

I Application

The TLS pump is a positive displacement rotary lobe pump designed according to the sanitary requirements. The pump has a reduced size and it is highly efficient and reliable.

This pump is ideal for managing all kinds of fluid, of either low or high viscosity, in the food-processing, dairy and cosmetic industries as well as for filtering and bottling applications. Products containing fragile solids such as junket can be pumped without damage thanks to the specially designed lobes.

I Design and features

The TLS pump is a monoblock pump that can be adapted to any gear motor with a B5 flange. The pump basically consists of a stainless steel pump housing and cover manufactured by investment casting, two tri-lobe rotors with a sanitary design attachment. Moreover, the pump is provided with height adjustable stainless steel legs of hygienic design.

The rotary lobe pump is provided with a C/SiC/EPDM external single mechanical seal. The seal is balanced and has a sanitary design. If an application requires it, other seal materials can be used.

I Technical specifications

Materials:

| | |
|-------------------------------------|--------------------|
| Parts in contact with the product | AISI 316L (1.4404) |
| Other stainless steel parts | AISI 304L (1.4306) |
| Support and lantern | GG-25 |
| Gaskets in contact with the product | EPDM |

Mechanical seal:

| | |
|-----------------|-----------------------|
| Rotary part | Silicon carbide (SiC) |
| Stationary part | Carbon (C) |
| Gaskets | EPDM |

| | |
|--------------------------|----------------------------|
| Internal surface finish: | Bright polish, Ra < 0,8 µm |
| External surface finish: | Matt |

| | |
|--------------|-----------|
| Connections: | DIN 11851 |
| | CLAMP |
| | SMS |



TLS rotary lobe pump with shroud



I Technical specifications

Operating limits:

| | | |
|-------------------|----------------------------|---------------|
| Nominal pressure | 1200 kPa (12 bar) | 174 PSI |
| Temperature range | -10 to 120 °C (EPDM) | 14°F to 248°F |
| | +140°C (SIP, max. 30 min.) | 284°F |

| | DN | Maximum speed min ⁻¹ | Maximum pressure bar | Volume per revolution l/rev. |
|-----------------|-----------|---------------------------------|----------------------|------------------------------|
| TLS 1-25 | 25 1" | 950 | 12 | 0,10 |
| TLS 1-40 | 40 1½" | 950 | 7 | 0,14 |
| TLS 2-40 | | 950 | 12 | 0,23 |
| TLS 2-50 | 50 2" | 950 | 7 | 0,30 |
| TLS 3-50 | | 720 | 12 | 0,68 |
| TLS 3-80 | 80 3" | 720 | 7 | 0,95 |

I Motor and gear unit

Helical gear unit with B5 flange in compliance with the IEC standards and triphasic induction motor
4 poles=1500/1750 rpm, efficiency class according to EC regulation, IP 55 protection and F-class insulation.

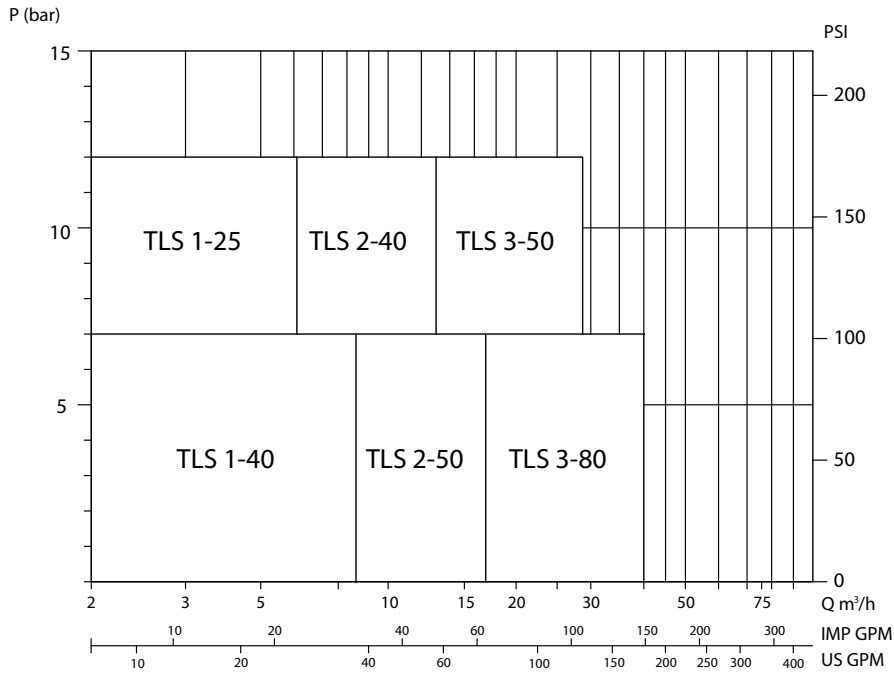
3 phases, 50 Hz, 230 V Δ / 400 V Y, ≤ 4 kW
3 phases, 50 Hz, 400 V Δ / 690 V Y, ≥ 5,5 kW

