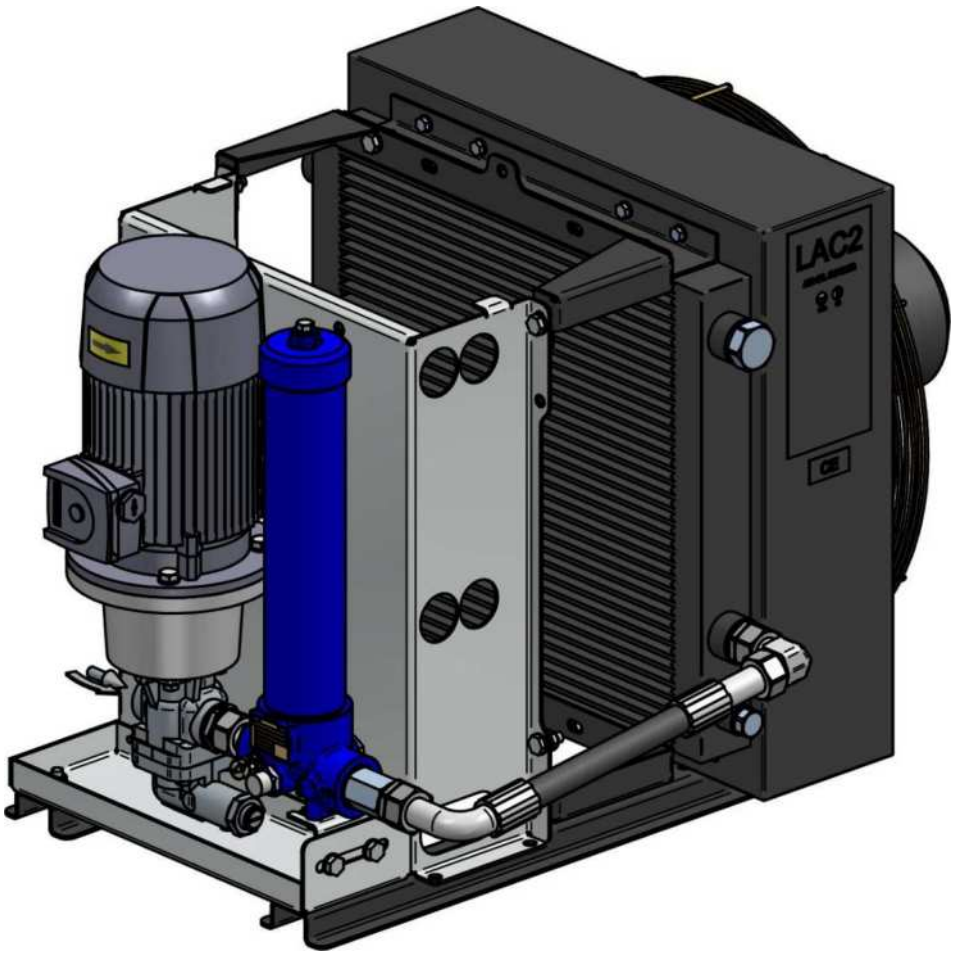
OCU Oil conditioning unit



Date:	**08.11.2024**
Document no.:	**951-175-003-EN**
Version:	**02**

Read this manual before installing or commissioning the product and keep it at hand for later reference!

Original EC Declaration of Incorporation in accordance with Directive 2006/42/EC, Appendix II Part 1 B

The manufacturer hereby declares at its sole responsibility that the partly completed machinery conforms to the essential health and safety requirements of the Machinery Directive 2006/42/EC, Annex I, marked in the Annex to the EC Declaration of Incorporation as applicable and fulfilled at the time of placing on the market.
The special technical documents were prepared following Annex VII part B. Upon justifiable request, these special technical documents can be forwarded electronically to the respective national authorities. The authorized company for the compilation of the technical documentation is the manufacturer.

Designation: Oil Conditioning Unit for oil circulation systems
Type OCU-X-X-X-X-X-X

Furthermore, the following directives and standards were applied in the respective applicable areas:
2011/65/EU: ROHS II including the addition (EU) 2015/863

EN ISO 12100-1/A1 EN ISO 12100-2/A1

The partly completed machinery must not be put into service until it has been established that the machinery into which it is to be incorporated is in compliance with the provisions of the Machinery Directive 2006/42/EC and all other applicable Directives.

Muurame, 24.5.2022
Juha Kärkkäinen
Design Office Manager
SKF Lubrication Management
Manufacturer: Oy SKF Ab Finland Teollisuustie 6 40951 Muurame FINLAND

Original UK Declaration of incorporation according to the Supply of Machinery (Safety) Regulations 2008 No. 1597 Annex II

The manufacturer hereby declares under sole responsibility that the partly completed machinery complies with the essential health and safety requirements of UK legislation Supply of Machinery (Safety) Regulations 2008 No. 1597 Annex I, marked in the Annex to the EC Declaration of Incorporation as applicable and fulfilled at the time of placing on the market.
The special technical documents were prepared following Annex VII part B. Upon justifiable request, these special technical documents can be forwarded electronically to the respective national authorities. The authorized company for the compilation of the technical documentation is SKF (U.K.) Limited, 2 Canada Close, Banbury, Oxfordshire, OX16 2RT, GBR.

Designation: Oil Conditioning Unit for oil circulation systems
Type OCU-X-X-X-X

Furthermore, the following regulations and standards were applied in the respective applicable areas:
The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012 No. 3032

EN ISO 12100-1/A1 EN ISO 12100-2/A1

The partly completed machinery must not be put into service until it has been established that the machinery into which it is to be incorporated is in compliance with the provisions of UK legislation Supply of Machinery (Safety) Regulations 2008 No. 1597 and all other applicable Directives.

Muurame, 24.5.2022
Juha Kärkkäinen
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Warranty
The instructions contain no statements regarding the warranty or liability for defects. That information can be found in our general terms of payment and delivery.

Training
We conduct detailed training in order to enable maximum safety and efficiency. We recommend taking advantage of this training. For further information, contact your authorized SKF dealer or the manufacturer.

Disclaimer
The manufacturer shall not be held responsible for damages caused by:

- Accidents, or negligent or inappropriate use, assembly, operation, configuration, maintenance or repairs
- Improper or late response to malfunctions
- Unauthorized modifications to the product
- Intent or negligence
- The use of non-original (non-SKF) spare parts

Liability for loss or damage resulting from the use of our products is limited to the maximum purchase price. Liability for consequential damages of any kind is excluded.

Table of contents

Safety alerts, visual presentation, and layout

While reading these instructions, you will encounter various symbols, illustrations, and text layouts intended to help you navigate and understand the instructions. Their meaning is explained below.

Safety alerts:
Activities that present specific hazards (to life and limb or possible damage to property) are indicated by safety alerts. Always be sure to follow the instructions given in the safety alerts.

⚠ DANGER

These safety alerts indicate an imminent danger. Ignoring them will result in death or serious injury.

⚠ WARNING

These safety alerts indicate potentially imminent danger. Ignoring them could result in death or serious injury.

⚠ CAUTION

These safety alerts indicate potentially imminent danger. Ignoring them could result in minor injury.

NOTICE

These safety alerts indicate a potentially harmful situation. Ignoring them could result in damage to property or malfunctions.

Illustrations:
The illustrations used depict a specific product. For other products, they may have the function of a diagram only. This does not alter the basic workings and operation of the product.

Text layout:
- **First-order bulleted lists:** Items on a bulleted list start with a solid black dot and an indent.
  - **Second-order bulleted lists:** If there is a further listing of subitems, the second-order bulleted list is used.

1 **Legend:** A legend explains the numbered contents of an illustration, presented as a numbered list. Items in a legend start with a number (with no dot) and an indent.
  - **Second-order legend:** In some cases, the numbered contents of an image represent more than just one object. A second-order legend is then used.

1. **Instruction steps:** These indicate a chronological sequence of instruction steps. The numbers of the steps are in bold and are followed by a period. If a new activity follows, the numbering starts again at "**1.**"
  - **Second-order instruction steps:** In some cases, it is necessary to divide up a step into a few substeps. A sequence of second-order instruction steps is then used.

Table 1

Illustrations

Symbol	Meaning
	**General warning** Activities which generate actual hazards (to life and limb or possible damage to the material)
	**Warning of suspended load**
	**Risk of explosion** Carry out work on electrical parts only if the atmosphere is not potentially explosive. Work has to be carried out by a specialist for maintenance and repairs in potentially explosive atmospheres.
	**Electrical component hazard, electrical shock hazard** Make sure to disconnect the system or component from the power supply before carrying out works on electrical parts. Don't use steam jet or high-pressure cleaners for cleaning. Otherwise, electrical components may be damaged. Do not touch cables or electrical components with wet or damp hands. Cleaning work on energized components may be carried out by electrical specialists only.
	**Risk of fire** Risk of fire and explosion when using inflammable cleaning agents.
	**Health hazard** Hazard due to spouting lubricant / pressure injection due to a leakage (defective fitting, too high system pressure or other damages).
	**Crushing hazard**
	**Slipping hazard**
	**Hot surfaces**
	**Disposal** Environmentally sound disposal and recycling.
	**Wear personal protective equipment (goggles)**
	**Disposal** Environmentally sound disposal of waste electrical and electronic equipment.

