

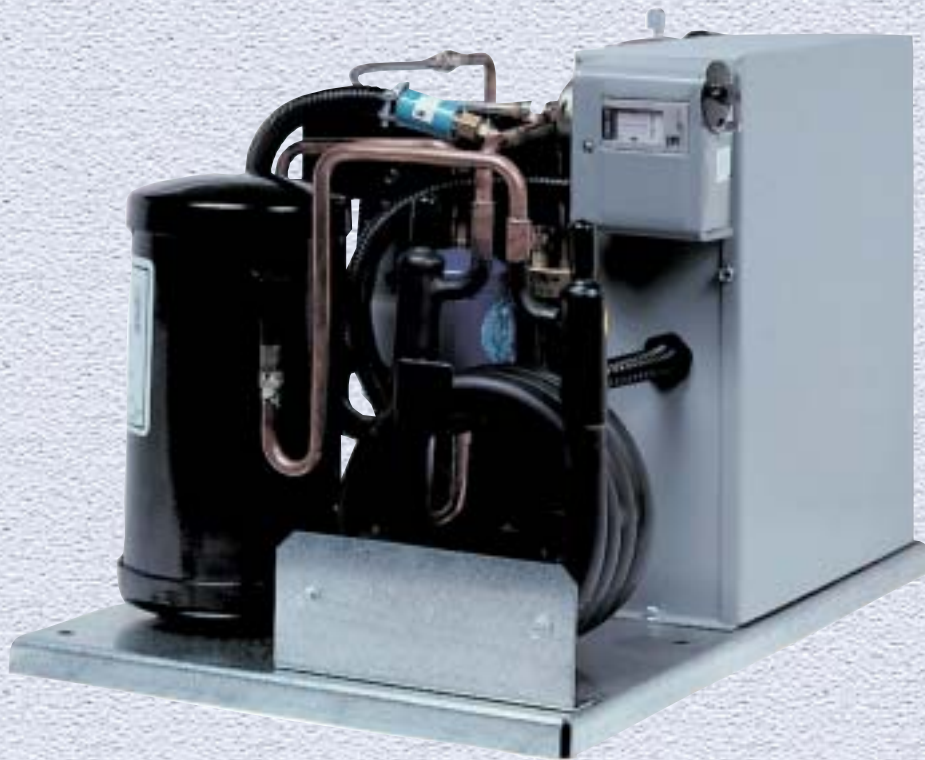
Bulletin
BN-HSWC-98A
(04/02)
Replaces: BN-HSWC-98
(9/98)

WATER COOLED HERMETIC & SCROLL CONDENSING UNITS 1/2 TO 6 HP

EXTRA SPACE

EXTRA COMPACT

EXTRA FEATURES



BOHN[®]
The Cold Standard

1/2 TO 6 HP WATER COOLED CONDENSING UNITS

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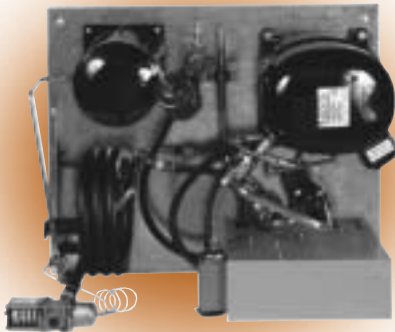
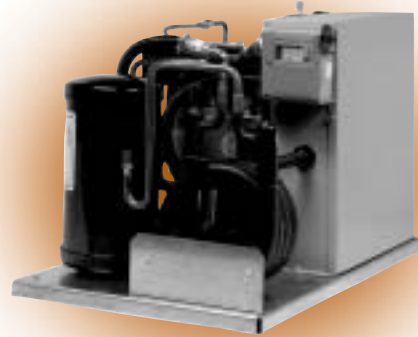
NOMENCLATURE

ZW	N	030	L	6	B
Compressor	Application	Equiv.HP	Temp.	Refrigerant	Voltage
HW = Hermetic ZW = Scroll	N = Indoor M = Beacon	005 = 1/2HP 008 = 3/4HP 010 = 1HP 01* = 1-1/2HP 02* = 2HP 03* = 3HP 04* = 4HP 05* = 5HP 060 = 6HP	H = High L = Low M = Medium X = Medium/Low	2 = R-22 6 = R-404A/507	B = 208/230/1/60 C = 208/230/3/60 D = 460/3/60 G = 230/1/60

1/2 TO 6 HP WATER COOLED CONDENSING UNITS

FEATURES & BENEFITS - THE EXTRAS

EXTRA COMPACT: Component location and unit size are all **optimized for easy field replacements or new installations** where space is limited.



EXTRA SPACE: Component location and unit size are all minimized, but not the control box. **Extra space is provided inside the electrical box** for service and installation of additional components. This extra space is large enough to accommodate circuit breakers, compressor contactors, time clocks and start components.

EXTRA FEATURES: **Compressor isolation valves** are a standard service feature. The valves are located both on the discharge and suction side of the compressor to save refrigerant reclamation time.

Another standard feature is the **extra capacity receiver** which provides the benefit of total refrigerant pump down. The extra capacity of this receiver is also beneficial for units installed with long refrigerant lines.



1/2 TO 6 HP WATER COOLED CONDENSING UNITS

FEATURES & BENEFITS

Copeland hermetic and scroll compressors for low and medium temperature operation using HCFC22 and HFC404A. Copeland hermetic low temperature compressors for HFC404A.

