JORDAIR INSTALLATION REQUIREMENTS

Before installing a Jordair compressor the end user is responsible for accommodating for the appropriate cooling, placement, air intake, and electrical connections. A Jordair-certified technician will then be required to perform the final installation and commissioning of the compressor. If the equipment is being installed into a newly built facility then the compress equipment and certified technician should be last on the schedule after the rest of the facility is completed. The following document is meant to provide a guideline to assist you in this process.

For any clarifications on the requirements outlined in this document you can reach out to:
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End-User Responsibilities for Pre-Installation

The following requirements must be met to fulfil pre-installation requirements and validate the warranty:

1. Ensure the equipment is placed for service access and adequate airflow
2. Install adequate ducting and/or ventilation for compressor cooling
3. Install a fresh air PVC intake pipe with bird screen - min. diameter 3”
4. Provide electrical service and lockable disconnect, installed by a certified electrician

Installation and Commissioning

Installation of the actual compressor equipment involves the placement and connection of all three components* (Compressor, Air Storage, and Fill Station) using high pressure stainless steel tubing. An initial start-up and commissioning test will be performed as well. This work must be performed by a Jordair-certified technician in order to comply with the CSA Z180 standard and for our warranty requirements.

**Note: Modular “plug and play” units such as the Mini-Kat, Micro-Kat, and Integra still require a Jordair certified technician to perform the initial start-up and commissioning*

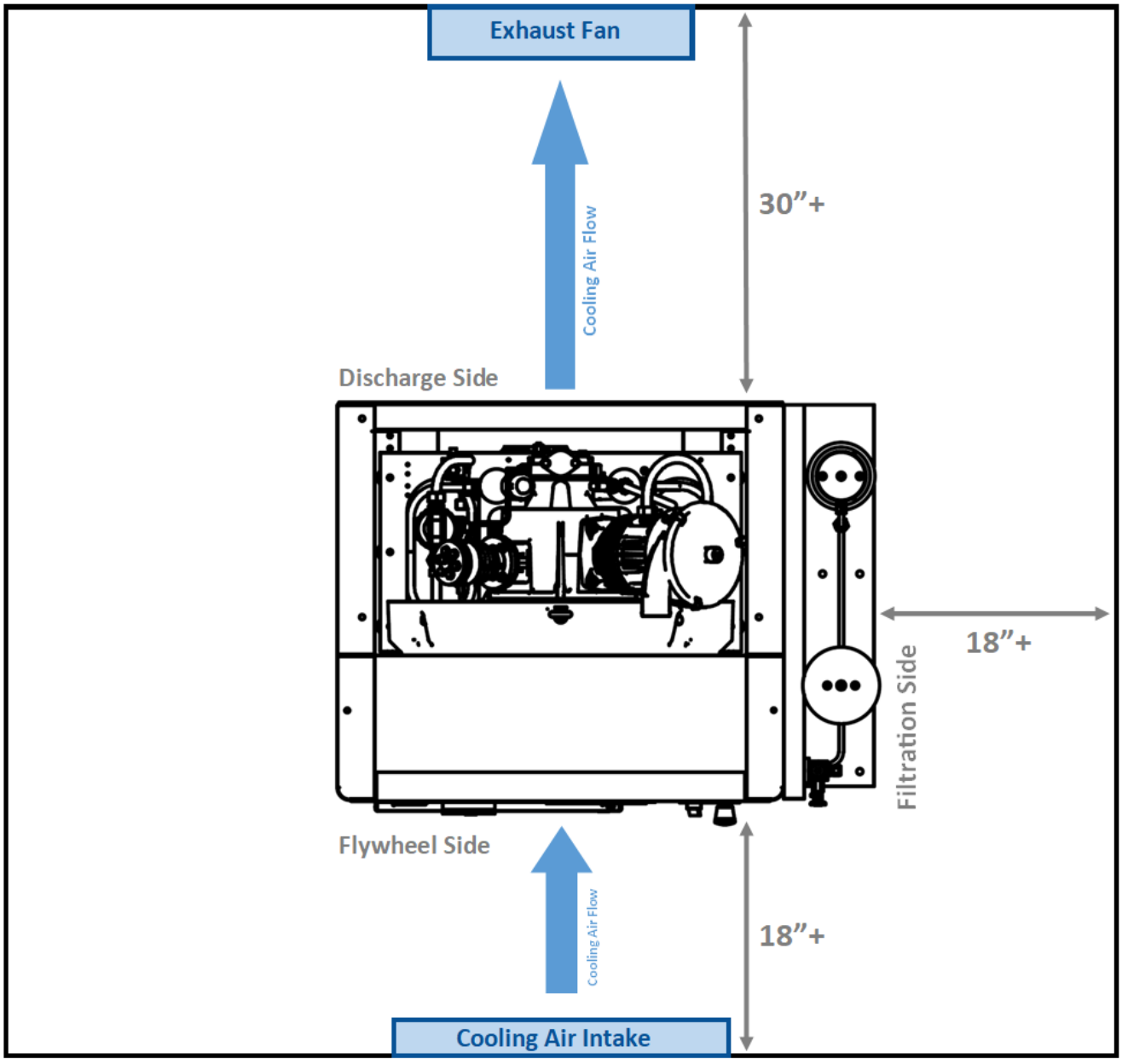
The end user is responsible for scheduling the installation with their closest available technician. Jordair has certified technicians with all our major distributors. If you don’t already have one in mind you can find a list of certified distributors on our website at https://www.jordair.ca/jordair-distributors

