



Odin® 150 cfm PTO Compressor Module Specification¹

The PTO Compressor module is a “PTO kit” built into a compact, pre -plumbed and engineered package. The module is built to house all compressor components necessary to make air with the exception of the compressor air end, air filter assembly and remote panel.

Module Frame

The frame is built of 6063 aluminum tubing, ¼’ thickness, and designed for a bottom supported mount bracket (not included). An aluminum side panel at one end of the module has a series of bulkhead fittings ready for plumbing to the various components for easy installation.

Compressor Air End

The air compressor must be designed to be installed on the apparatus chassis and have 100% duty cycle. The air compressor shall be an American manufactured, continuous duty, oil-injected type, rotary screw rated up to 150 cfm @ 150 psi. Parts shall be readily available, and stocked in USA with certified service centers in all 50 states. It shall have an additional speed up gearbox designed and integrally built by the compressor manufacturer. Compressor to have side-by-side gear set to provide for maximum ground clearance. A copy of the certification record shall be included. The system shall have a high-temperature and a high-pressure shut-down circuit.

Air Receiver/Separator

The air receiver/separator (vessel) must act as an air/oil separator. The vessel shall be powder coated carbon steel material and contain an integrated coalescing oil separator element. The vessel must have a lubricant sight glass no smaller than 2” in diameter. The pressure vessel must have a 200 psi (13.8 b) high-pressure relief valve. The vessel must have a replaceable spin on 25-micron oil filter with safety bypass feature. It must contain an integral, pneumatically piloted, blow down valve. The vessel shall be a horizontal mount design. (A vertical mount air/oil receiver is available as an option.) The vessel shall meet all vessel ASME requirements. Oil carryover is rated 10 ppm or under at full flow.

Heat Exchanger

The heat exchanger shall be the liquid-to-liquid type. The heat exchanger shall be constructed of stainless steel material and a compact plate type design.

Auto Balance Valve

A pneumatic modulating inlet valve mounted on the air end inlet shall control the compressor. An *AutoOdin* balancing system shall be provided to automatically maintain the air pressure within plus-or-minus 5% of the water pump pressure throughout the CAFS operating range. The balance valve will take its pressure signal from the fire pump system.

Compressor Control panel

The compressor control panel shall include the controls and instruments necessary. The compressor controls and instruments shall be mounted on a custom designed embossed placard. The standard panel will require the transmission to operate the PTO and be switched from the cab, or operators panel by customer supplied switch. The control panel shall include the following:

1. Compressor Control Panel
 - a. Hour Meter
 - b. Compressor Temperature Gauge
 - c. Air Pressure Gauge
 - d. Audio Alarm
 - e. PTO engaged light
 - f. Overspeed light
 - g. Overpressure light

¹ Specifications are subject to change and improvements without notice



- h. High temp light.

Air Intake Assembly

The kit shall contain all the components necessary to install a remotely mounted air intake filter. The kit shall include:

- 1. 8” Air Filter
- 2. Inlet Flexible Duct 3”x10’
- 3. 4ea, 3” Hose Clamp
- 4. 2ea, 3” Rubber 90° Elbow
- 5. Air Intake Hood

Manuals

The PTO Compressor Kit shall include an installation and operation manual. One (1) printed manual and one (1) manual on CD shall be provided with each kit.

Safety Interlocks & Controls.

A PTO over-speed circuit must be provided by the PTO supplier, or the transmission must be programmed with the required speed limitation, to prevent over-speed damage to the compressor.

Compressor Mounting Bracket

A precision cut steel mounting bracket shall be provided for the compressor air end. (Specify drivers or passenger side mount)

Kit Contents

- 1. 150 cfm Screw Compressor (Air End)
- 2. Bracket, Compressor Mount, Laser Cut
- 3. Air/Oil Receiver, Horizontal Mount
- 4. Separator filter assembly
- 5. Bracket Set, Receiver Mount
- 6. Oil Filter Base, Spin-on, With Filter
- 7. Inlet Control Valve
- 8. AutoOdin Compressor Control Manifold
 - a. Calibrated Balance Valve
 - b. Manual Pressure Adjustment Regulator
 - c. Blow down Valve
- 9. Air Intake Assembly
 - a. 8” Air Filter
 - b. Inlet Flexible Duct 3”x10’
 - c. 4ea, 3” Hose Clamp
 - d. 2ea, 3” Rubber 90° Elbow
 - e. Air Intake Hood
- 10. Oil Cooler Assembly
 - a. Heat Exchanger, Plate Type, Stainless Steel
 - b. Water Strainer (Clean Water Pick-up)
 - c. ½” Check Valve, Water
 - d. Thermostatic Valve, Oil
- 11. 3/4” Master Check Valve, Air
- 12. Companion Flange, For Customer Supplied Drive shaft
- 13. Compressor Control Panel
 - a. Hour Meter
 - b. Compressor Temperature Gauge
 - c. Air Pressure Gauge
 - d. Shut-Down Relay
 - e. Audio Alarm



- f. PTO engaged light
 - g. Overspeed light
 - h. Overpressure light
 - i. High temp light.
14. Manual, Installation and Operation
15. 4 gallons oil
- System is warranted for one year after start up date.

Package Requirements (not included with the Odin kit)

The entire system will require complete plumbing and installation of all of the components. The complete CAF system will require a minimum of the following items. Additional items may be required dependant upon the application and NFPA ratings desired.

- 1. Transmission PTO and Drive-shaft
- 2. Fire pump
- 3. Master Water and Foam check valves
- 4. Foam injection system
- 5. Individual water and air mix point check valves
- 6. Required and desired water and foam flow meters and gauges
- 7. Master and individual line drains

PTOM Option – PTOMAV01

This option can be added to the standard PTO Module according to your specifications and needs of operation. This option is not included in the base price of the module.

Autovalve Assemblies

There will be 3 Autovalve systems complete, with all wiring and remote displays. They are supplied loose and configured as the following parts:

- (Qty 2) 1.5” solution valves and ½” air valves
- (Qty 1) 2.5” solution valves and ¾” air valves
- 3 control displays for remote operation
- 3 wire harness assemblies

Odin® Darley AUTOVALVE Specifications²

The AUTOVALVE is an automatic valve system for predetermined flows of water, solution, and air for the making of Compressed Air Foam. The system consists of an electronic controller, two valves and wiring harness. The AUTOVALVE controller has five modes of operation that are controlled with two buttons, labeled “SELECT FLOW” and “ENGAGE FLOW”. The five modes of operation are:

- WATER
- WET C.A.F.
- DRY C.A.F.
- AIR ONLY
- CLOSED

The AUTOVALVE has a “slug flow” safety interlock when used in conjunction with Foam Pro 2000 series systems. The slug flow safety interlock is enabled or disabled by an input signal from the foam proportion system. When the slug flow safety interlock is enabled (indicating no foam concentrate), the air inject valve will remain closed and the foam solution / water valve will default to the fully open position when either “WET C.A.F.” or “DRY C.A.F.” is engaged.

The solution/water valves are all Stainless Steel in construction, with swing out type three piece construction. The air valve is of Stainless Steel, and two piece construction.

*2 ½” & 3” Solution valves are Akron Brass.

² Specifications are subject to change and improvements without notice.