SHANGHAI YUKE INDUSTRY CO.,LTD

Shanghai Yuke Highway Instruments

2025

www.yukelab.com

Company Instruction

Shanghai Yuke is converted from Shanghai Geology Factory, which was affiliated to Geology and Mine Ministry of China.

Shanghai Yuke mainly develops and produces petroleum products analyzing instruments , highway detecting instruments, geological instruments and lab instruments. Shanghai Yuke is with strong technical strength, large service team and sales, and strict quality manage system makes the market superior of Yuke.

Before

Company Instruction

Shanghai Yuke launches advanced products domestic and overseas with innovative concept continuously replying on 50 years' R&D experience in professional instruments. Among them, the automatic flash point tester, automatic viscometer, automatic moisture tester, automatic fluorescence sulfur analyzer, etc. have reached international leading level in technology. Won a wide range of trust and praise in the domestic and foreign customers. The sales value always be the first in domestic industry.

Now

Asphalt Kinds

Kind

01 **Asphalt**

02 **Modified asphalt**

03 **Emulsified asphalt**

04 **Asphalt mixture**

Asphalt kinds

Asphalt： Residues from Crude Oil Processing.

Modified asphalt: Asphalt after adding rubber, resin and other modifiers.

Emulsified asphalt: Asphalt with emulsifier.

Asphalt mixture: It is a mixture of asphalt and aggregate (stone).

Major Classifications

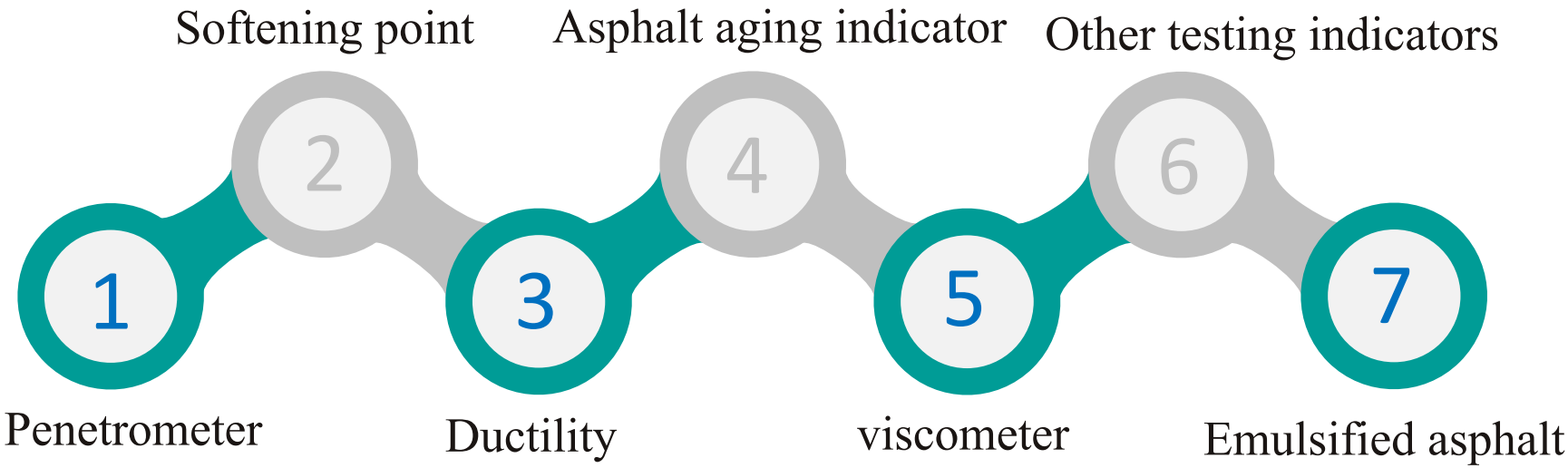
Kind

01 Asphalt testing instruments

(including Emulsified asphalt).

02 Asphalt Mixture testing instruments

Asphalt testing instruments



01 Penetrometer (Refer to ASTM D5)

Penetrometer: Testing Hardness Index of Asphalt, grade of asphalt.

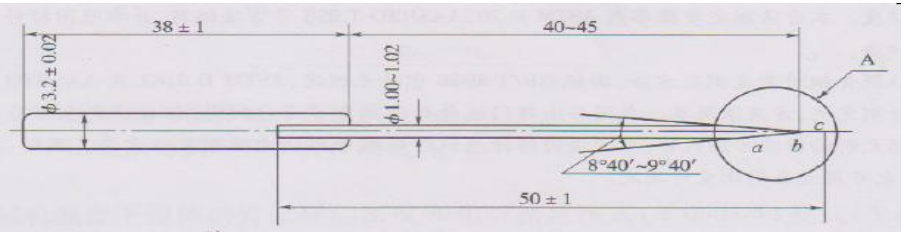
Details:

1.Total weight（100g±0.05g）： Standard needle:2.5±0.05g，needle connecting rod: 47.5g±0.05g, balacing weight: 50±0.05g；

2.Standard needle requirement: Material (stainless steel), hardness index, Surface finish, weight（2.5g）, the point of needle angle；

3.Sample container：Metallic materials, Φ55×H35（small, Standard Configuration）

4.Constant temperature water bath: do experiments , or maintenance of specimens, accuracy: ±0.1℃



01 Penetrometer (Refer to ASTM D5)

The differences of penetrometers：

YK-2801E1：Ordinary type，25℃ cotrolling temperature.

