

ComfortStar®

Air Conditioning and Heating

SPECIFICATION sheet

MHH



Split System Heat Pump

Standard features:

- R410a system
- High efficiency compressor
- Compact design for easy installation and transportation
- Ultra quiet
- Factory installed liquid line filter drier
- Pre-charged R410a good for 25' of lineset
- Brass liquid and suction service valves with sweat connections
- Contactor with lug connections
- Ground lug connection
- Terminal block provided for low voltage connections
- High and low pressure switch included
- Crankcase heater is included
- Copper Tube-Aluminum Fin Coil used on all models
- ARI certified
- ETL listed

Cabinet features:

- Heavy gauge galvanized steel with gray powder paint finish
- Fully louvered removable coil guard to protect condenser surface
- Easy access to service valves and electrical connections
- Easy access to fan motor without disconnecting wires

13 SEER
High Efficiency
R410a



SPECIFICATION sheet

MHH



7 Models

MHH18-410

MHH24-410

MHH30-410

MHH36-410

MHH42-410

MHH48-410

MHH60-410

13 SEER

High Efficiency

R410a

General Terms of Limited Warranty

ComfortStar USA warrants that our products conform to the manufacturer specifications and will be free of defects in material and workmanship under normal use and maintenance.

For complete details of the limited warranty, including applicable terms and conditions, see your local distributor or contact the manufacturer for a copy.



Model Number Identification

<u>MHH</u>	<u>18</u>	<u>410</u>
13 SEER series HEAT PUMP	capacity 18,000 (Btu/h)	R410a

Before proceeding with installation, refer to installation instructions packaged with each model, as well as complying with all federal, state, provincial, and local codes, regulations and practices.

Condensing Unit Refrigerant Line Set Information

Suction line Sizing

Unit Size		1 1/2 Ton	2 Ton	2 1/2 Ton	3 Ton	3 1/2 Ton	4 Ton	5 Ton
Suction Line Connection Size	standard	3/4" I.D.	3/4" I.D.	3/4" I.D.	3/4" I.D.	3/4" I.D.	7/8" I.D.	7/8" I.D.
Suction Line Run - Feet	optional	5/8"	5/8"	5/8"	5/8"	5/8"	3/4"	1 1/8"
		Capacity Factor						
25'	standard	1.00	1.00	1.00	1.00	1.00	1.00	0.99
	optional	1.00	1.00	1.00	1.00	1.00	1.00	1.00
50'	standard	0.98	0.98	0.98	0.99	0.98	0.98	0.98
	optional	0.97	0.97	0.97	0.97	0.98	0.98	0.99
100'	standard	0.95	0.95	0.96	0.97	0.97	0.97	0.94
	optional	0.94	0.94	0.94	0.94	0.95	0.95	0.98
150'	standard	0.92	0.92	0.93	0.96	0.96	0.96	0.90
	optional	0.90	0.90	0.90	0.90	0.91	0.92	0.97

Notes: * Standard size
Using suction line larger than shown in chart will result in poor oil return and is not recommended.

