Modular Operating Theatre Project Checklist

47 checkpoints to settle before you request a quotation

Most of the cost and most of the delay in a modular operating theatre is fixed by the building, not by the equipment. This form collects the building data a supplier needs in order to price a defined scope — and shows you which answers are still missing before the quotation stage.

HOW TO USE THIS FORM

1. Work through it with the architect, MEP consultant or main contractor.
2. Tick one option per line. Write dimensions where a line is provided; leave it blank if the figure is not yet known.
3. Send the completed form to **info@icarelife.com** for a scope review, with no obligation.

PROJECT DETAILS

Project / hospital _____

Country / city _____

Name and company _____

Role on the project _____

Date _____

★ marks the ICARELIFE suggested default when the consultant has no stated preference. It is a starting point, not a specification.

1 Project & Client

01 Your role in the project

☐ Main contractor ☐ Sub-contractor ☐ Hospital / end user ☐ Consultant

02 Project stage

☐ Tender ☐ Design stage ☐ Under construction ☐ Upgrade of an operating suite

03 Target handover date

.....

04 Architect or MEP consultant already appointed?

☐ Yes ☐ No ☐ Not yet, decision pending

05 Other suppliers already quoting?

☐ Yes ☐ No ☐ Unknown

2 Building & Site

a frequent source of site variations

06 Drawings available

☐ DWG received ☐ PDF only ☐ Pending

07 Floor-to-slab height

.....

08 Floor-to-finished-ceiling height

.....

09 Ceiling void depth ★ *typical minimum 600 mm, depends on hood and duct size*

.....

10 Beams above the ceiling

☐ No beams ☐ Beams present ☐ Unknown

11 Structural support above ceiling for pendants and OR lights

☐ Available ☐ To be provided by others ☐ Unknown

12 **Slab anchoring for the laminar hood** ★ *hung from slab with threaded rods*

☐ Slab can be anchored ☐ Restrictions — describe: ..... ☐ Unknown

13 **Building type**

☐ New build ☐ Renovation of an existing building

14 **Existing wall type**

☐ Concrete / masonry ☐ Drywall / light partition ☐ Unknown

15 **Delivery access to the floor**

☐ Lift ☐ Stairs only ☐ Ground level

3 MOT Envelope

16 **Rooms in scope**

☐ Operating rooms only ★ ☐ ORs + sub-sterilizing ☐ ORs + support + sterile corridors

17 **Wall and ceiling finish**

☐ Standard hygienic modular panels ★ ☐ Upgraded finish (e.g. glass-type) ☐ Client has own preference

18 **Fire rating of panels**

☐ Standard ★ ☐ Fire-rated, consultant to specify ☐ Unknown

19 **Floor**

☐ Seamless welded vinyl ★ ☐ Epoxy, by others ☐ Existing floor retained

20 **Doors**

☐ Hermetic sliding for ORs, swing for support rooms ★ ☐ Hermetic sliding everywhere ☐ Swing doors only

21 **Windows / observation panels**

☐ None ☐ Frosted glass ☐ Clear viewing panel ☐ Unknown

22 Radiation shielding (C-arm / intraoperative imaging)

☐ Not required ☐ Required ☐ Unknown

Lead thickness (if required): ☐ 2 mm Pb ★ ☐ 4 mm Pb (special cases, e.g. cath lab)

☐ Radiation physicist / consultant to specify

Lead lining in walls (shielding is installed separately — it cannot be built into modular panels):

☐ Installed separately by others, modular panels fitted over it ★ ☐ Separate lead lining item, supplier to be agreed

☐ Unknown

Lead-lined hermetic door: — door lead thickness: ☐ Supplier provides ☐ By others ☐ Not applicable

☐ 2 mm Pb ★ (usual) ☐ 4 mm Pb (rare cases) ☐ Radiation physicist to specify

23 Control panel

☐ Integrated surgical control panel ★ ☐ Basic switch panel ☐ By others

24 Pendants, OR lights, X-ray viewer

☐ By others ☐ Included in the supplier's scope

4 Air Treatment

25 Supply scope ★ *envelope + air treatment as one integrated package*

☐ AHU only ☐ AHU + HEPA / laminar ceiling ★ ☐ Full system incl. ducting, diffusers, controls

