



FORM 1: PROPOSAL FOR A NEW FIELD OF TECHNICAL ACTIVITY

Circulation date 2020-09-01	Reference number: 292 (to be given by ISO Central Secretariat)
Closing date for voting 2020-11-24	
Proposer JISC	ISO/TS/P 292

A proposal for a new field of technical activity shall be submitted to the ISO Central Secretariat, which will assign it a reference number and process the proposal in accordance with the [ISO/IEC Directives Part 1, Clause 1.5](#). The proposer may be a member body of ISO, a technical committee, subcommittee or project committee, the Technical Management Board or a General Assembly committee, the Secretary-General, a body responsible for managing a certification system operating under the auspices of ISO, or another international organization with national body membership. Guidelines for proposing and justifying a new field of technical activity are given in the [ISO/IEC Directives Part 1, Annex C](#).

Proposal (to be completed by the proposer)

Title of the proposed new committee (The title shall indicate clearly yet concisely the new field of technical activity which the proposal is intended to cover).
Cold Chain Logistics
Scope statement of the proposed new committee (The scope shall precisely define the limits of the field of activity. Scopes shall not repeat general aims and principles governing the work of the organization but shall indicate the specific area concerned).
Standardization in the field of cold chain logistics. The scope will include, but is not limited to; - terms and conditions for carriage/storage service of refrigerated goods, physical handling of refrigerated goods (acceptance, loading, transshipment, storage, sorting, transportation and delivery), - maintenance and control methods of temperature-controlled facilities, quality control methods throughout the cold chain (e.g. temperature monitoring and control, prevention of damage, loss and delay), - hygiene management during carriage/storage service to prevent contamination of goods, - facilitation of logistical efficiency - manpower management, staff education and training, safety management for staff and workplaces, - safety and reliability of carriage/storage services, - information management and data processing such as customer management and cargo/parcel tracking, as well as terminology
Excluded: - Standardization covered by ISO/TC 34, ISO/TC 122, ISO/TC 283 and ISO/TC 304

- The proposer has checked whether the proposed scope of the new committee overlaps with the scope of any existing ISO committee**
- If an overlap or the potential for overlap is identified, the affected committee has been informed and consultation has taken place between proposer and committee on**
 - i. modification/restriction of the scope of the proposal to eliminate the overlap,**
 - ii. potential modification/restriction of the scope of the existing committee to eliminate the overlap.**
- If agreement with the existing committee has not been reached, arguments are presented in this proposal (under question 7) as to why it should be approved.**

Proposed initial programme of work. (The proposed programme of work shall correspond to and clearly reflect the aims of the standardization activities and shall, therefore, show the relationship between the subject proposed. Each item on the programme of work shall be defined by both the subject aspect(s) to be standardized (for products, for example, the items would be the types of products, characteristics, other requirements, data to be supplied, test methods, etc.). Supplementary justification may be combined with particular items in the programme of work. The proposed programme of work shall also suggest priorities and target dates.)

The new TC prioritizes the following items to be standardized:

1. Contactless refrigerated logistics in the whole process (see Annex A)
2. Terminology standard on cold chain logistics
3. Quality control and monitoring method under temperature-controlled storage, transportation and delivery
4. Hygiene control of staff to prevent contamination of goods
5. Hygiene control of refrigerated goods and facilities to avoid contamination and to prevent infection (including contactless, automated operations)
6. Delivery operations to the end user (including contactless, automated operations that contribute to safe and efficient delivery)
7. Security control of staff and refrigerated goods
8. Maintenance and management of ISO 23412:2020.

When this proposal is approved, we will start working on Item 1 at the first meeting.

Annex A is the draft document and draft ISO Form 4 relating Item 1, which has been prepared by SAC, China.

Indication(s) of the preferred type or types of deliverable(s) to be produced under the proposal (This may be combined with the "Proposed initial programme of work" if more convenient).

This TC develops all type of ISO deliverables such as IS, TS, PAS and TR.