The following abbreviations may be used within these instructions:

Table 2

Abbreviations

Abbr.	Description	Abbr.	Description
max.	maximum	Nm	Newtonmeter
min.	minimum	incl.	including
min	minutes	i.e.	this means
s	seconds	rh	relative humidity
if appl.	if applicable	approx.	approximately
poss.	possibly	Ø	diameter
e.g.	For example	®	Registered
ml	millilitre	©	Copyright
cm^3 (ccm)	cubic cm	TM	Trademark
mm	millimetre	%	per cent
°C	degrees Celsius	dB (A)	sound pressure level
°F	degrees Fahrenheit	N	Newton
K	Kelvin	>	greater than
In.	inch	<	less than
etc.	et cetera	±	plus minus
kg	Kilogram	SW	width across flats
l	litre	ESD	Electrostatic Discharge
mbar	millibar	re	regarding
no.	number	N/A	Not applicable
kW	kilowatt	a.a.r	as a rule
V	volt	h	Hour
W	watt	d	day
AC	alternating current	l/min	Liter per minute
DC	direct current	gal/min	Gallons per minute
A	ampere	pint/min	Pints per minute
Ah	ampere hour	cc	cubic centimetre
Hz	frequency (hertz)	≈	approximately
NC	normally closed	=	equal to
NO	normally open	%	per cent
;	Pascal newton per squar meter N/m^2	‰	per mille
bar	bar, 100 kPa	hp	horse power
PSI	pounds per square inch	kp	kilopound
sq.in.	square inch	fpsec	feet per second
cu. in.	cubic inch	cwt.	centistoke
mph	miles per hour	µm	micron
rpm	revolutions per minute	lb.	pound
gal.	gallon		

Abbreviations:

Table 3

Conversion factors

Sl no.	Parameter	Description
1	length	1 mm = 0,03937 in.
2	area	1 cm^2 = 0,155 sq.in
3	volume	1 ml = 0,0352 fl.oz.
		1 l = 2,11416 pint (US), 0,264 gallons (US)
4	mass	1 kg = 2,205 lbs
		1 g = 0,03527 oz.
5	density	1 kg/cm^3 = 8,3454 lb./gal (US)
		1 kg/cm^3 = 0.03613 lb./cu.in.
6	force	1 N = 0,10197 kp
7	pressure	1 bar = 14,5 psi, 100 kPA
8	temperature	°C = (°F-32) x 5/9
9	output	1 kW = 1,34109 hp
10	acceleration	1 m/s^2 = 3,28084 $ft./s^2$
11	speed	1 m/s = 3,28084 f/s
		1 m/s = 2,23694 m/h

1. Safety instructions

1.1 General safety instructions

- Putting the products into operation or operating them without having read the instructions is prohibited. The operator must make sure that the instructions are read and understood by all persons tasked with working on the product or who supervise or instruct such persons. Retain the instructions for further use.
- The product may only be used in awareness of the potential dangers, in proper technical condition, and according to the information in this manual.
- Any faults that could affect safety must be remedied according to responsibility. The supervisor must be notified immediately in case of malfunctions outside one's individual scope of responsibility.
- Unauthorized modifications and changes can have an unpredictable effect on safety and operation. Unauthorized modifications and changes are therefore prohibited. Only original SKF spare parts and SKF accessories may be used.
- Any unclear points regarding proper condition or correct assembly/operation must be clarified. Operation is prohibited until issues have been clarified.
- The components used must be suitable for the intended use and the applicable operating conditions, e.g. max. operating pressure and ambient temperature range, and must not be subjected to torsion, shear, or bending.

Fig. 1

1.2 General behaviour when handling the product

- Familiarize yourself with the functions and operation of the product. The specified assembly and operating steps and their sequences must be observed.
- Keep unauthorized persons away.
- Wear personal protective equipment always.
- Precautionary operational measures and instructions for the respective work must be observed.
- In addition to these Instructions, general statutory regulations for accident prevention and environmental protection must be observed.
- Precautionary operational measures and instructions for the respective work must be observed. Uncertainty seriously endangers safety.
- Safety-related protective and safety equipment must not be removed, modified or affected otherwise in its function and is to be checked at regular intervals for completeness and function.
- If protective and safety equipment has to be dismantled, it must be reassembled immediately after finishing the work, and then checked for correct function.
- Remedy occurring faults in the frame of responsibilities. Immediately inform your superior in the case of faults beyond your competence.
- Never use parts of the centralized lubrication system or of the machine as standing or climbing aids.

1.3 Intended use

Supply of lubricant to lubrication points.
Spare parts should only be used to replace faulty components of identical construction.
Use is only permitted within the scope of commercial or economic activity by professional users, in compliance with the specifications, technical data, and limits specified in this manual.

1.4 Persons authorized to use the product

Operator
A person who is qualified by training, knowledge and experience to carry out the functions and activities related to normal operation. This includes avoiding possible hazards that may arise during operation.

Specialist in electrics
Person with appropriate professional education, knowledge and experience to detect and avoid the hazards that may arise from electricity.

Specialist in mechanics
Person with appropriate professional education, knowledge and experience to detect and avoid the hazards that may arise during transport, installation, start-up, operation, maintenance, repair and disassembly.

1.5 Foreseeable misuse

Any usage of the product other than as specified in this manual is strictly prohibited. Particularly prohibited are:

- Use of non-specified consumables, contaminated lubricants, or lubricants with air inclusions.
- Use of C3 versions in areas with aggressive, corrosive substances (e.g., high salt load).
- Use of plastic parts in areas with high exposure to ozone, UV light, or ionizing radiation.
- Use to supply, convey, or store hazardous substances and mixtures as defined in the CLP Regulation (EC 1272/2008) or GHS with acute oral, dermal, or inhalation toxicity or substances and mixtures that are marked with hazard pictograms GHS01-GHS06 and GHS08.

- Use to supply, convey, or store Group 1 fluids classified as hazards as defined in the Pressure Equipment Directive (2014/68/EU) Article 13 (1) a).
- Use to supply, convey, or store gases, liquefied gases, dissolved gases, vapors, or fluids whose vapor pressure exceeds normal atmospheric pressure (1013 mbar) by more than 0.5 bar at their maximum permissible operating temperature.
- Use in an explosion protection zone.
- Use without proper securing against excessively high pressures, in the case of pressurized products.
- Use outside of the technical data and limits specified in this manual.

1.6 Referenced documents

In addition to this manual, the following documents must be observed by the respective target group:
- Company instructions and approval rules

If applicable:
- Safety data sheet of the lubricant used
- Project planning documents
- Supplementary information regarding special designs of the pump. This you will find in the special system documentation.
- Instructions for other components for setting up the centralized lubrication system.

1.7 Prohibition of certain activities

- Replacement of or modifications to the pistons of the pump elements
- Repairs or modifications to the drive
- Alterations to the control circuit board beyond adjustment of lubrication times and interval times or replacement in case of defect
- Alterations to the power supply board beyond replacement in case of defect

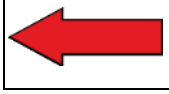
1.8 Painting plastic components and seals

The painting of any plastic components and seals of the products described is prohibited. Completely mask or remove plastic components before painting the main machine.

1.9 Safety markings on the product

Fig. 2

Risk of wrapping, pinching, crushing, or shearing when the reservoir lid is open
(only for reservoirs with filling from above)



Direction of rotation of the motor

Possible safety markings on the product

NOTE

Further to the findings of the workplace risk evaluation the operating company has to attach additional markings (e. g. warnings, signs giving orders, prohibition signs or labelling as specified by CLP / GHS), where appropriate.

1.10 Note on the type plate

The type plate provides important data such as the type designation, order number, and sometimes regulatory characteristics. To avoid loss of this data in case the type plate becomes illegible, it should be entered in the manual.

Table 4

Table for copying out the type plate

Model:	
P-No. :	
S-No. :	

1.11 Emergency shutdown

This is done by a course of action to be defined by the operator.

1.12 Assembly, maintenance, fault, repair

Prior to the start of this work, all relevant persons must be notified of it. At a minimum, the following safety measures must be taken before any work is done:
- Unauthorized persons must be kept away
- Mark and secure the work area
- Cover adjacent live parts
- Dry any wet, slippery surfaces or cover them appropriately
- Cover hot or cold surfaces appropriately

Where applicable:
- Depressurize
- Isolate, lock and tag out
- Check to make sure live voltage is no longer present
- Ground and short-circuit

The product should be protected as much as possible from humidity, dust, and vibration, and should be installed so that it is easily accessible. Make sure an adequate distance from sources of heat or cold. Any visual monitoring devices present, such as pressure gauges, min./max. markings, or oil level gauges must be clearly visible. Observe the mounting position requirements.

Drill required holes only on non-critical, non-load-bearing parts of the operator's infrastructure. Use existing holes where possible. Avoid chafe points. Immobilize any moving or detached parts during the work. Adhere to the specified torques.

If guards or safety devices need to be removed, they must be reinstalled immediately following conclusion of work and then checked for proper function.
Check new parts for compliance with the intended use before using them.

Avoid mixing up or incorrectly assembling disassembled parts.
Label parts. Clean any dirty parts.

1.13 First start-up, daily start-up

Make sure that:
- All safety devices are fully present and functional
- All connections are properly connected
- All parts are correctly installed
- All warning labels on the product are fully present, visible, and undamaged
- Illegible or missing warning labels are immediately replaced

1.14 Residual risks

Table 5

Residual risks

Residual risk	Possible in life cycle	Prevention / remedy
Personal injury/material damage due to falling of raised parts.	A B C G H K	Keep unauthorized people away. No people may remain under raised parts. Lift parts with suitable and tested lifting devices.
Personal injury/material damage due to tilting or falling of the product because of non-observance of the stated tightening torques.	B C D G	Observe the specified tightening torques. Fix the product to components with adequate load-bearing capacities only. If no tightening torques are stated, apply tightening torques according to the screw size characteristics for 8.8 screws.
Personal injury/material damage due to electric shock from a damaged connection cable.	B C D E F G H	Check that the connection cable is intact before using it for the first time and, after that, at regular intervals. Do not mount the cable to moving parts or at a friction point. If this cannot be avoided, use either spring coils or protective conduits depending on the circumstances.
Personal injury/damage to material due to spilled or leaked lubricant.	B C D F G H K	• Be careful when filling the reservoir and when connecting or disconnecting lubricant feed lines. Always use suitable hydraulic screw connections and lubrication lines for the stated pressures. • Do not mount lubrication lines to moving parts or friction points. If this cannot be avoided, use flexible hose lines or spring coils respectively protective conduits depending on the circumstances.

Life cycle: A = transport, B = installation, C = initial start-up, D = operation, E = cleaning, F = maintenance, G = fault, repair, H = shutdown, K = disposal

2. Lubricants

2.1 General information

Lubricants are selected specifically for the relevant application. The manufacturer or operator of the machine should ideally make the selection in consultation with the supplier of the lubricant. If you have no or little experience in selecting lubricants for lubrication systems, please contact us. We would be happy to assist you in selecting suitable lubricants and components to build a lubrication system optimized for your particular application. Consider the following points when selecting/using lubricants. This will spare you potential downtime and damage to the machine or lubrication system.

2.2 Material compatibility

The lubricants must generally be compatible with the following materials:

- Plastics: ABS, CR, FPM, NBR, NR, PA, PET, PMMA, POM, PP, PS, PTFE, PU, PUR
- Metals: steel, gray cast iron, brass, copper, aluminum

2.3 Temperature properties

The lubricant used must be suitable for the specific ambient temperature of the product. The viscosity approved for proper functioning must neither be exceeded at low temperatures nor fall too low at high temperatures.

