

P 13 piston pump – complete data

P 13 piston pump

Model	P 13 ^{DMR}	P 13 ^{DMR}	P 13 ^{EMR}	P 13 ^{EMR}	P 13 ^{SEMR}
Type of pump	mechanical piston pump KA 139				
Output (KA 139)*	15-65 l/ min		30-75 l/ min		30-75 l/ min
Output (KK 139 - optional)	25-115 l/ min		35-90 l/ min		30-120 l/ min
Delivery pressure (theor.)*	40 bar		40 bar		40 bar
Delivery distance*	up to 300 m		up to 300 m		up to 500 m
Delivery height*	up to 100 m		up to 100 m		up to 100 m
Air compressor	2-cylinder compressor, 3.5 bar, 300 l/ min suction capacity				
Engine	2-cylinder diesel engine 12.5 kW at 2,800 rpm		e-motor 400 V 7.5 kW at 2,900 rpm		e-motor 400 V 11 kW at 2,900 rpm
Weight	1,060 kg	990 kg	1,000 kg	990 kg	1,020 kg
Length	3,530 mm	3,000 mm	3,530 mm	3,000 mm	3,130 mm
Width	1,640 mm	1,640 mm	1,640 mm	1,640 mm	1,640 mm
Height	1,450 mm	1,450 mm	1,450 mm	1,450 mm	1,450 mm
Fill height	1,300 mm	1,300 mm	1,300 mm	1,300 mm	1,300 mm
Part no.	111 460.020	111 460.010	111 460.040	111 460.030	111 460.060

* Information is based on experience values and is dependent on the material used.

Standard equipment P 13

2-cylinder air compressor, positive-action mixer, agitator in hopper, standard spray gun NW 35, box-type screen NW 10, truck automatic overrun brake for permissible maximum speed of 80 km/ h (130 km/ h), tools and truck coupling (passenger vehicle coupling, on request)

Further accessories

Spray gun

NW 25-40 made of glass-fibre reinforced plastic (20, 21)

straight, short 402 592
angled, long 404 479

Putzmeister Mörtelmaschinen GmbH

is a member of the Putzmeister Group with headquarters in Aichtal near Stuttgart.

Since 1958, Putzmeister has been a manufacturer and worldwide supplier of mortar machines, fine plaster spray and paint pumps, concrete pumps, tunnelling machines, industrial pumps, large-robot technology for cleaning complex systems and plants, and professional high-pressure cleaning systems.

NW 35 made of aluminium (22-24)

straight, short (stand.) 001 306.004
angled, short 209 307.009
angled, long 209 308.008

Mortar nozzles

12 mm ø 214 753.004
14 mm ø 214 754.003
16 mm ø 214 755.002
18 mm ø with collar 001 329.007
20 mm ø with collar 001 330.009

Refurbishing spray gun (18)

1", with 12 mm nozzle 207 283.002
V 35/R1", with coupling 203 135.002
1.5", with 12 mm nozzle with coupling 433 461

Recommended mortar lead (40 m)

2 x mortar hose 207 617.005
13.3 m, 50 mm ø
1 x mortar hose 207 616.006
13.3 m, 50/ 35 mm ø
1 x air hose 40 m, 1/2" 214 734.007
Spray gun, short 700 ^m/m 209 307.009

Mortar hoses

13.3 m, 35 mm ø, NW 35 207 615.007
10 m, 25 mm ø, NW 25-40/ 35 207 809.004

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P 13

The double-piston pumps in the P13 series are robust, extremely hard-wearing, high-performance machines suitable for use on any construction site.

They are exceptionally versatile and can handle all types of site-mixed mortar and Factory produced mortar up to 8 mm grain size. These highly reliable machines can be universally applied, particularly for heavy-duty continuous operation using electric or diesel power units.



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P 13 piston pump – veritable “masters of the trade” when it comes to placing site-made and factory made mortars

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General



For more than 40 years the P 13 piston pump has been renowned for its reliability, sturdy design, long service life, minimum costs for wear and tear and maximum performance.

This type of plastering machine is to be found on construction sites the world over where they are often put to use in extreme conditions.

Low operating costs and simple and unproblematic application have contributed to their reputation as being “veritable masters in the plastering business” as the translation of the name of the German company “Putzmeister” already implies.

Fields of application



The P 13 can handle almost all of the commercially available types of plaster and mortar. They can be used for plastering, rendering, wet spraying, pumping, filling, injecting and compressing – the range of applications is practically endless.

