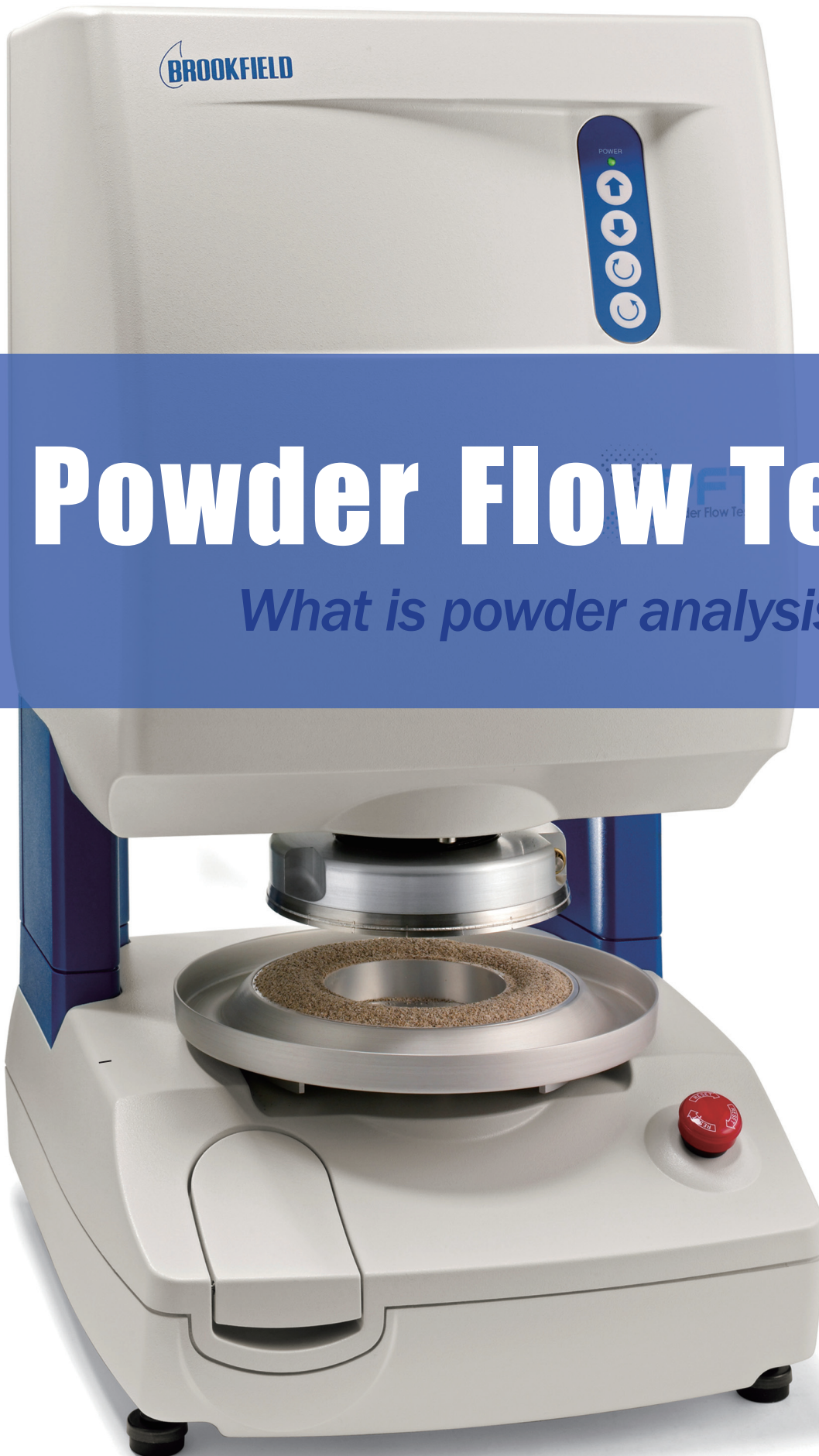




Powder Flow Tester

What is powder analysis?