A listing of relevant existing documents at the international, regional and national levels. (Any known relevant document (such as standards and regulations) shall be listed, regardless of their source and should be accompanied by an indication of their significance.)

- ISO 23412:2020 Indirect, temperature-controlled refrigerated delivery services - Land transport of parcels with intermediate transfer
- ISO/DIS 22712 'Refrigerating systems and heat pumps — Competence of personnel'. (ISO/TC 86/SC 1)
- WTO TFA article 7.9 Perishable Goods
- JSA-S1004:2020 Cold chain logistics services -Requirements for low temperature storage services and low temperature transport services
- ASEAN-Japan Guidelines on Cold Chain Logistics

A statement from the proposer as to how the proposed work may relate to or impact on existing work, especially existing ISO and IEC deliverables. (The proposer should explain how the work differs from apparently similar work, or explain how duplication and conflict will be minimized. If seemingly similar or related work is already in the scope of other committees of the organization or in other organizations, the proposed scope shall distinguish between the proposed work and the other work. The proposer shall indicate whether his or her proposal could be dealt with by widening the scope of an existing committee or by establishing a new committee.)

The proposed TC is intended to deal with the follow-up work for ISO 23412 developed by ISO/PC 315 "Indirect, temperature-controlled refrigerated delivery to services – land transport of parcels with intermediate transfer", and, at the same time, to expand its scope to cold chain logistics as a whole. There is no existing TC with the same scope.

Cold chain logistics constitutes an important part of the social infrastructure and it contributes to safe and efficient delivery of the goods, in coordination with related equipment and facilities that other TCs/SCs deal with. This new TC aims to establish widely applicable standards for the whole cold chain logistics system.

Outputs from this new TC facilitates and improves logistical efficiency and prevents deterioration of perishable goods such as temperature-sensitive good and other materials that require careful handling.

Furthermore, it is required to develop a standard to avoid face-to-face contact in the process of logistics distribution, effectively preventing and controlling the spread of disease, and protecting the health of personnel and consumers.

In order to avoid duplication and conflicts with other existing ISO/TCs and SCs, IEC/TCs and other organizations, this new TC will ensure to cooperate with them by establishment of liaison relationships as necessary.

A listing of relevant countries where the subject of the proposal is important to their national commercial interests.

The subject is relevant to all countries, especially to those:

- Observing a growing demand for better quality food and other refrigerated goods, due to economic development, expansion of E-commerce (EC) trading both domestically and globally, etc.
- Concerned with issues such as damages to food products caused by poor handling that often lead to food poisoning and food loss.
- Seeking effective measures for infection prevention and control, including that for COVID-19, throughout the supply chain from production to delivery.
- Seeking effective measures to enhance productivity of agriculture, fishery and related industries by realizing a long-distance transportation of perishable food products.

As for ISO/PC315, we have 35 member countries in total (as of July 2020):

P members: 16 countries

(China, Denmark, Finland, France, Germany, Hungary, India, Indonesia, Ireland, Italy, Japan, Republic of Korea, Malaysia, Philippines, Thailand, United Kingdom)

O members: 19 countries.

(Argentina, Austria, Bulgaria, Colombia, Cuba, Czech Republic, Estonia, Islamic Republic of Iran, Israel, New Zealand, Norway, Portugal, Romania, Russian Federation, Senegal, Sierra Leone, Singapore, Slovakia, Spain)

We welcome these NSBs as well as all those who have not attended PC315 to join the new TC.

A listing of relevant external international organizations or internal parties (other ISO and/or IEC committees) to be engaged as liaisons in the development of the deliverable(s). (In order to avoid conflict with, or duplication of efforts of, other bodies, it is important to indicate all points of possible conflict or overlap. The result of any communication with other interested bodies shall also be included.)

