



The Airport Range

The Beam Airport Range

Beam is the world's leading manufacturer of specialist sweepers and high pressure washing equipment. Founded 40 years ago, Beam now has over 2500 machines in service worldwide with airports, contractors and municipal customers. The Beam airport range is designed to address the key surface cleansing needs of all sizes of airports in any environment. In particular,

- High speed runway sweeping with speeds of up to 45 km/h
- Stand cleaning and degreasing
- Runway rubber removal using either:
 - Ultra high pressure water, or chemical application
- Painted line removal
- Liquid pick-up (glycol recovery)



Far left and left
High speed runway sweeper – The A9500

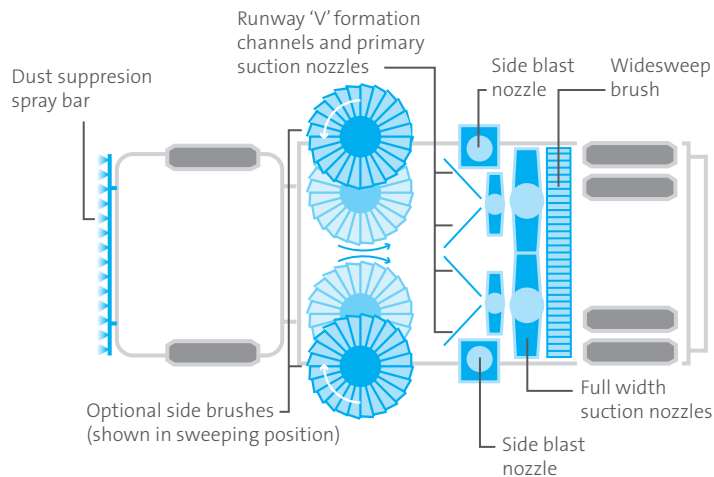
Below
Stand cleaning and degreasing – The A14000



A9500

High Speed Runway Sweeper

The unique design of sweeping system and pick-up hood allows for sweeping speeds of up to 45km/h using 2 sets of nozzles – each focussed on different types of FOD.



The A9500

- Exceeds requirements of all military and civil aviation authority pick-up tests.
- Has a working speed that gives double the productivity of traditional runway sweepers.
- Has sweeping and pick-up systems located between the axles where they are protected from collision damage.
- Unlike with rear-mounted systems, the debris is collected before it risks being scattered by the rear wheels of the truck.



Far left
A9500 equipped with snow brush.

Left
In-cab control panel.

Technical data – A9500:

Chassis:	18 tonne
Wheel base:	4500mm
Power pack:	205Kw and 210Kw
Hopper capacity:	9.5m ³
Tilt angle:	50°
Water tank capacity:	Up to 2000 litres
Sweeping speed:	Up to 45km/h
Working width:	2300mm 3500mm (with optional side brushes)
Wide sweep brush:	ø400mm
Option side brush:	ø1000mm
Dimensions:	L = 8400mm / W = 2500mm / H = 3300mm

Optional equipment:

- Front or rear mounted magnet
- Snow brush
- High pressure water system, 160 bar @ 128 l/min.
- Detergent system
- Rear mounted wanderhose
- Heated hopper for cold weather use

A9000/A14000

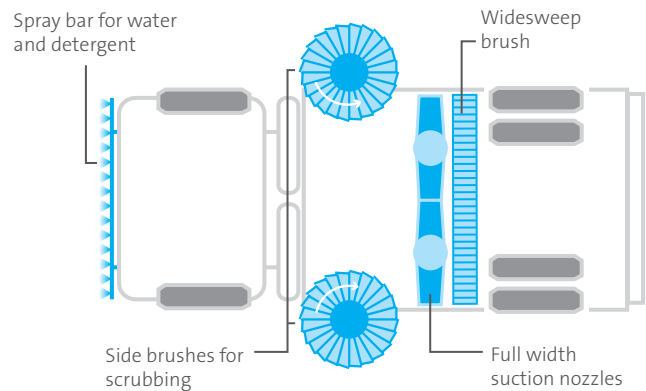
Stand Cleaning and Degreasing

The Beam stand cleaner is offered in a number of configurations in order to suit all sizes of airports.

