



## The Airport Range

Johnston Beam VT and VX Range

### Johnston Sweepers Ltd

Curtis Road, Dorking, Surrey RH4 1XF, UK

Tel: +44 (0)1306 884722

Fax: +44 (0)1306 884151

E-mail: [enquiries@johnstonsweepers.com](mailto:enquiries@johnstonsweepers.com)

[www.johnstonsweepers.com](http://www.johnstonsweepers.com)

 A Johnston Group Company

Due to continuous product development Johnston Sweepers Ltd reserves the right to alter specifications without prior notice.  
AIRPBRO/CIC/2K/0904

# Johnston Beam - Sweeping the world's airports

24  
HOUR

UK MAINLAND  
PARTS DELIVERY

30  
THOUSAND

PARTS IN STOCK  
WORLDWIDE

200  
STRONG

WORLDWIDE  
CUSTOMER SERVICE  
NETWORK



Certificate No. FM 83396

You can't take risks with airport sweepers - that's why Johnston Beam machines are individually designed for high-speed, high-performance clearance of runways, taxiways and aprons.

Recognised as the world's leading manufacturer of outdoor surface cleansing equipment, Johnston produces a comprehensive range of sweeping equipment for a diverse range of airside and landside sweeping applications.

Our airport range now includes custom built VX sweepers and a hybrid version of our already popular VT twin-engined sweeper range.

With durable, heavy duty designs and environmentally friendly Euro 3 engines, Johnston Beam sweepers are built to meet the toughest cleansing challenges. And in order to maintain high performance in such a safety critical environment, we believe that you - and your machines - deserve premium quality after sales support.

Over 200 strategically located distributors and dealers worldwide ensure that our support network is unrivalled within the industry. Rigorous service technician training programmes ensure that you have access to comprehensive support, detailed technical & application advice and a consistently high standard of service, wherever you're based.

With over 30,000 parts lines held in stock worldwide, we can deliver parts anywhere in the world, so you can be sure that your Johnston Beam sweeper will continue to give maximum performance with minimum downtime.

RIGHT  
Johnston  
machines also  
available for  
landside sweeping  
applications



## About Johnston Beam

Based in Them, Denmark, Johnston Beam is renowned throughout the industry for designing and building heavy duty, high performance machines that are supported worldwide. As well as standard heavy duty surface cleansing units with capacities from 5m<sup>3</sup> to 12m<sup>3</sup>, Johnston Beam offers individually tailored machines for a wide range of highly specialised applications.

Johnston Beam is the sweeper of choice at many British airports including Stansted, Gatwick and Heathrow. International clients also include the UK Ministry of Defence (which operates 50 runway sweepers) and many airports throughout the world including Frankfurt, Barbados, Antwerp, Copenhagen, Lusaka and Tripoli.



ABOVE  
**Johnston Beam  
VT Sweeper**  
Front mounted magnet



LEFT  
**Johnston Beam  
VX Sweeper**  
Stand scrubbing

BELOW LEFT  
**Johnston Beam  
VX Sweeper**  
Airport maintenance



RIGHT  
**Johnston Beam  
VX Sweeper**  
Stand scrubbing and  
fluid recovery

## Cleared for take off

Suited to a range of applications including stand scrubbing, liquid pick up, rubber removal and high speed runway sweeping, the Johnston Beam airport range gives you maximum clearance with minimum disruption. Whilst Johnston Beam's airport sweepers are built to a bespoke specification, they share many common features that ensure that they are unrivalled for reliability, durability, safety and efficient operation. Vehicles are available in a range of sizes and Johnston equipment can be mounted on a full range of chassis types from 10t to 36t GVM.

The Johnston Beam VT Range comes with a turbocharged Euro 3 Iveco NEF engine delivering up to 88kW; the VX with a choice of powerful Euro 3 Mercedes units up to 205kW.

With an infinitely variable throttle for optimum performance and efficiency, the auxiliary engine drives a dynamically balanced multi-vane impeller. On the VT Range this is done via a step up gearbox and fluid flywheel; on the VX Range via a belt drive system and fluid flywheel. The throttle can also be used to reduce noise levels for night sweeping operations.

The bodies come in a range of hopper capacities; the VT Range from 5m<sup>3</sup> to 8m<sup>3</sup>; the VX Range from 6m<sup>3</sup> to 12m<sup>3</sup> (although specialist bodies can be provided). Both feature internally treated integral water tanks; the VX Range also comes with sacrificial anodes to minimise tank corrosion.

Each vehicle's control systems are designed for ease of use, safety and maximum performance. All sweeping operations are controlled from the master module inside the cab. This incorporates an audible & visual raised hopper warning, auxiliary engine fuel gauge and hour counter & tachometer. On the VX Range there is an option for all the controls to be integral.

Add a comprehensive choice of optional equipment and you have a versatile range that leaves airports the world over cleared for take-off.

