Standard Equipment

Compressor

Single-stage, flooded rotary screw airend with the power-saving, proprietary Sigma Profile. The airend maintains its efficiency over a wide flow range.

SFC Drive System

- TEFC motor, high-efficiency, 460 or 575 V, 3-phase, 60 Hz, 3600 rpm, class F insulation, 1.15 service factor, EPAct compliant.
- PTC motor protection (SFC37-110S)
- Siemens AG Master Drive frequency converter. (Micro Master used on SFC 8, 11, and 18S).
- Magnetic contactor between power and drive (galvanic separation)
- Pulse-width modulation and IGBT Technology
- Soft start for unlimited motor starts
- Power factor correction to near unity
- Incoming AC line reactor (SFC 18-110S)
- EMI (electromagnetic interference) filter
- Pressure transducer controlled to +/-2 psig
- Constant torque

Sigma Control System

Sigma Control is a modern, compact, PC-based control system with Intel™ processor and real-time operating system. Sigma Control monitors critical compressor and control system functions, as well as compressor maintenance items. History memory offers easy trouble shooting and record keeping. Integrated database with plain text display in up to 30 languages. Sigma Control has three communication ports built in (RS 232, RS 485, Profibus) with open architecture for communication and integration into master control systems. The SFC 8, 11, and 18S feature the Sigma Control Basic.

Protective Devices

Sigma Control system provides low temperature lock-out, and fluid temperature rise gradient monitoring. Safety pressure relief valve, emergency stop button and fluid level indicator are also included. The SFC 8, 11, and 18S also use door limit switches.

Compressor Control

The Sigma Control/Sigma Control Basic, combined with the SFC drive system, efficiently adjusts compressed air output to fluctuating requirements. System pressure is maintained ±2 psig by reducing or increasing airend speed in a wide flow range without sacrificing efficiency. If the air demand falls below the minimum flow output, the compressor idles for a minimal period of time before it shuts down. The compressor starts up automatically if the pressure drops below a pre-set level.

Air Cooling System

- All units are filled with Sigma Premium Fluid to cool, clean, and lubricate the airend.
- Separate cooling air inlet zones for the aftercooler, compressor, and drive motor ensure optimum cooling. Drawing ambient air across the coolers and motor through separate zones avoids preheating and results in lower approach temperatures, longer lubricant life, and cooler motor temperatures.
- Pneumatic inlet and vent valve.
- Combined reservoir and separator tank with 3-stage separation system ensures minimal fluid carry over of 2 ppm (by weight). Quick-change devices on the separator and cooler allow complete, fast, and easy fluid changes.
- ASME or CRN separator tank is equipped with quick-disconnect fittings for manual verification of separator element contamination.
- Combination valve incorporates a thermostatically controlled valve, cooler by-pass, and micro fluid filter. The thermostatically controlled valve ensures perfect fluid temperature regulation. The micro fluid filter utilizes a spin-on cartridge.
- Main fluid and compressed air lines are made of rigid pipe and incorporate flexible pipe connections.
- Standard units are air cooled with high-efficiency air and fluid cooler. Optional water cooling is available (SFC37-110S).
- A radial cooling fan provides intensive cooling for reliable condensate removal and high static pressure for easy ducting. The SFC 8, 11, and 18S use a low-noise axial fan.
- Moisture separator with Eco-Drain (on T models only).

Enclosure

Compact unit is super soundproofed by a sheet metal enclosure with mineral wool and plastic liners. Enclosure features a durable powder-coated finish. Compressor is mounted on solid base frame with a solid steel floor and anti-vibration mounts. Additional vibration isolation for airend, motor, and separator tank is standard. Unit also features hinged and gasketed access doors as well as removable rear and side cabinet panels.

Devices for Easy Maintenance

Fluid change pressurization valve complete with drain hose; and easily accessible drive motor grease fittings (SFC37-110S).

Options

Integrated dryer, water-cooled models (SFC37-110S), and higher pressures are available.

Accessories

A comprehensive range of clean air treatment products, including dryers, filters, separators, and air receivers are available.