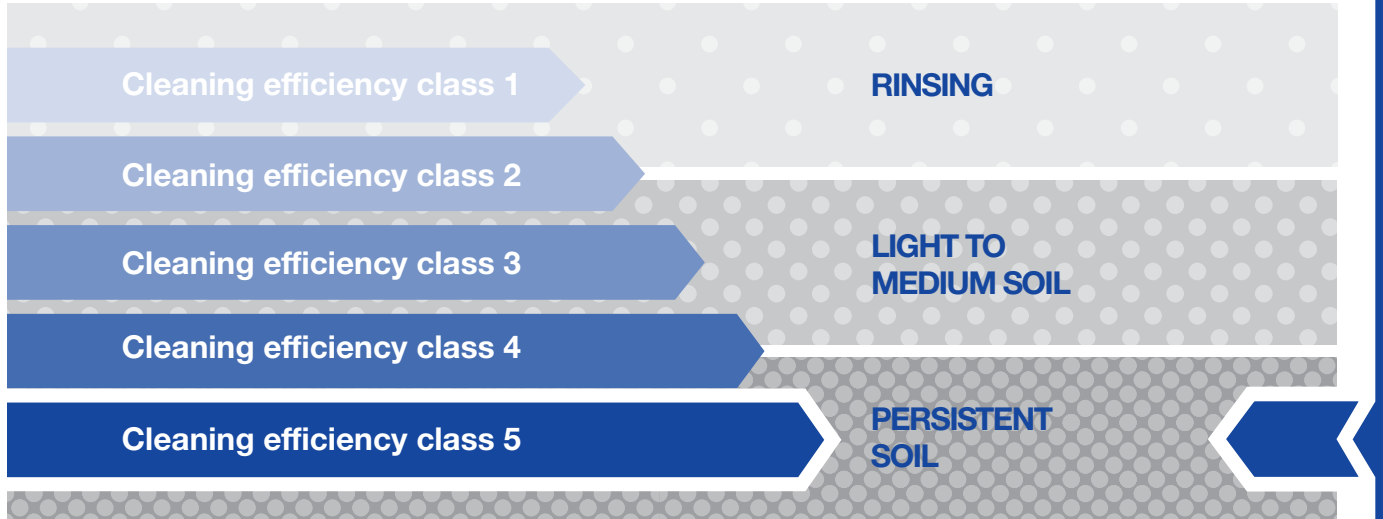


THE EFFECTIVE MEDIUM AGAINST THE MOST PERSISTENT SOILING



Cleaning efficiency class 5


Persistent soiling requires special measures. That's why the Lechler high impact tank cleaning nozzles in efficiency class 5 are equipped with high-grade gear units and work with deliberately controlled rotation. They prove their capabilities in tasks in the food and beverage industry, the chemical and petrochemical industry and the paper industry.


Solid jet nozzles ensure maximum efficiency and maximum impact. Cleaning efficiency class 5 includes rotating cleaners that are suitable for medium to very large tanks. Process reliability is increased through combination with the Lechler rotation monitoring sensor.




| | | | | | | | | | | | |
|---|-------------------------------|---|---|---|---|----|----|----|----|----|----|
|  | Max. tank diameter [m] | 0 | 3 | 6 | 9 | 12 | 15 | 18 | 21 | 24 | 27 |
|---|-------------------------------|---|---|---|---|----|----|----|----|----|----|

 **Operating principles**
Gear-controlled

 **Flow rates at 2 bar**
25 to 260 l/min

 **Recommended operating pressures**
5 bar

 **Max. temperatures**
60 to 95 °C



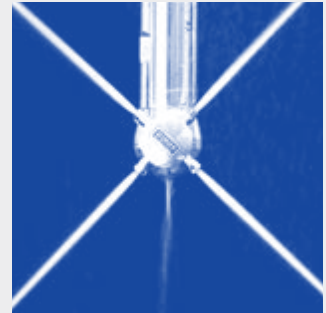
High impact tank cleaning machine

»IntenseClean Hygienic«

Series 5TA

Series 5TA

The IntenseClean Hygienic 5TA is a permanent feature, especially in the pharmaceutical, food and beverage industries. It is extremely effective thanks to the particularly powerful solid jet nozzles and is also suitable for small tanks with persistent soiling. The series can resist pressures of up to 15 bar and high temperatures without any problem. All parts used exhibit a particularly high surface quality.



