NEOMETRIX DEFENCE NMX-BETL-01

Ballistic Evaluation Testing Laboratory

CAPABILITY SHEET · BALLISTIC EVALUATION LABORATORY · ENGINEERED TO ORDER - IS 17051 / NIJ 0106

THE FACILITY

WHAT	A complete laboratory that ballistically qualifies hard- and soft-armour panels, ballistic helmets and shields to IS 17051:2018 and NIJ 0106 - range line, conditioning train, instrumentation and software as one integrated facility.
STATUS	Engineered to order - built to the IS 17051:2018 and NIJ 0106.00 / 0106.06 / 0101.06 test regime. Installation, integration and acceptance trials undertaken against contract; calibre set and instrumentation configurable to your specification.
COVERS	Service calibres 9x19, 5.56x45, 7.62x39, 7.62x51, 7.62x54 and 12.7 mm, plus 17-grain FSP and 2 / 4 / 16 / 64-grain RCC fragment simulators for V50 ballistic-limit determination.

THE RANGE LINE

FIRING REST	Remote-fired EPVAT rest, mobile on wheels; NATO/CIP universal receiver with velocity barrels for every calibre and a V50 fragment barrel; elevation and azimuth +/-5 deg; safety-door interlock disables firing while the cell door is open.
VELOCITY	Two independent non-contact light-gate screens (NIJ 0106.06), active area >=400 x 800 mm, centred 2.5 +/- 0.025 m from the backing face; range 50-1800 m/s at 0.1% accuracy; LAN / Ethernet / RS232 / RS485 / Wi-Fi.
YAW	Two high-speed X-Y detectors, active area >=380 x 380 mm, max bullet length 180 mm; yaw range 45 deg at +/-0.5 deg accuracy; splinter-shielded, mobile on wheels; LAN / Wi-Fi interface.
TARGET TABLE	Motorised, 900 mm diameter, 450 kg capacity, 360 deg stepless rotation, X-Y-Z travel 300 mm, height 700-1300 mm - all driven from a 20 m remote per IS 17051:2018.

SAMPLES, BACKING & V50

SAMPLE FIXTURES	Holders for HAP and SAP per IS 17051, a 500 x 500 mm sample holder, a 900 x 600 mm ballistic-shield holder (<=40 mm thick), and a pair of helmet head-forms, size 7 1/4, per NIJ 0106.00.
BACKING FIXTURE	610 x 610 x 140 mm (+/-2 mm) metallic reference planes for the oil-based clay, removable wooden back; backing-consistency drop test per NIJ 0101.06 with a 63.5 mm, 1043 g steel sphere from 2000 mm.
V50 & RELOADING	Reference V50 BL(P): 2-gr RCC 1280, 4-gr RCC 1059, 16-gr RCC 754, 64-gr RCC 533 m/s; 17-gr FSP 300-1800. Reloading station (dies, turret, press, priming, 200 g / 5 mg balance) prepares rounds to velocity.

CONDITIONING & ENGAGEMENT

CONDITIONING	Environmental / thermal-cycle chamber >=1 x 1 m, -40 to +180 degC (+/-1 degC), 10-day programmable cycle; NIJ 0101.06 tumbler, SS-304 832 mm drum at 5 rpm, 65 degC / 80% RH; armour-submersion bath.
SOFTWARE & POWER	Ballistic software logs per-shot velocity, average V-values and full statistics on an included workstation. Input 230 V single-phase or 415 V three-phase, 50 Hz; 6-year minimum equipment life.
ENGAGEMENT	Installation, operator training, three sets of O&M manuals and drawings, 24-month warranty and AMC. Send your specification to sales@neometrixgroup.com - compliance matrix in two working days. Export subject to GoI authorisation.

DEFENCE PROGRAMMES DESK

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