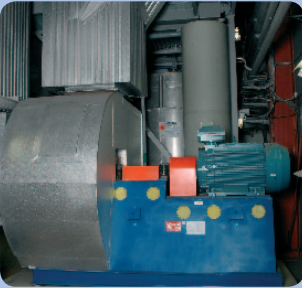


SKF SM-100 Oil Pumping Unit

For demanding circulating oil lubrication
system applications



SKF SM-100 Oil Pumping Unit

Circulating oil lubrication system is a critical part of your process

In the heavy and process industries there are many process critical machines and equipment such as fans, pumps, compressors, refiners, pressurized washers, etc.

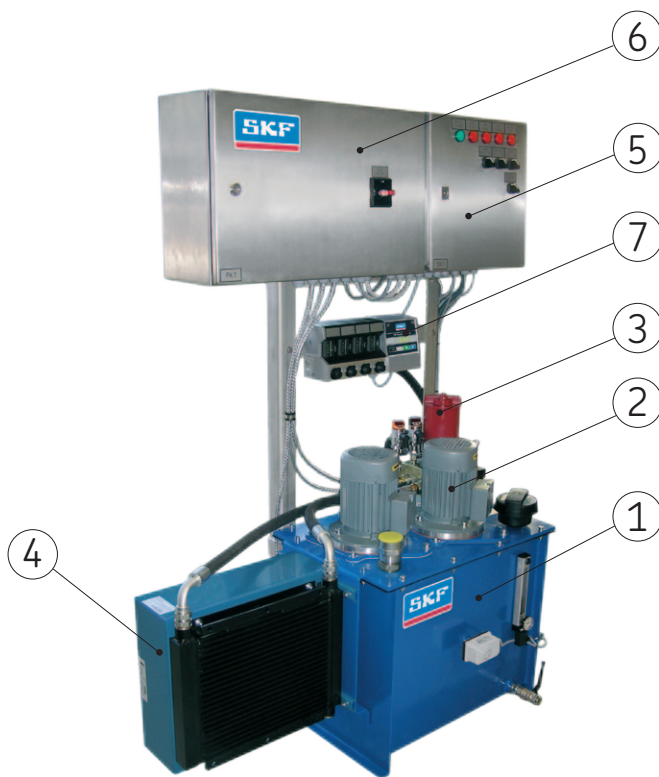
Often a failure of the equipment leads to a production stoppage resulting in unexpected maintenance costs and production losses. In some processes a fan failure, for example, can lead not only to production losses but also to a high risk that the material in the process has to be scrapped. Most critical equipment requires high process reliability, and an extremely reliable lubrication solution.

Lubrication is an essential part of preventive maintenance and equipment reliability. Manual grease lubrication can be enhanced with a centralized grease lubrication system.

Oil circulating lubrication systems are mainly used in high-speed applications which are above grease lubrication capabilities. High shaft speed will generate high bearing temperatures and the lubricant effectiveness is reduced. Bearing temperature is often elevated by high process temperature, e.g., a hot gas fan shaft may lead to a very high bearing temperature requiring a sizeable amount of circulating oil for cooling purposes to keep the operating oil at the desired viscosity.

SKF SM-100 is a complete small oil circulation system. The unit can handle one or two small machines with a total flow rate of 7 l/min. The system pressure level is adjusted by variable speed drives (frequency control). Other typical systems utilize an overflow valve leading to energy losses, component wear and oil degradation.

SKF SM-100 oil circulation unit saves energy. The reservoir is equipped with a heater to control oil viscosity at start up. An optional cooler is furnished to reduce the filtered oil temperature supplied to the bearings. The filter cartridge can be changed during operation, using a by-pass valve. For even larger fans, SKF Muurame has Flowline, a full oil circulation system family with necessary customized designs to fulfill customer requirements.



