INGERSOLL-RAND AIR COMPRESSORS

Step Saver Kit

Small Compressor Division

Ingersoll-Rand Company

Campbellsville, KY 42718

Instructions & Parts List

MODEL 2475 VALVE / GASKET KIT PART NUMBER 32301426

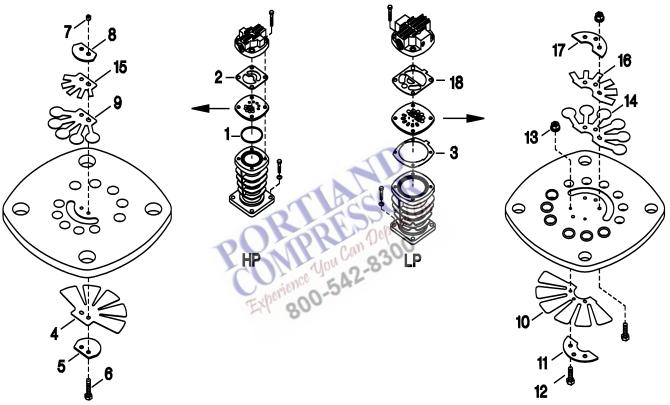


Figure 1. Kit Parts Assembly.

Ref. Nbr.	Part Number	Description	Qty.
Ref.	32301426	Kit, Valve / Gasket	1
1-1	32247462	O-Ring, HP Cylinder	1
1-2	32247926	Gasket, Head - HP	1
1-3	32248197	Gasket, Cylinder / Valve Plate - LP	1
1-4	32236671	Valve, Finger - Inlet	1
1-5	32297343	Retainer, Finger Valve	1
1-6	97511042	Screw, Hex - M3 X 16	2
1-7	97511059	Nut, Hex - M3 w/Lockwasher	2
1-8	32295461	Retainer, Valve	1
1-9	32241010	Valve, Finger - HP Discharge	1

Ref. Nbr.	Part Number	Description	Qty.
1-10	32248130	Valve, Inlet - 4"	1
1-11	32248148	Retainer, Inlet - 4"	1
1-12	32247512	Screw, Hex - M4 X 12	6
1-13	32248171	Nut, Hex - M4	6
1-14	32248155	Valve, Discharge - 4"	1
1-15	32295479	Valve, Damper	1
1-16	32294464	Valve, Damper - Discharge	1
1-17	32248163	Retainer, Discharge - 4"	1
1-18	32248189	Gasket, Valve Plate / Head - LP	1

WARNING



Hazardous voltage! Can cause severe injury or death!

Always disconnect main power supply before servicing.

NOTICE

During disassembly, note the positions and locations of parts to facilitate easier assembly.

Disassembly

- 1). Disconnect compressor fom main power supply.
- Ensure all air pressure has been vented from compressor, receiver, and associated tubing and components. (NOTE: Pressure can be vented through manual drain valve on receiver).
- 3). Remove inlet filter assembly, frame vent tube and intercooler tube from first stage head.
- 4). Disconnect intercooler tube and discharge tube from second stage head.
- Remove head screws. Carefully lift head and then valve assembly off cylinder. Retain all hardware for reassembling.
- Remove old valve plate o-ring and gasket from cylinders. A new o-ring and gasket should be used when reinstalling valve assembly onto cylinder.

Finger Valve Removal

- Using localized heat (450°F for five minutes) to break sealant, heat valve retainer nuts on discharge surface of valve plate.
- 2). Loosen and remove valve retainer nuts and screws.
- 3). Carefully remove valve retainers, inlet fingers and discharge fingers.

Valve Cleaning

Paying special attention to seating area, clean valve plate with stiff bristle brush. DO NOT USE WIRE BRUSH! Use non-flammable safety solvent to loosen dirt, oil or carbon deposits and gasket residue. Should it be necessary to scrape, do so lightly to prevent marring valve seating surface. Carefully clean all cylinder and head gasket seating surfaces in a similar manner to allow for proper seating of new gaskets and o-rings.

Valve Assembly Procedures

- 1). Position valve plate on work surface with discharge side facing down.
- Align inlet finger valve to ensure it seats properly against valve plate surface. Place one valve retainer over finger, aligning screw holes on all three parts.
- Place one drop of LocTite 680, or equivalent heat-removable retaining compound, on hex head screws and hand tighten screws into valve plate from inlet side.
- Ensure finger valves are properly seated and aligned with inlet valve holes on valve plate.

WARNING



High pressure air! Can cause severe injury or death!

Always relieve pressure from the compressor and all associated tubing and components before servicing.

NOTICE

Torque values given are for threads lubricated with oil or grease

- 5). Torque each screw in accordance with Table 1.
- 6). Turn valve plate over. Apply one drop of LocTite 680 to hex nuts. Hand tighten nuts onto inlet valve retainer screws. Ensure finger valve is aligned with inlet holes on valve plate. Tighten to final torque.
- Align discharge finger valve to ensure it seats properly against valve plate surface. Place damper over finger, and then the retainer over the damper, aligning all parts on retainer screws.
- 8). Apply one drop of LocTite 680 on threads of hex nuts and hand tighten onto discharge valve retainer screws. Ensure finger valve is aligned with discharge holes on valve plate. Torque nuts in accordance with Table 1.

Valve & Head Installation

- 1). Install new valve plate o-ring on cylinder bore.
- Carefully align valve plate on cylinder with discharge side facing up (See Figure 1).
- Position first stage valve plate with discharge finger valve facing up and toward beltwheel side of compressor, and inlet fingers pointed toward frame end of compressor.
- 4). Position the second stage valve plate with the discharge finger valve facing up and toward the frame end of the compressor, and the inlet fingers toward the beltwheel.
- Align the new head gasket on the valve assembly. Carefully align the head on the valve plate.
- Position the first stage head with the inlet filter connection toward the frame end of the compressor.
- Position the second stage head with the intercooler tube connection toward the beltwheel.
- Install the head screws and hand tighten in a cross pattern to the final torque. See Table 1.
- Apply pipe thread sealant to all threads. Reinstall the inlet filter assembly
 and intercooler tube on the first stage head. Connect the intercooler tube
 and discharge tube to the second stage head.

Cylinder Flange Capscrews	50 Ft. Lb.
Head Capscrews	75 Ft. Lb.
Valve Screws (HP side)	9 In. Lb.
Valve Screws (LP side)	27 In. Lb.

Table 1. Torque Values.