# **Global Network**

30K+ Clients





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# **Intelligent Testing Instruments For Paint Industry Chain**

Intelligent | Automatic | IoT

www.bevsinfo.com



# **Company Profile >>**



#### **Time of Establishment:**

January 2003



#### **Professional R&D and Manufacturing:**

Intelligent testing equipment and intelligent robotic testing and inspection system for paint and ink industry chain, new energy, new materials, biodegradation and other fields



#### **Industry Innovator and Leader:**

- ratents:100+
- ★ The first to use advanced touch screen technology for all electronic product controls
- ★ Manufacture, R&D of intelligent robotic testing and inspection system



# **Enterprise Strength:**

National high-tech enterprise

Specialization,refinement, characteristic and novelty
enterpriseof Guangdong Province
Innovative enterprise of Guangdong Province



#### Service Area:

Universities, research institutes, manufacturing industry and testing industry cluster



#### **Global Distributors:**

80+ by the end of 2022



#### **Global Customers:**

30,000+ by the end of 2022

# BEVS Industrial(Guangzhou) Co., Ltd



Make R&D more efficient, test more intelligent and data more connected



Let customers love products made in BEVS



Passion and innovation, continuous exploration



#### Dispersion

#### **Intelligent Mixer**

- 750W,
- 500 ~ 12000rpm,
- 300mm





Highlight

• 550W • 30 ~ 9000rpm

210mm

Manual

Vessel:1.5/3 L

**Laboratory Mixer** 

**Laboratory Mixer** 

550W,30 ~ 9000rpm,250mm Vessel:0.5/1.5 L



Laboratory Mixer

750W,60 ~ 6000rpm,280mm Vessel:0.5/1.5 L



BEVS 2501/1

**Laboratory Mixer** 

1.1KW, 60 ~ 5500rpm,330mm Vessel:3.5/10 L Auto



**Laboratory Mixer** 

1.5KW,60~6000rpm,400mm Vessel:5/10/20 L Auto

# **Density / Grinding**







**Auto Drawdown Master** 

With light source, compatible with scrapers and film applicators.Load, stroke, and speed can be adjusted



**Pressure Density Cup** 

Volume: 100ml Test pressure: 10bar Made of stainless steel

BEVS 2101 BEVS 2102

BEVS 1905

BEVS 1907

BEVS 1906

#### New

#### **Automated Particle Analyzer**

- Automatic drawdown
- Auto analysis of the particle size value
- Only 30s for a single measurement
- Able to determine the fineness of transparent liquid and metallic paints



**Specific Gravity Cup** 

Volume: 50/100/83.3 ml Accuracy: ±0.2%(15°C ~ 25°C)



