

AQUAMAT

TANK CLEANING UNIT (TCU)

DESIGN “AQUAMAT S 600”

16.A.1 – 08/2022

The **TANK CLEANING UNIT AQUAMAT S 600** designed for internal cleaning of tanks and containers.

The tank cleaning unit AQUAMAT S 600 is driven by the jet fluid and cleans tanks three-dimensionally from the inside. It is suitable for particularly small and medium-sized tank openings. Different nozzle holders are available for easily adapt the performance to individual requirements.

- Designed for low to medium performance.
- Rugged build (application-oriented design).
- Compact design - small tank access with appropriate nozzle hub
tank access ≥ 98 mm realisable
- High-quality design with corrosion resistant stainless steel materials.
- User-friendly maintenance due to few wear parts.
- Easy disassembly and assembly. Easy handling. Short setup times.
- Low wear due to almost frictionless parts.
- Flexible application options.
- Connection of various nozzle holders, connection nipples and extension lances possible.
- The rotation speed is adjustable via eddy current brake.
- Suitable for use with hot water up to 95 °C.



Code no.	
TANK CLEANING UNIT AQUAMAT S-600	00.01329.0027
TANK CLEANING UNIT AQUAMAT S-600 <u>CHEMICAL DESIGN</u>	00.01329.0028

NOTE!

TRG S 600 – Chemical design:
viton seals & free of non-ferrous metal

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TECHNICAL DATA

Operating pressure max.:	600 bar
Flow rate max.:	100 l/min
Installed high pressure pump power:	max. 40 kW
Kv value:	14.2 l/min/√bar
Required drive torque:	0.15 - 0.35 Nm

<u>Leakage:</u>	
L New condition:	approx. 0.5 - 1.0 l/min (standard)
	approx. 1.0 - 3.0 l/min (chemistry)

Nominal diameter:	8 mm
Sealing system:	hydrodynamic sealing system HPS
HP connection:	G 3/8" (i)
Speed regulation:	via eddy current brake
Number of nozzles / nozzle inserts:	see nozzle holder
Tank access min.:	98 mm
	 Depending on nozzle hub used!
Dimensions:	236 mm x 87.5 mm
Weight:	4.9 kg

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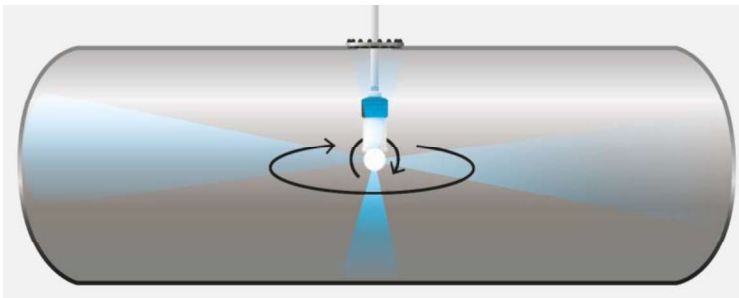
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APPLICATION / USE

The TCU AQUAMAT S 600 is suitable for cleaning of containers with small and medium dimensions as well as suitable for weakly to moderately adhering soiling:

- IBC containers cleaning.
- Removal of desposits or caking from inner walls and internals of vessels and tanks.
- Decontaminate and disinfect (in conjunction with chemical additives).
- Interior cleaning of:
 - ↳ ASF disposal containers, hazardous material containers, paint mixer containers, storage containers, tanks, barrels, silos, etc.
- Other application fields: feed industry and construction



■ Illustration: Tank cleaning



■ Illustration: IBC containers cleaning

FUNCTION / APPLICATION

The jet nozzles are fixed to lever arms, which are driven by the recoil force of the water.

The rotary movement of the nozzle arm is converted into a rotary movement in the second plane via a built-in deflection and transmission gear, so that the nozzle jets reach every point within the body.

The rotation speed is adapted by an adjustable magnetic brake.

The calculation of the power is to be made according to the reaction force of the nuzzle holder, the maximum power limit of 40 kW high-pressure pump power must not be exceeded.

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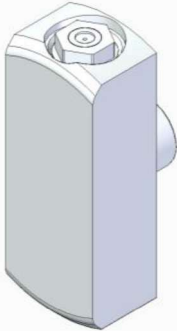
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DESIGN "AQUAMAT S 600"

