Test Sieves

The standard 8 in and 12 in, full height, brass frame sieves with stainless steel mesh stocked by DGSI are shown on the next page. The following are available upon request:

- Brass frame and mesh sieves
- Stainless steel frame and mesh sieves
- Half height sieves
- 3 in (7.6 cm) diameter sieves
- Extended rim pans
- Stainless steel pans and covers.

Test Sieves made to ASTM E 11

ASTM Published Standards on Sieve Analysis Procedures for Specific Materials					
Material	ASTM #	Title of Standard	Sieve No/ Size Range	Dry	Wet
Aggregate	C 117	Test for materials finer than No. 200 sieve in mineral aggregates by washing	200	-	X
Aggregate	C 125	Definitions of terms relating to concrete and concrete aggregates			
Aggregate	C 136	Test for sieve or screen analysis of fine and coarse aggregates	3 ½ in - 200	X	-
Aggregate	C 142	Test for friable particles in aggregates	1 ½ in - 20	-	X
Aggregate	C 330	Specifications for lightweight aggregates for structural concrete	1 in - 100	X	X
Aggregate	C 331	Specifications for lightweight aggregates for concrete masonry units	¾ in - 100	X	X
Asphalt	D 313	Test for coarse particles in mixtures of asphalt and mineral matter	-	-	X
Cement	C 184	Test for fineness of hydraulic cement by the No. 100 & 200 sieves	100/200	X	
Cement	C 430	Test for fineness of hydraulic cement by the 325 sieve	325		
Glass	C 429	Test for sieve analysis of raw materials for glass manufacture	8 - 200	X	X
Glass	D 1214	Test for sieve analysis of glass spheres			
Ore	E 276	Test for particle size or screen analysis at No. 4 sieve and finer for metal bearing ores and related materials	4 - 200	X	
Mineral	D 451	Test for sieve analysis of granular mineral surfacing for asphalt roofing and shingles	6 - 100	X	
Mineral	D 452	Test for sieve analysis of non-granular mineral surfacing for asphalt roofing and shingles	12 - 200	X	
Mineral	D 546	Test for sieve analysis of mineral filler for road and paving materials	-	X	
Soil	D 422	Particle size analysis of soils	3 - 200	X	X

When ordering special sieves, please note the following:

- Brass frame with brass mesh sieves available only in No. 7 or smaller for 8 and 12 inch diameter sieves.
- All stainless steel half height sieves are available in No. 3½ or smaller mesh sizes.
- Half height 8 inch diameter brass frame with stainless steel mesh sieves available only in no. 3½ or smaller.

Sieve Certification and Verification

Each of our sieves includes a Certificate of Compliance stating that the accompanying sieve was manufactured to the relevant specifications of ASTM, ANSI and ISO. The certification contains a serial number that also appears on the body of the sieve. Consult our web site for details.

Test Sieves				
Standard Designation	Sieve Opening	Alternative Designation	Part No. 8 Inch	Part No. 12 Inch
100 mm	101.6 mm	4 in	PCF-84000	PCF-14000
90 mm	90.5 mm	3-1/2 in	PCF-83500	PCF-13500
75 mm	76.1 mm	3 in	PCF-83000	PCF-13000
63 mm	64 mm	2-1/2 in	PCF-82500	PCF-12500
50 mm	50.8 mm	2 in	PCF-82000	PCF-12000
45 mm	45.3 mm	1-3/4 in	PCF-81750	PCF-11750
38.1 mm	38.1 mm	1-1/2 in	PCF-81500	PCF-11500
31.5 mm	32 mm	1-1/4 in	PCF-81250	PCF-11250
25.0 mm	25.7 mm	1 in	PCF-81000	PCF-11000
22.4 mm	22.6 mm	7/8 in	PCF-80780	PCF-10780
19.0 mm	19 mm	3/4 in	PCF-80750	PCF-10750
16.0 mm	16 mm	5/8 in	PCF-80580	PCF-10580
12.5 mm	12.7 mm	1/2 in	PCF-80500	PCF-10500
11.2 mm	11.2 mm	7/16 in	PCF-80716	PCF-10716
9.5 mm	9.51 mm	3/8 in	PCF-80380	PCF-10380
8.0 mm	8 mm	5/16 in	PCF-80516	PCF-10516
6.3 mm	6.35 mm	1/4 in	PCF-80250	PCF-10250
5.6 mm	5.66 mm	No. 3-1/2	PCF-80003	PCF-10003
4.75 mm	4.76 mm	No. 4	PCF-80004	PCF-10004
4.00 mm	4 mm	No. 5	PCF-80005	PCF-10005
3.35 mm	3.36 mm	No. 6	PCF-80006	PCF-10006
2.36 mm	2.38 mm	No. 8	PCF-80008	PCF-10008
2.00 mm	2 mm	No. 10	PCF-80010	PCF-10010
1.70 mm	1.68 mm	No. 12	PCF-80012	PCF-10012
1.40 mm	1.41 mm	No. 14	PCF-80014	PCF-10014
1.18 mm	1.19 mm	No. 16	PCF-80016	PCF-10016
1.00 mm	1 mm	No. 18	PCF-80018	PCF-10018
850 µm	0.841 mm	No. 20	PCF-80020	PCF-10020
710 µm	0.707 mm	No. 25	PCF-80025	PCF-10025
600 µm	0.595 mm	No. 30	PCF-80030	PCF-10030
500 µm	0.5 mm	No. 35	PCF-80035	PCF-10035
425 µm	0.42 mm	No. 40	PCF-80040	PCF-10040
355 µm	0.355 mm	No. 45	PCF-80045	PCF-10045
300 µm	0.297 mm	No. 50	PCF-80050	PCF-10050
250 µm	0.25 mm	No. 60	PCF-80060	PCF-10060
212 µm	0.21 mm	No. 70	PCF-80070	PCF-10070
180 µm	0.177 mm	No. 80	PCF-80080	PCF-10080
150 µm	0.149 mm	No. 100	PCF-80100	PCF-10100
125 µm	0.125 mm	No. 120	PCF-80120	PCF-10120
106 µm	0.105 mm	No. 140	PCF-80140	PCF-10140
90 µm	0.088 mm	No. 170	PCF-80170	PCF-10170
75 µm	0.074 mm	No. 200	PCF-80200	PCF-10200
63 µm	0.063 mm	No. 230	PCF-80230	PCF-10230
53 µm	0.053 mm	No. 270	PCF-80270	PCF-10270
45 µm	0.044 mm	No. 325	PCF-80325	PCF-10325
38 µm	0.037 mm	No. 400	PCF-80400	PCF-10400