Scraper

Size: 90×40×6 mm Material: stainless steel





Single Channel

Range: 10/15/25/50/100 µm Division: 1/1.5/2.5/5/10 μm Size: 175×65×13 mm



BEVS 1908

01

**Double Channel** Range: 15/25/50/100 μm

Division: 1.5/2.5/5/10 μm Size: 175×65×13 mm



**Triple Channel** Range: 25/50/100 μm Division: 2.5/5/10 μm

Size: 175×85×13 mm



Wide Single Channel

Range: 25/50/100 μm Division: 2.5/5/10 μm Size: 175×65×13 mm

#### **Viscosity**



Online Krebs Viscometer

Easy operation Units: KU、g、cP Range: 27~5274cP

Manual

Units: KU, g, cP

Range: 27~5274cP



**Intelligent Rotothinner** 

BEVS 1133

BEVS 1118

BEVS 1107



Auto up/down Units: cP



Range: 0.1~36000cP

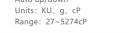


BEVS 1131



Intelligent Krebs Viscometer

Auto up/down





**Al Viscometer** • Range: 1~6,000,000cP

● Speed: 0.1~200RPM

● Repeatability: ±0.2%

• Storage: 1000 measured values

Accuracy: ±1%



#### ● Viscosity range: 0.1~10000cp

- Accuracy: ±1%
- Temperature range: RT~75 °C

BEVS 1138

- Rotation rate: 100~1500rpm
- Shear rate: 333~20000s<sup>-1</sup>

BEVS 1106 BEVS 1101 BEVS 1108



Afnor Cup

**Intelligent Krebs Viscometer** 

2: 2.5mm 6: 6mm 4: 4mm 8: 8mm



4: 4mm 6: 6mm



ISO Cup

3: 3mm 5: 5mm



Ford Cup

BEVS NK-2

BEVS 1701/3

1: 2.1mm 4: 4.1mm 2: 2.8mm 5: 5.8mm 3: 3.4mm



DIN Cup

- 2: 2mm 4: 4mm
- 6: 6mm

BEVS 1109

BEVS 1702



Zahn Cup 1: 1.92mm 4: 4.40mm

2: 2.70mm 5: 5.40mm 3: 3.85mm







4: 4mm

6: 6mm



Afnor Cup, ISO Cup,

Ford Cup, DIN cup.

#### **Thickness**

**Wet Film Gauge** 

1701/1 range: 20~350μm

1701/2 range: 25~2700μm

1706 range: 10~100μm

BEVS 1701/1 BEVS 1706



Wet Film Gauge

Range: 25~2000µm Material: Aluminum



Range: 25/50/100/200/300/500/1000µm

Wet Film Thickness Wheel

BEVS 1707

**Paint Inspection Gauge** Range: 45°: 20~1800µm

63.4°: 10~900μm 84.3°: 2~180µm

#### **Application of Film**



BEVS 1830





Adjustable Applicator

accuracy: 10μm, Accuracy: ±2μm Range: 0 ~ 3500µm Film width: 50/100/150/200/250/300mm



Digital Adjustable Applicator

accuracy: 1μm, Accuracy: ±2μm Range: 0~3500µm Film width: 50/100/150/200/250/300mm

Coating platform: Glass bed Speed: 1~200mm/s Coating size: L250×W200mm

Mini Auto Film Applicator

**Application of Film** 

BEVS 1818G

BEVS 1818GV

BEVS 1811GV



BEVS 1818V

BEVS 1818S

BEVS 1811/1

BEVS 3236

BEVS 1829

Mini Auto Film Applicator

Coating platform: Vacuum bed Speed: 1~200mm/s Coating size: L250×W200mm



# Mini Auto Film Applicator

 Coating platform Vacuum bed with heating

■ Temp.: RT~150°C, 5°C/min

● Speed: 1~200mm/s • Coating size: L250×W200mm

• Size: L490×W300×H290mm



BEVS 1818H

#### Film Application Kit

- Used for on-site film making and performance testing
- Including 22 products for viscosity, adhesion, fineness, etc
- Portable kit for users

**Single Sided Applicator** 

**Eight Sided Applicator** 

175/200µm

Film width: 60mm

Thickness: 25/50/75/100/125/150/



Bar coater

Thickness: 4/6/8/10/12/15/20/25/30 /40/50/60/70/80/100/120/150/200µm Film width: 200/320mm



Bar coater handle



For BEVS 200

BEVS 1801/50 BEVS 1801/75

BEVS 1808/50 BEVS 1808/75

BEVS 1802

BEVS 1819

BEVS 200

BEVS 1803/60 BEVS 1803/80

BEVS 200/S



#### **Single Sided Applicator**

Thickness: 50/75/100/125/150/200µm Film width: 50/75mm



Thickness: 50, 100µm Film width: 50/70mm

#### Two Sided Applicator

Thickness: 25/50, 75/100, 150/200, Film width: 80mm



#### **Four Sided Applicator**

Thickness: 30/60/90/120, 50/100/150/200, 100/200/300/400, 300/400/500/600, 5/10/15/20, 25/50/75/100μm. Film width: 60/80mm

