

SKF Oil Conditioning Unit

for lubrication oil cooling and filtration

Contamination is a fact of life in many mill systems. Removing contamination and maintaining oil temperature will contribute greatly to optimum lubrication with correct oil viscosity.

SKF has designed two units to enhance oil lubrication of industrial machines. SKF-OCU-XX models are used for applications where only filtration is required. SKF-OCU-WAC and SKF-OCU-AIC models also include a cooler to lower the operating temperature of lubricating oil. All these units act in a side stream (kidney loop) configuration.

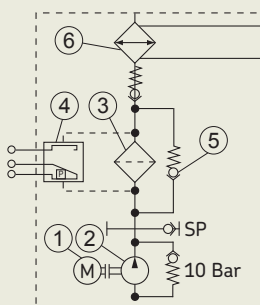
Low-volume off-loop or kidney loop filtration and cooling systems protect oil, extending its useful service life. Most importantly, wear and premature failures are virtually eliminated. Kidney loop filtration and cooling can be used effectively in many applications such as large bearing housings, compressors, turbine systems, vacuum pumps and gearboxes. It can be useful on machinery where the existing filtration is not satisfactory or does not exist.



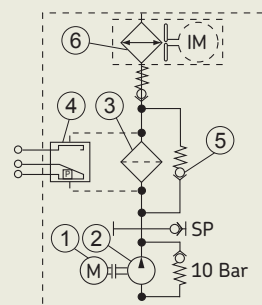
The unit is installed on the machine. Access ports should be located on opposing sides of the oil sump, so that suitable oil circulation is possible. Once connected to the sump, bearing housing, gearbox, etc, the system is ready for continuous operation. The design is fully integrated with a minimal number of connections. There is very little chance of error and, apart from periodic filter changes, there is no need for regular maintenance.

SKF Oil Conditioning Unit helps to protect your machinery from unexpected failures. The solution helps to extend machine service life by reduced wear and improved lubrication.

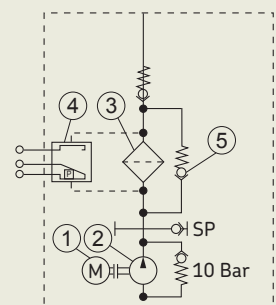
Hydraulic diagrams



SKF-OCU-WAC



SKF-OCU-AIC



SKF-OCU-XX

1 Motor, 2 Pump, 3 Filter, 4 Clogging Indicator, 5 Safety valve, 6 Cooler

Options

- Electrical clogging indicator
- Temperature transmitter with display
- Pressure transmitter with display
- Manometer
- Thermometer
- Shut-off valve before unit
- Flowmeter (SKF Flowline or SKF Safeflow)
- Moisture transmitter

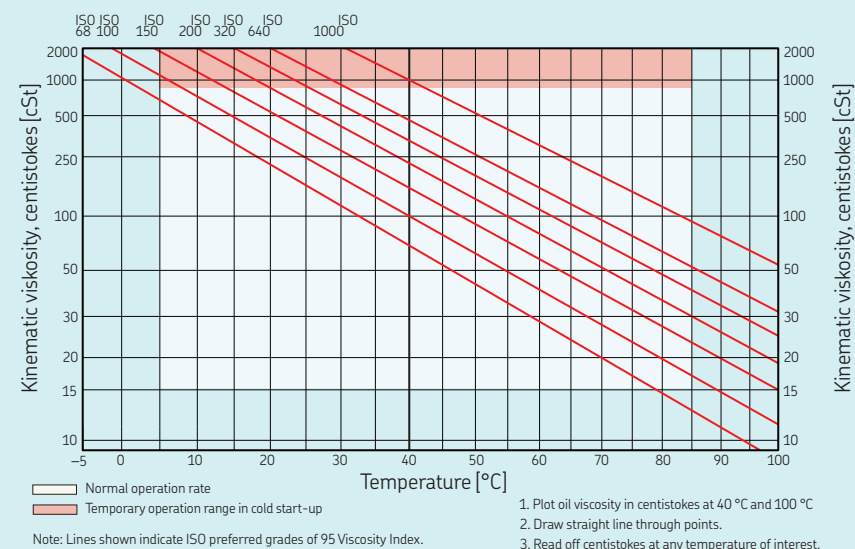
Options with water cooler (WAC)