Accessories

PB-120	12 in Brass Pan, 1-5/8-in Deep	PB-182	8 in Brass Pan, Half Height
PB-125	12 in Brass Cover, w/o Ring	PB-185	8 in Brass Cover, with Ring
PB-180	8 in Brass Pan, Full Height		

Test Sieves

DGSI Test Sieves are manufactured to ASTM E11 standards from precision woven wire cloth. A certificate of compliance with ASTM E11, ANSI and ISO is included with each sieve. All sieves listed on this page — which have a part number formatted as PCF-XXXXX — are considered by DGSI to be “full height” and have a height of 2 inches from the mesh to the top of the frame.

The sieves DGSI designates as “half height” have different actual heights (from the mesh to the top of the frame) depending on their diameter, as follows:

- 8” dia. Actual height is 1 inch (mesh to frame)
- 12” dia. Actual height is 1-5/8 inch (mesh to frame)

  12-inch sieves are also available as a special order with a 3-5/8-inch height (mesh to frame).

PCF-80000C	8 in Sieve Set for Concrete (ASTM D422). Includes:
PB-180	8 in Brass pan, full height
PB-185	8 in Brass cover, with ring
PCF-80004	8 in Brass Sieve, FH S/S Mesh #4
PCF-80008	8 in Brass Sieve, FH S/S Mesh #8
PCF-80016	8 in Brass Sieve, FH S/S Mesh #16
PCF-80030	8 in Brass Sieve, FH S/S Mesh #30
PCF-80050	8 in Brass Sieve, FH S/S Mesh #50
PCF-80100	8 in Brass Sieve, FH S/S Mesh #100
PCF-80200	8 in Brass Sieve, FH S/S Mesh #200
PCF-80380	8 in Brass Sieve, FH S/S Mesh 3/8 in
PCF-80750	8 in Brass Sieve, FH S/S Mesh 3/4 in
PCF-81500	8 in Brass Sieve, FH S/S Mesh 1-1/2 in
PCF-83000	8 in Brass Sieve, FH S/S Mesh 3 in
PCF-80000S	8 in Sieve Set for Soils (ASTM D422). Includes:
PB-180	8 in Brass pan, full height
PB-185	8 in Brass cover, with ring
PCF-80004	8 in Brass Sieve, FH S/S Mesh #4
PCF-80010	8 in Brass Sieve, FH S/S Mesh #10
PCF-80020	8 in Brass Sieve, FH S/S Mesh #20
PCF-80040	8 in Brass Sieve, FH S/S Mesh #40
PCF-80060	8 in Brass Sieve, FH S/S Mesh #60
PCF-80140	8 in Brass Sieve, FH S/S Mesh #140
PCF-80200	8 in Brass Sieve, FH S/S Mesh #200
PCF-80380	8 in Brass Sieve, FH S/S Mesh 3/8 in
PCF-80750	8 in Brass Sieve, FH S/S Mesh 3/4 in
PCF-81000	8 in Brass Sieve, FH S/S Mesh 1 in
PCF-81500	8 in Brass Sieve, FH S/S Mesh 1-1/2 in
PCF-82000	8 in Brass Sieve, FH S/S Mesh 2 in
PCF-83000	8 in Brass Sieve, FH S/S Mesh 3 in

Sieve Brushes

These brushes are used for cleaning the sieves after use. Select the type based on wire cloth size:

- P-410 Fine sieves
- P-412 Coarse sieves
- P-411 No. 16 and finer
- P-413 No. 30 and coarser

(L-R) P-413, P-412, P-411 and P-410

Sieve Brushes		
P-410	Fine Sieve Brush, bristle, 9¾ in long	1 lb
P-411	Round Sieve Brush, bristle, 6 in long	1 lb
P-412	Coarse Sieve Brush, wire, 5 in long	1 lb
P-413	Coarse Sieve Brush, brass wire, 13 in long	1 lb

Wet Washing Sieve

ASTM C 117

The Wet Washing Sieve has a No. 200 stainless steel screen and is used in soils analysis to remove the minus 200 portion. Water is sprayed over the known sample mass on the sieve to facilitate removal of the fines. The remaining fraction may be oven dried in the sieve.

Wet Washing Sieves, P-404 & P-406

Available in two models, 4- or 8-in (10.2 or 20.3 cm) deep brass frame with or without a No. 20 stainless steel backing. Other depths and diameters are available as special order.

Wet Washing Sieve		
P-404	Wet Washing Sieve, 4 in deep	5.0 lb
P-406	Wet Washing Sieve, 8 in deep	5.0 lb
P-40410	Wet Washing Sieve, 4 in w/ backing	5.0 lb
P-40610	Wet Washing Sieve, 8 in w/ backing	5.0 lb

Optical Comparator

Convenient for checking mesh sizes in sieves, angles and more. Scales are photo-etched into a glass reticle which is placed in actual contact with the measured object. Reticles are easily interchanged. Measures radii, diameters, angles, hole sizes, pitch and thicknesses.

