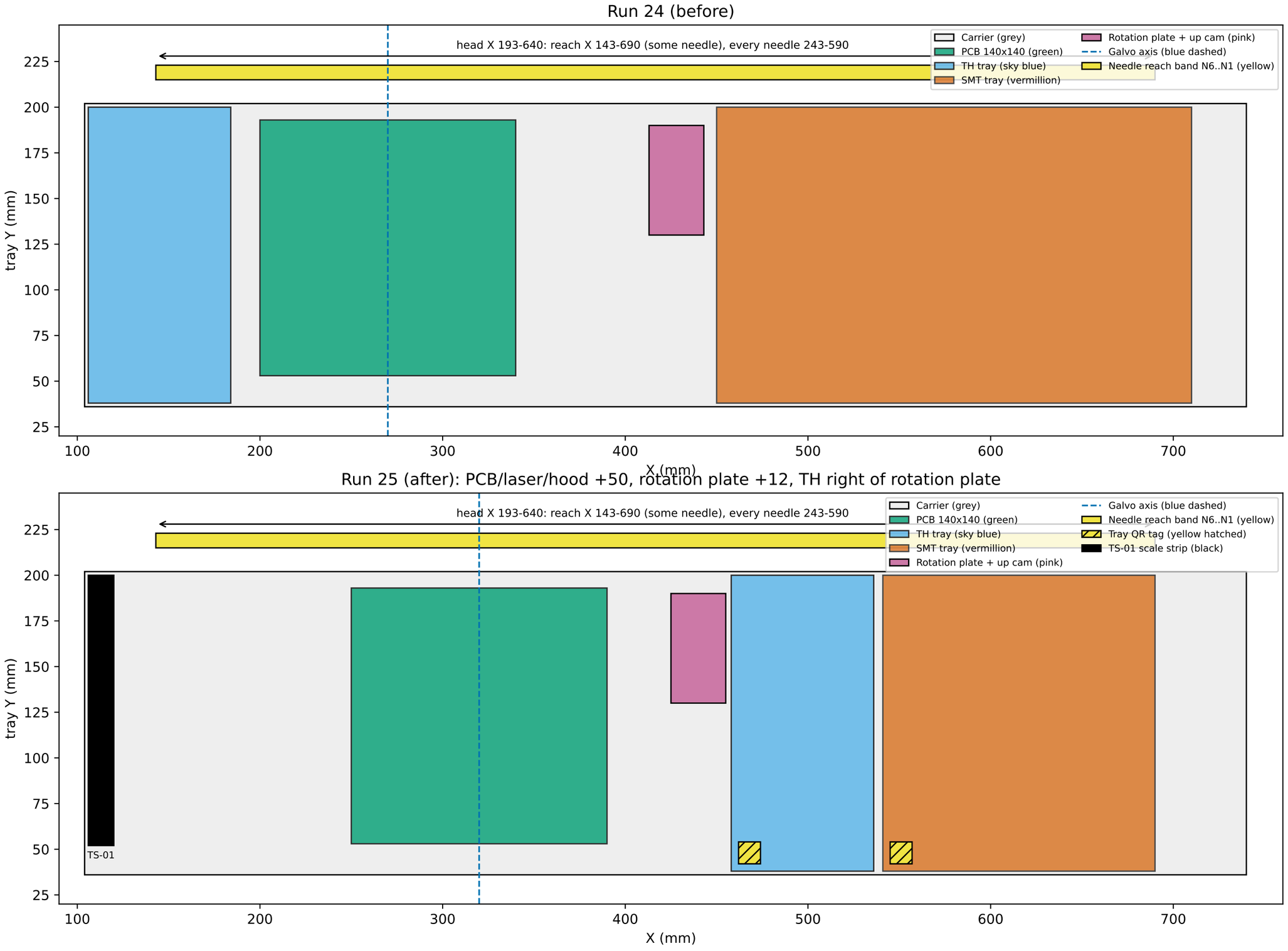
OSSO run 25 - tray re-layout (design change A/B/C)

2026-11-02 | integrated in the run 25 model | metric (mm), M3/M5 | Okabe-Ito colours, every colour also labelled | tray frame at load (Yc 105)



Reach (head X 193-640, tray Yc 105-515): run 24 PCB N6 69.3 %, TH 52.6 %, SMT 92.3 % -> run 25 PCB 100 % for N1-N6 and hot air, TH 100 % for every needle, SMT 100 % (N6). Rotation plate, up camera (OV9281) and both tray QR tags reachable by N1-N6, hot air and the angled crosshair camera.

OSSO run 25 - option integration decisions

2026-11-02 | integrated in the run 25 model | metric (mm), M3/M5 | Okabe-Ito colours, every colour also labelled | tray frame at load (Yc 105)

Option	Integrated decision	Model	Software rule
CAL-01 calibration plate	Stored OFF the machine in a padded case; e-plate door sleeve removed. Up-cam scale tile stays on the machine (N4 picks it).	not on machine (tile kept)	SR-027
FW-01 fire / smoke watch	T1 NTC in the exhaust + F1 IR flame on the fixed duct, latching relay K1 in the laser-enable chain. Extractor ON for every trip (no damper), hood stays down. S1 optional (bay + M8 pins reserved). Extinguisher port optional, not modeled.	holder on duct, K1 on e-plate, M8 on back panel	SR-028
JQR-01 job QR	Job QR on the PCB, both sides mirrored, patch moved to the near edge: board X 66-74, Y 9-17 (fiducial-free, nearest the angled camera, clears via grid). Typed override after 3 failed reads, logged.	PCB rule PR-QR	SR-029
EL-01 ESD tray lids	Clear anti-static acrylic lids, 12 mm max part height, lid top 25 mm. Camera-only lid detection: engraved frosted mark on each finger tab (no magnets / hall). Lids stored off the machine.	not on machine	SR-030
TS-01 tray scale	Scale strip on the carrier left rim (X 106-120, Y 52-200) + pointers P1 (machine Y 225) and P2 (Y 425), mounted outboard of the tray bridge, window 5 mm above the bridge sweep. Manual habit only.	modeled	none (SR-031 not used)
Tray QR (new)	QR tag in the front-left (datum) cell of each tray insert, read by the crosshair camera; job blocked on mismatch.	modeled	SR-032
Design rule	No custom stencils or per-job masks, ever.	-	SR-033

Open points

1. TS-01 strip covers tray Y 52-200 only (carrier 36-202, left hanger to Y 51): P1 reads Yc 130-278, P2 reads Yc 330-478. Load Yc 105 and index 470-502 (above 478) are off-scale.
2. TS-01 pointer window sits 31 mm above the strip (above the tray-bridge sweep): two-hairline gunsight to remove parallax.
3. TH tray moved from the left of the PCB to the right of the rotation plate (order now PCB | rotation plate | TH | SMT).
4. SMT tray shrinks from 260 to 149 wide (8x5 -> 5x5 cells, one used for the QR tag); TH loses one cell to its QR tag (11 cells).