



Heating and Air Conditioning

TECHNICAL GUIDE

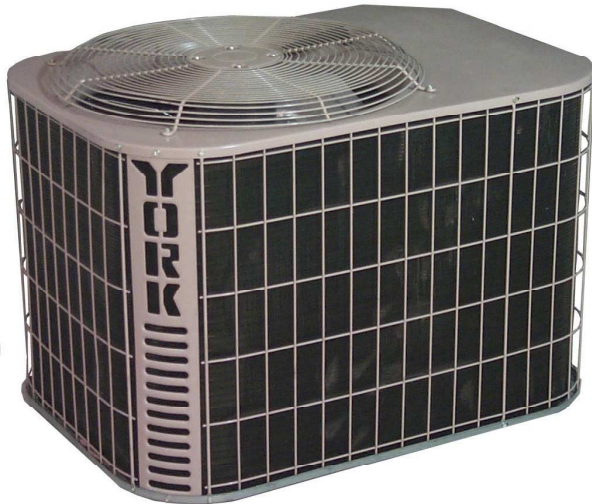
SPLIT-SYSTEM

50 Hz CONDENSING UNITS

H*RA018S78 THRU H*RA036S78 (1 PH)

H*RA036S50 THRU H*RA060S50 (3PH)

(1.5 THRU 5 NOMINAL TONS)



DESCRIPTION

The HRA Series condensing unit is the outdoor part of a versatile system of air conditioning. It is designed to be custom matched with one of UPG's complete line of evaporator sections, each designed to serve a specific function. Matching Air Handlers are available for upflow, downflow or horizontal applications to provide a complete system. Electric Heaters are available if required. Add-On coils are available for use with upflow, downflow or horizontal furnaces and air handlers.

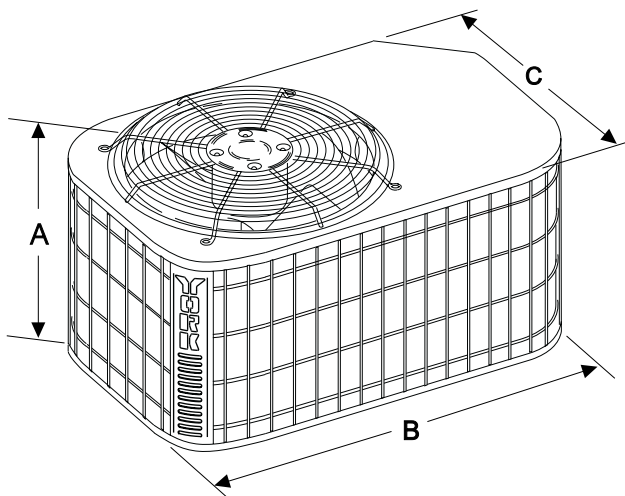
FEATURES

- **QUALITY COILS** - The coil is constructed of copper tube and hardened black coated aluminum fins for durability and long lasting efficient operation. The decorative 2" x 4" grille backed by the black coated fins, enhances appearance and protects the unit.
- **PROTECTED COMPRESSOR** - The hermetic compressor is internally protected against high pressure and temperature by the simultaneous operation of a high pressure relief valve and temperature sensors which stop the compressor if operating temperatures go too high. Both protectors reset automatically. A discharge line solid core filter drier further protects the compressor.
- **DURABLE FINISH** - Cabinet is made of pre-painted steel. The pre-treated flat galvanized steel provides a better paint to steel bond, which resists corrosion and rust creep. Special primer formulas and glossy earth tone finish insure less fading when exposed to sunlight.
- **LOWER INSTALLED COST** - Installation time and costs are reduced by easy power and control wiring connections. Discharge line heat exchanger knockouts are provided, if required. Available in sweat connect models only. The unit contains enough refrigerant for matching indoor coils and 15 feet of interconnecting piping. The small base dimension means less space is required on the ground or roof.
- **TOP DISCHARGE** - The warm air from the top mounted fan is blown up away from the structure and any landscaping. This allows compact location on multi-unit applications.
- **LOW OPERATING SOUND LEVEL** - The upward air flow carries the normal operating noise up away from the living area. The rigid top panel effectively isolates any motor sound. Isolator mounted compressor and the rippled fins of the condenser coil muffle the normal fan motor and compressor operating sounds.
- **LOW MAINTENANCE** - Long life permanently lubricated motor- bearings need no annual servicing.
- **EASY SERVICE ACCESS** - Fully exposed refrigerant connections, a single panel covering the electrical controls and the mox plug in the control box connecting the condenser fan, make for easy servicing of the unit.
- **SECURED SERVICE VALVES** - Secured re-usable service valves are provided on both the liquid and vapor sweat connections for ease of evacuating and charging.
- **FACTORY TESTED** - to verify system operation and control functioning before shipment.

PHYSICAL AND ELECTRICAL DATA

MODEL		H1RA018S78	H1RA024S78	H1RA030S78	H1RA036S78	H1RA036S50	H1RA048S50	H1RA060S50
Unit Supply Voltage		230 – 1 – 50				380/415 – 3 – 50		
Normal Voltage Range ¹		207 to 253				342 to 455		
Minimum Circuit Ampacity		9.8	14.6	20.4	20.8	7.3	10.8	13.3
Max. Overcurrent Device Amps ²		15	25	35	35	15	15	20
Compressor Type		Recip	Recip	Recip	Recip	Recip	Recip	Recip
Compressor Amps	Rated Load	7.4	11.3	15.2	15.5	5.2	7.2	9.2
	Locked Rotor	53	65	90	82	39	53	79
Crankcase Heater		No	No	No	No	No	No	No
Fan Motor Amps	Rated Load	.5	.5	1.8	1.8	.8	1.8	1.8
Fan Diameter Inches		18	18	18	18	18	22	22
Fan Motor	Rated HP	1/12	1/12	1/4	1/4	1/4	1/3	1/3
	Nominal RPM	970	970	900	900	1,100	1,075	1,075
	Nominal CFM	1,650	1,650	2,350	2,350	2,250	3,200	3,300
Coil	Face Area Sq. Ft.	8.00	8.00	9.15	9.15	9.15	15.72	23.58
	Rows Deep	1	1	1	1	1	1	1
	Fin / Inches	14	14	16	16	18	18	18
Liquid Line OD		3/8	3/8	3/8	3/8	3/8	3/8	3/8
Vapor Line OD		3/4	3/4	3/4	3/4	3/4	7/8	7/8
Unit Charge (Lbs. - Oz.) ³		3 - 13	3 - 14	3 - 15	4 - 11	4 - 11	7 - 10	9 - 12
Charge Per Foot, Oz.		0.66	0.66	0.68	0.68	0.68	0.70	0.70
Operating Weight Lbs.		118	123	135	137	137	206	228

