

Sulzer Pumps for Zinc Refining Applications



The Heart of Your Process



Our Experience Dedicated to Your Success

The global metal processing industry has been undergoing significant changes over the past years and now finds itself in a new era.

Go Beyond the Limits

A shortage of skilled workers coupled with stricter environmental regulations have prompted a change in the market dynamics; the trend is now towards remote metals operations where more reliable pumps and pumping equipment, that are less labor intensive, are required.

In such a complex market, only a few manufacturers manage to understand the challenges faced in metal pumping applications. Sulzer Pumps 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.

Designed to Withstand Highly Abrasive Environments

Reliability is crucial in metal industry. Due to processing, erosion, corrosion and lack of regular maintenance, pump efficiency and reliability are continuously challenged. Sulzer Pumps is well aware of the harsh conditions and develops equipment engineered to a high standard. Its experience and product knowhow are dedicated to providing sustainable and reliable solutions, selecting the most appropriate product and material, to sustain the changing environment in metal industry.

More Than a Pump Supplier

Sulzer Pumps supplies a complete pumping package for metal processing industry, from clear liquid to light slurry process to submersible and dewatering pumps including full services and support.

By working together with Sulzer, customers benefit from:

- Increased time between failures with extended run times on equipment
- Lower energy consumption due to high efficiencies and optimum selections
- Reduced capital costs and increased profitability with current products, optimizing interchangeability between common parts
- Reduced downtime costs due to improved pump reliability
- Cutting edge technologies from a pump supplier with a strong engineering heritage and a comprehensive local support network



Roasting of Zinc Concentrates

Cooling Waters

AHLSTAR APP/APT process pumps or ADVANTAGE CPT chemical process pumps

- Closed, high efficiency and low NPSHr impeller
- Cast iron material A48 CL 35B (53)
- Unique dynamic shaft seal

Liquids Containing Solid Particles

AHLSTAR WPP/WPT wear and corrosion resistant process pumps

- Corrosion and wear resistant, open impeller
- Corrosion and wear resistant stainless steel material Avesta 654 SMO *
- Double mechanical shaft seal or unique dynamic shaft seal

Collected Floor Liquids

AHLSTAR ASP/AST self priming process pumps or WSP/WST wear resistant self priming process pumps

- Open, high efficiency and low NPSHr impeller
- Corrosion and wear resistant stainless steel material ASTM A890 3A (41)
- Integrated vacuum structure

SALOMIX® L Agitator

- Gear or V belt drive
- Paddle or propeller
- Different seal options
- Applicable stainless steels

*) Avesta 654 SMO is a trade mark owned by Avesta Sheffield which has granted Sulzer Pumps Finland Oy licence to produce this material.

Leaching and Purification Processes

Corrosive and Incrystallizable Clean Liquids

AHLSTAR APP/APT process pumps or ADVANTAGE CPT chemical process pumps

- Closed, high efficiency and low NPSHr impeller
- Corrosion and wear resistant stainless steel material ASTM A890 3A (41)
- Double mechanical shaft seal or unique dynamic shaft seal

Corrosive and Erosive Liquids Containing Solid Particles

AHLSTAR WPP/WPT wear and corrosion resistant process pumps

- Corrosion and wear resistant, open impeller
- Corrosion and wear resistant stainless steel material Avesta 654 SMO *
- Double mechanical shaft seal or dynamic shaft seal





Electrowinning of Zinc

Electrolyte Liquids

AHLSTAR APP/APT process pumps or ADVANTAGE CPT chemical process pumps

- Open impeller
- Corrosion and wear resistant stainless steel material ASTM A890 5A (4T)
- Unique dynamic or ready fitted double mechanical shaft seal
- Special floating installation

Zinc Casting

Cooling Waters

AHLSTAR APP/APT process pumps or ADVANTAGE CPT chemical process pumps

- Closed, high efficiency and low NPSHr impeller
- Cast iron material ASTM A48 CL 35B (53)
- Unique dynamic shaft seal

Gas Scrubbing

Corrosive Circulation Waters of the Scrubber

AHLSTAR APP/APT process pumps or ADVANTAGE CPT chemical process pumps

- closed, high efficiency and low NPSHr impeller
- Corrosion and wear resistant stainless steel material ASTM A890 1B (4L)
- Double mechanical shaft seal or dynamic shaft seal

Other Utilities

Water transport

The B series of vertical line shaft pumps consist of BK, BS and BP ranges. They are primarily used in water lift, transfer and cooling water applications.

AHLSTAR NVP/NVT non-clogging vertical pumps are intended for all kinds of hard applications with wastewater, slurries or waste stock.

SM/SMN single stage double entry pumps are used across a broad range of industries in liquid transport and transfer applications.

ZPP and Z22 double suction pumps are designed for applications including cooling and circulating water pumping.

Boiler Feed

The HPP/HPT high pressure multistage pumps are used for pumping clean or slightly contaminated liquids in high pressure applications in various industries.

