



Pump-to-Point lubrication
Box Lubricator

Roesen
Lubrication Systems

Roesen GmbH
Lubrication Systems

Managing Director:
Jan-Friedrich Walther

Am Heuwege 10
27367 Horstedt OT Stapel,
Germany
Tel.: +49 (0)4288-95095
Fax: +49 (0)4288-95099

www.roesen-bremen.de
E-Mail:info@roesen-bremen.com

District court
HRB 205861
VAT-Nr. DE 304760198

Company

Reliable lubrication „Made in Germany“

Roesen GmbH Lubrication Systems produce proven and robust oil lubrication pumps for over 50 years.

The equipping of ship engines and steam locomotives was once the main business of FA. Roesen Apperatabau & CO.KG, so that nowadays the matured product portfolio is globally installed in industrial plants for smooth, trouble free operation and best protection of machine components: Roesen oilers are mostly found in „Pump-to-Point“ lubrication of

piston compressors – one of the most important elements of industrial plants - but also in forming machines, presses, rolling mills, piston pumps, large engines and refineries.



Company building Roesen GmbH

Application:

Roesen oilers are used for loss lubrication of:

- cylinders and stuffing boxes on piston compressors
- piston pumps
- rolling mills
- steam engines
- large engines from Sulzer, Jenbacher
- shipmotors MAN B&W, DEUTZ

Revision:

In our workshop we service and repair the following brands

- ROESEN-Lubricator
- GRÜTZNER-Lubricator
- IVO-Lubricator
- VÖGELE-Lubricator
- JM-Lubricator
- BOSCH-Lubricator
- MANZEL-Lubricator
- COULTHARD-Lubricator
- DELIMON-Lubricator

Roesen Box Lubricator model HD

Roesen Box Lubricator model HD enables the individual adjustment and verification of oil flow to each lubrication point, also in operation.

Due to a modular design and “Pump-to-Point” of the Roesen Box Lubricator HD we can customize to a large variety of plants and drive systems. Because of the double-acting forced control of conveyor and metering piston a Roesen Box Lubricator is ensured to run up safely – also after a longer downtime.

The wide product portfolio of Roesen Box Lubricators HD provides gas free lubrication flow to up to 32 lubrication points with individually adjustable feed rates up to 0,23in³/min per lubrication point and with working pressures up to 10850psi.

All oils and emulsions with a viscosity range from 25 to 3000 cSt – also food grade oils – are usable.



Roesen Box Lubricator system HD IV with a gearbox in pressure-tight version

Roesen Box Lubricator HD for oil consumption lubrication

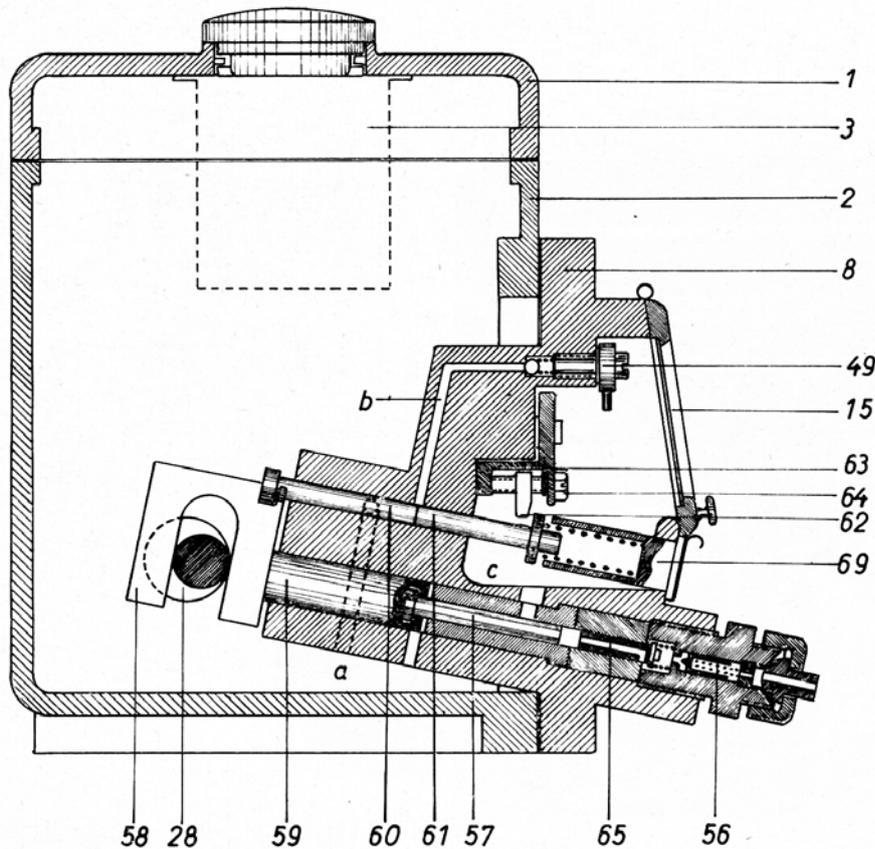
- housing, pump body and crankshaft bearings are made of cast iron (EN-GJL-250)
- suitable for oils and emulsions
- force controlled safety
- unpressurized visual control
- precisely adjustable
- designed for economical, reliable continuous operation
- drive systems: rotating, oscillating or motor driven
- up to 32 lubrication points
- Roesen HD Box Lubricator is deliverable for pressures:
 - up to 5800psi with max. 0,01in³ per stroke/outlet
 - up to 10850psi with max. 0,007in³ per stroke/outlet
- includes test certificate according to EN 10204-3.1

