



## The specialist range

S7000 – S12000

# The specialist range

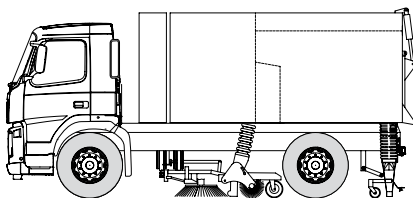
Based in Denmark, Beam manufactures a range of high performance sweeping, cleaning and high pressure washing equipment which is sold via our worldwide distribution network. Each machine is tailored to individual customer requirements from a range of modular options.

## Modular options

- Hoppers – From 7m<sup>3</sup> up to 12m<sup>3</sup>. Normal steel or stainless steel type 1.4301 (304) or 1.4401 (316)
- Power packs – Auxiliary engine or Hydrostatic
- Sweepgear options – Centre brushes, channel brushes, side sliding units, rotatilt functions, etc.
- High pressure water systems – Standard systems up to 300 bar and flows up to 200 litres with a vast array of spray bar options
- Front equipment – Fixed, pivoting and side sliding front brushes, scraper bars, tunnel washing equipment, detergent spray bars, etc.
- Full width suction – between or behind the rear axle
- Additional options – Autolube systems, cameras, fuel tanks, rear and top mounted wanderhoses

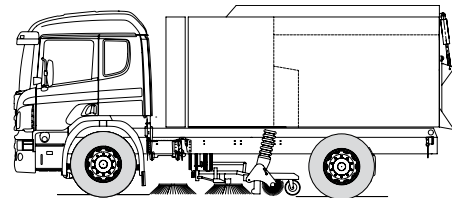
## Hopper modules

With a choice of materials and capacities, the hopper is the starting point for the sweeper specification. Each hopper is made up of 3 primary parts – the engine cowl, the hopper body and the integral water tanks. Other features include, a rear screen shaker, inspection hatch ladder, beacons, single colour paint finish on the exterior of the hopper, dirt inlet to the hopper via replaceable rubber coated wear plates, marker lights, marker boards and the safety prop.



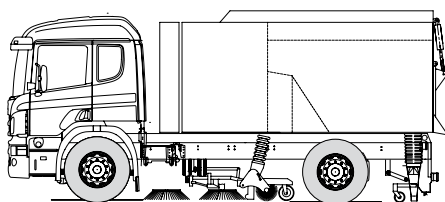
### S7000

Voided air volume:	7m <sup>3</sup>
Typical chassis GVW:	18 tonne
Typical chassis layout:	4x2
Water volume standard:	1880 litres
Water volume with rear suction:	1480 litres



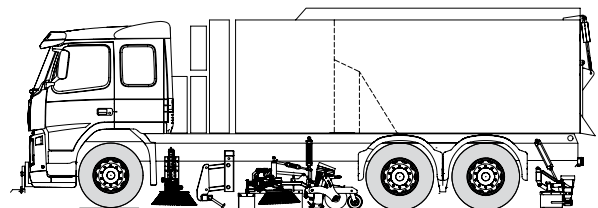
### S8000

Voided air volume:	8m <sup>3</sup>
Typical chassis GVW:	18 tonne
Typical chassis layout:	4x2
Water volume standard:	2160 litres
Water volume with rear suction:	1760 litres



### S9000

Voided air volume:	9m <sup>3</sup>
Typical chassis GVW:	18 tonne
Typical chassis layout:	4x2
Water volume standard:	2420 litres
Water volume with rear suction:	2020 litres



### S12000

Voided air volume:	12m <sup>3</sup>
Typical chassis GVW:	26 tonne
Typical chassis layout:	6x2*4
Water volume standard:	3230 litres
Water volume with rear suction:	2830 litres

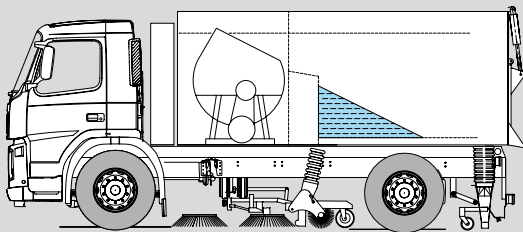
## Water tank modules

The S range has 2 linked water tanks located either side of the hopper for optimum weight distribution and balance. An additional water tank inside the hopper can be either 600 or 1000 litres and an external water tank can be installed between the cab and the hopper. Tanks can be produced from normal steel (internally painted with a special marine coating) or stainless steel, type 1.4301 (304) or 1.4401 (316).

