

350/375/400/425 CFM UNDERDECK SIDE-MOUNT PTO SHAFT DRIVEN AIR COMPRESSOR BID SPECIFICATION

REVISED: February 2, 2022

Type: Vanair® 350/375/400/425 UDSM PTO shaft driven air compressor.

New and in current production.

Capacity: 350-425 CFM free air at up to 150 PSIG operation.

Compressor: Sullair[®] 16 series design oil flooded rotary screw. The air compressors shall be completely

manufactured and assembled in the USA. Air compressor inlet control valve shall be a

bolt-on housing.

Input Speed: Air compressor shall produce 350 CFM at 1925 RPM input speed

375 CFM at 2060 RPM input speed 400 CFM at 2175 RPM input speed 425 CFM at 2325 RPM input speed

Ratings per CAGI/PNEUROP PN2CPTC3.

Gear Ratio: Air compressor gear ratio shall be 1.69 to ensure lowest possible engine speed.

Air Intake Filters: Separate two-stage, heavy duty, dry-type air filters shall be provided for air compressor.

Receiver Tank: Vertical tank with internal coalescer, pressure relief safety valve, and minimum pressure

valve.

Air/Fluid Separator: Separator element to be located internally in air separation tank. Separator shall be

constructed with metallic end cap with mechanical grounding strap and staples. Vanair[®] separator shall provide for enhanced air quality, reduced operating and maintenance cost

and optimized compressor performance with 3000-hour separator life.

Instrument Panel: The V-TEC II[®] system consists of an all-in-one I/O and LCD module. The module receives

sensor information and modulates infinitely variable engine speed based on air demand. The module also presents system information including system hours, service intervals, air pressure, and oil temperature. The V-TEC II[®] is IP66/67 weatherproof rated and features a 3.5-inch LCD display panel that is viewable in low and bright light conditions with five

navigation buttons.

V-TEC II® System is equipped with torque-management technology providing soft-start PTO

engagement which eliminates high torque spikes at start-up.

The Vanair® V-TEC II® Speed Control system utilizes a micro-processor in conjunction with solid state electronics and is designed with a chassis-specific plug and play wiring harness. Wiring harnesses shall be built in accordance with IPC WHMA-A-620C standards and use weatherproof connections and woven loom material. Harness to utilize sealed buss block

design for all power and ground circuits eliminating all butt connections and splices.

The V-TEC II® controller is pre-programmed to specific applications based on engine

The V-TEC II[®] controller is pre-programmed to specific applications based on engine,

transmission, PTO gear ratio, and Vanair Underdeck model.

PTO will disengage in case of high compressor temperature, over pressurization, over

speed, under speed, and failure to set parking brake.

The Vanair® V-TEC II® presents troubleshooting information on the display to eliminate the

need for external connections to a laptop and additional software.



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The V-TEC II® Controller logs faults and fault conditions for easy troubleshooting diagnostics.

Cooling System: Compressor air-to-oil cooling system shall allow rated air delivery and pressure operation

continuously in 125°F ambient temperatures. Fan assembly to be solid-state brushless design with integral thermal protection. Cooler to be mounted in a powder coated sheet metal enclosure with a fan assembly and utilize SAE O-ring fittings (No ABS plastic shrouding). When using the V-TEC II[®], a fan temp switch is not used. The RTD, thermal

valve and V-TEC II®, control the compressor cooling.

Controls: Pneumatic inlet control valve shall be integrated into compressor system and automatically

modulate output from 0 to 100% in response to air demand.

General: The compressor shall be manufactured in an ISO 9001 certified quality system.

Warranty: The air end is warranted for life when adhering to the prescribed maintenance schedule.

This warranty does not cover damage caused by accident, misuse, or negligence. If the compressor unit is disassembled the warranty is void. All other parts including the compressor unit shaft seal are warranted for twelve months subject to the same conditions.

Service Centers: The air compressor manufacturer MUST have factory authorized service centers located in

each state of the United States of America and Canadian provinces.

Installation: Systems must be installed by a factory authorized installation center.

Minimum Truck Requirements:

ments: This compressor system requires a large truck with proper transmission to operate, therefore the minimum truck requirements are: Allison 3000 or 4000 series transmission (no manual

shift or Allison 1000/2000), minimum 33,000 lbs. GVWR or larger, no 4x4 chassis and no low profile (lo-pro) trucks. If these requirements are not met, fitment, ground clearance and

torque/horsepower issues may prevent installation of this product.