



SECTION AR

AGGREGATES AND ROCKS

Mineral aggregates are used in all fields of the construction industry to produce bituminous mixtures, concrete, mortars to be used in structures, fill materials, railway ballast, etc. For this reason we have given particular attention to all testing methods in accordance with international standards EN, ASTM, AASTHO, BS, NF, etc...

Proeti equipment can be used both in the construction industry and in the production of concrete, mortar, bituminous mixtures, bases for roads, airports, hydraulics in civil engineering works... and they will also allow you to measure the quality of the materials to determine its properties: mechanical, geometric, physical, chemical, thermal, corrosion, resistance and degradation.



LABORATORY OVENS

EN 932-5, 1097-5 | BS 1924:1

ASTM C127, C136, D558, D559, D560, D698, D1557, D1559

Designed for drying, baking, conditioning and moisture determination. Especially suitable when high temperature uniformity and precision inside the chamber are required.

The interior chamber, the grid shelves and the exterior front part are stainless steel made, while external walls are made of zinc coated steel.

Sturdy manufacture, double walled with 60 mm thick glass fibre for thermal insulation. Temperature from ambient to 200°C is controlled by a digital precision thermostat.

The oven is supplied with two grid shelves easily removable which can be positioned at various heights with pilot light and exhaust holes for fast cooling.

Power supply: 230 V | 50-60 Hz



AR003

CODE	CAPACIDAD	INSIDE DIMENSIONS	OUTSIDE DIMENSIONS	WATTAGE	WEIGHT	GRID SHELF
AR001	100 L	400x420x600 mm	700x515x910 mm	1250 W	45 Kg	AR001-01
AR003	220 L	600x610x600 mm	900x725x910 mm	2050 W	70 Kg	AR003-01
AR005	440 L	900x700x700 mm	1250x760x1000 mm	3700 W	95 Kg	AR005-01
AR007	750 L	900x640x1300 mm	1250x700x1600 mm	4950 W	140 Kg	AR007-01

STAINLESS STEEL PANS

Pans stainless steel made



MG551-02

MG551-01

CODE	DIMENSIONS
MG551-01	200x200 mm
MG551-02	200x400 mm
MG551-03	300x300 mm
MG551-04	400x400 mm
MG551-05	400x600 mm
MG551-06	600x600 mm
MG551-07	1000x1000 mm

MUFFLE FURNACES

Designed for high temperature heatings. Structure composed of in sheet-steel, frontal furnace in diecasted steel to avoid the aggreation of the acid smokes. The thermic insulation in ceramic fibre avoids the smallest heating leakage saving energy accordingly. Electronic regulation of the temperature is obtained through a digital thermostat.



MG702

CODE	VOLUME	DIMENSIONS	CONSUMPTION
MG702	7,6 L	540x510x490 mm	3,8 kW

TESTING SIEVES

EN 933-1, 933-2 | ISO 3310-1, 3310-2, 565
ASTM E 11 | BS410 | NF X11-504 | DIN 4187-1

We propose a complete range of full depth testing sieves with 200 mm, 8", 250 mm, 300 mm, 12", 315 mm and 450 mm dia., with woven wire cloth and perforated plate conforming to the different Standards.

All frames except the 450 mm dia., and wire cloth sieves are manufactured from stainless steel. Perforated plates are made from tinned steel. Sieves having the same nominal diameter are designed to nest one in each other.

Each sieve is supplied complete with certificate of conformity.



TABLE OF THE WOVEN WIRE MESH SIEVES

APERTURE mm	ASTM NUMBER	FRAME Ø 200 mm	FRAME Ø 8"	FRAME Ø 250 mm	FRAME Ø 300 mm	FRAME Ø 12"	FRAME Ø 315 mm	FRAME Ø 400 mm	FRAME Ø 450 mm
0,020		T1101	T1201	T1301	T1401	T1501	T1601	T1701	T1801
0,025		T1102	T1202	T1302	T1402	T1502	T1602	T1702	T1802
0,032		T1103	T1203	T1303	T1403	T1503	T1603	T1703	T1803
0,038	N° 400	T1104	T1204	T1304	T1404	T1504	T1604	T1704	T1804
0,040		T1105	T1205	T1305	T1405	T1505	T1605	T1705	T1805
0,045	N° 325	T1106	T1206	T1306	T1406	T1506	T1606	T1706	T1806
0,050		T1107	T1207	T1307	T1407	T1507	T1607	T1707	T1807
0,053	N° 270	T1108	T1208	T1308	T1408	T1508	T1608	T1708	T1808
0,056		T1109	T1209	T1309	T1409	T1509	T1609	T1709	T1809
0,063	N° 230	T1110	T1210	T1310	T1410	T1510	T1610	T1710	T1810
0,071		T1111	T1211	T1311	T1411	T1511	T1611	T1711	T1811
0,075	N° 200	T1112	T1212	T1312	T1412	T1512	T1612	T1712	T1812
0,080		T1113	T1213	T1313	T1413	T1513	T1613	T1713	T1813
0,090	N° 170	T1114	T1214	T1314	T1414	T1514	T1614	T1714	T1814
0,100		T1115	T1215	T1315	T1415	T1515	T1615	T1715	T1815
0,106	N° 140	T1116	T1216	T1316	T1416	T1516	T1616	T1716	T1816
0,112		T1117	T1217	T1317	T1417	T1517	T1617	T1717	T1817
0,125	N° 120	T1118	T1218	T1318	T1418	T1518	T1618	T1718	T1818
0,140		T1119	T1219	T1319	T1419	T1519	T1619	T1719	T1819
0,150	N° 100	T1120	T1220	T1320	T1420	T1520	T1620	T1720	T1820
0,160		T1121	T1221	T1321	T1421	T1521	T1621	T1721	T1821
0,180	N° 90	T1122	T1222	T1322	T1422	T1522	T1622	T1722	T1822
0,200		T1123	T1223	T1323	T1423	T1523	T1623	T1723	T1823
0,212	N° 70	T1124	T1224	T1324	T1424	T1524	T1624	T1724	T1824
0,224		T1125	T1225	T1325	T1425	T1525	T1625	T1725	T1825
0,250	N° 60	T1126	T1226	T1326	T1426	T1526	T1626	T1726	T1826
0,280		T1127	T1227	T1327	T1427	T1527	T1627	T1727	T1827
0,300	N° 50	T1128	T1228	T1328	T1428	T1528	T1628	T1728	T1828

APERTURE mm	ASTM NUMBER	FRAME Ø 200 mm	FRAME Ø 8"	FRAME Ø 250 mm	FRAME Ø 300 mm	FRAME Ø 12"	FRAME Ø 315 mm	FRAME Ø 400 mm	FRAME Ø 450 mm
0,315		T1129	T1229	T1329	T1429	T1529	T1629	T1729	T1829
0,355	N° 45	T1130	T1230	T1330	T1430	T1530	T1630	T1730	T1830
0,400		T1131	T1231	T1331	T1431	T1531	T1631	T1731	T1831
0,425	N° 40	T1132	T1232	T1332	T1432	T1532	T1632	T1732	T1832
0,450		T1133	T1233	T1333	T1433	T1533	T1633	T1733	T1833
0,500	N° 35	T1134	T1234	T1334	T1434	T1534	T1634	T1734	T1834
0,560		T1135	T1235	T1335	T1435	T1535	T1635	T1735	T1835
0,600	N° 30	T1136	T1236	T1336	T1436	T1536	T1636	T1736	T1836
0,630		T1137	T1237	T1337	T1437	T1537	T1637	T1737	T1837
0,710	N° 25	T1138	T1238	T1338	T1438	T1538	T1638	T1738	T1838
0,800		T1139	T1239	T1339	T1439	T1539	T1639	T1739	T1839
0,850	N° 20	T1140	T1240	T1340	T1440	T1540	T1640	T1740	T1840
0,900		T1141	T1241	T1341	T1441	T1541	T1641	T1741	T1841
1,000	N° 18	T1142	T1242	T1342	T1442	T1542	T1642	T1742	T1842
1,120		T1143	T1243	T1343	T1443	T1543	T1643	T1743	T1843
1,180	N° 16	T1144	T1244	T1344	T1444	T1544	T1644	T1744	T1844
1,250		T1145	T1245	T1345	T1445	T1545	T1645	T1745	T1845
1,400	N° 14	T1146	T1246	T1346	T1446	T1546	T1646	T1746	T1846
1,600		T1147	T1247	T1347	T1447	T1547	T1647	T1747	T1847
1,700	N° 12	T1148	T1248	T1348	T1448	T1548	T1648	T1748	T1848
1,800		T1149	T1249	T1349	T1449	T1549	T1649	T1749	T1849
2,000	N° 10	T1150	T1250	T1350	T1450	T1550	T1650	T1750	T1850
2,240		T1151	T1251	T1351	T1451	T1551	T1651	T1751	T1851
2,360	N° 8	T1152	T1252	T1352	T1452	T1552	T1652	T1752	T1852
2,500		T1153	T1253	T1353	T1453	T1553	T1653	T1753	T1853
2,800	N° 7	T1154	T1254	T1354	T1454	T1554	T1654	T1754	T1854
3,150		T1155	T1255	T1355	T1455	T1555	T1655	T1755	T1855
3,350	N° 6	T1156	T1256	T1356	T1456	T1556	T1656	T1756	T1856
3,550		T1157	T1257	T1357	T1457	T1557	T1657	T1757	T1857
4,000	N° 5	T1158	T1258	T1358	T1458	T1558	T1658	T1758	T1858
4,750	N° 4	T1159	T1259	T1359	T1459	T1559	T1659	T1759	T1859
5,000		T1160	T1260	T1360	T1460	T1560	T1660	T1760	T1860
5,600	N° 3,5	T1161	T1261	T1361	T1461	T1561	T1661	T1761	T1861
6,300	1/4"	T1162	T1262	T1362	T1462	T1562	T1662	T1762	T1862
6,700	0,265"	T1163	T1263	T1363	T1463	T1563	T1663	T1763	T1863
7,100		T1164	T1264	T1364	T1464	T1564	T1664	T1764	T1864
8,000	5/16"	T1165	T1265	T1365	T1465	T1565	T1665	T1765	T1865
9,500	3/8"	T1166	T1266	T1366	T1466	T1566	T1666	T1766	T1866
10,000		T1167	T1267	T1367	T1467	T1567	T1667	T1767	T1867
11,200	7/16"	T1168	T1268	T1368	T1468	T1568	T1668	T1768	T1868
12,500	1/2"	T1169	T1269	T1369	T1469	T1569	T1669	T1769	T1869
13,200	0,530"	T1170	T1270	T1370	T1470	T1570	T1670	T1770	T1870

