

# vertidrive

WE CREATE  
INNOVATIONS  
THAT STICK

## V400

### **SOLUTION FOR REMOVING COATINGS AND CONTAMINANTS FROM LARGE STEEL SURFACES**

Surface preparation trends are rapidly changing. New regulations focused on environmental impact, safety, and labour are putting pressure on shipyards, tank terminals, and subcontractors. Industry contractors must adapt their methods of surface preparation or become obsolete. A significant shift is underway, moving away from hazardous abrasives and towards Ultra-High-Pressure (UHP) blasting.

However, even with UHP blasting - paints, coatings, and protective materials can still harm our environment and wildlife. That's where the VertiDrive V400 Series steps in.

Introducing our newest V400 platform: the strongest and most robust robotic solution in its class for enclosed UHP water

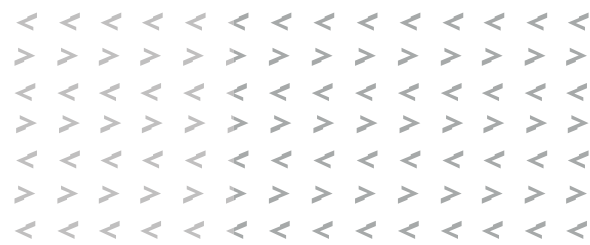
blasting and washing. Designed to withstand harsh industrial environments, its durable frame allows for versatile operation: upside down, vertically, or horizontally, thanks to our improved, powerful magnets.

The V400 Series is purpose-built to address present challenges and beyond, ensuring large steel surfaces can be prepared with utmost safety, efficiency, and regulatory compliance.

**FASTER,  
SAFER,  
CLEANER.**



# V400



## EXPERIENCE MASSIVE PRODUCTION

Our V400 Series introduces a break-through solution that surpasses the limitations of traditional UHP blasting methods. No longer accept slow production rates that average 5-8m<sup>2</sup> (53.8-86.1ft<sup>2</sup>) per hour, when you can experience an impressive average coverage of 45m<sup>2</sup> (484.4ft<sup>2</sup>) per hour.

Upgrade your blasting operations to the V400 Series and unlock exceptional performance, backed by our expert knowledge, and unwavering customer support.

