

PREISER



SCIENTIFIC

ALL THE RIGHT STUFF FOR THE
COAL TESTING LABORATORY

An ISO 9001:2008 Certified Company



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Carousel in Model 950



Z92-1206- Model 950 Automatic Sulfur Analyzer
Z92-1205- Model 900 Single Sample Sulfur Analyzer

SULFUR ANALYZER

The 900 Series Sulfur Analyzers use oxidative combustion and a non-dispersive solid-state infrared detection system to perform sulfur analysis on coal, coke and other solids and heavy liquids. Each utilize a micro-computer system, an integral electronic balance and high temperature furnace together with other microprocessor controlled systems to rapidly and accurately determine sulfur content. Two models of the 900 Series are available: a Single Sample Model (shown) and an Automatic Model. In the Automatic Model, which utilizes a rotating sample carousel, all analyzer operations are controlled by the operator through an interactive flat panel touch-screen display, including adding sample information into memory. This graphically based operator interface is designed to allow easy, straight forward operation of the analyzer with minimal operator training. Up to 20 samples can be weighed out into ceramic crucibles and placed into the Automatic Model's carousel. After sample weighing, all operations are unattended. 20 samples can be analyzed in 60 minutes. The Single Sample Model differs from the Automatic version in two major respects: (1) It runs one sample at a time and (2) instead of the interactive touch screen, it has a 4 line LCD display and a separate, simple keypad. The result of an analysis is displayed on a LCD display screen as % Sulfur and is printed out on the provided printer.

- Sample size is 0.350 grams for coals up to 4% sulfur
- Coals having sulfur ranges of 0.1% to 99.99% can be analyzed
- Accuracy is $\pm 1\%$ of the sulfur content of most samples, within the limits of ASTM D4239-05
- Each crucible is positioned at the furnace entry position and an elevator then lifts it into the furnace where the sample is incinerated at 1350°Celsius in an oxygen gas stream
- All sulfur is converted to SO_2 and then measured by the Infrared detection system
- The analyzer calculates and displays the percent sulfur by weight, and prints results
- Dimensions: 43"H x 25"W x 24"D; Weight: 525 lb

PLASTOMETER

The Plastometer is used for the determination of plastic properties of coal by the Gieseler constant-torque method. It is designed to meet the ASTM Standard D-2639, providing critical data necessary for the thorough analyses of coking coals. Single and dual furnace systems are available.

- The low thermal inertia designed solder pot furnace enables rapid initial heat-up to 330°C and quick cool-down from the maximum temperature, thus minimizing time wasted in temperature adjustments.
- A regulated torque is supplied to the rabble arm stirrer, inside a three-piece crucible, through the use of electronically regulated speed and torque control systems.
- The microprocessor control unit automatically regulates the necessary power to the solder pot furnace by monitoring a type J (Iron-Constantan) thermocouple.
- During the actual test the temperature of the furnace is increased at a uniform rate of 3 °C per minute over the operator-selected temperature range.
- Dimensions: 30"H x 54"W x 36"D; Weight: 345 lb



Z91-3900- Model 4000 Gieseler Plastometer

PLASTOMETER & DILATOMETER DUAL SYSTEMS



Z91-3920- Model 6300 Plastometer/Dilatometer

Preiser Scientific's new 6000 Series of Plastometer/Dilatometer controllers provide for great flexibility by allowing two Plastometer units or two Dilatometer units to be run with only one controller. The Model 6300 additionally provides for one Gieseler Plasticity and one Audibert-Arnu test to be performed at the same time using one controller. Multiple Furnace Systems are:

Z91-3920-01 Model 6100 Dual Plastometer

Dimensions: 30"H x 72"W x 36"D; Weight: 390 lb

Z91-3920-02 Model 6200 Dual Dilatometer

Dimensions: 35"H x 72"W x 36"D; Weight: 447 lb

Z91-3920-03 Model 6300 Plastometer / Dilatometer

Dimensions: 35"H x 72"W x 36"D; Weight: 441 lb

DILATOMETER

The Preiser Dilatometer is used for the determination of the expansion and contraction of coal as a function of temperature. It is designed with state of the art microprocessor technology; the most precise and efficient model available. The fully automatic system is designed around ASTM D 5515 and ISO Standard 349 for the Audibert-Arnu method of analysis. Single and dual furnace systems are available. (see page 2)

- Furnace is of low thermal inertia design, thereby making possible the rapid interchange of heat between the furnace itself and the dilatometer tube assembly situated in the high grade brass alloy core of the furnace.
- Design permits rapid cooling back to the initial programmed test temperature, allowing increased utilization of the dilatometer for testing samples.
- Furnace system is equipped to run two samples simultaneously and two separate LVDT's (Linear Variable Differential Transducers) are provided for very precise measurement of positive or negative movement of the two samples
- During the test, the temperature is increased at a uniform rate of 3°C per minute over the operational range of 330°C to 540°C.
- Has a 10.4 inch TFT "touch-screen" monitor that gives run, plot, and diagnostics. Pentium CPU with minimum of 10 Gbytes storage on a Windows based operating system that will allow recall and overlay of up to 6 data plots on one screen. Can be connected to LAN through the provided Ethernet port. RS232 feature available upon request.
- Dimensions: 35"H x 54"W x 36"D; Weight: 396 lb



Z91-3910-01 Model 5000 Audibert-Arnu Dilatometer
Z91-3910-02 Model 5000 Ruhr Dilatometer



Z91-2290- Air Drying Oven

AIR DRYING OVEN

The Preiser Air Drying Oven provides for the partial drying of coal to bring it to near equilibrium with room temperature before further reduction and division in accordance with ASTM D2013. Oven is often used for drying float/sink samples.

- Large and roomy mechanical convection oven that contains 6 shelves.
- Control panel with solid-state digital temperature control that maintains temperature uniformity throughout the oven using two 24-hour interval timers to operate the heating elements and the fan motor.
- Temperature range from 0-105°F.
- Dimensions: 78-1/2"H x 35"W x 29-1/2"D; Weight: 623 lb

HARDGROVE GRINDABILITY

Preiser Scientific's Grindability Tester is a compact precision built instrument designed specifically for the determination of the relative "hardness" or abrasive potential of coal. Unit is constructed in strict accordance with ASTM Designation D-409 and conforms to procedures proposed by ISO for the determination of the Hardgrove Grindability index of coal and coke.



Z90-9301- Hardgrove Gindability Machine

- Stationary lower steel grinding bowl is mated with an upper grinding ring consisting of eight steel balls that rotate at 20 rpm.
- Grinding ring is rotated by a motor/belt driven spindle to which 29 kg of removable weights are attached that bear onto the eight rotating balls.
- A counter/switch assemble totals the number of revolutions and automatically stops the machine at the end of 60 revolutions.
- Sample loading is remarkably easy because of the design of the machine.
- Machine is virtually maintenance free because high-quality and durable materials are used in the manufacture of this instrument.
- Dimensions: 25"H x 24"W x 18"D; Weight: 312 lb

Electrical requirements must always be specified.

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CRUSHER



91-6830- Holmes Model 401XL Crusher

Model 401XL has a capacity of 4000 pounds per hour using a 3/8" diameter perforated screen plate; 2500 pounds using a 3/16" diameter screen. It is recommended for crushing 6-inch and smaller material to minus-4 mesh. Machines are available for many different electrical specifications and for hazardous locations.