Specially designed models:

- with Flow-Switch
- with overpressure valve
- with pre lubrication system
- with heating system
- with ATEX realization



Roesen Box Lubricator HD function



The camshaft (28) drives the conducting piston (59) with the pressure piston (57) and the allocation piston (60) by means of the fork (58). The control piston (61) follows the suction stroke of the allocation piston (60) until it reaches the adjustable stop, which is provided by the carrier (62). Depending on the position of the regulation screw (64) a larger or smaller vacuum develops between the allocation piston (60) and control piston (61) which sucks up oil through channel (a) into the chamber of the allocation piston (60). While the compression stroke closes the channel (a), the oil is pumped through channel (b) to the visual flow control (49) where it visibly returns to the control basin (c) of each lubrication outlet and is accessible for flow

calibration. The control basin (c) feeds the pressure piston (57) with oil which is provided by the piston valve (65) and the check valve (56) to the lubrication line. The flow rate is adjusted by the regulation screw (64) which is secured against unintentional misadjustment by means of a lock spring (63).

The Roesen HD High-Pressure Box Lubricator is deliverable for pressures:
 up to 5800psi with max. 0,01in³ per stroke / outlet
 up to 10850psi with max. 0,007in³ per stroke / outlet

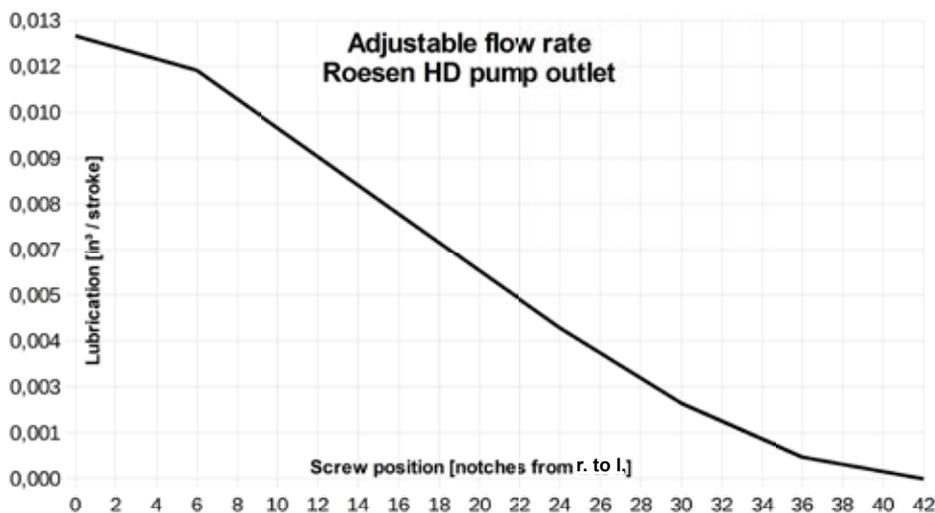
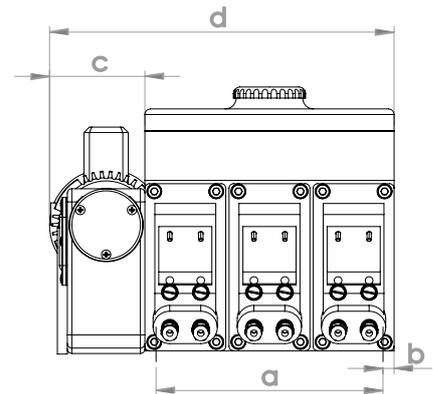


