Applied Comfort Packaged Terminal Air Conditioner with Top-Mounted Hydronic Heat 16" x 42" Model NYWC Flat Top --- Size 7, 9, 12, 15, 17000 Btuh Nominal Cooling --- R-410A Refrigerant

General Specifications

Heating/Cooling Chassis.

- **Safety Compliance** -- The NYWC is a Listed product eligible to bear the CSA Mark of cCSAus (US and Canada Safety Compliance). The NYWC is produced in a CSA inspected factory in Cambridge, Ontario, Canada.
- **3rd Party Energy Performance Verification** -- The Cooling-Capacity and Energy Performance Verification Testing for the N Series of chassis is conducted by Intertek Labs and the test reports are available upon request – these tests cover the full range of cooling outputs available for the N Series. Note that the performance verification testing conducted on the N chassis is with hydronic coils in place to recognize the higher static pressures encountered with the hydronic installation. Cooling-Capacity Tests conducted in accordance with ANSI/ASHRAE Standard 310/380 and CAN/CSA Standard C744.
- **General Construction** -- Factory-assembled and tested, self-contained, complete air-cooled refrigeration system with R-410A refrigerant using two low-noise high-static pressure dual-inlet evaporator blowers, and one dual-inlet condenser blower with efficient condensate removal system and optional manual fresh air damper or optional automatic damper. Hydronic heat has a 24V valve signal, with hydronic coil mounting via brackets to top of sleeve above chassis. Power cord exists from under right side of chassis. Surfaces in contact with the airstream comply with requirements in ASHRAE 62.1.

Wall Sleeve

- Industry standard 16" x 42", made of 1.3mm (18 gauge) galvanized phosphatized steel. Coated with electrostatically applied, baked-on, industry-standard beige polyester powder paint for maximum corrosion protection. Completely insulated.

Room Cabinet

- Top discharge with stamped one-piece grille. Control access door on right side. Enclosure completely encloses controls and piping. 4" nominal height, black kick plate adjustable from 3" to 5". Front panel is removable without use of tools to provide access to filters and cooling unit. Filter is removable with the use of tools. Made of 1.3mm (18 gauge) phosphatized steel. Coated with electrostatically applied, baked-on industry-standard beige polyester powder paint.

Louvers

- Architectural type with silver powder-coating baked on.

Power Cord

- LCDI power cord supplied with the 230-208V chassis, and standard non-LCDI cord set with the 277V chassis.

Power Air Damper for Fresh Air (optional)

- A power motorized door for fresh air opens when evaporator blowers are energized, and automatically closes when the evaporator blower is not energized.

Refrigeration System

- Direct expansion indoor coil with capillary restrictor, and rotary compressor with vibration isolation and overload protection.

Indoor and Outdoor Coils

- Seamless copper tubes mechanically expanded into aluminum.

Charge

- R410A refrigerant.

Evaporator Fan:

- One direct drive, dual-shaft with permanent split capacitor two-speed motor. The evaporator fan consists of two centrifugal dual-inlet blower type.

Condenser Fans:

- One direct drive with permanent split capacitor motor. The condenser fan is a centrifugal dual-inlet blower type. The housing is phosphatized and powder-coated steel for durability.

Filters

- Washable aluminum weave filter in a durable aluminum frame.

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Condensate Drain

- Drain pan to direct condensate to outdoor coil for re-evaporation. Optional drain kit allows for industry standard connection to indoor or outdoor drains.

Digital Touchpad Control

- The NYWC Digital Control controls the integral air conditioner and heat source via a touchpad, or optional remote 24-volt wall mounted thermostats.
- Temperature-Limit Control: prevents occupant from exceeding preset, setback, or setup temperature.
- Chassis comes with standard 7-wire connection harness for thermostats; control by external thermostat is enabled using DIP switches.