- The covered feed hopper with a capacity of 1.6 cubic feet (70 lb) has a manual-feed control gate.
- Stressing safety in operation, its open latch sensor cuts all power and a reset button must be actuated before re-starting the machine.
- The rotor swing-hammers and all 3/16" thick screen plates are heat-treated and hardened.
- Screen plates have round-hole perforations. Available perforation diameters are (in inches) 1/8, 3/16, 1/4, 5/16, 3/8, 1/2, 3/4, and 1. Two plates are included with purchase and sizes must be specified.
- The Nema-12 magnetic starter provides a control circuit and overload protection for the 7 1/2 HP, TEFC motor.
- The rotor speed is 1260 rpm; with interchange "V" pulleys, 2360 rpm.
- Dimensions: 56"H x 36"W x 39-1/2"D; Weight: 1040 lb

SAMPLE CUTTING STATION

The Model 1400 sample cutting station accepts crushed sample feed from a Holmes crusher. The belt conveyor discharges the sample over a reciprocating stainless steel cutter.

- Built to mate with the 401XL crusher
- Constructed of painted steel
- Includes two sample containers that hold 1375 cu.in. each
- Splitter operation is either continuous or intermittent via a 0-150 second dial
- Dimensions: 62"H x 35"W x 86"D; Weight: 2000 lb



91-8400- Holmes Model 1400 Sample Cutting Station

CRUSHER

Model 201XL has a capacity of 1000 pounds of coal per hour using a 3/16" diameter perforated screen plate; 500 pounds using a 1/16" diameter screen. It is recommended for crushing 2-inch and smaller material. Machines are available for many different electrical specifications and for hazardous locations.



91-6730- Holmes Model 201XL Crusher

- The covered feed hopper with a capacity of 0.40 cubic feet (20 pounds) and has a manual-feed control gate.
- Stressing safety in operation, its open latch sensor cuts all power, and a reset button must be actuated before re-starting the machine.
- The rotor-swing hammers and all 3/16" thick screen plates are heat-treated and hardened.
- Screen plates have round-hole perforations. Available perforation diameters are (in inches) 1/16, 3/32, 1/8, 3/16, 1/4, 3/8, and 1/2. Two plates are included with purchase and sizes must be specified.
- The Nema-12 magnetic starter provides a control circuit and overload protection for the 2 HP, TEFC motor.
- The rotor speed is about 3450 rpm.
- Dimensions: 43"H x 25"W x 28"D; Weight: 340 lb

JAW CRUSHER

The Jaw Crusher will efficiently reduce limestone and rock, or any dry friable material. All units are easy to clean with easy access to all crushing surfaces. It will increase productivity and ease your operation. Exceptional crushing capacity with minimum power consumption is obtained by the unique movable jaw motion. This insures maximum production in the lab and field.

- Ruggedly designed to absorb the shock and impact of constant use.
- Easy access to all parts for rapid cleaning and maintenance.
- New space saving motor mounting design.
- Feed hopper and safety guards standard with units supplied with a motor.
- Heavy duty fabricated steel main frame.
- Easy jaw adjustment.
- Dimensions: 42"H x 36"W x 43"D; Weight: 782 lb



91-6509- Jaw Crusher

JAW CRUSHER

Designed for grinding virtually any material, the Jaw Crusher is especially recommended for metallurgical, assay, soil and commercial/industrial laboratories. Rigorous demands of a pilot plant operation require tough equipment, quickly and easily adjusted. All our laboratory equipment is constructed to meet and exceed these demands.

- Fabricated steel feed hopper and heavy cast iron main frame.
- Crusher and motor are mounted on a heavy, tubular steel base.
- Swinging jaw provides double impact, due to a single toggle design, creating a forward and downward motion.
- Single toggle is handwheel adjusted for easy control of jaw opening.
- Fabricated steel flywheel and sheave guards ensure safe operation.
- Dimensions: 28"H x 44"W x 25"D; Weight: 600 Lb



91-6500- Jaw Crusher

ROTARY SAMPLE DIVIDER

The Preiser Rotary Sample Divider (RSD) provides fast and accurate sub-division of coal, minerals, ash and other granular samples. The RSD can be customized for throughput rate, sample top size, and division ratio. It can be used for mixing samples prior to subdivision by processing sample several times through the RSD

- All contact parts such as hopper, vibrator feed tray, "U" covers, divider segments and overflow pans are constructed of stainless steel.
- Can be used to produce 1 to 16 sample splits in various combinations. Select divider segments on basis of nominal top size, capacity, and sample division ratios. Segments available to produce 1/16th, 1/8th, and 1/4th splits.
- Hopper is 1.8 cubic feet (51 liters) with a 4" X 6" gate to allow accurate splits of samples up to 1-1/3" top size.
- Feed rate is adjustable to allow greatest level of sampling precision.
- Hopper feed section can be used alone to feed small jaw crushers and pulverizers.
- "U" covers act as sample stream cutters and prevent sample loss. Covers must equal the number of divider segments.
- Dimensions: 44"H x 56"W x 33"D; Weight: 650 lb



FRS-440749A Rotary Sample Divider

RIFFLES / SPLITTERS



Model #50XL is a totally-enclosed, floor-model, sample riffle consisting of feed chutes, spouts, and drawers of 20-gauge galvanized steel. This riffle has 14 spouts, 1" wide for minus-4 mesh coal. Optional tilt lugs are available for containers and are bolted to the feed chute. A dolly, which will raise the riffle about three inches, is also optional.

- The safety enclosure is 18-gauge steel, painted on both sides.
- To inspect or clean the interior, simply lift out the feed chute, remove the drawers, and open the doors.
- Bolted construction is used for the enclosure and in areas out of the sample flow.
- Overall Size: 35 3/4"H x 17"W x 31"D; Weight: 155 lb

91-8138-01 Holmes Model 50XL Riffle, Galvanized Interior

91-8138-02 Holmes Model 50XL Riffle, Stainless Steel Interior

Model #60XL is a totally-enclosed, floor-model, sample riffle consisting of feed chutes, spouts, and drawers of type-304 stainless steel. This riffle has 28 spouts, 1/2" wide for minus-8 mesh coal. Optional tilt lugs are available for containers and are bolted to the feed chute. A dolly, which will raise the riffle about three inches, is also optional.

- The safety enclosure is 18-gauge steel, painted on both sides.
- To inspect or clean the interior, simply lift out the feed chute, remove the drawers, and open the doors.
- Bolted construction is used for the enclosure and in areas out of the sample flow.
- Overall Size: 35 3/4"H x 17"W x 31"D; Weight: 155 lb



91-8139-01 Holmes Model 60XL Riffle, Galvanized Interior

91-8139-02 Holmes Model 60XL Riffle, Stainless Steel Interior

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Model #70XL is a totally enclosed, floor model sample riffle consisting of feed chutes, spouts and two drawers of type-304 stainless steel. This riffle has 18 spouts, 3/4" wide for minus-6 mesh coal. Optional tilt lugs are available for containers and are bolted to the feed chute.

- The safety enclosure is 18-gauge steel, painted on both sides.
- To inspect or clean the interior, simply lift out the feed chute, remove the drawers, and open the doors.
- Bolted construction is used for the enclosure and in areas out of the sample flow.
- Dimensions: 35-3/4"H x 17"W x 31"D; Weight: 155 lb

91-8140-01 Holmes Model 70XL Riffle, Galvanized Interior

91-8140-02 Holmes Model 70XL Riffle, Stainless Steel Interior

RIFFLES / SPLITTERS



Model #15FXL is a totally-enclosed, bench top, sample riffle consisting of feed chutes, spouts, and drawers of type-304 stainless steel. This model has a built-in stainless steel feed hopper. This riffle has 24 spouts, 3/8" wide for minus-20 mesh dry material.