## SAFER, FASTER, CLEANER

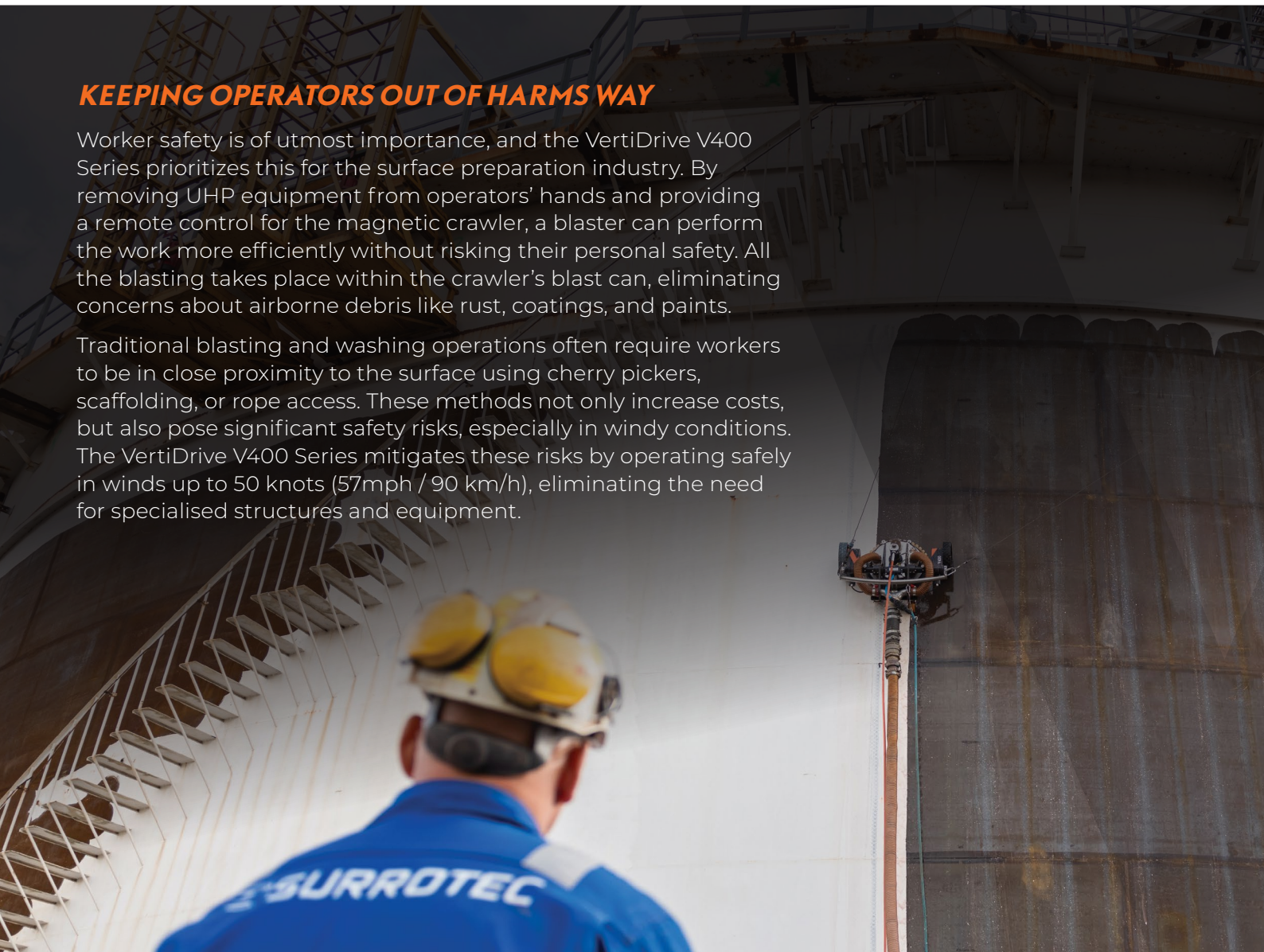
Revolutionise your operations with our Skid Mount Vacuum System for the V400 Series for cost-efficient waste water collection

Effortlessly collect waste water and store them responsibly in our optional big bag holder. Experience unmatched performance, flexibility, and cost savings in one smart solution.

## KEEPING OPERATORS OUT OF HARMS WAY

Worker safety is of utmost importance, and the VertiDrive V400 Series prioritizes this for the surface preparation industry. By removing UHP equipment from operators' hands and providing a remote control for the magnetic crawler, a blaster can perform the work more efficiently without risking their personal safety. All the blasting takes place within the crawler's blast can, eliminating concerns about airborne debris like rust, coatings, and paints.

Traditional blasting and washing operations often require workers to be in close proximity to the surface using cherry pickers, scaffolding, or rope access. These methods not only increase costs, but also pose significant safety risks, especially in windy conditions. The VertiDrive V400 Series mitigates these risks by operating safely in winds up to 50 knots (57mph / 90 km/h), eliminating the need for specialised structures and equipment.



