



创新

产品

应用



particle under control.

Technologie-
Orientierte
Partikel-,
Analysen- und
Sensortechnik



产品

Topas产品不仅仅是制造过程的输出，先进的技术和设计、专业的技术人才以及高素质的公司员工的均衡完美结合造就了Topas产品的高品质保证。Topas产品品种繁多，包括标准设备、定做复杂系统，如测试台等。

Products

Topas products are more than just the output of a manufacturing process. A well-balanced mixture of advanced technology, design and technical expertise as well as our highly qualified staff ensure the high quality of Topas products. The wide range of Topas products includes both standard devices and complex tailor-made systems such as test stands.

创新

Topas成功的关键因素是他们的产品通过创新获得新的发展以及不断的进步，这个理念的贯彻至今创造了26个专利和注册商标。

Innovations

A key part of Topas' success is the new development and continuous improvement of their products through innovations. Implementing this philosophy has so far resulted in 26 patents and registered designs.

应用

在颗粒技术领域，TOPAS产品有着有趣的广泛应用。世界范围内来说，这些得到确认的产品已经长期应用于气溶胶技术的基础科学的研究以及过滤器的发展研究。

Applications

There is a wide range of interesting applications for Topas products in the field of particle technology. Worldwide, these well established products have been used for basic scientific research in the field of aerosol technology and filter development for a long period of time.

纪事 **History**

- 1991** 11月公司成立
November Company founded in Dresden, Germany
- 1992** 联邦教育和科技部拨款支持高新技术产业
Federal Ministry of Research awards a grant to support highly innovative enterprises
- 1993** 凝聚式气溶胶发生器系列SLG获得设计奖项
Design Award for the Condensation Aerosol Generator series SLG
- 1994** 凝聚式气溶胶发生器系列SLG获得创新奖项
Innovation Award for the Condensation Aerosol Generator series SLG
- 1995** 成功引入洁净室/空间认证的相关产品，首次推出吸附滤料的过滤器测试台
Successful introduction of products related to clean room / environment validation, first filter test rig for adsorptive filter materials
- 1997** 新建生产线，粒子过滤器分离效率测试台
Movement into new facilities, Filter test rigs for fractional efficiencies of particle filters
- 1998** 玻璃生产车间的建立
Installation of glass blower workshop
- 1999** 过程设备的发展，
 通过DIN EN ISO 9001认证
*Development of process instruments,
 Certification according to DIN EN ISO 9001*
- 2001** 油雾分离器测试台，PSM 165滤料孔径测定仪
Filter Test Rig for oil mist separators, Pore Size Meter PSM 165
- 2002** Topas GmbH十周年，14个雇员，发展自动过滤器扫描测试系统，
 泄漏试验测试台，静电中和器，ASHRAE尘发生器
10th anniversary of Topas GmbH; 14 employees; development of an Automated Filter Scanning Test System, Test Rig for Leak Test, Electrostatic Aerosol Neutralizer, ASHRAE Dust Dispenser
- 2004** 粉尘发生器SAG 420
Dust Dispenser SAG 420
- 2007** 光学过程粒子传感器PMP获得2007萨克森创新奖项，
 Topas GmbH获得萨克森自由邦嘉奖
Topas GmbH was awarded an appreciation of the Free State of Saxony within the competition "Innovation Award of Saxony 2007" for the optical process particle sensor PMP
- 2008** 新发展的超细粒子检测设备系列产品准备就绪—EU LIFE-Project，
 25个雇员
Series-production readiness of the newly developed measuring instrument for ultrafine particulate matter within the EU LIFE-Project, 25 employees
- 2009** 扩大并迁移总部，新项目（气溶胶稀释器，滤料测试台）
Enlargement and relocation of the headquarters, new projects (aerosol dilution, test rig for filter media)



