



Baggage at Amsterdam Airport Schiphol



AirportCity

Amsterdam Airport Schiphol has the atmosphere of a metropolis and is a shining example of an AirportCity: a leading, efficient airport that provides the full range of services required by visitors and companies located there 24 hours a day, seven days a week. In addition to banks, shops, restaurants, conference centres, playing areas for children, hotels and a casino, Amsterdam Airport Schiphol also houses a collection of modern art. There is always something pleasing to do between checking in and boarding. All of the facilities and services ensure a smooth start to a holiday and a more pleasant and comfortable departure.

Schiphol Group aims to rank among the most prominent airport companies. Schiphol Group creates sustainable value for its stakeholders by developing AirportCities and positioning Amsterdam Airport Schiphol as Europe's preferred airport.

Baggage at Amsterdam Airport Schiphol

Each year, Schiphol handles approximately 50 million items of baggage. This is around 120,000 bags a day during quiet periods and 180,000 bags a day during extremely busy periods, such as at the start of the summer holiday season. Of the total number of bags, approximately 41.5 percent is transfer baggage. Transfer baggage is baggage belonging to transfer passengers. The share of transfer baggage is large because KLM and its partners, which jointly constitute Schiphol's main user, use the airport as a hub.

A fully automated and flexible baggage system is required to properly handle the large quantities of transfer baggage. That's why Schiphol continuously invests in expanding and innovating the baggage system. The airport therefore has the world's most modern baggage systems.



The future is 70MB

The number of bags handled at Schiphol annually is set to increase in the coming years to 70 million. To ensure that this increased volume of baggage can continue to be handled properly, Schiphol, together with its partners KLM and VIBM, the supplier of systems and software, is implementing a major investment programme known as 70MB (70 million bags). This programme is not only designed to handle 70 million suitcases a year but also to carry this out at lower costs per suitcase with the same number of man-hours as at the present time, under better working conditions and with improved quality.

The 70MB programme includes the expansion of baggage capacity (the construction of additional halls for sorting and screening baggage), innovation (intelligent technical solutions such as the baggage robot, an automatic unloading system and an automatic conveyor for containers) and process improvement (reducing peaks in baggage volume, for example).

In 2009 a new hall with four additional transfer unloading quays, including an automatic unloading system, opened at Pier D, and a similar hall was completed at Pier E in 2010. At the end of 2010, the new South Baggage Hall was completed, comprising an ultra-modern space with six loading robots, two transfer unloading quays and a large-scale baggage buffer with 4,200 storage positions.

New: South baggage hall

The new South Hall covers approximately 15,000 square metres. It was completed at the end of 2010, with the opening ceremony held at the beginning of 2011. There are plenty of reasons why the South Hall is 70MB's showpiece and a milestone in the project. The hall was designed to facilitate more efficient baggage handling at peak times, with the buffer used to store baggage with no immediate priority. Once the peak has subsided, baggage is sent from the buffer to the robots, which then start loading the containers. Loading procedures have furthermore been adapted to reduce the physical strain on employees.



Baggage robot and automatic unloading system: unique in the world

The loading and unloading of suitcases involves hard labour. Since the summer of 2006, employees in E Basement have gained assistance from a robot to load trolleys. The robot was a world first and was replaced by an improved version in 2008. Six of these robots operate in the new South Hall. The mechanical unloading module (MUM), or automatic unloading system, has been in operation in Hall D since August 2009. This system lifts up a container, tips it over and empties it onto a lateral. Likewise, it is unique in the world. The only human effort required with respect to both the baggage robots and MUM is operating the control panel. Baggage-handling employees undergo special training to operate the robots and MUM.

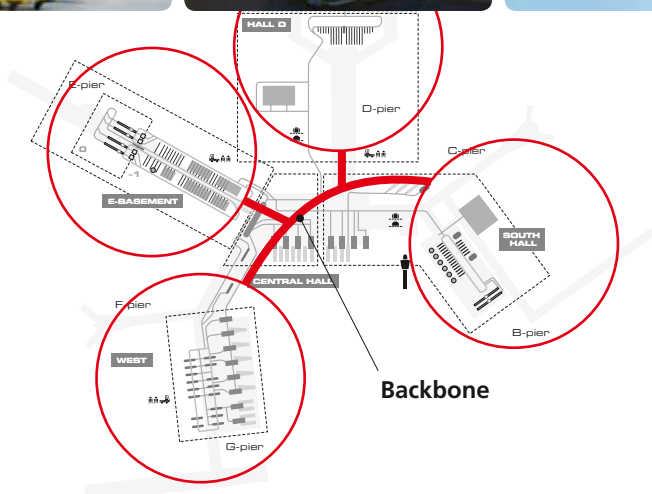
The people behind the baggage

Over 2,000 people, operating in shifts 24 hours a day, seven days a week, work to ensure that baggage is properly handled. Approximately 125 of these are Amsterdam Airport Schiphol employees who are responsible for the development, control, and management and maintenance of all baggage systems, including the computers and software that control the systems.

Handling companies carry out the physical handling of baggage. The largest of these is KLM, with approximately 1,100 employees working in the baggage areas. Other handling companies are Menzies Aviation, Aviapartner, KLM Customer Ground Handling and Servisair. Together, these companies serve more than 100 airlines.

Baggage handling

Schiphol has four areas where baggage is handled. From left to right, these areas are known as West, Basement E, Hall D and South. West is used for handling primarily arriving and departing baggage, while Basement E and Hall D are used only for handling transfer baggage. The new South Hall is currently still used for handling arriving and departing baggage but has been equipped to process transfer baggage more efficiently, with the addition of two transfer unloading quays and a large buffer. From 2013, the four baggage areas will be linked to each other by the Backbone. The Backbone will ultimately connect all baggage areas, thereby further extending total capacity and optimising the efficiency of the transfer process.