1. Rated in accordance with ARI Standard 110, utilization range "A".
2. Dual element fuses or HACR circuit breaker.
3. The Unit Charge is correct for the outdoor unit, matched indoor coil and 15 feet of refrigerant tubing. For tubing lengths other than 15 feet, refer to publication 035-15893-60*



All dimensions are in inches. They are subject to change without notice. Certified dimensions will be provided upon request.

UNIT MODEL H1RA	DIMENSIONS (INCHES)			REFRIGERANT CONNECTION LINE SIZE	
	A ¹	B	C	Liquid	Vapor
018S78	17	35	23	3/8"	3/4"
024S78	17	35	23		
030S78	19	35	23		
036S78	19	35	23		
036S50	19	35	23		
048S50	27	37	27	7/8"	
060S50	39	37	27		

1. Including fan guard

COOLING CAPACITY - WITH AIR HANDLER COILS

UNIT MODEL	AIR HANDLER			COIL ³ MODEL	COOLING						
	MODEL	ELECTRIC ² HEAT KW	W		RATED CFM	NET MBH		KW	SEER	SEER/TXV ¹	EER
						TOTAL	SENS.				
1 PHASE HRA / NAH											
H1RA018S78	N1AHB1293	5,8,10,15,18	17	G2FD024S17	650	18.1	12.9	1.86	--	--	--
H1RA024S78	N1AHB1293	5,8,10,15,18	17	G2FD030S17	850	23.4	16.8	2.87	--	--	--
H1RA030S78	N1AHB1293	5,8,10,15,18	17	G2FD030S17	1000	28.9	20.0	3.45	--	--	--
	N1AHB1293	5,8,10,15,18	17	G2FD036S17	1000	29.6	20.6	3.57	--	--	--
H1RA036S78	N1AHB1293	5,8,10,15,18	17	G2FD036S17	1250	33.5	25.2	3.83	--	--	--
3 PHASE HRA / NAH											
H1RA036S50	N-AHB1293	5,8,10,15,18	17	G2FD036S17	1200	33.6	24.9	3.81	--	--	--
	N-AHB1293	5,8,10,15,18	21	G2FD036S21	1200	34.4	25.5	3.87			
	N-AHC1693	5,8,10,15,20	21	G2FD042S21	1250	35.1	25.9	3.93			
H1RA048S50	N-AHC1693	5,8,10,15,18	21	G2FD048S21	1600	48.8	35.9	4.82	--	--	--
H1RA060S50	N-AHD2093	5,8,10,15,18	24	G2FD060S24	1900	60.5	43.0	6.29	--	--	--
1 PHASE HRA / FRP (SINGLE PHASE)											
H1RA018S78	F2RP024N93	5,7.5,10	18	--	650	18.1	12.9	1.86	--	--	--
H1RA024S78	F2RP024N93	5,7.5,10	18	--	850	23.4	16.8	2.87	--	--	--
H1RA030S78	F2RP036N93	5,7.5,10,15	21	--	1000	29.6	20.6	3.57	--	--	--
H1RA036S78	F2RP036N93	5,7.5,10,15	21	--	1250	34.3	25.6	3.86	--	--	--
3 PHASE HRA / FRP (SINGLE PHASE)											
H1RA036S50	F2RP036N93	10,15	21	--	1200	34.4	25.5	3.87	--	--	--
H1RA048S50	F2RP048N93	10,15	24	--	1600	48.8	35.9	4.82	--	--	--
H1RA060S50	F2RP060N93	10,15	24	--	1900	60.5	43.0	6.29	--	--	--

Cooling MBH based on 80°F entering air temperature, 50% RH, and rated air flow.

KW includes compressor, outdoor fan and indoor blower motor watts. Add-on coils include 365 watts/1000 CFM for blower motor.

EER (Energy Efficiency Ratio) is the total cooling output in BTU's at a 95°F outdoor ambient divided by the total electric power in watt-hours at those conditions.

SEER (Seasonal Energy Efficiency Ratio) is the total cooling output in BTU's during a normal annual usage period for cooling divided by the total electric power input in watt-hours during the same period.

1. TXV = Thermal Expansion Valve kit required. Use 1TV700 series kit.

2. Single phase units require single phase 2HK heaters — Three phase units require three phase 2HK heaters. (29) indicates 460 volt use only.

3. G2FD coils available with a factory installed horizontal drain pan. See price pages for specific model number.

-- = Not Applicable.

