Asphalt Testing Instrument Catalogue

Shape	Name	Item	Parameters	Functions	Standards
	Asphalt Softening Point Tester	SYD-2806E SYD-2806F	1. Power supply: AC 220V±10%, 50 Hz 2.Measurement range:E: (+5.0～+80.0)℃； F:(+32.0～+160.0)℃ 3.Temperature resolution: 0.1℃； 4. Stirrer: The stirring speed can be continuously adjusted. 5.Heating rate: After 3mins, automatically adjust to (5.0±0.5)℃/ min. 6. Heating power: 800 W 7.Beaker cubage: 1000 ml 8.Environment: The room temperature should be lower than 35 ℃ and keep stable without air convection. 9.Relative humidity: ≤ 85% 10.Total power consumption: ≤ 850 W 11.Dimension: 270mm×200mm×330mm（L×W×H）	Determine the softening point of asphalt, tar, liquid asphalt and other types of asphalt,determine two samples at the same time and it can show test results automatically.	ASTM D36,GB/T4507, T0606,JTG E20
	Automatic Softening Point Tester	SYD-2806G	1. Power supply: AC 220V (-5%～+10%), 50 Hz; 2. Measurement range: 32 ℃～160 ℃. (1) Heating medium: distilled water(softening point under 80 ℃) (2) Heating medium: glycerin (softening point over 80 ℃) 3. Temperature resolution: 0.01 ℃ 4. Cubage of beaker: 1000 ml 5. Stirrer: the stirring speed can be adjusted continuously. 6. Heating rate: it will be adjusted to 5.0±0.5 ℃/ min automatically after three minutes 7. Heating power: 600 W 8. Test result: LCD screen shows results and printer to print. 9. Computer communication interface: RS232C communication interface 10. Ambient temperature: The temperature should be lower than 35 ℃ and keep stable. There should not have any air draft. 11. Relative humidity: ≤85% 12. Total power consumption: ≤700 W 13. Test sample: 2 samples Dimension:400mm×300mm×490mm	Determine softening point of petroleum asphalt, coal pitch, liquid petroleum asphalt, and various asphalts.	ASTM D36,GB/T4507, T0606,JTG E20

	Automatic Softening Point Tester	SYD-2806H	1. Power supply: AC 220V (-5%～+10%), 50 Hz; 2. Measurement range: (1) Heating medium: distilled water(softening point under 80 ℃) +5 ℃～+80℃ (2) Heating medium: glycerin (softening point over 80 ℃) 32 ℃～160 ℃. 3. Temperature resolution: 0.1 ℃ 4. Cubage of beaker: 1000 ml 5. Stirrer: the stirring speed can be adjusted continuously. 6. Heating rate: it will be adjusted to 5.0±0.5 ℃/ min automatically after three minutes 7. Heating power: 600 W 8. Test result: LCD screen shows results and printer to print. 9. Ambient temperature: The temperature shall be lower than 35 ℃ and keep stable. There shall not be any airflow. 10. Relative humidity: ≤85% 11. Maximum power consumption: 700 W 12. Test samples: 2 or 4 samples 13.Computer port: RS-232C communication port 14.Outline dimension: 400mm×300mm×490mm(L*W*H)	Determine softening point of petroleum asphalt, coal pitch, liquid petroleum asphalt, and various of asphalts.	ASTM D36,GB/T4507, T0608,JTJ052
	Automatic Softening Point Tester	SYD-2806I	1. Power supply: AC 220V (-5%～+10%), 50 Hz; 2. Measurement range: 32 ℃～160 ℃. (1) Heating medium: distilled water(softening point under 80 ℃) (2) Heating medium: glycerin (softening point over 80 ℃) 3. Temperature resolution：0.01℃ 4. Stirrer：electromagnetic stirring，the speed is stepless adjustable. 5. Heating rate：Self adjusting to (5.0±0.5)℃/ min after 3 minutes. 6. Display and print：LCD screen to displays the result. Printed by printer. 7. Heating power：1400W 8. PC port：RS-232C communication port 9. Effective volume of flask：1000ml 10. Test condition：room temperature is lower than 35℃ and stable.No air convection. 11. Relative humidity：≤ 85％ 12. Overall power consumption：≤ 1500W 13. Test sample: 2 samples	Determine softening point of petroleum asphalt, coal pitch, liquid petroleum asphalt, and various asphalts.	ASTM D36,GB/T4507,T0606,JT G E20

	Bitumen Ductility Machine	SYD-4508C	1. Power supply： AC220V（-5%~+10%），50Hz 2. Measurement distance： 1.5m（±10mm） 3. Heating mode： Electric heater 4. Heating power： 3000W 5. Liquid circulation： By magnet circulation pump 6. Temperature control range： (5~50)℃，adjustable. Resolution is 0.01℃ 7. Temperature control accuracy： ±0.05℃。 8. Tensile speed： 10mm/min and 50mm/min, two grades 9. Measurement accuracy： ±1 mm。 10. Ductility display： Digital display after data processed by a single chip machine. 11. Refrigeration： Compressor 1.25P, input power is 950W 12. Ambient temperature： (-10~+35)℃ 13. Relative humidity： ≤85% 14. Maximum power consumption： 4100W 15. Overall dimension： 2365×520×1000mm	Determine the distance to which it will elongate before breaking when two ends of a briquette specimen of the material are pulled apart at a specified speed and at a specified temperature.	ASTM D113,GB/T 4508, T0602,JTG E20
	Bitumen Ductility Machine	SYD-4508C-1	1. Water bath temperature control range: 0～50℃ 2. Water bath temperature control accuracy: ±0.1 ℃ 3. Maximun measurement distance: ≤1500mm 4. Measurement accuracy: 1mm 5. Tensile speed: 50mm/min±2.5mm/min or 10mm/min±0.5mm/min 6. Tensile motor power: 200W 7. Heating power:3kW 8. Refrigeration power: 2700 kilocalorie 9. Power supply: Three phase 380V±10%、50HZ 10. Environment temperature: -10℃～+35℃ 11. Relative humidity: ≤85% 12. Boundary dimension: 2320mm×620mm×1030mm(L*W*H) 13. Overall power consumption:less 4100W	Determine the distance to which it will elongate before breaking when two ends of a briquette specimen of the material are pulled apart at a specified speed and at a specified temperature,Unit:cm.	ASTM D113,GB/T 4508, T0605,JTG E20

