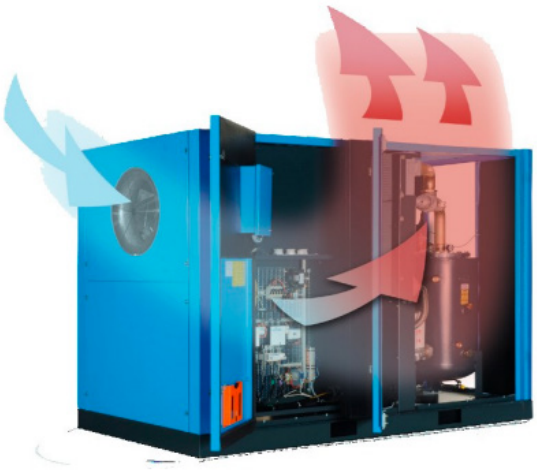
# Compressor Screw (SSC Series) User Manual



SSC series compressors with screw air-end and oil injection are designed in the pressure range of 7 to 31 bar and are used in various industries. Here is a brief explanation of how this system works and is maintained.SSC series compressors, with high reliability, optimized energy consumption, and reduced maintenance costs, are the most suitable solution for producing your required compressed air.

## How the Device Works

In the first step, ambient air enters the system through the air filter installed on the air-end. Then, the compressed air along with oil is transferred from the air-end outlet to the air and oil tank (receiver). Subsequently, the oil-separated air, after passing through the separator filter, enters the radiator through a one-way valve (minimum pressure valve) and, after cooling, is directed to the consumption line.

Important Note: For increased safety, two safety valves are installed on the system, the settings of which have been done by the factory and should not be changed under any circumstances. One of these valves is inside the device and on the receiver, and the other is installed on the consumer air storage tank.

## Periodic Services

Regular periodic services, in accordance with the instructions provided in this manual and by experienced company experts and technicians, will guarantee the correct operation and increase the lifespan of your compressed air system.

**Compressor periodic services include:**

- Replacement of the separator filter, oil filter, air filter, and special screw compressor oil.
- General inspection of the compressor and correction of possible defects and leaks in the connections.

**Service schedule:**

- Initial service: after 500 hours of operation.
- Subsequent services: at intervals of 500 and 1000 hours of operation.

## Device Installation

This company's screw compressors are designed so that they do not require a foundation and can be installed on any flat surface that can bear their weight.

**Important points in compressor installation:**

1. Sufficient air intake: The compressor should be positioned so that the air intake enters the system without obstruction to prevent oil temperature rise.
2. Suitable installation environment: The compressor installation site should be as free as possible from dust, moisture, and harmful gases.
3. Correct equipment layout: When installing the compressor and accessories, the layout must be done

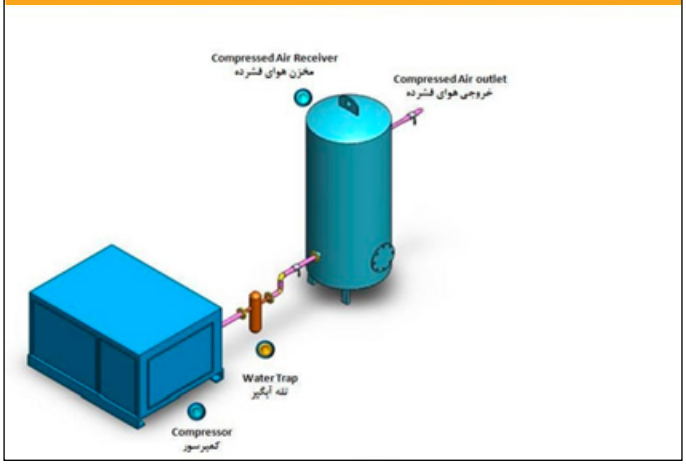
according to the drawings provided by the Safe Compressed Air Industries Company.

