



*Engineered  
Quality*



## SUBMERSIBLE PUMPS TP

wastewater / floodwater, acc. to German standard DIN 14 425  
fire & rescue, civil protection and municipalities  
up to 2.400 l/min, up to 2.1 bar

# Robust Quality.

MAST submersible pumps TP acc. to German standard DIN 14 425 are designed for demanding floodwater applications. With unique technical features like the encapsulated motor winding and the full motor protection MAST MD-Electronics. Reliable technology - for a long service life!

## ✓ DIN-compliant

MAST TP submersible pumps are tested and certified in accordance with DIN 14 425. They correspond completely in design and materials without exception the guidelines of the norm.

## ✓ Robust

Impeller and diffuser are made of shockproof cast iron acc. to DIN 1561 to resist abrasive solids.

## ✓ Maintenance-free

No oil filling, no lubrication points, no use of sealants, no readjustment work required.

## ✓ Durable

All at application highly loaded components are heavy-duty casted parts, made of seawater resistant aluminum alloy acc. to DIN EN 1706. Mineral-oil resistant NBR O-rings, certified cable H07-RN-F. Even mineral-oil / water mixtures can be pumped without damages. All screws are made of stainless steel.

## ✓ Efficient

At the construction site power supply is limited, therefore MAST submersible pumps are optimized for maximum performance with low power consumption.

## ✓ Reliable

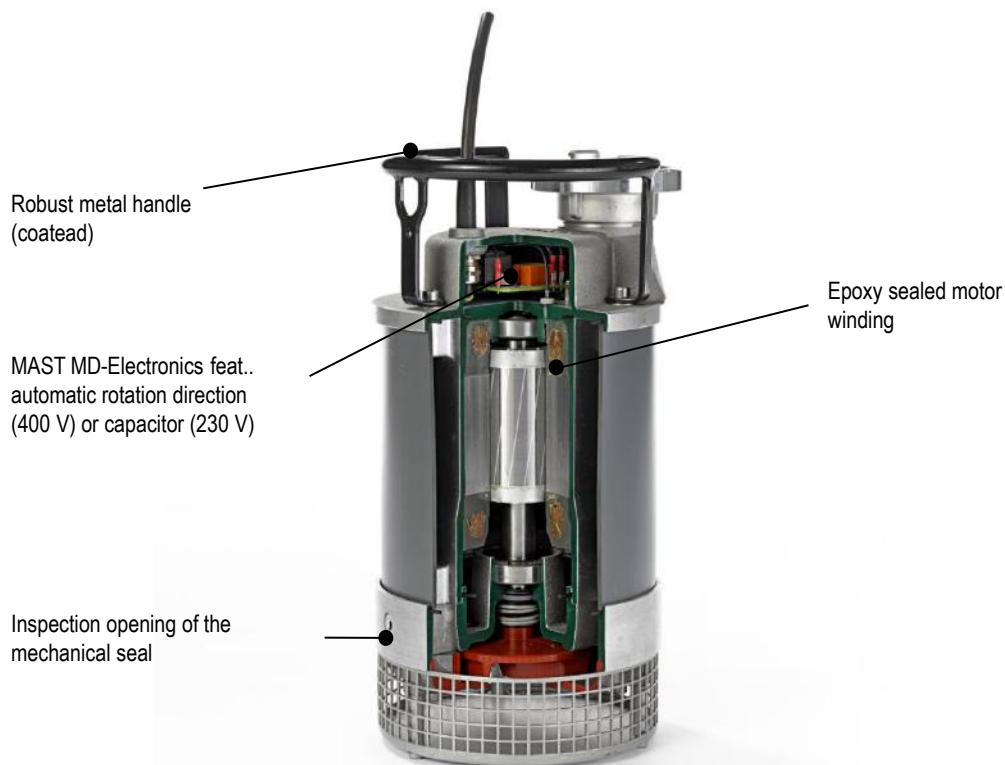
MAST submersible pumps T are fully protected by the cast resin encapsulated motor winding, overload protection, and the MAST MD electronics with automatic rotating direction at 400 V.

## ✓ Safe to run dry

For mobile applications customized safe to run dry mechanical seals.

## ✓ Solid

Built-in strain relief with very good adhesion between the cable and seal kit No use of sealants such as Silicone.





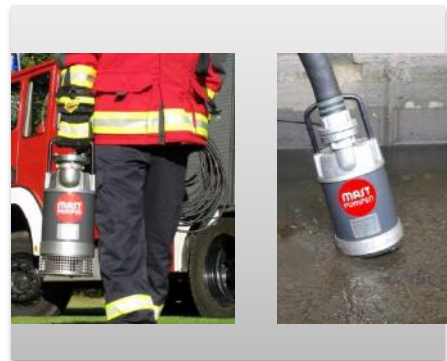
## High performing variety.

MAST submersible pumps TP acc. to DIN 14 425 are powerful, robust, but lightweight wastewater pumps for construction sites, municipalities and other professional applications.

### Lightweight

MAST submersible pumps TP acc. to DIN are designed for easy handling. The TP 4-1 with ca. 20 kg total weight including cable is one of the most lightweight pumps of its class. All at application highly loaded components and the carry handle are heavy-duty metal parts. The TP 4-1 can easily be hold by one person. The TP 8-1 N has an integrated loop to lift the pump with a carabiner. Not in use, the power supply wire can be fixed with a rope at the loop. The TP 15-1 comes with a turnable discharge to allow easy handling of the hoses at low water levels.

All types are available with Storz-coupling intake for connection in more stages to get over long distances. Nevertheless, they can still be used as a single stage pump.



### Low level pumping

MAST submersible pumps TP can be used for slurping applications. Low water level pumping is possible down to a few millimeter (TP 4-1 with disassembled strainer, or - for all types available wristband).

### Ready to use

The modular design using fewer screws as well as the oil and grease-free design support the simple and quick replacement of wearing parts.



## The accessories.

For MAST submersible pumps TP acc. to DIN a great variety of accessories are available, e.g. firehoses acc. to DIN, float switches or PRCD-safety switches. All pumps are available as pump set including all for a successful application needed accessories.



# Unique motor protection.

The MD-Electronics (motor and direction of rotation monitoring electronics ) is an invention of MAST. It offers a unique motor protection for pumps in version 400 V. The first generation was in 1978 applied for a patent, implemented and constantly evolving. It has been proven in thousands of demanding applications.

The latest generation is controlled by a micro-processor that ensures highest reliability. The MD-Electronics protects the electric motor 100 % from environmental risks. Learn more about the features of the MD Electronics below.

## Automatic rotating direction

The automatic rotating direction feature always switches the motor in the right direction, regardless of the phase sequence of the power supply. A motor damage due to incorrect direction of rotation is excluded. There is no reversing switch required. Easy handling and secure application.

## Overload protection

An built-in temperature sensor (PTC-thermistor) protects the motor from overheating damage in case of overload. In danger of overheating the pump turns off automatically. After cooling, the pump can be switched on again.

## Low voltage protection

In case of low voltage the MD-Electronics prevents the pump from starting. If the voltage drops below a defined value, the pump turns off. The pumps runs only when sufficient voltage is present.



## Mechanical seal monitoring

A regular review of the mechanical seal is not required. A sensor in the motor compartment detects a critical water intrusion and automatically turns off the pump at risk of breakdown. The motor is protected from harm. Only the worn out mechanical seal has to be replaced.

