

Compact Units

For fluid grease, NLGI grades 000, 00
Group MKF – 0.1 or 0.2 l/min

MKF1-KW2-20...



MKF2-KW3-20...



MKF2-KW6-22...



These MKFcompact units were developed to supply intermittently operated single-line centralized lubrication systems with lubricant. The basic model contains a gear pump with drive motor as well as the set of valves required for pressure relief and limitation (safety valve). The lubricant reservoir material is plastic.

The units are controlled depending on their design

- by hand (unit with pushbutton DK),
 - by an external control system,
 - by a builtin electronic control and monitoring unit
- timer or counter with adjustable interval and monitoring time.

The control and monitoring unit is either a **timer for time-dependent control** or a **counter for load-dependent control**.

Special features:

- preliminary lubrication (lubrication after the supply voltage is turned on)
- pump delay time
- pressure dependent cut-off
- monitoring of pressure build-up
- monitoring of pump running time

Overview Compact Units

Order No.	Delivery rate [l/min]	Reservoir capacity [l]	Control manual/ external	IG38-3	IZ38-3	Components				Hydraulic layout	Wiring diagram	Fig.
MKF1-K2-20000	0.1	1.8	external							1	1	1
MKF1-K2-20001	0.1	1.8	external			•	•			1	1	1
MKF1-K2-20003	0.1	1.8	external						•	1	1	1
MKF1-KW2-20000	0.1	1.8	external					•		1	1	1
MKF1-KW2-20001	0.1	1.8	external				•	•		1	1	1
MKF1-KW2-20003	0.1	1.8	external					•	•	1	1	1
MKF1-KW2-20004	0.1	1.8	external				•	•	•	1	1	1
MKF2-K3-22005	0.2	3		•		•	•			2	3	3
MKF2-K3-22015	0.2	3			•	•	•			2	3	3
MKF2-K3-22016	0.2	3			•	•	•	•		2	3	3
MKF2-KW3-20001	0.2	3	•			•	•	•		2	2	2
MKF2-KW3-20003	0.2	3	•			•	•	•	•	2	2	2
MKF2-KW3-20004	0.2	3	•			•		•	•	2	2	2
MKF2-KW3-20005	0.2	3	•			•		•		2	2	2
MKF2-KW3-22003	0.2	3		•		•	•	•	•	2	3	3
MKF2-KW3-22013	0.2	3			•	•	•	•	•	2	3	1
MKF2-KW6-20003	0.2	6	•			•	•	•	•	2	2	4
MKF2-KW6-22001	0.2	6		•		•	•	•		2	3	5
MKF2-KW6-22003	0.2	6		•		•	•	•	•	2	3	5

Reservoir material: plastic

• = components contained in the unit.

DK = pushbutton

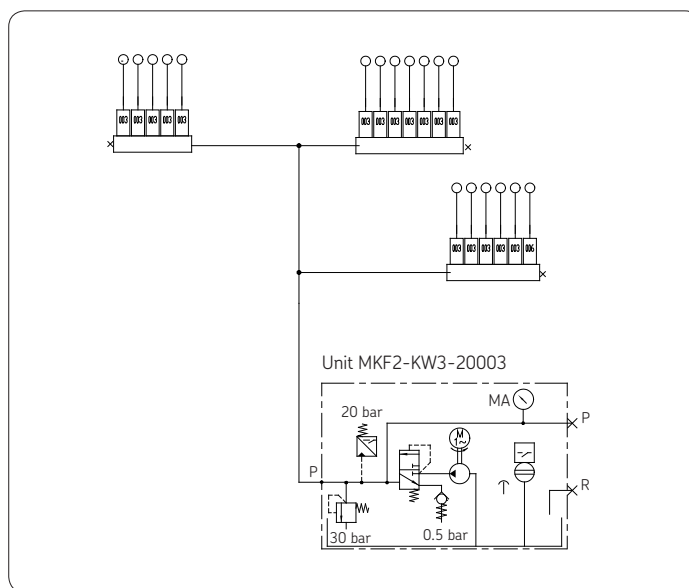
DS = pressure switch

WS = level indicator

MA = pressure gauge

Possible monitoring elements

- Pressure switch (DS) monitors the automatic pressure build-up.
- Level indicator (WS)
- Pressure gauge (MA) displays the pressure response in the main line.
- Monitoring contact (d2) turns off machine if pressure fails to build up.
- Indicator light, green (SL1) shows that pump is running.
- Indicator light, red (SL2) indicates a fault if pressure fails to build up or if there is a low level of lubricant in the reservoir (only with built-in level indicator).