YK-2801F：Low temperature type，5℃, 15℃, 25℃（If doing penetration index, the stanard requires doing three points of temperature.）

YK-2801H：Automtic type, it adopts high resolution capacitance touch screen, the information can be clearly displayed. Special "Computer Drawing Software + Data Accurate Reading Technology", it can automatically draw and print the nomogram of asphalt penetration relationship. It adopts new type lifting device,

2801E1

2801F

2801H

25℃
15℃
5 ℃
1.5h

01 Penetrometer (Refer to ASTM D5)

YK-2801E1 Penetrometer

1.Power supply: AC（220±10%）V, 50Hz;

2.Measurement range: 0 penetration～600 penetrations;

3.Resolution: 0.1 penetration(0.01mm);

4.Timing range: 5s, 8s, 10s, 12s, 30s, 60 s, and the error is less than ±0.1 s;

5.Power consumption: 200W;

6. Temperature control accuracy: 25 ℃± 0.1 ℃

7. Constant temperature bath: hard glass chamber

8. Stirring: magnetic stirrer, rotary stirring

9.Working environment: Temperature: (15～35)℃;Relative humidity：≤85%

11.Dimension: 260mm×400mm×640mm;(L*W*H)

12. Net weight: 16kg.

01 Penetrometer (Refer to ASTM D5)

YK-2801F
Penetrometer

1. Circulatory water bath

(1)Power supply: AC220V±10%， 50Hz

(2)Bath volume: 5L (including external circulation 2L)

(3)Temperature range: (5.0~60.0)℃

(4)Temperature accuracy: ±0.1℃(5.0℃～25.0℃)

(5)Circulatory water quantity: 8L/min

(6)Working environment: Temperature: 15℃～35℃, relative humidity: ≤85%

(7)Maximum power consumption: 1200W

(8)Dimension: 460mm×290mm×420mm

(9)Net Weight: 22kg

2. Penetrometer

(1)Timing controller: 5s ,8s,10s,12s,30s,or 60s can be selected. Bias within±0.1s

(2)Needle holder: High accuracy digital display. Easy to use and observe. It can be moved to any position.

(3)Resolution: 0.01 mm

(4)Penetration accuracy: ±1 penetration

(5)Measurement range:(0-600) penetration

(6)The length of standard needle: 50mm

(7)The weight of standard needle: 2.5g±0.05g

(8)Sample container: it meets the standard T 0604-2011

(9) Counterweight: 50g

25℃
15℃
5 ℃
1.5h

01 Penetrometer (Refer to ASTM D5)

YK-2801H Penetrometer

1.Power supply: AC（220±10%）V, 50Hz;

2.Power consumption: 200W;

3.Measurement range: 0 penetration～600 penetrations;

4.Resolution: 0.1 penetration;

5.Timing range: 0s～60 s, and the error is less than ±0.1 s;

6.Data saved: 50 groups;

7.Standard needle: 50mm,2.5±0.05 g;

8.Sample container: Φ55×H35

9.Standard weight: 50g

10.Lifting device: automatic lifting;

11.Dimension:260mm×400mm×600mm;(L*W*H)

12. Net weight: 15kg.

02 Softening Point(Refer to ASTM D36)

Softening point: Testing the high temperature stability of asphalt. Unit: ℃.

At a certain heating rate, the softening point is the temperature that the steel ball drops to 25.4 mm.

Details：

1.Stell ball: 3.5±0.05g, Ø9.53mm.

2. Metallic holder: the distance to bottom: 25.4mm.

the distance to the surface of water: 51mm

3. Initial temperature, heating rate: 5℃, start temperature, the heating rate is 5℃±0.5℃/min

02 Softening Point(Refer to ASTM D36)

The differences of softening point tester：

Temperature range, testing mode, sample quantity, RS232, Print function

YK-2806F

1. Power supply：AC（220V±10%）V, 50 Hz;
2. Measurement range：

(1) Heating medium: 5 ℃～80 ℃distilled water(softening point ≤80 ℃)

(2) Heating medium: 32 ℃～160 ℃ glycerin (softening point ＞ 80 ℃)

3. Temperature resolution: 0.1 ℃
4. Heating rate: it will be adjusted to （5.0±0.5） ℃/ min automatically after three minutes
5. Stirrer: Stirring speed can be adjusted continuously
6. Heating power: 600 W
7. Beaker cubage:1000ml
8. Suitable condition: 15℃～35℃
9. Relative humidity: ≤ 85%
10. Total power consumption: ≤ 850 W
11. Dimension: 270mm×200mm×330mm(L*W*H)
12. Net Weight: 3kg

02 Softening Point(Refer to ASTM D36)

The differences of softening point tester：

Temperature range, testing mode, sample quantity, RS232, Print function

YK-2806G-1

1. Power supply: AC（220±10%）V, 50Hz
2. Temperature resolution: 0.1 ℃
3. Measurement range:

(1) 5 ℃～80℃ (softening point ≦80 ℃)

(2) 32℃～160℃ (softening point >80 ℃)

4.Heating mode: Heating using bottom electric heating plate method

5. Heating rate:

When the medium is water, it will automatically adjust to (5 ± 0.5) ℃/min three minutes after the start of the experiment;

When the medium is oil, it will automatically adjust to (5 ± 0.5) ℃/min after heating to 60 ℃

6. Stirrer: the electromagnetic stirring speed can be adjusted continuously

7.Cubage of beaker: 1000ml

8.Data display: Built in industrial computer LCD screen display

9.Data export: USB

10. Ambient temperature: 15℃～35℃

Relative humidity: ≤85%

11. Dimension: 240mm×400mm×400mm

02 Softening Point(Refer to ASTM D36)

The differences of softening point tester：

Temperature range, testing mode, sample quantity, RS232, Print function

YK-2806H

1. Power supply: AC（220V±10%）V, 50Hz
2. Measurement range:
(1) Heating medium: distilled water(softening point ≦80 ℃) +5 ℃～+80℃
(2) Heating medium: glycerin (softening point > 80 ℃) 32 ℃～160 ℃.
3. Temperature resolution: 0.1 ℃
4.Test samples: It can do two samples or four samples.
5. Heating rate: it will be adjusted to (5.0±0.5)℃/ min automatically after three minutes
6. Heating power: 600 W
7. Computer port: RS-232C communication port
8. Cubage of beaker: 900 ml
9. Ambient temperature: 15℃～35℃
10. Relative humidity: ≤85%
11.Maximum power consumption: 700 W
12.Dimension: 400mm×300mm×490mm (L*W*H)

02 Softening Point

Name	Asphalt Softening Point Tester		
Item	YK-2806F	YK-2806G-1	YK-2806H
Application	Petroleum asphalt,coal asphalt,liquid petroleum asphalt etc.		
Main feature	Microcomputer control the heating rate	IPCcontrol the heating rate,automatical detecting the test results	Microcomputer control the heating rate,automatical detecting the test results， test 2 or 4 samples meanwhile
Temperature control range	(1)Sample softening point under 80℃, +5℃～+80℃; (2)Sample softening point above 80℃,+32℃～+160℃		
Samples	2 pieces		4 pieces
Beaker	1000ml high temperature resistance round glass beaker		Quartz square glass jar,effective volume 1000ml
Stir	Automatic stiring		
Automaticity	Semi-automatic	Automatic	
Communication port	No	Yes	
Printing	No	Yes, data can be stored ,customer provides Printer	Yes

03 Ductility(Refer to ASTM D113)

Ductility: Testing Low Temperature Cracking Performance of Asphalt. At a certain temperature, the asphalt is stretched to the length of fracture at a certain rate. Unit: cm.