P-150

P-150	Optical Comparator (7X) with #5 & #8 reticle	0.5 lb

Soil Mortar and Pestle

Used together to break down soil lumps prior to testing. The rubber tipped pestle prevents breaking down individual particles. Use with the ceramic pestle to grind materials to fine powders. The mortar is made from porcelain, glazed outside only.

P-420 & P-421

Soil Mortar and Pestle		
P-420	Soil Pestle, rubber tip on wood 8 in L	1.0 lb
P-421	Soil Mortar, porcelain, 5 x 2 1/2 in	1.0 lb
P-42001	Ceramic Pestle, ground end	1.0 lb

Timers

G-190 Stop Watch — One revolution of the large hand indicates 60 sec. 1/5 second increments. The small hand registers up to 30 minutes. G-19010 is the same but with 1/10 sec. increments.

P-400 Digital Timer/Clock/Stopwatch — Large LCD displays hours, minutes and seconds, alarm signals up to one minute, magnet mount, clip or stand, AAA battery included.

P-401 Long Ring Timer — Mechanical spring-wound, 60 minute capability, lies flat, stands or hangs.

P-402 Digital 24 Hour Timer — Large LCD display, flashing light and volume controlled alarm, repeat cycle memory, counts in one second increments, splash-proof keypad, non-skid rubber feet or wall mount, 4 "C" batteries included, two year Limited Warranty.

P-403 Digital Timer/Stopwatch — Recall feature automatically displays the last timer settings, 18" nylon neck rope.

G-190 P-401 P-400 P-402 P-403

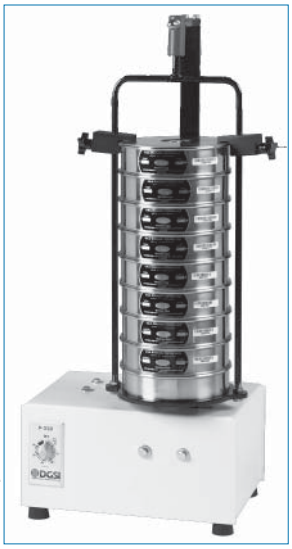
G-190	Stop Watch, 1/5 sec.
G-19010	Stop Watch, 1/10 sec.
P-400	Digital Timer / Clock / Stopwatch
P-401	Mechanical Timer, 1 - 60 min.
P-402	Digital timer, 20-hr count down
P-403	Digital timer / Stopwatch

Portable Sieve Shaker

The Portable Sieve Shaker will hold 8 full-height 8” sieves, pan and cover. Off-center bearings provide an orbital motion that reduces clogging and quick action clamps hold the sieve stack securely.

A 60-minute timer is provided with a “hold” position to permit continuous running. The motor and all mechanical parts are enclosed in a sturdy metal case. Heavy gauge steel, painted exterior.

Overall dimensions are:
38 in H x 15 in W x 13 in D (97 x 38 x 33 cm.).


P-220

P-220	Portable Sieve Shaker, 8 in, 110 V 60 Hz	57 lb
P-222	Portable Sieve Shaker, 8 in, 220 V 50 Hz	57 lb
P-22210	Portable Sieve Shaker, 8 in, 220 V 60 Hz	57 lb
Replacement Part		
P-22001	Clamp Assembly	
Related Items		
GO-216	Double-wall Laboratory Oven	
P-510	Riffle-type Sample Splitter	
GW-113	Triple Beam Scale	
G-29002	Table Brush, 2 x 8 x 12 in	
G-29203	Small Flat Bottom Scoop, 5.5 x 3.5” x 1.5 in (Bowl)	

Laboratory Sieve Shaker

Designed for shaking up to ten sieves and a 2⅛-in (5.4 cm) high pan. Two models, one for 8-in sieves, P-200, the other for 12-in sieves, P-210. The 12-in model comes with an adapter to allow use with 8-in sieves.

Circular motion with an alternating up and down bumping action is designed to provide thorough, repeatable sieving. Designed for use with sieves in the range of 4 - 200, it comes with a built-in sieve cover on two guide rods to hold a stack of four or more full height sieves.


P-200

The internal counterbalance and adjustable foot pads keep the shaker stationary without the need for a permanent mounting. An automatic timer with reset is provided. The motor and all mechanical parts are enclosed in a sturdy metal case.

Overall size: 39 ½ in H x 22 ½ in W x 12 ½ in D (100.3 x 57.2 x 31.7 cm).

P-200	Lab. Sieve Shaker, 8 in 110 V, 60Hz	135 lb
P-202	Lab. Sieve Shaker, 8 in 220 V, 50Hz	135 lb
P-210	Lab. Sieve Shaker, 12 in 120 V, 60Hz	135 lb
P-212	Lab. Sieve Shaker, 12 in 220 V, 50Hz	135 lb

Ro-Tap™ Sieve Shaker

Two models, one for 8 in., P-231, the other for 12-in sieves, P-240. Both provide a circular and tapping motion that closely emulates hand sieving. The P-231 is designed for shaking up to 6 full height 8 in sieves with pan and cover. The P-240 is for three 12-in sieves with pan and cover.

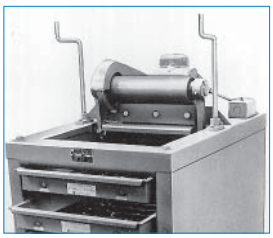

P-231

Rugged all steel construction features a vertically mounted and enclosed 1/4 HP motor and 30 minute timer. The machine may be easily fastened to a work top for added stability.

Overall size: 28 in W x 21 in D x 25 in H (71.1 x 53.3 x 63.5 cm).