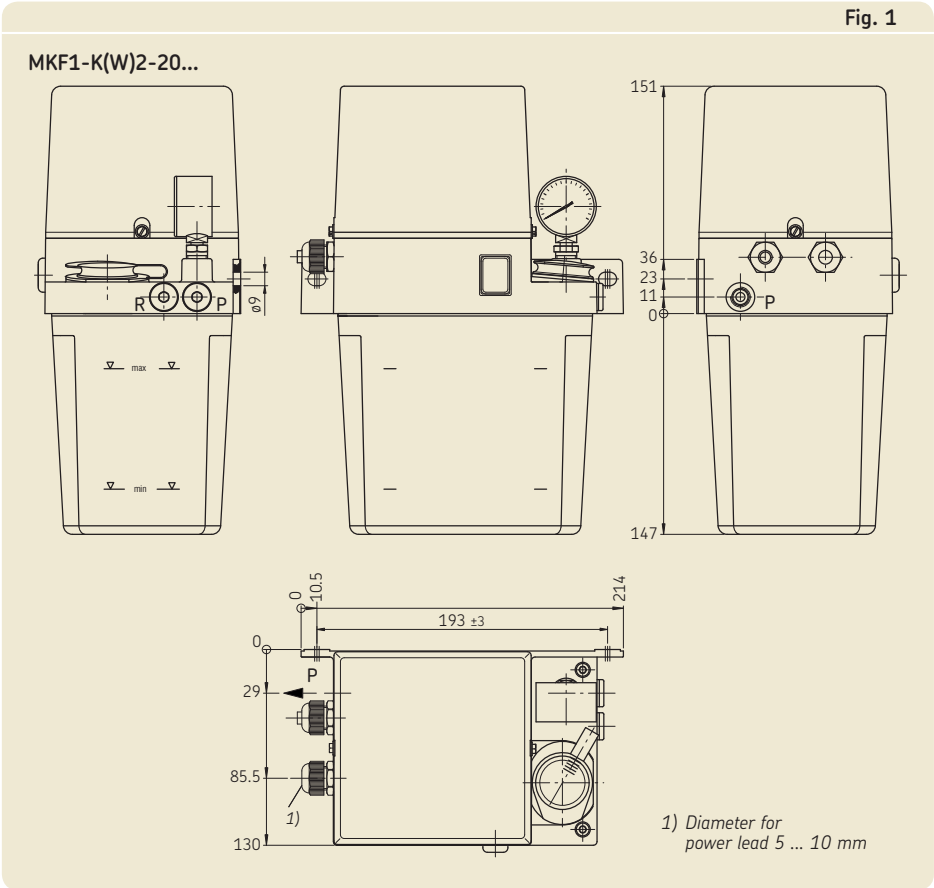
Practical example: universal milling machine

Technical data	
Gear pump unit	
Flow rate	
at 50 Hz	0.1 l/min
at 60 Hz	0.12 l/min
in relation to a service viscosity of 140 mm ² /s, at a back pressure of p = 5 bars	
Operating pressure 30 +1/-2 bar corresponds to actual value of builtin safety valve	
Operating temperature +10 to +40 °C	
Reservoir capacity nominal 1.8; 3 or 6 l	
Reservoir material plastic	
Type of enclosure IP 54	
Frequency/voltage 50/60 Hz, 115 V AC or please indicate when ordering 50/60 Hz, 230 V AC	
Medium grease, NLGI grades 000, 00; compatible with plastics, NBR elastomers, copper, copper alloys	
Motor with built-in thermostatic switch	
Mode of operation S3, 20% (1.25 to 25 min) duty cycle ¹⁾	
Power consumption approx. . 50 Hz: 115W; 60 Hz: 140 W	
Speed 50 Hz: 2600 rpm; 60 Hz: 3050 rpm;	
Level indicator	
Function opens in event of low lubricant (PNP)	
Voltage range 10...36 V DC	
Continous current max. 250 mA	
Natural current consumption . max. 20 mA	
Pressure switch	
Type of contacts NO-contact	
Max. switching voltage 42 V AC	
Max. switching current 2.5 A (ohmic load)	
Max. contact rating 30 VA ²⁾	
Switching pressure 20 bars	
¹⁾ The 20% duty cycle is the ratio of the pump running time to the subsequent idle time. Example: 1 minute of pump running time requires at least 5 minutes of idle time. The maximum permissible pump running time amounts to 3 minutes. That results in a necessary idle time of 15 minutes.	
²⁾ Take appropriate measures to protect contacts when switching inductive loads.	

