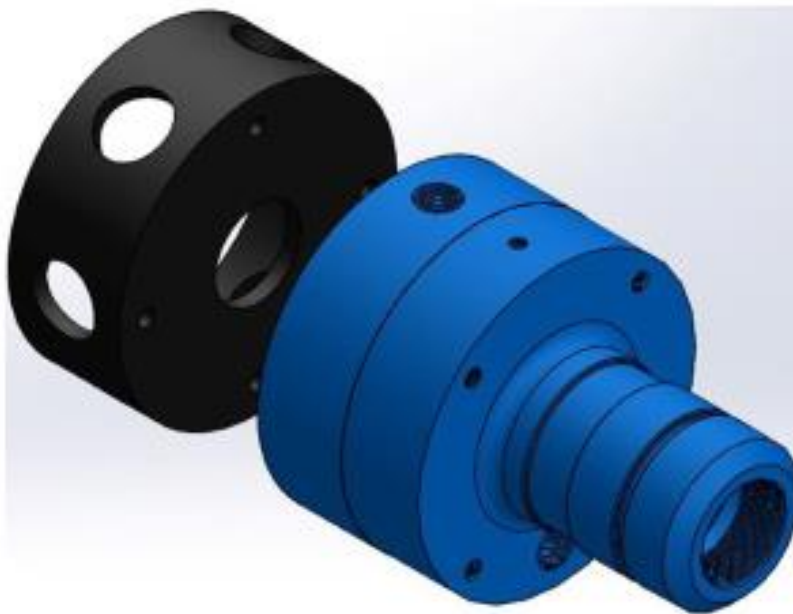


GIZZMOTO

**Multi-Nozzle Annular Jet (MNAJ)
Pumps & Equipment**



**Alternative Technology Solutions For
Transferring Liquids & Flow-able Materials
By Compressed Air or Gas**



_tcl-cumbria INTRODUCTION

All **GIZMOTO** units use fluid dynamics principles and operate **WITHOUT** moving parts, offering end users the following advantages:

- * **LOW ENERGY CONSUMPTION**
- * Multi-Functional & Unrestricted Media Flow
- * Variable Control - no heat generation
- * Virtually Noiseless & Vibration-Free
- * Cannot be overloaded or 'burn-out'
- * Clean and contamination free
- * Self-Cleaning - Low Maintenance
- * Works in Any Angle - No Direct Coupling
- * Easily Installed - Retro-Fit Module Change
- * **Self-Contained - Same Power & Control**
- * Portable & Mobile for Multiple Locations
- * Suitable for Harsh & Hazardous Areas
- * Can be used for water and a variety of liquids



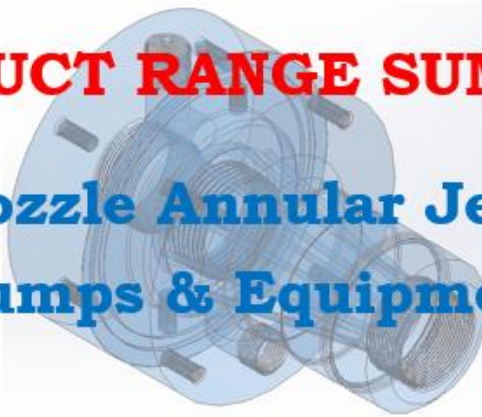
The following pages illustrate a wide range of standard units that can be used in many industrial and commercial sectors. They are also suitable for the OEM market and can be supplied with adaptations to enable retrofitting. Special units can be designed as part of an ongoing product development programme - see concepts section.



