



Industrial Systems-Light  
Davidson, NC 28036

# 2475

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Date: 15 Jan. 2009  
Cancels: 23 Aug 2004

## Engineering Data

|                        |           |                   |        |                                   |       |
|------------------------|-----------|-------------------|--------|-----------------------------------|-------|
| <b>Bore:</b>           | 4" & 2.5" | <b>Min RPM:</b>   | 575    | <b>Aircooled Aftercooler CTD:</b> | 25° F |
| <b>Stroke:</b>         | 2.75"     | <b>Max RPM:</b>   | 1600   | (Package performance)             |       |
| <b>Inlet Size:</b>     | 1" NPT    | <b>Sheave OD:</b> | 13.75" | <b>Number of Belts:</b>           | 1     |
| <b>Discharge Size:</b> | 0.50" NPT | <b>Sheave PD:</b> | 13.5"  | <b>Belt Section:</b>              | A     |

| Performance                            |          |     |      |      |     | Nameplate Amp Ratings  |          |          |          |          |          |                               |  |
|--|----------|-----|------|------|-----|--|----------|----------|----------|----------|----------|-------------------------------|--|
| Bare                                   | Motor HP | PSI | RPM  | ACFM | BHP |  | 200-3-60 | 200-1-60 | 230-1-60 | 230-3-60 | 460-3-60 | 575-3-60                      |  |
| 2475                                   | 5        | 75  | 1040 | 17.3 | 4.5 | 5HP  | 17.5     | 32.2     | 28       | 15.2     | 7.6      | 6.1                           |  |
| 2475                                   | 5        | 125 | 1040 | 17.1 | 4.8 | 7.5HP  | 25.3     |          | 40       | 22.0     | 11       | 9.0                           |  |
| 2475                                   | 5        | 175 | 1040 | 16.8 | 5.5 |  |          |          |          |          |          |                               |  |
| H2475                                  | 5        | 250 | 910  | 14.1 | 5.2 |  |          |          |          |          |          |                               |  |
| 2475                                   | 7.5      | 75  | 1500 | 24.3 | 7.3 |  |          |          |          |          |          |                               |  |
| 2475                                   | 7.5      | 125 | 1500 | 24.2 | 7.8 |  |          |          |          |          |          |                               |  |
| 2475                                   | 7.5      | 175 | 1500 | 24.0 | 8.2 |  |          |          |          |          |          |                               |  |
| 2475 (Gas)**                           | 12.5     | 175 | 1500 | 24.0 | 8.1 | Nominal Amps are based on NEC full load amperage rating for this size motor. Actual nameplate amps may vary according to motor design and/or motor manufacturer. |          |          |          |          |          |                               |  |
| 2475 (Gas)*                            | 13       | 175 | 1600 | 25.0 | 8.2 |  |          |          |          |          |          |                               |  |
| * Honda                                |          |     |      |      |     | ** Kohler  |          |          |          |          |          | H=250 PSIG operating pressure |  |
| Duplex units multiply capacity by two. |          |     |      |      |     |  |          |          |          |          |          |                               |  |

## Bare Pump Detailed Specifications

**FRAME**—The 100% cast iron frame is designed to support the overhung crankshaft. Cylinders bolt directly to the cast iron frame. Frame is completely sealed yet allows for maximum accessibility.

**CRANKSHAFT**—A unique overhung design supported by two heavy duty ball bearings with replaceable crankpin bushing. Entire shaft is balanced with an integral counterweight to insure smooth operation.

**CONNECTING RODS**—Solid one-piece design. These simple, easy to maintain rods can be used only with an overhung crankshaft. Crankpin bushing inside the rod is precision ground requiring no alignment.

**CYLINDERS**—These are 100% cast iron, separately cast and individually bolted to the frame in a V-type configuration. The cylinders are precision honed for low oil carryover. Radial fins on the cylinders help remove heat and ensure 360 degree cooling of the cylinders.