BELOW  
**Johnston Beam  
VX Sweeper**  
High speed FOD  
clearance



ABOVE  
**Johnston Beam  
VX Sweeper**  
Airport maintenance



## Custom clearance

You can't compromise on airport safety. That's why Johnston Beam doesn't compromise on the quality of design, build and specification of our sweepers. The result is a unique range of bespoke machines that can be custom-built to military FOD pick-up criteria and meeting the legislated friction co-efficient for touch down zones.

Not only does their modular design enable you to specify a configuration to meet precise military or civilian airside and landside sweeping requirements, it also means that you can have one machine that fulfils several functions equally efficiently.

Given Johnston Beam's 'modular' design concept, there is a huge number of possible specifications available for all possible airside and landside sweeping applications. So, whether you choose a machine for a specific task or combine capabilities in one vehicle, you are assured of superior clearance - custom built for your needs.

TOP  
**Johnston Beam  
VX Sweeper**  
Stand scrubbing

ABOVE  
Gulley cleaning

## Glycol/fluid recovery

Features full-width nozzles with twin asymmetric suction heads. These are laterally interlinked and flow-balanced for fast and effective fluid recovery at up to 25,000sq. metres/hour keeping runways and stands operational for longer. On the VT Range rear suction is only available on the VT800 model.

## Conventional sweeping

Johnston Beam units can carry conventional sweeping gear for general land and airside sweeping requirements. They are also available with two onboard water systems. For effective washing and rinsing, a choice of high pressure systems can deliver up to 200 litres of water per minute and up to 600 bar via high pulse rotating jets or V-jets mounted on full width spraybars.

## High speed sweeping (VX Range only)

Johnston Beam's unique 'V-channels' guide debris to the centre of the brush-assisted suction nozzles which maintain close ground to hood clearance. With all brushes designed to both sweep and scrub, you are assured of outstanding runway, taxiway and apron sweeping - with up to 98% pick-up of material - at speeds of up to 40 km/h.





### Stand cleaning & scrubbing

2500mm wide full width suction nozzle and scrubbing brushes combine with a detergent management & application system and high pressure surface washers for superb hard surface cleansing results. In addition, Johnston Beam has developed a high pressure hot water system for effective removal of grease and oil spills (VX Range only). The speed and efficiency of the operation enables rapid turnaround at busy airports.

### Rubber removal

Water-based chemicals used with the built-in detergent management system, surface scarification and high pressure water system produce an environmentally-sound rubber removal solution.

The ability to put down chemicals, rinse and remove detergents in a single pass helps prevent unnecessary pollution.

Preferred rubber removal methods may vary.

### Hot water system

As detergent cannot be used in certain environments - and the force of high pressure systems alone can damage surfaces - Johnston Beam has worked in partnership with its customers to develop the unique hot water cleansing system that features on the VX Range. Water on-board the vehicle is heated to 90°C and delivered via the high pressure system at up to 600 bar to enable the removal of oil and spills without chemicals.

### Multi-task sweeping

Johnston Beam produces versatile, high performance machines designed to undertake a variety of airside cleansing tasks. Many of the sweeping/cleansing functions above can be combined in one powerful and durable 'multi-task' machine, increasing machine utilisation and reducing cost.

Indeed, the modular design of Johnston Beam's multi-task airport sweepers enables you to specify a unit to meet your precise application.



TOP  
Full width mid suction

MIDDLE  
High pressure  
hand lance

BOTTOM  
Johnston Beam  
VX Sweeper  
Airport maintenance



## Optional equipment

- Detergent and chemical metering system. Ensures accurate control and a reduction in waste.
- Side air blast nozzles.
- Runway landing zone rubber removal system.
- Front-mounted, full width magnet - can be raised and lowered for effective high speed pickup of ferrous debris.
- High pressure water systems and washing hand lance.
- High pressure hot water system.
- Wanderhose - rear and top mounted options.
- Twin side brushes and full width nozzles for a total sweeping and suction width of up to 4000mm.
- Snow brush/plough options.
- Rear and upward view camera systems.
- Autolube systems.
- Please note that some of these options are only available on the VX Range. A comprehensive range of additional options is also available. Ask for details.

