

# 235HNL

## Engineering Data

<b>Bore:</b> 3" & 3"	<b>Min RPM:</b> 350	<b>Aircooled Aftercooler CTD:</b> 25° F
<b>Stroke:</b> 2.75"	<b>Max RPM:</b> 720	<b>Number of Belts:</b> 1
<b>Inlet Size:</b> 0.75" NPT	<b>Sheave OD:</b> 15.25	<b>Belt Section:</b> A
<b>Discharge Size:</b> 1" NPT	<b>Sheave PD:</b> 14.38	

Performance						Nameplate Amp Ratings						
Bore	Motor HP	PSI	RPM	ACFM	BHP		115-1-60	200-3-60	230-1-60	230-3-60	460-3-60	575-3-60
235HNL	2	50	500	8.2	1.9	1.5HP	24.0	12.0	7.8	6.8	3.4	2.7
235HNL	2	75	500	7.4	2.1	3HP	34.0	17.0	11.0	9.6	4.8	3.9
235HNL	2	100	500	6.9	2.3							
235HNL	3	50	720	11.8	2.7							
235HNL	3	75	720	10.7	3.0							
235HNL	3	100	720	9.4	3.3							

## Bare Pump Detailed Specifications

**FRAME**—The 100% cast iron frame is designed to support the overhung crankshaft. The 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.

**WATERCOOLED CYLINDER**—These are 100% cast iron, separately cast and individually bolted to the frame in a V-type configuration. The cylinders are precision honed with water-jackets to dissipate heat. The unique non-lube cylinder design utilizes a piston and crosshead that have nonoverlapping travel, and a pressurized distance piece keeps crankcase oil out of the compression chamber or air cylinder space. One gallon of water per minute

**PISTON**—Precision balanced aluminum piston provides smooth operation.

**RINGS**—There are two piston rings for sealing compression and oil control. The teflon ring is utilized in the non-lubricated compression chamber with an oil control ring located on the lower end of the piston beneath the distance piece.

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

**LUBRICATION**—Splash lubrication of running parts is simple and reliable up to the pressurized distance piece. There is no oil in the compression chamber. Lubrication dipper is integral with the connecting rod and cannot come loose.

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

**LOW OIL LEVEL SWITCH**—Low oil level switch prevents unit from operating when oil 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 discharge mounted check valve, pressure gauge, drain 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.

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**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 single phase motor voltages are 115/230. Standard three phase motor voltages are 200, 230/460 and 575.

**CONTROLS**—Units are equipped for dual control; both automatic start and stop operation with NEMA 1 pressure switch and constant speed control with discharge unloader.

## 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.

## Options Detailed Specifications

**OUTDOOR MODIFICATION**—Compressor package is furnished with TEFC (1.15 SF) motor, NEMA 4 vacuum 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.

**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.

**“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) on/off switch, fused control circuit, (2) reset buttons, 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).