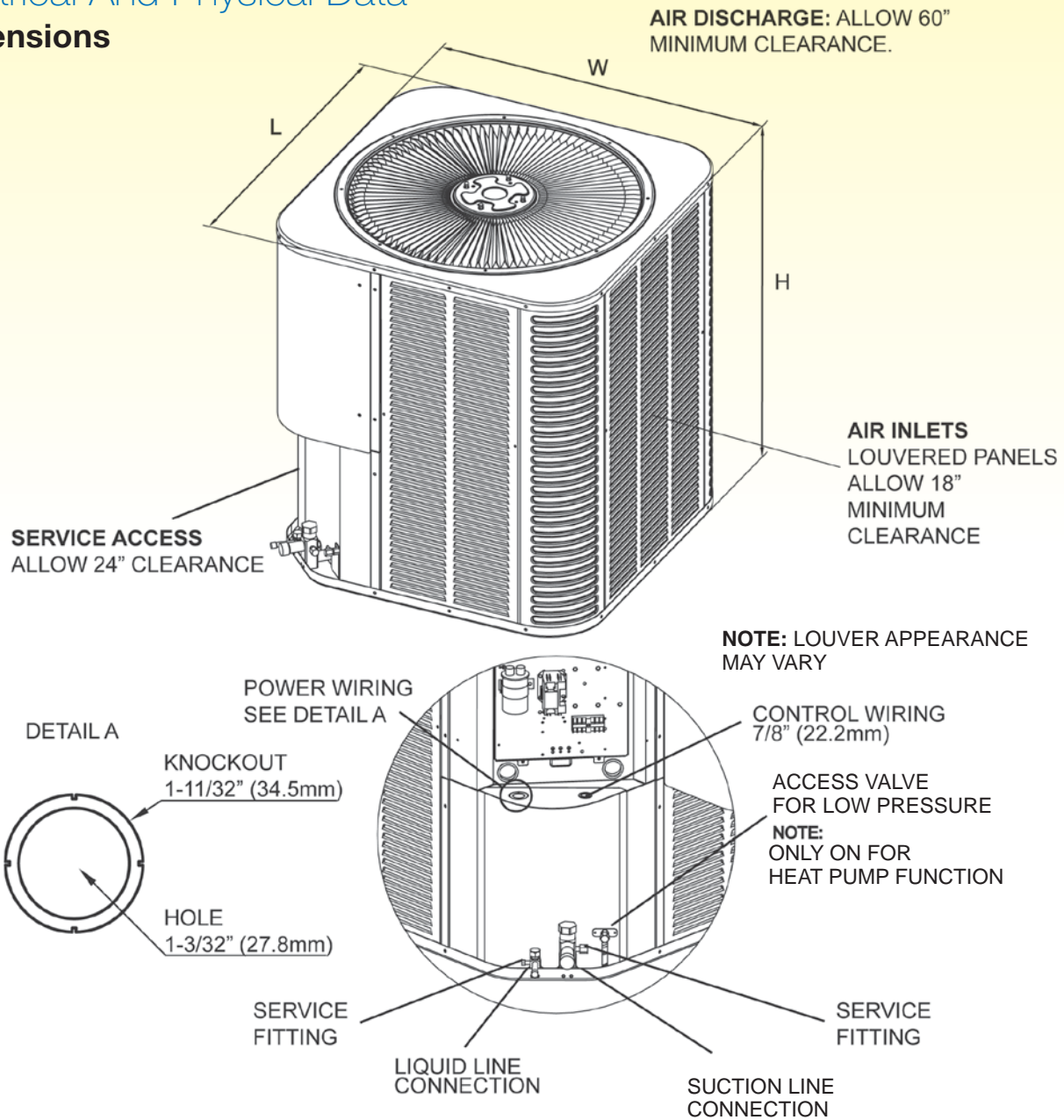
Liquid line Sizing

System Capacity	Liquid Line Connection Size (inch I.D.)	Compressor Type	Line Size Connection and Line Size (inch I.D.)	Liquid Line Size Outdoor Unit above or below indoor coil					
				Total Equivalent Length - Feet					
				25	50	75	100	125	150
				Maximum Vertical Separation - Feet					
1 1/2 Ton	3/8"	Rotary	3/8*	25	30	30	27	24	20
2 Ton	3/8"	Rotary	3/8*	25	30	30	24	20	15
2 1/2 Ton	3/8"	Rotary	3/8*	25	30	30	22	17	10
3 Ton	3/8"	Scroll	5/16	25	50	37	22	7	N/A
			3/8*	25	50	68	63	58	53
3 1/2 Ton	3/8"	Scroll	5/16	25	23	4	N/A	N/A	N/A
			3/8*	25	50	43	36	30	24
4 Ton	3/8"	Scroll	3/8*	25	46	38	30	22	15
			1/2	25	50	56	55	53	52
5 Ton	3/8"	Scroll	3/8*	25	50	56	44	32	20
			1/2	25	50	75	81	79	76