ISO 9001 certified
 12 100 11908 TMS



气溶胶发生器



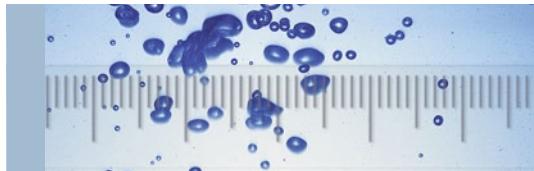
多分散雾化气溶胶发生器
单分散雾化气溶胶发生器
粉尘气溶胶发生器

气溶胶辅助设备



固定稀释比例的气溶胶稀释系统
稀释比例可调的气溶胶稀释系统
高压气体管线采样单元
采样转换单元
气溶胶中和器
气溶胶扩散干燥器

颗粒测量设备



气体中颗粒测量
液体中颗粒测量
塑性熔融体中颗粒测量

洁净室测量设备

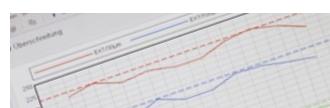


气溶胶发生器
气溶胶稀释和扩散
矩形采样探头
颗粒测定

过滤器和滤料测试



过滤器测试台
滤料孔径测定仪



软件解决方案

Aerosol Generation**pages**

*Aerosol generators for polydisperse droplet aerosols
Aerosol generators for monodisperse droplet aerosols
Aerosol generators for solid aerosols (dust disperser)*

6 - 11**Aerosol Accessories**

*Aerosol dilution systems with fixed dilution ratio
Aerosol dilution systems with adjustable dilution ratio
Sampling unit for pressure gas lines
Sample switching unit
Aerosol neutralizer
Diffusion dryer*

12 - 15**Particle Measurement**

*Particle measuring in gases
Particle measuring in fluids
Particle measuring in plastic melts*

16 - 17**Clean Room Equipment**

*Aerosol generation
Aerosol dilution and distribution
Rectangular shaped sampling probes
Particle measurement*

18 - 19**Filter and Filter Media Testing**

*Filter test rigs
Pore size meter*

20 - 22**Software Solutions****23**

气溶胶发生器

综述

- 产生特性已知的多分散测试气溶胶，符合VDI 3491/2083和FDA标准
- 粒径分布固定
- 浓度可通过初始压力和总流速调节，可持续高度稳定
- 高度重现性
- 确定粒子数浓度

General

- *Generation of polydisperse test aerosols with known properties according to VDI 3491 and 2083 as well as FDA guidelines*
- *Constant particle size distribution*
- *Concentration is adjusted by primary pressure and consequently the total flow rate, which results in very high stability of concentration*
- *High reproducibility*
- *Defined particle number concentration*



**ATM 210,
ATM 210/H**

- 置于增压容器中，提升到10bar
- *Aerosol generation into pressurised vessels up to 10 bar*



**ATM 220 with
Diffusion Dryer DDU 570**

- 简明设计
- 特别适用于实验室和含盐气溶胶
- 容易更换干燥剂（硅胶）
- 应用广泛
- *Simple and straightforward design*
- *Particularly suitable for laboratories and for salt aerosols*
- *Easy changing of the drying agent (Silica gel)*
- *Versatile*



应用

- 悬浮物过滤器的质量检验
- 层流箱的功能检验
- 洁净室的验收测量
- 测量设备的标定
- 流动可视化

Applications

- *Quality tests of filters for suspended matters*
- *Function tests of laminar flow boxes*
- *Acceptance measurements in clean rooms*
- *Calibration of measuring devices*
- *Flow visualisation*

**ATM 226**

- 内置压缩空气
 - 精简不锈钢框架
 - 通过整合电源适配器直接与交流电源相连
- *Internal generation of compressed air*
● *Compact stainless steel housing*
● *Connection directly to mains supply by integrated mains adapter*

**ATM 230**

- 系统由压缩空气驱动
 - 高浓度
 - 适用于发生示踪气溶胶
 - 移除挡板可以产生大颗粒
- *System operated with compressed air*
● *High concentration*
● *Suitable for generation of tracer particles*
● *Generation of larger particles by removing the baffle plate*

**ATM 241**

- 高浓度气溶胶输出
 - 喷嘴的可选性产生宽范围气溶胶浓度
 - 无间隔操作时间长
- *Very high aerosol output*
● *Broad range of concentration by selective choice of nozzles*
● *Very long operation periods*