- The safety enclosure is 18-gauge steel, painted on both sides.
- Fabricated stainless steel spouts for long wear and service life.
- Two doors on piano-type hinges allow access to the lower portion of riffle spouts for cleaning between samples.
- The totally enclosed construction minimizes dust evolution and prevents loss of sample due to grain bounce during riffling.
- Dimensions: 22"H x 11"W x 15"D; Weight: 35 lb

91-7985-01 Holmes Model 15FXL Riffle, Stainless Steel Interior

Model #17FXL is a totally-enclosed, bench top, sample riffle consisting of feed chutes, spouts, and drawers of type-304 stainless steel. This model has a built-in stainless steel feed hopper. This riffle has 24 spouts, 1/2" wide for minus-20 mesh material. It is a larger version of the 91-7985-01, Model 15FXL.

- The safety enclosure is 18-gauge steel, painted on both sides.
- Fabricated stainless steel spouts for long wear and service life.
- Two doors on piano-type hinges allow access to the lower portion of riffle spouts for cleaning between samples.
- The enclosed construction minimizes dust evolution and prevents loss of sample due to grain bounce during riffling.
- Dimensions: 22"H x 15"W x 15"D; Weight: 50 lb



91-7987-01 Holmes Model 17FXL Riffle, Stainless Steel Interior

Model #18FXL is a totally-enclosed, bench top, sample riffle consisting of feed chutes, spouts, and drawers of type-304 stainless steel. This model has a built-in stainless steel feed hopper. This riffle has 24 spouts, 3/4" wide for minus-6 mesh material. It is a larger version of the 91-7987-01, Model 17FXL.

- The safety enclosure is 18-gauge steel, painted on both sides.
- Fabricated stainless steel spouts for long wear and service life.
- Two doors on piano-type hinges allow access to the lower portion of riffle spouts for cleaning between samples.
- The totally enclosed construction minimizes dust evolution and prevents loss of sample due to grain bounce during riffling.
- Dimensions: 22"H x 21"W x 15"D; Weight: 60 lb



91-7988-01 Holmes Model 18FXL Riffle, Stainless Steel Interior

PULVERIZER

Holmes Pulverizer Model 501XL has a capacity of 400 grams of coal per minute using a screen with 0.024" diameter perforations and is recommended to pulverize minus-4 mesh coal to minus-60 mesh. This pulverizer is available either as a spring base (shown) or as an air base (cover), with a standard hopper (shown) or an extended feed hopper. Motors and wiring for hazardous locations are available.

- A quick opening latch provides easy access to the pulverizer and cuts power to both motors when the door is open.
- Available screen plate perforation diameters are (in inches) 0.020, 0.024, 0.033, 0.040, 0.0625, and 0.093. Also available are 0.010 X 17/32 inch slots. Three plates are included with purchase and sizes must be specified.
- The 390-cubic inch (6390 cm³) sample cup is tinned to prevent corrosion.
- The feed auger is chain-driven from an enclosed 1/8 HP, 2.7 amp, 115 V, single phase, TENV, AC gear motor. The auger speed is about 130 rpm.
- The rotor is belt-driven by a 1 HP, TEFC motor. The speed is about 8200 rpm. The 1.5" P.D. Poly V sheave will increase the speed to about 10,300 rpm.
- An enclosed Nema-12 motor starter has overload protection for each motor. The open-door sensor cuts all power until the reset (stop) button is actuated.
- Dimensions: 23 or 26-1/2"H x 19-1/2"W x 27"D; Weight: 244 lb



91-7121- Holmes Model 501XL Pulverizer



91-6508- Vibratory Pulverizer

VIBRATORY PULVERIZER

This pulverizer is designed for the efficient grinding of production samples. The Vibratory Pulverizer uses two rings and a puck inside an 8" hardened chrome alloy steel grinding bowl. A specially designed motor directly coupled to a rotating eccentric swings the bowl and components at a precise speed and distance for maximum grinding efficiency. Rapidly reducing a 1/2" (13 mm) wet or dry sample of mineral, ore, rock, soil and similar materials to a fine mesh of 400 +.

- Starting switch and timer.
- Insulated Cabinet for reduced operating noise.
- 900 rpm
- Dimensions: 43"H x 24"W x 24"D; Weight: 380 Lb

ROTARY SAMPLE DIVIDER

The sample divider PT 100 is a rotating divider. It divides the sample so exactly that the composition of each fraction of the sample corresponds exactly to that of the original bulk sample. This procedure guarantees a very high degree of dividing accuracy and reproducibility with both fine and coarse materials. The material feed and dividing processes take place automatically, without interruption and without loss of material.

Applications include cement clinker, chemicals, coffee, construction materials, fertilizers, fillers, flours, grains, metals powders, minerals, nuts, sand, seeds, soils, washing powder, etc.

- Speed is monitored and kept constant
- Feed size* ≤ 10 mm and batch size / feed quantity* ≤ 5000 ml
- Number of divisions 6 / 8 / 10 and time setting 1 - 60 min / continuous operation
- Dimensions: 1736"H x 24"W x 17"D; Weight: 75 Lb



91-7101- Rotary Sample Divider

ANALYTICAL BALANCE



Model HR-120 is an easy-to-use analytical balance that is durable, adapts to your environment, and provides great flexibility and resolution. This model is a Legal-for-Trade balance approved by NTEP. Options include an (RS-232C/current loop) serial interface, a 20mA current loop interface, and a rechargeable battery pack (NiMH). Includes push button calibration.

- Multi-Functional Weighing: %, Counting, Grams, mg, Oz, ozt, dwt, ct, mom, GN, t, TL
- System Diagnosis: Identifies Overload, Weighing Pan Error, Power Failure, Digital Tare Error, Calibration Errors & Low Battery
- Selectable weighing filters ensure fast and stable results in all environmental conditions.
- Large weighing chamber is accessible from either side or top.
- Outputs Serial Number of the Balance: Identifies stolen balance & greatly reduces capital goods inventory control. Enter balance's ID Number: For GLP records & identifying the balance
- Five (5)-year warranty
- Dimensions: 11.9"H x 8.4"W x 12.6"D; Weight: 12.5 lb

90-1694- Analytical Balance, 120 gram

TOP LOAD BALANCE / SCALES

The GX Series is produced as a single-size, low-profile, esthetically pleasing instrument. It is available in a choice of eight different capacities ranging from 210g to 8100g. Various resolutions and optional glass breeze breaks are also available.

- Large, bright Vacuum Fluorescent Display. You can see the display even in the dark.
- ACAI Counting Function for highly accurate counting.
- Fast, new Super Hybrid Sensor gives you the ultimate in response speed.
- Percentage, Counting Functions & Comparator functions.
- Capacity = Gram: 6100; Decimal Ounce: 215.170; Troy Ounce: 196.1195; Pennyweight: 3922.39; Carat: 30500.00; Momme: 1626.665; Grain Unit: 94137.4
- Accuracy = Percentage Min. Div: 0.01%; Counting Min: 0.01g;
- Linearity: $\pm 0.02g$; Repeatability: 0.01g; Stabilization Time: 1.5 seconds typically;
- Sensitivity Drift: $\pm 2ppm/^{\circ}C$ ($10^{\circ}C \sim 30^{\circ}C / 50^{\circ}F \sim 86^{\circ}F$)
- Pan Size: 165 x 165mm/ 6.49 x 6.49 inches
- Dimensions: 3.38"H x 8.26"W x 12.48"D; Weight: 2.05 lb



90-1712- Top Load Balance. 6100 gram

DESICCATING CABINET



90-6275-01 Desiccator Cabinet

Desiccator, with cement board shelves for storing reagents or samples, drying specimens or cooling crucibles.