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# V400

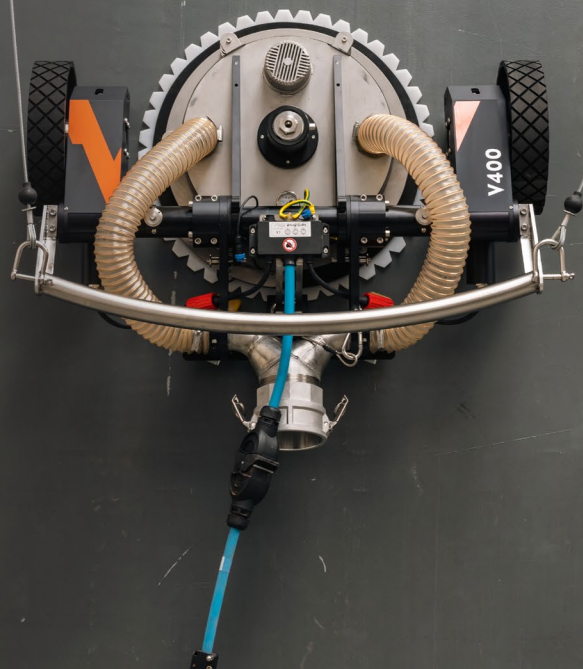
## MITIGATE FLASH RUST

The V400 Series is a cutting-edge innovation in surface preparation. When paired with the VertiDrive Vacuum System, it provides an efficient means of waste water collection and guards against flash rust. The treated surface dries instantaneously, making it ready for subsequent applications such as paint or coating.

Equipped with a closed blast can featuring an Ultra-High Pressure (UHP) cross, the V400 Series accommodates up to 16 nozzles. The system utilises UHP water blasting to effectively restore the surface profile, providing a superior level of surface preparation.



- **UP TO 45M<sup>2</sup> / 485 FT<sup>2</sup> PER HOUR**
- **UP TO 5X MORE EFFICIENT**
- **UP TO 5X FASTER THAN MANUAL WORK**
- **UP TO 92% COST REDUCTION**



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QUALITY SYSTEM CERTIFICATION  
**DNV GL**  
ISO 9001:2015

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B3600-1.1

## TECHNICAL SPECIFICATIONS

### ELECTRICAL MODEL

#### ROBOT

> Robot dimensions	900mm L x 990mm W x 420mm H (35.5" x 39" x 16.5")
> Weight	88 kg (194 lbs)
> Payload capacity	150 kg (330 lbs)
> Driving speed	Max. 5 m/min (16.4 ft)
> Holding power magnets	Up to 300 kg (660 lbs)
> Minimal Radius Required	>10m radius (20m diameter)
> Max operational Windspeed	50 knots / 25 m/s
> Adjustable Magnets	From 4 to 12mm (0.16" to 0.47")
> Drive Motors	2x 315W

#### UMBILICAL

> Dimensions	ø 18mm, length 50 m (164 ft)
> Weight	25 kg (0.5 kg / m)
> Extension	Max 100m (328 ft)

#### CONTROL BOX

> Input voltage range	230V systems: 200-240 VAC 120V systems: 100-120 VAC
> Input frequency range	50/60 Hz
> Input current (without cooling)	230V systems: 5A, 120V systems: 10A
> Input current (with cooling)	230V systems: 7A, 120V systems: 14A
> Working temp. (without cooling)	-20 to +35°C (0 to +95°F)
> Working temp. (with cooling)	-20 to +50°C (0 to +120°F)
> Output voltage to the robot	70 VDC (motors) and 24 VDC (logic).
> Dimensions	600mm H x 600mm W x 260mm D (600 x 690 x 260 mm with optional cooling)
> Weight	35 kg (44 kg for 'high temperature' systems with cooling)

#### REMOTE SYSTEM

> Remote control System	Hetronic Nova XL
> Range remote control	100 meters (328 ft)

#### ENVIRONMENTAL CONDITIONS

> Storage temperature	-40 to +85°C (-40 to +185°F)
> IP rating robot	IP65
> IP rating control box	IP66
> IP rating remote control	IP66

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# V400

## APPLICATION SPECIFICATIONS

#### ULTRA-HIGH PRESSURE

- > Max. 3000 bar @ 40 l/min  
(Max. 43,500 psi @ 10.5 gal/min)
- > Cleaning Width 400mm  
(15.75")
- > Self-rotating cross with 16  
x M10 nozzles
- > Average up to 45m<sup>2</sup> per  
hour (484ft<sup>2</sup>)

