Factory Acceptance Test · Witnessed at the supplier's works · Jiangsu, PRC

Factory acceptance test witness report

Sinospect Industrial Company Limited.
Sinospect sources, quality-controls and delivers industrial equipment from China.

Witnessed testing of a 12-station rotary filling and capping line against the agreed FAT protocol, recorded before the machine is released for packing and shipment.

Equipment under test
12-station rotary filling & capping monobloc for 500 ml PET · rated 6,000 bph · model RFC-12/6 · S/N [Identifier]

Supplier
[Supplier company] · [Factory location]

Prepared for
[Client company]

Order & test basis
[PO reference] · FAT protocol rev. C, agreed 18 March 2026 · 13 test items

Report reference
SAMPLE-FAT

Test dates & location
14–15 April 2026 · supplier's assembly hall, [Factory location]

Prepared by
Sinospect inspection engineer · Inspection engineer · 16 April 2026

Reviewed & issued by
Sinospect quality desk · Quality review · 17 April 2026

Conclusion of record

Release with conditions

The electrical tests pass. Output is 5,880 bph against 6,000 required; one contactor differs from the BOM; one sampled fill exceeds 501.2 ml. Packing requires verified closure of NC-01, NC-02 and NC-06. NC-05 closes before crate sealing; NC-03 and NC-04 close before shipment.

Three recorded states

- Released — every protocol item passed as witnessed
- **Release with conditions — non-conformities listed, owners and closure requirements recorded**
- Not released — the failing test item stated

§	Report section	State
01	Scope, protocol mapping and results per test item — 13 items, all witnessed in person	**7 pass · 6 open**
02	Test conditions, attendance and basis of witnessing	**Recorded**
03	Measured values annex, instruments and calibration	**Recorded**
04	Non-conformity register with owners and closure requirements	**3 Major · 3 Minor**
05	Photographic evidence	**6 of 148 shown**
06	Release recommendation and conditions	**5 conditions**

01 Scope, protocol mapping and results

Each item is a numbered clause of FAT protocol rev. C, with the acceptance criterion as agreed between client and supplier. The result is what was witnessed, not what the supplier's own test sheet reports.

§	Protocol	Test item	Acceptance criterion (rev. C)	Result
1	FAT-C 4.1	Identity, nameplate and BOM	Model, S/N, rated data, CE marking and BOM components per PO and approved drawings	**Fail · NC-02**
2	FAT-C 4.2	Dimensional check	Footprint, infeed/outfeed heights, conveyor pitch within ±5 mm of GA drawing	**Pass**
3	FAT-C 5.1	Insulation resistance	≥ 1 MΩ at 500 V DC on each power circuit (EN 60204-1 §18.3)	**Pass · 3.3.a**
4	FAT-C 5.2	Earth continuity	≤ 0.1 Ω between PE terminal and each exposed conductive part, 10 A test current	**Pass · 3.3.b**
5	FAT-C 6.1	No-load run	2 h at rated speed, no abnormal noise, vibration or temperature rise > 40 K on drives	**Pass**
6	FAT-C 6.2	Functional sequence	Bottle infeed, rinse, fill, cap, discharge and reject sequence per FDS rev. 2, all modes	**Pass**
7	FAT-C 7.1	Performance at rated output	≥ 6,000 bph sustained over 60 min, efficiency ≥ 97%, with client bottles and caps	**Fail · NC-01**
8	FAT-C 7.2	Fill accuracy sampling	n = 50 bottles, every fill within 500 ± 1.2 ml (498.8–501.2 ml)	**Fail · NC-06**
9	FAT-C 7.3	CIP cycle	Full CIP programme runs unattended; cups seal, no leakage, return temperature ≥ 80 °C	**Pass · obs.**
10	FAT-C 8.1	Safety interlocks and e-stops	All 6 guard interlocks and 4 e-stops stop the line, category 3 PL d, reset only from HMI	**Pass**
11	FAT-C 9.2	HMI language set	Complete English language set: screens, alarms, recipe editor	**Minor · NC-03**
12	FAT-C 10.1	Documentation pack	As-built electrical and pneumatic drawings, O&M manual (EN), EC DoC, component certificates	**Minor · NC-04**
13	FAT-C 10.2 / 11	Spares list and packing readiness	2-year spares list priced per PO annex 3; crate drawings, VCI and desiccant plan	**Minor · NC-05**

"Pass · obs." is a pass with an observation, not a non-conformity: the CIP return line reached 80 °C after 9 minutes against 6 in the supplier's simulation, within specification and noted for commissioning. Items 1, 7 and 8 carry Major findings NC-02, NC-01 and NC-06. Items 11–13 carry Minor findings NC-03–NC-05.

