

VS650 CNG Specification

NIROSTA®
In My Body



Performance & Environmentally Friendly CNG

Power For The Heavy Urban Environment

Equally at home on municipal street cleaning or extreme heavy duty work sites the **VR**ange delivers consistently high pick-up performance - even on contractor duties such as road planing and dirt pick-up around construction sites and access roads.

CNG - A Greener Bottom Line

Lower alternative fuel costs and lower incremental maintenance costs can save valuable dollars. Maintenance-free exhaust systems and lower life-cycle costs help green-up your bottom line. Government incentives and Infrastructure Tax Credits may be available to green fleets that can help reduce acquisition costs significantly.

NIROSTA® In My Body!

With a heavy-duty, corrosion-resistant **NIROSTA®** stainless steel body, Johnston's **VR**ange is robustly built for unrivalled durability. Johnston is the only sweeper manufacturer to offer as standard, "Complete Hopper Constructed of Stainless Steel" and an industry leading warranty.

Hydrostatic Drive

The single engined **VR**ange utilizes Johnston's hydrodrive gearbox which provides infinitely variable forward speed control and hydrodynamic braking. The operator can perfectly match the speed to the operation.

Dual Or Single Sweep

Available in dual or single sweep configuration, the maximum 11.8 feet swept path ensures superb coverage per hour - and with

(continued reverse side)

Housed in an enclosure behind the cab, carbon fiber reinforced aluminum Type 3 compressed natural gas (CNG) fuel tanks offer an approximate range of 250 miles depending on your application.

With no auxiliary engine to maintain, the VS650 single engine application provides lower maintenance costs and more time sweeping.

*VR*ange provides easy access to the blower and hydraulic components.

VS650 CNG ready to sweep in an urban environment where noise is a factor and the single engine is much quieter.



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Due to continuous product development Johnston Sweepers reserves the right to alter specifications without prior notice.

 **Johnston**
NORTH AMERICA

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high capacity hopper, water systems and fuel tanks, the **VR**ange is designed to stay at work longer.

Robust Construction

Mounted to the subframe, the hydraulically operated sweeping system is designed to prolong the life of the brush and reduces the cost of ownership. Both channel and wide-sweep brush installations feature quick-change mechanisms which reduce downtime between changeovers.

In-Cab Controls

All sweeping operations are controlled from the master module inside the cab, while all critical systems controls - including the master circuit breaker plus the valves and auxiliary equipment for the pneumatic, hydraulic and water systems - are housed in a purpose-built, dust and weatherproof locker. The **VR**ange comes with waterproof IP67 automotive electrical connectors to enhance reliability.

Advanced Hopper Design

With many years experience of sweeper design, Johnston have developed a unique system which creates a cyclone effect within the hopper which efficiently filters dust and debris particles through mesh screens prior to discharge to atmosphere. This unique design is a standard feature of all Johnston V sweepers.

Excess Water Discharge

The load de-watering system fitted as standard, enables drainage of water from the waste volume in the hopper.

Cold Weather Protection

The **VR**ange also features a standard Pressadrain™ water purging system that enables the easy removal of water from the systems in freezing overnight conditions.

Water Recirculation

The **VR**ange comes with an option for a water recir-

ulation system that recycles water from the hopper into the suction nozzle, which conserves water, reduces dust emissions. Water recirculation significantly increases sweeping productivity by allowing greater distances to be swept before the water tank needs to be refilled.

Emissions

The **VR**ange is also the first manufactured sweeper to achieve full PM10 test compliance in stringent air quality tests on whole vehicle emissions.

Options

Littasnatch: Specially developed to pick up light litter from pavements and hedgerows. With a lightweight, easy to operate flexible hose and nozzle, it can reach up to approximately 23 feet.

Supawash: A high pressure water system for faster cleaning of gulleys and drains using a hose and hand lance. Water can also be diverted to a front-mounted full-width spray bar or suction nozzle to help remove stubborn road debris.

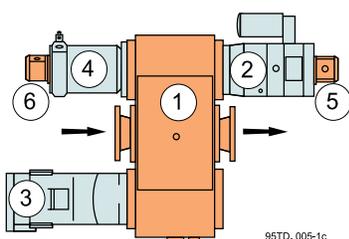
Powascrub: This wide sweep brush ground pressure device enables the extra scarification of compacted debris.

Load De-Watering: With increases in waste tipping charges, this option ensures that you only pay for waste volume, not unnecessary water volume.

Rear mesh shakers: A fast and effective method of clearing damp paper and leaves from suction meshes.

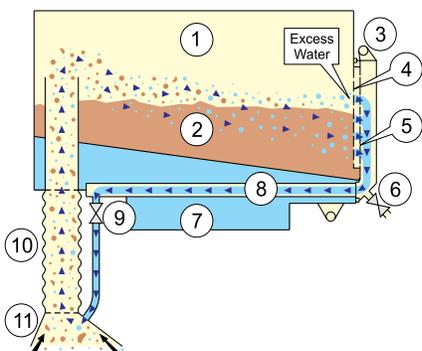
Wanderhose: Available in 8 inch diameter, this rigid, turntable-mounted hose with a flexible extension enables cleaning over a wide 11 foot radius.

Hydrodrive Gearbox Configuration



- 1 Hydrodrive gearbox
- 2 Vehicle propulsion pump
- 3 Vehicle propulsion motor
- 4 Exhauster fan pump
- 5 Sweeping function pump (SF)
- 6 Additional/optional equipment pump (AOP)

Illustration of water re-circulation system



- 1 Body and water tank
- 2 Payload
- 3 Rear door
- 4 Primary filter panel
- 5 Wedge wire filter panels
- 6 De-watering drain-off valve
- 7 Clean water tank
- 8 Transfer duct
- 9 Re-circulation control valve
- 10 Suction duct
- 11 Suction nozzle



High Performance - Low Emissions

The Cummins Westport ISL G engine evolved from the proven Cummins ISL diesel currently in operation in many fleets today. This cost-effective, high performance engine is packed with important features that have a positive impact on vehicle life-cycle costs. Housed in an enclosure behind the cab, carbon fiber reinforced aluminum type 3 compressed natural gas (CNG) fuel tanks offer an approximate range of 250 miles depending on your application. Standard methane gas detection system alerts the driver in the event of a fuel leak.

- EPA 2010 and CARB emission standards compliant
- Available up to 320 hp/1000 ft. lbs. torque
- 35% more torque at idle than previous Natural Gas engines
- No SCR aftertreatment system is required
- Maintenance-free exhaust system
- No DPF regeneration, cleaning or replacement
- Improved fuel economy
- Reliable/Durable
- Highest power-to-weight ratio in its class
- Shares many components/parts with ISL diesel engines
- Available ratings optimized for Allison transmissions
- Domestic fuel source reduces dependency on foreign oil