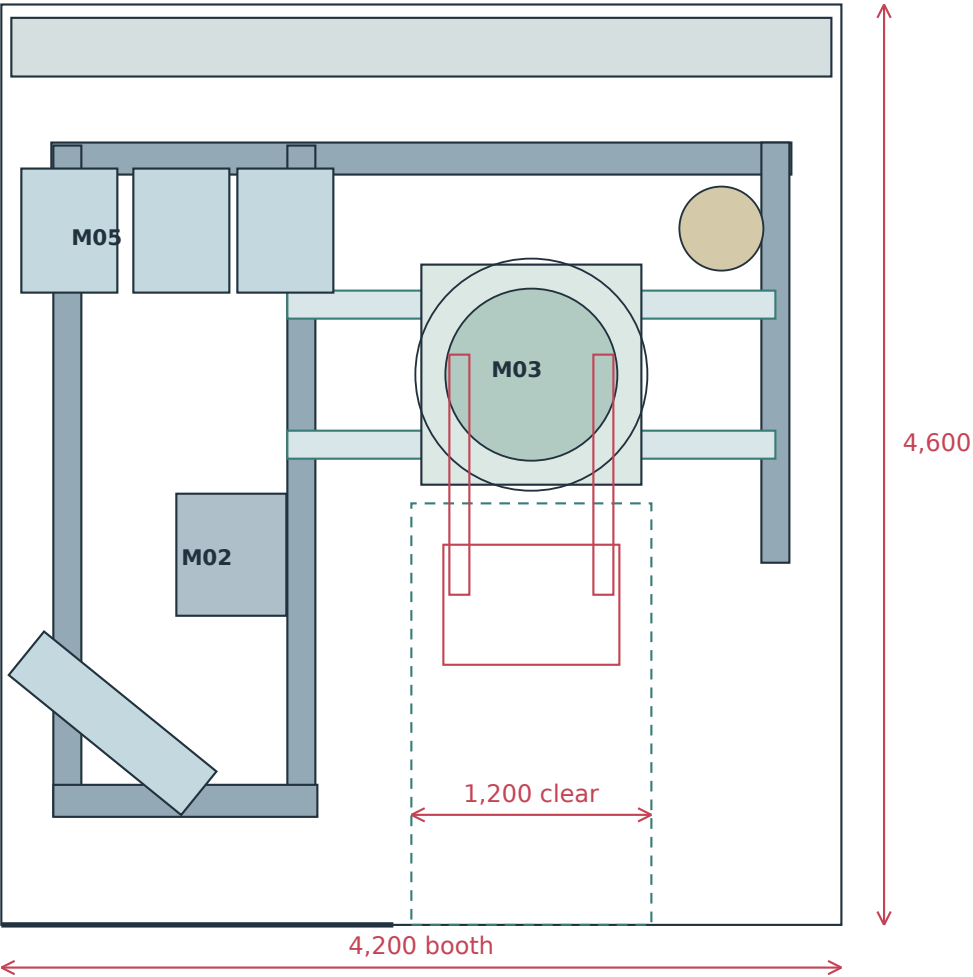