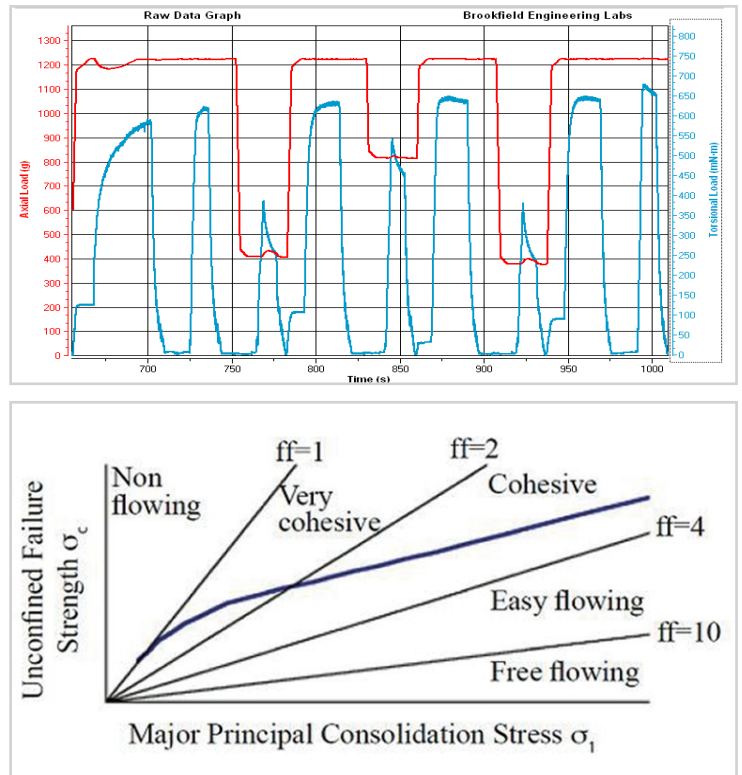
Developed in association with
The Wolfson Centre
for Bulk Solids Handling Technology
at the University of
Greenwich, England.

Powder Flow Tester

AMETEK Brookfield 사의 Powder Flow Tester는 물성 평가 분야에서 50년 이상의 오랜 경험을 바탕으로 다양한 분체류의 유동 능력을 정확하고 재현성 있게 측정 할 수 있는 장비입니다. 분체가 가지고 있는 고유 물성치와 환경적인 조건에 따라 달라지는 분체 유동 능력을 파악하여, 제품 개발, 생산성의 효율 증대, 제품 관리 등에 적용할 수 있습니다.



| Measure the yield Strength of bulk powder |



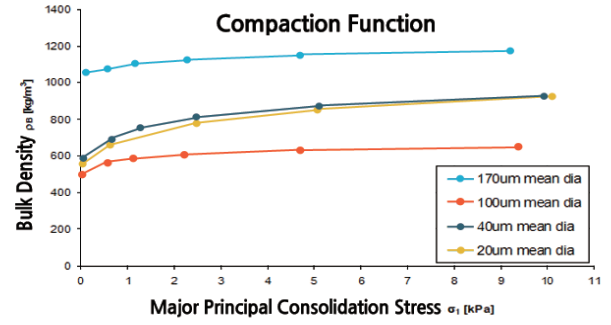
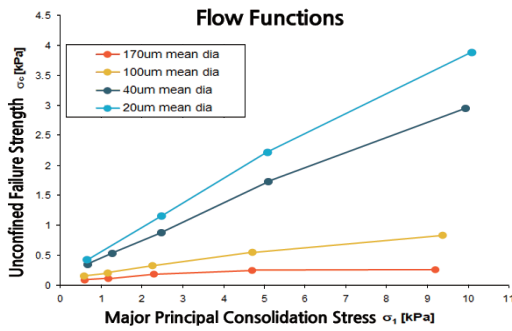
분체에 일정한 외력을 가하여, 수직응력과 전단응력을 측정합니다. 이 응집강도는 분체가 가지고 있는 물성치 등에 따라 다른 힘의 분포를 나타냅니다.

평가항목

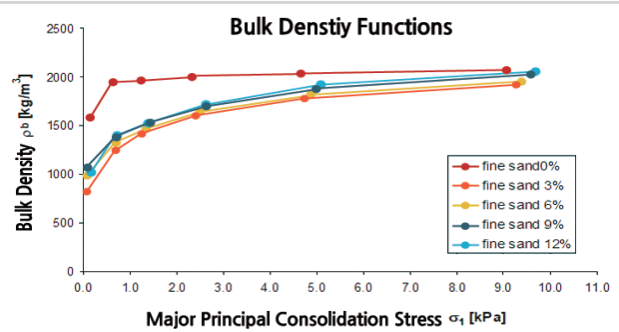
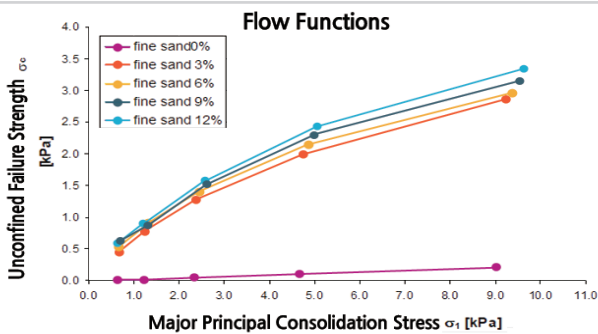


- 유동성 (Flowability)
- 유동지수 (Flow index)
- 내부마찰각 (Internal friction angle)
- 외부마찰각 (Wall friction angle)
- 안식각 (Angle of repose)
- 응집강도 (Cohesive strength)
- 분체 caking 평가 (Time Consolidation Test)
- 겉보기(부피)밀도 (Bulk density)
- 압축지수/률 (Compressibility Index/Ratio)
- Hopper Design

