



Baggage at Schiphol

April 2019

Royal Schiphol Group
+31 (0)20 601 2673
schiphol.nl
youtube.com/schiphol

Welcome to Amsterdam Airport

Baggage at Schiphol

Each year, Amsterdam Airport Schiphol handles some 53 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 a holiday season.

Almost 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.

Schiphol



The proper handling of these large quantities of transfer baggage, in particular, requires a fully automated and exible 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 in baggage handling, most of them in shifts. Some 100 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 employees working in the baggage areas. Other handling companies are Aviapartner, dnata, Menzies and Swissport.

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 Departure Lounge 3), Hall E (under Pier E), Hall D (under Pier D) and South (opposite the air traffic control tower).

West is used primarily for baggage checked in at Departure Halls 3 and 4. 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.

AirportCity

Amsterdam Airport Schiphol exudes the atmosphere of a true world metropolis and is a prime example of an AirportCity that provides its visitors and the businesses established there the services they require, 24 hours a day, 7 days a week.

Royal Schiphol Group is an airport business with Amsterdam Airport Schiphol as its main airport. We aim to create sustainable value for our stakeholders, with due regard for their various interests. It is Schiphol Group's ambition to develop Schiphol into Europe's Preferred airport. Royal Schiphol Group's mission is Connecting the Netherlands: facilitating optimal links with the rest of the world in order to contribute to prosperity and well-being in this country and elsewhere.

The newest Hall, South, is used 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. Other handling companies use Hall South to handle baggage from flights departing from Departure Hall 1.

Backbone: connecting the various areas

Since 2012 the Backbone connects the four baggage areas at Schiphol: from the new South Hall via Piers D and E to the West Hall under Departure Lounge 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.



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 (SSDOP).

During the May and summer holidays, passengers flying with KLM, TUI or Transavia, can check in their baggage at the drop-off desks at P3 Long-term Parking. This way they don't have to take their bags in the bus to the terminal.

Baggage checked to Amsterdam

Suitcases with Amsterdam as their final destination are transported from the aircraft to the baggage areas 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 25 to 40 minutes after arriving at Schiphol.

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 areas, 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.

Robots and automatisisation

The loading and unloading of suitcases is hard work. In the summer of 2006, the first baggage robot was deployed at Schiphol: the first of its kind in the world. In the past years the robots have been improved, and six of them are now active in the South Hall.

To unload containers, the 'ALT MUM', a mechanical unloading module, is being used. 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 ALT MUM is the operation of the panel, for which baggage-handling employees receive special training. Baggage employees also use the most modern lifting aids for loading bags into a container or onto a trolley.

Security measures for (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. As from mid 2015, persons and their hand baggage are checked by central security filters.

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

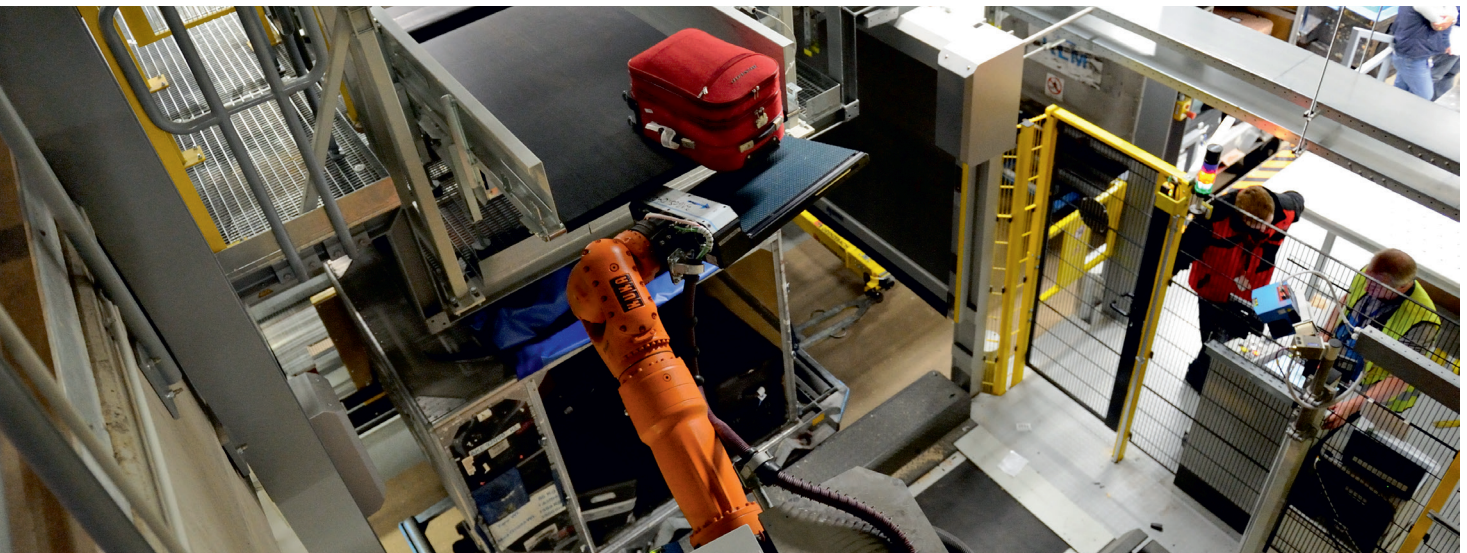
also take measures to prevent their baggage from being delayed. The first of these measures is checking in on time and properly securing or fastening handles, belts and buckles. These will then not get stuck in the system, where they might cause a system breakdown. Should a suitcase nevertheless be left 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, when replacing belts, the newest standard in sustainable technology is used. The ALT MUM, lifting aids and robots are innovations that reduce the physical burden on employees ('people'). The Blueveyor baggage belt, developed by Vanderlande, is made of non-toxic and recyclable materials. These belts consume 55% less energy ('planet').

