

Apex Labs Logo

TECHNICAL REFERENCE CATALOG

PHYSICS & MATERIAL SCIENCE

Precision Laboratory Instrumentation, Optical Benches, Electrical Networks
& Core Thermodynamics

Apex Labs Varanasi

Premium Manufacturer & Turnkey Institutional Supplier for Universities & Science Institutes
Varanasi, Uttar Pradesh, India

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PHYSICS LABORATORY SYSTEMS & PRODUCT SPECIFICATIONS

Apex Labs introduces its technical, unpriced reference catalog of **Physics and Material Science Equipment**. This inventory comprises industrial-grade diagnostic gauges, core mechanics validation frameworks (reversible and compound pendulums), high-accuracy optical benches, advanced spectrometers, electrical induction arrays, and thermal conductivity systems. Every instrument is rigorously calibrated to guarantee tight experimental limits and long-lasting educational performance. *Please reference the listed item codes when requesting formal quotes from our commercial desk.*

ITEM CODE	EQUIPMENT CLASSIFICATION	TECHNICAL PARAMETERS & BUILT SPECIFICATIONS
AL-PH-001/1	DC Moving Coil Ammeter	Desk-stand panel mount model. Available ranges: 0-1A, 1.5A, 3A, 5A, or 10A. Ideal for foundational circuit monitoring.
AL-PH-001/2	AC Moving Coil Ammeter	Desk-stand panel mount configuration. Available ranges: 0-1A, 3A, or 5A. Optimized for steady-state alternating current verification.
AL-PH-002/1	DC Moving Coil Ammeter (Deluxe)	Deluxe high-stability bench display unit featuring low-resistance shunts for absolute current tracking.
AL-PH-002/2	AC Moving Coil Ammeter (Deluxe)	Deluxe high-accuracy operational laboratory tracking model designed for precise structural electrical layouts up to 5A.
AL-PH-002/3	Square Dial DC Ammeter (EDM-80)	Flush panel-mount configuration with a clear mirrored scale plate for heavy hardware test bench integration.
AL-PH-003/1	Aneroid Barometer (Demonstration)	Equipped with an integrated micro air pump system and explicit linkage window for internal pressure/altitude simulation.
AL-PH-003/2	Aneroid Barometer (Wall Pattern)	Compact wall-mounting design with a 10cm clear scale face layout for general environment monitoring.
AL-PH-005/2	Astronomical/Terrestrial Telescope	Routine metal body achromat optics configuration, complete with matching adjustable height structural tripod.
AL-PH-005/3	Premium Brass Telescope Setup	Heavy solid brass body engineering with fine focus racks, astronomical eyepieces, housed in a formal storage box.

ITEM CODE	EQUIPMENT CLASSIFICATION	TECHNICAL PARAMETERS & BUILT SPECIFICATIONS
AL - PHN - 00	Air Wedge Apparatus Set	Includes optically flat glass blocks and sodium lamp slit apertures to verify microscopic thin-film interference thickness.
AL - PH - 006 / 1	Physical Balance (Analytical Type)	Teak wood protective case execution supporting precise 250g weight verification loops with agate knife edges.
AL - PH - 006 / 3	Varanasi Physical Balance (Elite)	Signature institutional execution featuring true 7-stone jeweled pivots, polished brass beam, and drawer base.
AL - PH - 007 / 1	Digital Lab Balance (600g)	Precision electronic scale with 0.1g least count. Features rapid stabilization tare routines for quick asset calculation.
AL - PH - 007 / 2	Digital Lab Balance (300g)	0.01g (10mg) high-sensitivity least count bench balance complete with an acrylic environmental draft shield ring.
AL - PH - 007 / 5	Micro-Analytical Assay Scale	Elite automated readout balance tracking down to 0.0001g (0.1mg). Equipped with motorized glass breeze break doors.
AL - PH - 012 / 1	Bar Pendulum (Compound Pattern)	Heavy iron bar pattern featuring multiple evenly split suspension bores for calculating center of oscillation and gravity acceleration.
AL - PH - 012 / 2	Kater's Reversible Pendulum	Premium structural steel bar with micro-adjustable knife edges and heavy adjustable weights for precise 'g' determination.
AL - PH - 015 / 1	Boyle's Law Apparatus (Simple)	Mounted on a durable base layout, containing thick-walled graduated pressure tubes and a sliding oil reservoir cylinder.
AL - PH - 015 / 2	Boyle's Law Apparatus (With Gauges)	Modern technical engineering layout fitted with standard direct-reading dial indicators, removing the need for mercury columns.
AL - PH - 022 / 1	Ballistic Galvanometer Apparatus	Moving coil type with high internal damping constants, copper wire winding, and mirror scaling options for charge evaluation.
AL - PH - 035 / 1	Cantilever Beam Deflection Kit	Includes heavily graduated reference scales, clamping block nodes, slotted weight hangers, and high-tensile test bars.
AL - PH - 045 / 2	Centrifugal Force Verification Set	Motor-driven rotational assembly with tracking slide blocks, variable speeds, and spring tension hooks for force evaluation.