Departing baggage

A baggage item handed in at a check-in desk or entered through a Self-Service Drop-Off Point can be on board the aircraft in 25 minutes. Based on the information on the suitcase's barcode label, the baggage system transports the suitcase to the correct lateral. From the lateral, baggage-handling employees load the suitcases destined for large aircraft onto containers, or onto trolleys if the bags are destined for small aircraft. Baggage tractors are then used to transport the baggage to the aircraft, where apron personnel load the baggage onto the aircraft.

Self Service Drop-Off Points

In 2008, a pilot programme involving Self-Service Drop-Off Points (SSDOPs) was launched in Departure Hall 2. SSDOPs allow passengers to print baggage labels and enter suitcases into the system themselves. More SSDOPs were placed following the successful trial. A total of six have been in operation from 2010 and their number will be expanded even further.



Transfer baggage

Transfer baggage is baggage that accompanies passengers transferring to another flight at Amsterdam Airport Schiphol. Depending on the port of embarkation and final destination, it takes 25 to 40 minutes to transfer baggage from one aircraft to

another. This baggage is transported from the aircraft of arrival to the baggage basements, where it is unloaded onto a lateral by baggage-handling employees. Using the information on the barcode labels, the baggage system automatically transports the baggage to the lateral of the connecting flight. Baggage not scheduled for immediate continuation of a journey is temporarily stored in a buffer, from where it is automatically retrieved at the right time.

Arriving baggage

Passengers can usually claim baggage from baggage carrousel or baggage belts 20 to 30 minutes after it has arrived at Schiphol. Suitcases are transported from the aircraft to the baggage basements and unloaded onto a lateral directly connected to the baggage carrousel or baggage belt in the arrival hall.

Hold baggage security measures

Since the bombing of Pan Am Flight 103 above Lockerbie, the law requires that all hold baggage be fully checked for anything that could pose a safety risk. Hand baggage is checked at the gates in the departure halls. For hold baggage, screening machines have been incorporated into the baggage system. If there is any doubt about the contents of a suitcase or hand baggage item, it is opened and its contents examined, where possible in the presence of the passenger concerned.

Delayed baggage

If the baggage misses its connection, the airline will ensure that it is loaded onto the next flight. Delayed baggage is usually delivered to the owner within 24 hours. Passengers themselves can also take measures to prevent their baggage from being delayed. The first of these measures is checking in on time and properly securing or fastening handles, belts and buckles. These will then not get stuck in the system and will not cause a system breakdown. Should a suitcase nevertheless unexpectedly be left behind, rapid identification of its owner eases corrective action. A suitcase label specifying a name and telephone number, and a piece of paper in the suitcase providing relevant details are a great help in this context. It also helps if the relevant passenger has a photograph of the suitcase and if the suitcase has unique features.



Facts & Figures

- In terms of passenger volume, Amsterdam Airport Schiphol is Europe's fifth largest airport after London Heathrow, Paris Charles de Gaulle, Madrid Barajas and Frankfurt. In terms of cargo volume, Schiphol ranks third in Europe.
- Together with its Skyteam partners, home carrier KLM, the main user, focuses strongly on transfer passengers. Partly because of this focus, about 41.5 percent of passengers at Schiphol are transfer passengers.
- In 2010, 45.2 million passengers travelled to, from or via Schiphol. They took almost 50 million baggage items with them.
- The aim of the 70MB investment programme is to handle a total of 70 million suitcases a year.
- 120,000-160,000 baggage items are sorted at Schiphol daily. The number of bags can even rise to 180,000 on peak days.
- Almost 2,000 people are engaged in baggage handling, of which 125 are Schiphol employees and 1,100 are KLM employees.
- Together, the different handling companies serve over 100 airlines.
- Transfer baggage not scheduled for immediate continuation of a journey is automatically and temporarily stored in a dedicated storage area. Schiphol has a buffer capacity of 3,000 baggage items in Hall D, 1,500 items in Basement E and 4,200 baggage items in the new South Hall.
- The Schiphol is situated entirely at about 4.5 metres below sea level. The baggage halls are situated deepest of all, in some places up to 13 metres below sea level. The wall of Basement E is 1.1 metres thick in order to withstand the groundwater.
- In total, the baggage areas include 21 kilometres of conveyors and a five-kilometre rail system. The systems operate on 105 servers, while the combined rail systems in Pier D and South are powered by almost 2,000 engines.
- The longest distance a suitcase can travel at Amsterdam Airport Schiphol is 2.5 kilometres.

Baggage capacity

From	Location	Size
1967	Old South/Departure Hall 1	17,000 m ²
1988	Central and E/Departure Hall 2	22,000 m ²
1992	West/Departure Hall 3	10,000 m ²
2002	Pier D	12,000 m ²
2004	West expansion	3,500 m ²
2009	Hall D transfer screening	3,500 m ²
2009	Pier E unloading quays	10,000 m ²
2010	South Hall	15,000 m ²
	Space for arriving baggage in arrival halls	20,000 m ²
	Facilities at check-in	15,000 m ²
	Total	118,000 m²

Baggage system

	Terminal 1	Terminal 2	Terminal 3/4
Check-in rows	8	8	16
Desk positions	100	56	176
Transfer unloading quays	2	8	-
Departure belts	4	4	8
Departure carrousel	3	5	17
Departure laterals	22	131	-
Departure odd-size belts	-	-	2
Arrival odd-size belts	1	-	2
Reclaim carrousel	3	7	9
Baggage robots	6	1	-
Automatic unloading installation	-	1	-

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