

PC Series -Ceramic-

Fine Ceramics

Fine ceramics are different from ordinary traditional ceramics. By using chemical and physical methods to control the green compact, then use mold forming method and high-temperature sintering to make its micro structure, chemical and physical properties **achieve a high level** till the last step undergo precision processing to become a variety of different products; fine ceramics are widely used in semiconductor, optoelectronics, biotechnology and solar energy industries.

From raw material to performance testing, **all process must be strictly tested**. Among them, the following results like, overall density, wet density, apparent porosity, water absorption, apparent density, open pores volume, open and closed porosity of the sample are more important.



Density & Quality

How to distinguish the quality of fine ceramics?

After powder pressed into shape which is called the green compact, the **density must be consistent**. And at the same time, the field technician can adjust the filling amount of the mold by the density result, **extend** the service life of the mold and **increase** the yield of product production. We can say, It is more effective in the sintering process, to **prevent deformation or collapse of samples due to uneven shrinkage**.

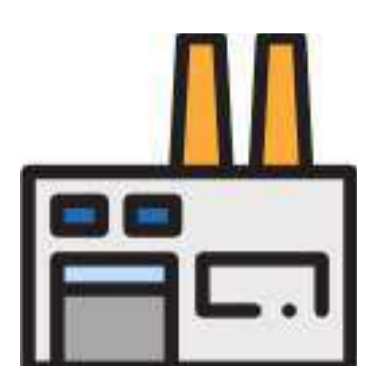
In summary, when discussing the properties of fine ceramic, **it is necessary to test the overall density from start till end**. It is not only due to the distribution status of pores, but also has a significant impact on the strength, elastic modulus, oxidation resistance, wear resistance, and other important properties of the material.



WAX mode measure the **bulk density** of ceramic **green compacts**

BULK mode measure the **apparent porosity** of ceramic **products**

Professional tester for different sample characteristics in different processes



What MatsuHaku Do:

