



7100

Industrial Systems-Light
Davidson, NC 28036

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

Engineering Data

Bore:	5.5" & 3"	Min RPM:	750	Aircooled Aftercooler CTD:	25° F
Stroke:	4"	Max RPM:	1100	(Package performance)	
Inlet Size:	1.5" NPT	Sheave OD:	18"	Number of Belts:	2
Discharge Size:	1" NPT	Sheave PD:	17.5"	Belt Section:	B

Performance						Nameplate Amp Ratings				
Bare	Motor HP	PSI	RPM	ACFM	BHP					
7100	10	75	800	38.0	8.5					
7100	10	125	800	37.2	9.6					
7100	10	175	800	36.6	10.7					
H7100	10	250	750	32.8	11.2					
7100	15	75	1100	51.6	13.5					
7100	15	125	1100	50.5	15.1					
7100	15	175	1100	50.0	16.3					
						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.				
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.



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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.

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

VALVES—Efficient combination valve design is utilized. Inlet valves consist of finger valves which allow maximum air flow. Discharge valves are large bore ring valves which provide maximum efficiency. Valve plate is easily removed for maintenance.

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 both automatic start and stop operation with NEMA 1 pressure switch and constant speed control with suction unloading on compressor inlet.

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 run simultaneously should system demand require.

15HP Duplex "Value" Package Detailed Specifications

RECEIVER MOUNTED—Duplex value packages include two (2) bare compressors with oil site glass and 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.)



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Fully Packaged 15HP Duplex "Value" Compressor Detailed Specifications

RECEIVER MOUNTED—"Fully Packaged" duplex value packages include two (2) bare compressors with oil site glass and 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.

(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 (15 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 (mtd. & 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 15 HP 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 Only 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.

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 motor. Fused control circuit (provided on 15HP units only), on/off switch, reset button and NEMA 1 enclosure (UL & CSA approved) included.



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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.