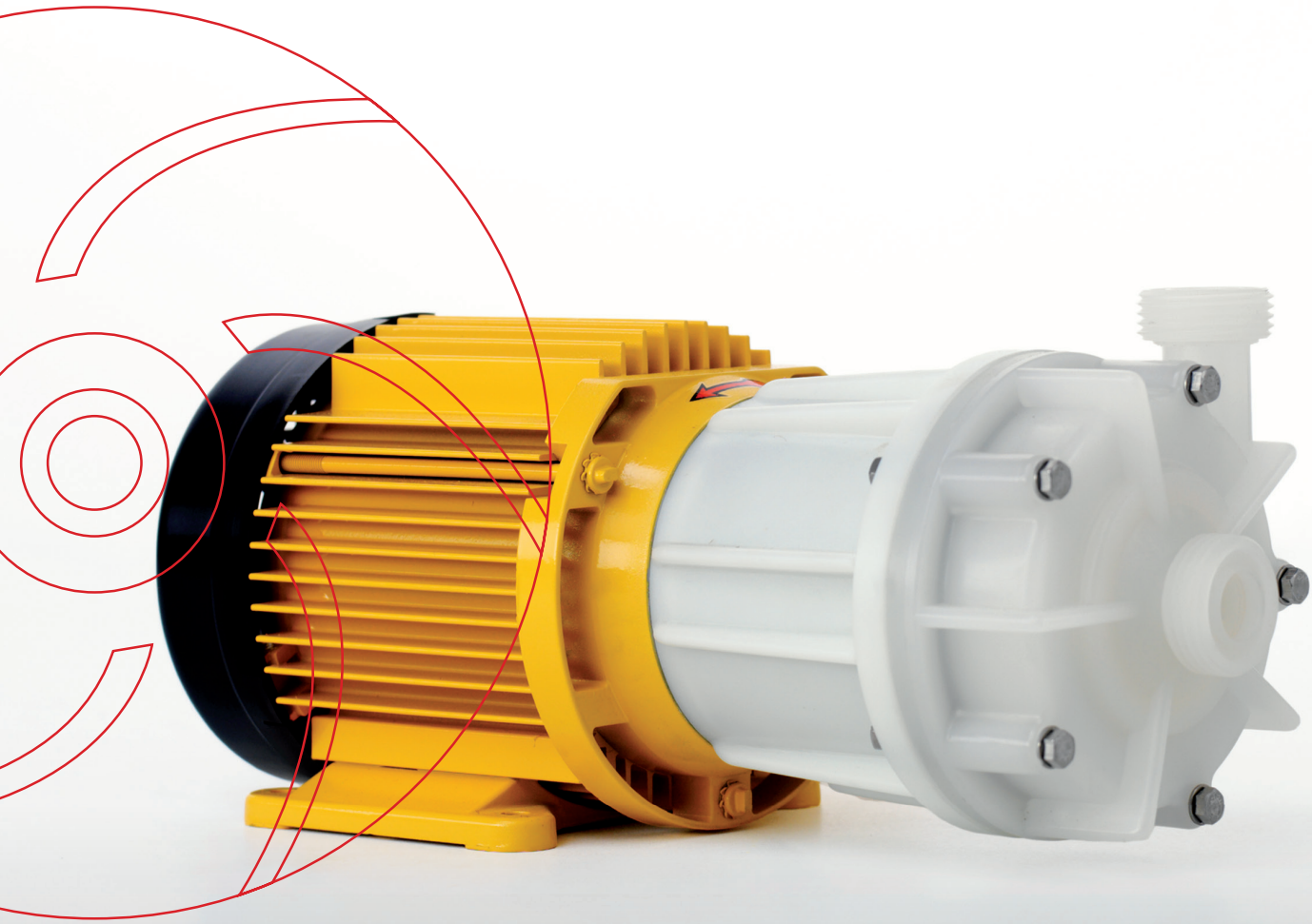


Product information

SCHMITT

MPN Pump Series
Normal priming,
magnetically coupled
centrifugal pumps
Materials: PVDF or PP