## Phase failure protection

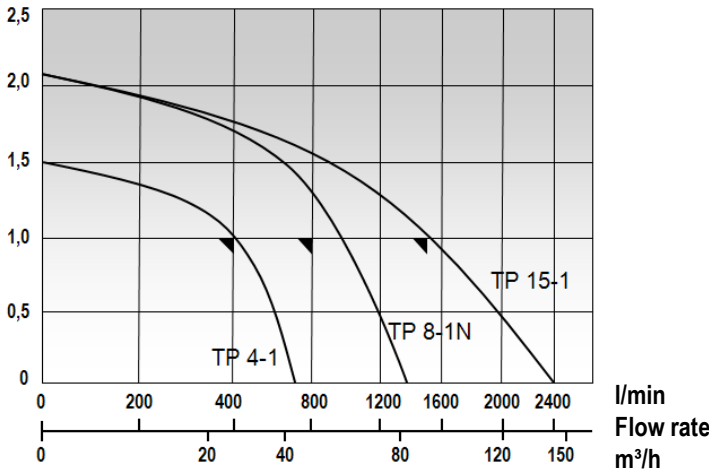
If one of the 3 phases breaks down, the pump will shut off automatically. A damaging 2- phase operation is not possible.

# The specifications.

Type		TP 4 - 1	TP 8 - 1 N	TP 15 - 1
Registered appoval n°		PVR 305/10/84	FT 6/1295/10	PVR 307/12/84
Proctection class		DIN EN 60529 - IP68		
Voltage	V	230	400	
Power consumption	P <sub>1</sub> kW	1,8	3,3	5,3
Rated Power	P <sub>2</sub> kW	1,3	2,7	4,5
Rated current	A	8,0	5,8	9,3
Grain passage	Ø mm	8	10	15
Discharge conn. / coupling		G 2½" / STORZ B		G 4" / STORZ A
Wire H07RN-F	20 m	3 G 1,5	4 G 1,5	4 G 2,5
Plug		DIN 49 443 IP68	CEE 16A IP45	
Fluid temperature	°C	max. 60°C		
Weight	kg	18	27	37
Total weight w. wire / plug	kg	20	32	45
Dimensions	cm	Ø 19 x B 23 x H 50	Ø 23 x B 27 x H 48	Ø 26 x B 44 x H 57

		flow rate Q l/min. at flow pressure p bar					
Typ	U	0	0,5	1,0	1,2	1,5	2,1
TP 4 - 1	230 V	780	610	400	220	0	
TP 8 - 1 N	400 V	1350	1200	950	840	560	0
TP 15 - 1	400 V	2400	1980	1520	1310	850	0

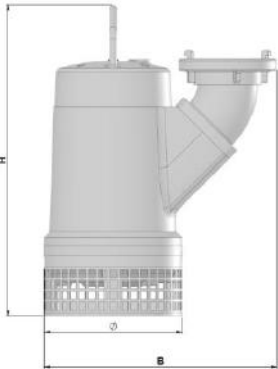
Flow pressure bar



TP 4 - 1



TP 8 - 1 N



TP 15 - 1

# The company.

The MAST PUMPEN company was established in 1948 and is still intergenerational owner-operated.

Decades of experience combined with cutting-edge technologies form a synthesis that produces exceptional products.

Computer Based developed and produced on the latest CNC machines, MAST pumps fulfill all the demands placed on a quality product. MAST pumps are designed and manufactured in Germany.



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## SEWAGE PUMPS ATP

non-clogging portable floodwater pumps  
fire & rescue, civil protection and municipalities  
up to 2.500 l/min, up to 2.0 bar

# Robust Quality.

MAST submersible sewage pumps ATP are designed for demanding applications. They are clogging safe, used without strainer to pump high polluted flood water with solids up to 80 mm. With unique technical features like the encapsulated motor winding, the full motor protection MAST MD-Electronics and the 360° rotary discharge. Reliable technology - for a long service life!

## ✓ Powerful

The performance of the ATP 20 has been tested and certified by TÜV Regensburg. MAST submersible sewage pumps ATP with a flow rate of up to 2,500 l / min (150 m³/h) are one of the most powerful pumps in their class.

## ✓ Reliable

MAST sewage pumps ATP are fully protected by the cast resin encapsulated motor winding, the pressure water tight capacitor (IP 68) at 230 V and the unique MAST MD-Electronics (400 V).

## ✓ Robust

The channel impeller is made of customized shockproof cast iron acc. to the German standard DIN 1561 suitable for even long fibrous materials with high-density.

## ✓ Clogging safe

MAST sewage pumps ATP are equipped with a clogging safe channel impeller with up to 80 mm grain passage. No strainer is needed.

## ✓ Maintenance-free

No oil filling, no lubrication points, no use of sealants, no readjustment work required.

## ✓ Safe to run dry

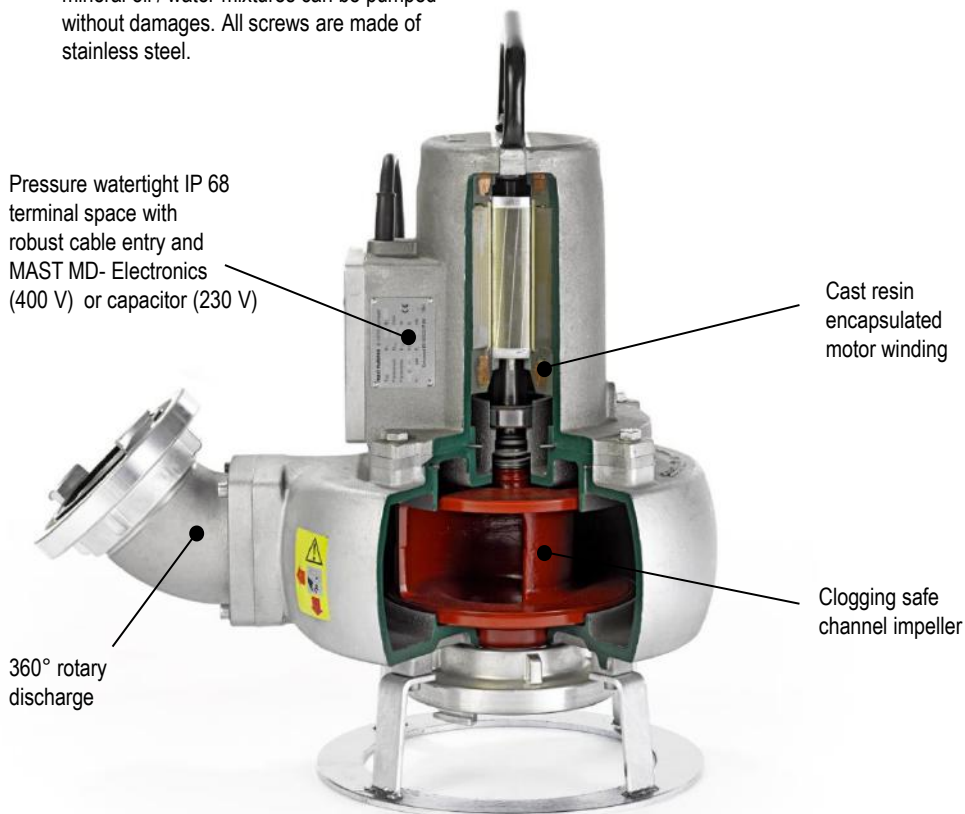
For mobile applications customized safe to run dry mechanical seals.

## ✓ Durable

Sea water resistant aluminum alloy acc. to the German standard DIN, mineral oil-resistant NBR seals, certified cable H07RN-F. Even mineral oil / water mixtures can be pumped without damages. All screws are made of stainless steel.

## ✓ Efficient

Due to the low power consumption 3 kVA (ATP 10 - series) or 5 kVA (ATP 15 and ATP 20 series) DIN power generator applications.







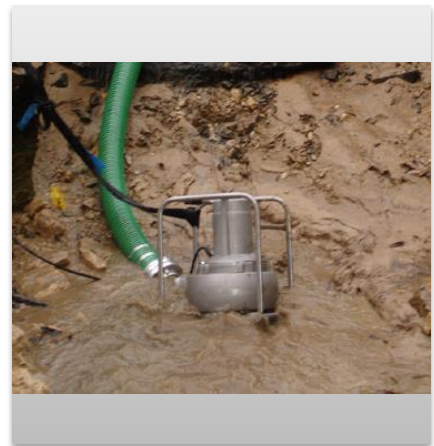
## Powerful diversity.