APERTURE mm	ASTM NUMBER	FRAME Ø 200 mm	FRAME Ø 8"	FRAME Ø 250 mm	FRAME Ø 300 mm	FRAME Ø 12"	FRAME Ø 315 mm	FRAME Ø 400 mm	FRAME Ø 450 mm
14,000		T1171	T1271	T1371	T1471	T1571	T1671	T1771	T1871
16,000	5/8"	T1172	T1272	T1372	T1472	T1572	T1672	T1772	T1872
18,000		T1173	T1273	T1373	T1473	T1573	T1673	T1773	T1873
19,000	3/4"	T1174	T1274	T1374	T1474	T1574	T1674	T1774	T1874
20,000	7/8"	T1175	T1275	T1375	T1475	T1575	T1675	T1775	T1875
22,400		T1176	T1276	T1376	T1476	T1576	T1676	T1776	T1876
25,000	1"	T1177	T1277	T1377	T1477	T1577	T1677	T1777	T1877
25,400		T1178	T1278	T1378	T1478	T1578	T1678	T1778	T1878
26,500	1,06"	T1179	T1279	T1379	T1479	T1579	T1679	T1779	T1879
28,000		T1180	T1280	T1380	T1480	T1580	T1680	T1780	T1880
31,500	1 ¼"	T1181	T1281	T1381	T1481	T1581	T1681	T1781	T1881
37,500	1 ½"	T1182	T1282	T1382	T1482	T1582	T1682	T1782	T1882
40,000		T1183	T1283	T1383	T1483	T1583	T1683	T1783	T1883
45,000	1 ¾"	T1184	T1284	T1384	T1484	T1584	T1684	T1784	T1884
50,000	2"	T1185	T1285	T1385	T1485	T1585	T1685	T1785	T1885
53,000	2,12"	T1186	T1286	T1386	T1486	T1586	T1686	T1786	T1886
56,000		T1187	T1287	T1387	T1487	T1587	T1687	T1787	T1887
63,000	2 ½"	T1188	T1288	T1388	T1488	T1588	T1688	T1788	T1888
71,000		T1189	T1289	T1389	T1489	T1589	T1689	T1789	T1889
75,000	3"	T1190	T1290	T1390	T1490	T1590	T1690	T1790	T1890
80,000		T1191	T1291	T1391	T1491	T1591	T1691	T1791	T1891
90,000	3 ½"	T1192	T1292	T1392	T1492	T1592	T1692	T1792	T1892
100,00	4"	T1193	T1293	T1393	T1493	T1593	T1693	T1793	T1893
106,00	4,24"	T1194	T1294	T1394	T1494	T1594	T1694	T1794	T1894
112,00		T1195	T1295	T1395	T1495	T1595	T1695	T1795	T1895
125,00	5"	T1196	T1296	T1396	T1496	T1596	T1696	T1796	T1896
Receiver		T1198	T1298	T1398	T1498	T1598	T1698	T1798	T1898
Cover		T1199	T1299	T1399	T1499	T1599	T1699	T1799	T1899



T1210+T1254+T1242



T2201+T2215+T2226

TABLE OF PERFORATED SHEET METAL SIEVES

APERTURE mm	FRAME Ø 200 mm	FRAME Ø 8"	FRAME Ø 250 mm	FRAME Ø 300 mm	FRAME Ø 12"	FRAME Ø 315 mm	FRAME Ø 400 mm	FRAME Ø 450 mm
4,00	T2101	T2201	T2301	T2401	T2501	T2601	T2701	T2801
4,75	T2102	T2202	T2302	T2402	T2502	T2602	T2702	T2802
5,00	T2103	T2203	T2303	T2403	T2503	T2603	T2703	T2803
5,60	T2104	T2204	T2304	T2404	T2504	T2604	T2704	T2804
6,30	T2105	T2205	T2305	T2405	T2505	T2605	T2705	T2805
6,70	T2106	T2206	T2306	T2406	T2506	T2606	T2706	T2806
7,10	T2107	T2207	T2307	T2407	T2507	T2607	T2707	T2807
8,00	T2108	T2208	T2308	T2408	T2508	T2608	T2708	T2808
9,50	T2109	T2209	T2309	T2409	T2509	T2609	T2709	T2809
10,00	T2110	T2210	T2310	T2410	T2510	T2610	T2710	T2810
11,20	T2111	T2211	T2311	T2411	T2511	T2611	T2711	T2811
12,50	T2112	T2212	T2312	T2412	T2512	T2612	T2712	T2812
13,20	T2113	T2213	T2313	T2413	T2513	T2613	T2713	T2813
14,00	T2114	T2214	T2314	T2414	T2514	T2614	T2714	T2814
16,00	T2115	T2215	T2315	T2415	T2515	T2615	T2715	T2815
18,00	T2116	T2216	T2316	T2416	T2516	T2616	T2716	T2816
19,00	T2117	T2217	T2317	T2417	T2517	T2617	T2717	T2817
20,00	T2118	T2218	T2318	T2418	T2518	T2618	T2718	T2818
22,40	T2119	T2219	T2319	T2419	T2519	T2619	T2719	T2819
25,00	T2120	T2220	T2320	T2420	T2520	T2620	T2720	T2820
26,50	T2122	T2222	T2322	T2422	T2522	T2622	T2722	T2822
28,00	T2123	T2223	T2323	T2423	T2523	T2623	T2723	T2823
31,50	T2124	T2224	T2324	T2424	T2524	T2624	T2724	T2824
37,50	T2125	T2225	T2325	T2425	T2525	T2625	T2725	T2825
40,00	T2126	T2226	T2326	T2426	T2526	T2626	T2726	T2826
45,00	T2127	T2227	T2327	T2427	T2527	T2627	T2727	T2827
50,00	T2128	T2228	T2328	T2428	T2528	T2628	T2728	T2828
53,00	T2129	T2229	T2329	T2429	T2529	T2629	T2729	T2829
56,00	T2130	T2230	T2330	T2430	T2530	T2630	T2730	T2830
63,00	T2131	T2231	T2331	T2431	T2531	T2631	T2731	T2831
71,00	T2132	T2232	T2332	T2432	T2532	T2632	T2732	T2832
75,00	T2133	T2233	T2333	T2433	T2533	T2633	T2733	T2833
80,00	T2134	T2234	T2334	T2434	T2534	T2634	T2734	T2834
90,00	T2135	T2235	T2335	T2435	T2535	T2635	T2735	T2835
100,00	T2136	T2236	T2336	T2436	T2536	T2636	T2736	T2836
106,00	T2137	T2237	T2337	T2437	T2537	T2637	T2737	T2837
112,00	T2138	T2238	T2338	T2438	T2538	T2638	T2738	T2838
125,00	T2139	T2239	T2339	T2439	T2539	T2639	T2739	T2839
Receiver	T1198	T1298	T1398	T1498	T1598	T1698	T1798	T1898
Cover	T1199	T1299	T1399	T1499	T1599	T1699	T1799	T1899

WET SIEVING PAN+LID STAINLESS STEEL

The water enters through the spray nozzle mounted on top of the lid and spill out of the pan with the finest granulated material.

Supplied complete with two watertight seals.



AR023

CODE	DESCRIPTION
AR021	Pan + Lid Ø200 mm
AR023	Pan + Lid Ø8"
AR025	Pan + Lid Ø300 mm
AR027	Pan + Lid Ø400 mm

WET WASHING SIEVES

ASTM E 11

Used for wet testing of fine granulated materials. Frame and woven wire cloth are stainless steel made. Frame dimensions: Ø200 mm by 100 or 200 mm height.

They are available in two heights 100 or 200 mm, with two mesh sizes 0.074 or 0.063 mm.



AR033

AR037

CODE	CLOTH OPENING	HEIGHT
AR031	0,075 mm	200 mm
AR033	0,063 mm	200 mm
AR035	0,075 mm	100 mm
AR037	0,063 mm	100 mm

ULTRASONIC CLEANSING APPARATUS

Double bodied tank, made entirely of stainless steel. Emptying drain, anti-parasite filter, adjustable timer and heating.

The principal of ultrasonic cleaning consists of the use of high frequency sound waves (40kHz), produced by a generator through a transducer, which propagates them mechanically inside the tank, this produces a cavitation effect which leads to the formation of millions of low pressure microscopical bubbles which carry out molecular cleaning, eliminating impurities, polluting agents and dirt from the parts or material which must be cleaned.

CODE	DIMENSIONS	VOLUME	WEIGHT
AR041	Ø280x300 mm	6,5 L	8 Kg
AR043	300x360x300 mm	9 L	13 Kg

ACCESSORIES

AR040-01

Detergent 1 L Bio-degradable, phosphate free

AR040-02

Detergent 4 L Bio-degradable, phosphate free



AR043

AR041

SIEVE BRUSHES

AR010-01

Soft hair Brush, Ø3 mm BS 812

AR010-02

Bristle Brush, soft hair, Ø35 mm

AR010-03

Double ended, brass and nylon bristle

AR010-04

Hard nylon sieve Brush, flat 60 mm

AR010-05

Soft hair brush

AR010-06

Hard sieve Brush



AR010-04

AR010-02

AR010-01

AR010-06

AR010-03

AR010-05

AR050 DIGITAL AIR JET SIEVE

EN 933-10

The air sweep sieve specially designed for dry grain testing, for a fine particle size, from 5 μm (0,005 to 4 mm).

It offers a great speed and sieving efficiency thanks to the fluidization of the product, obtained by means of a current of air that drags the particles making them pass through the sieve.

This effect is achieved with an industrial vacuum cleaner that keeps the depression constant. It has a digital cover with control of sieving time and vacuum meter, which incorporates a depression regulation system.

The sieving machine includes a methacrylate lid that allows to see the behavior of the product and a nylon mace to remove any product remains that may have remained in the lid due to static electricity.

Includes air Jet sieve shaker, connecting cable, methacrylate lid, nylon hammer and CE declaration of conformity.



Power supply: 220-240 V | 50-60 Hz | 19 W
Maximum Depression : 20 kPa
Timer: de 1 a 99 min
Number of Sieves: 1 tamiz
Diameter of Sieve: 200 mm
Weight: 20 Kg

ACCESSORIES

AR050-01
Aspirator device
Power supply: 1200 W



AR050-02
Recovery cyclone
It is a system that is used for the recovery of fines.



SIEVES FOR DIGITAL AIR JET SIEVE

CODE	APERTURE(μ)	CODE	APERTURE(μ)	CODE	APERTURE(μ)	CODE	APERTURE(μ)
AR050-11	5	AR050-28	65	AR050-45	250	AR050-62	1120
AR050-12	10	AR050-29	70	AR050-46	280	AR050-63	1180
AR050-13	15	AR050-30	71	AR050-47	300	AR050-64	1250
AR050-14	20	AR050-31	75	AR050-48	315	AR050-65	1400
AR050-15	25	AR050-32	80	AR050-49	355	AR050-66	1600
AR050-16	28	AR050-33	90	AR050-50	400	AR050-67	1700
AR050-17	30	AR050-34	100	AR050-51	425	AR050-68	1800
AR050-18	37	AR050-35	106	AR050-52	450	AR050-69	2000
AR050-19	41	AR050-36	112	AR050-53	500	AR050-70	2240
AR050-20	45	AR050-37	125	AR050-54	460	AR050-71	2360
AR050-21	48	AR050-38	140	AR050-55	600	AR050-72	2500
AR050-22	50	AR050-39	150	AR050-56	630	AR050-73	2800
AR050-23	53	AR050-40	160	AR050-57	710	AR050-74	3150
AR050-24	55	AR050-41	180	AR050-58	800	AR050-75	3350
AR050-25	58	AR050-42	200	AR050-59	850	AR050-76	3550
AR050-26	60	AR050-43	212	AR050-60	900	AR050-77	4000
AR050-27	63	AR050-44	224	AR050-61	1000		

1 μ = 0,001 mm

ELECTROMAGNETIC SIEVE SHAKERS

EN 932-5 | ISO 3310-1

These sieve shakers are activated by electromagnetic impulses and thanks to the triple vibrating action (vertical, lateral and rotational) they are recommended to perform sieving tests where high precision and performance are important, and where continual and intense uses are required.

