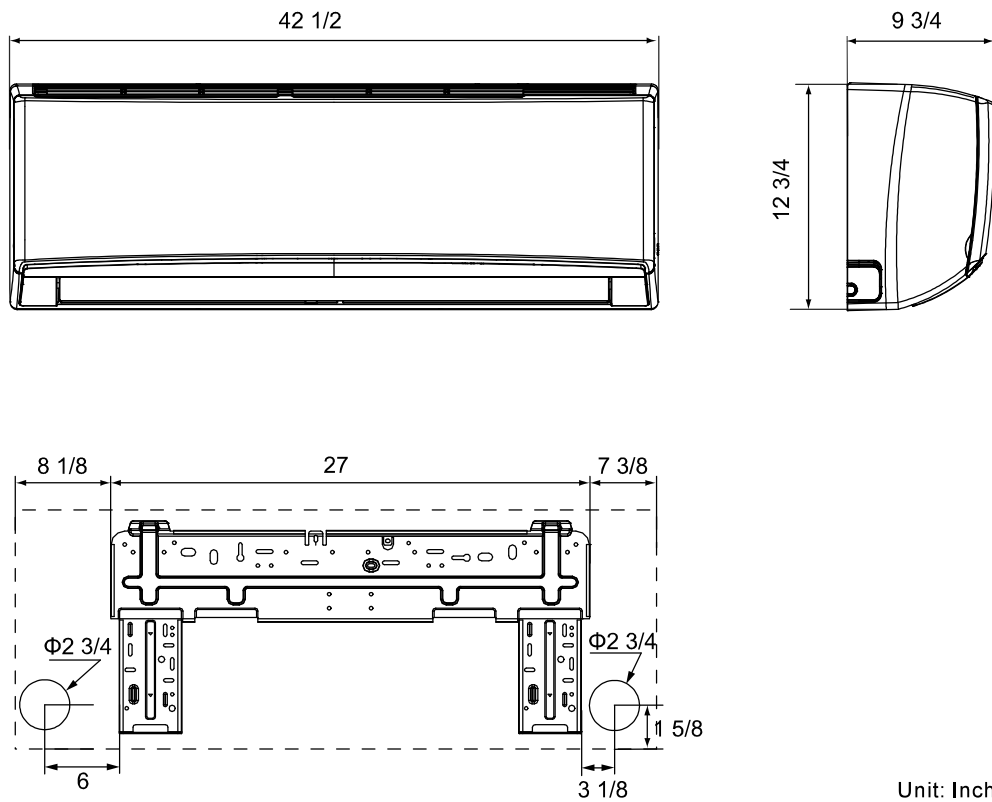


<b>COOLING PERFORMANCE*</b>						
Outdoor Ambient DB	Indoor Entering Air Temperatures					
	68°F DB		73°F DB		80°F DB	
	57°F WB		61°F WB		67°F WB	
	TC	SHC	TC	SHC	TC	SHC
0°F	8,274	6,639	8,517	6,842	8,975	7,200
5°F	8,903	7,142	9,165	7,361	9,657	7,746
14°F	10,160	8,148	10,462	8,398	11,022	8,838
23°F	10,789	8,651	11,110	8,916	11,705	9,384
32°F	11,418	9,154	11,758	9,435	12,387	9,930
41°F	12,047	9,657	12,407	9,954	13,069	10,476
50°F	12,612	10,090	12,943	10,345	14,666	10,954
59°F	13,241	10,593	13,591	10,864	15,348	11,500
68°F	14,498	11,599	14,888	11,901	16,713	12,592
77°F	15,127	12,102	15,536	12,419	17,396	13,138
86°F	15,756	12,605	16,184	12,938	18,078	13,684
95°F	15,829	12,679	16,300	13,071	17,182	13,745
104°F	15,200	12,176	15,652	12,552	16,500	13,199
113°F	14,571	11,673	15,004	12,034	15,817	12,653
122°F	13,314	10,667	13,707	10,997	14,452	11,561
129°F	12,685	10,164	13,059	10,478	13,770	11,015
<b>HEATING PERFORMANCE*</b>						
Outdoor Ambient DB	Indoor Ambient Temperature					
	68°F DB		73°F DB		80°F DB	
	57°F WB		61°F WB		67°F WB	
	TC	TC	TC	TC	TC	TC
-22°F	8,589	8,556	8,533	8,533	8,533	8,533
-13°F	9,760	9,724	9,698	9,698	9,698	9,698
-4°F	12,200	12,155	12,123	12,123	12,123	12,123
0°F	12,289	12,247	12,215	12,215	12,215	12,215
6°F	13,304	13,259	13,227	13,227	13,227	13,227
10°F	13,743	13,697	13,664	13,664	13,664	13,664
17°F	14,590	14,542	14,507	14,507	14,507	14,507
19°F	14,797	14,750	14,695	14,695	14,695	14,695
24°F	15,658	15,606	15,548	15,548	15,548	15,548
32°F	17,094	17,037	16,979	16,979	16,979	16,979
41°F	18,263	18,200	18,139	18,139	18,139	18,139
43°F	18,410	18,359	18,297	18,297	18,297	18,297
47°F	17,858	17,808	17,750	17,750	17,750	17,750
53°F	17,322	17,275	17,220	17,220	17,220	17,220
59°F	16,023	15,980	15,927	15,927	15,927	15,927
64°F	14,773	14,734	14,685	14,685	14,685	14,685
70°F	13,887	13,853	13,806	13,806	13,806	13,806
75°F	12,915	12,884	12,740	12,740	12,740	12,740
78°F	12,140	12,112	12,006	12,006	12,006	12,006