MAST sewage pumps ATP are available with stainless steel tubular frame customized for flood water treatment by fire fighters and civil protection organizations, or vertically designed with ground plate customized for municipal sewage treatment.

### Lightweight

Despite robust construction and high performance MAST submersible sewage pumps are light in weight. The total weight with cable and plug begins at 27 kg.

The robust stainless steel tubular frame is designed with no sharp edges . The pumps can easily be carried by two persons.



### Low level pumping

MAST sewage pumps are suitable for low level pumping. With tubular frame, simply turn the pump on the input coupling (available in combination with Storz coupling). The pump with ground plate only needs a mounted A/B or B/C Storz adapter on the input coupling.

## The accessories.

For MAST submersible sewage pumps ATP a wide range of accessories such as cable holder, rubber hoses, float switches and PRCD-safety switches is available.



# Unique motor protection.

The MD-Electronics (motor and direction of rotation monitoring electronics ) is an invention of MAST. It offers a unique motor protection for pumps in version 400 V. The first generation was in 1978 applied for a patent, implemented and constantly evolving. It has been proven in thousands of demanding applications.

The latest generation is controlled by a micro-processor that ensures highest reliability. The MD-Electronics protects the electric motor 100 % from environmental risks. Learn more about the features of the MD Electronics below.

## Automatic rotating direction

The automatic rotating direction feature always switches the motor in the right direction, regardless of the phase sequence of the power supply. A motor damage due to incorrect direction of rotation is excluded. There is no reversing switch required. Easy handling and secure application.

## Overload protection

An built-in temperature sensor (PTC-thermistor) protects the motor from overheating damage in case of overload. In danger of overheating the pump turns off automatically. After cooling, the pump can be switched on again.

## Low voltage protection

In case of low voltage the MD-Electronics prevents the pump from starting. If the voltage drops below a defined value, the pump turns off. The pumps runs only when sufficient voltage is present.

## Mechanical seal monitoring

A regular review of the mechanical seal is not required. A sensor in the motor compartment detects a critical water intrusion and automatically turns off the pump at risk of breakdown. The motor is protected from harm. Only the worn out mechanical seal has to be replaced.

## Phase failure protection

If one of the 3 phases breaks down, the pump will shut off automatically. A damaging 2- phase operation is not possible.



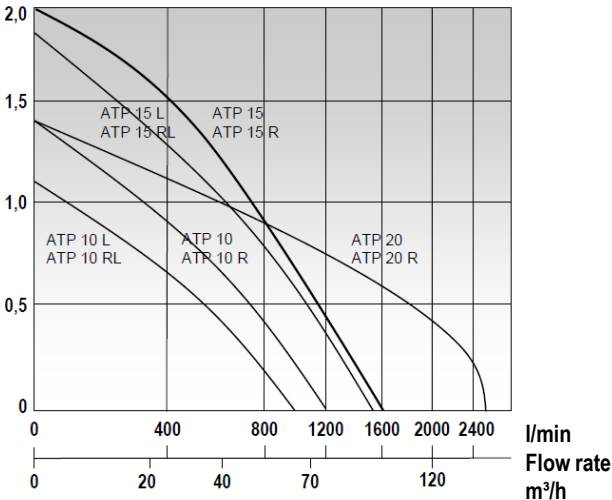
# The Specifications.

MAST submersible sewage pumps are available in 4 power stages. The types with 230 V are marked with an "L". The types in stainless steel tubular frame are also marked with an "R". If with or without frame, the types can be converted into each of the different versions later on.

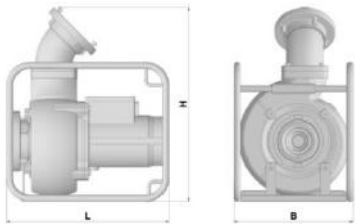
Type		ATP 10 L ATP 10 RL	ATP 15 L ATP 15 RL	ATP 10 ATP 10 R	ATP 15 ATP 15 R	ATP 20 ATP 20 R
Protection class		DIN EN 60529 - IP 68				
Voltage	V	230		400		
Power consumption	P <sub>1</sub> kW	1,8	2,7	2,0	3,1	2,9
Rated power	P <sub>2</sub> kW	1,3	2,0	1,5	2,6	2,3
Rated current	A	8,4	13,4	3,6	5,4	5,2
Grain passage	Ø mm	65				80
Discharge connection		G 2½" / STORZ B				G 4" / STORZ A
Incoming Connection		G 3" / STORZ B				G 4" / STORZ A
Wire H07RN-F	20 m	3 G 1,5		4 G 1,5		
Plug		DIN 49443 IP 68		CEE 16A IP 45		
Fluid temperature	°C	max. 60°C				
Total weight	kg	26	33	27	38	47
Total weight with frame	kg	27	34	28	39	49
Dimensions	cm	L 41 x B 23 x H 56	L 41 x B 23 x H 59	L 41 x B 23 x H 56	L 42 x B 23 x H 59	L 58 x B 35 x H 65
Dimensions with frame	cm	L 44 x B 26 x H 43	L 46 x B 26 x H 43	L 44 x B 26 x H 43	L 46 x B 26 x H 43	L 50 x B 36 x H 58

		flow rate Q l/min. at flow pressure p bar							
Typ	U	0	0,3	0,5	0,7	1,1	1,4	1,8	2,0
ATP 10 L ATP 10 RL	230 V	1000	780	500	300	0			
ATP 15 L ATP 15 RL	230 V	1500	1250	1100	910	580	320	0	
ATP 10 ATP 10 R	400 V	1200	1030	780	550	270	0		
ATP 15 ATP 15 R	400 V	1600	1300	1150	990	660	570	130	0
ATP 20 ATP 20 R	400 V	2500	2280	1920	1300	680	0		

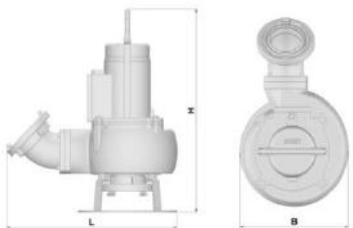
Flow pressure p bar



ATP with tubular frame



ATP floor standing



# The company.

The MAST PUMPEN company was established in 1948 and is still intergenerational owner-operated.

Decades of experience combined with cutting-edge technologies form a synthesis that produces exceptional products.

Computer Based developed and produced on the latest CNC machines, MAST pumps fulfill all the demands placed on a quality product. MAST pumps are designed and manufactured in Germany.



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## SUBMERSIBLE PUMPS T

wastewater

construction sites, municipal and professional applications

up to 2.400 l/min, up to 21 m

# Robust Quality.

MAST submersible pumps T are designed for demanding applications. With unique technical features like the encapsulated motor winding and the full motor protection MAST MD-Electronics. Reliable technology - for a long service life!

## ✓ Robust

Impeller and diffuser are made of shockproof cast iron acc. to DIN 1561 to resist abrasive solids.

## ✓ Efficient

At the construction site power supply is limited, therefore MAST submersible pumps are optimized for maximum performance with low power consumption.

## ✓ Maintenance-free

No oil filling, no lubrication points, no use of sealants, no readjustment work required.

## ✓ Reliable

MAST submersible pumps T are fully protected by the cast resin encapsulated motor winding, overload protection, and the MAST MD electronics with automatic rotating direction at 400 V.