UL listed for USA & Canada. MEA approval for New York City.

Piping is laid out to minimize stress and vibration for quieter operation.

Sight glass (optional) is easily viewable from the front to monitor the refrigerant charge.

Easy to verify leak free unit by checking for the nitrogen holding charge schrader valve on the discharge or suction service valve.

Encapsulated, automatic reset, high pressure control, and an adjustable low pressure control with flexible refrigerant hose to reduce possibility for leaks.

Easy access to the large electrical panel for service diagnostics or options.

Color coded wire harnesses are all labeled and coded for easy identification.

A suction line rotolock service valve is provided on the compressor for service.

An additional shut off valve is mounted in the discharge line of the compressor to enable the service technician to isolate the compressor for service.

Schrader valves permit recovery of refrigerant isolated in compressor for quick and easy compressor change if ever needed.

Factory installed suction filter available as option for additional system protection.

A helix tube in tube water cooled condenser is standard with refrigerant counter flow for optimum condensing unit efficiency.



N.Y. MEA



1/2 TO 6 HP WATER COOLED CONDENSING UNITS

FEATURES & BENEFITS

READY TO INSTALL!

Every unit is put into a vacuum and subjected to a rigorous leak test. This results in a clean, dry and leak free unit every time.

Electrical circuits are factory tested for functional integrity.

Every unit is run tested and cycled on both the high and low pressure controls.

All units are provided with a water regulating valve for superior head pressure control.

An extra capacity receiver with liquid shut-off valve is provided for installations with long refrigerant lines.

A pumpdown switch is provided on all models for field servicing.



THE OPTIONAL BEACON II® SYSTEM

The Beacon II System is a pre-assembled, factory installed refrigeration system featuring an integrated microcomputer-based electronic control board. System orders (including matching unit coolers) are now available for all HW & ZW models.

The Beacon II System replaces the expansion valve, solenoid valve, room thermostat, defrost control and timer. It comes factory preset thereby eliminating all of the expensive and time consuming fine tuning and adjustments necessary for a good system installation.

For additional information, see Beacon II bulletin or contact your local Sales Representative.

1/2 TO 6 HP WATER COOLED CONDENSING UNITS

UNIT SPECIFICATIONS

FEATURES & SPECIFICATIONS	MODELS	
	HW	ZW
Compressor mounting (rubber grommets)	Std	Std
Compressor discharge service valve (in line brass base valve)	Std	Std
Compressor suction service valve - rotolock	Std	Std
Large capacity refrigerant receiver (up to 100 ft. runs)	Std	Std
Receiver service valve (located on outlet)	Std	Std
Coaxial condenser (counterflow tube in tube)	Std	Std
Extra large electric box (encloses all options & capacitors)	Std	Std
Electric conduit (UL recognized, high impact, flame retardant copolymer)	Std	Std
Low pressure control switch (adjustable)	Std	Std
High pressure encapsulated safety switch (fixed)	Std	Std
Super hose on low pressure control (higher leak resistance)	Std	Std
Voltage 208-230 - 1ph - 60hz	Std	Std
Voltage 208-230 - 3ph - 60hz	Std	Std
Voltage 460 - 3ph - 60hz	Std	Std
Pump down control switch (pre-wired)	Std	Std
Water valve (mounted on condenser inlet)	Std	Std
Agency approvals UL, ULC, N.Y., MEA 106-98-E	Std	Std

UNIT OPTIONS

ELECTRICAL OPTIONS	MODELS	
	HW	ZW
Air defrost timer	Option	Option
Electric defrost timer	Option	Option
Electric defrost timer with contactor	Option	Option
Compressor crankcase heater ²	Option	Option
Beacon control	Option	Option
MECHANICAL OPTIONS	HW	ZW
Liquid line drier & sight glass assembly (sweat) ³	Option	Option
Liquid line solenoid valve (230v coil)	Option	Option
Suction filter with bypass	Option	Option
Suction accumulator ⁴	Option	Option
Suction accumulator & filter	Option	Option
Two-tiered stacking rack for field assembly	Option	Option

Notes: N/A = Not applicable

¹ Crankcase heaters are not required for indoor operation but are included in all HW models. Field wiring is required.
ZW models crankcase heaters are not available.

