

Engineered for endurance

Durable equipment for copper applications

Discover reliable, wear- and corrosion-resistant process equipment for the demanding conditions in copper applications. sulzer.com/copper



Application expertise for copper processing

Improve uptime and productivity while reducing total cost of ownership with a broad portfolio that covers the various steps in both hydrometallurgical and pyrometallurgical processes.

Our robust pumps are engineered to withstand the harsh conditions of slurry mixed with chlorides, fluorides, and acids. They feature specialized materials and designs that minimize abrasion/erosion, corrosion, erosion-corrosion, and wear, ensuring efficient operation at minimal unplanned downtime. The size and capacity of our equipment can be effectively scaled according to the customer needs – with no exceptions to efficiency.

We are application experts in mining, minerals, and metals processing with global experience and knowledge. Our expertise in pump selection results in efficient and durable process equipment that contribute to driving energy efficiency, continuous performance, and controlled maintenance costs.

4800+

pumps in copper processing applications

 200_{+}

satisfied customers



countries covered







Unlock the full potential of your operations with life-cycle services

When investing in process equipment, the initial capital investment is the first concern. The purchase price, however, is just a small part of the total life cycle cost for heavy-duty pumps, agitators, and compressors. Obtaining optimum working life from your equipment requires consistent servicing.



Original spare parts

Sulzer has a worldwide network of spare parts hubs to quickly deliver the parts you need from the stock or manufacture them promptly based on your specific order. Our commitment to continuous improvement often allows us to supply parts with enhanced features, thus increasing performance and extending equipment lifetime, while reducing maintenance costs.



Field services

Our highly skilled and experienced service engineers and technicians are ready to support you in improving your equipment performance at your site. Our field services cover installation, start-up service, regular inspections, trouble-shooting, performance measurements, condition monitoring, and more. With more than 160 service centers across the globe, Sulzer specialists will contribute to increasing your equipment lifetime.



Training

Deepen technical knowledge with Sulzer's training programs designed to boost the competence of your personnel, whether they are engineers or designers. Our goal is to enhance safety, reliability, and uptime by providing your team with the skills and knowledge they need to run your operations smoothly.



Repairs

With our cutting-edge equipment and highly skilled personnel we can repair and refurbish even the most demanding equipment back to its original performance. We also offer modernizations that enhance the performance or increase the lifetime of your equipment.



Customer service agreements

With Sulzer at your doorstep, you can improve your competitive advantage and ensure safe operation. Our partnership program offers you customized solutions for your process improvements and future applications. When you need to free your own resources to other valuable tasks or want to save money by not keeping spare parts in your own stock, Sulzer offers various service contract options for you.



Our comprehensive product portfolio

Sulzer pushes technologies to their limits and beyond in order to develop state-of-the-art pumps, capable of meeting even the most demanding needs of customers. The modular construction, durable wear parts, and accessories are designed to minimize the effects of corrosive environments and harsh conditions. Our technologies cover the entire journey from raw ore to finished metal.

Our solutions suit the mining stages, where mineral-bearing ores are extracted from the ground. We offer durable and efficient slurry pumps for separating the valuable minerals from the surrounding rock through physical methods like crushing, grinding, and flotation, as well as chemical processes such as leaching. The metal processing stage, where the extracted minerals are refined and finished into usable metal products, requires reliable pumps and pumping equipment.

Copper processes		Product					
		AHLSTAR A	AHLSTAR WPP/T	CPE	VA VM	EMW PLR	SNS
Floatation, thickening and tailings transportation							
Copper smelters	Water with granulated solid particles						
	Cooling waters						
	Collected floor liquids						
Leaching	Sulphuric acid						
	Solvent extraction						
	Electrowinning						
Electrorefining of copper anodes	Overflow of the electrolyte precipitation basin, washing waters and other clean liquids						
	Underflow of the electrolyte precipitation basin						
	Collected floor liquids						
Electrolyte purification and anode slime treatment	Corrosive and erosive liquids containing solid particles						
	Collected floor liquids						
Gas scrubbing	Corrosive circulation water on the scrubber						

Product overview

AHLSTAR A self-priming process pump

Features and benefits

- Highly applicable for various metals processing applications
- Open or closed high-efficiency and low-NPSHr impeller
- Dynamic shaft seal
- Corrosion and wear resistant materials
- Integrated vacuum structure
- Double mechanical shaft seal or dynamic shaft seal, also with balancing holes
- Unique dynamic or ready-fitted double mechanical shaft seal
- · Special floating installation

Key characteristics

Capacities 11'000 m³/h / 48'400 USgpm

Heads 160 m / 525 ft

Pressures 16 / 25 bar, 230 / 360 psi, depending on material and size

Temperatures 180°C / 356°F

Applications

- · Clean and slightly contaminated liquids
- Viscous liquids
- Fibrous slurries
- Solids containing liquids
- · Gas-containing liquids and self-priming applications
- · Various demanding applications



AHLSTAR WPP/T wear and corrosion resistant process pump

Features and benefits

- Corrosion and wear resistant, open impeller
- Corrosion and wear resistant materials
- Double mechanical shaft seal or unique dynamic shaft seal
- Integrated vacuum structure
- Open, high-efficiency and low-NPSHr impeller