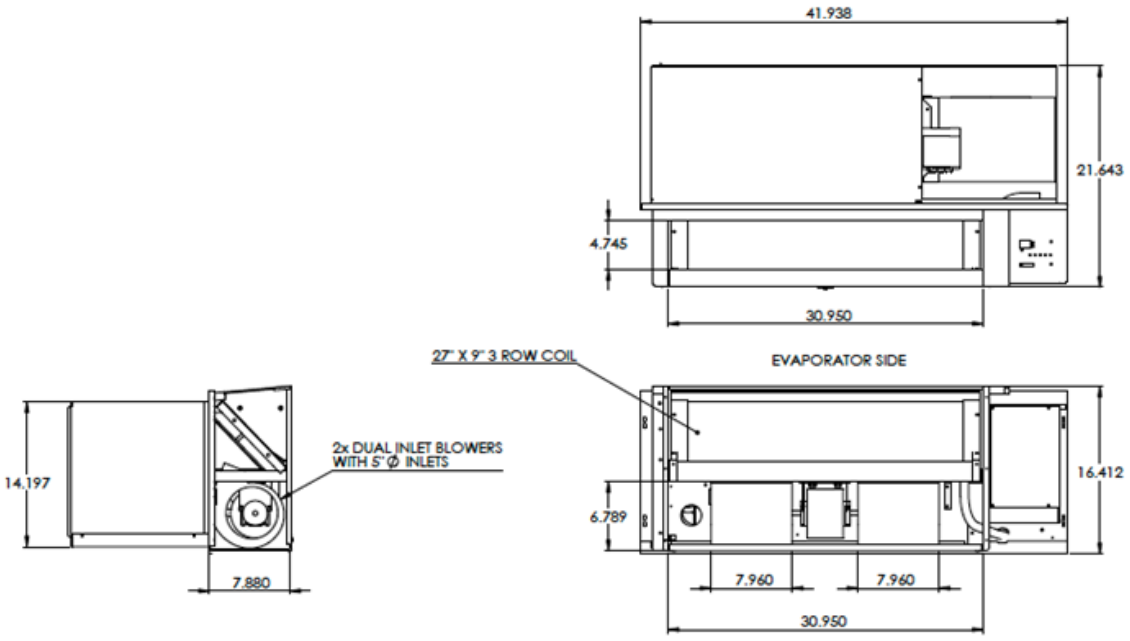
Sound-Power Level Ratings

- OITC sound rating test performed by ETL labs (Intertek Labs USA) to comply with ARI 300 standards.

Unit Performance Ratings

- Factory test according to AHRI 310/380/CSA C744, "Packaged Terminal Air-Conditioners and Heat Pumps." 3rd Party energy performance verification tests conducted by Intertek ETL labs.

Dimensional Data – Chassis



Certified Drawing --- Type: NYWC --- JAN2020 --- Applied Comfort Products Carver Inc. --- www.ptacs.com ---

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Performance Data – 3rd Party Lab Verified by Intertek Labs

NYWC Air Conditioner for use with TOP-MOUNTED Hydronic Heat Coil -- Separate Room Cabinet

CORD CONNECTED with LCDI Cord.

Model	Voltage	Hz	Min. Circuit Amps	MOP Fuse Amps	Electrical Plug (NEMA)	Cooling					Resistance Heat			Indoor CFM HIGH°	Indoor CFM LOW°	Net Wt. lbs.
						BTU/Hr.	EER	Amps	S/T	Pts./hr.	BTU/Hr.	kW	Amps			
NYWC07L00E6	115	60	8.3	15	#5-15P	7300	11.8	6.4	0.83	1.1	N/A	N/A	N/A	310	265	150
NYWC09L00E6	"	"	11.9	"	"	9600	11.3	8.4	0.73	2.2	N/A	N/A	N/A	"	"	"
NYWC12L00E7	"	"	16.3	20	#5-20P	12600	10.6	12.0	0.70	3.4	N/A	N/A	N/A	360	310	"
NYWC07K00E7	230 - 208	"	4.1	20	#6-20P	7300	11.8	3.2/3.4	0.83	1.1	N/A	N/A	N/A	325/300	290/250	"
NYWC09K00E7	"	"	5.7	"	"	9600	11.3	4.2/4.4	0.73	2.2	N/A	N/A	N/A	"	"	"
NYWC12K00E7	"	"	8.1	"	"	12600	10.6	6.0/6.2	0.70	3.4	N/A	N/A	N/A	370/350	325/300	"
NYWC15K00E7	"	"	9.9	"	"	14800	9.8	7.5/7.7	0.66	4.5	N/A	N/A	N/A	"	"	"
NYWC17K00E7	"	"	12.2	"	"	16100	8.4	9.2/9.4	0.65	5.0	N/A	N/A	N/A	420/410	380/360	"

NOTE: Chassis can be built with 15Amp cords (NEMA#5-15P for 115V; #6-15P for 208-230V) as special order for models with MOP fuse amps listed above as 15.

