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AS 990 / ASC 990

Sweeper



Safety at the airport is top priority. The high-speed AS 990 sweeper cleans all service and traffic areas of the airport with outstanding sweeping efficiency, so that follow-up damage caused by FOD (foreign objects debris) is prevented. The AS 990 clears solid materials like leaves, dirt and debris, as well as liquids such as de-icing agents and surface water. The permanent PMB 2400 magnetic bar, which is attached to the front panel of the AS 990, can be used to pick up any magnetic metals.

Highlights

- Delivers excellent sweeping results.
- Collects large quantities of water and de-icer from runways.
- Removes FOD hazards (foreign objects debris) avoiding possible damage to aircraft that may be caused by dislodged objects.
- Cleans more intensively to remove oil residue (ASC 990).
- More than 400 machines in operation around the world.

Your benefits

- All functions can be activated using the CAN-Bus control panel on the central pedestal.
- Removing dirt, grass and leaves and smaller quantities of snow with blast nozzles.
- Separate remote control with flexible cable for tipping the hopper.
- The hopper can be tilted without starting the auxiliary engine.
- Environmentally friendly thanks to compatibility with the latest emissions ratings.

Performance features

Cleaning concept

The AS 990 delivers perfect results when sweeping large areas, while moving safely through the entire airport. Equipped with two optional circular brushes, a rear-mounted sweeping unit and a high-power suction fan, the machine can cover large areas quickly and efficiently. The AS 990 offers a hygienic solution due to its blast nozzles, rear-mounted standard sweeping unit and optional quick-change liquid suction feature. It can be fitted to all truck makes and models with the relevant specifications – a unique concept that's highly flexible and versatile.



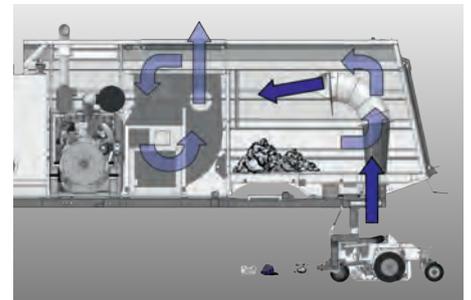
Suction and sweeping system

- **SRS rear suction vehicle**
- Two suction nozzles width: 2 x 49 inches (1,250 mm) – streamlined design with premium hot-vulcanized rubber coating on the interior for lower friction and less wear and tear.
- Symmetrical load distribution.
- Roller brushes that lift up when they encounter obstacles.
- Easily accessible cable duct.
- Smooth adjustment of sweeping pattern, accessible from the outside.
- One central sweeping pattern adjustment mechanism with color-coded scale to indicate level of wear.
- **Liquid suction vehicle**
- Two suction nozzles width: 2 x 45 inches (1,150 mm): Streamlined design with premium hot-vulcanized rubber coating on the interior for low friction and less wear and tear.
- Collection of liquids – up to 100% performance.
- Optional collection of glycol – 96% to 99%.
- Rear-mounted or inter-axle version plus dual mounted version available.

Suction fan drive

SRS rear suction vehicle with full-length suction nozzle brush roller, sweeping width 92-1/2 inches (2,300 mm).

In addition to the two suction nozzle jets, a brush roller that stretches over the entire sweeping width is also used for faster sweeping, and can reach sweeping speeds of up to 25 mph (40 km/h). The sweeping unit is attached to the rear using a flexible lifting feature separate from the chassis, allowing it to be adjusted to different flooring even while operating. The high-quality wheels, with built-in reset mechanism, ensure that the suction vehicle runs reliably across its route.



Options

- Quick-release coupling mechanism for swapping the sweeping unit and liquid suction feature
- Liquid gate to improve the collection of liquids

Liquid suction nozzle

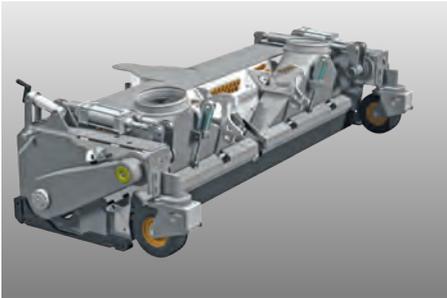
The liquid suction nozzle is specifically designed to collect liquids such as water or de-icer, such as glycol, as effectively as possible.

Cover for bulky debris

The standard version of the suction vehicle includes a built-in cover for bulky debris. The pneumatic cover can be operated from the driver's cab to collect larger pieces of debris.

The suction performance can be adapted to suit the amount of dirt. The hydraulic drive is fitted with a speed sensor to monitor the suction fan's power. A stepless adjustment of the suction fan is possible. The speed of the suction fan is regulated using hydraulics and adjusted from the control panel. No maintenance is required when compared to conventional V-belt/toothed belt drives. The impeller and sheathing in the housing are made from premium wear-resistant metal.