P-231	Ro-Tap™ Shaker, 8 in, 110 V, 60Hz	185 lb
P-23110	Ro-Tap™ Shaker, 8 in, 220 V, 50Hz	185 lb
P-240	Ro-Tap™ Shaker, 12 in, 110 V, 60Hz	220 lb
P-242	Ro-Tap™ Shaker, 12 in, 220 V, 50Hz	220 lb

P-261



P-262

P-265

P-266

Gilson® Screen Shaker

The Screen Shaker is used for gradation analysis of sample batches up to a maximum of one cubic foot (0.028 m^3). It will separate the sample in up to seven sizes simultaneously in less than five minutes. Designed primarily to separate materials with sizes in the range of 4 in (10.1 cm) to No. 4. It will also handle smaller amounts of finer materials down to No. 200.

Designed to use five screen trays and a dust tray, the Shaker may be optionally fitted with six screen trays with the dust tray placed under the machine as a stationary receptacle. The opening sizes of the five standard screens should be specified at the time of order placement as they are included in the price of the Screen Shaker.

Available in two models, Standard and Hydraulic. The difference is in the method of securing the trays during gradation. The Standard model (P-262) clamps the trays with manually operated threaded clamping rods. The Hydraulic model (P-261) uses two hydraulic cylinders to secure the trays and is operated with a single lever control. The screening motion of these Shakers is essentially vertical vibration set at optimum for stone and gravel materials. The Shakers are driven by a 1/3 hp, capacitor start motor with overload protection. Accessories and screen trays are shown on the next page.

Tray dimensions: 26" L x 16" W x 3" H

P-261	Gilson® Hydraulic Screen Shaker w/ 5 screens and dust tray, 115 V, 60Hz	470 lb
P-26110	Gilson® Hydraulic Screen Shaker w/ 5 screens and dust tray, 230 V, 50Hz	470 lb
P-262	Manual Screen Shaker w/ 5 screens, tray, 110 V, 60 Hz	470 lb
P-26210	Gilson® Standard Screen Shaker w/ 5 screens and dust tray, 230 V, 50Hz	470 lb

Screen Trays for P-261/2 Series Shaker

Suitable for all Gilson Shakers. Specify model number and screen size when ordering.

Screen Shaker Specifications and Accessories

Specifications	P-261	P-262
Load Capacity:	1 cu ft	1 cu ft
Screen Trays:	5	5
Tray Clamping:	Hyd.	Man.
Height:	33 in (83.8 cm)	
Width:	23 in (58.4 cm)	
Depth:	31 in (78.7 cm)	
Weight:	470 lb 212 kg	470 lb 212 kg

Accessories

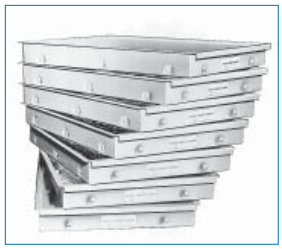
P-26150	Standard Dust Tray for P-261/2 only	18.0 lb
P-267	Door Enclosure for P-261/2 only	12.0 lb
P-266	7 Tray Rack for all models	43.0 lb
P-265	Sand Attachment, 8 sieves, all models	14.0 lb

INTERMEDIATE U.S.A. STANDARD SERIES

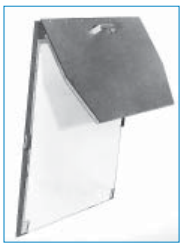
Made from brass wire cloth in sizes No. 5 to No. 14

Model No.	Standard (mm)	Alternate No.	Replacement Screen
P-47205	4.00	5	P-48205
P-47206	3.35	6	P-48206
P-47207	2.80	7	P-48207
P-47208	2.36	8	P-48208
P-47210	2.00	10	P-482010
P-47212	1.70	12	P-482012
P-47214	1.40	14	P-482014

Tray Size: 26" L x 16" W x 3" H



Screen Trays



Door Enclosure

COARSE U.S.A. STANDARD SERIES			
Made from steel wire cloth in sizes 4 in to No.4			
Model No.	Standard (mm)	Alternate No.	Replacement Screen
P-47040	100	4 in	P-48040
P-47035	90	3.5 in	P-48035
P-47030	75	3 in	P-48030
P-47025	63	2.5 in	P-48025
P-47020	50	2.0 in	P-48020
P-47017	45	1.75 in	P-48017
P-47015	37.5	1.50 in	P-48015
P-47012	31.5	1.25 in	P-48012
P-47010	25.0	1.0 in	P-48010
P-47009	22.4	7/8 in	P-48009
P-47008	19.0	3/4 in	P-48008
P-47007	16.0	5/8 in	P-48007
P-47006	12.5	1/2 in	P-48006
P-47005	11.2	7/16 in	P-48005
P-47004	9.5	3/8 in	P-48004
P-47003	8.0	5/16 in	P-48003
P-47002	6.3	1/4 in	P-48002
P-47001	5.6	3 1/2	P-48001
P-47000	4.75	4	P-48000

FINE U.S.A. STANDARD SERIES			
Made from brass wire cloth in sizes No.16 to No.200, with brass supporting back-up cloth			
Model No.	Standard (mm)	Alternate No.	Replacement Screen
P-47416	1.18	16	P-48416
P-47418	1.00	18	P-48418
P-47420	850 µm	20	P-48420
P-47425	710 µm	25	P-48425
P-47430	600 µm	30	P-48430
P-47435	500 µm	35	P-48435
P-47440	425 µm	40	P-48440
P-47445	355 µm	42	P-48445
P-47450	300 µm	50	P-48450
P-47460	250 µm	60	P-48460
P-47470	212 µm	70	P-48470
P-47480	180 µm	80	P-48480
P-47401	150 µm	100	P-48401
P-47402	75 µm	200	P-48402

Sample Splitters

ASTM B 215, C 136, C 702, C 778, D 421, D 424, D 457, D 806
AASHTO T 27, T 144, T 248

The Gilson® range of Sample Splitters feature adjustable width chutes and a lever released hopper. This results in good accuracy for mixing and reducing samples to represent smaller volumes suitable for laboratory testing.