Therefore they are suggested for accurate sieving tests, on fine materials too.

These electromagnetic shakers are of simple and sturdy construction, they can hold up to 10 sieves and are also suitable for wet sieving tests.

Power supply:

230 V | 50 Hz | 450-750 W

ACCESSORY

AR051-01

Noise reduction cabinet

Lined internally with sound-proofing material for noise reduction in compliance with CE Directive.



CODE	DIMENSIONS SIEVES (mm y ")	DIMENSIONS	WEIGHT
AR051	200 y 8"	320x380x850 mm	40 Kg
AR053	200 - 8" - 250 - 300 - 12" - 315	380x440x1080 mm	65 Kg
AR055	200 - 8" - 250 - 300 - 12" - 315 - 350 - 400	430x460x1150 mm	80 Kg
AR057	200 - 8" - 250 - 300 - 12" - 315 - 400 - 450 - 18"	480x500x1150 mm	85 Kg



AR051+AR051-01

AR059 SIEVE SHAKER MOTOR OPERATED

EN 932-5 | ISO 3310-1

This simple and low cost sieve shaker is activated by an electric motor and can hold up to 8 Sieves Ø200 mm or 7 Sieves Ø300 mm plus pan and lid.

It accepts sieves having diameter Ø200-250-300-315 mm and 8"...12".

It is also possible to perform wet sieving tests.

Supplied with timer 0 - 60 minutes.

Power supply:

230 V | 50 Hz | 110 W

Dimensions:

350x400x950 mm

Weight:

24 Kg



AR059

AR060 HIGH CAPACITY SCREEN SHAKER

EN 932-5 | ISO 3310-1

The screen shaker has a capacity of about 30 litres of sample and is ideal for sizing large quantities of crushed stones, sand, gravel, slag, coal, coke, ores, pellets and similar materials.

Able to perform between two and six separations simultaneously, the vibrating unit consists of interlocking sections, which support and separate the screen trays. An equal clearance between trays allows each tray to be removed independently.

The unit includes one dustpan. It can hold six screen trays, which are ordered separately, and one dustpan.

Power supply: 230 V | 50 Hz | 750 W

Dimensions: 585x790x850 mm

Screen trays dimensions: 457x660x75 mm

Weight: 180 Kg



AR060

ACCESSORIES

AR060-01

Upper and frontal safety doors in compliance with CE Directive. If the door is opened while the shaker is working, it automatically stops. The doors also protect from dust.



AR060+AR060-01

AR060-02

Soundproofed safety cabinet in compliance with CE Directive. Steel made with microswitch, lined with sound-proofing material for noise reduction. If the door is opened while the shaker is working, it automatically stops. The cabinet also protects from dust.

Dimensions:

920x1000x1400 mm



AR060+AR060-02

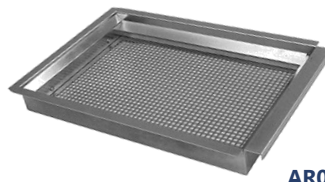
SCREEN TRAYS WITH PERFORATED GALVANIZED PLATE

EN 933-2 | ISO 3310-2

APERTURE	CODE	APERTURE	CODE
4,00 mm	AR061-11	22,40 mm	AR061-30
4,75 mm	AR061-12	25,00 mm	AR061-31
5,00 mm	AR061-13	26,50 mm	AR061-32
5,60 mm	AR061-14	28,00 mm	AR061-33
6,30 mm	AR061-15	31,50 mm	AR061-34
6,70 mm	AR061-16	37,50 mm	AR061-35
7,10 mm	AR061-17	40,00 mm	AR061-36
8,00 mm	AR061-18	45,00 mm	AR061-37
9,00 mm	AR061-19	50,00 mm	AR061-38
9,50 mm	AR061-20	53,00 mm	AR061-39
10,00 mm	AR061-21	56,00 mm	AR061-40
11,20 mm	AR061-22	63,00 mm	AR061-41
12,50 mm	AR061-23	75,00 mm	AR061-42
13,20 mm	AR061-24	80,00 mm	AR061-43
14,00 mm	AR061-25	90,00 mm	AR061-44
16,00 mm	AR061-26	100,00 mm	AR061-45
18,00 mm	AR061-27	106,00 mm	AR061-46
19,00 mm	AR061-28	125,00 mm	AR061-47
20,00 mm	AR061-29		

SCREEN TRAYS FOR SIEVE SHAKER STAINLESS STEEL WOVEN WIRE MESH

EN 933-2 | ASTM E11 | ISO 3310-1



AR060-45



AR061-39

APERTURE	N° ASTM	CODE	APERTURE	N° ASTM	CODE	APERTURE	N° ASTM	CODE
0,038 mm	400	AR060-11	0,710 mm	25	AR060-36	11,20 mm	7/16"	AR060-60
0,045 mm	325	AR060-12	0,800 mm	-	AR060-37	12,50 mm	1/2"	AR060-61
0,053 mm	270	AR060-13	0,850 mm	20	AR060-38	13,20 mm	0,530"	AR060-62
0,063 mm	230	AR060-14	1,00 mm	18	AR060-39	14,00 mm	-	AR060-63
0,075 mm	200	AR060-15	1,18 mm	16	AR060-40	19,00 mm	3/4"	AR060-64
0,080 mm	-	AR060-16	1,25 mm	-	AR060-41	20,00 mm	-	AR060-65
0,090 mm	170	AR060-17	1,40 mm	14	AR060-42	22,40 mm	7/8"	AR060-66
0,100 mm	-	AR060-18	1,60 mm	-	AR060-43	25,00 mm	-	AR060-67
0,106 mm	140	AR060-19	1,70 mm	12	AR060-44	25,40 mm	1"	AR060-68
0,125 mm	120	AR060-20	2,00 mm	10	AR060-45	26,50 mm	1,06"	AR060-69
0,150 mm	100	AR060-21	2,36 mm	8	AR060-46	28,00 mm	-	AR060-70
0,160 mm	-	AR060-22	2,50 mm	-	AR060-47	31,50 mm	1¼"	AR060-71
0,180 mm	80	AR060-23	2,80 mm	7	AR060-48	37,50 mm	1½"	AR060-72
0,200 mm	-	AR060-24	3,15 mm	-	AR060-49	40,00 mm	-	AR060-73
0,212 mm	70	AR060-25	3,35 mm	6	AR060-50	45,00 mm	1¾"	AR060-74
0,250 mm	60	AR060-26	4,00 mm	5	AR060-51	50,00 mm	2"	AR060-75
0,300 mm	50	AR060-27	4,75 mm	4	AR060-52	53,00 mm	2,12"	AR060-76
0,315 mm	-	AR060-28	5,00 mm	-	AR060-53	56,00 mm	-	AR060-77
0,320 mm	-	AR060-29	5,60 mm	3,5	AR060-54	63,00 mm	2½"	AR060-78
0,355 mm	45	AR060-30	6,30 mm	1/4"	AR060-55	75,00 mm	3"	AR060-79
0,400 mm	-	AR060-31	6,70 mm	0,265"	AR060-56	80,00 mm	-	AR060-80
0,425 mm	40	AR060-32	7,10 mm	-	AR060-57	90,00 mm	3½"	AR060-81
0,500 mm	35	AR060-33	8,00 mm	5/16"	AR060-58	100,00 mm	4"	AR060-82
0,600 mm	30	AR060-34	9,50 mm	3/8"	AR060-59	106,00 mm	4,24"	AR060-83
0,630 mm	-	AR060-35	10,00 mm	-	AR060-60	125,00 mm	5"	AR060-84

AR065

BAR GRID SIEVES

EN 933-3 | NF P18-561 | NLT 354

Complete set of 14 bar sieves from 2,5 to 50 mm slot width. The frame is anodized aluminium made and the grids are stainless steel rod bars having diameter from 5 to 15 mm according to the slot widths.

Sieve sizes, slot width tolerances and rod bars diameter are checked one by one, and meet EN 933-3 Standard.

Each sieve can be ordered separately and is supplied with an identification label indicating the serial number.

Sieve dimensions: 275x275x475 mm

Sieve Weight: 2 Kg

ACCESSORY

AR065-40

Kit to fix bar sieves on top of each other

CODE	APERTURE	CODE	APERTURE
AR065-01	2,50 mm	AR065-09	16,00 mm
AR065-02	3,15 mm	AR065-10	20,00 mm
AR065-03	4,00 mm	AR065-11	25,00 mm
AR065-04	5,00 mm	AR065-12	31,50 mm
AR065-05	6,30 mm	AR065-13	40,00 mm
AR065-06	8,00 mm	AR065-14	50,00 mm
AR065-07	10,00 mm	AR065-20	Cover
AR065-08	12,50 mm	AR065-30	Receiver



AR065-11

AR065-05

AR065-02

AR065-13

AR070

LARGE CAPACITY SAMPLE SPLITTER

EN 933-3 | ASTM C136 | NF P18-553
AASHTO T27,T87 | BS 812:1,1377:2,1924:1

This large sample splitter is designed for reducing large quantities of sample to a manageable size.

Suitable for any material from sand sizes up to Ø108 mm. Each chute bar is 12 mm wide to get openings of 12 - 24 - 36 - 48 - 60 - 72 - 84 - 96 - 108 mm.

Very sturdily constructed, it is totally galvanized for rust protection.

Complete with two collecting pans.

Clam shell hopper: 30 litres

Weight: 55 Kg



AR070

ACCESSORY

AR070-01
Kit of 4 wheels with brake

SAMPLE SPLITTERS

EN 932-1, 932-2 | ASTM C136, C702 | AASHTO T27

Used for splitting materials such as aggregates, sand, gravel and similar into two representative portions.

Painted steel made, they are supplied with two collecting pans and scoop.



AR075

AR081

GAUGE

EN 933-4

To determine the shape coefficient of the aggregate. Made of galvanized sheet metal with modified notches.

Weight: 500g



AR081

AR083

FLAKINESS | THICKNESS GAUGE

BS 812:105.1

Suitable to verify if aggregate is flaky; if its thickness is less than 0,6 of its nominal size.

Constructed of heavy gauge stainless steel sheet.