SOUND RATINGS

UNIT MODEL	SOUND RATINGS DECIBELS
018	7.6
024	7.8
030	8.2
036	8.2
048	8.2
060	8.0

COOLING PERFORMANCE

MODEL	SUCT. T/P @ COMPR.		AIR TEMP ON CONDENSER							
			75°F		95°F		115°F		125°F	
	TEMP.	PSIG	MBH	KW	MBH	KW	MBH	KW	MBH	KW
H1RA018S78A	35	61.5	13.1	1.36	13.1	1.36	10.6	1.46	9.3	1.52
	40	68.5	14.8	1.42	14.8	1.42	12.8	1.55	10.6	1.61
	45	76.0	16.5	1.48	16.5	1.48	13.7	1.62	12.2	1.69
	50	84.0	18.4	1.55	18.4	1.55	15.2	1.71	13.7	1.78
H1RA024S78A	35	61.5	21.3	1.59	17.7	1.93	14.7	2.14	13.3	2.23
	40	68.5	24.1	1.68	20.1	2.04	16.7	2.27	15.1	2.38
	45	76.0	26.7	1.77	22.3	2.16	18.9	2.40	17.1	2.53
	50	84.0	29.6	1.85	24.9	2.27	21.1	2.55	19.4	2.67
H1RA030S78A	35	61.5	28.0	2.31	24.4	2.65	20.1	2.86	18.0	2.96
	40	68.5	31.5	2.44	27.5	2.78	22.8	3.02	23.4	3.31
	45	76.0	35.1	2.52	30.7	2.91	25.9	3.17	23.4	3.48
	50	84.0	38.9	2.62	34.2	3.04	28.8	3.34	26.3	3.48
H1RA036S78A	35	61.5	30.6	3.14	27.0	3.48	23.1	3.79	21.0	3.89
	40	68.5	34.4	3.28	30.4	3.64	26.1	3.98	23.7	4.10
	45	76.0	38.3	3.42	33.9	3.81	29.1	4.17	26.6	4.30
	50	84.0	38.9	2.62	34.2	3.04	28.8	3.34	26.3	3.48
H1RA036S50A	35	61.5	29.6	3.24	27.8	3.52	25.1	3.73	23.4	3.78
	40	68.5	33.2	3.37	31.2	3.68	28.2	3.91	26.4	3.97
	45	76.0	36.9	3.51	34.7	3.84	31.4	4.10	29.3	4.16
	50	84.0	40.7	3.65	38.2	4.00	34.6	4.28	32.4	4.36
H1RA048S50A	35	61.5	43.2	4.17	39.1	4.87	34.4	5.50	31.9	5.87
	40	68.5	48.1	4.37	43.6	5.11	38.5	5.80	35.8	6.22
	45	76.0	53.2	4.58	48.3	5.35	42.8	6.11	39.8	6.57
	50	84.0	58.4	4.79	53.2	5.60	47.2	6.41	44.0	6.91
H1RA060S50A	35	61.5	50.6	5.23	48.7	5.73	45.2	6.11	42.7	6.24
	40	68.5	55.6	5.37	54.1	5.97	50.8	6.44	48.4	6.61
	45	76.0	60.9	5.48	59.7	6.19	56.7	6.76	54.5	6.98
	50	84.0	66.3	5.58	65.6	6.40	62.8	7.08	60.8	7.35

1. For condensing unit only. Does not include effect of evaporator motor power or heat.

2. Performance based on 15" superheat and 15" sub-cooling at condensing unit.

a. Increase capacity 1% for each 2...increase in sub-cooling.

b. Decrease capacity 1% for each 2 decrease in sub-cooling.

3. Sub-cooling in excess of 20...may result in excessively high condensing temperature with air on condenser above 115° Maximum recommended condensing temperature is 140..F.

ACCESSORIES

Refer to Price Manual for specific model numbers.

Compressor Blanket - Designed to further reduce the normal operating sound.

Hard Start Kit (Single Phase Units) - provides required starting torque for use with thermal expansion valve.

Outdoor Thermostat - 2TD06700124 - Consists of an adjustable outdoor thermostat and relay in a vented enclosure. It provides additional second stage control of the supplemental resistance heat.(Balance Point Control)

Room Thermostats - One of the following thermostat may be used with these systems.

2ET07700324 - Programmable electronic, One Stage Heat / One Stage Cool, Manual change over, rectangular thermostat with built-in anti-short cycle protection.

2TH07700124 -One Stage Heat / One Stage Cool, Manual changeover, non-programmable vertical thermostat.

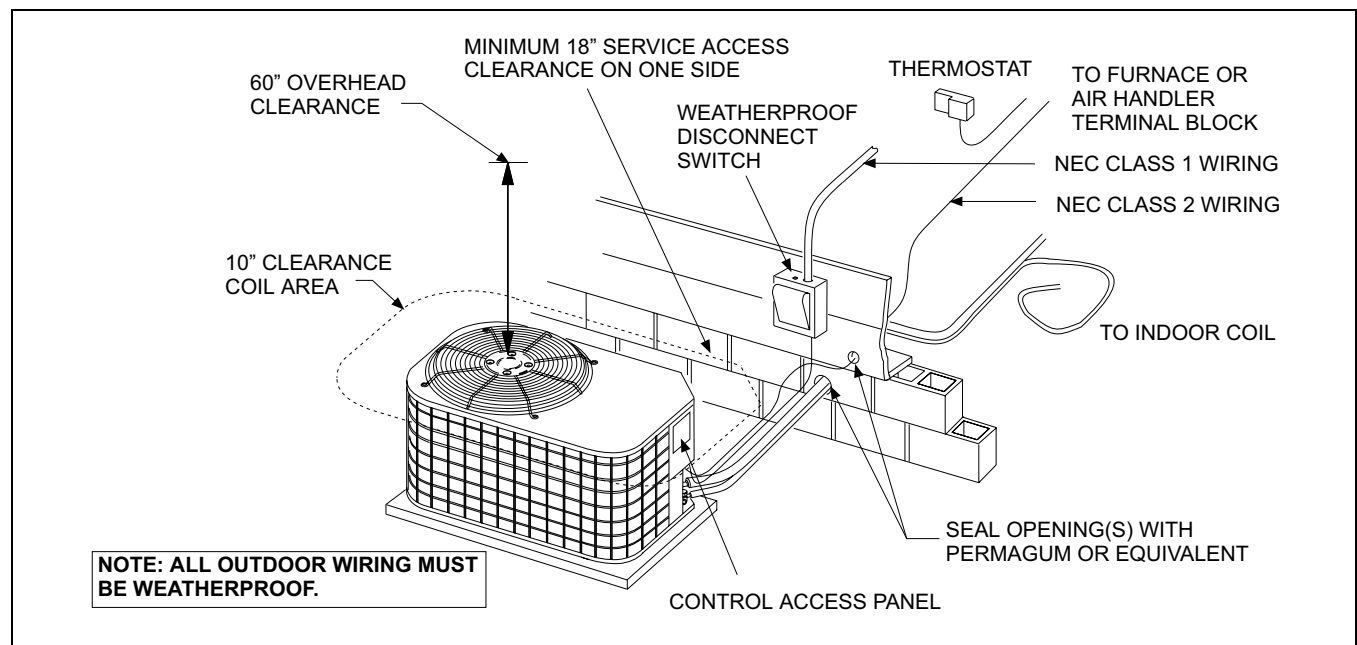
2TH07701024 - One Stage Heat / One Stage Cool, manual changeover, non-programmable rectangular thermostat.

