

SUBMITTAL DATA SHEET

Series Name: Star Pro Series
Model Number: CSS24CD(O)(29Q)/ASH24SG32(29J)

Air Handler Heat Pump System	
Location:	Approval:
Engineer:	Date:
Submitted to:	Construction:
Submitted by:	Unit Qty:
Reference:	Unit Designation (Model #):



INDOOR SPECIFICATION	
Indoor Air Flow (High/Low) (CFM)	830/420
Indoor Noise Level (High/Low) (dBA)	42/38
Dimension (W×D×H)	inch 17-33/64×21-1/32×45
	mm 445×534×1143
Package (W×D×H)	inch 20-55/64×26-37/64×46-17/64
	mm 530×675×1175
Net/Gross Weight	lbs 114/127
	kg 51.5/57.5

OUTDOOR SPECIFICATION	
Compressor Type	ROTARY
Compressor Model	KTM240D57UMT
Refrigerant	R32
Refrigerant Oil Charge(mL)	670
Refrigerant Oil	VG74
Outdoor Air Flow (Max) (CFM)	2000.0
Outdoor Noise Level (dBA)	55
Dimension (W×D×H)	inch 36-1/32×25-19/32×13-37/64
	mm 915×650×345
Package (W×D×H)	inch 40-5/32×28-15/16×17-1/8
	mm 1020×735×435
Net/Gross Weight	lbs 84/92
	kg 42/45.5

EFFICIENCY			
Cooling		Heating	
SEER2	17.7	HSPF2	8.5
EER2	10.4	COP	3.40

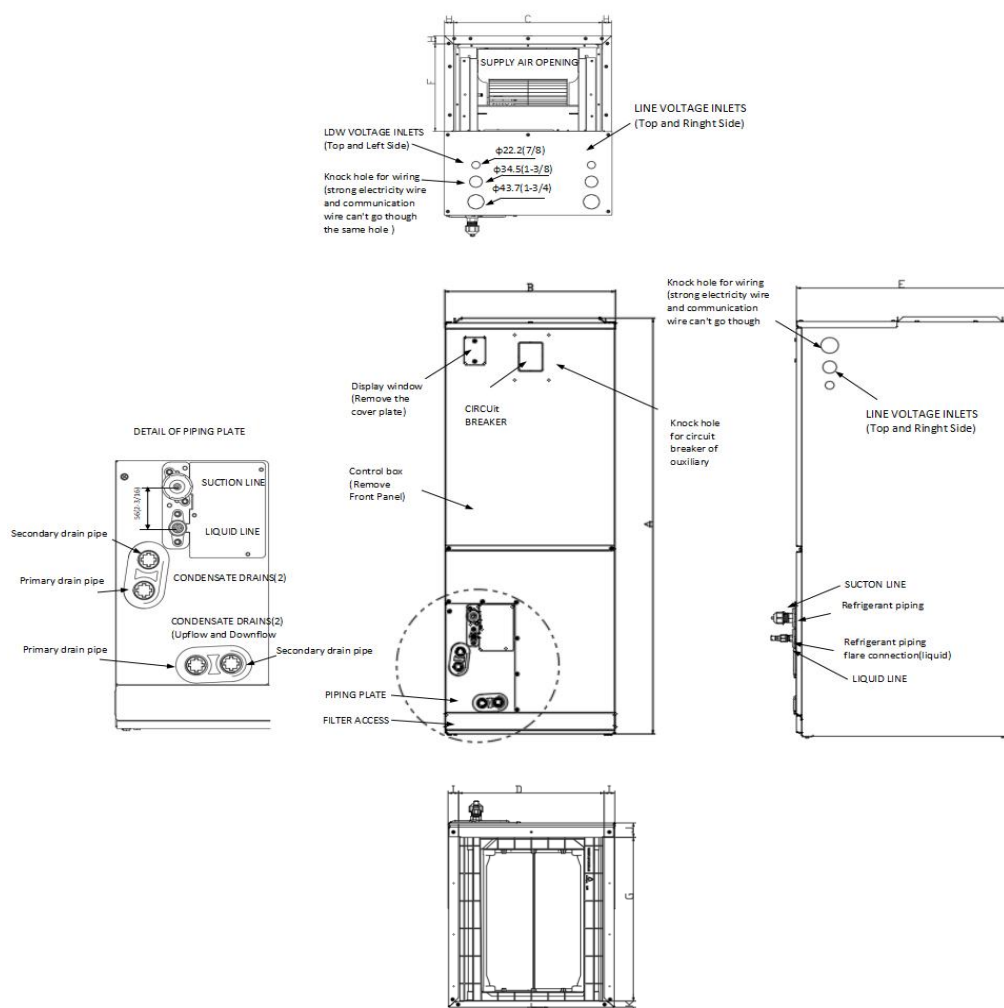
PERFORMANCE of Cooling	
Cooling (Btu/hr)	
Rated Capacity	24000
Min/Max Capacity	7200~27000
Standard Operating Range(*F/°C)	5~131(-15~55)
Rated Cooling Conditions: Indoor: 80°F DB/67°F WB Outdoor: 95°F DB/75°F WB	