Diagram: flow rates Roesen HD

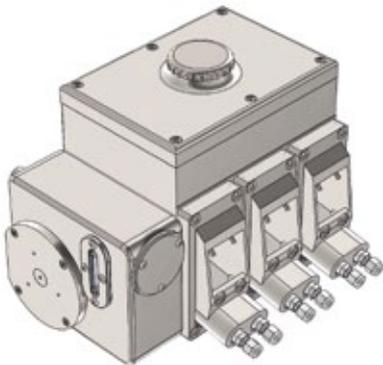
Roesen Box Lubricator model HD

Model HD case designs

Size	Lubrication points	Volume Ltr.	a (mm)	b (mm)	c (mm)	d (mm)	width (mm)	height (mm)
HD II	2	3,3	129	10	85	317	250	240
HD II	4	3,1	129	10	85	317	250	240
HD III	6	4,6	205	10	85	353	250	240
HD IV	8	6,1	281	10	85	389	250	240

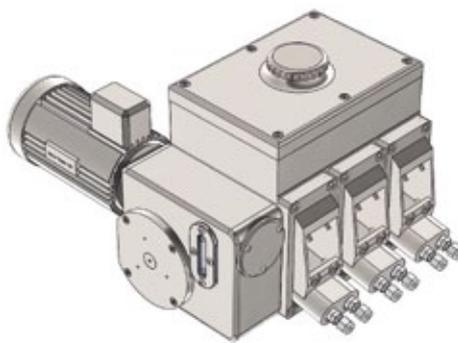


Model HD drive versions



Transmission drive

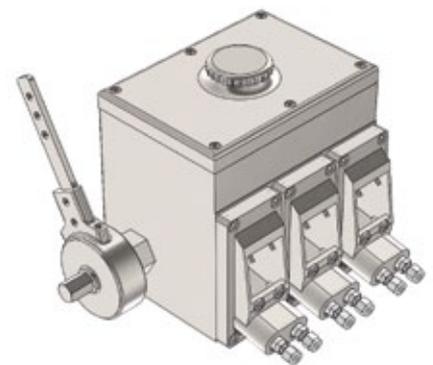
The transmission can be adapted to customer needs with different gear ratings. The drive shaft can be fitted with different adapters and diameters. The input shaft can be placed up- / downwards, front- / backwards or to the side. The transmission can be mounted on the left- or right-hand-side of the lubrication box. This makes it possible to drive the system by chain, gearwheel, coupling or a belt.



Motor- / Transmission drive

A matching electric drive with an adaptable mounting position can be configured to confined spaces. The motor can be delivered with one- or three-phase power connection. Special versions support the adjustment of variable engine speeds.

Technical realization conform to ATEX directives are available.



Oscillating swing arm drive

The oscillating swing arm is used to drive the lubrication pump for an alternating drive and can be mounted on the left- or right-hand-side. This is used for example for stuffing lubrication on plunger pumps.