² Required on ZW "L6" models

³ Required on HW "X6" models

1/2 TO 6 HP WATER COOLED CONDENSING UNITS

PERFORMANCE DATA - HIGH & MEDIUM TEMP. MODELS - HERMETIC COMPRESSORS

Model	Compressor HCFC-22		Capacity BTU/HR				
			Suction Temperature °F				
			0°F	10°F	20°F	30°F	40°F
HWN005H2	ART82C1	BTU/H	3220	4220	5390	6860	87600
		GPM	0.7	1.0	1.3	1.8	3.0
		PSI	0.4	0.6	1.0	1.6	2.7
HWN008H2	RS64C2	BTU/H	3840	5530	7500	9820	11990
		GPM	0.6	1.1	1.5	2.1	2.7
		PSI	0.5	0.9	1.5	2.6	2.9
HWN010H2	RS70C1	BTU/H	4550	6600	8810	11350	14280
		GPM	0.5	1.3	1.8	2.7	3.8
		PSI	0.4	1.2	2.1	4.1	6.8
HWN015H2	CR18KQ	BTU/H	5700	8190	11240	14860	19100
		GPM	1.5	1.8	2.6	3.7	6.1
		PSI	0.5	0.6	1.1	2	4
HWN020H2	CR24KQ	BTU/H	7120	10330	14330	19190	25100
		GPM	1.1	1.8	3.2	4.9	8
		PSI	0.5	0.8	1.7	3.3	8
HWN030H2	CR37KQ	BTU/H	11950	17140	23660	31640	41470
		GPM	1.4	2	4.2	6.8	13
		PSI	0.6	0.9	1.8	3.7	9.9
HWN040H2	CR53KQ	BTU/H	14850	23880	33740	44620	56820
		GPM	5.1	5.8	7.5	12	18
		PSI	1.9	2.2	3	6.7	12.7
HWN050H2	CRN5-0500	BTU/H	21510	30630	40460	51570	64890
		GPM	4	6.1	9	13.5	21
		PSI	0.9	1.5	3	6.1	13.1

Capacity rating conditions: 85° entering water, 105°F condensing, 20°F ITD, 0°F subcooling.
(Condensing temperature - entering condenser water temperature)

BTUH = British Thermal Units (All capacities are rated at 60 Hz operation)

GPM = Gallons Per Minute (Water flow rate)

PSI = Pounds per Square Inch (Water pressure drop through condenser)

1/2 TO 6 HP WATER COOLED CONDENSING UNITS

PERFORMANCE DATA - EXTENDED TEMP. MODELS - HERMETIC COMPRESSORS

Model	Compressor HFC-404a		Capacity BTU/HR						
			Suction Temperature °F						
			-25°F	-20°F	-10°F	0°F	10°F	20°F	30°F
HWN005X6	RS43C2E	BTU/H	1280	1540	2110	2950	4060	5500	7300
		GPM	0.2	0.2	0.4	0.7	1	1.5	2.1
		PSI	0.2	0.2	0.2	0.4	0.6	1.2	2.1
HWN008X6	RS55C2E	BTU/H	1590	2010	2800	3980	5280	6800	8800
		GPM	0.2	0.4	0.7	1.1	1.5	2.1	4.4
		PSI	0.2	0.2	0.4	0.7	1.2	2.1	4
HWN009X6	RS64C2E	BTU/H	2060	2560	3695	4953	6395	8019	9947
		GPM	0.3	0.5	0.6	1.2	1.5	1.8	2.5
		PSI	0.3	0.4	0.5	1.1	1.5	2.1	3.4
HWN010X6	RS70C1E	BTU/H	1600	2335	3770	5200	6800	8700	11200
		GPM	0.3	0.3	0.4	1.1	1.5	1.8	2.7
		PSI	0.3	0.3	0.3	0.9	1.5	2.1	3.9
HWN015X6	CS10K6E	BTU/H	2000	2815	4580	6930	9710	12900	16300
		GPM	0.6	0.8	1	1.5	2.3	3.3	4.8
		PSI	0.2	0.3	0.4	0.5	0.9	1.6	3.1
HWN020X6	CS12K6E	BTU/H	2650	3615	5670	8340	11490	15100	19200
		GPM	0.8	0.9	1.6	1.8	2.8	4.3	6.6
		PSI	0.4	0.4	0.5	0.6	1.2	2.6	4.3
HWN025X6	CS14K6E	BTU/H	3840	4900	7160	10140	13630	17500	21800
		GPM	0.2	0.5	1.1	1.8	3.2	4.7	7.2
		PSI	0.1	0.2	0.5	0.8	1.7	4.2	6.6
HWN030X6	CS18K6E	BTU/H	4590	5825	8570	12600	17400	22700	28300
		GPM	0.5	0.9	1.5	2.9	4.9	8	10.5
		PSI	0.2	0.4	0.6	1.4	3.3	8	10.4
HWN032X6	CS20K6E	BTU/H	4650	6505	10110	14210	19220	25600	34000
		GPM	0.5	0.8	1.3	1.8	2.6	5	9.5
		PSI	0.2	0.4	0.6	0.8	1.1	2.2	6.6
HWN040X6	CS27K6E	BTU/H	6819	8628	12406	17547	23901	31622	40740
		GPM	0.8	1.3	1.8	2.7	5.5	10.8	15
		PSI	0.4	0.6	0.8	1.2	2.6	8.1	13.6
HWN050X6	CS33K6E	BTU/H	8100	10515	15433	21505	28838	37733	48694
		GPM	1.3	2.1	3.1	4.5	6.2	9	13.6
		PSI	0.1	0.1	0.7	1	1.6	3	6.2

Capacity rating conditions: 85° entering water, 105°E condensing, 20°F ITD, 0°F subcooling.
(Condensing temperature - entering condenser water temperature)

BTUH = British Thermal Units (All capacities are rated at 60 Hz operation)
GPM = Gallons Per Minute (Water flow rate)
PSI = Pounds per Square Inch (Water pressure drop through condenser)