The primary function of all these machines is the cleaning of oil, grease and fuel spills from aircraft parking stands, together with the recovery of glycol.

The Beam stand cleaner in basic configuration:

- 9m³ hopper in mild or stainless steel
- Water capacity, 2900 litres
- Detergent tank, 200-400 litres
- High pressure pump, 200 bar @ 100 litres
- Left and right hand channel brushes for sweeping or scrubbing
- Full width suction nozzles
- Wide sweep brush for sweeping or scrubbing
- Multiple spray bars for detergent dispersal and application of high pressure water
- Water heating systems



Typical 9m³ configuration



Left
Detergent dispersal

Below
Full width suction



Above
Scrubbing the detergent

Left
High pressure jet rinsing

Optional equipment

- 9 or 14m³ hoppers
- Additional water tanks
 - Internal (hopper) 600 & 1000 litres
 - External (between cab & hopper) 1100, 1500, 2000 litres
- 3rd brush for additional scrubbing
- Side blast nozzles
- Rear mounted rotor cleaning system for superior cleaning performance with lower water consumption
- High pressure systems up to 600 bar
- Front mounted magnetic bar

Runway rubber removal

Ultra high pressure (UHP) water option



The Beam UHP washer is offered in two variants, the standard 170kW model and a high power 250kW version. Both machines have a variety of applications – including runway rubber removal, painted line removal, and surface texturing. Cleaning widths vary between 300mm and 2500mm.

The UHP 170 and 250 are mounted on either 3 or 4 axle chassis.

They have 14m³ stainless steel hoppers containing:

- Fresh water tanks
- A waste tank
- The ultra high pressure water pump
- A powerful fan driven vacuum system to collect waste

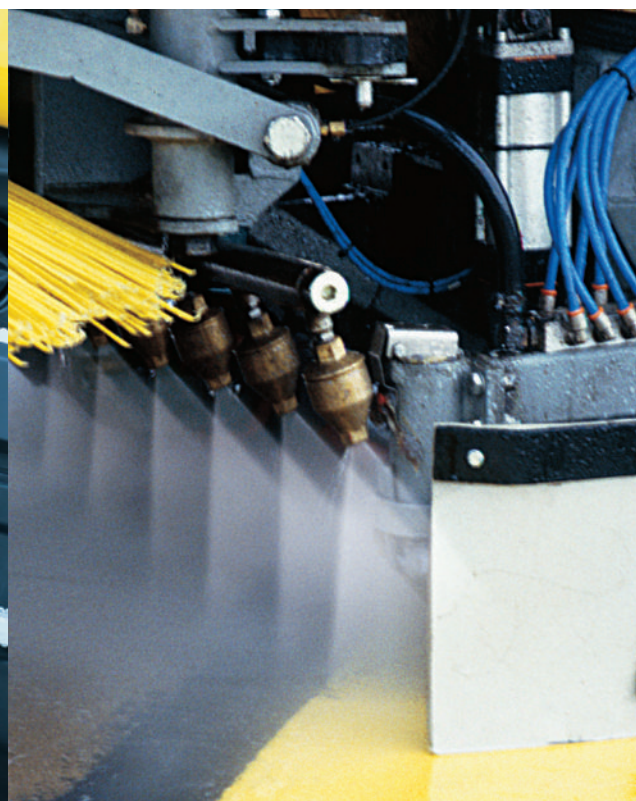
All power comes from the chassis engine driven through a hydrostatic gearbox. The CAN control system monitors and controls the operation of the water system, the vacuum waste collection system and an array of different cleaning heads and other optional equipment. This allows the machine to be operated by 1 driver from the safety of the chassis cab.

Runway rubber removal

The chemical option

The Beam A9000 and A14000 machines can be equipped with detergent and high pressure water systems that facilitates the cleaning of runway rubber deposits using chemicals.

