MAST PUMPEN

Program
Fire Brigade
Civil Protection

MAST-Submersible Pumps DIN 14 425

The MAST Company was founded in 1948. Experience, gained over decades, combined with latest technology, formed a synthesis to create truly remarkable pumps.

Computer-based design, manufactured with the most modern CNC-machines, MAST pumps fulfill all demands expected from a high quality product.

TP 4-1

TP 8-1

TP 15-1

Flat suction is possible down to a liquid level of only a few millimeters.

For many years, MAST-submersible pumps are top ranked in fire-fighting, civil protection, Federal Armed Forces and the construction industry.

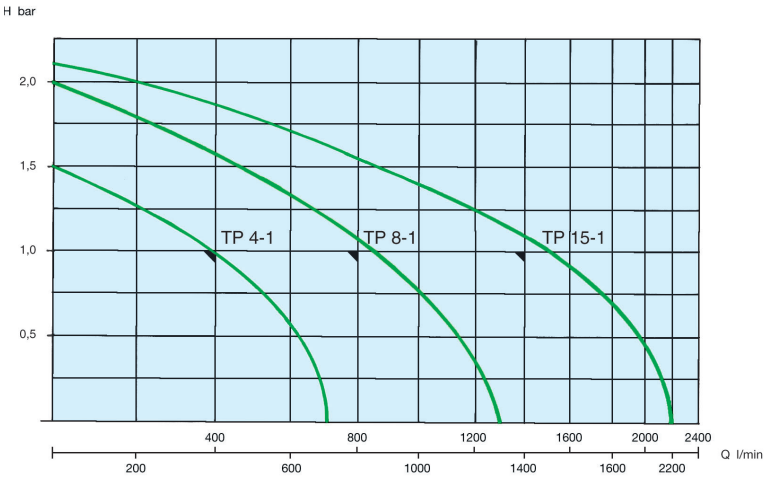
To operate under severe conditions, a submersible pump has to be robust, reliable und powerful. It has to be insensitive to dirt and dry-running safe. At the same time, it is expected to be handy, maintenance-free und easy-to-operate. All these advantages are combined in MAST-submersible pumps.

The MAST TP 4-1 includes, as a standard feature, a flat suction mechanism that allows pumping liquid down to a few millimeters. The MAST TP 8-1 and MAST TP 15-1 are equipped with an electronic control system (MD-Electronic).
As a result, the pump always rotates in the proper rolling direction, even with an incorrect phase sequence. In addition, phase failure, voltage, frequency and motor temperature are monitored.

MAST-submersible pumps have no oil chambers which need to be maintained or controlled. Therefore, these pumps can also be operated in water protection areas and be used for delivering drinking water.

Clogging is no subject matter with MAST-submersible pumps. Any solid particles passing the protective gaze are easily transferred by the pump. Vertically or horizontally - it does not matter how the pump is operated. For your own safety, we designed all pumps oil-tight, even the supply lines. The motors winding is cast in plastic; this provides security for the pump and saves you expensive services. All MAST-submersible pumps agree with the German standard DIN 14 425. Various laboratories tested the MAST-submersible pumps and provided them with audit numbers - not only in Germany, but also in Austria.

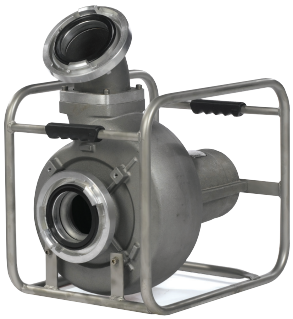
Performance Diagram Submersible Pumps



	TP 4 – 1		TP 8 – 1		TP 15 – 1	
German audit number	PVR 305/10/84		PVR 306/11/84		PVR 307/12/84	
German protection class	DIN 40 050 IP 68					
	l/min.	bar	l/min.	bar	l/min.	bar
Pumping rate l/min.	700	0	1300	0	2200	0
(acc. to DIN 14 425)	610	0,5	1150	0,5	1980	0,5
at a	400	1,0	870	1,0	1520	1,0
pumping head bar	220	1,2	440	1,5	850	1,5
(1bar = 10 mWC)	0	1,5	0	2,0	0	2,1
Voltage V	230		400			
P_1 KW	1,8		3,0		5,3	
Output						
P_2 KW	1,3		2,4		4,5	
Rated current A	8,5		5,5		9,3	
Cable 20 m H 07 RN-F	3 G 1,5		4 G 1,5		4 G 2,5	
Connection plug	16 A DIN 49 443 (Schuko IP 68)		16 A DIN 19 462 (CEE 16 A 5-polig)			
Coupling (Storz)	B		B		A	
Grain passage Ø mm	8		10		15	
Immersion depth	max. 20 m					
Dimensions L x B x H mm	235 x 190 x 500		390 x 260 x 560		440 x 260 x 570	
Weight with cable kg	21		40		47	