PERFORMANCE of Heating	
Heating (Btu/hr)	
1. @ 47°F Rated	26000
2. @ 47°F Min/Max Capacity	7100~30000
3. @ 17°F Rated	15900
4. @ 5°F Rated: Capacity	20000
Standard Operating Range(*F/°C)	-4~75(-20~24)
1. Rated Heating Conditions: Indoor: 70°F DB/60°F WB Outdoor: 47°F DB/43°F WB	
2. Rated Heating Conditions: Indoor: 70°F DB/60°F WB Outdoor: 17°F DB/15°F WB	
3. Heating Conditions, Compressor Operating at Max. Frequency Indoor: 70°F DB/60°F WB Outdoor: 5°F DB/5°F WB	

ELECTRICAL	
Indoor Power Supply	208/230V, 60Hz, 1Ph
Indoor MCA 115V/(208/230V)	3.5
Indoor MOP	6
Outdoor Power Supply	208/230V, 60Hz, 1Ph
Outdoor MCA	20
Outdoor MOP	25
Communication Wiring	AWG 25×3 Shielded
Compressor RLA	9.45
Outdoor Fan Motor RLA	2
Outdoor Fan Motor W	75
Indoor Fan Motor RLA	2.6
Indoor Fan Motor W	249
System Power Input @ Cooling (W)	2308(530 ~ 2870)
System Power Input @ Heating (W)	2265(440 ~ 2730)
MCA: Min. circuit amps (A)	MOC: Max. over current protection (A)
RLA: Rated load amps (A)	W: Fan motor rated output (W)

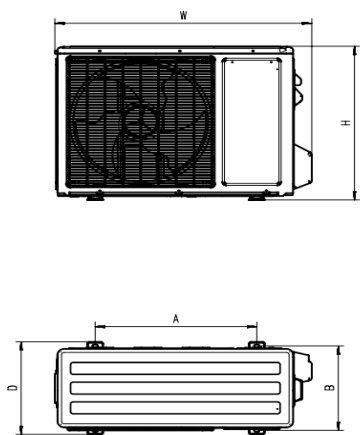
PIPING	
Throttle type(Indoor)	Piston
Throttle type(Outdoor)	Capillary
Liquid Size	9.52mm(3/8in)
Gas Size	19mm(3/4in)
Max. Piping Length(ft/m)	164(50)
Max. Height Difference(ft/m)	82(25)
Max. Pre-charged Length(ft/m)	24.6(7.5)
Refrigerant Pre-charged Amount(oz/kg)	58.2(1.65)
Additional Charge of Refrigerant((oz/ft)/(g/m))	0.52(48)
Connection Method	Flared

Indoor Unit Dimension



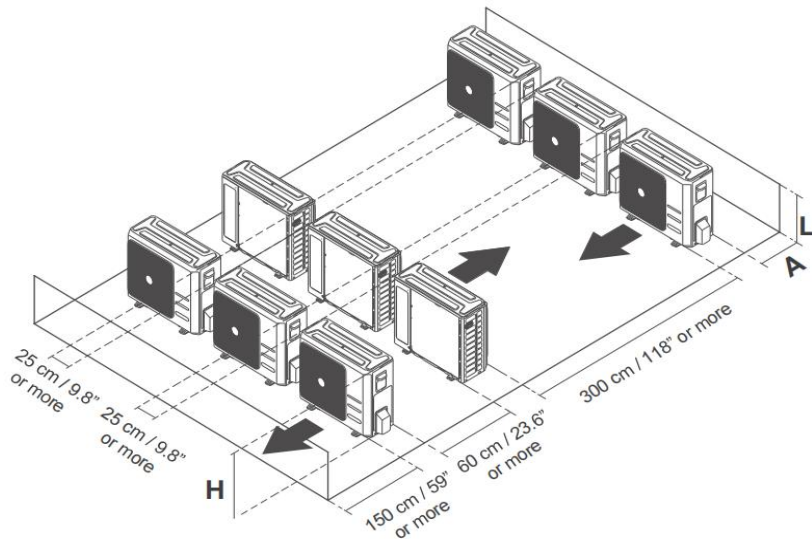
Dimensions		Model	18K/24K		30K/36K		48K/60K	
			inch	mm	inch	mm	inch	mm
A	Model Height		45-3/4	1162	49-49/64	1264	53-47/64	1365
B	Model width		17-41/64	448	21-9/64	537	24-39/64	625
C	Supply Air Opening width		15-5/8	397	19-9/64	486	22-19/32	574
D	Return Air Opening Width		15-25/64	391	18-47/64	476	22-23/64	568
E	Model Depth		21-7/64	536	21-7/64	536	21-7/64	536
F	Supply Air Opening Depth		10-9/32	261	10-9/32	261	10-9/32	261
G	Return Air Opening Depth		18-23/32	475.5	18-23/32	475.5	18-23/32	475.5
H	Supply Air Opening Clearance		15/16	24	15/16	24	15/16	24
I	Return Air Opening Side Clearance		1-1/8	28.5	1-1/8	28.5	1-1/8	28.5
J	Return Air Opening Front Clearance		1-21/32	42	1-21/32	42	1-21/32	42
K	Return Air Opening Back Clearance		45/64	18	45/64	18	45/64	18

