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# ACE

Combination machine



The ACE is an airport combination machine for de-icing runways, taxi-ways and aprons and is available in four different versions to meet differing needs. With the ACE range, solid and liquid spreading materials can be applied separately or combined in a single operation, and it is designed for mounting on large carrier vehicles and semi-trailers.

## Highlights

- Application of **both liquid and solid de-icing agents**
- **Preventive as well as curative** de-icing
- **Modular design** and individual composition

## Your benefits

- Due to its **modular construction**, the ACE can be assembled in many different ways to meet the individual needs of different airports.
- The ACE offers a **stable and maintenance-friendly construction** for a long service life.
- Maximum spraying and spreading width of **24 metres**.

## Performance features

### Modular construction

The ACE is designed for mounting on large carrier vehicles and semi-trailers and, due to its modular construction, can be assembled in many different ways to meet the individual requirements of different airports.

The combination machine consists of three components: the body with modular liquid tanks made of polyethylene, the drive unit, and the separate spreading material hopper with a distribution system. There are only a few wearing parts and the entire machine benefits from specially developed corrosion protection, while all joints are hermetically sealed.



### Hopper

The ACE's hopper has a volume from 4.0 - 7.0m<sup>3</sup> while the polyethylene system tanks are suitable for any spraying agent. They are available from 1,850 litres and can be supplemented with 2,200 or 2,500 litre front tanks. The hopper and tank configurations can be adapted to suit different vehicles and local conditions.

### Dosage and conveyor system

The spreading material is transported to the distribution system by a V-profiled conveyor belt. Pressure distributors relieve the pressure of the spreading material on the belt ensuring a long service life.



### Distribution system

For all ACE variants, a double-disc spreading system allows solid, liquid or mixed spreading materials to be used. The spreading agent is delivered via a conveyor belt and liquid pump, based on the vehicle's speed. Mixtures of solid and liquid spraying materials can be applied up to a ratio of 1:1 (50% solid and 50% liquid) thanks to a special injection system, while closed control loops allow precise distribution of the de-icing agent.



### ACE-2S - The basic version

For airports wanting a de-icing solution ideally suited to every situation, the smart ACE-2S concept is a great entry-level variant. Thanks to the special spreading discs, both spreading and spraying materials can be applied.

- Two special spreading discs to the rear
- Spreading width of 6 to 24 m\*
- Spraying width of 6 to 15 m



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- A proven design that's used worldwide
  - Flexible application options – solid, liquid or combined
  - Technology that's been tested around the globe in a wide range of winter conditions
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### ACE-RSP - The disc variant

A handy and low-maintenance solution with four special spreading discs in total.

- Two special spreading discs to the rear
- Two side spraying arms, each fitted with one spreading disc

- Spreading width of 6 to 24 m\*
- Spraying width of 6 to 15 m or a limit of 24 m



- Reliable, easy-to-use technology
- A good view of the special discs, due to high-positioned spraying arms
- Easy avoidance of obstacles
- An even ejection rate thanks to spraying discs with multiple injection points
- Reduced risk of damage

### The ACE-ASP - The expert variant with nozzles

The ACE-ASP offers ideal features for airports that want fast and accurate spraying. It combines the proven technology of the ACE-2S with state-of-the-art ASP spraying technology.

- Two special spreading discs to the rear
- Fixed spray bar to the rear
- Two side spraying arms at the front with a double row of nozzles
- Spreading width of 6 to 24 m\*
- Spraying width of 4 to 14 m or a limit of 24 m



- Increased safety thanks to a double row of nozzles and an overlapping spraying result
- Reduced swirling due to the low-pressure pumping system
- A high working speed
- Spraying arms with collision protection
- Tipping function to avoid obstacles

### ACE-ASPS - The entry-level variant with nozzles

The ideal solution for airports that want precise spraying with less de-icing time pressure.