MAST-Submersible Sewage Pumps

ATP 20



ATP 20 R

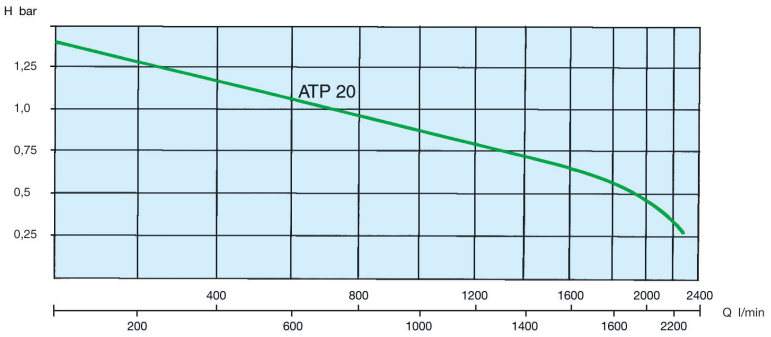
The MAST-submersible sewage pump is a robust, high performance single-stage channel-impeller pump. It is designed to deliver sewage water containing fibrous and solid impurities up to 80 mm diameter. It never clogs, because the input diameter corresponds with the grain passage size. A-Storz-couplings are mounted on the in- and output (optional available with an A/B-Storz reduction coupling). The efficiency rate of the pump is above 70 %. As the pump does not have any oil chamber it is maintenance-free, but nevertheless dry-running safe. Flat suction is possible down to a liquid level of only a few millimeters. Due to the light weight (seawater-resistant aluminum-alloy construction acc. to DIN EN 1706) of only 46 kg including cable, the ATP 20 is specially suitable for mobile use.

The MAST-submersible sewage pump can be used submerged and outside the water combined with a suction hose and a protective gaze. It can be operated vertically and horizontally. Running the pump with a 5 kVA-generator, there are still resources to connect a spotlight. The protective-circuit-plug (CEE 5-pole 16 A) is equipped with a rolling direction monitoring system and a phase changer.

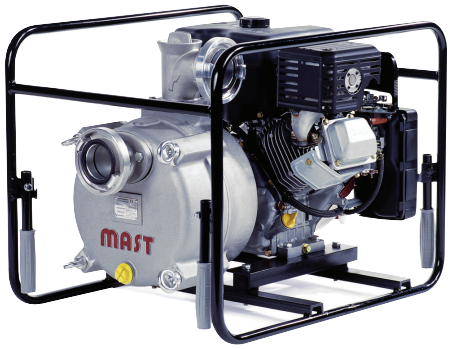
The MAST-submersible sewage pump is also available mounted on a stainless-steel tubular frame (ATP 20 R).

ATP 20

Performance Diagram Submersible Sewage Pump



MAST-All Purpose Pumps



NP 12 B

The MAST-all purpose pumps are self-priming centrifugal pumps that are insensitive to pollutants, do not require any maintenance and are readily portable in spite of their robust construction. Their operation efficiency makes them extremely economical, even if high pumping rates are involved. The pumps are as well as the engines state-of-the-art products. Both sections are well known for their reliability and exceptional robustness.

Only the most appropriate materials for given applications are used for MAST-all purpose pumps. Aluminum is always used as seawater-resistant-alloy in conformity with DIN EN 1706.

MAST-all purpose pumps are available in three product classes with an output up to 1200 l/min. and a pressure up to 4,1 bar. They are also available with diesel engine and electric motor.

MAST-all purpose pumps are optional available as a wheeled version. They types NP 4 D, NP 8 D, NP 12 D and NP 12 B are optional available with an Electric Start.

	ATP 20	ATP 20 R
German protection class	DIN 40 050 IP 68	
	l/min.	bar
Pumping rate l/min.	2300	0,3
(acc.to DIN 14 425)	1920	0,5
at a	1300	0,7
pumping head bar	700	1,0
(1bar = 10 mWC)	0	1,4
Voltage V	400	
P_1 KW	2,8	
Output		
P_2 KW	2,2	
Rated current A	4,9	
Cable 20 m	4 G 1,5	
H 07 RN-F		
Connection plug	DIN 49 462 (CEE 16 A 5-pole)	
Coupling Storz	A	
Grain passage Ø mm	80	
Immersion depth	max. 14 m	
Dimensions L x B x H mm	580 x 350 x 650	510 x 360 x 580
Weight with cable kg	46	48

MAST-Ex Proof Transfer Pumps

TUP 2-1

TUP 1-1,5 CL DIN 14 424

The portable MAST-transfer pumps TUP are explosion proof (EEx II 2G c IIB T 3), self priming and designed for pumping mineral oil products or other non-aggressive liquids with a viscosity < 1,5 cm^2/s. They are equipped with an explosion proof 400 V electric motor and can be used in explosion hazard areas (zones 1 and 2) for handling inflammable liquids (explosion group II; temperature classes T1 up to T3).