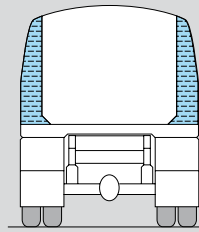
Model	Additional water tanks (litres)				
	In hopper (See note 1)		Behind cab (See note 2)		
S7000	600	1000	1100	1500	2000
S8000	600	1000	1100	1500	2000
S9000	600	1000	1100	1500	2000
S12000	600	1000	1100	1500	2000
Dimension 'a' (mm)			315	450	650

### Notes

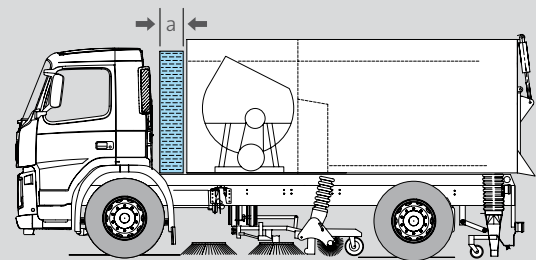
1. In hopper water tanks reduce voided volume
2. A weight calculation is required to ensure axles are not overloaded



Additional tanks in hopper (600 or 1000 litre)



Standard tanks



Additional tanks between cab and hopper

## Power pack modules

The power pack uses a choice of Mercedes auxiliary engines with power ratings up to 205kW. Power is transmitted to the dynamically balanced fan via a belt drive system and fluid flywheel. The S range is 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 a hydrostatic transmission, driven from the chassis engine. This transmission can also be used to power the entire sweeper washer function from the chassis engine.



### Note:

Typical operating speed for normal sweeping is 1200 rpm.

	MB904	MB906	MB906
Capacity (cc):	4250	6370	6370
Operating revs (RPM):	900 – 1800	900 – 1900	900 – 1900
Power output (kW @ RPM):	130 @ 2200	170 @ 2200	205 @ 2200
Max torque (Nm):	675	810	1100
Fuel consumption (l/hour):	5 – 18	7 – 20	7 – 20



Side sliding brush unit



Rear high pressure V-jets

## Sweep gear options

Designed to withstand the most arduous conditions, we offer a wide range of sweeping equipment to suit all application needs. Below are example layouts although most machines are designed and built to customers' specific requirements and application needs.

Power pack	Brush unit trunking diameter	Brush unit nozzle width
MB904	275mm	600mm
MB906	300mm	750mm

### Channel brush

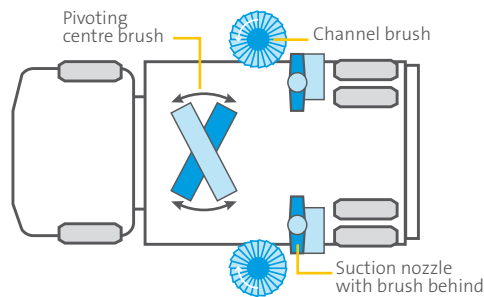
Channel brushes feature trailing arms that minimise the risk of damage on collision with kerbs or other obstructions.

### Brush behind

The brush sits immediately behind the nozzle to enable rapid pick up at very low auxiliary engine rpm, reducing both fuel cost and noise.