COMPRESSOR PLACEMENT

When choosing a location to place the compressor the following considerations must be applied to allow for service access and adequate cooling airflow:

- A minimum space of **18”** is required on the **flywheel** and **filtration** side of the compressor
- A minimum space of **30”** is required on the **discharge** side of the compressor
- The side opposite the filtration panel may be placed next to the wall on standard models

The floor site must be capable of supporting the weight of the unit. Secure the compressor unit to the floor using ½” lag bolts. Position the unit so that it is level.



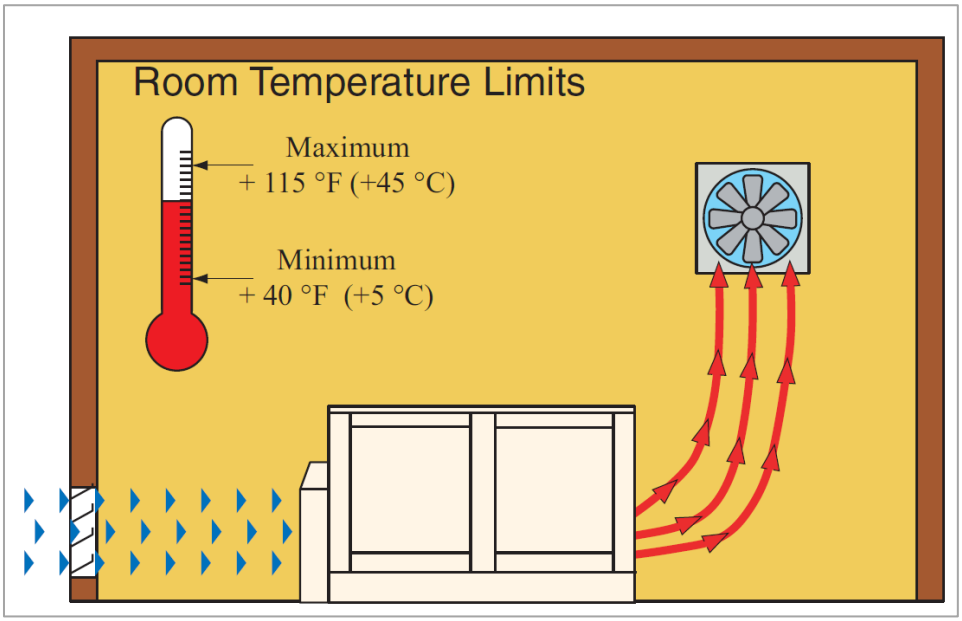
COMPRESSOR COOLING REQUIREMENT

Compressor Ventilation Information:

Jordair compressors are air-cooled machines, and since air under compression increases in temperature, it is imperative that the compressor be installed with adequate ventilation. When installing a compressor system the most common cause of component failure is inadequate ventilation. Even a larger room will cause an over-heating issue if there is not an appropriately sized exhaust fan and the movement of air.

Installation procedures:

