#### ATLAS COPCO OIL FREE PISTON COMPRESSOR

#### **General Description**

LF, a unique single stage oil-free reciprocating compressors designed for operating at maximum working pressure of 10 bar (45 psi) and capacities from 3.1 to 15.5 l/s at 50Hz, 7.6 to 38.6 cm at 60Hz. LF compressors are available in a number of product variants to match the exact needs of a wide range of end users.



# **Working Principle**

Filtered air is entered through the inlet valve into both cylinders. The piston is driven forward through the connection rod attached to the balanced crankshaft. The air is compressed in the cylinder that leaves through the outlet valve when the required pressure of 10 bar (145 psi) is reached.

#### Scope of Supply

#### **Drive arrangement**

The standard drive arrangement is direct drive with electrical motor. However, the compressor block can also be directly driven by a hydraulic motor, diesel or petrol motor and kit is available for belt drive arrangement.

#### **Electrical Regulation**

The standard electrical regulation occurs by means of pressure switch that starts/stops the compressor at pre-set pressures. Al units are also supplied with over load relay. In standard models, the cylinder heads are always de-pressurized if the units is stopped via pressure switch. On units with Direct on Line (DOL) start this is done through the pneumatic Unloader located inside the pressure switch box. Units with Y/D start are supplied with an Industrial Unloader Valve and Solenoid valve to de-pressurized the cylinder heads both stopping and starting the unit. Starting the compressor without back pressure in combination with special Y/D motor dramatically reduces start-up current. A cubicle is needed to manage the motor running between Y and D and to control the Industrial Unloader Valve.

#### L Block

- Simplified discharge pipe (LF 2-3)
- Check valve (LF 5-7)
- Pneumatic unloading (LF 10)
- Fan shroud
- Dry type intake filter with venturi silencer
- Safety valve
- Temperature reducer
- 100% Duty cycle
- 40°C/104°F maximum ambient operating temperature



# L Power Pack

- Compressor
- TEFC flanged motor



# L Base-Mounted or L Complete Unit

- Compressor/power pack
- TEFC flanged motor
- Mounted on ASME tank
- ASME safety/pressure relief valve
- Pressure switch
- Discharge valve





#### L Full Feature

- L Complete Unit
- Atlas Copco refrigerant dryer
- Receiver 250 liter (1.5-4Kw)
- Receiver 475 liter (4-7.5Kw)



# L Trolley

- L Power Pack
- Mounted on special framework, with wheels and lifting bars
- 2 x 10-liter receivers
- Special pilot valve- operates in unload mode



# **Features & Benefits**

# **Compact & Space Saving**

- Compressor block V shaped 2 cylinder directly coupled to the motor
  - o Ideal for integration with limited space requirement
  - o Low vibration and excellent cooling

# **Highest reliability**

- 100% oil free
  - Engineered to cost effectively provide the best quality air, where oil cannot be tolerated
- Robust Design
  - Extended product life, Straight forward maintenance and vast options for different applications