Notes: * Standard size
N/A Application not recommended

Electrical And Physical Data

Dimensions



Dimensional Data

Unit Model (Btu/h)	Dimensions (inches)			Refrigerant Connection Service Valve Size	
	"H" in (mm)	"W" in (mm)	"L" in (mm)	Liquid	Suction
1 1/2 Ton (Cooling Unit)	24-15/16 (633)	21-7/8 (554)	21-7/8 (554)	3/8	3/4
1 1/2 Ton (Heat Pump Unit)	24-15/16 (633)	23-5/8 (600)	23-5/8 (600)	3/8	3/4
2 Ton	24-15/16 (633)	23-5/8 (600)	23-5/8 (600)	3/8	3/4
2 1/2 Ton	24-15/16 (633)	28 (710)	28 (710)	3/8	3/4
3	24-15/16 (633)	29-1/8 (740)	29-1/8 (740)	3/8	3/4
3 1/2 Ton	29-7/8 (759)	28 (710)	28 (710)	3/8	3/4
4 Ton	33-3/16 (843)	28 (710)	28 (710)	3/8	7/8
5 Ton	33-3/16 (843)	29-1/8 (740)	29-1/8 (740)	3/8	7/8

Specifications

Model			MHH18-410	MHH24-410	MHH30-410	MHH36-410	MHH42-410	MHH48-410	MHH60-410
Power supply		V-Ph-Hz	208/230V 1Ph 60Hz	208/230V 1Ph 60Hz	208/230V 1Ph 60Hz	208/230V 1Ph 60Hz	208/230V 1Ph 60Hz	208/230V 1Ph 60Hz	208/230V 1Ph-60Hz
Cooling	Capacity	Btu/h	18000	22400	29000	36000	42000	48000	56500
	SEER	Btu/h.W	13.00	13.00	13.00	13.00	13.00	13.00	13.00
Heating	Capacity	Btu/h	17000	21500	29000	34500	43000	48000	57000
	HSPF	Btu/h.W	7.7	7.7	7.7	8.2	8.2	8.2	8.2
Compressor	Model		PA160X2CS- 3KUU	PA200X2CS- 3MUU	PA270X3CS- 3MUU	ZP31K5E- PFV-130	ZP36K5E- PFV-130	ZP42K5E- PFV-130	ZP51K5E- PFV-130
	Type		Rotary	Rotary	Rotary	Scroll	Scroll	Scroll	Scroll
	Brand		Panasonic/ Toshiba	Panasonic/ Toshiba	Panasonic/ Toshiba	Copeland	Copeland	Copeland	Copeland
	Rated current (RLA)	A	7	8.75	12	13.5	17.5	18.4	21.8
	Locked rotor Amp (LRA)	A	32.6	34.8	59.93	79	109	117	134
	Capacitance	uF	40	50	55	45	45	70	70
	Crankcase	W	30	30	30	30	30	30	30
Outdoor Fan Motor	Type		PSC Motor	PSC Motor	PSC Motor	PSC Motor	PSC Motor	PSC Motor	PSC Motor
	Horsepower	HP	1/12	1/12	1/6	1/6	1/3	1/3	1/3
	Rated current	A	0.5	0.5	1	1	1.7	1.7	1.7
	Capacitor	uF	6	6	6	6	15	15	15
	Speed	RPM	1075	1075	825	825	1075	1075	1075
Outdoor Fan Blade	Type		Axial flow fan	Axial flow fan	Axial flow fan	Axial flow fan	Axial flow fan	Axial flow fan	Axial flow fan
	Diameter	inch	18-7/8	18-7/8	23	23-5/8	23	23	23-5/8
Outdoor air flow		CFM	1600	1600	3100	3300	4300	4300	4500
Outdoor sound level (sound pressure level)		dB(A)	57	57	62	63	67	67	66
Dimension	Body (WxHxD)	inch	23-5/8"× 24-15/16"× 23-5/8"	23-5/8"× 24-15/16"× 23-5/8"	28"× 24-15/16"× 28"	29-1/8"× 24-15/16"× 29-1/8"	28"× 29-7/8"× 28"	28"× 33-3/16"× 28"	29-1/8"× 33-3/16"× 29-1/8"
	Packing (WxHxD)	inch	24-3/4"× 26-1/4"× 24-3/4"	24-3/4"× 26-1/4"× 24-3/4"	29"× 26-1/4"× 29"	30-1/4"× 26-1/4"× 30-1/4"	29"× 31-1/4"× 29"	29"× 34-1/2"× 29"	30-1/4"× 34-1/2"× 30-1/4"
	Net/Gross	lbs	130/141	134/145	165/176	172/185	200/216	213/229	222/238
Charged refrigerant type		Ozs	R410a/102	R410a/102	R410a/123	R410a/129	R410a/150	R410a/167	R410a/167
Refrigerant piping	Liquid/Suction	inch	3/8 / 3/4	3/8 / 3/4	3/8 / 3/4	3/8 / 3/4	3/8 / 3/4	3/8 / 7/8	3/8 / 7/8
	Max. refrigerant pipe length	ft	150	150	150	150	150	150	150
	Max. elevation between outdoor unit and indoor unit	ft	33	33	33	50	50	50	50
Shipped with orifice size			0.054	0.061	0.068	0.068	0.08	0.09	0.108
MCA	A		9.3	11.5	16	18	23.6	24.7	29.1
MOP	A		15	20	30	30	40	40	50
Min/Max V	V		197/253	197/253	197/253	197/253	197/253	197/253	197/253
Electrical Conduit Size	Inch		1/2"/3/4"/1"	1/2"/3/4"/1"	1/2"/3/4"/1"	1/2"/3/4"/1"	1/2"/3/4"/1"	1/2"/3/4"/1"	1/2"/3/4"/1"