- 9 or 14m³ hopper options in mild or stainless steel for the collection of chemical waste and rubber deposits.
- Water capacity 2900/4500 standard with optional additional tanks of up to 3000 litres
- Detergent tank, 400 litres
- High pressure pump options 200-400 bar and 100 litres per minute
- Optional water heating system



Above left
Chemical dispersal

Far left
Agitating the chemical

Above
High pressure jet rinsing

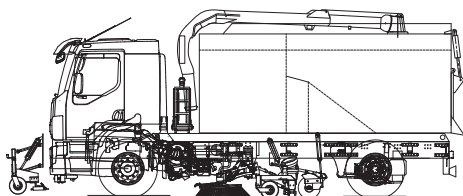
Left
Full width suction

Machine Design and Construction

All Beam machines are constructed from a range of modular options. These modules are shared across all applications – from stand cleaning machines, to runway rubber removal.

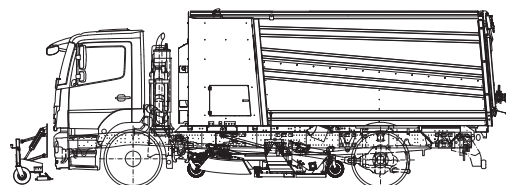
The core modules are: hopper, power and fan pack, brush and nozzle systems and water systems.

Hopper modules:



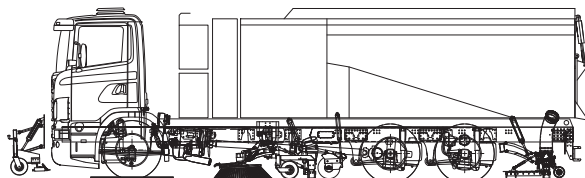
A9000

Voided air volume:	9m ³
Typical chassis GVW:	18 tonne
Typical chassis layout:	4x2
Water volume range:	2900-5900 litres



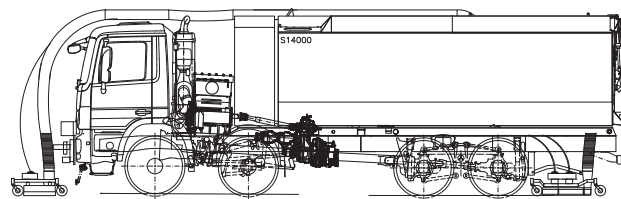
A9500

Voided air volume:	9.5m ³
Typical chassis GVW:	18 tonne
Typical chassis layout:	4x2
Water volume range:	1500-2000 litres



A14000

Voided air volume:	14m ³
Typical chassis GVW:	26 tonne
Typical chassis layout:	6x2/4
Water volume range:	4500-7500 litres



UHP 170 & 250

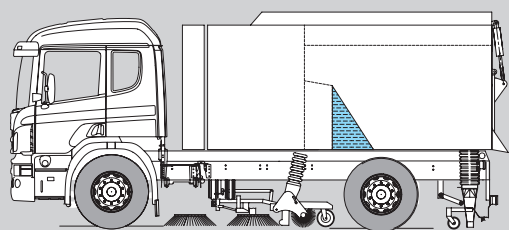
Voided air volume:	14m ³
Typical chassis GVW:	26 tonne
Typical chassis layout:	6x2/4
Water volume range:	3600-7600 litres

Water tank options (litres)

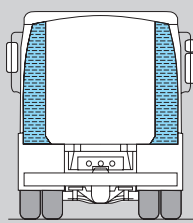
MODULE	Standard Tank	Optional (in hopper)	Optional (between cab & hopper)	Other options
A9000	2900	600, 1000	1100, 1500, 2000	
A9500	1500	—		500
A14000	4500	600, 1000	1100, 1500, 2000	
UHP 170/250	3600	600, 1000	1100, 1500, 2000	

Notes:

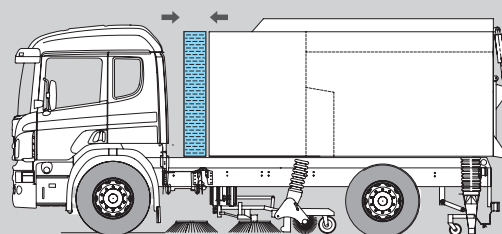
1. Optional additional water tanks in hopper reduce the hopper's voided volume.
2. A weight calculation is required to ensure axle loads are permissible.
3. The rear suction option will reduce the standard water capacity by 400 litres.



