




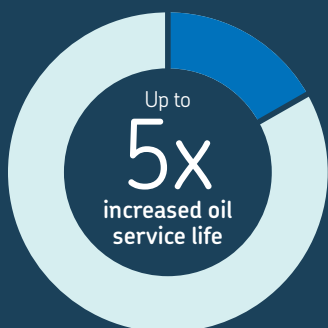


# Oil conditioning unit OCU

For cooling and filtering of lubrication and hydraulic oils



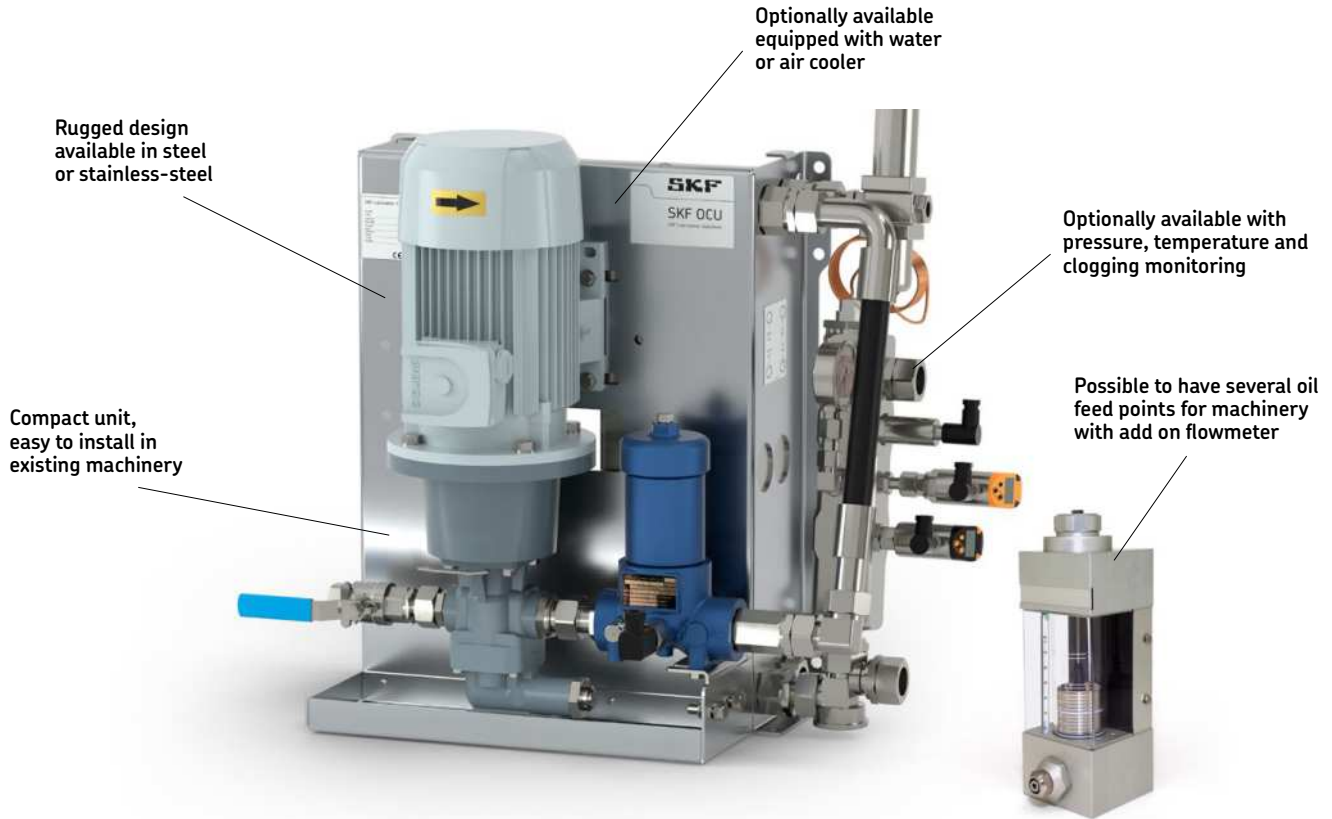
- 
Lubrication and hydraulic oils; 15 to 800 mm<sup>2</sup>/s
- 
up to 12 bar (174 psi)
- 
10 to +80 °C (50 to 176 °F)
- 
5 to 30 l/min (10.5 to 63 pts/min)
- 
25 microns (12 and 7 on request)