ITEM CODE	EQUIPMENT CLASSIFICATION	TECHNICAL PARAMETERS & BUILT SPECIFICATIONS
AL - PH - 080 / 1	Melde's String Apparatus	Electrically driven micro-vibrator assembly designed to chart transverse wave layers and string tension coefficients.
AL - PH - 095 / 2	Newton's Rings Micro-Optics Kit	Includes a specialized focusing microscope, optical glass plates, condensing mirrors, and a 45-degree beam splitter plate.
AL - PH - 110 / 3	Optical Bench (Double Rod, 1.5 Meter)	Solid stainless steel rods complete with 4 heavy-sliding layout riders, lens holders, and fine transverse adjustment mounts.
AL - PH - 115 / 1	Prism Spectrometer (Standard)	6-inch circular graduated scale face with fine twin vernier adjustment controls, rack-and-pinion focusing collimator, and telescope.
AL - PH - 115 / 4	Advanced Research Spectrometer	Large 7-inch circle precision optics configuration with highly polished dense flint glass prism and protective lens hoods.
AL - PH - 150 / 1	Carey Foster Resistance Bridge	Thick low-resistance copper busbar paths running along a hand-polished seasoned wooden block, with a 1-meter slide wire.
AL - PH - 160 / 2	Post Office Box (Dial Pattern)	4-decade configuration with continuous non-inductive wound resistor networks housed in a dust-proof console layout.
AL - PH - 180 / 1	Tangent Galvanometer (Standard Base)	Non-magnetic turn frame chassis fitted with a premium compass fluid core assembly and dual tracking scale options.
AL - PH - 210 / 3	Decade Resistance Box (3 Dial)	Ranges up to 1000 Ohms utilizing premium low-temperature coefficient manganin wire networks on heavy brass switches.
AL - PH - 210 / 6	Decade Resistance Box (6 Dial)	Wide spectrum analytical laboratory tuning block covering up to 1 Megaohm with absolute accuracy tolerances.
AL - PH - 250 / 2	Daniell Cell Complete Assembly	Copper outer containment pot paired with an inner porous clay cup module and structural zinc plate terminal rods.
AL - PH - 240 / 1	Leclanche Cell Container	Robust glass jar configuration complete with a zinc rod, ammonium chloride charging salts, and manganese dioxide block bag.

ITEM CODE	EQUIPMENT CLASSIFICATION	TECHNICAL PARAMETERS & BUILT SPECIFICATIONS
AL - PH - 290 / 1	Laboratory Rheostat (8-Inch)	Heavy porcelain cylindrical tube wrapped with high-insulation oxidized resistance wire. Continuous slider path rated at 5 Ohm/5A.
AL - PH - 290 / 5	Laboratory Rheostat (12-Inch)	Long sliding tube layout built for micro-adjusting laboratory current paths. Specially rated at 100 Ohm/2A for safety overruns.
AL - PH - 320 / 1	Joule's Calorimeter Apparatus	Polished copper vessel enclosed in an outer insulated structural wooden box, complete with lid, stirrer, and thermometer ports.
AL - PH - 330 / 2	Thermal Conductivity Set (Searle's)	Thick structural copper steam jacket fitted with dual precision fluid temperature taps and a cooling water coil interface.
AL - PH - 340 / 1	Lee's Disc Apparatus Set-up	Includes a thick brass circular disc, steam generator block, cooling disc, and adjustable suspension cords for bad conductors.