

PG DOSING UNIT MODEL 68-76-01



The *PocketGoniometer* product line is a family of scientific testing instruments used to determine the interaction between a liquid droplet and a surface.

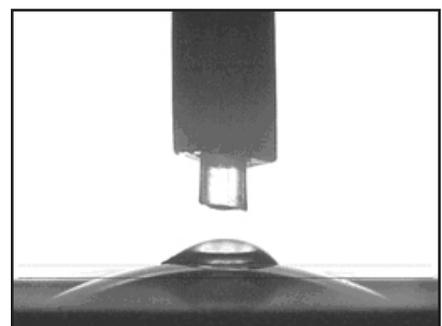
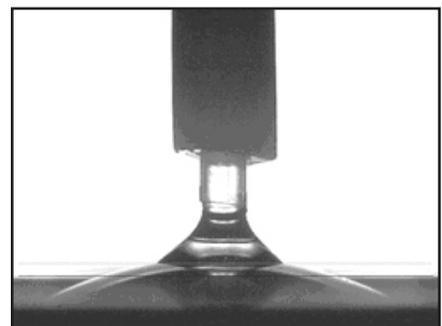
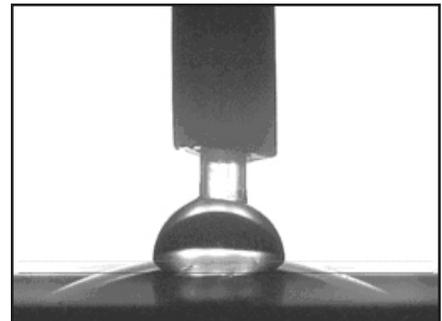
The PG Dosing Unit is a stand-alone pump used in unison with the PGX+ *PocketGoniometer* to measure contact angle. When tacky liquids or many different liquids are being tested, it is necessary to clean or replace the liquid system to avoid contamination. With the PG Dosing Unit, disposable syringes are an attractive alternative to tedious cleaning and replacement of expensive parts, saving time, effort, and expense.

The PG Dosing Unit is based on a standard syringe pump for low-cost disposable syringes.

The complete liquid system consists of a one mL syringe, a dispensing tip and a PTFE tubing. This standard syringe produces more than two hundred liquid droplets of four microlitres and when the syringe is emptied or not required any more, the entire liquid system is disposed of. A new syringe is then filled with the new test liquid, a new dispensing tip with tubing is attached and the syringe is put into the PG Dosing Unit. Disposable items like syringes, dispensing tips and PTFE tubings are offered in economical bulk packages.

The PG Dosing Unit can be operated in many modes.

The most common use is to set the pump to a preset droplet volume and pump out a new droplet for each new test position. The unit can also be programmed for sophisticated analysis of the “wetting hysteresis” using the advancing/receding contact angles to characterise the surface properties. Here the dynamic contact angle is measured as the droplet advances across the test surface (top right). The pump flow is then automatically reversed at a user- defined volume and the liquid droplet is now receding on the surface (center right). Finally the droplet will release from the dispensing tip (bottom right) and the test is aborted.



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The PG Dosing Unit is shipped complete with:

- Black plastic case
- Five disposable syringes
- Five PTFE tubings with LILAC Dispensing Tip 0.2 mm
- Five PTFE tubings with RED Dispensing Tip 0.5 mm
- Five PTFE tubings with PINK Dispensing Tip 0.9 mm
- A Power Adaptor 100-240 VAC

| Technical specifications | | |
|--------------------------|----------------------------------|-------------|
| Disposable items: | | Part Number |
| Syringe | 100 pcs, one mL volume | # 860322 |
| PTFE tubing 1.5 /0.2 mm | 100 pcs, L=250 mm | # 860315 |
| PTFE tubing 1.5 /0.5 mm | 100 pcs, L=250 mm | # 860316 |
| PTFE tubing 1.5 /0.9 mm | 100 pcs, L=250 mm | # 860317 |
| Dispensing tip 0.2 mm | 50 pcs, LILAC | # 860323 |
| Dispensing tip 0.5 mm | 50 pcs, RED | # 860324 |
| Dispensing tip 0.9 mm | 50 pcs, PINK | # 860325 |
| | | |
| Preset droplet volumes | At 2, 4 and 8 µL | |
| Programmable volumes | Three userdefined (0,1 .. 20 µL) | |
| Programmable pump cycles | Three userdefined (0,1 .. 20 µL) | |
| Top-Up function | Yes | |
| | | |
| General specifications | | |
| Power supply | 100-240VAC or 12VDC | |
| Power consumption | 2 W | |
| Dimensions (LxWxH) | 160 x 55 x 55 mm | |
| Weight (incl syringe) | 500 grams | |

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