

SUBMITTAL DATA SHEET

Series Name: Star Pro Series
Model Number: CSS30CD(O)(29R)/ASH30SG32(29K)

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)	950/520
Indoor Noise Level (High/Low) (dBA)	40/36
Dimension (W×D×H)	inch 21-1/32×21-1/32×49-7/32
	mm 534×534×1245
Package (W×D×H)	inch 24-13/32×26-37/64×50-13/64
	mm 620×675×1275
Net/Gross Weight	lbs 137/151
	kg 62/68.5

OUTDOOR SPECIFICATION	
Compressor Type	TWIN-ROTARY
Compressor Model	KTM240D57UMT
Refrigerant	R32
Refrigerant Oil Charge(mL)	670
Refrigerant Oil	VG74
Outdoor Air Flow (Max) (CFM)	2650.0
Outdoor Noise Level (dBA)	56
Dimension (W×D×H)	inch 37-63/64×31-57/64×15-3/4
	mm 965×810×400
Package (W×D×H)	inch 42-1/8×34-41/64×20-43/64
	mm 1070×880×525
Net/Gross Weight	lbs 132/140
	kg 60/63.5

EFFICIENCY			
Cooling		Heating	
SEER2	17.0	HSPF2	8.5
EER2	11.2	COP	3.55

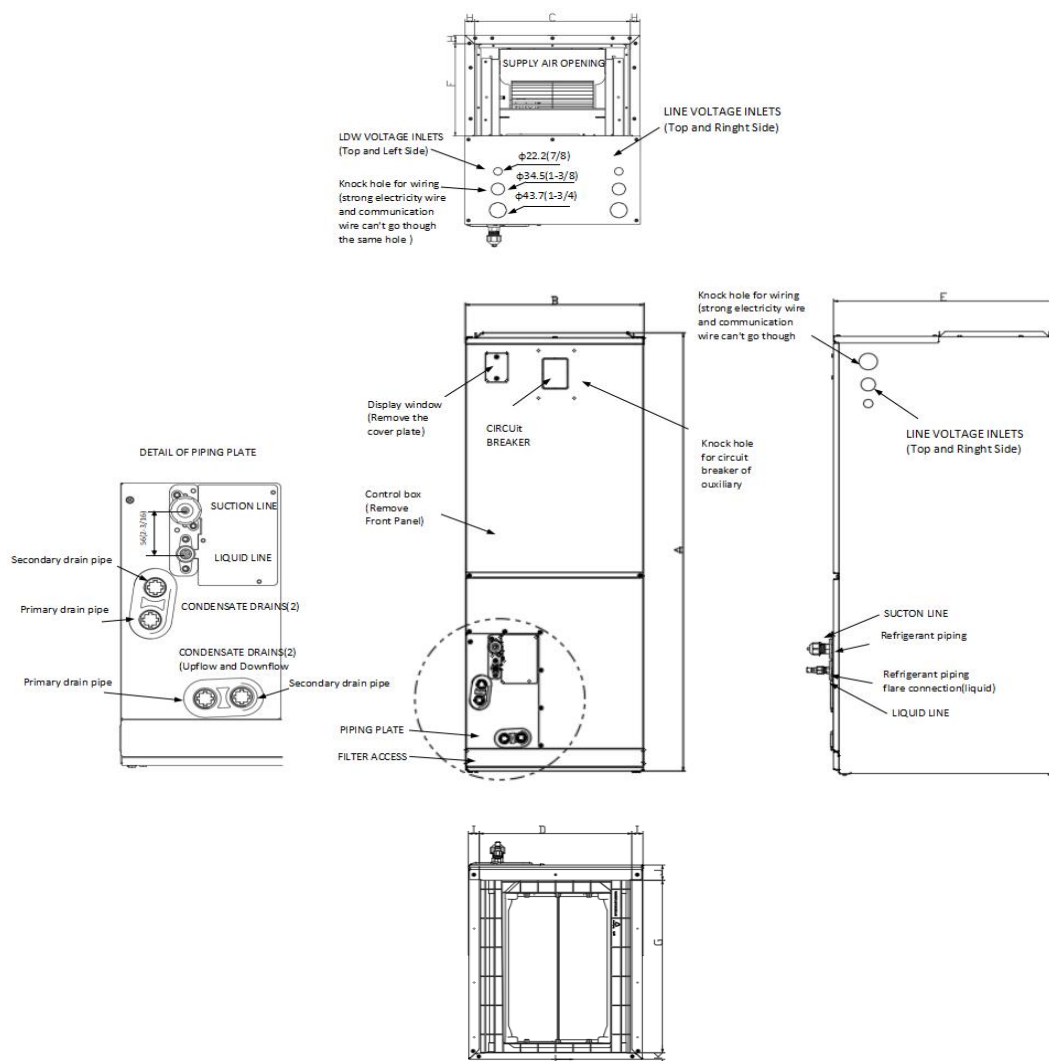
PERFORMANCE of Cooling	
Cooling (Btu/hr)	
Rated Capacity	30000
Min/Max Capacity	10400~34000
Standard Operating Range(°F/°C)	5~131(-15~55)
Rated Cooling Conditions: Indoor: 80°F DB/67°F WB Outdoor: 95°F DB/75°F WB	