**PISTONS**—Precision balanced low pressure aluminum and high pressure cast iron pistons provide smooth operation.

**RINGS**—There are three piston rings for sealing compression and oil control. The taper faced compression ring and beveled oil scraper ring provide quick seating. One, three-piece oil control ring maintains proper lubrication on cylinder wall. Precision honing used in conjunction with the ring stack up means low oil carryover.

**FLYWHEEL**—The cast iron fan type flywheel forces a "cyclone" air blast to provide cooling for the deep finned cylinders and finned copper tube intercooler. The flywheel is balanced to keep vibration to a minimum.

**INTERCOOLER**—Two stage compressors use an intercooler. The intercooler between stages is of finned copper tube construction to provide maximum cooling area. It is located directly in the flywheel air blast to remove the heat of compression between stages keeping running temperatures and power needs to a minimum, ensuring high air delivery for horsepower expended. The intercooler is provided with a relief valve to prevent over-pressurization.

**LUBRICATION**—Splash lubrication of running parts is simple and reliable. Lubrication dippers are integral with connecting rods and cannot come loose.

**INLET FILTER**—The filter has a durable canister with a dry type 10 micron inlet filter/silencer as standard.

**VALVES**—Reliable, time proven finger valves are quick acting and made from premium grade stainless steel. Valve components are easily removable for maintenance.

## Simplex Detailed Specifications

**BASE**—The compressor and motor are aligned on a heavy steel base.

**RECEIVER**—Receiver mounted units are ASME, National Board coded, and include discharge mounted check valve, pressure gauge, drain valve, service valve, and relief valve.

**DRIVE**—The drive is V-belt type with an easily removed, totally enclosed wire beltguard.

**MOTOR**—Standard AC motors are NEMA T frame with drip-proof enclosure, Class B insulation, 1.15 Service Factor, and grease lubricated ball bearings. Standard single phase motor voltage is 230. Standard three phase motor voltages are 200, 230/460 and 575.

**CONTROLS**—Units are equipped for automatic start and stop operation with NEMA 1 unloading pressure switch and on/off lever.

**“E”-SERIES STARTER (MTD. & WIRED STANDARD ON 7.5HP UNITS)**—“E”-Series starters provide full voltage control of electric motors. They include thermal relays which protect the motor windings from harmful currents and resultant temperature rise caused by overloaded motor, low line voltage or stalled rotor. Reset button and NEMA 1 enclosure (UL & CSA approved) included.

## Gasoline Simplex Detailed Specifications

**BASE**—The compressor and engine are aligned on a heavy steel base.

**Receiver**—Receiver mounted units are ASME, National Board coded, and include discharge mounted check valve, pressure gauge, drain valve, service valve, and relief valve.

**DRIVE**—The drive is V-belt type with an easily removed, totally enclosed beltguard. Engine- Kohler package -12.5 HP aircooled Command engine with 12 volt electric starter and gas tank. Honda package -13hp aircooled engine with 12 volt electric starter, pull start, 1.7 gallon fuel tank, low oil level shutdown, and 3 amp recharging system.

**CONTROL**—Control is constant speed control with engine slowdown.

**BASEPLATE PACKAGE**—Base mounted units are supplied with a 4 gallon A.S.M.E. 200 psi receiver with pressure gauge, relief, service and drain valve.

## 5HP & 7.5HP Duplex Detailed Specifications

**RECEIVER MOUNTED**—All duplex units include two bare compressors with two motors mounted on a single-receiver. Each compressor/motor configuration is designed to run as an independent compression unit. However, both units can be run simultaneously should system demand require.