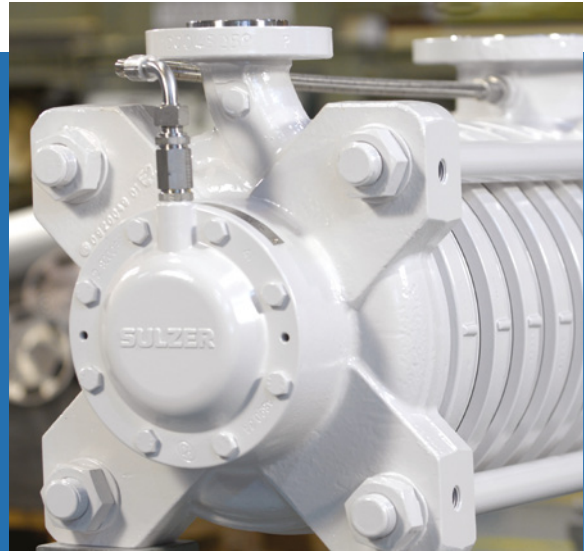
The M series of ring section multistage pumps consist of MB, MC, MD and ME ranges. A wide range of common hydraulic components and bearing assemblies are used within the 4 standard pressure ranges.

Mine Dewatering

The HPH/HPL multistage pumps are specifically designed for mine dewatering applications. Their robust construction is designed to combat the highly abrasive environment in which they operate.

XJ/XJS Dewatering

Whether on the surface or underground, the conditions in mines are harsh. Besides the mud, slurry, stones and rocks, there are large volumes of water to remove in order to keep production moving.



Sulzer Pumps and Agitators Range

Type of Pump	Pump Name	Capacities	Heads	Pressures	Temperatures
Multistage	HPH	130 to 1,000 m ³ /h 680 to 5,000 USgpm	120 to 1,800 m 600 to 5,000 ft	18 Mpa 2,610 psi	Up to 105°C Up to 220 °F
	HPL	36 to 1,000 m ³ /h 170 to 5,000 USgpm	40 to 400 m 190 to 1,300 ft	4 Mpa 560 psi	Up to 105°C Up to 220 °F
	MBN	Up to 700 m ³ /h Up to 3,080 USgpm	Up to 900 m Up to 2,950 ft	Up to 10 Mpa Up to 1,450 psi	Up to 180°C Up to 355 °F
	MSD	Up to 3,200 m ³ /h Up to 14,000 USgpm	Up to 2,900 m Up to 9,500 ft	Up to 30 Mpa Up to 4,400 psi	Up to 200°C Up to 400 °F
End Suction	AHLSTAR	Up to 9,000 m ³ /h Up to 40,000 USgpm	Up to 160 m Up to 525 ft	Up to 2.5 Mpa Up to 360 psi	Up to 210 °C Up to 410 °F
	ZE/ZF	Up to 2,600 m ³ /h Up to 11,440 USgpm	Up to 300 m Up to 1,000 ft	Up to 10 Mpa Up to 1,450 psi	Up to 425°C Up to 800 °F
	CPT	Up to 1,700 m ³ /h Up to 7,500 USgpm	Up to 290 m Up to 950 ft	Up to 2,5 MPa Up to 375 psi	Up to 260°C Up to 500 °F
Submersible	ABS XJ and J	Up to 1,220 m ³ /h Up to 5,390 USgpm	Up to 100 m Up to 330 ft	Up to 1,3 MPa Up to 190 psi	Up to 40°C Up to 104°F
	ABS XJS	Up to 110 m ³ /h Up to 475 USgpm	Up to 40 m Up to 130 ft	Up to 0.52 MPa Up to 75 psi	Up to 40°C Up to 104°F
	ABS XFP	Up to 8,780 m ³ /h Up to 38,675 USgpm	Up to 110 m Up to 360 ft	Up to 1,5 MPa Up to 220 psi	Up to 40°C Up to 104°F
Vertical	NKP/NKT	Up to 430 m ³ /h Up to 1,600 USgpm	Up to 55 m Up to 200 ft	Up to 1 MPa Up to 150 psi	Up to 95°C Up to 205 °F
	NVP/NVT	Up to 1,220 m ³ /h Up to 6,000 USgpm	Up to 85 m Up to 300 ft	Up to 1 MPa Up to 150 psi	Up to 95°C Up to 205 °F
	SJP	200 to 54,500 m ³ /h 900 to 240,000 USgpm	Up to 12 m Up to 40 ft	Up to 0.2 MPa Up to 30 psi	Up to 50°C Up to 120 °F
	SJD	9 to 18,000 m ³ /h 40 to 70,000 USgpm	Up to 1,360 m Up to 6,000 ft	Up to 15 MPa Up to 2,150 psi	Up to 205°C Up to 400 °F
Double Suction	SMN	Up to 10,000 m ³ /h Up to 44,000 USgpm	Up to 200 m Up to 650 ft	Up to 3 MPa Up to 435 psi	-10 to 50°C 15 to 120 °F
	ZPP/Z22	Up to 25,200 m ³ /h Up to 130,000 USgpm	Up to 160 m Up to 525 ft	Up to 2.5 MPa Up to 360 psi	Up to 120°C Up to 250 °F

	Agitator Name	Pressures	Temperatures
Agitators	SALOMIX® L	Up to 1,6 MPa Up to 230 psi	Up to 180°C Up to 355 °F
	Scaba	Up to 2,5 MPa Up to 360 psi	Up to 350°C Up to 660 °F

www.sulzer.com



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