

## Product information

### **P Pump Series**

Normal priming,  
magnetically coupled  
impeller-type peripheral pumps  
Material: PVDF

**SCHMITT**

chemical resistant pumps

## Description

### P Pump Series



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chemical resistant pumps

Normal-priming, magnetically coupled impeller-type peripheral pumps

**Application:** The P Pump Series is particularly suitable for the frequency converter operation and for crystallizing media (no air can get inside), toxic or environmentally hazardous media. A small amount of gas in the liquid can also be transferred without disrupting the liquid flow.

**Field of application:** Spraying of chemicals through narrow nozzles, Very narrow installation space in plants, electro-plating technology, waste water treatment, laboratory technology, transfer through close meshed filters, metering equipment, laboratory and medical technology, circulating pump for heat exchangers, environmental technology

**Materials:** PVDF (polyvinylidene fluoride)

Hermetically sealed

**Max. output rate:** 45 l/min

**Max. discharge head:** 35 m

**Motor power:** 1,1 kW

The P Pump Series is designed according to the peripheral impeller principle. The special impeller and housing geometry enables higher pressures and a linear characteristic. All parts in contact with the medium are made of PVDF (chemical resistant). The power is transmitted contact free and abrasion-free with a magnetic coupling through the closed housing wall („Slot-pot“) to the pump impeller. An encapsulated counter-magnet is built-in inside the impeller. Therefore, a rigid shaft passage is not necessary.

## Types P Pump Series



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chemical resistant pumps

- Advantages:**
- » due to the linear characteristic, this pump can be very precisely controlled and metered
  - » approximately double the pressure at the same size, compared to conventional centrifugal pumps
  - » transfer also possible at rising back pressure e.g. when filters are clogging
  - » building block system with a centric suction port
  - » fully compatible with the MPN Pump Series (with few steps, at location, an MPN Pump Series can be converted to a P Pump Series)
  - » hermetically sealed, absolutely leak-proof the highest chemical resistance
  - » low-maintenance through double hydro-dynamic slide bearings with extra big radii
  - » long lasting and wear resistant (self-centering impeller, therefore no axial thrust)
  - » self-cooling design for the operation under demanding conditions
  - » robust design - vulnerable (floating) axles are not necessary
  - » no metal parts are in contact with the medium
  - » easy to maintain (wear parts can be changed swiftly)
  - » very compact
  - » negative pressure tight for vacuum systems

# Types

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- Materials and Components:**
- » Medium contacting parts are made solid of PVDF
  - » Housing seal alternatively made of FKM, EPDM, FEP or Kalrez®
  - » Slide bearings made of the materials PTFE/ceramic
  - » High-quality electric motors made in Germany

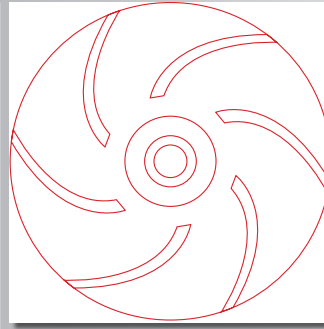
- Material details:**
- » **PVDF:** Polyvinylidene Fluoride, Pure, milky white, not colored (up to +95° C)
  - » **FKM:** Viton® quality, -20...+200° C
  - » **EPDM:** Ethylene propylene diene M-class rubber, Food-safe (FDA, KTW, WRC), -40...+160° C
  - » **FEP:** Fluorinated ethylene propylene with Viton® or silicone core, -60...+200° C
  - » **Kalrez®:** High performance elastomere up to +315° C
  - » **PTFE:** Pure Teflon®, fiber glass or carbon fiber reinforced
  - » **Ceramik:** Highly pure Al<sub>2</sub>O<sub>3</sub>-ceramic 99.7%

### Motor details:

- Standard Motors (stock items):**
- » Three-phase motors: 230/400 V 3ph, 50 Hz, IP 55, insulation-class F
  - » or 277/480 V 60 Hz also with PTC thermistor
  - » Alternating current motors: 230 V 1ph, 50/60 Hz, IP 55, Insulation class F
- Special design models (available):**
- » Special voltages and frequencies
  - » 2-, 4- and 8-pole
  - » UL and CSA execution
  - » Special protection types (e.g. IP 65)
  - » High temperature designs
  - » Special insulation classes (e.g. tropical insulations)
  - » Multi area voltage (e.g. 220-290 / 380-500 V 50 Hz; 220-332 / 380-575 V 60 Hz.)
  - » Additional designs upon enquiry.

