DOCUMENT CONTROL

Particular	Details
Document Title	Pharmaceutical & Time- and Temperature-Sensitive Cargo Handling SOP
Document No.	BG/CGO/SQC/SOP/PHARMA/001
Department	Cargo Directorate
Process Owner	General Manager Cargo
Operational Owner	Cargo Operations
Station	Hazrat Shahjalal International Airport (HSIA), Dhaka
Classification	Controlled Document
Prepared By	Cargo SQC
Reviewed By	Concerned Cargo Departments
Approved By	Competent Authority, Biman Bangladesh Airlines Ltd.

DOCUMENT STATUS

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Any amendment to this SOP shall be reviewed and approved through the applicable Biman document-control process.

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1. PURPOSE

This SOP establishes a standardized procedure for the **pre-arrival planning, booking, acceptance, security screening, movement, storage, monitoring and release of pharmaceutical and other time- and temperature-sensitive cargo** handled by Biman Bangladesh Airlines Ltd., Cargo Directorate.

The SOP is intended to protect cargo from:

- Temperature deviation
- Excessive ambient exposure
- Physical damage
- Contamination
- Security risk
- Incorrect storage
- Unnecessary handling
- Operational delay
- Loss of traceability

The fundamental principle is:

PLAN → VERIFY → ACCEPT → PROTECT → STORE → MONITOR → RELEASE → HANDOVER

2. SCOPE

This SOP applies to pharmaceutical and other time- and temperature-sensitive cargo under Biman Cargo's operational control, including:

- Export cargo
- Import cargo
- Transit cargo
- Transfer cargo
- Connecting cargo
- Active temperature-controlled containers
- Passive temperature-controlled packaging
- Refrigerated cargo
- Frozen cargo
- Deep-frozen cargo
- Other shipper/manufacturer-specified temperature requirements

The SOP applies to relevant Biman functions including:

- Cargo Export
- Cargo Import

- Cargo SQC
- Cargo Warehouse
- Cargo Acceptance
- Security Screening
- ULD/Build-up
- GSE
- Ramp Operations
- Flight Operations interface
- Load Control interface
- Cargo Management

3. OBJECTIVES

The objectives are to:

1. Ensure pharmaceutical cargo is accepted only when Biman can safely handle it.
2. Maintain the required temperature conditions.
3. Minimize uncontrolled exposure time.
4. Establish clearly defined Critical Control Points.
5. Ensure traceability at each handover.
6. Ensure appropriate storage and monitoring.
7. Prevent and manage temperature excursions.
8. Ensure appropriate emergency response.
9. Define staff responsibilities.
10. Establish auditable records.
11. Support applicable aviation, pharmaceutical, quality and cargo requirements.
12. Promote continuous improvement through audit and CAPA.

4. REGULATORY & REFERENCE FRAMEWORK

The SOP shall be implemented with reference to the latest applicable editions of:

- ICAO Annex 9, Facilitation
- ICAO Annex 17, Aviation Security
- IATA Temperature Control Regulations (TCR)
- IATA Cargo Handling Manual (ICHM)
- IATA Dangerous Goods Regulations (DGR), where applicable
- IATA Airport Handling Manual (AHM), where applicable
- IATA CEIV Pharma principles, where applicable
- WHO Good Distribution Practices for pharmaceutical products
- WHO applicable technical guidance for temperature-sensitive pharmaceutical products
- CAAB requirements
- Applicable Bangladesh Customs/NBR requirements
- Applicable Biman Cargo procedures
- Applicable shipper/manufacturer handling instructions

Where requirements conflict, the applicable legal/regulatory requirement shall take precedence. Product-specific manufacturer requirements shall not be overridden by generic temperature assumptions.

5. DEFINITIONS & ABBREVIATIONS

Term	Definition
TTSPP	Time- and Temperature-Sensitive Pharmaceutical Product
Pharmaceutical Cargo	Medicines, vaccines, biologicals and related healthcare products requiring controlled handling
Temperature Excursion	Exposure outside the specified temperature range
Passive Packaging	Insulated packaging using thermal protection/phase-change materials
Active Container	Temperature-controlled container using powered refrigeration/heating
Cold Room	Temperature-controlled storage facility
CCP	Critical Control Point
SQC	Safety, Quality & Compliance
ULD	Unit Load Device
GSE	Ground Support Equipment
AWB	Air Waybill
DG	Dangerous Goods
CAPA	Corrective and Preventive Action
CRT	Controlled Room Temperature

6. RESPONSIBILITIES

Function	Main Responsibility
Cargo Booking/Commercial	Obtain shipment information and identify special handling
Cargo Export	Export preparation and coordination
Cargo Import	Import preparation and delivery coordination
Cargo Acceptance Officer	Documentary and physical acceptance
Cargo Warehouse	Controlled storage and cargo movement
Cargo Supervisor	Operational control and escalation
Cargo SQC	Quality oversight, compliance, investigation and CAPA
Security Screening	Security screening
ULD/Build-up	ULD preparation and build-up
GSE	Suitable equipment and operator
Ramp	Controlled aircraft-side transfer
Engineering(CAAB/Biman P&W)	Facility and refrigeration support
Duty Officer/OIC	Major operational decisions

6.1 DETAILED RESPONSIBLE PERSON / ACCOUNTABILITY MATRIX

The following assignment shall be used together with the functional responsibilities in Section 6. The **Primary Responsible Person** performs or directly coordinates the activity. The **Escalation / Approval** role provides operational control, authorization or specialist support. Supervisors shall ensure that a named individual is assigned on every shift.