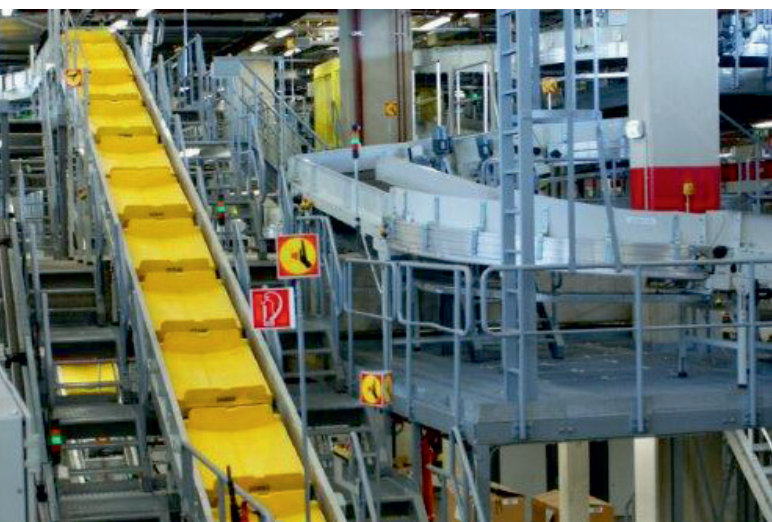


As from July 2019 KLM Baggage Services deploys 34 fully electric baggage towing tractors. They replace the hybrid tractors currently in use, which operate electricly in the cellar, but outside still on diesel. It is one of the measures KLM is taking to achieve fully CO₂-neutral ground operations in 2020.



Facts & Figures

- In terms of passenger volume, Amsterdam Airport Schiphol is Europe's third largest airport. In terms of cargo volume, Schiphol also 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, almost 40% of the passengers at Schiphol are transfer passengers.
- In 2018, a of 71.1 million passengers travelled to, from or via Schiphol, taking approximately 53 million baggage items with them.
- 120,000-160,000 baggage items are sorted at Schiphol daily. The number of bags can even rise to over 180,000 on peak days.
- Almost 2,000 people are engaged in baggage handling at the airport, of whom approximately over 100 are Schiphol employees and 1,100 are KLM employees.
- The five different handling companies serve 108 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 2,700 baggage items in Hall D, 1,500 items in Basement E, and 3,900 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.



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
2017	Check-in facilities in temporary Departure Hall 1A on top of Baggage Hall South	15.000 m ²
Total		144.500 m²

Baggage system

	Terminal 1	Terminal 1A	Terminal 2	Terminal 3/4
Check-in rows*	8	1	8	16
Check-in positions	66	22	46	158
of which SSDOP	7		12	20
Transfer unloading quays	2		9	1
Departure belts	4		4	9
Departure carousels	4		11	17
Departure laterals	19		82	-
Departure odd-sized belts	-		-	2
Arrival odd-size belts	1		-	2
Reclaim carousels	3		6	7
Baggage robots	6		1	-
Automatic unloading installation	-		1	-
Holiday period: P3 remote drop-off: 4 desks				