1/2 TO 6 HP WATER COOLED CONDENSING UNITS

PERFORMANCE DATA - EXTENDED TEMP. MODELS - SCROLL COMPRESSORS

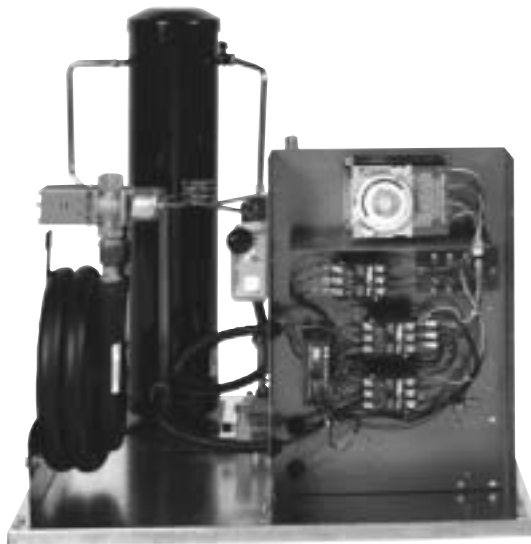
Model	Compressor HFC-404a		Capacity BTU/HR							
			Suction Temperature °F							
			-25°F	-20°F	-10°F	0°F	10°F	20°F	30°F	40°F
ZWN030X6	ZS21K4E	BTU/H	9010	10230	12840	16070	19740	24110	29310	35200
		GPM	1.2	1.3	1.6	2	2.7	4.4	6.8	10.8
		PSI	0.6	0.6	0.7	0.9	1.2	1.8	3.7	8.1
ZWN035X6	ZS26K4E	BTU/H	11270	12740	15910	19930	24490	29950	36400	43650
		GPM	4.6	5.1	5.2	5.6	6	6.8	8.8	12
		PSI	1.9	1.9	1.9	2.1	2.3	2.6	3.9	6.7
ZWN045X6	ZS30K4E	BTU/H	12810	14390	17960	22870	28480	35030	42320	50100
		GPM	5.1	5.2	5.5	5.8	6.8	8.5	11.9	15.1
		PSI	1.9	1.9	2	2.1	2.6	3.7	6.6	9.8
ZWN055X6	ZS38K4E	BTU/H	15920	18050	22640	28420	34970	42780	51980	62350
		GPM	3.1	3.4	4.8	5.8	7.5	10.3	14.5	21
		PSI	0.5	0.6	1	1.1	2.2	3.8	7	13.1
ZWN060X6	ZS45K4E	BTU/H	19220	21820	27360	34160	41850	51090	62130	74750
		GPM	3.1	3.3	5	6.9	9	12.6	17.7	23.9
		PSI	0.8	0.8	1.2	1.2	2	3.7	6.8	10.1

Capacity rating conditions: 85° entering water, 105°F condensing, 20°F ITD, 0°F subcooling.
(Condensing temperature - entering condenser water temperature)

BTUH = British Thermal Units (All capacities are rated at 60 Hz operation)

GPM = Gallons Per Minute (Water flow rate)

PSI = Pounds per Square Inch (Water pressure drop through condenser)



1/2 TO 6 HP WATER COOLED CONDENSING UNITS

PERFORMANCE DATA - LOW TEMP. MODELS - HERMETIC COMPRESSORS

Model	Compressor HFC-404a		Capacity BTU/HR					
			Suction Temperature °F					
			-30°F	-25°F	-20°F	-10°F	0°F	10°F
HWN011L6	CF04K6E	BTU/H	2080	2810	3570	5310	7590	10680
		GPM	0.5	0.7	1	1.6	3	6
		PSI	0.2	0.4	0.6	1.4	3.7	7.4
HWN014L6	CF06K6E	BTU/H	3770	4810	5990	8700	11780	15070
		GPM	1.0	1.3	1.5	2.5	4.0	5.0
		PSI	0.8	1.2	1.5	3.4	7.4	8.0
HWN025L6	CF09K6E	BTU/H	5560	7040	8720	12590	17060	21970
		GPM	1.0	1.5	2.0	3.5	5.8	8.5
		PSI	0.2	0.6	0.8	2.0	4.4	8.5
HWN031L6	CF12K6E	BTU/H	7550	9510	11570	16060	21180	27140
		GPM	1.25	2.5	3.4	5.75	9.5	11
		PSI	0.6	1.2	1.9	4.4	9.8	12

PERFORMANCE DATA - LOW TEMP. MODELS - SCROLL COMPRESSORS

Model	Compressor HFC-404a		Capacity BTU/HR					
			Suction Temperature °F					
			-40°F	-30°F	-25°F	-20°F	-10°F	0°F
ZWN030L6	ZF09K4E	BTU/H	6380	8270	9300	10500	13200	16300
		GPM	1.8	2.3	2.6	3	4.3	6.5
		PSI	0.6	0.9	1.1	1.3	2.6	4.1
ZWN035L6	ZF11K4E	BTU/H	7900	10170	11500	12900	16200	20200
		GPM	1.9	2.7	3.2	4.7	5.2	7.5
		PSI	0.8	1.3	1.7	3.1	3.6	7.1
ZWN045L6	ZF13K4E	BTU/H	8570	11480	13200	15000	19100	23800
		GPM	2.6	3.6	4.5	5.2	8	10.1
		PSI	1.2	2.1	2.9	3.6	8	10
ZWN055L6	ZF15K4E	BTU/H	11080	14480	16400	18500	23300	28900
		GPM	2.9	4.3	5.5	6.3	9	11.3
		PSI	1.5	2.6	3.8	4.7	8.6	12.3
ZWN060L6	ZF18K4E	BTU/H	13260	17260	19500	22000	27700	34500
		GPM	2.5	4.2	4.5	5.5	9	13.1
		PSI	1.1	1.8	2.1	2.6	6	11.1

