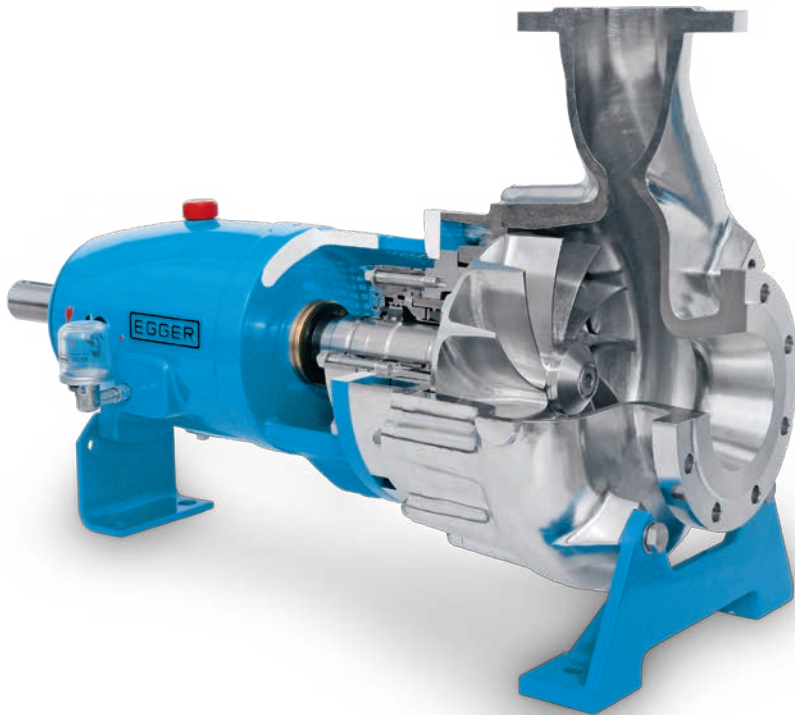


## Turo® Vortex Pumps T

Turo® Vortex Pumps with a completely open spherical channel. Only 15% of the pumped fluid comes into contact with the impeller. Around the world, thousands of pumps have proven themselves with decades of excellent service.



### Applications

- Chemical and crystalline suspensions
- Numerous abrasive and corrosive fluids
- All viscous materials
- High concentrations of fibrous suspensions
- Municipal and industrial wastewater
- Every kind of sludge

### Features

- Gentle pumping of sensitive liquids, such as salt crystal
- Special volute casing, tuned to the hydraulics

### Facts & Figures

Nominal dimensions:	DN 32–200 mm 1¼–8"
Flow rate:	up to 200 l/s 3170 US gpm
Differential head:	up to 140 m, 460 ft
Pressure:	up to 30 bar, 440 psi
Temperature:	up to 180°C/355°F

### Reference industries and fluids

The Egger Turo® Vortex Pumps have the capability to handle challenging liquids gently and without any risk of clogging.

Below is a selection of industry sectors in which Egger pumps have proven themselves over a long time:

- Chemical industry
- Petrochemical industry
- Waste water treatment
- Automotive industry
- Building industry
- Mining industry
- Paint and varnish industry
- Rubber industry
- Power industry
- Food industry
- Paper and cellulose industry
- Shipbuilding
- Solar industry
- Steel industry
- Textile and fiber industry
- Sugar industry

## 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 T

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

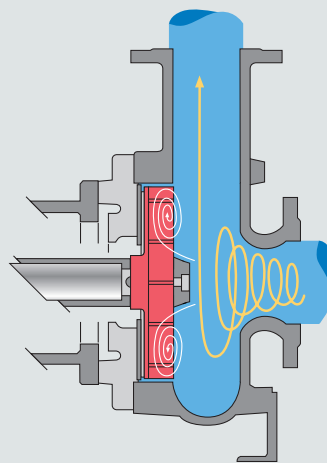
One component of the Turo® System is the patented axial spiral in the casing. It means, Egger specially applies coordinated casing geometries to the vortex impeller. This optimal interaction between impeller and casing confers to Egger Turo® Pumps the high discharge heads and efficiency uniquely achievable 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

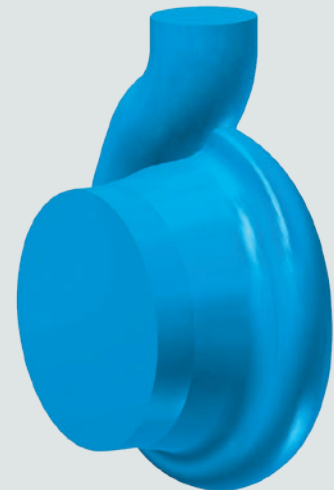
This feature is achieved by the completely recessed impeller. Solid objects up to the diameter of the pressure outlet and long fibrous materials do not cause any malfunctions. There are no

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.

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



Totally recessed impeller



Patented axial spiral

channels that the solids have to pass through nor are there any radial gaps between the pressure and suction 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

## 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.

1101.en - 03.2016

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Further information can be found on:  
[www.eggerpumps.com](http://www.eggerpumps.com)