Please note: Not all lubricants are suitable for use in a centralized lubrication system.
SKF does offer an inspection service to test customer supplied lubricant for use in a centralized system.
See important product usage information on the back cover.



MKF1-KW2-20...

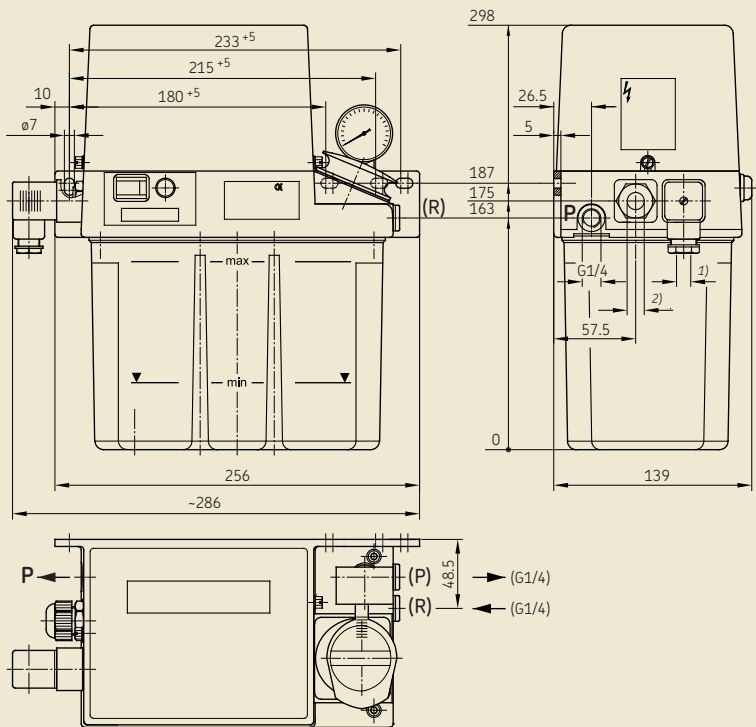




MKF2-KW3-20...

Fig. 2

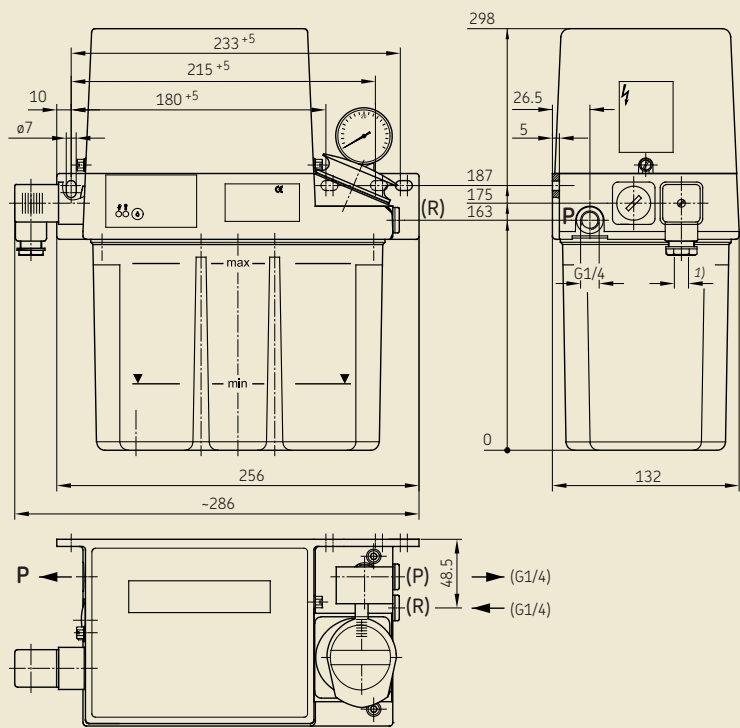
MKF2-K(W)3-20...



- 1) Diameter for power lead 8 ... 10 mm
2) Diameter for power lead 6 ... 12 mm

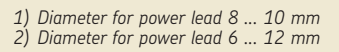
Fig. 3

MKF2-K(W)3-22...

