

# AQUADRY 25 DRYING SYSTEM

**Safe and pollution free system for water removal**



**Made in Britain**



**How does it work ?** - By using tap water and pure water followed by hot air at reduced atmospheric pressure to produce stain free surfaces.

**Without** Trichloroethylene, sawdust or centrifuges ? -Yes, just plain tap water, the **AQUADRY** makes its own pure water.



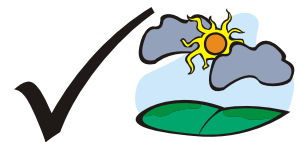
**Extraction ?** - Not essential, only warm humid air produced.

**What** special facilities are needed ? - none, runs off 240 volts single phase mains supply and tap water.

**Running costs ?** - materials none, water and electricity only with an occasional recharge of water purifying cylinders.

**Service and spares** availability - the **AQUADRY** is made in Birmingham by us.

**Toxic emissions?** - the **AQUADRY** does not pollute, no solvents or chemicals are used.



**Downside ?** - takes longer than solvent dryers, typically 3 to 10 minutes per batch depending on the product shape, but the process is programmed so other jobs can be done whilst the drying sequence is in action.

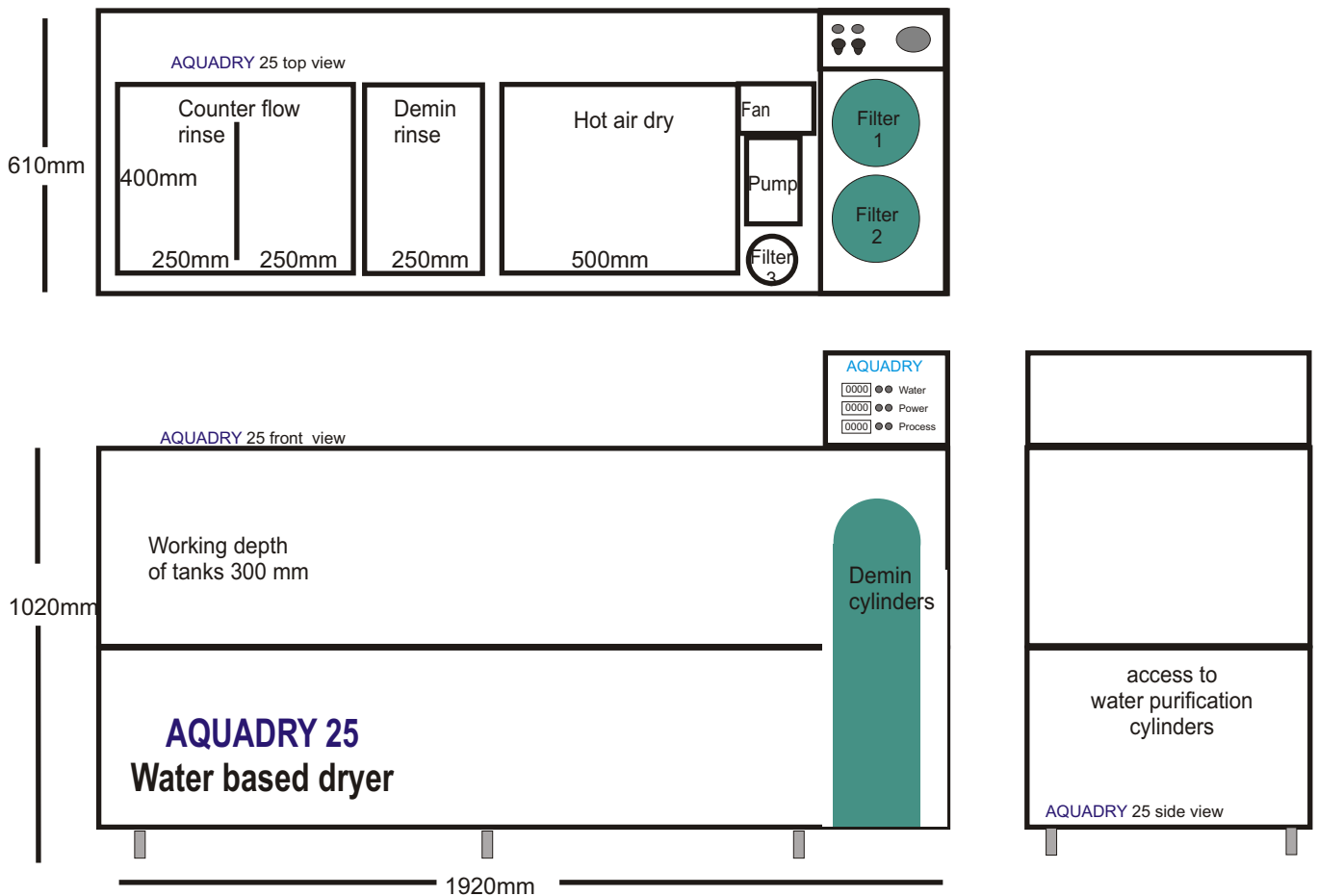
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**Note: Subject to design change 2013**