Function video

Scan the QR-code or go to:

www.lechler.com/intensecleanhygienic5ta



Max. Tank diameter [m]

0 | 3 | 6 | 9 | 12 | 15 | 18 | 21 | 24 | 27



Materials

316L SS, 632 SS, PEEK, PTFE, Zirconium oxide, EPDM



Max. temperature

95 °C



Recommended operating pressure

5 bar



Installation

Operation in every direction is possible



Filtration

Line strainer with a mesh size of 0.2 mm/80 mesh



Bearing

Ball bearing



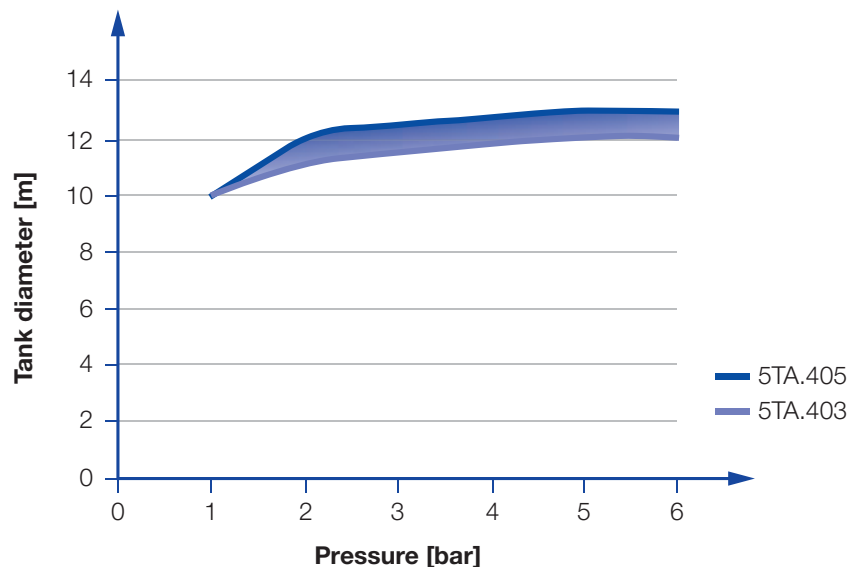
Weight

0.9 kg

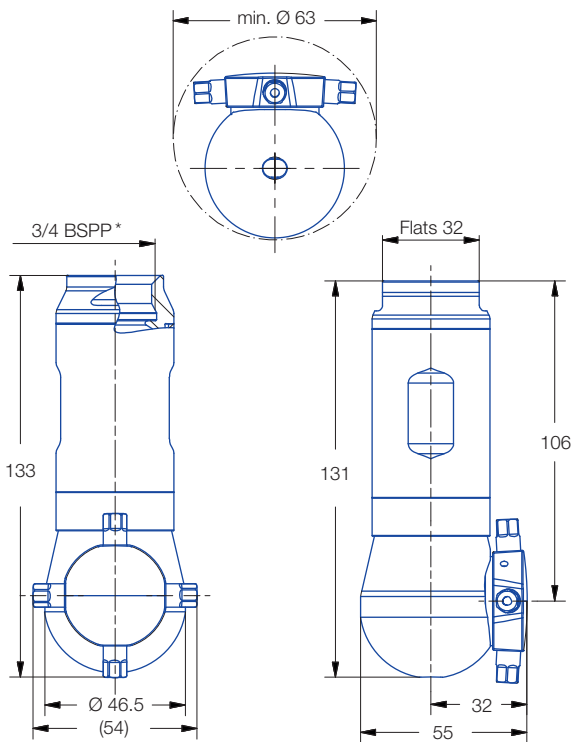


Rotation monitoring sensor

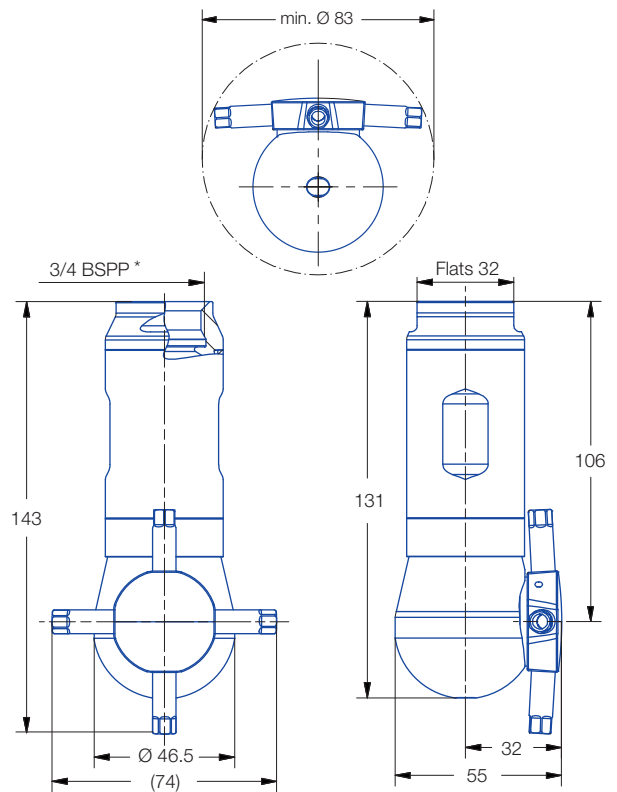
Sensor compatible, Info: see page 76





Overview of the tank diameter, depending upon the pressure of series 5TA



Female thread
5TA.403.1Y.AL and 5TA.404.1Y.AL

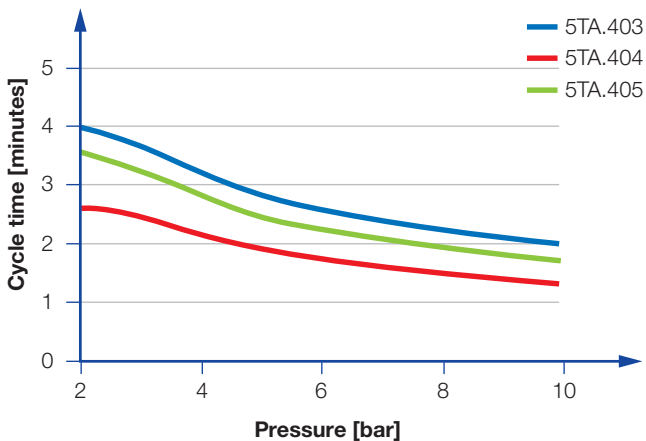


Female thread
5TA.405.1Y.AL

| Spray angle  | Ordering no. Type | E Ø [mm] | Number. Ø Nozzles [mm] | V̇ [l/min] | | | | Max. tank diameter [m] |
|--|----------------------|----------------|------------------------------|-------------------------------------|----|-----|---------------------------|---------------------------|
| | | | | p [bar] (p _{max} = 15 bar) | | | | |
| | | | | 2 | 5 | 10 | at 40 psi [US gal/min] | |
| 360°  | 5TA.403.1Y.AL | 1.5 | 4 x 3.0 | 24 | 39 | 55 | 7.7 | 12.0 |