2.4 Aging of lubricants

Based on past experience with the lubricant used, checks should be conducted at regular intervals defined by the operator, to determine whether the lubricant needs to be replaced due to aging processes (oil separation). In case of doubt regarding the continued suitability of the lubricant, it must be replaced before the system is started up again. If you do not yet have any experience with the lubricant used, we recommend conducting a check after just one week.

2.5 Avoidance of faults and hazards

To avoid faults and hazards, please observe the following:

- When handling lubricants, observe the relevant safety data sheet (SDS) and any hazard labeling on the packaging.
- Due to the large number of additives, some lubricants that meet the pumpability requirements specified in the manual are not suitable for use in centralized lubrication systems.
- Whenever possible, always use SKF lubrication greases. They are ideal for use in lubrication systems.
- Do not mix lubricants. This can have unpredictable effects on the properties and usability of the lubricant.
- Use lubricants containing solid lubricants only after technical consultation with SKF.
- The lubricant's ignition temperature has to be at least 50 kelvin above the maximum surface temperature of the components.

3. Overview, functional description

3.1 Purpose of the system

Oil Conditioning Unit circulates the oil in the system and removes external contaminants, e.g. abraded particles and oxidized particles. OCU-XX models are used in applications where only filtration properties are required. OCU-WAC and OCU-AIC models contain also a cooler which can be used to cool the oil in the system.

OCU-XX-P-400-WAC + DP + FL15 contain two separate filter: Main filter which removes particles and deep filter which removes varnish, water & nano particles.

Typical applications are e.g. presses, wind generators and gear boxes.

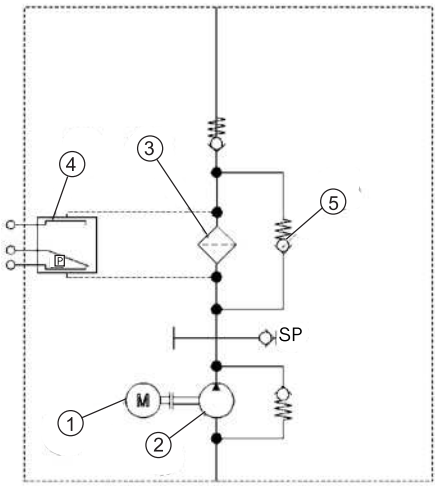
3.2 Design and operation of the system

NOTE

OCU unit a pump (2) has internal relief valve. It´s opening pressure is 10 Bar.

3.2.1 OCU-XX

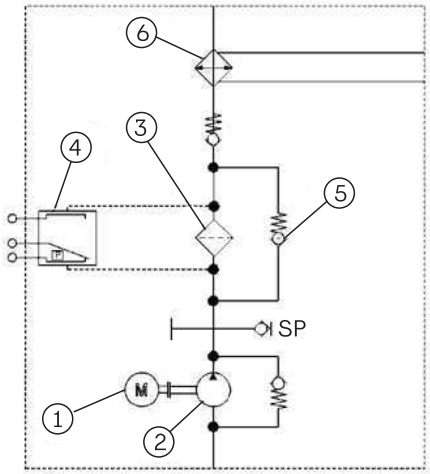
Fig. 3



SKF-OCU-XX Pump-Filter unit consists of a motor (1), pump (2), filter (3), filter clogging indicator (4) and bypass valve (bypass pressure 4,5 bar) (5). The pump circulates the system oil through the filter. A bypass valve is located between the pump and the filter. It opens if the filter has clogged. The cleanness of the filter is monitored by visual clogging indicator which alarm limit is 3,4 bar.

3.2.2 OCU-WAC

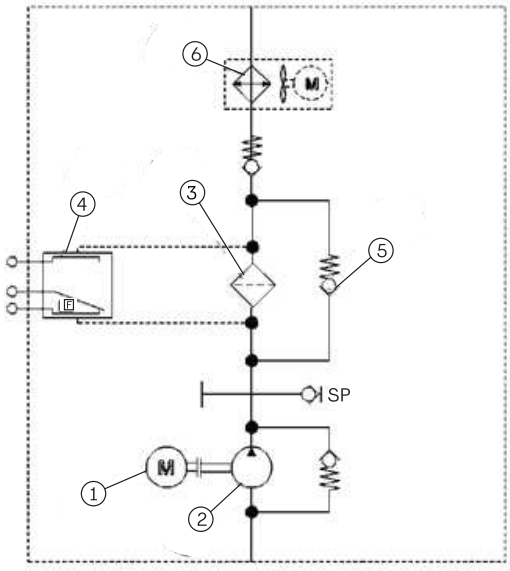
Fig. 4



SKF-OCU-WAC Pump-Filter-Water cooler unit consists of a motor (1), pump (2), filter (3), filter clogging indicator (4), bypass valve (bypass pressure 4,5 bar) (5) and a water heat exchanger (6). The pump circulates the system oil through the filter and the cooler. A bypass valve is located between the pump and the filter. It opens if the filter has clogged. The cleanness of the filter is monitored by visual clogging indicator which alarm limit is 3,4 bar.

3.2.3 OCU-AIC

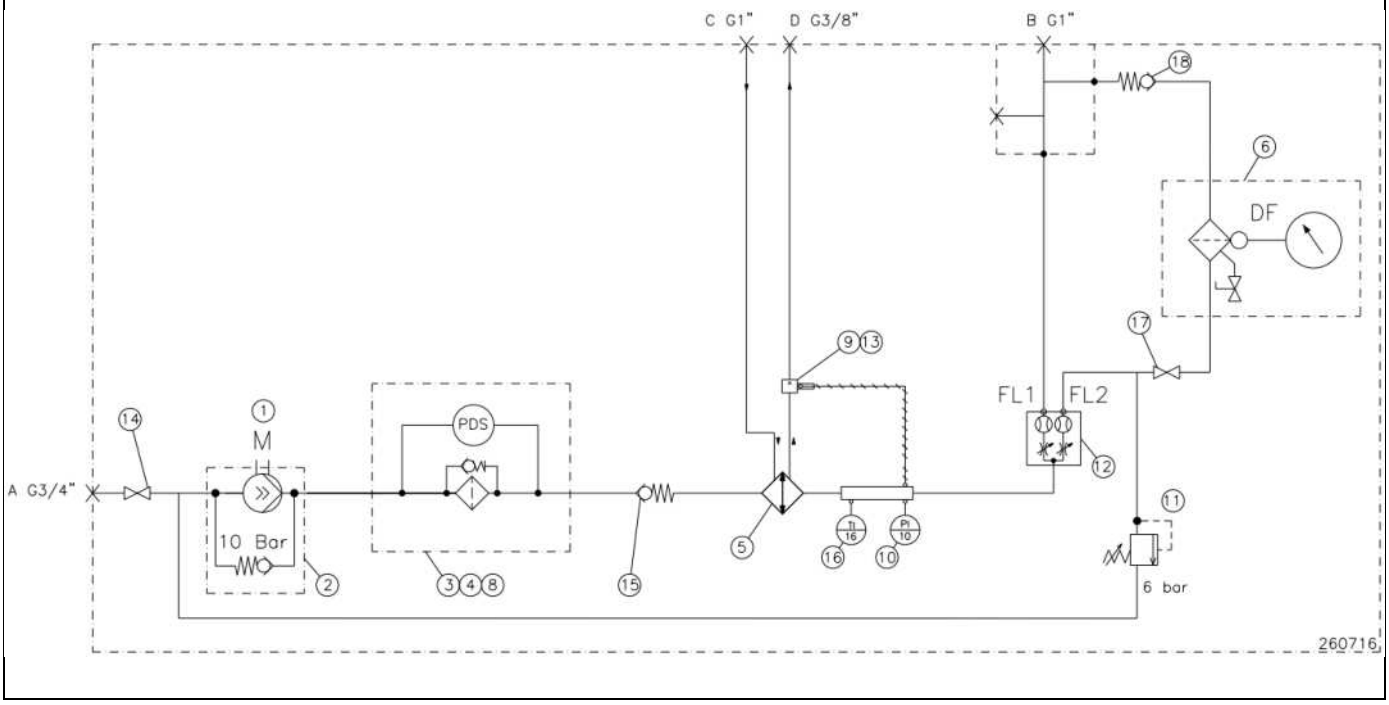
Fig. 5



SKF-OCU-AIC Pump-Filter-Air cooler unit consists of a motor (1), pump (2), filter (3), filter clogging indicator (4), bypass valve (bypass pressure 4,5 bar) (5) and an air heat exchanger (6). The pump circulates the system oil through the filter and the cooler. A bypass valve is located between the pump and the filter. It opens if the filter has clogged. The cleanness of the filter is monitored by visual clogging indicator which alarm limit is 3,4 bar.

3.2.4 OCU-XX-P-WAC + DP + FL15

Fig. 6



Motor:
Power=0,55/0,75 Kw
RPM=935/1450 r/min
Voltage=400 V, 50 Hz
Pumping capacity=5/10 l/min

OCU-XX-P-400-WAC + DP + FL15 Pump-Filter unit circulates the system oil through a main filter (3) to a water cooler (5). Water cooler's water flow (cooling capacity) is controlled by manually adjusted thermostat valve (9). Oil temperature can be followed for temperature gauge (16). Cooled oil flows to flowmeter (12) which will divide oil flow back to oil reservoir (FL 1) and to deep filter (FL 2). Oil pressure in deep filter (6) will be set to 3 – 4 bar by adjusting FL 1 flow tube and FL 2 flow tube has adjusted to full open. Deep filter's pressure will be followed from pressure gauge locate top of DF filter (6). OCU unit's system pressure can be monitored with gauge (10).