	Bitumen Ductility Machine	SYD-4508G	1. Power supply： AC（220±10%）V,50Hz 2. Measurement distance： 1.5m（±10mm） 3. Heating method:Electric heater 4.Bath circulation:Strong magnetic circulation pump to circulate the bath liquid 5. Temperature control： Range： 5℃～50℃, Temperature display resolution： ±0.01℃ 6.Accuracy:±0.1℃ 7. Tensile speed： 10mm/min and 50mm/min 8.Accuracy：±1mm 9.Ductility display:Real-time display on screen 10.Ductility record: a.record through the wireless ductility recorder(remote controller) b.record through the ductility recorder 1/2/3 keys of touch screen 11.Tensile test： Range：(0～300)N,resolution： 0.1N 12.Accuracy：±1N 13.Data output：（1）Communication port RS232（2）Printed by micro-printer 14.Refrigeration： Compressor 15.Ambient temperature： (-10～+35)℃ 16.Relative humidity： ≤85% 17.Maximum power consumption： 4100W 18.Overall dimension： 2365×530×950mm(L*W*H)	Determine the distance to which it will elongate before breaking when two ends of a briquet specimen of the material are pulled apart at a specified speed and at a specified temperature.	ASTM D113;GB/T 4508,T0602,JTG E20
	Bitumen Ductility Machine	SYD-4508G-1	1.Water bath temperature setting: control range (-10～20)℃； accuracy ± 0.1℃ 2.Ductility measurement:range 1500mm(±10mm),accuracy 1mm 3.Tensile speed: 5cm/min±0.25cm/min； 1cm/min±0.05cm/min 4.Tension measurement:range (0～3000)N； accuracy ±0.1N 5.Tensile motor power: 180W 6.Heating power: 2×2kW 7.Refrigeration power: 2700 kilocalorie 8.Power supply: Three phase 380V±10%、50HZ 9.Environment temperature: -10℃～+35℃ 10.Relative humidity: ≤85% 11.Boundary dimension: 2320×620×1030mm 12.Overall power consumption:less 5200W	Determine the distance to which it will elongate before breaking when two ends of a briquette specimen of the material are pulled apart at a specified speed and at a specified temperature，which is named as the asphalt ductility	ASTM D113,GB/T 4508; T0605;JTG E20

	Penetrometer	SYD-2801E1	1. Measurement range： (0～600) penetration scale 2. Resolution： 0.01mm 3. Timing controller： 5s or 60s, can be setted at will，bias within ±0.1s 4. Heating power： 200W 5. Temperature control accuracy： 25℃±0.1℃ （Note: The ambient temperature shall not exceed 20℃） 6. Temperature control mode： High accuracy digital temperature controller 7. Constant temperature bath： Hard glass bath 8. Stirring： Automatically stirred by magnetic stirrer 9. Standard needle： 2.5g±0.05g 10. Needle holder： It can be adjusted roughly and finely without measurable frication to make the tip aim the sample conveniently. 11. Power supply：AC（220±10％）V, 50Hz 12. Dimension：280mm×350mm×700mm **Optional accessories** Grease masher ： It is used in the tests which determine the cone penetration of lubricating grease (or petrolatum) 2. Standard cone： 102.5g±0.05g 3. Other cones： 1/2 scale cone，1/4 scale cone	Determine the penetration of pavement petroleum asphalt, modified asphalt, liquid petroleum asphalt and emulsified asphalt. test solid particle, powder, colloid and raw-food materials such as cheese, glycine, butter, cream and leavening. It can be widely used in food industry, highway engineering and other industrial fields.	ASTM D5,T0604,JTG E20
	Low-Temperature Penetrometer	SYD-2801F	1. Circulatory water bath (1)Power supply: AC20V±10%， 50Hz (2)Bath volume: 8.5L (3)Temperature range: (5.0~100.0)℃ (4)Temperature accuracy: ±0.1℃ (5)Circulatory water quantity: 5L/min (6)Pump lift: 1m (7)Maximum power consumption: 1000W (8)Dimension: 420mm×380mm×900mm 2. Penetrometer (1)Timing controller: 5s 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: 0.01m (4)Penetration accuracy: ±1 penetration (5)Maximum scale: 600 penetration (6)Standard needle: 50mm, 2.5g±0.05g (7)Dimension: 280mm×350mm×700mm	Determine the penetration of pavement petroleum asphalt, modified asphalt, liquid petroleum asphalt and emulsified asphalt,test solid particle, powder, colloid and raw-food materials such as cheese, glycine, butter, cream and leavening.	ASTM D5; T0604,JTG E20

 	Low temperature Automatic Penetrometer	SYD-2801I	1.Measurement range: 0 penetration～600 penetrations; 2.Resolution: 0.1 penetration; 3.Timing range: 0s～60 s, and the error is less than ±0.1 s. 4.Heating power: 200 W; 5.Temperature controlling accuracy: 25±0.1 ℃ (Note: the ambient temperature should not be higher than 20 ℃); 6.Data saved: 30 groups; 7.Constant temperature bath: harden glass container a.Bath volume:5.5L b.Temperature range: (5.0～100.0)℃ c.Temperature accuracy: ±0.1℃ d.Total consumption:less 1800W e.Outline dimension: 420×380×900mm(L*W*H) f:Power supply: AC（220±10%）V,50Hz 8.Stirrer: a magnetic stirrer; 9.Standard needle: 2.5±0.05 g and it conforms to the requirements of GB/T4509 and T0604. 10.Shifting holder: It has two ways to adjust the height of standard needle, so it is convenient to let the needle tip just touch the sample surface. 11.Power supply: AC 220 V±10%, 50 Hz. 12.Outline dimension: 280×350×700mm(L*W*H)	Determine the penetration of highway bitumen, modified asphalt, as well as liquid petroleum asphalt or residue of emulsified asphalt after evaporation,inspecting industry materials such as solid granule, powder, colloid, as well as food materials such as cream, glycine, etc.	ASTM D5; GB/T4509, T0604,JTJ052
	Centrifugal Extractor	SYD-0722	1. Rated rotation speed： 3000r/min 2. Power supply：AC（220±10%）V，50Hz 3. Volume：3000g 4. Timer：40, 60, 80, 99（s） 5. Maximum power consumption： 550W 6. Ambient temperature： 10℃～35℃ 7. Relative humidity：≤85% 8. Net weight：34.5Kg 9. Dimension： 430mm×410mm×445mm	Determine bitumen content (bitumen-mineral aggregate ratio) in the bituminous mixture, which is made of viscous petroleum bitumen, by the centrifuge separation method.	ASTM D2172; T0722,JTG E20
	Automatic Centrifugal Extractor	SYD-0722A	1. Capacity：1000g~1500g 2. Extracting precision：≤0.1% 3. Extracting time：(20~40)minutes per time 4. Centrifuging speed：5500r.p.m, 11000r.p.m 5. Working environment：(5~40)℃，RH < 80% 6. Power supply： AC380V±10%, 50 Hz 7. Maximum power consumption： About 5kw 8. Cooling water：Pressure：≮2bar，temperature：≯12℃ 9. Net weight：About 300kg 10. Dimension：1400㎜(L)×800㎜(W)×1600㎜(H)	Determine bitumen content (bitumen-mineral aggregate ratio) in the bituminous mixture, which is made of viscous petroleum bitumen, by the centrifuge separation method.	ASTM D2172; T0722,JTG E20