chemical resistant pumps

Description
MPN Pump Series

SCHMITT

chemical resistant pumps

Normal priming, magnetically coupled centrifugal pumps

Application:	The MPN Pump Series is particularly suitable 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:	Electro-plating technology, wastewater treatment, laboratory and medical engineering, wafer production, printed circuit board (PCB) manufacturing, solar cell production, analytical instruments, semiconductor technology, zoological seawater aquaria, environmental technology, wastewater treatment, plant dosage
Materials:	PVDF (polyvinylidene fluoride) oder PP (polypropylene)
	hermetically sealed
Max. output rate:	400 l/min
Max. discharge head:	32 m
Motor power:	0,18 - 3,0 kW
	In the MPN 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:	» hermetically sealed, absolutely leak-proof » highest chemical resistance » robust design - without vulnerable (floating) axles » low-maintenance through double hydro-dynamic slide bearings with extra big radii » long-lasting and wear-resistant through axial thrust compensation » self-cooling design for the operation under demanding conditions » half-open impeller (i.e. solids up to 3 mm of grain size and 10 Vol. % are possible) » dry run safe within certain 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 » various chemical resistant materials can be supplied from stocked inventory » available as explosion proof version for combustible environments (ATEX)

Types
MPN Pump Series

SCHMITT

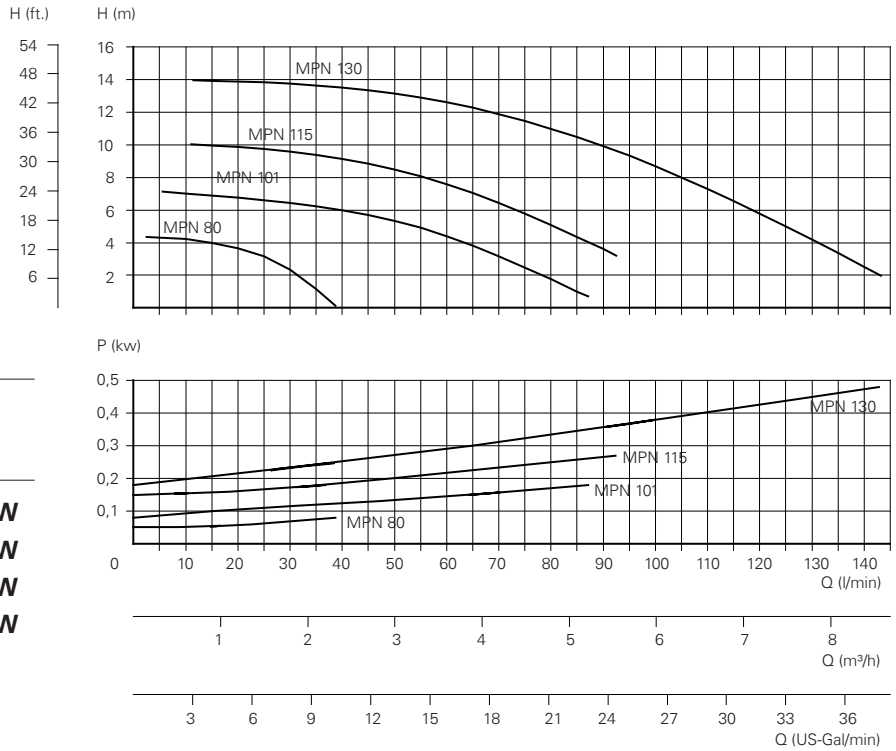
chemical resistant pumps

Materials and Components:	» Parts in contact with the medium are made solid of PVDF, (up to +95° C), or PP (up to +80° C) » Housing seal alternatively made of FKM, EPDM, FEP or Kalrez® » Slide bearings made of the materials PTFE/ceramic or SiC / SiC » High-quality electric motors made in Germany
Material details:	» **PVDF:** Polyvinylidene Fluoride, Pure, milky white, not colored (up to +95° C) » **PP:** Polypropylene, Fiber glass-reinforced, gray (up to +80° 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 » **Ceramic:** Highly pure Al_2O_3-ceramic 99.7% » **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 » Three-phase motors: spark arrested for combustible environments, explosion proof: EEx e II T3
Special design models (available):	» Three-phase motors, explosion proof, flameproof enclosure, EEx de II CT4 » 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
MPN Pump Series