Outdoor Unit Dimension

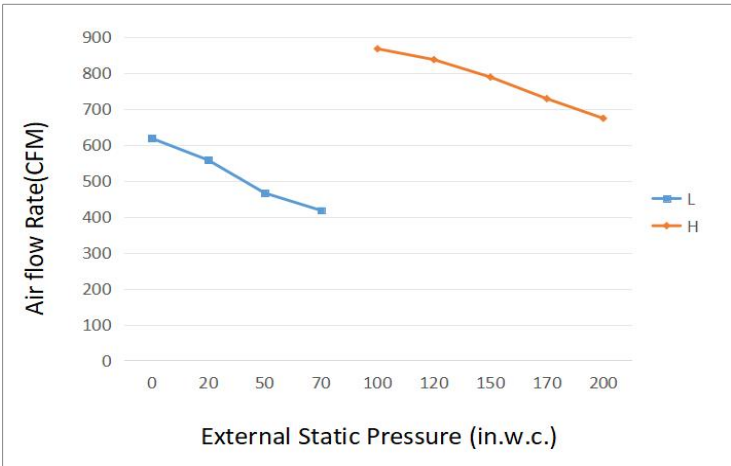


Dimensions \ Model		18K/24K		30K/36K/48K/60K	
		inch	mm	inch	mm
W	Model width	915	36-1/32	965	37-63/64
H	Model height	650	25-19/32	810	31-57/64
A	Distance between left and right foot bolts	605	23-13/16	635	25
B	Distance between front and rear foot bolts	357	14-1/16	405	15-15/16
D	Model depth	392	15-7/16	448	17-41/64

Installation Instruction For Outdoor Unit



Fan Performance For Indoor Unit



Features

- High efficiency and energy-saving, SEER2 up to 18.4
- Multi-position installation: horizontal(left or right), vertical(up or down)
- ECM fan motor with constant torque technology
- External static pressure up to 0.80 In.W.G
- 1 inch R4.2 fiberglass free insulation reduces condensation and boosts efficiency(optional)
- Optional Auxiliary heat kit up to 20kW
- Easy Maintenance
- Multiple control options available:
 - Wired controller with built-in WiFi
 - Third-Party 24V Thermostat
- Adaptive Control System
- Crankcase heater equipped as standard