	Wax Content Tester	SYD-0615	1. Power supply： AC（220±10%）V，50Hz 2. Heating power： 700W 3. Cooling power： 1033W(-23.3℃ standard) 4. Temperature sensor：Pt100 5. Refrigeration medium：R404A 6. Temperature accuracy：±0.1℃。 7. Working environment：-10℃～30℃，RH＜85。 8. Total power consumption：≤1800W。 9.Overall dimension：7350mm×415mm×510mm **Optional accessories** 1.Vacuum drying oven：Model DZF-6020（Recommend） 2. Burning furnace： Model SYD-0615-1 Cracking furnace（Recommend） 3. Balance： 0.1mg,0.1g one set for each	Determine the wax content in the petroleum asphalts by cracking distillation.	ASTM D721,T 0615,JTG E20,SH/T0425
	Distillation Stove	SYD-0615-1	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	The specified equipment and matched with the “SYD-0615 Asphalt Wax Content Tester”	ASTM D6307; SH/T 0425, T0615,JTG E20
	Asphalt Thin Film Oven	SYD-0609	1.Power supply: AC220V±10%，50Hz 2.Power: 2.5KW 3.Temperature of workroom: 163℃±0.5℃ 4.Temperature control accuracy: ±0.5℃ 5.Rotate speed of turn plate: (5.5r±1r)/min 6.Test sample quantity: 4 pieces 7.Size of workroom: 450mm×450mm×510mm 8.Ambient temperature: 5℃～50℃ 9.Relative humidity: ≤85%	Test the quality loss after heating the road asphalt film，test the change of needle penetration, softening point, breaking point and ductility for asphalt residue as need to evaluate the aging resistance property of asphalt.	ASTM D2872, ASTM D1754,T0609,JTG E20
	Asphalt Rolling Thin Film Oven	SYD-0610	1. Power supply： AC（220±10%）V, 50Hz 2. Heating power： 2.4kW 3. Working temperature： 163℃ 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： (5~50)℃ 9. Relative humidity： ≤85% 10. Maximum power consumption： 2.6kW	Determine mass loss of highway asphalt rolling thin film after heating, and the change of penetration, viscosity, ductility and breaking point of asphalt residue after the thin film has been heated, so as to estimate the aging performance of bitumen.	ASTM D2872, ASTM D1754,T0609,JTG E20

	Kinematic Viscometer(Capillary Viscometer Method)	SYD-265E（135℃）	1. Power supply: AC 220 V±10%, 50 Hz 2. Heating power: Two grades; 1000 W (Auxiliary heating) + 600 W (Temperature control) 3. Temperature range: Ambient to 135.0℃ 4. Temperature control accuracy: ±0.1℃ 5. Mercury thermometer: Rod type; scale division is 0.1 ℃; Temperature range is 100℃~150℃; 6. Bath capacity: about 23 L 7. Sample quantity: You can make determination using 3 capillary viscometers at a time. 8. Stirring motor (1) Power: 6W (2) Speed: 1200 RPM 9. Ambient temperature: -10℃～+35℃ 10. Relative humidity: ＜85％ 11. Temperature sensor: Platinum resistance; Pt100 12. Maximum power consumption: 1800 W 13. 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）	Determine the viscosity of decahydronaphthalene solution of polythene and polypropylene at the stipulated temperature，determine the viscosity of asphalt at the stipulated temperature.	ASTM D2170; GB/T1841,T0619
	Kinematic Viscometer(Capillary Viscometer Method)	SYD-265E（180℃）	1. Power supply: AC 220 V±10%, 50 Hz 2. Heating power: 1700 W 3. Temperature range: Ambient to 135.0℃(or 180℃). 4. Temperature control accuracy: ±0.1℃ 5. Mercury-in-glass thermometer: Scale division 0.1℃. Range 100℃~150℃(for maximum 135.0℃) Range 100℃~150℃ and range 150℃~200℃(for maximum 180.0℃) 6. Bath capacity: about 23 L 7. Sample quantity: using 3 capillary viscometers at a time. 8. Stirring motor (1) Power: 6W (2) Speed: 1200 RPM 9. Ambient temperature: -10℃～+35℃ 10. Relative humidity: ＜85％ 11. Temperature sensor: RTD, Pt100 12. Maximum power consumption: 1800 W 13. Capillary viscometer: One group of Cannon-Fenske Opaque capillary viscometers; 7 pieces in total. 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）	Determine the viscosity of decahydronaphthalene solution of polythene and polypropylene at the stipulated temperature, determine the viscosity of asphalt at the stipulated temperature.	ASTM D2170;GB/T1841,T0619

	Bitumen Dynamic Viscometer(Vacuum Capillary Method)	SYD-0620B（Digital）	1. Temperature control mode：Point controlled by digital temperature controller. 2. Temperature control arrange：0.00℃～100.00℃ 3. Temperature control accuracy：±0.01℃ 4. Pressure range：300mmHg±0.5mmHg 5. Timing mode：4 built-in timer. Can do timing for 4 capillary viscometers 6. Timing range：0.0s～99999.9s（27.7h）; Bias ≤0.02% 7. Measurement range：About 18 Pa.s～580000Pa.s 8. Test samples：4 samples 9. Operation interface：Touch-type colored LCD 10. Power supply：AC（220±10%）V , 50Hz 11. Ambient temperature：5℃～50℃ 12. Relative humidity：≤85% 13. Overall dimension：590mm×430mm×630mm 14. Net weight：32.5kg（no water in bath） 15. Maximum power consumption：1800W **Optional part:** 1.Capillary viscometer washer： SYD-0620-3 Capillary Viscometer Washing Apparatus	Determine the dynamic viscosity of sticky petroleum asphalts by vacuum capillary viscometer, also determine other materials which viscosity range is 0.0036～20.000Pa.s.	ASTM D2171,T 0620,JTG E20,SH/T0557
	Vacuum Viscometer Tube Washer	SYD-0620-3	1. The temperature control of water bath: room temperature ～90℃ 2.Washing holes: four 3.Environment temperature: room temperature:～35℃ 4.Relative temperature: ≤85% 5. Power supply: AC（220±10%）V，50Hz 6. Maximum power consumption: no more than 700W 7. Dimension: 380㎜×380㎜×650㎜（Bottles are not included.）	Clean the capillary viscometer tube for testing the asphalt.	ASTM D445
	Bituminous Mixtures Theoretical Maximum Specific Gravity Tester	SYD-0711A	1. Power supply： AC(220±10%)V, 50Hz. 2. Volume of vessel： 4000ml×2 3. Power of vacuum pump： 160W 4. Negative pressure： 3.7 kPa（27.75mmHg）. Allowable bias is ±0.3 kPa. 5. Power of shaking machine： 30W 6. Dimension： 510mm×520mm×380mm **Optional accessory** 1. Constant temperature water bath： HWY-1 Low-temperature water bath	Determine the theoretical maximum specific gravity of bituminous mixtures by vacuum process.design the ratio of bituminous mixtures, survey the road condition or calculate the void ratio and compactness of road construction.	ASTM D2041,T 0711,JTG E20

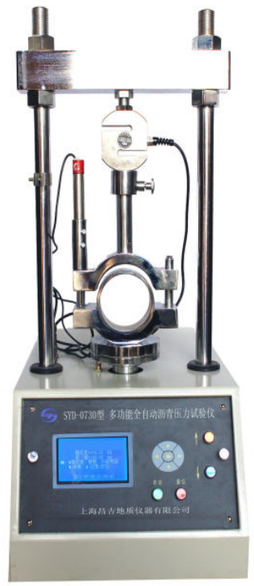
	Asphalt Standard Viscometer	SYD-0621	1. Power supply: AC 220 V±10%, 50 Hz 2. Circular trough: (1) Inner diameter: 160 mm (2) Depth: 116 mm 3. Sample tube: four pieces in a set. The diameter of effuse tube is: φ10 mm±0.025 mm, φ5 mm±0.025 mm, φ4 mm±0.025 mm and φ3 mm±0.025 mm. 4. Ball stopper specification: 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. 5. Temperature controlling range: room temperature～90 ℃. 6. Temperature controlling accuracy: ±0.1 ℃ 7. Time resolution:0.1 s, maximum time value: 999.9 s 8. Heating type: electric heater. Use a circulation pump circulating water bath liquid to control the temperature in the circular trough. Heating power is 600 W. 9. Ambient temperature: -10℃～35 ℃ 10. Relative humidity: ≤ 85% 11. Dimension: length 420 mm, width 340 mm, height 570 mm 12. Maximum power consumption: 700 W	Determine the viscosity of liquid petroleum asphalt, coal pitch and emulsified asphalt at flowing state.	ASTM D139; T0621,JTJ052
	Engler Viscometer	WNE-1B	1. Power supply：AC（220±10%）V, 50Hz 2. Standard water value：(51±1)s 3. Temperature range：(0～100)℃ 4. Temperature control accuracy：±0.1℃ 5. Engler viscosity thermometer：Correspond with GB/T 514 6. Specification of measuring flask：(200±0.2)ml 7. Inner crucible：stainless steel material 8. Timing: Max 999.9s 9. Timing mode: LED electronic timing 10. Heating power：700W 11. Ambient temperature：(-10～+40)℃ 12. Relative humidity： ≤85% 13. Dimension： 430mm×410mm×620mm 14. Maximum power consumption： 800W	Determine the rate of time(seconds) of liquid flow out from Engler viscometer and time(seconds) of distilled water flow out at 20℃ under certain temperature and cubage.	ASTM D1665; GB/T266,JTG E20, Q/YXYY11