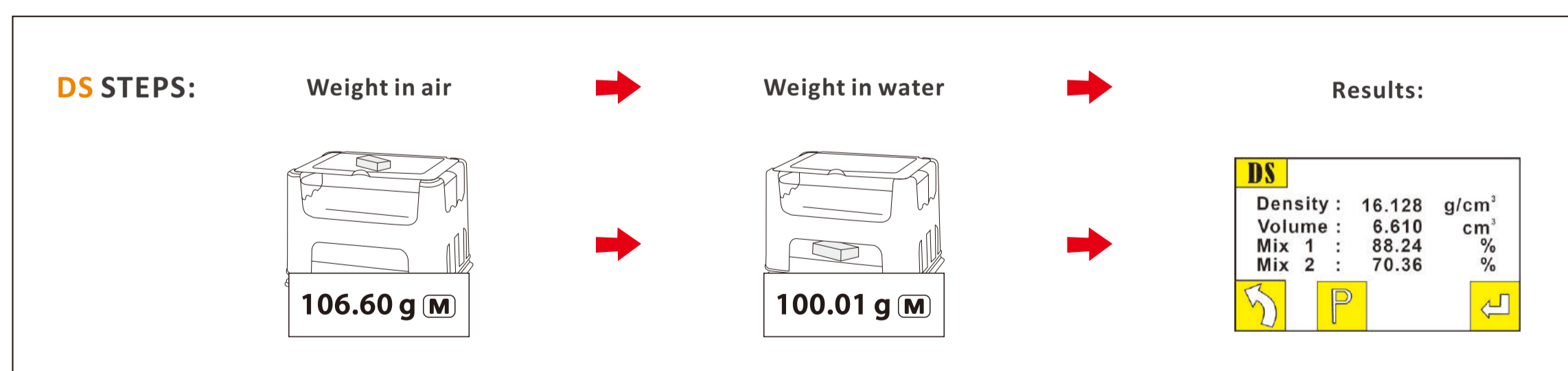
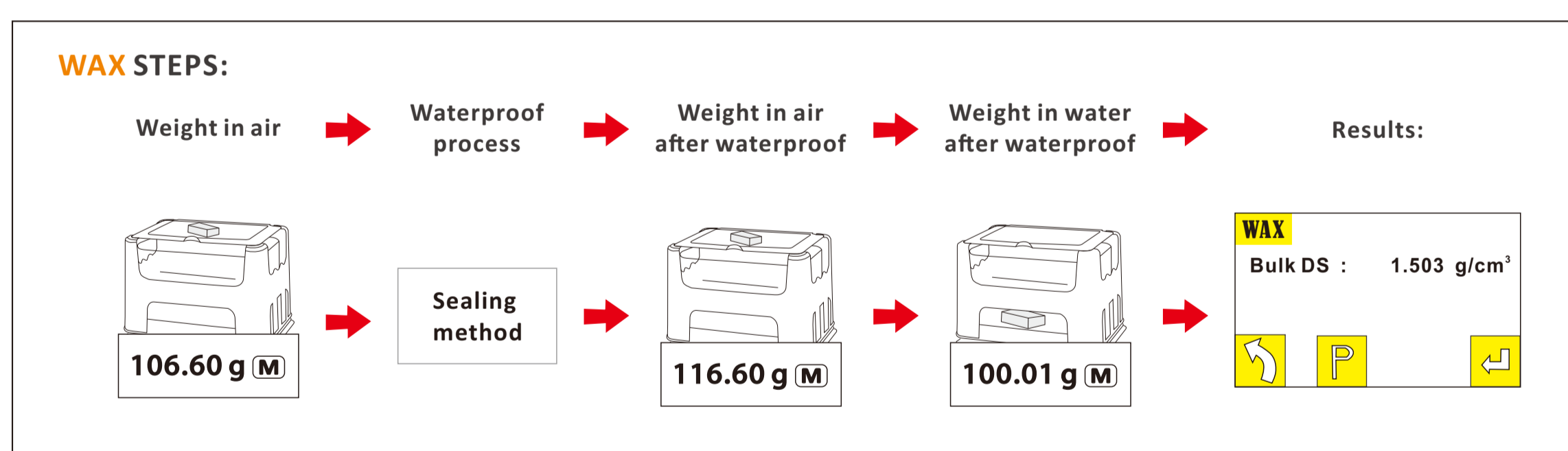
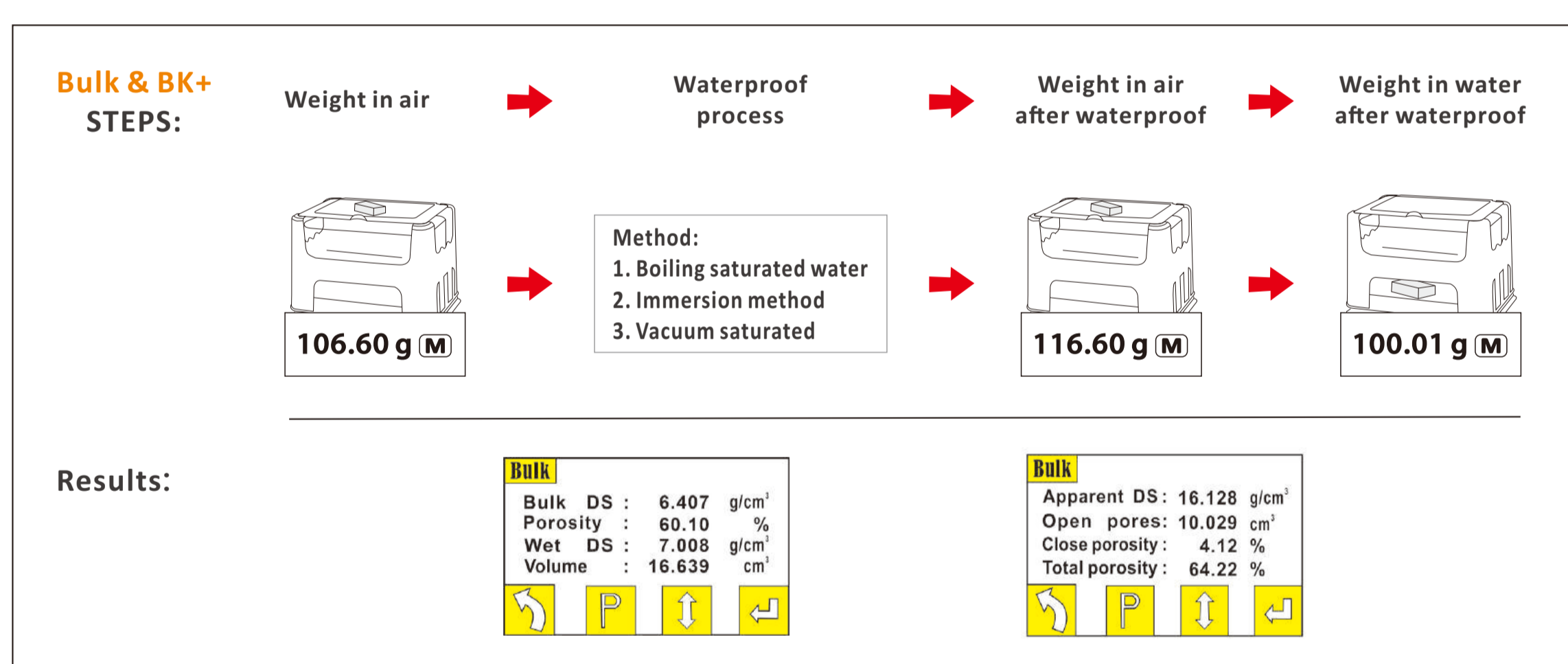
MatsuHaku PY series equipped **4** modes:

- 1. BULK** - Adopting water saturation method for porous material. Show Bulk density, Wet density, Apparent porosity density, Volume.
- 2. BK +** - Adopting water saturation method for porous absorbent material. Show Bulk density, Wet density, Apparent porosity density, Volume.
- 3. WAX** - Sealing method for porous absorbent material. Show Bulk density directly.
- 4. DS** - Nonabsorbent material. Show Density, Volume, Mix ratio directly.



The pore structure **greatly affects the physical properties of Fine Ceramics**, So it is very important for the density detection of the green compact and sintered body.

If you want to **confirm the quality**, the very important point is to **know the density of it**.



MatsuHaku Density Tester Keep You Aware Of

1. **Reduce** the cost and the **Defect** loss
2. Fit the international **Standard**
3. Make sure the quality **Stable**



*With MatsuHaku Density Tester
Quality control is more easier than you thought*