OD_Model1	ID_Model1	Furnace	Brand	ARIREF	ID_Type	Stage	Est_AirFlow	ACHP	IsHSVTC												
CSS24CD(O)	ASIH24SG32		ComforStar		A	High	810	II													
OUTDOOR DB		59					63					67					71				
	IWB(°F)	72	74	76	78	80	72	74	76	78	80	72	74	76	78	80	72	74	76	78	80
85	TC ¹	22.30	22.37	22.43	22.50	22.57	23.70	23.77	23.84	23.91	23.99	25.10	25.18	25.25	25.33	25.40	26.70	26.78	26.86	26.94	27.02
	Sensible ²	18.48	20.14	21.79	22.30	22.30	14.97	16.62	18.27	19.92	21.58	11.37	13.02	14.67	16.32	17.98	7.78	9.43	11.08	12.73	14.39
	kW	1.97	1.98	1.98	1.99	1.99	1.99	2.00	2.00	2.01	2.01	2.01	2.01	2.02	2.02	2.03	2.03	2.03	2.04	2.04	2.05
90	TC ¹	21.60	21.66	21.73	21.79	21.86	23.00	23.07	23.14	23.21	23.28	24.50	24.57	24.65	24.72	24.80	26.00	26.08	26.16	26.23	26.31
	Sensible ²	18.14	19.79	21.45	21.60	21.60	14.65	16.30	17.95	19.61	21.26	11.11	12.76	14.42	16.07	17.73	7.50	9.15	10.80	12.46	14.11
	kW	2.08	2.08	2.09	2.09	2.10	2.10	2.10	2.11	2.11	2.12	2.12	2.12	2.13	2.13	2.14	2.14	2.15	2.15	2.15	2.16
95	TC ¹	21.00	21.06	21.13	21.19	21.25	22.40	22.47	22.53	22.60	22.67	23.80	23.87	23.94	24.01	24.09	25.30	25.38	25.45	25.53	25.60
	Sensible ²	17.85	19.50	21.00	21.00	21.00	14.37	16.03	17.68	19.33	20.99	10.81	12.46	14.11	15.77	17.42	7.23	8.88	10.53	12.18	13.84
	kW	2.19	2.19	2.20	2.20	2.21	2.21	2.21	2.22	2.22	2.23	2.23	2.23	2.24	2.24	2.25	2.25	2.25	2.26	2.26	2.27
100	TC ¹	19.32	19.38	19.44	19.49	19.55	20.61	20.67	20.73	20.79	20.86	21.90	21.96	22.03	22.09	22.16	23.28	23.35	23.42	23.49	23.56
	Sensible ²	16.07	17.55	18.90	18.90	18.90	12.93	14.43	15.91	17.40	18.89	9.73	11.21	12.70	14.19	15.68	6.51	7.99	9.48	10.96	12.46
	kW	2.01	2.02	2.02	2.02	2.03	2.03	2.04	2.04	2.05	2.05	2.05	2.06	2.06	2.07	2.07	2.07	2.08	2.08	2.09	2.09
105	TC ¹	17.77	17.83	17.88	17.93	17.99	18.96	19.02	19.07	19.13	19.19	20.14	20.20	20.27	20.33	20.39	21.41	21.48	21.54	21.61	21.67
	Sensible ²	14.46	15.80	17.01	17.01	17.01	11.64	12.98	14.32	15.66	17.00	8.76	10.09	11.43	12.77	14.11	5.86	7.19	8.53	9.87	11.21
	kW	1.85	1.86	1.86	1.86	1.87	1.87	1.87	1.88	1.88	1.89	1.89	1.89	1.90	1.90	1.90	1.91	1.91	1.92	1.92	1.92
115	TC ¹	16.35	16.40	16.45	16.50	16.55	17.44	17.49	17.55	17.60	17.65	18.53	18.59	18.64	18.70	18.76	19.70	19.76	19.82	19.88	19.94
	Sensible ²	13.01	14.22	15.31	15.31	15.31	10.48	11.69	12.89	14.09	15.30	7.88	9.08	10.29	11.50	12.70	5.27	6.47	7.68	8.88	10.09
	kW	1.70	1.71	1.71	1.71	1.72	1.72	1.72	1.73	1.73	1.73	1.74	1.74								

Model	Heating		Outdoor conditions (DB)										
	Indoor Conditions		5°F	10°F	17°F	20°F	25°F	32°F	35°F	40°F	47°F	50°F	57°F
ASH24SG32 CSS24CD(O) (208-230V)	DB		-15.5°C	-12.2°C	-8.3°C	-6.7°C	-3.9°C	0°C	1.7°C	4.4°C	8.3°C	10°C	13.9°C
	60°F	TC	18.53	19.32	20.10	21.38	22.65	23.92	25.20	26.47	27.74	29.02	30.29
	(15.6°C)	Input	2.58	2.47	2.40	2.40	2.40	2.40	2.41	2.41	2.41	2.41	2.42
	65°F	TC	17.99	18.76	19.52	20.75	21.99	23.23	24.46	25.70	26.93	28.17	29.41
	(18.3°C)	Input	2.64	2.52	2.45	2.45	2.45	2.45	2.46	2.46	2.46	2.46	2.46
	70°F	TC	17.13	18.21	18.64	20.15	21.35	22.55	23.75	24.95	26.15	27.35	28.55
	(21.1°C)	Input	2.64	2.57	2.49	2.37	2.24	2.37	2.49	2.53	2.51	2.51	2.52
	75°F	TC	16.95	17.66	18.38	19.55	20.71	21.87	23.04	24.20	25.37	26.53	27.69
	(23.9°C)	Input	2.74	2.62	2.54	2.55	2.55	2.55	2.56	2.56	2.56	2.56	2.57