ComfortStar®

Air Conditioning & Heating Products

STAR PRO™ SERIES

24 VOLT HEAT PUMP SYSTEMS

RESIDENTIAL PRODUCTS CATALOG

CHH Series

2-5 TONS

HI-HEAT -22°F LOW AMBIENT TEMP

R32+ ECO FRIENDLY REFRIGERANT

UP TO 17.3 SEER2



Comfort, it's in our name.

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STAR PRO™ SERIES

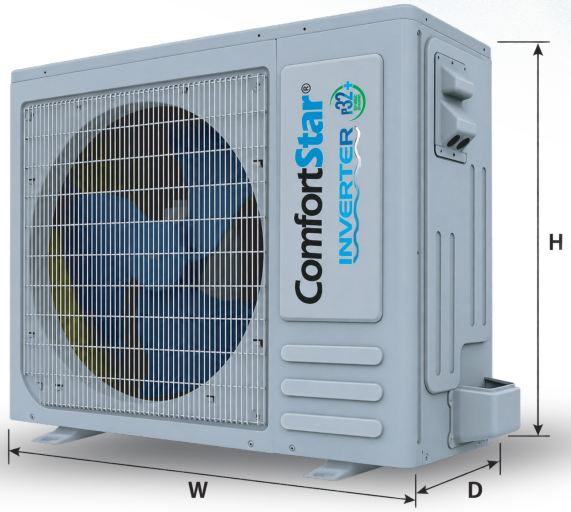
CHH Series

Central Inverter Heat Pump System

HI-HEAT -22°F LOW AMBIENT TEMP

r32+ ECO FRIENDLY REFRIGERANT

24V Control Cold-Climate Performance



DIMENSIONS

Model	W(in)	D(in)	H(in)	Weight(lb)
CHH32-24	37-13/64	15-23/64	25-19/32	92.6
CHH32-36	39-9/16	17-23/32	31-57/64	152.1
CHH32-48	42-23/32	19-31/64	33-55/64	227.1
CHH32-60	42-23/32	19-31/64	33-55/64	231.5

FEATURES

Extreme Cold-Climate Heating
Designed to operate in outdoor temperatures as low as *–22°F (–30°C).*

24V Thermostat Compatibility
Designed for integration with compatible standard 24V heat pump thermostats.

Inverter Compressor Technology
Variable-speed operation adjusts capacity to heating and cooling demands for efficient, consistent comfort.

Compact Side-Discharge Design
Space-saving footprint, occupying up to 50% less space than conventional outdoor condensing units.

Built-In Self-Diagnostics
Helps simplify troubleshooting and system maintenance.

Quiet Operation
Engineered for low-noise performance, with sound levels as low as 54 dBA.

NEEP Listed
Recognized for cold-climate heat pump performance.

Flexible Indoor Unit Compatibility
Can be paired with compatible air handlers or A-coils equipped with a TXV.

Replacement-Friendly Installation
Designed to simplify system upgrades using compatible existing refrigerant line sets and control wiring.