## ✓ Durable

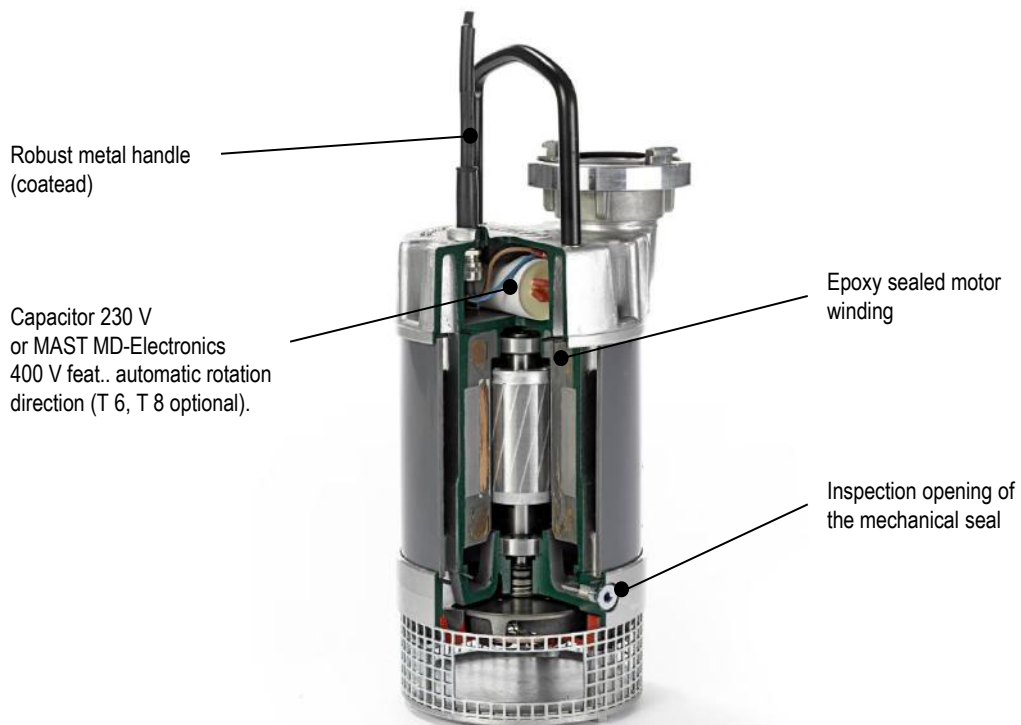
All at application highly loaded components are heavy-duty casted parts, made of seawater resistant aluminum alloy acc. to DIN EN 1706. Mineral-oil resistant NBR O-rings, certified cable H07-RN-F. Even mineral-oil / water mixtures can be pumped without damages. All screws are made of stainless steel.

## ✓ Safe to run dry

For mobile applications customized safe to run dry mechanical seals.

## ✓ Solid

Built-in strain relief with very good adhesion between the cable and seal kit. No use of sealants such as Silicone.







## High performing variety.

MAST submersible pumps T are powerful, robust, but lightweight wastewater pumps for construction sites, municipalities and other professional applications.

### Lightweight

MAST submersible pumps T are designed for easy handling. The T 6 L (230 V) and T 6 (400 V) with 21 kg and 22 kg total weight (including cable) are one of the most lightweight pumps of their classes. The T 6 L, T 6 and T 8 is easily hold by one person. The T 12, T 16 and T 20 have a turnable discharge for easy handling of the pressure hose.

Using the Storz-coupling system, all types are available with Storz-coupling intake for connection in more stages to pump over long distances. Nevertheless, they can be used as a single stage pump.



### Low level pumping

MAST submersible pumps TP can be used for slurping applications. Low water level pumping is possible down to a few millimeter (types T 12, T 16 and T 20 with optional wristband).

### Ready to use

The modular design using fewer screws as well as the oil and grease-free design support the simple and quick replacement of wearing parts.

## The accessories.

For MAST submersible pumps a wide range of accessories such as cable bracket, hoses, float switch and PRCD safety switch is available. The pumps are also available as a complete set of pumps with robust quality accessories.



# Unique motor protection.

The MD-Electronics (motor and direction of rotation monitoring electronics ) is an invention of MAST. It offers a unique motor protection for pumps in version 400 V. The first generation was in 1978 applied for a patent, implemented and constantly evolving. It has been proven in thousands of demanding applications.

The latest generation is controlled by a micro-processor that ensures highest reliability. The MD-Electronics protects the electric motor 100 % from environmental risks. Learn more about the features of the MD Electronics below.

## Automatic rotating direction

The automatic rotating direction feature always switches the motor in the right direction, regardless of the phase sequence of the power supply. A motor damage due to incorrect direction of rotation is excluded. There is no reversing switch required. Easy handling and secure application.

## Overload protection

An built-in temperature sensor (PTC-thermistor) protects the motor from overheating damage in case of overload. In danger of overheating the pump turns off automatically. After cooling, the pump can be switched on again.

## Low voltage protection

In case of low voltage the MD-Electronics prevents the pump from starting. If the voltage drops below a defined value, the pump turns off. The pumps runs only when sufficient voltage is present.

## Mechanical seal monitoring

A regular review of the mechanical seal is not required. A sensor in the motor compartment detects a critical water intrusion and automatically turns off the pump at risk of breakdown. The motor is protected from harm. Only the worn out mechanical seal has to be replaced.

## Phase failure protection

If one of the 3 phases breaks down, the pump will shut off automatically. A damaging 2- phase operation is not possible.



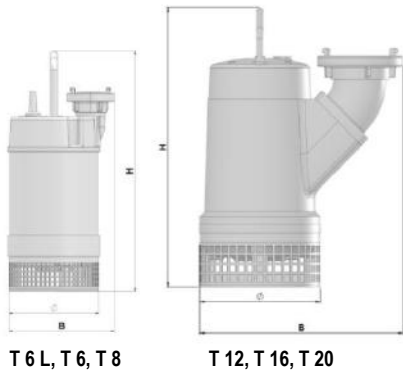
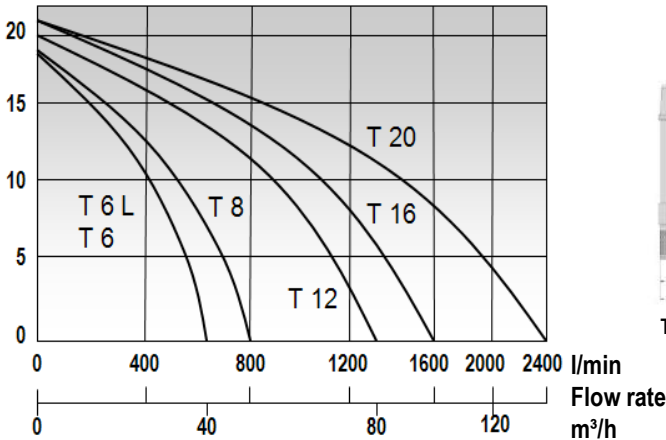
# The specifications.

MAST submersible pumps are available in 5 power stages. The Type 230 V is marked with an "L".

Type		T 6 L	T 6	T 8	T 12	T 16	T 20
Protection class		DIN EN 60529 - IP 68					
Voltage	V	230	400				
Power	P <sub>1</sub> kW	1,6		2,0	3,0	3,7	5,3
	P <sub>2</sub> kW	1,2		1,5	2,4	3,0	4,5
Rated current	A	8,1	2,9	3,8	5,5	6,5	9,3
Grain passage	Ø mm	8			15		
Discharge conn. / coupling		G 2" / STORZ C		G 2½" / STORZ B		G 4" / STORZ A	
Wire H07RN-F	20 m	3 G 1,5	4 G 1,5	4 G 1,5		4 G 2,5	
Plug		Schuko IP 44	CEE 16A IP X4				
Fluid temperature	°C	max. 60°C					
Total weight	kg	21	22	23	39	42	45
Dimension	cm	Ø 19 x B 23 x H 50			(abw. B 39)	Ø 26 x B 44 x H 57	

Typ	U	flow rate Q / l/min.at flow height meter						
		0	5	10	15	18	20	21
T 6 L / T 6	230 / 400 V	660	560	400	160	0		
T 8	400 V	800	690	500	210	0		
T 12	400 V	1300	1150	870	440	170	0	
T 16	400 V	1600	1400	1060	600	310	120	0
T 20	400 V	2400	1980	1520	850	340	140	0

Flow height meter



# The company.

The MAST PUMPEN company was established in 1948 and is still intergenerational owner-operated.

