Aggregates - Rocks

GROUP I&S

GROUP I&S

SIEVES TABLE FROM Ø 200 TO 500 MM. MADE ENTIRELY STAINLESS STEEL BRAID, ACCORDING TO UNE-EN 933/2, ISO 3310/1, 7050/3, ASTM E11, BS 410, DIN 4187, NFX11-504, AASHTO T27 LABELLING A MICRO-PERCUSSION WITH SERIAL NUMBER EACH

Aperture ISO 3310/1 mm	ASTM E-11	Ø 200	Ø203 (8")	Ø250	Ø300	Ø 305 (12")	Ø400	Ø450	Ø500
125	5"	A001.01	A002.01	A003.01	A004.01	A005.01	A006.01	A007.01	A008.01
112		A001.02	A002.02	A003.02	A004.02	A005.02	A006.02	A007.02	A008.02
106	4,24"	A001.03	A002.03	A003.03	A004.03	A005.03	A006.03	A007.03	A008.03
100	4"	A001.04	A002.04	A003.04	A004.04	A005.04	A006.04	A007.04	A008.04
90,00	3½"	A001.05	A002.05	A003.05	A004.05	A005.05	A006.05	A007.05	A008.05
80,00		A001.06	A002.06	A003.06	A004.06	A005.06	A006.06	A007.06	A008.06
75,00	3"	A001.07	A002.07	A003.07	A004.07	A005.07	A006.07	A007.07	A008.07
71,00		A001.08	A002.08	A003.08	A004.08	A005.08	A006.08	A007.08	A008.08
63,00	2½"	A001.09	A002.09	A003.09	A004.09	A005.09	A006.09	A007.09	A008.09
56,00		A001.10	A002.10	A003.10	A004.10	A005.10	A006.10	A007.10	A008.10
50,00	2"	A001.11	A002.11	A003.11	A004.11	A005.11	A006.11	A007.11	A008.11
45,00	1¾"	A001.12	A002.12	A003.12	A004.12	A005.12	A006.12	A007.12	A008.12
40,00		A001.13	A002.13	A003.13	A004.13	A005.13	A006.13	A007.13	A008.13
37,50	1½"	A001.14	A002.14	A003.14	A004.14	A005.14	A006.14	A007.14	A008.14
35,50		A001.15	A002.15	A003.15	A004.15	A005.15	A006.15	A007.15	A008.15
31,50	1¼"	A001.16	A002.16	A003.16	A004.16	A005.16	A006.16	A007.16	A008.16
28,00		A001.17	A002.17	A003.17	A004.17	A005.17	A006.17	A007.17	A008.17
26,50	1,06"	A001.18	A002.18	A003.18	A004.18	A005.18	A006.18	A007.18	A008.18
25,00	1"	A001.19	A002.19	A003.19	A004.19	A005.19	A006.19	A007.19	A008.19
22,40	7/8"	A001.20	A002.20	A003.20	A004.20	A005.20	A006.20	A007.20	A008.20
20,00		A001.21	A002.21	A003.21	A004.21	A005.21	A006.21	A007.21	A008.21
19,00	¾"	A001.22	A002.22	A003.22	A004.22	A005.22	A006.22	A007.22	A008.22
18.00		A001.23	A002.23	A003.23	A004.23	A005.23	A006.23	A007.23	A008.23
16,00	5/8"	A001.24	A002.24	A003.24	A004.24	A005.24	A006.24	A007.24	A008.24
14,00		A001.25	A002.25	A003.25	A004.25	A005.25	A006.25	A007.25	A008.25
13,20	0,53"	A001.26	A002.26	A003.26	A004.26	A005.26	A006.26	A007.26	A008.26
12,50	½"	A001.27	A002.27	A003.27	A004.27	A005.27	A006.27	A007.27	A008.27
11,20	7/16"	A001.28	A002.28	A003.28	A004.28	A005.28	A006.28	A007.28	A008.28
10,00		A001.29	A002.29	A003.29	A004.29	A005.29	A006.29	A007.29	A008.29
9.50	3/8"	A001.30	A002.30	A003.30	A004.30	A005.30	A006.30	A007.30	A008.30
9,00		A001.31	A002.31	A003.31	A004.31	A005.31	A006.31	A007.31	A008.31
8,00	5/16"	A001.32	A002.32	A003.32	A004.32	A005.32	A006.32	A007.32	A008.32
7,10		A001.33	A002.33	A003.33	A004.33	A005.33	A006.33	A007.33	A008.33
6,70	0,265"	A001.34	A002.34	A003.34	A004.34	A005.34	A006.34	A007.34	A008.34
6,30	¼"	A001.35	A002.35	A003.35	A004.35	A005.35	A006.35	A007.35	A008.35
5,60	3½"	A001.36	A002.36	A003.36	A004.36	A005.36	A006.36	A007.36	A008.36
5,00		A001.37	A002.37	A003.37	A004.37	A005.37	A006.37	A007.37	A008.37
4,75	4	A001.38	A002.38	A003.38	A004.38	A005.38	A006.38	A007.38	A008.38
4,50		A001.39	A002.39	A003.39	A004.39	A005.39	A006.39	A007.39	A008.39
4,00	5	A001.40	A002.40	A003.40	A004.40	A005.40	A006.40	A007.40	A008.40
3,55		A001.41	A002.41	A003.41	A004.41	A005.41	A006.41	A007.41	A008.41
3,35	6	A001.42	A002.42	A003.42	A004.42	A005.42	A006.42	A007.42	A008.42
3,15		A001.43	A002.43	A003.43	A004.43	A005.43	A006.43	A007.43	A008.43
2,80	7	A001.44	A002.44	A003.44	A004.44	A004.45	A006.44	A007.44	A008.44

SIEVES TABLE FROM Ø 200 TO 500 MM. MADE ENTIRELY STAINLESS STEEL BRAID, ACCORDING TO UNE-EN 933/2, ISO 3310/1, 7050/3, ASTM E11, BS 410, DIN 4187, NFX11-504, AASHTO T27 LABELLING A MICRO-PERCUSSION WITH SERIAL NUMBER EACH

