



TransPAC

The Carbon Dosing Solution





About Us

Transvac Systems Limited is a privately owned Ejector Solutions provider formed in 1973.

As both a designer and a manufacturer of Ejectors, Transvac has full in-house control over process and mechanical design, supply of raw materials, manufacturing, scheduling and testing. With all of our procedures certified to BS EN ISO 9001:2015 the quality of the final product is assured.

Transvac is accredited to Module H of the Annexe III Pressure Equipment Directive (PED) and our products are CE marked where appropriate. We are also 1st Point Assessment (FPAL) and Achilles registered.

All products are custom designed to suit the process and mechanical requirements of each application to ensure maximum operating efficiency.

Transvac offers standard and exotic materials of construction including Hastelloy, Duplex, Super Duplex, Titanium etc.





TransPAC The Complete Carbon Dosing Solution

Powdered Activated Carbon (PAC) is a primary form of treatment for pesticides and organics removal. It is often added to drinking water supplies to remove pesticides (such as Metaldehyde) and herbicides, and to neutralise the causes of taste and odour complaints, to ensure current legislation requirements are met.

Traditional PAC dosing methods incorporating mechanical agitators, tanks and slurry pumps have proved to be unreliable and ultimately very costly.

Transvac offer a variety of simple & reliable PAC dosing systems, using our Ejectors as the key element.

Transvac PAC dosing systems are available as fully containerised or skid mounted packages. Containerised systems are available for purchase or low cost rental.

A TransPAC offers outstanding value as it can be taken from site to site as required, which is ideal for treating seasonal issues such as algae bloom, taste & odour, chemical spills or pesticide contamination.

TransPAC systems are designed and built at our site in Derbyshire, with a full range of performance testing carried out on every system we build.



*No capital expenditure required
Short & long term rental options
Competitive hire rates
Fast-track solution for failing works*

Clients include:





TransPAC - a complete PAC dosing solution



When water standards slip, you need to act fast. The TransPAC dosing solution puts you back in control.

With minimal need for building or groundworks, TransPAC provides a safe and secure home for your dosing solution. Simply hook it up and away you go.

TransPAC provides once-through inline dosing, so there are no batch mixing tanks to contend with and the fully programmable HMI control panel provides accurate and efficient dosing. After all, no one likes wastage.

The TransPAC is also supplied with a silo adapter kit which can be easily fitted by the site operator to enable the system to receive carbon from a site silo, rather than a bulk bag.

A Containerised **TransPAC** Dosing System Includes

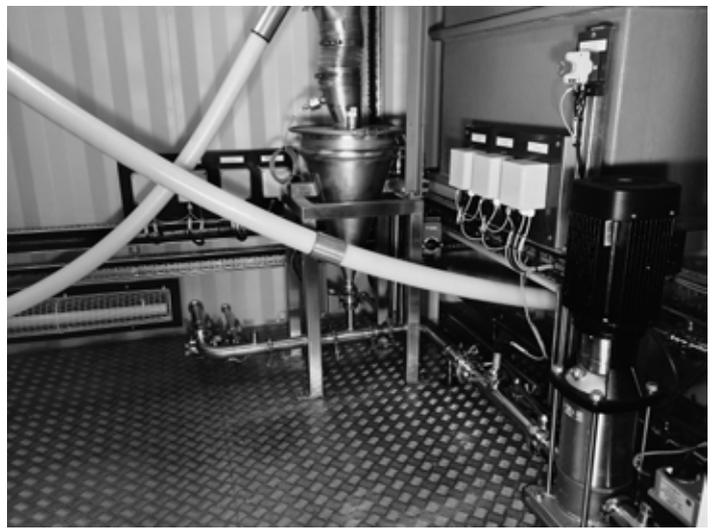
- ✓ Secure, vandal-proof container with lighting
- ✓ Transvac PAC Ejector, in-line wet mixing / pumping system
- ✓ Powder handling / metering system (bulk bag or silo fed option)
- ✓ Clean water pressure booster pumps
- ✓ Water header tank
- ✓ Site specific control panel with alarm interface
- ✓ Interconnecting pipework and valves (manual or automated)
- ✓ Instrumentation
- ✓ Optional compressor
- ✓ Silo feed adapter kit
- ✓ Optional dust extraction system
- ✓ Improved hydraulic bag clamping arrangement to eliminate dust
- ✓ Performance tested prior to delivery