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Computer Based developed and produced on the latest CNC machines, MAST pumps fulfill all the demands placed on a quality product. MAST pumps are designed and manufactured in Germany.



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## MULTI-PURPOSE PUMPS NP

Wastewater

for fire & rescue, construction sites and municipalities

up to 1.200 l/min, up to 41 m

# Powerful diversity.

MAST multi-purpose pumps are self-priming centrifugal pumps. They are available in 4 power stages – with gas engine, Diesel engine or electric motor (230 V / 400 V).



## Robust

MAST multi-purpose pumps NP are dirt-resistant, maintenance-free and easily portable. They are powerful but economical in consumption. The range NP is characterized by their exceptional reliability and robustness. They are designed for demanding applications.

MAST multi-purpose pumps NP have a maximum flow rate up to 1.200 l/min and a maximum flow height up to 41 m. The range is available with petrol engine, Diesel engine and electric drive.

## Reliability

An important requirement for quality and durability is an optimized combination of materials. Only seawater-resistant aluminum alloy acc. to DIN EN 1706 and mineral oil-resistant elastomers are used in the NP-pumps. They guarantee maximum corrosion protection combined with low weight.

## Petrol engine

MAST multi-purpose pumps NP with petrol engine (type „B“) are suitable for continuous operation. They are particularly environmentally friendly by their low noise „Lo-Tone“ muffler, fuel-efficient OHV-design and improved „Dual-Clean“ air filters. The low oil level shutdown protects against engine damages.

## Diesel engine

MAST multi-purpose pumps NP with Diesel engine (type „D“) are heavy duty pumps to withstand even the toughest applications at construction sites.

Due to the automatic decompression and direct injection they are easy to start and very economical to use. The forced-feed lubrication and the single-cam system (SCS) ensure reliability, and a long-lasting operation. An electric starter for maximum comfort is available.

## Electric motor

If an electric power supply is available, MAST multi-purpose pumps NP can be provided with an electric motor 230 V (type „L“) and 400 V (type „E“). Simply plug in and switch on. Silent running however efficient.

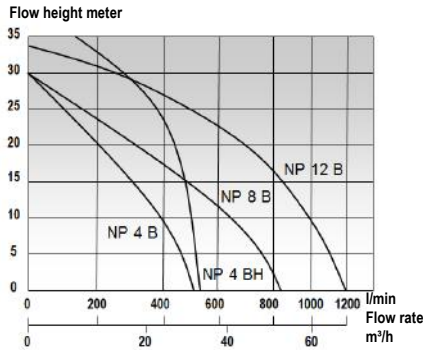




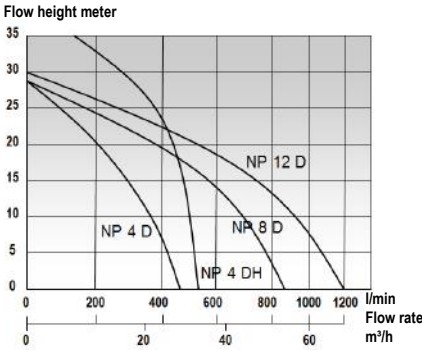
# Technical Data.

Multi-purpose pump		NP 4 B	NP 4 BH	NP 8 B	NP 12 B	NP 4 D	NP 4 DH	NP 8 D	NP 12 D	NP 4 L	NP 4 E	NP 8 E	NP 12 E
Engine / Motor		4 - stroke petrol				Diesel				230 V	400 V		
Pumping rate l/min. at a pumping head m wc ( 1 l = 0,26 gal / 1 m = 3,28 ft.) acc. to DIN ISO 9906		l/min m 500 0 440 5 380 10 200 20 0 30	l/min m 520 0 460 15 420 20 300 30 0 41	l/min m 850 0 770 5 650 10 360 20 0 30	l/min m 1200 0 1000 10 700 20 250 30 0 34	l/min m 500 0 440 5 380 10 200 20 0 28	l/min m 520 0 460 15 420 20 300 30 0 41	l/min m 850 0 800 5 680 10 400 20 0 30	l/min m 1200 0 1100 5 910 10 530 20 0 30	l/min m 320 0 270 5 190 10 150 12 0 15	l/min m 400 0 350 5 255 10 120 15 0 18	l/min m 820 0 760 5 630 10 400 15 0 20	l/min m 1200 0 1100 5 910 10 640 15 0 20
Output	kW	3,0	4,8	4,8	7,5	3,4	3,4	3,4	5,0	0,75	1,5	2,5	4,0
Speed	r.p.m.	3600	3600	3600	3600	3600	3600	3600	3600	2850	2870	2875	2850
Rated current	A	—	—	—	—	—	—	—	—	5,4	3,3	4,6	7,3
Grain passage	Ø mm	8	8	10	20	8	8	10	20	8	8	10	20
Connection size	G	G 2"	G 2"	G 2 1/2"	G 2 1/2"	G 2"	G 2"	G 2 1/2"	G 2 1/2"	G 2"	G 2"	G 2 1/2"	G 2 1/2"
STORZ-Coupling		C	C	B	B	C	C	B	B	C	C	B	B
Dimensions LxWxH	cm	54x39x4 2	62x46x5 0	62x46x5 0	72x54x5 5	57x46x5 0	57x46x5 0	70x49x5 5	72x49x5 5	48x28x4 3	48x28x4 3	62x46x5 0	70x49x5 5
Weight	kg	28	34	43	58	49	49	58	72	26	29	45	67
Sound power level	dB(A)	102	104	104	105	105	105	105	110	58	61	65	66
Consumption ca.	l(gal)/h	1,2 (0,3)	1,6 (0,3)	1,6 (0,3)	2,8 (0,8)	1,2 (0,3)	1,2 (0,3)	1,2 (0,3)	1,8 (0,5)	—	—	—	—
Tank capacity	l (gal)	2,5 (0,6)	3,6 (0,8)	3,6 (0,8)	7,9 (1,7)	3,0 (0,8)	3,0 (0,8)	3,0 (0,8)	5,0 (1,3)	—	—	—	—
Suction height	m (ft.)	up to 8,4 m (26 ft.) self-priming											
liquid temperature	°C (°F)	water up to 100°C (212°F), oil at room temperature ( mind statutory provisions!)											
liquid density	kg/dm³	max. 1,1 kg/dm³											
pH-value of liquid	pH	5 - 8											

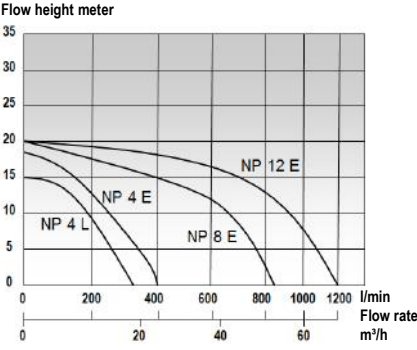
with petrol engine (B)



with Diesel engine (D)



with electric motor (L/E)



Auch als Pumpensatz komplett mit Zubehör lieferbar.

# The company.

The MAST PUMPEN company was established in 1948 and is still intergenerational owner-operated.

Decades of experience combined with cutting-edge technologies form a synthesis that produces exceptional products.

Computer Based developed and produced on the latest CNC machines, MAST pumps fulfill all the demands placed on a quality product. MAST pumps are designed and manufactured in Germany.