Non-LCDI Cord plugs into hard-wired receptacle in Subbase.

Model	Voltage	Hz	Min. Circuit Amps	MOP Fuse Amps	Electrical Plug (NEMA)	Cooling					Resistance Heat			Indoor CFM HIGH°	Indoor CFM LOW°	Net Wt. lbs.
						BTU/Hr.	EER	Amps	S/T	Pts./hr.	BTU/Hr.	kW	Amps			
NYWC07R00E2	277	"	3.7	15	#7-20P	7300	11.8	3.0	0.88	0.8	N/A	N/A	N/A	360	310	150
NYWC09R00E2	"	"	5.4	"	"	9600	11.3	4.0	0.77	1.9	N/A	N/A	N/A	"	"	"
NYWC12R00E2	"	"	7.2	"	"	12600	10.6	5.3	0.70	3.4	N/A	N/A	N/A	"	"	"
NYWC15R00E2	"	"	8.8	"	"	14800	9.8	6.6	0.66	4.5	N/A	N/A	N/A	"	"	"
NYWC17R00E2	"	"	10.4	"	"	16100	8.4	8.1	0.65	5.0	N/A	N/A	N/A	410	370	"

Hydronic Heat Performance

Model	Voltage	Hz	Hot Water Heat HIGH SPEED	Hot Water Heat LOW SPEED	Water Flow Rate	Coil Pressure Drop (HIGH SPEED)	Steam Heat HIGH SPEED	Steam Heat LOW SPEED	Steam Pressure Drop	Heating Current
			BTU/Hr.	BTU/Hr.	USGPM	Ft of Water	BTU/Hr.	BTU/Hr.	psi	Amps
NYWC07L, 09L	115	60	16500	15500	1.7	3.0	19900	18600	0.13	<1
NYWC12L	"	"	17800	16700	1.8	3.4	21400	19600	"	"
NYWC07K, 09K	230 - 208	"	16900/16300	16100/15100	1.8 - 1.7	3.1 - 2.9	20400/19600	19400/18100	"	"
NYWC12K,15K	"	"	18100/17600	17100/16500	1.9 - 1.8	3.5 - 3.3	21600/21100	20400/19600	"	"
NYWC17K	"	"	19200/19000	18400/19000	2.0 - 1.9	3.8 - 3.6	22900/22600	21900/21400	"	"
NYWC07R,09R,12R,15R	277	"	17800	16700	1.8	3.4	21400	19900	"	"
NYWC17R	"	"	19000	18200	1.9	3.7	22600	21600	"	"
NYWC07S,09S,12S,15S	115 230-208	"	18100	17100	1.9	3.5	21600	20400	"	"
NYWC17S	115 230-208	"	18900	18100	2.0	3.6	22500	21700	"	"
NYWC07U,09U,12U,15U	115 277	"	18100	17100	1.8	3.4	21400	19900	"	"
NYWC17U	115 277	"	18900	18100	1.9	3.9	22400	21300	"	"

Cooling performance is rated in accordance with ASHRAE/AHRI Standard 310/380 and tested with **HYDRONIC COIL IN PLACE**. Maximum Steam Pressure: 2 psig ---- Steam ratings based on 70°F entering air, and 2 psig steam pressure with heat output automatically adjusting for blower speed. Maximum Water Temperature: 210°F ---- HIGH SPEED Water ratings based on ASHRAE/AHRI conditions of 70°F entering air, 200°F entering water and 180°F leaving water temperatures. LOW SPEED Water ratings based on water ˜ow rate set for HIGH SPEED rating condition operating point.

