General Specifications:
Bard Wall – Mount ™ SxxH-Series 10 EER "Quiet–Climate" 43-50dbA Heat Pumps, With CRV Intake & Exhaust and White Rodgers 1F95-1277 Thermostat

FURNISH and INSTALL

A one-piece wall-mounted, factory-assembled, precharged, prewired, tested and ready-to-operate heat pump unit. The unit shall be approved and listed by Intertek ETL Listed (ETL US/C) for installation on combustible surfaces for zero clearance between the unit and wall. The first three feet the supply duct must be approved for ¼" clearance to combustible material. Unit performance shall be certified in accordance with Air Conditioning, Heating and Refrigeration Institute, (AHRI). The Bard manufactured model No. S49H*A05VP4 heat pump with the integrated CRV (Classroom Ventilator) Intake and Exhaust, or equal, operated by a properly programmed White Rodgers 1F95-1277 thermostat and installed correctly to meet the Section 121-B ventilation requirements of California Title 24 Code.

The HVAC unit shall have outside air make-up for ventilation mixed with return air, filtered through the same filter, prior to passing through the indoor coil, and shall have a factory or field installable, integral Classroom Ventilator (CRV) capable of providing and exhausting 15 cfm per the anticipated 32 occupants, (480cfm) via separate Ventilation Only Mode. Outside ventilation air shall not bypass the indoor coil or the filter. The CRV shall be a 2 position open, spring loaded close, and meet ANSI/ASHRAE 62.1 ventilation standards.

PERFORMANCE

The HVAC system will have an indoor operating sound level that will not exceed 50 dbA measured 10 feet directly in front of the return air grille at 5' above the floor. Other optional accessories are available to approach 43 dbA.

The HVAC system shall be designed to maintain a minimum indoor temperature of 72 Deg F. in the heating season and a maximum of 78 Deg. F. in the cooling season. HVAC unit shall be sized to provide a maximum total air in circulation equal to a 6 minute air change during heating and/or cooling cycles (compressor operation) and not more than a 9 minute air change during the ventilation only cycle.

Energy efficiency rating shall be minimum 10.0 E.E.R. (Energy Efficiency Ratio) and 3.0 C.O.P. (coefficient of performance) by AHRI as meeting Standard 390-2003 for Single Package Vertical Units. (SPVU)

BLOWERS and FANS

To provide a quiet comfortable environment, the twin indoor blowers shall have a centrifugal forward curved direct drive blower. Indoor blowers shall discharge horizontally into a ducted supply with a maximum internal velocity of 1000 fpm. Maximum air velocity at the supply registers is not to exceed 500 fpm. The ECM indoor blower motor shall be variable speed providing super-high efficiency, low sound levels, and soft-start capabilities. The indoor blower motor shall be self adjusting to provide the proper airflow rate for the 2 stage airflow operation without user adjustment or wiring changes.

Propeller type outdoor fan shall be direct driven by a 1-speed motor, separate from the indoor blower motor.

STANDARD FEATURES

Plug in CO2 sensor ready ventilation control.
Two-inch pleated filter (MERV 8 Minimum)
Environmentally Safe R410A refrigerant.
Circuit breaker or toggle disconnect.
All three (3) phase units to have a built-in phase monitor to prevent reverse rotation of scroll compressor motor.
High and Low pressure controls plus 24 volt transformer with built-in circuit breaker.
Bi-Flow Filter Drier
A separate Filter Service Door for easy 1" or 2" filter replacement.
Coremark Full Flow Schrader Ports

CONTROLS

Ventilation and temperature control shall consist of a wall-mounted 5/1/1-day, 3 stage heat, 2 stage cool programmable thermostat White Rodgers 1F95-1277. The thermostat shall be equipped with key-pad lockout, ventilation control programming, and a standard locking thermostat guard. Thermostat to be pre-programmed to bring on continuous ventilation one hour prior to and during anticipated occupancy as per the California Title 24, Section 120.1-(c) 2 ventilation requirements.

BARD 8403-067 CO2 Sensor (Optional)

Furnish and install a Bard 8403-067 CO2 Sensor to control the amount of fresh outdoor air supplied to maintain acceptable levels of CO2 in the space according to Section 120.1 California Title 24 ventilation standards. The CO2 sensor shall have non dispersion-infrared (NDIR) technology used to measure carbon dioxide gas, provide voltage or current output based on
CO2 levels, provide SPST relay output, and Automatic Background Calibration (ABC) algorithm. The CO2 Sensor shall wire easily to the SxxH ventilation board, and provide modulating classroom ventilator (CRV) damper control of outside air between 700 – 1500 ppm CO2. Geary Pacific wiring diagram # 11-0383.