4. Technical data

4.1 General technical data

Table 6

General technical data

Description	Unit	OCU-05	OCU-10	OCU-30
Oil flow	l/min	5	10	30
Maximum operating pressure	bar	10	10	10
Oil viscosity	cSt	15-800	15-800	15-800
Oil max. viscosity at start up	cSt	2000	2000	2000
Oil temperature range	°C	10-80	10-80	10-80
Ambient temperature	°C	–10 to +40	–10 to +40	-10…+40
Operation temperature	°C	10 to +40	10 to +40	10…+40
Motor power, oil pump	kW	0,55	0,75	1,1
Motor rotation speed, oil pump	r/min	935	1450	1440
Motor voltage (3-phase)	V, Hz	400/690, 50 460, 60	400/690, 50 460, 60	400/690, 50 460, 60
Filtration rating β2000	µm	25	25	25
Alarm limit for clogging indicator (type P/H)	bar	3,4	3,4	3,4
Opening pressure, safety valve	bar	10,00	10,00	10,00
Cooling capacity, water heat exchanger	kW/°C	0,13	0,13	0,5
Cooling capacity, air heat exchanger	kW/°C	0,15	0,15	0,5
Motor power, air cooler	kW	0,37	0,37	0,75
Motor voltage (3-phase)	V, Hz	230/400, 50	230/400, 50	230/400, 50
OCU-XX unit weight	kg	33	33	36
OCU-WAC unit weight	kg	38	38	53
OCU-AIC unit weight	kg	60	60	76
OCU-XX-P-400-WAC + DP + FL15 weight	kg	74	74	-

NOTE

OCU unit protection class is IP55.

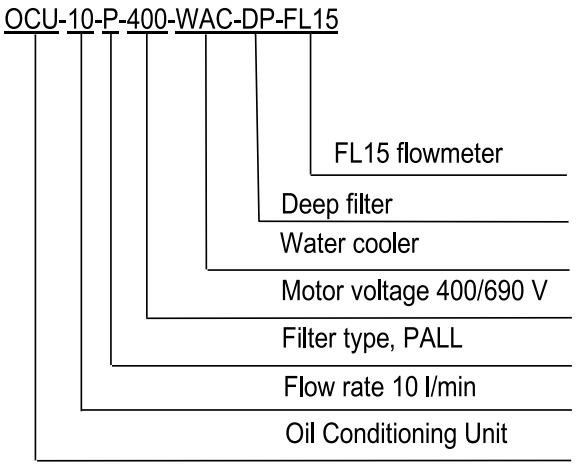
Table 7

Sl no.	Item number	Description
1	13140901	OCU-05-P-400-WAC
2	13140904	OCU-10-P-400-WAC
3	13140906	OCU-30-P-400-WAC
4	13140907	OCU-05-P-400-XX
5	13140908	OCU-10-P-400-XX
6	13140909	OCU-30-P-400-XX
7	13140911	OCU-05-P-400-AIC
8	13140912	OCU-10-P-400-AIC
9	13140913	OCU-30-P-400-AIC
10	13140919	OCU-05-PL-400-XX
11	13140921	OCU-10-PL-400-XX
12	13140922	OCU-05-PL-400-AIC
13	13140923	OCU-05-PL-400-WAC30
14	13140924	OCU-05-PL-400-WAC
15	13140925	OCU-05-P-400-WAC SS
16	13140926	OCU-10-P-400-WAC SS
17	13140927	OCU-05-PL-400-WAC-SS
18	13140928	OCU-30-P-400-WAC SS
19	13140929	OCU-10-PL-400-WAC
20	13140930	OCU-10-PL-400-WAC SS
21	13140965	OCU-05-PL-400-WAC-DP-FL15
22	13140966	OCU-10-PL-400-WAC-DP-FL15

4.2 Symbols

Table 8

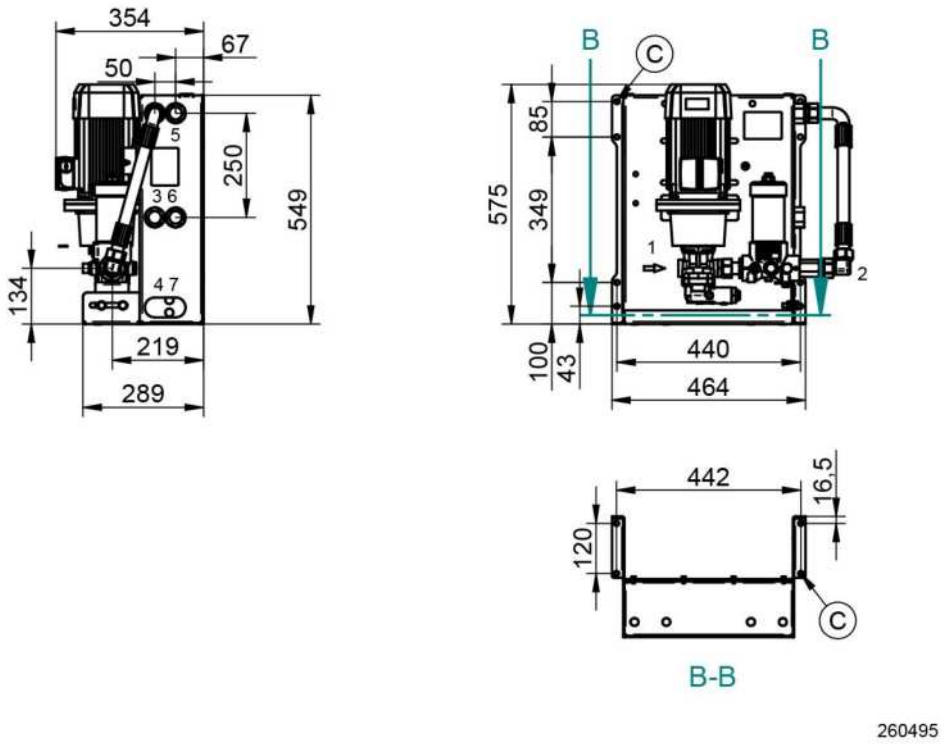
Symbol	Abbreviation	Description	Example: OCU-A-B-C-D-E-F
	OCU	Oil Conditioning Unit	
A	5	Oil flow 5 l/min	
	10	Oil flow 10 l/min	
	30	Oil flow 30 l/min	
B	P	Filter type PALL	
	PL	Filter type PALL tall	
C	400	Motor voltage 400/690 V AC	
D	XX	Unit without cooler	
	WAC	Unit with water cooler	
	AIC	Unit with air cooler	
E	DP	Deep filter	
F	FL15	Flowmeter	



4.3 Dimensional drawings

4.3.1 OCU-XX, SKF-OCU-WAC 5 and 10 l/min

Fig. 7

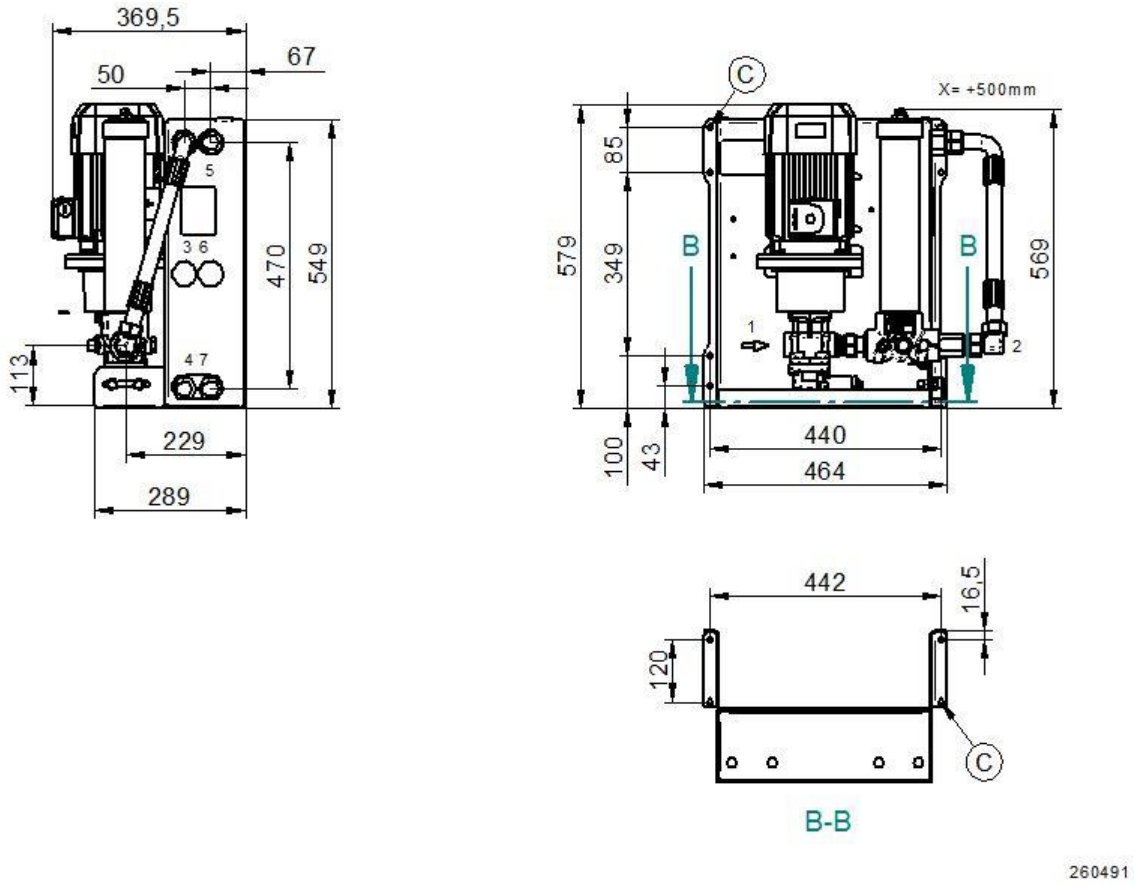


Item	Size	Connection
1	G 3/4”	Oil suction connection for models SKF-OCU-XX and -WAC 5/10 l/min
2	G 1"	Oil pressure connection for models SKF-OCU-XX 5/10 l/min
3	G 1”	Oil pressure connection for models SKF-OCU-WAC 5/10 l/min
5	G 1"	Water circulation out for models SKF-OCU-WAC 5/10 l/min
6	G 1"	Water circulation in for models SKF-OCU-WAC 5/10 l/min