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*Engineered  
Quality*



## DRAINAGE PUMPS K

wastewater

fire & rescue, professional domestic applications

up to 330 l/min, up to 11 m

# Robust Quality.

MAST drainage pumps K are designed for demanding applications. Robust electric motor encapsulation of stainless steel and impact-resistant, glass-fiber reinforced plastic housing and triple times shaft seal for a long life.

## ✓ Powerful

With a flow rate of up to 330 l/min they are optimized for maximum performance at low power consumption and easy operating weight. They are among the most powerful, yet lightest pumps in its class.

## ✓ Versatile

MAST drainage pump K are suitable for clear and wastewater containing solids up to 10 mm grain size. They are available for mobile use without float switch, and the shaft installation with ball float switch or a fully installed float switch with an overflow alarm.

## ✓ Overload protection

The built-in thermal winding protection switches the pump off at risk of overheating. An electric motor damage due to overload is excluded.

## ✓ Temperature resistant

permanently applicable at 45°C, or up to 3 min. up to 80°C for pumping high temperature water from the washing machine.

## ✓ Resistent

The 3-acting shaft seal and all other gaskets are in mineral oil resistant NBR quality. The pumps can therefore also be used for the pumping of mineral oil at room temperature (in compliance with statutory regulations).

## ✓ Long lasting

Mast drainage pump K are corrosion resistant submersible pumps made of shockproof, 30% fiberglass reinforced hard plastics and robust electric motor encapsulation of stainless steel 1.4301 (V2A). The rotor shaft is made of stainless steel 1.4221 (V2A). The connecting cable is designed in certified H07RNF quality for heavy duty.

## ✓ Robust cable entry

With very good adhesion between the cable and seal kit. No use of sealants such as Silicone.

## ✓ Premium quality

MAST drainage pumps are designed and manufactured in Germany.

Alarm contact warns against the risk of flooding.

Built-in float switch

Manual-/ Automatic switch

Alarm horn (80 dB)



Removable non-return valve (standard at types with ball float switch and built-in float switch)

Stainless steel motor housing

Fiberglass hard plastic body

Illustration type „SA“

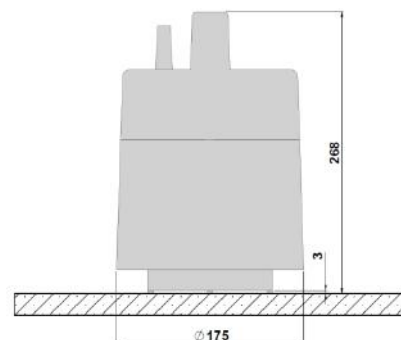
# Powerful diversity.

MAST dewatering pumps are submersible pumps for drainage of waste water. They can be used for drainage of shafts and pits, for pumping out of containers, and for many other purposes. Due to their low weight, they are also ideal for mobile use when quick help is needed.



## Low level pumping.

MAST drainage pumps are suitable for low water pumping (all versions). After removing the strainer (user-friendly snap closure), the pump can be placed directly on the floor for low level pumping down to 3 mm. A prior filling is not required.



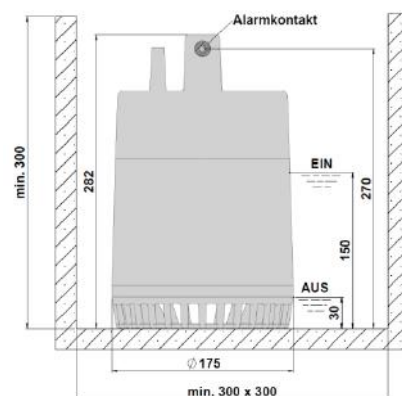
Low level pumping with removed strainer (dimensions in mm)

## Fully built-in float switch with flood alarm.

The K-series type "SA" with fully built-in float switch and flood alerts are for installation in domestic wastewater shafts. They have a built-in plug-acoustic flood alarm did warns against the risk of flooding.

Running in automatic mode, automatic pumping starts at about 15 cm water level and stops at about 3 cm. When the pumps is totally flooded (inflow pump performance above) to acoustic alarm signal (80 dB) warns against the risk of a floor flooding.

By pressing the rocker switch the pump can be switched on manually at low water level. A removable non-return valve is included.



Installation scene type "SA" with fully built-in float switch (dimensions in mm)

## Always ready for use.

MAST drainage pumps K are available as pump set K 5 (without float switch) and K 5 S (with float switch), a ready for use set including pump (max. 330 l/min, max. 11 m) and premium accessories like high-quality fire hose and robust tether. The pump sets are stackable. The total weight is only 12 kg.

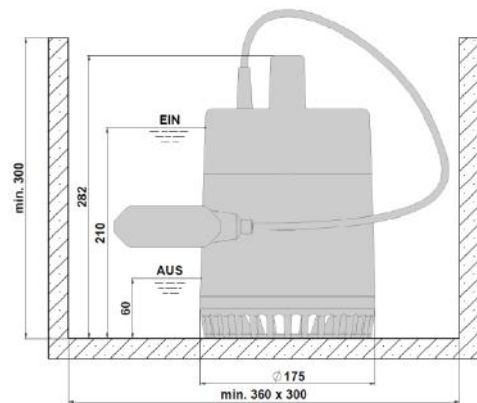
### The pump set includes:

- 1 pc. drainage pump K 5 or K 5 S
- 1 pc. C-Storz connection
- 1 pc. 10 m fire hose C-Storz acc. to DIN 14 811
- 1 pc. 5 m tether
- 1 pc. storage box 40 x 30 x 32 cm.



## Easy installation.

The robust versions type „S“ with ball float switch are suitable for dewatering waste water from shafts and pits. The ball switch float is mounted on a solid swivel to ensure long-lasting switching operation. It switches reliable even when coated with dirt.



Installation scheme of type „S“ with ball float switch (dimensions in mm).

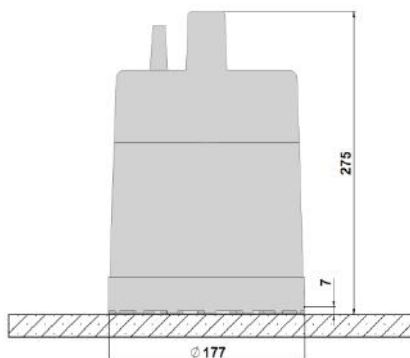


## Low level pumping.

The version „K 2 F“ is specially designed for low water level pumping. A filling prior to the application is not necessary. The pump is self-priming from the beginning, and therefore immediately applicable. It starts pumping at a water level of ca. 7 mm only.

The resistant baseplate is made of stainless steel 1.4301. It allows a stable stand on the floor and a low wear at frequent use.

The liquid input is only sideways to prevent the pump from adhere at instable floors as e.g. groundsheets. A removable non-return valve is included.



Low level pump type K 2 F (dimensions in mm)



# Technical Data.

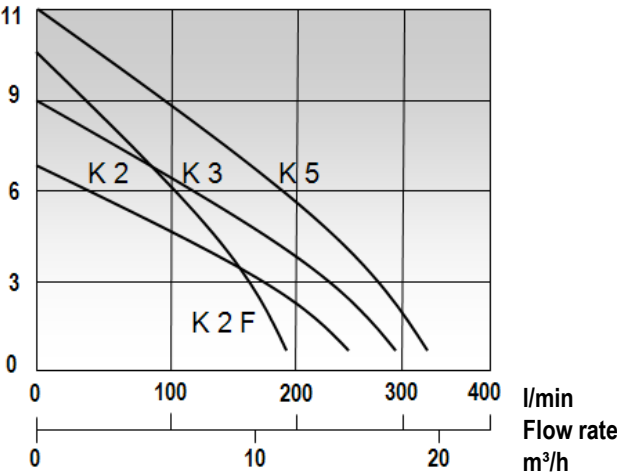
MAST Drainage pumps are available in 3 power levels and 3 types, and as low level pump.

