Stainless steel hybrid pump LES

Features:

- Hygienic design, based on the EHEDG guidelines
- Excellent behavior when a high gas content present
- Very quite operation
- robust construction – ideal for rapid temperature changes
- Various mechanical seal systems available
  e.g. with FDA, USP Cl VI. certificates
- completely drainable

The main advantages of the LES pump

compared to a side channel pump can be summarized as follows:

- Power saving through a higher efficiency
- Lower acquisition, maintenance and operating costs
- Delivery of solids is possible
- Quick adaptation to new delivery conditions by easy impeller exchange
- Operations with large flow rates and high delivery heads

Food industry

CIP, milk, vinegar, cooking oil, sugar solutions, brine, etc.

Beverage industry

CIP, mineral water, spirits, alcohol, ice tea, etc.

Pharmaceuticals/cosmetics

CIP/SIP, alcohol, ultrapure water, perfumes, colorants, etc.

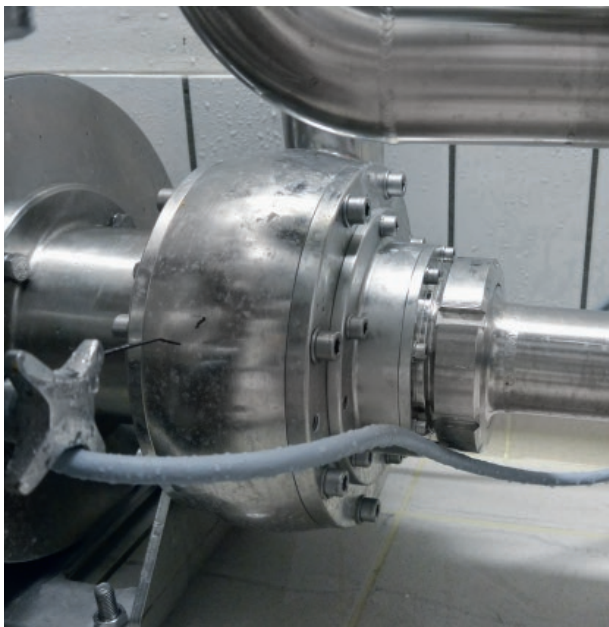
Chemicals/industry

CIP, lyes, acids, ethanol, methanol, solvents, div. chemicals, etc.

SAWA Pumpentechnik AG is using for all pumps the high quality, corrosion resistant chromium-nickel-molybdenum stainless steel 316L respectively 1.4435. All wetted parts are electropolished and have a smooth, pore-free surface.

Excellent alternative to side channel pumps

The stainless steel hybrid pump LES from SAWA Pumpentechnik AG has a specially designed pump cover with an integrated recirculation system and, in addition, an inducer. That allows to use the LES pump in a self-priming application.



silent and efficient

Optional versions:

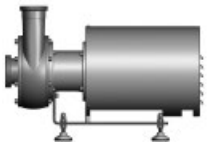
✓ ATEX
for zones 1, 2 and 21, 22

✓ Pharma Design
for maximum safety, reliability and hygiene (surface roughness down to Ra < 0.4 µm)

✓ Magnetic coupling
hermetically sealed design LESM for crystallising, toxic, flammable and environmentally hazardous liquids

✓ Mobile
with sturdy stainless steel trolley

✓ Bearing bracket execution
for special requirements

Modules/options:	
Design option I – foot motor without stainless steel shroud 	Design option T – stainless steel shroud and chrome steel foot with machine feet 
Design option M – stainless steel shroud and chrome steel foot 	Design option W – ATEX/ bearing bracket execution 

ATEX execution:
- Zones 1, 2 and 21, 22
- Design with magnetic coupling or bearing bracket execution
- Certified ATEX motors
- Various monitoring options (PT100, dry run protection etc.)

Available documentations:
- SAWA test report
- Operating and maintenance manual
- FDA conformity certificate of elastomers
- Certificate of conformity 2.2 EN DIN 20304
- Inspection certificate 3.1 DIN EN 10204
- Surface roughness and ferrite content protocols
- Welding protocol
- USP Cl VI confirmation

Accessories:
- Residue emptying valve
- Motor protection switch and electrical accessories
- Customer specific accessories

Materials:
- Mechanical seals: carbon, chrome steel, tungsten carbide, SSiC, ceramics
- Seals: FPM/FKM, FFKM, EPDM, PTFE, FEP

Connection options (e.g. according to DIN, ISO, ASME):
- Thread
- Flange
- Tri-clamp
- Sterile connections (thread, flange, clamp)

Flow rate Q [m^3/h]	max. 150
Delivery head H [m]	up to 60
Temperature range [°C]	minus 30 to 120, max. 145 (SIP)
Viscosity [mPa s]	up to 500
Nominal pressure	PN6 to PN100 (type LEH)

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