气溶胶发生器

综述

- 多分散雾化气溶胶发生器
- 高浓度气溶胶输出

General

- *Generation of polydisperse droplet aerosols*
- *Very high aerosol output*

应用

- 分离装置测试
- 流动可视化

Applications

- *Testing of separators*
- *Flow Visualisation*



ATM 242

- 特殊开发用于产生示踪粒子
- 气溶胶体积流量和颗粒产生速率可调
- *Special development for generation of tracer particles*
- *Aerosol volume flow and particle production rate adjustable*

ATM 243

- 测试油雾分离器的理想仪器
- 气溶胶温度可调至130° C
- 很高的气溶胶颗粒浓度和颗粒质量流速
- *Ideal for testing of oil mist separators*
- *Adjustable aerosol temperature up to 130°C*
- *Very high aerosol particle concentration and particle mass flow*

LDG 244

- 产生大颗粒油滴 (50 – 100 μm)
- 方便大量配置油量
- *Generation of oil droplets with a very large diameter (50 - 100 μm)*
- *Very large and easy to dose oil quantities*



综述

- 产生粒径可调的单分散气溶胶
- 可迅速调节所需颗粒粒径
- 稳定产生数浓度较高的颗粒
- 专利技术

General

- Generation of monodisperse aerosols with adjustable particle size
- Very rapid adjustment of desired particle size
- High particle number concentration at high constancy
- Patented concept



SLG 250

- 单分散气溶胶
- 颗粒粒径可调
- Monodisperse aerosol
- Adjustable particle size range

应用

- 颗粒测量设备的标定
- 基本气溶胶研究
- 分离效率的测定
- 吸入研究
- 产生示踪气溶胶

Applications

- Calibration of particle measuring instruments
- Aerosol research
- Determination of separation efficiencies
- Inhalation studies
- Generation of Tracer particles



SLG 270

- 单分散气溶胶
- 颗粒粒径可调
- 通过旁路过滤单元的调节可获得大颗粒气溶胶
- Monodisperse aerosol
- Adjustable particle size
- Generation of large particles possible by patented screen-bypass-unit

气溶胶发生器

综述

- 通过把粉末扩散到气体或空气流中形成悬浮颗粒物产生气溶胶
- 连续工作原理
- 持续定量给料，高精度喂料控制
- 扩散喷嘴的新型结构陶瓷设计，具有较长的操作寿命
- 设备操作方便
- 使用灵活，操作方便

General

- Generation of aerosols by feeding a powder into a gas or air stream to form a particulate suspension
- Continuous working principle
- Highly accurate feed control with constant dosing of the powder
- Novel structural ceramics design of the dispersing nozzle for long operational life
- Easy device control
- Flexible in use with ease of operation



SAG 410/U

- 方便调节给料范围
- 新型专利给料机制
- 可添加少量样品
- 适合于煤烟和氧化铝的给料和扩散
- Easy to switch dosing range
- New patented dosing mechanism
- Possible to feed very low quantities of sample
- Suitable for dosing and dispersing soot and aluminium oxide



SAG 410, SAG 410/L

- 连续工作原理
- 可在较宽范围内持续稳定的供料
- 给料单元可替换
- 设备控制方便
- Continuous working principle
- Wide constant dosing range over long operational periods
- Exchangeable dosing units
- Easy device control



SAG 410/H

- SAG 410的改装模型，适用于相当高的给料容积
- Modified model of SAG 410 for substantially higher dosing volumes



应用

- 应用在要求气体或空气中存在悬浮颗粒的方面（如：过滤器的分离效率）
- 确定过滤器的容尘量
- 流动可视化
- 涂层和混合过程分析

Applications

- Applications requiring solid particulate suspension in air or gas (e.g. separation efficiency of filters)
- Defined dust loading of filters
- Flow visualisation
- Analysis of coating and mixing processes

**SAG 420**

- 适用于容尘量测试，符合ISO 5011
- 创新型的给料和驱动技术
- 可选电子天平配件以达到精确质量流量控制
- *Particularly suitable for dust loading capacity tests according to ISO 5011*
- *Innovative dosing and drive technology*
- *Accurate mass flow control with weigh scale option*