| | 5TA.404.1Y.AL | 1.5 | 4 x 4.0 | 35 | 56 | 79 | 11 | 12.5 |
| | 5TA.405.1Y.AL | 1.5 | 4 x 5.0 | 50 | 79 | 111 | 15.5 | 13.0 |

E = narrowest free cross-section
* Slip-on connection on request


The maximum tank diameter shown above applies for the recommended operating pressure and is indicative only. The cleaning result is also affected by the type of soiling.



Cycle time depending on pressure of series 5TA

**Example of ordering with ATEX approval.
FDA and (EC) 1935/2004 conform.**

Unit group/category/zones:

 II 1G Ex h IIB T6...T4 Ga

 II 1D Ex h IIIC T85 °C...T135 °C Da

Example
of Ordering:

Type/Ordering no.
5TA.403.1Y.AL.EX



**Example of ordering with FDA
and (EC) 1935/2004 conformity.**

All Materials are suitable for
contact with food.

Example
of Ordering:

Type/Ordering no.
5TA.403.1Y.AL





High impact tank cleaning machine

»IntenseClean Hygienic«

Series 5TB

Series 5TB

The IntenseClean Hygienic 5TB has firmly established itself, above all in the pharmaceutical, food and beverage industries – and with good reason: The especially strong solid jets produce an extremely high degree of effectiveness, while the gear-controlled rotation ensures high levels of efficiency. All parts used are noted for their particularly high surface quality. This series is suitable for high pressures and temperatures.



