

VELOCITY™ HVLS FANS

Serco High Volume Low Speed fans are designed to provide an energy-efficient solution for large spaces. HVLS fans require much less energy than traditional HVAC systems, and provide year-round employee comfort and temperature control.

Enhancing the movement of air

Since 1958, Serco products have been engineered to be the finest dock and warehouse solutions in the industry. With today's global focus on energy efficiency, Serco is directing its resources to enhancing the efficient movement of air through industrial and commercial facilities with our VELOCITY™ High Volume Low Speed (HVLS) fan.

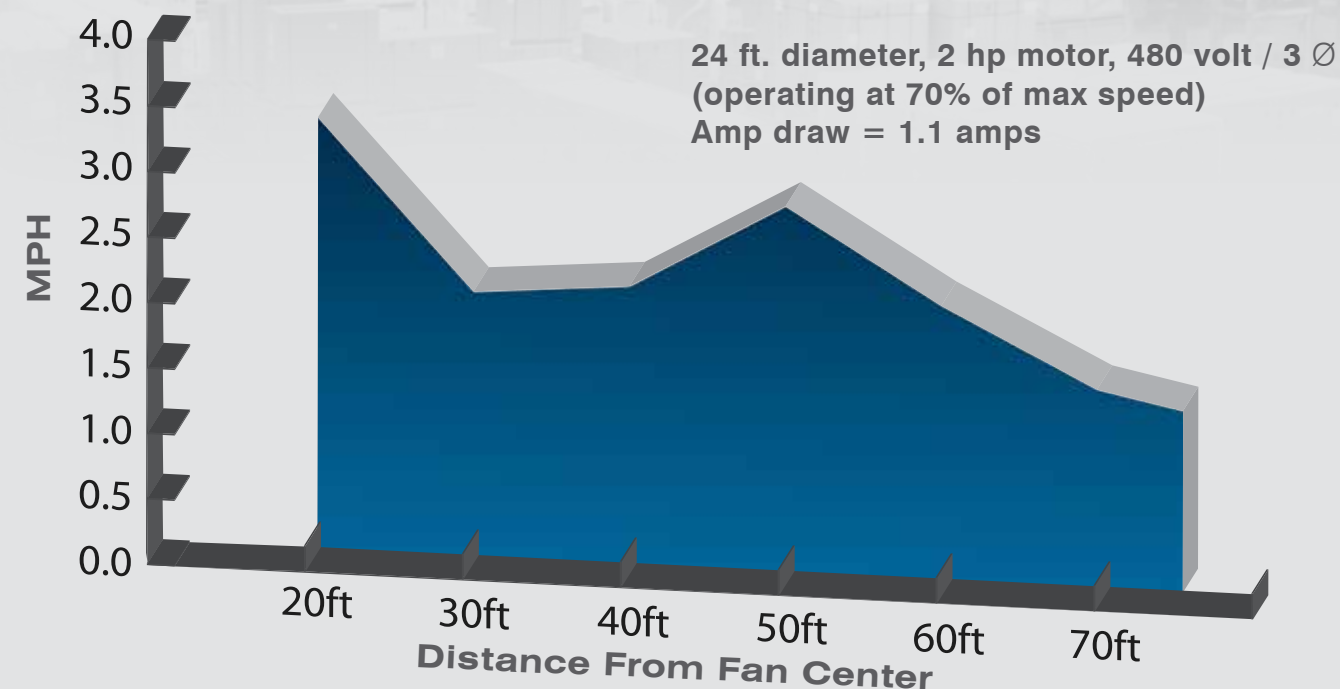
Serco fans are designed to be the most efficient and durable high volume low speed fans in the industry. The slow-moving air mass produced by Serco fans provides considerable benefits:

- **Keeps employees cool and comfortable**
 - The 2 - 3 mph breeze created by Serco fans delivers the equivalent of a 7 - 11 degree decrease in perceived temperature
 - Research supports that increased employee comfort can result in improved productivity and safety
- **Reduces energy consumption**
 - Working with the HVAC system, Serco fans help regulate temperature from ceiling to floor, which can allow a facility to raise its thermostat setting 3 - 5 degrees. This creates a potential energy savings of 4% per degree change
- **Protect product integrity**
 - Air circulation helps keep food and produce dry and fresh, reducing potential for decay or spoilage
 - Air circulation reduces stagnant air, hot and cold spots and condensation
 - Serco fans are also designed to operate in reverse, which helps de-stratify air in refrigerated applications
- **Improves general working conditions**
 - Floor condensation is minimized, keeping floors drier and safer for foot and motorized traffic.
 - Improved indoor air quality through the dispersing of fumes
 - Fans can be operated from a centralized location (iFAN™ option), allowing a facility to easily monitor fan activity and performance
- **Contributes to LEED certification credits in various categories**
 - Energy and Atmosphere
 - Indoor Environmental Quality
 - Innovation and Design



It's simple... we move more air for less!