SAG 440

- 符合EN 779和ASHRAE 52.2标准
- 步进马达技术的使用，获得高精度给料速度
- 适于使用含有特定比例纤维物质的粉尘
- 持续操作
- *Device in accordance with standards EN 779 and ASHRAE 52.2*
- *Highly accurate dosing with use of stepping motor technology*
- *Suitable for use with dusts containing linters*
- *Continuous operation*

气溶胶附属装置

综述

- 气溶胶稀释恒定且具有可重现性
- 通过显示设备持续监测稀释比
- 用户可自定义体积流量或者稀释比
- 寿命长、可靠性高

General

- Constant and reproducible dilution of aerosols
- Permanent monitoring of the dilution ratio by means of a display facility
- Adaptable to customized volume flows or dilution ratios
- Long life and highly reliability



DIL 550

- 固定稀释比例和与之相关的体积流量
- 适合多种模式
- 设备连用可扩展稀释比例
- 无需辅助空气, 不产生废气
- *Fixed dilution ratio and corresponding volume flow*
- *Various model versions*
- *Extended dilution ratios by cascading several devices*
- *No auxiliary air flow and no exhaust air*

DDS 560

- 稀释比例可调
- 数据可视化, 显示可调节稀释比例和当前体积流量
- 用于粒子计数器, 体积流量控制在 0.3–5 l/min
- *Adjustable dilution ratio*
- *Screen display for data showing adjusted dilution ratio and current volume flow*
- *For use with Particle counters with a volume flow of 0.3 to 5 l/min*



应用

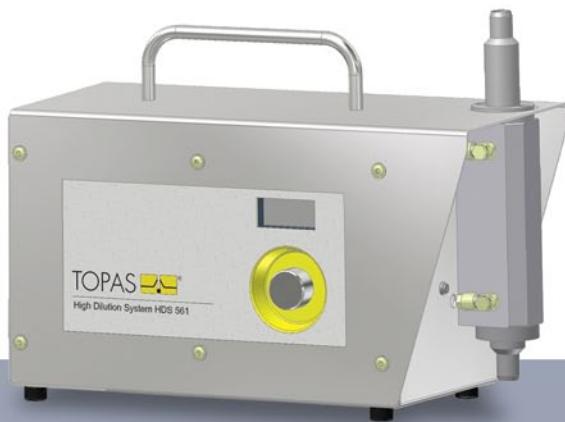
- 高浓度气溶胶测量
- 过滤器分离效率的测定
- 基本气溶胶研究
- 洁净室和安全橱柜的验收控制

Applications

- Measurement of highly concentrated aerosols
- Determination of separation efficiency of filters
- Aerosol research
- Acceptance control of clean rooms and safety cabinets

**DIL 554**

- 固定稀释比例1:100
- 适合多种模式：用于粒子计数器，体积流量为1cf/min或者2cf/min
- 配有电池，便于移动操作
- 压力损失较低
- 具有不锈钢外壳，推荐洁净室使用
- *Fixed dilution ratio 1:100*
- *Model versions: for volume flow of particle counter 1 cf/min or 2 cf/min*
- *Mobile use with battery operation*
- *Low pressure loss*
- *Recommended for use in clean rooms because of stainless steel housing*

**HDS 561**

- 单级高稀释比（可高达1:100000）
- 动态稀释，压力损失低
- 推荐用不同体积流量（可达到100l/min）
- *Very high single-stage dilution (up to 1:100 000)*
- *Very low pressure loss because of active dilution*
- *Recommended for different volume flows (up to 100 l/min)*

综述

- 采样和样品条件控制设备
(稀释、干燥和中和测试粒子)

General

- Equipment for sampling and sample conditioning (dilution, drying and neutralisation of test aerosols)*



DDU 570

- 扩散干燥器，用于干燥雾化气溶胶
 - 颗粒几近无损失
- *Diffusion dryer for drying of aqueous aerosols*
- *Very low particle loss*

EAN 581

- 静电气溶胶中和器，离子产生可控
 - 正、负离子源独立调节
 - 无放射性源
- *Electrostatic aerosol neutralisation with controllable generation of ions*
- *Separate adjustment of both positive and negative source of ions*
- *No radioactive source*



应用

- 过滤效率测定
- 高浓度气溶胶测量
- 基本气溶胶研究...