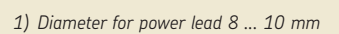


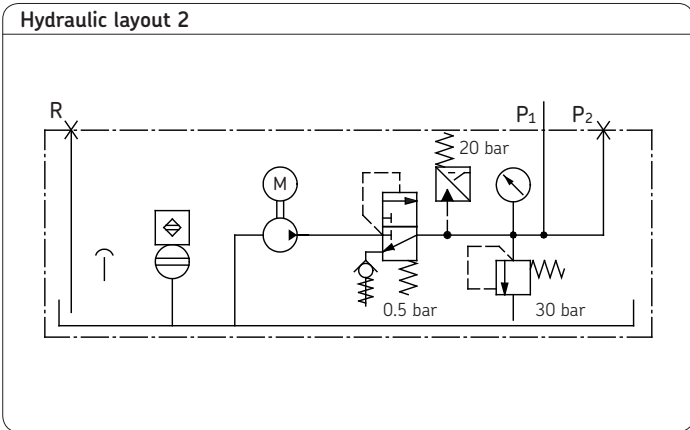
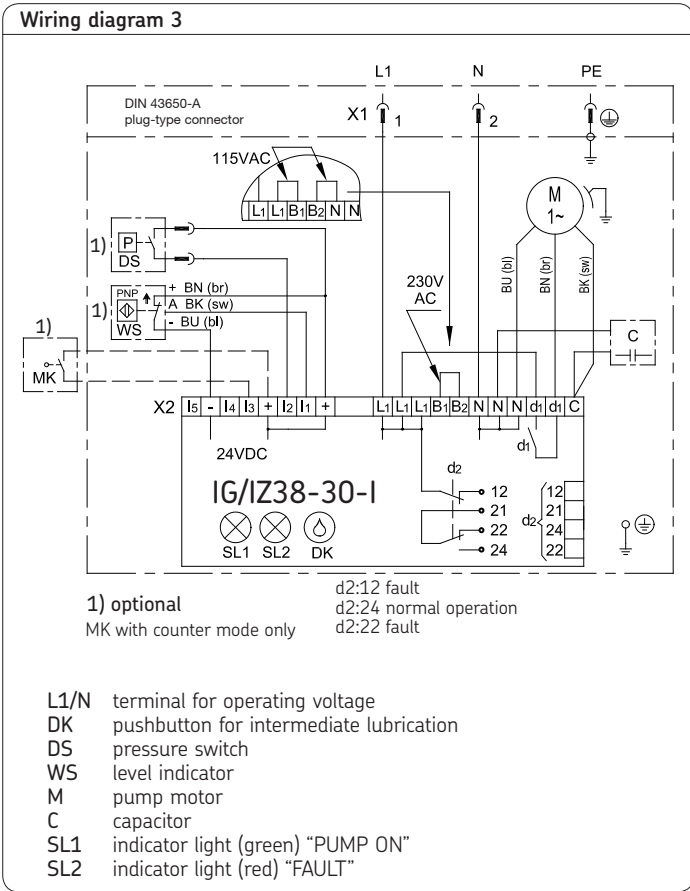
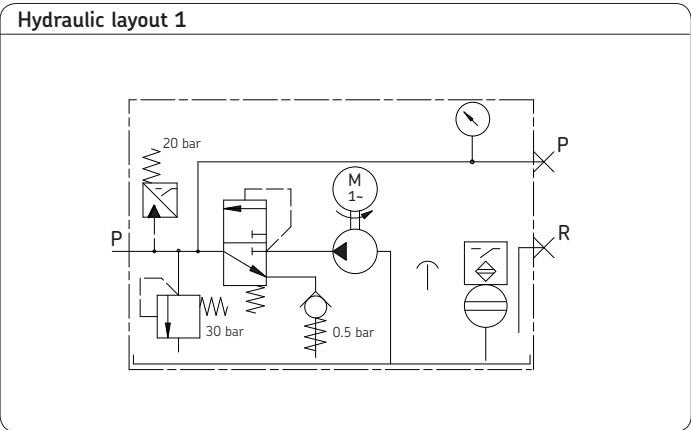
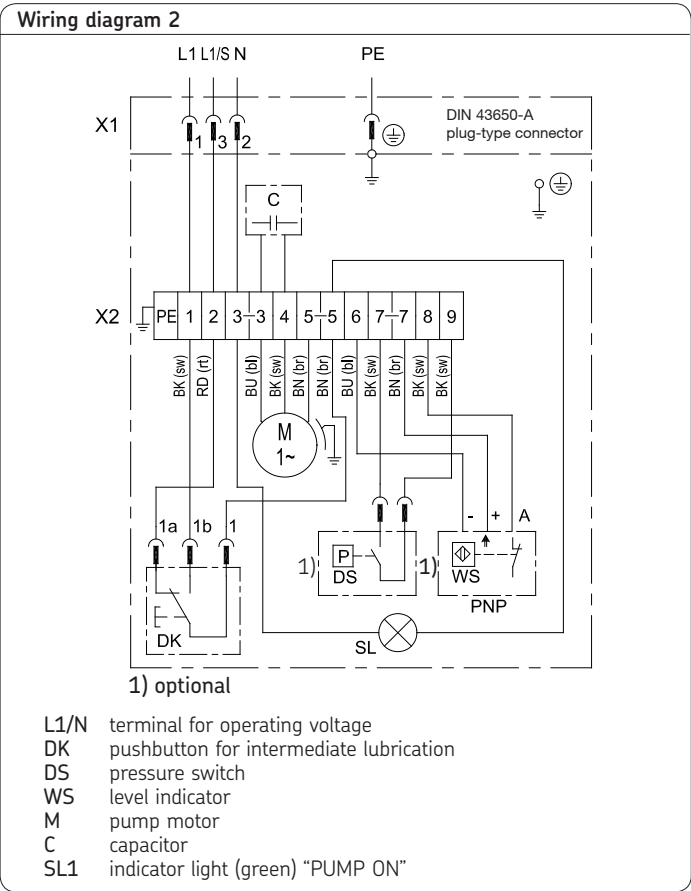
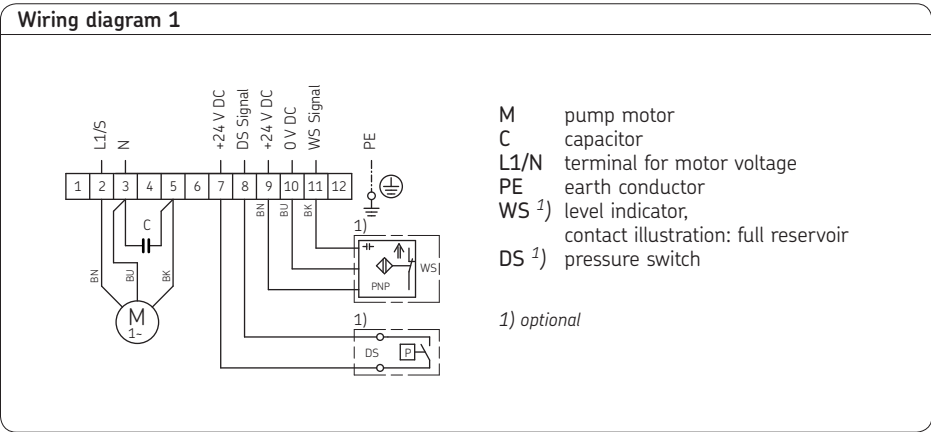
- 1) Diameter for power lead 8 ... 10 mm