\* Maximum System Capacity  
 TC - Total Capacity(Btu/h)  
 SHC - Sensible Capacity(Btu/h)



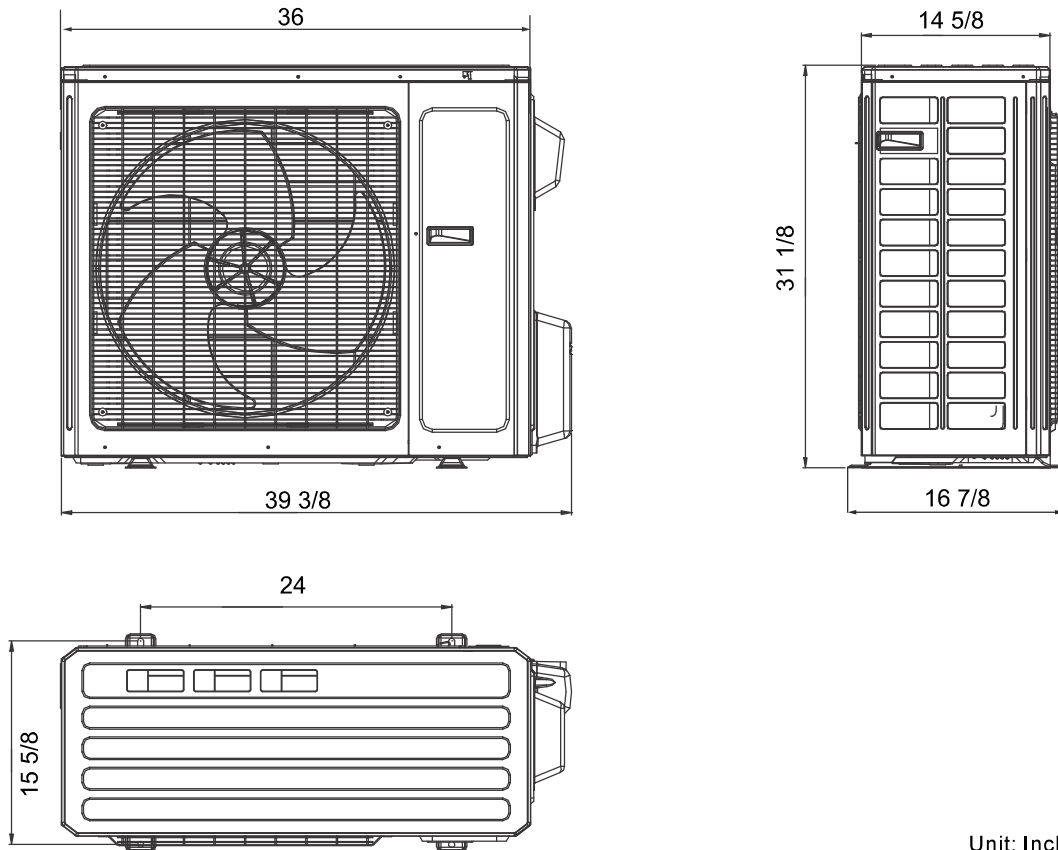
**INDOOR UNIT DIMENSIONS**



Unit: Inch