Letter	Explanation
C	Installation point Diameter/amount pcs: Ø12 / 12

4.3.2 OCU-XX, SKF-OCU-WAC, 30 l/min

Fig. 8

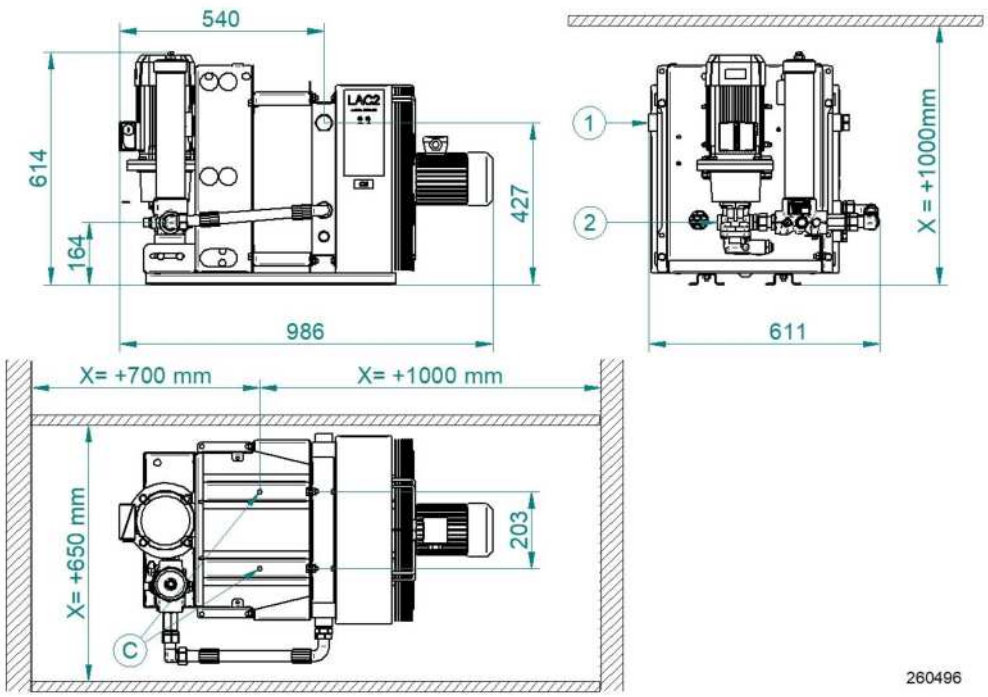


Item	Size	Connection
1	G 1”	Oil suction connection for models SKF-OCU-XX and -WAC 30 l/min
2	G 1"	Oil pressure connection for model SKF-OCU-XX 30 l/min
4	G 1”	Oil pressure connection for model SKF-OCU-WAC 30 l/min
5	G 1"	Water circulation out for model SKF-OCU-WAC 30 l/min
7	G 1"	Water circulation in for model SKF-OCU-WAC 30 l/min

Letter	Explanation
C	Installation point Diameter/amount pcs: Ø12/ 12
X	Free space for filter element exchange

4.3.3 OCU-AIC 5 and 10 l/min

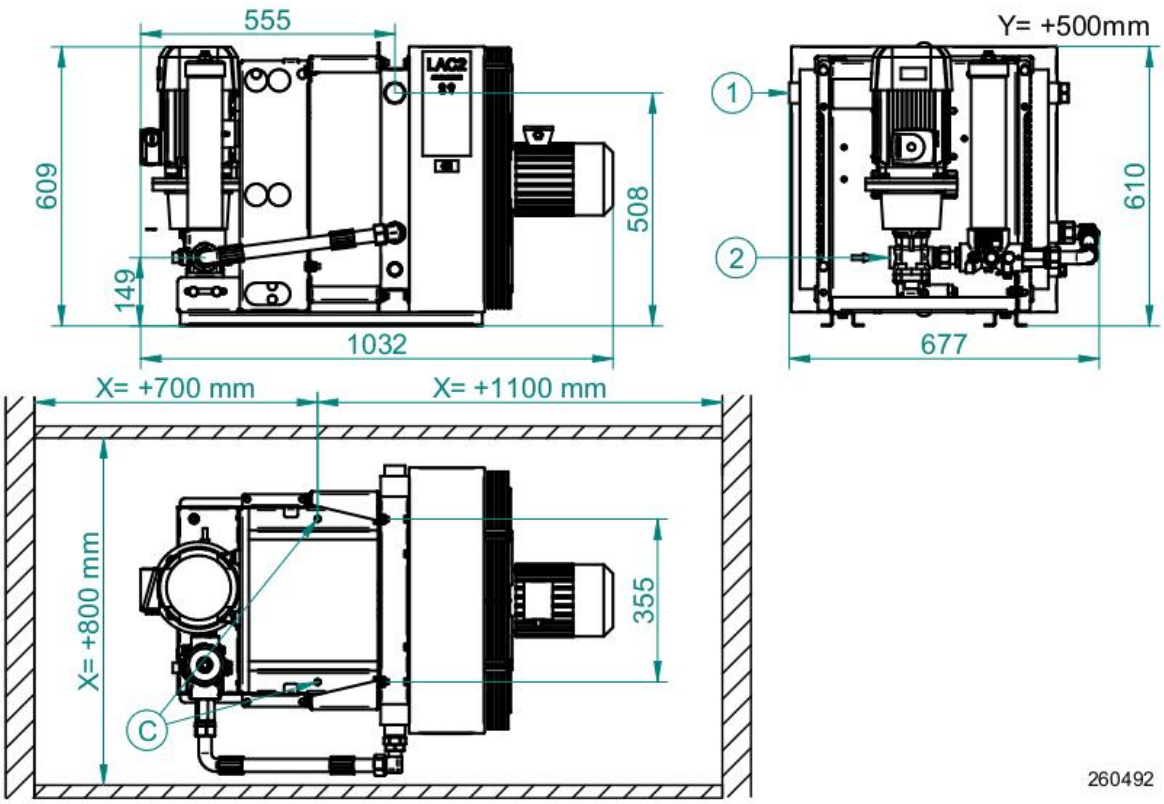
Fig. 9



Item	Size	Connection
1	G 1”	Oil pressure connection for models SKF-OCU-AIC-5/10 l/min
2	G 3/4”	Oil suction connection for models SKF-OCU-AIC-5/10 l/min
Letter		**Explanation**
C		Installation point Diameter/amount pcs: Ø13 / 12
X		Free space for air heat exchanger proper operation

4.3.4 OCU-AIC, 30 l/min

Fig. 10

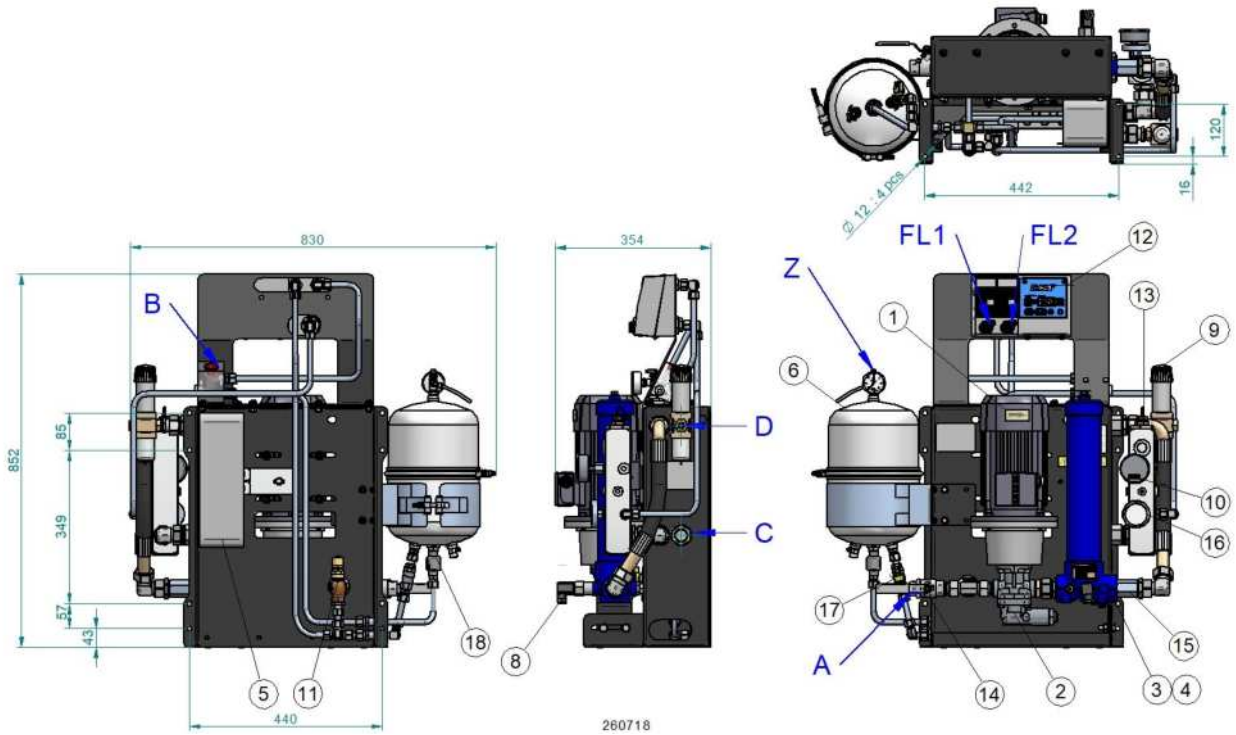


Item	Size	Connection
1	G 1”	Oil pressure connection for model SKF-OCU-AIC 30 l/min
2	G 1"	Oil suction connection for model SKF-OCU-AIC 30 l/min

Letter	Explanation
C	Installation point Diameter/amount pcs: Ø13 / 2
X	Free space for air heat exchanger proper operation
Y	Free space for filter element exchange

4.3.5 OCU-05-P-400-WAC-DP-FL15

Fig. 11



Item	Size	Connection
A	G 3/4”	Oil in connection (suction)
B	G 1"	Oil out connection (pressure line)
C	G1”	Water in
D	G3/8”	Water out

Letter	Explanation
FL1	Flowmeter’s flow tube 1 to oil reservoir
FL2	Flowmeter’s flow tube 2 to deep filter
Z	DF filter pressure gauge

5. Delivery, returns, storage

5.1 Delivery

After receipt of the shipment, it must be inspected for any shipping damage and for completeness according to the shipping documents. Immediately inform the transport carrier of any shipping damage. The packaging material must be preserved until any discrepancies are resolved.