Maximum Output to Valve: 25 VA at 24 VAC.

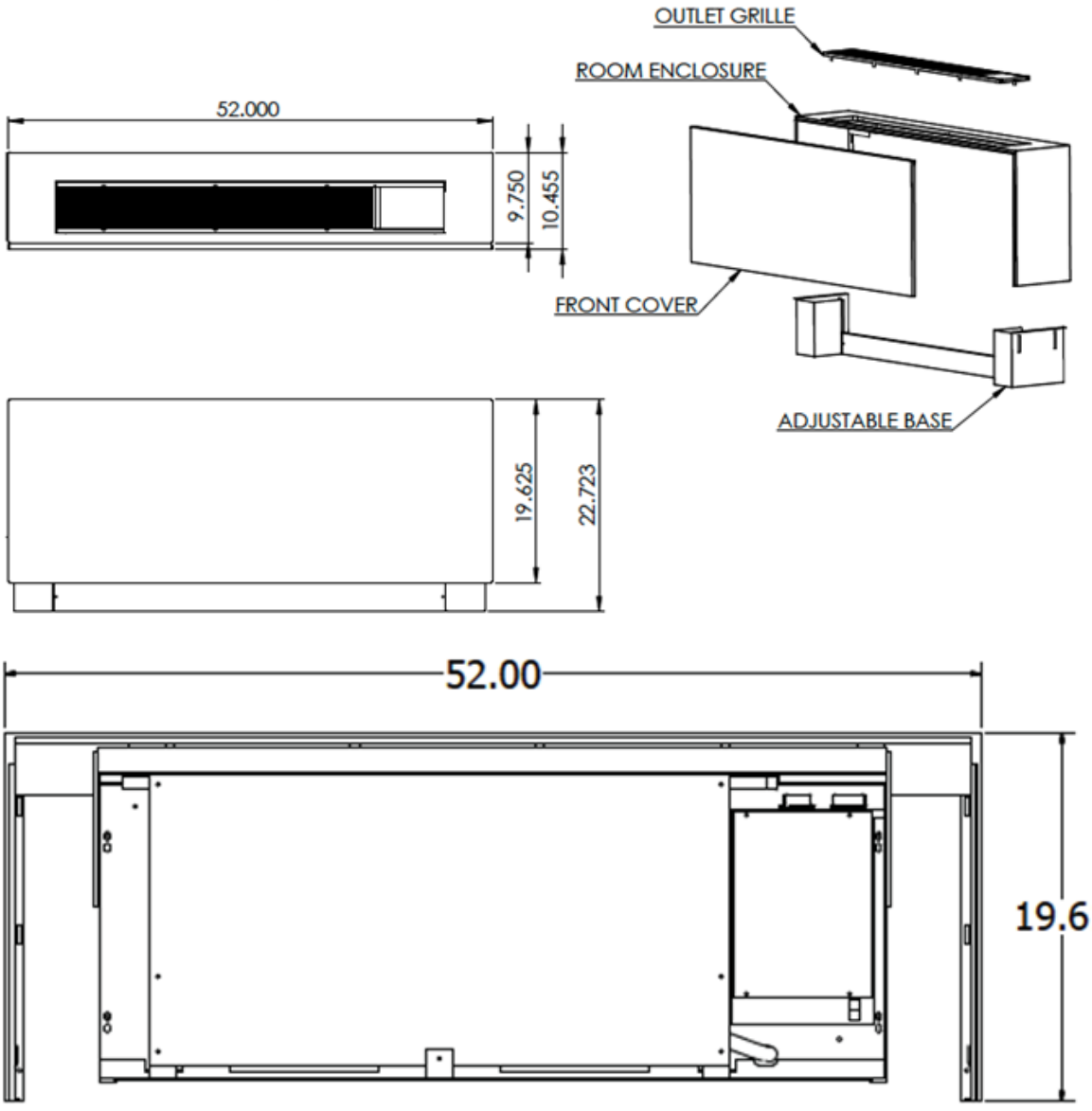
Certified Drawing --- Type: NYWC --- JAN2020 --- Applied Comfort Products Carver Inc. --- www.ptacs.com ---

