

## Tablet Friability Test Instrument - Type PTF 10E/ER and PTF 20E/ER



The **PTF E** and **PTF ER**, single or double-drum, fixed or variable speed, Tablet Friability Test instruments, are manufactured in compliance to the USP <1216>, EP <2.9.7> and other Pharmacopoeias. Both versions are available as single or dual drum instruments.

One of the testing criteria of mechanical strength of tablets and cores is Friability and Abrasion testing. During the process of coating, transportation, packing etc. the tablet will loose some weight. To measure the weight loss the samples are counted and weighed. Thereafter the friability test is performed following the individual monographs of the relevant Pharmacopoeia. When finished, the samples have to be de-dusted and weighed again. Actually the difference between the weight before and after the test is determined as friability; which usually should not exceed 1%. Tablets of a diameter more than 13 mm are tested while the instrument is raised on one side by about 10%.



The PTF E Instruments with fixed speed of 25 drum rotations per minute are manufactured with either one (**10E**) or two (**20E**) drums, both Friability and (optionally) Abrasion drums are available. The PTF ER Instruments with variable speed between 20 and 70 rpm are also available with either one (**10ER**) or two (**20ER**) drums.

The standard supply scope includes the Friability (or Roche) drums, but the use of Abrasion drums is also possible. The standard Friability drum causes the samples to roll and fall during the test while the Abrasion drum continuously stresses the sample by contact with lamellas.

PTF 10E/ER and PTF 20E/ER Tablet Friability Test instrument for use with 1 or 2 drums. A silent DC geared motor rotates the drums at a fixed speed of 25 rpm (PTF E) or variable speed (PTF ER). The actual drum is made from Plexiglas (Perspex) and is separated into two parts, the drum body and a removable cover, which opens to fill, discharge and clean the

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drum from the inside when required. The instrument itself is made from high quality stainless steel which fully meets the current GLP requirements. An anti-static coated Friability drum is available as an option.

### ***Principle of Operation..***

Clean the samples from any dust prior to the test. Weigh the samples and introduce them into any drum of the instrument via the filling hole. Program the test information, such as speed, time etc. and start the run. When the test is finished the drum revolution stops and the samples are automatically discharged into individual collectors. De-dust the samples using a brush and weigh again. The maximum mean weight loss from 3 consequent tests should not exceed 1%.

### Featuring:

- 1 or 2 Friability Drums made from Plexiglas (optional incl. antistatic coating), in compliance with the USP, EP and DAB pharmacopoeia
- LCD Display informing of adjusted rotation speed and operating time (or number or revolutions)
- PTF 10/20E = fixed drum rotation speed, 25 rpm  $\pm$  1 rpm
- PTF 10/20ER = variable drum speed, 20 - 70 rpm  $\pm$  1 rpm (>30 rpm  $\pm$  2 rpm)
- Programmable number of drum revolutions or rotating time - requires Set-up procedure
- Instrument housing made from stainless steel to meet GLP requirements
- IQ/OQ Documentation included

### **Options:**

- Friability Drum incl. antistatic coating
- Tablet Abrasion drum
- 10° Instrument Stand
- Qualification Equipment



### Technical Data

Drum rotating speed PTF 10/20E:	fixed to 25 rpm $\pm$ 1 rpm
Drum rotating speed PTF 10/20ER:	variable 20 - 70 rpm (20-30 rpm $\pm$ 1 rpm, >30 $\pm$ 2 rpm)
Number of Drums included:	PTF 10E/ER - 1 Friability Drum PTF 20E/ER - 2 Friability Drums
Enter total testing time:	1 - 9999 seconds
or enter no. of revolutions:	1 - 9999 rev.

### Weights and Dimensions

Net weight:	11/13 kg
Gross weight:	17/20 kg
Packaging:	590 mm x 590 mm x 590 mm