	Engler Viscometer	WNE-1C	1. Standard water value: 51±1 s (Water temperature 20±0.1 ℃; 200 ml; It can be converted into water value at 25±0.1 ℃, 50 ml) 2. Temperature range: 0℃～100℃ 3. Temperature control accuracy: ±0.1℃ 4. Thermometer: In accordance with T0622 5. Flask: 100 ml 6. Inner container: Made of stainless steel 7. Power of heater: 550 W 8. Timer accuracy: 1/100 s 9.Outline dimension:200㎜×200㎜×400㎜（L×W×H,without temperature controller） **Optional accessories** 1.Receiving flask: （200ml）2 pieces 2.Engler thermometer: 0～60℃,scale mark 0.5℃ 1 piece 3.Engler thermometer: 50～110℃,scale mark 0.5℃ 1 piece	Determine ratio between the time used by an asphalt sample or other petroleum products sample flowing out of Engler viscometer under a certain temperature and volume, and that of distilled water flowing out of Engler viscometer at 25 ℃.	ASTM D1665; GB/T266,JTG E20, Q/YXYY11
	Saybolt Viscometer	SYD-0623	1. Power supply： AC（220±10%）V 50Hz 2. Instrument structure：Desk type 3. Working mode：Double lines，parallel test 4. Receiving flask：(60±0.0)5ml 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	Determine the Saybolt viscosity of bitumen and bituminous mixtures under a constant temperature	ASTM D88;T 0623,JTJ052
	Asphalt Tenacity Tester	SYD-0624	1.Drag speed:(500mm+10mm)/min; 2.Max drag force:1000N; 3.Dragging force un-linear error:<0.5%; 4.Dragging force sampling interval:0.5mm; 5.Max dragging length:610mm; 6.Power supply:AC220V+10%,50Hz; 7.Maximum power consumption:≤500W; 8.Dimension:520mm*400mm*1220mm. **Choice of the accessories** 1.Constant temperature water bath:HWY-10 multifunctional circulation constant temperature water bath(recommend)	Determine the tenacity under specified conditions and evaluate the effect of asphalt adding modification agent .	ASTM D5081; T0624,JTG E20, SH/T 0735

	Bitumen PAV System(Pressure Aging Vessel)	PAV-1	(1) PAV-1-1 pressuring aging vessel 1.Electricity Power supply：AC（220±10%）V、50Hz Rated power：1100W Rated current：10A 2.Vessel Volume：13L Medium：Air Rated working temp.：110℃±5℃ Rated working pressure：2.1MPa Designed pressure：2.2 MPa Water pressure：2.75 MPa Safety valve opening pressure：2.15 MPa Explosive pressure for rupture disk：2.6 MPa 3. Pressure controller Model：WP962-2(WP-D90) Precision：±0.01MPa 4. Temperature and time controller Model WP962-1(WP-D90) Temperature control precision：±0.1℃ Grading：64×1080min Outage maintaining function：Yes 5. Dimension 630mm×450mm×500mm （2）PAV-1-2 aging vacuum vessel 1.Electricity Power supply：AC（220±10%）V、50Hz Rated power：900W Rated current：10A 2.Vessel Volume：13L Medium：Air Rated working temp.：180℃±5℃ Rated working pressure：Absolute pressure 15kPa Pressure control mode：Electric contact pressure gauge 3. Temperature and time controller Model XMT-E55T2 Temperature control precision：±0.1℃ Time control mode：Button 4. Dimension 560mm×390mm×350mm	Accelerated Aging Test for Bitumen by Pressure Aging Vessel	ASTM D6521,AASHTO PPI,T 0630-2011

	Gyrator Compactor	SYD-XY150-1	1. Movement range for compactor: （0～250）mm 2.Moding sample height range: （50~170）mm 3.Rotary compaction movement accuracy:less 0.10mm 4. Range of gyrate compaction angle: (0~2）°, ±0.02° adjustable. (Calibrated at 1.16°±0.02° internal angle when leaving factory) 5. Rotary compaction pressure: （0~1000）Kpa±3%, (Calibrated at 600Kpa±2% when leaving factory,bigger pressure can be customizable) 6. Rotation speed：30±0.3）r/min,customizable continuous adjustable speed 7.Spinning times: 0~999 8.Displace measurement: （0~220）mm 9.Test model diameter: standard Φ150mm,optional Φ100mm 10.Pressure mode: pneumatic 11、Instrument dimension: 850×640×1800mm(L*W*H) 12、Package dimension: 1000×800×1950mm(L*W*H) 13、Model weight:7.5kg 14、Gross weight:350kg	Use the electro-pneumatic rotary compaction method φ150mm or φ 100mm(optional),for asphalt mixture,emulsified asphalt and cold-recycling mixture as the compaction mold of the cylinder samples to do the asphalt mixture physico-mechanical properties test in laboratory.	ASTM D6925; JT/T 724,JTG E20, AASHTO
	Automatic Breaking Point Tester(Fraass Method)	SYD-0613A	1. Power supply：AC（220±10%）V，50Hz 2. Refrigeration mode：Low temperature circulatory bath 3. Cooling rate：(1±0.5)℃/min 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） Note: We can customize the breaking point tester with measuring range:-40℃～25℃	Determine the temperature which a bitumen tends to break rather to flow when cooled and stressed	JTG E20-2011, GB/T 4510