# Characteristics

## P Pump Series



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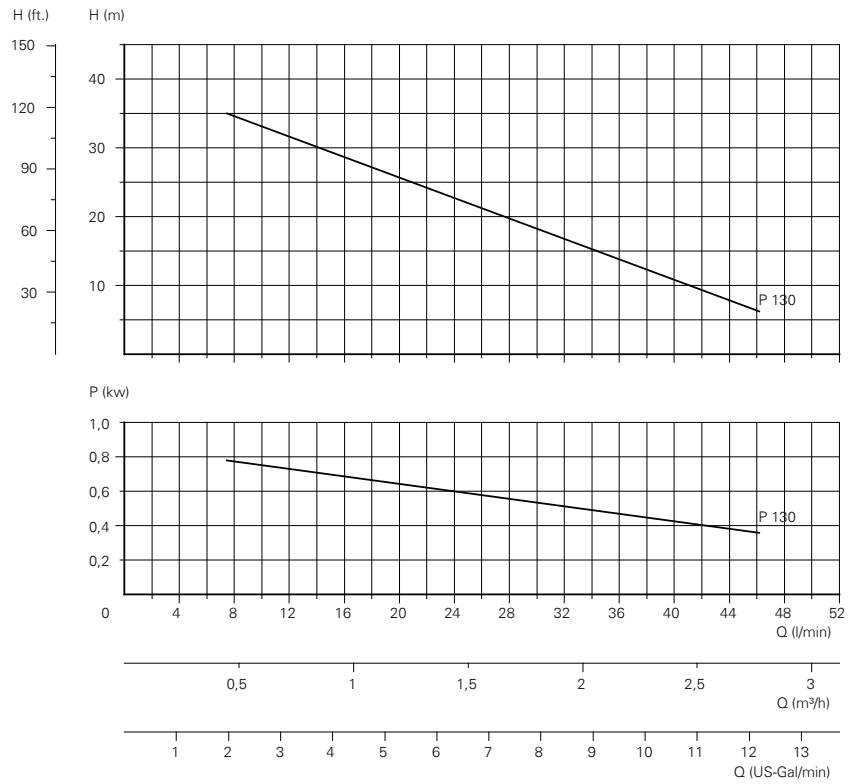
chemical resistant pumps

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### P 130 Pump Series

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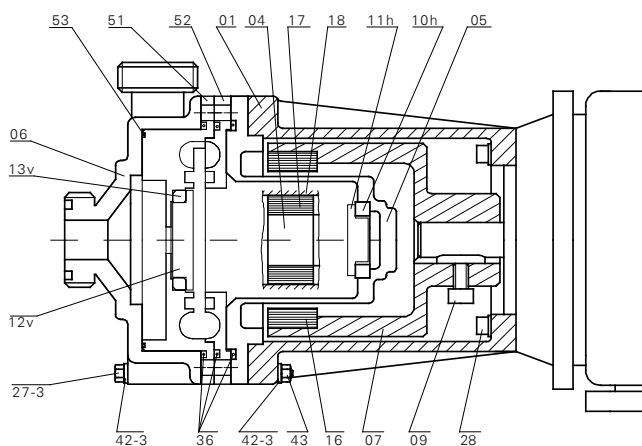
Motor power » P 130: 1,10 kW



Characteristic lines measured with water, 20° C and 2900 Rpm (50 Hz.)

