

## Product information

### **MDN Pump Series**

Normal priming,  
magnetically coupled  
pumps

Material: PVDF  
dry-run-safe

# **SCHMITT**

chemical resistant pumps

## Description

### MDN Pump Series



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normal priming, magnetically coupled pumps

**Applications:** High purity applications

The MDN Pump Series is particularly suitable for toxic or environmentally hazardous media. A small amount of gas in the liquid can also be transferred without disrupting the liquid flow.

**application fields:** Electro-plating technology, wafer production, semiconductor technology, wastewater treatment, printed circuit board (PCB) manufacturing, zoological seawater aquaria, laboratory and medical engineering, solar cell production, environmental technology, wastewater treatment plant dosage, analytical instruments

**Materials:** PVDF (Polyvinylidenfluorid)

hermetically sealed

**Max. output rate:** 140 l/min

**Max. discharge head:** 14 m

**Motor power:** 0,55 kW

In the MDN Pump Series, the motor 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.

**Advantages:**

- » dry-run-safe
- » hermetically sealed, absolutely leak-proof
- » highest chemical resistance
- » robust design
- » low-maintenance through double ceramic ball bearings
- » long-lasting and wear-resistant through axial thrust compensation
- » self-cooling design for the operation under demanding conditions
- » no abrasion into the medium to be pumped (high purity applications)
- » negative pressure tight for vacuum systems
- » no metal parts are in contact with the medium
- » easy to maintain (wear parts can be changed swiftly)
- » universally applicable, quiet and compact

## Types

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#### Materials and Components:

- » parts in contact with the medium are made solid of PVDF, (up to +95° C)
- » housing seal alternatively made of FKM, EPDM, FEP or Kalrez®
- » ball bearings made of SiC
- » 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
- » **SiC**: silicon carbide, without free silicon, sintered

#### Motor details:

##### Standard motors (stock items):

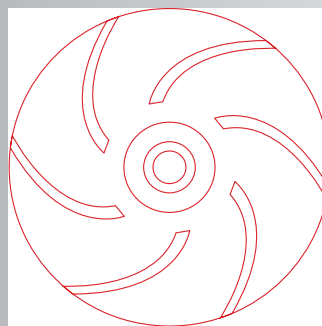
- » three-phase motors: 230/400 V 3ph, 50 Hz, IP 55, insulation class F or
- » 277/480 V 60 Hz also with PTC thermistor
- » alternating current motors: 230 V 1ph, 50/60 Hz, IP 55, insulation class F