Details:

1.Standard module: it meets GB/T4508.

2.The temperature of water bath: accuracy: ±0.1℃,

the points of measuring temperature: 5℃、15℃、25℃;

03 Ductility(Refer to ASTM D113)

YK-4508C： Standard type, measurement range:1.5m

1. Power supply： AC（220±10%）V, 50Hz;
2. Measurement distance： 1.5m（±10mm）;
3. Heating mode： Electric heater;
4. Heating power： 4500W;
5. Temperature control mode： Shield type cold heat balance pressurization cycle system;
6. Temperature control range： (5~50)℃, adjustable. Resolution is 0.01℃;
7. Temperature control accuracy： ±0.1℃;
8. Tensile speed： 10mm/min and 50mm/min, two grades;
9. Measurement accuracy： ±1 mm;
10. Ductility display： Display in real time;
11. Ductility record： By touching screen
12. Average ductility： When the ductility record is finished, automatically display in the screen;
13. Refrigeration mode： Compressor refrigeration;
14. Ambient temperature： (15~+35)℃;

Relative humidity： ≤85%;

15.Dimension: 2370mm×520mm×1000mm;

16.Total power consumption： ≤5600W;

17.Net wet: 285kg.

25℃
15 ℃
10 ℃
5 ℃

03 Ductility(Refer to ASTM D113)

YK-4508G-1：It can do force measurement and elastic restitution test.

1. Power supply： AC（220±10%）V, 50Hz
2. Total power consumption： ≤5600W
3. Measurement distance： 1.5m（±10mm）
4. Heating mode： Electric heater
5. Temperature control mode： Shield type cold heat balance pressurization cycle system
6. Temperature control range： (5~50)℃, adjustable. Resolution is 0.01℃
7. Temperature control accuracy： ±0.1℃
8. Tensile speed： 10mm/min and 50mm/min, two grades
9. Measurement accuracy： ±1 mm
10. Ductility display： Display in real time
11. Ductility record： (1)By wireless ductility recorder (referred to as "remote controller")
(2)Through the "record" button of industrial control touch screen
12. Force measurement： (0～300)N
13. Force accuracy： ±1N
14. Resolution: 0.1N
15. Stretch display: Real time display of industrial touch screen
16. Data output： Real time display of industrial touch screen
17. Refrigeration mode： Compressor refrigeration
18. Ambient temperature： (-10~+35)℃
19. Relative humidity： ≤85%
20. Dimension: 2370mm×530mm×950mm
21. Net Weight: 285kg

25℃
15 ℃
10 ℃
5 ℃

04 Asphalt aging indicator

Thin film oven： Testing quality loss of asphalt after aging

YK-0609 5h

1.Power supply: AC(220±10%)V，50Hz

2.Power: 2.5KW

3.Temperature of workroom: 163℃±0.5℃

4.Temperature control accuracy: ±0.5℃

5.Rotate speed of turn plate: (5.5±1)r/min

6.Test sample quantity: 4 pieces

7.Size of workroom: 450mm×450mm×510mm

8.Ambient temperature: 15℃～35℃

Relative humidity: ≤85%

9.Dimension: 730mm×630mm×780mm

ASTM D1754

04 Asphalt aging indicator

Thin film oven： Testing quality loss of asphalt after aging

YK-0610A 85min

1. Power supply： AC（220±10%）V, 50Hz
2. Total power consumption： ≦2.6kW;
3. Working temperature： 163℃（or 175℃）
4. Temperature control precision： ±0.5℃
5. Rotating speed of turn plate： (15±0.2) r /min
6. Air flow rate： (4000±200)mL /min
7. Timing unit： Alert at 85 min
8. Ambient temperature： (15~35)℃

Relative humidity： ≤85%

9.Dimension： 930mm×800mm×820mm

10.Net weight：152kg

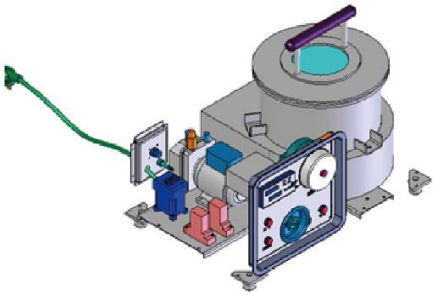
YK-0610: It is not suitable to test modified asphalt of high viscosity.

ASTM D2872

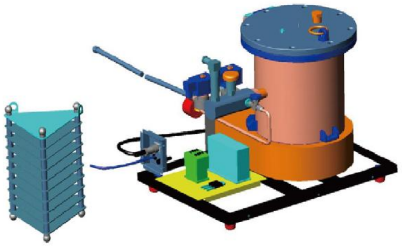
04 Asphalt aging indicator

Aging Vessel: Testing quality loss of asphalt after aging

PAV-1 Bitumen PAV System (Pressure Aging Vessel)



PAV-1-2沥青老化真空箱内部结构图



PAV-1-1沥青压力老化箱内部结构图

I. Main technical features

1. This system is composed of PAV-1-1 pressuring aging vessel and PAV-1-2 aging vacuum vessel.

2. This system is equipped with a IPC. The high pressure aging test is controlled by a IPC. All test procedures can be controlled by a IPC.

II. Main technical specifications

1.Power supply: AC (220±10%) V, 50Hz

2.Total power consumption: 2kw

3.Fuse rated current: 15A

4.Working medium: Compressed air

5.Working temp.: (90～110) ℃±0.5℃

6.Working pressure: 2.1MPa±0.1MPa

Actual pressure control (2.100mpa ± 0.015MPa)

7.Bursting pressure of safety bursting disc: 2.6Mpa

8. Temp.controlling accuracy: ±0.1℃

9.Segment time: LIDA temperature controller max. Range is 9999Min

10.Power off hold function: Yes.

11.Dimension: 630mm×450mm×500mm

ASTM D6521

05 Viscosity

Viscosity： Test the resistance of asphalt flowing under specified temperature conditions.