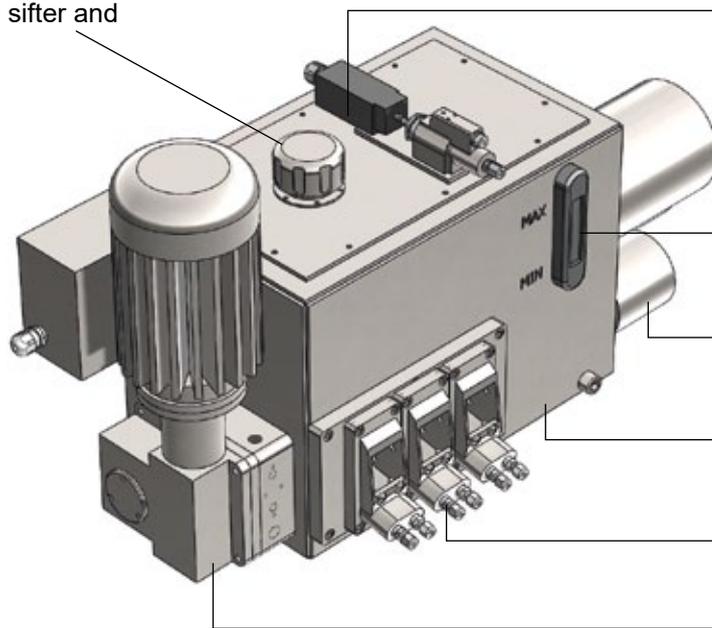
Model HD optional equipment

- All available versions (transmission-, motor- or oscillating swing arm) can be fitted with a hand driven prelubrication.
- Pump outlets are delivered with 6mm, 8mm, 1/4" solderable or solderless fittings.

- All pump outlets will be fitted with high quality check valves for maximum operational security.
- Furthermore all outlets can be equipped with oil returning pressure relief valves.
- Function monitoring can be provided by our optional built in Flow-Switch.

Roesen HD compact oiler

filler neck with sifter and ventilation



Flow-Switch RG 2404B

level-switch

optical level indicator

heating system

supply tank
e.g. 10 gallons

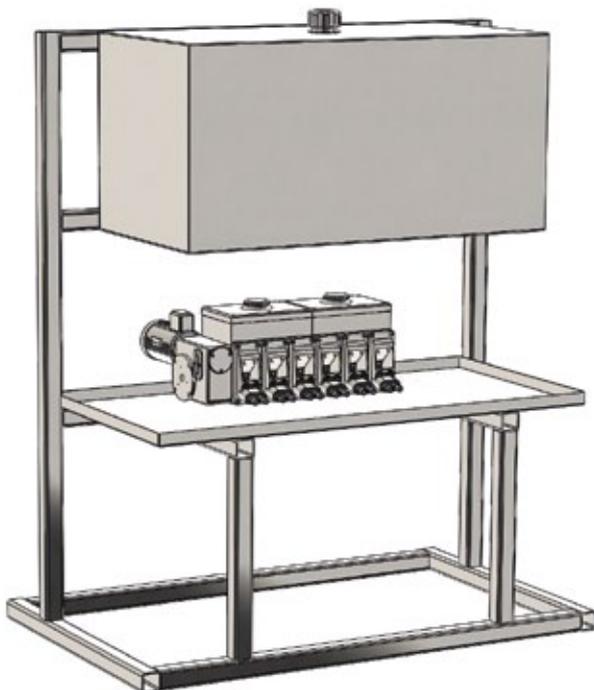
Roesen
HD pump elements

drive unit – motor with
transmission

This design is very compact and suitable for confined space conditions. The lubrication reservoir can be adapted in size and layout to your needs, includes the lubrication elements and is delivered as an entire unit.

Optional components are optical and electrical temperature- and fill level monitoring devices as well as a heating system.

Roesen HD Stand-Alone system



We offer centralized lubrication units as Stand-Alone systems. The main elements of this system are the Roesen Box Lubricators HD II to HD IV. A combination of Roesen models HD and EZ are possible.

The lubricant reservoir will be customized in size and layout to your needs and provided with the right lubrication system as a whole unit. Supply of lubrication from the reservoir is provided by gravitation.

Optional components are optical and electrical temperature- and fill level monitoring devices as well as a heating system.

On request we will provide you with a redundant lubrication unit.

Our pump systems are configured by default for reliable "Pump-To-Point" lubrication. If desired the system can be adapted to a Progressive Divider or Divider Block system.