*Note: The VertiDrive V400 is designed to improve wastewater collection efficiency during surface preparation. However, its ability to contain and manage waste water varies depending on surface conditions and operational setup. Complete containment of waste water cannot be guaranteed.*

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# V400

## WORKING IN A HAZARDOUS AREA?



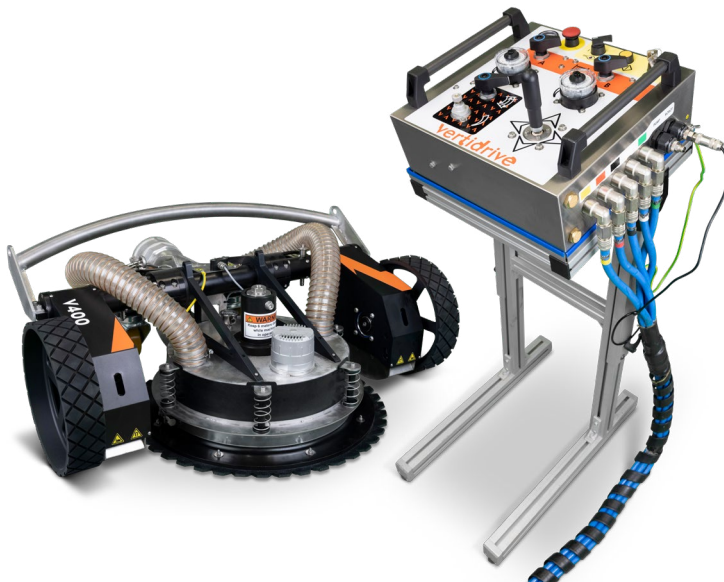
PNEUMATIC  
DRIVEN OPTION:  
ATEX ZONE 2  
CERTIFIED

### ATEX ZONE 2 CERTIFIED

Comply with often strict safety regulations at tank terminals.

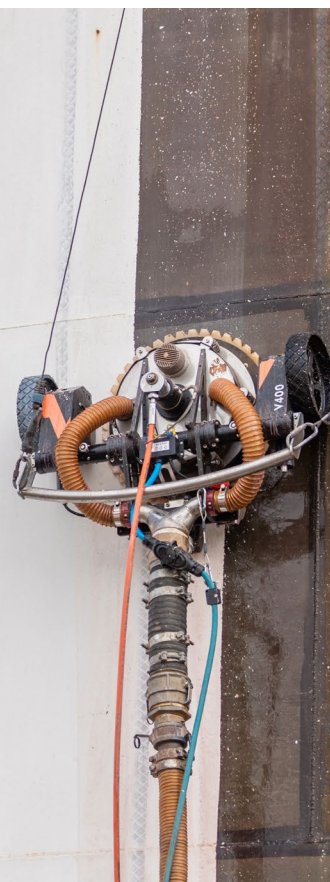
The V400 Series ATEX variant is designed for blasting activities in Zone 2 environments, ensuring safety without compromising on performance. With powerful air motors and a pneumatic control box, the V400 seamlessly integrates into ATEX-regulated areas, providing reliable and efficient operation.

When paired with the ATEX Zone 2 VertiDrive Vacuum system, the V400 allows you to experience the benefits of robotic blasting and waste collection, all in one efficient package.



**THE V400 IS THE STRONGEST AND MOST ROBUST ROBOTIC SOLUTION IN ITS CLASS FOR ENCLOSED UHP WATER BLASTING AND WASHING.**

**WHEN PAIRED WITH THE VERTIDRIVE VACUUM SYSTEM, IT PROVIDES AN EFFICIENT MEANS OF WASTE WATER COLLECTION.**



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## TECHNICAL SPECIFICATIONS

### ATEX CERTIFIED MODEL



PNEUMATIC  
DRIVEN OPTION:  
ATEX ZONE 2  
CERTIFIED

#### ROBOT

> Robot dimensions	900mm L x 990mm W x 420mm H (35.5" x 39" x 16.5")
> Weight	85 kg (187 lbs)
> Payload capacity	150 kg (330 lbs)
> Driving speed	Max. 8m/min (5m/min at full load)
> Holding power magnets	Up to 300 kg (660 lbs)
> Minimal Radius Required	>10m radius (20m diameter)
> Max operational Windspeed	50 knots / 25 m/s
> Adjustable Magnets	From 4 to 12mm (0.16" to 0.47")
> Drive Motors	2x air motor 7 bar, 840 NI/min max