I Options

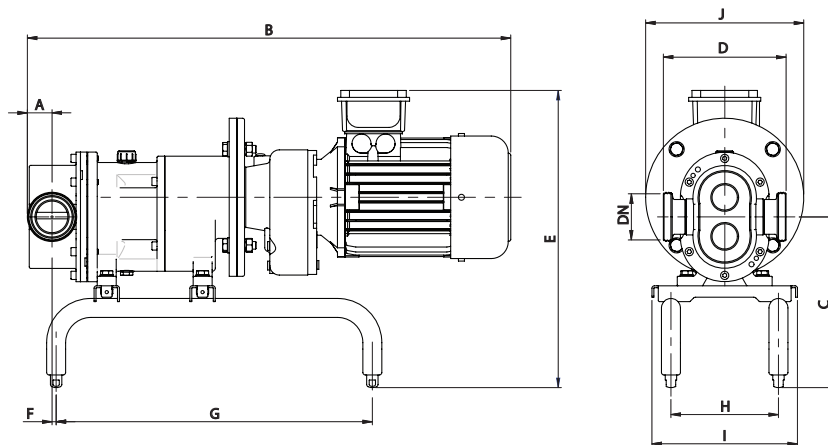
- Pump casing with drain port.
- Mechanical seal options: SiC/SiC, TuC/SiC.
- Lip seal.
- FPM gaskets.
- External by-pass.
- Bi-lobe rotors.
- Stainless steel shroud can be mounted without disassembling the pump.
- Other drive types and protection classes.
- Different types of connections.
- Stainless steel trolley.
- Polyester or stainless steel control box.



I Performance chart



I Dimensions



| Pump | DN | D | | |
|----------|----------|-----------|-----|-------|
| | | DIN 11851 | SMS | CLAMP |
| TLS 1-25 | 25 1" | 158 | 138 | 156 |
| TLS 1-40 | 40 | 166 | 146 | |
| TLS 2-40 | 1½" | 190 | 192 | 189 |
| TLS 2-50 | 50 | 194 | 194 | 190 |
| TLS 3-50 | 2" | 239 | 239 | 235 |
| TLS 3-80 | 80 3" | 256 | 260 | 248 |



I Dimensions

| | Gear unit | kW | DN | A | B | C | E | F | G | H | I | J | kg |
|-----------------|-----------|------|----|----|------|-----|-----|-----|-----|-----|-----|-----|-----|
| TLS 1-25 | SK01F | 0,55 | 25 | 26 | 625 | 220 | 387 | 2 | 400 | 140 | 200 | 165 | 36 |
| | | 0,75 | 25 | 26 | 625 | 220 | 387 | 2 | 400 | 140 | 200 | 165 | 39 |
| TLS 1-40 | SK01F | 0,75 | 40 | 33 | 640 | 220 | 387 | 8 | 400 | 140 | 200 | 165 | 40 |
| | | 1,1 | 40 | 33 | 675 | 220 | 392 | 8 | 400 | 140 | 200 | 185 | 44 |
| TLS 2-40 | SK20F | 1,1 | 40 | 33 | 725 | 270 | 448 | 1 | 500 | 170 | 230 | 200 | 59 |
| | | 1,5 | 40 | 33 | 725 | 270 | 448 | 1 | 500 | 170 | 230 | 200 | 63 |
| TLS 2-50 | SK20F | 1,5 | 50 | 39 | 735 | 270 | 448 | 6 | 500 | 170 | 230 | 200 | 64 |
| | | 2,2 | 50 | 39 | 765 | 270 | 470 | 6 | 500 | 170 | 230 | 200 | 74 |
| TLS 3-50 | SK25F | 2,2 | 50 | 39 | 880 | 353 | 569 | -13 | 600 | 200 | 280 | 250 | 121 |
| | | 3 | 50 | 39 | 880 | 353 | 569 | -13 | 600 | 200 | 280 | 250 | 121 |
| | | 4 | 50 | 39 | 925 | 353 | 579 | -13 | 600 | 200 | 280 | 250 | 126 |
| TLS 3-50 | SK33F | 5,5 | 50 | 39 | 1010 | 353 | 604 | -13 | 600 | 200 | 280 | 270 | 156 |
| TLS 3-80 | SK25F | 3 | 80 | 55 | 905 | 353 | 569 | -2 | 600 | 200 | 280 | 250 | 124 |
| | | 4 | 80 | 55 | 955 | 353 | 579 | -2 | 600 | 200 | 280 | 250 | 130 |
| TLS 3-80 | SK33F | 5,5 | 80 | 55 | 1035 | 353 | 604 | -2 | 600 | 200 | 280 | 270 | 159 |
| | | 7,5 | 80 | 55 | 1035 | 353 | 604 | -2 | 600 | 200 | 280 | 270 | 166 |