- * Durable, hand crafted construction. Fabricated from stainless steel and glass.
- * Superior seal integrity
- * Rigid door full length door hinges
- * One piece neoprene door gasket
- * Shelves are adjustable in half-inch increments
- * Dimensions: 12-1/4"H x 12-1/2"W x 12-1/4"D; Weight: 23 lb

Electrical requirements must always be specified.



91-9000- TS-1 Testing Screen

TS-1 SCREENER

Coal samples for the laboratory have never been so easy to size using the Testing Screen Model TS-1. The Testing Screen (TS-1) handles sample batches up to one cubic foot and separates from two to seven sizes simultaneously in three to five minutes. Designed primarily for the 4 inch to No. 4 size range, the screen will handle smaller amounts of finer materials down to No. 200 mesh.

- Makes tests quick and accurate while separating up to 7 sizes per test.
- Few moving parts, low maintenance, sturdy construction.
- Large selection of convenience accessories. Coarse series screens are available from 4" to No. 4, in steel wire cloth. Also available are the Intermediate series in No. 5, to No. 14, in brass wire cloth, and the Fine series from No. 16 to No. 100 in brass wire cloth. Size No. 200 is available only in phosphor bronze wire cloth. Screen trays are also available in round hole screens, from 4" to 1/8". Five screen trays are included with purchase and sizes must be specified.
- Screen trays independently removable with visible separation to refusal.
- The TS-1 is a hydraulic clamping model.
- Dimensions: 43"H x 23"W x 31"D; Weight: 485 Lb

SCREENS

Replacement screen trays and wire cloth for Testing Screens in "ASTM SIZES" are manufactured to meet wire cloth specifications of ASTM E 11 and AASHTO M92. Some screen size designations also conform to many International sieve Standards, such as International Standards Organization (ISO 565). Wire Cloth is plain steel (S), or stainless steel (SS).

The "ROUND SIZES" are punched round hole openings in steel plate as used for testing coal (ASTM D 4749), wood chips (TAPPI T16), and other special materials.



91-9010 Series TS-1 Screens



91-9184- Sieve Shaker

SIEVE SHAKER

The Ro-Tap is the industry standard in test sieve shakers. Unique two-dimensional operation - a horizontal, circular motion and a vertical, tapping motion - allows material particles to stratify and "seek" critical openings in the test media. The result is the most accurate and consistent particle analysis testing. Designed for heavy duty use and requires minimal maintenance.

- 99 minute digital timer/clock. Serialized for complete traceability.
- The RX-29 model is recommended for testing with full height 8" diameter test sieves. One sample can be tested on a series of six sieves of different openings with one operation of the Ro-Tap. (RX-30 model, 91-9184-13 for 12" sieves, is also available)
- Full height brass sieves with stainless steel cloth are normally recommended, but brass sieves with brass cloth or stainless steel sieves with stainless steel cloth are also available. Half height sieves may be special ordered.
- Dimensions: 25"H x 28"W x 21"D; Weight: 190 lb

TEST SIEVES

PREISER 91-9137 SERIES 8" DIAMETER FINE TEST SIEVE WITH A BRASS FRAME AND BRASS WIRE CLOTH

PREISER 91-9139 SERIES 8" DIAMETER FINE TEST SIEVE WITH A BRASS FRAME AND STAINLESS STEEL WIRE CLOTH

PREISER 91-9141 SERIES 8" DIAMETER FINE TEST SIEVE WITH A STAINLESS STEEL FRAME AND STAINLESS STEEL WIRE CLOTH

PREISER 91-9145 SERIES 8" DIAMETER COARSE TEST SIEVE WITH A BRASS FRAME AND STAINLESS STEEL WIRE CLOTH

PREISER 91-9147 SERIES 8" DIAMETER COARSE TEST SIEVE WITH A STAINLESS STEEL FRAME AND STAINLESS STEEL WIRE CLOTH



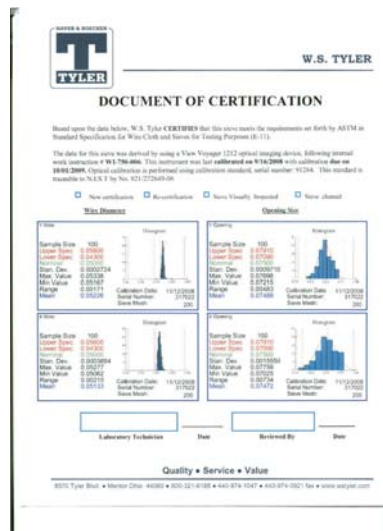
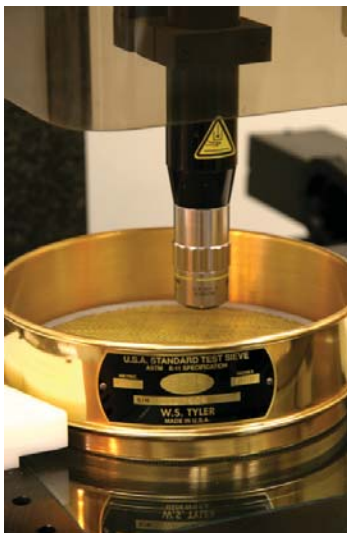
- 8" diameter test sieve conforms to the ASTM E-11 Specification. The test sieve is constructed with a sturdy brass frame or stainless steel frame and brass cloth or stainless steel wire cloth. This product is available in standard full height (2-5/8" overall height- pictured) or half height (1-5/8" overall height) designs.
- Each sieve is supplied with a serial number and a matching test sieve Certificate of Compliance.
- NIST Traceable examination is available.
- Supplied with labeled storage carton.
- 3", 12" and 18" diameter sieves also available.
- Bottom pans in brass or stainless steel.
- Top covers in brass or stainless steel.

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Part #	91-9137 B/B	91-9145 B/S
Suffix	91-9139 B/S	91-9147 S/S
	91-9141 S/S	91-9147 S/S
01	No.3.5	NA
02	No.4	NA
03	No.5	4"
04	No.6	3-1/2"
05	No.7	3"
06	No.8	2-1/2"
07	No.10	2.12"
08	No.12	2"
09	No.14	1-3/4"
10	No.16	1-1/2"
11	No.18	1-1/4"
12	No.20	1.06"
13	No.25	1"
14	No.30	7/8"
15	No.35	3/4"
16	No.40	5/8"
17	No.45	.530"
18	No.50	1/2"
19	No.60	7/16"
20	No.70	3/8"
21	No.80	5/16"
22	No.100	.265"
23	No. 120	1/4"
24	No.140	NA
25	No.170	NA
26	No.200	NA
27	No.230	NA
28	No.270	NA
29	No.325	NA
30	No.400	NA

CERTIFIED TEST SIEVES

This service is available for new and in use test sieves. A sophisticated examination provides NIST Traceable information and is detailed in a series of histograms.



