

## Exotic metal axial flow pump

For more than 30 years, SGL Carbon has been developing and manufacturing axial flow pumps able to deliver high flow rates required by chemical industries for fertilizers or chlor-alkali processes.

Based on a close cooperation with the phosphoric acid market players, SGL introduced a complete range of exotic metal pumps with an optimized design offering flexibility and durable performances.

Installed all over the world -typically on evaporation, crystallization or flash cooler lines- these heavy-duty motor-pump groups warrant an extended level of reliability at our valued customer's production plants.

### Customer benefits

#### Extreme corrosion resistance

A wide range of fine metal grades carefully selected according to the process conditions and the considered wetted parts of the pump: the perfect chemical compatibility.

#### Production costs under control along the lifecycle

Robust construction and first-class raw materials cut the effects of corrosion and erosion ensuring extended operating lifetime and maintenance intervals.

#### High flexibility

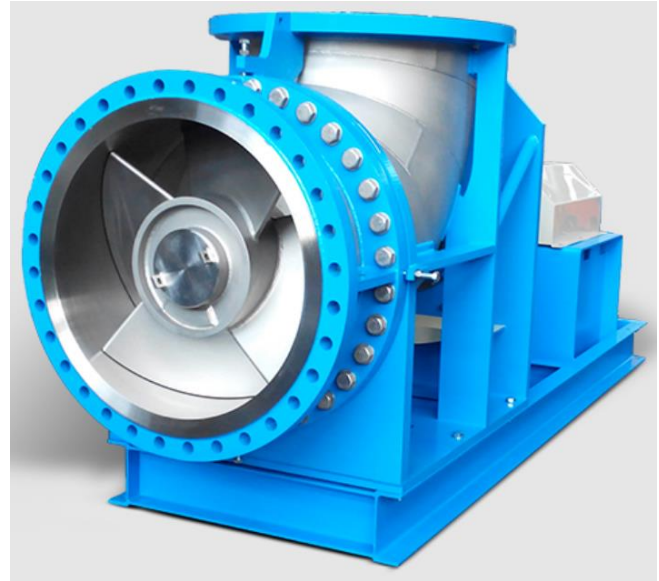
Multiple design options to optimize the performances of both new plants as well as of installations with existing footprint.

#### Unique durability

Reinforced bearing housings and the reliable design of the elbow steel structure ensure a low sensitivity to the operating parameters, enabling a lasting efficiency.

### Application examples

- Circulation of corrosive and/or abrasive fluids at high flow rates in loops of reduced head losses.
- Phosphoric, fluosilicic acid, caustic potash and soda, industrial effluents.



↑ 904L axial-flow pump C900

### Product information

- Outstanding shaft rigidity preventing deflection at seal and vibrations: safe and reliable
- Rugged, dismantlable shaft protection sleeve made from a suitable corrosion-resistant exotic metal
- Sealing via gland packing or cartridge mechanical seals
- Operation stability thanks to the steep and continuous decline of performance curves
- Blades set customized to fit customer duty point
- Elbow wear sleeve adjustable and replaceable to permit better performances, easier inspection and maintenance
- Complete range of fabricated metals: nickel alloys, Hastelloy, Uranus, Sanicro, Super Duplex, titanium etc.
- Multiple motor-pump group arrangements: vertical, horizontal, ground-based, spring-mounted, suspended, gear-box, V-belts transmission or universal coupling

**By the way:** independently of the pump size, each exotic metal part is fabricated. This avoids chemical and mechanical problems faced by casted materials: impurities, heterogeneous structure, sensitivity to abrasion.