Roesen Box Lubricator model EZ

This sophisticated model system Gruetzner EZ is built for lubrication with oils and emulsions up to 2170psi counter pressure. It is characterized by a third piston valve which ensures gas free fluid flow. Depending on the design it provides up to 20 individually adjustable lubrication points with a feed rate up to 0,02in³ per stroke/point. All oils and emulsions with a viscosity range from 25 to 3000 cSt – also food grade oils – are usable.

Due to the modular design and “Pump-to-Point” of the Roesen Box Lubricator EZ we can customize to a large variety of plants and drive systems. Because of the force controlled double-acting conveyor and metering piston a Roesen Box Lubricator is ensured to run up safely – also after a longer downtime.



Roesen Box Lubricator system
Gruetzner EZ VIII with gearbox

Box Lubricator Gruetzner model EZ for up to 2170psi

- housing, pump body and crankshaft bearings are made of cast iron (EN-GJL-250)
- suitable for oils and emulsions
- force controlled
- unpressurized visual control
- precisely adjustable
- designed for economical, reliable continuous operation
- drive systems:
 - rotating, oscillating or motor driven
- up to 20 lubrication points
- flow rates up to 0,02in³ per stroke / line
- up to 2170psi counter pressure
- includes test certificate according to DIN EN 10204-3.1

Specially designed models:

- with Flow-Switch
- with overpressure valve
- with pre lubrication system
- with heating system
- with ATEX realization



Roesen Box Lubricator
System Grütznert EZ II

Roesen Box Lubricator EZ function

The control piston (61) follows the in-stroke of the allocating piston (60) until it reaches the adjustable stop, provided by the carrier (62). Depending on the detent position of the regulation screw (64) a vacuum develops which sucks up oil, indicated by the direction of the arrow, into the cylinder. There will always be more oil sucked up than needed. Excess oil is sent back to ensure a compensation of the flow rate of different viscous oils. The oil is pumped to the visual flow control (b) where it visibly returns to the control basin (c) of each lubrication outlet and is accessible for flow calibration. The control basin (c) feeds the pump piston (59a) with oil which is provided over the piston valve (65) to the outlet (52).

After the pump stroke is completed the piston valve (65) is mechanically closed through a lever (23), actuated by a cam (d) on the camshaft (28). Any kind of oil slippage is conducted by relief grooves in the pump piston (59a) and piston valve (65) back into the control basin (c). Therefore any unregular pump activity is visible.