Advantages of a **TransPAC** Dosing System

- PAC dose rate to match works flow ✓
- Accurate dosing, no PAC wastage ✓
- Clean and reliable operation ✓
- Once through in-line mixing ✓
- Dosing lines flushed clean after use ✓
- No wet mixing moving parts ✓
- Minimal maintenance ✓
- Simple to install and operate, minimal civil works required ✓
- Hygienic design ✓
- Manual or fully automatic operation ✓
- Compatible with site telemetry ✓
- Containers can be moved from site to site as required ✓
- No requirement to involve M & E contractors ✓



- Buy or hire options
- Competitive monthly hire rates
- Plug in and start dosing!
- Fast-track solution for failing works
- Bulk-bag or silo feed

Silos

Transvac regularly work with silo providers to enable silo fed PAC dosing systems. These can be coupled with our mobile TransPAC systems or with our fixed skid packages and can incorporate a varying range of silo arrangements and sizes.

Our latest TransPAC designs allow for both silo and bulk bag feed as standard and can be interchanged with minimal modifications to the system.



Case Studies



Client	<i>Yorkshire Water</i>
Issue	<i>Taste & Odour Issue</i>
Flowrate	<i>3kg/hr – 60kg/hr</i>
Product Provided	<i>Fully containerised TransPAC system</i>
Preferred Dosing Method	<i>Bulk-Bags</i>

Client	<i>Welsh Water</i>
Issue	<i>Spike in pesticide concentration</i>
Flowrate	<i>1kg/hr – 10kg/hr</i>
Product Provided	<i>Fully containerised TransPAC system complete with free standing dust extraction unit.</i>
Preferred Dosing Method	<i>Silo</i>



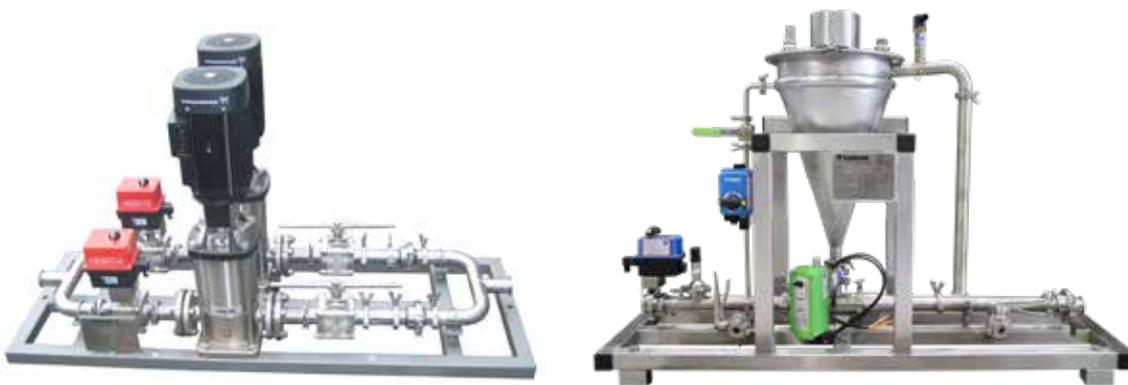
Client	<i>Yorkshire Water</i>
Issue	<i>Taste & Odour Issue</i>
Flowrate	<i>5kg/hr – 95kg/hr</i>
Product Provided	<i>Fully containerised TransPAC system</i>
Preferred Dosing Method	<i>Silo</i>

Dosing Skid Packages



For installation of a PAC system inside an existing building, Transvac skid packages can be tailor made to match the individual site needs.