YK-0620B-1

Bitumen Dynamic Viscometer

60℃

1.Power supply: AC（220±10%）V , 50Hz

2.Total power consumption: ≤1800W

3.Temperature control point: 60.00℃±0.01℃

4.Vacuum control point: 40kPa±0.066kPa

5.Test samples: 4 samples

6. Measurement range: About 18 Pa.s～580000Pa.s

7. Timing mode: 4 built-in timer. Can do timing for 4 capillary viscometers

8. Coefficient Library of viscometer: 60 viscometer coefficients can be stored in the system

9. Timing range: 0.0s～99999.9s（27.7h）； Bias 15min ≤0.05%

10. Ambient temperature： 15℃～35℃

11. Measurement range: About 18 Pa.s～580000Pa.s

Relative humidity： ≤85%

12. Dimension： 610mm×410mm×610mm

13. Net weight： 32.5kg

ASTM D2171

05 Viscosity

Viscosity： Test the resistance of asphalt flowing under specified temperature conditions.

YK-265E

Kinematic Viscosity Tester

60、135、180℃

1. Power supply: AC (220±10%) V, 50 Hz
2. Maximum power consumption: 1800 W
3. Heating power: 1700W
4. Temperature range: Ambient ～135℃(180.0℃)
5. Temperature control accuracy: ±0.1℃
6. Mercury thermometer:

Rod type; scale division is 0.1 ℃; Temperature range is 100℃~150℃ scale division is 0.1 ℃; Temperature range is 150℃~200℃;

7. Bath capacity: about 23 L
8. Stirring motor: power: 6W, speed: 1200 RPM
9. Suitable environment: 15℃～35℃

Relative humidity: ＜85％

10. Temperature sensor: Platinum resistance; Pt100
11. Capillary viscometer: One group of Cannon-Fenske Reverse Flow capillary viscometers; 7 pieces in total. They are N0.200, 300, 350, 450, 500 and 600 (The inner diameters of R tube of them are 1.02, 1.26, 1.48, 1.88, 2.20, 3.10 and 4.00 mm respectively).
14. Overall dimension: 530mm×400mm×670mm（Bath is included）

05 Viscosity

Viscosity： Test the resistance of asphalt flowing under specified temperature conditions.

NDJ-1C

Brookfield Viscometer

135、175 ℃

1. Measurement range：100 mPa·s～2×10^5 mPa·s (If you select the No.30 spindle, the measurement range can be extended to 4×10^5 mPa·s)
2. Spindle：No.21, 27, 28 and 29 total 4 pieces of spindles (the No.30 spindle is optional)
3. Rotation speed：5RPM, 10 RPM, 20 RPM, and 50 RPM
4. Measurement error：±1% (F·S); (If you select the No.30 spindle, it will be ±3% (F·S)
5. Temperature control range：45 ℃～200 ℃
6. Temperature control accuracy：±0.1 ℃
7. Sample cylinder：20 ml
8. Power supply：AC 220V±10%, 50 Hz
9. Ambient temperature：5 ℃～35 ℃ (when the controlling temperature is close to ambient temperature, please run the air conditioner to let the ambient temperature be 5 ℃ lower than the controlling temperature)
10. Relative humidity：≤80%

05 Viscosity

Viscosity： Test the resistance of asphalt flowing under specified temperature conditions.

NDJ-1F

Brookfield Viscometer

135、175 ℃

1. Measurement range：25mPa·s～1×10⁷mPa·s (If you select the No.30 spindle, the measurement range can be extended to 2×10⁷ mPa·s)
2. Spindle：No.21, 27, 28 and 29 total 4 pieces of spindles (the No.30 spindle is optional)
3. Rotation speed：(0.1、0.2、0.5、1、2、5、10、20、50、100、200)r/min
4. Measurement error： ±1% (F·S); (If you select the No.30 spindle, it will be ±3% (F·S)
5. Temperature control range：45 ℃～200 ℃
6. Temperature control accuracy： ±0.1 ℃
7. Sample cylinder：20 ml
8. Printing output：needle printer
9. Communication port：RS232 port
10. Power supply：AC 220V±10%, 50 Hz
11. Ambient temperature：5 ℃～35 ℃ (when the controlling temperature is close to ambient temperature, please run the air conditioner to let the ambient temperature be 5 ℃ lower than the controlling temperature)
12. Relative humidity：≤80%

05 Viscosity

Viscosity： Test the resistance of asphalt flowing under specified temperature conditions.

YK-0621-1

Asphalt Standard Viscometer

1.Power supply：AC（220±10%）V, 50Hz

2.Total power consumption： ≤800W

3.Circular trough： Inner diameter：160 mm, Depth：116 mm

4.Sample tube： four pieces in a set. The diameter of effuse tube is: φ10 mm±0.025 mm, φ5 mm±0.025 mm, φ4 mm±0.025 mm and φ3 mm±0.025 mm.

5. Ball stopper specification：

A: Diameter of ball： 12.7 mm±0.05 mm; Sign height：92 mm±0.25 mm.

B: Diameter of ball： 6.35 mm±0.05 mm; Sign height：90.3 mm±0.25 mm.

6. Temperature controlling range： 20～90 ℃.

7. Temperature controlling accuracy： ±0.1 ℃

8. Time resolution： 0.1 s, maximum time value: 999.9 s

8. Heating type：electric heater. Heating power is 750W.

10. Ambient temperature： 15℃～35 ℃

Relative humidity：≤ 85%

11.Dimension：400mm×440mm×570mm

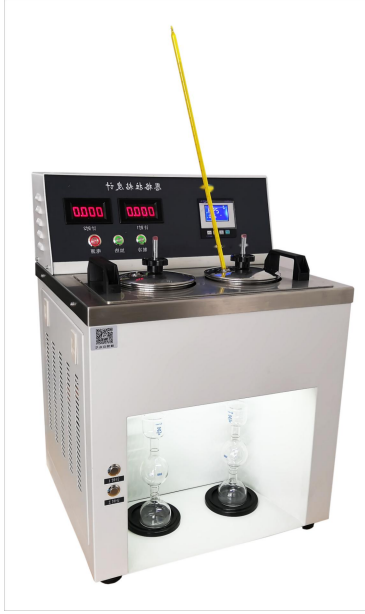
12.Net weight：23kg.

05 Viscosity

Viscosity： Test the resistance of asphalt flowing under specified temperature conditions.

