

Why Buy an INGERSOLL RAND TYPE 30 AIR COMPRESSOR ?

ADDED VALUE BENEFITS OF TYPE 30 RECIPROCATING COMPRESSORS

INGERSOLL RAND TYPE 30 reciprocating air compressors were first built in **1930** (hence the name). Ingersoll Rand has spent the intervening years constantly reinventing this most respected industrial air compressor. Ongoing developments in bearing and valve materials have allowed higher safe operating speeds. Computer designed cylinder heads have considerably lowered compressed air temperatures, meaning less carbon formation on valves and lower power draw, and finally, high technology lubricants have been developed to reduce oil carryover, stop carbon forming, and extend the life between oil changes to 2000 hours. The latest upgrades to the Type 30 pump design have allowed them to be rated for **100% duty cycle**, a unique achievement for small air cooled reciprocating machines.

So - Why Buy TODAY'S TYPE 30 ?

TWO STAGE DESIGN

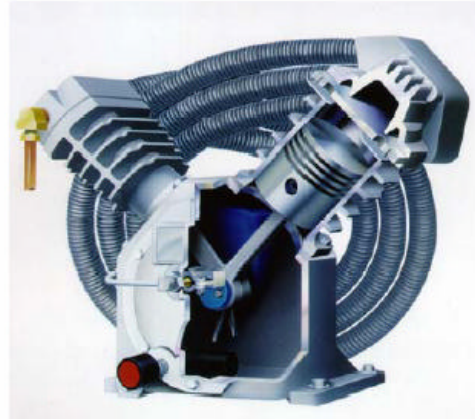
The **Type 30** air compressor is a **two stage** design. That is, it has different diameter cylinders separated by an efficient **intercooler** and compresses the air in two steps. This keeps the air temperature **down** and reduces the **power** used. Many compressors have **two cylinders**, but few are genuinely **two stage** machines. The many features of the **heavy duty** construction of the Type 30 compressor are summarised below:-

CAST IRON CONSTRUCTION

The Type 30 is **all** cast iron - crankcase, cylinders, and cylinder heads. No hybrid alloy blocks with cast iron cylinders or liners - just 100% solid cast iron for longest life and greatest strength.

CRANKSHAFT

Ingersoll Rand's unique overhung crankshaft design is made possible by the strength of the cast iron crankcase. The shaft is fully supported **solely** from the flywheel end by two heavy duty ball bearings running on a **replaceable** crank pin bush. If a bearing fails, the crankshaft is **not damaged**. A crankcase cover plate on the non-drive end is quickly removed to enable easy inspection of the internals.



A TYPICAL RUGGED TYPE 30 COMPRESSOR BLOCK

CONNECTING RODS

The solid, **one piece**, inherently concentric and easy to fit connecting rod design is only feasible because of the overhung crankshaft concept. Here again, the crankshaft is fitted with a precision ground crankpin bushing to protect it against frictional wear from contact with the big end bearings of the con rods.

CYLINDERS

The individual solid cast iron cylinders are **bolted** to the crankcase and can be replaced if damaged. They are precision honed to reduce oil carryover and have radial cooling fins to remove the heat of compression efficiently.

PISTONS

The different diameter high & low pressure pistons are made from different materials and are precision balanced to be equal in weight and so provide very smooth machine operation.

RINGS

Type 30 piston rings use the latest technology. Two tapered face compression rings and two three-piece bevelled oil scraper rings ensure quick seating, proper lubrication of the cylinder wall and low oil carryover.

FLYWHEEL DESIGN

The cast iron flywheel is moulded in the shape of an efficient fan which forces a "*cyclone*" of cooling air to pass over the cylinder and intercooler cooling fins. The flywheel is balanced with the crankshaft to give excellent vibration free operation.

INTERCOOLING

The intercooler between the two stages of the Type 30 compressor is constructed of finned copper tube for maximum cooling area and is fitted with a protective pressure relief valve.

