SKF Multilube pumping unit

for heavy vehicle lubrication systems

SKF Multilube pumping unit

SKF centralised lubrication systems are an effective solution for lubrication maintenance of heavy vehicles. 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 and vehicle applications that use this system are much more reliable even in harsh operating conditions.

Compact and flexible solution

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

The pumping unit can be used in all SKF MonoFlex single-line, SKF DuoFlex dual-line and SKF ProFlex progressive lubrication systems.

Advantages and features

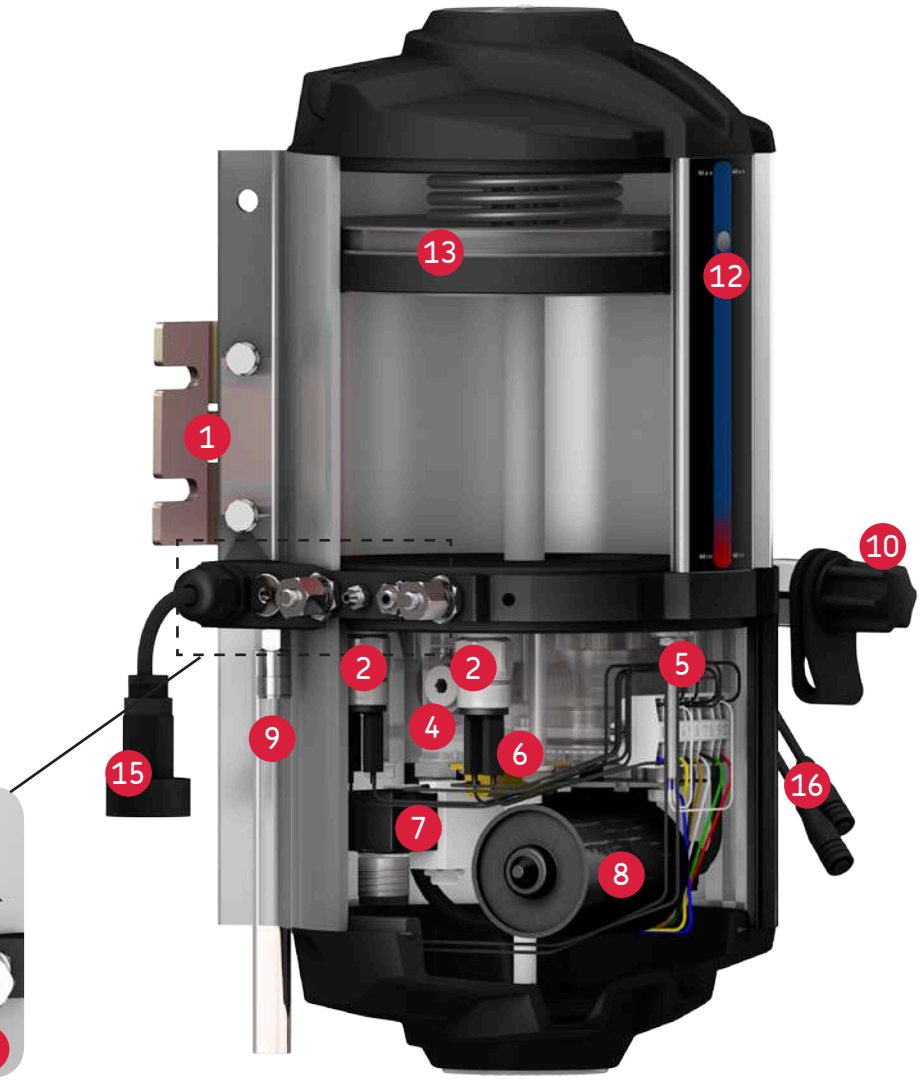
- Modular and durable design
- Easy installation and start-up
- Can be vertically or horizontally installed
- Two reservoir sizes
- Two-ball pumping element improves operational reliability
- Suitable for both grease and oil systems
- Suitable for various metering device types
- Filling connection equipped 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 operation temperature range

