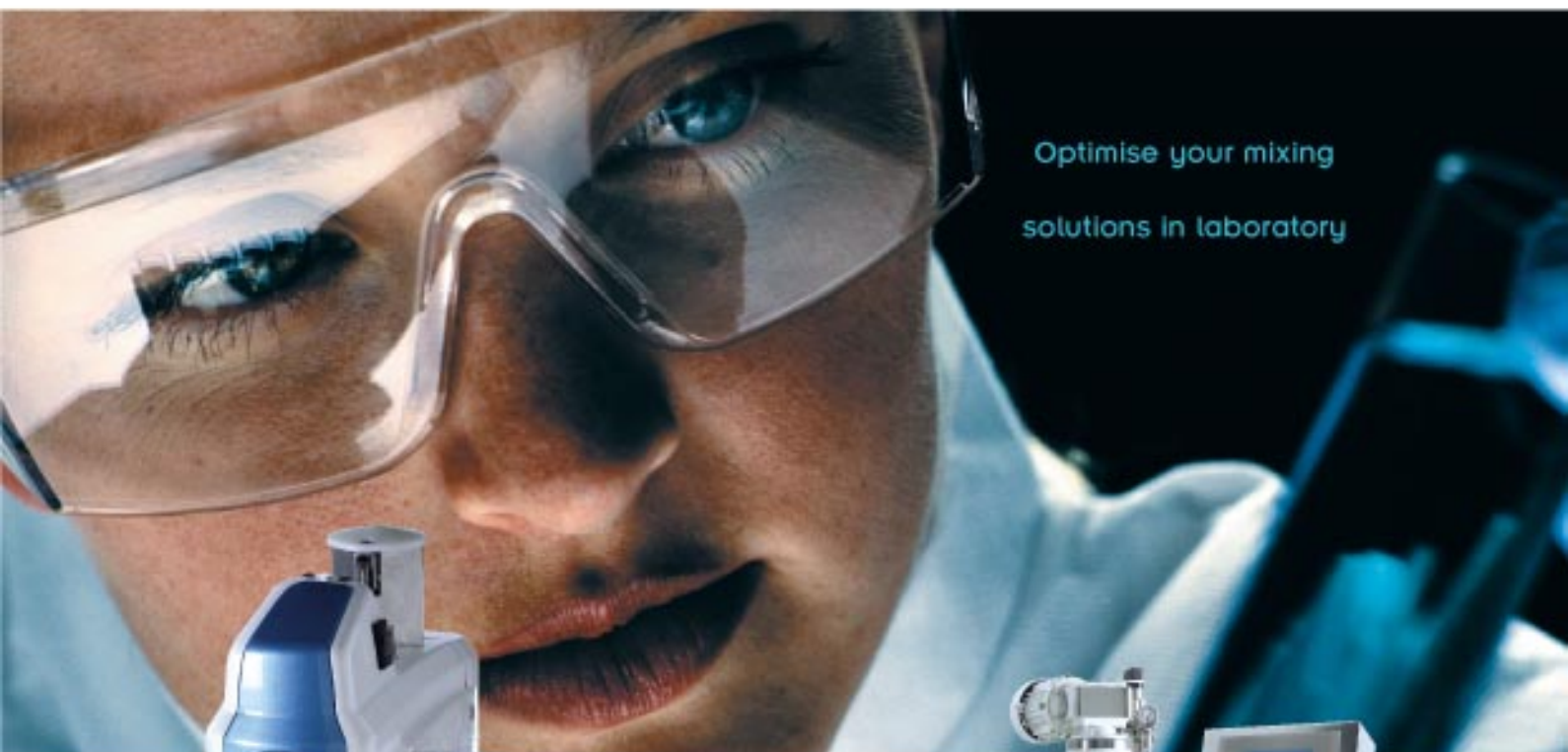


Laboratory mixers



Optimise your mixing
solutions in laboratory



TURBOTEST



TRILAB - Under vacuum pilot

vmi
RAYNERI

To meet the specific needs for the mixing in laboratory

Specialist in the domain of industrial mixing equipment, VMI proposes to the laboratories equipments adapted to their research tasks and development: bench top equipment for testing formulations and pilot extrapolations.

Turbotest, a machine on bench top laboratory

Turbotest enables the development of formulations, the validation of the different propellers and speed ranges according to the product rheology.

Trilab, Vacuum pilot extrapolation

Enabling mixings at the production level, in particular in controlled atmosphere, the Trilab confers a perfect homothetic on the pilot tests, therefore producing results directly extrapolated in production.

Turbotest and Trilab are two independent and complementary solutions that bring, when used together, all their synergy to the formulation tests.



→ Turbotest™ Clearly innovative

Playing the seduction card, the new Turbotest design, shows a volunteer of innovation. An innovation conveyed by: ergonomics, power and versatility...



*Beakers clamping
(patented system)*

Turbotest

Technical data

Technical datas

With an electric motor developing 300W, a maxi couple of 90 ncm and a speed frequency from 50 to 3300 rpm, Turbotest expands its use towards the production of fine emulsions and tixotropic mixings.

