Turo® Vortex Pumps TA

Patented Turo® Vortex TA impeller for pumping of raw municipal sewage with a high content of fibers without clogging. Fully recessed impeller for maximal free passage.

Applications

- Raw sewage
- Municipal and industrial wastewater
- Sludge with a high content of fibers
- All viscous media
- Suspensions with a high content of fibers

Features

- Pumping raw sewage without clogging
- Patented vortex hydraulics
- Special axial spiral casing, tuned to the hydraulics
- Interchangeable with Turo® T, TV and TEO

Facts & Figures

Nominal dimensions:	DN 80 – 200 mm 3 – 8"
Flow rate:	up to 180 l/s 2'850 US gpm
Differential head:	up to 100 m, 330 ft
Pressure:	up to 16 bar, 230 psi
Temperature:	up to 130 °C / 265 °F

The Turo® TA impeller is capable of pumping raw municipal sewage with a high content of fibers, that may clog conventional impellers.

Advantages

Open channel
Open spherical channel from the suction to the pressure outlet, due to the completely recessed impeller.

Non-clogging
Solids up to the diameter of the pressure outlet and long fibrous materials do not cause any malfunction.

Quiet running
No radial forces are transmitted to the shaft by the recessed impeller in the casing.

Insensitivity to abrasion
The geometric shape of the impeller is adapted to the vortex casing. That reduces the abrasive attack to a minimum.

Gentle pumping
Sensitive particles (crystals, bacterial flakes, etc.) are not damaged. Lower emulsion of oil in water.

Modular system
Our modular system allows an economical storage.

Long tool life
A robust construction, a thick casing and a judicious choice of materials ensure a long life cycle.

Reliability
The Egger hydraulics, quiet running and proper sealing systems ensure trouble-free operation.

Hydraulics for Vortex Pumps TA

The vortex impeller is an «open» impeller whereby power transfer to the fluid being transported is comparable to the principle of a hydraulic coupling. Egger, the pioneer in vortex impellers, has rigorously optimized their special hydraulic properties to today's industry needs. Various impeller variations have resulted from this, offering optimal conditions for each application.

Insensitivity to abrasion – gentle pumping

As a result of the Turo® System, the major proportion (85%) of the fluid being pumped is transported directly from the primary vortex to the pressure connection. Only 15% of the fluid being pumped comes in contact with the impeller through the secondary vortex. Sealing gaps which could wear during solids handling and cause grinding effects are not present in our construction. That reduces the abrasive attack to a minimum and sensitive structures in the material to be conveyed such as crystals, bacterial flakes or algae remain largely unaffected. Any potential wear on the impeller always develops symmetrically; therefore the balance and thus the quiet running of the pump remain assured. The output will only drop significantly with an almost completely abraded impeller.

Higher, longer-lasting efficiency through optimal flow geometries

One component of the Turo® System is the patented axial spiral in the casing. It means, Egger specially applies coordinated casing geometries to the vortex impeller. This optimal interaction between impeller and casing confers to Egger Turo® Pumps the high discharge heads and efficiency uniquely achievable by vortex impeller pumps. Because of their insensitivity to wear, efficiency levels are sustained, even over long periods of time.

Great freedom from clogging by particles and fibers – open spherical channel

This feature is achieved by the completely recessed impeller. Solid objects up to the diameter of the pressure outlet and long fibrous materials do not cause any malfunctions. There are no channels that the solids have to pass through nor are there any radial gaps between the pressure and suctions sides that could be clogged by fibers and otherwise obstruct the pump.

Quiet operation from the minimum to the maximum output

Turo® vortex impellers transfer only minimal, near-constant radial forces to the shaft, regardless of whether the pump is used for minimal, optimal or maximal production volumes – a further advantage compared to closed impeller shapes. Together with the highly balanced nature of the impeller, this guarantees quiet operation of the pump.

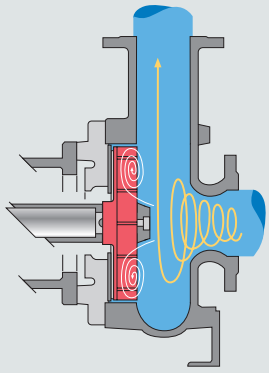
Impeller variations

The Turo® TA impeller is suitable for pumping municipal raw wastewater with high proportions of textiles, who tend to clog. It is hydraulically optimized for this requirement and fully integrated into our Turo® Vortex pump's modular system.

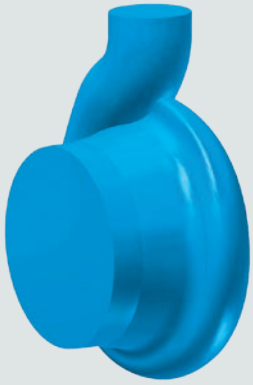
Turo® Modular System

The Turo® TA Vortex hydraulic is completely integrated into the modular system of the Egger pumps. The impellers of the series Turo® TA, Turo® T, Turo® TV and TEO are interchangeable without any modifications.

Non-clogging, safe delivery rate due to the recessed impeller and a patented axial spiral



Totally recessed impeller



Patented axial spiral

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