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Physical Data

Heating/Cooling Chassis and Front Panel
Size Nominal 7000/9000//12000//15000/17000 Btuh……138//140//142//146//148 lbs

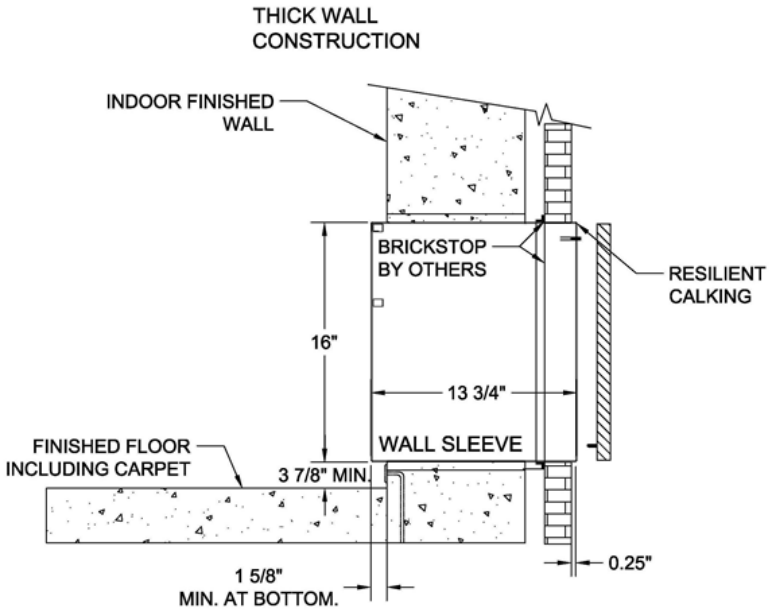
Unit Dimensions – Wall Sleeve, Cabinet



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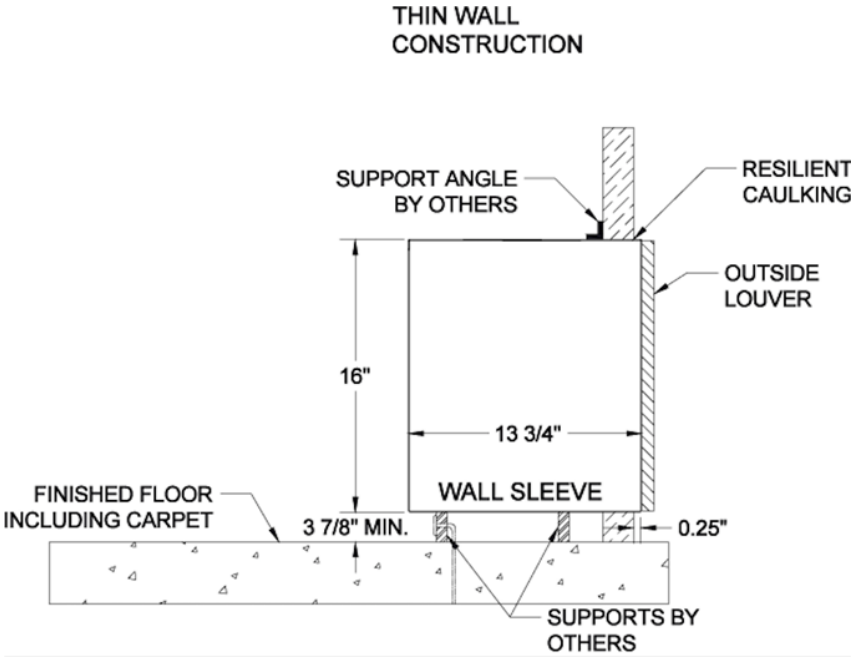
Unit Dimensions – Wall Profile

NOTE: Sleeve must be installed a minimum of 3 7/8" off the floor.