Capacity rating conditions: 85° entering water, 105°F condensing, 20°F ITD, 0°F subcooling.
(Condensing temperature - entering condenser water temperature)

BTUH = British Thermal Units (All capacities are rated at 60 Hz operation)

GPM = Gallons Per Minute (Water flow rate)

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1/2 TO 6 HP WATER COOLED CONDENSING UNITS

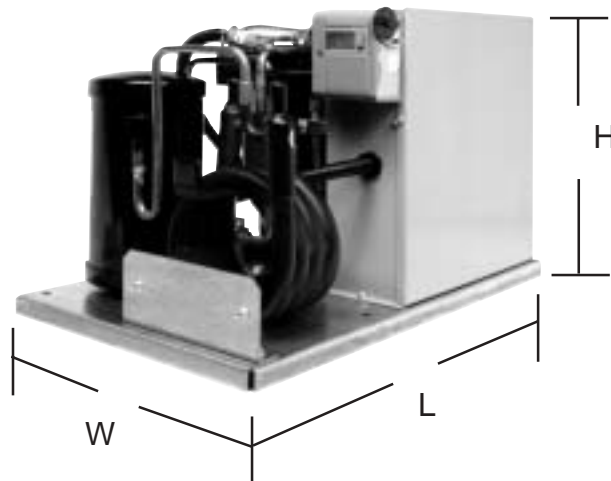
UNIT DIMENSIONAL & CONNECTION DATA

Model Number	Compressor Model	Dimensions (inches)			Connections (inches)				Receiver Capacity lbs. @90%	Unit Net Wt. Lbs.
		L	W	H	Suction (ODS)	Liquid (ODS)	WaterIn (FPT)	WaterOut (MPT)		
HWN005H2	ART82C1	22	14	17	1/2	3/8	1/2	1/2	6	77
HWN005X6	RS43C2E	22	14	17	1/2	3/8	1/2	1/2	5.5	98
HWN008H2	RS64C2	22	14	17	1/2	3/8	1/2	1/2	6	92
HWN008X6	RS55C2E	22	14	17	1/2	3/8	1/2	1/2	5.5	98
HWN009X6	RS64C2E	22	14	17	5/8	3/8	1/2	1/2	5.5	103
HWN010H2	RS70C1	22	14	17	5/8	3/8	1/2	1/2	6	91
HWN010X6	RS70C1E	22	14	17	5/8	3/8	1/2	1/2	5.5	107
HWN011L6	CF04K6E	27	22	21	5/8	3/8	1/2	1/2	9	114
HWN014L6	CF06K6E	27	22	21	5/8	3/8	1/2	1/2	9	114
HWN015H2	CR18KQ	27	22	21	5/8	3/8	1/2	1/2	10	136
HWN015X6	CS10K6E	27	22	21	5/8	3/8	1/2	1/2	9	148
HWN020H2	CR24KQ	27	22	21	5/8	3/8	1/2	1/2	10	141
HWN020X6	CS12K6E	27	22	21	7/8	3/8	1/2	1/2	9	148
HWN025L6	CF09K6E	27	22	21	5/8	3/8	1/2	1/2	9	120
HWN025X6	CS14K6E	27	22	21	7/8	3/8	1/2	1/2	9	152
HWN030H2	CR37KQ	29	25	28	7/8	1/2	1/2	1/2	22	174
HWN030X6	CS18K6E	27	22	28	7/8	1/2	1/2	1/2	20	172
HWN031L6	CF12K6E	27	22	21	7/8	1/2	1/2	1/2	20	136
HWN032X6	CS20K6E	27	22	28	7/8	1/2	1/2	1/2	20	182
HWN040H2	CR53KQ	29	25	28	7/8	1/2	1/2	1/2	22	196
HWN040X6	CS27K6E	29	25	28	7/8	1/2	1/2	1/2	20	183
HWN050H2	CRN5-0500	29	25	28	7/8	1/2	3/4	3/4	22	221
HWN050X6	CS33K6E	29	25	28	7/8	1/2	1/2	1/2	20	207
ZWN030L6	ZF09K4E	27	22	28	7/8	1/2	1/2	1/2	20	159
ZWN030X6	ZS21K4E	29	25	28	7/8	1/2	1/2	1/2	20	171
ZWN035L6	ZF11K4E	27	22	28	7/8	1/2	1/2	1/2	20	165
ZWN035X6	ZS26K4E	29	25	28	7/8	1/2	1/2	1/2	20	186
ZWN045L6	ZF13K4E	27	22	28	7/8	1/2	1/2	1/2	20	185
ZWN045X6	ZS30K4E	29	25	28	7/8	1/2	1/2	1/2	20	207
ZWN055L6	ZF15K4E	27	22	28	7/8	1/2	1/2	1/2	20	201
ZWN055X6	ZS38K4E	29	25	28	7/8	1/2	3/4	3/4	20	226
ZWN060L6	ZF18K4E	29	25	28	7/8	1/2	1/2	1/2	20	207
ZWN060X6	ZS45K4E	29	25	28	7/8	1/2	3/4	3/4	20	241