Another argument, lowered mini speed enables the use of peripheral tools adapted to heat exchange or cooling.

The new motorization enables to use a high-speed rotor stator.

Versability

Sold with a shaft and a large choice of blades, Turbotest can be equipped with 18 different tools, including a range of emulsor Rotor Stator with a diameter from 25 to 70 mm.

Mixing capacity:
between 200 cl and 20L.

2 patents

A new safety clamping system of the beaker enables to make a preselection before clamping, with only one hand.

Only one control allows the mechanical release and the head displacement.

Programming

Turbotest features a digital control box with LCD screen in order to permanently display the speed, time, and couple.

Programming enables to register up to 10 phases.

Ergonomics and safety

The base of Turbotest is widen to adapt to the electrical heated plates.

Thanks to its safety system, the rotation of the impeller stops when the beaker is not in place.

Cleaning

On the stainless steel raising column, there is no removable components, allowing an easy cleaning.

The base is made of a mobile shell, which can be cleaned separately.

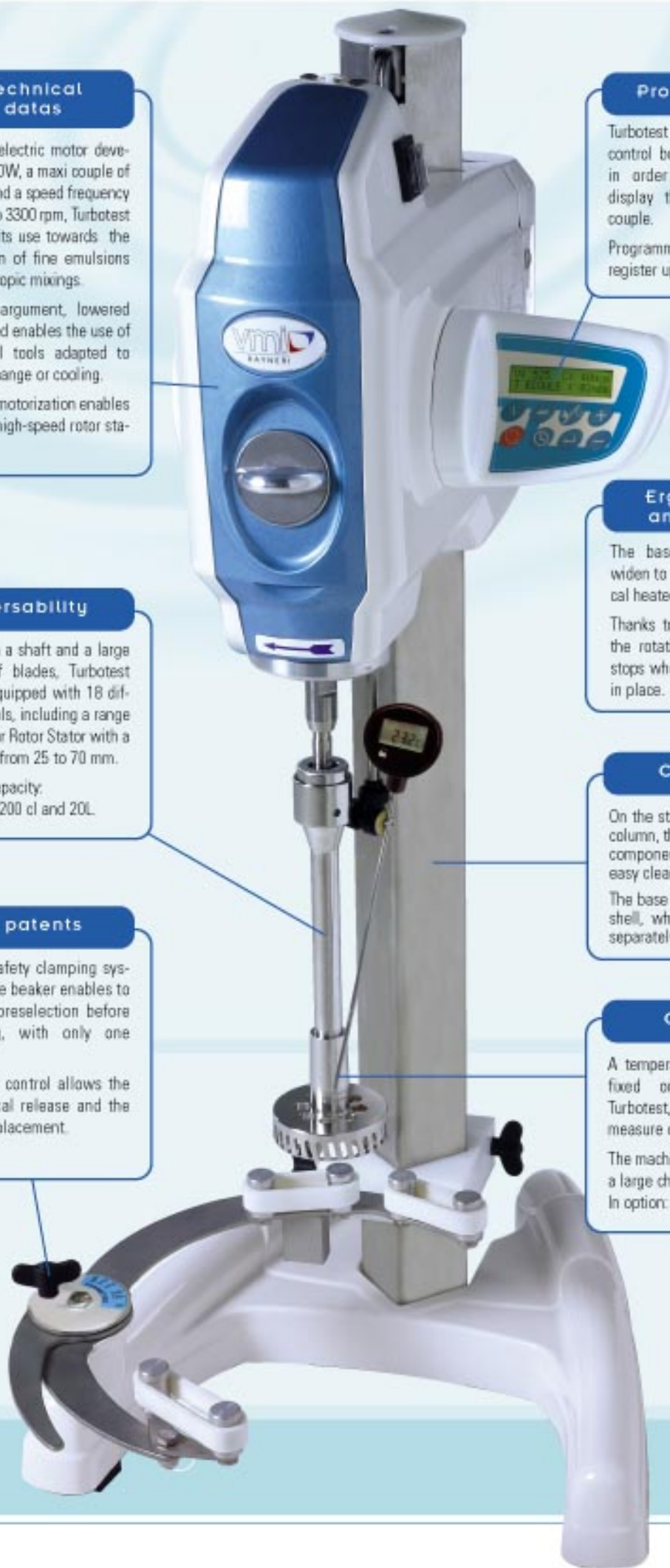
Options

A temperature probe can be fixed on the head of Turbotest, enabling a product measure during the mixing.

The machine is equipped with a large choice of blades.
In option: use of an emulsor.



Only one lifting handle
(patented system)





Trilab with a tipping bowl for draining

Trilab

Under vacuum pilot

With its 3 steps arrangement, on the same principle as the industrial range Trimix, the Trilab is most suitable for the viscous or pasty mixings. Enabling the under vacuum mixing, Trilab imitates the conditions of industrial productions. This is a direct solution for the manufacturing of marketing batch. Trilab is tailored for the manufacturing of products in the pharmaceuticals, cosmetics, chemical and food industries.