Activity / Duty	Primary Responsible Person	Escalation / Approval	Main Duty
Booking / Pre-alert	Cargo Booking/Commercial Officer	Cargo Supervisor	Obtain shipment information, identify TTSPP, temperature and special handling requirements; circulate pre-alert.
Capability Check	Cargo Supervisor / Warehouse Supervisor	Cargo Manager / Duty Officer	Verify cold-room capacity, monitoring, alarm, backup power, GSE, screening, staff and ULD readiness before acceptance.
Flight Planning	Cargo Supervisor / Cargo Planning Officer	Duty Officer / OIC	Verify flight, aircraft, capacity, connection time, ULD and loading restrictions; coordinate with Flight Operations/Load Control.
Cold-room Reservation	Warehouse Supervisor / Cold-room In-charge	Cargo Supervisor	Check temperature, capacity, alarm, equipment and backup power; allocate and record storage location.
GSE Preparation	GSE Supervisor / GSE Operator	Cargo Supervisor	Select, inspect, position and confirm serviceable GSE and competent operator.
Staff Preparation	Cargo Supervisor / Shift Supervisor	Duty Officer / OIC	Assign competent personnel, brief temperature/special handling requirements and confirm communication/escalation.
Security Preparation	Security Screening Supervisor / Screening Operator	Cargo Supervisor / Security Duty Officer	Ensure screening equipment and trained personnel are available and minimize exposure time.

ULD Preparation	ULD/Build-up Supervisor / ULD Team	Cargo Supervisor	Select and inspect serviceable ULD, pallet, net, contour and protective materials; brief build-up team.
Ramp Coordination	Ramp Supervisor / Ramp Coordinator	Duty Officer / OIC	Confirm cargo ready time, GSE, transfer route, priority handling and aircraft loading interface.
Cargo Acceptance	Cargo Acceptance Officer	Cargo Acceptance Supervisor	Perform documentary and physical acceptance; verify temperature requirement, packaging, labels, DG and security status.
HOLD / REJECT Decision	Cargo Acceptance Supervisor	Duty Officer / OIC; SQC where required	Control, segregate and authorize disposition of shipments with unresolved discrepancies.
Security Screening	Security Screening Operator	Security Screening Supervisor	Conduct approved screening, record status and return cargo immediately to controlled storage.
Transfer to Storage	Cargo Warehouse Officer / Cargo Helper	Warehouse Supervisor	Use suitable GSE, move cargo directly and update storage location.
Temperature-Controlled Storage	Warehouse Officer / Cold-room In-charge	Warehouse Supervisor	Receive, place, segregate and monitor cargo according to temperature category and storage location.
Daily Facility Check	Cold-room In-charge / Warehouse Officer	Warehouse Supervisor	Check temperature, alarm, monitoring system, door, seal, cleanliness, capacity, airflow, backup power and abnormal conditions.
Temperature Monitoring	Cold-room In-charge / Assigned Warehouse Officer	Warehouse Supervisor	Monitor and record temperature, alarms and deviations; preserve records.
Temperature Alarm	Cold-room In-charge	Warehouse Supervisor / Duty Officer	Verify actual condition, protect cargo, notify Engineering and SQC as applicable, and record incident.

Temperature Excursion	Warehouse Supervisor / Cargo Supervisor	Cargo SQC + Duty Officer/OIC	STOP release, identify and protect cargo, capture temperature data, notify stakeholders, initiate assessment and CAPA.
Engineering Support	Engineering Duty Technician / Refrigeration Team	Engineering Duty Officer	Respond to refrigeration, alarm, power and facility failures and restore/maintain controlled conditions.
Power Failure	Warehouse Supervisor	Engineering Duty Officer / Duty Officer	Activate backup, keep doors closed, increase monitoring and arrange alternative storage if required.
Refrigeration Failure	Warehouse Supervisor	Engineering Duty Officer / Duty Officer	Protect cargo, monitor temperature, identify affected cargo and arrange controlled transfer to alternative storage.
Cleaning	Warehouse Cleaning Team	Warehouse Supervisor	Coordinate cleaning, protect/relocate cargo, clean/dry area and record completion.
Pest Control	Facilities / Pest Control Team	Warehouse Supervisor / SQC	Conduct approved pest-control programme and prevent contamination exposure.
Cargo Retrieval	Warehouse Officer / Cargo Helper	Warehouse Supervisor	Verify AWB/status/location, retrieve with suitable GSE, maintain protection and update records.
Export Build-up	ULD/Build-up Supervisor / Build-up Team	Cargo Supervisor	Build ULD, maintain temperature protection, verify ULD serviceability and complete build-up records.
Ramp Transfer	Ramp Supervisor / Ramp Team	Duty Officer / OIC	Move cargo/ULD at the appropriate time, minimize ramp exposure and confirm handover/loading.
Aircraft Loading Interface	Ramp Supervisor / Loading Team	Load Control / Flight Operations interface	Coordinate timely loading and confirm loading/handover.

Import Aircraft Unloading	Ramp Supervisor / Ramp Team	Duty Officer / OIC	Prioritize temperature-sensitive cargo and transfer under controlled conditions.
Import Storage / Breakdown	Warehouse Supervisor / Breakdown Team	Cargo Supervisor	Receive, store, break down and maintain temperature protection and traceability.
Customs Interface	Cargo Import Officer	Import Supervisor	Coordinate customs processing and maintain cargo status until authorized release.
Delivery / Release	Cargo Import Delivery Officer	Import Supervisor	Verify AWB, status, condition and authorization before controlled handover.
Transit / Transfer Coordination	Cargo Transfer/Transit Officer	Cargo Supervisor	Monitor arrival/connection, storage, security, ULD and ramp transfer through connecting flight.
Active Container	Assigned Warehouse Officer / ULD Team	Warehouse/ULD Supervisor	Check condition, operating status, display, power/battery and follow manufacturer instructions.
Passive Packaging	Acceptance Officer / Warehouse Officer	Cargo Supervisor	Protect insulation, avoid unnecessary opening, preserve indicators/data logger and report damage.
Dry Ice	DG-Trained Cargo Officer	DG Supervisor / Cargo Supervisor	Verify DG requirements, ventilation, handling and documentation.
Storage Security	Warehouse Security / Authorized Warehouse Staff	Security Supervisor / Warehouse Supervisor	Control access, escort visitors where applicable and report suspicious activity.
Capacity Control	Warehouse Supervisor	Cargo Manager / Duty Officer	Monitor capacity, temperature categories, arrivals/departures and emergency reserve.
ULD Serviceability	ULD Supervisor / ULD Inspector	Cargo Supervisor	Inspect ULD condition and serviceability; isolate unserviceable ULDs.
GSE Serviceability	GSE Supervisor / GSE Operator	GSE Manager	Inspect equipment, confirm capacity/cleanliness and replace defective equipment.