Acoustical Accessories (For operating sound levels below 42dbA)

1. For approximate 4-6 dbA sound reduction furnish and install Vibration Isolation Curb, Bard model WMSC5-4 (Grey)
2. For approximate 4-7 dbA sound reduction furnish and install Return Air Acoustical Plenum, Bard model WAPR11-X (Beige)
3. For approximate 1-2 dbA sound reduction furnish and install Supply Air Acoustical Plenum, Bard model WAPS51-G.

Additional Accessories

1. Outdoor Coil Grille Guards, "Bard Gard". Protects outdoor coil from damage. Excellent when unit is located near a playground. All units shall have a heavy duty BARD GARD outdoor coil guard. The BARD GARD shall have a 14 gauge frame and 13 gauge expanded metal mesh. The entire BARD GARD shall be powder coated the same color as the wall mount unit.

Note: All applications are different so actual sound reductions may vary from the values listed above.
Contact us if your particular application requires the HVAC system to operate at or near 43 dbA.

This document is available in MS Word format from:
GEARY PACIFIC CORP. 1908 N. Enterprise Street, Orange, CA 92865-4102. (714) 279-2950
Or gearypacific@gearypacific.com

EQUIPMENT & MATERIAL SCHEDULE

3.0 Ton* — HP 1

Heat Pump, Bard, R410a, 'Quiet Climate', Wallmount, S38H2-A05VP4 5 KW
36,000 Nom Btu Cooling Capacity - 10.30 EER
35,000 Nom Btu Heating Capacity from Compressor- 3.20 COP
Additional 17,065 Nom Btu Heating Capacity from Heat Strips.
MCA 58, MOCP 60, Min. Wire Size #6
1100 CFM @ .15 Esp, Unit Weight 630 lbs.
230 Volt, 60 Cycle, Single Phase

3.5 Ton* — HP 1

Heat Pump, Bard, R410a, 'Quiet Climate', Wallmount, S43H-A04VP4 4 KW
41,500 Nom Btu Cooling Capacity - 10.50 EER
39,000 Nom Btu Heating Capacity from Compressor- 3.20 COP
Additional 13,652 Nom Btu Heating Capacity from Heat Strip @ 230V.
MCA 55, MOCP 60, Min. Wire Size #6
1250 CFM @ .15 Esp, Unit Weight 630 lbs.
230 Volt, 60 Cycle, Single Phase

4.0 Ton* — HP 1

Heat Pump, Bard, R410a, 'Quiet Climate', Wallmount, S49H-A05VP4 5 KW
46,000 Nom Btu Cooling Capacity - 10.20 EER
45,000 Nom Btu Heating Capacity from Compressor- 3.00 COP
Additional 13,652 Nom Btu Heating Capacity from Heat Strip @ 230V.
MCA 65, MOCP 70, Min. Wire Size #6
1400 CFM @ .2 Esp, Unit Weight 640 lbs.
230 Volt, 60 Cycle, Single Phase

5.0 Ton* — HP 1

Heat Pump, Bard, R410a, 'Quiet Climate', Wallmount, S61H-A05VP4 5 KW
55,000 Nom Btu Cooling Capacity - 10.40 EER
52,000 Nom Btu Heating Capacity from Compressor- 3.00 COP
Additional 17,065 Nom Btu Heating Capacity from Heat Strip @ 230V.
MCA 69, MOCP 80, Min. Wire Size #4
1450 CFM @ .2 Esp, Unit Weight 650 lbs.
230 Volt, 60 Cycle, Single Phase

NOTE:

* Unit certified for 1 or 2 Electrical Circuits, Consult SxxH Specifications Sheet, Form #S3416 (Current Revision) for more detailed information.