	Marshall Stability Tester	SYD-0709A	1. Maximum load： 50kN 2. Measuring range： ≤40kN 3. Measuring bias： ≤±0.1kN 4. Overload protection： Automatically protect when load is over 39kN 5. vertical deformation（flow value）： Range 0～20mm, bias ≤±0.05mm 6. Lifting rate for pressure machine： (50±5)mm/min 7. Communication port： RS232 8. Power supply： AC220V±10%，50Hz 9. Ambient temperature： 0℃～60℃ 10.Dimension： 600mm×380mm×840mm 11.Motor power： 550W 12.Net weight： 98kg **Optional accessories** 1,HWY-1 Low temperature thermostatic water bath 2,SYD-0702 Marshall electric compactor	Do the Marshall stability test for bituminous materials.	ASTM D6927; T0709,G E20
	Marshall Stability Tester	SYD-0709A-1	1. Maximum load： 50kN 2. Measuring range： ≤40kN 3.Overload protection: Automatically protect when load is over 39kN 4. Measuring bias： ≤±0.1kN 5. Vertical deformation（flow value）： Range 0～20mm, bias ≤±0.05mm 6. Lifting rate for pressure machine： (50±5)mm/min 7. Communication port： RS232 8. Motor power： 550W 9. Power supply： AC220V±10%，50Hz 10.Overall power consumption: Less 800W 11. Ambient temperature： 0℃～60℃ 12.Dimension：650mm×380mm×840mm(L*W*H) 13.Net weight：98kg **Optional accessories** 1,Constant water bath：HWY-1 low temperature constant water bath(recommended）	Do the Marshall stability test and judge the destroy point for bituminous materials,do the proportion design of the bitumen mixture and inspect the construction quality of the bitumen road.	ASTM D6927;T0709,G E20

	Multifunctional Fully-Automatic Asphalt Pressure Tester	SYD-0730	1. Max. load : 50KN,bending test 5KN; 2.Sensor measuring range: Stability, splitting sensor measuring range ≤ 40KN; Bending sensor measuring range ≤4KN; 3.Loading protection: Loading value>39KN (stability, splitting sensor) and 3.9KN (blending measuring sensor) loading protection function. 4.Measuring error: Bitumen mixture stability measuring error ≤+0.1KN; Bending stability measuring error ≤+0.01KN; 5.Vertical deformation(flow value)measuring range : 0~20mm.Measuring error:≤+0.05mm; 6.Compactor rising speed : 50mm+5mm/min; 7.Communication port: Adopting RS232 serial communication port, and it can realize communication with computer ; 8.Power supply : AC220V+10%,50Hz; 9.Environment temperature: 0℃~60℃; 10.Electric motor consumption: 550W; 11.Dimension: 600mm*380mm*900mm; 12.Total weight: 98Kg.	Determining the stability of bituminous mixtures ,flow value.determination of Marshall stability, bending and splitting as per above standards.	T0709,T0715,T0716,JTG E20
	Multifunctional Fully-automatic Asphalt Pressure Tester	SYD-0730A-1	1.Pressure 1 measurement range and accuracy: range (0~50)kN, accuracy ±0.01kN 2.Pressure 2 measurement range and accuracy: range (0~5)kN, accuracy ±0.01kN 3.Left displacement sensor range and accuracy:range (0~20)mm,accuracy ±0.001mm 4.Right displacement sensor range and accuracy:range (0~20)mm,accuracy ±0.001mm 5.Basic configuration:bending measuring device,splitting fixture,stability holder 6.Servo motor power: 1.5kW 7.Test Lifting speed: (1~50) mm /min 8.Quickly lifting speed: 50mm/min 9.Refrigeration compressor: AC(220~240)V 6.5A 10.Color touch screen size: 800×480mm 11.Heater power: AC220V,1.5kW 12.Environment box inner dimension: 650×340×400mm 13.Power supply:three phase（380±10%）V,3A,50Hz 14.Dimension: 750×695×1775mm（L×W×H）	Determination of Marshall stability, bending , splitting and freeze-thaw splitting as per above standards.	T0709,T0715,T0716,JTG E20

	Multifunctional Fully-Automatic Asphalt Pressure Tester	SYD-0730A	1.Pressure 1 measurement range and accuracy: range (0~100)kN, accuracy ±0.01kN 2.Pressure 2 measurement range and accuracy: range (0~3)kN, accuracy ±0.01kN 3.Left displacement sensor range and accuracy:range (0~20)mm,accuracy ±0.001mm 4.Right displacement sensor range and accuracy:range (0~20)mm,accuracy ±0.001mm 5.Basic configuration:uniaxial compression measuring device,bending measuring device,splitting fixture,stability holder 6.Servo motor power: 1.5kW 7.Test Lifting speed: (1~50) mm /min 8.Quickly lifting speed: 50mm/min 9.Refrigeration compressor: AC(220~240)V 6.5A 10.Color touch screen size: 800×480mm 11.Heater power: AC220V,1.5kW 12.Environment box inner dimension: 650×340×400（mm） 13.Power supply:three phase（380±10%）V、3A、50Hz 14.Dimension: 750 ×695×1775mm（L×W×H）	Determination of Marshall stability, uniaxial compression test(cylinder,prismoid),bending , splitting and freeze-thaw splitting as per above standards.	T0709,T0715,T0716,JTG E20
	Marshall Electric Compactor	SYD-0702	1. Hammer weight： 4536g±9g 2. Fall of Hammer： 457mm±1.5mm； 3. Mould： Suitable for Φ101.6mm×63.5mm 4. Compaction speed： (60±5)times/min 5. Compaction times： (0～999)times 6. Wooden compaction pedestal： 457mm×200mm×200mm 7. Concrete compaction pedestal： 120mm×460mm×480mm 8.Power supply： AC（220±10%）V,50Hz 9.Motor power： 370W 12.Outline dimension： Main: 540mm×540mm ×1790mm(L*W*H) Control cabinet: 400mm×330mm×700mm（L*W*H） 13.Net weight： About 180kg **Optional accessorry** 1. Mold professional ejector 2. Asphalt mixture blender: SYD-F02-20 automatic asphalt mixture blender(recommended)	A standard compacter to be used in Φ 101.6mm×63.5mm cylinder test specimen according to the standard Marshall test,Brazilian test(splitting method).	ASTM D6926,T 0702,JTG E20

	Marshall Electric Compactor(big and small mould)	SYD-0702A	1. Hammer 1： 4536g±9g 2. Hammer 2： 10210g±10g 3. Fall of Hammer： 457.2mm±1.5mm； 4. Mould 1： Suitable for Φ101.6mm×63.5mm 5. Mould 2： Suitable for Φ152.4mm×95.3mm 6. Compaction speed： (60±5)times/min 7. Compaction times： (0～999)times 8. Wooden compaction pedestal： 457×200×200mm 9. Concrete compaction pedestal： 120×460×480mm 10.Power supply： AC（220±10%）V,50Hz 11.Motor power： 370W 12.Overall dimension： 540mm×540mm ×1790mm(L*W*H) 13.Net weight： About 180kg **Optional accessorry** 1. Mold professional ejector 2. Asphalt mixture blender: SYD-F02-20 automatic asphalt mixture blender(recommended)	Test Methods of Bitumen and Bituminous Mixture for Highway Engineering.	ASTM D6926,T 0702,JTG E20
	Marshall Electric Compactor(big and small mould)	SYD-0702A-1	1. Hammer 1：4536g±9g(Φ101.6×63.5mm mold) 2. Hammer 2：10210g±10g(Φ152.4×95.3mm mold) 3. Fall of Hammer： 457mm±1.5mm； 4. Compaction speed： (60±5)times/min 5. Compaction times： (0～999)times 6. Wooden compaction pedestal： 457×200×200mm 7. Concrete compaction pedestal：120×460×480mm 8.Lifting motor power: 0.01KW 9.Color touch screen: 480x270 mm 10.Power supply： AC（220±10%）V,50Hz 11.Motor power： 370W 12.Work environment:temperature -10℃～35℃,relative humidity ≤85% 13.Outline dimension： 1950mm×540mm×540mm 13.Net weight： About 180kg **Optional accessorry** 1. Mold professional ejector 2. Asphalt mixture blender: SYD-F02-20 automatic asphalt mixture blender(recommended)	Test Methods of Bitumen and Bituminous Mixture for Highway Engineering.	ASTM D6926;JTG E20

