

Process innovation

conveX

pumps for hard applications



ABRASIVE
FIBROUS
SHEAR SENSITIVE
VISCIOUS
PRESENCE OF AIR/GAS
HIGH CONTENT OF SOLIDS

no chance to wear !

Convex pumps are designed to market an advanced technology in hard to pump fields. In the applications where pumping by centrifugal, progressive cavity or other type of pumps involves high life cycle costs (LCC), Convex represents a breakthrough in pump technology offering an optimum fluid transport with creation of value. The fluid to be pumped rotates inside the casing through an innovative impeller which, thanks to its unique design and to fluid viscosity, generates a powerful vortex. The open design of the impeller and the absence of close tolerances eliminates blockage and wear problems, produces a smooth pump operation, pulsation-free and without product damage. Several are the benefits of Convex compared to conventional pumps especially in the process of industries handling abrasive, viscous/delicate fluids, sludge, liquids with entrained air / gas, slurries with high solids content and shear sensitive materials. In these applications Convex pump cuts maintenance costs, reduces spare parts inventory, increases process efficiency and productivity with fast pay back.



Advantages:

- Reliability
- Efficiency
- Versatility
- Sturdiness
- Low NPSHr
- Dry-running
- No pulsation
- Gentle handling of products
- Running with air \ gas
- Wear resistant
- Low maintenance
- Long life of components
- Low life cycle costs (LCC)
- Low spare parts requirement
- Fast pay-back

Applications

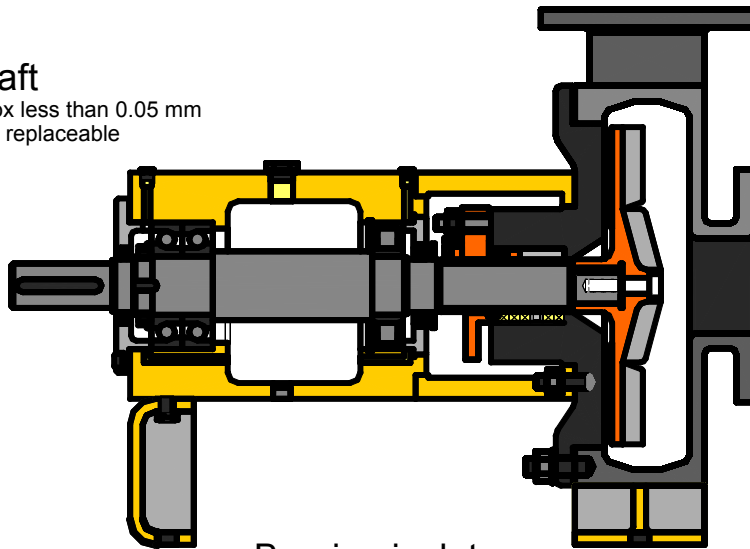
Pulp & Paper: stock with high content of solids, contaminants and abrasives, high consistency stock, stock recovered from thickeners and flotation units, sludges, slurries of kaolin clay and calcium carbonate, slurry of titanium dioxide, latex, starch, additives, coating colors, etc.; **Chemicals:** emulsions, oils, crystal slurries, paints, lime milk, pigment slurries, inks, latex, effluents, sludges, etc.; **Food industry:** molasses, syrups, sugar slurries, milk products, oils, citrus oils, etc.; **Ceramics:** barbotine; rock slurries, glazes, waste slurries, etc.; **Water and Wastewater industry:** thickened/digested sludges, lime sludges, wastes with high solids content, etc.

Stuffing box

- designed to fit a wide range of mech. seals (single / double)
- packing / mech. seals interchangeability
- easy access for flushing and for maintenance
- back pull-out design, easy to remove

Heavy-duty shaft

- deflection at stuffing box less than 0.05 mm
- hardened shaft sleeve, replaceable
- heat treatment
- AISI 420 std.



Bearing frame

- heavy-duty design
- high reliability
- suitable for oil and grease lubrication
- common for different pump sizes

Bearing isolators

- non-contact design
- zero leakage
- total exclusion of contaminants
- extended bearing life

Concentric casing

- designed for abrasive, viscous, fibrous and high solid content fluids
- reduce wear and turbulence
- increase seal life
- rotate of 90°

Convex impeller

- unique and patented
- designed for abrasive, viscous, fibrous and high solid content fluids
- non-clogging design
- wear resistant
- improve handling of large volume of air / gas
- low pulse
- suitable for shear sensitive products
- high suction lift capability and easy to prime
- low NPSH requirements

Technical features

Model CXM: horizontal, close-couple

Model CXS: horizontal, with bearing frame

Design: "Back pull-out"

Seal: packing (DIN 3780)

Seal: mechanical single / double (DIN 24960)

Custom seals on specific applications

Flanges: DIN (metric), PN 16

Lubrication: oil or grease

Materials:

- case: cast iron GG 25 or AISI 316

- impeller: AISI 316/17-4PH

- shaft: AISI 420

Other metallurgies on request



Pulsations ?