2TH04701224 - Two stage cool, manual changeover, non programmable thermostat.

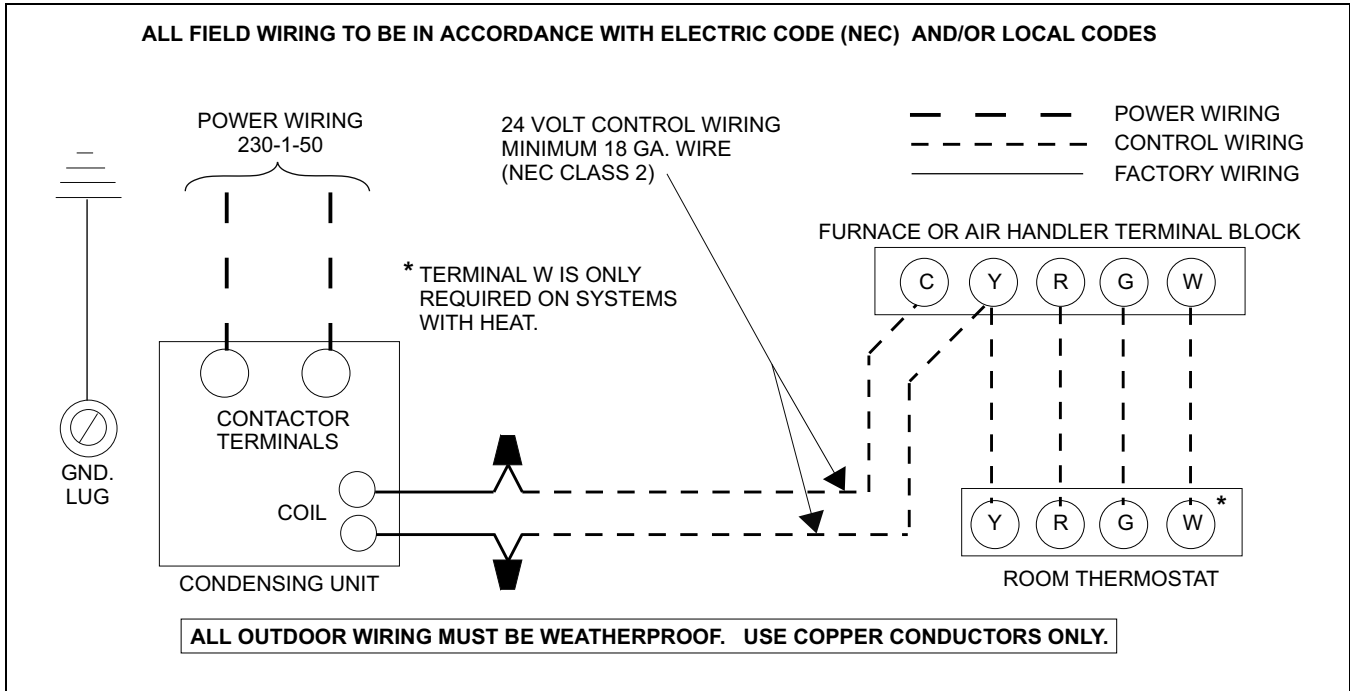
2TH04701024 - Two stage heat, two stage cool, auto or manual changeover, non-programmable thermostat.

2ET07700424 - Two stage heat, two stage cool, programmable electronic (5+1+1), auto or manual changeover.

