SKF Multilube pumping unit

for industrial lubrication systems

SKF Multilube pumping unit

SKF centralised lubrication systems are an effective solution for lubricating individual machines and equipment. The systems are easy to install, the pumping unit has a compact structure, the metering devices operate reliably and the system is simple to use. As a result, machine applications that use this system are much more reliable even in harsh outdoors operating conditions.

Compact and flexible solution

All relevant components and functions are integrated into the modular SKF Multilube pumping unit: control unit, pump, reservoir, directional valve and pressure monitoring. Built-in heating enables operation even under demanding and cold conditions.

SKF Multilube can be used with all SKF grease and oil systems, SKF MonoFlex single-line, SKF DuoFlex dual-line, SKF ProFlex progressive lubrication systems. Auxiliary equipment, such as sliding surface nozzles and lubrication brushes, can be used depending on lubrication needs.

Advantages and features

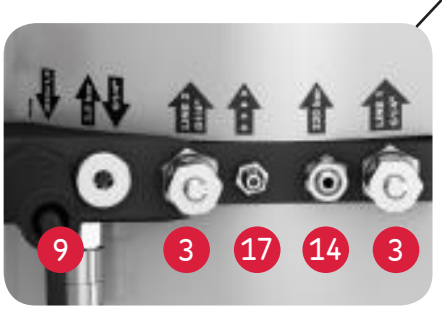
- Compact “all-in-one” structure
- Modular and durable design
- Easy installation and start-up
- Two reservoir sizes
- Two-ball pumping element improves operational reliability
- Suitable for both grease and oil systems
- Suitable for various metering device types
- Filling connection equipped with filter
- Reservoir with overfill relief valve
- External pressure relief valve
- Visual level indicator in reservoir
- Electrical low level switch in reservoir
- Heating resistor in pumping block
- Wide operating temperature range
- Clear and versatile user interface
- Optional internal or external control
- Several operation voltages