ISO/TC 34, TC 51, TC 52, TC 86, TC 94, TC 96, TC 104, TC 110, TC 111, TC 122, TC 154, TC 260, TC 283, TC 304, TC 308 and TC 313

UNCTAD

UNECE

WCO

WTO

A simple and concise statement identifying and describing relevant affected stakeholder categories (including small and medium sized enterprises) and how they will each benefit from or be impacted by the proposed deliverable(s).

Expected main stakeholders are as follows:

- Logistics providers: Enhancement of competitive strength in the market and social reliability, assurance of quality of refrigerated goods throughout the whole process of logistics.
- Shippers: Stabilization of supply system and logistics cost reduction with less damages to goods. Easier to identify good-quality logistics service providers.
- Consumers: Improvement of quality of life and more opportunities to purchase high-quality and safe products.
- Manufactures and producers: Expand their market and ensure the quality of goods
- Others: Infection prevention and control. Achievement of SDGs such as reduction of food losses.

An expression of commitment from the proposer to provide the committee secretariat if the proposal succeeds.

If the proposal is accepted, JISC is willing to undertake the work of secretariat of the new TC, and is committed to providing all resources to successfully run the secretariat.

Purpose and justification for the proposal. (The purpose and justification for the creation of a new technical committee shall be made clear and the need for standardization in this field shall be justified. Clause C.4.13.3 of [Annex C](#) of the ISO/IEC Directives, Part 1 contains a menu of suggestions or ideas for possible documentation to support and purpose and justification of proposals. Proposers should consider these suggestions, but they are not limited to them, nor are they required to comply strictly with them. What is most important is that proposers develop and provide purpose and justification information that is most relevant to their proposals and that makes a substantial business case for the market relevance and the need for their proposals. Thorough, well-developed and robust purpose and justification documentation will lead to more informed consideration of proposals and ultimately their possible success in the ISO IEC system.)

Logistics is a foundation of economic activities and a part of social infrastructure which plays an important role in our life. Especially, cold chain logistics, a transportation method to keep temperature steady through the whole supply chain from production to delivery, is a significantly effective measure to achieve safe transportation of essential goods such as foods and pharmaceutical goods.

Countries and regions in the world have been facing food poisoning and food loss problems during transportation due to damages caused by inappropriate temperature control.

Standardization of cold chain logistics will help improving this situation; it contributes to resolution of food loss and hygiene problems, quality improvement and expansion of sales opportunity for manufacturers and distributors. These match SDGs goal 2 and 12, especially to meet Target 2.3 (secure food producers' access to opportunities for value addition) and 12.3 (reducing food losses along supply chains).

Goal 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture

Goal 12: Ensure sustainable consumption and production patterns.

In addition, the volume of food products traded via EC and food delivery services has increased, especially due to behavioural changes to stay home under the COVID-19 pandemic. With the expectation that EC market of food products will grow steadily under the state of new normality and even afterwards, cold chain logistics has been becoming ever more important. Therefore, it is necessary to standardize the appropriate operation method for cold chain logistics including hand hygiene, disinfection and sterilization of equipment and facilities from the perspective of prevention of infectious diseases such as COVID-19.

Furthermore, as the demand for contactless delivery (e.g. non face-to-face delivery) grows, it is also important to develop standards keeping in mind that there are new, efficient measures such as manpower saving utilizing artificial intelligence and robots, contactless operation methods between person and person as well as between person and goods, etc.

Japan has led the development of ISO23412:2020 regarding refrigerated delivery service which was published in May 2020, less than 3 years from the proposal. In light of the situation described above, Japan is willing to make further contribution through activities in the new TC to promote the standardization of cold chain logistics.

Signature of the proposer

Yutaka OKAMOTO

Committee Manger of ISO/PC 315

Further information to assist with understanding the requirements for the items above can be found in the [Directives, Part 1, Annex C](#).