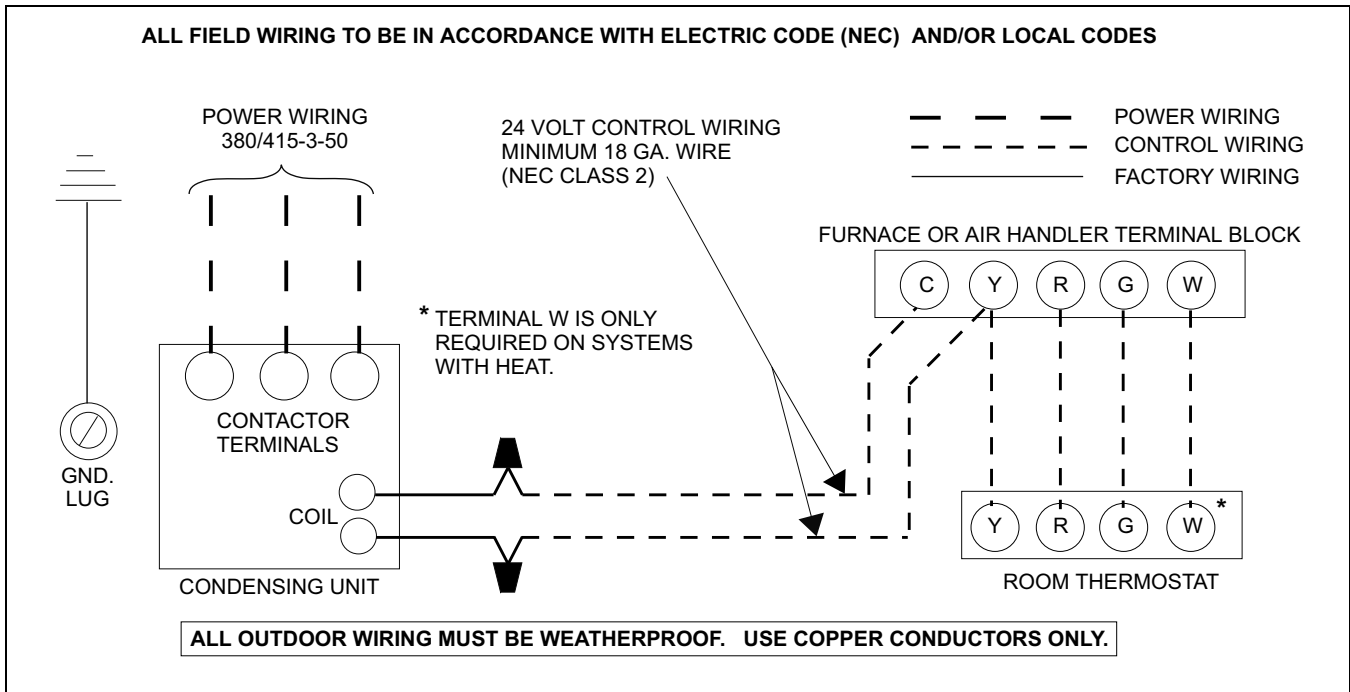
TYPICAL INSTALLATION - H*RA018S78 THRU 036S78 (1 PH) & H*RA 036S50 THRU 060S50 (3 PH)



TYPICAL FIELD WIRING - 1 PH APPLICATION (018S78 - 036S78)

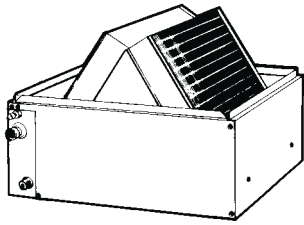


TYPICAL FIELD WIRING - 3 PH APPLICATION (036S50 - 060S50)

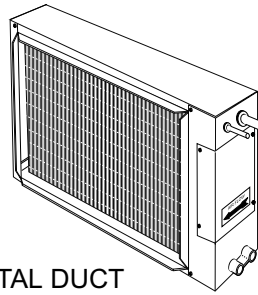


MATCHING INDOOR COMPONENTS

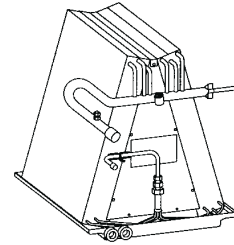
ADD-ON COILS - FOR FURNACE APPLICATION



G1UA
UPFLOW

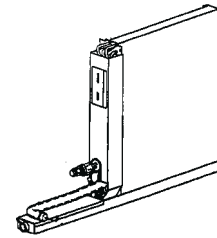
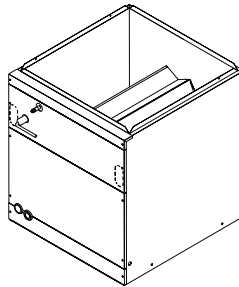


G1HD
HORIZONTAL DUCT



G1NA
UPFLOW

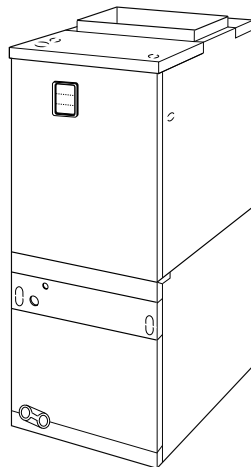
G2FD*
MULTI-POSITION
(UPFLOW, HORIZONTAL
AND DOWNFLOW)



G1NF
OUTDOOR
FURNACE COIL

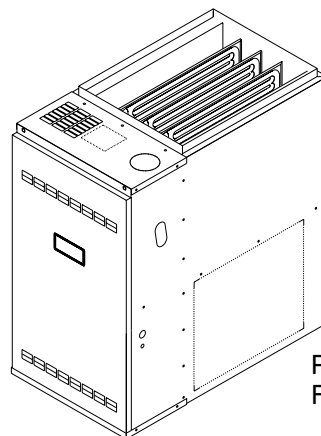
AIR HANDLERS

N1AH
MODULAR
BLOWER

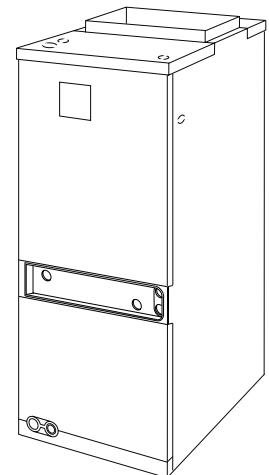


G2FD*
COIL

F2RP
FAN COIL UNITS
(UPFLOW, HORIZONTAL)