Many companies are still using or have recommenced producing their own mixes themselves on the construction site.

Mortars prepared in this way have two decisive advantages: on the one hand, the costs are reasonably low, as sand and binders can be obtained locally. On the other hand, they can be prepared exactly to suit the material from which the wall is made (e.g. clay bricks) and local weather conditions.

■ Spraying and pumping

The P 13 is a complete mixing and pumping unit incorporating

a positive-action mixer, pump and compressor allowing a particularly wide range of applications. For example, pre-spray mortar, base-coat plaster, texture plaster, renders, scratch plaster, factory-dry and factory-wet mortar (Fig. 2-5).

■ Injecting and compressing

The P 13 can handle cement mortars with up to 8 mm grain size and at 40 bar maximum pump pressure (Fig. 7). Cement and bentonite slurries are equally easy to mix and pump.

■ Filling and back-filling

The P 13 also demonstrates its qualities when used for filling large volumes using long hoses (Fig. 6).

It can also be used for filling in cavity walls.

■ Refurbishing

The P 13 is particularly suitable for use when applying high-quality, large-grain mortar (e.g. cement-bonded refurbishing mortar up to 8 mm) (Fig. 8).

A further ideal field of application for the P 13 is shotcreting using up to grain size 8 mm.

Operation



Piston pumps operate according to the principle “simple but functional” – an ideal combination. The simple and complete design of the pump, drive unit, positive-action mixer, agitator housing and compressor make the P 13 the plastering machine par excellence.

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In addition to standard operations such as base-coat plastering or spray plastering, the P 13 is excellently suited for use where large volumes must be pumped, for example, when infilling formwork.

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Here, the P 13 is seen raising carriageway slabs using a cement mortar.

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Coarse-grain shotcrete (here 8 mm) can only be handled using a P 13 type piston pump.

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P 13 piston pump – robust, reliable and hardwearing



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■ The high-pressure piston pump

A standard fixture of the P 13 is the KA 139 double-piston pump. It is capable of pumping up to 75 l/ min. A working piston and a compensating piston are driven via a camshaft. The compensating pump allows the “air chambers” which are required in single-piston pumps to be dispensed with. Even when operating at great pumping heights and pressures, this principle guarantees keeping material flowing smoothly and evenly. This also means that the spray gun is practically pulsation-free thus guaranteeing a clean and smooth spray pattern.

The spraying air for the P 13 is simultaneously control air so the pump can be easily switched on and off from the spray gun.

The particularly low-wear P 13 piston pump is made of top-grade, robust components, for example a hard-chromium plated delivery cylinder. Wear and tear is optimal, likewise operating costs and thus the machine boasts a particularly long service life.

A pressure-relief valve also contributes to operational safety as it automatically ensures that the pump is switched off when reaching the set pressure. If pressure falls below this set value, then the pump restarts automatically. The P 13 can therefore also be used as an injection pump with maintained pressure.

Should a higher performance be required, the KK 139 double-piston pump can be installed. This features 2 working pistons doubling the performance of the KA pump.

■ The robust power units

The P 13 is available with 2 different kinds of drive units: The DMR version

on features a 2-cylinder 12.5 kW diesel engine that is particularly reliable and extremely robust. The EMR version features a 400 V electric motor with either 7.5 kW or 11.5 kW (SEMR version). These models are especially suitable for use in environments where noise levels must be taken into consideration. Once installed, the electric motors are practically maintenance-free.

■ The positive-action mixer

The positive-action mixer makes sure that the quality of the mix is optimal. The large, practical discharge opens the mixer directly downwards into the bottom mortar hopper. The P 13 allows continuous pumping with a mixer volume of 150 l and a mortar hopper volume of 200 l.

The mortar hopper features a vibratory screen that is moved mechanically. It retains oversize particles and ensures a smooth flow of mortar.

The rotating agitator in the bottom of the mortar hopper prevents the mortar from “settling”.

The mixer shaft and agitator shaft are driven by V-belts that can be switched on and off using a V-belt tensioner.

Yet another good example illustrating that practical solutions do not necessarily result in higher costs.

■ The engine canopy

The enemies of any machine are dust and mortar splashes. The motor, compressor and gears of the P 13 are protected by means of a sturdy canopy that also reduces the noise level. As the operating components such as switchgear, mixer flap, clutch and mixer shaft drive



Motor, piston pump and compressor are all readily accessible beneath the raised canopy.