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CHH Series

Central Inverter Heat Pump System

HI-HEAT -22°F LOW AMBIENT TEMP

r32+ ECO FRIENDLY REFRIGERANT



SPECIFICATIONS

Outdoor Unit			CHH32-24	CHH32-36	CHH32-48	CHH32-60
Power Supply		V, Ph, Hz	208/230V, 1Ph, 60Hz	208/230V, 1Ph, 60Hz	208/230V, 1Ph, 60Hz	208/230V, 1Ph, 60Hz
Cooling	Capacity	Btu/h	23000	36000	48000	54000
	SEER2	Btu/h/W	17.3	17.1	17.1	17
	EER2	Btu/h/W	10	10	10.2	9
Heating	Capacity	Btu/h	25000	37000	50000	56500
	HSPF2-5	Btu/h/W	10.1	10.1	9.3	9.1
Heating @ 5°F (-15°C)	Capacity	Btu/h	25000	42500	48000	53000
	COP	W/W	1.82	1.8	1.85	1.8
Heating @ 17°F (-8.3°C)	Capacity	Btu/h	20000	31000	38000	45000
Heating @ -4°F (-20°C)	Capacity	Btu/h	17800	35000	40700	46700
Heating @ -13°F (-25°C)	Capacity	Btu/h	14800	30000	34200	41600
Heating @ -22°F (-30°C)	Capacity	Btu/h	12000	23000	25000	26000
Outdoor Minimum Circuit Ampacity		A	19	29	38	40
Outdoor Max. Fuse		A	20	30	40	40
Outdoor Air Flow		CFM	1824.6	2942.9	3413.8	3766.9
Outdoor Noise Level		dB(A)	60	62.5	65	65
Connecting Wiring			AWG 20-2	AWG 20-2	AWG 20-2	AWG 20-2
Throttle Type			EXV	EXV	EXV	EXV
Compressor	Type		DC Inverter Rotary	DC Inverter Rotary	DC Inverter Rotary	DC Inverter Rotary
	Model		EKPM240D89UMTR	EKTF400D64UMTR	EKPQ420D31SMUR	EKPQ420D31SMUR
	Rated Power Input	W	2045	3265	3560	3560
Outdoor Fan Motor	Type		BLDC Motor	BLDC Motor	BLDC Motor	BLDC Motor
	Power Input	W	75	150	180	150
Outdoor Coil	Number of Rows		2	3	3	3
	Tube Od	inch	9/32	9/32	9/32	9/32
	Number Of Tubes		28	54	57	57
Refrigeration	Type / Factory Charge	oz	R32 / 58.2	R32 / 95.2	R32 / 134	R32 / 134
	Outdoor Additional Charge	oz/ft	0.52	0.52	0.52	0.52
	N.A. Design Pressure	PSI	609 / 174	609 / 174	609 / 174	609 / 174
Refrigerant Piping	Liquid / Vapor Valve Size	inch	(3/8) / (3/4)	(3/8) / (3/4)	(3/8) / (3/4)	(3/8) / (3/4)
	Max. Refrigerant Pipe Length	ft	164	246	246	246
	Max. Height Difference	ft	82	98	98	98
Ambient Temp.	Cooling	°F	5~122	5~122	5~122	5~122
	Heating	°F	-22~75	-22~75	-22~75	-22~75

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STAR PRO™ SERIES

ASH32 Series

Universal Multi-Position Air Handler

HI-HEAT -22°F LOW AMBIENT TEMP

R32+ ECO FRIENDLY REFRIGERANT



DIMENSIONS

Model	W(in)	D(in)	H(in)	Weight(lb)
ASH24SG3	17-33/64	21-1/32	45-5/64	114
ASH36SG3	21-1/32	21-1/32	49-1/64	137
ASH48SG3	24-31/64	21-1/32	52-63/64	165
ASH60SG3	24-31/64	21-1/32	52-63/64	165

FEATURES

Multi-Position Installation
Supports upflow, downflow, horizontal left, and horizontal right configurations.

Compact Design
Space-saving cabinet for flexible installation.

24V Thermostat Compatibility
Compatible with standard 24V heat pump thermostats.

Wi-Fi Enabled
Supports wireless connectivity.

Constant Torque ECM Motor
Automatically adjusts torque for consistent airflow performance.

Refrigerant Line Set Compatibility
Designed for use with compatible existing refrigerant line sets.

Optional Electric Heat Kits
Field-installed auxiliary heating available from 5kW to 20kW.

Indoor Air Quality Compatibility
Supports integration with compatible UV lamps and humidifiers.

Easy Maintenance
Designed for convenient servicing and accessibility.