	Automatic Mixture Blender	SYD-F02-20	1. Blending amount： 20L 2. Temperature control range： Room temperature~200℃ 3. Temperature control accuracy： ±5℃ 4. Timing range： (0~999)s 5. Timing accuracy： ±0.1s 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： 600mm×400mm×1300mm 10. Net weight： 215Kg 11. Power supply： AC（380±10%）V；16A；50Hz（three-phase four-wire with null line 12. Ambient temperature： (-5~+50）℃ 13. Relative humidity： ≤80%	Used to blend the test specimen of bituminous mixtures before production.	T 0702-2011,JTG E20-2011
	Automatic Mixture Blender	SYD-F03-60	1.Blending curbage :60L ; 2.Range of temperature controlling :ambient temperature ~200℃ ; 3.Temperature controlling accuracy :+5℃ ; 4.Timing range :0~999 s ; 5.Timing accuracy :+0.1 s ; 6.Blending speed : (1) Rotation speed: 67 ring /min; (2) Revolution speed: 42 ring /min; 7. Stir motor: 380V, 2200W, 1400 ring/min, 50Hz; 8. Going up and down of the motor: 380V, 750 W, 1400 ring /min, 50Hz; 9. Environment temperature:-5℃ ~+50℃; 10. Environment humidity: ≤80% (relative humidity); 11. Dimension: 1066mm*650mm*2100mm; 12. Total weight: 1100 kg; 13. Power Supply: AC (380+10), 50Hz, 30A (three-phase four-wire system, with zero line).	Blend before making samples of bituminous mixture	JTG E20-2011

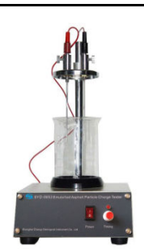
	Automatic Wheel-Track Tester(Normal)	SYD-0719	1. Standards: industrial standard T0719-2011 in JTG E20-2011 2. Grinding rate：(42±1)times/min(one-way) 3. Test wheel movement distance： 230mm±10mm 4. Rubber hardness：78±2 at 60℃,international standard. 5. Loading device： 0.7MPa±0.05Mpa when CPRESS is at 60℃,optional 0.8,0.9Mpa 6. Displacement measuring range：0mm～30mm 7. Displacement measuring accuracy： ＜0.01mm 8. Wheel track test time：60 minutes～240 minutes. 60 minutes is standard 9.Temperature control for constant temperature chamber:Ambient temp.～80℃,precision ±0.5℃. 1) Overall machine dimension: 1320mm×750mm×1400mm(L*W*H) 2) Gross weight: 250kg 3) Sample dimension: 300mm×300mm×50mm(standard),can test the thickness of samples from 30 to 100mm . 10.Work mode: no submerging test 11.Temperature measurement accuracy: ±0.1℃ 12.Environment control accuracy: ±0.5℃ 13.Sample temperature control accuracy: ±0.5℃ 14.Temperature measurement channels: 1 channel 15.Testing sample quantity: 1 piece 16.Maintaining sample quantity: 3 piece 17. Roller motion mode: Test wheeled 18. Power supply (1)Three-phase supply: AC380V, 50Hz, 3Kw, three-phase four-wire system, with zero line. (2)Single-phase supply: AC220V, 50Hz, 5A, single-phase three-wire, with ground line.	Determine the wheel track resistance property of bituminous mixtures under high temperature condition(Immersed in water or not immersed in water),determine the high temperature stability of the bituminous mixtures at site.	T0719,JTG E20
	Wheel-Track Molding Machine	SYD-0703	1.The mill pinion specification :radius is 500mm ,width is 300mm , 2.The mill pinion compaction load control range :(200~700)/cm (do adjustment at random) 3.The mill pinion compaction load controlling accuracy :+3N/cm ; 4.The mill pinion temperature controlling range : ambient temperature ~200℃ ; 5.The mill pinion temperature controlling accuracy :+3℃ ; 6.The compaction times :(12+1) time/min ; 7.Test mode specification:300mm*300mm*(30~100)mm: 8.Dimension :1216mm*640mm*1750mm ; 9.Total weight :500kg ; 10.Power supply :AC380V,50Hz,300W (three-phase four-wire system ,with zero line)	Mill bituminous mixtures to molding,determine the sample making method (wheel-grind method) for other physical and mechanical characteristics of bituminous mixtures.	T0703,JTG E20

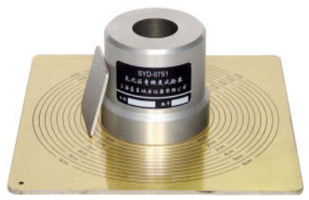
	Automatic Wheel-Track Tester(Single wheel scientific research)	SYD-0719A+SYD-0703	1. Grinding rate： (42±1)times/min (One way) 2. Test wheel movement： 230mm±10mm 3. Rubber hardness： 78±2 at 60℃,international standard 4. Loading device：0.7MPa±0.05Mpa When 60℃ ,adjustable range: 0.5～1.2 Mpa 5.Test sample temperature: 60℃±0.5℃ 6.Temperature measuring accuracy: ±0.1℃ 7. Displacement measuring range： ±0.01mm 8.Thermostatic bath control range: 40～80）℃（Random set）,accuracy: 1℃ 9.Working method: Submerging test and non-flooding test 10.Test sample size: 300×300×50mm(Standard), Wheel-Track test to the thickness 30～100mm of the test sample. 11.Temperature measuring channel quantity: 2 roads 12.Test time: 60 minutes～240 minutes 13.Synchronous testing samples:1 piece 14. The number of healthy specimens: 3 pieces 15.Grinding motion mode: Wheel motion 16.Outline dimension:1520×770×1510mm(L*W*H) 17.Net weight: 350kg 18:Power supply:AC380V,10A,50Hz,3 phase 4 wire	Determine the wheel track resistance property of bituminous mixtures under high temperature condition(Immersed in water or not immersed in water).	T0719,JTG E20
	Automatic Wheel-Track Tester(Double wheels scientific research	SYD-0719B+SYD-0703	1.Main technical specifications (1)Displacement detection range :(0~30)mm ; (2)Deformation detection range: +0.05 mm, resolution: 0.001mm. (3)Temperature controlling range :(40~80)℃ (4)Temperature controlling accuracy: +1℃, resolution: 0.1℃. (5)Height of the sample :300*300*(50~100)mm ; (6)The rubber hardness of mill pinion :National standard hardness 78+2 (60℃) (7)The ground pressure of mill pinion: 0.7Mpa +0.05MPa. (8)The walking speed of dolly: 42 time/min + 1time/min. (9)The walking distance of dolly :(230+10) mm (10)Wheel-track test time: (20~600)min (11)Physical dimension :1520mm*1100mm*1450mm; (12)Dimension :1650mm*1150mm*1630mm ; (13)Total weight: 400kg. 2.Power supply (1)Three-phase power supply: AC380V, 50Hz, Kw, three-phase four-wire system, with zero line. (2)Single-phase power supply: AC220V, 50Hz, 5A, single-phase three-wire, with ground wire.	Determine the wheel-track against capability of bituminous mixtures in high temperature (Immersion and not immersion).determination of the stability of bituminous mixtures in high temperature on site .	T0719,JTG E20