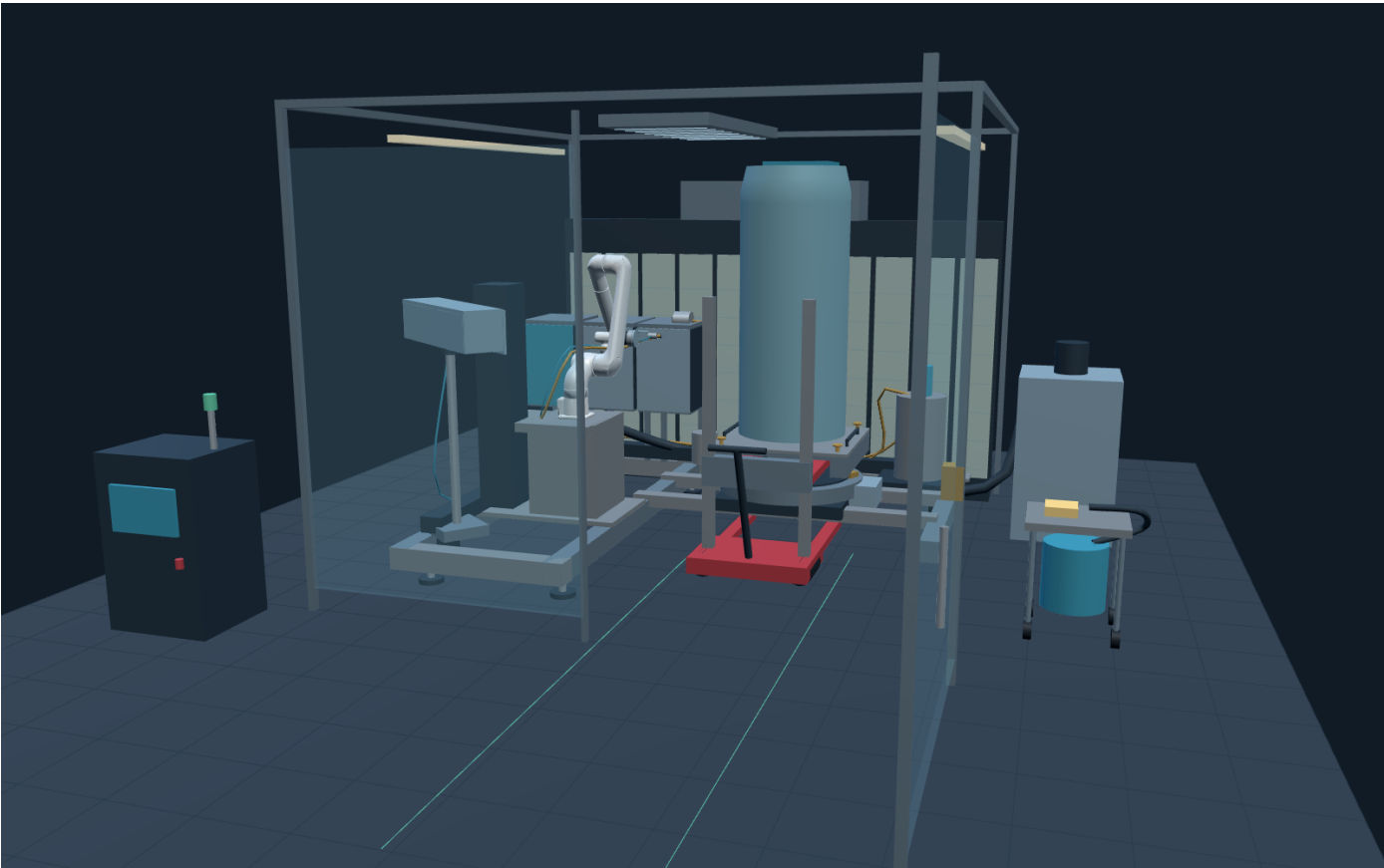
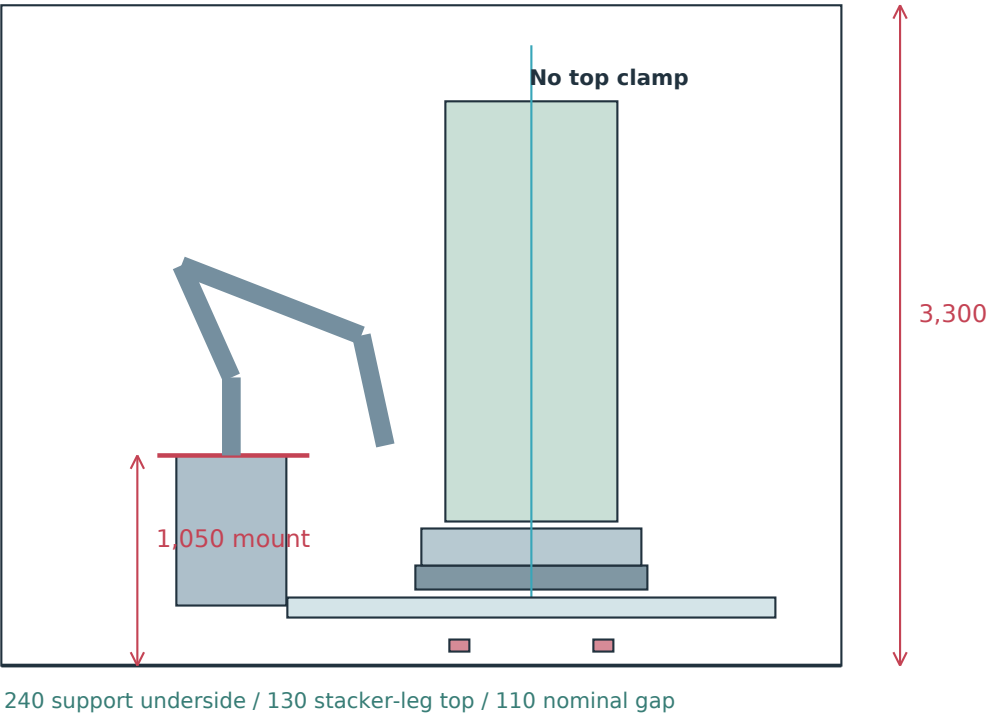
Clear loading access + raised cobot