Additional tanks in hopper (600 or 1000 litre)



Standard tanks



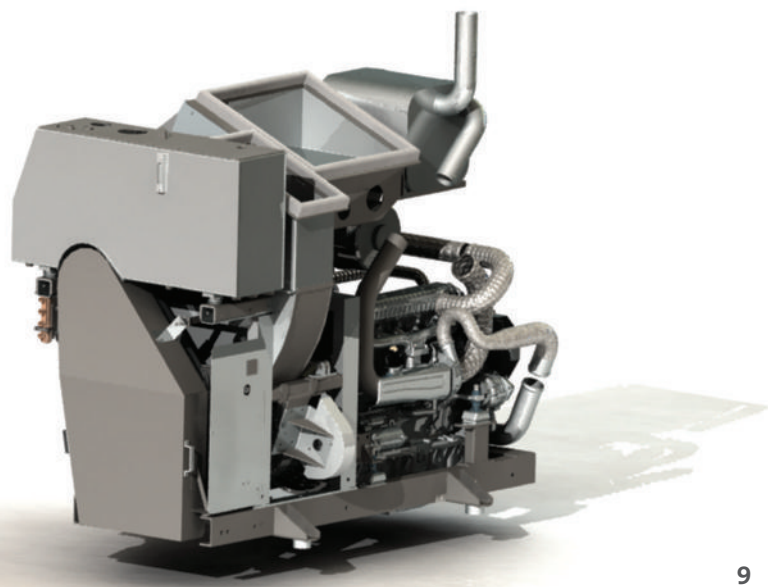
Additional tanks between cab and hopper

Power pack options

– Twin engine or hydrostatic drive

The twin engine power pack uses a choice of Auxiliary engines with power ratings up to 210kW. Power is transmitted to the dynamically balanced fan via a belt drive system and fluid flywheel. All Beam machines are designed to deliver exceptional performance at very low engine rpm keeping noise and fuel consumption to a minimum.

Hydrostatic transmission – for ultimate speed control from 0 km/h, we offer hydrostatic transmissions driven from the chassis engine. These transmissions can be used to power the entire sweeper and washer functions from the chassis engine.





In-cab control systems

The sweeping controls are located in the cab.

Far left
Standard control panel

Left
Integrated controls are an optional extra



Wanderhoses

There are nine different wanderhose options mounted either at the rear or on top of the vehicle – ideal for clearing out gulleys at the edge of the runways or taxiways or for tough to reach areas.

Far left
Top mounted wanderhose

Left
Rear mounted wanderhose

The Beam Rotorcleaning system

As an alternative to full width rear suction and spray bars, Beam offers a rear mounted Rotorcleaning system. The Rotorcleaner achieves superior results using lower volumes of water. It operates at 60 to 80 litres per minute compared to the traditional 100 litres per minute. This reduces the costs of fuel, waste disposal, refilling and allows for better utilisation (more on-station time). This system is equally valuable when used in road maintenance, construction, industrial site cleaning, and aircraft parking stand cleaning.

The system is rear mounted, it uses 4 rotating spray bars covering the full width of the truck and full width suction. It is completely enclosed ensuring no water seepage and a high vacuum that collects all water and waste. It can be used with a range of high pressure pumps from 100 to 600 bar.



Top left
Rotorcleaner system

Top right
Before and after on mud covered road

Notes



Beam A/S

Salten Skovvej 4-6
DK- 8653 Them
Denmark

Tel.: +45 8684 7600

Fax: +45 8684 7734

www.beamsweepers.com



Due to continuous product development Beam A/S reserves
the right to alter specifications without prior notice.
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