Records & Documentation	Performing Officer / Assigned Record Custodian	Concerned Supervisor / SQC	Complete and retain checklists, logs, handover, incident, calibration, ULD/GSE and electronic records.
Training & Competency	Cargo Training Coordinator / SQC	Cargo Manager / Competent Authority	Plan training, assess competency and maintain training records.
KPI Monitoring	Cargo SQC	Head of Cargo / Cargo Manager	Collect, verify, trend and report KPI performance; initiate corrective action where required.
Internal Audit / CAPA	Cargo SQC Auditor / CAPA Coordinator	Head of Cargo / Process Owner	Audit compliance, investigate root causes and track CAPA to closure.
Emergency Escalation	Person identifying the event	Cargo Supervisor → Duty Officer/OIC → SQC/Engineering/Security as applicable	Immediately protect cargo, stop unsafe activity and escalate through the defined chain.
Cold-room Reservation	Warehouse Supervisor / Cold-room In-charge	Cargo Supervisor	Check temperature, capacity, alarm, equipment and backup power; allocate and record storage location.
GSE Preparation	GSE Supervisor / GSE Operator	Cargo Supervisor	Select, inspect, position and confirm serviceable GSE and competent operator.
Staff Preparation	Cargo Supervisor / Shift Supervisor	Duty Officer / OIC	Assign competent personnel, brief temperature/special handling requirements and confirm communication/escalation.
Security Preparation	Security Screening Supervisor / Screening Operator	Cargo Supervisor / Security Duty Officer	Ensure screening equipment and trained personnel are available and minimize exposure time.
ULD Preparation	ULD/Build-up Supervisor / ULD Team	Cargo Supervisor	Select and inspect serviceable ULD, pallet, net, contour and protective materials; brief build-up team.
Ramp Coordination	Ramp Supervisor / Ramp Coordinator	Duty Officer / OIC	Confirm cargo ready time, GSE, transfer route, priority handling and aircraft loading interface.

Cargo Acceptance	Cargo Acceptance Officer	Cargo Acceptance Supervisor	Perform documentary and physical acceptance; verify temperature requirement, packaging, labels, DG and security status.

Accountability rule: A duty shall not be considered assigned merely because a department is named. The concerned Supervisor/OIC shall assign a specific competent person for the shift/flight and ensure that the handover is recorded where applicable.

Delegation rule: Where the named post is unavailable, the next higher operational supervisor shall formally assign a competent replacement. Critical activities shall not be performed by untrained or unauthorized personnel.

SQC role: Cargo SQC provides independent quality/compliance oversight, verification, investigation and CAPA support. SQC shall not replace the operational owner for routine cargo handling activities.

7. CRITICAL CONTROL POINTS

CCP	Activity	Primary Control
CCP-01	Booking/Pre-alert	Shipment requirements
CCP-02	Capability Check	Facility/equipment readiness
CCP-03	Acceptance	Documentation/package condition
CCP-04	Security Screening	Security + exposure time
CCP-05	Controlled Storage	Correct temperature/location
CCP-06	ULD Build-up	Product protection
CCP-07	Ramp Transfer	Time/temperature control
CCP-08	Aircraft Loading	Timely loading
CCP-09	Import Recovery	Immediate controlled transfer
CCP-10	Release/Delivery	Condition/documentation
CCP-11	Deviation	Hold/investigate/escalate
CCP-12	Emergency	Product protection

Part-01

PRE-ARRIVAL, BOOKING & CARGO HANDLING PREPARATION

8.1 PURPOSE

To ensure that Biman has the required facility, equipment, staff, storage capacity, security screening, ULD and ramp arrangements **before the shipment arrives**.

The principle is:

NO SURPRISES AT CARGO ARRIVAL

Responsible: Cargo Booking/Commercial Officer, coordinated by the Cargo Supervisor.

8.2 BOOKING PROCEDURE

HOW TO DO

1. Receive booking request.
2. Identify pharmaceutical/temperature-sensitive nature.
3. Obtain temperature requirement.
4. Identify packaging type.
5. Identify active/passive container.
6. Identify special handling requirements.
7. Check Biman's handling capability.
8. Confirm booking only after capability is established.

8.3 CAPABILITY CHECK

Before confirming shipment, check:

Facility

- Temperature-controlled space.
- Capacity.
- Cold-room status.
- Monitoring system.
- Alarm.
- Backup power.
- Access control.

Equipment

- Trolley.
- Dolly.
- Forklift/stacker where applicable.
- ULD equipment.
- Thermal protection.
- Temperature monitoring equipment.

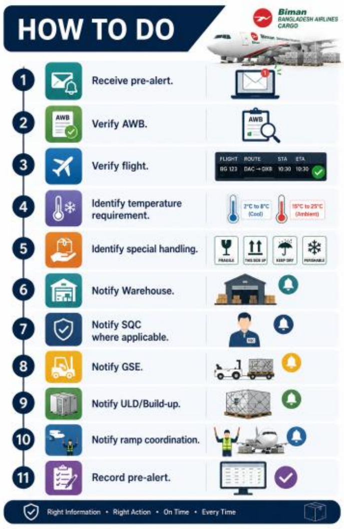
Security

Confirm that screening can be performed without unacceptable exposure.