- Self-acting water control valve or
- Automatic water control valve including PID controller

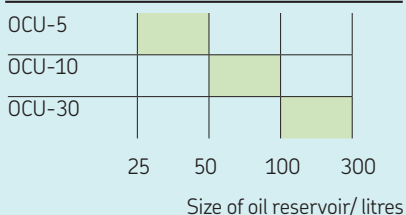
Options with air cooler (AIC)

- Thermostat
- Frequency converter for air cooler

Viscosity and temperature limits



Size recommendation



OCU order structure

Example: SKF-OCU-5-P-400-WAC

SKF-OCU-A-B-C-D

SKF-OCU

Flowrate

A 5/10/30

Filter

B P = Utlipleat SRT

Motor voltage *

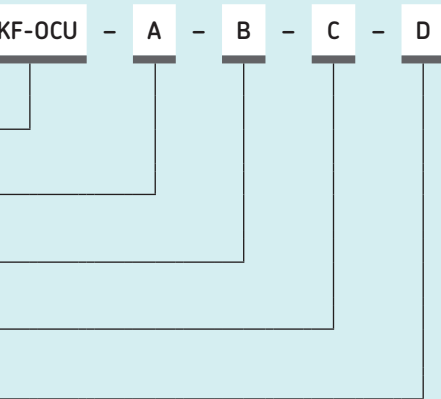
C 400 = 400/690 V, 50 Hz

Cooler

D WAC = Water cooler

AIC = Air cooler

XX = No cooler



* Other motor voltages available on special request

Description	Unit	SKF-OCU-5	SKF-OCU-10	SKF-OCU-30
Flow rates	l/min	5	10	30
Oil side, max. operating pressure	bar/psi	10 / 145	10 / 145	10 / 145
Water side, max. operating pressure	bar/psi	10 / 145	10 / 145	10 / 145
Oil viscosity	cSt	15–800	15–800	15–800
Max. viscosity at start-up	cSt	2000	2000	2000
Oil temperature	°C/°F	+10 to 80 / +50 to 176	+10 to 80 / +50 to 176	+10 to 80 / +50 to 176
Ambient temperature	°C/°F	-10 to +40 / +14 to 104	-10 to +40 / +14 to 104	-10 to +40 / +14 to 104
Operation temperature	°C/°F	+10 to 40 / +50 to 104	+10 to 40 / +50 to 104	+10 to 40 / +50 to 104
Oil pump motor power	kW	0,55	0,75	1,1
Rotation speed	r/min	935	1450	1450
Operating voltage (3-phase)	V, Hz	400/690, 50	400/690, 50	400/690, 50
Filtration rating*	µm	20	20	20
Opening pressure, safety valve	bar/psi	3,4 / 49	3,4 / 49	3,4 / 49
Visual clogging indicator switching pressure (P)	bar/psi	3,5 / 50	3,5 / 50	3,5 / 50
Integrated pressure relief valve	bar/psi	10 / 140	10 / 140	10 / 140

* Other filtration ratings available on special request

skf.com | skf.com/lubrication

© SKF is a registered trademark of the SKF Group.

© SKF Group 2017

The contents of this publication are the copyright of the publisher and may not be reproduced (even extracts) unless prior written permission is granted. Every care has been taken to ensure the accuracy of the information contained in this publication but no liability can be accepted for any loss or damage whether direct, indirect or consequential arising out of the use of the information contained herein.

PUB LS/P8 10160/2 EN · September 2017