Aperture ISO3310/1 mm	ASTM E-11	Ø 200	Ø203 (8")	Ø250	Ø300	Ø 305 (12")	Ø400	Ø450	Ø500
2,50		A001.45	A002.45	A003.45	A004.45	A005.45	A006.45	A007.45	A008.45
2,36	8	A001.46	A002.46	A003.46	A004.46	A005.46	A006.46	A007.46	A008.46
2,24		A001.47	A002.47	A003.47	A004.47	A005.47	A006.47	A007.47	A008.47
2,00	10	A001.48	A002.48	A003.48	A004.48	A005.48	A006.48	A007.48	A008.48
1,80		A001.49	A002.49	A003.49	A004.49	A005.49	A006.49	A007.49	A008.49
1,70	12	A001.50	A002.50	A003.50	A004.50	A005.50	A006.50	A007.50	A008.50
1,60		A001.51	A002.51	A003.51	A004.51	A005.51	A006.51	A007.51	A008.51
1,40	14	A001.52	A002.52	A003.52	A004.52	A005.52	A006.52	A007.52	A008.52
1,25		A001.53	A002.53	A003.53	A004.53	A005.53	A006.53	A007.53	A008.53
1,18	16	A001.54	A002.54	A003.54	A004.54	A005.54	A006.54	A007.54	A008.54
1,12		A001.55	A002.55	A003.55	A004.55	A005.55	A006.55	A007.55	A008.55
1,00	18	A001.56	A002.56	A003.56	A004.56	A005.56	A006.56	A007.56	A008.56
0,900		A001.57	A002.57	A003.57	A004.57	A005.57	A006.57	A007.57	A008.57
0,850	20	A001.58	A002.58	A003.58	A004.58	A005.58	A006.58	A007.58	A008.58
0,800		A001.59	A002.59	A003.59	A004.59	A005.59	A006.59	A007.59	A008.59
0,710	22	A001.60	A002.60	A003.60	A004.60	A005.60	A006.60	A007.60	A008.60
0,630		A001.61	A002.61	A003.61	A004.61	A005.61	A006.61	A007.61	A008.61
0,600	30	A001.62	A002.62	A003.62	A004.62	A005.62	A006.62	A007.62	A008.62
0,560		A001.63	A002.63	A003.63	A004.63	A005.63	A006.63	A007.63	A008.63
0,500	35	A001.64	A002.64	A003.64	A004.64	A005.64	A006.64	A007.64	A008.64
0,450		A001.65	A002.65	A003.65	A004.65	A005.65	A006.65	A007.65	A008.65
0,425	40	A001.66	A002.66	A003.66	A004.66	A005.66	A006.66	A007.66	A008.66
0,400		A001.67	A002.67	A003.67	A004.67	A005.67	A006.67	A007.67	A008.67
0,355	45	A001.68	A002.68	A003.68	A004.68	A005.68	A006.68	A007.68	A008.68
0,315		A001.69	A002.69	A003.69	A004.69	A005.69	A006.69	A007.69	A008.69
0,300	50	A001.70	A002.70	A003.70	A004.70	A005.70	A006.70	A007.70	A008.70
0,280		A001.71	A002.71	A003.71	A004.71	A005.71	A006.71	A007.71	A008.71
0,250	60	A001.72	A002.72	A003.72	A004.72	A005.72	A006.72	A007.72	A008.72
0,224		A001.73	A002.73	A003.73	A004.73	A005.73	A006.73	A007.73	A008.73
0,212	70	A001.74	A002.74	A003.74	A004.74	A005.74	A006.74	A007.74	A008.74
0,200		A001.75	A002.75	A003.75	A004.75	A005.75	A006.75	A007.75	A008.75
0.180	80	A001.76	A002.76	A003.76	A004.76	A001.76	A006.76	A007.76	A008.76
0,160		A001.77	A002.77	A003.77	A004.77	A005.77	A006.77	A007.77	A008.77
0,150	100	A001.78	A002.78	A003.78	A004.78	A005.78	A006.78	A007.78	A008.78
0,140		A001.79	A002.79	A003.79	A004.79	A005.79	A006.79	A007.79	A008.79
0,125	120	A001.80	A002.80	A003.80	A004.80	A005.80	A006.80	A007.80	A008.80
0,112		A001.81	A002.81	A003.81	A004.81	A005.81	A006.81	A007.81	A008.81
0,106	140	A001.82	A002.82	A003.82	A004.82	A005.82	A006.82	A000.82	A008.82
0,100		A001.83	A002.83	A003.83	A004.83	A005.83	A006.83	A007.83	A008.83
0,090	170	A001.84	A002.84	A003.84	A004.84	A005.84	A006.84	A007.84	A008.84
0,080		A001.85	A002.85	A003.85	A004.85	A005.85	A006.85	A007.85	A008.85
0,075	200	A001.86	A002.86	A003.86	A004.86	A005.86	A006.86	A007.86	A008.86
0,071		A001.87	A002.87	A003.87	A004.87	A005.87	A006.87	A007.87	A008.87
0,063	230	A001.88	A002.88	A003.88	A004.88	A005.88	A006.88	A007.88	A008.88
0.056		A001.89	A002.89	A003.89	A004.89	A005.89	A006.89	A007.89	A008.89
0,053	270	A001.90	A002.90	A003.90	A004.90	A005.90	A006.90	A007.90	A008.90
0.050		A001.91	A002.91	A003.91	A004.91	A005.91	A006.91	A007.91	A008.91
0,045	325	A001.92	A002.92	A003.92	A004.92	A005.92	A006.92	A007.92	A008.92
0,040		A001.93	A002.93	A003.93	A004.93	A005.93	A006.93	A007.93	A008.93

- The openings also meet standards BS and DIN

SIEVES TABLE FROM Ø 200 TO 500 MM. FULLY BUILT IN STAINLESS STEEL MESH SQUARE HOLS PERFORATED PLATE AND UNE-EN 933/2, ISO 3310/2, 7050/4, ASTM E11, BS 410, DIN 4187, NFX11-504, AASHTO T27 LABELLING A MICRO-PERCUSSION WITH SERIAL NUMBER OF EACH

Aperture ISO3310/1 mm	ASTM E-11	Ø 200	Ø203 (8")	Ø250	Ø300	Ø 305 (12")	Ø400	Ø450	Ø500
125	5"	A011.01	A012.01	A013.01	A014.01	A015.01	A016.01	A017.01	A018.01
112		A011.02	A012.02	A013.02	A014.02	A015.02	A016.02	A017.02	A018.02
106	4,24"	A011.03	A012.03	A013.03	A014.03	A015.03	A016.03	A017.03	A018.03
100	4"	A011.04	A012.04	A013.04	A014.04	A015.04	A016.04	A017.04	A018.04
90,00	3½"	A011.05	A012.05	A013.05	A014.05	A015.05	A016.05	A017.05	A018.05
80,00		A011.06	A012.06	A013.06	A014.06	A015.06	A016.06	A017.06	A018.06
75,00	3"	A011.07	A012.07	A013.07	A014.07	A015.07	A016.07	A017.07	A018.07
71,00		A011.08	A012.08	A013.08	A014.08	A015.08	A016.08	A017.08	A018.08
63,00	2½"	A011.09	A012.09	A013.09	A014.09	A015.09	A016.09	A017.09	A018.09
56,00		A011.10	A012.10	A013.10	A014.10	A015.10	A016.10	A017.10	A018.10
50,00	2"	A011.11	A012.11	A013.11	A014.11	A015.11	A016.11	A017.11	A018.11
45,00	1¾"	A011.12	A012.12	A013.12	A014.12	A015.12	A016.12	A017.12	A018.12
40,00		A011.13	A012.13	A013.13	A014.13	A015.13	A016.13	A017.13	A018.13
37,50	1½"	A011.14	A012.14	A013.14	A014.14	A015.14	A016.14	A017.14	A018.14
35,50		A011.15	A012.15	A013.15	A014.15	A015.15	A016.15	A017.15	A018.15
31,50	1¼"	A011.16	A012.16	A013.16	A014.16	A015.16	A016.16	A017.16	A018.16
28,00		A011.17	A012.17	A013.17	A014.17	A015.17	A016.17	A017.17	A018.17
26,50	1,06"	A011.18	A012.18	A013.18	A014.18	A015.18	A016.18	A017.18	A018.18
25,00	1"	A011.19	A012.19	A013.19	A014.19	A015.19	A016.19	A017.19	A018.19
22,40	7/8"	A011.20	A012.20	A013.20	A014.20	A015.20	A016.20	A017.20	A018.20
20,00		A011.21	A012.21	A013.21	A014.21	A015.21	A016.21	A017.21	A018.21
19,00	¾"	A011.22	A012.22	A013.22	A014.22	A015.22	A016.22	A017.22	A018.22
18.00		A011.23	A012.23	A013.23	A014.23	A015.23	A016.23	A017.23	A018.23
16,00	5/8"	A011.24	A012.24	A013.24	A014.24	A015.24	A016.24	A017.24	A018.24
14,00		A011.25	A012.25	A013.25	A014.25	A015.25	A016.25	A017.25	A018.25
13,20	0,53"	A011.26	A012.26	A013.26	A014.26	A015.26	A016.26	A017.26	A018.26
12,50	½"	A011.27	A012.27	A013.27	A014.27	A015.27	A016.27	A017.27	A018.27
11,20	7/16"	A011.28	A012.28	A013.28	A014.28	A015.28	A016.28	A017.28	A018.28
10,00		A011.29	A012.29	A013.29	A014.29	A015.29	A016.29	A017.29	A018.29
9.50	3/8"	A011.30	A012.30	A013.30	A014.30	A015.30	A016.30	A017.30	A018.30
9,00		A011.31	A012.31	A013.31	A014.31	A015.31	A016.31	A017.31	A018.31
8,00	5/16"	A011.32	A012.32	A013.32	A014.32	A015.32	A016.32	A017.32	A018.32
7,10		A011.33	A012.33	A013.33	A014.33	A015.33	A016.33	A017.33	A018.33
6,70	0,265"	A011.34	A012.34	A013.34	A014.34	A015.34	A016.34	A017.34	A018.34
6,30	¼"	A011.35	A012.35	A013.35	A014.35	A015.35	A016.35	A017.35	A018.35
5,60	3½"	A011.36	A012.36	A013.36	A014.36	A015.36	A016.36	A017.36	A018.36
5,00		A011.37	A012.37	A013.37	A014.37	A015.37	A016.37	A017.37	A018.37
4,75	4	A011.38	A012.38	A013.38	A014.38	A015.38	A016.38	A017.38	A018.38
4,50		A011.39	A012.39	A013.39	A014.39	A015.39	A016.39	A017.39	A018.39
4,00	5	A011.40	A012.40	A01340	A014.40	A015.40	A016.40	A017.40	A018.40
RECEIVER		A021	A022	A023	A024	A025	A026	A027	A028
LID		A031	A032	A033	A03C	A035	A036	A037	A038