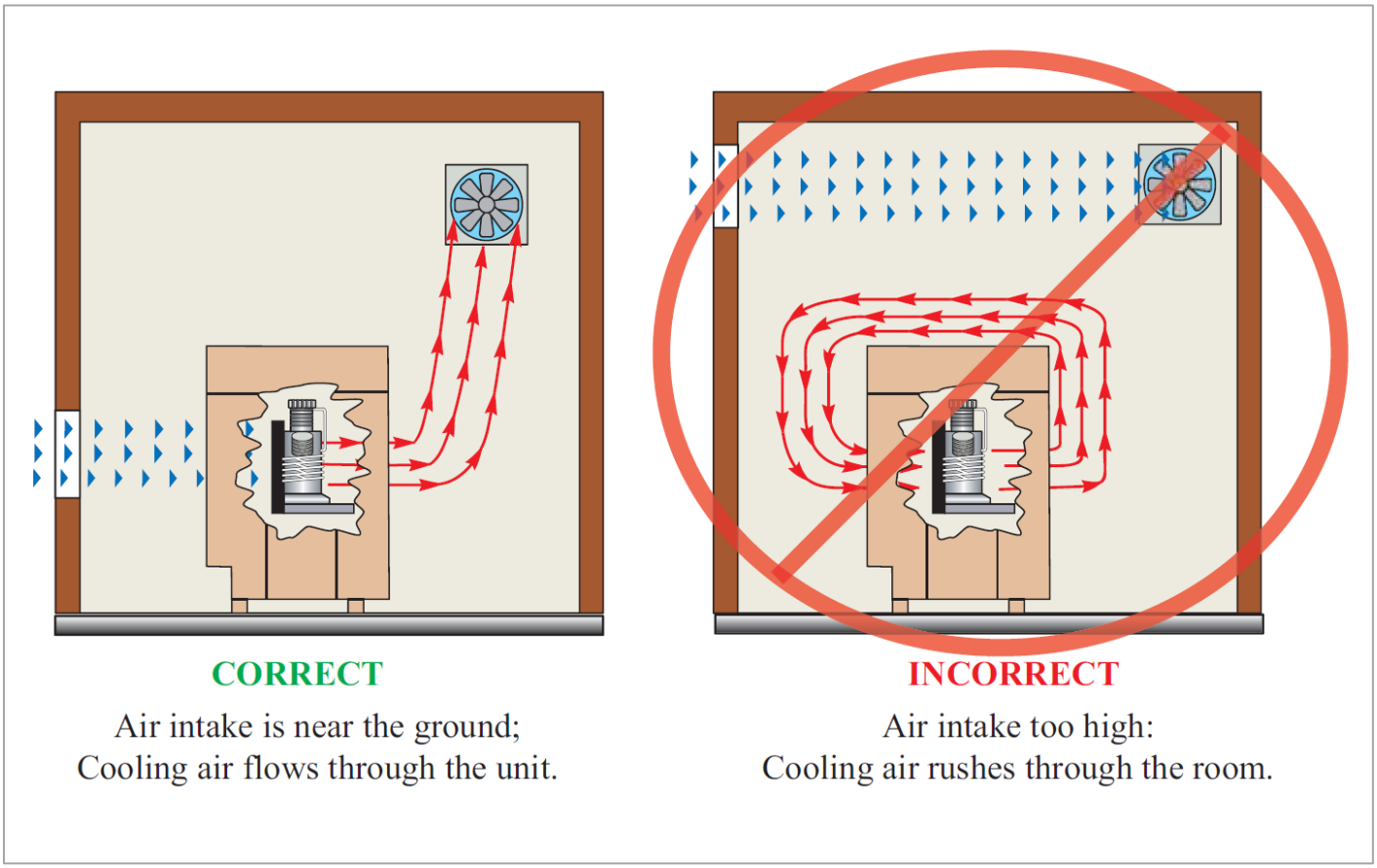
- Place the equipment as close as possible to the fresh cooling air source. It is very important to have a continuous supply of cool air to maintain the compressor at the correct operating temperature.
- It is recommended that the inlet source of the cooling air be as low as possible in the wall and preferably located close to the compressor mounted cooling fan assembly.
- The opening area of the intake air is to be 2.5 times the area in square feet of the compressor mounted cooling fan.
- A full flow exhaust fan is to be installed high on the wall above the compressor to exhaust the hot air; the fan is to be interlocked to start when the compressor is in operation.
- Enclosed ultra-silent units are to have a duct installed directly from the compressor auxiliary fan to the rooms exhaust fan.
- The compressor should never be operated with an ambient room temperature in excess of 40°C.
- The air must be free of poisonous gases and exhaust gases (such as flue gases, solvent fumes, paint fumes, engine exhaust etc.)



Fan volume in SCFM based on the compressor size:

- **Compressors of 5 to 7.5 HP** are to have an exhaust fan size of 1200 to 1500 SCFM (for unit size IK100II to IK120II)
- **Compressors of 10 HP** are to have an exhaust fan size of 1800 to 2200 SCFM (for unit size IK12.14II)
- **Compressors of 15 to 20 HP** are to have an exhaust fan size of 3000 to 3500 SCFM (for unit size IK15.1II to IK18.1II)
- **Compressors of 30 to 50 HP** are to have an exhaust fan size of 5000 to 7500 SCFM (for unit size IK22.0 to IK23.0).

