



Cleaning Turbine

LKTA Cleaning Turbine

PD 65098 GB3 2002-02

Application

Cleaning turbine LKTA is used for CIP cleaning of processing tanks and storage vats in dairies, breweries and other foodprocessing plants.

Working principle

LKTA is a duplex rotary turbine. Via the connecting pipe the cleaning liquid is added and distributed to the horizontally rotating nozzle and to the two vertically rotating nozzles. The two vertically rotating nozzles are the primary cleaning nozzles which rotate relatively fast. This means that drops of high velocity are formed which will provide effective cleaning when the drops hit the tank wall.

Standard design

The cleaning turbine consists of the following main elements: 38 mm connecting pipe provided with welding end, horizontally rotating flushing head, vertically rotating rotor, two bearing covers which are fastened by means of screw/pin, two sets of bearings provided with O-rings in order to reduce the amount of leaking liquid to a minimum. A counter-weight will ensure that rotation takes place with a minimum of vibrations.

Materials

Steel parts:	Stainless steel AISI 304.
Bearings:	Fluorosint (reinforced PTFE type) with O-ring.
Finish:	Semi bright.

Technical data

Working pressure:	80-130 kPa (0.8-1.3 bar).
Vertical rotor nozzle diameter:	7.5 mm.
Horizontal flushing head nozzle diameter:	4 mm.
Effective cleaning radius (working range):	Max. 2500-3000 mm.
Max. spray radius at $\Delta p = 150$ kPa (1.5 bar):	6000-7000 mm.
Flushing head revolutions:	Approx.180 rpm. at 0.8 bar. Approx.230 rpm. at 1.3 bar.



Fig. 1. LKTA, Cleaning turbine.

The required number of spray turbines type LKTA in tanks and vats depends on the size and appearance in each individual case, but the following cleaning capacities may be regarded as normative:

Horizontal tanks:	Up to 8,000 l = 1 cleaning turbine.
	8,000 l up to 30,000 l = 2 cleaning turbines.
Vertical tanks:	Up to 20,000 l = 1 cleaning turbine.

Ordering

LKTA - code No. 31618-0050-2.

Pressure drop/capacity diagram

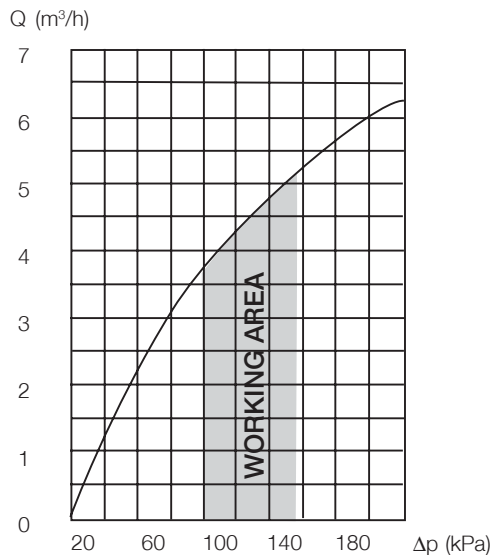


Fig. 2. Cleaning turbine LKTA. Medium: Water (20oC).

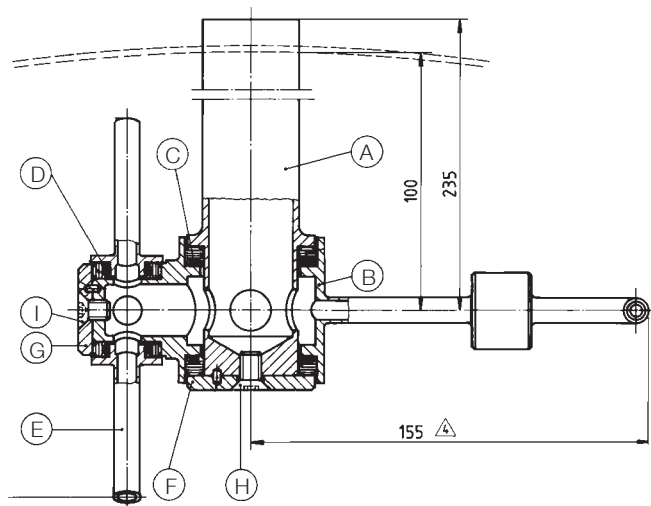


Fig. 3. Parts list drawing.

Installation

Cleaning turbine LKTA is installed in horizontal as well as vertical tanks and vats. If only one turbine is used, it should be placed centrally in the area to be cleaned, whereas if several turbines are used, these should be positioned so that the surface to be cleaned is divided up symmetrically.

Parts list

- A. Connecting pipe
- B. Flushing head (horizontally rotating)
- C. Seal ring (large)
- D. Seal ring (small)
- E. Rotor (vertically rotating)
- F. Bearing cover (large)
- G. Bearing cover (small)
- H. Screw (large)
- I. Screw (small)

Dimensions (mm)

Type	LKTA
A	150
B	155
L	235
Weight (kg)	1.0

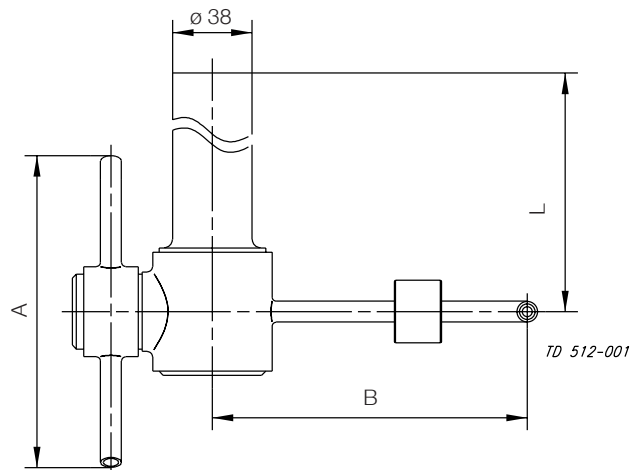


Fig. 4. Dimensions.

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