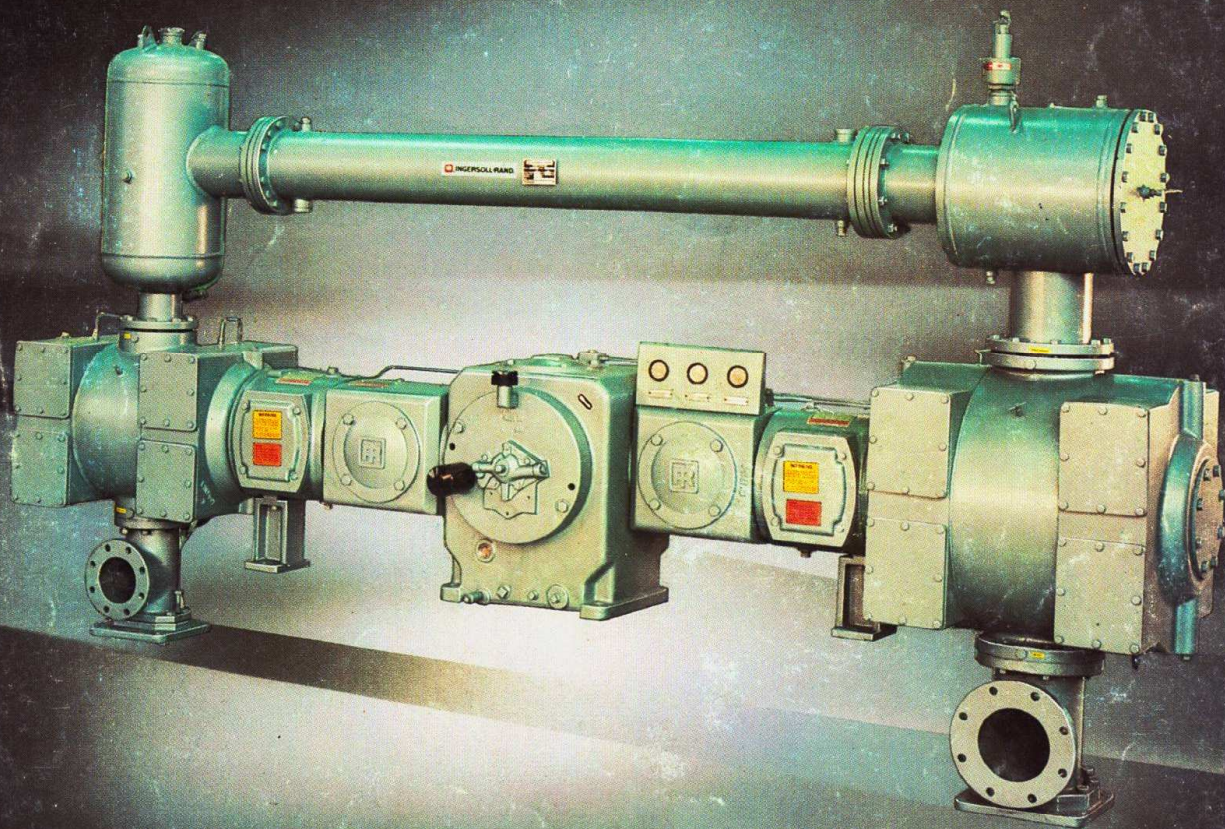


IHE Balanced opposed Reciprocating Air Compressors



INGERSOLL-RAND
AIR COMPRESSORS

**Unmatched
compressor
performance with
these unique
features**

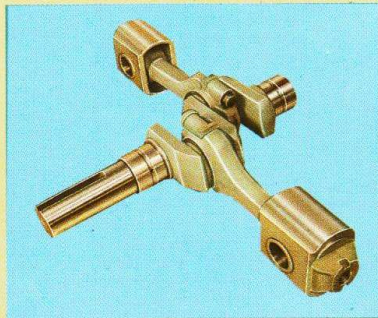


Full-floating pressure lubricated bearings

Made to Ingersoll-Rand exclusive design, these precision bearings are full-floating - free to rotate slowly both on the journal and within the bearing housing. This ability to "roll with the punch" means that the pressurized oil film is distributed evenly around the inside and outside surfaces eliminating metal-to-metal contact. Since the load is not concentrated at any one point, friction is reduced and bearing wear is distributed evenly - resulting in longer lasting bearings that never need adjustment.