Wire size should be determined in accordance with National Electrical Code
Must use time-delay fuses or HACR type circuit breaker

Outdoor Condenser Units

Outdoor Condenser	Indoor Coil or Air handler	Cooling Capacity	SEER	EER	Heating Capacity @ 47F	Heating Capacity @ 17F	HSPF
MHH-18-410	HD2-18	18000	13	11.5	17000	10100	7.7
	(U)AC1818A	16700	13	11.6	16900	10300	8
	(U)AC1818B	18200	13	12.1	17900	10000	8.2
MHH-24-410	HD2-24	22400	13	10.5	21500	15100	7.7
	(U)AC1824A	21500	13	11.1	21000	12800	8
	(U)AC1824B	22000	13	11.4	22000	13000	8.5
MHH-30-410	HD2-30	29000	13	10.3	29000	18000	7.7
	(U)AC2430A	26700	13	10.9	27900	16800	7.8
	(U)AC2430B	27200	13	11.5	28200	16700	8.4
MHH-36-410	HD2-36	36000	13	11.5	34500	21200	8.2
	(U)AC3036A	32100	13	10.8	33300	21800	8.2
	(U)AC3036B	36000	13	11.6	36500	22900	8.5
	(U)AC3036C	36800	13	12.4	35500	21400	9
MHH-42-410	HD2-42	42000	13	11	43000	26800	8.2
	(U)AC3642B	37800	13	11.1	39600	23500	8.1
	(U)AC3642C	40800	13	11	41100	24300	8.2
	(U)AC3642D	39900	13	11.8	39600	23500	8.3
MHH-48-410	HD2-48	48000	13	11.1	48000	28600	8.2
	(U)AC4248B	45400	13	10.6	46600	29400	8.3
	(U)AC4248C	47300	13	10.9	47200	29100	8.5
	(U)AC4248D	49100	13	12.3	47100	28700	8.5
MHH-60-410	HD2-60	56500	13	10.7	57000	35000	8.2
	(U)AC4860C	54300	13	10.7	55200	35500	8
	(U)AC4860D	57000	13	11.3	55700	34600	8.3

Field Installed Optional Accessories

Thermostats:

CP series:

Horizontal
non-programmable
or programmable thermostat



CVT series:

Vertical
non-programmable
thermostat



CDT series: Touch Screen
programmable thermostat

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