#### UMBILICAL

> Dimensions	ø 55mm, length 50 m (164 ft)
> Weight	25 kg (0.5 kg / m)

#### CONTROL BOX

> Input pressure	Min. 7 bar, max 12 bar
> Dimensions	400mm H x 500mm W x 250mm D (1250mm H x 500mm W x 640mm D incl. stand)
> Weight	20kg (35kg incl stand)
> Air consumption	1700 NI/min max

#### ATEX CERTIFICATION

> Certification	Ex II 3G Ex h IIB T4 Gc
> Ambient temperature	-5°C < Ta < +40°C

#### ENVIRONMENTAL CONDITIONS

> Storage temperature	-40 to +85°C (-40 to +185°F)
> IP rating robot	IP65
> IP rating control box	IP65

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## V400

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## APPLICATION SPECIFICATIONS

#### ULTRA-HIGH PRESSURE

- > Max. 3000 bar @ 40 l/min  
(Max. 43,500 psi @ 10.5 gal/min)
- > Cleaning Width 400mm  
(15.75")
- > Self-rotating cross with 16  
x M10 nozzles
- > Average up to 45m<sup>2</sup> per  
hour (484ft<sup>2</sup>)

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## V700

### **INDUSTRIAL-GRADE SOLUTION FOR REMOVING COATINGS AND CONTAMINANTS FROM LARGE STEEL SURFACES**

The steel surface preparation industry has faced many challenges, including slow production, high costs, and dangerous working conditions. To keep up with changing times and prioritise safety and efficiency, it's important for companies to innovate and attract new talent. That's where the VertiDrive V700 Series comes in.

Our new robotic platform is designed specifically for tough industrial environments, ready for future demands. With powerful magnets, the V700 Series can work on any steel surface with magnetic properties, even upside down. Plus, it's incredibly versatile and can switch between three different applications in just minutes.

### **REDUCE ASSET DOWNTIME**

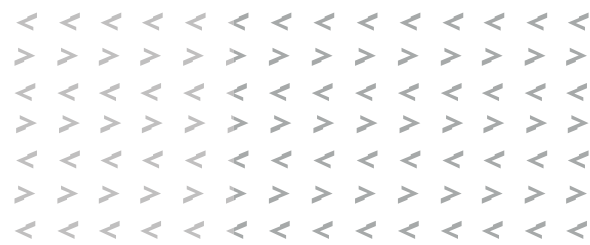
The V700 Series can help speed up the process of preparing large steel assets like storage tanks and ships. Normally, this preparation can take up to 70% of the asset's downtime.

This results in enhanced availability of assets. For instance, there's a notable increase in tank storage, and docking availability.

**FASTER,  
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CLEANER.**



# V700



## EASY TO USE

- > Operator Friendly
- > Compatibility
- > Easy to maintain
- > Plug and play
- > On site training

With our Train-the-Trainer program, we ensure you'll have someone in-house qualified to train new staff to operate the crawler while maintaining the best results. This helps ensure that your operation runs smoothly and efficiently.

## EXPERIENCE MASSIVE PRODUCTION

The V700 Series can improve your washing and blasting performance significantly. We don't just sell you a piece of equipment - we analyse your current operation and show you how our crawler can be your competitive advantage.

With the V700, you can achieve impressive blasting and washing results in terms of performance and high consistent quality. Check out the V700 Series applications below.

