

Baggage at Schiphol



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Baggage at Schiphol

Each year, Amsterdam Airport Schiphol handles over 55 million items of baggage. This can vary from day to day from around 120,000 items on a slow day to 180,000 during extremely busy periods, such as the start of the summer holiday season.

Over 40 percent of all these items are transfer baggage: baggage belonging to passengers who are transferring to another flight at Schiphol. This is largely due to the network of Amsterdam Airport Schiphol's home carrier KLM and Skyteam partners: Schiphol functions as a hub in this network.

The proper handling of these large quantities of transfer baggage, in particular, requires a fully automated and flexible baggage system. That is why Schiphol continuously invests in expansion and innovation and has one of the most advanced baggage systems in the world.



The people behind the baggage

Around 2,000 people work at the Amsterdam Airport Schiphol baggage handling department, most of them in shifts. Approximately 120 of these individuals are Amsterdam Airport Schiphol employees who are responsible - together with a number of subcontracted companies - for the development, control, management and maintenance of all baggage systems, including the data centres 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 permanent employees working in the baggage areas. Other handling companies are Aviapartner, Swissport and KLM Customer Ground Handling. Together, these companies serve 99 airlines at Schiphol.

Baggage handling

There are four areas at Schiphol where baggage is processed. These are connected by means of the Backbone: the transport system that can carry baggage items directly from one area to the other. These handling areas are called West (under Arrival Hall 3), Hall E (under Pier E), Hall D (under Pier D) and South (air traffic control tower).

West is used primarily for baggage checked to Amsterdam and for baggage that has been checked in at Schiphol. In Hall E transfer baggage is unloaded, and intercontinental baggage is prepared for KLM and its partners. Transfer baggage is also unloaded in Hall D. Additionally, baggage with European destinations is prepared here.

The new South Hall was taken into use by KLM in January 2013 for unloading and preparing transfer and other baggage for Schengen destinations. The hall has been perfectly equipped for this purpose with six loading robots, two transfer unloading quays, a large buffer and a good connection to the other areas via the Backbone. Subsidiary KLM Customer Ground Handling also prepares the baggage for transavia.com flights here.

Checked-in baggage

A baggage item handed in at a check-in desk or entered through a Self-Service Drop-Off Point requires at least 25 minutes to reach the aircraft. Based on the information on the suitcase's barcode label, the baggage system transports the suitcase to the correct loading quay (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

There are increasingly more locations in Schiphol's departure halls where passengers can enter their own bags into the system. These locations are called Self-Service Drop-off Points and are located at the easyJet and ArkeFly desks in Departure Hall 3 and the KLM desks in Departure Hall 1 and 2.

Baggage checked to Amsterdam

Suitcases with Amsterdam as their final destination are transported from the aircraft to the baggage basements and unloaded onto an unloading quay. These are directly connected to the baggage belts in the Arrival Hall. Passengers can usually claim baggage from the baggage belts 20 to 30 minutes after arriving at Schiphol.





The baggage department

The Backbone has been in use since December 2012. This new baggage transport system connects the four baggage areas at Schiphol: from the new South Hall via Piers D and E to the West Hall under Departure Hall 3 (and vice versa).

Now that all areas have been connected with each other, both physically and at the operating level, a single integrated baggage system has been created. As a result, transfer baggage in particular can now be handled much more efficiently. The Backbone increases the efficiency of the baggage system as a whole and also expands its capacity.

Construction of the Backbone started in 2010, and the system was put into operation on 12 December 2012. The project officially concluded a year later. Construction of the Backbone brought far-reaching changes to the very heart of baggage operations, which continued without interruption during the entire implementation.

Transfer baggage

Transfer baggage is baggage that accompanies passengers transferring to another flight at Amsterdam Airport Schiphol. This baggage is transported from the aircraft of arrival to the baggage basements, where it is unloaded onto a transfer unloading quay 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. Depending on the port of embarkation and final destination, it takes at least 40 to 50 minutes to transfer baggage from one aircraft to another. 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.