DRFT FORM 4: NEW WORK ITEM PROPOSAL (NP)

Circulation date Click here to enter a date.	Reference number: Enter Number (to be given by ISO Central Secretariat)
Closing date for voting Click here to enter a date.	
Proposer <input checked="" type="checkbox"/> ISO member body: Standardization Administration of China (SAC) <input type="checkbox"/> Committee, liaison or other ¹ : Click here to enter text.	N Click here to enter text.
Secretariat SAC	

A proposal for a new work item within the scope of an existing committee shall be submitted to the secretariat of that committee.

¹The proposer of a new work item may be a member body of ISO, the secretariat itself, another technical committee or subcommittee, an organization in liaison, the Technical Management Board or one of the advisory groups, or the Secretary-General. See ISO/IEC Directives Part 1, [Clause 2.3.2](#).

The proposer(s) of the new work item proposal shall:

- make every effort to provide a first working draft for discussion, or at least an outline of a working draft;
- nominate a project leader;
- discuss the proposal with the committee leadership prior to submitting the appropriate form, to decide on an appropriate development track (based on market needs) and draft a project plan including key milestones and the proposed date of the first meeting.

The proposal will be circulated to the P-members of the technical committee or subcommittee for voting, and to the O-members for information.

IMPORTANT NOTE

Proposals without adequate justification risk rejection or referral to originator.

Guidelines for proposing and justifying a new work item are contained [in Annex C of the ISO/IEC Directives, Part 1](#).

- The proposer has considered the guidance given in the Annex C during the preparation of the NP.

Resource availability:

- There are resources available to allow the development of the project to start immediately after project approval* (i.e. project leader, related WG or committee work programme).

* if not, it is recommended that the project is first registered as a preliminary work item (a Form 4 is not required for this) and when the development can start, Form 4 should be completed to initiate the NP ballot.

Proposal (to be completed by the proposer, following discussion with the committee leadership)

Title of the proposed deliverable

English title

Technical specification for contactless refrigerated logistics in the whole process

French title (if available)

(In the case of an amendment, revision or a new part of an existing document, include the reference number and current title)

Scope of the proposed deliverable

Standardization of the requirements of contactless delivery service flow and quality control in the whole process of refrigerated chain logistics from sales end to client end, including no contact between person and person, no contact between person and express goods.

Purpose and justification of the proposal

Non-contact logistics can reduce directly face-to-face contact between personnel in logistics. Contactless delivery service is a great help for people still requiring the company's services but worrying about the infection spreading.

The non-contact operation specification in cold chain logistics can be standardized to avoid face-to-face contact in the process of logistics distribution, effectively prevent and control the spread of virus infection, and protect the health of consumers.

The specification will regulate the non-contact operation norm of the whole cold chain logistics process, including the use of online mode to replace the traditional mode, delivery in the location agreed upon previously, online query path node, online opening invoice etc., with the purpose of avoiding face to face in the process of logistics distribution, effectively preventing and controlling the spread of the virus infection, and securing the health of consumers.

Consider the following:

Is there a verified market need for the proposal?

What problem does this document solve?

What value will the document bring to end-users?

See [Annex C](#) of the ISO/IEC Directives part 1 for more information.

See the following guidance on justification statements in the brochure 'Guidance on New work': <https://www.iso.org/publication/PUB100438.html>

Please select any UN Sustainable Development Goals (SDGs) that this document will support. For more information on SDGs, please visit our website at www.iso.org/SDGs."

- GOAL 1: No Poverty
- GOAL 2: Zero Hunger
- GOAL 3: Good Health and Well-being
- GOAL 4: Quality Education
- GOAL 5: Gender Equality
- GOAL 6: Clean Water and Sanitation
- GOAL 7: Affordable and Clean Energy
- GOAL 8: Decent Work and Economic Growth
- GOAL 9: Industry, Innovation and Infrastructure
- GOAL 10: Reduced Inequality
- GOAL 11: Sustainable Cities and Communities
- GOAL 12: Responsible Consumption and Production
- GOAL 13: Climate Action
- GOAL 14: Life Below Water
- GOAL 15: Life on Land
- GOAL 16: Peace and Justice Strong Institutions
- N/A GOAL 17: Partnerships to achieve the Goal