Note: Compressor rooms will always require an exhaust-venting fan in order to stop the recycling of the cooling air and provide reliable compressor service life and the longest filter cartridge process capacity.



CORRECT

Air intake is near the ground;
Cooling air flows through the unit.

INCORRECT

Air intake too high:
Cooling air rushes through the room.

JORDAIR
COMPRESSORS INC.

RECOMMENDED SIZE FOR COMPRESSOR INTAKE PIPING

The testing of high-pressure breathing air can often result in a failure to meet the CSA standard unless procedures are followed to provide a source of fresh air for the compressor intake. The inlet source is to be provided from the cleanest ambient air supply possible. A compressor intake pipe is not a substitute for a cooling exhaust air fan.

The factors to consider when installing compressor intake piping in a building are the length of pipe, the diameter of the pipe and the number of 90-degree bends. All intake pipes must have a large diameter screen on the inlet to prevent entry of foreign debris and animals. Install a gooseneck end on the pipe or water trap to avoid water entry to the compressor air inlet filter.

Installation guidelines for a maximum of four 90º bends

INLET CAPACITY	DISTANCE	* PIPE DIAMETER
≤ 13 SCFM	≤ 50 ft	3”
	50 – 100 ft	3”
	100 – 150 ft	4”
13 – 30 SCFM	≤ 50 ft	3”
	50 – 100 ft	4”
	100 – 150 ft	6”
30 – 50 SCFM	≤ 50 ft	4”
	50 – 100 ft	8”
	100 – 150 ft	10”

**NOTE: Add 1” in pipe diameter if the number of bends exceeds four.*

Important Notes

- For ease of installation use PVC plastic pipe.
- The pipe is to be secured to the wall with proper clamps and fasteners in accordance with the manufacturer’s recommendations.
- The PVC plastic pipe is to be terminated three to 5 feet from the compressor intake with a stub reducer of equal size as the compressor inlet housing entrance pipe.
- The intake air must not contain any exhaust fumes or flammable vapors such as paint solvents, which may cause an internal fire.
- Make sure that the air intake is unobstructed and moisture in the intake air is kept to a minimum.
- Be sure not to terminate the suction pipe over the compressor cooling air exhaust.
- A compressor intake pipe is not a substitute for a cooling exhaust air fan.

ELECTRICAL CONNECTION - MOTOR VOLTAGE AND AMP LOAD

The end user is responsible for ensuring that a suitable electrical service is installed and available at the compressor installation location prior to equipment delivery and commissioning. All electrical work must be performed by a qualified and licensed electrical contractor in accordance with all applicable local electrical codes and regulations. A dedicated power supply and lockable disconnect means shall be provided for the compressor system. The disconnect must be installed within line of sight of the equipment or as otherwise required by applicable electrical codes.

The electrical service must be properly sized to accommodate the compressor motor starting and running loads using the following guide:

Single phase AC Motors Full-Load Current (FLA) in Amperes (Service Factor Included)

	Standard Models		Ultra-Silent Models	
HP Rating	208 V	230 V	208 V	230 V
3	22	20	N/A	N/A
5	33	34	35	36
7.5	49	45	52	47
10	64	62	67	64

Three-phase AC Motors Full-Load Current (FLA) in Amperes (Service Factor Included)

	Standard Models				Ultra-Silent Models			
HP Rating	208 V	230 V	460 V	575 V	208 V	230 V	460 V	575 V
3	14	14	9	8	N/A	N/A	N/A	N/A
5	21	20	12	10	25	23	14	11
7.5	29	27	15	14	32	30	17	15
10	37	34	19	17	40	37	21	18
15	56	47	26	23	61	51	28	25
20	73	66	35	29	78	70	37	31
25	87	79	41	34	92	83	43	36
30	100	91	48	42	103	95	50	44

Notes:

1. These values of motor full-load current are to be used as guides only. Where exact values are required (e.g., for motor protection), always use those appearing on the motor nameplate.
2. Ultra-Silent models will always have a higher FLA due to the auxiliary cooling fan
3. These values of full-load current are for motors running at usual speeds and motors with normal torque characteristics. Motors built for especially low speeds or high torques may have higher full-load currents, and multi speed motors will have full-load current varying with speed, in which case the nameplate current ratings shall be used.
4. The voltages listed are rated motor voltages. Corresponding Nominal System Voltages are 120 and 240 V. Refer to CSA Standard CAN3-C235-M83, Preferred Voltage Level for AC Systems, 0 to 50,000 volts.
5. If the compressor is to be included in a circuit with a back-up generator, ensure the generator is appropriately sized for the motor based on the above chart.