Applications

- *Determination of filtration efficiency*
- *Measurement of highly concentrated aerosols*
- *Aerosol research*



SYS 520

- 在不同采样头之间进行转接的设备
- 清洗程序防止样品污染
- 软管压缩阀可靠性高

● *Instrument for switching between different sampling points*

● *Purging routine prevents sample falsification*

● *High reliability with hose compression valves*



SYS 525

- 用于含压气路颗粒测量过程中的采样单元 (可达到8bar)

● 等速采样

● 设备可显示监测结果，采样速度可调

● *Sampling unit for particle measurements at pressure gas lines (up to 8 bar)*

● *Isokinetic and isoaxial sampling*

● *Device display for monitoring and re-adjusting of isokinetics*

综述

- 测定颗粒粒径分布和数浓度
- 光学测量方法
- 最优化光学解决方案
- Topas 软件用户友好

General

- *Determination of particle size distribution and number concentration*
- *Optical measurement method*
- *Optimized optical solutions*
- *User-friendly Topas software*



LAP 321

- 气溶胶激光粒径谱仪
 - 高分辨率
 - 高分类精度
 - 测定浓度范围较宽
 - 简洁设计
- *Particle size spectrometer for aerosols*
 - *High resolution*
 - *High classification accuracy*
 - *Wide concentration measuring range*
 - *Compact design*



FAS 362

- 液体粒子计数器
 - 灵活样品喂料单元
 - 宽浓度范围
 - 测量结果与粒子材料几乎无关
- *Particle counter for fluids*
 - *Flexible sample feed unit*
 - *Wide concentration measuring range*
 - *Measuring results almost independent from particle material*



应用

- 颗粒粒径测量
- 环境和药物气溶胶测量
- 过滤器和分离器的分离效率测量
- 质量控制过程监控

Applications

- Particle size measurement
- Measurement of environmental and pharmaceutical aerosols
- Fractional efficiency measurement for filters and separators
- Monitoring of processes for quality control

**PAM 510**

- 现场测定中过程气溶胶监测
- 同时测定粒子平均粒径和数浓度
- 宽浓度范围
- Process Aerosol Monitor for *in situ* measurements
- Simultaneous determination of mean particle size and particle concentration
- Wide concentration range

PMP 694

- 在流动透明塑料熔融体中，进行过程条件下内嵌或旁路颗粒测量
- 信号阈可选
- 为挤压机和塑料机械中监测材料纯度而设计
- In-line or by-pass particle measurements under process conditions in flowing transparent plastic melts
- Selectable signal thresholds
- Designed for material purity monitoring in extruders and plastics machines

PAP 610

- 用于原位液漏气溶胶浓度测量的过程气溶胶光度计
- 利用两个波段来获取额外粒径信息
- 无浓缩效果和无镜面污染
- Process-Aerosol Photometer for *in situ* concentration measurement of blow-by aerosols
- Additional particle size information using two measurement wavelengths
- No condensation effects and no window contamination

综述

- 用于洁净室设备和认证的测试、验收和监测设备
- 测试气溶胶的产生、稀释和分布，同时采样并进行粒径测量

General

- *Instruments for testing, acceptance control, monitoring of clean room facilities and clean room validation*
- *Generation, dilution and distribution of test aerosols, also sampling and particle size measurement*



SYS 529

- 符合EN ISO 14644-3标准的采样探头
 - 在过滤器部件边缘精细扫描
 - 快速扫描并精确采样
-
- *Sampling probe design according to EN ISO 14644-3*
 - *Precise scanning at the edges of a filter element*
 - *Accurate sampling and short scanning times*