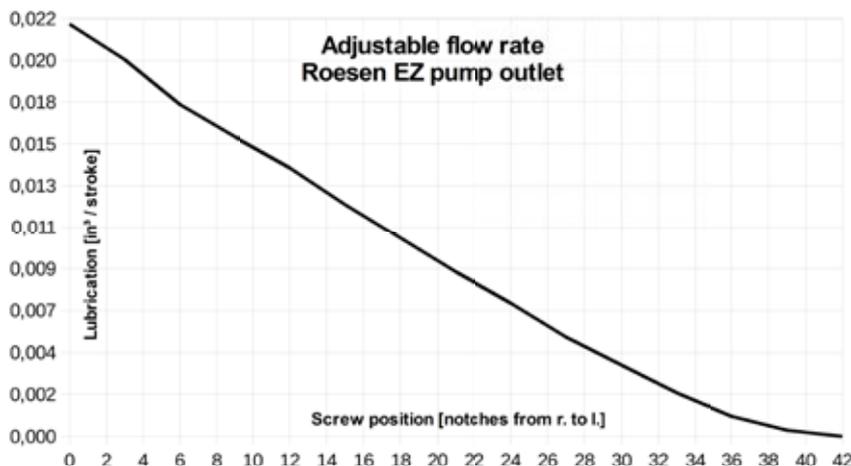
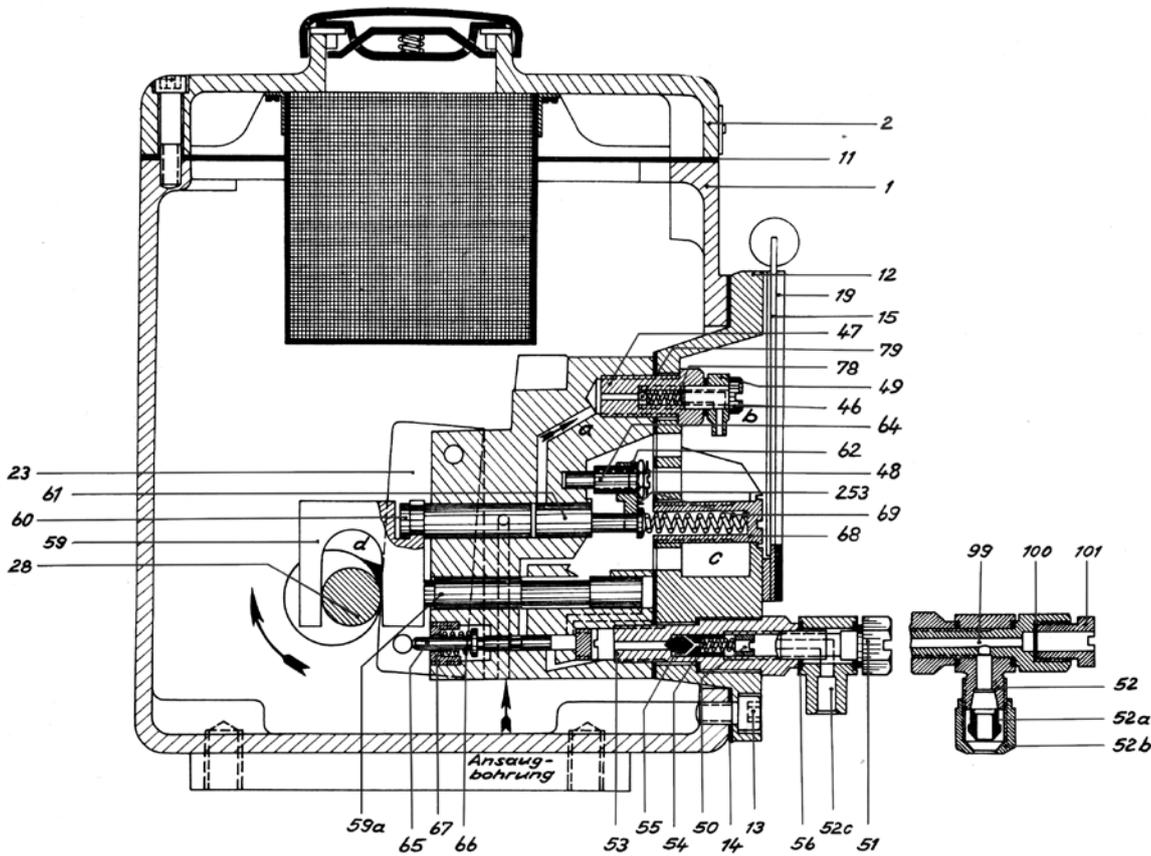
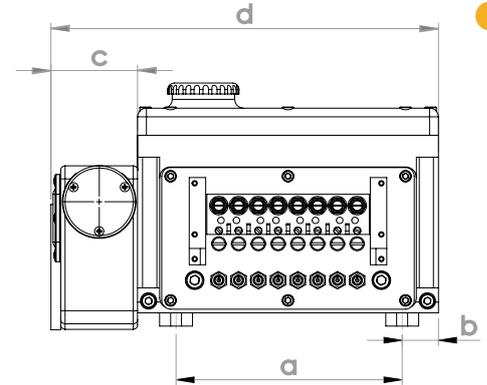


Diagram for a Roesen Box Lubricator system Gruetzner EZ

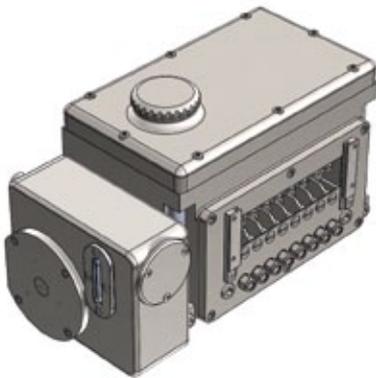
Roesen Box Lubricator model EZ

Model EZ case designs

Size	Lubrication points	Volume Ltr.	a (mm)	b (mm)	c (mm)	d (mm)	width (mm)	height (mm)
EZ II	2	3,8	134	44	94	317	202	200
EZ II	4	3,8	134	44	94	317	202	200
EZ III	6	4,5	170	44	94	353	202	200
EZ IV	8	5,2	206	44	94	389	202	200
EZ V	10	5,9	242	44	94	425	202	200
EZ VI	12	7,3	278	62	112	497	202	200
EZ VIII	14	8,7	320	77	127	569	202	200
EZ VIII	16	8,7	320	77	127	569	202	200
EZ X	18	10,1	400	73	123	641	202	200
EZ X	20	10,1	400	73	123	641	202	200