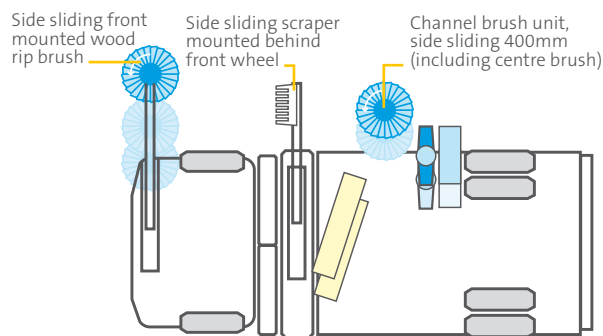
### S7000

Conventional sweep gear configuration



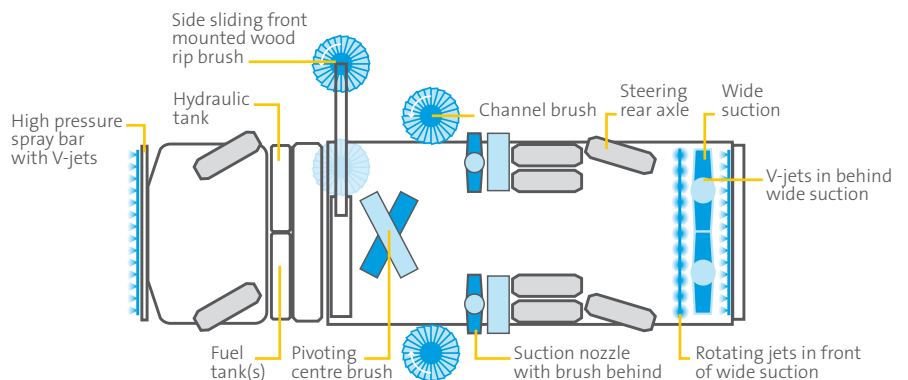
### S8000/S9000

Heavy duty multi-task sweep gear configuration



### S12000

Heavy duty construction type sweep gear configuration



### Side sliding brush unit

The channel brush and nozzle extend up to 400mm enabling the machine to keep away from the edges of a freshly laid surface.

### Rotatilt function

The Rotatilt function of the channel brush precisely angles the brush both laterally and longitudinally.

### Simple scraper

Mounted behind the front wheel, the simple scraper lifts compacted mud and debris from the surface.



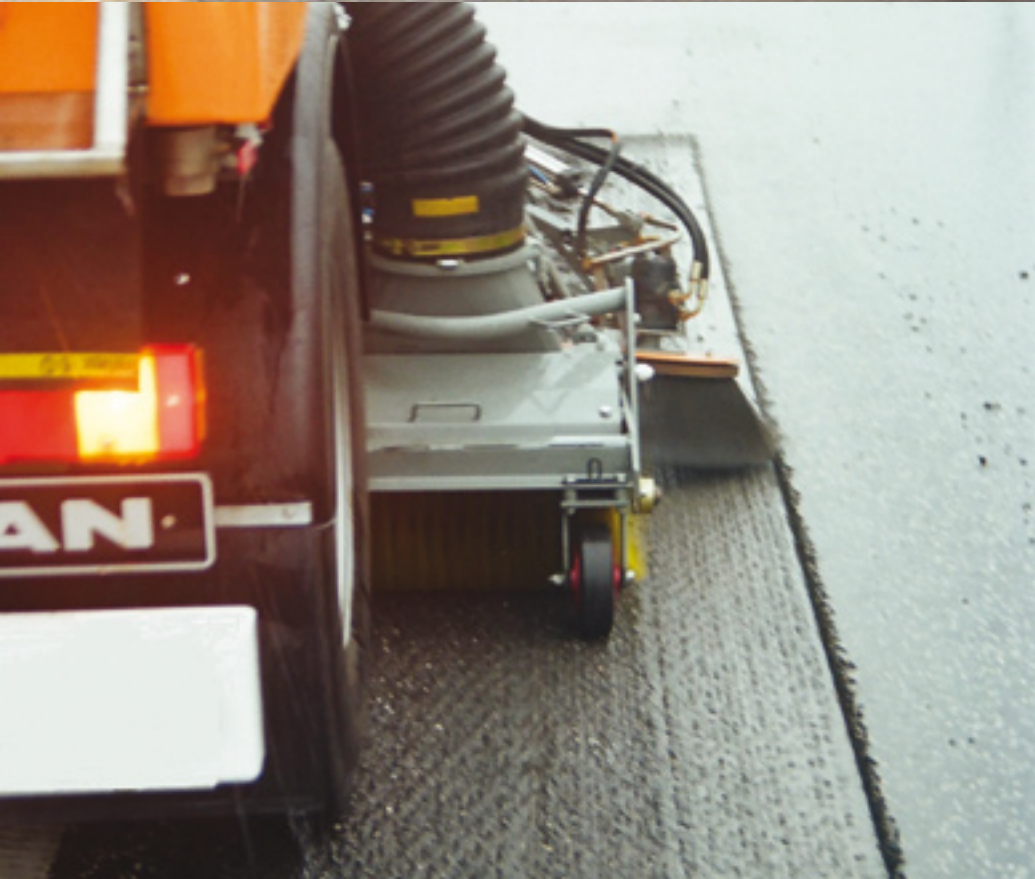
**Far Left**  
Trailing arm channel brush