16.A.4 – 08/2022

NOZZLE HOLDER

Description	Code no.	
NOZZLE HOLDER (SCREW-IN NOZZLE) Operating pressure: 400 bar Lever arm: 2.0 mm Tank access: └ minimum outlet -manual: 105 mm └ minimum outlet - automatic: 125 mm Nozzle reaction force: 90 N - 150 N Number of nozzles: 2 Nozzle design: C Nozzle thread: G 1/4" Connection thread (inlet): M12 x 1 Nozzle hub - diameter Ø: 62.0 mm Nozzle hub - width: 30.8 mm Weight: 0.352 kg	00.02900.0254	
NOZZLE HOLDER (SCREW-IN NOZZLE) Operating pressure: 400 bar Lever arm: 1.0 mm Tank access: └ minimum outlet -manual: 105 mm └ minimum outlet - automatic: 125 mm Nozzle reaction force: 150 N - 280 N Number of nozzles: 2 Nozzle design: C Nozzle thread: G 1/4" Connection thread (inlet): M12 x 1 Nozzle hub - diameter Ø: 62.0 mm Nozzle hub - width: 30.8 mm Weight: 0.352 kg	00.02900.0255	
NOZZLE HOLDER (PLUG-IN NOZZLE) Operating pressure: 600 bar Lever arm: 1.0 mm Tank access: └ minimum outlet -manual: 115 mm └ minimum outlet - automatic: 140 mm Nozzle reaction force: 150 N - 280 N Number of nozzles: 2 Nozzle design: A or M Connection thread (inlet): M12 x 1 Nozzle hub - diameter Ø: 79.0 mm Nozzle hub - width: 34.3 mm Weight: 0.387 kg	00.02900.0256	

Nozzle calculation with „Water Jetting Calculator“: www.water-jetting-calculator.com/nozzlecalculation

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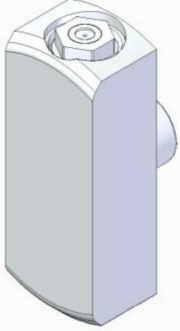
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TANK CLEANING UNIT (TCU)

DESIGN "AQUAMAT S 600"

16.A.5 – 08/2022

NOZZLE HOLDER

Description	Code no.	
NOZZLE HOLDER (PLUG-IN NOZZLE) Operating pressure: 600 bar Lever arm: 2.0 mm Tank access: ↳ minimum outlet -manual: 115 mm ↳ minimum outlet - automatic: 140 mm Nozzle reaction force: 90 N - 150 N Number of nozzles: 2 Nozzle design: A or M Connection thread (inlet): M12 x 1 Nozzle hub - diameter Ø: 79.0 mm Nozzle hub - width: 34.3 mm Width nozzle: 0.387 kg	00.02900.0253	
NOZZLE HOLDER (SCREW-IN NOZZLE) Operating pressure: 600 bar Lever arm: 1.2 or 0.6 mm Tank access: ↳ minimum outlet -manual: 98 mm ↳ minimum outlet - automatic: 114 mm Nozzle reaction force - lever arm = 0.6 mm: 280 N - 500 N Nozzle reaction force - lever arm = 1.2 mm: 140 N - 280 N Nozzle diameter Ø max.: 1.9 mm Number of nozzles (with flow stabilizer): 2 (4) Nozzle design: P Connection thread (inlet): M12 x 1 Nozzle hub - diameter Ø: 57.0 mm Nozzle hub - width: 26.3 mm Weight: 0.283 kg	00.02900.0251	
NOZZLE HOLDER (SCREW-IN NOZZLE) Operating pressure: 600 bar Lever arm: 1.5 mm Tank access: ↳ minimum outlet -manual: 98 mm ↳ minimum outlet - automatic: 114 mm Nozzle reaction force (3 nozzles): 100 N - 230 N Nozzle diameter Ø max.: 1.9 mm Number of nozzles (with flow stabilizer): 3 Nozzle design: P or T Nozzle thread: M 10 Connection thread (inlet): M12 x 1 Nozzle hub - diameter Ø: 57.0 mm Nozzle hub - width: 26.3 mm Weight: 0.283 kg	00.02900.0248	

Nozzle calculation with „Water Jetting Calculator“: www.water-jetting-calculator.com/nozzlecalculation

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DESIGN "AQUAMAT S 600"

16.A.6 – 08/2022

NOZZLE HOLDER

Description	Code no.	
NOZZLE HOLDER (SCREW-IN NOZZLE) Operating pressure: 600 bar Lever arm: 8.0 mm Tank access: ↳ minimum outlet -manual: 98 mm ↳ minimum outlet - automatic: 114 mm Nozzle reaction force (3 nozzles): 20 N - 50 N Nozzle diameter Ø max.: 1.9 mm Number of nozzles (with flow stabilizer): 2 Nozzle design: P or T Nozzle thread: M10 Connection thread (inlet): M12 x 1 Nozzle hub - diameter Ø: 57.0 mm Nozzle hub - width: 26.3 mm Weight: 0.283 kg	00.02900.0250	
NOZZLE HOLDER* (SCREW-IN NOZZLE) Operating pressure: 600 bar Lever arm: 2.0 or 1.0 mm Tank access: ↳ minimum outlet -manual: 98 mm ↳ minimum outlet - automatic: 114 mm Nozzle reaction force - lever arm = 1.0 mm: 150 N - 280 N Nozzle reaction force - lever arm = 2.0 mm: 90 N - 150 N Nozzle diameter Ø max.: 1.9 mm Number of nozzles (with flow stabilizer): 2 (4) Nozzle design: P or T Nozzle thread: M10 Connection thread (inlet): M12 x 1 Nozzle hub - diameter Ø: 57.0 mm Nozzle hub - width: 26.3 mm Weight: 0.283 kg	00.02900.0244	

Nozzle calculation with „Water Jetting Calculator“: www.water-jetting-calculator.com/nozzlecalculation



* Always operate nozzle holder only with 2 nozzles!