ATM 226

- 产生高度稳定分布的多分散气溶胶，且颗粒粒径接近最具穿透力颗粒半径 MPPS，用于悬浮物过滤器测试
 - 颗粒产生速率可调
-
- *Aerosol Generator of high stability polydisperse aerosols in the size range of the most penetrating particle size (MPPS) for suspended matter filters*
 - *Adjustable particle production rate*



应用

- 用于不同工业上认证和验收控制：
药物、半导体、医学、气溶胶工业和食品工业

Applications

- Validation and acceptance control for use in various industries, including:
*Pharmaceutical,
semiconductor,
medical,
the aerospace industry and
food industry*

**DIL 554**

- 气溶胶稀释系统
- 在28.3 l/min和56.6 l/min时能够维持稳定的，
经过认证的稀释比1:100
- 对样品流速进行持续的光学监测

- Aerosol dilution system
- Steady, certified dilution ratio of 1:100 at 28.3 l/min and 56.6 l/min respectively*
- Permanent optical monitoring of the sample flow rate*

ADD 536

- 符合SWKI标准 99-3和DIN 1946-4标准的气溶胶分布和稀释系统
- 持续监测源数据
- 稀释比可调以适合不同粒子计数器的特性

- Aerosol distribution and dilution systems according to standards SWKI guideline 99-3 and DIN 1946-4*
- Permanent monitoring of the source values (particles/time)*
- Adjustable dilution ratios to suit the specification of the particle counter*

LAP 340

- 粒子计数器，测量范围在0.3–10 μm
- 粒子浓度可达到
980,000 Particles/ft³ (35 Particles/cm³)
- 连接环境传感器和数据传输系统

- Particle counter with measuring range 0.3 to 10 μm*
- Particle concentration up to 980,000 Particles/ft³ (35 Particles/cm³)*
- Connection for climate sensors and data transfer*

综述

General

- 过滤器部件测试包括:
 - 压差特征
 - 容尘能力
 - 分级效率

- 使用计算机自动控制测试过程，且Topas控制软件用户友好

**ABP 115**

- 测试空气滤清器入口和发动机进气管过滤器，符合ISO 5011标准
- 质量流量控制粉尘配料
- 自动化水平较高

- *Tests of inlet air cleaners and motor intake filters according to ISO 5011*
- *Mass flow control of dust dosing*
- *High level of automation*

ALF 114

- 用于全面通风粒子空气过滤器测试，符合EN 779和ASHRAE 52.2标准
- 通用过滤器支撑系统，适用于袋式和盒式过滤器、滤筒以及平面媒介
- 粗粉尘过滤器和细粒子过滤器的分级

- *Tests of particulate air filters for general ventilation according to EN 779 and ASHRAE 52.2*
- *Universal filter holding system for pocket and cassette filters, filter cartridges and flat media*
- *Classifying of coarse dust filters and fine particle filters*

AFS 150

- 悬浮物过滤器测试，符合EN 1822-4（过滤器扫描）和EN 1822-5（整体分级效率）标准
- HEPA和ULPA过滤器分级
- 通用过滤器支撑系统，适用于不用尺寸的过滤器，可达到1220 x 1830 mm

- *Tests of filters for suspended matter according to EN 1822-4 (Filter scan) and -5 (integral filtration efficiency)*
- *Classifying of HEPA and ULPA filters*
- *Universal filter holding system for varying filter dimensions up to 1220 x 1830 mm*



应用

- 用于过滤器质量测试和分类
- 用于过滤器部件研究项目

Applications

- *Quality testing and classification of filter*
- *Research projects for filter elements*

**SPT 140**

- 测试油雾分离器的压力降、分级效率以及压力控制特征
- 曲轴箱通风系统最优化
- 系统温度控制
- *Tests of oil mist separators regarding pressure drop, filtration efficiency and pressure control characteristics*
- *For optimisation of crankcase ventilation systems*
- *System temperature control*

**PAF 11x**

- 柜式空气过滤器测试系统，符合DIN 71460和ISO 11155，可分离粉尘和气态污染物
- 模块化结构
- 平面过滤材料测试成为可能
- *Tests of cabin air filters according to DIN 71460 (ISO 11155) for separation of dust and gaseous elements*
- *Modular construction*
- *Tests of planar filter materials possible*