**Left**  
Brush behind suction nozzle

**Below left**  
Side sliding brush unit

**Below**  
Channel brush rotatilt function

**Bottom**  
Simple scraper behind front wheel



### Full width scraper

A full width scraper under the body of the chassis.

### Edge cutter

Edge cutter cutting back encroaching verge, maintaining road width and preventing surface damage.

### Pivoting roller brush

The front mounted roller brush is ideal for brushing freshly milled asphalt onto the unmilled section. It can also be used for brushing snow.

### Weed rip brush

For tough jobs a weed rip brush, 750mm side sliding (can also be interchanged with the edge cutter).

### 1100mm dia. front mounted brush

For the ultimate in reach and flexibility, the front mounted 1100mm brush (1100mm side sliding).



**Far left**  
Full width scraper bar

**Left**  
Edge cutter and plough

**Bottom left**  
Front mounted pivoting roller brush

**Below**  
Side sliding brush unit with weed rip brush

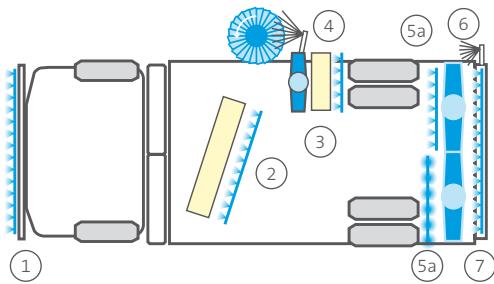
**Bottom**  
1100mm diameter side sliding front brush



# High pressure water system modules

A wide range of high pressure systems is available up to 300bar @ 100 l/min. Water may be applied to the road surface through a selection of spray bars via either V jets or, for deep cleansing, rotary jets.

System	Pump type	Minimum engine size
140 bar @ 42 l/min	Membrane	130 kW
150 bar @ 100 l/min	Piston	130 kW
200 bar @ 100 l/min	Piston	130 kW
250 bar @ 100 l/min	Piston	205 kW
300 bar @ 100 l/min	Piston	205 kW
240 bar @ 150 l/min	Piston	205 kW



## Ref Spray bar position

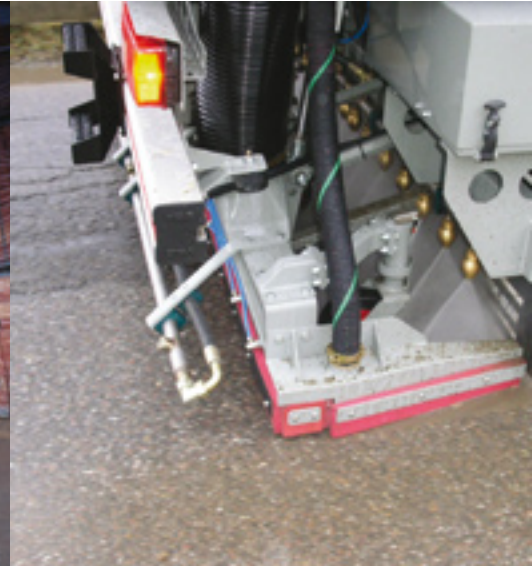
- 1 Front mounted, fixed
- 1 Front mounted, manual pivot
- 1 Front mounted, pneumatic pivot
- 2 Behind wide sweep brush
- 3 Behind suction nozzle with V-jets
- 4 Behind channel brush with V-jet
- 5a In front of wide suction with V-jets
- 5b In front of wide suction with rotating jets
- 6 To the side of the wide suction with V-jets
- 7 Behind wide suction with V-jets