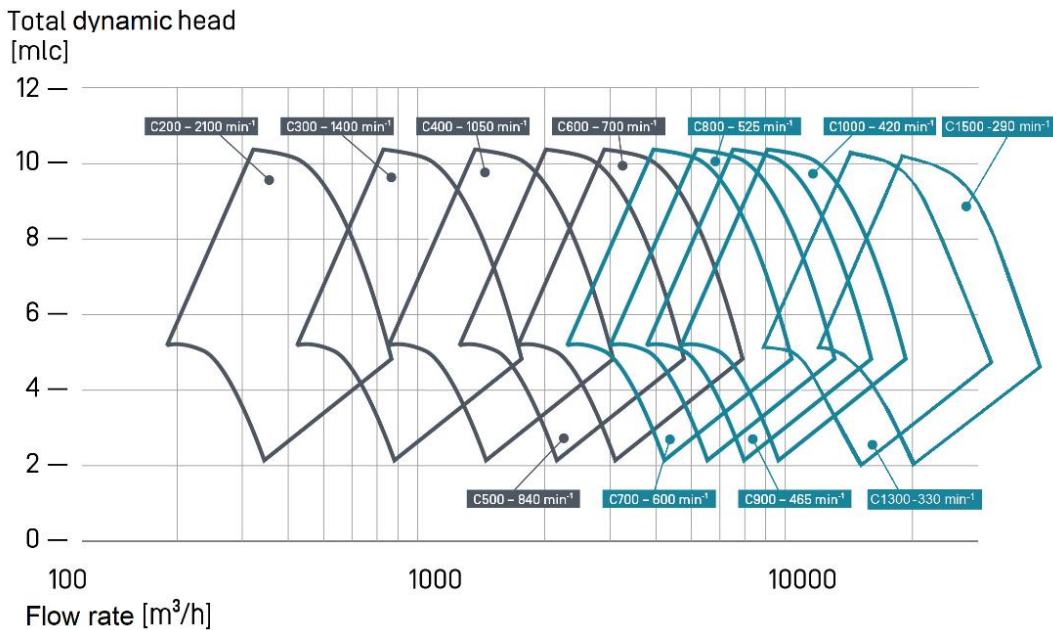
## Data of exotic metal axial-flow pump

Technical specification	Units	Type C200 to C1500
Propeller diameters	mm	from 200 to 1500
Flow directions		Top suction -> Down or End suction -> Top
Installation		horizontal as standard, vertical design available
Flow rates	m³/h	from 120 to 30 000
Total Dynamic Heads	mlc	up to 10
Rotation speeds	rpm	from 200 to 2100
Operating temperatures	°C	from -40 to +250
Design pressures	barg	up to 10
Flanges standards		ISO PN metric, ANSI 150 lbs metric, ANSI 150 lbs UNC
Materials		nickel alloys, Super Duplex metals, stainless steels, reactive metals
Sealing technologies		gland packing, cartridge mechanical seals



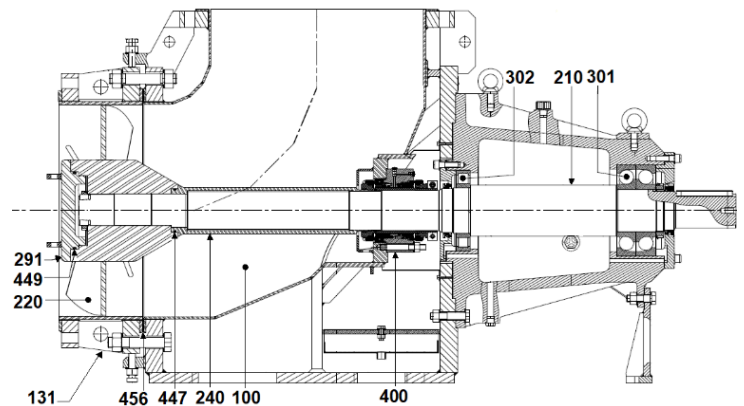
↑ Super Duplex propellers for C1300 V pump

## Metallic axial-flow pumps performance chart



## Typical exotic metal axial-flow pump bill of material

Item	Description	Material
100	elbow housing	exotic metal, steel (fabricated)
131	wearing sleeve	exotic metal, steel (fabricated)
210	shaft	steel
220	propeller 0°	exotic metal (fabricated)
240	shaft sleeve	exotic metal
291	propeller nose	exotic metal
301/302	bearings	steel
400	double mechanical seal cartridge	exotic metal, (per)fluoro-elastomers
447/449	O-rings	(per)fluoro-elastomers
456	gasket	(per)fluoro-elastomer



↑ Sanicro 28 C600 pump cross-sectional drawing



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