Common modular structure retained | vertical C axis | no building-floor anchors

TOP VIEW - loading position



FRONT ELEVATION - schematic robot



M01 / Remove the obstruction

Front crossbar and the inner loading-lane rails are removed. Left machinery spine, right support and rear beam remain connected. Table bridges pass above the stacker legs.

M02 / Raise the robot

POC: fixed 1,050 mount. Final: 1,050 starting height plus a lift provision up to 900 travel; this simulated path uses up to 760. Mount height is provisional pending tooling / structural freeze.

M03 / Transfer and withdraw straight

The 1,100 square aluminium carrier uses two through fork pockets. Fork bottoms remain at least 525 during retreat, above the 514 table top. Clamp positions avoid the fork lanes.

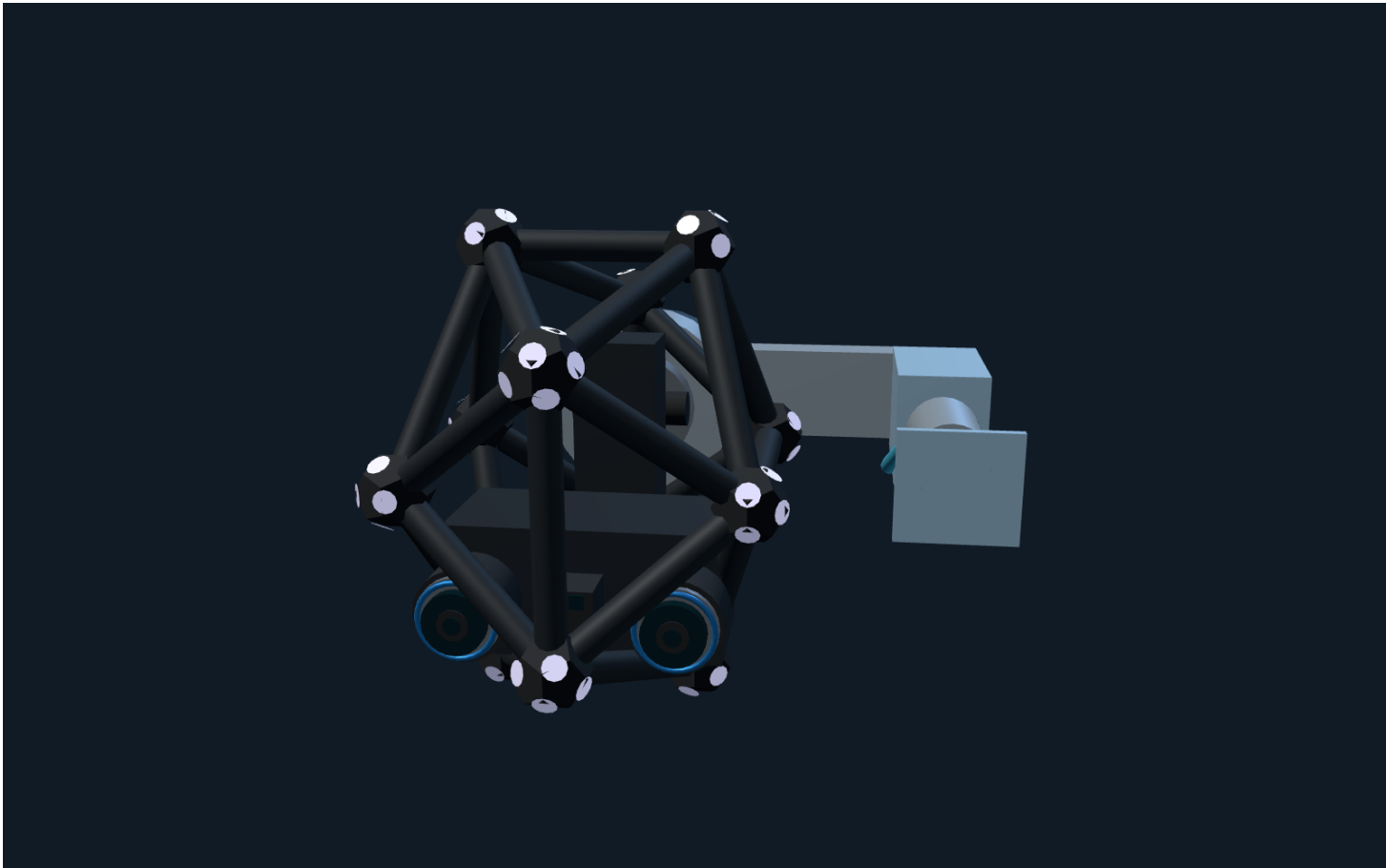
M04 / Mechanical release inputs

Actual stacker / forks, carrier SWL, workpiece CAD and lower retention must be checked. Recalculate stiffness, tip / slide stability and dynamic loads for the open-front base.



Realistic optical forms + permanent spray service

Reference-derived scanner / C-Track models | separate protective enclosures | three exchange bays