P6UH
FURNACE



COOLING PERFORMANCE DATA

CONDENSING UNIT MODEL NO:		H1RA018S78A																	
EVAPORATOR COIL MODEL NO:		G2FD024S17																	
INDOOR AIR		CONDENSER ENTERING AIR TEMPERATURE																	
		75			85			95			105			115			125		
ID CFM	ID DB/WB	CAPACITY MBTUH			CAPACITY MBTUH			CAPACITY MBTUH			CAPACITY MBTUH			CAPACITY MBTUH			CAPACITY MBTUH		
		T.C.	S.C.	K.W	T.C.	S.C.	K.W	T.C.	S.C.	K.W	T.C.	S.C.	K.W	T.C.	S.C.	K.W	T.C.	S.C.	K.W
500	85/71	18.3	10.6	1.37	17.8	10.6	1.49	17.3	10.6	1.61	16.0	10.0	1.72	14.6	9.4	1.83	13.0	9.4	1.93
	80/67	18.1	10.8	1.37	17.2	10.7	1.47	16.3	10.5	1.57	14.7	10.0	1.67	13.1	9.5	1.76	11.1	8.5	1.86
	75/63	16.5	10.5	1.35	15.4	10.2	0.77	14.2	9.8	1.53	12.6	9.2	1.63	11.0	8.5	1.72	9.3	7.8	1.80
650	85/71	18.4	11.0	1.38	18.0	11.3	1.50	17.6	11.6	1.62	16.5	11.4	1.74	15.3	11.2	1.85	13.7	11.1	1.95
	80/67	18.2	11.6	1.38	17.5	11.7	1.48	16.8	11.8	1.59	15.3	11.4	1.69	13.8	11.0	1.79	11.6	10.0	1.88
	75/63	17.2	11.9	1.36	16.1	11.6	1.45	15.0	11.4	1.55	13.3	10.7	1.64	11.7	10.0	1.74	9.9	9.2	1.82
800	85/71	18.4	11.4	1.39	18.2	12.0	1.51	17.9	12.5	1.63	17.0	12.7	1.75	16.0	12.9	1.87	14.3	12.7	1.97
	80/67	18.3	12.4	1.38	17.8	12.8	1.49	17.3	13.1	1.60	15.9	12.8	1.71	14.4	12.5	1.81	12.1	11.5	1.90
	75/63	17.8	13.3	1.37	16.8	13.1	1.47	15.8	12.9	1.56	14.1	12.2	1.66	12.3	11.5	1.75	10.4	10.6	1.84

NOTE: ALL CAPACITIES ARE NET WITH INDOOR FAN HEAT ALREADY DEDUCTED AT 1250 BTUH/1000 CFM.
KW RATING IS FOR OUTDOOR UNIT ONLY.

CONDENSING UNIT MODEL NO:		H1RA024S78A																	
EVAPORATOR COIL MODEL NO:		G2FD030S17																	
INDOOR AIR		CONDENSER ENTERING AIR TEMPERATURE																	
		75			85			95			105			115			125		
ID CFM	ID DB/WB	CAPACITY MBTUH			CAPACITY MBTUH			CAPACITY MBTUH			CAPACITY MBTUH			CAPACITY MBTUH			CAPACITY MBTUH		
		T.C.	S.C.	K.W	T.C.	S.C.	K.W	T.C.	S.C.	K.W	T.C.	S.C.	K.W	T.C.	S.C.	K.W	T.C.	S.C.	K.W
650	85/71	26.4	15.4	2.15	25.4	15.3	2.31	24.4	15.3	2.47	22.5	14.7	2.62	20.6	14.2	2.76	17.8	13.3	2.89
	80/67	25.3	15.6	2.11	23.9	15.1	2.26	22.5	14.6	2.40	20.1	13.8	2.53	17.7	13.0	2.65	15.2	12.4	2.78
	75/63	24.0	15.4	2.08	21.8	14.4	1.16	19.6	13.4	2.31	17.6	12.7	2.44	15.6	11.9	2.56	13.3	11.4	2.69
850	85/71	26.6	16.2	2.17	25.7	16.4	2.33	24.9	16.6	2.50	23.2	16.4	2.66	21.5	16.3	2.81	18.7	15.4	2.94
	80/67	25.7	16.7	2.13	24.6	16.6	2.28	23.4	16.6	2.44	21.1	15.9	2.57	18.8	15.2	2.70	15.9	14.3	2.82
	75/63	24.6	16.8	2.10	22.8	16.2	2.23	20.9	15.7	2.35	18.6	14.7	2.47	16.3	13.8	2.59	14.0	13.1	2.72
1050	85/71	26.7	16.9	2.18	26.1	17.4	2.36	25.4	17.9	2.53	23.9	18.1	2.70	22.4	18.3	2.86	19.5	17.4	2.99
	80/67	26.1	17.8	2.15	25.2	18.2	2.31	24.3	18.5	2.47	22.1	17.9	2.61	19.8	17.3	2.74	16.7	16.1	2.85
	75/63	25.2	18.2	2.12	23.7	18.1	2.26	22.2	17.9	2.39	19.6	16.8	2.51	16.9	15.6	2.62	14.7	14.7	2.75

NOTE: ALL CAPACITIES ARE NET WITH INDOOR FAN HEAT ALREADY DEDUCTED AT 1250 BTUH/1000 CFM.
KW RATING IS FOR OUTDOOR UNIT ONLY.

CONDENSING UNIT MODEL NO:		H1RA030S78A																	
EVAPORATOR COIL MODEL NO:		G2FD030S17																	
INDOOR AIR		CONDENSER ENTERING AIR TEMPERATURE																	
		75			85			95			105			115			125		
ID CFM	ID DB/WB	CAPACITY MBTUH			CAPACITY MBTUH			CAPACITY MBTUH			CAPACITY MBTUH			CAPACITY MBTUH			CAPACITY MBTUH		
		T.C.	S.C.	K.W	T.C.	S.C.	K.W	T.C.	S.C.	K.W	T.C.	S.C.	K.W	T.C.	S.C.	K.W	T.C.	S.C.	K.W
650	85/71	26.4	15.4	2.15	25.4	15.3	2.31	24.4	15.3	2.47	22.5	14.7	2.62	20.6	14.2	2.76	17.8	13.3	2.89
	80/67	25.3	15.6	2.11	23.9	15.1	2.26	22.5	14.6	2.40	20.1	13.8	2.53	17.7	13.0	2.65	15.2	12.4	2.78
	75/63	24.0	15.4	2.08	21.8	14.4	1.16	19.6	13.4	2.31	17.6	12.7	2.44	15.6	11.9	2.56	13.3	11.4	2.69
850	85/71	26.6	16.2	2.17	25.7	16.4	2.33	24.9	16.6	2.50	23.2	16.4	2.66	21.5	16.3	2.81	18.7	15.4	2.94
	80/67	25.7	16.7	2.13	24.6	16.6	2.28	23.4	16.6	2.44	21.1	15.9	2.57	18.8	15.2	2.70	15.9	14.3	2.82
	75/63	24.6	16.8	2.10	22.8	16.2	2.23	20.9	15.7	2.35	18.6	14.7	2.47	16.3	13.8	2.59	14.0	13.1	2.72
1050	85/71	26.7	16.9	2.18	26.1	17.4	2.36	25.4	17.9	2.53	23.9	18.1	2.70	22.4	18.3	2.86	19.5	17.4	2.99
	80/67	26.1	17.8	2.15	25.2	18.2	2.31	24.3	18.5	2.47	22.1	17.9	2.61	19.8	17.3	2.74	16.7	16.1	2.85
	75/63	25.2	18.2	2.12	23.7	18.1	2.26	22.2	17.9	2.39	19.6	16.8	2.51	16.9	15.6	2.62	14.7	14.7	2.75