## Applications

- Gearboxes
- Large bearing houses
- Compressors
- Turbine systems
- Vacuum pumps

# Product information



## Description

OCU (Oil Conditioning Unit) is an electrically operated oil cooling, filtering and pumping unit that comes without reservoir. Usually the unit is installed close to machines like large gear boxes and bearing housings having an oil bath. OCU removes contamination effectively and reduces oil temperature affecting positively to bearing and gear life. Three different OCU models are available, with air cooler, with water cooler and without cooler where only filtration is needed. Large oil bath volumes can be equipped with oil low level sensor and instrumentation block with temperature and pressure sensors to safeguard system operation. Even small oil circulation lubrication systems can be created by adding flowmeters and control system. For extremely high oil volumes several OCU units can be installed back to back for fail safe redundant operation. A number of corrosion-resistant designs for outdoor and off-shore applications shall complete the range.

## Features and benefits

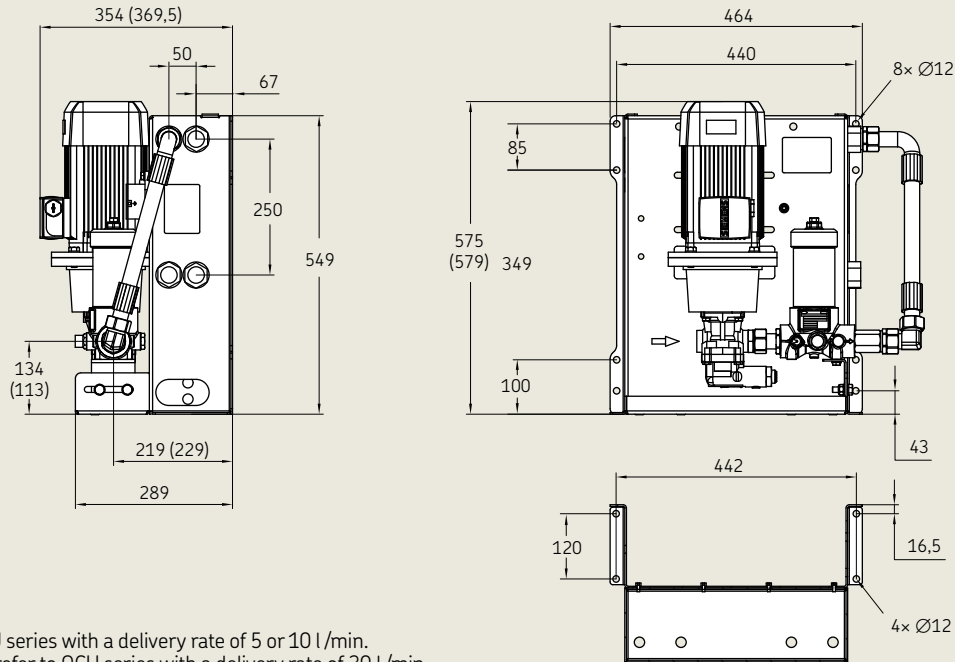
- Reduces wear in gears and bearings by good filtration
- Improves lubrication film and extends machine life
- Increases the service life of oil up to 5 times and more
- Optional available incl. monitoring and power supply unit
- Low noise, high efficiency pump unit

## Technical data

Function principle	electrically operated oil conditioning, pumping, cooling and filtration unit
Lubricant	lubrication and hydraulic oils; 15 to 800 mm <sup>2</sup> /s
Lubricant viscosity at start-up	2 000 mm <sup>2</sup> /s
Operating temperature	10 to +40 °C; 14 to +104 °F
Oil temperature	10 to +80 °C; 50 to +176 °F
Operating pressure	max. 12 bar; max. 174 psi
Flow rate	5 to 30 l/min, 10.5 to 63 pts/min
Oil filtering rate	25 microns (12 and 7 on request)
Opening pressure, safety valve	adjustable 10-15 bar
Suction port connection:	
SKF-OCU 5, 10 l/min	G3/4
SKF-OCU 30 l/min	G1
Pressure port connection	G1
Water cooler inlet connection	G1
Water cooler outlet connection	G1
Cooling capacity, water cooler	0,13-0,5 kW/°C
Cooling capacity, air cooler	0,15-0,5 kW/°C
Protection class	IP 65
Motor voltage, oil pump	400/690 V, 50 Hz; 460 V, 60 Hz
Motor power, oil pump	0,55-1,1 kW
Motor voltage, air cooler	230/400 V, 50 Hz; 460/480 V, 60 Hz
Motor power, air cooler	0,37-0,75 kW
Materials:	
Housing	painted steel or stainless steel, depending on design selected
Dimensions	max. 677 × 610 × 1 032 mm; max. 26.6 × 24.0 × 40.6 in
Mounting position	upright