PERFORMANCE of Heating	
Heating (Btu/hr)	
1. @ 47°F Rated	31000
2. @ 47°F Min/Max Capacity	6400~32000
3. @ 17°F Rated	19200
4. @ 5°F Rated: Capacity	23500
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)	5
Indoor MOP	6
Outdoor Power Supply	208/230V,60Hz,1Ph
Outdoor MCA	22.5
Outdoor MOP	25
Communication Wiring	AWG 25×3 Shielded
Compressor RLA	9.45
Outdoor Fan Motor RLA	2.5
Outdoor Fan Motor W	150
Indoor Fan Motor RLA	3.6
Indoor Fan Motor W	375
System Power Input @ Cooling (W)	2679(735 ~ 3230)
System Power Input @ Heating (W)	2550(455 ~2550)
MCA: Min. circuit amps (A)	MOCP: Max. over current protection (A)
RLA: Rated load amps (A)	W: Fan motor rated output (W)

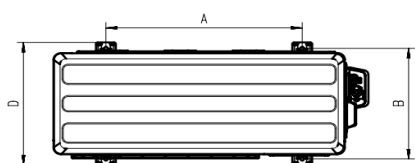
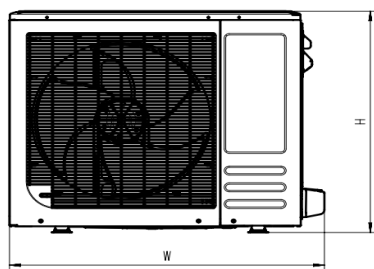
PIPING	
Throttle type(Indoor)	Piston
Throttle type(Outdoor)	Capillary
Liquid Size	9.52mm(3/8in)
Gas Size	19mm(3/4in)
Max. Piping Length(ft/m)	164(50)
Max. Height Difference(ft/m)	82(25)
Max. Pre-charged Length(ft/m)	24.6(7.5)
Refrigerant Pre-charged Amount(oz/kg)	84.66(2.4)
Additional Charge of Refrigerant((oz/ft)/(g/m))	0.52(48)
Connection Method	Flared

Indoor Unit Dimension



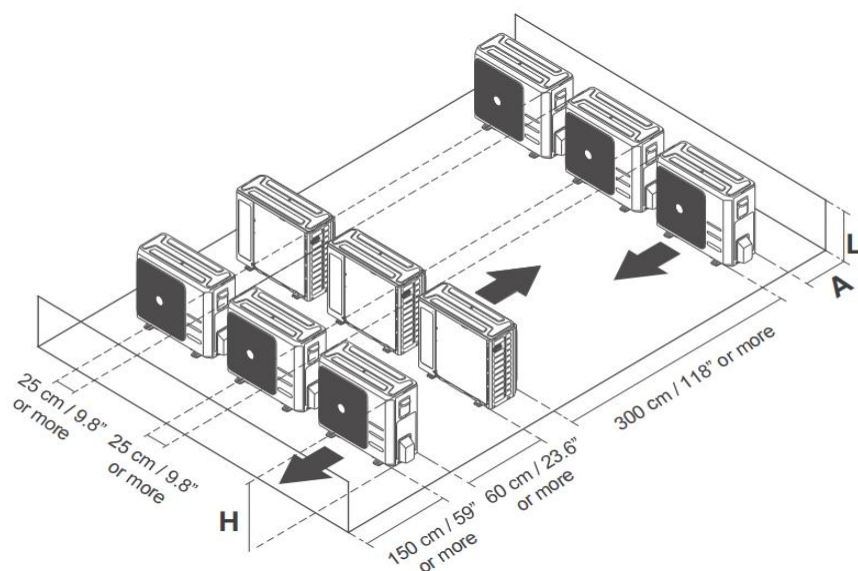
Dimensions		Model		18K/24K		30K/36K		48K/60K	
				inch	mm	inch	mm	inch	mm
A	Model Height			45-3/4	1162	49-49/64	1264	53-47/64	1365
B	Model width			17-41/64	448	21-9/64	537	24-39/64	625
C	Supply Air Opening width			15-5/8	397	19-9/64	486	22-19/32	574
D	Return Air Opening Width			15-25/64	391	18-47/64	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