02 Test conditions and basis of witnessing

Condition	Recorded	Attendance	Recorded
Product	Potable water at 19–21 °C; client-supplied 500 ml PET bottles (PCO 1881), 1,200 pcs, and caps, 1,500 pcs	Sinospect	Sinospect inspection engineer, witness on both days; Sinospect quality desk by video for the rated-output run
Utilities	380 V / 50 Hz three-phase from the hall supply; 6.5 bar dry air; CIP skid from the supplier's test bay	Supplier	Project engineer, electrical engineer, two fitters; sales manager at the closing meeting
Ambient	17–22 °C, 55–65% RH on both days	Client	Not present; briefed by call after each day and at the closing meeting
Machine state	Fully assembled on the base frame, conveyors fitted, guards closed, 26 h run-in logged	Basis	100% of items witnessed in person; supplier test sheets compared, not relied upon

03 Measured values annex

Values are those read by the witness from the instrument display at the time of test. Where the supplier's own instrument was used, its calibration certificate was sighted and is listed in 3.4.

3.1 · Rated-output run, 15 April, 10:05–11:05

Interval	Bottles in	Good out	Rejects	Stops
00–10 min	1,004	990	6	1 (cap feed)
10–20 min	1,012	1,003	4	0
20–30 min	1,010	998	5	1 (cap feed)
30–40 min	1,006	962	5	1 (capper jam, 22 s)
40–50 min	1,009	969	3	1 (cap feed)
50–60 min	1,011	958	4	1 (cap feed)
Total 60 min	**6,052**	**5,880**	**27**	**5**

Good output is 5,880 bph, 98.0% of rated; good/infeed count ratio is 97.2%. Infeed less good output and rejects leaves 145 counts to reconcile. NC-01 requires the counter boundaries, material handling and efficiency calculation to be recorded with the re-run.

3.2 · Fill accuracy, n = 50, gravimetric at 20 °C

Statistic	Value	Criterion	State
Mean fill	500.41 ml	reported	—
Standard deviation	0.38 ml	reported	—
Maximum, valve 7	501.28 ml (+1.28)	≤ 501.2 ml	**Fail**
Minimum, valve 3	499.62 ml (−0.38)	≥ 498.8 ml	**Pass**
Below 498.8 ml	0 of 50	0	**Pass**

The recorded maximum exceeds the upper limit by 0.08 ml: NC-06, Major. Valve 7 was re-set; 10 further bottles read 500.2–500.7 ml. The required 50-bottle repeat remains open. The mean is descriptive; acceptance applies to every sampled bottle.

3.3 · Electrical safety, main panel +MCC1 and remote stations, 14 April

a · Insulation resistance, 500 V DC	Measured	Limit	State
L1/L2/L3 – PE, main incomer	> 200 MΩ	≥ 1 MΩ	**Pass**
Main drive circuit, VFD isolated	148 MΩ	≥ 1 MΩ	**Pass**
Capper drive circuit	112 MΩ	≥ 1 MΩ	**Pass**
Conveyor motors (4), each	96–185 MΩ	≥ 1 MΩ	**Pass**
Heater circuit, CIP return	38 MΩ	≥ 1 MΩ	**Pass**

b · Earth continuity, 10 A	Measured	Limit	State
Main panel door	0.04 Ω	≤ 0.1 Ω	**Pass**
Filler carousel frame	0.06 Ω	≤ 0.1 Ω	**Pass**
Capper head housing	0.07 Ω	≤ 0.1 Ω	**Pass**
Outfeed conveyor frame	0.09 Ω	≤ 0.1 Ω	**Pass**
Remote e-stop station 4	0.05 Ω	≤ 0.1 Ω	**Pass**

3.4 · Instruments used and calibration status (certificates sighted on site)

Instrument	Type / model	Owner	Certificate no.	Calibrated	Valid until	State
Insulation tester	Fluke 1507	Sinospect	[Reference]	11 Jan 2026	10 Jan 2027	**Valid**
Earth-bond tester	Megger DLRO10X	Supplier	[Reference]	22 Sep 2025	21 Sep 2026	**Valid**
Precision balance	Sartorius Entris 6202, 0.01 g	Supplier	[Reference]	03 Nov 2025	02 Nov 2026	**Valid**
Laser distance meter	Leica Disto D2; 5 m tape, class II	Sinospect	[Reference]	11 Jan 2026	10 Jan 2027	**Valid**
IR thermometer	Testo 830-T2	Sinospect	[Reference]	14 Jun 2025	13 Jun 2026	**Valid**

Bottle counts were taken from the HMI counter and cross-checked by hand count over two 5-minute windows (deviation 2 and 3 bottles).

