

Liquid Jet Compressors

Transvac has been supplying Liquid Jet Compressors to the water, effluent, oil & gas and process industries for over 35 years.



Liquid Jet Compressor in PVCu with unions



Liquid Jet Compressor in PVCu with GMS flanges

Typical Applications:

Water Treatment

- Entraining Ozone or Chlorine Gas for disinfection of water used for swimming pools, cooling towers, bottling plants etc.
- Entraining atmospheric air to transfer oxygen to remove irons and manganese from borehole water.
- Entraining atmospheric air for filter backwashing / scouring of filter media.

Oil & Gas

- Entraining Vent Gas
- De-aeration of seawater
- Entraining header Gas for oil / water separation

Effluent Treatment

- Entraining atmospheric air to transfer oxygen for sewage treatment.
- Entraining atmospheric air to transfer oxygen for chemical oxidising.
- Entraining atmospheric air for aerating and mixing balance tanks.
- Entraining pressurised air for producing 'white water' on DAF (Dissolved Air Flotation) plants.

Process

- Entraining CO₂ for carbonating soft drinks.
- Simultaneous scrubbing and pumping of corrosive gases.
- Recycling and mixing off-gas with motive liquor to increase contact time and enhance the process reaction.



Liquid Jet Compressor in stainless steel

Liquid Jet Compressors

Principle of operation

In operation a high velocity jet of pressurised liquid discharged from the motive nozzle produces a region of low pressure in the suction chamber to entrain the secondary gas. The two streams then thoroughly mix in the throat before the resulting mixture flows through the diverging cone to regain pressure in order to overcome system discharge heads.

Advantages

- Simple to operate & install
- Reliable with no moving parts
- Inline mixing of liquid & gas
- Virtually silent operation
- Minimal maintenance
- Suitable for hazardous areas
- Custom designed
- Available in most materials

Construction

Standard materials of construction include rubber-lined, PVCu, PP, PTFE, PVDF, hastelloy, titanium, stainless steel, Super Duplex & Duplex steels and carbon steel. Other materials are also available.

Connections include flanged, screwed, plain, hosetail, bauer and hygienic.

All Transvac's design and manufacturing processes are quality assured and certified to BS EN 9001:2000 and units can be CE marked where applicable.



Liquid Jet Compressor with Polypropylene contact parts



Liquid Jet Compressor with PTFE contact parts in a support shell