WNE-1B-1

Engler viscosity



1. Power supply：AC（220±10%）V, 50Hz
2. Maximum power consumption：1200W
3. Standard water value：K20=(51±1)s,
(when the sample is asphalt：×0.224)
4. Temperature range：(20～100)℃
5. Temperature controlling ：(20±0.1)℃,
(25±0.1)℃
6. Temperature control accuracy: ±0.1℃
7. Ambient temperature：(15～28)℃
Relative humidity： ≤85%
8. Dimension： 420mm×380mm×590mm
9. Net weight: 24 kg.

25℃
50ml

06 Other testing indicators

Other testing indicators:

Open cup flash point tester YK-3536, Breaking point tester YK-0613A, Wax content tester YK-0615, Asphalt tenacity tester YK-0624, Saybolt viscometer YK-0623, and ect.

YK-3536 Open cup

YK-0613A Breaking Point

YK-0615 Wax content

YK-0624 Tenacity

YK-0623 Saybolt viscometer

PAV-1 Aging Vessel

06 Other testing indicators

YK-3536

Cleveland Open-Cup Flash Point Tester

1.Power supply: AC（220±10%）V, 50Hz.

2.Power consumption: ≦650W

3.Heating device: furnace heating, no naked fire, explosion prevented.The power is adjustable from 0W to 600W.

4.Test flame applicator: It applies the test flame automatically.

5.Thermometer: (-6～400)℃. Scale is 2℃. It is the same as thermometer ASTM 11C.

6.Igniting device:

(1) Ignition source: coal gas(or civil gas)

(2) Nozzle aperture: about 0.8mm

7.Ambient temperature: (15~ 35)℃ , Relative humidity: ≤85%

8.Dimension: 350mm×290mm×350mm (thermometer is not included)

9.Net weight: 5.5kg.

06 Other testing indicators

YK-0613A

Automatic Breaking Point Tester

(Fraass Method)

1. Power supply： AC（220±10%）V，50Hz
2. Refrigeration mode： Low temperature circulatory bath
3. Cooling rate： 1℃/(60s±5s)
4. Temperature measuring range： -30℃～25℃
5. Temperature measuring error： ±0.5℃
6. Steel slice: 41mm×20mm×0.15mm
7. Test samples： It can determine 3 samples at the same time.
8. Ambient temperature： Room temp. ～+30℃
9. Relative humidity： ≤85%
10. Power consumption： 450W（breaking point tester）+ 1600W（low temperature circulatory bath）
11. Overall dimension： 500mm×400mm×570mm（breaking point tester）

06 Other testing indicators

No.	Optional parts
1	Vacuum pump (ZXZ-2L/S)
2	Vacuum dry case (DZF-6020)
3	Analysis balance (0.1 mg, 0.1 g)

YK-0615 Wax Content Tester

1. Power supply： AC（220±10%）V，50Hz
2. Total power consumption：≤1800W
3. Cooling mode：Compressor refrigeration

4 Test temp.：-20℃

5. Accuracy： ±0.3℃

7. Working environment：15℃～28℃，

RH＜85

8. Dimension： 750mm×440mm×560mm

YK-0615-1 Distillation Stove

1. Power supply: AC(220±10%)V, 50 Hz
2. The electric furnace heating power: 2000W
3. Heating control: solid adjustable pressure model can be adjusted continuously.
4. Constant temperature control: 550℃+10℃
5. Ambient temperature: ≤35℃
6. Relative humidity: ≤85%
7. Total power consumption:≤2100W
8. Dimension: heating furnace: 220mm*330mm*400mm

   elevator-platform:150mm*1750mm*120mm
9. Weight: 5kg

06 Other testing indicators

YK-0624

Asphalt Tenacity Tester

With IPC

1. Power supply:（220±10%）V,50Hz;
2. Maximum power consumption:≤500W
3. Drag speed:(500mm+10mm)/min;
4. Max drag force:1000N;
5. Dragging force un-linear error:<0.5%;
6. Max dragging length: 610mm;
7. Working environment: （15～35）℃
8. Dimension:520mm*400mm*1220mm.
9. Net weight: 100kg.

06 Other testing indicators

YK-0623

Saybolt Viscosity Tester

1.Power supply： AC（220±10%）V 50Hz

2. Instrument structure： Desk type

3. Working mode： Double lines，parallel test

4. Receiving flask： (60±0.05)ml

5. Heating power of bath： 1000W

6. Working temperature of bath： Room temp.~ 240.0℃

7. Temperature control accuracy： ±0.1℃

8. Timing range： 0.0s~ 999.9s

9. Timing accuracy： ±0.1s

10. Ambient temperature： ≤35℃

11. Relative humidity： ≤85%

12. Overall dimension： 360mm×360mm×790mm

07 Emulsified asphalt testing instruments

1.YK-0653 Emulsified Asphalt Particle Charge Tester

2.YK-0654 Emulsified Asphalt Adhesion Tester

3.YK-0655 Emulsified Asphalt Storage Stability Tester

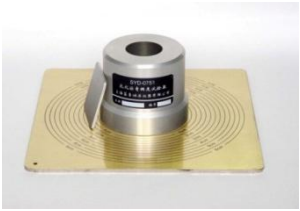
4.YK-0751 Emulsified Asphalt Consistency Tester