8.4 PRE-ALERT

HOW TO DO

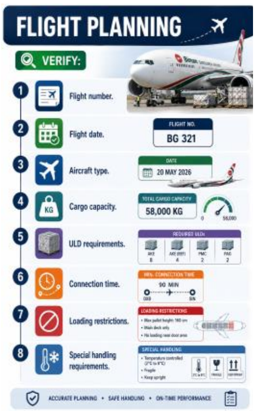
1. Receive pre-alert.
2. Verify AWB.
3. Verify flight.
4. Identify temperature requirement.
5. Identify special handling.
6. Notify Warehouse.
7. Notify SQC where applicable.
8. Notify GSE.
9. Notify ULD/Build-up.
10. Notify ramp coordination.
11. Record pre-alert.



8.5 FLIGHT PLANNING

Verify:

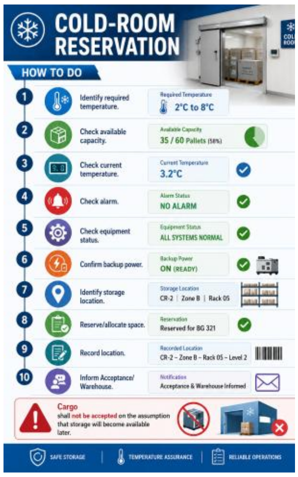
1. Flight number.
2. Flight date.
3. Aircraft type.
4. Cargo capacity.
5. ULD requirements.
6. Connection time.
7. Loading restrictions.
8. Special handling requirements.



Where necessary, coordinate with Flight Operations/Load Control.

8.6 COLD-ROOM RESERVATION

HOW TO DO

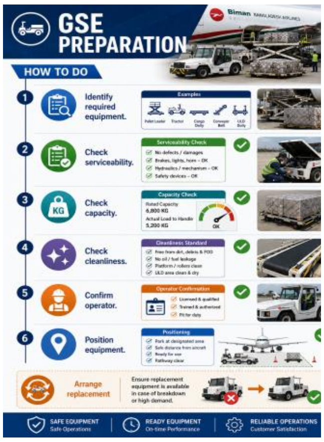


1. Identify required temperature.
2. Check available capacity.
3. Check current temperature.
4. Check alarm.
5. Check equipment status.
6. Confirm backup power.
7. Identify storage location.
8. Reserve/allocate space.
9. Record location.
10. Inform Acceptance/Warehouse.

Cargo shall not be accepted on the assumption that storage will become available later.

8.7 GSE PREPARATION

HOW TO DO



1. Identify required equipment.
2. Check serviceability.
3. Check capacity.
4. Check cleanliness.
5. Confirm operator.
6. Position equipment.
7. Arrange replacement if defective.
8. Confirm readiness.

8.8 STAFF PREPARATION

The Supervisor shall:

1. Identify expected arrival time.
2. Identify required activities.
3. Assign competent staff.
4. Brief staff on temperature requirements.
5. Brief special handling requirements.
6. Confirm communication.
7. Confirm escalation contacts.

8.9 SECURITY PREPARATION

1. Notify screening personnel.
2. Confirm screening equipment.
3. Confirm operator availability.
4. Arrange priority/controlled screening where justified.
5. Minimize waiting time.
6. Return screened cargo immediately to controlled storage

8.10 ULD PREPARATION

HOW TO DO

1. Identify ULD requirement.
2. Select correct ULD.
3. Inspect condition.
4. Verify serviceability.
5. Check pallet/net/contour requirements.
6. Prepare protective materials.
7. Position ULD.
8. Brief build-up team.
9. Prepare documentation.

Unserviceable ULDs shall not be used.

8.11 RAMP COORDINATION

Confirm:

- Flight.
- Aircraft.
- Cargo ready time.
- Loading commencement.
- ULD requirement.
- GSE.
- Transfer route.
- Priority handling.
- Temperature requirement.

HOW TO DO

1. Confirm cargo ready time.
2. Confirm loading interface.
3. Confirm ramp readiness.
4. Confirm GSE.
5. Transfer cargo at the appropriate time.
6. Avoid unnecessary ramp waiting.
7. Confirm handover/loading.

8.12 TRANSIT/TRANSFER PREPARATION

Verify:

1. Arrival flight.
2. Arrival time.
3. Connecting flight.
4. Connection time.
5. Temperature requirement.
6. Storage.
7. Security.
8. Documentation.
9. ULD.
10. Ramp transfer.

FLOW

ARRIVAL → UNLOAD → CONTROLLED TRANSFER → STORAGE → ULD/BUILD-UP → RAMP → CONNECTING FLIGHT

8.13 CONTINGENCY PREPARATION

Consider:

- Cold-room failure.
- Power failure.
- GSE failure.
- X-ray failure.
- Flight delay.
- Flight cancellation.
- Ramp congestion.
- Aircraft change.
- ULD shortage.
- Excessive dwell time.
- System outage.

HOW TO DO

1. Identify risk.
2. Identify immediate protection.
3. Identify alternative equipment/facility.
4. Assign responsible person.
5. Establish escalation.
6. Record contingency decision where required.

8.14 PRE-ARRIVAL READINESS CHECK

- ☐ Booking confirmed
- ☐ AWB verified
- ☐ Flight confirmed
- ☐ Temperature identified
- ☐ Special handling identified
- ☐ Storage available
- ☐ Cold-room operational
- ☐ Monitoring available
- ☐ Security arranged
- ☐ GSE arranged
- ☐ Staff assigned
- ☐ ULD confirmed
- ☐ ULD serviceable
- ☐ Ramp coordinated
- ☐ Transfer plan confirmed
- ☐ Contingency considered
- ☐ Relevant parties notified

8.15 GO / NO-GO DECISION

GO

Proceed when:

- Temperature capability exists.
- Storage exists.
- Equipment exists.
- Staff exist.
- Screening is available.
- ULD/ramp arrangements are confirmed.
- No critical unresolved issue exists.