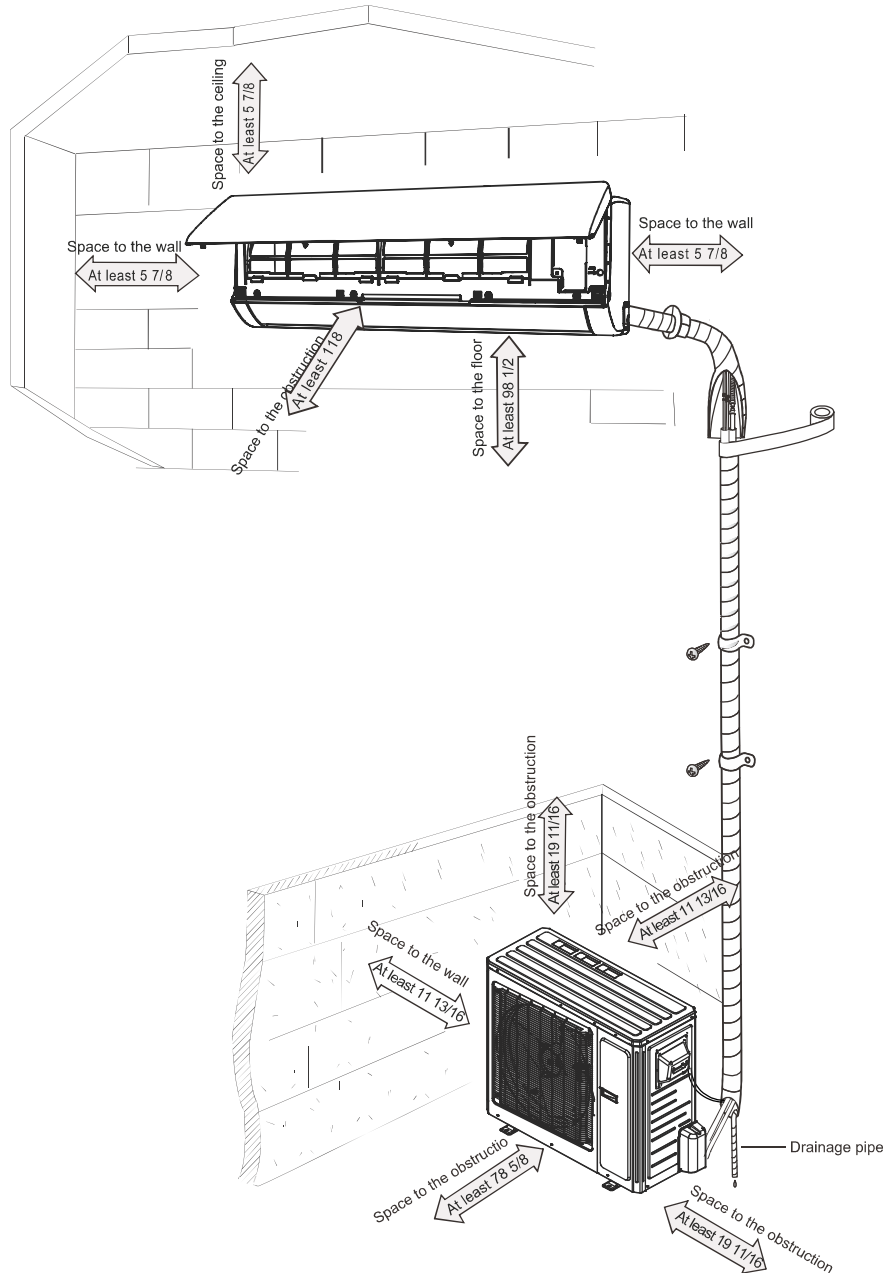
**OUTDOOR UNIT DIMENSIONS**



Unit: Inch



## INSTALLATION DIAGRAM



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