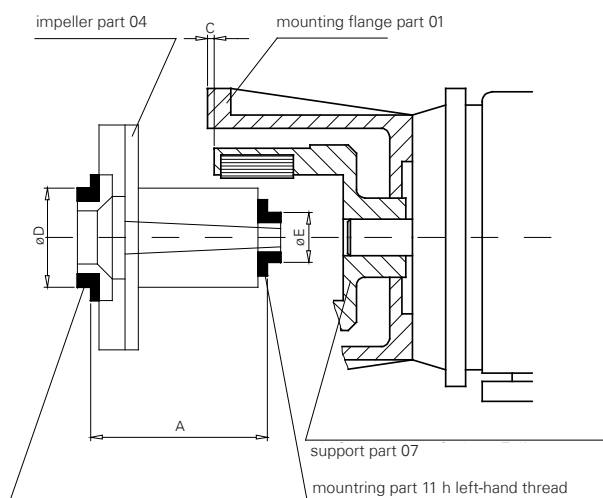
# Parts Descriptions

## P Pump series



Part-no.	Part	Material standard	on request
01	mounting flange	PP	
04/17	impeller with magnet + cover	PVDF	
18	impeller with magnet + cover	PVDF	
11h	mounting (left-hand thread)	PTFE	
12v	mounting (right-hand thread)	PTFE	
05	backplate + stationary ring	PPVDF ceramic	
06	pump housing	PVDF	
36	pump housing seal	FKM*	FEP, EPDM
07	support with magnet + cylinder bolt		
16/09	magnet + cylinder bolt		
27-3	hexagon bolt	A4	
28	cylinder bolt	A4	
42-3	washer	A4	
43	hexagon bolt	A4	
51	pump housing insat + ring	PVDF ceramic	
13v	back plate insat	PVDF	
52	back plate insat	PVDF	
53	o-ring seal	FKM*	