ODS = Outside Diameter Sweat

FPT = Female Pipe Thread

MPT = Male Pipe Thread



1/2 TO 6 HP WATER COOLED CONDENSING UNITS

ELECTRICAL DATA - HERMETIC COMPRESSORS

Model Number	Compressor Model	Power Supply			Compressor		MCA		MOPD		Evap. Fan Amps	Def. Htr. Amps
		Volts	Ph	Hz ⁺	RLA	LRA	Air	Elec.	Air	Elec.		
HWN005H2B	ART82C1-CAV	208-230	1	60	5.9	30.0	15	20	15	20	8	15
HWN005X6B	RS43C2E-CAV	208-230	1	60	4.8	24.1	15	20	15	20	8	15
HWN008H2B	RS64C2-PAV	208-230	1	60	6.9	37	15	20	15	20	8	15
HWN008X6B	RS55C2E-CAV	208-230	1	60	5.4	40	15	20	15	20	8	15
HWN009X6B	RS64C2E-CAV	208-230	1	60	6.9	37	15	20	15	20	7	15
HWN010H2B	RS70C1-PFV	208-230	1	60	6.3	34.2	15	20	15	20	7	15
HWN010H2C	RS70C1-TFC	208-230	3	60	4.2	31	15	20	15	20	8.6	15
HWN010X6B	RS70C1E-PFV	208-230	1	60	6.3	34.2	15	20	15	20	7	15
HWN010X6C	RS70C1E-TFC	208-230	3	60	4.2	31	15	20	15	20	8.6	15
HWN011L6B	CF04K6E-PFV	208-230	1	60	9.6	59.2	15	20	15	20	8	15
HWN011L6C	CF04K6E-TF5	208-230	3	60	6.4	52.0	15	20	15	20	8	15
HWN014L6B	CF06K6E-PFV	208-230	1	60	11.4	59.2	15	20	20	25	4	23
HWN014L6C	CF06K6E-TF5	208-230	3	60	7.0	52.0	15	20	15	20	9	19
HWN015H2B	CR18KQ-PFV	208-230	1	60	8.1	47	15	24	15	25	6	19
HWN015H2C	CR18KQ-TF5	208-230	3	60	4.9	40	15	24	15	25	7	19
HWN015H2D	CR18KQ-TFD	460	3	60	2.8	23	15	20	15	20	9	15
HWN015X6B	CS10K6E-PFV	208-230	1	60	9.8	56	15	24	20	25	6	19
HWN015X6C	CS10K6E-TF5	208-230	3	60	6.7	51	15	20	15	20	7	15
HWN020H2B	CR24KQ-PFV	208-230	1	60	12.2	70.5	20	29	25	30	6	23
HWN020H2C	CR24KQ-TF5	208-230	3	60	6.7	40	15	24	15	25	9	19
HWN020H2D	CR24KQ-TFD	460	3	60	3.6	28	15	20	15	20	8.5	15
HWN020X6B	CS12K6E-PFV	208-230	1	60	9.8	56	15	24	20	25	6	19
HWN020X6C	CS12K6E-TF5	208-230	3	60	6.7	51	15	25	15	25	9	19
HWN025L6B	CF09K6E-PFV	208-230	1	60	16.7	87.0	20	25	30	35	6	30
HWN025L6C	CF09K6E-TF5	208-230	3	60	10.2	72.2	15	20	20	25	7	19
HWN025X6B	CS14K6E-PFV	208-230	1	60	11.2	61	15	29	20	30	6	23
HWN025X6C	CS14K6E-TF5	208-230	3	60	8.2	55	15	24	15	25	9	19
HWN025X6D	CS14K6E-TFD	460	3	60	4.2	28	15	20	15	20	8.3	15
HWN030H2B	CR37KQ-PFV	208-230	1	60	16.7	100.3	21	38	35	45	12	30
HWN030H2C	CR37KQ-TF5	208-230	3	60	9.9	85	15	38	20	40	12	30
HWN030H2D	CR37KQ-TFD	460	3	60	5	39	15	24	15	25	9	19
HWN030X6B	CS18K6E-PFV	208-230	1	60	14.4	82	18	38	30	40	12	30
HWN030X6C	CS18K6E-TF5	208-230	3	60	9.4	65.5	15	29	20	30	7	23
HWN030X6D	CS18K6E-TFD	460	3	60	3.9	33	15	24	15	25	10	19
HWN031L6B	CF12K6E-PFV	208-230	1	60	19.0	105.0	21	38	35	50	12	30
HWN031L6C	CF12K6E-TF5	208-230	3	60	11.9	85.0	15	29	20	30	7	23
HWN031L6D	CF12K6E-TFD	460	3	60	5.9	42.0	15	24	15	25	10	19
HWN032X6B	CS20K6E-PFV	208-230	1	60	16.7	96	21	38	30	50	12	30
HWN032X6C	CS20K6E-TF5	208-230	3	60	10.3	75	15	29	20	30	7	23
HWN032X6D	CS20K6E-TFD	460	3	60	4.6	40	15	24	15	25	10	19
HWN040H2B	CR53KQ-PFV	208-230	1	60	26	140	33	45	50	60	12	35
HWN040H2C	CR53KQ-TF5	208-230	3	60	16.3	107	20	38	35	45	12	30
HWN040H2D	CR53KQ-TFD	460	3	60	8.1	55	15	29	15	30	11	23
HWN040X6B	CS27K6E-PFV	208-230	1	60	21.5	121	27	44	45	60	12	35
HWN040X6C	CS27K6E-TF5	208-230	3	60	13.7	105	20	38	30	40	12	30
HWN040X6D	CS27K6E-TFD	460	3	60	7.6	52	15	29	15	30	11	23
HWN050H2B	CRN5-0500-PFV	208-230	1	60	30.8	142	39	59	50	60	12	47
HWN050H2C	CRN5-0500-TF5	208-230	3	60	19.2	130	24	37.5	40	50	12	30
HWN050H2D	CRN5-0500-TFD	460	3	60	8.7	65	15	29	15	30	10	23
HWN050X6B	CS33K6E-PFV	208-230	1	60	27.6	125	35	59	50	60	12	47
HWN050X6C	CS33K6E-TFC	208-230	3	60	16.8	102	21	38	35	45	12	30
HWN050X6D	CS33K6E-TFD	460	3	60	8.8	48	15	29	15	30	10	23

