

# oil lifter and pressure pumps

Heating technology





## Heating Oil, Extraction and Pressure Units

Eckerle heating oil conveying systems can be used universally, from supplying traditional oil-burning heaters to state-of-the-art oil condensing oil burners. A distinction is made here between pressure and extraction pump units.

**Pressure units** are installed close to the tank (no more than three metres of suction height). They draw the oil through independently and, depending on the model, push it up to a height of 26m.

A distinction is made between permanently running pump systems (e.g. SK9E/FP8E) and intermittently running systems, which are designed for charging operation. This makes them more energy efficient and also more durable.

**Extraction units** are installed close to the consumer. They draw the oil through independently and, depending on the model, up to a height of 9.5m.

A distinction is made between consumption or level-controlled systems (e.g. SP32) and systems which are controlled by the consumer and which operate alongside them (e.g. SP8).

In the pipe between the tank and the pump there is either a vacuum or suction pressure. This means that a possible leak in the suction pipe has no effect on the peripheral equipment.

Our oil supply systems are equipped with extensive safety features and certified according to DIN EN125141:05.2000.



### Pressure Pump Assembly

#### Description

With electromagnetic piston pump, adjustable in four different flow rates and self regulating pressure control. The safety housing has a pressure relief valve that opens to the suction side. Ready-to-plug-in with mounting strip, cable connections 8 x 1 mm

#### Applications

The unit can be used for different applications by changing the position of a jumper on the pump's PCB.

- Version SK9E: Pressure pump for systems with one or more oil ovens to be used as a permanent operating pump during the heating season (not usable for full-year operation)
- Version FP8E: Pressure pump for oil burners in one-line systems or automatic oil evaporation burners (e.g. for tiled stoves) with electronic control

#### SK9E/FP8E

#### Technical Data

Pump unit (L x W x H)	180 x 98 x 200 mm
Electrical spec.	230 V/50 Hz, 25 VA
Max. delivery rate	4 – 12 l/h
Max. delivery height	15 m
Max. suction height	3 m
Weight	2 kg
Special feature	Integrated check valve on the suction line



### Pressure Storage Assembly

#### Description

With electromagnetic piston pump and path-dependent control and safety device. The integrated accumulator is filled depending on the pressure of the piston pump and thus reduces energy consumption.

The KD10 has a pressure gauge, built-in suction filter and suction-side check valve. A safety oil pan with emergency shut-off is installed. The pump comes ready-to-plug-in and is supplied with mounting strip, cable connections 8 x 1 mm.

#### Applications

- Central oil distribution systems up to 12 consumers, suitable for full-year operation
- Feeding pump for oil burners in single-line systems

#### KD10

#### Technical Data

Pump unit (L x W x H)	180 x 150 x 280 mm
Electrical spec.	230 V/50 Hz, 40 VA
Max. delivery rate	14 l/h
Max. delivery height	14 m
Max. suction height	3 m
Weight	4 kg
Special feature	Integrated check valve on the suction line



## Pressure Storage Assembly

### Description

The aggregate consists of a powerful but noiseless inner gear pump, driven by an electric motor. The pump fills a 5 l membrane accumulator. The switch control works dependently on the pressure. In case of a line break, the unit will be automatically switched off by a safety switch (< 2 bar). The check valve protects the suction pipe against a pressure increase and prevents any fuel oil release. An integrated recovery security tank with a leakage sensor assures additional safety. This system integrates a filter on the suction line. The function of the pump is completely monitored, with a status indication of the operation status on a front screen. The cover is easily removable and protects the device against dust and humidity. Suction and pressure connections are designed for copper pipes of 10 x 1 mm. The device is delivered with installation material and electrical plug.

### Applications

- Central oil supply systems for housing estates with several oil ovens (> 12 users) suitable for full-year operation.
- Automatic supply of oil burners, combined heat and power stations or similar devices in single line systems up to 1000 KW.

## DSA100

### Technical Data

Pump unit (L x W x H)	530 x 240 x 510 mm
Electrical spec.	230 V/50 Hz, 130 VA
Max. delivery rate	100 l/h
Max. delivery height	26 m
Max. suction height	3 m
Max. pump pressure	3,2 bar
Extension tank	5l content
Weight	ca. 21 kg
Special feature	Integrated check valve on the suction line



## Pressure Pump Unit

### Description

The units consist of a high-quality internal gear pump with a built-in, adjustable pressure relief valve (except FPK200W), suction filter (except FPK200W) and single-phase AC motor and plastic coupling.

### Applications

The Eckerle pressure pump units FPK40W / 120W and 200W are used as feeder units for heating oil consumers with their own power circuit, such as pressure atomiser burners, CHPs, or for filling day tanks with level controls.