LARGE CABINET OVEN



91-2161- Large Cabinet Oven

X2 Horizontal Air Flow Cabinet Oven, Designed to meet ASTM D2961 for Single-Stage Total Moisture in Coal. The X2 oven is a heavy duty cabinet oven with a space-saving design. Ovens are available as Class "A" or Class "B", any voltage, and with gas or electric heat. All ovens are of welded steel construction and quality components are used throughout. Ovens come with a limited warranty and are factory wired and tested before shipment. Ovens meet or exceed NFPA-86, NFPA-70, OSHA & UL requirements.

- Meets or exceeds NFPA-86, NFPA-70, OSHA & UL requirements
- Factory wired, tested with temperature survey and balanced before shipment
- Reinforced steel doors with ball bearing heavy duty hinges
- Uniform temperature throughout oven
- Heavy duty blowers and full horizontal air flow
- Pre-wired NEMA 1 control cabinet with UL approved controls
- Safety interlocks shut off heat if safety requirements are not ALL met
- Digital indicating temperature controller and solid state excess temperature controller
- Heavy duty, large diameter, Incoloy® sheathed, low watt density heating elements
- Dimensions: 82"H x 78"W x 36"D, Chamber- 60"H x 55"W x 30"D; Weight: 2710 lb

MOISTURE OVEN

The Preiser Model 100 Moisture Oven is designed to determine the moisture content of coal as per ASTM Standard D3173. It consists of a specially designed low temperature oven coupled with a microprocessor based temperature control system for drying samples up to 115°C.

- The oven, controls, and air system are housed in a compact "table-top" cabinet.
- The cylindrical stainless steel drying chamber is 8" diameter x 9½" deep.
- Input air passes through the manual control flow meter which is adjustable from 0-25 L/min.
- After it passes through the flow meter, it is preheated and passed into the oven chamber, over the samples, and out the rear mounted exhaust port.
- Accessory Z91-1632-05 and Z91-1632-06 Combination Crucible/Weighing Bottle Trays permit multiple samples to be dried at the same time in a convenient manner.
- Dimensions: 15"H x 20"W x 22"D; Weight: 102 lb



Z91-1632- Model 100 Moisture Oven

LAB OVEN



91-2340- Lab Oven

Premium Mechanical Convection Oven, 3.75cu.ft. / 106L, 50C to 275C,

Featuring advanced microprocessor controls and temperature stability, our premium ovens are ideal for your precise heating applications with a temperature range of 50°C to 275°C. Intuitive microprocessor controls deliver detailed information on current temperature and set-points.

- Mechanical convection provides uniform heating, precise temperature control and fast drying using a blower that circulates heated air in a horizontal airflow pattern.
- Temperature uniformity at 200°C proficient to $\pm 3^{\circ}\text{C}$
- Visual over-temperature alarms and built-in safety backup maintains temperature control at 5°C above setpoint should the primary control fail.
- A silicone gasket on the oven door prevents heat loss and low density heating elements ensure long life.
- Enamel-painted steel exterior and a stainless-steel interior are easy to clean.
- Dimensions: 23"H x 25.8"W x 23.5"D, Chamber – 20"H x 18"W x 18"D; Weight 150 lb

ASHING FURNACES



Combines microprocessor based programmability with a special furnace design that makes it ideal for coal and coke ashing procedures meeting ASTM D3174 specifications. The coal ashing furnace incorporates a three mode controller consisting of a 2-ramp programmable control which allows programming the rate of temperature increase and decrease (ramp), and length of time the temperature holds at specific levels (dwell). Includes two stainless steel trays and handle. Electrical connection requires fixed wiring; no power cord supplied.

- Model F6000-60 meets ASTM D3174 specifications: 3-4 air exchanges per minute. Heating rate of 8C/min. 500C, 6C/min. from 500C to 750C. Holds at 750C for two hours, then turns off.
- Temperature range is 100C to 975C (212F to 1787F).
- Adjustable gas flow meter/valve (0-80 l/min.) conveniently located on front allows easy adjustment of airflow rate.
- Stainless steel manifold at rear chamber pre-warms incoming gases; provides maximum temperature gradient of only 3C at 750C.

90-8541- Ashing Furnace

- The rear of the chamber incorporates a 0.38" (0.95 cm) diameter port for monitoring chamber temperatures with independent measuring devices and a 0.25" ID or 0.375" OD hose barb on back of unit to connect with an inert gas line.
- Temperature to 975C with standard stainless steel manifold or Temperature to 1093C with optional inconel manifold.
- An enlarged vent hole on top of the furnace accepts 2" diameter flexible tubing for air exhaust.
- Dimensions: 21"H x 19-1/8"W x 20"D, Chamber 6-3/4"H x 12-3/4"W x 10"D; Weight: 134lb

Heavy-duty furnace for coal ashing with a temperature range up to 1100°C. Meets ASTM D3174, D2361 and D2795. Features furnace chamber design which provide capacity for large number of crucibles and promotes faster combustion. Includes one inconel sample tray and handle.

- Available in two models, this single chamber model has a resistance wire wound refractory muffle, a digital programmable controller and a controller for over-temperature protection.
- The dual chamber version (Z90-8531-01) uses two separate element segments of resistance wire embedded in a refractory concrete slab.
- The Digital Programmable Controller is an 8 segment system - any segment can be ramp or dwell - with dual display showing the measured value and set point or program status. An additional controller is added for control of the second set of elements
- Both systems have an outward and upward swinging door with a power isolation switch for protection of the operator when opened.
- A 50 mm ID chimney fitted to each chamber creates a natural draft, with air entering the rear and then being preheated before flowing through the front and over the samples. This design provides for very thorough ashing of all coal samples, regardless of their position in the furnace.
- Dimensions: 705mmH x 505W x 725D. Chamber: Single - 90mmH x 170W x 455D – Dual/Each 60mmH x 190W x 400D; Weight: 140lb



Z90-8530- Ashing Furnace



90-8538- Ashing Furnace

These benchtop furnaces feature a three-step multi-stage programmable system for management of time, temperature and rate. Three-step program can be linked for six-stage operation and up to seven-day delay start. Each is constructed with a heavy gauge steel cabinet finished with durable baked enamel coating. A vertical lift door is standard for operator safety and space conservation

- Preiser 90-8538-10 is designed to meet ASTM D3174 specifications. Pre-heated air is drawn through the heating chamber using an exclusive air venturi exhaust design. The result is that combustion gases are more rapidly exhausted, increasing combustion uniformity and furnace life.
- Temperatures ranging up to 1100°C (2012°F) from 50°C (123°F).
- Dimensions: 14"W x 12.5"D x 10"H / Chamber – 10"H x 14"W x 12.5"D; Weight: 148 lb

Electrical requirements must always be specified.



COKE DRUM TUMBLER

Constructed in compliance with ASTM D-3402, the coke drum tumbler provides the means for determining the relative measure of the resistance of coke to degradation by impact and abrasion. The drum tumbler may also be used to perform ASTM Test E-279, for iron ore pellets and sinter.

- Drum rotates at 24 ± 1 revolutions per minute under load.
- Coke may be sized 3" x 2" (standard procedure) or, as an alternative procedure, 50% of 2½" x 2" and 50% of 2" x 1½". A minimum of 2 tests must be performed on each sample per ASTM methodology.
- The Preiser Coke Drum Tumbler is available in single or double (shown) drum configurations.
- Pre-set electrical counter, for determination of total revolutions
- Dimensions: 48"H x 60"W x 36"D; Weight: 1500 lb

FRS-440200B4 Coke Drum Tumbler Tester, Double Drum
FRS-440201B4 Coke Drum Tumbler Tester, Single Drum

Visit our web site
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testing laboratory
products, including
new releases.