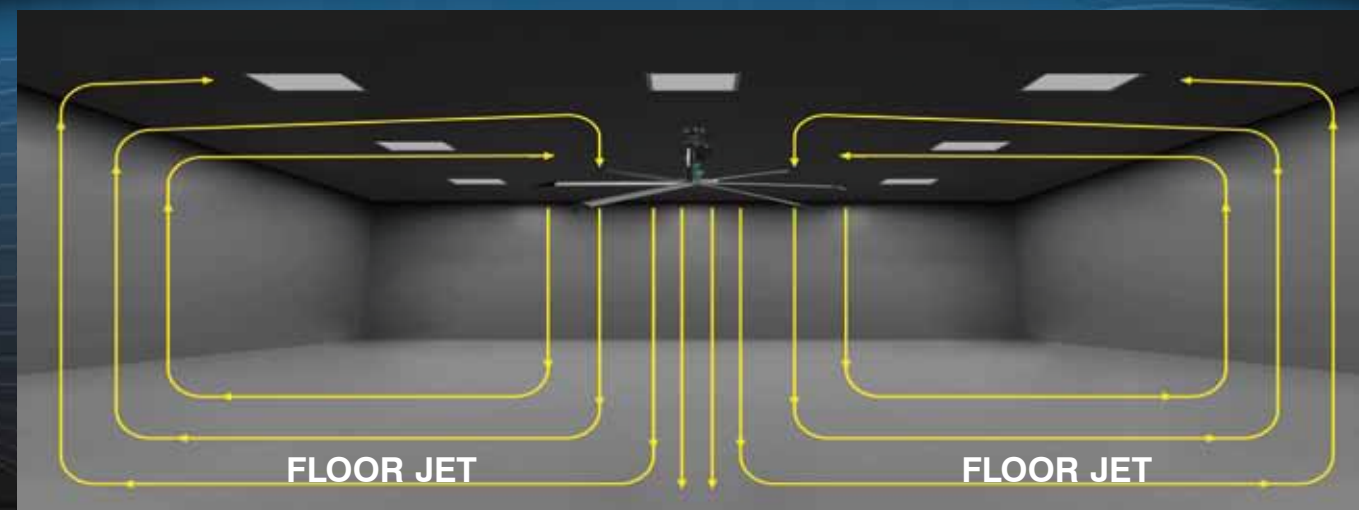
The Serco VELOCITY fan circulates the greatest volume of air while consuming the least amount of energy.



1.1 amps (operating at 70% of max speed) at 480 volt / 3 Ø = 915 watts
Average electrical cost = \$0.10 kWh
Energy cost = voltage x current x $\sqrt{3}$ x hours used x cost per kWh / 1,000
 $480 \times 1.1 \times 1.73 \times (24 \times 365) \times \$0.10 / 1000 = \mathbf{\$801.12}$

HOW DOES THE VELOCITY FAN WORK?

The patented airfoils (blades) on the Serco VELOCITY fan produce a massive, cylindrical column of air that flows down to the floor and outward in all directions. This "horizontal floor jet" pushes air a greater distance before it begins moving vertically and is drawn back through the fan. The greater the down flow, the greater the air circulation and resulting benefits. In cooler months, the VELOCITY fan can operate in reverse, circulating hot air trapped at ceiling level and creating a warmer mix of air throughout a facility.



VELOCITY™ FAN Design Highlights



Drive System/Variable Frequency Drive (VFD)

- Industrial-grade integrated motor/gear box assembly - lifetime rated; no maintenance
- Advanced, programmable VFD - rated for extreme environmental conditions
- VFD is fan mounted and factory wired - 100% operational QC check prior to shipment
- Compliant with National Fire Protection Association (NFPA) HVLS fire safety standards

6-Blade Design

- Less torque than 10-blade fan - extends the life of the fan
- 40% lighter than 10-blade fan - reduces stress on building and eases installation
- Less fan weight reduces load on attachment points
- Lowest and most effective Solidity Ratio in the industry