## KEEP OPERATORS OUT OF HARMS WAY

Our solutions prioritise the safety and health of operators. By removing dangerous UHP and abrasive blasting nozzles and lances from the operator's hand, we've reduced the risk of injury. The V700 is operated remotely, ensuring the operator's safety by maintaining a secure distance from the actual blasting process

Traditionally surface treatment operators have to use cherry pickers, scaffolding, or rope access to blast elevated surfaces. With the use of a V700 series these challenges are taken away. The robot can even work safely up to wind speeds of 50 knots (57mph / 90 km/h), increasing the actual blasting time.

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**BLASTONE**



# V700

## V700 FOR ABRASIVE BLASTING

Best for removal of coatings, paints, liners, corrosion, and anti-fouling systems. This method provides a brand-new profile on the blasted surface.

- > Blast up to 60m<sup>2</sup> (646ft<sup>2</sup>) per hour.
- > Capable of holding up to 3 #10 SnakeBite blast nozzles. Max. 600 N (60 kg force) at 1m (3.28ft) arm length
- > Can house any blast hose and nozzle between 20mm to 80mm (0.7874" to 3.1496")

## V700 FOR HIGH PRESSURE WASHING

Best for the removal of contaminations like oils, fouling, salts, and others.

This method maintains the underlying coatings and liners.

- > Max. 1000 bar @ 80 l/min (Up to 14500 psi @ 21.1 gal/min)
- > 1 or 3 self-rotating nozzle application

## V700 FOR ULTRA HIGH PRESSURE

Best for removal of coatings, paints, liners, corrosion, and anti-fouling systems. This method will restore the surface to its original surface profile.

- > Max. 3000 bar @ 40 l/min (Max. 43500 psi @ 10.5F gal/min)
- > Achieve up to 60m<sup>2</sup> (646ft<sup>2</sup>)
- > 1500 mm (60") cleaning width

## BLAST CONSISTENTLY IN ANY WJ OR SA STANDARD

Utilising the V700 Series with one of the 3 washing and blasting applications will give you a consistent blasting pattern with minimal overlap and high performance ensuring water or abrasives are used most efficiently.

Depending on the specifications of the surface, the swing arm and step timer function can be configured to wash and blast at the most optimal width and speed. With the VertiDrive V700 Series, you don't have to worry about operator fatigue or inconsistency.

**The robot always produces the same output, so you'll get a uniform result every time.**



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ISO 9001:2015

## TECHNICAL SPECIFICATIONS

### ELECTRICAL MODEL

#### ROBOT

> Robot dimensions	750mm L x 520mm W x 720mm H (29.5" x 20.5" x 28.5")
> Weight	62 kg (137 lbs)
> Payload capacity	180 kg (397 lbs)
> Driving speed	Max. 5 m/min (16.4 ft)
> Holding power magnets	Up to 900 kg (1984 lbs)
> Minimal Radius Required	>4m radius (8m diameter)
> Max operational Windspeed	50 knots / 25 m/s
> Adjustable Magnets	From 7 to 13mm (0.28" to 0.51")
> Drive Motors	2x 315W
> Swing Arm Motor	1x 315W

#### SWING ARM

> Torque capacity (horizontal)	Max 150 Nm (15 kg at 1m arm length).
> Torque capacity (vertical)	Max 600 N (60 kg force) at 1m arm length
> Working width	1500mm
> Swing arm speed	Max 30 °/s.

#### UMBILICAL

> Dimensions	ø 18mm, length 50 m (164 ft)
> Weight	25 kg (0.5 kg / m)
> Extension	Max 100m (328 ft)

#### CONTROL BOX

> Input voltage range	230V systems: 200-240 VAC 120V systems: 100-120 VAC
> Input frequency range	50/60 Hz
> Input current (without cooling)	230V systems: 5A, 120V systems: 10A
> Input current (with cooling)	230V systems: 7A, 120V systems: 14A
> Working temp. (without cooling)	-20 to +35°C (0 to +95°F)
> Working temp. (with cooling)	-20 to +50°C (0 to +120°F)
> Output voltage to the robot	70 VDC (motors) and 24 VDC (logic).
> Dimensions	600mm H x 600mm W x 260mm D (600 x 690 x 260 mm with optional cooling)
> Weight	35 kg (44 kg for 'high temperature' systems with cooling)