Max. Tank diameter [m]

0 | 3 | 6 | 9 | 12 | 15 | 18 | 21 | 24 | 27



Materials

316L SS, 632 SS,
PEEK, PTFE,
Zirconium oxide,
EPDM



Max. temperature

95 °C



Recommended operating pressure

5 bar



Installation

Operation in every direction is possible



Filtration

Line strainer with a mesh size of 0.2 mm/80 mesh



Bearing

Ball bearing



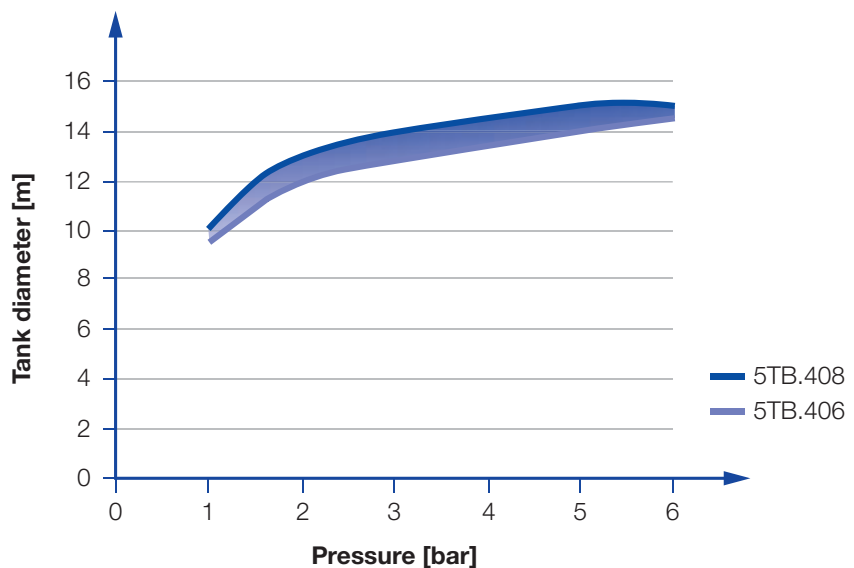
Weight

4.0 kg

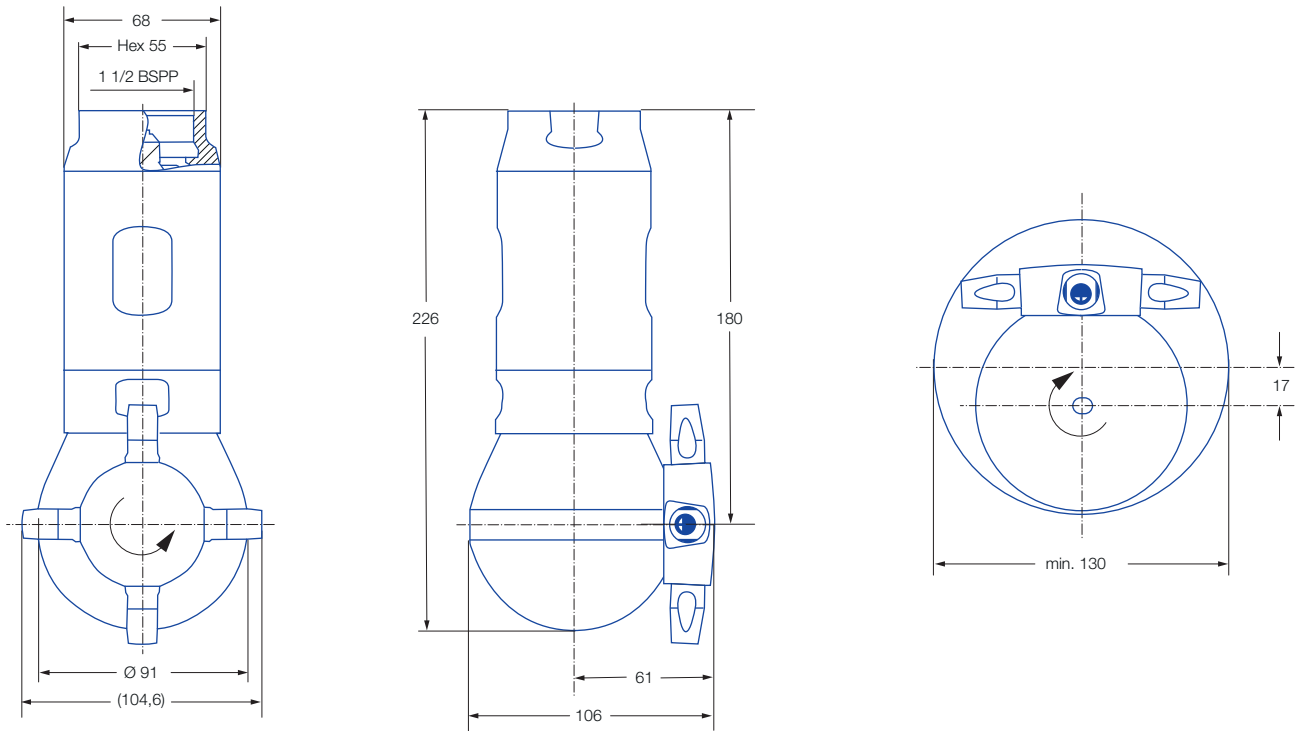




Rotation monitoring sensor

Sensor compatible,
Info: see page 76



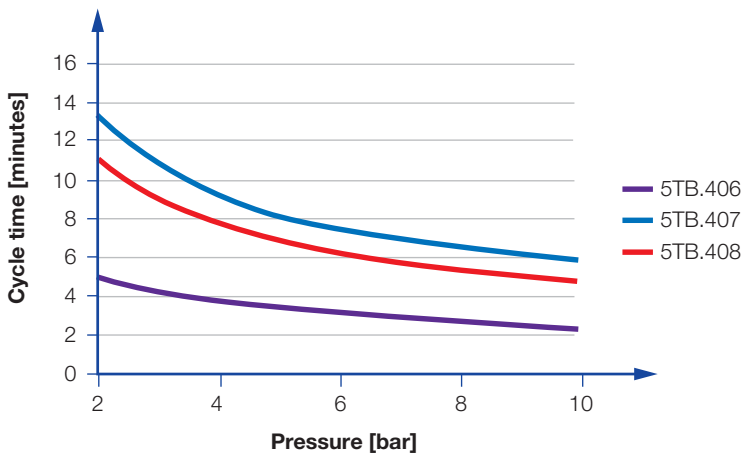
Overview of the tank diameter, depending upon the pressure of series 5TB



| Spray angle  | Ordering no. Type | E Ø [mm] | Number, Ø Nozzles [mm] | V̇ [l/min] | | | | Max. tank diameter [m] |
|--|----------------------|----------------|------------------------------|-------------------------------------|-----|-----|---------------------------|---------------------------|
| | | | | p [bar] (p _{max} = 25 bar) | | | | |
| | | | | 2 | 5 | 10 | at 40 psi [US gal/min] | |
| 360°  | 5TB.406.1Y.AS | 6.0 | 4 x 6.0 | 107 | 169 | 239 | 33.1 | 14.0 |
| | 5TB.407.1Y.AS | 6.0 | 4 x 7.0 | 132 | 209 | 296 | 41.0 | 14.0 |
| | 5TB.408.1Y.AS | 6.0 | 4 x 8.0 | 150 | 238 | 336 | 46.7 | 15.0 |

E = narrowest free cross-section