5.2 Return shipment

Before return shipment, all contaminated parts must be cleaned. If this is not possible or practical, e.g. if it would impede fault detection in the case of complaints, the medium used must always be specified. In the case of products contaminated with hazardous substances as defined by GHS or CLP regulations, the safety data sheet (SDS) must be sent with the product and the packaging must be labelled in accordance with GHS/CLP. There are no restrictions for land, air, or sea transport. The choice of packaging should be based on the specific product and the stresses to be expected during transport (e.g., necessary anti-corrosion measures in the case of shipment by sea). In the case of wooden packaging, the applicable import regulations and the IPPC standards must be observed. Required certificates must be included in the shipping documents. The following information, as a minimum, must be marked on the packaging of return shipments.

Fig. 12

Marking of return shipments

5.3 Storage

The following conditions apply to storage:

- Dry, low-dust, vibration-free, in closed rooms
- No corrosive, aggressive substances at the storage location (e.g., UV rays, ozone)
- Protected against animals (insects, rodents)
- If possible, keep in the original product packaging
- Protected from nearby sources of heat or cold
- In the case of large temperature fluctuations or high humidity, take appropriate measures (e.g., heating) to prevent the condensation of water
- Before usage, check products for damage that may have occurred during storage. This applies in particular to parts made of plastic (due to embrittlement).

5.4 Storage temperature range

For parts not filled with lubricant, the permitted storage temperature is the same as the permitted ambient temperature range (see “Technical data”).

5.5 Storage conditions for products filled with lubricant

For products filled with lubricant, the permitted storage temperature range is:

minimum	+5 °C	[+41 °F]
maximum	+35 °C	[+95 °F]

If the storage temperature range is not maintained, the following steps for replacing the lubricant may not lead to the desired result under certain circumstances.

5.5.1 Storage period up to 6 months

Filled products can be used without implementing additional measures.

5.5.2 Storage period between 6 and 18 months

Pump:

- Connect the pump to a power source
- Switch on the pump and run it until lubricant comes out of every outlet without air bubbles
- Disconnect the pump from the power source
- Remove and dispose of the lubricant that came out

Lines:

- Remove pre-installed lines
- Make sure that both ends of the line are open
- Fill the lines completely with fresh lubricant

Metering devices:

> **NOTE**
>
> Due to the large number of different metering devices, no universally valid statement can be made regarding the removal of the old lubricant and correct bleeding after filling with new lubricant. The instructions can be found in the technical documentation of the specific metering device used.

5.5.3 Storage period more than 18 months

To prevent faults, the manufacturer should be consulted before start-up. The basic procedure for removal of the old lubrication filling corresponds to that for storage periods between 6 and 18 months.

6. Assembly

⚠ WARNING

Electrical connections may only be made by a qualified electrician. The supply voltage must be switched off before accessing any current-carrying parts of the unit. The supply voltage must be turned off before any product components are opened.

⚠ WARNING

Make sure all hydraulic components used in OCU lubrication system have proper pressure class (max. 10 bar).

6.1 OCU-XX and OCU-WAC

OCU-XX and OCU-WAC units can be installed vertically on the floor or to the wall. The unit should be placed below tank oil level (max. 5 meters) and as close to the tank as possible. When placing the unit, it must be observed that there is sufficient space for replacing the filter element.

- The diameter of inlet and outlet pipes cannot be smaller than the pump connections. Max. flow rate in the pump inlet line is 1 m/s.
- The flow direction of cooling fluid must be reverse to oil flow direction.
- Make sure that the pipes do not cause tension or vibration to the cooler. Connections are marked in the unit.
- The unit must only be used in dry locations.
- Operation temperature must be 10 °C – 40 °C.

6.2 OCU-AIC

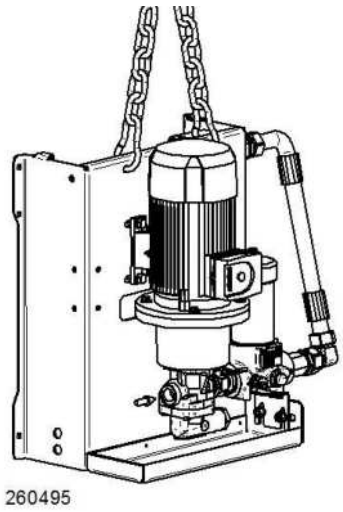
The unit should be placed so that the suction connection of the pump is always below the oil level (max. 5 m) and as close to the tank as possible. When placing the unit, it must be observed that there is sufficient space for replacing a filter element as well as sufficient free space for cooler air flow.

6.3 Safe lifting

⚠ WARNING

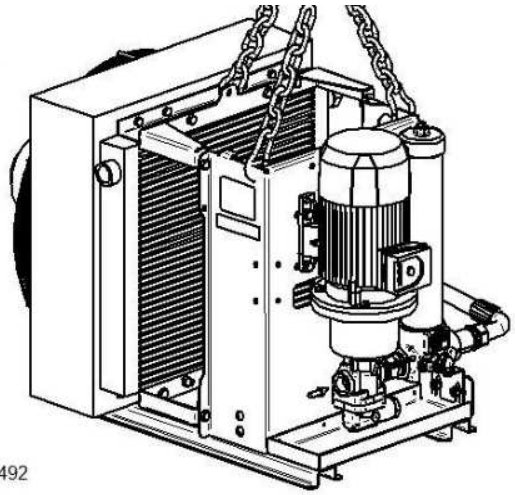
If you need to lift the oil condition unit, the specified lifting points must be used. These specified lifting points are marked in the picture below.

Fig. 13



WAC-XX model

Fig. 14



AIC-XX model

7. First start-up

In order to warrant safety and proper functioning of the system, a person assigned by the operator must carry out the following inspections before start-up. Immediately eliminate detected deficiencies, if found. Deficiencies may be remedied by an authorized and qualified specialist only.

7.1 Before unit start-up

Make sure that:
- There is oil in the system.
- Pump inlet is always filled with oil. Air in the inlet line can cause problems at initial start-up.
- All connections are at right locations and tightened properly.
- Valves are open
- Hoses/pipes and couplings are not damaged.
- The pump rotates to correct direction. Direction of rotation is marked on the motor.
- The electric motor is not overloaded due to cold start conditions or operation with high oil viscosity.
- The oil used is within 15 – 800 cSt which is the recommended operating viscosity range considering the pump, motor power, filter element size etc.

7.2 Inspections prior to initial start-up

Table 9

Inspections prior to initial start-up

Activity to be done	YES	NO
All mechanical components assembled and tightened properly as per the toques given	☐	☐
Pump and reservoir have been mounted correctly	☐	☐
There are no visible leakages at the connections, joints and on the tubes	☐	☐
Pump configuration corresponds to the intended use	☐	☐
The supply line has been laid correctly	☐	☐
The reservoir has been filled with suitable lubricant within the recommended levels	☐	☐
No visible damage, contamination and corrosion	☐	☐
Make sure proper mounting of protection and monitoring equipment for correct function	☐	☐
Operating pressure and required volumetric flow rate adjusted correctly	☐	☐
All components, e. g. lubrication lines, have been filled with the right lubricant and have been installed correctly	☐	☐
Any dismantled protection and monitoring equipment has been reassembled and checked for correct function	☐	☐
The lubricant used corresponds to the admitted specification of the pump and the intended use	☐	☐
All warning labels on the product are available and in proper condition	☐	☐

7.3 Inspections during initial start-up

Table 10

Inspections during initial start-up

Activity to be done	YES	NO
No unusual noises, vibrations, accumulation of moisture, or odours present	☐	☐
No unwanted escape of lubricant (leakages) from connections	☐	☐
Lubricant is supplied free from bubbles	☐	☐
The performance characteristics for the connections match the specifications in the Chapter 4 Technical data	☐	☐

NOTICE

OCU unit pump (2) has an internal pressure relief valve opening at 10 bar. OCU-deep filter unit contains also relief valve which limits deep filter max pressure to 6 bar.

NOTICE

Maximum viscosity at cold start is 2000 cSt for 5 min.

7.4 OCU-XX-P-400-WAC + DP + FL15 flow adjustment

NOTICE

OCU-XX-P-400-WAC + DP + FL15 unit's recommended max. viscosity 40° is 460 cSt. If viscosity exceed that value do not open flowmeter's tube 2 (FL2) adjuster until oil has reached normal operation temperature and viscosity is under 460 cSt.

DF filter's flow with different oil viscosity (40°C, new filter cartridge)

Approx. flow at 3 bar	32 cst	46 cst	68 cst	100 cst	150 cst	220 cst	320 cst	460 cst
	2 l/min	1,5 l/min	1 l/min	0,8 l/min	0,6 l/min	0,4 l/min	0,2 l/min	0,1 l/min

See section 4.3.5

- Open flowmeter's adjusters (FL1 & FL2) fully open and follow DF filter's pressure from filters pressure gauge (Z)
- Adjust DF filter's pressure to 3 - 4 bar by adjusting flowmeter tube FL1
- Follow deep filter's pressure from pressure gauge locate top of DF filter (6) if oil temperature changes during operation

8. Maintenance

Regular and appropriate maintenance is a prerequisite to detect and clear faults in time. The specific timelines have to be determined, verified at regular intervals and adapted by the operator based on the operating conditions. If needed, use the below table for regular maintenance activities.

⚠ WARNING

The hydraulic system must be switched off before any work is carried out on the filter. Make sure that there is no pressure in the filter. Whenever work is carried out on the filter, be prepared for oil leakage which can cause injury due to high pressure or high temperature.

Risk of burns. Do not touch the hot surfaces of the unit.

Risk of slippery because of lubricant. Clean machine surroundings for lubricant.

Disconnect unit from power supply before maintenance activities.

Table 11

Maintenance checklist

Activity to be done	YES	NO
All mechanical and hydraulic connections carried out correctly and tightened properly as per the given torques	☐	☐
All components, such as lubrication lines and metering devices, have been correctly installed	☐	☐
All lubrication lines checked for damages and leakages	☐	☐
Check whether there are contaminations on the drive shaft, e. g. dust, straw and wound-up parts	☐	☐
No visible damage and corrosion on the metallic parts	☐	☐
Any dismantled protection and monitoring equipment has been reassembled and checked for correct function	☐	☐
No unusual noises, vibrations, accumulation of moisture or odours present	☐	☐
Check if there are any visible contamination in the reservoir	☐	☐
Lubricant is supplied free from bubbles	☐	☐
Product protected with adequate pressure control valve	☐	☐
Any warning labels on the product are present and in proper condition	☐	☐
No unwanted escape of lubricant from connections	☐	☐
The performance data correspond to the specifications stated in the Chapter 4 Technical data	☐	☐

8.1 Electric motor and pump

Electric motor and pump are maintenance free.