MetraSCAN BLACK+ Elite + fixed wrist spray

MetraSCAN reference envelope

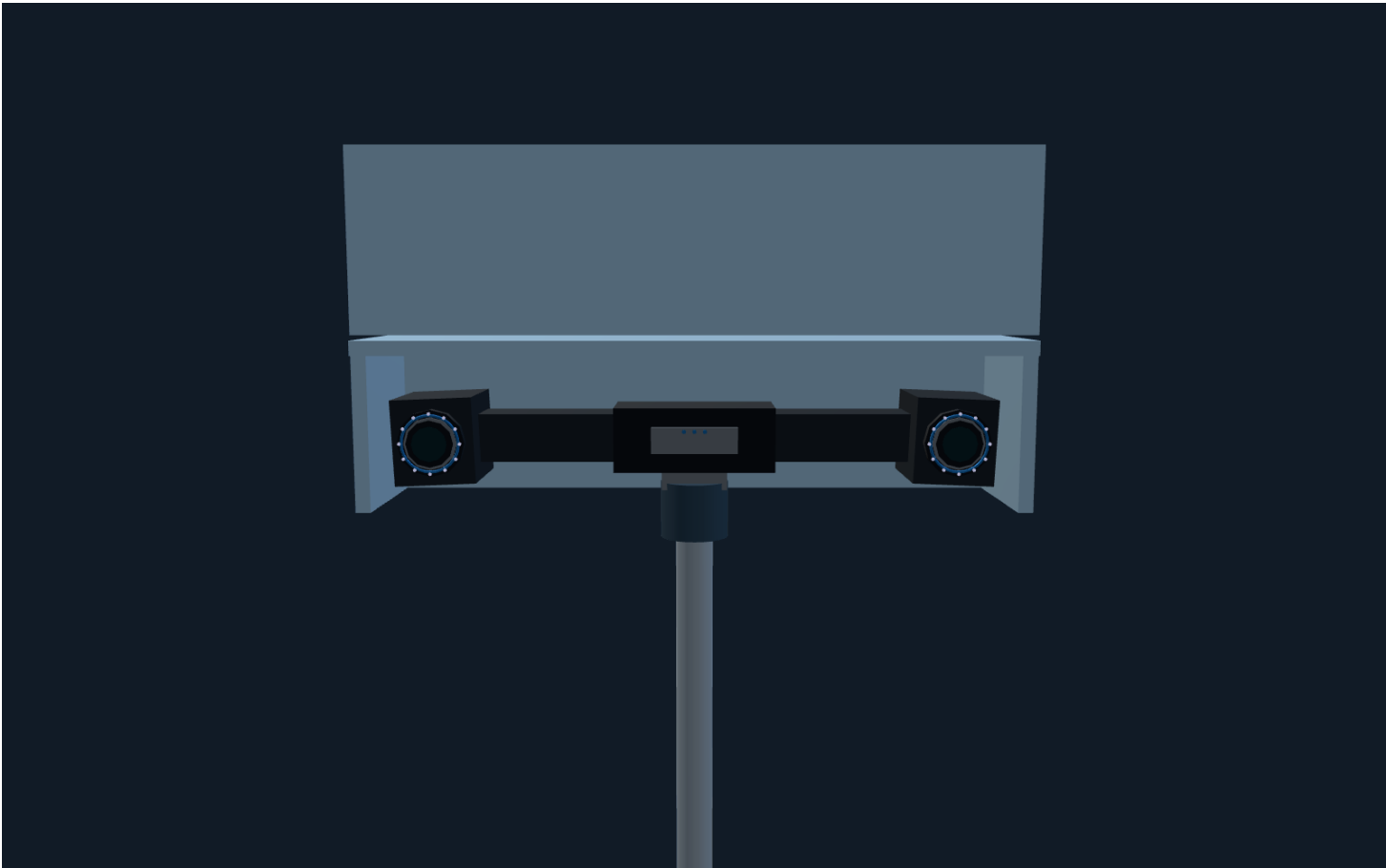
289 x 235 x 296 nominal scanner envelope. Black polyhedral target cage, reflective marker nodes, rear grip, blue-ring twin cameras and central laser apertures are represented.

Wrist arrangement

The nozzle sits on a permanent side bracket, approximately 210 off the changer centre. Material and air lines route through the dress pack and stay connected during every exchange.

Inactive protection

A nozzle shield closes during scanning / sanding. The empty robot changer is covered during spraying. Scanner and sander use the common exchange interface.



C-Track+ Elite + full-width shutter

C-Track reference envelope

1,031 x 181 x 148 nominal device envelope. Long stereo bar and two camera pods replace the earlier short box. The enclosure is external to the device body.

Station protection

Scanner / sander / blast-ready bays are approximately 480 wide. The scanner bay and fixed tracker remain closed through spray or dust exposure and clearance.

Flush while still connected

The wrist retracts to a horizontal-entry extracted wet cup. Material stops, contained flushing finishes, and the permanent nozzle shield closes before metrology release.

Visual geometry is not OEM CAD. Automation adapter, hose bend radii, payload / centre of gravity and cover interfaces require supplier review.

Sources: Creaform product references and technical specifications (accessed 21 Sep 2026).