Versatility

Versatility of the agitation in the tank (rotor/estator or blades)
Capacity: 5 litres for production from 1.5L (mini 0.8 L with emulsor).

Ergonomic

Control panel with digital screen.
Easy access to the tank with total tools relief, thanks to the rise and rotation at 90 degrees of the head.
Manual change of the tools in the tank.
Visual control: the tank head is equipped with a windscreen wiper and the inside of the bowl is lightened.
Self-contained and mobile system.

Technical data

Double welded tank at a controlled temperature and pressure (vacuum pump and heating unit integrated).
3 coaxial tools especially adapted to arduous mixings and to the production of fine emulsions.
Scraping in 2 ways.
Under vacuum incorporation of powders and liquids in the bowl bottom, during the production.
Draining under pressure.

Technical data



Trilab in loosened position.



Under vacuum incorporation of powders and liquids in the bowl bottom.



Versatile agitation in the bowl (rotor/estator or blades).



Cleaning

Made of stainless steel.
Dismantable Scraper without tool. (patented system).



Fig.1



Fig.2



Fig.3

Options

Melter integrated with the agitator in the tank.
Possibility of tipping tank for draining.



Manual change of the tools.



Coaxial mixer with scraping in 2 ways (patented)
- counterrotation : reduced mixing time
- corotation : high viscous products – top introduction.

A wide range of tools!

Turbotest and Trilab directly result from the know-how of Rayneri in the field of mixing.

They can be equipped with a set of 24 tools; each providing a specific solution to any mixing constraints, as encountered so often during the production level. This wide range enables, at the laboratory scale, to conceive mixing process, directly adapted to the production level. Moreover, the recommendations of VMI RAYNERI, based on efficiency, enable a saving time as well as providing a high standard formulations.

Emulsor Rotor/Estator

- ➔ Thin emulsion
- Thin dispersion of powders into a liquid
- (high speed use)



Dismantlable set for cleaning purposes

DIAMETER (mm)	LIQUIDS PRODUCTS	VISCOUS AND THIXOTROPIC PRODUCTS
	Thin holes stator	Large holes stator
25	USEFUL VOLUMES	
25	From 0.2 to 1 litre	
45	From 0.5 to 3 litres	From 0.2 to 2 litres
55	From 2 to 7 litres	From 1.5 to 3.5 litres
70	From 5 to 15 litres	From 3 to 5 litres



Thin holes stator for low viscosity products

Large holes stator

Radial flow turbines

- ➔ Dissolution solids into liquids
- Dispersion solids into liquids
- Emulsion of non-miscible liquids
- (High-speed use)

Turbines	From 0.2 to 5 litres	From 5 to 20 litres
	DIAMETERS (mm)	
Centrifuge	55	90
Centripète	30-40-55	120-160
Sevins à ovules	65	80-100
Déflocculeuse	35-55-65	80-100
Centridéflocculeuse	65	90



Centrifuge

Centripète

Sevins à ovules

Déflocculeuse

Centridéflocculeuse

*Tools are shown with recommendations of utilization, which can be adapted according to the process.

Axial flow propellers

- ➔ Resuspension
- Suspension holding
- Homogenizing liquid/liquid



Propellers	DIAMETERS (mm)	
	From 0.2 to 5 litres	from 5 to 20 litres
Hélice marine	65	80
Tripale profilée	80	120-160
Quadripale PSVB	55-80	100-110
Quadripale PA (deairating)	55-80	100-110
Quadripale PSVH (Resuspension)	55-80	100-110



Hélice Marine



Tripale profilée



Quadripale PSVB



PA



PSVH



Pales éclipables

for viscous products

Others turbines

- ➔ Crushing, cutting

	DIAMETER (mm)
Cutting	55 - 65 - 80
Mixer	55



Cutting

Mixer



Tripale profilée bidirectionnelle

papillon

- ➔ Mixing of pastes

	DIAMETER (mm)
Hélice tripale profilée bidirectionnelle	80 - 120 - 160
Papillon	80

- ➔ Disintegration of bricks

	DIAMETER (mm)
Délicieuse	65 - 80

- ➔ Heat exchange

	DIAMETER (mm)
Planétaire	80 - 130



Délicieuse



Planétaire

A complete range from laboratory scale to pilot plant level



Located in the heart of Europe on the Atlantic coast of France, VMI is based in Montaigu, close to Nantes. VMI is a division of the Group Bretèche, and exports all over the world. With 50 years experience, VMI RAYNERI proposes, whatever the sector of activity of its clients (chemicals, cosmetics, pharmaceuticals, food industries), its know-how in the field of mixing. From laboratory scale to pilot plant level, VMI Rayneri designs and manufactures material and complete installations adapted to elaborated mixings.



Plate-forme Trimix



Multimix



Disperseur sur monte & baisse



Turbotest



VMI in Sailing races

Sébastien Josse, Skipper of the 60' monohull, participates in the most important sailing races, with Isabelle Autissier, or alone such as for the Transat Jacques Vabre or the next around-the-world race "Vendée Globe".

vmi
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