## 5HP & 7.5HP Duplex “Value” Package Detailed Specifications



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**RECEIVER MOUNTED**— Duplex value packages include two (2) bare compressors with two (2) ODP motors mounted on a single horizontal A.S.M.E. coded receiver tank. Standard controls are automatic start/stop with unloading pressure switch. These packages include an E-Series alternator, mounted and wired, in a NEMA-1 enclosure. Panel is both U.L. and CSA approved. The alternator panel allows both compressor units to operate in response to system air pressure demand. For example, if system pressure dips below the preset lower pressure limit, compressor “A” will automatically start. If pressure rises to the upper set point limit, compressor “A” will shut down. Next time system pressure drops below the preset lower pressure limit, compressor “B” will automatically start. Should system demand require, both compressor units will start automatically to meet and maintain system air pressure demand. Alternator includes (2) duty rated starters with overload protection, (1) control relay for alternation, (1) on/off switch, fused control circuit, (2) reset buttons through the cover. Package features a totally enclosed belt guard, no aftercooler, with manual tank drain. Standard voltage is 230-3-60 with optional voltages available to meet specific site needs. Duplex value package options include install kit, start-up kit, and electric automatic tank drain with power cord. No other options are available with these packages.

**(NOTE: NO MODIFICATIONS OR OPTIONS ARE AVAILABLE FOR VALUE PACKAGE UNITS OTHER THAN THOSE DESCRIBED IN THIS SECTION.)**

## Fully Packaged 5HP & 7.5HP Duplex “Value” Compressor Detailed Specifications

**RECEIVER MOUNTED**—“Fully Packaged” duplex value packages include two (2) bare compressors with two (2) ODP motors mounted on a single horizontal A.S.M.E. coded receiver tank. Standard controls are automatic start/stop with unloading pressure switch. These packages include an E-Series alternator, mounted and wired, in a NEMA-1 enclosure. Panel is both U.L. and CSA approved. The alternator panel allows both compressor units to operate in response to system air pressure demand. For example, if system pressure dips below the preset lower pressure limit, compressor “A” will automatically start. If pressure rises to the upper set point limit, compressor “A” will shut down. Next time system pressure drops below the preset lower pressure limit, compressor “B” will automatically start. Should system demand require, both compressor units will start automatically to meet and maintain system air pressure demand. Alternator includes (2) duty rated starters with overload protection, (1) control relay for alternation, (1) on/off switch, fused control circuit, (2) reset buttons through the cover. Package features a totally enclosed belt guard with air-cooled aftercooler, mounted and piped, and electric automatic tank drain with power cord (115-volt). Standard voltage is 230-3-60 with optional voltages available to meet specific site needs. “Fully Packaged” duplex value package install kit and start-up kit only. No other options are available with these packages.

**(NOTE: NO MODIFICATIONS OR OPTIONS ARE AVAILABLE FOR VALUE PACKAGE UNITS OTHER THAN THOSE DESCRIBED IN THIS SECTION.)**

## Totally Packaged Detailed Specifications

**TOTALLY PACKAGED RECEIVER MOUNTED MODELS (5HP AND 7.5HP)**—The totally packaged model is a simplex compressor configuration which comes standard with an 80-gallon, ASME coded vertical receiver tank (includes pressure gauge, service valve, and relief valve), an “E”-Series starter (mounted and wired), aircooled aftercooler, and electric (115-volt) automatic drain valve. No modifications or options are available with this package. Prewired NEMA-1 electrics will be for 230/3/60 voltage; however the compressor starter is equipped with a dual-voltage coil which is capable of operating with 230/3/60 voltage or 460/3/60 voltage with minor field-wiring modifications. An additional set of heaters, decal, and instructions to convert the unit from 230 volts to 460 volts are supplied with each unit. The totally packaged 5 & 7.5HP models are also available in 200/3/60 or 230/1/60 electrics.

**(NOTE: NO MODIFICATIONS OR OPTIONS ARE AVAILABLE FOR TOTALLY PACKAGED UNITS OTHER THAN THOSE DESCRIBED IN THIS SECTION.)**



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## Options 5HP Only Detailed Specifications

**OUTDOOR MODIFICATION**—Compressor package is furnished with TEFC (1.15 SF) motor, NEMA 4 pressure switch. Does not include the low oil level switch. This configuration can be used for outdoor installation.

**LOW OIL LEVEL SWITCH**—Low oil level switch prevents the unit from operating when oil level is low.

**HIGH DUST FILTER**—An optional heavy-duty, 10-micron, high dust inlet filter with built in centrifugal pre-cleaner and automatic dust ejector valve is available.