BEVS 1807

Mini Auto Film Applicator

Coating platform: Glass bed+Vacuum bed

Speed: 1~200mm/s Coating size: L250×W200mm

**Mini Auto Film Applicator** 

Coating platform: Glass bed Speed: 1~200mm/s Coating size: L240×W200mm



BEVS 1811G

#### New

#### **Auto Film Applicator**

- Coating platform: Glass bed
- Speed: 1~350mm/s
- Coating size: L455×W300mm

• Size: L490×W300×H290mm

BEVS 1811/2

BEVS 1811/3:RT~150°C BEVS 1811/5:RT~200°C



#### AI Film Applicator

Coating platform: Glass bed+Vacuum bed Speed: 1~350mm/s Coating size: L455×W300mm



#### **Auto Film Applicator**

Coating platform: Glass bed Speed: 10~140 / 50~300 mm/s Coating size: L380×W300mm



#### **Auto Film Applicator**

Highlight

Coating platform: Vacuum bed Speed: 10~140 / 50~300 mm/s Coating size: L380×W300mm



#### **Auto Film Applicator**

Coating platform: Vacuum bed with heating Speed: 10~140 / 50~300 mm/s Coating size: L380×W300mm

BEVS 1817

BEVS 1805



**Cube Applicator** 

Thickness: 37/75, 50/100µm Film width: 16/41mm



**Four Sided Applicator** With Reservoir

Thickness: 30/60/90/120 50/100/150/200μm Film width: 60/80mm



**Rhombus Four Sided** Applicator

Thickness: 30/60/90/120µm Film width: 80mm Accuracy: 2µm





**Auto Panel Spray Station** 

Spray panel: MAX 500x200mm Spray pressure: 0.1~0.5 Mpa Dimension: 1500x1300x2320mm



Spray pressure: 0.1~0.5 Mpa



**Auto Panel Spray Station** 

Spray panel: MAX 150×150mm Dimension: 1000×950×2300mm



#### **Automatic Panel Sprayer**

- Spray panel: MAX 450×300mm • Spray pressure: 0.1-0.5 Mpa
- Dimension: 955x550x1200mm



BEVS 1828/1826

BEVS 1809

BEVS 1810

03

BEVS 1122

BEVS 2902/05



#### **Payne Permeability Cup Hiding Power Chart**



BEVS 3232



#### **EXP Auto Panel Spray Station**

Spray panel: MAX 500×250mm Spray pressure: 0.1~0.5 Mpa Dimension: 1500x1300x2320mm



**EXP Auto Panel Sprayer** Spray panel: MAX 300×300mm

Spray pressure: 0.1~0.5 Mpa Dimension: 1150 x750x1200mm



# New

#### **3D EXP Auto Panel Sprayer**

- Spray panel: cylindrical (d:50~300mm,H:50~420mm) square(L:50~300mm,W:50~300mm)
- Dimension: 1050x600x1200mm



Film width: 6mm, groove gap: 1.5mm Range: 50~1000µm



**Levelling Applicator** 





Material: aluminium alloy Exposed area: 10/25cm²



BEVS 2216 BEVS 2205



#### **Tabletop Fully Auto Adhesion Master**

• Test panel dimensions:

 $(120 \sim 150)x(50 \sim 100)x(0 \sim 7)$ mm, LxWxH

• Cutting interval: 1, 1.5, 2, 3mm

• Operation pressure: 0.5 ~ 0.7 Mpa



#### **Multifunction Coating Performance Tester**

• Functions: scratch, cross cut, pencil hardness, linear abrasion;

- Fully automatic operation
- Testing parameters are adjustable

BEVS 2211

#### **Auto Cross Cutting Tester**

 Application: Single blade grid cutting Salt spray test scratch sample Load: 1~40N

**Adhesion Tester Verifier** 

• Cut angle: 0 ~ 90°

• Real time reading

• Units: MPa, psi

• Range: 0~100Mpa

• Resolution: 0.01Mpa

• Accuracy: ± 0.5% of full scale

- Cut lines: 1 ~ 11
- Cut spacing: 1~4mm



#### **Auto Pull Off Adhesion Tester**

- Real time display of drawing rate chart
- Measure environmental temperature and humidity
- Units: MPa, psi, N
- Range: 0.4~200MPa
- Dolly dis.: 7, 10, 14, 20, 50 mm