- Two special spreading discs to the rear
- Fixed spray bar to the rear
- Two side spraying arms at the front with a single row of nozzles
- Spreading width of 6 to 24 m\*
- Spraying width of 6 to 16 m or up to 24 m using long ejection nozzles

\* Spreading widths depend on spreading materials used and weather conditions

- Sophisticated, functional technology that's ideal for smaller airports
- Good value for money
- Convenient folding of the spraying arms using the ES control panel in the driver's cab

## Drive options

ACE machines are powered by the hydraulics of the carrier vehicle or an EU Stage 5-certified diesel engine. The electrical and hydraulic components are located in the protected power pack compartment.

## Operation

The ACE is controlled via the very easy to operate ES control panel in the driver's cab, allowing spreading width and dosage to be entered quickly and clearly. A graphic colour touch screen, and click-turn knobs and push buttons, allow quick and reliable operation of all work functions.



## AirportLogic

AirportLogic is an innovative control technology that uses GPS in real time to optimise both the untreated areas and the consumption of spraying agent during de-icing operations. The spray segments are switched on and off automatically. The result is increased safety through better coverage of the runways and aprons plus reduced consumption of spraying agent, cutting consumption costs by up to 15%.



## Gallery



## Variants

### ACE-2S - The basic version



For airports wanting a de-icing solution that adapts ideally to every situation, the smart ACE-2S concept is a great entry-level variant. Thanks to the special spreading discs, both spreading and spraying materials can be applied.

- Two special spreading discs to the rear

### ACE-RSP - The disc variant



A handy and low-maintenance solution with four special spreading discs in total.

- Two special spreading discs to the rear
- Two side spraying arms, each fitted with one spreading disc

### ACE-ASP - The professional version with nozzles



The ACE-ASP offers ideal features for airports wanting fast and accurate spraying. It combines the proven technology of the ACE-2S with state-of-the-art ASP spraying technology

- Two special spreading discs to the rear
- Fixed spray bar to the rear
- Two side spraying arms at the front with a double row of nozzles

### ACE-ASPS - The entry-level variant with nozzles



The ideal solution for airports that want precise spraying and have less de-icing time pressure.

- Two special spreading discs to the rear
- Fixed spray bar to the rear
- Two side spraying arms at the front with a single row of nozzles

## Related products

### CJS-DI

Jet sweeper



### ASP Airport Sprayer

Sprayer



### TJS / TJS-C

Jet sweeper





Trust in our many years of uniquely diverse experience. **Get in touch with us.** We'll find the right solution for your specific challenge.

## Technical data

	ACE-2S	ACE-RSP
<b>Hopper</b>		
Hopper capacity	4 - 7 m <sup>3</sup>	4 - 7 m <sup>3</sup>
<b>Pre-wet equipment</b>		
Tank capacity front tanks	2,200 - 7,500 l	2,200 - 7,500 l
Tank capacity lateral tanks	1,850 l	-
<b>Conveyor system</b>		
Conveyor system	belt	belt
<b>Distribution system</b>		
Distribution systems	<b>Combi disc:</b> Spreading width: 6 - 24 m <b>Combi disc:</b> Spraying width: 6 - 15 m	<b>Combi disc:</b> Spreading width: 6 - 24 m <b>Combi disc:</b> Spraying width: 6 - 24 m
<b>Mounting/demount system</b>		
Mounting/demount system	Hoofklift / Fixed-mounted	Hoofklift / Fixed-mounted
<b>Drive system</b>		
Type of drive	Vehicle hydraulics	Vehicle hydraulics
<b>Control system</b>		
Control system	ES	ES
<b>Speed</b>		
Working speed	45 km/h	30 km/h
	ACE-ASP	ACE-ASPS
<b>Hopper</b>		
Hopper capacity	4 - 7 m <sup>3</sup>	4 - 7 m <sup>3</sup>
<b>Pre-wet equipment</b>		
Tank capacity front tanks	2,200 - 7,500 l	2,200 - 7,500 l
Tank capacity lateral tanks	1,850 l	1,850 l
<b>Conveyor system</b>		
Conveyor system	belt	belt
<b>Distribution system</b>		
Distribution systems	<b>Combi disc:</b> Spreading width: 6 - 24 m <b>Spray nozzles:</b> Spraying width: 4 - 24 m	<b>Combi disc:</b> Spreading width: 6 - 24 m <b>Spray nozzles:</b> Spraying width: 6 - 24 m
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