Type		K 2 F	K 2 K 2 S K 2 SA	K 3 K 3 S K 3 SA	K 5 K 5 S K 5 SA
Protection class		DIN EN 60529 - IP 68			
Voltage	V	230			
Power	P W	700	430	650	810
Rated current	A	3,3	2,1	3,1	3,7
Grain passage	Ø mm	4	10		
Discharge connection		G 1 1/4" Innengewinde			
Wire	H07RN-F	10 m 3G1,0 (Ausführung SA 4G1,0)			
Plug		Schuko IP 44			
Fluid temperature	°C	max. 45°C (bis 3 Min. max. 80°C)			
Total weight	kg	7	5	6	7
Dimensions	mm	Ø 177 x H 275	Ø 175 x H 282		

Type „F“ : Low level pump  
Type „S“ : with ball float switch  
Type „SA“: with built-in float switch and flood alarm

	flow rate Q l/min. at flow height H meter					
Typ	0	3	5	7	9	11
K 2 F	200	170	130	90	20	0
K 2, K 2 S, K 2 SA	250	160	90	0		
K 3, K 3 S, K 3 SA	300	230	170	90	0	
K 5, K 5 S, K 5 SA	330	270	210	150	80	0

Flow height meter



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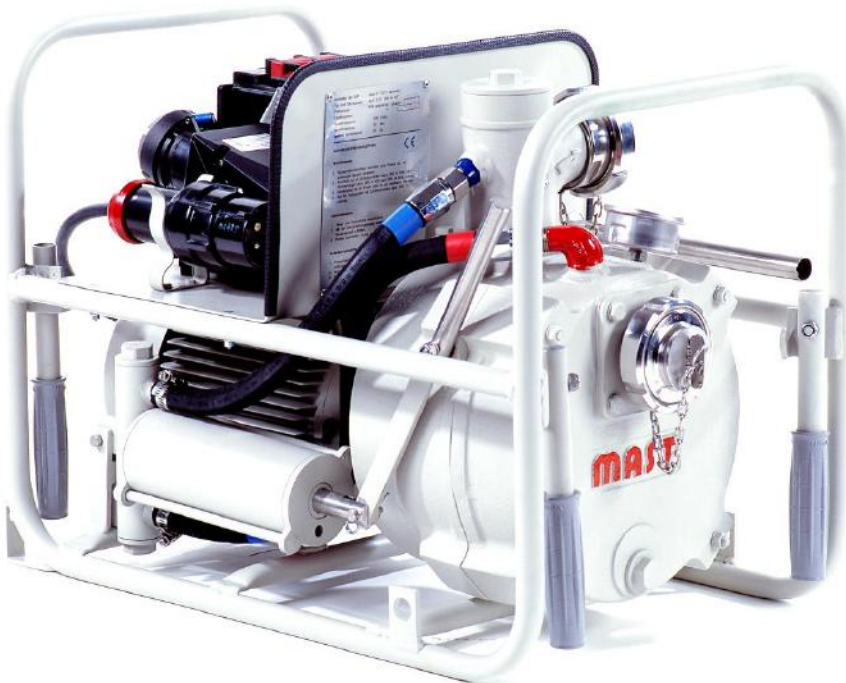
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*Engineered  
Quality*



## HAZMAT PUMPS TUP, GUP, IN EX

explosion proof

up to 620 l/min, up to 2.0 bar

# Hazmat pumps TUP

acc. to DIN 14 424, protection class EEx II 2G c IIB T3  
for **flammable** and **non-aggressive liquids**



TUP 2 - 1



TUP 3 - 1,5 C / CL acc. to DIN 14 424

The portable MAST Ex proof pumps TUP are explosion proof EEx II 2G c IIB T3. They are **self-priming** after an initial filling.

Applicable for flammable liquids and other non-aggressive liquids with a kinematic viscosity of  $< 5 \text{ cm}^2/\text{s}$ . The 3-/ 400 V motor is explosion proof. The pumps can be used in **explosion hazard areas (zone 1 and 2)** for flammable liquids (explosion group IIA + IIB and temperature classes T1 to T3).

The design of the MAST TUP series is based on the robust pumps for construction sites. They are **dry-running safe** after the first filling and insensitive to dirt. Moreover, they are compact, light weight and maintenance free.

They are equipped with an explosion proof motor switch with overload protection. The type „L“ is additionally equipped with a 230 V explosion proof plug socket for connection of e.g. a spot light. The serial STORZ coupling can be replaced by an other systems.

The **TUP 3-1,5 C** and **TUP 3-1,5 CL** comply to the German standard **DIN 14 424**. All MAST TUP pumps are **ATEX-certified** acc. to the EU directive 94/9/EG ATEX ( TUP 3-1,5 and TUP 3-1,5 CL code IBExU03ATEXB036X, TUP 2-1 code IBExU09ATEXB014X) .

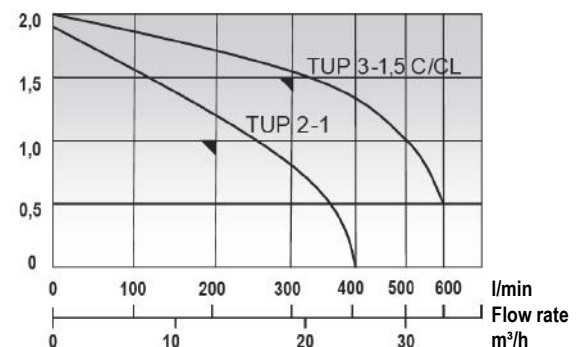
The MAST-Ex proof pumps TUP are established at civil protection organizations e.g. the THW, fire fighters and armed forces since many years.

## Technical Data

Transfer Pumps	TUP 2 - 1	TUP 3-1,5 C/CL
Ex-protection class	EEx II 2G c IIB T3 acc. to RL 94/4/EG (ATEX)	
DIN standards	-	DIN 14 424
German audit number	-	PVR 250/1/77
Type examination certificate	IBExU09ATEXB014X	IBExU03ATEXB036X
Range of application	- 20°C ≤ Temp. fluid ≤ + 40°C	
Flow rate l/min.	l/min   bar	l/min   bar
for	400 0	600 0,5
Transfer pressure bar	350 0,5	500 1,0
acc. DIN ISO 9906	250 1,0	420 1,25
	190 1,25	320 1,5
	0 1,8	0 2,0
Voltage V	400	400
Output kW	P <sub>1</sub> 2,3	3,0
	P <sub>2</sub> 1,85	2,5
Rated current A	3,7	4,55
Rotation speed rpm	2890	2875
Grain passage Ø mm	8	4
Discharge connection G	2"	2"
Coupling	Storz DIN 14 307-C	DIN 14 307-C
Connection line 1,5 m	H07 RN-F 5G1,5	H07 RN-F 5G1,5
Plug	CEE 16 A 5p EEx	CEE 16 A 5p EEx
Dimensions LxBxH cm	62x33x44	62x39x46
Total weight kg	36	56

## Characteristics

Flow pressure bar

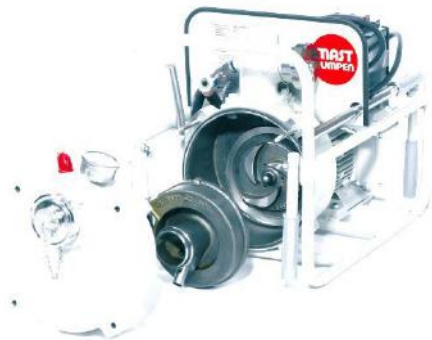


# Hazmat pump GUP 3 -1,5

acc. to DIN 14 427, protection class EEx II 2G c IIB T3  
for **flammable** and **aggressive liquids**



GUP 3 -1,5



Disassembled in a few steps for cleaning.

In case of an accident you are challenged in many ways. Your work can only be efficient with the best equipment. The hazmat pump GUP 3-1,5 acc. to **DIN 14 427** is completely made of stainless steel, dirt insensitive, robust and maintenance-free.