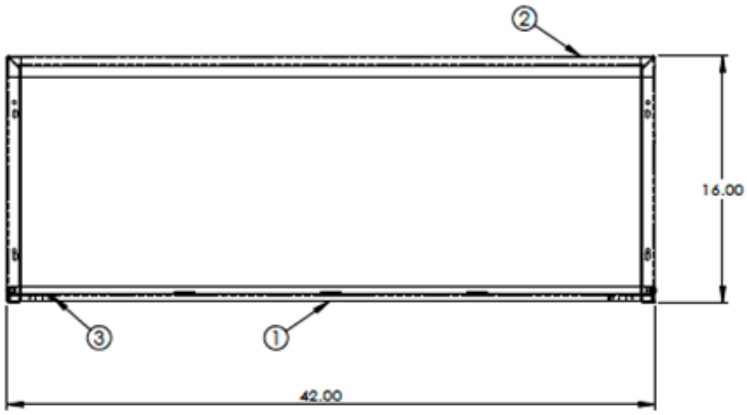


Unit Dimensions – Sleeve

NOTE: Sleeve must be installed a minimum of 3-7/8" off the floor.

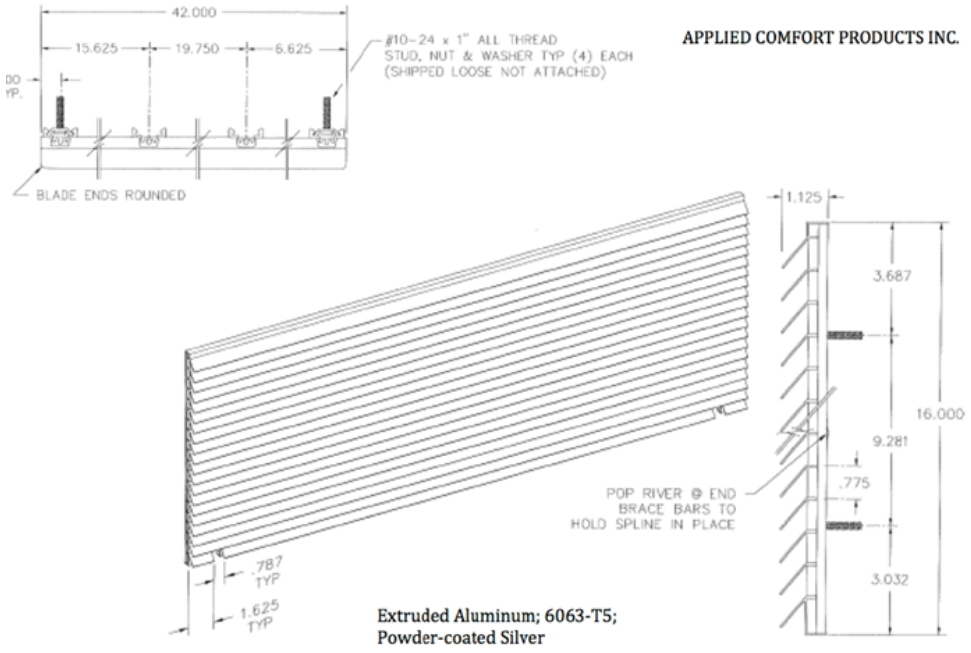


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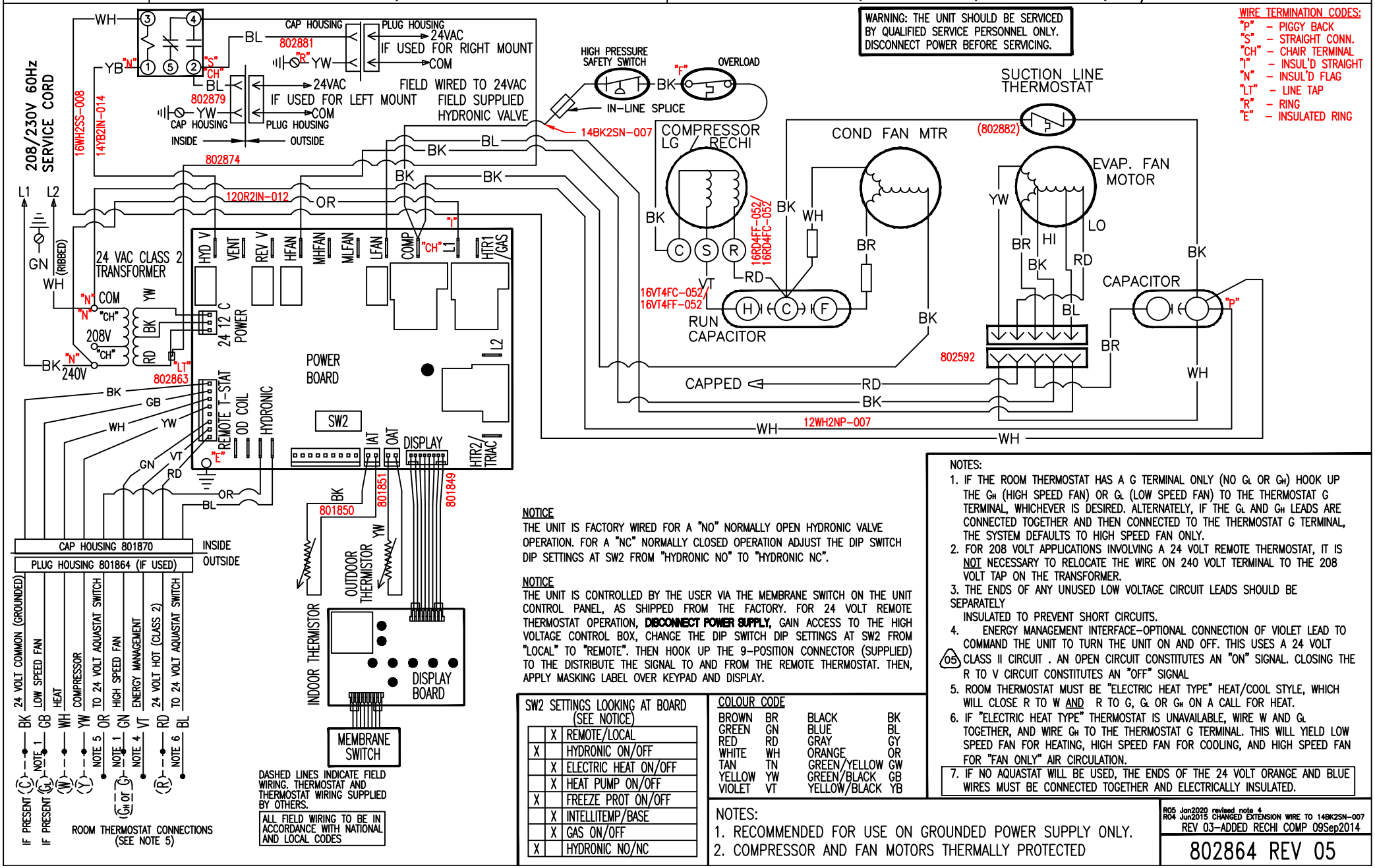
ITEM NO.	PART NUMBER	QTY.
1	802820	1
2	802822	1
3	802821	2
4	85589 SM SCREW	4

Unit Dimensions – Architectural Grille



Certified Drawing --- Type: NYWC --- Date: Jan 2020 --- Applied Comfort Products Carver Inc.
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Wiring diagram

CONNECTION DIAGRAM | DANGER: ELECTRICAL SHOCK HAZARD, DISCONNECT POWER BEFORE SERVICING | NYWC ELECTRONIC CONTROL, HYDRONIC HEAT, CORD CONNECTED, 208/230 VAC 60 Hz. 12 & 15K BTU



NOTICE
THE UNIT IS FACTORY WIRED FOR A "NO" NORMALLY OPEN HYDRONIC VALVE OPERATION. FOR A "NC" NORMALLY CLOSED OPERATION ADJUST THE DIP SWITCH DIP SETTINGS AT SW2 FROM "HYDRONIC NO" TO "HYDRONIC NC".