综述

- 滤料的特征

General

- *Characterization of filter media*

应用

- 滤料的设计和发展
- 质量检验

Applications

- *Development and design of filter media*
- *Quality testing*

**AFC 13x****MBP 116****PSM 165**

- 过滤器滤料分析，包括压差特征、容尘量以及平均效率
- 可在任意面流速测试
- *Analysis of filter media detailing differential pressure characteristics, arrestance and dust holding capacity*
- *Testing at arbitrary face velocities*

- 容尘量测试台，用于平板滤料质量测试
- 测试有效性、压差的可靠性测试、效率以及容尘能力
- 简单坚固设计，减少人工操作
- *Dust loading test rig for quality testing of flat sheet filter media*
- *Efficient, reliable testing of differential pressure, arrestance and dust holding capacity*
- *Simple robust design, cost-saving manual operation*

- 滤料结构特性测试，测量滤料孔径
- 测定最小冒泡压力、孔径分布、平均流孔径以及气体渗透率
- 可适用于不同尺寸和材料的样品
- *Pore size measurements for structural characterization of filter media*
- *Determination of bubble point, pore size distribution, mean flow pore size and gas-permeability*
- *Adapters for different sample dimensions and materials*

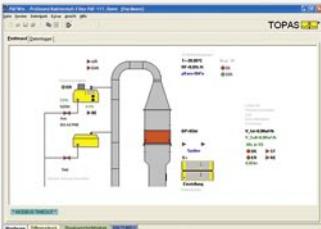
综述

- 通过人机界面可方便控制Topas设备和测试台
- 自动数据收集和评估
- 模块化设计
- 易于用户登录操作和测量结果评估
- 简单数据输出，用于存储数据的进一步分析过程
- 依照行业标准对结果进行在线自动评估和计算
- 三国语言可用：德语、英语、法语

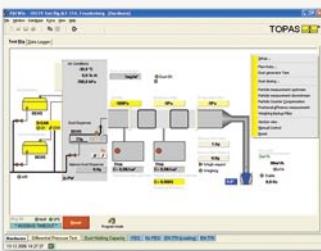
应用

- Convenient control of Topas devices and test rigs by man machine interface
- Automated data acquisition and evaluation
- Modular design
- Easy to use with customized logging and evaluation of measured results
- Simple data export for future processing of acquired data
- Automated evaluation, calculation of results in-line with industry standards
- Trilingual available: German, English and French

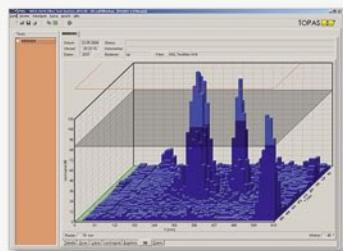
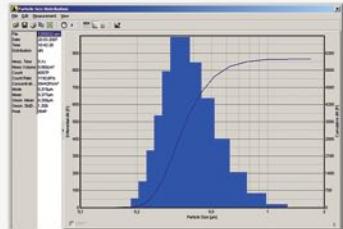
PAFWin



- 用于过滤器测试台控制和数据收集的软件
- 对于不同测试台和测试过程有相应的版本
- 根据各自的标准可自动进行用户自定义的计算和分析



- Complex control and data acquisition software for filter test rigs
- Several versions for different test rigs and test procedures
- Automated and customized calculations and analysis according to respective standards



进一步应用

- **PASWin**
根据各自的标准可自动进行用户自定义的计算和分析
- **PSMWin** 用于滤料孔径测定仪PSM中对孔径特性的测定
- **PMPWin** 用于聚合物熔融体颗粒传感器PMP中对塑性熔融体中颗粒的测量
- **USSWin** 用于自动US沉降速度计USS 791中对研磨剂颗粒粒径分布的测定
- **CREWin** 用于颗粒测量和数据评估，与洁净室标准一致

