

Double Acting Blanking & Cupping Press

CAPABILITY SHEET · HIGH-SPEED CUP FORMING LINE · ENGINEERED TO ORDER

THE MACHINE

WHAT	A double-acting vertical crank press that blanks a disc from brass strip and deep-draws it into a cup in one stroke - the first forming operation in small-arms cartridge-case manufacture.
STATUS	Engineered to order. Reference design, not yet built: designed to an Indian ordnance manufacturing enterprise's specification for 5.56 mm and 9 mm brass cups and passed technical evaluation against it; no order followed, so no delivered machine is claimed.
PRINCIPLE	The outer slide blanks and holds the disc flat against the die; the inner slide draws it into a cup without ever releasing it, so the cup stays concentric with the blank that made it.

FORCE, RATE & OUTPUT

FORCES	Cutting force at least 630 kN; drawing force at least 360 kN. Punch stroke 30 mm minimum, drawing stroke 80 mm minimum.
RATE	120 to 150 strokes per minute. Output comes from multiplying the stroke, not raising the speed.
OUTPUT	About 72,000 cups per hour on 8-fold tooling and 81,000 cups per hour on 9-fold tooling at 150 strokes per minute, excluding coil change, tool setting and changeover.

LINE & TOOLING

COIL LINE	Double de-coiler with pneumatic pressure rollers, straightening unit, laser loop control between straightener and press, computerised servo roller feed accurate to ± 0.1 mm with manual single-stroke mode, cut-off shear collecting scrap strip.
TOOLING	Multi-fold tool block, 8 or 9 punch stations on 148 mm strip; carbide dies, matched cutting and cupping punch sets, stripper rings, tool-block trolleys for off-machine setting and a die storage cabinet.
MATERIAL & COOLANT	70/30 brass strip to JSS 9535-2, 148 mm wide, 3.11-3.55 mm ± 0.02 mm, 75-80 VPB, in 1 MT coils. Dedicated coolant pump with filtration and chiller holding coolant 15-25 degC.

BUILD, CONTROL & ENGAGEMENT

CONSTRUCTION	Frame cast iron or stress-relieved fabricated steel to IS 2062, frame and crosshead held by pre-pressed tie rods, cast or forged steel table. Geometrical accuracy to be proved to IS 4592 at acceptance; output sampling to MIL-STD-105E.
CONTROL & SAFETY	Inbuilt PLC panel with pressure lubrication and fault annunciation; clutch and brake safety valve, strip-feed, voltage-drop, air-pressure-drop and motor-temperature control, tool shielding, flywheel dead-lock. Tropicalised for 440 V, 30-50 degC ambient.
ENGAGEMENT	Send the cup drawing and tolerances, strip material and thickness, required output and available floor space to sales@neometrixgroup.com - compliance matrix within two working days.

DEFENCE PROGRAMMES DESK

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Reference configuration for 5.56 mm and 9 mm brass cups. Forces, stroke, tool-block fold, strip width and output are sized to the customer's cup drawing, material and required rate, and settled at design review.