- Water tank with 528 gallon (2,000 liter) capacity made from polyethylene – optional rust-free/extra water tank with 528 gallon (2,000 liter) capacity.
- Hydraulically powered water pump – maximum 145 psi at 9.8 gallons/minute (10 bar at 37 liters per minute) dry run-safe.
- Winter mode – automatic evacuation of the entire water system (anti-frost function).
- Dust binding – water jets installed upstream of the suction vehicle in the suction nozzle and tube as well as on the circular brushes.



Sweeping material hopper

Large 12.4 yd³ (9.5 m³) hopper for large quantities of debris; tank volume as per DIN EN 15429. The base of the hopper is made from stainless steel. The hopper is equipped with a hydraulic tipping mechanism, allowing it to be emptied safely thanks to the large 52° tilt angle. The hopper can be tipped using a separate remote control with a long, flexible cable. The hand-held control panel is housed in a waterproof storage case. The hopper can be tilted without starting the auxiliary engine.

Separate, rust-free 528 gallon (2,000 litre) water tank

The water tank is installed between the driver's cab and the auxiliary engine with a suction fan to reduce noise levels and is equipped with an easily accessible cleaning flap. An extra water tank with a capacity of 528 gallons (2,000 liter) is available as an option.



Quick-change system

Thanks to the optional quick-change system, you can switch between the SRS rear suction vehicle and the liquid suction vehicle in a matter of minutes without needing any tools. A dual version is also available as an option.



Special version: the ASC 990

The ASC 990 cleans aircraft parking bays by applying a mixture of detergent and water. The cleaning solution is applied to the area to be cleaned by the spray bar in front of the circular brushes. The surface is then treated and roughened by the circular brushes. Any dislodged material is then collected in the tank by the rear-mounted sweeping unit. The ASC 990 is particularly suited to intensive cleaning of transport areas and collecting heavy and awkward substances such as oil.

A modular concept

SRS rear suction vehicle with built-in roller brush, rear-mounted liquid suction vehicle or inter-axle liquid suction vehicle. A dual version is available as an option.

High-pressure cleaning equipment with rotating nozzles

An efficient high-pressure cleaning bar can be installed in front of the liquid suction vehicle, delivering up to 2900 PSI at 18.5 gallons/min (10 bar at 37 liters/min). As a result, the model can clean intensively over a width of around 94-1/2 inches (2.4 m), while also sucking up all the water and dirt at the same time. This option enhances the results delivered by the ASC 990 even further.



Options

1. One blast nozzle on the left and right

For both summer and winter cleaning. The blast nozzles provide a strong blower performance over the entire width of the unit as well as next to the truck, ensuring the best possible cleaning results. Also available with pneumatic height adjustment.

2. Circular brushes on the left and right

For sweeping gutters or increasing the sweeping width. Pneumatic adjustment of ground bearing pressure and rinse pressure. Water jets installed to bind dust.

3. Hose reel with cleaning hose

For general cleaning after emptying, a 32.75 foot (10m) hose with an adjustable jet. Water supply with a pressure level of 145 PSI at 9.8 gallons/min (10 bar at 37 l/m) through the hydraulically powered water pump with dry run-safe mechanism.

4. Hand-held suction hose

For cleaning gullies, drains and other awkward areas. Mounted on the rear tank flap. Hose diameter: 7-7/8 inches (200mm). Control unit installed directly on the hand-held suction hose.

5. Leaf screen cleaning unit in the tank

A tube equipped with water jets for cleaning the leaf screen, and the area above it, make the machine easier to clean with more effective results.

6. Water outlets on the rear gate

These fittings allow any excess water or de-icer to be drained before the hopper is emptied completely.

7. Cold-start function

The cold-start function for the auxiliary engine ensures a reliable start under even the toughest conditions, including temperatures as low as -4°F (-20°C).

8. Rear area monitoring

A camera is mounted on the tank flap. It is switched on automatically as soon as reverse is engaged. The image is streamed directly to the operating unit.

9. Marker spray units

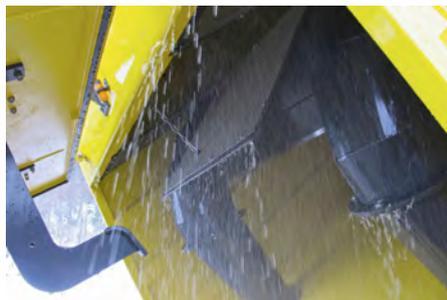
The optional marker spray units can be installed on the left and right of the sweeper, helping the user to keep track of which areas have been swept to avoid doing the same sections twice.

10. Retractable suction nozzles on the left and right

Two suction nozzles on the left and right, installed in front of the rear axle, increase the suction width by 19-5/8 inches (500mm) on each side. The two suction nozzles can also work simultaneously if needed. The suction nozzles are operated pneumatically and can be adjusted by 12-1/2 inches (320mm) to the side. The sucking action can be applied regardless of whether the side suction nozzle is extended or retracted. The built-in water jets allow for effective dust binding.