Official product imagery

Official dimensional specifications

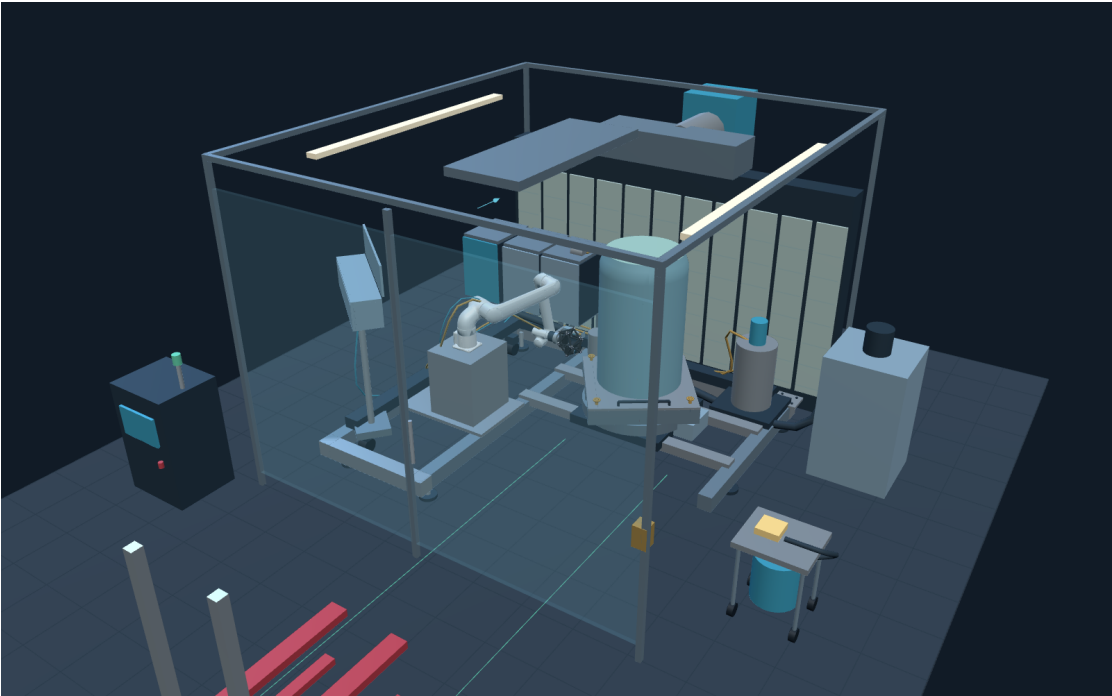


POC + final: one complete operating sequence

31 steps retained | spray preparation / flushing replaces detachable spray-head exchange

CURRENT R3 SEQUENCE

01	Prepare the fixture	8 s
02	Open the right access door	4 s
03	Bring in the fixture pallet	14 s
04	Seat and lock the pallet	8 s
05	Withdraw the stacker	10 s
06	Close and lock the door	4 s
07	Pick up the scanner	10 s
08	Scan the uncoated surface	26 s
09	Return and protect the scanner	10 s
10	Prepare the permanent spray nozzle	10 s
11	Apply the coating	30 s
12	Shut off and flush the fixed nozzle	10 s
13	Extract and condition	16 s
14	Clean and release for metrology	8 s
15	Pick up scanner for thickness	10 s
16	Measure coating build	24 s
17	Park optics before sanding	10 s
18	Pick up the compliant sander	10 s
19	Correct excess coating	30 s
20	Park the sanding tool	10 s
21	Clear the sanding residue	16 s
22	Release the clean cell	8 s
23	Pick up scanner for verification	10 s
24	Verify and record the result	24 s
25	Return scanner and park robot	10 s
26	Open for unloading	4 s
27	Insert the stacker forks	10 s
28	Release the pallet clamps	6 s
29	Lift clear of the datums	6 s
30	Withdraw the loaded fixture	14 s
31	Cycle complete	4 s



AETEC in-house POC / 1.4 m sample

Final-cell study

2.1 m part, nominal 860 diameter and 2,820 crown height when seated. Booth A remains 4,200 x 4,600 x 3,300. The final cell retains the qualified fixture / tool / protection interfaces.

What R3 verifies in software

Both designs and both part families run the complete sequence. Fixed spray geometry and hose endpoint continuity, tool states and stacker/base envelopes are checked. IK samples are recomputed for the raised mount.

Engineering scope boundary

The dimensions are concept values unless previously fixed by the project basis. Exact workpiece CAD, full collision / swept-volume checks, structural release and real process acceptance remain physical engineering work.

Commercial and certification basis

R2 proposal / budget quotation remain the commercial baseline. The user-specified ATEX-certified PoWa protective package remains the design basis; supplier configuration documents control final release.

374 s demonstration timeline. Physical process times require trials.