NOTICE
THE UNIT IS CONTROLLED BY THE USER VIA THE MEMBRANE SWITCH ON THE UNIT CONTROL PANEL, AS SHIPPED FROM THE FACTORY. FOR 24 VOLT REMOTE THERMOSTAT OPERATION, **DISCONNECT POWER SUPPLY,** GAIN ACCESS TO THE HIGH VOLTAGE CONTROL BOX, CHANGE THE DIP SWITCH DIP SETTINGS AT SW2 FROM "LOCAL" TO "REMOTE". THEN HOOK UP THE 9-POSITION CONNECTOR (SUPPLIED) TO THE DISTRIBUTE THE SIGNAL TO AND FROM THE REMOTE THERMOSTAT. THEN, APPLY MASKING LABEL OVER KEYPAD AND DISPLAY.

SW2 SETTINGS LOOKING AT BOARD (SEE NOTICE)

	X	REMOTE/LOCAL
X		HYDRONIC ON/OFF
	X	ELECTRIC HEAT ON/OFF
	X	HEAT PUMP ON/OFF
X		FREEZE PROT ON/OFF
	X	INTELLITEMP/BASE
	X	GAS ON/OFF
X		HYDRONIC NO/NC

COLOUR CODE

BROWN	BR	BLACK	BK
GREEN	GN	BLUE	BL
RED	RD	GRAY	GY
WHITE	WH	ORANGE	OR
TAN	TN	GREEN/YELLOW	GW
YELLOW	YW	GREEN/BLACK	GB
VIOLET	VT	YELLOW/BLACK	YB

NOTES:
1. IF THE ROOM THERMOSTAT HAS A G TERMINAL ONLY (NO G_L OR G_H) HOOK UP THE G_H (HIGH SPEED FAN) OR G_L (LOW SPEED FAN) TO THE THERMOSTAT G TERMINAL, WHICHEVER IS DESIRED. ALTERNATELY, IF THE G_L AND G_H LEADS ARE CONNECTED TOGETHER AND THEN CONNECTED TO THE THERMOSTAT G TERMINAL, THE SYSTEM DEFAULTS TO HIGH SPEED FAN ONLY.
2. FOR 208 VOLT APPLICATIONS INVOLVING A 24 VOLT REMOTE THERMOSTAT, IT IS NOT NECESSARY TO RELOCATE THE WIRE ON 240 VOLT TERMINAL TO THE 208 VOLT TAP ON THE TRANSFORMER.
3. THE ENDS OF ANY UNUSED LOW VOLTAGE CIRCUIT LEADS SHOULD BE SEPARATELY INSULATED TO PREVENT SHORT CIRCUITS.
4. ENERGY MANAGEMENT INTERFACE–OPTIONAL CONNECTION OF VIOLET LEAD TO COMMAND THE UNIT TO TURN THE UNIT ON AND OFF. THIS USES A 24 VOLT CLASS II CIRCUIT . AN OPEN CIRCUIT CONSTITUTES AN "ON" SIGNAL. CLOSING THE R TO V CIRCUIT CONSTITUTES AN "OFF" SIGNAL
5. ROOM THERMOSTAT MUST BE "ELECTRIC HEAT TYPE" HEAT/COOL STYLE, WHICH WILL CLOSE R TO W AND R TO G, G_L OR G_H ON A CALL FOR HEAT.
6. IF "ELECTRIC HEAT TYPE" THERMOSTAT IS UNAVAILABLE, WIRE W AND G_L TOGETHER, AND WIRE G_H TO THE THERMOSTAT G TERMINAL. THIS WILL YIELD LOW SPEED FAN FOR HEATING, HIGH SPEED FAN FOR COOLING, AND HIGH SPEED FAN FOR "FAN ONLY" AIR CIRCULATION.
7. IF NO AQUASTAT WILL BE USED, THE ENDS OF THE 24 VOLT ORANGE AND BLUE WIRES MUST BE CONNECTED TOGETHER AND ELECTRICALLY INSULATED.

NOTES:
1. RECOMMENDED FOR USE ON GROUNDED POWER SUPPLY ONLY.
2. COMPRESSOR AND FAN MOTORS THERMALLY PROTECTED

R05 Jan2020 revised note 4
R04 Jun2015 CHANGED EXTENSION WIRE TO 14BK2SN-007
REV 03–ADDED RECHI COMP 09Sep2014

802864 REV 05