- ▶ Automatic or manual controls
- ▶ Booster pumps
- ▶ Washdown loop
- ▶ Header tanks available (WRAS approved)
- ▶ Duty standby systems available
- ▶ Flexible layout
- ▶ "Plug & Play" installation
- ▶ Hygienic
- ▶ Compatible with bulk-bag or silo systems



Isolator Hoods

Manual addition systems are designed to minimise exposure to dust and contamination to clean areas with an isolation hood with port for extraction and glove ports for operators.

- ▶ Compatible with 25kg bags
- ▶ Hygienic polished finish
- ▶ Tri-clamp connections
- ▶ Protection for operators
- ▶ Quick & efficient dosing





Research & Development Test Facility

Transvac officially opened its R&D Test facility in April 2010. The state-of-the-art test facility primarily develops new oil & gas Ejector technology for subsea processing, flare gas recovery, sand slurry pumping and production boosting.

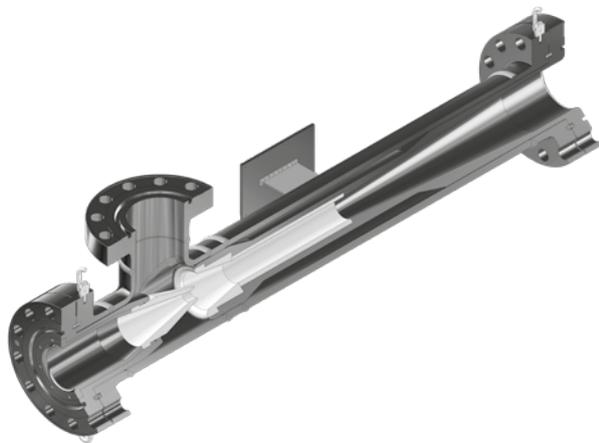
Ejector applications for the nuclear, bio-fuel, chemical and wastewater industries are also under development.

The R&D test facility includes high and low pressure

equipment for handling water, gas, multi-phase and slurry. Test programmes are supported by CFD studies and include fundamental University research.

The Transvac facilities include liquid flow lines for high, medium & low pressure testing (in excess of 250 bar (g)) and solids handling systems.

Transvac performs functional validation tests for Ejectors used in the oil & gas, nuclear and process industries.



Why not visit Transvac head office and come and see the first-class R&D facility for yourself?



Research & Development - Key Research Areas

Fluid Structure Interaction

- ▶ Jet break up characterisation
- ▶ Coalescing and dispersion of multiphase flows
- ▶ Measurement techniques [laser Doppler]
- ▶ CFD model calibration [new code development]

High Motive Pressure Liquid Jet Compressor

- ▶ Optimisation & characterisation
- ▶ Scaled trials
- ▶ CFD model calibration

Low energy inline micro bubble generation

- ▶ Optimisation of new equipment and envelope testing

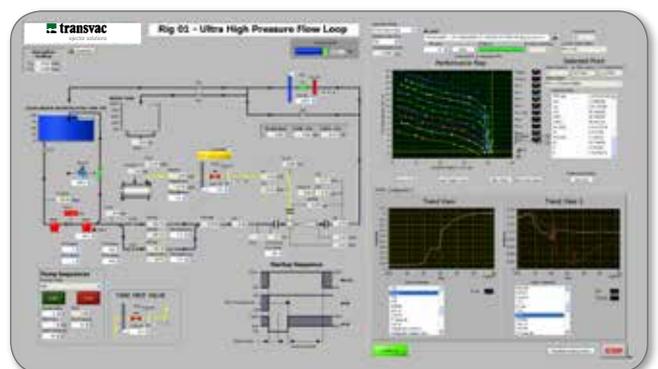
Gas Motivate Liquid Units

- ▶ Optimisation and stabilisation studies

Liquid Jet Pump Erosion Prediction Techniques

- ▶ Micro scale experimental trials
- ▶ CFD modelling and calibration
- ▶ Full scale Ejector testing
- ▶ Accelerated testing methods

R&D clients include:





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