Crankpin bearings are split into two halves for assembly. Aluminium main and crankpin bearings are much stronger than most bearing metals, have a higher load-carrying capacity, and a higher heat conductivity.

With thousands of installations in virtually every application world-wide, Ingersoll-Rand has experience and technical know-how in reciprocating compressor design and application that is second to none



Crank Assembly

Crank assembly comprises:

Crankshaft

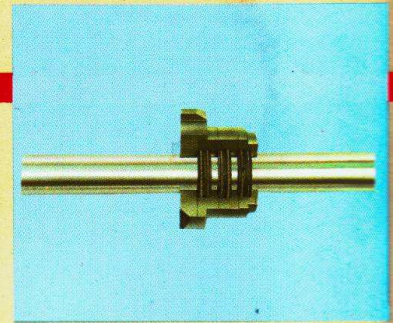
Special large diameter closed die-forged steel construction. Precision machined and ground - for longer life. Balanced design to assure maximum stability. Integral drilled oil passages.

Crosshead

Specially designed aluminium alloy to give extended life. Full-floating pin-type unique design. Permanently aligned - requires no adjustment.

Connecting Rod

Closed die-forged steel construction. Accurately machined and honed for longer life. I-section design for rigidity and light weight. Split-bolted marine type crank-pin end for easy assembly and disassembly. Rifle-drilled oil passage.



Full-floating self-adjusting packing

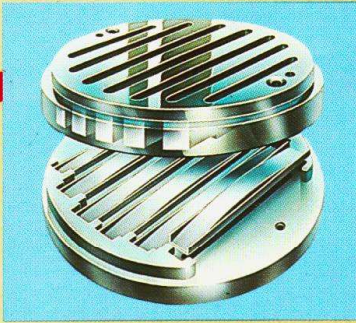
The compressor piston rod is sealed by precision floating seal rings with ground and lapped surfaces. These rings form a perfect seal with the help of air pressure, and with much less friction than obsolete soft packing. The segmental rings have wear stops. They adjust themselves in operation, and float with the movement of the rod. This feature alone saves a lot of money usually wasted in leakage and in labour for adjustments and replacements. This packing will operate for years without attention. A variety of ring materials is available to suit any service.



Outer head with liberal air and water passages

Large, unrestricted air passages save power by reducing air friction and pulsation. Generous water passages ensure thorough, uniform cooling, eliminating "hot spots" and reducing cylinder distortion.

NL Units for oil free compressed air



Channel valves are the key to long life

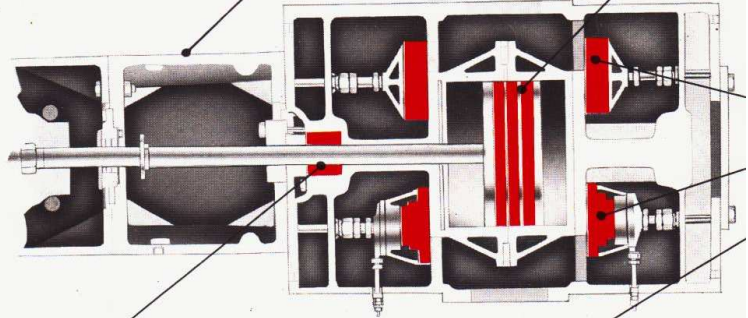
This family of compressors gives you the longest valve life of any in its class. That's because a special air cushion allows the moving valves to float rather than slam against their stops. This eliminates valve impact, increases durability and minimizes noise - without the use of coil springs.

IR channel valves also have cost-saving, reversible, hardened, stainless steel seat plates so no re-machining of the valve seat is ever required. Concentric ring valves must be machined as they do not offer this reversible seat plate.

IHE compressors are also available with non-lubricated cylinders for oil-free air. They give you double the life because all wear points are protected against friction by optimised self-lubricating materials with improved mechanised design. These non-lubricated valves, rings and packing are similar to the ones available on standard ESV/ESH NL machines.

NL Distance Piece

An additional distance piece is provided on all NL machines to accommodate an oil stop plate on the piston rod which prevents the travel of frame oil up the rod to the cylinder.