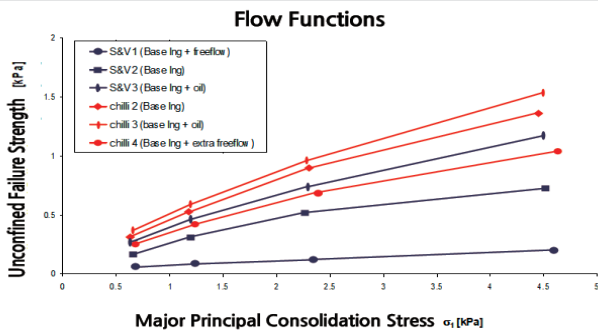
응용사례 ① 입도 분포, 입자 크기에 따른 분체 유동성 및 밀도 평가



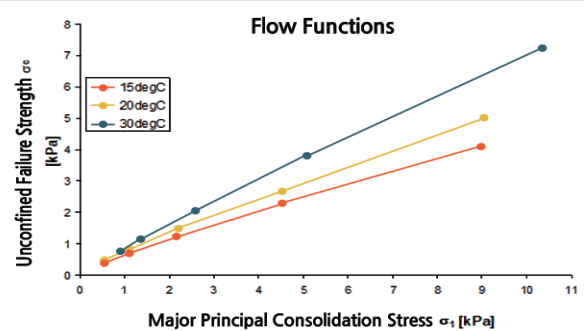
응용사례 ② 수분함량에 따른 분체 유동성 및 밀도 평가



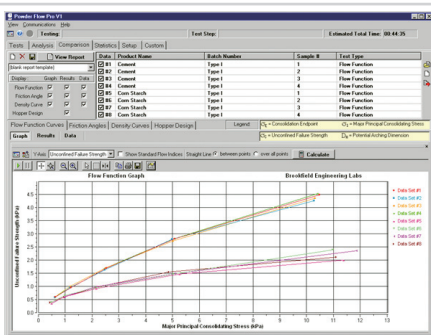
응용사례 ③ 유동첨가제 함량에 따른 분체 유동성 평가



응용사례 ④ 온도에 따른 분체 유동성 평가



최대 8개의 샘플의 비교 분석 가능



Statistical Report 제공

Statistical Report

Brookfield Engineering Labs, Inc.

Sample Description	Batch Number	Sample #	Test Type	Results	Critical Arching Stress	Critical Arching Internal Angle	Critical Arching Density
1 Olive Seed	101	11	Time Consolidated Flow Function	0.011	0.100	40.3	1576.4
2 Olive Seed	101	20	Time Consolidated Flow Function	0.012	0.180	40.4	1506.9
3 Olive Seed	101	12	Time Consolidated Flow Function	0.100	4.500	81.0	1241.1
4 Olive Seed	101	11	Flow Function	0.105	6.222	81.6	1200.3
5 Olive Seed	101	10	Time Consolidated Flow Function	0.215	4.000	78.7	1019.4
Minimum				0.011	0.100	40.3	1576.4
Maximum				0.215	4.500	81.0	1241.1
Average				0.132	2.450	65.1	1040.9
Standard Deviation				0.110	2.100	21.3	102.8

PFT POWDER FLOW TESTER SPECIFICATIONS

Load for Vertical Axis Compression:	7 kg — Accuracy $\pm 0.6\%$ FSR	
Axial Speeds:	0.1mm/second up to 5mm/second	
Distance:	Accuracy $\pm 0.3\text{mm}$	
Torque:	$\pm 7.0 \text{ N}\cdot\text{m}$ — Accuracy $\pm 1.2\%$ 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 $\pm 5\%^\dagger$	
Dimensions (wxdxh):	(cm) 36.2 x 39.7 x 67.6	(in) 14 $\frac{1}{4}$ x 15 $\frac{5}{8}$ x 26 $\frac{5}{8}$
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 XP, Vista or Windows 7 (32 and 64 bit) with one USB or RS-232 port

APPLICATIONS

Adhesives	Equipment Manufacturers	Sugar
Beverages	Silos / Bins / Hoppers	Gunpowder/Ammunition
Cocoa	Feeders	Healthcare Products
Milk Powder	Energy	Tablets
Ceramics	Biomass	Inks / Toners
Cosmetics	Coal	Paints / Coatings / Pigments
Chemicals	Fluxes	Minerals
Construction	Food	Personal Care Products
Cement	Biscuits / Cookies / Crackers	Talcum Powder
Fly Ash	Cereal	Pharmaceuticals
Gypsum	Chocolate / Cocoa	Starch
Hydrated Lime	Flavorings / Seasonings	
Dairy / Cheese	Flour	
Detergents	Spices	

OPTIONAL ACCESSORIES

- Temperature Probe
- Humidity Sensor
- Wall Friction Lid: mild steel or Tivar 88



Inner Catch Tray, Outer Catch Tray



Wall Friction Lid



Vane Lid



화신기계상사

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