NO-GO / HOLD

Do not proceed normally when:

- Required temperature facility is unavailable.
- Temperature requirement is unknown.
- Required equipment is unavailable without alternative.
- Packaging is compromised.
- Critical documentation is missing.
- Operational arrangements cannot support the shipment.
- Safety/security concern exists.

Part-02

ACCEPTANCE OF PHARMACEUTICAL & TEMPERATURE-SENSITIVE CARGO

9.1 PURPOSE

To ensure that pharmaceutical cargo is accepted only when documentation, packaging, labelling, temperature requirements, security requirements and physical condition are satisfactory.

Responsible: Cargo Acceptance Officer. Supervisor: Cargo Acceptance Supervisor/OIC.

9.2 PRE-ACCEPTANCE INFORMATION

Before physical acceptance, the Acceptance Officer shall obtain or verify:

1. AWB number.
2. Flight number/date.
3. Origin/destination.
4. Shipper/consignee.
5. Number of pieces.
6. Gross weight.
7. Commodity.
8. Temperature requirement.
9. Special handling instructions.
10. Packaging type.
11. Active/passive container.
12. Dry ice information where applicable.
13. Data logger information where applicable.

9.3 DOCUMENT CHECK

HOW TO DO

Step 1: Receive the shipment documents.

Step 2: Match AWB number.

Step 3: Match number of pieces.

Step 4: Verify gross weight.

Step 5: Verify commodity description.

Step 6: Identify temperature requirement.

Step 7: Verify special handling instructions.

Step 8: Check DG requirements where applicable.

Step 9: Record discrepancies.

DO NOT PROCEED if:

- Temperature requirement is unknown.
- Critical documentation is missing.
- Instructions are contradictory.
- Biman cannot provide the required handling capability.

Place the shipment on **HOLD** and inform the Supervisor.

9.4 PHYSICAL INSPECTION

TTS Label Verification: The Acceptance Officer shall verify the IATA Time & Temperature Sensitive (TTS) label, where applicable, against the AWB, transport documentation and applicable shipper/manufacturer handling instructions. The specified temperature range and special handling requirements shall be consistent with the shipment documentation. Any discrepancy shall be recorded and the shipment placed on HOLD pending clarification.

The Acceptance Officer shall inspect:

- Outer packaging
- Damage
- Leakage
- Wetness
- Broken seals
- Open packaging
- Labels
- Temperature markings
- Orientation arrows
- Security indicators
- Container condition
- Evidence of excessive heat/freezing
- Data logger/temperature indicator

HOW TO DO

1. Place shipment in designated inspection area.
2. Inspect all accessible sides.
3. Match identification with AWB.
4. Check labels.

5. Check physical condition.
6. Do not unnecessarily open temperature-controlled packaging.
7. Record abnormalities.
8. Escalate significant damage.

9.5 VERIFY TEMPERATURE REQUIREMENT

The actual temperature requirement shall be established from:

- Manufacturer instruction
- Shipper instruction
- Transport documentation
- Applicable service requirement

IMPORTANT

Do not assume that all pharmaceutical cargo requires 2–8°C.

The actual specified range shall be followed.

9.6 PACKAGING CHECK

Qualification / Suitability of Temperature-Controlled Packaging: The Acceptance Officer shall verify, where applicable, that active or passive temperature-controlled packaging is approved, qualified or otherwise suitable for the specified temperature range, intended route and expected transport duration, in accordance with the manufacturer, shipper or applicable handling instructions.

Passive Packaging

Check:

1. Outer condition.
2. Insulation integrity.
3. Thermal packaging condition.
4. Indicators/data logger.
5. Handling labels.

Do not open unnecessarily.

Active Container

Check:

1. Container identification.
2. Physical condition.
3. Operating status.
4. Display/temperature.
5. Battery/power status.
6. Handling instructions.

Report any suspected malfunction.

9.7 SECURITY SCREENING

HOW TO DO

1. Identify shipment.
2. Confirm AWB/package count.
3. Transfer to approved screening point.
4. Conduct required screening.
5. Minimize exposure time.
6. Return cargo to controlled storage immediately after screening.
7. Record screening status.

9.8 TRANSFER TO STORAGE

After screening:

1. Confirm temperature category.
2. Identify storage location.
3. Use suitable GSE.
4. Move cargo directly.
5. Avoid unnecessary waiting.
6. Place cargo in correct location.
7. Record/update location.

9.9 ACCEPTANCE DECISION

Cargo shall be classified as:

ACCEPT

All requirements satisfied.

ACCEPT WITH CONTROL

Minor discrepancy approved by the responsible Supervisor without compromising safety, security or product integrity.

HOLD

Further verification required.

REJECT

Cargo cannot safely or compliantly be accepted.

9.10 HOLD PROCEDURE

When cargo is placed on HOLD:

1. Mark HOLD status.
2. Segregate physically/electronically.
3. Maintain required temperature.
4. Inform Supervisor.
5. Inform SQC where required.
6. Contact shipper/forwarder where applicable.
7. Document reason.
8. Do not release until authorized.

9.11 ACCEPTANCE CHECKLIST

☐ AWB verified

☐ Pieces verified

☐ Weight verified

☐ Commodity verified

☐ Temperature identified

☐ Packaging checked

☐ Labels checked

☐ Special handling checked

☐ DG requirements checked where applicable

☐ Security screening completed

☐ Cargo condition satisfactory

☐ Storage location confirmed

☐ Records completed

Part-03

TEMPERATURE-CONTROLLED STORAGE

10.1 PURPOSE

To ensure pharmaceutical cargo remains within the required environmental conditions while under Biman Cargo's storage control.

The principle is:

RECEIVE → VERIFY → PLACE → MONITOR → PROTECT → RETRIEVE → HANDOVER

Responsible: Warehouse Officer/Cold-room In-charge. **Supervisor/OIC: Warehouse** Supervisor.

