



YAMATO HOLDINGS CO., LTD.

## Refrigerated parcel delivery service “Cool TA-Q-BIN” and “PAS1018” project

-- A new standard development for operation of door-to-door refrigerated parcel delivery services --

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Yamato Holdings Co., Ltd.

The 21st ISL in Taiwan

3 July 2016



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## **Cool TA-Q-BIN**

Yamato's refrigerated parcel delivery service

# Company outline



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## Yamato Holdings Co., Ltd.

Headquarters	Tokyo, Japan
<b>Founded</b>	<b>1919</b>
Revenue	1,416 billion yen (FY 2016)
Employees	196,582 (Mar 2016)
Business areas	24 countries

## History

- 1919 Yamato Transport established
- 1976 TA-Q-BIN started in Japan (40 year anniversary)**
- 1988 Cool TA-Q-BIN started in Japan**
- 2000 President Transnet (統一速達) started TA-Q-BIN in Taiwan
- 2005 Yamato Holdings established
- 2010-2011 TA-Q-BIN launched in Shanghai, Hong Kong, Singapore and Malaysia
- 2013 Operation started at Haneda Chronogate

# Main business



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## Door-to-door parcel delivery services; a series of “TA-Q-BIN”



### TA-Q-BIN operation in Japan (FY 2016)

**Total number of general parcels**  
1,731 million (Daily 4.7 million)

**Total number of refrigerated parcels**  
192 million (Daily 0.5 million)

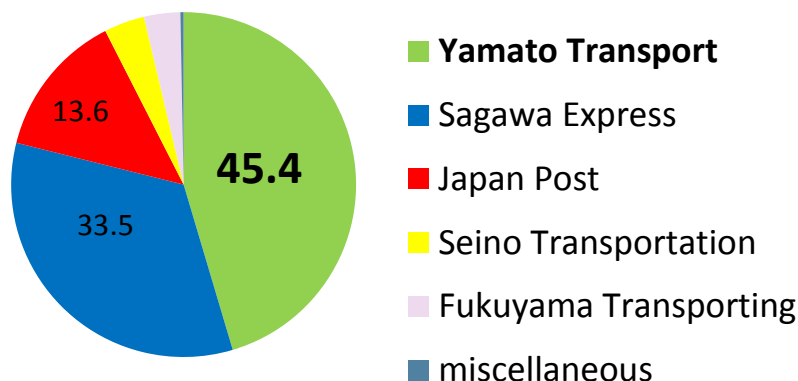
Employees	159,844
Vehicles	43,782
Operation sites	4,000
Retail accesses	220,000

# Market analysis in Japan (FY 2015)



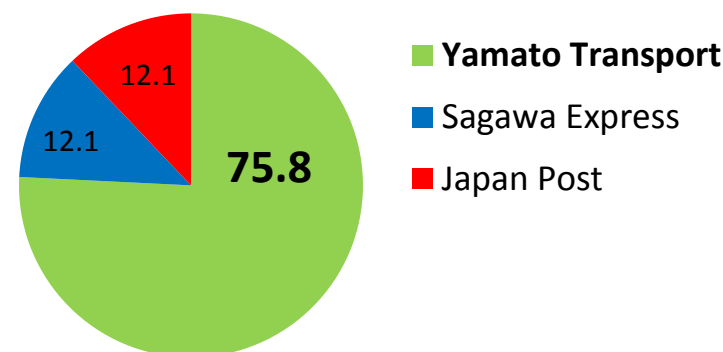
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## General parcel delivery service



Company	Volume (million)	Market share (%)
<b>Yamato Transport</b>	<b>1,622</b>	<b>45.4</b>
Sagawa Express	1,196	33.5
Japan Post	485	13.6
Seino Transportation	135	3.8
Fukutsu Transporting	123	3.4
miscellaneous	9	0.3
<b>Total</b>	<b>3,570</b>	<b>100.0</b>

## Refrigerated parcel delivery service



Company	Volume (million)	Market share (%)
<b>Yamato Transport</b>	<b>187</b>	<b>75.8</b>
Sagawa Express	30	12.1
Japan Post	30*	12.1*
miscellaneous	+	+
<b>Total</b>	<b>247</b>	<b>100.0</b>