VALVES

The Type 30 compressor is fitted with reliable, proven, high lift, cool running valves constructed of stainless steel for maximum life.

LUBRICATION

Simple splash lubrication is used on the TYPE 30 and this is only possible because bearing operating temperatures are so low. Best of all, the new Ingersoll Rand **ALL SEASONS** synthetic lubricant allows 2000 hours of operation between oil changes, and reduces oil carryover and carbon formation. This *saves money* on replacement oil and machine repairs.

WARRANTY

The TYPE 30 compressor package carries a 12 months warranty, and the pump **24 months** parts & labour warranty, conditional upon the machine being constantly run on **ALL SEASONS** lubricant.

HEAVY DUTY RUNNING GEAR

The Type 30 is unique among its competition for having the big end bearings, crankshaft bearings & crankpins designed for extra heavy duty service. This allows Type 30 compressors to run to much higher operating pressures than most competitive units - up to 250 psig. (1723 kPag). However, the receiver-mounted Type 30 package is designed to handle pressures of up to 175 psig (1205 kPag) maximum, in order to ensure that the full 100% duty cycle rating is maintained, since at higher pressures, only intermittent duty is possible.

THE TYPE 30 PACKAGE

There are two standard options available for Type 30 packaged compressors - they can be supplied either base mounted or receiver mounted.

BASE MOUNTED TYPE 30

The base mounted Type 30 package consists of a heavy duty fabricated steel baseplate with both the compressor block and motor slide rails attached to it with high tensile steel bolts. A precision-bored cast iron pulley is fitted to the motor, and matched V-Belts transfer the drive to the grooved flywheel of the compressor. This transmission is protected by an OHSA approved belt guard. No motor starter, pressure switch or constant speed unloader valve is supplied with the standard package. These can be ordered as optional extras. There are also a number of drive options:-

- * Flameproof motor, belts and beltguard
- * Diesel drive
- * Petrol drive
- * Choice of IP23 or IP54 electric motors

RECEIVER MOUNTED TYPE 30

Receiver mounted Type 30 packages essentially comprise a base mounted set as described above, permanently fixed on top of a suitably sized horizontal air receiver built to AS1210 standards, with the following additional components:-

- * Motor starter or pressure switch, depending on the size of the motor.
- * Receiver pressure gauge, relief valve and manual drain valve.
- * Air discharge sockets at both ends of the receiver to allow for easy installation of pipework.
- * Regulation systems to suit the size of compressor - 2.2 kW up to 7.5 kW units utilize stop/Start control provided by a pressure switch. 7.5 kW up to 22 kW units use either Constant Speed Control provided by cylinder unloaders, or, in some sizes, Dual Control, which incorporates both regulation systems.

ACCESSORIES

LOW OIL LEVEL SWITCH - For those who don't like to have to worry about regular checking of crankcase oil levels, the optional low oil level switch will protect the compressor from damage due to insufficient lubrication.

AIRCOOLED AFTERCOOLER Up to 70% of the water entrained in the compressed air leaving the Type 30 compressor can be removed by installing an air cooled aftercooler. This can either be supplied as a free standing unit on legs, fitted with its own electric cooling fan, plus a moisture separator and auto drain, or else as a beltguard mounted model which uses the air receiver as a moisture separator.

OIL FILTERS High efficiency Dornick Hunter borosilicate glass fibre coalescing oil filters will remove all dirt, water particles and oil in the compressed air, down to 0.01 micron solids and 0.01 ppm remaining oil and water carryover.

NON-CORRODING AIRLINES

Ingersoll Rand Simplair anodised aluminium extruded modular airlines, complete with simple "push in, tighten up" O-Ring fittings provide top

quality airlines. Simplair can be installed by anyone, and can even be used to construct work benches with air running through the legs. If you need another outlet, drill a hole and pop it in. *A RECEIVER MOUNTED TYPE 30 PACKAGE*