Preparatory work

(An outline should be included with the proposal)

- A draft is attached
- An outline is attached
- An existing document will serve as the initial basis

The proposer or the proposer's organization is prepared to undertake the preparatory work required: Yes No

If a draft is attached to this proposal

Please select from one of the following options (note that if no option is selected, the default will be the first option):

- Draft document can be registered at Working Draft stage (WD – stage 20.00)
- Draft document can be registered at Committee Draft stage (CD – stage 30.00)
- Draft document can be registered at Draft International Standard stage (DIS – stage 40.00)
- If the attached document is copyrighted or includes copyrighted content, the proposer confirms that copyright permission has been granted for ISO to use this content in compliance with [clause 2.13](#) of the ISO/IEC Directives, Part 1 (see also the [Declaration on copyright](#)).

Is this a Management Systems Standard (MSS)?

- Yes No

NOTE: if Yes, the NP along with the Justification study (see Annex SL of the Consolidated ISO Supplement) must be sent to the MSS Task Force secretariat (tmb@iso.org) for approval before the NP ballot can be launched.

Indication of the preferred type or types of deliverable to be developed

- International Standard
- Technical Specification
- Publicly Available Specification

Proposed Standard Development Track (SDT)

To be discussed between proposer and Secretary considering, for example, when does the market (the users) need the document to be available, the maturity of the subject etc.

18 months* 24 months 36 months 48 months

* Projects using SDT 18 are eligible for the 'Direct publication process' offered by ISO /CS which reduces publication processing time by approximately 1 month.

Draft project plan (as discussed with committee leadership)

Proposed date for first meeting: [Click here to enter a date.](#)

Proposed dates for key milestones:

1st Working Draft (if any) circulated to experts: [Click here to enter a date.](#)

Committee Draft ballot (if any): [Click here to enter a date.](#)

DIS submission*: [Click here to enter a date.](#)

Publication*: [Click here to enter a date.](#)

* Target Dates on DIS submission and Publication should preferably be set a few weeks ahead of the limit dates (automatically given by the selected SDT).

For guidance and support on project management; descriptions of the key milestones; and to help you define your project plan and select the appropriate development track, see: go.iso.org/projectmanagement

NOTE: The draft project plan is later used to create a detailed project plan, when the project is approved.

Known patented items (see ISO/IEC Directives, Part 1, [clause 2.14](#) for important guidance)

Yes No

If "Yes", provide full information as annex

Co-ordination of work

To the best of your knowledge, has this or a similar proposal been submitted to another standards development organization?

Yes No

If "Yes", please specify which one(s):

[Click here to enter text.](#)

A statement from the proposer as to how the proposed work may relate to or impact on existing work, especially existing ISO and IEC deliverables. The proposer should explain how the work differs from apparently similar work, or explain how duplication and conflict will be minimized

There is some existing ISO deliverables specify the indirect, temperature-controlled refrigerated delivery services, or specify the supply chain applications of RFID(read/write radio-frequency identification technology) associated with freight containers, product tagging, product packing, transport units, returnable transport items and returnable packing items. The difference between the proposal work for specification and these deliverables is that it will specify the contactless norm of cold supply chain in the whole process. Including the use of online mode to replace the traditional mode, delivery in the location agreed upon previously, online query path node, online opening invoice etc.