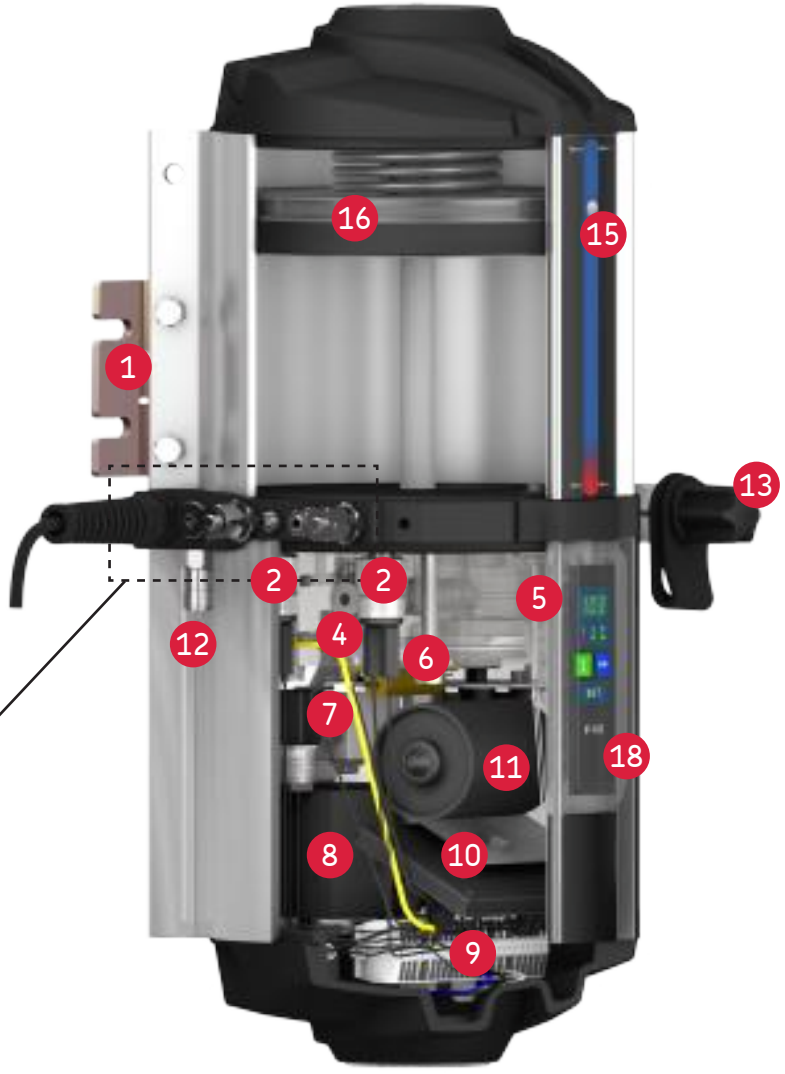
SKF Multilube pumping unit MLPI

Max. output	16 cm^3/min (14 g/min)
Reservoir	4 l / 10 l
Max. pressure output	200 bar, 2 900 psi
Operating temperature range	–30 to +80 °C, –22 to +176 °F
Lubrication line connections	G 1/4
Lubricant	Up to NLGI 2
Operation voltage	24 V DC, 115 V AC or 230 V AC
Power consumption	150 W
Protection class	IP67 (with user-interface IP65)
Weight with full reservoir (4 l / 10 l)	23 kg / 30 kg
Height (4 l / 10 l)	535 mm / 720 mm
Width	274 mm
Depth	244 mm
Material	Aluminium
Approvals	cTUVus, standards UL 61010-1, CAN/CSA-C22.2 61010-1

SKF Multilube main components

1. Fixing plate
2. Pressure control unit
3. Lubricant outlets
4. Pumping element
5. Low level switch
6. Heating element
7. Line valve
8. Power supply
9. Electrical connections
10. Control unit
11. Electrical motor
12. Overfill relief valve
13. Filling connector with filter
14. Pressure relief valve
15. Visual level indicator
16. Follower piston
17. Bleed screw
18. User interface





SKF Multilube dimensions, 4 l and 10 l

User interface IF-103

Molded in epoxy resin: water resistant and shockproof.
Buttons are based on EMFI technology, no moving parts.

Display, 3 digits	State of lubrication – Time display – Alarm codes Set values of lubrication parameters Display of main line pressures
Indicator lights, 3 two color LEDs	Status of main line and pump Alarm type
Buttons, 3 pcs	Triggering operations – Extra lubrication – Acknowledgment of alarms Displaying and setting parameters Toggling between time and pressure displays
Lubrication parameters	Lubrication cycle, 1min ...999h Max. pressurizing time 1 ...999s Pressure limits 0...200bar Type of lubrication system Parameter settings are password protected

The integrated user interface

The SKF Multilube pumping unit is controlled by a built-in user interface, which makes it simple to use the system and adjust its functions.

It is also possible to control the system externally with SKF multi-channel control centres, or a customer's PLC or process control system. Remote monitoring and control can also be achieved using text messages by creating a connection between a modem which is installed on the pumping unit and a mobile phone.

Designation system for SKF Multilube pumping unit

Example: MLPI-10-2-230-IF103-PSE

MLPI - 10 - 2 - 230 - IF103 - PSE

Product identification

MLPI	SKF Multilube pumping unit for industrial use

Reservoir size

4	4 litres
10	10 litres

System type

1	Single-line MonoFlex system
2	Dual-line DuoFlex system
P	ProFlex system
C2P	Two channel/zone ProFlex system
OS	Single-line MonoFlex Oil system

Operating voltage

24	24 V DC
115	115 V AC
230	230 V AC

User interface

IF103	Built-in user interface and control
24	External control, control voltage 24 V DC

Pressure control

PSE	Built-in pressure sensor
EPT	External pressure transmitters

For other options please contact SKF Muurame

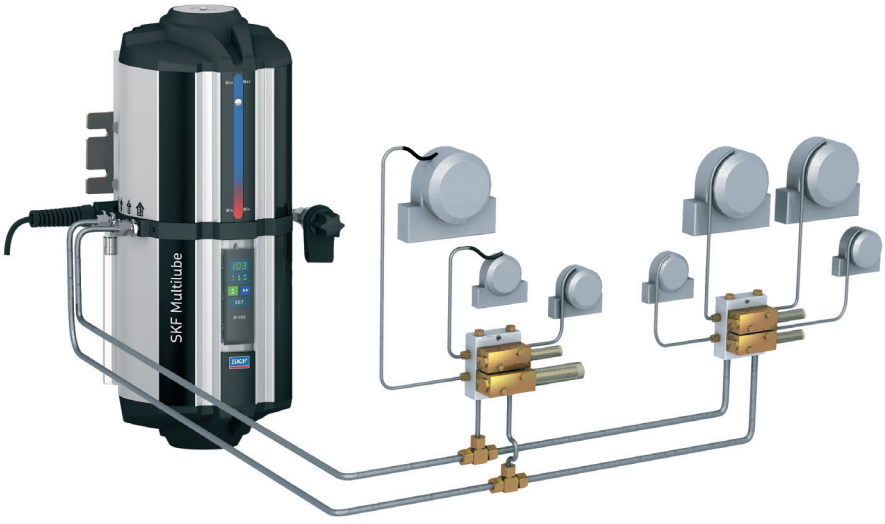
⚠ CAUTION

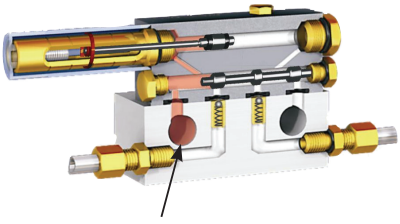
For all systems described in this brochure, see important product usage information on the back cover.