NOTE: ALL CAPACITIES ARE NET WITH INDOOR FAN HEAT ALREADY DEDUCTED AT 1250 BTUH/1000 CFM.
KW RATING IS FOR OUTDOOR UNIT ONLY.

COOLING PERFORMANCE DATA

CONDENSING UNIT MODEL NO:		H1RA036S78A																	
EVAPORATOR COIL MODEL NO:		G2FD036S17																	
INDOOR AIR		CONDENSER ENTERING AIR TEMPERATURE																	
ID CFM	ID DB/WB	75			85			95			105			115			125		
		CAPACITY MBTUH			CAPACITY MBTUH			CAPACITY MBTUH			CAPACITY MBTUH			CAPACITY MBTUH			CAPACITY MBTUH		
		T.C.	S.C.	K.W	T.C.	S.C.	K.W	T.C.	S.C.	K.W	T.C.	S.C.	K.W	T.C.	S.C.	K.W	T.C.	S.C.	K.W
1050	85/71	38.7	23.4	2.92	37.4	23.5	3.17	36.0	23.6	3.42	32.6	22.6	3.60	29.2	21.5	3.78	25.5	20.3	3.91
	80/67	36.8	23.5	2.87	34.8	24.0	3.08	32.7	24.5	3.29	29.1	22.1	3.43	25.5	19.6	3.57	22.4	18.8	3.74
	75/63	35.0	23.4	2.83	31.9	22.2	1.57	28.7	21.0	3.13	25.5	19.6	3.28	22.3	18.2	3.43	19.6	17.4	3.61
1250	85/71	39.1	24.4	2.94	37.7	24.7	3.19	36.4	25.0	3.44	33.2	24.3	3.65	30.1	23.6	3.85	26.2	22.3	4.00
	80/67	34.7	24.8	2.89	34.1	25.2	3.11	33.5	25.6	3.34	29.9	23.6	3.48	26.3	21.6	3.62	22.8	20.5	3.78
	75/63	35.6	24.8	2.85	32.6	23.9	3.01	29.6	22.9	3.18	26.3	21.5	3.33	23.1	20.0	3.47	20.0	18.9	3.64
1450	85/71	39.4	25.4	2.95	38.1	25.9	3.21	36.7	26.4	3.46	33.9	26.1	3.69	31.0	25.7	3.92	26.9	24.3	4.08
	80/67	32.5	26.1	2.90	33.4	26.4	3.15	34.3	26.7	3.39	30.7	25.2	3.53	27.0	23.6	3.66	23.1	22.2	3.82
	75/63	36.2	26.2	2.86	33.4	25.5	3.05	30.5	24.8	3.23	27.2	23.3	3.37	23.8	21.8	3.51	20.4	20.3	3.67

NOTE: ALL CAPACITIES ARE NET WITH INDOOR FAN HEAT ALREADY DEDUCTED AT 1250 BTUH/1000 CFM.
KW RATING IS FOR OUTDOOR UNIT ONLY.

CONDENSING UNIT MODEL NO:		H1RA036S50A																	
EVAPORATOR COIL MODEL NO:		G2FD036S17																	
INDOOR AIR		CONDENSER ENTERING AIR TEMPERATURE																	
ID CFM	ID DB/WB	75			85			95			105			115			125		
		CAPACITY MBTUH			CAPACITY MBTUH			CAPACITY MBTUH			CAPACITY MBTUH			CAPACITY MBTUH			CAPACITY MBTUH		
		T.C.	S.C.	K.W	T.C.	S.C.	K.W	T.C.	S.C.	K.W	T.C.	S.C.	K.W	T.C.	S.C.	K.W	T.C.	S.C.	K.W
1100	85/71	38.6	26.0	2.80	36.4	24.8	2.96	34.2	23.6	3.12	31.9	22.5	3.28	29.7	21.3	3.44	27.6	20.6	3.52
	80/67	36.0	25.7	2.72	33.7	24.5	2.88	31.3	23.3	3.04	29.0	22.2	3.20	26.6	21.0	3.36	24.3	20.0	3.52
	75/63	33.4	25.3	2.64	31.0	24.2	1.48	28.5	23.0	2.96	26.0	21.9	3.12	23.5	20.7	3.28	21.0	19.4	3.52
1250	85/71	39.0	25.8	2.64	36.9	25.2	2.86	34.8	24.5	3.08	32.8	23.9	3.30	30.7	23.2	3.52	28.1	22.7	3.72
	80/67	36.4	26.4	2.68	34.2	25.5	2.86	31.9	24.6	3.04	29.6	23.7	3.22	27.4	22.8	3.40	24.9	21.6	3.60
	75/63	33.9	27.1	2.72	31.4	25.9	2.86	28.9	24.7	3.00	26.5	23.5	3.14	24.0	22.3	3.28	21.7	20.5	3.48
1400	85/71	39.4	25.6	2.48	37.5	25.5	2.76	35.5	25.4	3.04	33.6	25.3	3.32	31.7	25.2	3.60	28.6	24.8	3.92
	80/67	36.8	27.2	2.64	34.7	26.5	2.84	32.5	25.9	3.04	30.3	25.2	3.24	28.1	24.5	3.44	25.5	23.2	3.68
	75/63	34.3	28.8	2.80	31.9	27.5	2.92	29.4	26.3	3.04	27.0	25.1	3.16	24.5	23.9	3.28	22.4	21.7	3.44

NOTE: ALL CAPACITIES ARE NET WITH INDOOR FAN HEAT ALREADY DEDUCTED AT 1250 BTUH/1000 CFM.
KW RATING IS FOR OUTDOOR UNIT ONLY.