4. Sufficient space for service: Sufficient space should be considered in the compressor room for equipment repair and service (a minimum of 150 cm distance from the side walls is necessary).

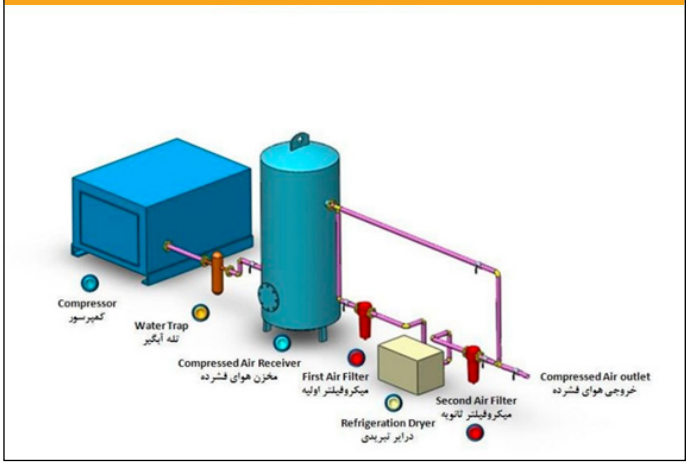
5. Preventing pressure drop: If compressed air is used at distances farther from the compressor, it is recommended to use smaller tanks next to the consumers to reduce pressure drop.

6. Level installation location: The compressor installation location must be perfectly level for optimal and trouble-free device performance.

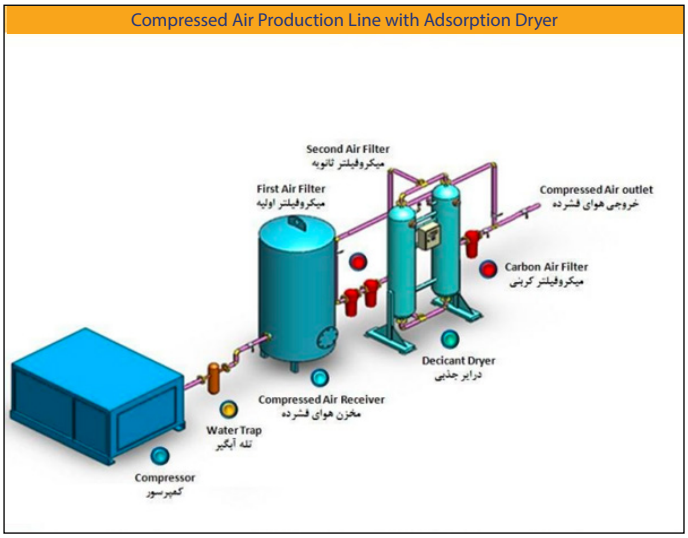
Compressed Air Production Line Without Dryer, Booster, and Microfilter



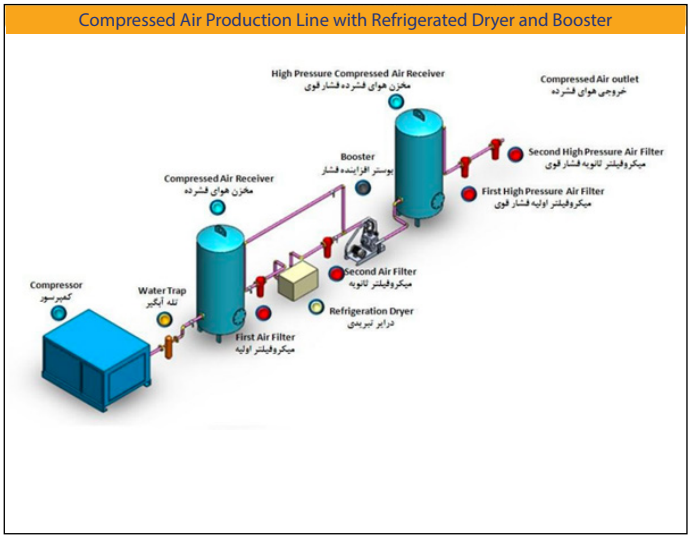

Compressed Air Production Line with Refrigerated Dryer




Compressed Air Production Line with Adsorption Dryer




Compressed Air Production Line with Refrigerated Dryer and Booster




## Service and Maintenance

Just as principled design, selection of high-quality parts, and correct assembly are essential for having an ideal compressor, regular maintenance and service by the operator are also of great importance. Observing the following points is mandatory to maintain the health, safety of the operator, and proper functioning of the device:

