## HEAT PUMP BEST PRACTICE INSTALLATION CHECKLIST: CENTRALLY-DUCTED SYSTEMS[1]

| | | | |
|---|---|---|---|
| **Customer's Name:** | | **Address:** | |
| **Manufacturer:** | | **Model#** | |

**SECTION 1. Registered Vendor Checklist.** Please complete and sign the following section.

**Heat Load Served by ASHP (Check only one):**

- ☐ ASHP project serves entire home
- ☐ ASHP project is full replacement of existing heating system
- ☐ ASHP project is partial replacement of existing heating system
- ☐ ASHP project serves isolated zone only

**Installer to Complete - Check Done or N/A in the columns, fill in blanks. Installer to Sign**.

| **SYSTEM DESIGN** | |
|---|---|
| Calculated heating/cooling load (kWh): _____, Design temperature (°C): _____ | |
| Capacity of system selected (kWh) at design temperature: _____ | |
| Heating/cooling load calculated using CA/CSA F280-12 | YES / NO / NA |
| Heat Pump system sized following CA/CSA C273.5 | YES / NO / NA |
| **OUTDOOR UNIT** | |
| Height from ground (cm): _____ Best Practice: Above snow level (≥ 60 cm) | |
| Has unobstructed airflow as required by manufacturer? | YES / NO / NA |
| Is under roof drip line and is protected by ice/snow shield? | YES / NO / NA |
| Is fastened to structure or mechanical pad? | YES / NO / NA |
| Was measured to be level? | YES / NO / NA |
| Does not interfere with walkway, porch, window, or door? | YES / NO / NA |
| Is installed at serviceable height? | YES / NO / NA |
| Is protected by rain cap? | YES / NO / NA |
| **INDOOR UNIT** | |
| Is properly located, properly fastened to structure, and level? | YES / NO / NA |
| Has clearance for service and operation as required by manufacturer? | YES / NO / NA |

[1] Air-Source Heat Pump Commissioning Checklist, New York State Energy Research and Development Authority (NYSERDA), 2019 and Ductless Heat Pump Installation requirements, Efficiency Maine, 2018

| LINE SET | |
|---|---|
| Diameter of line set (mm): _____ | |
| Manufacturer-specified lengths (cm): Minimum: _____ Maximum: _____ | |
| Maximum with factory charge: _____ Manufacturer-specified vertical difference: _____ | |
| Installed line set length: _____ Installed vertical difference:_____ | |
| Does line set length exceed manufacturer's requirements for factory charge? | YES / NO / NA |
| Refrigerant added: Pounds _____ Ounces _____ N/A | |
| Line set purged with $N_2$; Pressure tested with $N_2$; Evacuated to 250 µm or per manufacturer. | |
| $N_2$ test pressure (PSIG): _____ Test duration (minutes): _____ | |
| # evacuations performed: _____, Vacuum Level (µm): _____, Vacuum duration (minutes): _____ | |
| Were brazing joints required? | YES / NO / NA |
| Was $N_2$ purge used during brazing operations? | YES / NO / NA |
| Was flare connection tightened per mfg.'s recommended torque?<br>Torque setting: _____ | YES / NO / NA |
| Visible line sets run through line set covers with transition and termination fittings. | YES / NO / NA |
| Insulation completely covers line sets (no exposed copper). | YES / NO / NA |
| Insulation UV protection provided on exterior of building. | YES / NO / NA |
| Floor/wall/ceiling pipe penetrations are sealed. | YES / NO / NA |
| Line sets and units were sensed with refrigerant detector and no leaks were found. | YES / NO / NA |
| **ELECTRICAL WORK** | |
| All electrical work performed by licensed electrician or an authorized person in the territory under B.C. Reg. 183/2019, July 22, 2019. | YES / NO / NA |
| Disconnect box wiring shock risk reduced by lock, strap tie, and/or box that provides other means of protection. | YES / NO / NA |
| **DUCT SYSTEM** | |
| Design airflow: _____ Design discharge static pressure: _____ | |
| Measured airflow: _____ Measured static pressure: _____ | |
| Is the existing ducting being used for ASHP system? | YES / NO / NA |
| If YES, was the duct system adequately sized for required heat pump airflow? | YES / NO / NA |
| If NO, were required upgrades/modifications to the duct system completed? | YES / NO / NA |
| Were ducts sized using NBC (Section 9.33.6) and ACCA Manual D or equivalent? | YES / NO / NA |
| Ducts are sealed, and no leaks are evident. | YES / NO / NA |
| Any ducts outside conditioned space are insulated to Code. | YES / NO / NA |

| OPERATION/CONTROL | |
|---|---|
| Unit(s) were operated in both heating and cooling modes to verify proper operation. | YES / NO / NA |
| Continuous fan function disabled (unless it is a part of ventilation system). | YES / NO / NA |
| Dual fuel outdoor cutoff control installed and functioning as designed to optimize use of ASHP for heating. | YES / NO / NA |
| **INTEGRATED CONTROL** | |
| Have integrated controls been installed to provide automatic changeover from the ASHP to the existing central heating system per the manufacturer's instructions? | YES / NO / NA |
| **HOMEOWNER'S EDUCATION** | |
| Owner's Manual for the Heat Pump has been provided to the homeowner. | YES / NO / NA |
| Homeowner has been taught how to control the ASHP system, including turning it on and off, adjusting the temperature, setting baseboard thermostat appropriately (if applicable), and switching between heating and cooling modes. | YES / NO / NA |
| Preventative maintenance requirements, including how to clean and/or change the filter, have been explained. | YES / NO / NA |
| Homeowner has been shown what alarms look like when the ASHP is not functioning properly. | YES / NO / NA |
| Warranty documents have been provided to the homeowner and have explained who to contact for service. | YES / NO / NA |
| **Installer's Signature:** | **Date:** |
| **Installer's Full Name:** | **Company Name:** |

**SECTION 2. Homeowner Checklist.** Please complete and sign the following section.

| | |
|---|---|
| I have received Owner's Manual for the heat pump. | YES / NO |
| Installer has taught me how to control the heat pump, including turning it on and off, adjusting the temperature, setting baseboard thermostat appropriately (if applicable), and switching between heating and cooling modes. | YES / NO |
| Installer has explained preventative maintenance requirements, including how to clean and/or change the filter. | YES / NO |
| Installer has showed me what alarms look like when the heat pump is not functioning properly. | YES / NO |
| Installer has provided warranty documents and explained who to contact for service. | YES / NO |
| Noise and vibration levels of the system are acceptable. | YES / NO |
| Line set covers are aesthetically acceptable. | YES / NO |
| **Homeowner's Signature:** | **Date:** |