Factory Acceptance Test (FAT) Checklist

For industrial equipment sourced from China. Twelve sections, with a procurement control point for each. Updated June 2026.

01

Before FAT is scheduled

Confirm that the supplier is actually ready for FAT before sending an inspector, buyer representative or third-party witness to the factory.

- [ ] Supplier confirms equipment assembly is complete.
- [ ] Supplier confirms FAT can be performed on the exact equipment ordered.
- [ ] Equipment is available at the factory and not already packed.
- [ ] Utilities, test media, fixtures, loads or simulation setup are available as agreed.
- [ ] Required measuring instruments and test equipment are available.
- [ ] Supplier confirms test personnel will be present.
- [ ] Buyer-approved drawings and specifications are available at the factory.
- [ ] FAT procedure and acceptance criteria are agreed before the test date.
- [ ] Inspection access, photo permission and document access are confirmed.
- [ ] Supplier agrees that open critical or major non-conformities may block release.
- [ ] FAT date is scheduled before final packing, shipment booking or balance payment.

> **PROCUREMENT CONTROL POINT**
> Do not schedule FAT based only on the supplier saying “machine is ready”. Ask for readiness evidence and confirm that the FAT can be performed against the actual purchase specification.

02

Documents to request before FAT

Request the FAT document set before the test. Missing documents often cause weak FAT execution because the inspector has nothing objective to verify against.

- [ ] Purchase order and technical specification.
- [ ] Approved general arrangement drawings.
- [ ] Approved electrical, hydraulic, pneumatic or control drawings, if applicable.
- [ ] Bill of materials or key component list.
- [ ] Inspection and test plan, if used.
- [ ] FAT procedure or test protocol.
- [ ] FAT acceptance criteria.
- [ ] Nameplate data or nameplate artwork.
- [ ] Calibration certificates for measuring instruments used during FAT.
- [ ] Material certificates, welding records, NDT records or pressure-test records, if contractually required.
- [ ] Key bought-out component certificates or datasheets.
- [ ] Software, PLC, HMI, firmware or configuration version information, if applicable.
- [ ] Packing list draft.
- [ ] Spare-parts list.
- [ ] Operation and maintenance manual draft, where required by the purchase order.
- [ ] Previous non-conformity reports or corrective-action records related to the equipment.

> **PROCUREMENT CONTROL POINT**
> FAT should verify the equipment against the latest approved revision, not against an outdated drawing or a supplier’s internal standard.

03

Test plan and acceptance criteria

A FAT without acceptance criteria is only a demonstration. Before FAT, the buyer and supplier should define what will be checked, how it will be checked, and what result is acceptable.

- [ ] FAT scope is defined.
- [ ] Each test has a measurable acceptance criterion.
- [ ] Critical performance parameters are included.
- [ ] Required test duration is defined.
- [ ] Test conditions are defined.
- [ ] Load, no-load, simulation or utility conditions are specified where relevant.
- [ ] Instruments used for measurements are identified.
- [ ] Sampling method is defined for multiple units.
- [ ] Retest rules are defined for failed items.
- [ ] Criteria for release, conditional release and hold are agreed.

> **PROCUREMENT CONTROL POINT**
>
> Avoid vague criteria such as “running normally”, “acceptable quality” or “same as sample”. FAT criteria should be traceable to the purchase order, drawings, specifications or agreed test protocol.

04

Equipment identification and serial numbers

Before witnessing any test, confirm that the equipment being tested is the equipment ordered.

- [ ] Manufacturer name matches purchase records.
- [ ] Buyer name, project number or order reference is confirmed, if applicable.
- [ ] Equipment model matches the purchase order.
- [ ] Serial number is present and recorded.
- [ ] Nameplate data matches the agreed specification.
- [ ] Tag numbers match drawings or project list.
- [ ] Quantity of units matches order or FAT scope.
- [ ] Key component serial numbers are recorded where required.
- [ ] Motors, pumps, sensors, PLCs, drives, instruments or other key components match the approved list.
- [ ] Drawing revision used during FAT is recorded.
- [ ] Equipment configuration matches the approved option list.

