



Cryogenic pumping

Below zero, above expectations

API 610 compliant pumping solutions for demanding low temperature and cryogenic applications.



Leading the way for tomorrow's low temperature energy needs

Oil & gas downstream

From refrigerants and refinery products to liquified natural gas (LNG), Sulzer has extensive references for safe and reliable pumping of liquids down to -180°C (-292°F).

Sulzer product portfolios include dedicated products for low temperature downstream applications, including:

- High pressure LNG send out
- Boil-off gas recondensing
- LNG desuperheating
- LPG transport

Cryogenic pathways to net zero

Sulzer low temperature pumping solutions enable:

- Green methanol or ammonia for fertilizer production or transportation of hydrogen
- Liquid air for cryobattery applications
- Cryogenic Carbon Capture (CCC)



Industry leading products

Sulzer JVCR, JSJD and JOHV are specifically designed for low temperature applications, through Sulzer's patented cryogenic sealing system.

Sulzer J-unit, ensures full isolation of the cold process fluid and the seal chamber, enabling the use of standard API 682 dual mechanical seals, operating with a continuously circulating pressurized seal oil.

The spring-loaded J-unit is connected to an isolation chamber on the pump, which ensures automatic adjustment of the seal oil pressure.



Sulzer patented J-Unit enables the use of standard API 682 mechanical seals



Engineering expertise for low temperature pumping applications



Low temperature material options available for core Sulzer API 610 products

Sulzer experience

Conventional cryogenic applications

Liquified petroleum gas (LPG)

Sulzer has 50+ years experience in downstream processing for low temperature pumping of ethylene, propene, methanol and other hydrocarbon products.

Unlike submerged motor pumps (SMP's) which are non-compliant to API 610, all of Sulzer's cryogenic pumps are fully classified by API 610 to ensure maximum safety and reliability combined with proprietary design features which deliver the best possible CAPEX and OPEX.



Axial split, between bearing pump (API BB3) operating on low temperature ethane application

High pressure LNG send-out pumps

Sulzer JVCR pumps operate worldwide with exceptional reliability in LNG import terminals at temperatures below -160°C (-256°F).



Our test facilities guarantee the highest standards and quality-tested pump equipment

Sulzer experience

Clean energy applications

Cryogenic liquid air pumps

Sulzer will supply 5 vertically suspended, double-casing (API VS6) liquid air pumps for a large-scale LAES project, operating below -140°C (-220°F).

The cryobattery facility will provide 300 MWh of storage and 50 MW output for six hours — enough clean, renewable capacity for 480,000 homes — using existing electrical infrastructure.



Green ammonia pumps

Sulzer has been selected as a supplier for green ammonia loading and storage pumps for the production of hydrogen from renewable energy sources (green hydrogen).

These pumps are specifically designed for low operating temperatures.



The Sulzer Flow division keeps your processes flowing. Wherever fluids are treated, pumped, or mixed, we deliver highly innovative and reliable solutions for the most demanding applications.

The Flow division specializes in pumping solutions specifically engineered for the processes of our customers. We provide pumps, agitators, compressors, grinders, screens and filters developed through intensive research and development in fluid dynamics and advanced materials. We are a market leader in pumping solutions for water, oil and gas, power, chemicals and most industrial segments.

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