BEVS 2201

BEVS 2209

BEVS 2213

BEVS 2201ATV

# **Auto Bond Strength Tester**

- Automatically load tests
- Automatic reset
- Unit: MPa、psi
- Adhesive strength: 0~10 Mpa • Speed: 0.2~0.4Mpa/s
- For building industry

BEVS 2202 BEVS 2206 BEVS 2203

05



#### **Cross Hatch Cutter**

Cutting adge: 8 Spacing: 1/1.5/2/3 mm



#### **Cross Hatch Basic Cutter** Cutting adge: 1

Angle: ±8° Spacing: 1/1.5/2/3 mm



#### Multi-hatch Gauge Applicable for testing: cross cut,

wet film thickness, Sharp corner edge roughness



#### **Hatch Gauge**

Suitable for testing: cross cut With a T-shaped positioning window

#### **Curing / Drying**



BEVS 1812



#### **Drying Time Recorder**

Track: 6 (3 set) Auto reset Auto reading result



BEVS 1815

BEVS 2301 BEVS 2311

BEVS 1813 BEVS 1813S

Track: 10 (5 set) Manual reset Read result via ruler

> BEVS 2308 BEVS 2303 BEVS 2305 BEVS 2304 BEVS 2302 BEVS 2312



#### **Oven Loggermaster**

Channel: 6/12 Temp. range: 0~1300℃ Accuracy: ±0.3℃

BEVS 1503:20°,60°,85°



#### **Insulation box**

Duration: 100°C@25min、200°C@200min 250°C@60min、300°C@65min 500°C@60min、800°C@50min

BEVS 1501U

#### Gloss / Color

• Accuracy: ±1%

New

BEVS 1506

**AI Minimum Film Forming Temperature Master** 



• Temperature Range: -10°C~ 65°C;

• Number of samples: 6 groups

• Width of samples: 16mm

#### Bench Glossmeter

Measurement angle: 60 Measurement range: 0~2000GU Measurement area: 2X2mm

BEVS 1503/1:20° BEVS 1503/2:60° BEVS 1503/3:85°



#### Intelligent Glossmeter

Measurement angles: 20 °, 60 °, 85 ° Measurement range: 0~2000GU



BEVS 3212

#### 60° Glossmeter

Measurement angle: 60 ° Measurement range: 0~1000GU

#### BEVS 1201/5

#### **Color Assessment Cabinet**

- Light source: Five light sources
- Light source types:
- D65, TL84, CWF, F, UV • Automatic switching of light source
- Display the single use time and total

**Color Assessment Cabinet** 

Display the single use time and total

• Light source: Six light sources • Light source types:

D65, TL84, CWF, F, UV, U30 • Automatic switching of light source

time of each light source

time of each light source



BEVS 1201/6

#### **Non Contact Auto Color Measurement Machine**

- Non contact design reduces collisions and scratches
- Can quickly detect multiple samples at once
- Accuracy: A E \* ab < 0.2, single detection time: 0.2S.





#### Hardness

BEVS 1301

BEVS 1309

BEVS 1321



**Electric Pencil Hardness Tester** 

#### **Pencil Hardness Tester**

Tip load: 500/750/1000 g Angle: 45° With pencil set (6B~6H)

BEVS 1303

Load: 500~1000g

Speed: 0.5~5.5mm/s



#### **Buchholz Indentation Tester**

With locator and HD microscope Load: 500 ± 5 g Magnification: 20x

#### Pencil Hardness Test Platform

For: BEVS 1301, BEVS1309 Panel thickness: 0-5mm Panel length: 50~150mm

#### **Intelligent Pendulum Hardness Tester**

- Fully automatic control
- Compatible with K-pendulum and P-pendulum;
- Real time monitoring