The GUP 3-1,5 is explosion proof (EEx II 2 G c IIB T3) and **self-priming**. It is **ATEX-certified** acc. to the EU directive 94/9/EG (code IBExU04ATEXB025X).

The pump can be evacuated easily before starting by using the integrated hand-piston pump. After the evacuation, the pump is **dry-running safe**. Pumping against closed valves does not damage the pump. Although fully stainless steel casted, the weight is only 82 kg. Other couplings on request.

The GUP 3-1,5 is suitable to pump all liquids - even at higher temperature, within the limits of the resistance of the materials stainless steel 1.4408 and 1.4571 (V4A) and fluorocarbon FPM (Viton).

The GUP 3-1,5 can be used for pumping **acid liquids**, **flammable liquids** and **waste water** with a viscosity < 5 cm<sup>2</sup>/s. For cleaning, the pump can be disassembled easily.

Further advantages:

The pumped liquid can contain little stones, glass- and metal pieces up to diameter Ø 10 mm . The pump creates a vacuum up to 98 % (-0,98 bar).

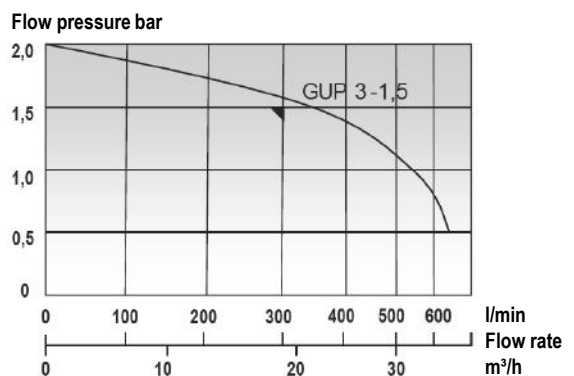
The pump can be operated without damages in combination with valves for flow reduction or even against closed valves. If the flow breaks down, the pump has not to be turned off.

Pulsing-free flow during pumping supports life-cycle of hoses. Flow and flow pressure are self-regulating, no by-pass is needed.

## Technical Data

Hazmat pump		GUP 3-1,5
Ex-protection class		EEx II 2G c IIB T3 acc.to RL 94/4/EG (ATEX)
DIN standards		DIN 14 427
German audit number		PVR 354/4/92
Type examination certificate		IBExU04ATEXB025X
Range of application		- 20°C ≤ Temp. fluid ≤ + 40°C
Flow rate l/min. for		l/min bar 620 0,5 550 1,0
Transfer pressure bar acc. DIN ISO 9906		460 1,25 200 1,75 0 2,0
Voltage	V	400
Output kW	P <sub>1</sub>	3,0
	P <sub>2</sub>	2,5
Rated current	A	4,55
Rotation speed	U/min.	2860
Grain passage	Ø mm	10
Discharge connection	G	2"
Coupling		DN 50 DIN 11 851
Connection line	1,5 m	H07 RN-F 5G1,5
Plug		CEE 16 A 5p EEx
Dimensions	LxBxH cm	62x39x46
Total weight	kg	82

## Characteristics



# Submersible hazmat pump IN EX 7-3 D

Protection class EEx II 2G c IIB T4  
for **aggressive liquids**



IN EX 7-3 D



Motor protection plug for IN EX 7-3 D

The MAST- submersible hazmat pump IN EX 7-3 D is an explosion proof submersible pump for dewatering in **hazardous zones 1 and 2**.

It can be used for **acid liquids** within the limits of the resistance of the materials stainless steel 1.4408 and 1.4571 (V4A) and fluorocarbon FPM (Viton) with a kinematic viscosity < 5 cm<sup>2</sup>/s The pumped liquid can contain little stones, glass- and metal pieces up to diameter Ø 10 mm.

The IN EX 7-3 D is a single-stage, full submersible centrifugal pump with protection class EEx II 2G c EEx d IIB T4.

The electric motor is pressure tight IP 68, the max. immersion depth is 5 m. The pump has a 90° bend with a DN 50 thread acc. to DIN 11 851 (other connections on request).

The pump is **ATEX-certified** acc. to the EU directive 94/9/EG (code BVS 04 ATEX E 098X). The connecting cable length is 8 meter. It is covered with a 5 meter PTFE / stainless steel protection. The plug is explosion proof CEE-plug (4-pole).

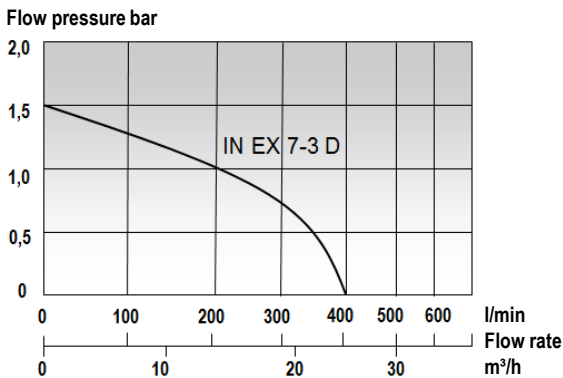
At mobile application, the IN EX 7-3 D must be used together with a motor protection plug (optional available).

Note: Submersible pumps must not be used to pump inflammable liquids (zone 0).

## Technical Data

Hazmat submersible pump		IN EX 7-3 D	
Ex-protection class		EEx II 2G c IIB T4 acc.to RL 94/4/EG (ATEX)	
DIN standards		-	
German audit number		-	
Type examination certificate		BVS04ATEXE098X	
Range of application		- 20°C ≤ Temp. liquid ≤ + 40°C	
Flow rate l/min. for Transfer pressure bar acc. DIN ISO 9906		l/min   bar	
		400   0	
		350   0,5	
		200   1,0	
		125   1,2	
		0   1,5	
Voltage	V	400	
Output kW	P <sub>1</sub>	1,0	
	P <sub>2</sub>	0,78	
Rated current	A	2,2	
Rotation speed	U/min.	2850	
Grain passage	Ø mm	10	
Discharge connection	G	1 1/2"	
Coupling	DN	DN 50 DIN 11 851	
Connection line	8,0 m	NSS HOEU-J 4X2,5	
Plug		CEE 16 A 4p EEx	
Dimensions	ØxBxH cm	20x34x58	
Total weight	kg	50	

## Characteristics





# ATEX references

## EU directive 94/97EG

The TUP 2-1 and TUP 3-1,5 C / CL are suitable for pumping inflammable but not aggressive liquids.  
The GUP 3-1,5 is suitable for pumping inflammable and aggressive liquids. The submersible pump  
IN EX 7-3 D is suitable for aggressive liquids but not inflammable liquids.

## APPLICATION AREA

Hazardous environments are classified in „zones“ according to the potential occurrence of explosive atmospheres.

**The pumps may be used in zone 1 and zone 2.**

**Zone 2** includes an environment, where during standard application an explosive atmosphere of a mixture of air, inflammable gases and vapors does not occur or occurs for a short period only.

**Zone 1** includes an environment, where during standard application an explosive atmosphere of a mixture of air, inflammable gases and vapors occurs occasionally.

**The pumps must not be used in zone 0!**

**Zone 0** includes an environment, where during standard application an explosive atmosphere of a mixture of air, inflammable gases and vapors occurs for a longer period or frequently.



## PROTECTION CLASS



II 2G c IIB T3



Explosion proof marking

II

Equipment group  
other hazardous areas than mining

2

Category  
Applicable in zone 2 and 1

G

Type of explosive atmosphere  
Gas, vapor, fog

c

Type of protection  
Constructional safety

IIB

Classification CENLEG

T

Temperature class IEC

Max. admissible surface temperature T3 = 200°C, T4 = 135°C

Ignition temperature of inflammable substances T3 > 200°C, T4 > 135°C

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