26 Cleanliness class, ISO 14644-1 ★ *reference values — the consultant confirms per project*

Major OR: ☐ ISO 5 (at operating zone) ☐ ISO 6 ☐ ISO 7 ★ ☐ ISO 8 ☐ Consultant to specify

Minor OR: ☐ ISO 6 ☐ ISO 7 ★ ☐ ISO 8

Sub-sterile / sterile corridor: ☐ ISO 7 ☐ ISO 8 ★ ☐ Not classified

Induction / recovery: ☐ ISO 8 ★ ☐ Not classified

27 Air change rate basis

☐ Per consultant specification ☐ Per ASHRAE 170-2021 (20 total ACH for OR) ★ ☐ Unknown

28 Laminar ceiling size over the surgical area ★ *ICARELIFE standard sizes; project design governs*

Major OR: ☐ 2600 × 2400 mm (for ISO 5 operating zone) ☐ 2600 × 1400 mm (for ISO 7) ★

☐ Custom size / shape to suit beam layout

Minor OR: ☐ 2600 × 2400 mm (for ISO 5 operating zone) ☐ 2600 × 1400 mm (for ISO 7) ★

☐ Custom size / shape to suit beam layout

29 Pressure regime

☐ Positive OR, cascading to corridors ★ ☐ Simple positive pressure only ☐ Consultant to specify

30 Pressure monitoring

☐ Digital gauges per room, with logging ★ ☐ Mechanical gauges only ☐ By others

31 Temperature and humidity control

☐ Both controlled ★ ☐ Temperature only

32 Dehumidification capacity ★ *important in hot, humid climates*

☐ Achievable with base system ☐ Dedicated dehumidification required ☐ To be verified against site data ★

33 Cooling source

☐ Chilled water from building ☐ Self-contained DX unit (if no chilled water) ☐ Unknown

34 AHU location

☐ Rooftop (anchorage & weatherproofing required) ☐ Plant room ☐ Ceiling void ☐ Unknown

35 Controls

☐ Standalone ★ ☐ BMS integration required

36 HVAC design by

☐ Client consultant ☐ Design support from the equipment supplier (optional service)

5 Power & Electrical

37 Building power supply

☐ e.g. 230 V / 60 Hz, 1Ph + 3Ph ☐ e.g. 400 V / 50 Hz, 3Ph ☐ Other ☐ Unknown

38 Capacity available for the full air treatment load

☐ Yes ☐ No, upgrade needed ☐ Unknown

39 Isolated power supply (IT system) for the operating rooms

☐ Already installed ☐ Main contractor supplies ☐ To be added to scope ☐ Unknown

40 UPS for OR critical loads (controls, lights, pendants)

☐ By others ☐ Not required ☐ To be included in scope ☐ Unknown

6 Medical Gas & Utilities

41 Medical gas scope

- ☐ By others
- ☐ Coordinated with the supplier
- ☐ Outlets, panels and alarms included

42 Gas outlet schedule

- ☐ Per consultant drawing
- ☐ Per standard OT configuration ★
- ☐ Not defined yet

43 Water and drain connection points (AHU condensate, humidifier)

- ☐ By main contractor
- ☐ Unknown

44 Autoclave / sterilizer in the sub-sterile room ★ *heat load & exhaust*

- ☐ Not in scope
- ☐ In scope, heat load to be confirmed
- ☐ Unknown

7 Standards & Compliance

45 Standard applied

- ☐ Local hospital and licensing requirements
- ☐ International standard requested by the client
- ☐ Consultant to confirm

46 Testing and validation

- ☐ Factory test only
- ☐ On-site validation: airflow, pressure, particle count, recovery time ★

47 Documentation required

- ☐ Test reports
- ☐ Material certificates
- ☐ Both ★

After the form is complete

Send it before the first quotation, not after. A supplier who receives a completed form can price a defined scope. A supplier who receives “please quote for two operating theatres” either pads the price to cover the unknowns, or quotes a minimum scope and lets variations follow.

STANDARDS THE ANSWERS ARE MEASURED AGAINST

ISO 14644-1 (cleanliness classification) · ANSI/ASHRAE/ASHE 170 (ventilation of health care facilities) · DIN 1946-4 (hospital ventilation) · GB 50333-2013 (clean operating department, China) · HTM 03-01 (specialised ventilation for healthcare premises).

Editions differ by country and project. The project consultant confirms the applicable standard; the values in this form are reference values, not code requirements.

NOTES / OUTSTANDING ITEMS

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