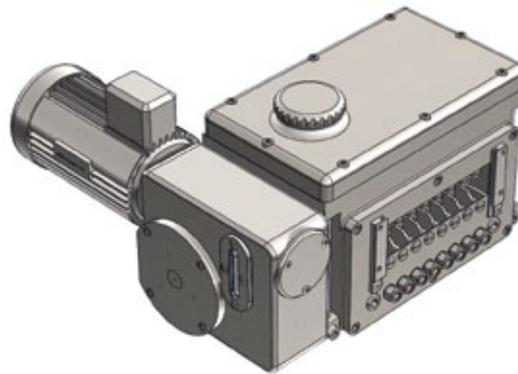


Model EZ drive versions



Transmission drive

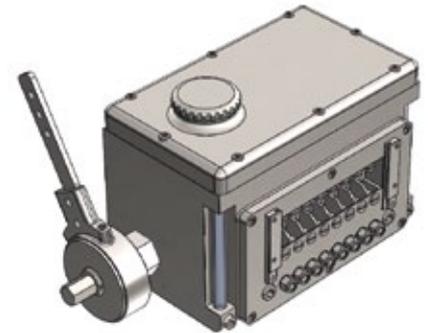
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Motor- / Transmission drive

A matching electric drive with an adaptable mounting position can be configured to confined spaces. The motor can be delivered with one- or three-phase power connection. Special versions support the adjustment of variable engine speeds.

Technical realization conform to ATEX directives are available.



Oscillating swing arm drive

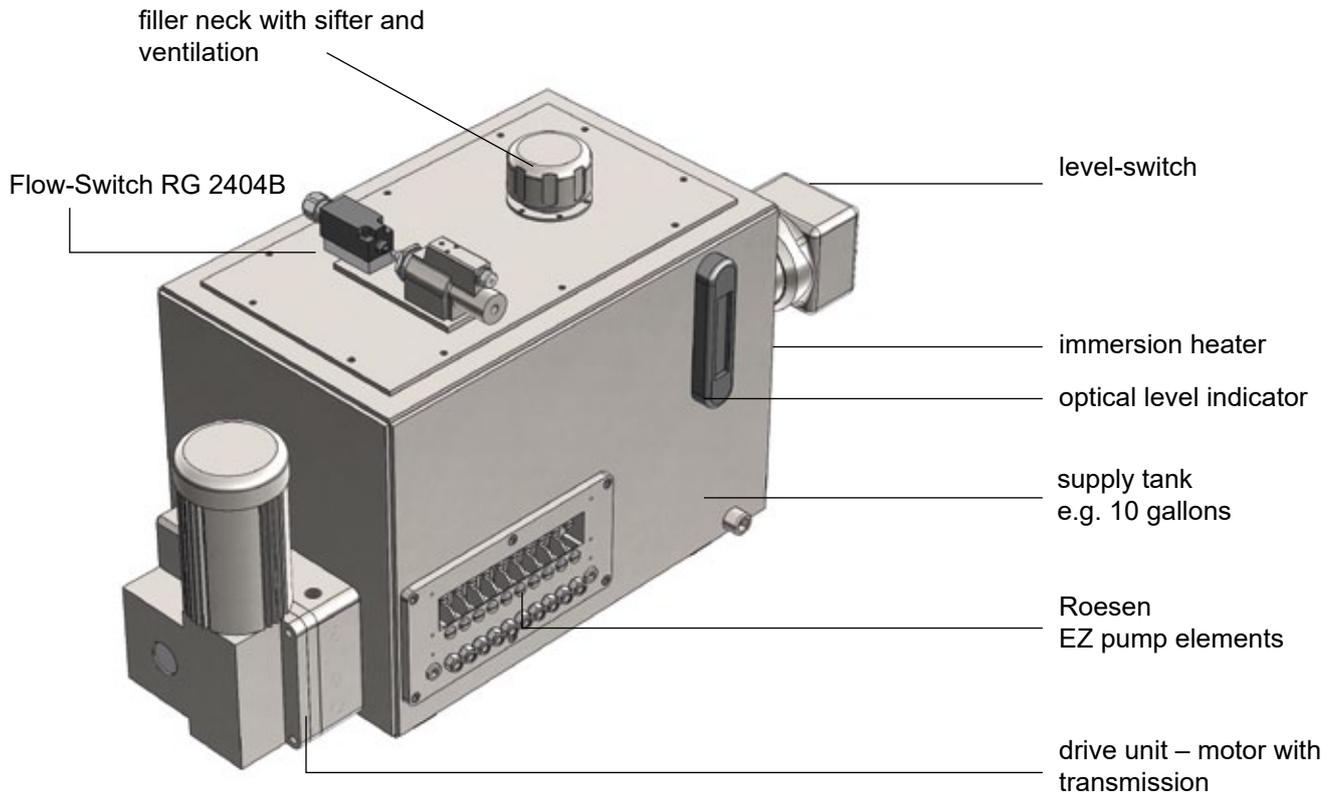
The oscillating swing arm is used to drive the lubrication pump for an alternating drive and can be mounted on the left- or right-hand-side. This is used for example for stuffing lubrication on plunger pumps.