Pan and lid for wet sieving. Made entirely of stainless steel with a water inlet at the top and a drain at the bottom.

A040 Pan and lid Ø200 mm
A042 Pan and lid Ø300 mm.

A045 Sieve for wet sieving of fine materials, Manufactured entirely of stainless steel ring Ø200 x 200 mm high mesh UNE 0.075 mm (ASTM No. 200).

A046 Sieve for wet sieving of fine materials, made entirely of stainless steel ring Ø200 x 100 mm high mesh UNE 0.075 mm (ASTM No. 200).

A048 Brass bristle brush

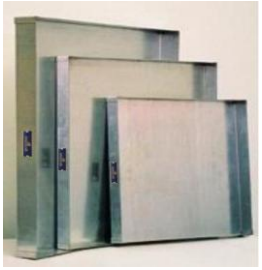
A048.01 Double ended, brass and nylon bristle
A048.02 Bristle Round Brush Ø30 mm.

Digital ultrasonic cleaning baths
Completely transistorized built in high frequency electric generator. Working frequency 35 Khz. Temperature regulation by microprocessor with digital read out (from ambient +5º C to 90º C). Timer 0 - 99 minutes. Cleaning tray made of stainless steel 18/10. External case made of stainless steel AISI-316. Heating by semi-detached elements at the tray. Complete-half wave selector. It allows less power consume in some applications. Draining tap incorporated.

A049 Digital ultrasonic cleaning baths, 5,7 l. capacity
Dimensions int.: 150 x 300 x 150 mm (HxWxD)
A049.05 Digital ultrasonic cleaning baths, 12 l. capacity
Dimensions int.: 150 x 300 x 240 mm (HxWxD)
A049.10 Digital ultrasonic cleaning baths, 18 l. capacity
Dimensions int.: 200 x 330 x 300 mm (HxWxD)

SAMPLE PREPARATION TRAY

Galvanized Sheet	Stainless Steel	Dimensions
A051	A061	200x200x50 mm
A052	A062	400x200x50 mm
A053	A063	400x400x50 mm
A054	A064	600x400x50 mm
A055	A065	600x600x50 mm
A056	A066	1000x1000x50 mm



SIEVE SHAKER MOTOR OPERATED

UNE EN 932-5 / ISO 3310-1

A070 The analytic **sieve shaker** is designed to obtain reproducible results in accordance with the standard ISO 9001 for measuring and control equipment. It is an essential device for research laboratorios and for quality assessment of any type of industries during the analysis of the production process. It allows to define mechanic characteristics of particles, concentration by joining forces, miscibility, perfomance with regard to stress, organoleptic characteristics, etc.

Features

- Capacity up to 6 Kg of sample.
- Three-dimensional movement.
- It can fit wet and dry sieves.
- It is controlled by a microprocessor.

User friendliness

- Standard lock system easy to program provided with the sieve.
- Adjustment of the sieve power (100% corresponds to 6400 RPM). This allows better spread of the sample through the sieve and better efficiency in the sieve process.
- It is programmable up to 16 memories. Time can be adjusted from 10 seconds to 99 minutes and hold position.
- Adjustable by intervals from 1 to 99 seconds.

Power supply: 220V, 50 Hz
Dimensions: 280x370x765 mm (W x I x h)
Weight: 15 kg

A071 Electromagnetic sieves shakers for Ø200 and 203 mm (8 "). Suitable for sieving fine material. The separate digital control panel can adjust:, power control, intermittent and sieving time from 1 to 999 minutes. The team also allows testing of wet sieving.
Sieve clamping system using threaded rod and steel lid.
Power supply: 220V, 50 Hz I ph
Dimensions: 320x380x850 mm
Weight: 40 kg

UNE EN 932-5

A073 Electromagnetic sieves shakers for Ø200, 203 (8 "), 250, 300, 315 (12"). Suitable for sieving fine material. The separate digital control panel can adjust:, power control, intermittent and sieving time from 1 to 999 minutes. The team also allows testing of wet sieving.
Sieve clamping system using threaded rod and steel lid.
Power supply: 220V, 50 Hz I ph
Dimensions: 380x440x1075 mm
Weight: 65 Kg

A075 Electromagnetic sieves shakers for Ø200, 203 (8 "), 250, 300, 315 (12"), 350, 400, 450 (18 "). Suitable for sieving fine material. Digital control module with triple vibrating action: vertical, lateral and rotational. regulation Microprocessor control with function sieving time between 0 and 999 minutes, adjusting the intensity of vibration (continuous or intermittent). The team also allows testing of wet sieving. The control module separated from the body of the machine to avoid splashing. Sieve clamping system using threaded rod and steel lid.
Power supply: 220V, 50 Hz I ph
Dimensions: 480x500x1150 mm
Weight: 85 Kg

HIGH CAPACITY SIEVE SHAKER

A077 Equipment classification and screening test samples such as rocks, gravel, slag, ores, sand and similar materials. The sieve has a capacity of six sieves and dust pan. Each screen may contain a sample to 30 liters.
Supplied complete **without** sieves (must be ordered separately).
Power supply: 230V, 50Hz 750W
Dimensions: 580X790X850 mm.
Weight: 185 kg approx.

ACCESSORIES:

A077.30 Safety doors, upper and frontal, complete with micro-switch, complying to CE Safety Directive.
A078 Securtiy cabinet, steel made with microswiche, complying to CE Safety Directive

SIEVES:

Code	Aperture	code	Aperture	Code	Aperture
A077.01	4”	A077.10	3/8”	A077.19	Nº 30
A077.02	3½”	A077.11	7/16”	A077.20	Nº 40
A077.03	3”	A077.12	5/16”	A077.21	Nº 50
A077.04	2½”	A077.13	¼”	A077.22	Nº 60
A077.05	2”	A077.14	Nº 4	A077.23	Nº 80
A077.06	1½”	A077.15	Nº 8	A077.24	Nº 100
A077.07	1”	A077.16	Nº 10	A077.25	Nº 140
A077.08	¼”	A077.17	Nº 16	A077.26	Nº 200
A077.09	½”	A077.18	Nº 20	A077.27	Fondo

AIR JET SIEVING MACHINE
UNE EN 933-10

A076 Apparatus for dry sieving of powders or granules is applied in obtaining granulometric curves between 5 to 4000 microns. The reliability and repeatability of the results, make a basic piece of equipment in the quality control of products in dust. The process is based on the application of a sweep of air entrains the fine particles to make them pass through a sieve. This effect is achieved by a vacuum that causes a depression controlled via the vacuum connection port.
Measuring range of 5 to 10 (depending on product) to 4000 microns
Vacuum regulator.
Integrated electronic control. Digital display of vacuum programmable from 0 to 99 mbar
Stop function, and OFF
Interior polished stainless steel AISI 304
Engine 20 r.p.m. 14.7 W 220V 50 Hz, IP 52.
Vacuum: up to 65 mbar
Weight: 20 kg
(Aspirator Optional) available 1200W and 2400W
Power supply: 220V, 50 Hz
Supplied with connection cable, nylon hammer, plastic cover and vacuum tube connection.