#### Deformation



BEVS 1616



**Cylindrical Mandrel Bend Tester** 

Sample width: MAX 70/100mm



BEVS 1605

BEVS 1306

#### **Conical Mandrel Bend Tester**

Maximum sample size: 200X100mn Application: Flexibility testing

#### New

#### **Cupping Tester**

• Panel size: (70-250)×(60-90)mm, L×W

• Steel ball diameter: 20mm

• Stroke length: 16mm

• Max. cupping force: 3000N



BEVS 1608

#### **Auto Cylindrical Bend Tester**

Bending times: 1~99999 times Speed: 10~60rpm Sample thickness: 0.3-1mm

BEVS 1601/3



#### **Auto Cupping Tester**

Camera system Maximum force: 15KN



#### Impact Tester

Weight of indenter: 8.9N (2 pounds)/17.8N (4 pounds) Tube height: 63.6cm/10.1.7cm Compliant with standards: ASTM D2794, BS 6496



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#### **Impact Tester**

Weight of indenter: 1kg Tube height: 100cm Compliant with standards: ISO6272, BS3900, DIN55669



#### **Impact Tester**

Weight of indenter: 1kg Tube height: 50cm/100cm Compliant with standard: GB/T 1732

#### Abrasion, Scrub / Washability

#### BEVS 2811

#### **Rotary Abraser**

- Specimen: Φ 130mm, φ8mm
- Rotation speed: 10-100 r/min
- Test load: 250/500/1000 g
- Cycles: 1~9999



BEVS 2816

BEVS 2806H

#### **AI Wet Abrasion Scrub Tester**

- Speed: 10~99 times/min • Cycles: up to 99999
- Thickness of test panel: 0~25 mm
- Brush: 1~2 pcs



BEVS 2808

BEVS 2803

BEVS 2809



• Replace the fixture head and sample platform for

• Suitable for testing coatings, plastics, decorative

fabrics, automotive interiors, and velvet fabrics.

compatibility testing with different standards;

**Multifunction Abraser** 

Adjustable stroke and speed;

**Scratch Tester** 

Sample size: 100 x 150mm Sample thickness: MAX 1.6mm Test coating thickness: 0.3mm



**Auto Scratch Tester Plus** 



BEVS 2806

Stroke length: 40-120mm Speed: 1-50mm/s Spacing: 5-10mm



**Complex Scratch Tester** 

Shape and radius of the needle (mm): (Sharp) 0.03, (Ball) 0.25, (Ball) 0.5 Sample size: MAX 200 x 100 x 12mm



#### Linear Abraser

Speed: 20-99 spm Sample height: MAX 14.5cm

BEVS 2810



**Wet Abrasion Scrub Tester** 

Channel: 1-2 Running speed: 10-40 spm Control module: 1 driver



**Wet Abrasion Scrub Tester** 

Channel: 1-4 Speed: 1-65 spm Control module: 2 drivers



independent/ simultaneous running



**Vertical Wet Abrasion** Scrub Tester

Number of rolling brushes: 1-4 Speed: 0-200spm, forward/reverse rotation Sample size: 200X150mm



**Detergent Washability Tester** 

Speed: 37 + 1spm Four slots can be flipped 180 degrees Application: washability

BEVS 1307 BEVS 1305



#### **Auto Heating Abrasion Tester**

Temperature range: RT~300 ℃ Test stroke: 30/60/90mm Speed: 20-190 spm



#### **Coin Scratch Tester**

Pressure on coin (without weight): 1000g Pressure on coin (without weight): 1500g Size: 112X81X95mm

08



# **Brush**

Standards: ASTM D2486, D3450, D5213; DIN53778; GB/T9755, GB/T9756, GB/T9780.

#### **Weathering Testing**





#### **Multifunction UV Weather Tester**

• Total power: 2kw

• Light source: UVA-340 / UVB-313

• Lamp No.: 40W x 8

• Rated life of lamp: 2000h



#### **Multifunction Aging Chamber**

• Xenon lamp aging tester and salt spray tester in one

Lamp power: 6.5kw
Lamp shape: Long arc
Lamp cooling: deionized water
Lamp life: 3000~4000h

#### New

#### **Tabletop Xenon Aging Tester**

#### Features

- 7"touch screen, easy operation;
- Advanced air-cooled xenon lamps for excellent simulations;
- Controllable inner box temperature, BPT/BST;
- Automatic control of light irradiance.