The maximum tank diameter shown above applies for the recommended operating pressure and is indicative only. The cleaning result is also affected by the type of soiling.



Cycle time depending on pressure of series 5TB

**Example of ordering with ATEX approval.
FDA and (EC) 1935/2004 conform.**

Unit group/category/zones:

 II 1G Ex h IIB T6...T4 Ga

 II 1D Ex h IIIC T85 °C...T135 °C Da



Example
of Ordering:

Type/Ordering no.
5TB.406.1Y.AS.EX

**Example of ordering with FDA
and (EG) 1935/2004 conformity.**

All Materials are suitable for
contact with food.



Example
of Ordering:

Type/Ordering no.
5TB.406.1Y.AS



High impact tank cleaning machine

»IntenseClean«

Series 5TM

Series 5TM

The IntenseClean is used in many applications, amongst others in the petrochemical industry. It is noted for its robust and proven construction, effective solid jets and gear-controlled rotation.



| | | | | | | | | | | | |
|--|-------------------------------|---|---|---|---|----|----|----|----|----|----|
| | Max. tank diameter [m] | 0 | 3 | 6 | 9 | 12 | 15 | 18 | 21 | 24 | 27 |
|--|-------------------------------|---|---|---|---|----|----|----|----|----|----|

Materials
Stainless steel 1.4404 (316L), 1.4301 (304), 1.4310, 1.4571 (316Ti), 1.4401 (316), AISI 302, PTFE, PEEK, PTFE ELS (only ATEX-version)