ACCESSORIES:
A076.01 Aspirator device
A076.03 Sieve Ø200 mm, mesh size UNE 0.020 mm
A076.04 Sieve Ø200 mm, mesh size UNE 0.032 mm
A076.05 Sieve Ø200 mm, mesh size UNE 0.036 mm
A076.06 Sieve Ø200 mm, mesh size UNE 0.038 mm
A076.07 Sieve Ø200 mm, mesh size UNE 0,040 mm
A076.08 Sieve Ø200 mm, mesh size UNE 0,063 mm

DETERMINATION OF PARTICLE DENSITY AND WATER ABSORPTION OF AGRREGATES

A079 Basket Ø200x200 mmh of to handle and 3.35 mm mesh
V434 Hydrostatic weighing table for manual lifting device and support for the placement of Cuba.

A080 Pycnometer 1000 ml with capillary
A081 Pycnometer 500 ml with capillary

FLAKINESS INDEX BS 812

Determination of the particle shape

A082 Series consists of seven sieves built in furnace painted plate with slots sized according to the following table:

Code	Slot width x length
A082.01	4,9x30
A082.02	7,2x40
A082.03	10,2x50
A082.04	14,4x60
A082.05	19,7x80
A082.06	26,3x90
A082.07	33,9x100

BAR SIEVES FOR DETERMINATION OF AGGREGATE FLAKINESS INDEX EN 933-3/ NF P18-561

A083 Consisting of a series of 13 SIEVES made of steel powder coated. Dimensions sieve of 280x280 mm openings cylindrical bars according to the following table:

Code	Size Fraction	Slot Width mm
A083.01	63/80	40 ± 0,3
A083.02	50/63	31,5 ± 0,3
A083.03	40/50	25 ± 0,2
A083.04	31,5/40	20 ± 0,2
A083.05	25/31,5	16 ± 0,2
A083.06	20/25	12,5 ± 0,2
A083.07	16/20	10 ± 0,1
A083.08	12,5/16	8 ± 0,1
A083.09	10/12,5	6,3 ± 0,1
A083.10	8/10	5 ± 0,1
A083.11	6,3/8	4 ± 0,1
A083.12	5/6,3	3,15 ± 0,1
A083.13	4/5	2,5 ± 0,1
A084	Fondo	

BALLAST TEST

Sieves 490x380 mm rectangular ballast. Made of steel painted in two models: bar and square mesh with the following lights:

Bars

Code	Aperture
A085	25 mm
A086	16 mm
A087	12,5 mm
A088	8 mm
A089	Fondo

Square Mesh

Code	Aperture
A094	80 mm
A095	63 mm
A096	50 mm
A097	40 mm
A098	31,5 mm
A099	22,4 mm

A100 Mobile workforce with two bearings, needle for testing and slab elements

CLASSIFICATION OF SAMPLES

UNE EN 932-1 / 933-2 / 933-3 / ASTM C136 / NF P18-553 / BS 1377 / BS812:1

Sample splitters (Riffle Boxes) for classifying samples into representative portions through chutes of different sizes. They are made of sheet steel powder coated. Comes with three receivers with handles and catcher (from ¼ "to 1 ½") and rest without catcher

Code	Slot Width	Slot Number
S001	¼" - 6,3 mm	14
S002	½" – 12,5 mm	14
S003	¾" – 19,1 mm	16
S004	1" – 25,4 mm	14
S005	1½" – 38,1 mm	12
S006	2" – 50,8 mm	10
S007	3" – 76,2 mm	8

S010 Large capacity sample splitter
Designed for the reduction of test samples which are too large in volume to be conveniently handled. It handles any material from sand sizes up to dia. 108 mm. Each chute bar is 12 mm wide so that openings of 12-24-36-48-60-72-84-96-108 mm are possible. Complete with two collecting pans. Clam shell hopper: 30 litres capacity. Very sturdily constructed, it is totally cadmium plated for rust protection. Weight: 55 Kg

V8212/30 Porcelain mortar Ø125 mm
V8212/31 Hand Mortar with rubber head

V425 Lona to expand samples. Size 2x2 m.

BULK DENSITY OF AGGTEGATES
EN 1097-3 / ASTM C29÷97 / BS 812 / ISO 6872

Manufactured in stainless and painted thick
A115 Metal container with handles 1 dm ³
A116 Metal container with handles 5 dm ³
A117 Metal container with handles 10 dm ³
A118 Metal container with handles 20 dm ³
C001.02 Steel rod Ø16 x 600 mm

SPECIFIC GRAVITY OF AGGREGATES
UNE 103.302, ASTM D854, BS 8122, 1377

V5572 Renault pycnometer cup solid peak of 50 ml.
V5573 Renault pycnometer cup solid peak of 100 ml.
V5562 Gay-Lussac pycnometer of 50 ml liquid.
V6361 Calibrated flask 100 ml.

FINE AGGREGATE SURFACE MOISTURE
ASTM C70 / AASHTO T142

A125 Chapman bottle to determine the surface moisture in fine aggregates. Graduated up to 200 ml between two appraisals and from 375 to 450 ml capacity above the second.
Weight: 510 g.

A125.01 Enclosure for bottle chapman
V9245 Maximum and minimum thermometer with canopy

Hammer grinding mill, for laboratory

A127 Used to mill small quantities of product for laboratory testing.
Feeding is via vertical input which allows products with a particle size of max. 15 mm
Quick release door with safety micro sensor which is activated when the rotor and blades are in operation.
It comprises a three long-lasting blades manufactured from stainless steel and an interchangeable screen with round perforations from 1 to 5 mm diameter.
Frontal and loading hopper manufactured from mirror-polished AISI-304 stainless steel.
- Grinding chamber dia. 110 mm - 3 fixed hammers
- Output particle size: various opening size 1, 2, 3, 4 and 5 mm(one screen included)
- Max. hardness of the material to grind: 6 Mohs
- Chamber volume: 0,5 l
- Speed: 3000 rpm
- Power supply: 230V 1ph 50/60Hz 1,1kW
- Dimensions: 520 x 230 xh 420 mm
- Weight: 25 kg

DETERMINATION OF VOIDS IN THE FILLER
EN 1097-4 / BS 812

A128 Equipment for compacting the filler, base manufactory of 100 x 150 mm with two guide columns, Ø25 mm internal cylinder and a piston penetration graduated that slides cylinder freely without friction side.
Weight: 4 kg

Accessories:

A128.01 Pack of 100 filters Ø25 mm.

DETERMINATION OF DRYING SHRINKAGE
EN 1367-4 / BS 812:102

A130 Triple mould 50x50x200 mm with holes for the placement of the contact tip

A130.01 Point of contact for previous mold. Supplied in pack of 15 pieces.