1/2 TO 6 HP WATER COOLED CONDENSING UNITS

ELECTRICAL DATA - SCROLL COMPRESSORS

Model Number	Compressor Model	Power Supply			Compressor		MCA		MOPD		Evap. Fan Amps	Def. Htr. Amps
		Volts	Ph	Hz ⁺	RLA	LRA	Air	Elec.	Air	Elec.		
ZWN030L6B	ZF09K4E-PFV	208-230	1	60	14.7	88	18	38	30	45	12	30
ZWN030L6C	ZF09K4E-TF5	208-230	3	60	9.9	77	15	24	20	25	6	19
ZWN030L6D	ZF09K4E-TFD	460	3	60	5.1	39	15	24	15	25	10	19
ZWN030X6B	ZS21K4E-PFV	208-230	1	60	14.7	88	18.4	38	30	45	12	30
ZWN030X6C	ZS21K4E-TF5	208-230	3	60	9.9	77	15	38	20	40	12	30
ZWN030X6D	ZS21K4E-TFD	460	3	60	5.1	39	15	24	15	25	10	19
ZWN035L6B	ZF11K4E-PFV	208-230	1	60	18.6	109	23	38	40	50	12	30
ZWN035L6C	ZF11K4E-TF5	208-230	3	60	12.2	88	15	29	25	30	6	23
ZWN035L6D	ZF11K4E-TFD	460	3	60	6.4	44	15	24	15	25	10	19
ZWN035X6B	ZS26K4E-PFV	208-230	1	60	18.6	109	23.2	38	40	50	12	30
ZWN035X6C	ZS26K4E-TF5	208-230	3	60	12.2	88	15.2	38	25	40	12	30
ZWN035X6D	ZS26K4E-TFD	460	3	60	6.4	44	15	24	15	25	9	19
ZWN045L6B	ZF13K4E-PFV	208-230	1	60	24	129	30	41	50	60	11	30
ZWN045L6C	ZF13K4E-TF5	208-230	3	60	13.5	99	17	38	30	40	11	30
ZWN045L6D	ZF13K4E-TFD	460	3	60	7.4	49.5	15	24	15	25	9	19
ZWN045X6B	ZS30K4E-PFV	208-230	1	60	24	129	30	59	50	60	11	47
ZWN045X6C	ZS30K4E-TF5	208-230	3	60	13.5	99	17	44	30	45	12	35
ZWN045X6D	ZS30K4E-TFD	460	3	60	7.4	49.5	15	29	15	30	11	23
ZWN055L6B	ZF15K4E-PFV	208-230	1	60	28.8	169	36	38	60	60	10	30
ZWN055L6C	ZF15K4E-TF5	208-230	3	60	19.2	123	24	38	40	50	10	30
ZWN055L6D	ZF15K4E-TFD	460	3	60	8.7	62	15	25	15	25	8	19
ZWN055X6B	ZS38K4E-PFV	208-230	1	60	28.8	169	36	59	60	60	12	47
ZWN055X6C	ZS38K4E-TF5	208-230	3	60	19.2	123	24	44	40	50	12	35
ZWN055X6D	ZS38K4E-TFD	460	3	60	8.7	62	15	29	15	30	10	23
ZWN060L6C	ZF18K4E-TF5	208-230	3	60	21.5	156	27	44	45	60	12	35
ZWN060L6D	ZF18K4E-TFD	460	3	60	8.3	70	15	29	15	30	11	23
ZWN060X6C	ZS45K4E-TF5	208-230	3	60	21.5	156	27	38	45	60	12	30
ZWN060X6D	ZS45K4E-TFD	460	3	60	8.3	70	15	29	15	30	10.6	23

RLA values have been calculated by dividing the maximum continuous current (MCC) by 1.56, per UL and National Electrical Code Standard.