Blade-Lock Safety System™

- Redundant safety system that interconnects the blades, hub, drive shaft and frame
- Blade straps and retaining collars lock blades to the hub struts and to adjacent blades
- Safety plate attached to the frame prevents separation of hub assembly
- Safety cables and guy wires provide additional security - further connecting the fan to the facility structure and providing extra stabilization if fan is exposed to crosswinds

Airfoil (Blade) Design

- NACA aerodynamic profile specifically suited for rotary airfoil applications
- One piece, extruded anodized aluminum design
- Generates more efficient down flow resulting in a more powerful horizontal floor jet

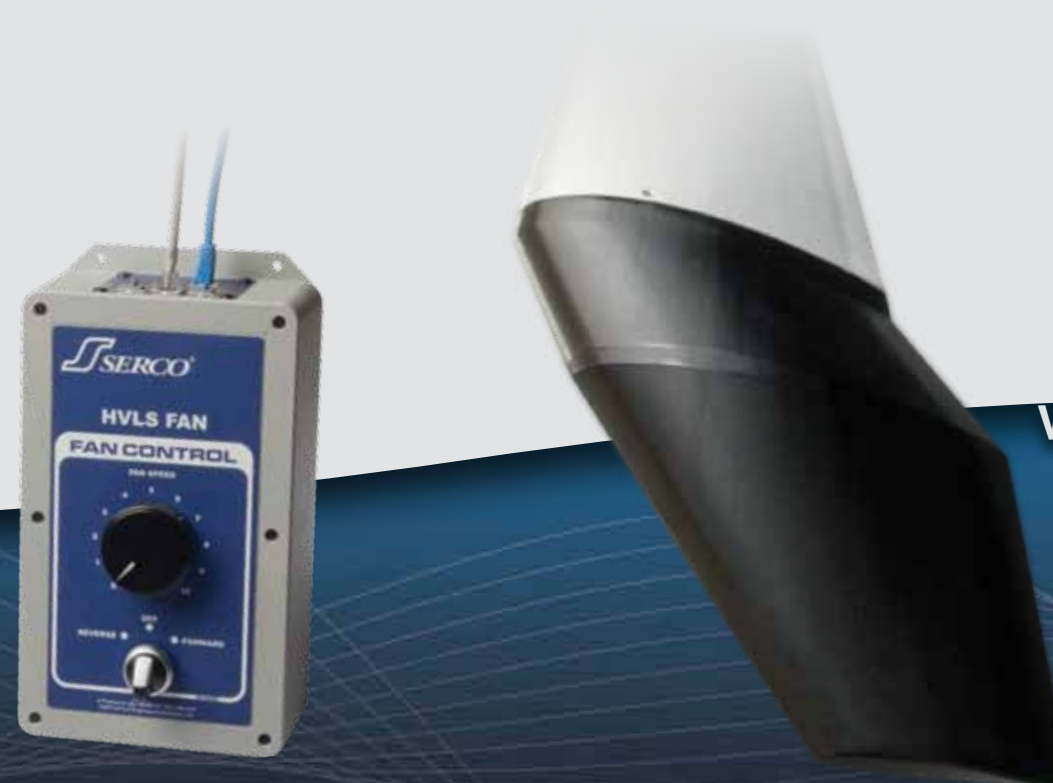
Operating Controls

- Adjustable speed control panel with forward/off/reverse switch and remote diagnostics
- Connection via CAT 5E cables
- iFAN™ option allows network configuration and centralized operation

PRODUCT SPECIFICATIONS

Diameters: 8', 10', 12', 14', 16', 18', 20', 24'
Controls: Remote panel or iFAN Option
(connection via CAT 5E cable)
Motor: 1 hp, 1.5 hp, 2 hp

Voltage: 208 - 230, 480 / 3 Ø
Coverage: Up to 24,000 sq. ft. (330,000 cfm)
Warranty: Lifetime Warranty on Blades, Hub & Frame
12-Year Service Life Limited Warranty
3-Year Parts & 1-Year Labor



WINGLET DESIGN

- Patent-pending design - designed for a stationary rotary airfoil application
- Maximizes efficiency of airfoil by reducing induced drag
- Vortices are generated below the airfoil - Turbulence is directed away from the trailing blade
- Molded high density polyethylene (HDPE) - extreme durability

iFAN™ Powered by 4SIGHT™

iFAN allows you to network your fans and control them from a centralized location. Powered by our proprietary 4SIGHT software, iFAN ensures that you gain the maximum level of performance, functionality and savings from your VELOCITY fans. The benefits of iFAN are Incredible!

Integrated: iFAN allows you to network up to 30 fans per configuration. Communication is established by “daisy chaining” the fans together via CAT 5E cables and connecting the last fan to the iFAN computer.