> **PROCUREMENT CONTROL POINT**
>
> Do not accept FAT evidence that cannot be tied to serial numbers, model numbers or project identification. Without traceability, photos and videos may not prove that the tested unit is the unit being shipped.

05

Visual and dimensional checks

Visual and dimensional checks confirm that the equipment is complete, correctly built and consistent with the approved design before functional testing.

[ ] Overall equipment layout matches the approved drawing.
[ ] Main dimensions match the approved drawing or tolerance table.
[ ] Mounting points, anchor holes, flanges, interfaces or connection points are checked.
[ ] Material, finish and surface treatment match the specification.
[ ] Weld appearance is checked where applicable.
[ ] Paint or coating condition is checked for visible defects.
[ ] Fasteners, guards, covers, doors and panels are present.
[ ] Cable, hose and pipe routing is visually checked.
[ ] Labels, warning plates, flow-direction marks or terminal marks are present where specified.
[ ] Accessibility for maintenance points is checked against specification, where applicable.
[ ] No visible damage, deformation, corrosion, missing parts or poor workmanship is observed.
[ ] Any cosmetic or workmanship defects are photographed and recorded.

> **PROCUREMENT CONTROL POINT**
>
> Visual checks should not replace functional tests. They should confirm that the equipment is complete and built to the agreed configuration before performance is witnessed.

06

Functional test witnessing

Functional test witnessing is the core of FAT. The purpose is not just to see the machine run — it is to verify agreed functions and performance against the FAT procedure.

[ ] FAT starts with confirmed equipment identification.
[ ] Test setup is recorded.
[ ] Test conditions match the agreed FAT procedure.
[ ] Supplier performs each test in the agreed sequence, where required.
[ ] Inspector witnesses the test directly.
[ ] Actual measured values are recorded, not only pass / fail results.
[ ] Key functions are demonstrated.
[ ] Control panel, HMI, indicators and alarms are checked where applicable.
[ ] Start, stop, reset, changeover and operating modes are checked where applicable.
[ ] Interlocks or protection functions are checked where specified.
[ ] Leakage, pressure, speed, temperature, vibration, noise or output values are checked where specified.
[ ] Test duration meets the agreed procedure.
[ ] Abnormal interruptions, resets, alarms or supplier adjustments are recorded.
[ ] Deviations from the FAT procedure are documented.
[ ] Failed test items are retested only after corrective action is completed.

> **PROCUREMENT CONTROL POINT**
>
> A short video of the equipment running is not the same as witnessed FAT. The buyer needs traceable test conditions, measured results and confirmation that the exact ordered equipment was tested.

07

Safety, accessories and spare-parts checks

This section is a procurement checklist for confirming that specified safety-related features, accessories and spare parts are present before release — it is not a safety manual.

- [ ] Specified guards, covers, barriers or protective devices are installed.
- [ ] Emergency-stop devices are present where specified.
- [ ] Safety labels or warning plates are present where specified.
- [ ] Electrical cabinet layout and labelling are checked against drawings, where applicable.
- [ ] Grounding, cable marking or terminal marking is checked where specified.
- [ ] Accessories listed in the purchase order are present.
- [ ] Tooling, fixtures, change parts, connectors or adapters are present where ordered.
- [ ] Spare-parts list matches the purchase order or contract.
- [ ] Spare parts are physically checked, counted and photographed where possible.
- [ ] Consumables or wear parts included in the order are identified.
- [ ] Certificates or declarations required by the buyer are available.

> **PROCUREMENT CONTROL POINT**
>
> Accessories and spare parts are often overlooked during FAT. Once the equipment is packed or shipped, missing small items can delay installation and commissioning.

08

Documentation and test-record review

The FAT report should contain objective records the buyer can use for release control and future reference, not just a supplier statement that the equipment passed.

- [ ] FAT report includes equipment model and serial number.
- [ ] FAT report includes purchase order or project reference.
- [ ] Test date, location and attendees are recorded.
- [ ] Test procedure revision is recorded.
- [ ] Drawing revision is recorded.
- [ ] Actual measured values are included.
- [ ] Instrument details or calibration references are included where relevant.
- [ ] Photos show nameplates, full equipment view, key components and test setup.
- [ ] Videos are labelled or organised by test item where useful.
- [ ] Non-conformities are listed with status.
- [ ] Open items are clearly identified.
- [ ] Supplier comments are separated from inspector findings.
- [ ] Buyer decision is recorded as release, conditional release or hold.