Note: Wide suction can be mounted between axles as well as behind rear axle



- Far left**  
Rear spray bar. V-jets behind wide suction
- Left**  
Rotary jets. Powerful rotary jets for deep cleaning
- Below left**  
Front spray bar. High pressure front spray bar options
- Below**  
Side jets. High pressure jet gets into the very edge
- Bottom**  
Channel brush spray bar. Channel brush spray jet cleans right into the kerb edge





**Above left**  
Full width rear suction

**Top**  
Side suction

**Left**  
Front mounted detergent spray bar

**Above**  
Variable dosing system

## Detergent options

Detergent system options for grease and oil spill removal. Front mounted detergent spray bar for stand-alone dispersal. Variable dosing system to control the dilution of the detergent by mixing with water.

## Full width suction nozzle

Rear or mid mounted, the full width suction unit features two articulated rubber-lined nozzles which, in combination with a choice of high pressure water systems, offers optimum surface cleansing increasing surface friction levels and providing safer driving conditions. Side suction pods minimise the spill of water.

## In-cab control systems

The sweeping controls are located in the cab.



**Top left**  
Standard control panel

**Left**  
Integrated controls are an optional extra

**Bottom left**  
Ergo switch mounted on arm brace

**Bottom right**  
Manual water control valves inside the cabin

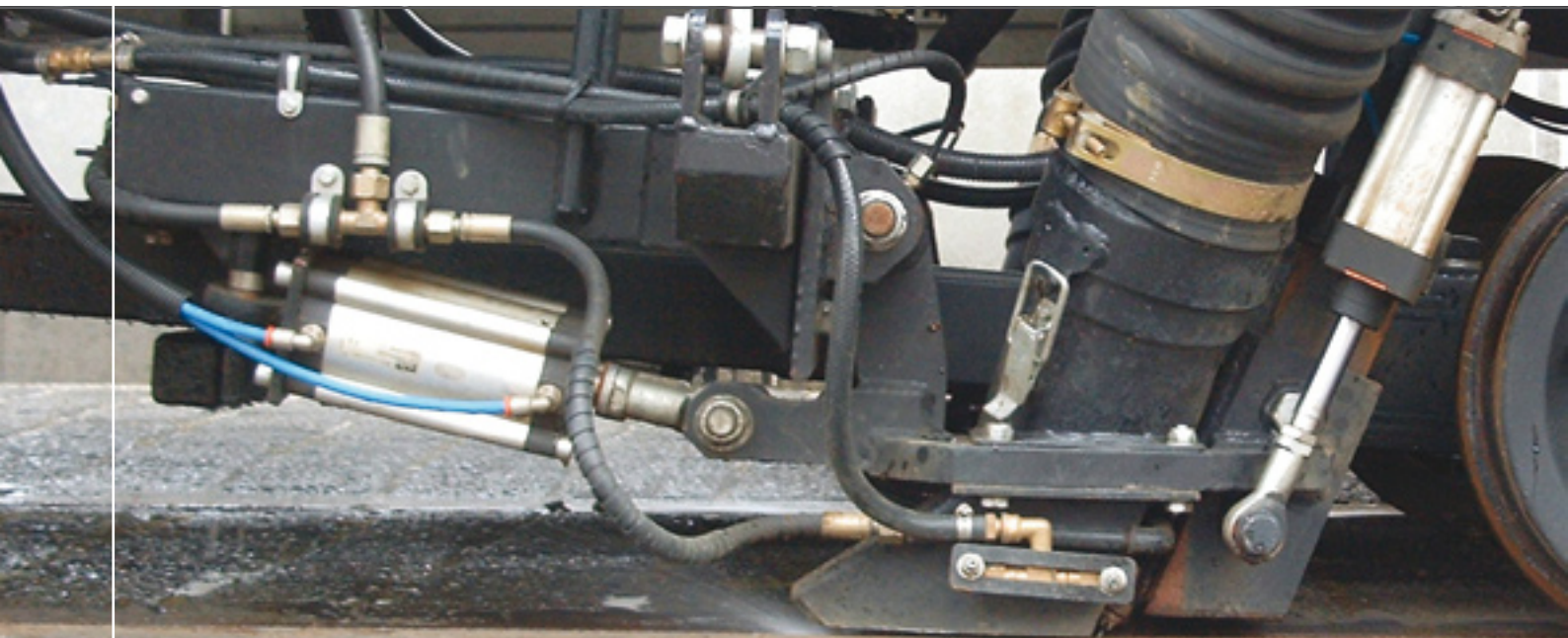
## Wanderhoses

There are 9 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.

Type	Mount	Hose dia	Elevation
Electro/pneumatic	Rear	170mm	2m
Electro/pneumatic	Rear	170mm	3m
Electro/pneumatic	Rear	200mm	2m
Spring relieved	Rear	170mm	2m
Spring relieved	Rear	200mm	2m
Spring relieved	Top	150mm	N/A
Spring relieved	Top	200mm	N/A
Hydraulic	Top	200mm	N/A
Hydraulic	Top	150mm	N/A



**Above**  
Rear mounted wanderhose



Above  
Tram track cleaner

Far left  
Recycling machine

Left  