Centralised lubrication improves runnability

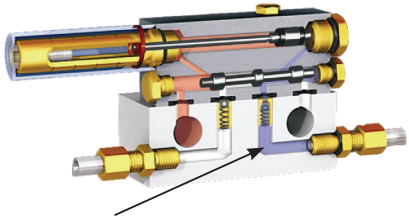
The high-quality SKF centralised lubrication system with SKF Multilube pumping unit prevents virtually all bearing failures and improves the runnability of machines and equipment. A centralised lubrication system always results in the lubrication being optimal, consequently reducing energy and lubricant consumption. The SKF centralised lubrication system is also a financially justified solution for lubrication to improve the runnability of production processes.

SKF DuoFlex lubrication systems with SGA metering devices

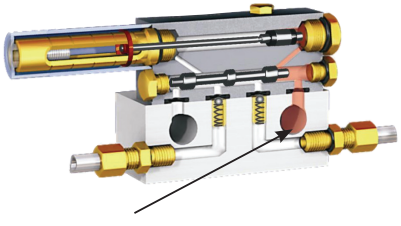




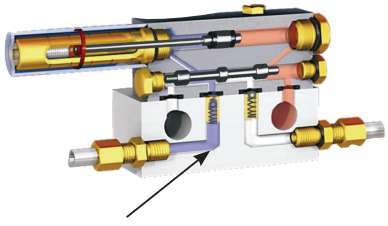
Lubricant inflow from line 1



To lubrication point A



Lubricant inflow from line 2



To lubrication point B

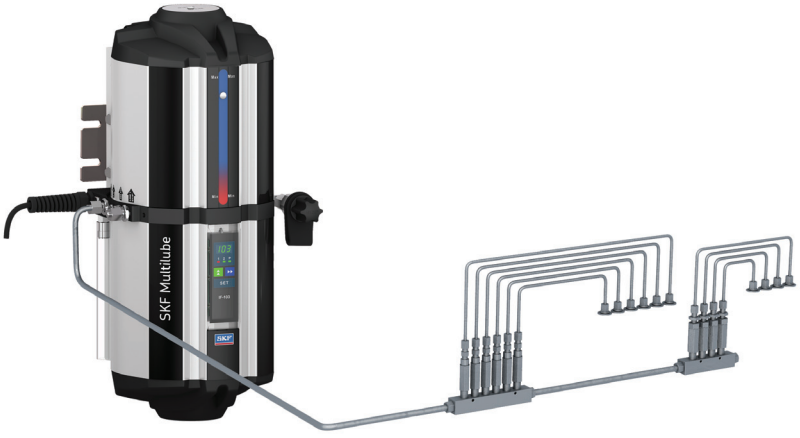
SGA metering devices

Lubricant greases NLGI 000 – 2
SGA dosage range 0,15–8,6 g

Designed for use in dual-line lubrication systems, SGA metering devices feature a modular design with separate baseplates which make system modifications simple. SGA metering devices are manufactured of zinc coated carbon steel or stainless steel and are installed in either aluminium or stainless steel BPSG baseplates. There are three sizes of metering devices and six baseplates, covering all industrial needs from small joints to large roller bearings.

Quantity	Value	Unit	Description
T	– 35 ... +80	°C	Operating temperature range
T	–31 to +176	°F	Operating temperature range
p_{max}	200	bar	Max. operating pressure
p_{max}	2 900	psi	Max. operating pressure

SKF MonoFlex lubrication system with LG and B-type metering devices



LG and B metering devices

Compatible lubricants: oils and greases
NLGI 000 – 1
LG and B dosage range 0,02 – 0,50 cm^3