11. Exhaust diffuser

The two suction nozzles suck in air containing debris and collect it in the hopper. Inside the hopper, any debris is separated using gravity. Exhaust air is fed out of the hopper at the top. A diffuser can be installed in the top of the hopper to calm the air. This diffuser can be swivelled in or out pneumatically for automatic cleaning.



Gallery





Additional information

The experts at Aebi Schmidt recommend the following configuration:
Magnet bars/circular brushes/ blast nozzles/rear suction vehicle



Variants

AS 990



High-performance sweeper tailored to the needs of airport traffic areas.

ASC 990



The AS 990 series machine can also be equipped as a stand cleaning machine. The stand cleaning option is particularly suitable for collecting rubber abrasion and oil.

Related product

AS 660

Sweeper



Cleango 500

Sweeper



eSwingo 200+

Sweeper



Keywords

#Airports #Fire brigade, Military & Civil Defence #Sweeping #Innercity Roads #Airport Airside

Technical data

	AS 990	ASC 990
Hopper		
Tank volume	12.4 yd ³ (9.5 m ³)	12.4 yd ³ (9.5 m ³)
Tilt angle	52°	52°
Sweeping unit		
Disc brush diameter	21.7 in / 25.6 in / 29.5 in (550 mm / 650 mm / 750 mm)	47.2 in (1,200 mm)
Disc brush speed	120 rpm	120 rpm
Brush material	Plastic / steel	Plastic / steel
Sweeping width rear suction unit	90.6 in (2,300 mm)	90.6 in (2,300 mm)
Roller brush diameter	15.75 in (400 mm)	15.75 in (400 mm)
Roller brush length	51.2 in (1,300 mm)	51.2 in (1,300 mm)
Suction unit		
Model	Dual version / Rear suction unit / Rear liquid suction unit / Liquid suction unit between axles	Dual version / Rear suction unit / Rear liquid suction unit / Liquid suction unit between axles
Quick change device	Option	Option
Retractable side inter-axle suction nozzles	Option	Option
Suction nozzle width rear suction unit	2x 45 in / 1,150 mm	2x 45 in / 1,150 mm
Suction nozzle width liquid suction unit	2x 49 in / 1,250 mm	2x 49 in / 1,250 mm
Suction hose diameter	9.8 in (250 mm)	9.8 in (250 mm)
Suction nozzle diameter	9.8 in (250 mm)	9.8 in (250 mm)
Suction fan		
Type of drive	Hydraulic motor	Hydraulic motor
Max. air flow rate (free flow)	18,823 cfm (32,000 m ³ /h)	18,823 cfm (32,000 m ³ /h)
Max. approx. vacuum	3.5 ft / 1.5 PSI (1,070 mm / 0.1 bar)	3.5 ft / 1.5 PSI (1,070 mm / 0.1 bar)
Speed	3,300 rpm	3,300 rpm
Blast nozzles		
Direction of flow	Left	Left
Air speed	190 mph (85 m/s)	190 mph (85 m/s)
Water system		
Total water volume	528 gallons (2,000 l)	793 gallons (3,000 l)
Fresh water pump	145 PSI (10 bar)	145 PSI (10 bar)
Detergent tank	-	185 gallons (700 l)
Water tank material	PE polyethylen	Aluminium
Water spray nozzles per disc brush	2	2
Water spray nozzles in the suction nozzle	4	4
Water spray nozzles in the suction hose	2	2
Water spray nozzles on spray bar	7	7
Detergent spray nozzles on spray bar	-	6
Cleaning hose	19.7 ft (6 m)	19.7 ft (6 m)
Drive system auxiliary engine		
Engine type	Deutz TCD 7.8 L6	Deutz TCD 7.8 L6
Number of cylinders	6	6
Exhaust emission	EuroMot V / Tier 4 final	EuroMot V / Tier 4 final
Displacement	7.8 L (7,800 cm ³)	7.8 L (7,800 cm ³)
Performance	335 HP (250 kW @ 2,200 rpm)	335 HP (250 kW @ 2,200 rpm)
Torque	1,032 lbf - ft (1,400 Nm)	1,032 lbf - ft (1,400 Nm)
Speed		
Transport speed	56 mph (90 km/h)	56 mph (90 km/h)
Sweeping speed	12 mph (20 km/h)	12 mph (20 km/h)
Dimensions		
Mounting length	232.67 in (5,910 mm)	255.5 in (6,490 mm)
Mounting height	93.7 in (2,380 mm)	93.7 in (2,380 mm)
Example entire vehicle		
Length	324.8 in (8,250 mm)	324.8 in (8,250 mm)
Width	98.4 in (2,500 mm)	98.4 in (2,500 mm)
Height	132.3 in (3,360 mm)	132.3 in (3,360 mm)

	AS 990	ASC 990
Overhang	87.8 in (2,230 mm)	87.8 in (2,230 mm)
Body weight standard version	13,228 lb (6,000 kg)	15,432 lb (7,000 kg)
Payload	13,889 lb (6,300 kg)	13,889 lb (6,300 kg)



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