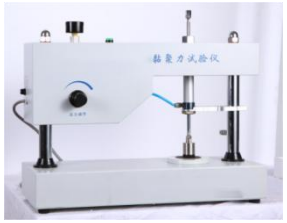
5.YK-0752 Wet Wheel Abrasion Tester

6.YK-0754 Cohesive Force Tester

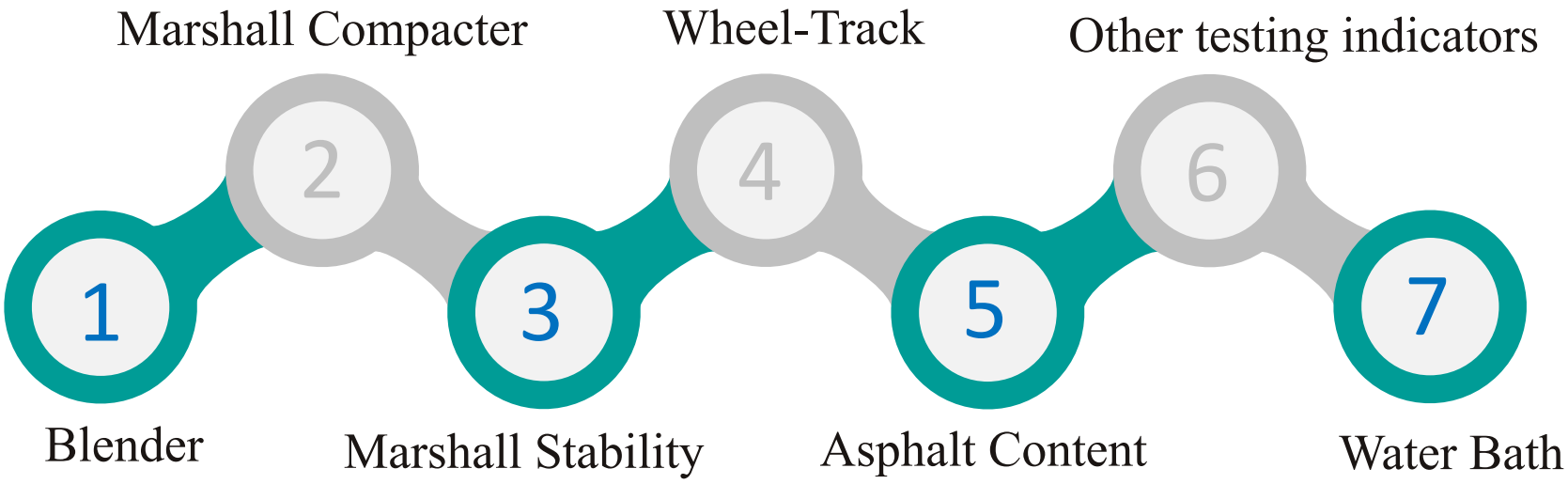
7.YK-0755 Load Wheel Rolling Tester



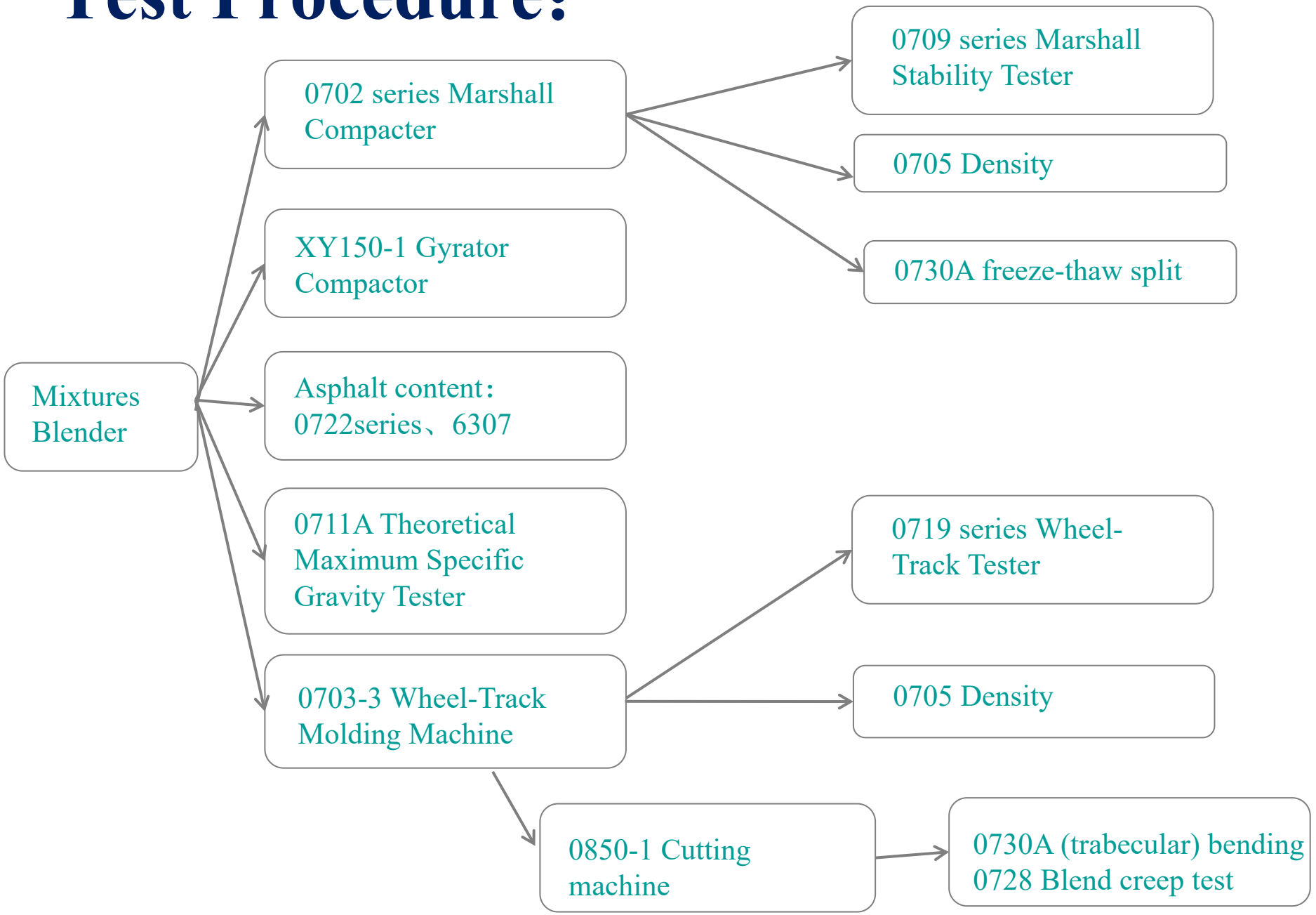





Asphalt mixtures testing instruments



Test Procedure:



01 Mixtures Blender

YK-F02-20

Automatic Mixture Blender

1. Blending amount： 20L
2. Temperature control range： Room temperature~200℃ (Can customize ~250℃)
3. Temperature control accuracy： ±5℃
4. Timing range： (0~999)s
5. Timing accuracy： ±1s
6. Rotation rate of paddle：
Complete revolution 47R/min, Autorotation 76R/min
7.Blending motor：
Alternating current 380V, 550W；1400R/min；50Hz
8.Lifting motor：
Alternating current 380V,250W；1400R/min；50Hz
9. Overall dimension： 670mm×550mm×1340mm
10. Net weight： 215Kg
11. Ambient temperature： (-5~+50）℃
Relative humidity： ≤80%
13. Power supply： AC（380±10%）V；16A；
（three-phase four-wire with null line）

02 Marshall Compacter(Refer to ASTM D5581)

0702 series Marshall Compacter: Used for specimen forming.