##### 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

## MDN Pump Series

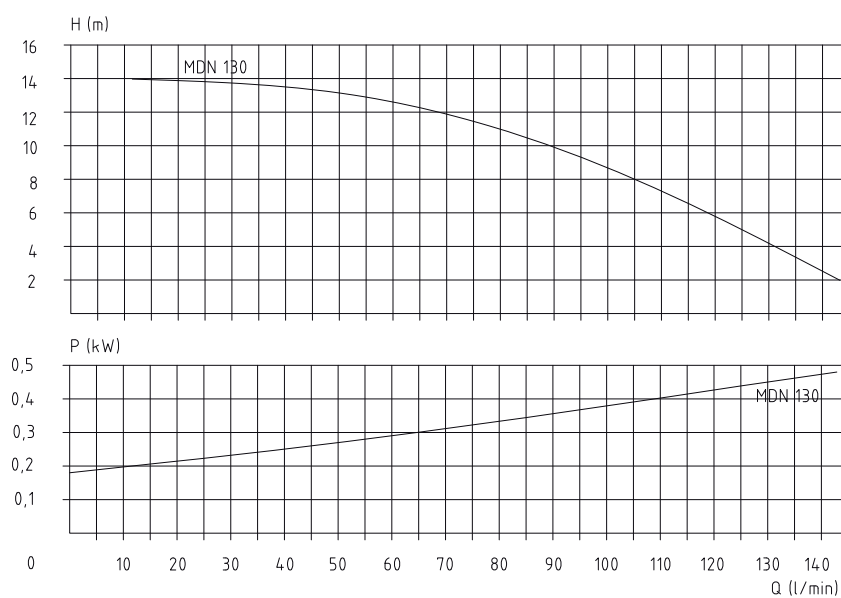


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### MDN Pump Series 130

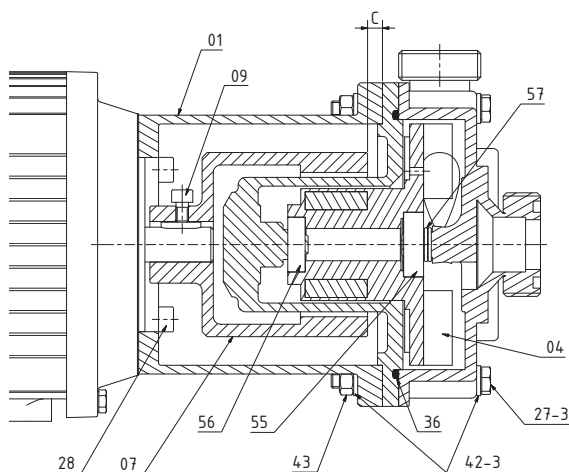
Motor power » MDN 130: 0,55 kW



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

# Parts Description

## MDN Pump Series



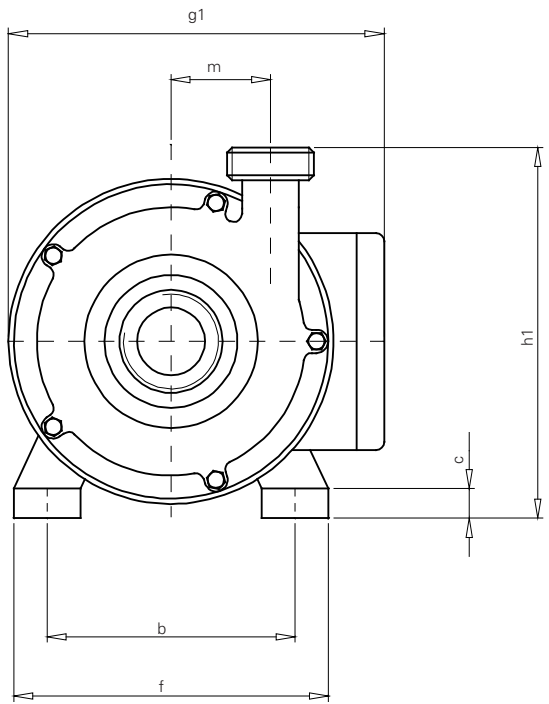
Part-no.	Part	Material	
		standard	on request
01	mounting flange	PP	
04	impeller with magnet and cover	PVDF	
55	front bearing	Si <sub>3</sub> N <sub>4</sub> / PTFE	SiC / PTFE
56	back bearing	Si <sub>3</sub> N <sub>4</sub> / PTFE	SiC / PTFE
57	compensating elements	Viton®	EPDM
05	backplate	PVDF	PP
06	pump housing	PVDF	PP
36	pump housing seal	FKM*	FER, EPDM or Kalrez
07	support with magnet		
09	bolt		
27-3	hexagon bolt	1.4571	
28	bolt	1.4571	
42-3	washer	1.4571	
43	hexagon bolt	1.4571	

\*FKM = e.g. Viton®

Typ	C
MDN 130	6,0

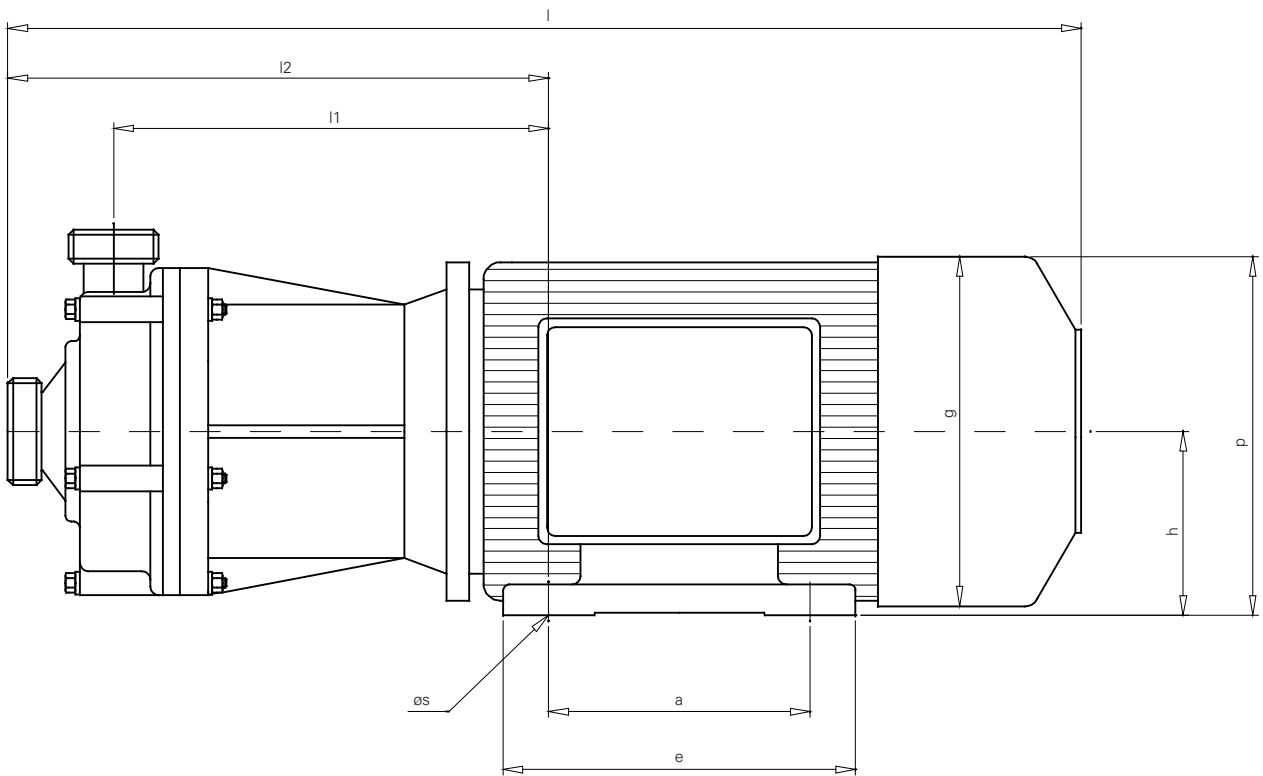
Specification  
MDN Pump Series

chemical resistant pumps



Type	h	h1	l	l1	l2	g	g1	p	a	b	e	f	c	ø s	m	suction conn.		pressure conn.		weight
																nom. bore	male thread	nom. bore	male thread	kg
MDN 130	71	150	372	153	203	139	194	140	90	112	108	140	10	8	42	20	G1 1/4"	15	G 1"	8,6

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**

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

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