Max. temperature
95 °C

Recommended operating pressure
5 bar

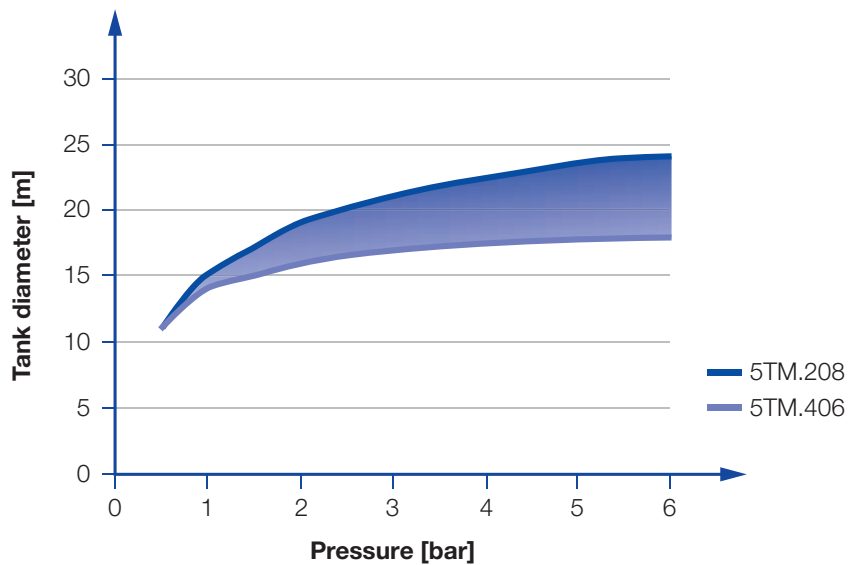
Installation
Operation in every direction is possible

Filtration
Line strainer with a mesh size of 0.2 mm/80 mesh

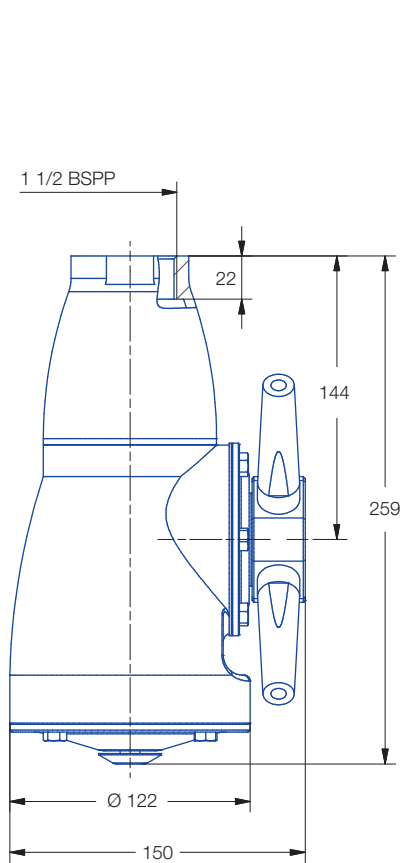
Bearing
Ball bearing

Weight
7.5 kg

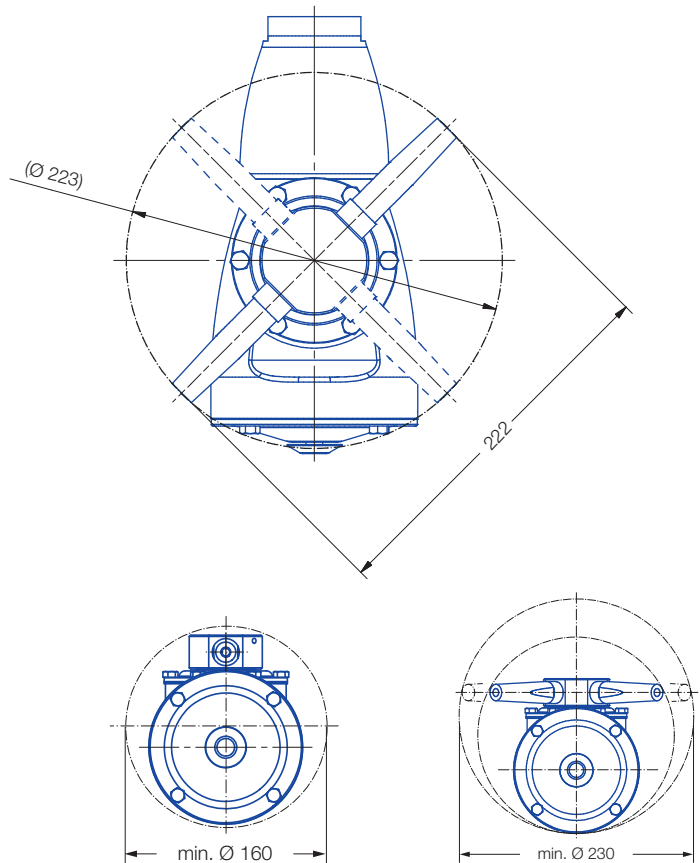
Rotation monitoring sensor
Sensor compatible,
Info: see page 76



