(800) 628-8139 or (508) 946-6200
brookfieldengineering.com

PFT Powder Flow Tester

Affordable Testing for Powder Characterization

The PFT Powder Flow Tester brings quick and easy analysis of powder flow behavior in industrial processing equipment. Evaluate powder discharge from storage containers. Use as QC check for incoming materials. Rapidly characterize new formulations for flowability and adjust composition to match flow behavior of established products.

Developed in association with
The Wolfson Centre
for Bulk Solids Handling Technology
at the University of Greenwich, England.

Choice of Test Options:
- Flow Function
- Time Consolidated Test with Flow Function
- Wall Friction
- Bulk Density

Choice of Flow Function Tests:
- Demo (8 minutes)
- Standard (25 minutes)
- Time Consolidation (user-defined)

Real Time Clock Displays:
- Test Step
- Remaining Time to Completion

Shearing Algorithm Captures:
- Peak Stress Value
- Subsequent Stable Stress Value
- Recognizes “Slip Stick” Materials

Data Output:
- Flow Index for Powder Flowability
- Arching Dimension
- Rat-hole Diameter
- Hopper Half Angle
- Gravity Chute Angle (Wall Friction Angle)
- Bulk Density Curve

Compact design with small footprint
- Tester fits conveniently on workbench
  Depth: 15 inches / 38cm
  Width: 14 inches / 36cm
  Height: 27 inches / 69cm

What’s Included?

- Instrument
- Powder Flow Pro Software

What else is needed?

Choose one or both:
- Standard Volume Accessory Kit
  230cc Trough & 33cc Vane Lid
- Small Volume Accessory Kit
  38cc Trough & 5cc Vane Lid

Each of the above include:
- Wall Friction Lid
  304 s/s simulated 2B finish
- Outer Catch Tray
- Inner Catch Tray w/ Scraper Tool
- Powder Scoop
- Cleaning Brush

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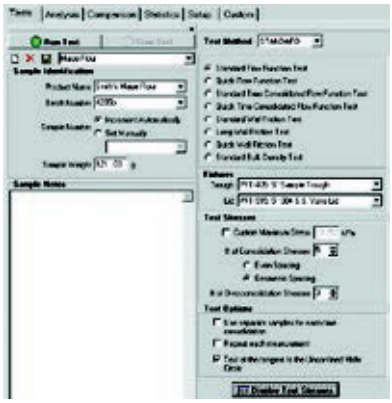
Repeatable Reliable Accurate

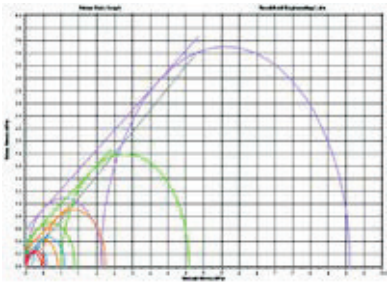
Included

Powder Flow Pro Software

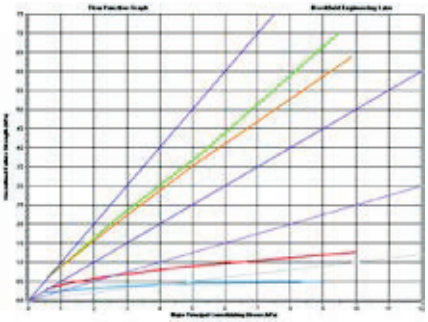
Operation and control of the Powder Flow Tester is accomplished with Powder Flow Pro Software.



Main screen provides choice of basic tests:
- Flow Function
- Wall Friction
- Time Consolidated Flow Function
- Bulk Density



Stress data output screen captures “normal stress” and “shear stress” values and plots data in graphical format (calculates Mohr Circle Failure Loci).



Flow Function test produces graphs of powder flow behavior which show:
Unconfined Failure Strength vs. Major Principal Consolidating Stress
Arching Dimension vs. Principal Consolidation Stress
Rat-hole Diameter vs. Powder Fill Level
Arching Dimension vs. Hopper Half Angle

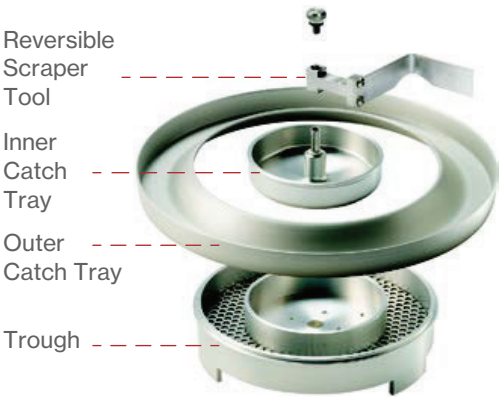
Optional Accessories

- Wall Friction Lids in Mild Steel 22-28RA, Tivar 88 or special order
- Temperature Probe
- Humidity Sensor
- Sieve Kit Standard or Small Volume
- Carrying Case for easy transport
- Sand Castle Demonstration Kit
- Powder Flow Demonstration Kit

Small Volume Vane Lid
.795-13.252 kPa
Standard Volume Vane Lid
.289-4.819 kPa

Close-up View of Vane Lid used for Flow Function Test

Close-up View of Wall Friction Lid for Wall Friction Test and Density Test



PFT Powder Flow Tester Specifications

Load for Vertical Axis Compression:	7 kg – Accuracy ±0.6% FSR
Axial Speeds:	0.1mm/second up to 5mm/second
Distance:	Accuracy ±0.3mm
Torque:	±7.0 N•m – Accuracy ±1.2% FSR
Trough Rotational Speeds:	1 revolution/hour (RPH) up to 5 RPH
Temperature Sensing:	-20°C to 120°C*
Humidity Sensing:	10% to 95% RH ±5%†
Dimensions (wxdxh):	(cm) 36.2 x 39.7 x 67.6 (in) 141/4 x 155/8 x 265/8
Weight:	34 kg (75 lb)

* Requires Part No. DVP-94Y

† Requires Part No. PFT-607Y

Minimum Computer Specifications for Powder Flow Pro Software

2GHz processor with 1 GB of RAM and 30 MB hard drive space available
1024x768 video resolution with 128 MB of graphics memory
Windows 7, Windows 10/11 (32 and 64 bit) with one USB or RS-232 port

Repeatable Reliable Accurate