Baggage robot and automatic unloading system: unique in the world

The loading and unloading of suitcases is hard work. In the summer of 2006, the employees in Basement E began receiving help loading containers from a baggage robot: the first of its kind in the world. A new and improved robot was deployed in 2008, of which six are now active in the South Hall.

The 'mechanical unloading module' (MUM), an automatic system for the unloading of containers, has been in operation in Hall D since August 2009. This system, again a world first, lifts up a container, tips it over and empties it onto a lateral. The only human effort required for both the baggage robot and the MUM is the operation of the panel, for which



baggage-handling employees receive special training. There are also other ways in which the physical burden on baggage-handling employees is being relieved. In collaboration with the handling agents at Schiphol, a lifting aid has been developed for loading bags into a container or onto a trolley with minimal physical effort. This lifting aid was installed at all laterals in Hall E in 2012; the West Hall will also receive these aids starting in May 2014.

Security measures regarding (hold) baggage

The law requires that all baggage be fully checked for anything that could pose a safety risk. For hold baggage, screening machines have been incorporated into the baggage system.

All hand baggage is also checked. This is currently done after check-in at ticket control or the gate. Starting in 2015, central security filters will be installed in the entire terminal to check personal baggage and hand baggage.

Delayed baggage

If an item of baggage misses the flight, the airline will ensure that it is loaded onto the next flight that is available. 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, where they might cause a system breakdown. Should a suitcase nevertheless be left behind, rapid identification of its owner eases corrective action. A label on the suitcase with contact details is useful, as well as a label on the inside.

Corporate Responsibility

Baggage handling is also an area in which we are constantly looking for ways to strike a balance between people, planet and profit. For instance, the so-called 'blueveyor' was used to replace belts in the baggage system. This is a baggage belt made of recycled and recyclable material (cradle-to-cradle) which also uses less energy than a 'normal' baggage belt.

The MUM, lifting aids and robots are innovations that reduce the physical burden on employees. Efficiency has also been improved by means of simplifying processes, like those involving odd-size baggage.

Facts & Figures

- In terms of passenger volume, Amsterdam Airport Schiphol is Europe's fourth largest airport after London Heathrow, Paris Charles de Gaulle and Frankfurt. In terms of cargo volume, Schiphol ranks third in Europe.
- Together with its Skyteam partners, the airport's principal user and home carrier KLM focuses strongly on transfer passengers. Partly because of this focus, over 40% of passengers at Schiphol are transfer passengers.
- In 2013, a total of 52.6 million passengers travelled to, from or via Schiphol, taking approximately 55 million baggage items with them.
- 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 at the airport, of whom 115 are Schiphol employees and 1,100 are KLM employees.
- The four different handling companies serve 99 airlines.
- Transfer baggage not scheduled for immediate continuation of a journey is automatically and temporarily stored in a dedicated storage area. Schiphol has buffer capacity for 3,000 baggage items in Hall D, 1,500 items in Basement E, and 4,200

items in the new South Hall.

- Schiphol is situated approximately 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 keep out the groundwater.
- In total, the baggage areas comprise a transport system covering over 30 kilometres. The systems operate on 110 servers and are powered by almost 10,000 engines.
- The longest distance a suitcase can travel at Amsterdam Airport Schiphol is 2.5 kilometres.

Year	Location	Size
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	5,000 m ²
2009	Pier E unloading quays	10,000 m ²
2010	South baggage 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	129,500 m²

Baggage system				
	Terminal 1	Terminal 2	Terminal 3/4	
Check-in rows	8	8	16	
Desk positions	73	56	176	
Transfer unloading quays	2	8	1	
Departure belts	4	4	8	
Departure carousels	4	13	17	
Departure laterals	19	82	-	
Departure odd-sized belts	-	-	2	
Arrival odd-size belts	-	-	2	
Reclaim carousels	3	7	8	
Baggage robots	6	1	-	
Automatic unloading installation	-	1	-	