1 Reservoir, 2 Pumps, 3 Filter, 4 Cooler,
5 Control unit, 6 Power supply, 7 Flow meters (option)



SKF Flowline monitor oil flowmeter

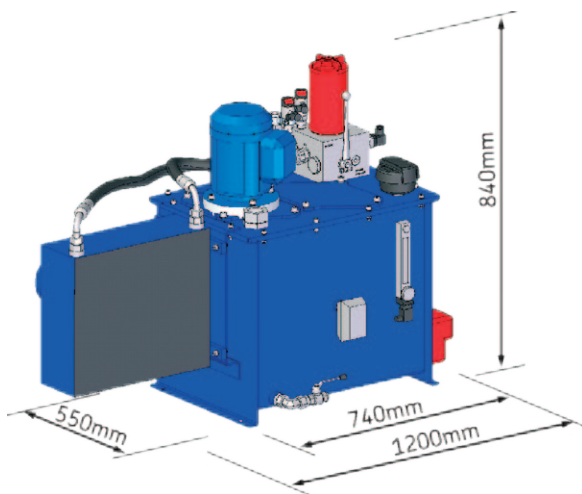
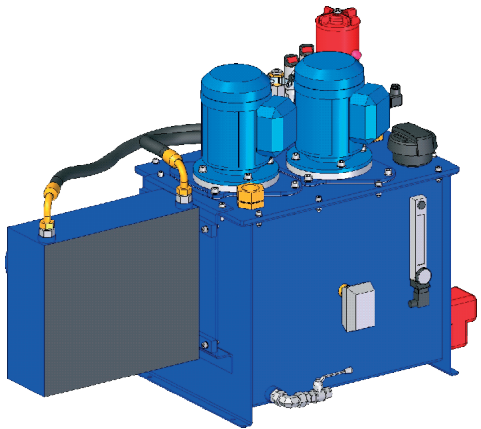
Features

Versatile, modular design

- One or two pumps
- Efficient air cooler, special application without cooler
- Compact power supply unit with frequency converters, available also without power supply
- Compact electronic control system, available also without control
- Unique filter cartridge manifold with manual by-pass and pressure relief valves plus instrumentation
- The filter and manifold arrangement eliminates several interconnecting pipes, fittings and hoses reducing the potential for additional maintenance and leakage points

Installation options

- Digital or variable orifice flow meters
- Customized piping engineering and material package
- Installation and start up service
- Optional piping system heating for cold conditions



Benefits

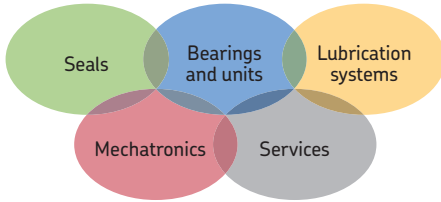
Ideal for small applications

- Fans, Gears, Refiners, Washers, Gear boxes, Motors, Presses, Rolls, Pumps, Chippers, Machines etc.
- Complete compact oil circulating lubrication system with all necessary functions and options
- Easy to locate and install
- Quick and easy start-up
- Easy to use
- Easy to maintain (minimal number of interconnecting pipes, fitting etc)
- No water needed for cooling, easy installation
- Optional variable frequency drive (VFD) speed controllers for cooling and pumping thereby reducing component wear, oil degradation and considerable energy savings

Technical specifications

- Tank volume: 100 l
- Operating pressure: max. 10 bar
- Oil flow range: 2 to 7 l/min (6,8 l/min at 950 r/min)
- Oil viscosity in operating conditions: 30 to 1 000 cSt
- Oil filtering rate: 5 microns
- Filter deltaP switch (alarm at 2 bar and automatic by-pass at 3 bar)
- Manual by pass valve for filter change while operating
- Oil tank visual level monitoring with low level switch
- Thermostat controlled heater for oil tank, heating from 20 to 50 °C in 6 h
- Outgoing oil temperature and pressure readings
- Variable frequency drive (VFD) air cooler of oil, 4 kW max, depending on ambient temperature
- Variable frequency drive (VFD) motors for pressure control
- PLC based control unit with main switch, fuse, indication lights, automatic pump change switch and alarm indicators for pressure, tank temperature, dirty filter, low level
- Standard power supply 400 VAC/50 Hz

For SKF SM-100 Oil Pumping Unit alternatives and installation options please contact your local SKF sales unit



The Power of Knowledge Engineering

Drawing on five areas of competence and application-specific expertise amassed over 100 years, SKF brings innovative solutions to OEMs and production facilities in every major industry worldwide.

These five competence areas include bearings and units, seals, lubrication systems, mechatronics (combining mechanics and electronics into intelligent systems), and a wide range of services, from 3-D computer modelling to advanced condition monitoring and reliability and asset management systems.

A global presence provides SKF customers uniform quality standards and universal product availability.

SKF Lubrication Solutions

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