LG metering devices

LG type metering devices

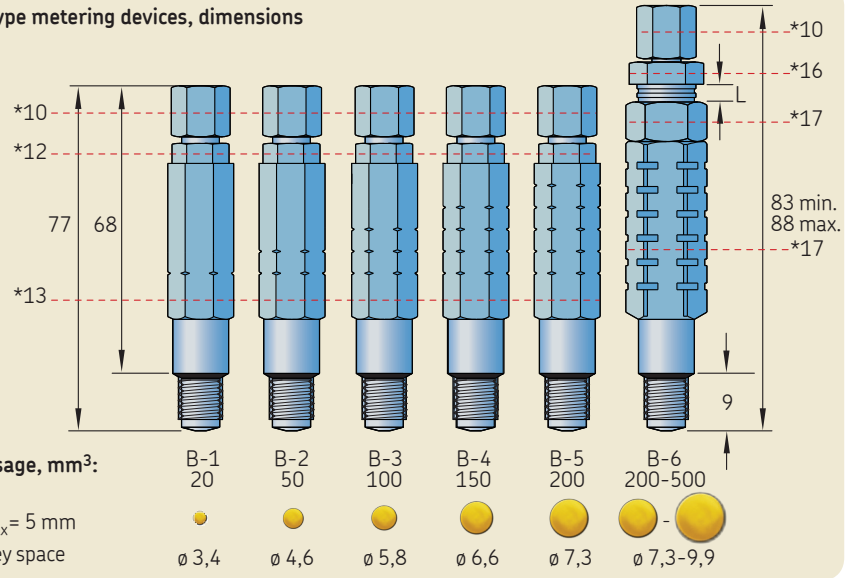
LG type metering devices are used in SKF MonoFlex single line lubrication applications. The metering device group consists of a mounting rail with one or more metering devices attached to it. Metering devices and mounting rails are made of stainless steel.

B type metering devices

B type metering devices are used in SKF MonoFlex single-line lubrications systems. The metering device group consists of a mounting rail with one or more metering devices attached to it.
Metering devices and mounting rails are made of zinc coated carbon steel.

For additional information on B and LG type metering devices, please refer to SKF brochure *PUB 11276, B-, LG- and OS-metering devices for SKF MonoFlex single-line lubrication systems.*

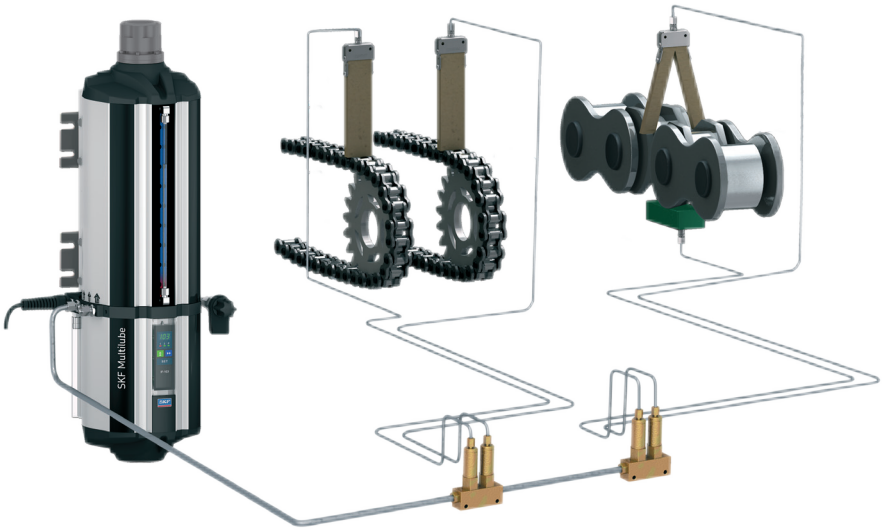
B type metering devices, dimensions



Quantity	Value	Unit	Description
T	– 25 – +80	°C	Operating temperature range
T	– 13 – +176	°F	Operating temperature range
p_{max}	150	bar	Max. operating pressure
p_{max}	2175	psi	Max. operating pressure
w x h x d	15 × 90 × 15	mm	Metering devices B1–B5-size
	17 × 110 × 17		Metering devices B6-size

B type metering devices

SKF MonoFlex lubrication system with OS metering devices



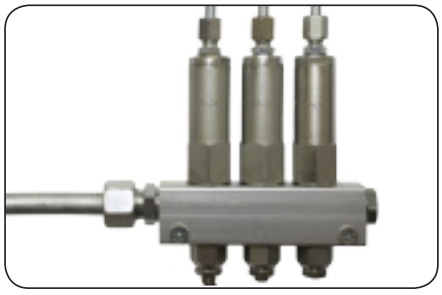
OS-33 metering devices are installed on separate BPOS- mounting rails which are made from aluminium and available in six different sizes. OS-33 metering devices are externally adjustable. Metering device are made from zinc coated carbon steel.