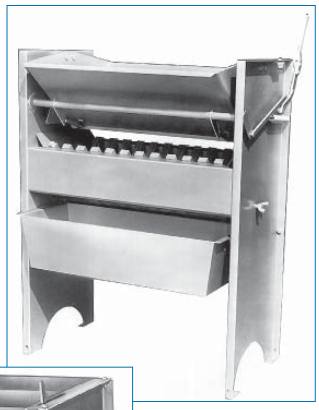
The adjustable width chutes allow one splitter to replace several fixed chute splitters. These Splitters are available with load capacities from 50 lb to 500 lb and particle sizes from 60 µ to 6 in. Three models are featured here with capacities from 1 ft^3 down to 125 in^3 and particles from 4 in to ¼ in.

The universal chute section is comprised of a set of precise dimensioned aluminum bars that pivot about a rod through their lower ends. The top ends of the bars are flipped to alternate sides to form chutes of pre-determined widths.

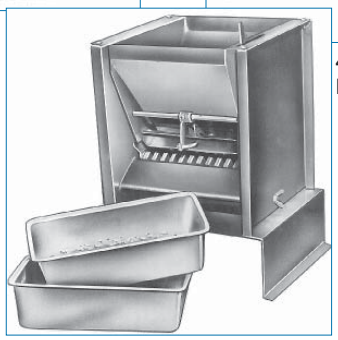
The splitters are made from durable steel with a baked paint finish with aluminum chute bars and pans. Model P-502 is made from stainless steel, except for the aluminum chute bars and pans. All models come with two sample pans.

P-500	Gilson® Sample Splitter, 1 ft^3 hopper capacity, 4 in max. particle size	136 lb
P-50001	Gilson® Replacement Pan for P-500	11.0 lb
P-501	Gilson® Sample Splitter, 0.55 ft^3 hopper capacity, 2 in max. particle size	64.0 lb
P-50101	Gilson® Replacement Pan for P-501	6.0 lb
P-502	Gilson® Sample Splitter, 125 in 3 hopper capacity, ¼ in max. particle size	15.0 lb
P-50202	Gilson® Replacement Pan for P-502	1.0 lb

2-in Sample Splitter, P-501



4-in Sample Splitter, P-500

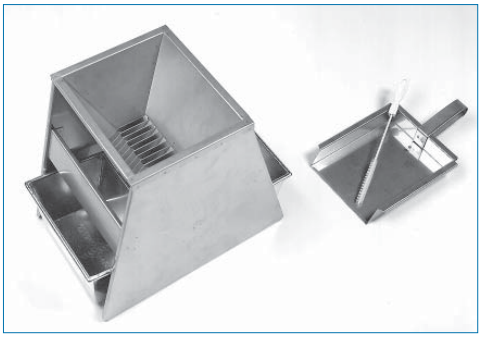


1/4-in Sample Splitter, P-502

Riffle Type Sample Splitters

ASTM B 215, C 136, C 702, C 778, D 421, D 424, D 457, D 806
AASHTO T 27, T 144, T 248

Riffle type splitters divide the sample poured into the hopper into two equal portions by two series of chutes which discharge alternately in opposite directions to separate pans. These one-piece construction splitters feature stainless steel hoppers and chutes. Pans supplied are made from cold rolled steel or stainless steel, depending on the model selected. Four pans, a scoop and cleaning brush are supplied with each model. Model P-511 is provided with a removable hopper.

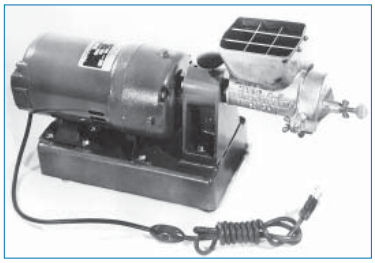


P-51X series

Riffle-Type Sample Splitters		
P-510	½ in Chute Riffle Splitter	17 lb
P-511	¾ in Chute Riffle Splitter	21 lb
P-512	1 in Chute Riffle Splitter	31 lb
P-513	2 in Chute Riffle Splitter	27 lb
P-514	2½ in Chute Riffle Splitter	50 lb
Related Items		
P-51001	Replacement Pan for P-510	4 lb
P-51101	Replacement Pan for P-511	4 lb
P-51201	Replacement Pan for P-512/3	6 lb
P-51401	Replacement Pan for P-514	6 lb

Specifications for Riffle-Type Sample Splitters					
Specifications:	P-510	P-511	P-512	P-513	P-514
Hopper Size:					
(in)	6¾ x 11	6¾ x 14¾	9 x 20	9½ x 19½	9 x 24
(cm)	17.2 x 27.9	21.6 x 35.6	22.9 x 50.8	24.1 x 49.5	22.9 x 61
Chute Width:					
(in)	½	¾	1	2	2½
(cm)	1.0	1.9	2.5	5.0	6.5
No. Chutes:	14	14	16	8	8
Pan Size:					
(in)	10½ x 5½	13½ x 6¾	19 x 6½	19 x 6½	22 x 6½
(cm)	27 x 14	34 x 17	48 x 16½	48 x 16½	56 x 16½
Pan Depth:					
(in)	4½	5	5¼	5¼	5¼
(cm)	11.4	12.7	13.3	13.3	13.3
Pans Supplied:	4	4	4	4	4

Manual and Electric Soil Grinders



S-179

S-178

- Sturdy cast iron construction.
- Grinding plate distance adjustable for fineness.
- Easily disassembles without tools for cleaning.
- Hopper has a capacity of 50 in^3 (0.82 l).
- Ground material fineness to between 75 - 100 mesh.
- Manual model clamps to a 3/8 to 1½ in (0.1 - 3.8 cm) thick table top.
- Electric model has a cast iron base with 3 point rubber pads for stability. 27 x 12 x 16 in (68 x 31 x 41 cm).