8.2 Main filter

A visual clogging indicator indicates when the filter element must be replaced. With optional electrical indicators the signal can also be transferred to desired location to indicate dirty filter. If the clogging indicator triggers an alarm during a cold start only, it is possible that the element does not need to be replaced yet.

8.2.1 Replacing the filter element

1. Switch off the hydraulic system and release pressure from the filter.
2. Open the vent plug on the filter unit cover approximately two turns.
3. Unscrew and remove cover counterclockwise.
4. Remove the filter element. Collect the oil in a suitable container and dispose of it in accordance with environmental regulations.
5. Moisten the thread and sealing surfaces on the filter bowl and filter head as well as the O-rings on the bowl and element with the oil, if necessary.
6. Install a new filter element. Make sure that the type code corresponds with the type of the old element.
7. Carefully close the filter housing cover.
8. Start the unit with vent plug open approximately two turns.
9. Tighten the vent plug when only oil bleeds through.
10. Check the filter for leakage, tighten if necessary.

8.3 Water heat exchanger

Always clean the cooler before it becomes completely clogged. Clean the strainer by flushing with water. In general, all light deposits can be removed by back flushing the cooler. Rinse the cooler with a lot of water.

Requirements for cooling water:

- The maximum amount of particles (< 0.6 mm) should be less than 10 mg/l. Thread-like particles cause a rapid increase in pressure loss.
- Corrosion: critical values
  - Free chlorine: CL 2 < 0.5 ppm
  - Chloride ions: CL < 700 ppm at t=20 °C; CL < 200 ppm at t=50 °C
- Other critical values:
  - pH 7 -10
  - sulphate SO4 2<100 ppm
  - [H CO3 -] / [SO4 2-] > 1
  - Ammonia, NH3 < 10 ppm
  - Free CO < 10 ppm
- The following ions are not corrosive under normal conditions:
  - phosphate, nitrate, iron, manganese, sodium and potassium

8.4 Air cooler

The air fins of the cooler matrix can be cleaned by blowing through with compressed air. If necessary, a high-pressure washing system and degreasing agent can be used. When using a high-pressure washing system, point the jet parallel to the air fins.

8.5 OCU-XX-P-400-WAC + DP + FL15 DF filter change

NOTICE

This task requires a container to collect the oil from the system. Filter housing contains up to 5 L of oil.

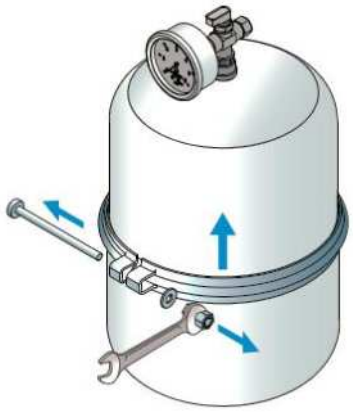
Drain the deep filter before removing a filter cartridge as follows:

1. Make sure that a container is in place
2. Close the deep filter inlet valve
3. Open the drain valve
4. Open the bleed valve

Wait for a few minutes after the oil stops draining to make sure that the system is completely empty. After that replace the cartridge by following steps:

1. Place a protective cover on the floor around the system. Make sure there is enough room on the cover to place the upper housing and its contents away from the system.
2. Remove the housing clamp.

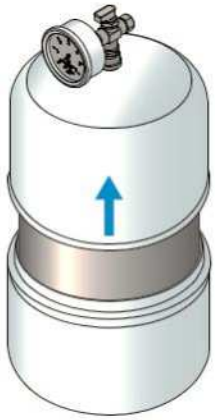
Fig. 15



a) Use a 14mm spanner to loosen the housing clamp.
b) Lift the clamp off the housing.

3. Remove the upper housing.

Fig. 16



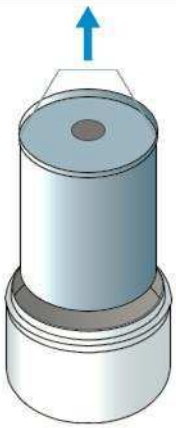
Clean the upper housing before proceeding.

4. Loosen and remove the cartridge locking nut, using the spanner if necessary.

Fig. 17

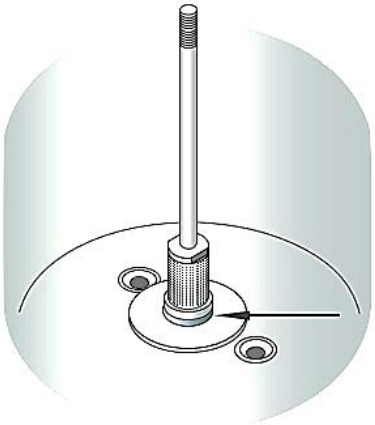
5. Using the handle, pull the used cartridge straight up off the spindle.

Fig. 18



6. Clean the lower housing.
7. Inspect the O-ring and the sintered filter at the base of the spindle.

Fig. 19



Clean or change if necessary.

8. Using a little spillage from the old cartridge and a cloth, lubricate the hole at the base of the new cartridge.

Fig. 20

9. Carefully align the cartridge over the spindle and push down gently. The cartridge will click into place over the O-ring.
10. Replace the locking nut and tighten by hand as far as possible.
11. Continue to tighten by rotating the cartridge by hand until there is no gap between the locking nut and the cartridge.

Fig. 21

12. Check that the cartridge is situated firmly in the lower housing.
13. Check that the housing O-ring is in place.
14. Replace the upper housing.
15. Replace the housing clamp.
16. Tighten the housing clamp to 9 Nm.
17. Close the drain valve.
18. Open the inlet valve.
19. Close the air bleed.

The system is now ready to be restarted. When started, carefully open the air bleed valve to bleed the filter. Once the air is removed, close the air bleed valve.

Monitor the system for leakage after a cartridge change. Dispose the old cartridge and any spillage.

NOTICE

If the cartridge type is changed, replace the cartridge tag on the filter housing.

9. Cleaning

9.1 Basics

Cleaning should be carried out in accordance with the operator's own company rules, and cleaning agents and devices and the personal protective equipment to be used should likewise be selected in accordance with those rules. Only cleaning agents compatible with the materials may be used for cleaning. Completely remove any cleaning agent residue left on the product and rinse with clear water. Unauthorized persons must be kept away. Use signage to indicate wet areas.

9.2 Interior cleaning

The interior normally does not need to be cleaned. The interior of the product must be cleaned if incorrect or contaminated lubricant accidentally enters the product. Please contact our service department.

9.3 Exterior cleaning

Do not allow any cleaning fluid to enter the interior of the product during cleaning.

⚠ WARNING

Risk of injury and objects hitting

Cleaning work may only be performed on the products only after disengaging the connection from the equipment drive shaft to prevent any accidental physical injuries

⚠ WARNING

Serious injury from contact with or inhalation of hazardous substances

Wear personal protective equipment. Observe the safety data sheet (SDS) of the hazardous substance. Avoid contaminating other objects or the environment during cleaning.

10. Repairs

⚠ WARNING

Risk of injury

At a minimum, the following safety measures must be taken before any repairs:

- Unauthorized persons must be kept away
- Mark and secure the work area
- Use personal protective equipment as necessary

- Depressurize the product
- Isolate the product, and lock and tag it out
- Cover any adjacent live or moving parts

11. Shutdown, disposal

11.1 Temporary shutdown

Temporary shutdowns should be done by a course of action to be defined by the operator.

The system can be temporarily shut down by disconnecting it from electrical, pressurized air and hydraulic outlets. If you wish to shut down the product temporarily, see also Section 5.3: Storage. For further information, please refer to relevant components operating and service manuals. When recommissioning the equipment, please refer to sections commissioning and technical specification in the relevant components' operating and service manuals.

11.2 Permanent shutdown, disassembly

Permanent shutdown and disassembly of the product must be planned properly by the operator and conducted in compliance with all applicable laws and regulations.

Used equipment filled with lubricant must be decommissioned and disposed of in accordance with national legislation and the procedures indicated in this operating and service manual.

NOTICE

Lubricants can contain chemicals that can contaminate the soil and the water system. Lubricants must be disposed of appropriately. Observe any local laws and regulations concerning disposal and recycling.

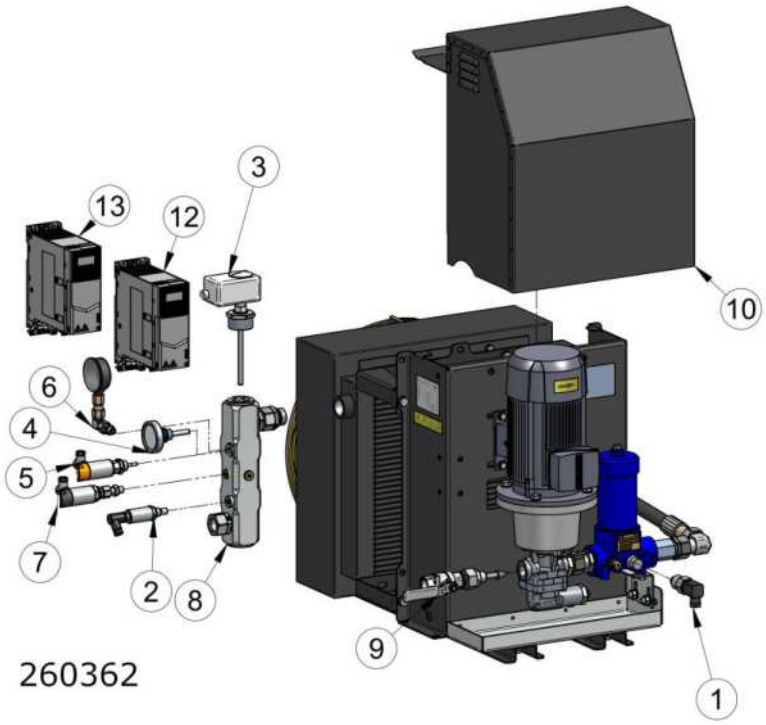
You can also return the product to Oy SKF Ab for disposal. Oy SKF Ab reserves the right to recover any costs arising from the disposal.

11.3 Disposal

The waste producer/operator must dispose of the various types of waste in accordance with the applicable laws and regulations of the country in question.