Overview of the tank diameter, depending upon the pressure of series 5TM



Female thread



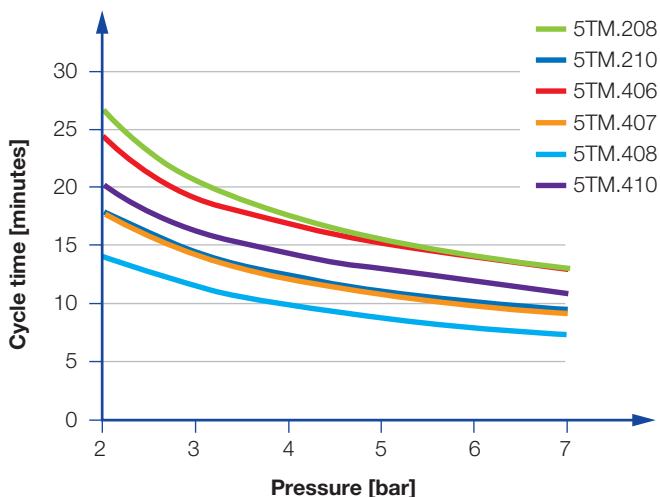
5TM.2XX.1Y.AS (2 nozzles)

5TM.4XX.1Y.AS (4 nozzles)

| Spray angle | Ordering no. | E Ø [mm] | Number, Ø Nozzles [mm] | V [l/min] | | | | Max. tank diameter [m] |
|-------------|---------------|----------|------------------------|------------------------------------|-----|-----|------------------------|------------------------|
| | | | | p [bar] (p _{max} = 7 bar) | | | | |
| | | | | 2 | 3 | 5 | at 40 psi [US gal/min] | |
| 360° | 5TM.208.1Y.AS | 8 | 2 x 8.0 | 125 | 153 | 198 | 39 | 24.0 |
| | 5TM.210.1Y.AS | 10 | 2 x 10.0 | 160 | 196 | 253 | 50 | 24.0 |
| | 5TM.406.1Y.AS | 6 | 4 x 6.0 | 140 | 171 | 221 | 43 | 18.0 |
| | 5TM.407.1Y.AS | 7 | 4 x 7.0 | 170 | 208 | 269 | 53 | 20.0 |
| | 5TM.408.1Y.AS | 8 | 4 x 8.0 | 200 | 245 | 316 | 62 | 22.0 |
| | 5TM.410.1Y.AS | 10 | 4 x 10.0 | 260 | 318 | 411 | 81 | 23.0 |

E = narrowest free cross-section

The maximum tank diameter shown above applies for the recommended operating pressure and is indicative only. The cleaning result is also affected by the type of soiling.



Cycle time depending on pressure of series 5TM

Example of ordering with FDA and (EG) 1935/2004 conformity.



All Materials are suitable for contact with food.



Example of Type + Mat.-Nr. + Anschluss = Bestell-Nr.
Ordering: 5TM.208 + 1Y + AS = 5TM.208.1Y.AS

Example of ordering with ATEX approval, FDA and (EG) 1935/2004 conformity.



Unit group / category / zones:

- ⊗ II 1G Ex h IIB T6...T3 Ga
- ⊗ II 1D Ex h IIIC T85 °C...T150 °C Da



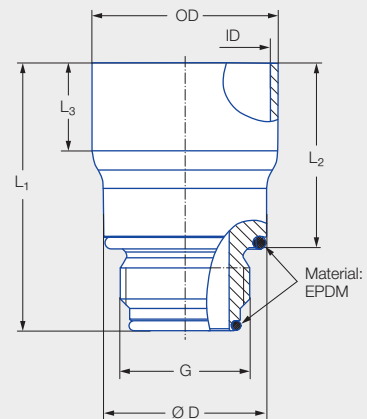
Example of Type + Mat.-Nr. + Anschluss = Bestell-Nr.
Ordering: 5TM.208 + 1Y + AS = 5TM.208.1Y.AS.EX



Adapter »HygienicFit« Series 05C

Series 05C

The HygienicFit ensures a hygienic connection between your tank cleaning nozzle and the supply line. The adaptor is welded onto the connection pipe, while the Lechler tank cleaning nozzle is screwed onto it. The O-rings on the adapter completely encapsulate the thread, thereby providing a perfectly hygienic connection to the system. Through the use of the O-rings, the HygienicFit also offers a reliable thread lock.