#### Technical info.

- Air-cooled xenon lamp: 1800W
- Exposure area: 1200 cm<sup>2</sup>
- Irradiance: 300-400nm, 340nm, 420nm
- BPT: Light cycle 45-90°C, Dark cycle 25-50°C



#### **Intelligent Multifunctional Salt Spray Tester**

- Chamber capacity: 800L,
- Heating via Titanium tube heater
- Humidity range: 20%~95%, accuracy ± 5%
- Temperature range: Ambient to 65 ± 2 ° C
- Test panel bracket: Two layers, 12 positions in total

# BEVS 3360

#### **Intelligent Xenon Aging Tester**

• Xenon lamp: 6.5kw

09

- Lamp shape: Long arc
- Cooling: deionized water
- Lamp life: 3000~4000h

# **Intelligent Station**



#### **BEVS 3233S**

#### **Auto Coating Performance Testing Workstation**

#### Features

- Industry first multi-coating performance testing workstation
- Adopting test panel QR code management system
- Automatic loading and unloading, automatic code scanning
- Automatic measurement of film thickness, gloss
- Automatically complete cross cut test and cupping test
- Automatic recognition and judgment of test results
- Compatible with a wide range of test panels

#### Technical info.

- Image system resolution: 5472×3768 pixels
- Maximum test panel size: 150×100×7mm, LxWxH
- Thickness measurement range: 1~1000 μm, ±1%
- Gloss measurement angle: 20°, 60°, 85°
- Cross-cut spacing: 1, 1.5, 2, 3mm
- Indenter speed: 0.02~0.4mm/s, ±0.5%
- Test panel storage capacity: 50~300 PCS

# **BEVS 3229U**

#### **Full Automatic Coating Testing Station**

#### **Features**

- The industry's first image detection coating defect system
- Automatic loading and unloading
- Automatic storage of wire bars and test panels
- Fully automated coating performance testing
- Support customization of multiple testing items

#### Technical info.

- ullet Dry film thickness accuracy:  $\pm$  (2 $\mu$ m+2%, Read value)
- Contact angle accuracy: 0.1°
- Visual recognition accuracy: 0.02mm



#### **Intelligent Station**





# BEVS 3230 Intelligent Coating Formulation Station

- Adopting a mobile workstation system design, remote control, and real-time monitoring;
- Can be automatically completed according to needs: precise distribution of materials, online mixing and stirring;
- Online pH blending and viscosity control, without the need for manual intervention throughout the entire process;
- Formula preparation can be automatically performed multiple times by setting the amount of formula change;
- Support automatic output of experimental reports.

# **BEVS 3226**

#### **Intelligent Panel Coating Station**

- Automatic loading and unloading, automatic storage of test plates, fully automatic control of dual axis (X, Y)
- Support one click calling of custom spraying mode, displaying current experimental parameters in real-time;
- Real time monitoring of humidity, temperature, and VOC gas concentration in the internal environment;
- Compatible with multiple coatings, can quickly replace 10 different coatings.





# BEVS 3228N Intelligent Robotic Coating Station

- Adopting the latest facial recognition technology, real-time encrypted data transmission;
- Automatic loading and unloading, automatic storage of wire rods and test plates;
- Robot automatic coating, with higher consistency and stability;
- Multiple film making modes are available, with 5 substrates automatically coated in one continuous process;
- Compatible with 10 different specifications of wire rods and 10 different coatings.



The BEVS System is a comprehensive experimental platform based on web technology and mature LIMS, with BEVS intelligent stations as the core. It is suitable for both research and service-oriented business organizations, as well as applications in process industry, quality assurance, quality control, and job organization.

This system consists of five stations: intelligent raw material storage workstation, intelligent formula preparation workstation, intelligent film making workstation, intelligent drying workstation, and intelligent performance testing workstation, with high integration and scalability. A single workstation can work independently and complete one or more experimental projects. Multiple workstations can be quickly combined and assembled to complete more intelligent and automated laboratory testing.

This system realizes intelligent and automated sampling and testing of various properties of related products such as coatings, inks, resins, etc. It is fully automated from raw material input to product output, improving detection efficiency by more than 100%, greatly reducing manual operations and differences, and improving repeatability and reliability.





