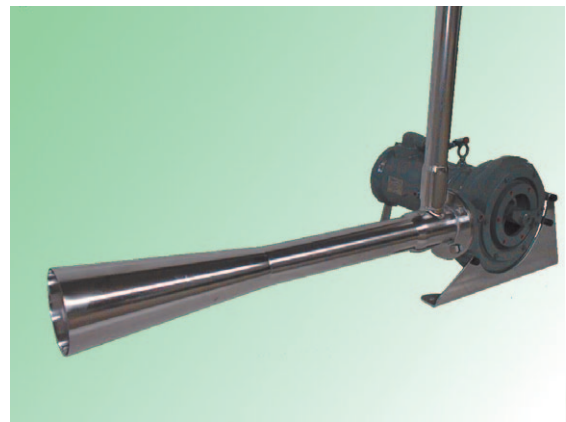


## AIR JET

- a system to aerate and mix water, waste water and sludges in effluent treatment plants, in industry and agriculture



Fields of application for the AIR JET system:

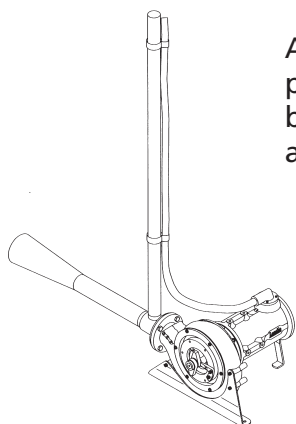
- Cleaning of storm water retention tanks, overflow and collection reservoirs, equalization tanks. Air necessary for the cleaning process alleviates unpleasant odours
- Mixing and deodorization of sludges
- Oxidation of activated sludge in aeration tanks
- Easy to install emergency oxidation system during breakdown or maintenance of existing aeration systems
- Supplementary aeration during peak periods of effluent oxygen demand
- Increase oxygen levels in fish breeding plants

**Quality in every detail**

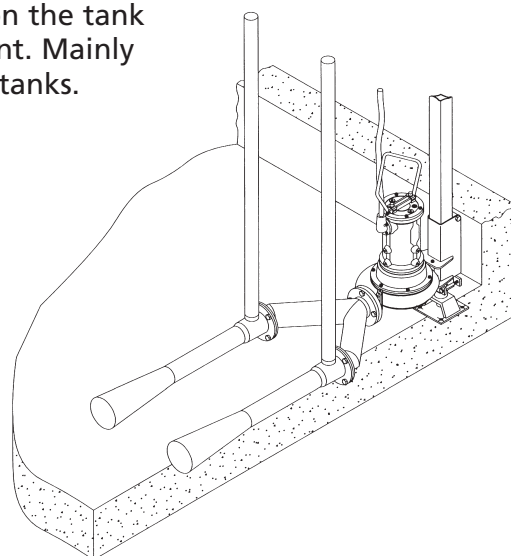
The AIR JET system consists of a LANDIA submersible pump type DG-I with one or more ejectors. Dependent on the customer's need for aeration and mixing it is possible to combine the ejector with pumps of different sizes and types with motors ranging from 3.0 til 18.5 kW.

The pumps in the AIR JET system are supplied with LANDIA's original chopping system making it possible to apply AIR JET everywhere, also in highly polluted mediums in which e.g. rags, large dry matter particles and high dry matter content can be found.

### ■ The design of the AIR JET system, examples:

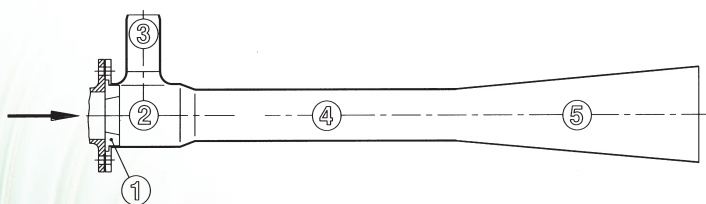


AIR JET system with a horizontal submersible pump. Can be mounted directly on the tank bottom without further equipment. Mainly applied in storm water retention tanks.



AIR JET system with a vertical pump and equipment for mounting at tank edge. Mainly applied in aeration tanks.

### ■ The function of the ejector:



By means of a LANDIA submersible pump type DG-I the liquid is pumped through diffuser 1, into the mixing chamber 2. When the liquid flow is pushed through the diffuser its velocity is increased remarkably. This creates a stable negative pressure resulting in the air being drawn through the aspiration pipe 3.

In the mixing chamber air and liquid are mixed turbulently. This mixing is enhanced in the ejector's high-turbulent zone 4 after which the liquid/air mix is flushed out through the diffuser 5 by means of high pressure.

The ejector is made of stainless steel AISI 304 with pipe branch for the aspiration pipe which can be supplied in stainless steel, as PVC pipe or spiral hose.

## ■ Performance AIR JET for clean water, 3x400 V/50 Hz:

### Landia Air-Jet Data:

Type of ejector	Tank depth	Pump data			Ejector data		
		Motor Rated power	Pump type	Q water m <sup>3</sup> /h	Quantity	Air flow nm <sup>3</sup> /h	SOTR kg O <sub>2</sub> /h
*AJ0301	3.5	3.0	DG-I 80	75	1	105 - 70	2.4 - 2.8
*AJ0401	4.5	4.0	DG-I 80	100	1	135 - 85	3.1 - 4.0
*AJ0551	5.5	5,5	DG-I 80	110	1	170 - 100	4.0 - 5.5
AJ0751	6.5	7.5	DG-I 105	150	1	205 - 115	4.8 - 7.6
AJ1101	6.5	11.0	DG-I 105	150	1	225 - 150	6.3 - 10.2
AJ1501	6.5	15.0	DG-I 105	160	1	290 - 200	7.3 - 12.2
AJ1851	6.5	18.5	DG-I 105	185	1	325 - 230	8.1 - 14.9
*AJ0752	4.5	7.5	DG-I 105	185	2	275 - 130	5.4 - 8.8
AJ1102	6.5	11.6	DG-I 105	215	2	350 - 205	6.6 - 10.5
AJ1502	6.5	15.0	DG-I 105	195	2	415 - 255	8.1 - 12.9
AJ1852	6.5	18.5	DG-I 105	275	2	460 - 300	10.7 - 15.9

The indicated figures for air flow and SOTR are the values measured at 1 meter and 6 meters submersion depth, respectively. However, the \*marked figures are values measured at maximum submersion depth.

**SOTR:** Standard Oxygen Transfer Rate (ANSI/ASCE 2-91)

Further information concerning oxygen transfer rates and pump capacities is available on request.

The overall aim for Landia is customer-made solutions based on more than 60 years of experience and know-how. In connection with every project we make proposals concerning optimum position, pump and ejector type, size and number, as well as suitable equipment for easy operation and service.

## ■ For precise dimensioning please always state:

- Tank dimension and volume
- Purpose of application (e.g. cleaning of bottom in storm water retention tank)
- Type of medium (e.g. storm water, active sludge, surplus sludge etc.)
- Dry matter content
- Temperature
- Required oxygen transfer in kg O<sub>2</sub>/h
- PH-value/chemical content
- Required type of material

LANDIA produces submersible mixers, flowmakers and pumps. We undertake the tasks which demand the specialist's proficiency and solve problems within, for instance, flow creation, mixing, pumping and aeration in waste water treatment plants and in industry.

We reserve the right to make technical alterations.

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