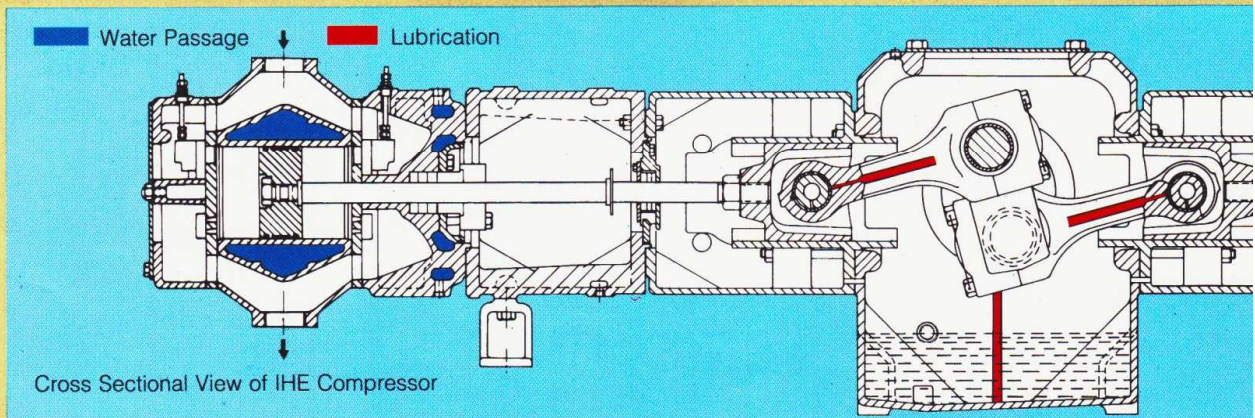


NL Packing

Full-floating, self-lubricating rings seal the piston rod with no metal-to-metal contact. They require no adjustment, keep leakage to a minimum and operate for long periods without attention or replacement.

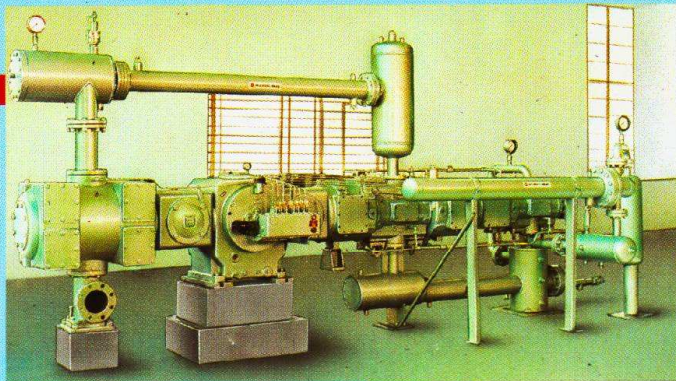
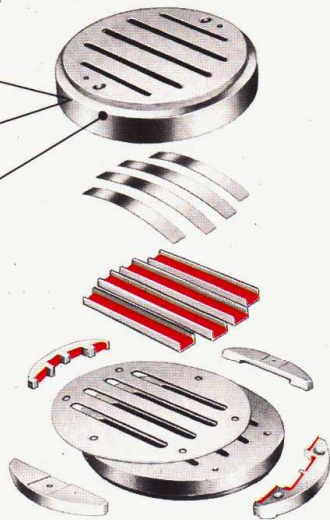
NL Channel Valves

Metal-to-metal sliding contact has been completely eliminated - with strips of self-lubricating material between valve springs and channels, and self-lubricating valve guide inserts. These valves operate without oil, yet have field-tested life approaching that of standard oil-lubricated Channel Valves.



NL Rings

These NL piston rings and wear rings of impregnated Teflon are self-lubricating and free-floating within their ring grooves. They require no expanders or other metal parts and are free to rotate distributing load evenly and assuring longer life.



IHE boosters and high pressure compressors

Single or multi-stage, lubricated or oil-free compressors are available for booster service - whatever be your inlet pressure, we have a booster to do your job - and high pressure applications. Typical applications include air separation, cylinder filling, enhanced oil recovery, engine starting etc.

Gives you more flexibility

Ingersoll-Rand's compressor line-up gives more options than any other available. You can get :

Drives :

- VBD / direct drive / gear drive
- with electric motor / engine

Regulation :

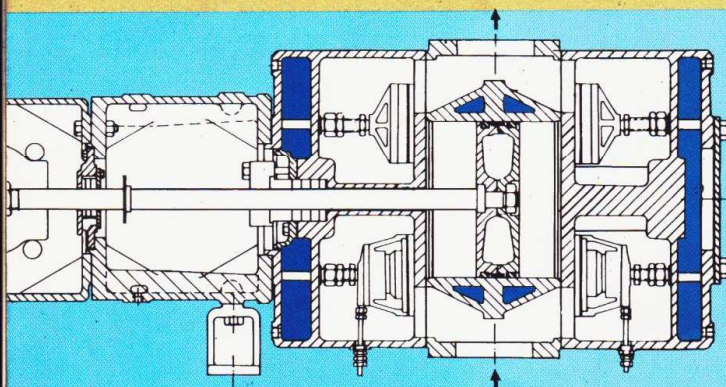
- Single step / two step

Control :

- Pneumatic or electro-pneumatic
- Constant speed or automatic dual control.