A listing of relevant existing documents at the international, regional and national levels

ISO 17363:2013 Supply chain applications of RFID-freight containers
 ISO 17367:2013 Supply chain applications of RFID-product tagging
 ISO 17366:2013 Supply chain applications of RFID-product packaging
 ISO17365:2013 Supply chain applications of RFID-transport units
 ISO17364:2013 Supply chain applications of RFID-returnable transport items and returnable packing items
 ISO 28001:2007 Security management systems for the supply chain — Best practices for implementing supply chain security, assessments and plans — Requirements and guidance
 ISO/FDIS 23412 Indirect, temperature-controlled refrigerated delivery services – land transport of parcels with intermediate transfer
 GB/T 28577-2012 Classification and basic specification for cold chain logistics
 GB/T 31086-2014 Requirements and ability evaluation indicator of cold chain services for logistics
 WB/T 1054-2015 Service specification for catering cold chain logistics
 WB/T1060-2016 Technical specifications for functions and selection of refrigerating vehicle for transporting food on road

Please fill out the relevant parts of the table below to identify relevant affected stakeholder categories and how they will each benefit from or be impacted by the proposed deliverable(s)

	Benefits/impacts	Examples of organizations/companies to be contacted
Industry and commerce – large industry	Giving instructions on the concerning delivery services industry to carry out the contactless operation during the whole process of cold chain logistics with the purpose of avoiding face-to face contact	N/A
Industry and commerce – SMEs	N/A	N/A
Government	The concerning government will take advantage of the specification to curb and prevent virus infection	N/A
Consumers	The process of cold chain logistics will be more effective than before and it will be convenient for the consumers to get the delivered products without direct contact.	N/A
Labour	Create jobs	N/A
Academic and research bodies	N/A	N/A
Standards application businesses	N/A	N/A
Non-governmental organizations	N/A	N/A
Other (please specify)	N/A	N/A

<p>Liaisons</p> <p>A listing of relevant external international organizations or internal parties (other ISO and/or IEC committees) to be engaged as liaisons in the development of the deliverable(s).</p> <p>Click here to enter text.</p>	<p>Joint/parallel work</p> <p>Possible joint/parallel work with</p> <p><input type="checkbox"/> IEC (please specify committee ID) Click here to enter text.</p> <p><input type="checkbox"/> CEN (please specify committee ID) Click here to enter text.</p> <p><input type="checkbox"/> Other (please specify) Click here to enter text.</p>
<p>A listing of relevant countries which are not already P-members of the committee</p> <p>Click here to enter text.</p> <p>NOTE: The committee manager shall distribute this NP to the ISO members of the countries listed above to ask if they wish to participate in this work</p>	
<p>Proposed Project Leader (name and e-mail address)</p> <p>Zhu Xianghua zhuxh@cnis.ac.cn Xing Jinjiao Xingjinjiao@shuanghui.net Ren Jie renjie@cweme.com</p>	<p>Name of the Proposer (include contact information)</p> <p>Dr.LI Yubing, Deputy Director General, Department of Standards Innovative Management, SAMR; Secretary General of Chinese Member Body of ISO, SAC</p>
<p>This proposal will be developed by</p> <p><input type="checkbox"/> An existing Working Group (please specify which one: <input type="checkbox"/> A new Working Group (title: Click here to enter text.) (Note: establishment of a new WG must be approved by committee resolution)</p> <p><input type="checkbox"/> The TC/SC directly</p> <p><input checked="" type="checkbox"/> To be determined</p>	
<p>Supplementary information relating to the proposal</p> <p><input checked="" type="checkbox"/> This proposal relates to a new ISO document;</p> <p><input type="checkbox"/> This proposal relates to the adoption as an active project of an item currently registered as a Preliminary Work Item;</p> <p><input type="checkbox"/> This proposal relates to the re-establishment of a cancelled project as an active project.</p> <p><input type="checkbox"/> Other: Click here to enter text.</p>	
<p>Maintenance agencies (MA) and registration authorities (RA)</p> <p><input type="checkbox"/> This proposal requires the service of a maintenance agency. If yes, please identify the potential candidate: Click here to enter text.</p> <p><input type="checkbox"/> This proposal requires the service of a registration authority. If yes, please identify the potential candidate: Click here to enter text.</p> <p>NOTE: Selection and appointment of the MA or RA is subject to the procedure outlined in the ISO/IEC Directives, Annex G and Annex H, and the RA policy in the ISO Supplement, Annex SN.</p>	