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The screen features a mechanical vibratory drive installed in the galvanized mortar storage hopper. It may be removed for cleaning.

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The P 13 is one of the low-maintenance plastering machines. Servicing the machine is done in next to no time as the few wearing parts can be quickly replaced.

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P 13 piston pump – the flexible plastering machine using electric or diesel power units ... and lot of accessories

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are all exposed when the canopy is raised, the hood remains closed during operation.

Pressure gauge (19) with grease buffer	
0-25 bar	426 387
0-40 bar	420 989
0-100 bar	426 388

T-piece NW 50 for connection to a pressure gauge 071 554.006

Variants and accessories



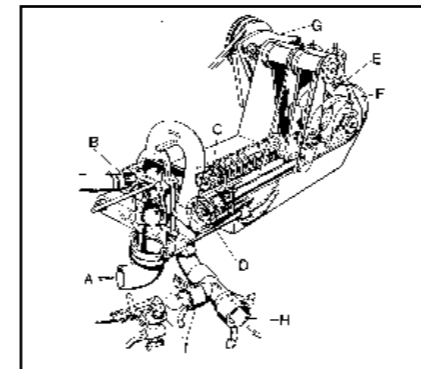
Piston pump variants

KA 139 (series)
max. 75 l/ min output,

1 working piston, 1 compensating piston

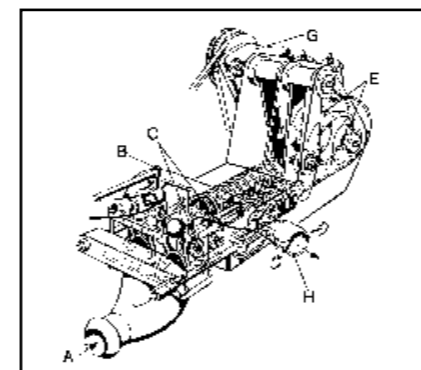
Air hoses	
10 m, 1/2"	001 682.003
20 m, 1/2"	001 665.004
40 m, 1/2"	214 734.007

Construction site extension leads 5x4 mm² CEE plug, coupl. 32 Amp.	
25 m	062 922.003
50 m	062 923.002



Miscellaneous	
Spray gun (14)	000 210.007
Hose hooks (15)	
Leather	000 206.008
Manuel lever (16)	
Grease gun	000 211.006
Grease cartridge (400 g)	000 113.007
Cleaning brush	000 100.007
Wheel clamp	H 221.730.8010

KK 139 (optional)
max. 120 l/ min output, 2 working pistons



Water charging fitting with water meter	002 705.002
Sound insulation for P 13 D	002 741.008
Drawbar adapter bent	207 070.008
Truck towing eye for braked design	212 700.004
un-braked design	212 154.003
Vehicle coupling for braked design	212 704.000
un-braked design	212 153.004

Accessories

Sponge balls (17)	
45 mm ø	065 044.001
60 mm ø	000 212.005

Please refer to the following pages for further accessories.

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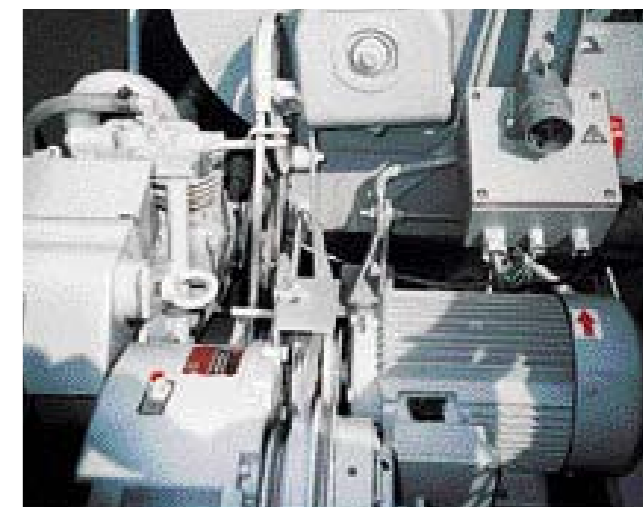
The double-piston pump (here the KK 139 with up to 120 l/ min pump output) means pulsation-free operation of the spray gun.

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The 2-cylinder diesel engine is extremely robust and requires next to no maintenance. Output is 12.5 kW.

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The powerful 400 V electric motor has an output of 7.5 kW and the S-version even 11 kW.

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