	Automatic Wheel-Track Tester(Three wheels scientific research	SYD-0719C+SYD-0703	① Main technical specifications ⑴ Applicable standards: National Ministry of Transportation industry standard JTG E20-2011 ⑵ Rolling speed of grinding wheel: (42 ± 1) times/ min (one way) ⑶ Test car moving distance: (230 ± 10) mm ⑷ Rubber hardness of grinding wheel: 78 ± 2 (international standard hardness) ⑸ Contact pressure between grinding wheel and test mode: (0.7 ± 0.05) Mpa (60 ℃), it can adjust up to 0.8, 0.9Mpa ⑹ Displacement measuring range: (0 ~ 30) mm ⑺ Displacement measurement accuracy: less than ± 0.005mm ⑻ Test time: (60 ~ 240) min ⑼ Control range of constant temperature box: room temperature ~ 80 ℃ (can be set), control accuracy ± 0.2 ℃ ⑽ Overall dimensions of the machine: 1300mm × 740mm × 1240mm ⑾ Weight of the whole machine: 300kg ⑿ Tryout Size: 300mm × 300mm × 50mm (standard), can do the rutting test of (30 ~ 100) mm thickness of the specimen ② Main technical parameters ⑴ Works: Immersion and non-immersion test ⑵ Ambient temperature control accuracy: ± 1.0 ℃ ⑶ Tryout temperature control accuracy: ± 0.5 ℃ ⑷ Temperature measuring channel number: 2 channels ⑸ Can do specimen number at the same time: 3 ⑹ The number of specimens of health: 9 ⑺ Roller motion mode: Test wheeled ③ Power supply ⑴ Three-phase power supply: AC380V, 50Hz, 10A, three-phase four-wire system, with zero line ⑵ Single-phase power supply: AC220V, 50Hz, 5A, single-phase three-wire, with ground wire	Determine the wheel-track against capability of bituminous mixtures in high temperature.determination of the stability of bituminous mixtures in high temperature on site.	T0719,JTG E20

	Pneumatic Wheel-Track Molding Machine	SYD-0703-1	1.Mill pinion specification :radius is 500mm ,width is 300mm , 2.Mill pinion compaction load control range :(200~700)/cm (adjustment at random,300N/cm before delivery) 3.Mill pinion compaction load controlling accuracy :+3N/cm ; 4.Mill pinion temperature controlling range : ambient temperature ~200℃ 5.Mill pinion temperature controlling accuracy :+5℃ ; 6.Compaction speed: 6 times/min ±0.5time/min 7.Compaction times: software set,default P1 as 4 times,P2 as 12 times 8.Test mode specification :300mm*300mm*(30~100)mm: 9.Outline dimension :1200mm*700mm*2000mm(L*W*H) 10.Total weight :350kg ; 11.Work air source: pressure 0.7Mpa,gas displacement 40L/min 12.Power supply :AC380V,50Hz,3.0kW (three-phase four-wire system ,yellow and green cable as zero line)	Mill bituminous mixtures to molding,determine the capacity of the bituminous mixture to resist high temperature track,and the high temperature stability of the bituminous mixtures matching design etc,test the physical mechanics characteristics of bituminous mixtures.	T0703,JTG E20
	Bituminous Mixtures Vibration Wheel Crushed Machine	SYD-0703-2	1. Total power: 300W 2. Power supply: AC220V, 50 / 60Hz 3. The maximum wheel grinding load: 55kN 4. Rolling schedule: ± 150mm 5. Rolling speed: adjustable, up to 10 times per minute 6. The specimen plate thickness: 50mm ~ 120mm, adjustable 7. Vibration frequency: 0Hz ~ 50Hz, adjustable 8. Compressed air: 0.6MPa ~ 0.8MPa, 700 L/ min 9. Overall dimensions: 1780mm × 950mm × 1550mm 10. The machine Weight: about 750kg	Using pneumatic loading work, suitable for hot mix asphalt material and simulate field conditions make asphalt specimen, the specimen can be used to make rutting test, cut into rods or coring and may be used for indirect tensile test and residual strain. Made of asphalt test block according to European standard or national standard.	JTG E20

	Asphalt Content Tester(Combustion Furnace Method)	SYD-6307	1. Max. sample weight : 4000g , recommended sample weight :(1000~2000) g . 2. Combustion chamber maximum temperature:800℃ ,accuracy :+5 ℃,standard working temperature:538 ℃ 3. Maximum temperature after burning : It can reach to 900 ℃ . 4. Combustion and filtration : It adopts after-burner the second combustion and high temperature filtration technology. The test exhaust emission can reach the standard. 5. Balance accuracy :0.1g ,range of balance :10kg(American imported balance) 6. Test precision :0.10% ; 7. Test time : 1200g sample only needs 30 minutes ; 8. The dimension of the combustion chamber :350mm*440mm*330mm ； 9. Overall dimension : 700mm*800mm*1550mm ; 10. Power supply : AC380V+10V,50Hz, current meter ≤ 40A(three-phase four-wire system, with zero line)	Determine the asphalt content of the bituminous mixtures,analysis the asphalt mixtures after the combustion.	ASTM D6307;AASHTO T308,T0735,JTG E20
	Compacted Bituminous Mixtures Density Tester	SYD-0705	1.Effective volume of the water bath： 83L 2.The power of the refrigeration compressor：1/4 P 3.Power of heating element： 1.3kw 4.Flow rate of circulation water pump： 10L/min 5.Electric balance Max.weight：15kg Reciprocal sensibility: 0.1kg 6.Water bath controlling temperature accuracy： (25+0.5)℃ 7.Power supply： AC(220V+10%)V,50Hz 8.Maximum power consumption： ≤1600w 9.Dimension： 930mm*750mm*1150mm	Determine the bulk volume relative density and the bulk volume density of the water absorption that is less than 2% for kinds of bituminous mixtures specimen by the surface drying method.determine the apparent relative density and the apparent density of the water absorption that is less than 0.5% for the compacted bituminous mixtures specimen by the water weight method.	T0705,JTG E20,T 0707

	Stone Powder Content Tester	NSF-1	1. Rotation speed of stirrer: adjustable, up to 600±60 r/min (As per the Standard). 2. Stirring vane: Φ75±10 mm 3. Cubage of glass bottle: 1 L 4. Timing device: (1) Max.: 90 min (2) Error: ±1 s 5. Measurement error for rotation speed: ±2 r/min 6. Self-controlled speed: 600±60 r/min, 400±40 r/min 7. Self-controlled function: (1) Optional test methods 1 (MB Value of Methylene Blue Test Methods) (2) Test methods 2 (Methylene Blue Rapid Test Methods) 8. Power supply: 220 V, 50 Hz 9. Weight: 8 kg 10. Outline dimension: Main unit:350mm×300mm×450mm(L*W*H) Controller:260mm×230mm×120mm（L*W*H）	Determining stone powder content in the sand.	GB/T14684-2001
	Petroleum Asphalt Four-Component Tester	SYD-0618B	(I) Heating furnace 1. Electric heater power range: 100W ~ 1000W, stepless adjustable; 2. Dimension: 270mm × 160mm × 115mm (length × width × height); 3. Total power consumption: less than 1200W. (II) Circulating water bath --HWY-10 multifunction circulation water bath 1. Bath volume: 10L; 2. Temperature range: -10 ℃ ~ 95 ℃; 3. Constant temperature accuracy: ± 0.2 ℃; 4. The cycle of water: ≥4L / min; 5. Dimensions: 530 mm × 400 mm × 430 mm (length × width × height); 6. Total power consumption: less than 1100W. (III) Base and column 1. Base size: 345mm × 210 mm; 2. Column total height: 1120 mm. **Optional accessories** 1. Vacuum drying oven: a vacuum of 267Pa (2 mm Hg); 2. High temperature furnace: 0 ℃ ~ 1000 ℃, there is an automatic temperature controller; 3. Balance: Weighing 120g, the sense of the amount of 0.1mg.	Measuring petroleum asphalt saturate, aromatic, resin and asphaltene four components.	ASTM D4124;JTG0509,JTG E20,T 0618
	Emulsified Asphalt Particles Ionic Charge Tester	SYD-0653	1. Power supply： AC(220±10%)V,50Hz 2. Working temperature： Room temp.＜35℃ 3. Timing accuracy： 3min±6s 4. Capacity of beaker： 300ml 5. Test voltage： DC(6V±0.3V) 6. Dimension： 280mm×180mm×260mm	Determine the electric charge characteristics of different kinds of emulsified asphalt particles ionics.	T 0653,JTG E20