\*calculated by Yamato

# General TA-Q-BIN system as the basis for Cool TA-Q-BIN






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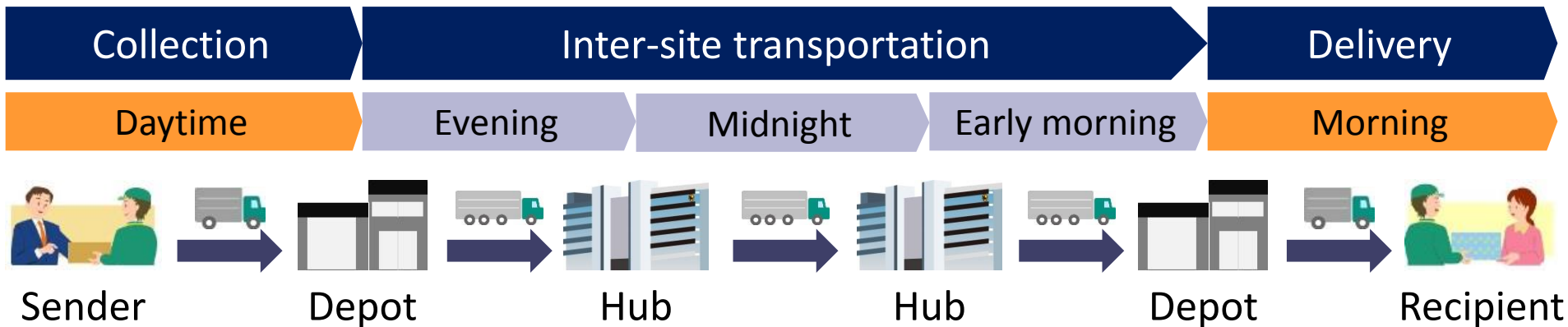
## A) Standard delivery duration system



Ex) Delivery days from Tokyo

-  Next day (morning)
-  Next day (after 2 pm)
-  N+2 day (morning)

## B) Hub-and-spoke system



# Service attributes of Cool TA-Q-BIN



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Yamato adopts “**multiple transportation-temperature ranges delivery**” (i.e. chilled, frozen, general) in its transportation system.

<b>Transportation temperature range</b>	<b>Chilled; 0 to 10 °C Frozen; below -15 °C</b>
<b>Type of user (sender)</b>	<b>Business clients, individual customers</b>
Goods type	Foods, chemicals, medical devices etc.
Business day	365 days
Size limit	120cm (amount of length + width + height) (160cm for general TA-Q-BIN)
Weight limit	15kg (25kg for general TA-Q-BIN)
<b>Fee</b>	<b>General TA-Q-BIN fee plus extra fee of Cool service</b>
Payment	Cash, credit card, e-moneys etc.



# Cool TA-Q-BIN system

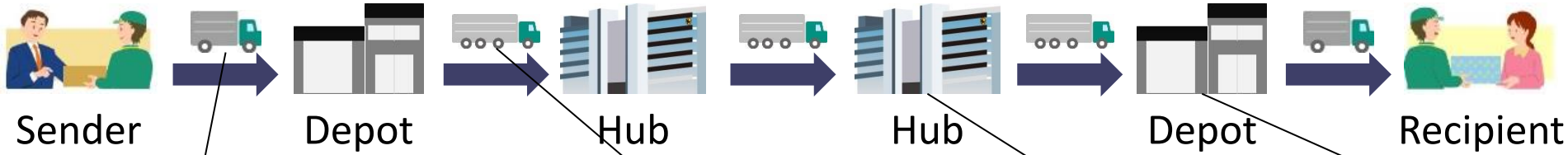


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Collection

Inter-site transportation

Delivery



**Delivery vehicle** with multiple compartments for 3 transportation-temperature ranges. (i.e. chilled, froze and general)

**Mobile cold storage** (left) to be loaded with general TA-Q-BIN (right) during inter-site transportation. (called “unit load system”)

**Temperature-controlled room** in the hub.

**Refrigerator and freezer** in the depot.



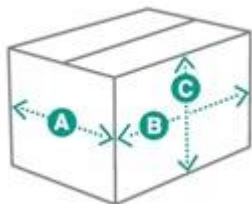
# Fee of Cool TA-Q-BIN



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(JPY, excluding tax)

Size range	Parcel size	Parcel weight	Extra fee for Cool	Fee for general TA-Q-BIN (Ex. from Tokyo to Osaka)
Size 60	≤ 60 cm	≤ 2 kg	<b>+200</b>	800
Size 80	≤ 80 cm	≤ 5 kg	<b>+200</b>	1,000
Size 100	≤ 100 cm	≤ 10 kg	<b>+300</b>	1,200
Size 120	≤ 120 cm	≤ 15 kg	<b>+600</b>	1,400
Size 140	No service for parcels exceeding 120cm or 15kg			1,600
Size 160				1,800



Size = A + B + C

Ex) Calculation of fee for 120 sized parcel

¥1,400 (general) + ¥600 (Cool) = ¥2,000 (total)

# Suggestions from Yamato's operation



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Building a temperature-controlled transportation system based on the existing transportation network for general parcels has;

## Advantage

### **Low initial investment**

-- installation of refrigerated compartment into vehicles and operation sites.