## FPK 40 W/120 W/200 W

### Technical Data

FPK 40W/120W Pump unit (L x W x H)	190 x 123 x 145 mm
FPK 200W Pump unit (L x W x H)	241 x 122 x 142 mm
Electrical spec.	230V/50Hz, 130 VA
Max. delivery rate	50 l/120 l/200 l
Max. delivery height	40 m
Max. suction height	5 m
Suction connection	G1/4 "
Pressure connection	G1/8 "
Suction and pressure connection	8 x 1 mm (FPK200W)



## Suction Pump Assembly

### Description

With powerful electromagnetic piston pump, float-, control- and safety device, built-in suction filter and integrated check valve, 1,6 l oil storage tank, LCD display with permanent function-control feedback. The pump is equipped with an additional redundant safety system that disconnects the pump from the mains. Safety-pan with switch off in the event on an internal leak and an integrated thermal system monitoring. It comes ready-to-plug-in with mounting strip, cable connections 8 x 1 mm.

### Applications

- Pump aggregate for fan burner up to 80kW at 7 m suction height
- Oil / tiled oven
- For single-line systems only

## SP 32/01

### Technical Data

Pump unit (L x W x H)	217 x 168 x 255 mm
Electrical spec.	230 V/50 Hz, 40 VA
Max. suction height	8 l/h at 7 m suction height or 16 l/h at 4 m suction height
Weight	2 kg
Special feature	Integrated check valve on the suction line



## Suction Pump Assembly

### Description

The first suction pump for oil fired fan burners that operates in a closed circuit. This system offers a 100% non-smelling oil supply. Provided with electromagnetic piston pump, safety device, suction filter and check valve. Hydraulic connectors: Suction line 10 x 1 mm, burner sided 2 x 3/8" male thread. Built-in safety oil pan with emergency shut-off function!

### Applications

- Suction pump aggregate running 100% closed circuit for fan burners up to 80 kW at 7 m suction height
- Easy installation via 7-pin-plug for burners
- Suitable for single-line systems only
- Perfect match for self-contained central heating

## SP 8

### Technical Data

Pump unit (L x W x H)	250 x 130 x 250 mm
Electrical spec.	230 V/50 Hz, 40 VA
Max. suction height	8 l/h at 7 m suction height or 16 l/h at 4 m suction height
Weight	3,4 kg
Special feature	Integrated check valve on the suction line



## Suction Pump Assembly

with higher flow rate

### Description

With two high performance electromagnetic piston pumps, float-, control- and safety device, built-in suction filter and check valve, 7,3 l oil storage tank and LCD display with permanent function-control feedback. The aggregate is equipped with an anti-syphoning valve (outlet sided), alternatively in mechanical version M (adjusted at 1.80 m) or electrical version E (control/ release by consumer).

Furthermore an additional redundant safety system to disconnect the pump from the mains power. A safety drip pan with emergency shut-off and an integrated thermal system monitoring. The pump is delivered ready-to-plug-in and supplied with mounting strip, cable connections 10 x 1 mm.

### Applications

- Full-automatic suction pump aggregate for feeding oil burners up to max. 50 l/h nozzle capacity
- For single-line systems only

## SP32/02-80-M/-E

### Technical Data

Pump unit (L x W x H)	400 x 230 x 320 mm
Electrical spec.	230 V/50 Hz, 80 VA
Max. suction height	80 l/h at 2 m suction height or 20 l/h at 7 m suction height
Weight	7 kg
Special feature	Integrated check valve on the suction line
Options	<b>SP 32/02-80-E</b> with electrical anti-syphoning valve <b>SP 32/02-80-M</b> with mechanical anti-syphoning valve



## Suction Pump Assembly

with higher flow rate

### Description

High performance-internal gear pump (gap compensated), motor, float-, control- and safety device, built-in suction filter, 8 l oil storage tank, built-in safety oil pan with separate electrical detection, LCD display with permanent function-control feedback, vacuum gauge, two separate feeding lines wether with electrical or mechanical or without antisiphoning-valves (outlet sided), all pipe connectors are located above the security pan, pipe connections for 15 x 1 mm pipe on suction line, 2 x (10 x 1 mm) on pressure side.

### Applications

- Full-automatic suction pump aggregate for supplying one or several oil burners up to 180 l/h nozzle capacity
- For single-line systems only.

## SP32/03-200-M/-O/-E

### Technical Data

Pump unit (L x W x H)	460 x 245 x 635 mm
Electrical spec.	230 V/50 Hz, 150 VA
Max. suction height	215 l/h at 4 m suction height or 180 l/h at 9,5 m suction height
Weight	20 kg
Options	<b>SP 32/03-200-M</b> with mechanical anti-syphoning-valves <b>SP 32/03-200-E</b> with electrical anti-syphoning-valves <b>SP 32/03-200-O</b> without anti-syphoning-valves

All indicated data serve alone the product description and are not as characteristics in the legal sense to be understood. Subject to alterations.