YK-0702: small test mould (Φ101.6㎜×63.5㎜ specimen).

YK-0702A: big test mould (Φ152.4㎜×95.3㎜ specimen) and

1. Hammer weight： 4536g±9g
Total Hammer weight :7850g±50g
2. Fall of Hammer： 457.2 mm±1.5mm；
3. Mould： Suitable for Φ101.6mm×63.5mm
4. Guide rod diameter: 16mm;
5. Platform dimensions: (305 ± 5)mm × (305 ± 5)mm × (25 ± 2)mm;
6. Compaction speed: 55–68 times/min;
7. Number of compactions: 0–999 times;
8. Wooden compaction base: 200mm × 200mm × 455mm (height) (tolerance ± 5mm)
9. Power supply voltage: AC (220 ± 10%) V / 50Hz;
10. Motor power: Approximately 370W;
11. Overall dimensions: 550mm × 550mm × 1740mm (length × width × height, main unit);
12. Total weight: Approximately 180 kg.

1. Hammer ： 10210g±10g
2. Fall of Hammer： 457.2mm±2.5mm；
3. Mould 2： Suitable for Φ152.4mm×95.3mm
4. Compaction speed： (55-68)times/min
5. Guide rod diameter：16mm
6.Platform dimension：(450±5)mm×(450±5)mm×(25±2)mm
7. Compaction times： (0～999)times
8. Wooden compaction base：300mm×300mm×455mm(H) （tolerance±5mm）
9.Power supply： AC（220±10%）V,50Hz
10.Motor power： about 550W
11.Overall dimension： 550mm×600mm×1740mm(L*W*H)
12.Net weight： About 200kg

02 Marshall Compacter (Demoulder)

YK-200S-1 Electric Hydraulic Demoulder: It's **matched** with our products YK-0702,YK-0702A, Marshall electric compactors.

1.Peakload: 20kN

2.Maximun stripper length: 230mm3.Oil pump working pressure: 30MPa4.Demoulding speed: 200mm/min5.Motor power: 1.1kW6.Power supply: AC380V/50Hz7.Machine gross weight: 250kg8.Outline dimension: 550mm×500mm×1100mm(L*W*H)

03 Marshall Stability Tester(Refer to ASTM D6927)

0709 series Marshall Stability Tester： Load-Displacement Deformation Curve and Flow Value for Testing Specimens.

YK-0709

1.Test load: (0~50.00) KN , measurement error: ±0.05%（F.S）

2.Test displacement: 0mm~10mm, measurement error: ±0.5%（F.S）

3. Lifting rate for pressure machine： (50±5)mm/min

4. Ambient temperature： 15℃～35℃

RH：≤85％

5.Power supply： AC(220±10%)V，50Hz

6.Total power consumption： ≤700W

7.Dimension： 400mm×700mm×870mm (L*W*H)

8.Net weight： 108kg

03 Marshall Stability Tester(Refer to ASTM D6927)

0709 series Marshall Stability Tester： Load-Displacement Deformation Curve and Flow Value for Testing Specimens.

YK-0709-1

1. Test load：（0～50.00）kN, measure error：±0.05%（F.S）
2. Vertical deformation（flow value）：（0～10）mm，measure error：±0.5%（F.S）
3. Lifting rate for pressure machine：(50±5)mm/min
4. Mode：Manual and Automatic two modes.
5. Suitable environment：

Ambient temperature：15℃～35℃

RH：≤85％

6. Communication port：RS232
7. Power supply：AC（220±10%）V，50Hz
8. Total consumption power：no more than 700W
9. Dimension：680×390×870mm

Net weight: 75kg.

04 Wheel-Track Tester

0719 series Wheel-Track Tester：

At a certain temperature, pressure and time, the deformation curve of the wheel after it is pressed over the rutting plate to produce displacement.

Time > 5h
Test time = 1h
Samples ≥3

03 Wheel-Track Tester

YK-0709E

1. Rolling speed of grinding wheel: (42 ± 0.5) times/ min (one way)
2. Test car moving distance: (230 ± 10) mm
3. Rubber hardness of grinding wheel: 80IRHD±5IRHD (23℃)
4. Load requirement： 780N±20N
5. Contact pressure between grinding wheel and test mode: (0.7 ± 0.03) Mpa (60 ℃)
6. Displacement measuring range: (0 ~ 30) mm
7. Displacement measurement accuracy: ± 0.01mm
8. Displacement times：1890 times (t1) and 2520 times (t2), Equivalent to 45 minutes and 60 minutes
9. Control range of constant temperature box: room temperature ~ 70 ℃ (can be set),
10.Control accuracy: ± 0.1 ℃
11. Environment temperature control accuracy: ± 1 ℃
12.Working chamber temperature control accuracy: ± 0.5 ℃

III.Main technical parameters

1. Working mode: Immersion and non-immersion test
2. Temperature measuring channel number: 2 channels
3. Can do specimen number at the same time: 3
4 The number of specimens of health: 9
5. Three-phase power supply: AC380V, 50Hz, 10A, three-phase five-wire system
6. Mould Size: 300mm × 300mm × 50mm (standard),Other height options available 150mm×300mm×(40～150)mm(Optional)
7. Weight of the whole machine: 800kg
8. Overall dimensions of the machine: 2400mm × 1040mm × 1720mm

05 Asphalt Content

YK-6307Asphalt Content Tester(Combustion Furnace Method)

1. Max. sample weight：4000g ,
2. Recommended sample weight：(1000~2000) g .
3. Balance range：12kg.
4. Balance accuracy：0.1g
5. The dimension of the combustion chamber ：350mm*440mm*330mm ；
6. Combustion chamber maximum temperature：800℃
7. Test precision：0.10% ;
8. Dimension：700mm*800mm*1550mm ;
9. Power supply：AC（380±7%）V, 50Hz
10. Total power consumption：≤7600W