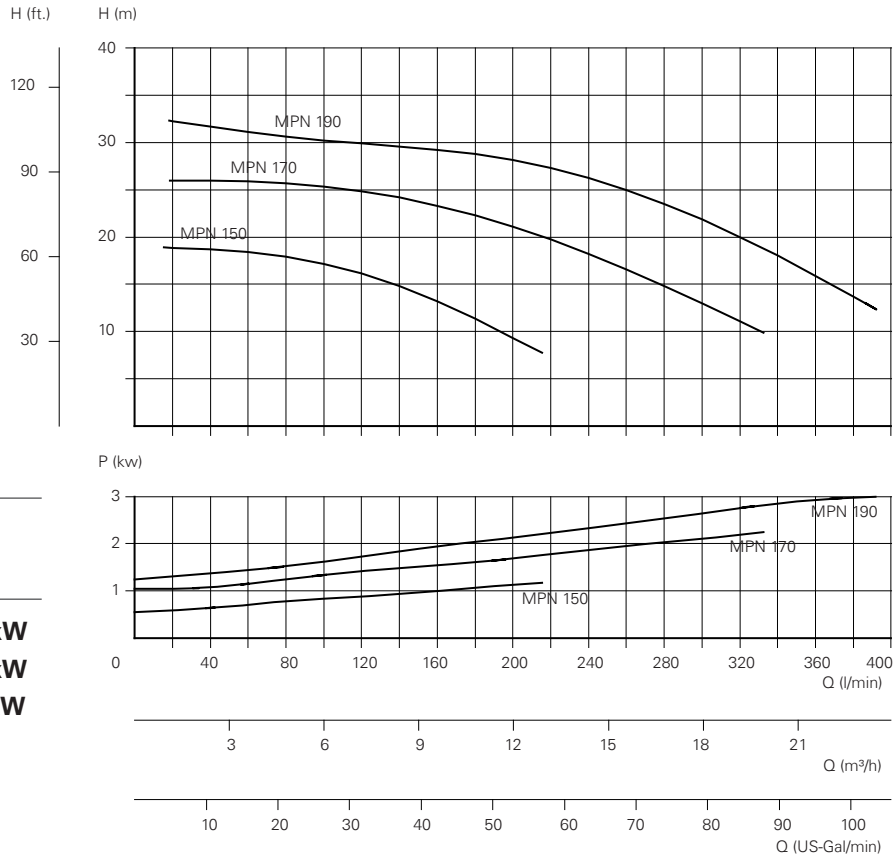
SCHMITT

chemical resistant pumps



MPN 80 bis MPN 130 Pump Series

Motor power
- » **MPN 130: 0,55 kW**
- » **MPN 115: 0,25 kW**
- **MPN 101: 0,18 kW**
- » **MPN 80: 0,18 kW**



MPN 150 bis MPN 190 Pump Series

Motor power
- » **MPN 190: 3,00 kW**
- » **MPN 170: 2,20 kW**
- » **MPN 150: 1,10 kW**

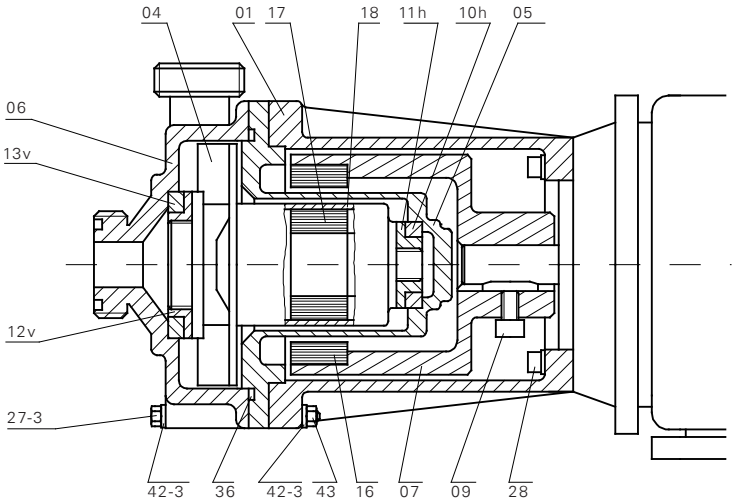
Characteristic lines measured with water, 20° C and 2900 Rpm (50 Hz.)