Unit Z, Hamstead Ind Est, Austin Way, Great Barr  
Birmingham, B42 1DU, England  
Tel: 44 (0)121 358 1456 Fax: 44 (0)121 357 4159  
Email: info@balco.co.uk Website: www.balco.co.uk  
**Manufacturing processing equipment since 1969**





## Sequence

After cleaning process, wash the items in the left side of the first rinse, followed by a rinse in the right side.

Wash items through the de-mineralised rinse for 10 seconds.

Place in Hot air drying chamber.

Press PROCESS switch and leave until timer indicates the sequence is finished. Drying time varies from 2 to 10 minutes dependant on the water retention ability of the products to be dried .

Remove dry items.

## Specifications

Case material and water tanks: beige textured chemically resistant Polypropylene, resistant to all acids, alkali and solvents.  
 Drying chamber: Stainless steel with support bars for multiple jigs.  
 Base frame and side panels: steel, welded and powder coated.  
 Dimensions: 1900 x 600 x 1000 mm high. Weight 90 Kg  
 Electrical supply: single phase 220-240 volts. 26 amps maximum.  
 Services: valved water supply 15mm dia. 40mm dia. waste

Larger sizes available including integral ultrasonic cleaning systems.

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# WATER v. TRICHLOROETHYLENE

## HISTORY.

Trichloroethylene ( a.k.a.Trike )has been used for decades, primarily for de-greasing and water removal ( drying )

Trike advantages,

for de-greasing, - quick, good at dissolving oils and greases.

and for drying, - mixes easily with water easily with additives, stain free finish.

Trike disadvantages.

Narcotic effect, induces stupor, addictive “Trike sniffers”, painful to eyes and skin, dangerous to clean out the machines ( several deaths over the years ). Disposal of the oily waste difficult and usually done illegally.

Finally Trichloroethylene is now identified as a Class II carcinogen and classified R40, R45, R60, R61, R62 with restrictions of flue output emissions of 3.64ppm.

Under the EU solvents directive, implemented in April 2001, all companies using Trichloroethylene are required to change to a safer product if there is one available.

The degreasing requirements of industry have been addressed in several way, in particular, Ultrasonic cleaners, high pressure water based detergent washers and non polluting solvents.

For the requirement for the removal of water it is not so easy to replace Trichloroethylene as other solvents will not perform in the same way, not forming an “emulsion phase” that allows water to be removed.

## DEVELOPMENT

Alternatives available,

Absorbent materials, ie Sawdust or maize husks, but this is a difficult to remove from the items being dried, causes stains unless in pristine condition and creates dust.

Centrifuges, these cause surface damage in many cases due to the acceleration and de-acceleration stages.

Simple hot air dryers work but cause surface staining from rinse water and are slow.

As none of the alternatives addressed the problems of the precision component industries, manufacturing jewellers, silversmiths and other manufacturers who need stain free drying, Balco approached the design of a suitable drying system by using a simple idea,

” if the water your rinse your components in contains salts, during drying you will remove the water and leave the salts and stain the component. Therefore remove the salts.”

Combining this logic with the fact that water evaporates faster at reduced temperatures when the air pressure is lower, resulted, in the AQUADRY 25. This system produces stain free dry components without resorting to polluting solvents, increasingly expensive consumables and hazardous materials.

Initial take up has been in the precious metal industry where Balco are best known but enquiries from several industries are currently being processed.

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Engineering Limited

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