### **Speedy set up over expanded service areas**

-- making use of existing transportation network. (i.e. vehicles and operation sites)

### **Reasonable prices for customers**

-- delivering parcels at multiple transportation-temperature ranges within a same vehicle.

## Disadvantage

**Exposure risks** to a non temperature-controlled environment with no special facilities. (e.g. special refrigerated warehouses)

**Constraints of procedures** required by existing operation rules of the transportation system for general parcels.

**Complicated operations** with parcels at multiple transportation-temperature ranges within a same vehicle. (i.e. chilled, frozen and general)



## **Introduction of PAS1018**

A new standard for operation of door-to-door refrigerated parcel delivery service.

# What is PAS1018 ?



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Publisher	British Standards institution (BSI)
Type	Publicly Available Specification (PAS)
<b>Working title</b>	<b>PAS1018:2017</b> <b>Indirect, temperature-controlled delivery services -- Land transportation of chilled parcels and frozen parcels with intermediate transfer -- Specification</b>
<b>Publication</b>	<b>February 2017</b> (target date)
Sponsor	Yamato Holdings Co., Ltd.
Further information	PAS 0: 2012 “Principles of PAS standardization”

# Scope of PAS1018



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- This PAS specifies requirements for the provision and operation of indirect, temperature-controlled delivery services for chilled parcels and frozen parcels in land transportation vehicles. It includes all delivery service stages from receipt of a chilled or frozen parcel from the delivery service user to its delivery at the designated destination, including intermediate transfer of the refrigerated parcels between refrigerated vehicles and via a geographical routing system.
- **PAS 1018 covers requirements for the transportation of refrigerated parcels in temperature-controlled conditions within refrigerated vehicles and through operation sites.**
- **This PAS is intended for application by temperature-controlled delivery service providers.**
- **This PAS does not cover direct refrigerated courier services** in which chilled parcels and frozen parcels are collected from the delivery service user and transported directly to a recipient without in-transit transfer.
- **It does not cover requirements for the quality or specifically for the temperature of the contents of the chilled parcels or frozen parcels being delivered** and their pre-point of receipt state, but does set the requirements for the delivery service carrying them.

# Contents of PAS1018



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- 1 Scope
  - 2 Normative references
  - 3 Terms and definitions
  - 4 Delivery service definition and communications**
  - 5 Business license for delivery service providers
  - 6 Transportation network
  - 7 Refrigerated parcels**
  - 8 Information exchanged on acceptance/collection of refrigerated parcels for delivery**
  - 9 Information exchanged between the delivery service provider and the recipient
  - 10 Conditions for operation sites and refrigeration equipment
  - 11 Work instructions and operational manuals
  - 12 Staffing
  - 13 Monitoring and improving the delivery service
- Annex Acceptable exposure times**



# Acceptable exposure times for refrigerated parcels



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Environmental temperature (°C)	Acceptable exposure time (Min)
$35\text{ °C} < x$	$\leq 5\text{ min}$
$25\text{ °C} < x \leq 35\text{ °C}$	$\leq 7\text{ min}$
$15\text{ °C} < x \leq 25\text{ °C}$	$\leq 15\text{ min}$
$5\text{ °C} < x \leq 15\text{ °C}$	$\leq 30\text{ min}$
$x \leq 5\text{ °C}$	$\leq 180\text{ min}$

NOTE The table above is applied to both chilled parcels and frozen parcels in the case of being exposed to non temperature-controlled environment during transference between refrigerated vehicles.

# Public consultation of PAS1018 held by BSI



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Date From 7th of July to 5th of August 2016

Website BSI Draft review system  
<https://drafts.bsigroup.com/>

The screenshot shows the BSI Draft Review website. At the top, the BSI logo is on the left, and navigation links for 'BSI Group', 'New Proposals', 'Standards Development', and 'Published Standards' are on the right. Below this is a dark blue header with 'Draft Review' on the left and 'Home', 'Register', 'Log in', 'Contact Us', 'Help', and a 'Log in' button on the right. The main content area has a dark background with the heading 'An easy way to comment on draft standards'. Below the heading are four numbered steps, each with an icon and a description:

- 1 Search**: Use the search bar below or browse by category to find standards relevant to your business or industry.
- 2 Read**: Read and review the current standard and think about how it would affect you and your business.
- 3 Comment**: Comment on the draft standard and help shape its future.
- 4 Share**: We make it easy for you to share standards and comments with colleagues.



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## **Subjects for further study**

# Subjects for further study



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1. What conditions are required for this type of refrigerated parcel delivery services in terms of operation ?
2. What requirements should be defined in PAS1018 with regard to those services ?
3. Is there any existing study to refer in determining the acceptable exposure times in PAS1018 ?
4. Where can potential opportunities be found for this type of refrigerated parcel delivery services ?



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