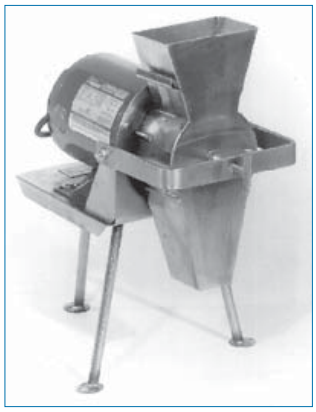
The manual model has a grinding capacity from 1 - 10 lb/ hour (0.5 - 4.5 kg/hr) at a crank speed of 30 to 50 rpm and the electric model 15 - 40 lb/hour (7 - 19 kg/hr).

S-178	Manual Soil Grinder, complete	15 lb
S-179	Electric Soil Grinder, 115 V, 60 Hz	55 lb
Replacement Item		
S-17901	Grinding Head, complete, fits S-179	8 lb

Stainless Steel, Electric Soil Grinder

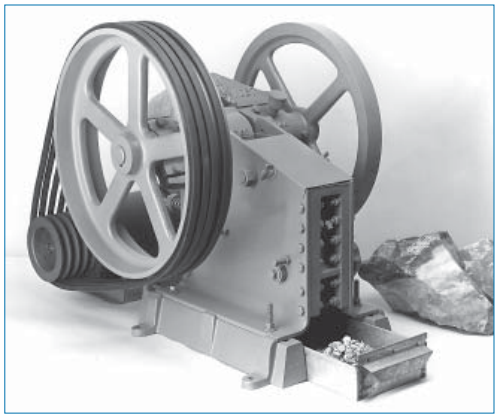
This compact soil grinder features a take-apart, all stainless steel grinding head, hopper chute and perforated plate for easy and efficient cleaning. Its light weight makes it suitable for field use. A one pint sample can be ground in 15 seconds with its powerful 1/3 Hp motor.

A No. 10 perforated plate is included, others are available.



P-610

P-610	Stainless, Electric Soil Grinder with No. 10 Perforated Plate, 110 V, 60 Hz	25.0 lb
P-61015	Stainless, Electric Soil Grinder with No. 10 Perforated Plate 230 V, 50 Hz	25.0 lb
Related Items		
P-61001	No. 4 Stainless Steel Perforated Plate	
P-61002	No. 10 Stainless Steel Perforated Plate	
P-61003	No. 35 Stainless Steel Perforated Plate	



P-633

Rock Crushers

Designed to handle the hardest of rocks, ores and minerals, these crushers will provide an easy means to reduce materials from sizes up to 4 x 6 in (10 x 15 cm) to particle sizes as low as 1/16 in (1.6 mm) in size.

These designs feature reversible and replaceable crushing jaws, alloy steel construction with sealed bearings, multiple Vee belt drives and guards for moving parts. Crushing capacities of up to 1300 lb/hr are possible, dependent on model and material.

Designed to operate with minimal power consumption, all models can be easily dismantled for internal cleaning.

P-635M and P-636M units meet Florida DOT requirements.

Rock Crushers		
P-633	Rock Crusher, 400 lb/hr cap. 2 hp, 1ph	430 lb
P-634	Rock Crusher, 400 lb/hr cap. 2 hp, 3ph	430 lb
P-635	Rock Crusher, 800 lb/hr cap. 3 hp, 1ph	660 lb
P-635M	Rock Crusher, Modified P-635, 3/4 max size	660 lb
P-636	Rock Crusher, 800 lb/hr cap. 3 hp, 3ph	660 lb
P-636M	Rock Crusher, Modified P-636, 3/4 max size	660 lb
P-637	Rock Crusher, 1300 lb/hr cap. 2 hp,1ph	750 lb

Specifications for Rock Crushers				
Specifications		P-633/4	P-635/6	P-637
Max. Feed Size:				
	(in)	2.3 x 3	2 3/8 x 34	5 x 7
	(cm)	5.8 x 7.6	6.1 x 7.6	12.7 x 17.8
Capacity:	(lb/hr)	400	800	1300
	(kg/h)	182	364	590
Dimensions:				
(W x D x H)	(in)	25 x 19 x 30	28 x 19 x 32	32 x 24 x 20
	(cm)	64 x 48 x 76	71 x 48 x 81	79 x 56 x 51
Motor hp:		2	3	5
Power phases:		1, P-633 3, P-634	1, P-635 3, P-636	3
Voltage:		220/440 V, 50/60 Hz (Specify when ordering)		

C-660

C-658

Los Angeles Abrasion Machines

ASTM C 131, C 535
AASHTO T 96

The Los Angeles Abrasion Machine is used as a quality control tool for aggregates, including crushed rock, gravel and slag. The testing method determines the degradation when subjected to abrasion, attrition, impact and grinding. The sample is placed in the drum along with a hardened steel abrasive charge. After rotating the drum a specific number of times, samples are removed and examined for wear.

DGSI offers two models: a basic model and an enclosed model. Both machines are constructed from structural steel with a welded 1/2 in (1.27 cm) thick drum wall. The drum is fitted with a removable shelf in accordance with ASTM “preferred design” recommendations. Rotation is provided by an electric motor with speed reduction and enclosed chain drive to allow the drum to turn at 30-33 rpm. Inside volume of both models is 7.12 ft^3

The enclosed model (C-660) is a new design that meets OSHA sound and mechanical safety requirements. An interlock prevents operation unless the double hinged lid is closed.

Both models (C-658 and C-660) come with a 25 kg abrasive charge and a heavy duty catch pan.