SCHMITT

chemical resistant pumps

Parts Descriptions

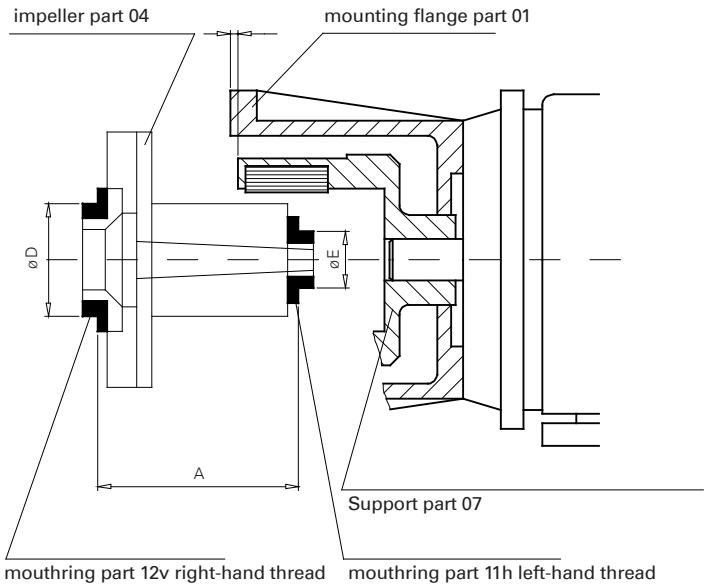
MPN Pump Series



Part-No.	Part	Material standard	Material on request
01	mounting flange	PP*/AL	
04/17	impeller with magnet + cover	PVDF	PP
18		PVDF	PP
11h	mouthring (left-hand thread)	PTFE	SiC
12v	mouthring (right-hand thread)	PTFE	SiC
05	backplate + stationary ring	PVDF	PP
10h		ceramic	SiC
06	pump housing + stationary ring	PVDF	PP
13v		ceramic	SiC
36	pump housing seal	FKM**	FEP or EPDM
07	support with		
16/09	magnet + cylinder bolt		
27-3	hexagon bolt	A4	
28	cylinder bolt	A4	
42-3	washer	A4	
43	hexagon bolt	A4	

*MPN 101–150: PP, others: AL

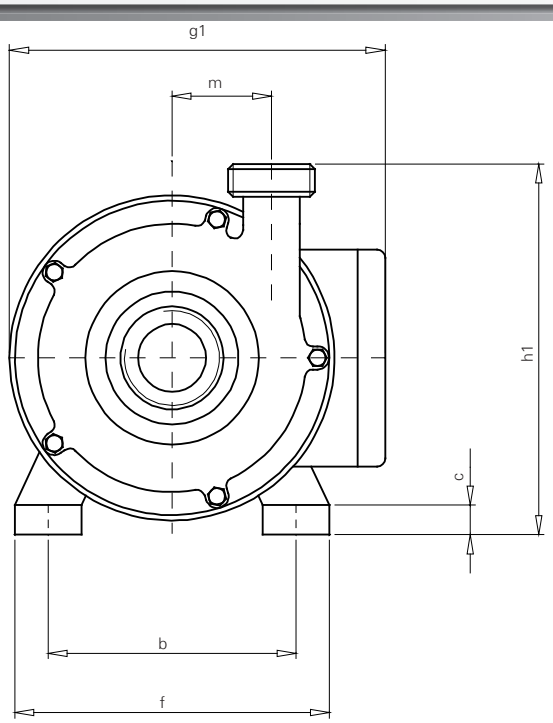
**FKM = e.g. Viton®



Type	A	C	Axial play	D	E
MPN 80	56,5	5,0	1,0	33,8	19,8
MPN 101	64,0	6,5	1,0	41,8	19,8
MPN 115	66,0	5,5	0,8	41,8	19,8
MPN 130	80,0	6,0	0,8	41,8	19,8
MPN 150	82,5	6,5	1,2	64,7	33,8
MPN 170	108,5	7,5	2,0	64,7	33,8
MPN 190	109,0	7,0	2,0	64,7	33,8