SKF Multilube pumping unit MLPV

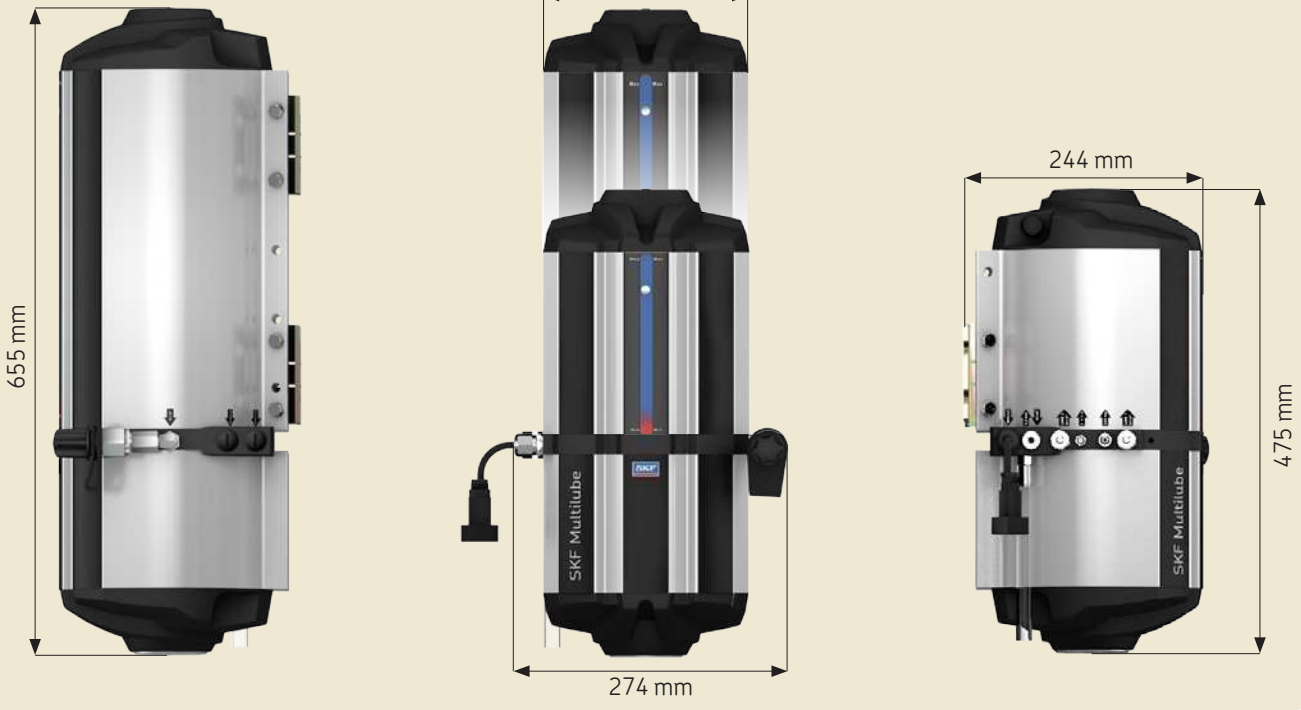
Max. output	16 cm^3/min (14 g/min)
Reservoir	4 l / 10 l
Max. pressure output ProFlex	200 bar, 2 900 psi
Max. pressure output MonoFlex, DuoFlex	140 bar, 2 030 psi
Operating temperature range	–30 to +80 °C, –22 to +176 °F
Lubrication line connection	G 1/4
Electrical connection	7 pole connector, IP68
Lubricant	Up to NLGI 2
Operating voltage	12 or 24 V DC
Power consumption	150 W
Weight with full reservoir (4 l / 10 l)	16 kg / 24 kg
Height (4 l / 10 l)	475 mm / 655 mm
Width	274 mm
Depth	244 mm
Material	Aluminium
Protection class	IP67

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. Electrical motor
9. Overfill relief valve
10. Filling connector with filter
11. Pressure relief valve
12. Visual level indicator
13. Follower piston
14. Bleed screw
15. Electrical connections
16. Piston detector connections (ProFlex systems only)



SKF Multilube dimensions, 4 l and 10 l



SKF ST-102 control centre

The SKF Multilube pumping unit is controlled and monitored using the control panel and buttons of the ST-102 control centre installed in the vehicle cabin. This makes it easy and simple to use and monitor the system.

Lubrication parameters are set using buttons, while indicators provide information on the system's operation and alert the user to problems.