A130.03 Invar bar reference for calibrating the gap

CONTRACTION METER
Determination of drying shrinkage
Test thermal properties and wear aggregates
EN 1367-4 / BS 812:102

A133 Equipment used for measuring variations in length of the specimen. The top bridge can be adjusted to suit the length of the specimens.
It also measures the linear shrinkage of samples having different dimensions.
as: 40x40x160 mm, 1 "x 1" x 1 "¼.
Supplied without meter and the reference bar (see accessories).

Accessories:

A133.01 Digital comparator 5 mm x 0.001 mm div.

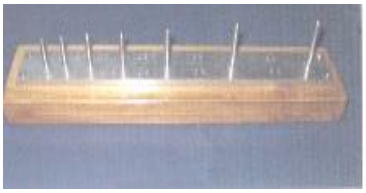
A133.02 Digital comparator 12.5 mm x 0.001 mm div.

A133.03 Invar bar reference for calibrating the gap

FLAKINESS AND THICKNESS GAUGE INDEX
BS 812

A134 Length gauge to measure flakiness index of aggregates.

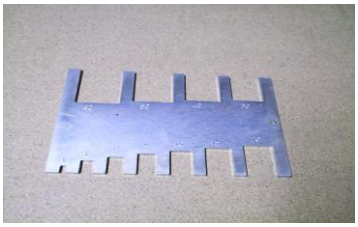
A135 aggregates



SHAPE COEFFICIENT
EN 933-4, 933-5 / DIN 4226 / CNR N.95

A136 Gauge for determining the coefficient form of coarse aggregate

A137 Shape gauge for measuring the length and thickness of aggregates for concrete.



UNE 22950/2

A138 Device for indirect (Brazilian) tensile strength in rock samples used in testing machines of Inmastec multiensayo
Applicable Ø90 mm specimens.
Displacement: 30 mm.

A139 Device for indirect (Brazilian) tensile strength in rock samples used in testing machines of Inmastec multiensayo
Applicable Ø70 mm specimens.
Displacement: 30 mm.

POTENTIAL REACTIVITY OF AGGREGATES TO ALKALI FRONT CEMENT
UNE 146.507 / UNE 146.507-1 / EN 96 / ASTM C289
A140 Container for determining the reactivity potential chemical of aggregates in contact with alkalis of cement. Manufactory of stainless steel with sealing cover.
Capacity: 59 cm ^{3}

CONSISTENCY OF AGGREGATES
EN 1367-2 / ASTM C86
A141 Metal basket Ø120x160 mm, 3.35 mm mesh with handle
A142 Metal basket Ø95x120 mm, mesh size 1.18 mm with handle
A143 Metal basket Ø95x120 mm, 0.60 mm mesh with handle
A144 Metal basket Ø95x120 mm, 0.50 mm mesh with handle
A145 Metal basket Ø65x80 mm, 0.15 mm mesh with handle

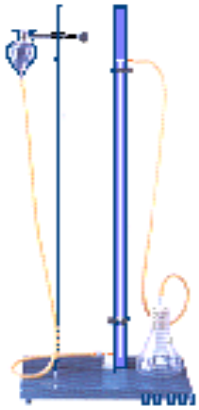
DETERMINING PARTICLE DENSITY AND WATER ABSORPTION
EN 1097-6 / ASTM C128, C127 / AASHTO T84 / BS 812 / DIN 12039
A146 Det conical mold, funnel and ram to determine relative density and fine aggregate absorption.
A147 1000 ml pycnometer with plug, capillary tube and funnel.
A148 500 ml pycnometer with plug, capillary tube and funnel.
V5236 Volumetric flask of 500 ml capacity

DETERMINATION OF RELATIVE DENSITY OF COARSE AGGREGATE
UNE EN 1097-6
A150 Metal basket Ø200 x 200 mm with handle, for coarse aggregate sizes less than 38 mm.
A151 Metal basket Ø250 x 250 mm with handle, for coarse aggregate sizes above 38 mm.

TEST METHLENE BLUE
For measuring the capacity of methylene blue absorption by sand fines.
EN 933-9 / NF P94-068 / NF P18-592
A152 Electronic Shaker fins, with digital display. Speed range between 200-2000 rpm. Supplied complete with stirring paddle, support and fixing chuck
A153 Electronic mixer with digital speed display, speed range 40-400 and 200-2000 rpm Accessories not included.
A153.01 Support dual T, stainless steel rod. AISI 304 Ø20 x 800 mm.
A153.02 Double blades cross.
A152.02 Box of 100 filter paper Ø 125 mm.
A152.03 Box of 100 gr. Methylene Blue.
A152.04 Box of 25 gr. Methylene Blue.
V7557 Burette 50 ml graduated with key.
V7558 Burette 100 ml graduated with key.
A152.05 Double locking nut
A152.06 Solid glass rod 300 mm length
A152.07 Base plate Support


A152


A153



Carbonate content in aggregates
UNE 103.200
A154 Bernard calcimeter to determine the carbonate content in soils and aggregates. By adding hydrochloric acid to the sample, the carbonate present therein is released in the form of C02. C02 liberated as a result of pressure increases, and this increases the level of the burette water deaeration. The measured level difference indicates the amount of C02 released, allowing the calculation of the carbonate content
Supplied with metal support, 100 ml burette, level glass ampoule, 250 ml Erlenmeyer flask., Glass test tubes, and latex rubber tube metal clamp nut.

DETERMINATION CLAYS, SILTS, DUST IN THE AGGREGATE
EN 933-9 / ASTM C117 / BS 812, NF P94-068
A155 Orbital and reciprocating
- Orbital or reciprocating motion modifiable
- Shaking tray is designed to couple various laboratory containers and is provided with four metal bars to fix padded in various ways such containers.
- Among its highlights technical specifications:
  -Stirring speed, adjustable from 40 to 350 rpm
  -Clock timer. Selectable up to 60 minutes,
  -Tray 500x400 Mm agitation.
  With digital-to an accuracy of ± 2%.
- Warning lamp operation.
- Manufactured under CE
- Voltage: 230v/50Hz

COEFFICIENT DETERMINATION OF LOS ANGELES
EN-1097-2 / EN 12697-17 / EN 12697-43 / ASTM C131
A158 Machine Los Angeles

Used to determine the resistance of aggregates to abrasion. It comprises a heavy steel cylinder of 711 mm inside diameter x 508 mm inside length, mounted on a base frame. The cylinder rotates at 31÷33 rpm.
The machine is fitted with an automatic digital counter which can be preset to the required number of revolutions of the drum.
The cylinder is counterbalanced so that the filling opening stays in position whithout tilting; a push-button allows to position such opening for the loading/unloading operations.
Supplied **"without"** abrasive charges to be ordered separately according to the Standards the machine has to comply. It cannot be sold in the CE markets without protection (see accessories).
Power supply: 230 V 50 Hz 1ph 750W
Dimensions: 1000x800x1000 mm
Weight: 370 Kg

A158.01 Set of 11 abrasive charges(between 4690 and 4860 ± 20 gr.)
A158.02 Set of 12 abrasive charges (between 5120 and 5300 ± 20 gr.)
A158.03 Security cabinet, manufactured from sheet steel, conforming to CE Safety Directive.
When opening the cabinet's door during Los Angeles working, a microswitch automatically stops the rotation of the drum.
Dimensions: 1100x1180x1250 mm
Weight: 150 kg approx..

CONSISTENCY OF AGGREGATES
UNE-7134 / ASTM C235

A159 Sclerometer of soft particles,
Equipment determines the soft particles in coarse aggregate.
It consists of a movable cylinder 1 kg of weight freefall and a needle of 1.6 mm Ø with round head.

A159.01 Cuzin Needle Ø 1.6 mm.

