Ingersoll Rand

Industrial Systems-Light
Davidson, NC 28036

H15T4

Ref: 9828.00
Sheet: 113
Date: 31 May 2000
Cancels: 1 June 1999

Engineering Data

Bore:	4.5" & (4.5"-3.81") & 1" & 0.56"	**Min RPM:**	630	**Aircooled Aftercooler CTD:**	40° F
Stroke:	4"	**Max RPM:**	1000	**Number of Belts:**	3
Inlet Size:	1.25" NPT	**Sheave OD:**	16	**Belt Section:**	C
Discharge Size:	0.25" NPT	**Sheave PD:**	15.25		

Performance

Bare	Motor HP	PSI	RPM	ACFM	BHP
H15T4	10	4000	630	13.4	11.3
H15T4	10	5000	630	13.2	11.7
H15T4	15	4000	890	18.9	15.9
H15T4	15	5000	890	18.6	16.6
H15T4	20	4000	1000	21.2	17.9
H15T4	20	5000	1000	20.9	18.6

Nameplate Amp Ratings

	200-3-60	230-3-60	460-3-60	575-3-60
10HP	32.2	28	14	11
15HP	48.3	42	21	17
20HP	62.1	54	27	22

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.

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—The first and second stages utilize a step type double acting piston, while the third stage utilizes a steeple type piston. The fourth and final stage uses a built-up steeple type piston.

RINGS—The first stage utilizes five compression rings and one oil control ring, while the second stage utilizes three compression rings and one oil control ring. The third stage uses four compression rings and one oil scrapper ring, with the fourth and final stage using five compression rings and one oil scrapper ring.

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

INTERCOOLER—The intercoolers between stages are of finned copper tube construction to provide maximum cooling area. They are located directly in the flywheel air blast to remove the heat of compressions between stages. This keeps running temperatures and power needs to a minimum, ensuring high air delivery for horsepower expended. The intercoolers are provided with relief valve to prevent over-pressurization.

INTERCOOLER PRESSURE GAUGE—A pressure gauge reading pressure in the intercooler(s) indicates when valve maintenance is required without costly tear-down inspections, in the case of high inter-stage pressure.

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 carbon steel canister with baked enamel finish. A dry type 10 micron inlet filter/silencer is standard.

VALVES—The first and second stage concentric ring type valves and third and fourth stage plate type valves are all made from premium grade stainless steel. Valve components are easily removable for maintenance.

CENTRIFUGAL UNLOADER—The centrifugal unloader automatically bleeds the air from intercooler and cylinders, preventing the compressor from starting against full load. This protects the motor from premature wear.
SHEAR DISC DISCHARGE RELIEF VALVE—The shear disc discharge relief valve protects against any sudden, abnormal pressure surge, which a conventional relief valve may not relieve quickly enough.
LOW OIL LEVEL SWITCH—Low oil level switch prevents unit from operating when oil is low.
AIRCOOLED AFTERCOOPER—Aircooled aftercooler lowers discharge air temperature to within 40°F of ambient temperature.
DISCHARGE SEPARATOR/DRAIN LEG— A drain leg is supplied between the second and third stage, third and fourth stage, and at the discharge of the unit to help separate and drain the condensate.
AUTOMATIC CONDENSATE DRAIN SYSTEM—An automatic condensate drain is supplied on the discharge separator/drain leg to automatically drain condensate when the compressor stops, unloads during constant speed control operation, or when the timer & solenoid valve interrupts the control air pressure during extended run times.
TIMER & SOLENOID VALVE—A timer and solenoid valve provides preset, electrically timed intervals for operating the automatic condensate drain system during extended run times.

Baseplate Detailed Specifications

BASE—The compressor and motor are aligned on a heavy steel base.
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 S.F., 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 and constant speed control.

Options Detailed Specifications

OUTDOOR MODIFICATION—Compressor package is furnished with TEFC (1.15 SF) motor, NEMA 4 pressure switch, NEMA 4 low oil level switch, and NEMA 4 timer & solenoid valve. This configuration can be used for outdoor installation.
DELUXE STARTER—Non-Combination Deluxe starters provide full-voltage control of electric motors. They include NEMA 1 enclosure, manual reset button, on/off switch, fused control circuit, 120 volt control transformer, and thermal relays which provide overload protection. Also, available with NEMA 4 enclosure.
PRIORITY VALVE (4000 PSIG)—Priority valve allows no flow out of the compressor until the valve setting is reached. This valve improves the compressor efficiency and reduces oil carryover.