SKF ST-102 control centre

Lubrication cycle	5–120 min
Pressurisation time	1–10 min
Functions	Setting lubrication cycle Setting max. pressurisation time Extra lubrication and alarm acknowledgment
Indicator lights	Line pressurisation Lubricant reservoir low level alarm Line pressure alarm

Quantity	Value	Unit	Description
T	–30 to +80	°C	Operating temperature range
T	–22 to +176	°F	Operating temperature range
U	12 or 24	V DC	Operating voltage
	IP30		Protection class
m	140	g	Weight
w × h × d	26 × 60 × 160	mm	Dimensions

⚠ CAUTION

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

Designation system for SKF Multilube pumping unit

Example: MLPV-4-1-24

MLPV - 4 - 1 - 24

Product identification

MLPV	SKF Multilube pumping unit for heavy vehicles

Reservoir size

4	4 litres
10	10 litres

System type

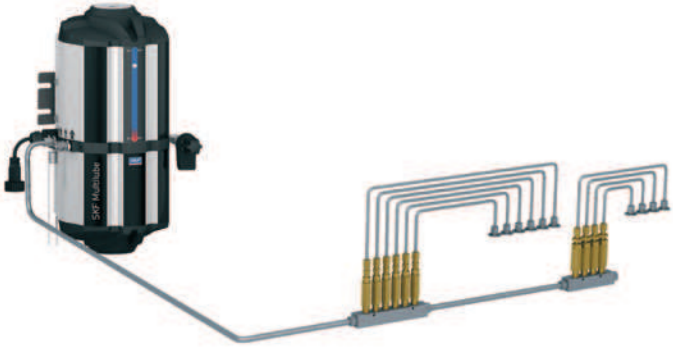
1	Single-line MonoFlex system
2	Dual-line DuoFlex system
P	ProFlex system
C2P	Dual-channel ProFlex system

Operating voltage

12	12 V DC
24	24 V DC

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 centralized 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 heavy vehicles.



Single-line SKF MonoFlex centralised lubrication system

Compatible lubricants: oils and greases NLGI 000 – 1

The main applications for the SKF MonoFlex systems are heavy trucks and their auxiliary equipment, earth moving machinery, forwarders, harvesters, material handling and property service machines.

The SKF MonoFlex system can easily be expanded to detachable auxiliary equipment using quick connectors and hoses. The dosage of each individual lubrication point can be adjusted separately either by changing or adjusting the doser.

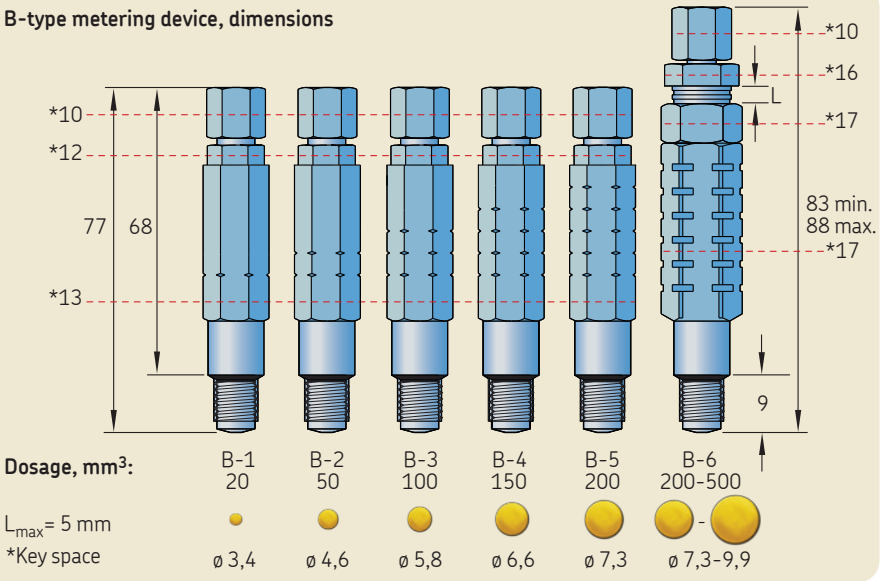
B-type metering device

B-type metering devices are used in SKF MonoFlex systems. The metering device group consists of a mounting rail with one or more dosers attached to it.

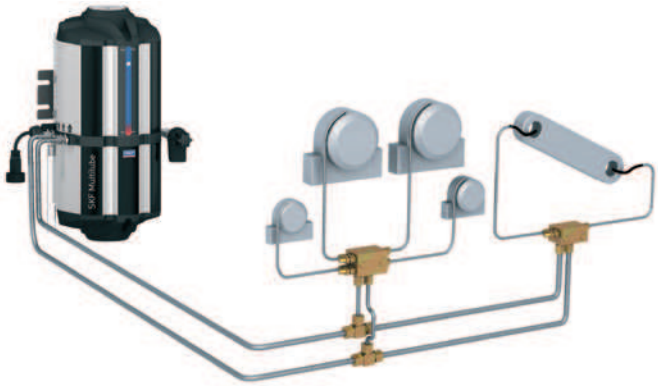
All dosers and mounting rails are made of zinc coated carbon steel. The dosage range for B-type metering device is 20 to 500 mm^3.