10.2 PRE-OPERATION FACILITY CHECK

Before storage:

1. Check room temperature.
2. Confirm temperature is within approved operating range.
3. Check alarm.
4. Check monitoring system.
5. Check door.
6. Check door seal.
7. Check leakage/condensation.
8. Check cleanliness.
9. Check airflow.
10. Check backup power.
11. Report abnormalities.

10.3 RECEIVING INTO STORAGE

HOW TO DO

1. Verify AWB.
2. Verify pieces.
3. Verify temperature requirement.
4. Verify cargo status.
5. Confirm storage location.
6. Use suitable GSE.
7. Move directly to controlled area.
8. Minimize ambient exposure.

9. Place cargo correctly.
10. Update storage record.

10.4 STORAGE LOCATION

Where practicable, location shall be traceable through:

Room → Zone → Rack → Position

Example:

Cold Room → Zone A → Rack 02 → Position 04

10.5 HOW TO PLACE CARGO

1. Identify correct zone.
2. Confirm space.
3. Separate temperature categories.
4. Maintain airflow.
5. Do not block air outlets.
6. Do not over-stack.
7. Maintain package stability.
8. Follow orientation arrows.
9. Segregate HOLD cargo.
10. Keep labels identifiable.

10.6 STORAGE SEGREGATION

Where applicable, separate:

- Accepted cargo
- HOLD cargo
- Damaged cargo
- Temperature-excursion cargo
- Security-hold cargo
- Export cargo
- Import cargo
- Transit/transfer cargo
- Different temperature categories

HOLD cargo shall never be confused with released cargo.

10.7 DOOR CONTROL

HOW TO DO

1. Open only when movement is ready.
2. Complete movement efficiently.
3. Close immediately.
4. Confirm door closure.
5. Report defective seals/closing mechanisms.

10.8 TEMPERATURE MONITORING

HOW TO DO

Temperature-controlled storage areas shall be subject to continuous temperature monitoring using approved and calibrated monitoring equipment, with automatic recording and alarm capability where the installed system supports these functions.

Monitoring data shall be securely retained and protected against unauthorized alteration or deletion.

The responsible personnel shall:

1. Verify that the monitoring system is operational.
2. Confirm that temperature sensors are functioning correctly.
3. Verify alarm functionality.
4. Review temperature readings and alarms at the approved frequency.
5. Ensure automatic temperature records are generated and retained.
6. Report abnormal readings or system failures immediately.
7. Preserve monitoring records for the applicable retention period.

8. Ensure that monitoring records are protected against unauthorized alteration or deletion.

10.9 TEMPERATURE MAPPING

Temperature-controlled rooms shall be appropriately mapped/qualified.

The mapping should identify:

- Hot spots.
- Cold spots.
- Temperature variation.
- Sensor locations.
- Alarm performance.
- Representative operating conditions.

Monitoring equipment shall be located according to the approved monitoring arrangement.

10.10 TEMPERATURE ALARM

When an alarm activates:

1. Check actual temperature.
2. Verify alarm condition.
3. Inform Supervisor.
4. Determine duration.
5. Protect affected cargo.
6. Contact Engineering.
7. Activate contingency if necessary.
8. Inform SQC where product integrity may be affected.
9. Record the incident.

DO NOT

- Ignore alarm.
- Reset without investigation.
- Delete records.
- Move cargo randomly.
- Open unnecessary doors.
- Release affected cargo without disposition.

10.11 TEMPERATURE EXCURSION

STEP 1: STOP

Do not release potentially affected cargo.

STEP 2: IDENTIFY

Record:

- AWB.
- Pieces.
- Required temperature.
- Location.
- Time.

STEP 3: PROTECT

Maintain the best available controlled condition.

STEP 4: RECORD

Capture:

- Actual temperature.
- Minimum/maximum.
- Duration.
- Alarm data.
- Data logger data.

STEP 5: NOTIFY

Notify Supervisor and SQC and the shipper/forwarder where applicable.

STEP 6: ASSESS

Product disposition shall be determined by the appropriate responsible party, particularly where product quality may be affected.

STEP 7: DOCUMENT

Complete excursion/incident report.

STEP 8: CAPA

Investigate root cause and implement corrective/preventive action where required.

10.12 POWER FAILURE

HOW TO DO

1. Inform Supervisor.
2. Confirm backup power.
3. Check temperature.
4. Keep doors closed.

5. Avoid unnecessary entry.
6. Increase monitoring as required.
7. Contact Engineering.
8. Prepare alternative storage.
9. Prioritize vulnerable cargo.
10. Record event.

10.13 REFRIGERATION FAILURE

1. Keep doors closed.
2. Inform Supervisor.
3. Contact Engineering.
4. Monitor temperature.
5. Identify affected cargo.
6. Determine remaining control capability.
7. Prepare alternative storage.
8. Transfer under controlled conditions if required.
9. Record movement.
10. Initiate deviation investigation where applicable.

10.14 CLEANING

HOW TO DO

1. Schedule cleaning.
2. Coordinate with operations.
3. Protect/relocate cargo where necessary.
4. Use approved cleaning materials.
5. Avoid contamination.
6. Protect monitoring equipment.
7. Clean and dry area.
8. Inspect.
9. Record cleaning.

10.15 PEST CONTROL

1. Maintain approved pest-control programme.
2. Prevent chemical exposure to cargo.
3. Record treatment.
4. Report pest activity.
5. Investigate potential contamination.

10.16 CARGO RETRIEVAL

HOW TO DO

1. Receive retrieval instruction.
2. Verify AWB.
3. Verify status.
4. Identify location.
5. Check condition.
6. Retrieve using suitable GSE.
7. Minimize exposure.
8. Maintain required protection.
9. Update record.
10. Transfer to next stage.