IMPACT RESISTANCEBS 812 / NF P18-574

A160 Apparatus for testing the impact strength of the aggregates according to BS 812. Sturdy steel protected against corrosion, has an automatic counter of the number of hits. Comes complete with cylindrical measure ø 76 x 52 mm deep and compacting rod ø 9.5 x 300 mm in length.
Dimensions: 442 x 320 x 930 mm.
Weight: 58 kg. About

Accessories:

A160.01 Compacting rod Ø95x300 mm
A160.02 Measurement cylindrical Ø6x52 mm

A161 Apparatus for testing the impact resistance of aggregates according to the NF P 18-574, robust steel corrosion protection with automatic counting of the number of hits. Supplied complete with cylindrical measure ø 102 x 52 mm deep and compacting rod ø 9.5 x 300 mm in length.
Dimensions: 442 x 320 x 930 mm.
Weight: 58 kg. Approx

Accessories:

A161.01 Ø102x52 mm cylindrical mesurement Standard NF 18-574

DETERMINATIÓN OF ABRASION DEEP AND CERAMIC TILE CEMENT
EN 1341 / 1342 / 1343 / 1339 / EN 10545-6 / UNE 13748-2

A162 ABRASION RESISTENCE ON NATURAL STONES AND CONCRETE TILES FOR PAVING

Used to determine the resistance to abrasion and wear of concrete products and natural stones, by measuring the length of a groove produced on the specimen surface by a disc with thickness of 70 mm that rotates at controlled speed and makes a constant pressure on the specimen.
A charge of abrasive material must be interposed between the disc and the specimen.
The instrument is supplied with aspirator to collect powders, electronic speed controller and shutting off device after the set number of revolutions, 1 Kg of abrasive material, accessories and cabinet to CE Safety Directive.
Power supply: 230 V 50 Hz 1ph 500W
Dimensions: 450x420x800 mm.
Weight: 85 Kg

A162.01 Box of 25 kg corundum grain 3
A162.02 Calibration plate made of boulonnaise marbre
A162.03 Abrasion disc Ø200 x 10 mm

CRUSH RESISTANCE
UNE 83112; BS 812:110

A163 Equipment to determine the crush resistance of the aggregates less than 9.5 mm. Supplied complete with Ø75 mm mold, mold base, compacting piston and rod.
A164 Equipment to determine the crush resistance of the aggregates less than 9.5 mm. Supplied complete with Ø150 mm mold, mold base, compacting piston and rod.

FRIABILITY COEFFICIENT
EN 1097-1 / NF P18-572, P18-576 / UNE 83115

A166 DETERMINATION OF THE RESISTANCE TO WEAR
Used to determine the resistance of aggregates by abrasion. The machine essentially comprises a heavy steel frame on which the following stainless steel cylinders can be mounted:
4 cylinders dia 200x154mm, or
2 cylinders dia 200x400mm, or
2 cylinders dia 200x154mm and 1 dia 200x400mm
The Micro-Deval is supplied complete with separate control panel fitted with a digital automatic revolutions counter.
Supplied "without" stainless steel cylinders and "without" stainless steel spheres which have to be ordered separately.
It cannot be sold in CE markets without security cabinet (A166-05)
Power supply: 230V 50Hz 1ph 750W
Dimensions: 1000x450x920mm
Weight: 150 kg approx.
A166.01 Abrasive charge of 9, 21, 259 stainless steel balls. 420, for Micro-Deval apparatus.
A166.02 Charges abrasive Ø 10 mm (5 Kg)
A166.03 Cylinder, standard, stainless steel, 200 mm dia. x 154 mm length (4 pieces are required). EN 1097-1
A166.04 Cylinder, stainless steel, 200 mm dia. x 400 mm length. Conforming to EN 13450, NF P18-572.
A166.05 Micro-Deval same to mod. A166, but equipped with security cabinet, conforming to CE Safety Directive.

A167

Accessories:
A167.01 Com Emery (25 Kg)
A167.02 Flour Emery, 5 kg pack
A167.03 Control Stone, ungraded (25 Kg)
A167.04 Friction Tester Reference Stone (Criggon Stone) 25 Kg bag
A167.11 Mould (without cover) to prepare the specimen
A167.12 Cove for the mould

ACCELERATED POLISHING MACHINE OF AGGREGATES
UNE-EN 1097-8 / EN 1341/ EN 1342/ EN 1343 /
T-174; BS 812 :114

A167 DETERMINATION OF THE POLISHED STONE VALUE
It measures the resistance of road aggregates, paving stones, paving blocks, to the polishing action of vehicle tyres on a road surface.
The specimens are manufactured with suitable moulds.
The specimen is than located on the Road Wheel accepting 14 specimens.
The wheel is now rotated and enters in contact with solid rubber tyre, spring loaded.
Abrasive charges are continuously introduced by two automatic mechanical feeders (hoppers). The feeders are held by a suitable support disjoined from the machine body; this solution saveguards feeding calibration and realiability/life of the hoppers from the influence of test execution vibrations.
Road wheel speed: 310 to 330 r.p.m.
The water is supplied at a controlled rate through a water container equipped with flow regulator.
The digital control panel, foreseen in the back side of the machine, allows to select the test time.
During the test execution the display shows the remaining time and the speed rotation of the wheel holding the specimens.
The machine provides a method of preparing polished stone specimens for use with the Skid Resistance Tester mod. A113 when used in Laboratory.
The unit is supplied complete with 2 rubber wheels (one for corn and one for flour emery), set of 4 secimen moulds and 2 mould covers, while control stone, corn and flour emery have to be ordered separately (see accessories).
Power supply: 230 V 50 Hz 1ph 750W
Dimensions: 1800x820x600 mm
Weight: 175 kg.

TEST ABRASION BÖHME
EN 1338 / EN 1339 / EN 1340 / 13892-3 / 14157 / DIN 52108

A168 The instrument measures a volume loss in a specimen under abrasion test and it's used in tests such as:
Paving stones, concrete slabs, slabs made of natural rocks and natural stone slabs.The test is performed by positioning a specimen to be verified in a abrasion tester Böhme apparatus on the test track on which has been spread normalized abrasive; the grinding wheel it's made rotate and the specimen submitted to the abrasive load of 294 N for a certain number of cycles. Before doing a test, establish the specimen's bulk density by measuring weight and thickness. Perform the test for 16 cycles composed of 22 turn each, calculating at the end a worn as a average loss in volume and weight. The apparatus is basically composed of:
Cast iron horizontal disc with a speed of 30 rpm and a diameter of 750mm furnished of a 200mm test track to position a specimen.
Separate control panel with digital revolutions counter with

automatic stop after preset revolutions, specimen's holder and adjustable charger used to produce a force of 294 N ± 3 N on a specimen
Power supply: 230V 50Hz 1PH 800 W
Dimension: 1500 x 1000 xh 850 mm
Weight: 250 kg
A168.01 Abrasive material, box of 5 kg

SKID RESISTANCE COEFFICIENT
EN 1097-8/ EN 1338/ EN 1341/ EN 1342/ EN 13036-4/ EN 1436/ ASTM E303

A169 TRRL Pendulum laptop to measure skid resistance.
The equipment consists of a base with three adjustable support points and joined by a vertical, where the whole mechanism is supported test and measurement of sliding resistance. The unit is The tester is supplied "WITHOUT" rubber sliders that have to be ordered separately (see accessories).and graduated scale for measuring light alloy mounted on rubber and laboratory use.
Dimensions: 750x730x330 mm.
Weight: 32 Kg

Accessories:
A169.01 Sliding rubber for use in laboratory PSV.
A169.02 Sliding rubber for use on land.
A169.03 Large rubber (6 pcs.).
A169.04 Small rubber (6 pcs.).
A169.05 Metal base plate.