### Outline Specification

<b>Chassis GVM:</b>	10 - 36 tonnes	<b>Swept width:</b>	up to 4000mm
<b>Hopper capacity:</b>	5m <sup>3</sup> - 12m <sup>3</sup>	<b>Water tank capacity:</b>	1000 - 6000 litres
<b>Auxiliary engine:</b>	VX Range - Euro 3 Mercedes OM904/OM906 up to 205kW VT Range - Euro 3 Turbocharged Iveco NEF up to 88kW		
<b>High pressure water systems:</b>	up to 200 litres per minute and 600 bar		
<b>Hot water system:</b>	Water is heated to 90°C (only available on VX Range)		

## Sweeper configurations

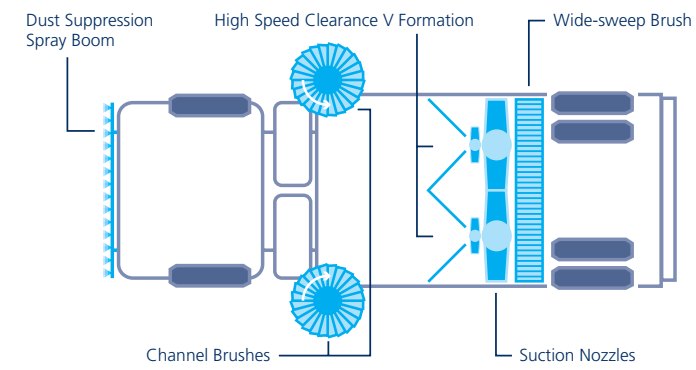
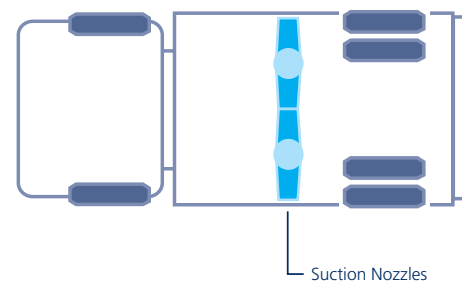
The diverse nature - and high performance requirement - of airport sweeping applications requires vehicles built for particular tasks. The Johnston Beam Airport Range features variations on a number of common sweep configurations and vehicles can be designed with several brush/nozzle combinations in order to meet your specifications.

The examples here show some of the many possible configurations, though we are always happy to discuss individual sweeping requirements and design units accordingly.

BELOW  
Johnston Beam  
VX Sweeper  
Stand scrubbing



### Liquid pick-up, glycol recovery

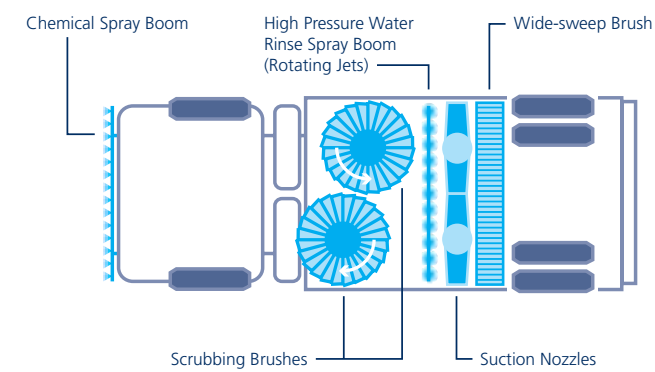


### High speed sweeping

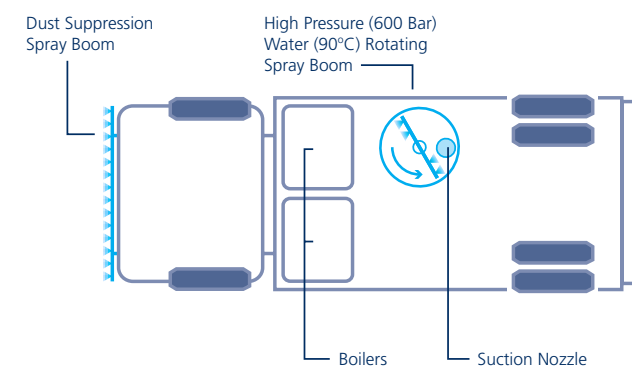
TOP  
High pressure  
rotating jets

MIDDLE  
Johnston Beam  
VT Sweeper  
Operator control box

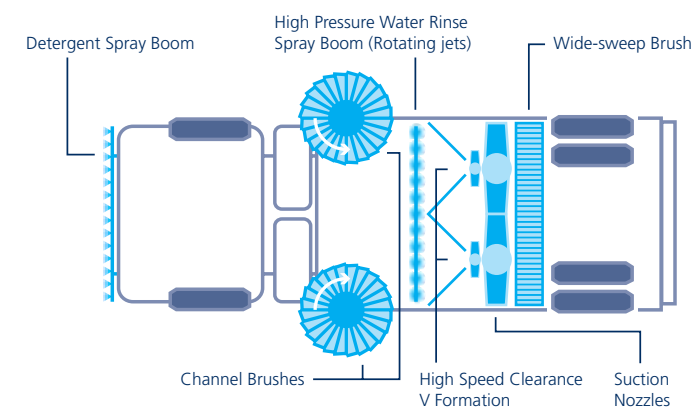
BOTTOM  
High speed clearance  
V formation



### Stand scrubbing and rubber removal



### Hot water system



### Multi-task sweeping