Hot water system

## Special solutions

### Tram-track cleaning

Tram tracks collect leaves, dirt and grease. The tram track cleaner scrapes out the compacted debris, jet cleans with high pressure water, vacuums the waste into the hopper and then lubricates the track. The sweep gear can be made to be demountable.

### Hot water system

The hot water machines have been designed to operate without the need for detergent. Instead, the hot water jets (up to 90°C) easily lift oil and grease from the surface.

### Recycling system

We have developed a system to re-cycle water used in high pressure washers. Special separators, working tanks and high pressure pumps enable machines to operate continuously for 4, 6 or even 8 hours. This offers a huge saving in time, fuel and waste charges.

### Our focus is always

- Cost effectiveness – single operator solutions
- Safety – machine operation from protected position in cab
- Environmentally friendly – low operating engine speed means less fuel consumption and lower noise levels

### Line removal

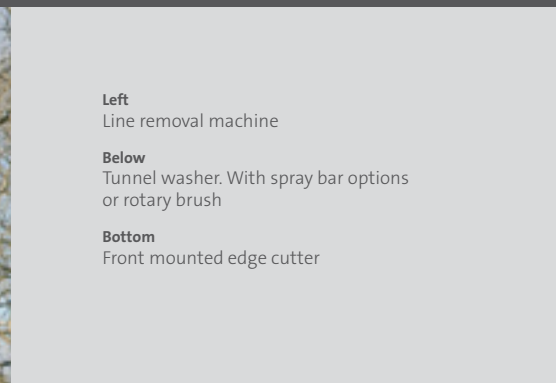
Replacing the expensive and slow, ultra-high pressure water and the environmentally damaging thermal lance method, the line remover grinds away the painted surface.

### Tunnel washing

Front mounted tunnel washing robotic arm uses high pressure water, combined with V-jet or rotating jet spray bars to wash tunnel walls, ceilings, road signs, crash barriers and central reservation walls. It has a 7m cleaning arc and 3-axis rotation. With the added benefit of being part of a sweeper, it cleans up after itself too.

### Front mounted edge cutter

Mounted at the front, the edge cutter can side slide by 750mm to allow the truck to clear overhanging trees. For cutting back encroaching verges.



**Left**  
Line removal machine

**Below**  
Tunnel washer. With spray bar options or rotary brush

**Bottom**  
Front mounted edge cutter

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