Weight: 600g



AR083

AR085

LENGTH GAUGE

BS 812:105.1

Ideal to determine if aggregate is elongated; if length is more than 1.8 of nominal size. Mounted on a hardwood base.

Weight: 1 Kg



AR085

AR087

SHAPE GAUGE - SHAPE INDEX

EN 933-4, 933-5, 933-7 | DIN 4226 | CNR N° 95 | NLT 354

For measuring the length/thickness ratio of individual particles.

Weight: 500g



AR087

Table of sample splitters:

CODE	SLOTS	WIDTH		WEIGHT
AR071	8	3"	76,20 mm	16 Kg
AR072	8	2½"	63,50 mm	15 Kg
AR073	10	2"	50,80 mm	13 Kg
AR074	12	1½"	38,10 mm	10 Kg
AR075	14	1"	25,40 mm	6 Kg
AR076	14	¾"	19,05 mm	5 Kg
AR077	14	½"	12,70 mm	3,5 Kg
AR078	14	¼"	9,39 mm	3 Kg
AR079	12	⅜"	6,35 mm	1,5 Kg

AR089 PROPORTIONAL CALIPER

ASTM D4791

Used either for rapid determination of percentages of flat and elongated particles in coarse aggregate fractions of 3/8" (9.5 mm) or larger.

Consisting of 8"x16" (203,2x406,4 mm) base plate with rubber feet, two fixed posts and a 12" (305 mm) pivoting arm, allowing ratios of 1:2, 1:3, 1:4, 1:5 to be obtained.

Weight:
3 Kg



AR089

AR091 EFFLUX INDEX APPARATUS

EN 933-6 | ASTM C1252 | AASHTO T 304 | CNR 113

Used to obtain information about the shape and angularity of grains in the 0,063-4 mm fraction of aggregates. The efflux index of an aggregate is the required time in seconds of a known volume of aggregates to flow from a known opening.

The unit is basically formed by:

- Aluminium body, Ø90 mm by 125 mm height
- Aluminium feed hopper Ø100 mm by 170 mm height
- Control shutter
- Polycarbonate funnel having 85 mm height
- 60° conical part, which end has Ø12 mm
- Base support
- Valve
- Decanter

Dimensions:
200x240x600 mm

Weight:
8 Kg



AR091

AR093 VOID CONTENT OF FINE AGGREGATE

ASTM C1252 | AASHTO TP33

Used to determine the uncompacted void content of a fine aggregate sample.

Indicates the angularity, sphericity, and workability of fine aggregate in a mixture.

Dimensions:
205x205x690 mm
Weight:
2 Kg



AR093

BA027 BOTTLE ROLLING MACHINE

BS 812

To rotate one up to three bottles or jars simultaneously about their longitudinal axis with rotation speed, adjustable from 0 up to 85 r.p.m. Supplied complete with timer 0-99 hours.

Power supply:
230 V | 50-60 Hz
Dimensions:
385x295x160 mm
Weight:
10 kg



BA027

AR095 ANDREASEN PIPETTE WITH STAND

25 ml capacity, glass made, used for an accurate and precise extraction of suspension material for analysis.

The pipette stand is used to precisely raise or lower the Andreasen pipette to its required level without disturbing the suspension.

Weight:
6 Kg



AR095

SU151 SAND EQUIVALENT TEST SET

EN 933-8 | NF XP18-598

- SU150-01
Measuring cylinder engraved at 100 - 380 mm (4 pieces)
- SU150-03
Rubber stopper for cylinder (2 pieces)
- SU150-04
Graduated rule 500 mm, stainless steel
- SU150-05
Metallis funnel, conforming to EN and NF Specifications
- SU150-07
Measuring can 200 ml capacity
- MG525-01
Plastic bottle 5 litres capacity
- SU150-09
Irrigator tube with stopcock and syphon assembly EN
- SU150-11
Weighted foot assembly for sand level EN
- SU150-15
Concentrated stock solution, 1000 ml

Weight: 5 Kg



SU151

SU155 SAND EQUIVALENT TEST SET

ASTM D2419 | AASHTO T176

- The set is identical to model SU151 except for:
- SU150-02
Measuring cylinder (4 pieces), engraved at 100 and 380 mm, with transparent adhesive label, graduated in mm and inch.
 - SU150-06
Funnel, wide mouth
 - SU150-08
Mesuring can 85 ml capacity
 - SU150-10
Irrigator tube with stopcock and syphon assembly ASTM
 - SU150-12
Weighted foot assembly for sand level ASTM

Weight: 5 Kg

ACCESSORY

- SU150-18
Carrying case except for the bottle



SU155

AR097 BLUE METHYLENE TEST SET

EN 933-9 | NF P94-068

Utilized to determine the clay content in the fine portions of the aggregates. The set comprises:

- AR097-01
Electric stirrer from 400 to 700 rpm with Ø70 mm propeller
- AR097-02
Support base for stirrer
- AR097-03
Burette 50 x 0,1 ml with stopcock
- AR097-04
Support base for burette
- AR097-05
Pan 200x150x80 mm
- AR097-06
Filter paper Ø90 mm (pack of 100)
- AR097-07
Glass rod Ø8x300 mm
- AR097-08
2000 ml capacity plastic beaker
- AR097-09
Methylene blue 100 g
- AR097-10
Kaolinite 500 g

Weight: 10 Kg



AR097

AR097-20

ACCESSORY

- AR097-20
Automatic dispenser 0-10x0,1 ml

MG380 SPECIFIC GRAVITY FRAME

EN 1097-6 | EN 12390-7 | BS 812 | BS 1881:14

This apparatus is used, together with a suitable electronic balance, for determining the specific gravity of aggregates.

A purpose built robust frame supports the electronic balance, while the lower part of the frame incorporates a moving platform which holds the water container, allowing test specimens to be weighed in both air and water.

The balance is not included and should be selected according to the weighing range required. Any type of electronic balance fitted with an under-bench weighing facility can be used.

Dimensions: 510x510x1150 mm

Weight: 50 Kg

ACCESSORIES

MG381-04

Density basket Ø200x200 mm with mesh 3,35 mm

MG220-09

Electronic top loading balance 16 Kg x 0,1 g



MG380

SPECIFIC GRAVITY BOTTLE

EN 1097-7 | NF P18-558 | BS 812

MG375-03

Gay Lussac Pyknometer 50 ml

MG375-04

Gay Lussac Pyknometer 100 ml

MG375-05

Gay Lussac Pyknometer 250 ml



MG375-02

MG375-03

FILLER RELATIVE DENSITY TEST

MG371-02

Pycnometer 500 ml with stopper, capillary tube and funnel

MG371-03

Pycnometer 1000 ml with stopper, capillary tube and funnel

VOLUME DENSITY AND VOIDS OF AGGREGATES

MG373-01

Pycnometer 500 ml with capillary tube stopper

MG373-02

Pycnometer 1000 ml with capillary tube stopper

MG373-03

Pycnometer 2000 ml with capillary tube stopper



MG373-02

RELATIVE DENSITY AND WATER ABSORPTION OF AGGREGATES MAX. 10 MM SIZE

AR101

Pyknometer with cone

BS 812:2, 1377:2 | ASTM D 854 | AASHTO T100 | EN 1097-6

Glass made with aluminium cone and rubber seal

AR103

Sand absorption cone and tamper

Used in determining the specific gravity and absorption of fine aggregates.



AR103

AR101

AR105 PLUNGER FOR THE GRADUATED CYLINDER

EN 933-11

Classification test for the constituents of coarse recycled aggregate.

The apparatus is composed by:
-Graduated glass cylinder 2000 ml
-Steel plunger 500 g



AR105

AR107 VOLUMETER FOR AGGREGATES

BS 812

Used to measure coarse aggregate density through water displacement method. Formed by a cylindrical metal container Ø150x350 mm fitted with a siphon tube at 250 mm from bottom.

Weight: 3 Kg



AR107

ACCESSORY

MG411-05
Graduated glass cylinder 250 ml

DETERMINATION OF LOOSE BULK DENSITY AND VOIDS

EN 1097-3 | ASTM C29 | ISO 6872 | BS 812
CNR N° 62,63,64

Used to determine the loose bulk density and voids of aggregates. Painted steel construction with handles. The top rim is smooth and plane and parallel to the bottom in accordance with the standards.

CODE	MEASURE
HR250	1 L
HR253	5 L
HR254	10 L
HR257	20 L



HR257

HR253

AR111 SCRATCH HARDNESS APPARATUS

ASTM C235

This apparatus is used in the field to determine the quantity of soft particles in coarse aggregate.

The apparatus consists of a metal sliding rod ended with a round point of 1,6 mm diameter, mounted in a suitable frame. A load of $8,9 \pm 0,4$ N is applied to the test simple.

Weight: 8 Kg



AR111

AR113 AGGREGATE IMPACT VALUE APPARATUS

BS 812 | NF P18-574

This machine is used to determine the aggregate impact value which provides a relative measure of the resistance of an aggregate to sudden shock or impact.

The machine is robustly designed and made from corrosion-resistant steel. It is fitted with a counter to check the number of blows delivered to the simple.

Dimensions:
440x320x930 mm
Weight:
55 Kg



AR113+AR113-01

ACCESSORIES

AR113-01
Cylindrical measure Ø76x52 mm and a tamping rod (BS 812)
AR113-02
Cylindrical measure Ø102x52 mm (NF P18-574)

AR115 DETERMINATION OF THE LIGHTWEIGHT AGGREGATES CRUSHING RESISTANCE PART 1

EN 13055-1

Apparatus for the determination of the crushing resistance of lightweight aggregates having diameter from 4 to 22 mm, and a volumic mass over 150 kg/m³.

Composed of: upper and lower cylinder inside diameter 113 mm, ring with adjustable height, piston, base.

Made of steel, plated against corrosion.

Dimensions: Ø180 x 260 mm

Weight: 15 Kg

AR117 DETERMINATION OF THE LIGHTWEIGHT AGGREGATES CRUSHING RESISTANCE PART 2

EN 13055-1

A081-02 METHOD 2

Apparatus for the determination of the crushing resistance of lightweight aggregates having volumic mass lower than 150 kg/m³.

Composed of: upper and lower cylinder inside diameter 76 mm, piston, base.

Made of steel, plated against corrosion

Dimensions: Ø100 x 200 mm

Weight: 6 Kg



AR117

AR115

AR121 AGGREGATE CRUSHING VALUE Ø150 MM

BS 812:110

Comprising 150 mm nominal diameter steel cylinder, plunger, base plate, tamping rod and measure 115 mm diameter x 180 mm deep.

Used for aggregate passing 12,7 mm and retained by 9,52 mm sieve. The complete assembly is cadmium plated for corrosion protection.

Weight: 20 Kg

AR123 AGGREGATE CRUSHING VALUE Ø75 MM

BS 812:110

Same as the AR121 model, made up of a 75 mm nominal diameter steel cylinder, a piston, a base plate, a compaction rod and a Ø57x90 mm cylinder. It is used for aggregates that pass through the 9,52 mm opening.