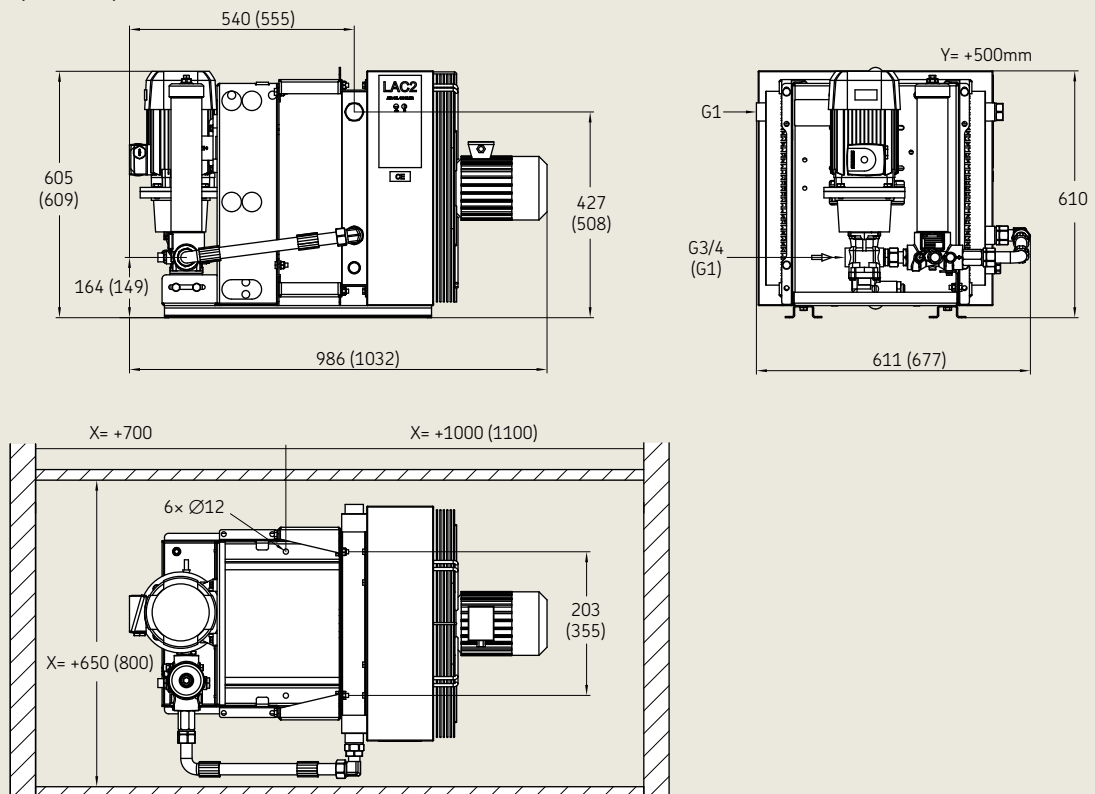
# Drawings

SKF-OCU-XX (no cooler),  
SKF-OCU-WAC (water cooler)



Values refer to OCU series with a delivery rate of 5 or 10 l/min.  
Values in brackets refer to OCU series with a delivery rate of 30 l/min.

SKF-OCU-AIC (air cooler)



Values refer to OCU series with a delivery rate of 5 or 10 l/min. Values in brackets refer to OCU series with a delivery rate of 30 l/min.