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ACCESSORIES

Description	Code no.	
SWIVELLING PULLING EYE Connection: M14 x 1,5 Tensile load max.: 5 kN Towing eyelet: Ø 11 mm Length: 500 mm	00.06048.0027	

Description	Code no.
SILVER GOOP thread lubricant for stainless steel and alloys 30 ml tube <i>Not applicable for aluminium and magnesium!</i>	04.00982.0010

LANCE PIPES

Description	Code no.	
LANCE PIPE Connection: G 3/8" a, both sides Operating pressure: max. 1200 bar Nominal diameter: i/d 8 mm Length: 500 mm	01.03559.0542	
LANZENROHR Connection: G 3/8" a, both sides Operating pressure: max. 1200 bar Nominal diameter: i/d 8 mm Length: 1000 mm	01.03559.0545	

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16.A.8 – 08/2022

ACCESSORIES

HIGH-PRESSURE ADAPTER - MALE THREAD

Description	Code no.	
DOUBLE NIPPLE (RED.) Connection: M24 x 1.5 DKO-S / G $\frac{3}{8}$ " Operating pressure: max. 1000 bar Nominal diameter: i/d 8 mm	01.02981.0454	
DOUBLE NIPPLE (RED.) Connection: M22 x 1.5 DKO-S / G $\frac{3}{8}$ " Operating pressure: max. 1000 bar Nominal diameter: i/d 8 mm	01.02981.0773 + Cylinder ring 01.00742.0331	
DOUBLE NIPPLE (RED.) Connection: M22 x 1.5 WGA / G $\frac{3}{8}$ " Operating pressure: max. 500 bar Nominal diameter: i/d 8 mm	01.02981.0812	
DOUBLE NIPPLE (RED.) Connection: M36 x 2 DKO-S / G $\frac{3}{8}$ " Operating pressure: max. 1000 bar Nominal diameter: i/d 8 mm	01.02981.0671	

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ACCESSORIES

HIGH-PRESSURE ADAPTER - FEMALE THREAD

Description	Code no.	
REDUCTION PIECE Connection: G 1/2" i / G 3/8" a Operating pressure: max. 600 bar Nominal diameter: i/d 8 mm Length: 44 mm	01.05320.0580	
REDUCTION PIECE Connection: G 3/8" / 1/2" - 14" NPT Operating pressure: max. 1000 bar Nominal diameter: i/d 8 mm Length: 55 mm	01.05320.0259	
REDUCTION PIECE Connection: G 3/8" / M33 x 2 Operating pressure: max. 1000 bar Nominal diameter: i/d 8 mm Length: 50 mm	01.05320.0596	

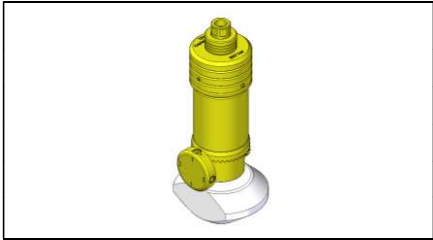
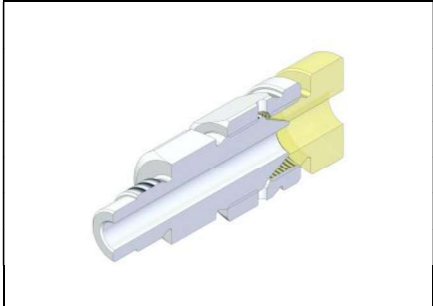
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16.A.10 – 08/2022

ACCESSORIES (OPTIONAL)

Description	Code no.	
TANK CLEANING DEVICE Operating pressure: max. 600 bar Flange outer dia. Ø: 440 mm Sockets: i/d 300 mm PN 6 i/d 300 mm PN 10 Stroke: 1900 mm Connection thread: M24 x 1.5 DKO-S Material: stainless steel Dimensions: 440 x 440 x 640 mm Weight: 15.4 kg	00.06020.0193	
TANK CLEANING DEVICE Operating pressure: max. 600 bar Sockets: i/d 140 mm and i/d 225 mm Nominal diameter: 140 mm Stroke: 800 mm Lance length: 0 - 800 mm Connection thread: M24 x 1.5 DKO-S Material: stainless steel Dimensions: 255 x 255 x 1050 mm Weight: 8.0 kg	00.06020.0195	
PROTECTION TCU-S - INSERT SUPPORT • Insert support for TCU-S into a container • Protective cover Length: 60 mm Width: 119 mm Weight: approx. 0.6 kg	00.04870.0126	
REDUCTION PIECE (for connection of a hose) Connection: G 3/8" / G 1/2" Operating pressure: max. 600 bar Nominal diameter: i/d 8 mm Length: 64 mm Diameter: 30 mm Spanner width: 27 mm Weight: 200 g	00.05320.0016	

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