MCA: Minimum Circuit Ampacity
MOCP: Maximum Overcurrent Protection

INTERIOR DUCTWORK- FLEX DUCT W/ 1"
INSULATION- CLASS I U.L.-181
FLAME SPREAD - 15
SMOKE DEVELOPED - 25

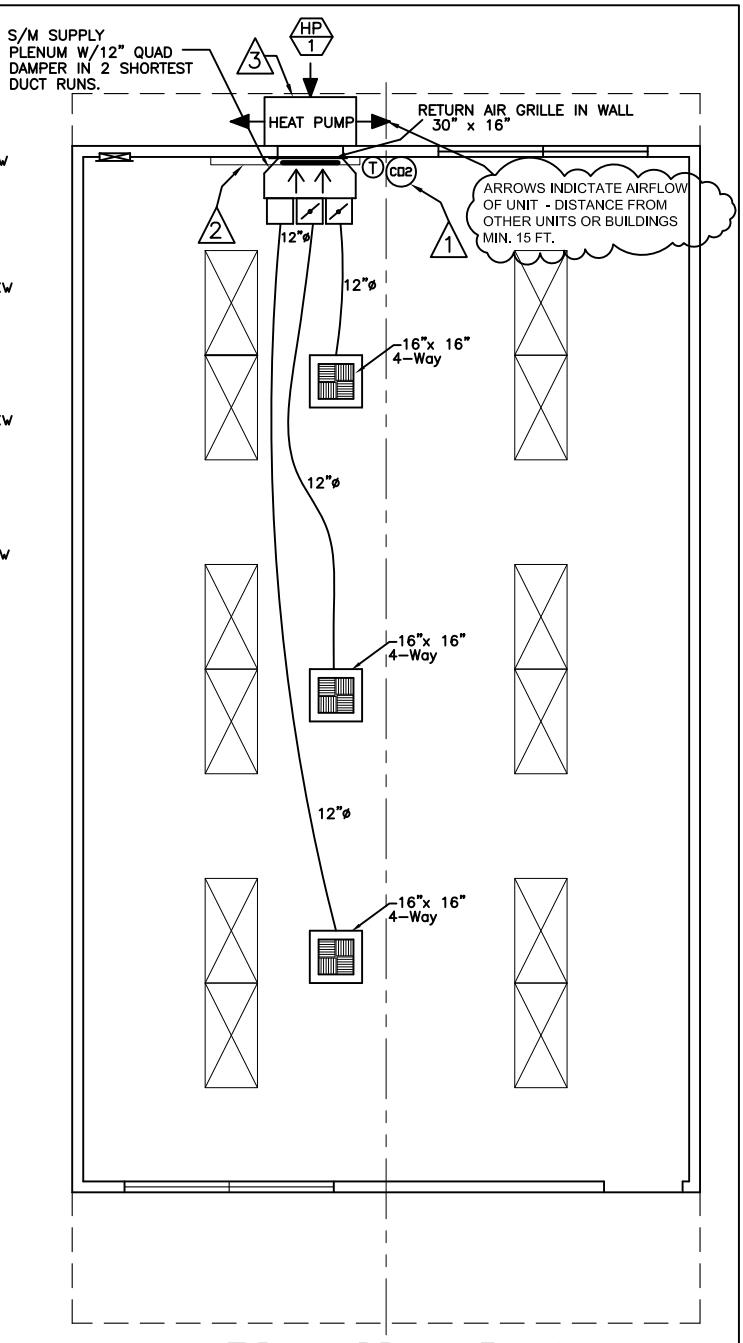
LEGEND

(T) THERMOSTAT - WHITE RODGERS 1F95-1277
MOUNT AT +48" A.F.F.
GP WIRING DIAGRAM # 11-0236

(CO2) CO2 SENSOR - BARD PT #8403-067

SHOEMAKER 104, T-BAR, 4 WAY
16" X 16", T-BAR, SUPPLY AIR DIFFUSER
WITH MIN. 26 GA. LINED SIDE OUTLET BOX

RETURN GRILLE WALL, TRU-AIRE 270 30 X 16



MECHANICAL PLAN

OPTIONS:

CHECK:

☐ 1 (CO2) CO2 SENSOR - BARD PT #8403-067
MOUNT AT 48" A.F.F. (OPTIONAL)

☐ 2 BARD RETURN AIR DUCT SILENCER
PT#WAPR11-X, Beige (OPTIONAL)

☐ 3 BARD GARD
VANDALISM PROTECTION FOR OUTDOOR COIL

☐ 4 BARD WALL SOUND CURB
WMSC5-X BEIGE (OPTIONAL)

MECHANICAL NOTES

FLEXIBLE DUCT SHALL BE MODULAR METAL FABRICATORS SERIES FDMA R4.2 WITH INSULATION, A SILVER POLY JACKET, AND A WIRE ENCAPSULATED NON-PERFORATED CORE THAT COMPLIES WITH ASTM C-518, 1991. FLEXIBLE DUCTING SHALL BE UL LISTED CLASS 1 AIR DUCT WITH A FLAME SPREAD RATING NOT TO EXCEED 25, AND A SMOKE-DEVELOPED RATING NOT TO EXCEED 50 IN ACCORDANCE WITH NFPA 90A & 90B.

THERMOSTAT PROGRAMMING TO BE PERFORMED AND BATTERY PROVIDED BY OTHERS ON SITE.

TEST AND BALANCE OF HVAC SYSTEM, CRV, OR ECONOMIZER TO BE PROVIDED AND PERFORMED BY OTHERS ON SITE.

ALL HVAC EQUIPMENT LEAVES FACTORY WIRED FOR 240V OPERATION. THE ACCEPTABLE OPERATING RANGE FOR THE 240 & 208 TAPS ARE:

TAP	RANGE
240V	253-216
208V	220-198 1 PH. 220-187 3 PH.

SAVE AS: 06-0046.DWG

GEARY PACIFIC SUPPLY
www.gearypacific.com

DWG NAME	BARD "SxxH" "QUIET CLIMATE" R410a, WALLMOUNT HEAT PUMP WITH 3 EA. SUPPLY DUCTS						
SIZE A	CUSTOMER NAME				JOB NO		
DATE	REV. DATE 1/10/15	REV# 1	APR	DRAWN BY MDC	SHEET 1 OF 1	Dwg # 06-0046	