CONDENSING UNIT MODEL NO:		H1RA048S50A																	
EVAPORATOR COIL MODEL NO:		G2FD048S21																	
INDOOR AIR		CONDENSER ENTERING AIR TEMPERATURE																	
ID CFM	ID DB/WB	75			85			95			105			115			125		
		CAPACITY MBTUH			CAPACITY MBTUH			CAPACITY MBTUH			CAPACITY MBTUH			CAPACITY MBTUH			CAPACITY MBTUH		
		T.C.	S.C.	K.W	T.C.	S.C.	K.W	T.C.	S.C.	K.W	T.C.	S.C.	K.W	T.C.	S.C.	K.W	T.C.	S.C.	K.W
1400	85/71	34.2	4.45	58.8	33.2	4.65	51.5	32.1	4.85	44.2	31.1	5.05	36.9	30.1	5.25	39.5	28.2	5.60	34.2
	80/67	34.3	4.32	51.6	33.1	4.52	46.3	31.9	4.71	40.9	30.7	4.91	35.6	29.47	5.10	35.3	27.9	5.42	34.3
	75/63	34.3	4.19	44.5	32.9	2.29	41.1	31.6	4.57	37.7	30.2	4.76	34.3	28.9	4.95	31.1	27.5	5.24	34.3
1450	85/71	34.7	4.44	57.7	33.9	4.66	51.8	33.1	4.89	45.9	32.4	5.11	40.0	31.6	5.33	39.6	27.1	5.64	34.7
	80/67	35.1	4.31	51.2	34.0	4.52	46.6	32.9	4.73	42.0	31.7	4.94	37.4	30.6	5.15	35.4	28.8	5.44	35.1
	75/63	35.6	4.17	44.7	34.1	4.37	41.4	32.6	4.57	38.0	31.1	4.76	34.7	29.6	4.96	31.3	30.5	5.24	35.6
1500	85/71	35.1	4.43	56.5	34.6	4.68	52.1	34.1	4.92	47.6	33.6	5.17	43.1	33.1	5.41	39.7	25.9	5.68	35.1
	80/67	36.0	4.29	50.8	34.9	4.52	46.9	33.8	4.74	43.0	32.8	4.97	39.1	31.7	5.19	35.6	29.7	5.46	36.0
	75/63	36.8	4.15	45.0	35.2	4.36	41.7	33.6	4.56	38.4	32.0	4.77	35.1	30.3	4.97	31.6	33.6	5.24	36.8

NOTE: ALL CAPACITIES ARE NET WITH INDOOR FAN HEAT ALREADY DEDUCTED AT 1250 BTUH/1000 CFM.
KW RATING IS FOR OUTDOOR UNIT ONLY.

COOLING PERFORMANCE DATA

CONDENSING UNIT MODEL NO:		H1RA060S50A																	
EVAPORATOR COIL MODEL NO:		G2FD060S24																	
INDOOR AIR		CONDENSER ENTERING AIR TEMPERATURE																	
		75			85			95			105			115			125		
ID CFM	ID DB/WB	CAPACITY MBTUH			CAPACITY MBTUH			CAPACITY MBTUH			CAPACITY MBTUH			CAPACITY MBTUH			CAPACITY MBTUH		
		T.C.	S.C.	K.W.	T.C.	S.C.	K.W.	T.C.	S.C.	K.W.	T.C.	S.C.	K.W.	T.C.	S.C.	K.W.	T.C.	S.C.	K.W.
1650	85/71	65.0	41.8	4.80	63.9	41.8	5.21	62.8	41.8	5.61	60.6	40.9	6.02	58.5	40.1	6.43	52.9	38.7	6.71
	80/67	62.4	41.5	4.76	60.7	41.1	5.14	59.1	40.7	5.52	55.3	39.4	5.84	51.5	38.2	6.16	47.7	36.7	6.49
	75/63	59.6	41.0	4.68	56.5	39.8	5.01	53.5	38.6	5.34	49.3	36.8	5.67	45.1	35.0	5.99	40.4	32.8	6.24
1900	85/71	65.8	44.7	4.82	64.7	44.7	5.23	63.5	44.6	5.64	61.5	44.0	6.05	59.6	43.4	6.45	54.2	42.0	6.79
	80/67	62.8	44.0	4.77	61.4	43.7	5.15	60.0	43.5	5.54	56.6	42.4	5.88	53.3	41.3	6.23	48.5	39.4	6.54
	75/63	60.0	43.6	4.70	57.5	42.5	5.05	55.0	41.5	5.40	50.7	39.8	5.71	46.5	38.2	6.03	41.9	35.8	6.30
2150	85/71	66.6	47.5	4.84	65.4	47.5	5.26	64.3	47.5	5.67	62.4	47.1	6.07	60.6	46.8	6.47	55.5	45.4	6.86
	80/67	63.3	46.5	4.78	62.1	46.4	5.17	60.8	46.2	5.55	58.0	45.3	5.93	55.1	44.4	6.30	49.4	42.1	6.58
	75/63	60.5	46.1	4.72	58.5	45.3	5.09	56.5	44.4	5.45	52.2	42.9	5.76	47.9	41.4	6.06	43.5	38.9	6.35

NOTE: ALL CAPACITIES ARE NET WITH INDOOR FAN HEAT ALREADY DEDUCTED AT 1250 BTUH/1000 CFM.
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NOTES

NOTES

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