The development of the MAST-transfer pumps TUP series is based on the well known, robust construction-site pump. They have their good properties, being dry-running safe and insensitive to dirt. They are handy, light-weight and completely maintenance-free. Even heavy polluted liquids can not do any harm to the pump.

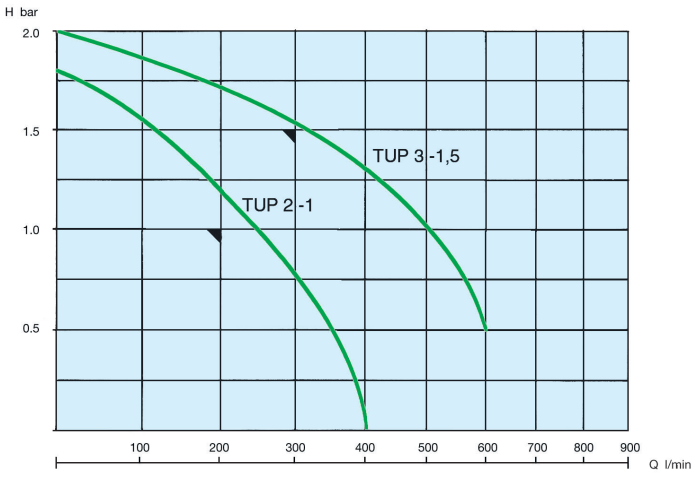
All MAST-transfer pumps TUP are provided ready for service with explosion-proof protective motor switch and plug. The L-series is equipped with an 230 V explosion-proof socket for connecting a spotlight. The robust tubular steel frame protects the pump against damages. The pump is provided with hinged handles.

The MAST-transfer pumps TUP 3-1,5 C and TUP 3-1,5 CL correspond to DIN 14 424. They are certified by the German Association for Technical Inspection (code PVR 250/1/77) and licensed by the Department of Safety Engineering IBExU (code IBExU03ATEXB036X) acc. to RL 94/9/EG (ATEX).

MAST-transfer pumps TUP have been used by fire brigades, the Federal Armed Forces and the Technisches Hilfswerk (THW) for many years and are purchased frequently. We are proud to count them to our customers.

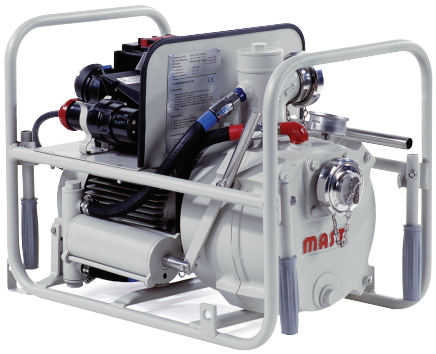
Accomodation of the MAST-ex-proof transfer pump in the fire-fighting vehicle.

Performance Diagram Ex-Proof Transfer Pumps



	TUP 2 – 1		TUP 3 – 1,5 C	TUP 3 – 1,5 CL
German audit number			PVR 250/1/77	
Ex-protection class (pump)			EEx II 2G c IIB T 3	
Ambient temp. T_a °C			-20 °C ≤ T_a ≤ +60 °C	
Media temp. T_{FM} °C			-20 °C ≤ T_{FM} ≤ +40 °C	
	l/min.	bar	l/min.	bar
Pumping rate l/min.	400	0	600	0,5
(acc. to DIN EN 1028-1)	350	0,5	580	0,75
at a	310	0,75	500	1,0
pumping head bar	250	1,0	420	1,25
(1 bar = 10 mWC)	190	1,25	320	1,5
	0	1,8	0	2,0
Motor			A.C. 3~400 V 50 Hz	
P_1 KW	2,3		3,0	
Output				
P_2 KW	1,85		2,5	
RPM	2890		2875	
Rated current A	3,7		4,55	
Socket 230 V EX				X
Connection plug	EN-CEE 16 A 5-pole EEx			
Suction height (water)	self-priming down to 8,4 m			
Suction-/delivery-connection	mounted coupling acc. to DIN 14 307-C			
Grain passage Ø mm	8		4	
Dimensions L x B x H mm	620 x 330 x 440		620 x 390 x 460	
Weight kg	36		56	57

MAST-Ex Proof Transfer Pumps for dangerous fluids DIN 14 427



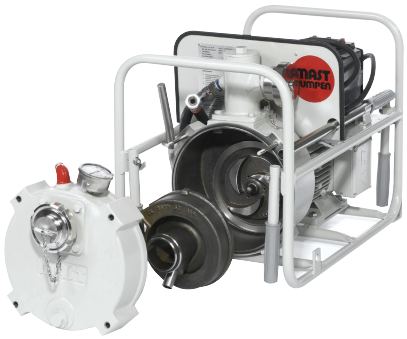
GUP 3-1,5

In case of a disaster you are challenged in many ways. Your work can only be efficient with the best equipment. The MAST-transfer pump GUP 3-1,5 for dangerous fluids will serve you well.