ASTM D 6307

YK-0722D
Automatic Centrifugal Extractor

1. Max. sample weight：

   Normal asphalt：3.5kg

   Rubberized asphalt：1.5kg

2.Centrifuging speed： no less than 8000r/min

3. Capacity：less than 300g

4. Distilaton:

main heating tube：10L/h

main heater+ auxiliary heater：35L/h

5. Power supply： AC(380±7%)V, 50 Hz

6. Maximum power consumption: 5.5kW

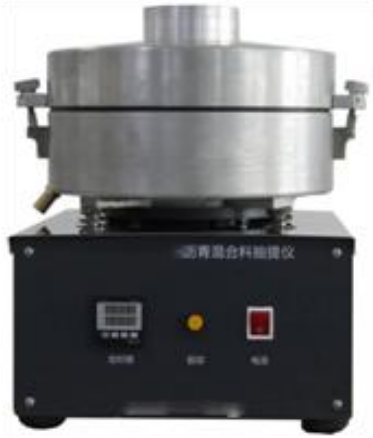
7. Dimension:1300㎜(L)×800㎜(W)×1700㎜8 .Net weight: 200kg

YK-0722A
Automatic Centrifugal Extractor

1. Power supply: AC(380±7%)V, 50 Hz
2. Maximum power consumption: 5000W
3. Capacity: 1000g~1500g
4. Extracting precision: ≤0.1%5. Extracting time: (20~40)minutes per time6. Centrifuging speed: 5500r.p.m, 11000r.p.m7. Working environment: (15~35)℃，RH < 80%8. Cooling water: Pressure: ≥2bar，temperature：≤12℃9. Dimension:1400㎜(L)×800㎜(W)×1600㎜(H)10.Net weight: 300kg

04 Asphalt Content

YK-0722
Centrifugal Extractor



1. Rated rotation speed： 3000r/min
2. Power supply： AC（220±10%）V，50Hz
3. Volume： 3000g
4. Timer： 0.01-99.99min
5. Maximum power consumption： 850W
6. Ambient temperature： 10℃～35℃
7. Relative humidity： ≤85%
8. Net weight： 34.5Kg
9. Dimension： 430mm×410mm×445mm

ASTM D2172

06 Other testing indicators

Other testing indicators:

Compacted Bituminous Mixtures Density Tester YK-0705, Bituminous Mixtures Theoretical Maximum Specific Gravity Tester YK-0711A, Asphalt Fracture Properties Tester YK-0629, Asphalt tenacity tester YK-0624, Saybolt viscometer YK-0623, and ect.

YK-0705 Density **YK-0711A Theoretical Maximum Specific Gravity** **YK-0629 Direct Tension**

07 Water Bath

1. The specimens for penetrometer, softening point,ductility:HWY-1

2. The specimens for marshall：HWY-501B（60℃ constant temperature）

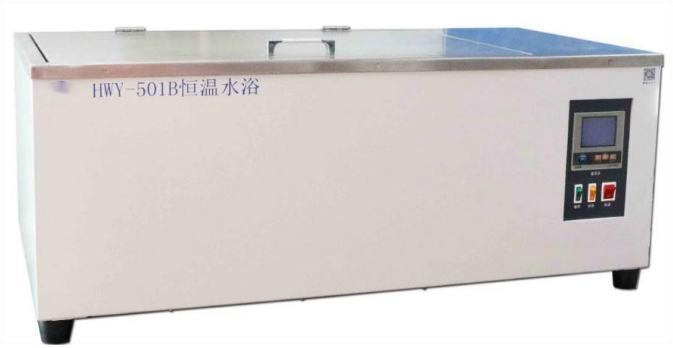
HWY-1
Low Temperature Water Bath

1. Power supply: AC (220 V ±10%), 50 Hz
2. Total power consumption: ≤2000 W
3. Size of water bath: 370mm ×300mm ×300mm
4. Suitable water cubage: 28 L
5. Heating device: Electric heater, power is 1300 W
6. Refrigeration device: refrigeration compressor of new type
7. Temperature controlling range: 5 ℃～80 ℃
8. Temperature controlling accuracy: ±0.1 ℃
9. Working environment: Temperature: (15-28 ℃, Relative humidity: ≤85%
10. Size: 750mm ×540mm ×580mm;
11. Net weight: 30 kg

07 Water Bath

1. The specimens for penetrometer, softening point,ductility:HWY-1
2. The specimens for marshall：HWY-501B（60℃ constant temperature）

HWY-501B
Constant Temperature Water Bath



1. Power supply： AC(220V±10%), 50Hz
2. Maximum power consumption：2500W
3. Volume of water bath：90L, 710*420*310mm
4. Temperature control range： Room temperature+5℃～70.0℃
5. Temperature control accuracy： ±0.1℃
6. Heating device：2400W
7. Water bath circulation: Magnetic circulation pump automatically circulates;
8. Ambient temperature： 15℃～+35℃
   Relative humidity： ≤85％
9. Dimension： 1000mm×510mm×400mm

07 Water Bath

1. The specimens for penetrometer, softening point,ductility:HWY-1

2. The specimens for marshall：HWY-501B（60℃ constant temperature）

HWY-2
Thermostatic Water Bath

1. Power supply： AC（220±10%）V ,50Hz;
2. Cubage of bath：330mm×390mm×300mm;
3. Suitable water Qty.：32L;
4. Heating device：Electric heating;
5. Cooling mode：Compressor refrigeration;
6. Temperature controlling range：-10℃～70℃;
7. Temperature controlling accuracy：±0.1 ℃;
8. Suitable temp.：（15～35）℃;
9. Relative humidity：≤85%;
10. Total power consumption：≤2300W；
11. Dimension：530mm×520mm×1000mm;
12. Net weight：40Kg.

07 Water Bath

1. The specimens for penetrometer, softening point,ductility:HWY-1

2. The specimens for marshall：HWY-501B（60℃ constant temperature）

HWY-10
Multifunctional Circulatory Constant Temperature Water Bath

1. Power supply: AC (220 ±10%)V, 50 Hz
2. Maximum power consumption: 1100 W
3. Volume of bath: 10 L
4. Temperature control range: -10 ℃～95 ℃
5. Temperature control accuracy: ±0.1 ℃
6. Quantity of circulated water: ≥3.5 L/min
7. Ambient temperature: 15 ℃～28 ℃

Relative humidity: ≤85%

8. .Dimension: 530mm×380mm×450mm(L*W*H)


Thanks !
2025