

## **LABORATORY LINES** MICROWAVE DIGESTION SYSTEM





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# our services Benefits and Support

In Kalstein France, we take care of the full satisfaction of our customers, that is why we provide value-added services of the highest level based on our experience.



#### Online Inductions and Trainings In any part of the world, receive your

induction or training from our specialized team of engineers



#### **Quick Response** Our work team is always available to response all your consults or questions, in order to support you in any situation.





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### Technical Support

Enjoy of personalized advice for the correct preventive and corrective maintenance of your equipment, thanks to Kalstein's manuals and articles, special catalogues and video tutorials.



## **Delivery Logistics**

We take care of all the necessary logistics for the dispatch of your goods, whether is by sea, land or.air.



### Kalstein Worldwide

With more than 25 years growing with our customers, Kalstein's multiformat and modern content, is now present in more than 10 countries and increasing.





#### Features:

- ✓ 316L industrial stainless steel cavity with multilayer Teflon coatings
- ✓ Dual magnetron for round models (one for YR04953 to YR04956 series)
- ✓ 360° continuous rotation in one direction enhances the uniform distribution of microwaves
- ✓ No consumables
- ✓ 8 pre-stored digestion methods, and able to edit and store 255 methods according to actual needs
- ✓ Upper clamshell design for the door for round models, not only conforms to the concept of explosion-proof mechanics, but also could use smoothly for operators and close more tight

#### Rotors

- ✓ Rotors of YR series
- ✓ Rotors of round models
- ✓ Working pressures & temperatures
- ✓ Principle of T & P measurement
- ✓ Principle of overpressure release

#### **Working Temperature & Pressure**

For all models:

- ✓ Temperature control range: 50-400°C
- ✓ Maximum working temperature: 250°C
- ✓ inner vessels T limit: 300°C
- ✓ Pressure control range: 0-10 MPa
- ✓ Maximum working pressure: 6 MPa

#### Principle of T&P measurement Temperature:

- Contactless IR sensor adopts particular wavelength range to directly measure The temperature of samples through inner vessels.
- ✓ Located at the bottom of the furnace chamber, temperature of each sample is Measured as the rotor rotates.
- ✓ All vessels monitoring

Digestion vessel has two parts, inner vessel and outer vessel. Inner vessels is for samples, outer vessel is for protection and signal reception.

- ✓ Vessel's material
- ✓ Inner vessel: TFM
- ✓ Outer vessel: peek+glass fiber
- ✓ Vessel volume: 100 ml

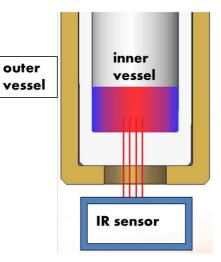




① Outer Vessel Body

CE

- ② Cover Assembly
- ③ Inner Vessel Body
- ④ Sealing Cover





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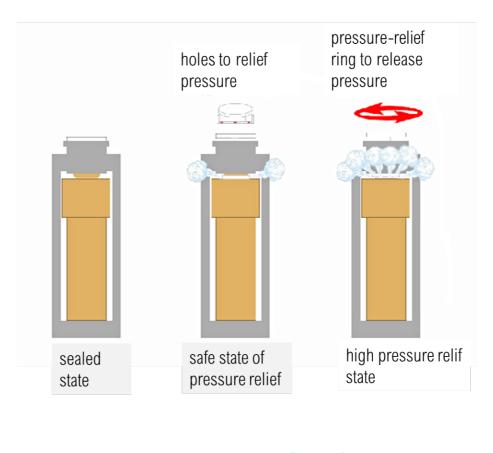
#### Principle of T&P measurement Pressure measurement:

- ✓ Contactless pressure sensor
- ✓ Optical distance measurement
- pressure sensor is located at the top of the furnace chamber, and the signal board receives and sends the light signal back to the sensor, then the pressure will be given by the distance conversion.
- ✓ All vessels monitoring

#### Principle of overpressure release

- Zero-consumable self-recovery high pressure digestion combination vessel, which provides a more powerful support for non-contact pressure control.
- ✓ There are pressure relief holes on the outer tank cover to help pressure relief







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#### Rotors

• There are 4 rotors for option, 6/8/10/12 vessels.





6 vessels

12 vessels

• If the user needs to change 6-vessel rotor to 12vessel one, it only needs to change the sample rotor, and add more vessels to then set the instrument for 12 vessels.





6-vessel rotor

12-vessel rotor

## Rotors of round models

#### YR04957 & YR04958

- There are 2 options:
- YR04957 is 12 vessels
- YR04958 is 18 vessels
- At present, it is unable to switch rotors between this two models.



12 vessels



18 vessels



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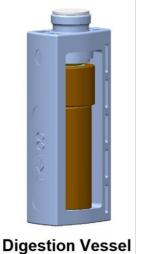
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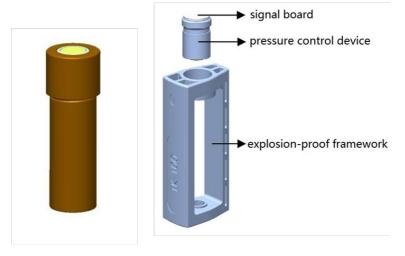
## Rotors of round models YR04957 and YR04958

Digestion vessels has 3 parts:

- Inner vessel, outer vessel and explosionproof framework.
- ✓ Vessel's material
- ✓ Inner vessel: TFM
- ✓ Outer vessel: peek+ glass fiber
- ✓ Frame: Polypropylene and Glass Fiber
- ✓ Sample volume: 100 ml
- Explosion-proof framework enhances security performance











This series also has 2 options: YR04959 is 40 vessels YR04960 is 50 vessels

- ✓ At present, it is unable to switch rotors between this two models.
- ✓ Sample volume: 50 ml



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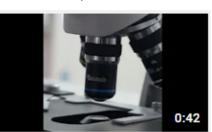
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