Skid-mounted package or bare unit with a wide range of optional accessories.

Maximum parts interchangeability



IHE ↔ ESV-ESH

Maximum interchangeability of parts between the IHE range and the 25-75 hp range of popular ESV/H compressors, provides added advantage to the customer for maintenance and spare parts availability and stocking

Data and Dimension

| Model | No. of Stages | Piston Displacement | | rpm | Working Pressure | | Dimensions (cm) | | | Weight kg |
|-----------|---------------|---------------------|------|-----|----------------------|------|-----------------|-------|--------|-----------|
| | | m ³ /min | cfm | | kg/cm ² g | psig | Length | Width | Height | |
| IHE-3 | 2 | 12.01 | 424 | 675 | 10.55 | 150 | 355 | 125 | 180 | 2050 |
| IHE-3NL | 2 | 12.01 | 424 | 675 | 10.55 | 150 | 355 | 125 | 180 | 2050 |
| IHE-5 | 2 | 19.29 | 681 | 750 | 8.79 | 125 | 361 | 125 | 190 | 2150 |
| IHE-5NL | 2 | 19.29 | 681 | 750 | 8.79 | 125 | 361 | 125 | 190 | 2150 |
| IHE-7 | 2 | 26.34 | 930 | 750 | 9.49 | 135 | 361 | 125 | 200 | 2300 |
| IHE-7NL | 2 | 26.34 | 930 | 750 | 9.49 | 135 | 361 | 125 | 200 | 2300 |
| IHE-10 | 2 | 34.44 | 1216 | 750 | 8.79 | 125 | 384 | 125 | 220 | 2600 |
| IHE-10NL | 2 | 34.44 | 1216 | 750 | 8.79 | 125 | 384 | 125 | 220 | 2600 |
| IHE-12 | 2 | 43.64 | 1541 | 750 | 7.03 | 100 | 408 | 125 | 300 | 3200 |
| IHE-12NL | 2 | 43.64 | 1541 | 750 | 7.03 | 100 | 408 | 125 | 300 | 3200 |
| IHE-S4 | 1 | 12.94 | 457 | 750 | 5.27 | 75 | 340 | 125 | 77 | 1500 |
| IHE-S4NL | 1 | 12.94 | 457 | 750 | 5.27 | 75 | 340 | 125 | 77 | 1500 |
| IHE-S7 | 1 | 26.71 | 943 | 750 | 4.22 | 60 | 382 | 125 | 105 | 2050 |
| IHE-S7NL | 1 | 26.71 | 943 | 750 | 4.22 | 60 | 382 | 125 | 105 | 2050 |
| IHE-S10 | 1 | 38.60 | 1363 | 750 | 3.16 | 45 | 382 | 125 | 105 | 2150 |
| IHE-S10NL | 1 | 38.60 | 1363 | 750 | 3.16 | 45 | 382 | 125 | 105 | 2150 |
| IHE-S15 | 1 | 50.98 | 1800 | 750 | 2.81 | 40 | 386 | 125 | 113 | 2600 |
| IHE-S15NL | 1 | 50.98 | 1800 | 750 | 2.81 | 40 | 386 | 125 | 113 | 2600 |
| IHE-S20 | 1 | 68.88 | 2432 | 750 | 2.46 | 35 | 386 | 125 | 132 | 3100 |
| IHE-S20NL | 1 | 68.88 | 2432 | 750 | 2.46 | 35 | 386 | 125 | 132 | 3100 |
| IHE-S24 | 1 | 87.26 | 3081 | 750 | 1.76 | 25 | 425 | 125 | 146 | 3600 |
| IHE-S24NL | 1 | 87.26 | 3081 | 750 | 1.76 | 25 | 425 | 125 | 146 | 3600 |

Other IHE models are also available at higher pressures. Different cylinder combinations can be offered to suit various capacities. All weights and dimensions are without drive arrangements.

Worldwide Support

Ingersoll-Rand gives all the advantages of the most experienced and professional support services in the air compressor business worldwide.