12. Options

Fig. 22



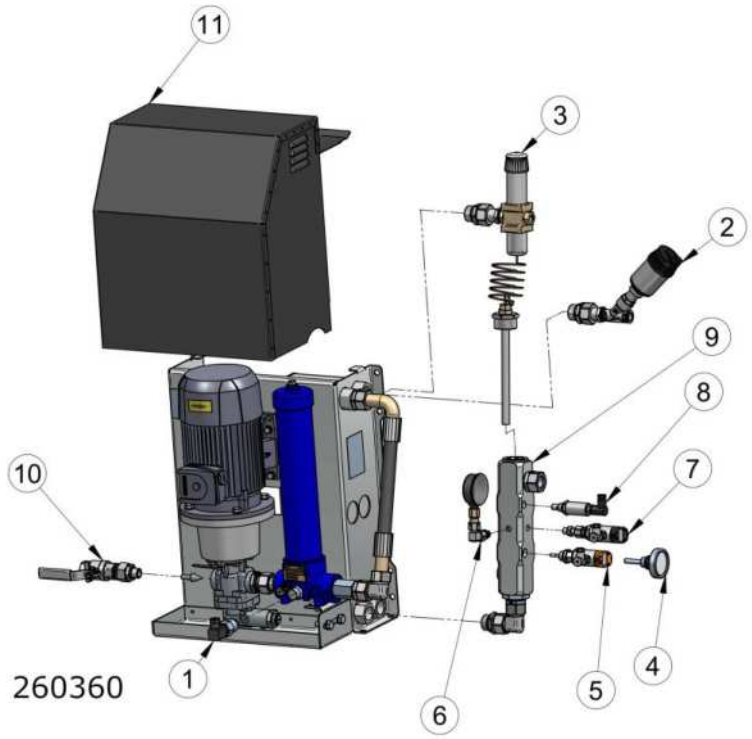
SKF-OCU-AIC

Table 12

Options parts list

Position	Item number	Option / spare part description
1	13608504	Electrical clogging indicator
2	13396160	Moisture transmitter
3	13396300	Thermostat
4	13396240	Thermometer
5	13396220	Temperature transmitter with display
6	13396200	Pressure gauge
7	13396180	Pressure transmitter
8	13396140	Measurement block 1 (OCU AIC05/10/30 WAC05/10)
9	13396105	Shut-off valve, 5-10 l/min models
	13396100	Shut-off valve, 30 l/min models
10	13149108	OCU cover
	13149128	OCU cover SS
12	13609058	Frequency converter 0,55 kW
13	13609060	Frequency converter 1,1 kW

Fig. 23



SKF-OCU-WAC

Spare parts may be used exclusively for replacement of identical defective parts. Modifications with spare parts on existing products are not allowed.

Table 13

Options parts list

Position	Item number	Option / spare part description
1	13608504	Electrical clogging indicator
2	13396280	PID controlled water control valve
3	13396260	Self-acting water control valve
4	13396240	Thermometer
5	13396220	Temperature transmitter with display
6	13396200	Pressure gauge
7	13396180	Pressure transmitter
8	13396160	Moisture transmitter
9	13396140	Measurement block 1 (OCU AIC05/10/30 WAC05/10)
	13396141	Measurement block 2 (OCU WAC30)
10	13396105	Shut-off valve, 5-10 l/min models
	13396100	Shut-off valve, 30 l/min models
11	13149108	OCU cover
	13149128	OCU cover SS

Table 14

Spare parts list

Item number	Option / spare part description
13613155	Motor for models SKF-OCU-05-XX/WAC/AIC
13613156	Motor for models SKF-OCU-10-XX/WAC/AIC
13613157	Motor for models SKF-OCU-30-XX/WAC/AIC
13607302	Pump for models SKF-OCU-05-XX/WAC/AIC
13607304	Pump for models SKF-OCU-10-XX/WAC/AIC
13607306	Pump for models SKF-OCU-30-XX/WAC/AIC
13101039	25 µm filter element for models SKF-OCU-05/10-P-XX/WAC/AIC
13101044	25 µm filter element for models SKF-OCU-XX-PL-XX/WAC/AIC
ROBX500/HY	Deep filter cartridge for models OCU-05-P-400-WAC-DP-FL15 & OCU-10-P-400-WAC-DP-FL15
13601568	Water heat exchanger for models SKF-OCU-05/10-WAC
13601572	Water heat exchanger for models SKF-OCU-30-WAC
13601556	Air heat exchanger for models SKF-OCU-05/10-AIC
13601557	Air heat exchanger for models SKF-OCU-30-AIC

13. Appendix

13.1 China RoHS table

Table 15

部件名称 (Part Name)	有毒害物质或元素 (Hazardous substances)				
	铅	汞	镉	六价铬	多溴联苯
	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent Chromium (Cr(VI))	Polybrominated biphenyls (PBB)
用钢和黄铜加工的零件 (Components made of machining steel and brass)	X	0	0	0	0
部件名称 (Part Name)	多溴二苯醚	邻苯二甲酸二丁酯	邻苯二甲酸丁苄酯	邻苯二甲酸二(2-乙基己基)酯	邻苯二甲酸二异丁酯
	Polybrominated diphenyl ethers (PBDE)	Dibutyl phthalate (DBP)	Benzyl butyl phthalate (BBP)	Bis (2-ethylhexyl) phthalate (DEHP)	Diisobutyl phthalate (DIBP)
用钢和黄铜加工的零件 (Components made of machining steel and brass)	0	0	0	0	0

本表格依据SJ/T11364的规定编制 (This table is prepared in accordance with the provisions of SJ/T 11364.)

0:	表示该有毒有害物质在该部件所有均质材料中的含量均在GB/T 26572 规定的限量要求以下。 (Indicates that said hazardous substance contained in all of the homogeneous materials for this part is below the limit requirement of GB/T 26572.)
X:	表示该有毒有害物质至少在该部件的某一均质材料中的含量超出GB/T 26572标准规定的限量要求。 (Indicates that said hazardous substance contained in at least one of the homogeneous materials used for this part is above the limit requirement of GB/T 26572.)

14. Related CE-declarations

SIEMENS

EU-Konformitätserklärung / EU Declaration of Conformity

(nach der EU-Richtlinie 2014/35/EU und Verordnung (EG) Nr. 640/2009)

Nr. / No A5E33321514A

Hersteller / Manufacturer:	Siemens Aktiengesellschaft Division Process Industries and Drives, Large Drives, PD LD
Anschrift / Address:	Vogelweiherstr. 1-15 D-90441 Nürnberg Germany
Produktbezeichnung / Product designation:	Niederspannungsmotoren / Low-Voltage Motors Typ / Type: 1LE10, 1LE15, 1LE16, 1PC1, 1PC3, 1LA9, 1LG6, 1MB1

Der oben beschriebene Gegenstand der Erklärung erfüllt die einschlägigen Harmonisierungsrechtsvorschriften der Union:

Niederspannungsrichtlinie:

2014/35/EU Richtlinie des Europäischen Parlaments und des Rates vom 26. Februar 2014 zur Harmonisierung der Rechtsvorschriften der Mitgliedstaaten über die Bereitstellung elektrischer Betriebsmittel zur Verwendung innerhalb bestimmter Spannungsgrenzen auf dem Markt, Amtsblatt der EU L96, 29.03.2014, S. 357–374

ErP Richtlinie:

(EG) Nr. 640/2009 Verordnung der Kommission vom 22. Juli 2009 zur Durchführung der Richtlinie 2005/32/EG (2009/125/EG) des Europäischen Parlaments und des Rates im Hinblick auf die Festlegung von Anforderungen an die umweltgerechte Gestaltung von Elektromotoren (wie geändert durch Verordnung **(EU) Nr. 4/2014** vom 06. Januar 2014).

Die alleinige Verantwortung für die Ausstellung dieser Konformitätserklärung trägt der Hersteller. Wir bestätigen die Konformität des oben genannten Produktes mit den Normen:

Referenznummer und Ausgabedatum / Reference number and date of issue

EN 60034-1[1]):2010 + AC:2010 [1]) mit allen relevanten Teilen und Ergänzungen / with all relevant parts and supplements

Unterzeichnet für und im Namen von: / Signed for and on behalf of:

Siemens Aktiengesellschaft
Nürnberg, 01.06.2016

i.V. .....
Klaus Körber
Head of Research and Development Low-Voltage

i.V. .....
Dr. Michael Kulig
Head of LD P Quality Management

Diese Erklärung bescheinigt die Übereinstimmung mit den genannten Richtlinien, ist jedoch keine Beschaffenheits- oder Haltbarkeitsgarantie. Die Sicherheitshinweise der mitgelieferten Produktdokumentation sind zu beachten. /

EC Declaration of Conformity

Manufacturer: Parker Hannifin Manufacturing Poland Sp. z o.o.
Accumulator and Cooler Division
54 – 156 Wroclaw, ul. Stargardzka 5
Poland
www.parker.com

Product: Parker LAC Air oil cooler with AC motor

Person authorized to compile the technical file: Erwan Jagueneau, Parker Hannifin Manufacturing Sweden AB.

Parker Hannifin Manufacturing Poland declares, according to Annex VIII of the Machinery Directive 2006/42/EC, under sole responsibility that the product above to which this declaration relates fulfils all the relevant provisions of the Machinery Directive.

The product is in conformity with the requirements in the following standards and directives.

- Safety of machinery – Basic concepts, general principles for design, SS-EN ISO 12100-1/A1:2009 and SS-EN ISO 12100-2/A1:2009.
- Safety of machinery – Safety requirements for fluid power systems and their components – Hydraulics, SS-EN ISO 4413:2010.
- Safety of machinery – Safety distances to prevent hazard zones being reached by upper and lower limbs, SS-EN ISO 13857:2008.
- Electric motors used on the product comply with the Low Voltage Directive (LVD) 2014/35/EU and the Electromagnetic Compatibility Directive (EMC) 2014/30/EC.

The above is valid for a complete product delivered by Parker Hannifin Manufacturing Poland Sp. z o.o. and a complete product is CE-marked by Parker Hannifin Manufacturing Poland Sp. z o.o.

If the product is not delivered complete by Parker Hannifin Manufacturing Poland Sp. z o.o. the product is also not CE-marked by Parker Hannifin Manufacturing Poland Sp. z o.o. and must not be put into service until the product has been declared in conformity with the requirements of the relevant directives and standards.

Spånga, October 25 2016

Erwan Jagueneau
Engineering Manager
Parker Hannifin Manufacturing Sweden AB

skf.com/lubrication

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