Key characteristics

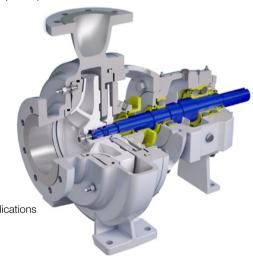
Capacities 7'000 m³/h / 31'000 USgpm

Heads 110 m / 360 ft

Pressures 16 bar, 230 psi, depending on material and size

Temperatures 180°C / 356°F

- Abrasive and viscous liquids, fibrous and non-fibrous slurries
- Abrasive solids and gas-containing liquids and slurries including self-priming applications



CPE ANSI process pump ANSI / ASME B73.1

Features and benefits

- The highest available efficiency on the ANSI process pump market providing clear savings in energy consumption
- Exceeds the requirements of all environmental (ECO) directives and the global energy efficiency targets for pumps
- · Maximized reliability thanks to shaft sealing conditions and heavy-duty bearing unit
- High degree of standardization, easy installation and robust construction equate to reduced maintenance and operating costs
- The CPE pump uses NSF61 and NSF372 certified materials

Key characteristics

Capacities up to 1'650 m³/h / 7'000 USgpm

Heads up to 275 m / 900 ft.
Pressures up to 27.5 bar / 400 psi
Temperatures up to 260°C / 500°F

Applications

- Clean and slightly contaminated liquids
- Viscous liquids
- Fibrous slurries



VA cantilever sump pump

Features and benefits

- Simple and robust design with ease of maintenance
- All types of hydraulics available: semi-open, open, closed or vortex impellers
- No sealing required
- No intermediate bearing
- Dry running is allowed on certain sizes

Key characteristics

Capacities up to 1'500 m³/h / 6'600 USgpm

Heads up to 100 m / 328 ft.
Pressures up to 20 bar / 290 psi
Temperatures up to 120°C / 248°F

- Clear and contaminated sump
- · Corrosive, encrusting liquids and slurries



VM vertically suspended sump pump

Features and benefits

- Simple and robust design with ease of maintenance
- All types of hydraulics available: semi-open, open, closed or vortex impellers
- No sealing required for clear liquids
- Single and dual seal design available for contaminated liquids

Key characteristics

Capacities up to 3'500 m³/h / 15'500 USgpm

Heads up to 100 m / 330 ft.
Pressures up to 20 bar / 290 psi
Temperatures up to 120°C / 250°F

Applications

- Clear and contaminated sump
- Corrosive, encrusting liquids and slurries
- · Industrial water
- Effluents
- Corrosive and abrasive mixtures
- · Hazardous fluids
- Abrasive liquids and/or liquids containing large solids
- · Abrasive fibrous slurries and/or fibrous slurries containing large solids
- Abrasive non-fibrous slurries and/or non-fibrous slurries containing large solids



EMW heavy-duty metal slurry pump

Features and benefits

- Highly applicable for various metals processing applications
- Extra high durability
- Minimized total cost of ownership
- Low energy consumption due to high efficiency
- Easy and quick installation and maintenance
- Low spare parts cost due to high degree of standardization

Key characteristics

Capacities up to 6'500 m³/h / 29'600 USgpm

Heads up to 95 m / 312 ft.
Pressures up to 16 bar / 232 psi
Temperatures up to 110°C / 230°F

- Mining and minerals processing
- Aggregates (sand and gravel)
- Chemical slurries



PLR slurry pump

Features and benefits

- Maximum abrasion and corrosion resistance
- Extended pump and spare parts lifetime
- High reliability and durability
- · Low spare parts costs due to high degree of interchangeability
- Maximum adaptability for specific duties

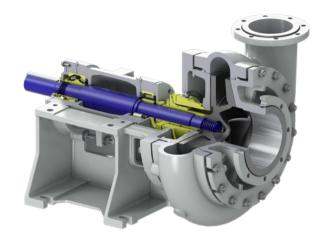
Key characteristics

Capacities up to 3'900 m³/h / 17'200 USgpm

Heads up to 80 m / 262 ft.
Pressures up to 50 bar / 735 psi
Temperatures up to 150°C / 300°F

Applications

- Abrasive and corrosive slurries
- Ammonium nitrate
- Froth pumping and self-regulating applications



SNS process pump

Features and benefits

- Designed to meet the design requirements of EN 5199 international standard
- Fulfills EU's (European Union) requirements for energy-related products (ErP)
- Highest efficiency across the whole pump range, fulfilling the benchmark efficiency index MEI 0.7 (minimum efficiency index)
- State-of-the-art hydraulics ensure optimum capacity with low net positive suction head required (NPSHr)
- Low energy consumption, high degree of standardization, easy installation and unique construction also equate to lower maintenance and operating costs
- ACS drinking water certification

Key characteristics

Capacities up to 1'400 m³/h / 6'000 USgpm

Heads up to 160 m / 525 ft.

Pressures up to 16 bar / 230 psi
Temperatures up to 120°C / 250°F

- Clean and slightly contaminated liquids
- Viscous liquids
- Fibrous slurries





sulzer.com

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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