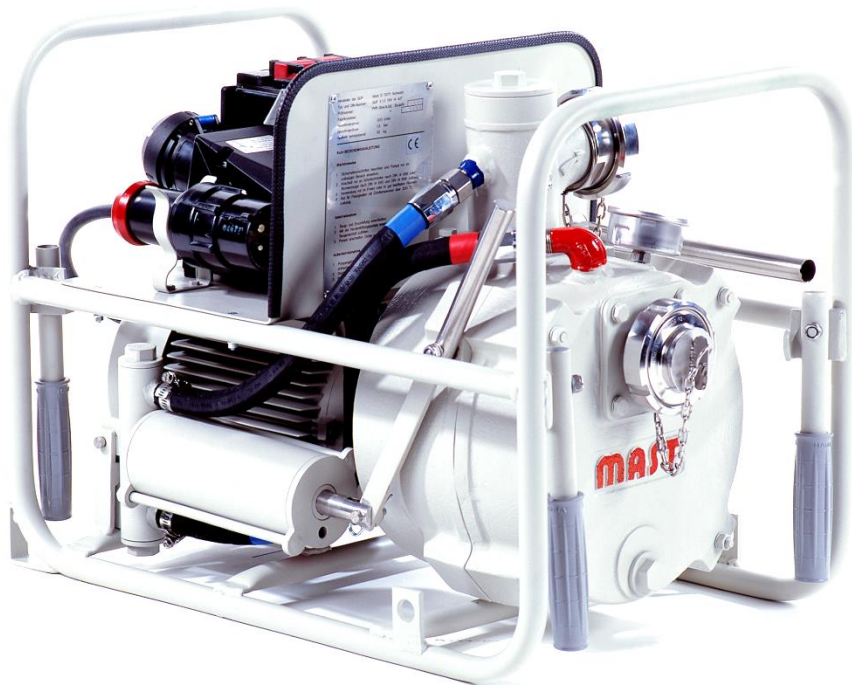




*Engineered
Quality*



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 **inflammable** 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 inflammable 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 inflammable 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.

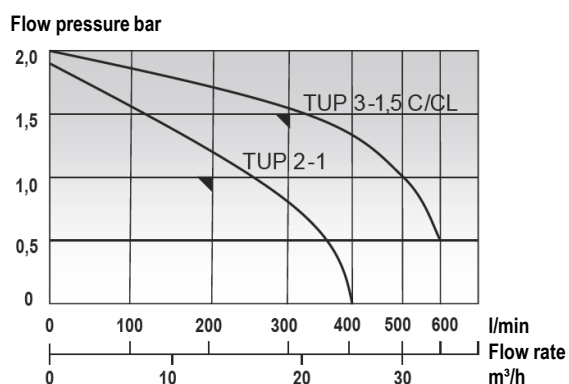
The **TUP 3-1,5 C** and **TUP 3-1,5 CL** comply to the German standard **DIN 14 424**. All MAST TUP pumps are **ATEX-certified** acc. to the EU directive 94/9/EG ATEX (TUP 3-1,5 and TUP 3-1,5 CL code IBExU03ATEXB036X, TUP 2-1 code IBExU09ATEXB014X) .

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. for	l/min bar	l/min bar
	400 0	600 0,5
Transfer pressure bar acc. DIN ISO 9906	350 0,5	500 1,0
	250 1,0	420 1,25
Voltage	190 1,25	320 1,5
	0 1,8	0 2,0
Output kW	400	400
Rated current	P ₁	2,3
	P ₂	1,85
Rotation speed	3,7	4,55
Grain passage	2890	2875
Discharge connection	8	4
Coupling	2"	2"
Connection line	Storz	DIN 14 307-C
Plug	H07 RN-F 5G1,5	H07 RN-F 5G1,5
Dimensions	CEE 16 A 5p EEx	CEE 16 A 5p EEx
Total weight	LxBxH cm	62x33x44
	kg	36

Characteristics

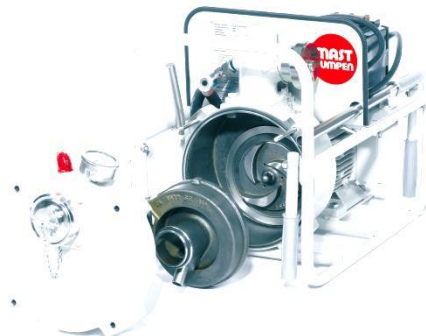


Hazmat pump GUP 3 -1,5

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 cm²/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 \varnothing 10 mm . The pump creates a vacuum up to 98 % (-0,98 bar).

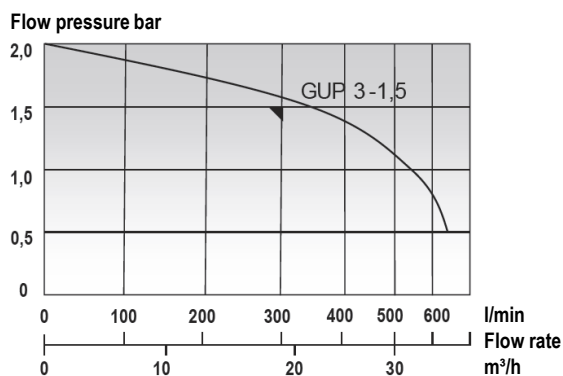
The pump can be operated without damages in combination with valves for flow reduction or even against closed valves. If the flow breaks down, the pump has not to be turned off.

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.		l/min bar
for		620 0,5
Transfer pressure bar		550 1,0
acc. DIN ISO 9906		460 1,25
		200 1,75
		0 2,0
Voltage	V	400
Output kW	P ₁	3,0
	P ₂	2,5
Rated current	A	4,55
Rotation speed	U/min.	2860
Grain passage	∅ 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 <math>< 5 \text{ cm}^2/\text{s}</math> The pumped liquid can contain little stones, glass- and metal pieces up to diameter \varnothing 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).

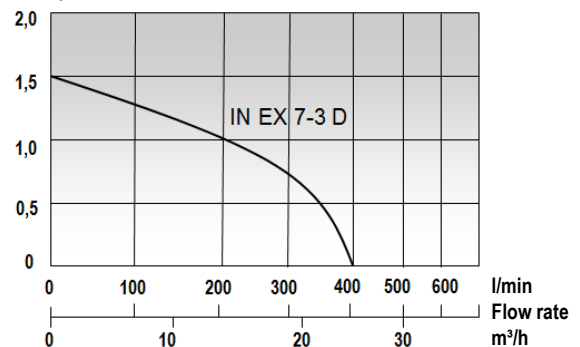
Note: Submersible pumps must not be used to pump inflammable liquids (zone 0).

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.	l/min	bar
for	400	0
Transfer pressure bar	350	0,5
acc. DIN ISO 9906	200	1,0
	125	1,2
	0	1,5
Voltage	V	400
Output kW	P ₁	1,0
	P ₂	0,78
Rated current	A	2,2
Rotation speed	U/min.	2850
Grain passage	∅ 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	∅xBxH cm	20x34x58
Total weight	kg	50

Characteristics

Flow pressure bar



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

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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