Weight: 8 Kg



AR121

AR123

AR119 DETERMINATION OF THE VOIDS OF DRY COMPACTED FILLER

EN 1097-4 | BS 812 | NLT 177 | CNR N°23

This apparatus is used for the determination of the voids content of dry compacted filler.

It consists essentially of these components:

- A metal base sized 100x150 mm
- A cylinder 25 mm inner diameter
- A plunger of a diameter that allows it to slide freely in the cylinder without lateral play

Weight: 4 Kg

ACCESSORIES

AR119-01

Filter paper Ø25 mm (100 pieces)



AR119

AR130 MICRO-DEVAL

EN1097-1 | EN 13450

NF P18-572, P18-576 | CNR N°109

Used to determine the resistance of aggregates to abrasion. The machine essentially comprises a heavy steel frame on which the following stainless steel cylinders can be mounted:

- 4 cylinders Ø200x154 mm or
- 2 cylinders Ø200x400 mm or
- 2 cylinders Ø200x154 mm and 1 Ø 200x400 mm

The Micro-Deval is supplied with a separate control panel fitted with a digital automatic revolutions counter. The control panel can be wall fixed or placed on a bench.

Equipped with a safety cabinet, manufactured in sheet steel, lined with sound-proofing material for noise reduction, conforming to CE Safety Directive. If the cabinet is opened while the machine is in operation a microswitch automatically stops the rotation of the cylinders.

Supplied without stainless steel cylinders and without stainless steel spheres which have to be ordered separately.

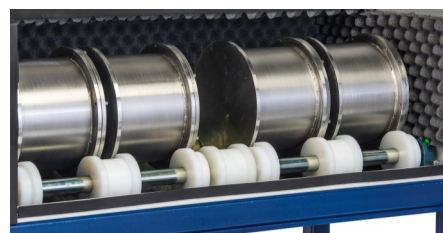
Power supply: 230 V | 50 Hz | 1100 W

Dimensions: 1150x600x1150 mm

Weight: 190 Kg



AR130



AR130-01

ACCESSORIES

AR130-01

Cylinder Ø200x154 mm EN 1097-1

AR130-02

Cylinder Ø200x400 mm EN13450, NF P18-576

AR130-03

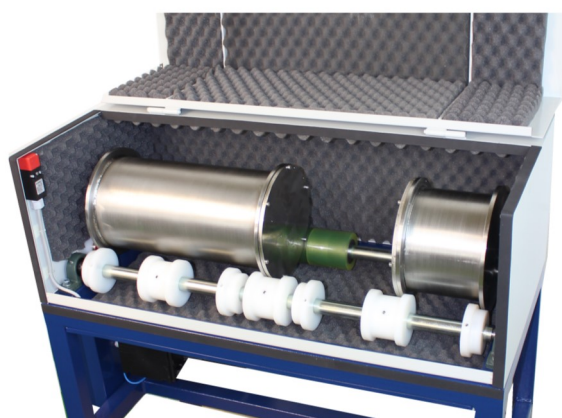
Stainles steel spheres Ø10 mm EN 1097-1 (Pack of 20 pieces)

AR130-04

Stainles steel spheres Ø18 mm NF P18-576 (Pack of 52 pcs)

AR130-05

Stainles steel spheres Ø30 mm NF P18-576 (Pack of 12 pcs)



AR130-02 + AR130-01



AR130-03 AR065-15

AR065-15

Bar grid sieve with slot width 9,5 mm
Used to check the wear of the spheres of the Micro-Deval having nominal size of 10 mm.

AR150 LOS ANGELES MACHINE

EN1097-2 | ASTM C131 | AASHTO T96
NF P18-573 | CNR N° 34

This test procedure is for determining the resistance of coarse aggregates to abrasion.

The machine consists of a rolled steel drum with an inner diameter of 711 mm and inner length of 508 mm. The drum is rotated by a speed reducer driven by an electric motor at a speed of between 31 and 33 r.p.m.

A push button positions the opening of the cylinder for easy loading and unloading operations. The control panel can be wall fixed or placed on a bench.

Supplied without abrasive charges which have to be ordered separately according to the requested Standards. It cannot be sold on the CE markets without its protections.

Power supply:
230 V | 50 Hz | 750 W
Dimensions:
1000x800x1000 mm
Weight:
370 Kg



AR150

ACCESSORIES

AR150-01
Soundproofed safety cabinet
Manufactured from sheet steel, internally lined with sound-proofing material for noise reduction, 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: 980x1070x1190 mm
Weight: 160 Kg



AR150+AR150-01

AR150-02
Device for an easy and fast clamping of the table to the drum



AR150-02

AR150-03
Set of 12 abrasive charges
EN1097-2 | NF P18-573

AR150-04
Set of 12 abrasive charges
ASTM C131 | AASHTO T96 | NLT 325-2 | CNR



AR150-04

AR161 MACHINE TO DETERMINE THE WEAR RESISTANCE ON PAVING TILES

EN 13748

Designed to determine the abrasion wear resistance on paving, according to the three established use types (normal, intensive and industrial). The test consists in measuring the track produced by a rotating disc in presence of an abrasive substance, for a certain time.

Electromechanically actuated machine with disk dia. 200 x 70 ±0,1mm. thickness. The pressure of the disk on the sample is applied by a 14 kg counterweight. A 10 litre capacity hopper is mounted on a directional support to store the abrasive material.

The control module incorporates an automatic counter to select the number of revolutions, luminous indicator and emergency button. As safety elements the machine incorporates an independent push button located in the control module that, when is activated, it stops all movement immediately inside of the test area.

Also, incorporates an opening detector that forces to work always with the doors that isolate the test area closed.

The whole test is carried out in a completely closed desk to avoid the diffusion of the powder and noise in the laboratory.

Discharge flow: 2,5 l/min

Speed test: 75 r.p.m.

Abrasive flow: 3 l/min

Power supply: 220-380 V | 50 Hz

Dimensions: 660x1200x1800 mm

Max. specimens dimensions: 250x240x90mm

Weight: 300 Kg

ACCESSORIES

AR161-01

Corundum abrasive grain 80 (25 kg bag)

AR161-02

Reference marble sample

AR163 DORRY ABRASION MACHINE

EN 1097-8 | BS 812

This test provides a measure of the resistance of an aggregate to surface wear by abrasion. The Dorry machine consists of a 615 mm diameter cast iron grinding disc which rotates on a horizontal plane at a speed of 28-31 r.p.m.

Abrasive sand is fed across the surface of the specimen through a special funnel. The control panel can be wall fixed or placed on a bench.

Supplied with two specimen moulds, two trays, weights and fixing device.

Power supply: 230 V | 50-60 Hz

Dimensions: 1130x710x1100 mm

Weight: 200 Kg

ACCESSORY

AR163-01

Graded Silica sand (Pack of 25 kg)



AR161



AR163

AR165 BÖHME ABRASION TESTER

EN 1338 | EN 1339 | EN 1340 | EN 13748 | EN 13892-3
EN 14157 | DIN 52108

This machine is used to determine the abrasion resistance of natural stones and concrete products used for internal and external paving.

The apparatus is composed of a cast iron horizontal disc with a speed of 30 r.p.m. and a diameter of 750 mm furnished with a 200 mm test track to position a specimen, separate control panel with digital revolutions counter with automatic stop after preset revolutions, specimen holder and adjustable charger used to produce a force of $294 \text{ N} \pm 3 \text{ N}$ on a specimen.

Power supply: 230 V | 50Hz | 800 W
Disc speed: 30 r.p.m.
Dimensions: 1500x1000x850 mm
Weight: 320 Kg



AR165

AR167 ABRASIMETER

EN 154 | EN ISO 10545-7

Suitable for determining the abrasion resistance of glazed tiles and other materials. The instrument has three stations, and it can work either with wet (PEI) or dry (MCC) abrasive charges.

Supplied with cabinet conforming to CE Safety Directive.

Power supply: 230 V | 50-60 Hz | 300 W
Speed: 300 r.p.m.
Eccentricity: 22,5 mm
Dimensions: 400x700x500 mm
Weight: 38 Kg



AR167

AR169 ACCELERATED POLISHING MACHINE

EN 1097-8, 1341, 1342, 1343 | BS 812:114
NF P18-575 | CNR N.105

This machine is used to measure the resistance of road stone to the polishing action of vehicle tyres on a road surface, simulating actual road conditions.

The specimens are manufactured with suitable moulds and mounted on the road wheel. The wheel then spins in contact with a spring-loaded solid rubber tyre. 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 safeguards feeding calibration and reliability/life of the hoppers from the influence of test execution vibrations. The water is supplied at a controlled rate through a water container equipped with flow regulator.

During the test execution the display shows the remaining time and the speed rotation of the wheel holding the specimens.

Supplied with 2 rubber wheels (one for corn and one for flour emery), set of 4 specimen moulds and 2 mould covers, while control stone, corn and flour emery have to be ordered separately.

Power supply: 230 V | 50 Hz | 750 W
Samples: 14
Road wheel speed: 310-330 r.p.m.
Dimensions: 1800x820x600 mm
Weight: 175 Kg



AR169

ACCESSORIES

- AR169-01
Corn Emery (25 Kg pack)
- AR169-02
Flour Emery (5 Kg pack)
- AR169-03
Flour Emery "Original" (5 Kg pack)
- AR169-04
Friction Criggon Stone ungraded (25 Kg bag)
- AR169-05
Control stones ungraded (20 Kg bag)

AR171 SKID RESISTANCE TESTER

EN 1097-8 | EN 1338 | EN 1341 | EN 1342 | EN 13036-4
EN 1436 | BS 7976

Used for the measurement of surface friction properties, this apparatus is suitable for both site and laboratory applications. It can be used for determining the Polished Stone Value (PSV) using curved specimens obtained from accelerated polishing tests performed by the Accelerated polishing machine (conforming to EN 1097-8), and also for testing Paving Stones (EN 1341, EN 1342) and Paving Blocks (EN 1338).

During operation the pendulum is raised and then released to swing freely, allowing the edge of the rubber slider to skid across the surface of the road or sample.

The skid tester is supplied with:

- Additional incorporated scale for tests on PSV specimens
- Rule made of plexiglass, for sliding length verification
- Thermometer -10 to +110°C for surface temperature
- Stool wash bottle, bristle and tool set for machine use
- Carrying case

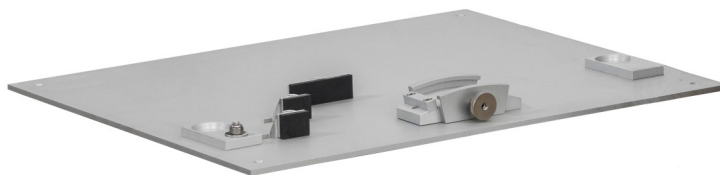
The tester is supplied without rubber sliders that have to be ordered separately

Case dimensions: 730x730x330 mm

Weight: 32 Kg



AR171



AR170-01 + AR170-02 + AR170-04

AR173 SKID RESISTANCE AND FRICTION TESTER

ASTM E303

As AR171, but calibrated to meet ASTM E303 specifications.