Model EZ optional equipment

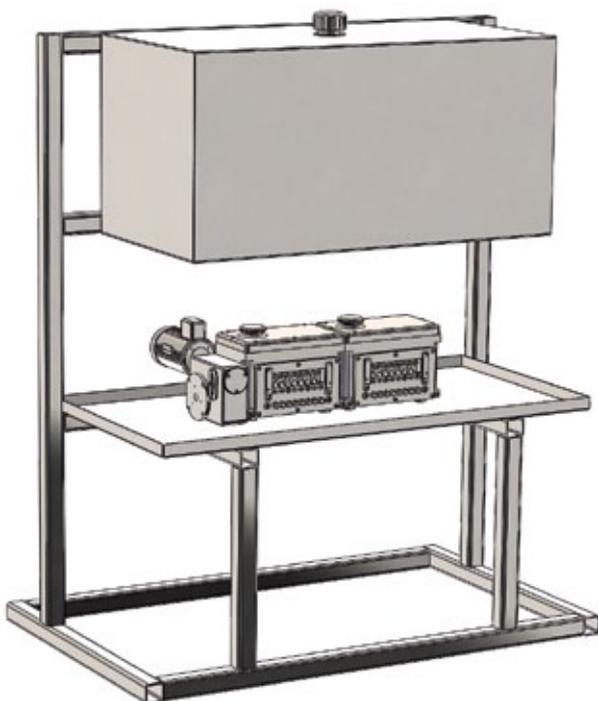
- All available versions (transmission-, motor- or oscillating swing arm) can be fitted with a hand driven prelubrication.
- Pump outlets are delivered with 6mm, 8mm, 1/4" solderable or solderless fittings.

- All pump outlets will be fitted with high quality check valves for maximum operational security.
- Furthermore all outlets can be equipped with oil returning pressure relief valves.
- Function monitoring can be provided by our optional built in Flow-Switch.

Roesen EZ compact oiler



Roesen EZ Stand-Alone system



We offer centralized lubrication units as Stand-Alone systems. The main elements of this system are the Roesen EZ II to EZ X Box Lubricators. A combination of Roesen EZ and HD are possible.

The lubricant reservoir will be customized in size and layout to your needs and provided with the right lubrication system as a whole unit. Supply of lubrication from the reservoir is provided by gravitation.

Optional components are optical and electrical temperature- and fill level monitoring devices as well as a heating system.

On request we will provide you with a redundant lubrication unit.

Our pump systems are configured by default for reliable "Pump-To-Point" lubrication. If desired the system can be adapted to Progressive Divider or Divider Block systems.



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