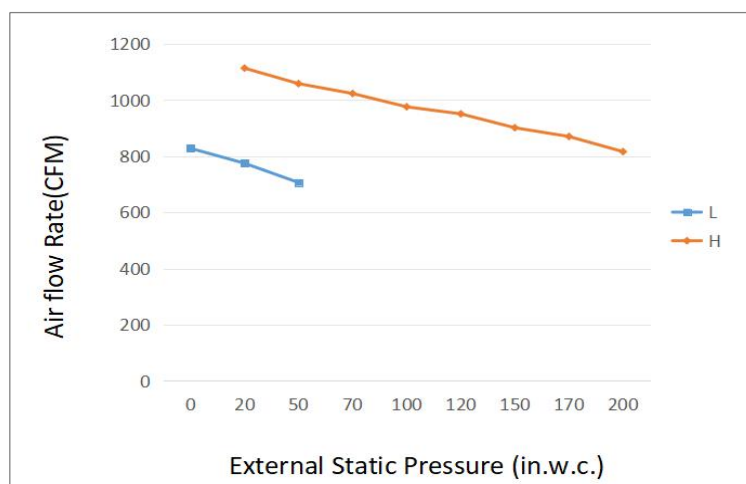


Dimensions \ Model		18K/24K		30K/36K/48K/60K	
		inch	mm	inch	mm
W	Model width	915	36-1/32	965	37-63/64
H	Model height	650	25-19/32	810	31-57/64
A	Distance between left and right foot bolts	605	23-13/16	635	25
B	Distance between front and rear foot bolts	357	14-1/16	405	15-15/16
D	Model depth	392	15-7/16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