OS-33 metering device, lubrication felt and sliding surface nozzle

Lubricant oil
OS dosage range 0,3 – 2,6 cm^3

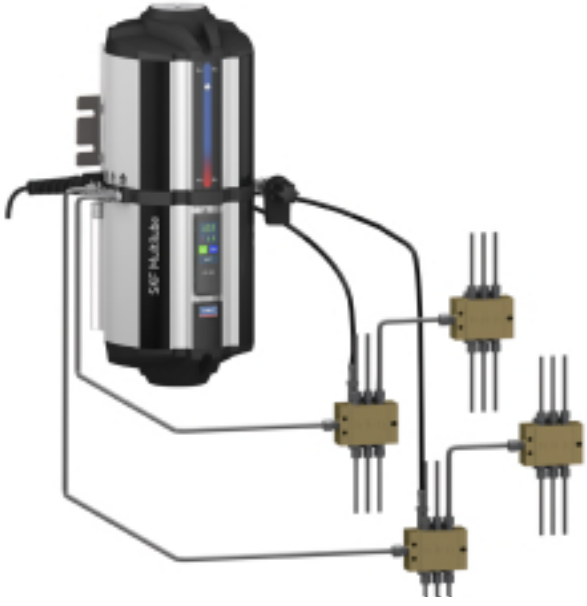
Metering device sends a dose of lubricant to the lubrication felt, which stores lubricant before releasing it to the lubrication point. Felt can be easily cut with scissors to the right shape and width for the lubrication.

The metering device sends a dose of lubricant to the sliding surface nozzle, which divides the dosage to the sliding surface. The sliding surface nozzle is equipped with a check valve which blocks the lubricant flow back to the metering device.



OS metering devices

SKF ProFlex lubrication system with progressive metering devices

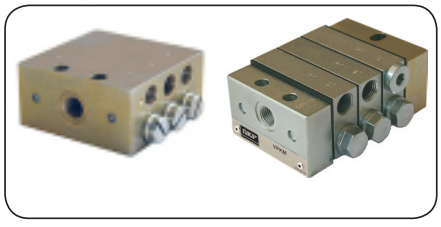


The VPB/VPK progressive metering devices used in SKF ProFlex systems can also be used in centralised manual lubrication systems. Metering devices are manufactured of zinc coated carbon steel. There is also available two channel/zone ProFlex system. For additional information regarding progressive metering devices, please refer to SKF brochure *PUB 1-3017, Block feeder VPB, Block feeder for use in oil or grease lubrication systems.*

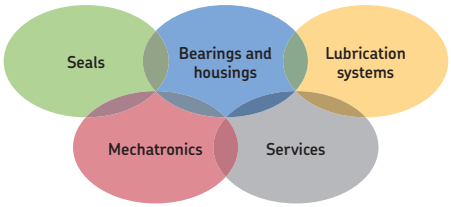
Progressive metering device

Lubricant greases NLGI 000 – NLGI 2
VPB dosage per cycle 0,2 cm^3
VPK dosage per cycle and outlet 0,05–0,6 cm^3

Quantity	Value	Unit	Description
T	– 25 to +110	°C	Operating temperature range
T	–13 to +230	°F	Operating temperature range
	3 – 20	pcs	Number of outputs
p_{max}	300	bar	Max.operating pressure with grease
p_{max}	4350	psi	Max.operating pressure with grease



VPB and VPK metering devices



The Power of Knowledge Engineering
Combining products, people, and application-specific knowledge, SKF delivers innovative solutions to equipment manufacturers and production facilities in every major industry worldwide. Having expertise in multiple competence areas supports SKF Life Cycle Management, a proven approach to improving equipment reliability, optimizing operational and energy efficiency and reducing total cost of ownership.

These competence areas include bearings and units, seals, lubrication systems, mechatronics, and a wide range of services, from 3-D computer modelling to cloud-based condition monitoring and asset management services.

SKF's global footprint provides SKF customers with uniform quality standards and worldwide product availability. Our local presence provides direct access to the experience, knowledge and ingenuity of SKF people.

Important information on product usage
All products from SKF may be used only for their intended purpose as described in this brochure and in any instructions. If operating instructions are supplied with the products, they must be read and followed.

Not all lubricants are suitable for use in centralized lubrication systems. SKF does offer an inspection service to test customer supplied lubricant to determine if it can be used in a centralized system. SKF lubrication systems or their components are not approved for use with gases, liquefied gases, pressurized gases in solution and fluids with a vapor pressure exceeding normal atmospheric pressure (1 013 mbar) by more than 0,5 bar at their maximum permissible temperature.

Hazardous materials of any kind, especially the materials classified as hazardous by European Community Directive EC 67/548/EEC, Article 2, Par. 2, may only be used to fill SKF centralized lubrication systems and components and delivered and/or distributed with the same after consulting with and receiving written approval from SKF.

SKF lubrication systems
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