CRI / CSR TEST SYSTEM

Preiser's Z94-8543-01, in conjunction with the Z94-8543-05 Tumbler, provides a high-quality, precision system for determining Coke Reactivity Index (CRI) and Coke Strength After Reaction (CSR) to ASTM Standard D5341. The ASTM standard was developed to simulate the major weakening processes - chemical reaction with carbon dioxide gas, and physical abrasion - encountered by coke lumps as they descend through a blast furnace. In accordance with the ASTM method, the system produces the coke/carbon dioxide reaction in a regulated atmosphere vessel within a high-temperature furnace. The reacted and cooled coke is then transferred to the strength-after-reaction tumbler where it is tumbled for a specified number of revolutions.



Furnace

- * Maximum Temperature: 1540oC (2804oF)
- * Heating Elements: 6 silicon carbide elements
- * Power: 15,000W; 230Vac; 3 Phase
- * Dimensions: 6"ID x 24"OD x 32"Length Weight: 581 lb
- * Heated Length: 18"
- * Mounting Stand: Floor-standing, baseplate with levelers, 48" furnace mounting bar

Control System

- * Cabinet Dimensions: 22"W x 17"D x 75"H Weight: 620 Lb
- * Temperature Control: Programmable, with outputs for solenoid control
- * Over-Temperature Control: Independent controller, power shut-down relay, manual reset
- * Power Supply: Phase angle SCR, current limiting, % power indicator, circuit breaker, and power-on indicator
- * Gas Control: N2 and CO2: calibrated flow meter, mass flow regulator, flow control valve, needle valve, pressure gauge, filter assembly, input and output bulkhead fittings; gas selection solenoid valve



Reaction Vessel

- * Material: Inconel 601
- * Internal Dimensions: 3"ID x 8" Length (coke sample area)
- * Internal Components: Gas diffuser, preheating section, Al2O3 preheating balls, thermocouple protective assembly
- * External Components: Removable lid assembly with 3/8" diameter gas outlet tube, thermocouple guide tube; 3/8" diameter gas inlet tube

After Reaction Tumbler

- * Description: Fully guarded motor driven tumbler with direct speed reducer, timer, and revolution counter
- * Dimensions: 69"H x 49"W x 49"D; Weight: 893 Lb



Z94-8543- Coke Reactivity Index Test System
Z94-8543- After Reaction Tumbler Test System

CALORIMETERS



90-4060- Model 6400 Calorimeter

Dimensions for 6400 Calorimeter only.
20"H x 16-1/2"W x 15-1/2"D
Weight: 70 lb, unboxed



The 90-4060-06 Automatic Isoperibol Calorimeter is a highly automatic calorimeter which is designed to free the user from the manual operations required for traditional calorimeters, minimizing the operator time required per test. It is a self-contained unit, requiring minimum laboratory bench space, capable of performing 6-8 tests in an hour with a high level of precision and a 5000-8000 calorie sample range. The Preiser 90-4060-02 Expanded Calorimeter System includes: 90-4060-06 Calorimeter with Rinse Tank, 90-4064-14 Printer, an Extra 90-4064-18 Bomb Head Assembly, the 90-4064-70 Bomb Maintenance Kit and a 90-4060-15 1 yr service kit. Configurations are available to meet your requirements.

Feature / Models	6400	6200	6100	1341
Part Number	90-4060-02	90-4062-02	90-4061-01	PAR-1341EE
Tests per Hour	6-8 as equipped	4-8 as equipped	4-8 as equipped	2
Operator Time Per Test	1 minute	6 minutes	6 minutes	25 minutes
Repeatability	0.10%	0.10%	0.20%	0.30%
Calorimeter Type	Isoperibol	Isoperibol	Compensated	Static
Bomb Type	Semi-Fixed Cylinder	Removable Bomb	Removable Bomb	Removable Bomb
Closure Type	Quick-Lock	Screw Cap	Screw Cap	Screw Cap
Bucket Type	Fixed	Removable	Removable	Removable
Bucket Filling	Automatic	Manual	Manual	Manual
Oxygen Filling	Automatic	Semi-Automatic	Semi-Automatic	Manual
Bomb Washing	Automatic Pressurized	Manual	Manual	Manual
Operation Type	Touch Screen Display	Touch Screen Display	Touch Screen Display	None
Memory	1000 Tests	1000 Tests	1000 Tests	None
Balance Connection	Ethernet, Touch Screen or RS232C	Ethernet, Touch Screen or RS232C	Ethernet, Touch Screen or RS232C	None
Temperature Resolution	0.0001°C	0.0001°C	0.0001°C	0.002°C
Computer Connection	Ethernet	Ethernet	Ethernet	None
Printer Connection	Ethernet or RS232	Ethernet or RS232	Ethernet or RS232	None

OXIDATION OF COAL TEST KIT

The oxidation of coal test kit, Preiser 90-4768-01, is designed to meet the requirements of ASTM D5263. The kit includes the 90-4769-06 Spec 20D+ Spectrophotometer, hot plate, filters, beakers, funnels and all other apparatus and supplies needed to perform the test.

90-4769- Spec 20D+ Spectrophotometer

The name has become synonymous with longevity, reliability, and quality. It remains a key tool in the classroom for teaching future chemists and a proven 'workhorse' instrument for the quantitative analysis of wastewater, foods and beverages, and more. The SPEC 20D+ spectrophotometer is a practical, useful tool that lab managers know they can rely on for their every day laboratory applications. No other spectrophotometer gives you the range of functionality and reliability at such an affordable price.

- 340 to 950 nm Wavelength Range allows you to perform a wide variety of spectrophotometric analyses
- Easy-to-Read Digital Display makes set-up fast and easy on the SPEC 20D+ model
- Dimensions: 8-1/4"H x 16-1/4"W x 13"D; Weight: 18 lb



90-2004-01 Pulp Density Scales

PULP DENSITY SCALES

When a quick specific gravity is essential, Preiser's Pulp Density Scale is a workhorse. It is designed to give an easy, accurate direct reading without a lot of fuss, whether you are determining the specific gravity of heavy media liquids in coal preparation plants, thickeners, slurries at ore mills, etc.

- Its large 9", easily read dial, black on white, glass enclosed for dust protection, reads from 1.000 to 3.000 kg specific gravity of pulp in 10 gram increments with easy interpolation to 5 grams. Accuracy/sensitivity is 10 grams.
- Capacity in one revolution of the dial is 1000 - 3000 grams.
- Slot screws adjust the tare; factory adjusted scale can be easily calibrated on site.
- With large, heavy duty hook for hanging pulp bucket. Supplied without pulp bucket.



Z90-8522- Volatile Furnace Programmer

VOLATILE PROGRAMMER

The Preiser Volatile Matter Programmer is an easy to use electro-mechanically controlled instrument designed to automate the determination of volatile matter in coal and coke.

- Programmer consists of two individual timers, variable autotransformer, and two built-in solid-state digital furnace controllers with chromel/alumel thermocouples.
- Two metal rods extending from the sides of the Programmer make possible the independent lowering and raising of two sample crucibles into or out of the two upright volatile matter furnaces (furnaces not included)..
- A single switch starts the descent of the sample(s) into the pre-heat and final-heat zones and the "dwell time" in the furnace(s).
- Timers are memory set and require only an initial adjustment.
- Dimensions: 35"H x 30"W x 23"D; Weight: 183 Lb

VOLATILE FURNACE

This furnace offers excellent temperature uniformity, response and recovery times to meet requirements of ISO 562.