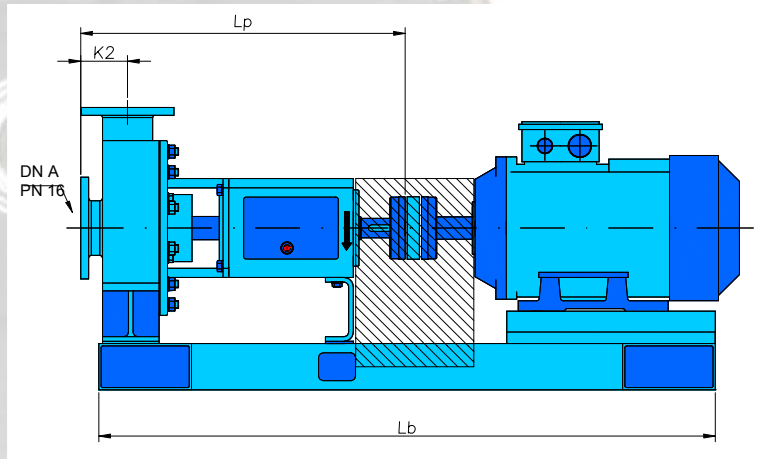
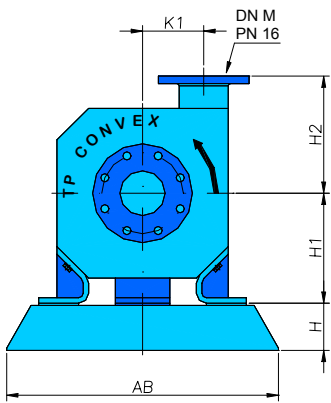
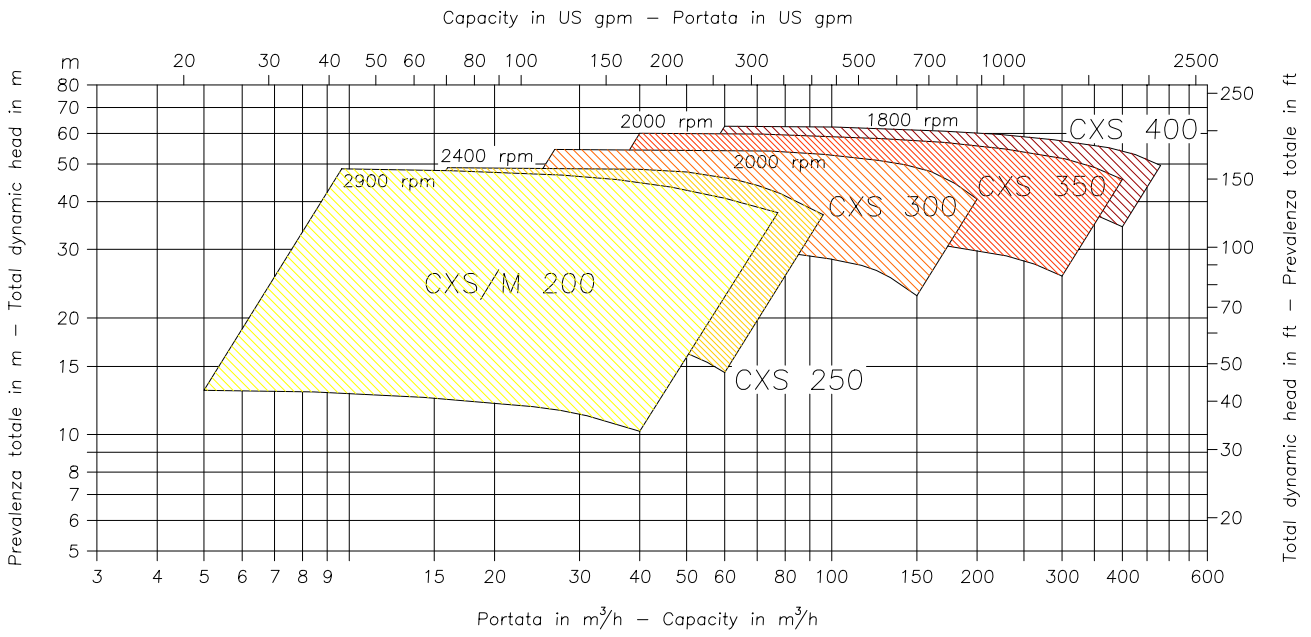
Plugging?

Air/gas entrained?

High solid contents?

Product damage?

High wear?



Tipo	DN A	DN M	H	H1	H2	K1	K2	Lp	Lb	AB	Peso* kg
CXS-200	50	40	108	192	188	92	80	641	1300	500	200
CXS-250	80	50	105	245	223	116	89	675	1370	700	250
CXS-300	100	80	105	245	261	135	101	700	1370	700	290
CXS-350	150	100	105	270	305	155	133	742	1370	700	330



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