AR173+AR170-04

ACCESSORIES

- AR170-01
Mounted rubber slider 32 mm width
- AR170-02
Mounted rubber slider 76 mm width
- AR170-03
Mounted rubber slider, 4S rubber, 76 mm width
EN 13036-4 | BS 7976
Recommended for ceramics, marbles, paving tiles,...
- AR170-04
Metal base plate for PSV tests in laboratory
- AR170-05
Clamping device for Polished Stone Value tests in laboratory
- AR170-06
Clamping device for tests on natural stones (EN 1341, 1342);
for concrete block pavers (EN 1338) and skidding tests on
wooden floor (EN 1339)
- AR170-07
Pink lapping film (10 sheets) for Skid Calibration

AR201 CONTAINER OF RESISTANCE TO FREEZING AND THAWING

EN 1367-1 | EN 932-5

It provides the needed informations on aggregates subject to freeze and thaw test cycles. The cold stress on aggregates depends on the water saturation degree and the freeze percentage. The test can be performed on aggregates having dimensions from 4 to 63 mm.

Supplied with 2000 ml container, stainless steel made, with cover and ballast for the test container, plated steel made, used for tests on lightweight aggregates.

Weight: 2,6 Kg



AR201

AR203 REACTIVITY OF AGGREGATES

ASTM C289 | NF P94-048

This test method covers chemical determination of the potential reactivity of an aggregate with alkalis in Portland-cement concrete.

Capacity: 60 ml

Weight: 2 Kg



AR203

AR205 SET OF MAGNESIUM SULPHATE TEST

EN 1367-2 | ASTM C88

Tests for thermal and weathering properties of aggregates. Only the apparatus produced specifically for this test are described here. Many other items of laboratory equipment such as balances, ovens and sieves are also required. Composed by:

AR205-01

Container Ø200x200 mm tinned steel with airtight lid

AR205-02

Basket, stainless steel mesh Ø120x160 mm, opening 3,35 mm

AR205-03

Basket, stainless steel mesh Ø95x120 mm, opening 1,18 mm

AR205-04

Basket, stainless steel mesh Ø95x120 mm, opening 0,60 mm

AR205-05

Basket, stainless steel mesh Ø65x80 mm, opening 1,18 mm

AR205-06

Hydrometer 20°C scale 1200-1300 g/ml



AR205

HR415 CLIMATIC CHAMBER 530 L WITH TEMPERATURE CONTROLLED FROM -25 TO +70 °C

EN 1367-1

Only temperature controlled from -25 to +70 °C for the determinations of the behavior and resistance to freezing and thawing of aggregates (EN 1367-1) and different other applications on concrete and building materials.

Internal and external frame is made of stainless steel
Polyurethane insulation: 60 mm thick. Internal ventilation. Door with 180° opening angle, equipped magnetic gasket and integrated heater against freezing. Shelves can be taken off and adjustable in height; adjustable feet.

It works with demineralized, softened waters, or tap water with hardness rate up to 300 ppm assuring an excellent functioning along the time.

Equipped with microprocessor temperature controller with integrated cycles multiple segments programmer. Visual alarm for minimum and maximum temperatura.

Supplied with 3 adjustable shelves suitable to withstand weights up to 40 kg.

Inside dimensions: 590x670x1360 mm

Overall dimensions: 710x820x2080 mm

Power supply: 230 V | 50-60 Hz | 2570 W

Weight: 170 Kg



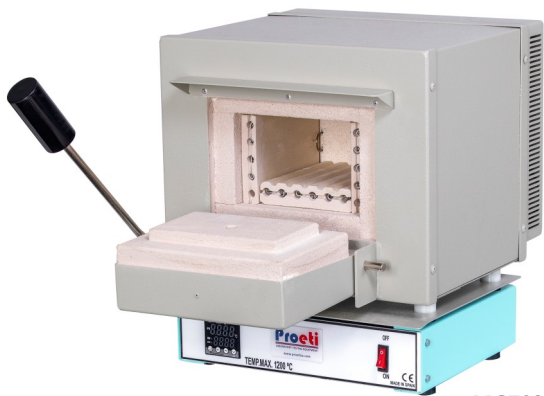
HR415

MG702 DIGITAL MUFFLE FURNACE 1100°C

EN 1367-5

This test involves heating soaked aggregates to 700°C for 3 minutes and comparing the loss in fines and the strength loss, determined in accordance with EN 1097-2, before and after the heat, using the appropriate accessories.

Power supply: 220 V
Capacity: 7,6 litros
Inside dimensions: 200x240x160 mm
Overall dimensions: 540x520x490 mm
Weight: 45 Kg



MG702

AR207 MICROLANCE MEASURING DEPTH 1000 MM

AR209 MICROLANCE MEASURING DEPTH 2000 MM

This electronic tester directly measures and visualizes on the display the moisture percentage and temperature of sand and fine aggregates up to Ø10 mm max by inserting the tip.

Suitable for both site and laboratory tests.

Moisture range: 0-35% accuracy 0,5%
Temperature range: -20°C to +60°C
Dimensions: 120x120x1200 mm
Weight: 2 Kg



AR207

AR221 CHAPMAN FLASK

ASTM C70 | AASHTO T142

Used for determining the amount of surface moisture in fine aggregates. The flask is graduated to 200 ml between the two bulbs and from 375 to 450 ml above the second bulb.

Weight: 500 g



AR221

SU093 COLOR STANDARD GLASS SCALE

ASTM C40

Used for determining the organic impurities in fine aggregates by the colorimetric method together with the organic impurities test bottles. 5 colored glass mounted in plastic holder.

Weight: 150 g



SU093

ACCESSORIES

MG401-04
 Graduated impurities test bottles, 500 ml (ASTM C40)
 MG401-05
 Graduated impurities test bottles, 1000 ml

CHLORIDE CONTENT

BS 812:117 | BS 1377:3

Used to estimate the chloride content of aqueous solutions in sand and fine aggregates.

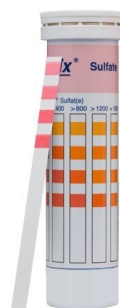
SU121
 Chloride Titrator Strips (40 pieces), range 0,005% to 0,1%
 SU123
 Chloride Titrator Strips (40 pieces), range 0,05% to 1%

SULPHATE CONTENT

BS 1377:3

Used to determine the sulphate ions in aqueous solutions of sand and fine aggregates.

SU125
 Sulphate Test Strips (100 pieces) range 200 to 1600 mg/l



SU121



SU125

AR211 SPEEDY MOISTURE TESTER

ASTM D4944 | AASHTO T217

For accurate moisture reading on field of soil, sand, aggregates.

The sample is introduced into the bottle with the reagent and the water in the sample reacts with calcium carbide and produces a gas, the pressure of which is indicated on the manometer and easily converted into the percentage of moisture.

Supplied in a carrying case with an electronic balance and accessories.

Capacity: 6 g
Moisture range: 0 - 20%
Weight: 6 Kg

AR213 SPEEDY MOISTURE TESTER

Same as model AR211 but 20 g capacity.

Weight: 6 Kg



AR213

ACCESSORY

AR211-01
Speedy Calibration kit

AR219 END-OVER-END SHAKER

EN 1997-2 | BS 1377:2

This method applies to soils containing up to 10% of particles retained on a 37,5 mm sieve, it rotates two gas jars at 50 r.p.m.

The shaker is equipped with an original friction device conforming the unit to CE Safety Directive. Supplied without gas jars to be ordered separately.

Power supply: 230 V | 50 Hz | 150 W
Dimensions: 550x430x500 mm
Weight: 20 Kg

ACCESSORIES

AR219-01
Gas jar to determine the specific gravity of soils
AR219-02
Rubber bung for the gas jar
MG043
Separate control panel with ON/OFF switch and timer

AR219-01

AR219-02



AR219

MG043

AR215 UNIVERSAL CARBIDE METER

BS 6576 | AASHTO T217 | ASTM D4944

For a rapid and accurate determination of moisture content in sand, gravel, aggregates, soil etc, based on the calcium carbide method.

The bottle is calibrated and equipped with a surface thermometer. The glass ampoule containing the calcium carbide is broken when the bottle is closed and shaken, granting better accuracy to the test.

The instrument comprises the testing bottle with manometer, small balance, 25 ampoules of reagent, accessories and carrying case.

Measurement system: Analogic manometer 2,5 bar
Samples: 20g - 50g - 100 g

AR217 DIGITAL UNIVERSAL CARBIDE METER

BS 6576 | AASHTO T217 | ASTM D4944

Same as mod. AR215, but with digital manometer for more accurate readings with pressure and temperature display.

Samples: 10g - 20g - 50g - 100 g

ACCESSORY

AR215-01
Carbide Ampoules (pack of 100)



AR215

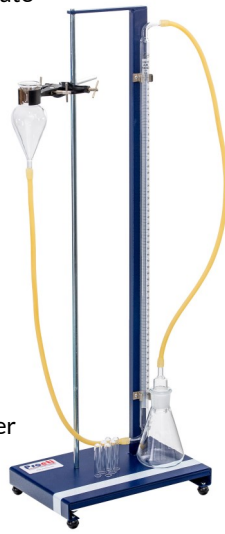
AR223 BERNARD CALCIMETER

UNE 103.200: NLT 116

Made of metal and used to determine the carbonate content of aggregates and soils.

When hydrochloric acid is added to the sample, the carbonate in the sample is released in the form of CO_2 . Consequently, the released CO_2 increases the pressure, which in turn increases the water level in the deaeration burette. The difference in the measured levels indicates the amount of CO_2 that has been released, thus allowing the carbonate content to be calculated.

The unit consists of a support stand, a burette with capacity for 100 cm^3 , a level tube with a tank measuring $\text{Ø}40 \times 140 \text{ mm}$ long, an Erlenmeyer flask of 250 cm^3 with a rubber stop pierced by a glass tube, a glass tube with 3 cm^3 capacity and a flexible rubber tube.



AR223

AR225 DIETRICH-FRÜHLING CALCIMETER

Used for the determination of calcium carbonate (CaCO_3) in certain products such as limestone and lime marl.

It mainly consists of a glass container in which the reaction between the calcium carbonate present in the product and a solution of hydrochloric acid takes place.

The resulting gas is collected and measured by a device connected to the container. As the volume of the released gas (CO_2) is in relation to the CaCO_3 content of the material, it is possible to calculate the percentage of CaCO_3 .

Dimensions: 400x200x1100 mm
Weight: 13 Kg



AR225

AR227 TILT TEST

This instrument measures the roughness coefficient of a rock specimen or of a joint.

It consists of an inclined adjustable plane on which the sample is placed. The plane is slowly tilted until the upper surface of the specimen slides on the lower one. The roughness index can be evaluated from the measured inclination angle.