#### REMOTE SYSTEM

> Remote control System	Hetronic Nova XL
> Range remote control	100 meters (328 ft)

#### ENVIRONMENTAL CONDITIONS

> Storage temperature	-40 to +85°C (-40 to +185°F)
> IP rating robot	IP65
> IP rating control box	IP66
> IP rating remote control	IP66

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## APPLICATION SPECIFICATIONS

#### ULTRA-HIGH PRESSURE

- > Max. 3000 bar @ 40 l/min  
(Max. 43,500 psi @ 10.5 gal/min)

#### HIGH PRESSURE WASHING

- > Up to 1000 bar @ 80 l/min  
(Max. 14500 psi @ 21.1 gal/min)
- > Up to 500 bar @ 100 l/min  
(Max. 7251 PSI @ 26.41 gal/min)
- > 1 or 3 self-rotating nozzle application

#### ABRASIVE BLASTING

- > Up to 3 nozzles
- > Max. 600 N (60 kg force)  
at 1m arm length

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# V700

## WORKING IN A HAZARDOUS AREA?



PNEUMATIC  
DRIVEN OPTION:  
ATEX ZONE 2  
CERTIFIED

### ATEX ZONE 2 CERTIFIED

Meet stringent safety standards at tank terminals effortlessly.

The V700 Series ATEX variant is specially designed for operation in Zone 2 environments, ensuring safe, compliant blasting without sacrificing productivity.

Equipped with robust air motors and a pneumatic control system, the V700 delivers powerful and consistent performance in ATEX-regulated areas. Its certified design also reduces downtime related to safety inspections, such as eliminating the need for hot work permits, giving you the efficiency edge you need in hazardous environments.



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## TECHNICAL SPECIFICATIONS

### ATEX CERTIFIED MODEL



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DRIVEN OPTION:  
ATEX ZONE 2  
CERTIFIED

#### ROBOT

> Robot dimensions	750mm L x 520mm W x 720mm H (29.5" x 20.5" x 28.5")
> Weight	60 kg (132 lbs)
> Payload capacity	180 kg (397 lbs)
> Driving speed	Max. 8 m/min (5m/min at full load)
> Holding power magnets	Up to 900 kg (1984 lbs)
> Minimal Radius Required	>4m radius (8m diameter)
> Max operational Windspeed	50 knots / 25 m/s
> Adjustable Magnets	From 7 to 13mm (0.28" to 0.51")
> Drive Motors	2x air motor 7 bar, 840 NI/min max
> Swing Arm Motor	1x air motor, 7 bar, 840 NI/min max

#### SWING ARM

> Torque capacity (horizontal)	Max 150 Nm (15 kg at 1m arm length).
> Torque capacity (vertical)	Max 600 N (60 kg force) at 1m arm length
> Working width	1500mm
> Swing arm speed	Max 30 °/s.

#### UMBILICAL

> Dimensions	ø 55mm, length 50 m (164 ft)
> Weight	60 kg (1.2kg/m)

#### CONTROL BOX

> Input pressure	Min. 7 bar, max 12 bar
> Dimensions	400mm H x 500mm W x 250mm D (1250mm H x 500mm W x 640mm D incl. stand)
> Weight	20kg (35kg incl stand)
> Air consumption	2500 NI/min max

#### ATEX CERTIFICATION

> Certification	Ex II 3G Ex h IIB T4 Gc
> Ambient temperature	-5°C < Ta < +40°C

#### ENVIRONMENTAL CONDITIONS

> Storage temperature	-40 to +85°C (-40 to +185°F)
> IP rating robot	IP65
> IP rating control box	IP65

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## APPLICATION SPECIFICATIONS

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- > Up to 500 bar @ 100 l/min
- > Up to 7251 PSI @ 26.41 gal/min
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