- Lightweight vacuum formed heating elements provide fast heating, typically 20 minutes to 900°C. The maximum temperature is 1000°C. Digital temperature control uses a sophisticated algorithm to ensure fast recovery after loading samples.
- Calibration ports are provided to allow insertion of thermocouples to be positioned under each crucible.
- A chimney is located at the back of the chamber.
- The outward and upward swinging door keeps the hot face away from the operator and the power isolation switch fitted to the door disconnects all power to the elements when the door is opened
- An optional separate controller provides for over-temperature protection.
- Dimensions: 655mmH x 435W x 610D, Chamber 100mmH x 200W x 210D Weight: 122 Lb



Z90-8528- Volatile Furnace



Z90-8524- Preiser Volatile Furnace

PREISER VOLATILE FURNACE

This furnace is designed for determining the volatile matter of coal samples. The large, 3-1/2" ID furnace bore allows up to four samples to be tested at one time, using the crucible holder provided. The furnace element design permits either a single step manual insertion of the sample or, using an optional drive mechanism, a two-step procedure. The furnace is of double walled construction for operator safety and comfort. An integral solid state control is provided for accurately maintaining furnace temperature.

- Maximum Furnace Temperature: 1000 degree C
- Heat-Up Time: Two hours, maximum, to 1000degree C
- Setpoint: 0 - 1000 degree C, front adjustable
- Dimensions: 36"H x 17-1/2"W x 12"D; Weight: 85 lb

WATER STILL



92-2760-01 Water Still

Mega-Pure Glass stills remove most dissolved solids and all pyrogens and biological impurities from tap water or pretreated water. They meet pyrogen purity standards for USP XXII. Wetted parts are PYREX, VYCOR glass, and PTFE. Only non-leaching components are used. They are wall and bench mountable.

- Vertical condenser design provides maximum purity.
- Quick release cover for easy cleaning access.
- A water level sensor in the boiling chamber.
- The high-temperature cutoff switch prevents any possibility of overheating.
- Includes feedwater solenoid valve for automatic operation.
- Product water capacity: 1.0 LPH
- Cooling water consumption: 11.3 LPH
- Water pressure: 20 to 100 psi
- Dimensions: 34"H x 18"W x 9-3/4"D; Weight: 36 lb

DEMINERALIZER

NANOPure Diamond UV is the ideal system for your critical applications requiring 18.2 megohm water with less than 1 ppb Total Organic Carbon. The water produced is perfect for applications requiring low organics including; High Performance Liquid Chromatography (HPLC), Ion Chromatography (IC), Gas Chromatography/ Mass Spec. (GC/MS) and TOC Determinations.

- The dual wavelength quartz UV lamp (185 & 254nm) oxidizes organics to virtually undetectable levels while controlling bacterial growth within the system.
- Purity up to 18.2 MW-cm—exceeds ASTM, CAP, and NCCLS Type 1 requirements.
- A dual wavelength UV lamp oxidizes organics down to virtually undetectable levels and also maintains minimal bacterial levels within the system.
- Dimensions: 19.5"H x 13.4"W x 16.9"D; Weight: 35 lb



17-8002- Demineralizer

TGA COAL ANALYZER

A fully automatic TGA system designed to analyze moisture, ash, and volatile matter in coal, food, cement, oil, etc. It is available in Single or Dual Analyzer Models. Analyzer's metallic carousel holds 19 pre-weighed samples. Utilizes separate PC with Windows operating system and is menu driven for controlling operation and recording results.

- Utilizes metallic crucibles, pedestals and covers. Does not utilize any expensive and breakable ceramic parts.
- Software program enables 4 "windows" to show system's carousel and crucible positions, real-time operation data, real-time temperature weight loss graphs, and complete analytical results.
- For Volatiles Analysis on coal samples, the metallic crucible covers are automatically placed on the metallic sample crucibles during operation (patent pending) without need of operator attendance and allows for precise volatile determinations by eliminating oxidation problems.
- Unique furnace system with automatic temperature ramping and programming. Features unattended operation with cycle time depending on type of coal or product tested, amount of ash, and weight of sample. If a coal analysis is interrupted either intentionally or by a power failure, it can be restarted later on as data is only lost and not recoverable if the interruption is during the analysis of the volatiles.
- All results can be saved on the hard disk for further evaluation and can be printed out either singly for each sample or together for a complete sample run in a list with or without a graphical record.
- Furnace power is 4KW. Max. temp. is 1000°C with accuracy of $\pm 1^\circ\text{C}$ at temp. ranges of 105°C-107°C and 900°C-905°C.
- Dimensions: 40"H x 63"W x 36"D; Weight: 385 lb



Z90-8254- Thermogravimetric Coal Analyzer

FREE SWELLING INDEX

Used for the determination of the Free Swelling Index of coal by the electric furnace method as designated by ASTM Standard D-720. The Free Swelling Index test is a rapid, small-scale, empirical method for measuring the free-swelling properties of coal. Results of the test may be used as an indication of the coal's coking characteristics, and have also been used as an index of the extent to which a coal has been oxidized or weathered. Rapid, easy, small-scale, and empirical method for measuring the free-swelling properties of coal.

- Dimensions: 12"H x 24"W x 24"D; Weight: 81 lb



FRS-41000A4 Free Swelling Index System, Complete

DIGITAL ASH FUSION SYSTEM

The Ash Fusion Furnace's microprocessor based temperature controller is preset with the proper temperature parameters to meet the ASTM test requirements. Maximum operating temperature is 2850°F (1550°C). Up to 36 samples can be processed in a day with little supervision. The video system displays and records the digital temperature reading, date, and batch identification.

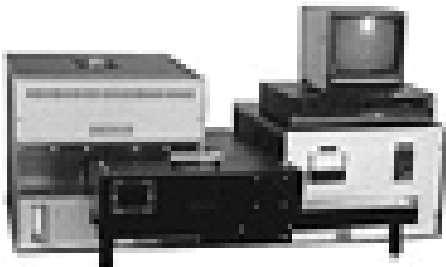
- * Rotameters control the rate of N₂ and CO/CO₂ gas flow into the furnace chamber.
- * The large ID combustion tube and specially designed sample carrier allows for up to 12 sample cones per test run.
- * The complete test cycle can be pre-set, including automatic gas switching which minimizes operator supervision.
- * The PC allows for data entry, running the unique ash fusion software program, and for archiving the test results.
- * The video camera system consists of a lightweight CCTV camera with lens and filter system designed to enable it to view the sample cones at elevated temperatures.
- * For regions where it is difficult to obtain the necessary premixed gases, an optional gas premixing assembly is available.
- * Dimensions: 30"H x 60"W x 46"D; Weight: 362 lb



Z90-8253- CAF Digital Imaging Ash Fusion System

AUTOMATIC ASH FUSION SYSTEM

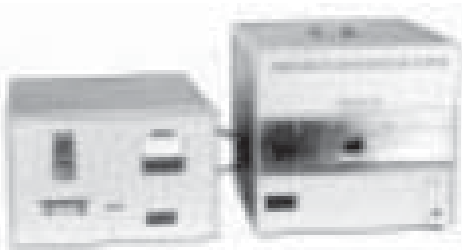
By combining a Z90-8251- Ash Fusion Furnace system with a Z90-8251X- video camera, monitor, temperature display, and video recorder, it is possible to perform a complete ash fusion test without interrupting the lab technician's duties. A busy operator need never again miss a critical moment.