10.17 EXPORT RELEASE FROM STORAGE

STORAGE → BUILD-UP → ULD → RAMP → AIRCRAFT

HOW TO DO

1. Confirm flight.
2. Confirm cargo readiness.
3. Confirm build-up area.
4. Retrieve cargo.
5. Maintain protection.
6. Build up ULD.
7. Protect temperature-sensitive cargo.
8. Transfer ULD to ramp.
9. Confirm aircraft loading.

10.18 IMPORT RELEASE FROM STORAGE

AIRCRAFT → RAMP → CONTROLLED STORAGE → BREAKDOWN → CUSTOMS → DELIVERY

HOW TO DO

1. Receive cargo from ramp.
2. Verify AWB.
3. Place in controlled storage.
4. Record location.
5. Retrieve when ready.

6. Verify condition.
7. Maintain protection.
8. Complete documentation.
9. Handover to authorized party.

10.19 TRANSIT / TRANSFER STORAGE

HOW TO DO

1. Receive arrival information.
2. Confirm connecting flight.
3. Confirm temperature.
4. Confirm storage.
5. Receive from aircraft.
6. Transfer to controlled area.
7. Record location.
8. Monitor temperature.
9. Prepare onward ULD.
10. Transfer to ramp.
11. Confirm loading.
12. Complete transfer record.

10.20 ACTIVE CONTAINERS

1. Identify container.
2. Check condition.
3. Check operating status.
4. Check display.
5. Check power/battery.
6. Follow manufacturer's instructions.
7. Do not disconnect without authorization.
8. Maintain environmental protection.
9. Report malfunction.

10.21 PASSIVE PACKAGING

Personnel shall:

1. Avoid unnecessary opening.
2. Maintain insulation.
3. Do not remove thermal materials without authorization.
4. Protect packaging.
5. Follow shipper instructions.
6. Preserve data logger/indicator.
7. Report damage.

10.22 DRY ICE

Where dry ice is present:

1. Identify shipment.
2. Confirm applicable DG requirements.
3. Follow Biman DG procedures.
4. Maintain required ventilation.
5. Do not touch dry ice with bare hands.
6. Do not improperly seal the package.
7. Follow applicable quantity/documentation requirements.
8. Escalate abnormalities to trained DG personnel.

10.23 STORAGE SECURITY

Access shall be restricted to authorized personnel.

HOW TO DO

1. Control access.
2. Prevent unauthorized entry.
3. Escort visitors where applicable.
4. Maintain access records where required.
5. Report suspicious activity.

10.24 CAPACITY CONTROL

The Warehouse Supervisor shall monitor:

- Total capacity.
- Occupied capacity.
- Available capacity.
- Temperature category.
- Expected arrivals.
- Expected departures.
- Emergency reserve.

Capacity shortages shall be escalated before they affect safe acceptance.

10.25 DAILY FACILITY CHECK

- ☐ Temperature
- ☐ Alarm
- ☐ Monitoring system
- ☐ Door
- ☐ Door seal
- ☐ Cleanliness
- ☐ Leakage/condensation
- ☐ Lighting
- ☐ Capacity
- ☐ Air circulation
- ☐ Backup power
- ☐ Safety equipment
- ☐ Access control
- ☐ Abnormal conditions

10.26 CALIBRATION

Temperature monitoring equipment shall be:

- Identified.
- Calibrated at defined intervals.
- Traceable to an appropriate standard.
- Protected from unauthorized adjustment.
- Checked after significant repair/intervention where required.

Expired or damaged monitoring equipment shall not be used for critical verification.

10.27 RELEASE FROM STORAGE

Before release:

1. Verify AWB.
2. Verify pieces.
3. Verify cargo status.
4. Check physical condition.
5. Verify temperature protection.
6. Confirm next destination/stage.
7. Complete handover documentation.

10.28 HANDOVER

Each handover shall establish:

WHO → WHAT → WHEN → WHERE → CONDITION

Record where applicable:

- Sender.
- Receiver.
- AWB.
- Pieces.
- Time.
- Location.
- Cargo condition.
- Temperature information.
- Deviation.

11. EMERGENCY & ESCALATION

Situation	Immediate Action	Escalation
Temperature abnormality	Protect cargo	Supervisor/SQC
Cold-room failure	Keep door closed	Engineering/Supervisor
Power failure	Activate backup	Engineering
GSE failure	Stop unsafe operation	GSE Supervisor
ULD failure	Hold ULD	ULD Supervisor
Damaged package	Isolate/HOLD	Supervisor/SQC
Security issue	Stop movement	Security
Capacity shortage	Control acceptance	Cargo Management
Flight cancellation	Maintain controlled storage	Supervisor/SQC
Suspected excursion	HOLD and record	SQC/Supervisor

12. RECORDS & DOCUMENTATION

The following records shall be maintained as applicable:

1. Pre-alert.
2. Pre-arrival readiness checklist.
3. Acceptance checklist.
4. Storage location record.
5. Temperature monitoring record.
6. Calibration certificate.
7. Temperature mapping/qualification record.
8. Facility inspection checklist.
9. Cleaning record.
10. Maintenance record.
11. Alarm record.
12. Temperature deviation report.
13. Incident report.
14. Handover record.
15. ULD serviceability record.
16. GSE readiness record.
17. Training record.
18. CAPA record.
19. Applicable CHAMP/electronic records.

Records shall be retained in accordance with the applicable Biman document-retention requirements.

Electronic Temperature Monitoring Records: Where an automated temperature monitoring system is installed, temperature data, alarm events and associated system records shall be automatically recorded and securely retained. Electronic records shall be protected against unauthorized alteration, deletion or manipulation and shall remain retrievable for the applicable retention period.

13. TRAINING & COMPETENCY

Personnel assigned to pharmaceutical cargo handling shall receive training appropriate to their duties.

Training should cover:

1. Pharmaceutical cargo awareness.
2. Time and temperature sensitivity.
3. Temperature-control principles.
4. Biman pharmaceutical SOP.
5. Packaging awareness.
6. Cold-room operation.
7. Temperature monitoring.
8. Temperature deviation response.
9. Emergency procedures.
10. ULD handling.
11. Ramp transfer.
12. Security requirements.
13. Dangerous Goods awareness where applicable.
14. Recordkeeping.
15. Reporting and escalation.