Annex(es) are included with this proposal (give details)

[Click here to enter text.](#)

Additional information/questions

[Click here to enter text.](#)

Reference number of working document:

Date:

Reference number of document: **ISO/WD nnn-n**

Committee identification:

Secretariat: SAC

Technical specification for contactless refrigerated logistics in the whole process

Document type: International standard

Élément introductif — Élément principal — Partie n: Titre de la partie

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO nnn-n consists of the following parts, under the general title *Technical specification for contactless refrigerated logistics in the whole process*:

Introduction

Non-contact logistics can reduce directly face-to-face contact between personnel in logistics. Contactless delivery service is a great help for people still requiring the company's services but worrying about the infection spreading.

Technical specification for contactless refrigerated logistics in the whole process

1 Scope

Standardization of the requirements of contactless delivery service flow and quality control in the whole process of refrigerated chain logistics from sales end to client end, including no contact between person and person, no contact between person and express goods.

2 Requirements

2.1 General

The requirements of non-contact cold chain logistics minimize human-to-human contact and non-contact between person and express goods; at the same time, improve logistics efficiency and ensure the freshness of items.

2.2 Online service in information platform

Use online mode to replace the traditional mode, including online order, online opening invoice and online query path node in the certain information platform. In particular, the use of big data, Internet of things and other technologies to achieve the intelligence of cold chain logistics, will be able to greatly improve the efficiency of cold chain logistics distribution, and the whole cold chain logistics distribution for better management and control.

2.3 Service flow of Contactless Cold Chain Logistics

2.3.1 Taking Delivery in the Producing Area

Consignees and producers agree online previously to take delivery of the goods at the designated location. Take measures to avoid direct contact, engage in temperature measurement, and take measures for cleaning and disinfection, etc.

2.3.2 Warehouse Management

When entering the warehouse, the basic information (including production date, type, weight, etc.) of the goods is written and bound on the handheld terminal. The goods are placed on the conveyor line, and the detection door is equipped with a fixed reader. When the RFID tags on the cargo box and the tray enter the reader's radiation range, they can be read. The staff checks the basic information in front of the screen instead of manually opening the box for inspection goods. By adopting automated measures, robots are used to manage automatic refrigerated warehouses as much as possible; relevant cleaning and disinfection measures are taken; standardized warehouse management is performed; temperature measurement is performed for operators, and sanitary management requirements are performed.

2.3.3 Transportation Management

Transportation personnel take temperature measurement and take safety precautions before delivery, including wears a surgical mask, goggles, protective clothing, disposable gloves, foot cover and head cover. The means of transportation shall be timely cleaned and disinfected before loading and after unloading; Keep a record of transportation management, etc. The temperature sensor included in the electronic tag is used to collect temperature information at any time, and the information is transmitted through GPRS in real time, so that the staff can keep track of the temperature inside the cabin at any time. When an exception occurs, the system automatically alarms.

2.3.4 Delivery

After receiving the order, sort out the goods, arrange the delivery, and update the RFID information of the goods. Delivery location agreed upon previously between distribution personnel and consumers online to avoid face to face contact. Take measures to avoid direct contact, engage in temperature measurement, and take measures for cleaning and disinfection, etc.

2.3.5 Receiving the Goods of Delivery

Consumers receive the goods in designated location agreed by them online previously. After receiving the goods, consumers evaluate the service online. It's necessary to fit out fresh intelligent cabinets and small refrigerating plant in community nearby.

2.4 Quality Control

In the whole process of cold chain distribution from pre-cooling of the producing area, automatic cold storage, the whole process of cold chain transportation to terminal distribution, each process should pass through different temperature zones to ensure good product quality. Quality control includes situation monitoring of delivery personnel, daily order fulfilment monitoring, sudden abnormal data monitoring, project execution monitoring, risk control data monitoring, and core index fulfilment monitoring.