MAST-transfer pump GUP 3-1,5 for dangerous fluids is a self-priming centrifugal pump with the standard of a maintenance-free design, insensitive to dirt, and absolutely dry-running safe. It is also capable of pumping against a closedgate valve. For the very first filling, a hand piston pump is integrated. Those specifications are met by the MAST-transfer pump with a weight of only 82 kg.

The MAST-transfer pump for dangerous fluids is explosion proof (EEx II 2G c IIB T 3) and licensed by the Department of Safety Engineering IBExU (code IBExU04ATEXB025X) acc. to RL 94/9/EG (ATEX). It is able to pump any liquid even at higher temperature within the limits of the stability of stainless steel (material N° 1.4408, N° 1.4571 (V4A) and flour hydrocarbon FKM Viton). Acid - lye liquids, muddy water, oil, petrol and other inflammable liquids may be pumped. To keep the transport safe and easy, hinged handles including a hand guard are mounted. Additionally, it is equipped with a 230 V explosion-proof light socket.

If necessary, the pump can easily be disassembled for cleaning.



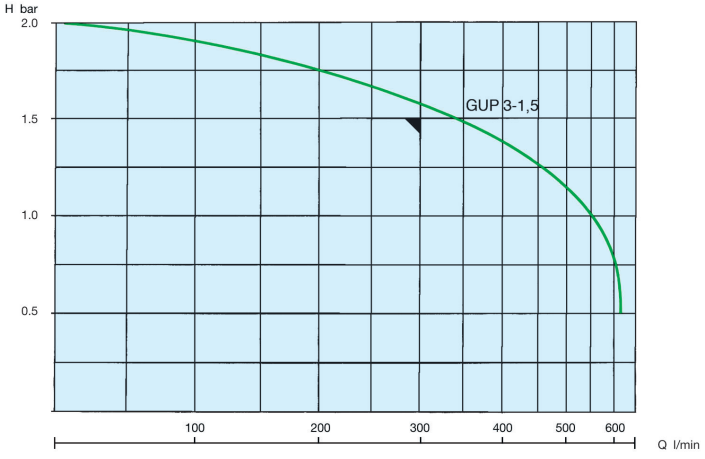
MAST-Ex Proof Transfer Pump for dangerous fluids, dissassebled with effortless ease.

Also available:

MAST-Ex Proof Transfer Pump TUP 3-1,5 E

In conformity to GUP 3-1,5, without hand piston pump. The weight is only 69 kg.

Performance Diagram Ex-Proof Transfer Pump



	GUP 3 – 1,5	
German audit number	PVR 354/4/92	
Ex-protection class (pump)	EEx II 2G c IIB T 3	
Ambient temp. T_a °C	-20 °C ≤ T_a ≤ +60 °C	
Media temp. T_m °C	-20 °C ≤ T_m ≤ +40 °C	
	l/min.	bar
Pumping rate l/min.	620	0,5
(acc. to DIN EN 1028-1)	550	1,0
at a	460	1,25
pumping head bar	340	1,5
(1 bar = 10 mWC)	200	1,75
	0	2,0
Motor	A.C. 3~400 V 50 Hz	
P_1 KW	3,0	
Output		
P_2 KW	2,5	
RPM	2875	
Rated current A	4,55	
Socket 230 V EX	X	
Connection plug	EN-CEE 16 A 5-pole EEx	
Suction height (water)	self-priming down to 8,4 m	
Suction-/delivery-connection	DN 50 DIN 11 851	
Grain passage Ø mm	10	
Dimensions L x B x H mm	620 x 390 x 460	
Weight kg	82	

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As various the pumps in the MAST product range are; they have one thing in common: highest quality and technical perfection. For many years, MAST-submersible pumps and MAST ex-proof-transfer pumps are top ranked in fire-fighting and civil protection; fields, where great reliability and performance is requested. When human life and valuable property are in danger, the possibility of mishaps must be excluded. As a consequence, MAST pumps have a roburst design and a high performance capacity to resist even the toughest operation conditions.

P48 11.04