



Industrial Systems-Light
Davidson, NC 28036

15T

Ref: 9820.00
Sheet: 121
Date: 15 Jan. 2009
Cancels: 23 Aug 2004

Engineering Data

Bore:	5" & 5" & 3.5"	Min RPM:	550	Aircooled Aftercooler CTD:	25° F
Stroke:	4"	Max RPM:	1080	(Package performance)	
Inlet Size:	(2) 1.5" NPT	Sheave OD:	21.25"	Number of Belts:	2
Discharge Size:	1.25" NPT	Sheave PD:	20.50"	Belt Section:	C

Performance						Nameplate Amp Ratings				
Bare	Motor HP	PSI	RPM	ACFM	BHP	200-3-60	230-3-60	460-3-60	575-3-60	
15T	15	125	800	54.5	16.0	15HP	48.3	42	21	17
15T	15	175	800	53.0	16.4	20HP	62.1	54	27	22
H15T	15	250	700	46.0	16.0					
15T	20	125	1080	73.1	20.9	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.				
15T	20	175	1080	72.0	22.5					
H15T	20	250	900	58.0	21.0					
Duplex units multiply capacity by two.										
H-250 PSIG operating pressure										

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 four piston rings for sealing compression and oil control. The taper faced compression ring and beveled oil scraper ring provide quick seating. Two, three-piece oil control rings maintain 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 multi-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. This keeps 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. A low oil level switch is standard equipment and protects the unit from operating when oil level is low.



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- INLET FILTER**—The filter has a durable canister with a dry type 10 micron inlet filter/silencer as standard.
- VALVES**—Concentric ring valves constructed of stainless steel provide large opening areas. This translates into dependable valve life.
- CENTRIFUGAL UNLOADER**—The centrifugal unloader automatically bleeds the air from intercoolers and cylinders, preventing the compressor from starting against full load. This protects the motor from premature wear.
- LOW OIL LEVEL SWITCH**—Low oil level switch prevents the unit from operating when oil level is low.

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 pressure gauge, drain valve, service valve, and relief valve.
- DRIVE**—The drive is V-belt type with provision for easy adjustment of belt slack. An easily removed, totally enclosed beltguard is standard equipment.
- MOTOR**—Standard AC motors are 1800 rpm, NEMA T frame with drip-proof enclosure, Class B insulation, 1.15 Service Factor, and grease lubricated ball bearings. Standard three phase motor voltages are 200, 230/460 and 575.
- CONTROLS**—Units are equipped for automatic start and stop operation with NEMA 1 pressure switch and constant speed control with free air un loaders on compressor head.

Duplex Detailed Specifications

- RECEIVER MOUNTED**—Units are ASME, National Board coded. 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 run simultaneously should system demand require.

Totally Packaged Detailed Specifications

- TOTALLY PACKAGED RECEIVER MOUNTED MODELS (20 HP)**—The totally packaged model is a simplex compressor configuration which comes standard with a 120-gallon ASME coded horizontal 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 20HP model is also available in 200/3/60 electrics.

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

Options—Detailed Specifications

- OUTDOOR MODIFICATION**—Compressor package is furnished with TEFC (1.15 SF) motor, NEMA 4 pressure switch, and NEMA 4 low oil level switch. This configuration can be used for outdoor installation.
- AIRCOOLED AFTERCOOLER**—An optional aircooled aftercooler lowers package discharge air to within 25°F of ambient temperature. A relief valve is provided to protect against over-pressurization.
- 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.



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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. Fused control circuit, on/off switch, 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 compressoprotect 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.