JAW CRUSHER
EN 1744-1 / UNE 83.120

A170 Equipment for crushing and reducing the size of aggregate samples, minerals and similar materials.
The crusher has an input opening measuring 80 x 50 mm, adjustment system of the size of material to 1 mm.
Container capacity 2.5 dm ^{3}.
Dimensions: 800x320x650 mm
Weight 100 Kg approx.

A171 Jaw Crusher similar to A170 model, but with input opening measuring 100 x 60 mm.

ROCK STRENGTH INDEX
ASTM D5731

A173 Used to determine the strength values of a rock specimen both in the field and in the laboratory.
It consists of a load frame for applying loads up to 55 KN, on which a manual hydraulic jack is mounted. The instrument accepts core specimens up to 4" (101,6 mm) diameter which are loaded by two coneshaped points.
A graduated scale indicates the distance between the conical points.
The applied load is measured by a **high precision electric load cell** with a digital display unit range 0-56kN proving:
- 65.000 divisions
- 0,001 kN resolution
- Linearity: 0,05%
- Hysteresis: 0,03%
- Repeatability: 0,02%

The strength index (IS) is got by the formula P : D2 where P is the strength and D the space between the two conical points. Supplied complete with wooden carrying case, goggles, accessories.
Dimensions: 400x530x720 mm. Weight: 25 kg

A175 Equipment formed by a point load rigid frame which is mounted on a framework consisting of two columns trials with adjustable upper bridge, hydraulic piston actuated by a manual pump millimeter ruler to measure the distance between two steel conical points constructed especially and a pressure gauge graduated to 400 kg / cm ²
Dimensions: 400x650x300 mm
Weight: 20 kg.

Accessories:
A175.01 Gauge of 400 Kg / cm ²
A175.02 Gauge of 100 Kg / cm ²
A175.03 Gauge of 20 Kg / cm ²
A175.04 Safety cabinet according to CE
A175.05 Set of cone-shaped points

SPCIMEN CUTTING DEVICES

C080 Cutting concrete specimens, witnesses and construction materials. It has a screw to vary the height of the head. Supplied complete with submersible pump water for cooling and blade guard.
Specifications: 3 Hp
Power supply:. 230/380V. 50 Hz
Cutter: Supports 300/350 - 25.4 mm ..
Carriage Dimension: 498 x 648 mm.
Maximum cutting length: 645/630

Accessory:
C080.01 Cutting Disc Ø350 mm
C080.02 Cutting Disc Ø300 mm

C081 High capacity cutter for highest production, cutting block, curbs and specimens. Height adjustable head. Ability to Ø 600 mm disc.
Motor: 220/380V three phase
Power: 7.5 C.V.

C081.01 Disc diameter Ø 600 mm. old concrete diamond.

ROCK CLASIFICACCIÓN
ASTM D5873 / ISRM
A180 clerometer for rock classification. The sample is placed horizontally on the stand and taken several measures at various points perpendicular to the longitudinal axis.
Impact energy: 0.74 Nm
Test Range: 10 ÷ 60 N / mm ²
Weight: 2,100 Kg approx.

A180.01 Support universal guide to test standard rock saw.

A182 Calibration Anvil for calibration to Hammers EN 12504-2 / ASTM D5873, C805
Dimensions: Ø150x230 mm
Weight: 17 kg approx.

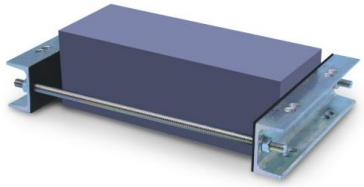
EN 101
Set of mineral Mohs hardness scale
A184 Set to identify minerals formed at its surface hardness. This consists of 10 mineral following codes: (1) Talcum, (2) Plaster, (3) Calcite, (4) Fluoride, (5) Apatite, (6) Feldspar, (7) Quartz, (8) Topaz, (9) Corundum and (10) Diamond
Weight: 500 kg approx.

SAND EQUIVALENT TEST SET (COMPLETE)
EN 933-8 / UNE 103109 / ASTM D2419 / BS 1924 / NF XP18-598
S060 Equipment to determine sand equivalent consists of the following components.
S060.01 Plexiglass measuring cylinder engraved at 2 stripes 100 and 380 mm. square basis
S060.02 Rubber stopper for cylinder
S060.03 Irrigator tube with conical tip and holes
S060.04 Measuring of 125 ml
S060.05 Funnel wide mouth
S060.06 Weighted foot assembly for sand level
S060.07 5 L container with siphon lid
S060.08 Tubo de goma (1,5 m).
S060.09 Mohr clamp
S060.10 Graduated ruler 500 mm stainless steel
V435 Stop watch, digital
S061 Miniature sample splitters 5 mm with three receivers
S062 Concentrated stock solution, 5000 ml.

S063 Motorized sand equivalent shaker
The unit provides a constant uniform shaking with automatic cycle test. Oscillating excursion is 203 mm at 175÷180 adjustable strokes/min. rate. Complete with digital timer that automatically stops the shaker at the end of the test. It cannot be sold in CE markets without security cabinet
Power supply: 230V 1ph 50 Hz 250 W
Dimensions: 700x360x350 mm. Weight: 30 Kg

C083

C083.01



C083.04

C083.03 Set mounting brackets diameter specimens 100, 110, 150, 160 mm. can only be used in conjunction with C083.02

C083.04 Mounting set for different sized blocks to 390x250 mm.

SPECIMEN GRINDING MACHINE
EN 12390-3/ ASTM D4543

C083 Specimens automatic grinding**,** designed to grind and polish concrete cube and cylinder specimens, blocks, natural stones, rocks, ceramic materials etc. The specimens are easily fixed to the table by proper locking stirrups (see accessories) allowing to grind at a time:

- N° 3 cube specimens 100mm side, or
- N° 3 cube specimens 150mm side, or
- N° 2 cube specimens 200mm side, or
- N° 2 cylinder specimens dia. 100x200, 110x220, 150x300, 160x320mm, or
- N° 1 block with max. dimensions 390x250mm

The revolving abrasive head is radially and alternatively moved in both directions through an electric motor actuated by a pushbutton.
The column is completely protected against the abrasive dust.
The vertical lowering of the grinding head is achieved with infinitesimal adjustments by operating on the top handwheel having 0,05mm graduations.
The machine, made from rugged plate, is supplied complete with control panel, coolant/decantation tank (by water and emulsifying oil), motor pump, set of abrasive sectors, safety chip guard that when removed, stops automatically the machine.
The standard supply "**does not include**":

- The locking stirrups,
- The diamond sectors (8 pieces)

that must be ordered separately (see accessories).

Technical specifications:
Table dimensions: 775x280mm (useful: 750x235mm)
Grinding wheel dia.: 330mm
Vertical span width: min. 175mm (95mm with the distance piece) max. 380mm
Grinding height range: 95 ÷ 380mm
Grinding head stroke: 215mm
Grinding wheel speed: 1400 rpm.
Power supply: 400V 3ph 50Hz 4500W
Dimensions: 1220x1080x (h) 1730mm
Weight: 410 kg approx.

Accessories:
C083.01 Diamond polishing sections (8 units required), especially effective due to their long working life and good grinding action.
C083.02 Set cubic specimen mounting brackets 100, 150, 200 mm.

Drying oven with forced air circulation, Adjustable temperature from 40 ° C to 250 ° C. Temperature homogeneity: ± 2%
Safety according to EN 61010-1, EN-61010-2-010
Outdoor furniture built in oven painted with epoxy. Inside tray, double body and counter stainless steel AISI 304. Silicone gasket. Adjustable aerator
Regulating Hydraulic thermostat temperature. Analog thermometer, the internal temperature reader, electric resistance heating chamber mounted independently, which allows optimum temperature stability.
Device complete with two stainless steel perforated trays.