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ASH32 Series

Universal Multi-Position Air Handler

HI-HEAT -22°F LOW AMBIENT TEMP

R32+ ECO FRIENDLY REFRIGERANT



SPECIFICATIONS

Indoor Unit			ASH24SG32	ASH36SG32	ASH48SG32	ASH48SG32
Power Supply	Rated Voltage	V, Ph, Hz	208/230V, 1Ph, 60Hz	208/230V, 1Ph, 60Hz	208/230V, 1Ph, 60Hz	208/230V, 1Ph, 60Hz
Cooling	Capacity	Btu/h	23000	36000	48000	54000
Heating	Capacity	Btu/h	25000	37000	50000	56500
Indoor Minimum Circuit Ampacity		A	3.5	5	7	7
Indoor Max. Fuse		A	6	6	10	10
Indoor Fan Motor	Motor Type		ECM Motor	ECM Motor	ECM Motor	ECM Motor
	Power Input	W	250	375	560	560
Indoor Air Flow (H/L)		CFM	805/450	980/620	1415/1000	1620/1030
Indoor Noise Level (H/L)		dB(A)	42/38	50/42.5	53/46	53/46
External Static Pressure		in. w.g.	0.8	0.8	0.8	0.8
N.A. Design Pressure		PSI	174/609	174/609	174/609	174/609
Indoor Coil	Number Of Rows		3	4	5	5
	Tube Od	inch	9/32	9/32	9/32	9/32
	Number Of Tubes		27×2	44×2	65×2	65×2
Refrigerant Piping	Liquid Side/Gas Side	inch	(3/8) / (3/4)	(3/8) / (3/4)	(3/8) / (3/4)	(3/8) / (3/4)
Connecting Wiring			485: AWG 25*3 Shielded, 24V: AWG 20	485: AWG 25*3 Shielded, 24V: AWG 20	485: AWG 25*3 Shielded, 24V: AWG 20	485: AWG 25*3 Shielded, 24V: AWG 20
Communication Type			24V / 485	24V / 485	24V / 485	24V / 485
Throttle Type			TXV	TXV	TXV	TXV
Setting Temperature		°F	62~90	62~90	62~90	62~90

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CHH & ASH32 Series

Heat Pump + Air Handler Systems

HI-HEAT -22°F LOW AMBIENT TEMP

R32+ ECO FRIENDLY REFRIGERANT



SPECIFICATIONS

Outdoor Unit			CHH32-24	CHH32-36	CHH32-48	CHH32-60
Indoor Unit			ASH24SG32	ASH36SG32	ASH48SG32	ASH60SG32
Power Supply	Rated Voltage	V, Ph, Hz	208/230V, 1Ph, 60Hz	208/230V, 1Ph, 60Hz	208/230V, 1Ph, 60Hz	208/230V, 1Ph, 60Hz
Cooling	Capacity	Btu/h	23000	36000	48000	54000
	SEER2	Btu/h/W	17.3	17.1	17.1	17
	EER2	Btu/h/W	10	10	10.2	9
Heating	Capacity	Btu/h	25000	37000	50000	56500
	HSPF2-4	Btu/h/W	10.1	10.1	9.30	9.10
	HSPF2-5	Btu/h/W	8.0	8.0	7.60	7.50
Hyper Heat @ 5°F (-15°C)	Capacity	Btu/h	25000	42500	48000	53000
	COP	W/W	1.82	1.8	1.85	1.8
Hyper Heat @ 17°F (-8.3°C)	Capacity	Btu/h	20000	31000	38000	45000
Hyper Heat @ -4°F (-20°C)	Capacity	Btu/h	17800	35000	40700	46700
Hyper Heat @ -13°F (-25°C)	Capacity	Btu/h	14800	30000	34200	41600
Hyper Heat @ -22°F (-30°C)	Capacity	Btu/h	12000	23000	25000	26000
Indoor Minimum Circuit Ampacity		A	3.5	5	7	7
Indoor Max. Fuse		A	6	6	10	10
Indoor Air Flow (H/L)		CFM	805/450	980/620	1415/1000	1620/1030
Indoor Noise Level (H/L)		dB(A)	42/38	50/42.5	53/46	53/46
N.A. Design Pressure		PSI	174/609	174/609	174/609	174/609
Refrigerant Piping	Liquid Side/Gas Side	Inch	(3/8) / (3/4)	(3/8) / (3/4)	(3/8) / (3/4)	(3/8) / (3/4)
Connecting Wiring			485: AWG 25*3 Shielded, 24V: AWG 20	485: AWG 25*3 Shielded, 24V: AWG 20	485: AWG 25*3 Shielded, 24V: AWG 20	485: AWG 25*3 Shielded, 24V: AWG 20
Communication Type			24V / 485	24V / 485	24V / 485	24V / 485
Throttle Type			TXV	TXV	TXV	TXV
Setting Temperature		°F	62~90	62~90	62~90	62~90

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