Materials
316L SS;
EPDM (O-Ring)



Max. temperature
150 °C



Installation
Operation in every
direction is possible

| Ordering no. | Connection thread BSPP male | Dimensions [mm] | | | | Dimensions OD = Outer diameter ID = Inner diameter [mm] | | Pipe standard |
|-------------------------|-----------------------------------|--------------------|----------------|----------------|------|--|------|-----------------------|
| | | L ₁ | L ₂ | L ₃ | Ø D | OD | ID | |
| 05C.190.1Y.AE.16 | 3/8 | 48 | 35,7 | 18 | 21,5 | 19,05 | 15,8 | DIN EN 10357 series D |
| 05C.230.1Y.AE.15 | 3/8 | 48 | 35,7 | 18 | 21,5 | 23 | 20 | DIN EN 10357 series A |
| 05C.250.1Y.AE.12 | 3/8 | 48 | 35,7 | 17 | 21,5 | 25 | 22,6 | DIN EN 10357 series D |
| 05C.250.1Y.AG.12 | 1/2 | 56 | 39 | 18 | 31 | 25 | 22,6 | DIN EN 10357 series D |
| 05C.350.1Y.AK.15 | 3/4 | 55 | 37,8 | 21 | 33,5 | 35 | 32 | DIN EN 10357 series A |
| 05C.380.1Y.AK.12 | 3/4 | 55 | 37,8 | 18 | 33,5 | 38 | 35,6 | ISO 2037 |
| 05C.381.1Y.AK.15 | 3/4 | 55 | 37,8 | 18 | 33,5 | 38,1 | 35,1 | DIN EN 10357 series D |
| 05C.381.1Y.AM.16 | 1 | 59 | 39 | 23 | 40,5 | 38,1 | 34,9 | DIN EN 10357 series D |
| 05C.508.1Y.AP.15 | 1 1/4 | 57 | 38 | 22 | 49,4 | 50,8 | 47,8 | DIN EN 10357 series D |
| 05C.635.1Y.AR.16 | 1 1/2 | 63 | 44 | 22 | 56 | 63,5 | 60,3 | DIN EN 10357 series D |

Spare parts set of O-rings, EPDM

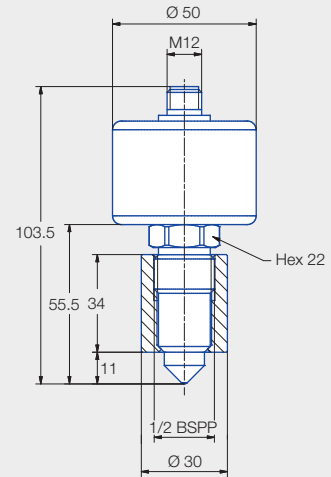
| Thread type BSPP | Ordering no. |
|------------------|-------------------------|
| 3/8 | 05C.000.E9.AE.00 |
| 1/2 | 05C.000.E9.AG.00 |
| 3/4 | 05C.000.E9.AK.00 |
| 1 | 05C.000.E9.AM.00 |
| 1 1/4 | 05C.000.E9.AP.00 |
| 1 1/2 | 05C.000.E9.AR.00 |

O-ring set is also available on request in FKM.



Rotation Monitoring Sensor

Cleaning processes can be easily and reliably monitored with the Lechler rotation monitoring sensor. The sensor records the quantity of liquid flowing over the sensor tip. With the aid of the software*, the sensor function can be specifically adjusted to the tank size, pressure and nozzle.



Electrical data

- Supply voltage: $U_b = 24\text{ V} \pm 20\%$ (18 to 32 VDC)
- Power requirements: $< 20\text{ mA}$
- Output signal: PNP, 50 mA short circuit protected, active

Operating conditions

- Ambient temperature: -10°C up to $+60^\circ\text{C}$
- Process temperature: 0°C up to $+100^\circ\text{C}$

Materials

- Socket (G 1/2"): 316L SS
- Probe tip: PEEK
- Body: 303 SS

Operating principle

- Capacitive

Advantages

- Reliable recognition of any faults during the cleaning cycle
- The process connection of the sensor is in compliance with the hygiene guidelines of the EHEDG
- Simple operation
- Can be connected to PLC
- Only needs to be set up once using the software provided
- Can be specifically adapted to each cleaning task



Ordering data

| Ordering data | Ordering no. |
|--|--------------------|
| Rotation monitoring sensor with weld-in sleeve | 050.040.00.00.00.0 |
| Cable set for first-time operation | 050.040.00.00.01.0 |

Rotation monitoring sensor with weld-in sleeve



Cable set for first-time operation/installation



Main adapter with cable



USB adapter with cable



Programming adapter Y-piece



Weld-in mandrel

* Software download (free of charge): www.lechler.com/software/rotationcontrolsystem