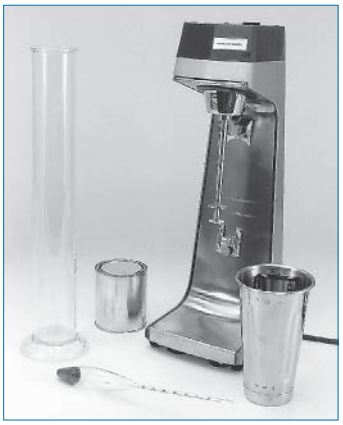
C-658	L.A. Abrasion Machine, 115 V, 60 Hz	1060 lb
C-65815	L.A. Abrasion Machine, 230 V, 50 Hz	1060 lb
C-660	Enclosed LA. Abrasion Machine, 230 V, 60 Hz, 1 phase	1080 lb
C-66015	Enclosed LA. Abrasion Machine, 230 V, 50 Hz, 1 phase	1080 lb
Related Item		
C-66020	Abrasion Charge, set of 12	20.0 lb

Hydrometer Test Set

ASTM D 422
AASHTO T 88

The Hydrometer Test Set is used to indirectly measure particles smaller than No. 200 present in a suspension at a given time. The stem of the ASTM hydrometer is scaled to read either specific gravity of the suspension (most preferred) or grams per liter of suspension.

At the maximum of three speeds, the Stirring Apparatus rotates at about 10,000 rpm under no load.



S-305

S-305	Hydrometer Test Set, 110 V, 60 Hz	22 lb
Set Includes:		
S-300	ASTM Soils Hydrometer, 151 H	
S-30010	Hydrometer Jar, 1000 ml scale	
S-30020	Stirring Apparatus w/ cup & paddle	
S-30040	Paddle, (extra)	
S-30060	Sodium Hexametaphosphate, 1 lb	
Related Items		
S-30030	Dispersion Cup, stainless steel, 900 ml	
S-30040	Special Mixing Paddle, conforms to ASTM specifications	
S-301	ASTM Soils Hydrometer, 152 H	
GW-115	Triple Beam Scale, 2610 g x 0.1 g capacity	
GW-111	Triple Beam Scale, 311 x 0.01 g capacity	
G-35125	Glass Beaker, 250 ml capacity	
G-190	Stop Watch, 30 minute, 1/5 second	
G-169	Thermometer, 1 - 50 ºC x 0.1 ºC	
G-170	Thermometer, 0 - 110 ºC x 1 ºC	
G-175	Thermometer, 30 - 120 ºF x 1 ºF	
P-610	Soil Grinder, motor driven, tripod mount	
S-178	Soil Grinder, hand operated w/ table clamp	
S-179	Soil Grinder, motor driven, pedestal mount	
S-30015	Rubber Stopper for Hydrometer Jar, S-30010	

Dispersing Agent

The Sodium Hexametaphosphate Dispersing Agent is used to keep the particles from coming out of suspension and flocculating during the particle size determination.

S-30060	Sodium Hexametaphosphate Dispersing Agent, 1-lb container	2.0 lb
S-30060-5	Sodium Hexametaphosphate Dispersing Agent, 5-lb container	5.0 lb

ASTM Soils Hydrometers

ASTM D 422, E 100
AASHTO T 88

The Hydrometers are used to determine particle size distribution of any particulate material that can be placed in a suspension that settles with time and has little particle density variation. They meet ASTM E 100 "Specification for ASTM Hydrometers."

S-300, S-301

The S-300 is graduated to read specific gravity of the suspension and the S-301 is graduated in grams per liter of the suspension. Made from molded seamless glass to ensure uniformity of volumetric displacement.

S-300	ASTM Soils Hydrometer 151 H. Range: 0.995 to 1.038 S.G. by 0.001 division	1.0 lb
S-301	ASTM Soils Hydrometer 152 H. Range: -5 to +60 grams per liter with g/L division	1.0 lb

Hydrometer Jar Bath

ASTM D 422
AASHTO T 88

The Hydrometer Jar Bath provides a gentle agitating water circulation system with controls to maintain a +20 °C temperature. It will hold eight 1000-ml Hydrometer Jars. The bath is made from stainless steel with brass and copper fittings. Automatic high-temperature shut-off of heater and pump. Overall size: 40 x 10 x 23 in.

S-30050

S-30050	Hydrometer Jar Bath, 110 V, 60 Hz	155 lb
Related Item		
G-169	Gen. Lab. Thermometer -1°C to 50°C x 0.1°C	

Hydrometer Jar

Kimax measuring cylinder for hydrometer analysis.

18-in (48.3 cm) high and 2-in (5.1 cm) diameter. Marked for 1000 ml volume with a tolerance of ± 5.0 ml.

S-30010

S-30010	Hydrometer jar
Related Item	
S-30015	Rubber stopper

Sand Equivalent Test Set

The Set includes everything needed to perform the test, except for the Shaker. It comprises the following items:

- Clear Plastic Measuring Cylinders 17 in high, 1 ¼-in inside diameter, graduated 0-15 in
- Stock Solution, 8 oz
- Weighted Foot Assembly, 1 kg
- Siphon Assembly
- Funnel
- Measuring Tin, 3 oz (85 ml) capacity
- Solid Stopper
- Irrigator Tube
- Carrying Case (with S-28000 only)

S-28000

S-28000	Sand Equivalent Test Set with Case	18.0 lb
S-28001	Sand Equivalent Test Set without Case	16.0 lb
Related Items		
S-28010	Clear Plastic Cylinder, graduated 0-15	
S-28020*	Sand Equivalent Stock Solution, 8 oz	
S-28012	Weighted Foot Assembly	
S-28013	Siphon Assembly	
S-28014	Funnel	
S-28015	Measuring Tin, 3 oz	
S-28017	Solid Stopper	
S-28018	Irrigator Tube	
S-28016	Carrying Case	
S-28022*	Sand Equivalent Stock Solution, 1 gal	

* Shelf life is limited after sealed bottle is opened.