Inclination angle: 0 - 75°
Max. sample diameter: 100 mm
Dimensions: 270x175x265 mm
Weight: 5 Kg



AR227

AR231 MOHS HARDNESS SCALE SET

BS 812:117 | BS 1377:3

The set consists of 10 reference minerals: Talcum, Gypsum, Calcite, Fluorite, Apatite, Feldspar, Quartz, Topaz, Corundum and Diamond.

Weight: 500 g

ROCK PICKS

AR233

Rock pick with pointed tip

AR235

Rock pick with chisel edge

BARTON PROFILOMETERS

Used for measuring the roughness profile of rock samples

AR237

Barton Profilometer 150 mm

AR239

Barton Profilometer 300 mm



AR229 POLISHER - GRINDER

Used for the preparation of rock and metallurgical specimens from lapping to final polishing. The disc is 200 mm diameter and the rotation speed is 300 r.p.m.

The machine is supplied with bakelite working disc and set of 25 abrasive silicon carbide discs.

Power supply:
230 V | 50 Hz | 200 W
Dimensions:
370x500x300 mm
Weight:
31 Kg



AR229

AR241 JAW CRUSHER

ASTM C289

A machine used in laboratories to crush samples of aggregate, minerals and similar materials in order to reduce their size.

The crusher has an input opening measuring 80 x 50 mm, and the size of the crushed material can be set to as little as 1 mm. Production capacity, depending on the material to crush, is 5 dm³/h.

Container capacity:

2,5 dm³

Power supply:

220 V | 50 Hz

Dimensions:

800x300x600 mm

Weight:

106 Kg



AR241

AR243 BOWL CHOPPER 15 L

NF P 94-093

Designed for the preparation of homogeneous samples of different types of materials such as aggregates, fines, soils,...

7" touch screen with speed, temperature, time,...

Programmable automatic stop

Container made of stainless steel

Power supply: 220-230 V | 3 pH | 2300 W

Bowl capacity: 6-7 kg

Variable speed: 1500-3000 r.p.m.

Dimensions: 640x550x920 mm

Weight: 165 Kg



AR243

AR245 JAR MILLS

ASTM C289

Designed for milling aggregate samples to reduce particle sizes down from 1-5 mm (depending on hardness) to pass through a 300 µm sieve. The machine is fitted within a noise reduction cabinet with a safety switch for safe operation conforming to CE directives. Fitted with a 0-99 minute electronic timer, the mill can drive jars of 300 cm³ for 150 g of dry product and 1000 cm³ for 500 g of dry product. The jar has be ordered separately

Power supply: 230 V | 50 Hz | 370 W

Dimensions: 730x350x445 mm

Weight: 55 Kg

ACCESSORIES

AR245-01

Alumina jar 300 cm³

AR245-02

Alumina jar 1000 cm³



AR245

AR247 BALL MILL

EN 61010-1, 61010-2-051, 61010-2-101, 61326-1

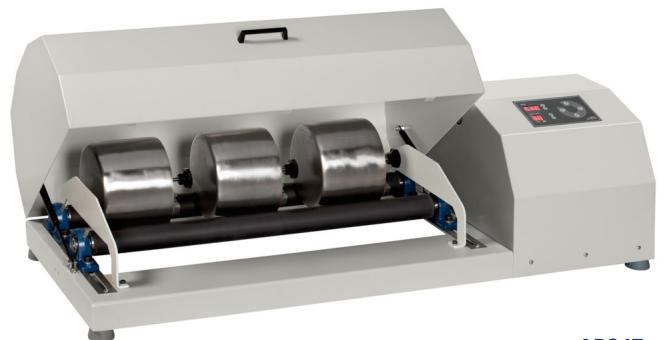
The ball mill splits the sample because of the hits against the balls. It moves along an arc of a semi-circle due to the dragging of the pitcher in the cylinder motor. Isolated jars prevent the contamination of samples.

Its function and design makes it suitable for mill works in laboratories of public works, manufacture of paints, ceramic, milling of raw materials,...

Power supply: 220-230 V | 50-60 Hz

Dimensions: 1230x490x350 mm

Weight: 72 Kg



AR247

ACCESSORIES

AR247-02

Stainless steel jug 3 L

AR247-03

Stainless steel jug 5 L

AR247-13

Stainless steel balls Ø20 mm (1 Kg)

AR247-14

Stainless steel balls Ø30 mm (1 Kg)

AR251 DIGITAL POINT LOAD TESTER

ASTM D5731 | ISRM

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, on which a manual hydraulic jack is mounted. The applied load is measured by a high precision electric load cell with a digital display unit range 0-56 kN.

A ruler mounted on the frame allows for direct measurement of the distance D between the conical platens before and after the test.

The compression load is measured by a pressure transducer with an advanced digital display unit, assuring the best accuracy and resistance to failure shocks.

Supplied complete with wooden carrying case, goggles and accessories.

Capacity: 56 kN
Linearity: 0,05%
Repeatability: 0,02%
Resolution: 0,001 kN
Dimensions: 400x530x720 mm
Weight: 25 Kg

ACCESSORY

AR251-01
 Lower and upper plate with seat ball
 To modify the Point Load Tester into a portable compression tester.



AR251

AR253 DIGITAL POINT LOAD TESTER 100 kN

Same as model AR251 but having load capacity up to 100 kN.

AR255 ROCK CLASSIFICATION HAMMER

ASTM D5873 | ISRM

Used to measure the rebound index on rock cores and samples. It is similar to the one used for testing concrete, but has a different level of impact energy: 0.74 Nm.

Rock cores are positioned horizontally and the rebound index is obtained from the average of several measurements performed perpendicularly to the longitudinal axis.

Impact energy: 0,74 Nm
Measuring range: 10...60 N/mm²
Weight: 2 Kg

ACCESSORY

AR255-01
 Rock cradle
 To locate core rock specimens.
 ASTM D5873

Weight: 20 Kg



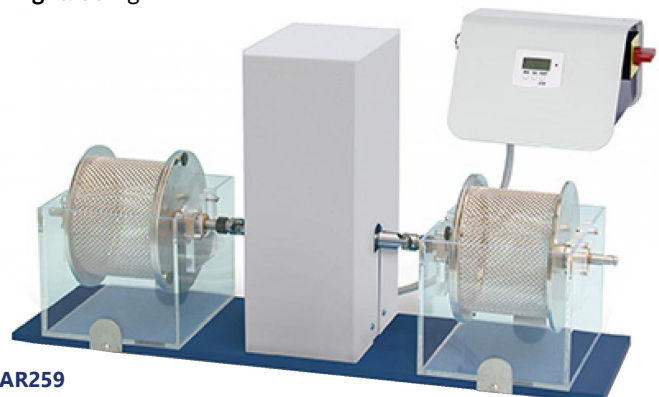
AR255+AR255-01

AR259 SLAKE DURABILITY APPARATUS

ASTM D4644

This equipment has been developed to assess the durability of rock to weakening and disintegration when subjected to the simulated effects of climatic slaking. The rock samples are dried and then submitted to wear stress inside a drum which is rotated into water. The test is performed different times and the wear is given by the loss in weight of the sample. The system incorporates a motor drive unit mounted on a baseplate which revolves two (or up to four) stainless steel drums manufactured from 2 mm mesh, Ø140x100 mm long. The tanks are filled with water to a level 20 mm below the drum axis. A digital timer automatically stops the motor after the preset time. The equipment is supplied with two drums with tanks, and it can accept two additional drums.

Power supply: 230 V | 50 Hz | 250 W
Dimensions: 350x740x300 mm
Weight: 30 Kg



AR259

AR261

ANALOGIC ROCK SHEAR BOX APPARATUS

ASTM D5607 | ISRM

The test method offers a simple and practical way of determining the strength and slope stability of rock, both in the field and in the laboratory.

The apparatus is composed of:

- 2 rams for reversible shearing action
- 1 ram for vertical load application
- 2 load gauges 50 kN
- 2 hand operated pressure maintainer
- Dial gauge 25x0,01 mm

Dimensions: 600x250x460 mm

Weight: 46 Kg



AR261

ACCESSORIES FOR ROCKS DIRECT SHEAR TESTS

AR260-01

Mould former to prepare the specimen

AR260-02

British Gypsum Crystacal paste (25 kg bag)

AR260-03

Vertical constant pressure maintainer

AR261-01

4 Dial gauges 10x0,002 mm with supports for AR261

To measure vertical displacement according to ASTM D5607

AR263-01

4 Lineal transducer 10 mm with supports for AR263

To measure vertical displacement according to ASTM D5607

AR271

EXTRUDER

Used to eject the rock sample from the rubber jacket, avoiding to empty the confining fluid. Supplied without adaptors to be ordered separately.

Weight: 12 Kg



AR271

ADAPTOR	SPECIMEN
AR271-01	Ø30,10x60 mm
AR271-02	Ø38,10x75 mm
AR271-03	Ø42,04x85 mm
AR271-04	Ø54,74x100 mm

AR263

DIGITAL ROCK SHEAR BOX APPARATUS

ASTM D5607 | ISRM

Similar to AR261 model but with digital measuring system.

The apparatus is composed of:

- 2 rams for reversible shearing action
- 1 ram for vertical load application
- 2 pressure transducers
- 2 hand operated pressure maintainer
- Lineal displacement transducer 25 mm
- Digital display for data acquisition and storing
- Software for test data processing



AR263

AR260-01

AR260-03

AR275

CORING MACHINE

Used in the laboratory to obtain cores from irregular rock samples.

2 speed electric motor 1140-2040 r.p.m. unloaded and 730-1340 r.p.m. at max load, doubly insulated and equipped with a friction device in compliance with CE Directive.

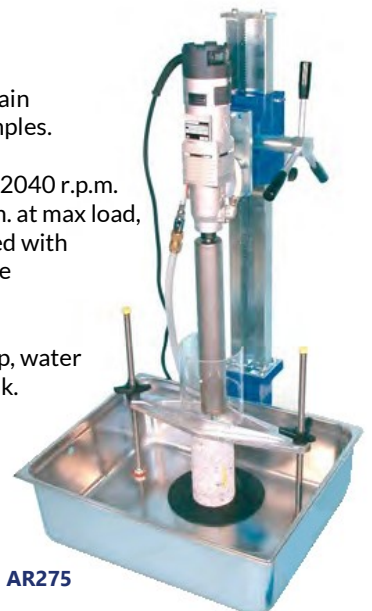
Supplied with specimen clamp, water cooling system and water tank.