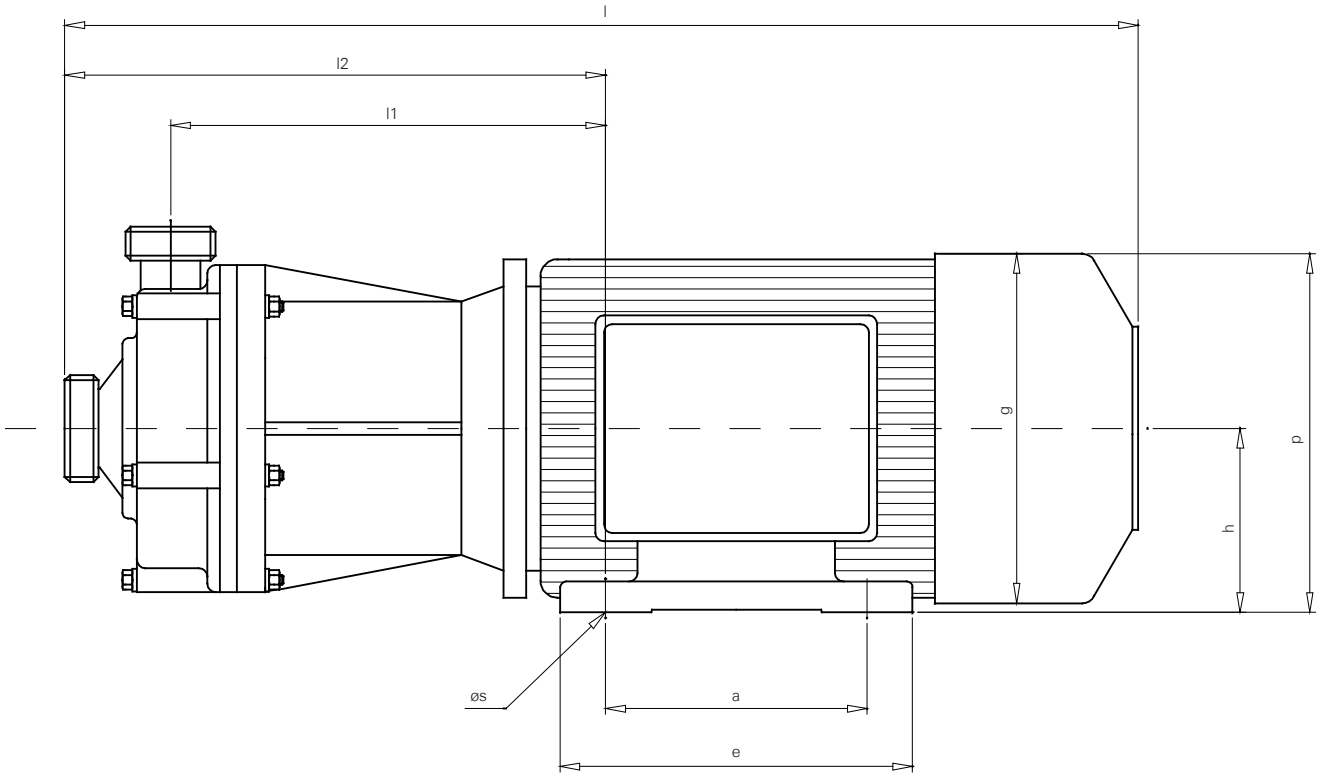
Parts Descriptions

MPN Pump Series

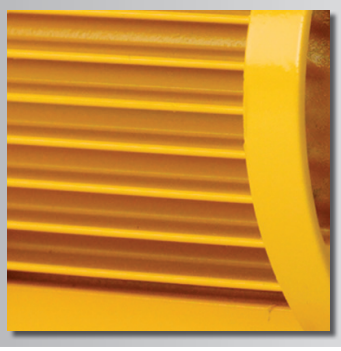


Type	h	h1	l	l1	l2	g	g1	p	a	b	e	f	c	ø s	m	suction conn.		pressure conn.		weights
																nom. bore	male thread	nom. bore	male thread	kg
MPN 80	56	110	290	123	158	111	164	113	71	90	90	112	8	6	25	10	G ¾"	10	G ¾"	4,6
MPN 101	56	118	297	131	165	111	164	113	71	90	90	112	8	6	31	15	G 1"	15	G 1"	4,5
MPN 115	63	134	335	145	185	126	156	126	80	100	97	116	6	7	37	15	G 1"	15	G 1"	5,3
MPN 130	71	150	372	153	203	139	194	140	90	112	108	140	10	8	42	20	G1¼"	15	G 1"	8,6
MPN 150	80	170	415	178	228	157	209	159	100	125	125	160	11	10	47	25	G1½"	20	G1¼"	15,3
MPN 170	90	190	495	222	277	177	235	180	125	140	152	180	14	11	58	32	G 2"	25	G1½"	23,8
MPN 190	100	211	535	235	295	198	255	200	140	160	175	205	14	12	65	32	G 2"	25	G1½"	30,0

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



Types
MPN Pump Series



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.

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TÜV CERT
DIN EN ISO 9001:2000
Zertifikat 71 100 A 013

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

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