04 Non-conformity register

Major findings require closure before packing; Minor findings close before shipment, with NC-05 evidence captured before crate sealing. NC-01–NC-05 retain the recorded supplier responses. NC-06 and its required closure are continued in section 06.

NC-01 Rated output not achieved: 5,880 bph over 60 min against 6,000 bph required — Major

Requirement	FAT-C 7.1; PO clause 3.2 (rated output 6,000 bph, efficiency ≥ 97%)	**Evidence**	Run log 3.1; HMI counter photos P-041/P-046; hand counts 2 × 5 min
Cause seen	Cap hopper elevator starves the capper at rated speed (4 of 5 stops). Capper timing itself was stable once fed. The filler carousel kept pace throughout.		
Supplier response	Replace elevator drive sprocket (ratio change) and raise hopper level sensor; re-run 60 min test with client bottles and caps, witnessed by Sinospect by video with counter shown before and after.		
Owner	Supplier project engineer	**Target closure**	**24 April 2026**, before crating

NC-02 Component substitution: main drive contactor not the BOM part — Major

Requirement	PO annex 2, BOM item E-14: specified contactor; FAT-C 4.1	**Evidence**	Panel photo P-018 (photo B); component label read on site
Finding	Contactor K1 (main drive) differs from the specified contactor on the approved BOM; the deviation requires approval. The other specified components (K2–K7, Q1, F-series) match. Substitution of a specified brand without notice is a contractual deviation regardless of the part's own rating.		
Supplier response	Specified part on order from the authorised distributor; fit before crating; supply photo of installed part with label legible plus distributor delivery note.		
Owner	Supplier electrical engineer	**Target closure**	**22 April 2026**

NC-03 HMI English language set incomplete: 6 alarm texts display in Chinese only — Minor

Requirement	FAT-C 9.2; FDS rev. 2 §6.4	**Evidence**	Screenshots S-07 to S-12 (alarm list, English set selected)
Supplier response	Translation table updated by the integrator; full alarm list exported in English and sent for review before shipment.		
Owner	Supplier controls engineer	**Target closure**	**22 April 2026**

NC-04 Documentation pack: electrical drawings at rev. B, no as-built rev. C; EC Declaration of Conformity not drafted — Minor

Requirement	FAT-C 10.1; PO clause 7 (documentation before shipment)	**Evidence**	Drawing set sighted, title block rev. B dated 02/2026; panel changes of 03/2026 not reflected
Supplier response	As-built rev. C to be issued after NC-02 closure so the drawing shows the installed part; DoC drafted on the supplier's template for Sinospect review.		
Owner	Supplier project engineer	**Target closure**	**24 April 2026**

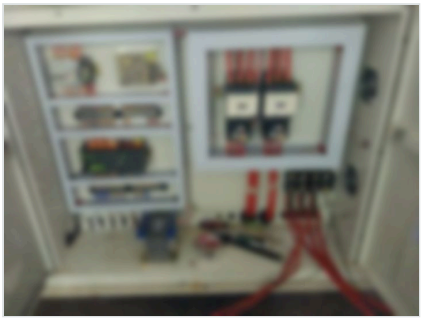
NC-05 Packing readiness: VCI film and desiccant not on site; crate drawings acceptable — Minor

Requirement	FAT-C 11; PO annex 4 (export packing, sea freight)	**Evidence**	Packing area walk-through 15 April; crate drawings PK-01/02 reviewed
Supplier response	Materials ordered; photo of VCI wrap and desiccant placement to be sent before the crate lid is fixed. Sinospect may attend crating if the client elects loading supervision.		
Owner	Supplier logistics	**Target closure**	**Before crate closure**

05 Photographic evidence

The full record holds 148 timestamped photographs and 4 video clips, each tied to a protocol clause and delivered with the report. Six entries are shown here, blurred. A, B, C, E and F are photographs from other Sinospect inspections; D is a generated image. In an issued report the photographs appear at full resolution with the clause reference in the caption.

A · Nameplate, FAT-C 4.1. Model, serial, rated data and CE mark read against the PO. Identifiers redacted in this sample.



B · Main panel +MCC1, NC-02. Contactor K1 label photographed at close range; comparison against BOM item E-14.

C · HMI production counter at 60 min, FAT-C 7.1. Good-bottle count 5,880 with time stamp; basis of NC-01.

