

155 mm Base-Bleed Shell Finishing Line

CAPABILITY SHEET · CRIMP + HYDRO, ROBOT-SERVED · ENGINEERED TO ORDER - DELIVERED OPERATIONS

THE LINE

WHAT	Integrated, robot-served finishing line for 155 mm base-bleed shell bodies: 300 t servo band-crimping cell with 100% force-signature capture + six-station 600 bar hydrostatic proof carousel, joined by buffered conveyors under one line SCADA.
STATUS	Engineered to order. The operations are built practice: Neometrix has delivered and exported robotised 155 mm shell-processing installations of the same equipment class (published record), and delivered band presses to multiple ammunition makers.
THROUGHPUT	60 s takt - 60 units/hour - 12,000 units/month at single shift (25 d x 8 h); crimp cycle 45-55 s and carousel index 60 s both inside takt; 85% OEE design allowance recoverable via buffer drain; two shifts double headroom.

THE TWO PROOFS

CRIMP	300 t servo-hydraulic radial band-seating press; 12-segment hardened die set; band pre-place with poka-yoke; 100% force-vs-position signature vs a witnessed, frozen master envelope (MIL-DTL-14824C practice); LVDT gauging; SPC with live Cp/Cpk.
HYDRO	6-station indexing carousel; 600 bar proof, 750 bar design; servo intensifier; redundant 0.1%-FS pressure measurement; P-t record + decay gate; LVDT dimensional gauging; volumetric-balance metering; MIL-STD-1522 + DGQA practice; water treatment + chiller.
TRACEABILITY	One barcode, one record per shell - crimp signature and hydro results in a single per-unit record; CSV/PDF unit certificates; OPC-UA/MES northbound; OEE dashboard; NOK units diverted to segregated, electronically quarantined spurs.

AUTOMATION & SAFETY

ROBOTICS	6-axis robot, 36 kg body payload class, servo gripper on body datums, serving press, carousel and conveyors; powered infeed / transfer / outfeed conveyors with 10-unit buffers; outfeed pass-stamp + barcode labelling.
SAFETY	Perimeter-fenced cell ~13.5 x 8.5 m (indicative); interlocked doors; light curtains at replenishment windows; safety architecture engineered to PL-d; single zoned e-stop domain; one supervisory operator per shift outside the fence.
UTILITIES	415 V +/-10%, 3-ph, 50 Hz, ~65 kW connected (hydro ~35, crimp ~22, robot ~4, balance conveyors/ancillaries); compressed air 6-7 bar, dry, ~40 CFM. Engineering estimates +/-10%, scaled from our as-built robotised platform; final at design approval.

DELIVERY & ENGAGEMENT

ACCEPTANCE	Rate demonstration: sustained 60 units/hour for 2 hours with 100% signature and P-t capture; FAI master-envelope teach witnessed and frozen; installation, commissioning, training and site-acceptance support included.
CONFIGURATIONS	Inline automated line; standalone 300 t crimping press (operator-loaded or robot-automated); standalone 600 bar hydro carousel; spare die sets, sealing heads and variant tooling; other calibres engineered to order.
ENGAGEMENT	Send your specification to sales@neometrixgroup.com - configuration-by-configuration response and budgetary quotation within two working days. Export engagements subject to Government of India authorisation.

DEFENCE PROGRAMMES DESK

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Reference configuration reflects the engineered line offering. Calibre, takt, pressure class and automation level are re-scoped against the customer's specification at proposal stage. (c) Neometrix Defence Limited.