	Emulsified Asphalt Storage Stability Tester	SYD-0655	1. Base with 10 mm chrome-plated steel plate, stable and reliable; 2. The glass tube holder structure is unique and can be adjusted up and down; 3. Overall design structure is reasonable, elegant appearance. II. Main technical specifications 1. Glass tube: The effective height 310 mm ± 10mm;Mark line 250ml; Sample loading entrance Φ32㎜ ± 0.1mm. 2. Dimension: 210 mm × 110 mm × 370 mm (length × width × height). **Optional accessories** 1. Balance: Weighing 1000g, the sense of it not more than 0.1g; 2. Filter screen: Sieve to 0.18μm.	Determination of various types of emulsified asphalt storage stability	JTG E20,T 0655
	Emulsified Asphalt Consistency Tester	SYD-0751	1. The metal truncated cone: Upper caliber: 38 mm; lower caliber: 89 mm; high 76 mm; 2. The metal plate: 4 mm thick, with a concentric calibration line, spacing: 0.5 cm. 3. Dimensions: 235 mm × 235 mm × 80 mm (length × width × height). **Optional accessories** 1. Balance: Weighing 1000g, the sense of it not more than 0.1g;	Determination of emulsified asphalt slurry seal mixture of consistency for testing emulsified asphalt slurry seal mixture of paving and workability to determine emulsified asphalt slurry seal mixture ratio design with the right amount of water.	JTG E20,T 0655
	Wet Wheel Abrasion Tester	SYD-0752	1.The rotating speed of electric motor :1400rpm 2.Auto-rotation rate of the wheel head :140rpm 3.Revolution rate of the wheel head :61rpm 4.The weight of the wheel head :2.27kg(working quality) 5.The length of the rubber hose for wheel head :127mm 6.Timing :5 min timing 7.Dimension :620mm*500mm*780mm 8.Weight :260kg 9.Power supply :AC 380V,50Hz,380W (three-phase four-wire system ,with zero line) **Optional accessories** 1.Balance :weigh 6000g ,reciprocal sensibility ⩽1g 2.Bake oven :with forced draft ,the temperature can be controlled in (60+3)℃ 3.Constant temperature water bath :HWY-1 low temperature constant temperature water bath	determine the compatibility and water detrimental resistance of the slurry surfacing mixtures after molding,determine the best asphalt content of mixtures together with the load wheel rolling test .	ASTM G105;T0752,JTG E20

	Cohesive Force Tester	SYD-0754	1.The diameter of the rubber pad :Φ28.6mm 2.The thickness of the rubber pad :6.4mm 3.The hardness of the rubber pad :HRC60 4.The max pressure :1Mpa 5.Circular test mode :Φ 60mm*6mm;Φ60mm*10mm 6.Torque spanner :(0-5)N•m 7.Power supply :AC 220V+10%;50Hz **Optional accessories** 1.Balance :weigh 500g ,reciprocal sensibility is less than 0.1g 2.Bake oven :with forced draft ,the temperature can be controlled in (60+3)℃ 3.Air compressor :AU1511 compressor (recommend)	Cohesive Force Test for Slurry Mixtures,confirm the initial setting time and opening time of slurry mixtures .	EN 12274-4;ASTM D3910;T 0754,JTG E20
	Load Wheel Rolling Tester	SYD-0755	1. Rolling frequency: 44 times / min ± 1 times / min; 2. The crank radius: 152mm ± 2mm; 3. Rubber wheel dimensions: diameter 76.5mm ± 1mm, width of 26.0mm ± 1.0mm; 4. Rubber wheel hardness: Between HRC60 ~ HRC70; 5. Rubber wheel loading weight: total weight of the car lay flat 56.7kg ± 0.5 kg; 6. Test mode: There are 6.4mm, 12.7mm thickness of two kinds, according to the need to use the internal dimensions of 50mm × 380mm; 7. Sand frame: internal dimensions of length 355.0 mm × width 38.0 mm × thickness 0.5 mm; 8. Steel plate: dimensions of length 353 mm × width 36 mm × height 3 mm; 9. Dimensions: 1400mm × 260mm × 450 mm (length × width × height); 10. Power Supply: AC380V, 50Hz, 550W (three-phase four-wire system, with zero line). **Optional accessories** 1. Platform balance: Weighing 100g, the sense of it not more than 0.5 kg; 2. Balance: Weighing 2000g, the sense of it not more than 1g; 3. Oven: With forced ventilation, temperature can be controlled at (60 ± 3) ℃.	Controlling the upper limit of the amount of asphalt in the slurry mixture, and determining the optimum asphalt content of slurry mixture with wet wheel wear test.	JTG E20,T 0755

	Bituminous Mixtures Bending Beam Rheometer	SYD-0728	1. Loading capacity：(0~300)N 2. Loading measuring error: ≤±0.1N 3. Measuring range： 0mm~20mm（mid-span deflection） 4. Measuring bias： ≤±0.01mm 5.Temperature control range： -2℃~60℃ 6. Temperature control bias： ≤±0.1℃ 7. Motor power： 90W 8. Compressor power： 1kW 9. Heating power： 2kW 10. Pump power： 45W 11. Communication port： RS232 12. Power supply： AC（220±10%）V，50Hz 13. Total consumption power: 3.2kW 14.Outline dimension: 810mm×540mm×1300mm(L*W*H) 15.Net weight： 86kg	Determine the strain rate of bending creep of bituminous mixtures under specified temperature and loading stress in horizontal condition to evaluate the deformation performance of bituminous mixtures.	ASTM D6648;T0728,JTG E20
	Electric Hydraulic Pressure Ejector	SYD-200S	1.Peakload: 20T 2.Maximun stripper length: 240mm 3.Oil pump working pressure: 30MPa 4.Demoulding speed: 200mm/min 5.Motor power: 1.1kW 6.Power supply: AC380V/50Hz 7.Machine gross weight: 200kg 8.Outline dimension: 530mm×500mm×1050mm(L*W*H)	Used in round specimen to demould,especial in asphalt mixture,cement mixture and higher density specimen by highway industries,constructions industries,universities and colleges,and scientific research institutions ect.laboratory.	