> **PROCUREMENT CONTROL POINT**
>
> A FAT report should be usable as release evidence. If it does not show what was tested, what values were measured and what remains open, it is not strong enough for shipment control.

09

Non-conformity handling

FAT non-conformities should be handled formally. The supplier may suggest fixing issues later, but the buyer needs clear records and objective closure evidence.

- [ ] Each non-conformity is described clearly.
- [ ] Each non-conformity is linked to a specification, drawing, order requirement or FAT criterion.
- [ ] Each issue is classified by severity: critical, major or minor.
- [ ] Photos, videos or test records support the finding.
- [ ] Supplier response is recorded.
- [ ] Corrective-action owner is identified.
- [ ] Target completion date is agreed.
- [ ] Retest requirement is defined.
- [ ] Open non-conformities are included in the release / hold decision.
- [ ] Buyer approval is required before closing major or critical items.

> **PROCUREMENT CONTROL POINT**
>
> Do not allow the supplier to close FAT issues verbally. Every non-conformity should have evidence, status and a buyer-visible closure trail.

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Corrective-action evidence

Corrective action is only useful when the buyer can verify it. Evidence should show that the specific issue was corrected on the specific equipment being purchased.

- [ ] Corrective action is linked to the original non-conformity.
- [ ] Supplier explains the correction made.
- [ ] Before-and-after evidence is provided where applicable.
- [ ] Corrected area is photographed with equipment ID or context.
- [ ] Failed functional test is repeated after correction.
- [ ] Retest results are recorded with actual measured values.
- [ ] Updated drawings, documents or records are provided if changes were made.
- [ ] Corrective action is verified by buyer, inspector or authorised representative.
- [ ] Non-conformity status is updated to open, closed or conditionally accepted.
- [ ] Remaining open items are listed before release decision.

> **PROCUREMENT CONTROL POINT**
>
> Photos of a repaired area may not be enough. For functional failures, require retest evidence. For configuration changes, require updated documents. For missing items, require physical verification.

11

Release or hold decision

The FAT should end with a clear procurement decision based on evidence, not on supplier pressure, shipment urgency or balance-payment timing.

[ ] All critical FAT items passed.
[ ] All major non-conformities are closed or formally accepted by buyer.
[ ] Minor open items are listed and accepted by buyer, if any.
[ ] Required documents are complete or open items are listed.
[ ] Accessories and spare parts are verified or exceptions are listed.
[ ] Corrective-action evidence has been reviewed.
[ ] Buyer release condition is documented.
[ ] Supplier is instructed whether to pack, hold, rework or retest.

> **PROCUREMENT CONTROL POINT**
>
> The commercial release decision belongs to the buyer. Sinospect provides factory-side evidence, non-conformity status and a release / hold recommendation to support that decision.

12

Post-FAT document pack

After FAT, the buyer should receive a complete document pack before authorising final packing, shipment or balance payment.

[ ] FAT report.
[ ] Signed or acknowledged test record.
[ ] Equipment identification record.
[ ] Nameplate photos.
[ ] General equipment photos.
[ ] Key component photos.
[ ] Functional test photos or videos.
[ ] Measurement records.
[ ] Calibration certificates for test instruments, where relevant.
[ ] Non-conformity list.
[ ] Corrective-action evidence.
[ ] Retest evidence, if applicable.
[ ] Updated drawings or as-built documents, if applicable.
[ ] Packing list draft.
[ ] Spare-parts verification record.
[ ] Open-item list, if any.
[ ] Final release / hold recommendation.

> **PROCUREMENT CONTROL POINT**
>
> The post-FAT document pack should make the buyer's release decision defensible. It should also create a baseline for later pre-shipment inspection, installation, commissioning and warranty discussions.

Full version, with guidance: sinospect.com/resources/factory-acceptance-test-checklist