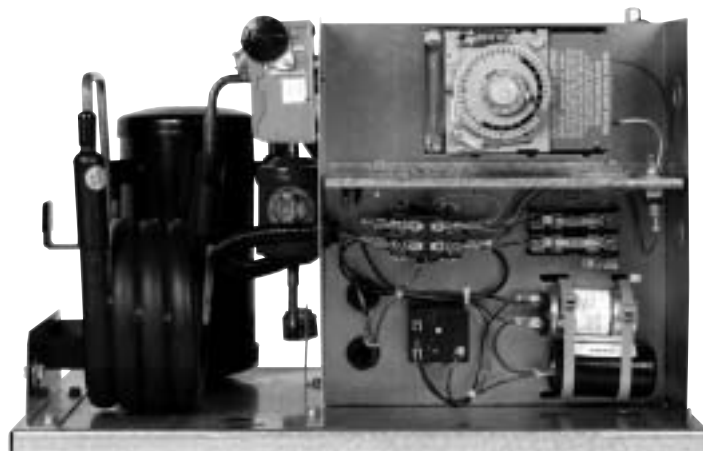
⁺ Consult Factory for 50 hz applications

RLA = Rated Load Amps

LRA = Locked Rotor Amps

MCA = Minimum Circuit Ampacity

MOPD = Maximum Overload Protection Device



1/2 TO 6 HP WATER COOLED CONDENSING UNITS

APPLICATION DATA

INSTALLATION PRECAUTIONS

All units are factory charged with dry nitrogen which must be evacuated prior to installation.

Water valves must be adjusted during initial start-up to design condensing pressure for the selected refrigerant.

All HW "X6" models require a suction accumulator. HW "X6" models with RS compressors are not suitable for HFC 507.

RETROFIT INSTALLATIONS

If a P.O.E. model is used in a retrofit, the old mineral oil must be completely removed from the system or at least reduced to no more than 5% of the total oil charge.

Polyolester oil is very hygroscopic. Take extra precautions to limit exposure to the atmosphere.

LEVELING UNITS

Unit must be level to insure proper oil return to the compressor.

ENGINEERING AIDS

Total Heat of Rejection (THR) all units:
 $THR = BTUH + (KW \times 1000 \times 3.4 \times 1.0)$

Water Temperature Rise (ΔT_w) through
water cooled condenser:
 $\Delta T_w = THR \div (GPM \times 60 \times 8.4)$

CONDENSER WATER TEMPERATURE

Maximum leaving water temperature is 105°F on all HW and ZW models.

CONDENSER WATER TREATMENT

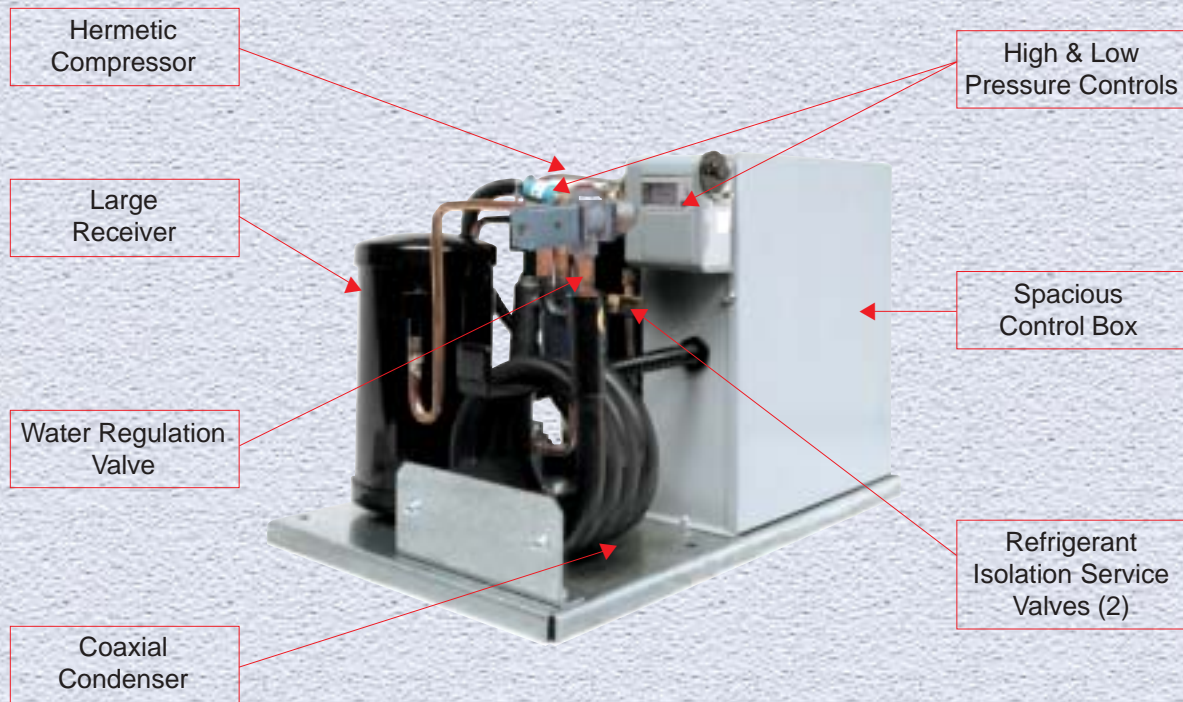
The use of untreated or improperly treated water may result in scaling premature erosion or corrosion. Heatcraft recommends the use of a qualified water treatment specialist for proper results.

1/2 TO 6 HP WATER COOLED CONDENSING UNITS

Notes



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Visit our web site at www.heatcraft.com for Technical Literature Online.

Since product improvement is a continuing effort at Heatcraft, we reserve the right to make changes in specifications without notice.



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