**Safety Instructions:**

■ Keep the manual always accessible; store it in a suitable place near the compressor.

■ Before any inspection or repairs, make sure to completely discharge the air inside the system.

■ While the device is running, avoid opening covers, connections, and fasteners, because compressed air and hot oil under pressure can be very dangerous.

■ Before performing any repairs, turn off the control fuse or press the emergency switch.

■ Since the device operates at high voltage, before doing electrical work, make sure to completely disconnect the power through the main switch.

■ When working with the compressor, avoid wearing loose or short-sleeved clothing to prevent potential hazards.

**Preventive Tips for Compressor Maintenance and Care:**

■ Overloading the electric motor can cause the system to stop; therefore, do not operate the compressor at a pressure higher than the value indicated on the device's nameplate.

■ Avoid changing the settings of safety valves and high-pressure switches that have been set at the factory.

■ Ensure the proper functioning of the auto-drains installed under the tanks, water traps, and microfilters daily.

■ Inspect all hydraulic hoses according to the schedule and replace them if damaged.

■ Always use experienced and specialized technicians for repairs and electrical work.

■ Only use spare parts manufactured by the company or parts recommended by the company's technical unit.

■ Avoid welding near the compressor and hydraulic equipment.

■ Check the device's oil level at least once a week and change it according to the schedule.

■ Avoid mixing different types of oils or oils with different grades.

## Screw Compressor Service and Inspection Schedule

| Inspection Items | Daily | 300 Hours Operation | 1500 Hours Operation / Every 6 Months | 3000 Hours Operation / Annually | 8000 to 10000 Hours Operation |
|---|---|---|---|---|---|
| Pulley & Coupling Inspection | Inspection | | | | |
| Belts Inspection | Inspection | | | | Replace if needed |
| Belt Tensioner Inspection | | | Inspection | | Replace if needed |
| Motor Mount Inspection | | | | Inspection | |
| Coupling Inspection | | Inspection | | | |
| Oil and Air Hoses Leak Test | Inspection | | Inspection | | Replace if needed |
| All Connections Leak Test | Inspection | | | | |
| Compressor and Oil Operating Temperature Inspection | Inspection | | | | |
| Air-End Inspection | Inspection | | | | Service and Overhaul if needed |
| Unloader Inspection | | Inspection | | Service and replacement if needed | |
| One-Way Valve with Minimum Pressure Valve Operation Inspection | | Inspection | | Service and replacement if needed | |
| Fan and Cooling Propeller Inspection | | | Inspection | | |
| Electric Motor Inspection | | Inspection | | Bearing Greasing | Replace Bearings if needed |
| Radiator Cleaning | | Air Cleaning | | | |
| Electrical Cable Connections and Panel Components Inspection | | Inspection and Checkup | | | |
| Bimetals Proper Operation Inspection | | Inspection | | | |
| Contactors Proper Operation Inspection | | Inspection | | | Replace if needed |
| Valves Proper Operation Inspection | | Inspection | | | Replace if needed |
| Pressure Switches Proper Operation Inspection | | Inspection | | | |
| Temperature Sensor Proper Operation Inspection | | Inspection | | | |
| Temperature Sensor Proper Operation Inspection | | Inspection | | | |
| All Bolts and Nuts Tightening | | | Tightening | | |
| Cabinet and Internal Components Cleaning | Cleaning | | | | |

Note: The above table is based on normal environmental and working conditions.