ComfortStar®

Air Conditioning & Heating Products

Performance Capacity Ratings

COOLING PERFORMANCE DATA

OD_Model	ID_Model	Furnace	Brand	ARIREF	ID_Type	Stage	Est_AirF _{low}	ACHP	IsHSVTC												
CSS30CD(O)	ASH30SG32		ComfortStar		A	High	900	H													
OUTDOOR DB	IWB(T)	59					63					67					71				
	IDB (°F)	72	74	76	78	80	72	74	76	78	80	72	74	76	78	80	72	74	76	78	80
85	TC ¹	28.40	28.49	28.57	28.66	28.74	30.30	30.39	30.48	30.57	30.67	32.20	32.30	32.39	32.49	32.59	34.30	34.40	34.51	34.61	34.71
	Sensible ²	23.99	26.20	28.40	28.40	28.40	19.36	21.56	23.77	25.97	28.18	14.61	16.81	19.02	21.22	23.43	9.86	12.06	14.26	16.47	18.67
	kW	2.52	2.52	2.52	2.53	2.53	2.53	2.53	2.54	2.54	2.54	2.54	2.55	2.55	2.55	2.55	2.56	2.56	2.56	2.56	2.57
90	TC ¹	27.40	27.48	27.56	27.65	27.73	29.10	29.19	29.27	29.36	29.45	30.90	30.99	31.09	31.18	31.27	32.80	32.90	33.00	33.10	33.20
	Sensible ²	22.90	24.97	27.04	27.40	27.40	18.48	20.55	22.62	24.70	26.77	14.01	16.08	18.15	20.22	22.30	9.49	11.56	13.62	15.70	17.77
	kW	2.58	2.59	2.59	2.60	2.60	2.61	2.61	2.62	2.62	2.63	2.63	2.64	2.64	2.65	2.61	2.61	2.62	2.62	2.63	2.63
95	TC ¹	26.60	26.68	26.76	26.84	26.92	28.40	28.49	28.57	28.66	28.74	30.10	30.19	30.28	30.37	30.57	32.00	32.10	32.19	32.29	32.39
	Sensible ²	22.51	24.58	26.60	26.60	26.60	18.16	20.23	22.31	24.38	26.45	13.66	15.73	17.80	19.88	21.95	9.17	11.24	13.31	15.38	17.46
	kW	2.59	2.59	2.60	2.60	2.61	2.61	2.62	2.62	2.63	2.63	2.64	2.64	2.65	2.65	2.66	2.67	2.67	2.68	2.68	2.69
100	TC ¹	25.90	25.98	26.06	26.13	26.21	27.60	27.68	27.77	27.85	27.93	29.30	29.39	29.48	29.56	29.65	31.10	31.19	31.29	31.38	31.47
	Sensible ²	22.17	24.24	25.90	25.90	25.90	17.80	19.87	21.94	24.02	26.09	13.33	15.40	17.47	19.54	21.62	8.81	10.88	12.95	15.02	17.10
	kW	2.64	2.64	2.65	2.65	2.66	2.66	2.67	2.68	2.68	2.69	2.69	2.70	2.70	2.71	2.71	2.72	2.72	2.73	2.73	2.74
105	TC ¹	25.10	25.18	25.25	25.33	25.40	26.70	26.78	26.86	26.94	27.02	28.40	28.49	28.57	28.66	28.74	30.20	30.29	30.38	30.47	30.56
	Sensible ²	21.78	23.85	25.10	25.10	25.10	17.39	19.46	21.54	23.61	25.69	12.95	15.02	17.09	19.16	21.24	8.47	10.54	12.61	14.68	16.76
	kW	2.46	2.46	2.47	2.47	2.48	2.48	2.49	2.49	2.50	2.50	2.51	2.51	2.52	2.52	2.53	2.53	2.54	2.54	2.55	2.55
115	TC ¹	22.08	22.14	22.21	22.28	22.34	23.57	23.64	23.71	23.78	23.86	24.98	25.06	25.13	25.21	25.37	26.56	26.64	26.72	26.80	26.88
	Sensible ²	21.39	23.46	24.30	24.30	24.30	17.03	19.10	21.18	23.25	25.33	12.58	14.65	16.72	18.79	20.87	8.12	10.19	12.26	14.33	16.41
	kW	2.26	2.27	2.27	2.27	2.28	2.28	2.29	2.29	2.30	2.30	2.31	2.31	2.32	2.32	2.32	2.33	2.33	2.34	2.34	2.35

HEATING PERFORMANCE DATA

Model	Heating		Outdoor conditions (DB)										
	Indoor Conditions DB		5°F	10°F	17°F	20°F	25°F	32°F	35°F	40°F	47°F	50°F	57°F
			-15°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
ASH30SG32 CSS30CD(O) (208-230V)	60°F (15.6°C)	TC	21.20	22.94	24.69	26.32	27.95	29.59	31.22	32.86	34.49	36.12	37.76
		Input	2.82	2.73	2.67	2.64	2.60	2.58	2.54	2.55	2.60	2.54	2.48
	65°F (18.3°C)	TC	20.58	22.27	23.97	25.55	27.14	28.73	30.31	31.90	33.49	35.07	36.66
		Input	2.90	2.82	2.74	2.71	2.67	2.64	2.62	2.61	2.66	2.59	2.54
	70°F (21.1°C)	TC	19.36	21.63	22.74	24.81	26.35	27.89	29.43	30.97	31.33	34.05	35.59
		Input	2.84	2.89	2.86	2.78	2.75	2.72	2.67	2.49	2.53	2.66	2.59
	75°F (23.9°C)	TC	19.30	20.11	20.81	21.31	21.60	22.18	22.57	26.40	31.09	31.59	32.57
		Input	3.09	2.98	2.89	2.88	2.83	2.79	2.77	2.76	2.82	2.74	2.68