For additional information on B-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 device, dimensions



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



Dual-line SKF DuoFlex centralised lubrication system

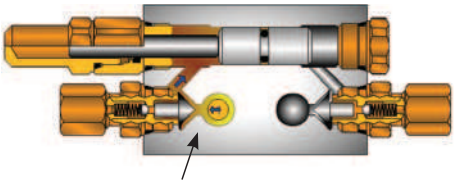
Compatible lubricants: greases NLGI 000 – 2

The main applications for the SKF DuoFlex system include heavy earth moving machinery, forestry machines, material handling machines and special vehicles.

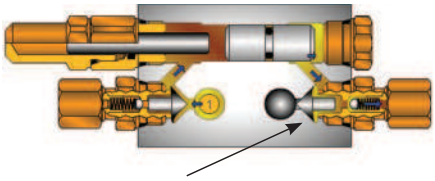
The SKF DuoFlex system can easily be expanded to detachable auxiliary equipment using quick connectors and hoses. The dosage of each individual lubrication point can be modified by adjusting the doser.

SMG metering devices

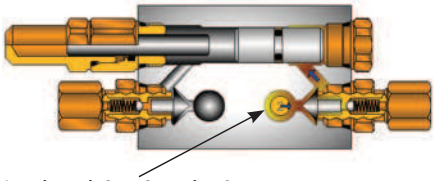
SKF DuoFlex systems are equipped with SMG metering devices, which can be used to dose harder greases and larger lubrication dosages compared to B-type metering devices. The metering devices are made of zinc coated carbon steel. Metering devices include built-in check valves to archieve the exact correct dosage. The dosage ranges of SMG metering devices can be adjusted from 130 to 1 500 mm^3.



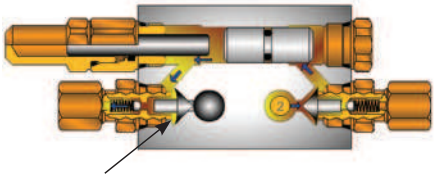
Lubricant inflow from line 1



To lubrication point A



Lubricant inflow from line 2



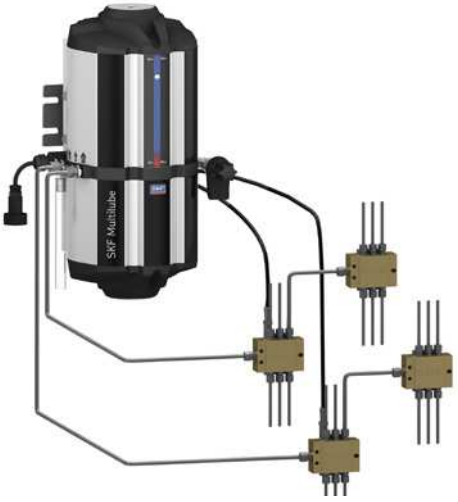
To lubrication point B

Quantity	Value	Unit	Description
T	–35 to +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

Metering device SMG-2-1-ZN

Metering device SMG-2-2-ZN

Metering device SMG-2-4-ZN



SKF ProFlex centralised lubrication system

Compatible lubricants: greases NLGI 000 – 2

The main applications for the SKF ProFlex system include heavy earth moving machinery, forestry machines, material handling machines and special vehicles.

Only one piston detector is needed for system monitoring.

SKF Multilube is also available for two ProFlex-system channels.

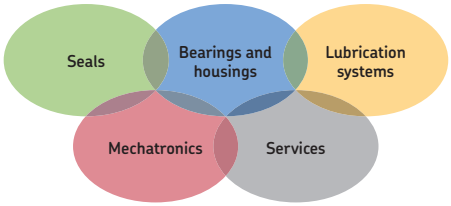
Progressive metering devices

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

Metering device VPB

Metering device VPK

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 outlets
p_{max}	300	bar	Maximum operating pressure with grease
p_{max}	4 350	psi	Maximum operating pressure with grease
	0.20	cm^3	Dosage for each outlet using VPB metering device
	0.05–0.6	cm^3	Dosage for each outlet using VPK metering device



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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PUB LS/P2 6408/2 EN · November 2014.

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