Further Applications

- **PASWin** for particle measurement in gases and liquids, e.g. by means of the Laser Aerosol Particle Size Instruments LAP or the Particle Counter for Liquids, FAS
- **PSMWin** for determination of pore size characteristics by means of the Pore Size Meter PSM
- **PMPWin** for particle measurement in plastic melts by means of the Polymer Melt Particle Sensor PMP
- **USSWin** for determination of the particle size distribution of abrasives with the Automated US-Sedimentometer USS 791
- **CREWin** for particle measurement and data evaluation in accordance with clean-room standards

References

3M Deutschland
3M United States
3M Korea

Argo-Hytox GmbH
Atlas Copco
ASAS Filter

BASF AG
Bayer AG
Bernard Dumas
Boehringer Ingelheim
Borealis Polyolefine GmbH
Bridgestone Corporation
BTU Cottbus
Bundesamt für Materialforschung und -prüfung

Camfil KG
Clarkson University
Clean & Science Co. Ltd.
Clean Diesel Ceramics GmbH
Clinix GmbH

Daimler AG
Dt. Forschungszentrum für Gesundheit und Umwelt
DMT GmbH & Co. KG
Donaldson Company Inc.
Drägerwerk AG & Co. KGaA
Dyson Manufacturing S/B

Eswegoo Vliesstoff GmbH
Evonik Degussa GmbH

Felix Schoeller Holding GmbH & Co. KG
FH Amberg
FH Berlin
Filtrauto
Forschungszentrum Jülich
Fraunhofer Gesellschaft
Freudenberg & Co. KG
Funcate, Brasilien

G.Bruss GmbH & Co. KG
GKD - Gebr. Kufferath AG
GlaxoSmithKline GmbH & Co. KG
GNS Automotive Co., Ltd.

Hanjin Co., Ltd.
Haver & Boecker OHG
Hawker France S.A.
Hengst GmbH & Co. KG
Herding GmbH
Hoffmann-La Roche Ltd
Hollingworth and Vose
HS-Luftfilterbau GmbH

Infineon Technologies AG
Institut für Luft- und Kältetechnik gGmbH
Internormen Technology GmbH
Inzi Controls
Irema Filter GmbH

Japan Tobacco Inc.
Japan Vilene Co. Ltd.
Junker Filter GmbH

Keller Lufttechnik GmbH und Co. KG
KITECH
Kolon Industries Korea
Korea Vilene Co. Ltd.

Leibniz Institut für Polymerforschung Dresden e.V.

Mahle GmbH
Mann+Hummel GmbH
Merck KGaA
Miele & Cie. KG
Mikropor A.S.
M+W Zander

Nifco Inc.
Norafin Industries GmbH

Parker Hannifin Corp
Paul Scherrer Institut
Philip Morris Research Laboratories GmbH
Philips
Physikalisch-Technische Bundesanstalt

Polytec Automotive GmbH & Co. KG
Rhodia
Riensch & Held GmbH & Co. KG
Rieter Automatik GmbH
Robert Bosch GmbH
RWTH Aachen

Sandler AG
Sartorius AG
Schweizer Bundesamt für Metrologie
Seung Chang Airtek Inc.
Siemens AG
Skan AG
SLG Prüf- und Zertifizierungs GmbH
Sofrance
STFI
SungJin Co., Ltd.

Testo AG
Thermo Fisher Scientific Inc.
Tianjin University
TSE Systems GmbH
TSI Incorporated
TU Berlin
TU Clausthal
TU Delft
TU Dortmund
TU Dresden
TU Kaiserslautern
TU München
TU Wien
TÜV Süd AG

Universität Stuttgart
Universität Bayreuth
Universität Erlangen-Nürnberg
Universität Karlsruhe
Universität Würzburg
University of Helsinki
University of Kuopio
University of Michigan

Vetter Pharma-Fertigung GmbH & Co. KG
Virginia Commonwealth University
Vorwerk & Co. KG
VTT Technical Research Centre of Finland

W.H. Mahl
Wacker Chemie AG
Wehrwissenschaftliches Institut für Schutztechnologien

Zarm - Universität Bremen

... and many more