Power supply:

230 V | 50-60 Hz | 1800W

Weight:

60 Kg



AR275

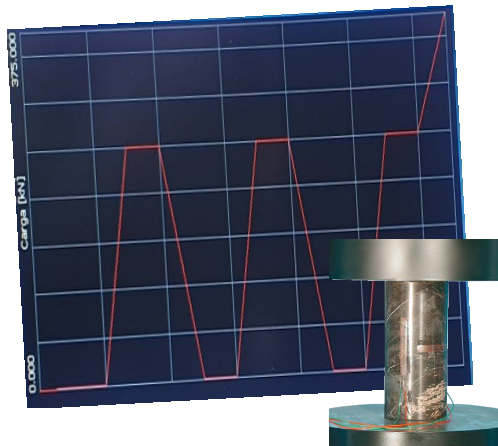
CORE DRILL BIT	SPECIMEN
AR275-01	Ø30,10x60 mm
AR275-02	Ø38,10x75 mm
AR275-03	Ø42,04x85 mm
AR275-04	Ø54,74x100 mm

AR300 ELASTIC MODULUS OF ROCK SPECIMENS

EN 14580 | EN 1926 | ISRM

ASTM D7012 | ASTM D2664 | ASTM D3148 | ASTM D5407

System designed to calculate the elastic modulus composed of a hydraulic system, an electronic measurement system and data acquisition software. This system has to be used with a high stability frame with capacity of 2000 or 3000 kN. The frame is not included.



AR300+HR017

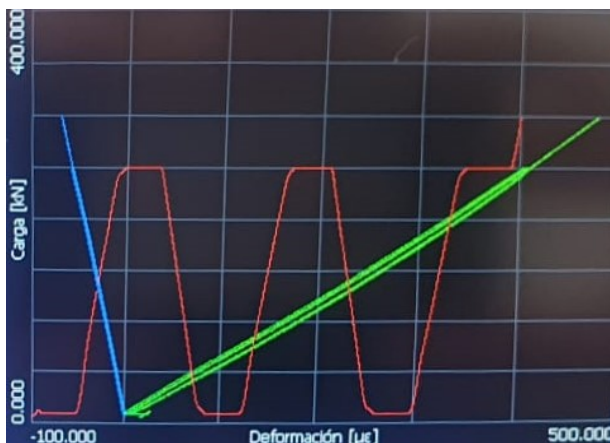
Its hydraulic installation has a high performance valve directly controlled by the digital unit that grants the automatic control of the pace rate increasing the load, keeps a certain load and then controls the pace rate decreasing the load. A laser position detector allows a rapid positioning of the piston and a very accurate touch point. This grants a touching sensitivity of test starting of about 0,1 per thousand of the maximum capacity.

The high performance control and data processing unit controlled by a 32 bit microprocessor can manage up to 8 high resolution channels for the control of load cells or transducers with strain gages bridge.

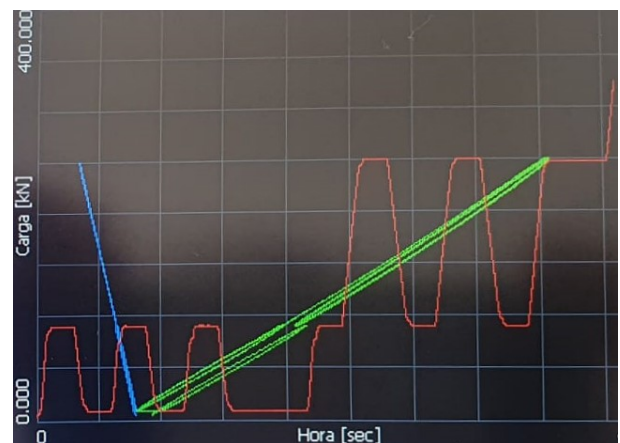
The unit contains two last generation converters with 24 bits resolution. The system processes the signals coming from the load cells and from the extensometers giving all the results required for a further processing following the most updated standards for this application.

The software has been developed on the working line of windows menu. It contains the profiles of the main Standards used, but the user can modify and personalise the test profile, which will be effected in a completely automatic way by the testing machine.

The appliance allows verifying the proper reading of the extensometers and, if everything is within the expected tolerances, it manages the average deformation value read by the transducers and processed by the digital unit, than it transmits all tests data throught a serial communication port RJ45 (Network Connection) to a PC, that can already belong to the end user or be supplied separately. This data will be processed by the software and transformed in a graph load/deformation and load/time, following the specific Standards.



MG030-65 Software for elastic modulus



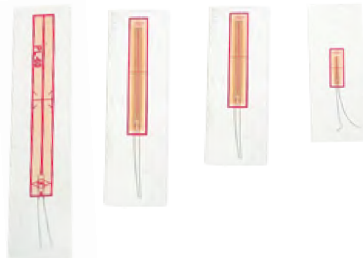
MG030-65 Software for elastic modulus

ACCESSORIES

The strain gauges must be previously installed on the specimen to be tested. The orientation and position of the bands is very important because they will condition the results of the test. The strain gauges must be chosen according to the grain size of the rock to be tested.



- AR300-11
Strain gauge 10 mm (10 pieces)
- AR300-12
Strain gauge 20 mm (10 pieces)
- AR300-13
Strain gauge 30 mm (10 pieces)
- AR300-14
Strain gauge 60 mm (10 pieces)
- AR300-15
Strain gauge 120 mm (10 pieces)



AR300-10
Interface module to connect up to 4 strain gauges
This module allows also the automatic calibration of the zero and of the measuring range after a special thermal compensation. This grants a five times better accuracy than the one requested by the Standards.

AR300-20
Strain gauge application kit
Composed of: glue, soldering iron, solder, cleaning liquid, accessories and carrying case.



HR101 ELECTRONIC COMPRESSOMETER-EXTENSOMETER

This equipment is an alternative to strain gauges. Made of two anodized aluminium pieces, one fixed and the other sliding and housing a displacement transducer that measures with high accuracy the movement of two conical points made of hardened steel and attached at the two ends of the electronic sensor.

The two conical points are coupled to the surface of the simple with a rapid and simple attachment system by means of two adjustable elastic straps.

The instrument is equipped with a mechanical knob to lock and unlock the displacement transducer, allowing to safeguard the selected base length while attaching of the device to the sample.

Normally the test is performed on cylinders by using 3 extensometers/compressometers, and on cubes or beams by using 2 or 4 instruments.

The extensometer is suitable to test cubes, cylinders and beam specimens, having minimum height of 130 mm. It is also possible to test mortar prisms 40x40x160 mm by using a block for reducing length.

Supplied with reducing block for mortarprisms, elastic Straps and carrying case.

- Gauge length:** adjustable from 50 to 160 mm
- Travel:** ±1,5 mm
- Sensitivity:** less than 0,01 micrón
- Weight:** 1000 g



ACCESSORIES

- HR101-01
Aluminium template to regulate and to calibrate the base length
- MG020-50
Calibration process for one compressometer

AR310 TRIAXIAL TESTS ON ROCK SPECIMENS

EN 1926, 14580 | ASTM D7012, D2664, D3148, 407

This system is used to apply lateral pressure to rock samples with a maximum capacity of 70 Mpa.

The servo-controlled hydraulic group of the system allows to maintain a constant axial load and isotropic pressure from 5 to 6 Mp.

The system control unit offers a real time reading of the pressure, fatigue and rupture values.

The system automatically applies a constant pressure increase ranging between 0,5 and 10 MPa/sec, as established by international standards. In this way, it is capable of reaching breakage between 5 and 10 minutes of testing.

Combined with a set of strain gauges applied on the surface of the rock specimen, it is used for the automatic reading in real time of different parameters such as:

- Poisson's ratio
- Stress value between axial and radial strain
- Maximum break value
- Young's modulus tangent and secant
- Maximum stress value in triaxial conditions

HOEK CELLS FOR ROCK TRIAXIAL TESTS

Hoek cells are used to measure the strength of cylindrical rock specimens which are subjected to triaxial compression.

The basic Hoek cell consists of the following parts: Cell body with two screwed end caps and two self-sealing couplings, two spherical seats and pistons, hardened and ground, one specimen jacket

ACCESSORIES

AR320-01

Load spreader

Used to prevent the cell piston from marring the platens of the compression machine.



AR320-01

AR325

AR271

Extruder

Used to eject the rock sample from the rubber jacket, avoiding to empty the confining fluid.

Supplied without adaptors to be ordered separately.

Weight: 12 Kg



AR271



AR300+HR017+AR310

It is recommended the use of a compression load frame with capacity of 2000 or 3000 kN combined with the automatic servo-controlled system and with the automatic system for the Elastic Modulus on rocks AR300, that includes the data acquisition and processing software

CODE	SPECIMEN DIMENSIONS	SPECIMEN TYPE	SPARE PISTON	SPARE JACKET	CORE DRILLING	ADAPTORS
AR321	Ø30,10x60 mm	AX	AR321-01	AR321-02	AR275-01	AR271-01
AR323	Ø38,10x75 mm	1,5"	AR323-01	AR323-02	AR275-02	AR271-02
AR325	Ø42,04x85 mm	BX	AR325-01	AR325-02	AR275-03	AR271-03
AR327	Ø54,74x100 mm	NX	AR327-01	AR327-02	AR275-04	AR271-04

ROCK PERMEABILITY

This test is performed to measure the water flow through a rock specimen contained in a Hoek cell and subjected to a high confining pressure. The hydraulic gradient within the rock sample is supplied by a constant pressure apparatus and the water permeating the sample is collected in a burette.

A couple of end caps are also necessary to fit the Hoek cell.

PERMEABILITY END CAP

The set consists of the upper and lower End Cap, with distance block

- AR321-05 Permeability end cap for Hoek specimen Ø30,10 mm
- AR323-05 Permeability end cap for Hoek specimen Ø38,10 mm
- AR325-05 Permeability end cap for Hoek specimen Ø42,04 mm
- AR327-05 Permeability end cap for Hoek specimen Ø54,74 mm
- AR329-05 Permeability end cap for Hoek specimen Ø63,50 mm

SU491

PERMEABILITY CONSTANT OIL/WATER PRESSURE SYSTEM

Providing an infinitely variable constant pressure from 0 to 3500 kPa. To be used with the Hoek Cell equipped with Permeability End Caps and Permeability Attachment.

The system consists of a motor hydraulic pump, oil/water vessel, piston/spring device, 10 litres of viscosity oil. The unit is supplied complete with precision pressure gauge 0 - 3500 kPa range.

Power supply: 230 V | 50 Hz

Weight: 20 Kg

SU450-30

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

AR311

MANUAL LATERAL PRESSURE SYSTEM

The unit consists of a hand operated pump with precision pressure gauge supplying pressures up to 35 MPa, a reservoir and connections, providing the Hoek cell with a lateral pressure source.

Weight: 18 Kg



AR311

AR313

COMPRESSION DEVICE FOR ROCK CORES

ASTM D2938

Used to perform compression tests on rock core specimens having max. diameter 55 mm and height between 95 and 110 mm.

Maximum load capacity: 100 kN

Piston's stroke: 20 mm

Platens diameter: 55 mm

Vertical daylight: 112 mm

Platens hardness: 60 HRC

Overall dimensions: Ø151x 249 mm

Weight: 10 Kg



AR313



SU450-30



SU491



AR325+AR325-05

HR471

CUTTING SAW

This universal saw with suitable accessories, can be used to cut concrete and rock cores and irregular rock samples in order to obtain geometrically defined samples.

Supplied with Ø300 mm diamond blade.

Power supply: 230 V | 50 Hz | 3000 W

Dimensions: 1220x780x12200 mm

Weight: 65 Kg



HR471