Sand Equivalent Shakers

ASTM **D 2419**
AASHTO **T 176, T 210**
California **217, 219**

Sand Equivalent Shakers		
S-28050	Mechanical Motor-Driven, 115 V, 60 Hz	159 lb
S-28051	Mechanical Motor-Driven, 230 V, 50 Hz	159 lb
S-28060	Hand-Operated, Spring-Type	30 lb

For more information please visit **www.DGSI.info/3094**

Relative Density Apparatus

ASTM D 4253, D 4254

C-681, shown with C-68002

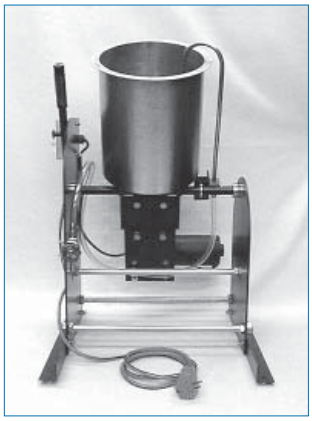
Apparatus is used to determine the relative density of free-draining soils. Soils of this type normally do not respond well to conventional Proctor moisture-density compaction tests. Maximum density is determined by placing soil in special molds and densifying using a vertically vibrating table and surcharge.

Relative Density Apparatus				
Model	Description	lb	(kg)	ft³
	Relative Density Set w/ table, 2 mold sets & gauge set			
C-680	230 V/60 Hz	990	(450)	26
C-68010	230 V/50 Hz	990	(450)	26
	Individual Components Vibrating Table			
C-681	230 V/60 Hz	605	(275)	20
C-68110	230 V/50 Hz	605	(275)	20
	Mold Sets, Complete			
C-68001	1 ft³ (2.83 L)	96	(44)	1.7
C-68002	0.5 ft³ (14.2 L)	280	(127)	3.5
C-68003	Gauge Set, Complete	8	(4)	0.2
C-68004	Pouring Funnel Set	30	(14)	1.8

Gravel Washer

ASTM C 117, D 1140

For aggregate samples containing clays and fines. The inclined stainless steel drum rotates to agitate the sample as water is fed in with the goose neck tube. The overflow from the drum lip is usually passed through a No. 200 sieve until clear. The washer is driven by a sealed electric motor with reduction drive gear. The 10¾-in dia. by 13-in deep (27 x 33 cm) drum locks in four angle positions. The water supply is controlled by a valve.



P-620

P-620	Gravel Washer, 115 V, 60 Hz, 4500 g	100 lb
P-62015	Gravel Washer, 230 V, 50 Hz, 4500 g	100 lb

Void Content Apparatus

ASTM C 1252, PTM 527
AASHTO TP 33, NAA Method A

The apparatus includes a 100 ml brass measure, funnel with special jar, funnel stand and a glass plate for calibration.

C-639

C-640

C-639	Void Content Apparatus, Coarse Aggregate	30 lb
C-640	Void Content Apparatus, Fine Aggregate	10 lb

Specific Gravity Bench

Designed to enable measurement of the specific gravity of aggregates, hardened concrete as well as other materials. Each of the components are available separately, as shown below. Requires a weigh-below scale.

For yield buckets, see Concrete Section, page 85.

A-530 shown with accessories

A-530	Specific Gravity Bench, w/ 115 V, 60 Hz outlet strip, 31 x 25 x 36 in (WxDxH)	75 lb
GW-30316*	Explorer Pro High Precision 22000 x 0.1g w \ o Cal	10 lb
A-532	Water Tank, 45 gal, 28 x 18, 24 in deep	20 lb
A-535	Specific Gravity Cradle, 8 x 9 x 6 in	1 lb
C-625	Wire Basket, No. 6 wire mesh, 8 x 8 in	8 lb
C-255	Tank Heater, 1000 W, 115 V, 60 Hz	6 lb
C-256	Tank Circulator	10 lb
G-175	Thermometer, -30 to 120°F x 1°F	1 lb
G-170	Thermometer, -10 to 110°C x 1°C	1 lb

* For lighter-weight aggregates, consider scale GW-30315 (12000 x .1 g)

Organic Impurities Test Set

ASTM C 40 **AASHTO T 21**

C-404

This Test Set is used to indicate the presence of detrimental organic compounds in sand used in mortar and cement. A positive result is indicated by a color which is compared to the permanent color standards chart provided. A positive result will require further testing before the sands can be used. The sand sample is placed in the graduated glass impurities bottle with sodium hydroxide solution (3 parts beads to 97 parts water by weight).

The Organic Impurities Test Set includes:

- Six 16-oz Graduated Glass Impurities Test Bottles*
- Color Standard Chart
- Sodium Hydroxide beads, 1 lb

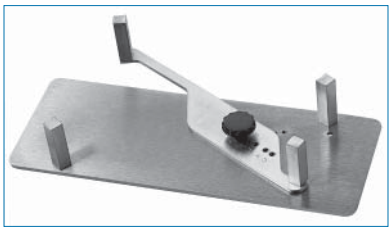
C-404	Organic Impurities Test Set	8.0 lb
Set Includes		
(6) 16 oz Grad. Glass Impurities Test Bottles, Color Standard Chart and Sodium Hydroxide Beads, 1 lb		
Related Items		
C-405	16 oz Graduated Glass Impurities Test Bottle	
C-410	Color Standard Chart	
C-415	Sodium Hydroxide Beads, 1 lb container	

* Note: Bottle configurations are under review by ASTM and may vary from those shown.

Proportional Caliper Device

ASTM D 4791

The Proportional Caliper Device is used to determine the percentages of flat, elongated, or flat and elongated particles in coarse aggregates. Made of plated steel, the 8 x 16-in (20.3 x 40.6 cm) base plate has four rubber feet for added stability. Three positions control the various ratios.



C-641

C-641	Proportional Caliper Device	12.0 lb