# Order information

## OCU, oil conditioning units

Order number	Designation	Cooler	Flow rate <sup>1)</sup>		Cooling capacity	Pump motor <sup>2)</sup>		Cooler motor <sup>3)</sup>	Dimensions	Weight	
			l/min	pts/min		kW	min <sup>-1</sup>			kg	lbs
Back plate and fittings made of steel											
13140907	OCU-05-P-400-XX	-	5	10,5	-	0,55	935	-	360×600×470	33	72.75
13140908	OCU-10-P-400-XX	-	10	21	-	0,75	1 450	-	360×600×470	33	72.75
13140909	OCU-30-P-400-XX	-	30	63	-	1,10	1 450	-	360×600×470	45	99.20
13140911	OCU-05-P-400-AIC	Air cooler	5	10,5	0,15	0,55	935	0,37	360×620×620	60	132.27
13140912	OCU-10-P-400-AIC	Air cooler	10	21	0,15	0,75	1 450	0,37	360×620×620	60	132.27
13140913	OCU-30-P-400-AIC	Air cooler	30	63	0,50	1,10	1 450	0,75	360×620×620	76	167.55
13140901	OCU-05-P-400-WAC	Water cooler	5	10,5	0,13	0,55	935	-	360×600×590	38	83.77
13140904	OCU-10-P-400-WAC	Water cooler	10	21	0,13	0,75	1 450	-	360×600×590	38	83.77
13140906	OCU-30-P-400-WAC	Water cooler	30	63	0,50	1,10	1 450	-	360×600×590	53	116.84
Back plate and fittings made of stainless steel											
13140925	OCU-05-P-400-WAC SS	Water cooler	5	10,5	0,13	0,55	935	-	360×600×590	38	83.77
13140926	OCU-10-P-400-WAC SS	Water cooler	10	21	0,13	0,75	1 450	-	360×600×590	38	83.77
13140928	OCU-30-P-400-WAC SS	Water cooler	30	63	0,5	1,10	1 450	-	360×600×590	53	116.84

1) Other flow rates and motor voltages available on request. Adjustable flowrate available with VFD.

Special units with additional high capacity filter and portable trolley available on request.

2) Oil pump motor 400/690 V, 50 Hz; 460 V, 60 Hz

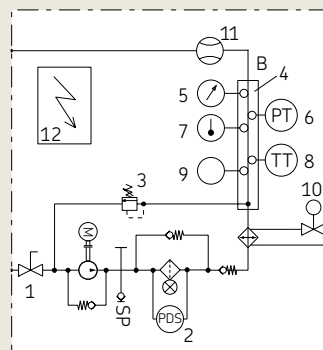
3) Air cooler motor 230/400 V, 50 Hz; 460/480 V, 60 Hz

## Accessory options

Order number	Identifier	Description
13396105	1	Shut-off valve, suction connection
13396100	1	Shut-off valve OCU-30, suction connection
13608504	2	Electrical filter clogging indicator
13602245	3	Pressure regulator for flowmeter
13396140	4	Measurement block for instruments
13396200	5	Pressure gauge
13396180	6	Pressure transmitter+display
13396240	7	Thermometer
13396220	8	Temperature transmitter+display
13396160	9	Moisture sensor
13396260	10	Thermostatic water control valve
*	11	Flow meter
*	12	Junction box, power supply, control
13149108	-	Protection cover OCU-5/10/30, painted
13149128	-	Protection cover OCU-5/10/30, AISI 304
13609058	-	Frequency converter, OCU-05/10
13609060	-	Frequency converter, OCU-30

\* available on request

## Hydraulic plan



Typical combinations

- A) OCU unit with water cooler, shut-off valve, clogging indicator, measurement block, thermostatic water control valve, temperature gauge and pressure transmitter (→ identifier 1, 2, 4, 6, 7)
- B) OCU unit with air cooler, shut-off valve, clogging indicator, measurement block, temperature transmitter and pressure gauge (→ identifier 1, 2, 4, 5, 8)
- C) Above models with suitable flowmeter and pressure regulator valve (→ identifier 11, 3)

[skf.com/lubrication](http://skf.com/lubrication) | [skf.com/OCU](http://skf.com/OCU)

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## Oil filter elements

Order number Description

13101039	Filter element for OCU units 05 & 10, filtration ration 22µ
13101038	Filter element for OCU units 05 & 10, filtration ration 12µ
13101037	Filter element for OCU units 05 & 10, filtration ration 7µ
13101044	Filter element for OCU unit 30, filtration ration 22µ
13101043	Filter element for OCU unit 30, filtration ration 12µ
13101042	Filter element for OCU unit 30, filtration ration 7µ