D · Gravimetric fill check, FAT-C 7.2. Sampled bottle on the calibrated bench scale. The mean of 500.41 ml, the individual maximum and the NC-06 disposition are in 3.2.

E · Insulation resistance, main drive circuit, FAT-C 5.1. Tester reading with lead positions shown in the adjacent frame.

F · Packing area, FAT-C 11. Crate base and shipping-mark stencil ready; VCI film and desiccant not yet on site (NC-05).

Every photograph in the record carries the camera timestamp, the protocol clause and, where a value is shown, the instrument's serial number in the same frame or the frame immediately before it. Supplier-taken photographs are kept in a separate folder and marked as such; they do not substitute for witnessed evidence.

06 Release recommendation

Seven of thirteen protocol items pass; three Major and three Minor findings remain open. The recommendation is **release with conditions**: C1, C2 and C5 before packing, C4 before crate sealing, and C3 before shipment. Shipment requires all five conditions to be closed. The buyer retains the final release and payment decisions under the order.

NC-06 **Fill accuracy: 501.28 ml exceeds the 501.2 ml upper limit** **Major**

Requirement	FAT-C 7.2: every bottle in n = 50 within 498.8–501.2 ml	**Evidence**	Annex 3.2: maximum 501.28 ml; 10 follow-up bottles at 500.2–500.7 ml
Closure required	Repeat the full 50-bottle sample after adjustment, with each reading and valve recorded; every fill within the original limits. See C5.		
Owner	Supplier project engineer	**Closure point**	Before packing

C1 **NC-01 closed by a witnessed re-run.** 60 minutes at rated speed with client bottles and caps, Sinospect attending by video, HMI counter shown at start and end, hand count for two 5-minute windows. Acceptance remains ≥ 6,000 bph good output and ≥ 97% efficiency. Record the agreed efficiency formula, counter boundaries, rejects, work in progress and bottle/cap handling; reconcile the counts. Sinospect records the witnessed result.

C2 **NC-02 closed by physical evidence before crating.** Photograph of the installed specified contactor with the label legible and the panel tag in frame, plus the distributor's delivery note. Any further substitution on the BOM requires a written concession from the client before fitting.

C3 **NC-03 and NC-04 closed before shipment.** English alarm list export and the as-built rev. C drawing set sent to Sinospect for review; EC Declaration of Conformity draft reviewed and signed by the supplier's legal representative before the bill of lading date.

C4 **NC-05 closed at crating.** Photographs of VCI wrap and desiccant in place before the lid is fixed. If the client elects loading supervision, Sinospect attends crating and container stuffing and closes this item on site.

C5 **NC-06 closed by the full fill-accuracy repeat.** Witness and record all 50 bottles against the original 498.8–501.2 ml limits, after adjustment and before packing. The 10-bottle follow-up is an interim check.

– Method, basis and limits

Basis of witnessing

FAT protocol rev. C as agreed by both parties; all 13 items witnessed in person over two days. Results are Sinospect's own readings, compared with but not taken from supplier test sheets.

Instruments

Sinospect's own insulation tester, laser meter and IR thermometer; supplier's earth-bond tester and balance with calibration certificates sighted on site and listed in 3.4.

Classification

Major: closure before packing for safety, performance or contractual configuration. Minor: closure before shipment; packing evidence before sealing. Observations carry no closure obligation.

This record covers the machine and tests presented at the supplier's works on the test dates. The buyer retains final acceptance. Open release conditions are recorded with the required closure evidence.

Sample: illustrative equipment, identifiers, dates, measurements and findings demonstrate the report structure.

Certification & sign-off

§ Prepared, reviewed and issued

The preparing engineer records the checks, readings and findings. The quality desk reviews the report and the release recommendation. This sample shows the preparation and review fields.

Reliance & scope

Prepared for the named addressee's decision to release the equipment for packing and shipment under the purchase order stated on the cover. Findings reflect the machine as presented on 14–15 April 2026 and the tests witnessed under FAT protocol rev. C. The witnessed protocol defines the recorded scope.

Sample record

The supplier findings register records each corrective action, the responsible role and its closure evidence.

Prepared by

[Signature placeholder]

Sinospect inspection engineer
Inspection engineer · Sinospect (Ningbo)

Date of preparation · **16 April 2026**

Reviewed & approved by

[Signature placeholder]

Sinospect quality desk
Quality review · Sinospect

Date of issue · **17 April 2026**

Sample reference, preparation and review fields demonstrate how the report is recorded and issued.