\*FKM = e.g. Viton®

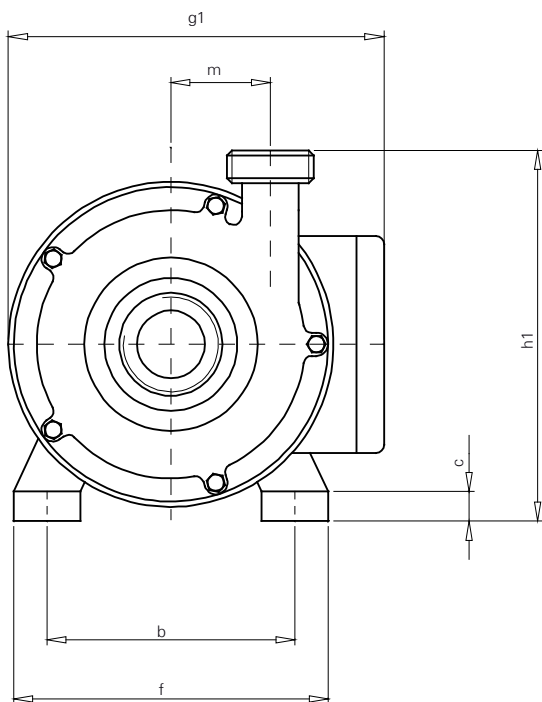


Type	A	C	D	E
P 130	76,1	3,1	33,8	19,8

# Specification

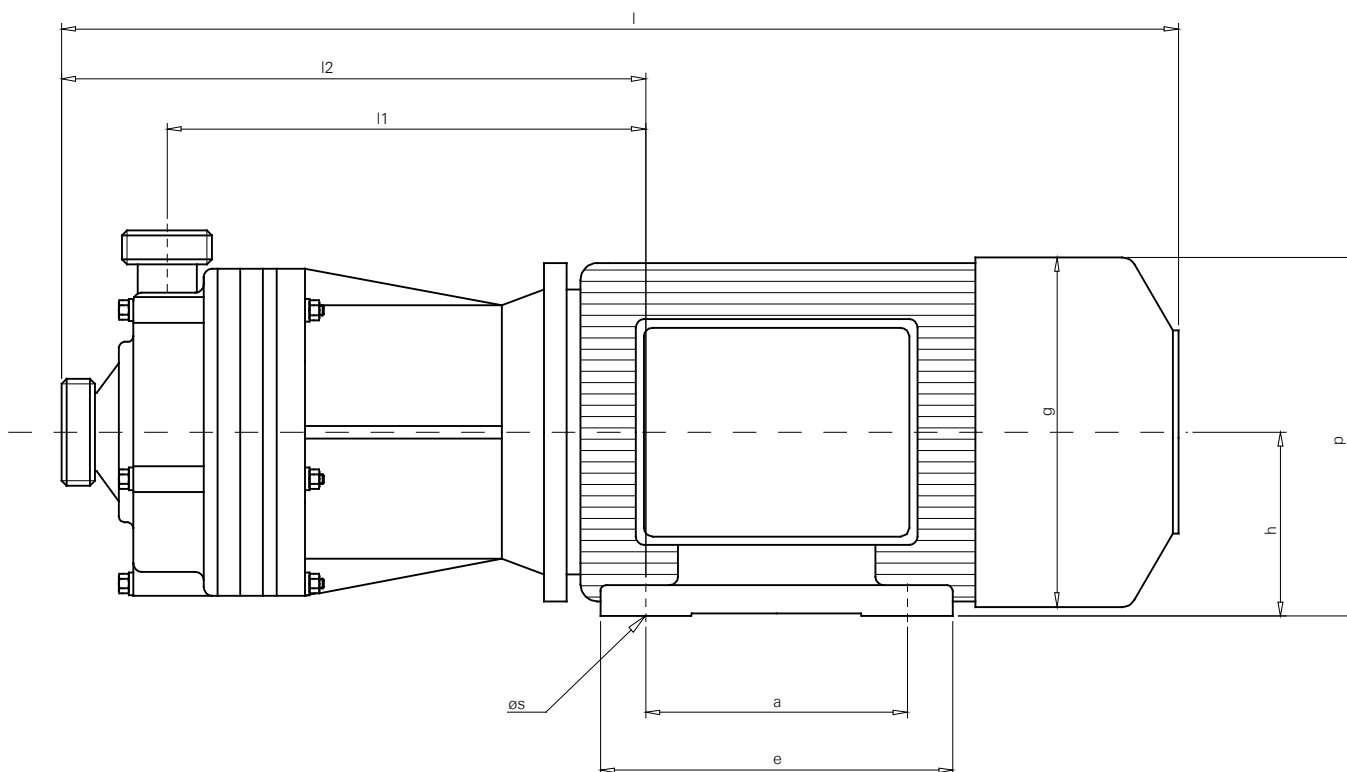
## P Pump Series

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Type	h	h1	l	l1	l2	g	g1	p	a	b	e	f	c	ø s	m	suction conn.		pressure conn.		weights kg
																nom. bore	male thread	nom. bore	male thread	
P 130	80	159	410	174	216	157	215	159	100	125	125	160	11	10	42	20	G1¼"	15	G 1"	12,7

The dimensions of the motors refer to three-phase standard motors.



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**Motors:**

- » all driving motors are to IEC standard operating on 230/400 volts 50 cycles.
- » single phase A.C. motors are also available up to 1,10 kW
- » explosionproof motors can be supplied to the whole range of pumps.
- » special voltages, frequencies and types of protection can be delivered on request.

**Note:**

- » upon request all motors can be supplied for USA standard (UL proof).
- » for each pump also detail handouts are available.

### **SCHMITT**

**Kreiselpumpen GmbH & Co.KG**

Einsteinstrasse 33

D - 76275 Ettlingen

fon: +49 - 72 43 - 54 53 - 0

fax: +49 - 72 43 - 54 53 - 22

info@schmitt-pumpen.de

[www.schmitt-pumpen.de](http://www.schmitt-pumpen.de)



We reserve the right to alter the technical details.  
Dimensions and performance details without guarantee.

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