Z90-8251X- Automatic Ash Fusion Video System

Z90-8251- Auto Ash Fusion Furnace System

- * A rear atmosphere inlet tube for the customer-supplied reducing gas system.
- * A solid-state, current-proportioning, temperature controller with a continuous digital-read-out of the furnace temperature
- * A field adjustable, audio signal alerts the operator when the anticipated fusion temperature range is reached.
- * The program automatically heats or cools the furnace at preset rate.
- * Heating is at a uniform rate of 15°F (8°C) per minute; the average cooling rate is appreciably higher.
- * The control system is calibrated at the factory and, normally, does not require adjustments
- * Camera has a burn-proof tube and a telephoto lens with automatic iris control
- * Furnace temperature is displayed on the video monitor, along with the specimen image
- * A record of the ash fusion made on the videotape recorder supplies a tape that can be played at any convenient time to review the critical temperatures.
- * A high resolution video camera selected specifically for this severe application.
- * An industrial grade, high resolution video monitor with an 8" picture tube.
- * Dimensions: Furnace - 19"H x 20"W x 22"D Controller - 13"H x 20"W x 22"D; Weight: 362 Lb





Z90-8765- Programmable Muffle Controller

MUFFLE FURNACE CONTROLLER

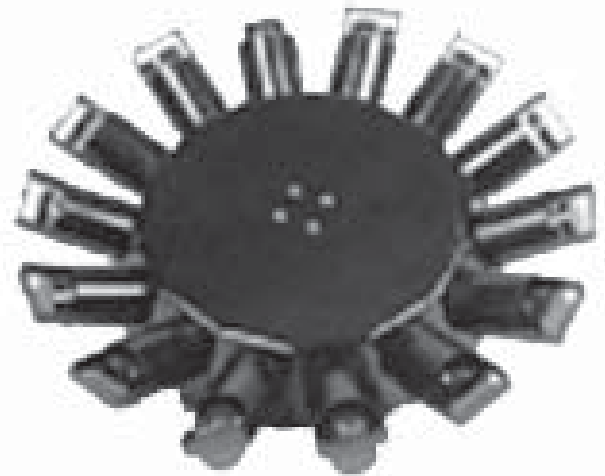
The Preiser Muffle Controller is a state of the art digital indicating and solid state controlling instrument, which is ideal for controlling laboratory muffle furnaces.

- * Accurate to $\pm 0.4\%$ of span over 10% - 90% of the range.
- * Controls furnaces up to 1000 ° C and 4900 watts.
- * 3 ft. chomel / alumel thermocouple
- * Dimensions: 8-1/2"H x 6" W x 9" D; Weight: 10 lb

MAXI-MIXING WHEEL

The Preiser Maxi-Mixing Wheel is fabricated to hold up to 14 samples. Simply place the coal sample in bottles, insert the bottles into the bottle holders, and start the rotation of the wheel until the sample is thoroughly mixed.

- * The mixing wheel has a 1/4 HP direct drive motor at 30 RPM
- * Holds up to 14 samples
- * 14 each 90-2587-01 8 oz. coal sample bottles included
- * Wall mount base
- * Dimensions: 32"h x 32"W x 32"D; Weight: 150lb



Z91-8500- Maxi-Mixing Wheel



91-1100- Davis Tube Tester for Magnetics

MAGNETICS DETERMINATOR

Determine magnetic separation characteristics of ores and check plant concentrate and tailing quality. The Davis Tube Tester Model EDT is an indispensable laboratory unit for determining the ferromagnetic and nonmagnetic fractions of small samples of crushed magnetic iron ore, magnetite, pyrrhotite, etc. It is helpful in determining mesh of liberation, selectivity index, grade and recovery of ferromagnetic compounds. In operating plants, it serves as a control device by determining plant concentrate and tailing quality. A field intensity of 4000 gauss in the center of the gap of the model EDT Tester guarantees superior performance and consistent results.

- * Variable speed of oscillation from one to 90 cycles per minute and adjustable angle of operation from horizontal to 45° provide flexibility to suit established laboratory procedures and personal preference.
- * Tube rotation of 120° and stroke of 2 inches (51 mm) are fixed standards.
- * Dimensions: 18-1/2"H x 25-1/2"W x 26"D; Weight: 364 lb

New for the Steel Industry

INGOT RATE-OF-RISE



93-5001- Model ZWE Ingot Rate-of-Rise Measuring System

Model ZWE Meter is a quality control instrument designed to monitor and display Rate-of-Rise, the critical slow speed motion of molten steel filling up its mold during the bottom pouring of ingots from a ladle so as to guide the operator in the plant in adjusting the flow of steel to maintain a constant speed for maximum ingot quality. Its advanced technology microwave telemetry link provides information from its Sensor/Telemetry/Transmitter Unit to a remote Computer/Display/Telemetry/Receiver Unit. It is critical for bottom poured ingots producers to minimize defects so that high yield, quality steel can be produced at low cost. The complete Model ZWE Steel Ingot Bottom Pouring Measuring System is composed of three parts: (1) The Microwave Sensor/Telemetry Transmitter Unit; (2) The Computer/Display/Telemetry Receiving Unit; (3) Accessories (cable and Battery Charger).

- The Microwave Sensor is installed over the mold during the pour and in monitoring the advance of molten steel in the mold, produces a signal that is transmitted via Radio Frequency to the Telemetry Receiver which is part of the Computer/Display/Telemetry Receiver Unit. The Computer uses this signal to calculate the Rate-of-Rise in real time (refresh every 20 seconds).
- The Calculated value of Rate-of-Rise is indicated on the high intensity, illuminated Display, visible to a distance of up to 1000 Ft. from the pouring area.
- The pouring team can observe the Display and adjust the flow of the molten steel to keep the Rate-of-Rise as constant as possible to achieve maximum ingot quality. This monitoring completely eliminates defects due to fluctuations in Rate-of-Rise.
- Weight: 100 lb



PREISER SCIENTIFIC

An ISO 9001:2000 Certified Company

ABOUT PREISER SCIENTIFIC

Preiser Scientific, Inc. is a complete source and a "one-stop" shopping center for coal testing equipment to laboratories throughout the world. Preiser Scientific was established in 1924 and has continuously provided technical products and services to research, industrial, quality control, teaching, environmental and government laboratories ever since.

Preiser Scientific is your source for over 100,000 items. Preiser Scientific manufactures and distributes coal testing products, like these shown here, as well as Analytical Balances and Scales, pH Meters, Microscopes, Laboratory Baths, Furnaces, Distillation Units, Environmental and Water Testing Equipment, Laboratory Glassware, Plasticware and Porcelainware, Filter Paper, and many other laboratory supply items. Specialty catalogs listing laboratory equipment and supplies for use in coal and water testing laboratories are available upon request. We invite your inquiries on any laboratory instrumentation, equipment, or supplies that you may require.

Preiser Scientific, Inc.

94 Oliver Street

P. O. Box 1330

St. Albans, WV 25177-1330

USA

Phone: 1-304-727-2902

FAX: 1-304-727-2932

E-mail: preiser@preiser.com

Web Site: <http://www.preiser.com>

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new releases.**

Preiser Scientific, Inc.

**17th Floor Hyundai Motor Tower
Unit 17-45**

No.38 Xiaoyun Road

Chaoyang District, Beijing, 100027 China

Phone: 86 10 6410 8548

FAX: 86 10 8453 9218

E-mail: preiser@preiser.com

Web Site: <http://www.preiser.com>