**AIRCOOLED AFTERCOOLER**—An optional air cooled aftercooler lowers package discharge air to within 25°F of ambient temperature. A relief valve is provided to protect against over-pressurization.

**AUTOMATIC DRAIN VALVE**—As air cools in the receiver, moisture drops out and accumulates in the tank. An automatic drain valve provides unattended, automatic draining of the moisture from the receiver tank. Either electric or pneumatic drain valves are available. Fully packaged models are standard with electric drain valve. Electric drain valve is prewired on units with deluxe starters and is supplied with a six foot heavy duty power cord with AC adapter with “E” Series starters.

**“E”-SERIES STARTER (MTD. & WIRED)—SIMPLEX UNITS**—“E”-Series starters provide full voltage control of electric motors. They include thermal relays which protect the motor windings from harmful currents and resultant temperature rise caused by overloaded motor, low line voltage or stalled rotor. Reset button and NEMA 1 enclosure (UL & CSA approved) included.

**NEMA 4 DELUXE STARTER (MTD. & WIRED)—SIMPLEX UNITS**—NEMA 4 Deluxe starters provide full voltage control of electric motors. They include NEMA 4 enclosure, manual reset button, on/off switch, 120 volt control transformer, and thermal relays which provide overload protection. Fused control circuit complies with National Electric Code (UL & CSA approved).

**“E”-SERIES NON-COMBINATION ALTERNATOR (MTD. & WIRED)—DUPLEX UNITS**—This optional panel enables both compression units to operate in response to system demand. For example, if system pressure dips below preset lower limit, compressor A will start. If pressure rises to upper limit set point, compressor A will shut down. Next time system pressure falls below lower limit, compressor B will start. Should system air demand require, both compression units will run simultaneously. Alternator panel includes (2) Definite Purpose (DP) starters with overloads, (1) control relay for alternation, (1) on/off switch, fused control circuit, (2) reset buttons through cover, and NEMA 1 enclosure (UL & CSA approved).

**COMBINATION DELUXE ALTERNATOR (MTD. & WIRED)—DUPLEX UNITS**—This optional panel enables both compression units to operate in response to system demand. For example, if system pressure dips below preset lower limit, compressor A will start. If pressure rises to upper limit set point, compressor A will shut down. Next time system pressure falls below lower limit, compressor B will start. Should system air demand require, both compression units will run simultaneously. Alternator panel includes (2) Definite Purpose (DP) starters with overloads, (1) control relay for alternation, (2) on/off switches, fused control circuit, (2) fused disconnect switches with door interlock, (2) 120 volt control transformers, (2) reset buttons, and NEMA 1 or NEMA 4 enclosure (UL & CSA approved).

**START-UP KIT**—Each start-up kits contains all the parts needed to correctly start up and maintain the compressor for the first year of operation. Kits include All Season Select lubricant (quantity dependent upon sump capacity), replacement filter element(s), MSDS sheet for lubricant, and (1) proof of warranty decal. The All Season lubricant is specifically formulated to protect and preserve the air compressor pump. All Season Select Lubricant can operate up to 2000 hours (under normal operating conditions) between oil changes. Use of All Season Select lubricant from start-up throughout the first 2-years of operation provides for a full **2-YEAR PUMP WARRANTY**, less consumables.

**INSTALL KIT**—Each install kit contains all the parts needed to correctly mount and install the compressor. Kits include a three (3) foot braided hose with NPT swivel connectors (size matches connection on compressor), vibration pads and foundation anchor bolts. The Install kit is specifically designed to ease installation of the air compressor and to protect and preserve the receiver tank.

**SEE CAMPBELLVILLE RECIP INTERNAL PRICESHEETS OR CONTACT YOUR INDUSTRIAL TECHNOLOGIES MARKETING MANAGER FOR NON-STANDARD PACKAGES, MODIFICATIONS, CONTROL PANELS OR OPTIONS FOR BASE MODELS LISTED IN THIS SECTION.**