MKF2-KW6-20...



MKF2-KW6-22...





Control unit

The compact units with 3- or 6-liter reservoirs may be equipped with an electronic control unit for intermittently operated single-line centralized lubrication systems.

Optionally with

- IG38-30-I for time-dependent control
- IZ38-30-I for load-dependent control

The units conform to the following directives:

- Electromagnetic compatibility 89/336/EWG; 91/31/EWG
- Low voltage directive 73/23/EWG; 93/68/EWG

Functions

- IG38-30-I: timer mode (time-dependent)
- IZ38-30-I: counter mode (load-dependent)
- Preliminary lubrication
(lubrication after the supply voltage is switched on)
- Pump delay time
- Monitoring of pressure build-up
- Monitoring of pump runtime limitation
- Monitoring of lubricant level with wire-break detection
(level indicator opens if lubricant level is critical)
- Terminal [-]
permits operation with three-wire proximity switch.

Technical data

Interval duration preselectable in 12 stages:
IG38-30-I (min): 1; 2; 4; 8; 16; 32; 64; 128; 256; 512; 1024; 2048
IZ38-30-I (pulses): 1; 2; 4; 8; 16; 32; 64; 128; 256; 512; 1024; 2048

Pump delay time, 15 s
nonadjustable

Pump runtime limitation, . . . 60 s
nonadjustable

Rated voltage 115 or 230 V AC
(please indicate when ordering)

Rated frequency 50/60 Hz

Design board-mounted

Order No. 1-0016-EN

Subject to change without notice! (07/2009)

Important product usage information

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 (1013 mbars) 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.

Further brochures

1-1203-EN Compact Units for Oil

1-1700-1-EN Control and Monitoring Units

1-9201-EN Transport of Lubricants in Centralized Lubrication Systems

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www.skf.com/lubrication

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