Competency shall be evaluated according to the applicable Biman training system.

14. KPI & MONITORING

Cargo Operations and SQC should monitor:

KPI	Target
Pre-alert availability	100% where applicable
Temperature requirement identified	100%
Pre-arrival readiness	100%
Storage availability	100%
Temperature monitoring availability	100%
Calibration validity	100%
Daily facility checks	100%
Unnecessary ambient exposure	Minimum
Undocumented excursions	0
Uncontrolled access	0
Storage traceability	100%
Excursion investigation	100%
CAPA closure within due date	100%

15. MASTER OPERATIONAL FLOW

15.1 EXPORT

BOOKING
↓
PRE-ALERT
↓
CAPABILITY CHECK
↓
PRE-ARRIVAL READINESS
↓
CARGO ACCEPTANCE
↓
SECURITY SCREENING
↓
TEMPERATURE-CONTROLLED STORAGE
↓
ULD PREPARATION
↓
BUILD-UP
↓
TEMPERATURE PROTECTION
↓
RAMP TRANSFER
↓
AIRCRAFT LOADING
↓
HANDOVER / RECORD COMPLETION

15.2 IMPORT

PRE-ALERT
↓
FLIGHT ARRIVAL
↓
AIRCRAFT UNLOADING
↓
PRIORITY RAMP TRANSFER
↓
TEMPERATURE-CONTROLLED STORAGE
↓
BREAKDOWN
↓
CUSTOMS INTERFACE
↓
DELIVERY PREPARATION
↓
CONTROLLED RELEASE
↓
AUTHORIZED HANDOVER

15.3 TRANSIT / TRANSFER

PRE-ALERT
↓
ARRIVAL FLIGHT
↓
AIRCRAFT UNLOADING
↓
CONTROLLED RAMP TRANSFER
↓
TEMPERATURE-CONTROLLED STORAGE
↓
CONNECTION MONITORING
↓
ULD BUILD-UP
↓
RAMP TRANSFER
↓
CONNECTING AIRCRAFT
↓
LOADING
↓
TRANSFER RECORD

16. MASTER DECISION FLOW

BEFORE ACCEPTANCE

Is the temperature requirement known?

→ YES → Continue

→ NO → **HOLD / CLARIFY**

Is Biman's facility capable?

→ YES → Continue

→ NO → **NO-GO / ALTERNATIVE CONTROL**

Is packaging acceptable?

→ YES → Continue

→ NO → **HOLD / INVESTIGATE**

Is required screening available?

→ YES → Continue

→ NO → **HOLD / ESCALATE**

Is controlled storage available?

→ YES → Continue

→ NO → **NO-GO / ALTERNATIVE ARRANGEMENT**

Is cargo temperature within requirement?

→ YES → Continue

→ NO → **HOLD / EXCURSION PROCEDURE**

17. GOLDEN RULES FOR ALL PERSONNEL

1. RIGHT TEMPERATURE

Always know the required temperature.

2. RIGHT TIME

Minimize uncontrolled exposure.

3. RIGHT PLACE

Store cargo only in the designated area.

4. RIGHT CONDITION

Protect packaging and cargo integrity.

5. RIGHT DOCUMENTATION

Record every critical activity.

6. RIGHT PERSON

Only trained and authorized personnel shall perform critical activities.

7. RIGHT ESCALATION

Report abnormalities immediately.

18. PHARMACEUTICAL CARGO HANDLING GOLDEN RULE

NO SURPRISES. NO UNCONTROLLED EXPOSURE. NO UNDOCUMENTED DEVIATION.

At every stage, Biman personnel shall know:

WHAT IS THE CARGO?
WHAT TEMPERATURE DOES IT REQUIRE?
WHERE IS IT?
WHO IS RESPONSIBLE?
WHAT IS THE NEXT STEP?
WHAT WILL WE DO IF SOMETHING GOES WRONG?

19. FORMS & ANNEXES

The following controlled forms should be developed as annexes to this SOP:

Annex A

Pharmaceutical Cargo Pre-Alert Form

Annex B

Pre-Arrival Readiness Checklist

Annex C

Pharmaceutical Cargo Acceptance Checklist

Annex D

Temperature-Controlled Storage Daily Inspection Checklist

Annex E

Temperature Monitoring Log

Annex F

Cold-Room Alarm/Incident Report

Annex G

Temperature deviation Report

Annex H

Pharmaceutical Cargo Handover Record

Annex I

ULD Preparation Checklist for Pharmaceutical Cargo

Annex J

Ramp Transfer Checklist

Annex K

Emergency Pharmaceutical Cargo Handling Checklist

Annex L

Training & Competency Record

Annex M

Pharmaceutical Cargo Internal Audit Checklist

20. REVIEW & REVISION

This SOP shall be reviewed periodically and whenever there is:

- Regulatory change.
- Change in Biman facility.
- Change in equipment.
- Major incident.
- Temperature excursion.
- Audit finding.
- Process change.
- New pharmaceutical handling capability.
- Significant organizational change.

All revisions shall be documented and approved through the applicable Biman document-control process.

Final Note:

In the event of any ambiguity, discrepancy, or confusion regarding the procedures outlined in this document, personnel must first consult the Cargo Operations Manual for clarification. Should the issue remain unresolved, reference must be made to the applicable IATA regulations.

This Standard Operating Procedure (SOP) is subject to revision, amendment, or correction at any time, in alignment with the latest directives issued by IATA, the Civil Aviation Authority of Bangladesh (CAAB), or Biman Bangladesh Airlines.

Under all circumstances, Biman's Safety Regulations shall take precedence and override any conflicting procedures or instructions.

END OF SOP

Safe Cargo. Controlled Temperature. Complete Traceability.