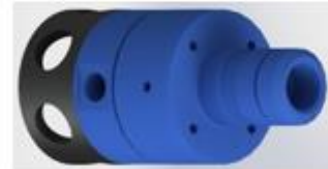
[tcl-cumbria](http://tcl-cumbria.com)

PRODUCT RANGE SUMMARY

Multi-Nozzle Annular Jet (MNAJ) Pumps & Equipment



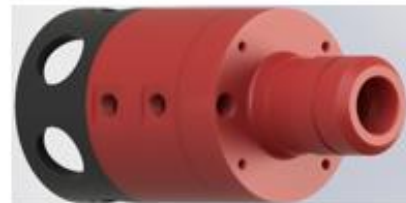
WATER-LIQUID PUMPS



AERATORS-INFUSERS AGITATORS-MIXERS



PROPULSION-JETTERS



Selection of inlet & outlet connections complemented by choice of compressed air (or gas) power supply connections *



* Side Port



* Top Port



* Rear Port

PLUS Fixing points for Mounting Brackets on top & rear faces

All working on No-Moving Parts Technology



_tcl-cumbria PRODUCT RANGE - UNITS

WATER-LIQUID PROPULSION-JETTERS



MODELS SIZES 15, 20, 25, 50

Bore ID - 15, 20, 25, 50mm

Inlet & Outlet - 1/2", 3/4", 1", 2" BSP

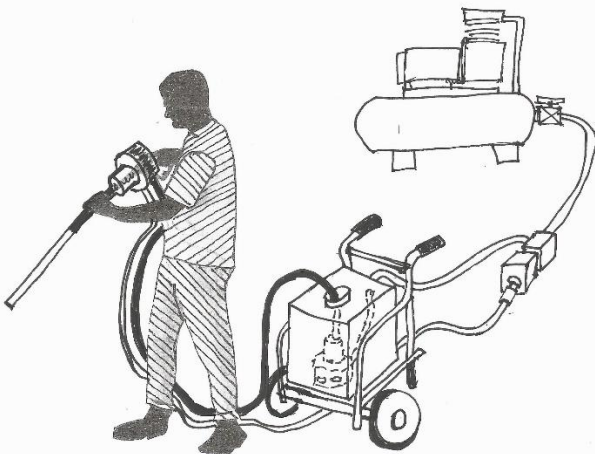
Air Supply - 1/2" or 3/4" BSP

NB Rear Ported

Body Diameter - 63, 80, 100, 200mm

Spigot Diameter - 40, 50, 100mm

Length - 100, 110, 160, 250mm



Example Application 1

LOW ENERGY CLEAN & DRY

Combination Air & Water Jetting provides rotary brushing action using water and air - **reducing water usage by 50%**

Secondary switchover facility to dry items using only air

Example Application 2

CLEAN ENERGY DRIVE

Single or Dual Propulsion units underslung on watercraft to provide **clean power and steer functions**

ADDED BENEFITS

Safe for wildlife - no blades

Oxygenation of water



GIZMOTO – CONCEPT-TOTAL SYSTEM

The following aspects should be considered by all end users when designing and building a bespoke system:

1. **GIZMOTO** – selection of size, type and function, plus materials of construction to give best match for chemical resistance
2. **ASU – Air Supply Unit – Compressed Air Filtration & Pressure Regulation/Indication**
3. **CONTROLS** – choice of pneumatic operating devices – manual, pneumatic and/or electropneumatic; either breadboard assembly or control panel/enclosure
4. **PIPEWORK** - including interconnecting flexible hoses and/or rigid tubing, with fittings
5. **POWER-PACK** – sizing and supply of **Air Compressor with attendant equipment**
NOTE - Part of the testing programme covered the evaluation of devices Compressed Air consumption at relative pressure ranges – 0.5Bar, 1.0Bar, 1.5Bar & 2.0Bar – to then design appropriately sized Compressed Air power supply plant & systems packages, with an analysis of high-pressure storage using demand factors – LOW ENERGY
6. **DESIGN SERVICE** – assessment of application requirements, including mountings, to produce a complete system layout
7. **INSTALLATION** – method (fixed, portable, mobile, floating) & manpower arrangements for site work
8. **COMMISSIONING** – setting-up and checking all operating parameters
9. **OPERATION** – continuous monitoring and cycling of entire system
10. **MAINTENANCE** – implementation of cleaning and rectification procedures

For more information, check out the website:

<https://www.tcl-cumbria.co.uk/gas-liquids-technology-glt/>

Or, send an e-mail to: info@tcl-cumbria.co.uk