Intelligent: iFAN software allows you to control fans individually, by zone and by facility. System functionality allows fans to be monitored and controlled by time settings, temperature settings or temperature variance. Interconnection with fire control system is also available.

Instantaneous: iFAN includes a 23-inch touchscreen computer with custom graphic display of your facility's fan layout. Administrators can immediately and easily make operational adjustments. The system can also display a variety of performance statistics for each fan and archive the data for later reference or trend analysis.

Invaluable: iFAN ensures that operational and energy savings goals for your HVLS fans are realized. Fan speed cannot be randomly adjusted at the fan. Zone settings can address the unique operational and environmental conditions within separate areas of a facility. Key performance statistics can be measured. Real-time adjustments to your operation are now possible.



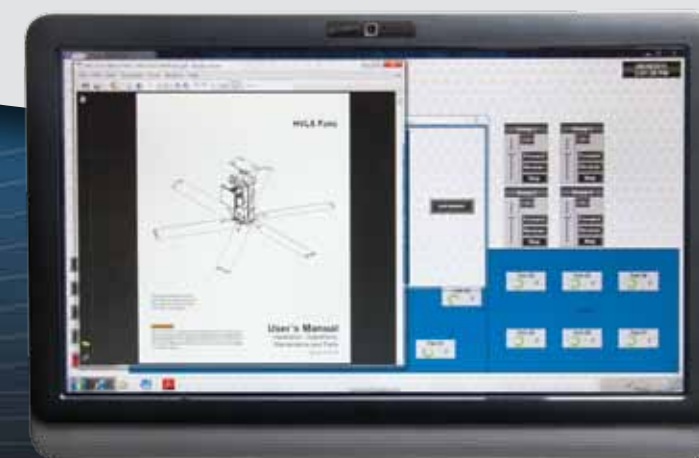
1. All-in-one touchscreen, flat panel computer with 23-inch 1080p high definition display. Computer includes license key to enable proprietary 4SIGHT™ software. Wall mounting bracket included.
2. Customized graphic display of facility and fan locations. Tapping a fan icon brings up a dialog box for that specific fan. Display also includes time and date, company logos and internet link.
3. Navigation Buttons: All fans – On or Stop, Timer and/or Temperature setting controls, Instructional Manuals, and Alarm Indicator.
4. Zone Controls: Fans can be configured into zones and controlled as groups.



Dialog box for individual fan provides access to direction and speed settings for a specific fan.



Timer setting dialog box enables direction and speed for individual fan or zones to be set by time of day. A similar dialog box is available based upon temperature settings.



Electronic instructional manual is accessible via the navigation buttons.



iFAN can be connected to facility's fire control system to command “All Stop” in the event an alarm is triggered.

COMPLETE LOADING DOCK SOLUTIONS

INTEGRATE YOUR LOADING DOCK. Serco® offers a comprehensive catalog of warehouse and loading dock equipment, providing you with a complete solution.



Dock Levelers: Mechanical, air-powered, hydraulic and vertical levelers suitable for any dock environment.

Vehicle Restraints: Powered and mechanical vehicle restraints safely secure trailers during loading and unloading.

Seals and Shelters: Dock seals and shelters ensure an energy-efficient and secure operation.

Dock Doors: TKO® impactable dock doors prevent door inefficiency due to panel or track damage, and provide a lower lifetime cost of ownership than conventional doors.

Dock Lifts: Dock lifts make loading docks 100% accessible, enabling product movement in various dock applications.

HVLS Fans: High Volume Low Speed Fans provide comfortable and energy-efficient dock environments.

Accessories: APS Resource® offers a variety of aftermarket dock accessories and conversion kits to suit a variety of application needs.



EXPERIENCE OUR ENGINEERED SOLUTIONS FOR YOURSELF

For over 50 years, Serco has been designing, manufacturing and integrating loading dock equipment. We invite you to view our full line of loading dock and warehouse products at our modern showroom in Dallas, Texas. Our Visit-in-Person (VIP) program offers a unique opportunity to gain hands-on experience with our products and interact with engineering and manufacturing personnel in a comfortable environment.

CAN'T MAKE THE TRIP TO DALLAS? Let our Mobile Showroom come to you. Our 53' completely enclosed and temperature-controlled trailer features over 20 full-sized, fully-functional dock equipment demo units. Call 1-877-778-DOCK (3625) to schedule an appointment and we'll drive our loading dock solutions straight to your door.



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A continuing research program is in effect at Serco. We reserve the right to incorporate product improvement at any time without prior notice.