Code	Capacity	Internal measures within mm. H x W x D	Exterior measurements in mm. H x W x D	Power W
V400	43	330 x 470 x 280	520 x 790 x 470	1.000
V401	78	500 x 450 x 350	810 x 640 x 550	1.000
V402	135	500 x 600 x 450	690 x 920 x 640	1.000
V403	250	800 x 600 x 520	1100 x 750 x 760	3.000

HOEK CELLS FOR ROCK TRIAXIAL TEST
ASTM D5873

For use with pressures up to 70 MPa.
Used to measure the strength of cylindrical rock specimens which are subjected to triaxial compression.
The basic Hoek cell consists of the following: cell body complete with two screwed end caps and two self-sealing couplings, two spherical seats and pistons, hardened and ground, one specimen jacket.

A187 Hoek AX Triaxial Cell measuring Ø 30.10 x 60 mm.
A188 Hoek cell measuring 1.5" Ø 38.10 x 75 mm.
A189 Hoek BX cell measuring Ø 42.04 x 85 mm.
A190 Hoek NX cell measuring Ø 54.74 x 100 mm.

Accessories:
Plates to distribute the load and prevent cell damage piston compression plates of the press.
A187.01 Load distribution plate for AX Cell
A188.01 Load distribution plate for Cell 1.5 "
A189.01 Load distribution plate for BX Cell
A190.01 Load distribution plate for NX Cell

Parts:
A187.02 Set of pistons for AX cell
A188.02 Set of pistons for 1.5 "cell
A189.02 Set of pistons for BX cell
A190.02 Set of pistons for NX cell

A187.03 Rubber sleeve for AX cell
A188.03 Rubber sleeve for 1.5 "cell
A189.03 Rubber sleeve for BX cell
A190.03 Rubber sleeve for NX cell

NOTE: The load spreaders A187.01 are used to avoid the cell´s pistons engrave the platens of the compression machine.
One set of extruder adaptors is formed by back plate, tamper and cell body support.

HORIZONTAL EXTRUDER HOEK SPECIMENS

A192 Equipment used to eject the rock sample from the rubber jacket, avoiding emptying the confining fluid. Supplied **"without"** adaptors to be ordered separately (see table).

Weight: 12 Kg

A192.01	Set of adapters to remove AX samples Ø 30.10 x 60 mm.
A192.02	Set of adapters to remove 1.5" samples 1.5, Ø38.10 x 75 mm.
A192.03	Set of adapters to remove BX samples Ø 42.04 x 85 mm.
A192.04	Set of adapters to remove NX samples Ø 54.74 x 100 mm.

HYDRAULIC CONSTANT ISOTROPIC CELL PRESSURE SYSTEM

A193 The unit consists of a hand operated pump, complete with precision pressure gauge supplying pressures up to 35 MPa, complete with reservoir and connections, providing all round pressure source to the Hoek Cell.
Weight: 18 Kg

Accessories:
A193.01 Pressure maintainer. Supplied complete with pump, to allow a costant load to be maintained during the test.

A196

A196 This unit provides an infinitely variable constant pressure from o to 3500 kPa by using a motorized hydraulic pump, an oil/water interchange vessel, piston/spring, valves, and high viscosity oil.
Supplied complete with test pressure precision gauge, range 0-3500 KPa.

Power supply: 230V 1ph 50 Hz
Dimensions: 320x320x410 mm
Weight: 20 Kg

PRMEABILITY OF ROCK WITH HOEK CELLS

Equipment for measuring the permeability or flow of water through a rock specimen with a controlled water pressre system.
The Hoek Cells can be equipped with the (optional) End Caps, screwed to the body.
The set consists of the upper and lower End Cap, complete with distance block.

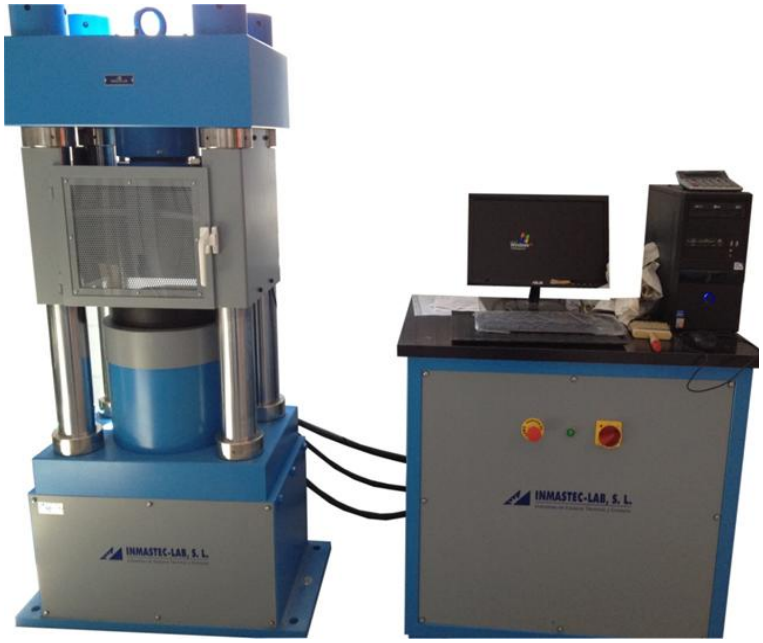
MODELS:
A187.05 Samples measuring Ø 30.10 mm.
A189.05 Samples measuring Ø 42.04 mm.
A190.05 Samples measuring Ø 54.74 mm.

A200 Permeability attachment, mounted on tripod, to be connected to the End Cap of the Hoek Cell.
Burette 50 ml capacity and 0,1 ml div..

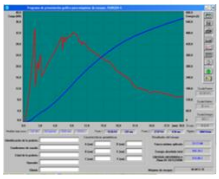
Accessories:
A195 Nylon tube (25 m).

"Speedy" Moisture Testers BS 6576 / ASTM D4944

A200 For accurate moisture reading on site of soil, sand, aggregates. The test system arrives by the reaction between water and calcium carbide forming a gas. Capacity 6 g. Complete with electronic balance, reagent tin, accessories the whole contained in a portable moulded case.
Moisture range: 0-20%
Weight: Kg.
A201 Speedy moisture tester 20 grams capacity. Range: 0-20%
A200.01 Carbide Amploules (Pack of 100)



The presses that can be used for testing: Press 2000 to 3000 KN KN servo (see section concrete) or electro-mechanical press multitester of 200 KN to 300 KN (see section soils)



Equipment required for testing:
Strain gauge, acquisition module with 16 signal conditioners, calculation software elastic modulus and computer

UNIAXIAL TEST STRAIN GAGES
ASTM D2664 / D5407 / D3148 / D2938 / ISRM
The test consists of determining the stress-strain curves, the elastic modulus (Young) and Poisson's coefficient in single axis compression of a regular cylindrical specimen. The gage should be chosen according to the size of the grain of the rock must be pasted neatly into the specimen, since the installation is very important in the test results. They put four bands in each sample, two for axial strain and two for diametral deformation. It is desirable to obtain a good result, install each band Wheatstone bridge,. Data acquisition transmitted by bands through a conditioner, is collected by the software automatically on your computer, which gives order to begin the test cycles are controlled, making the data displayed in real time while running all data.

C117 Compression testing machine 3000 KN with computer control (see section of concrete)
C111 Compression testing machine 2000 KN with computer control **(**see section of concrete**)**
S156 Universal Electromechanical frame 300 KN (see section soils)
S155 Universal Electromechanical frame 200 KN (see section soils)
S086 Data acquisition with capacity for 16 conditioners
C125 Extensometric bands with 60 mm base length.
C126 Extensometric bands with 30 mm base length.
C127 Extensometric bands with 20 mm base length.
C128 Extensometric bands with 10 mm base length.
V430 Compatible PC
E603 Elasticity software.

GROUP I&S