

**Greener. Cleaner. Smarter.**



**CS7000**

Hybrid & Battery Drive Combination Sweeper-Scrubbers



**Smart cleaning.**

**A Nilfisk-Advance Brand**



## GREENER. CLEANER. SMARTER.

### The industry's first Hybrid and ePower™ Drive Combination Sweeper-Scrubbers slash your total cost of ownership.

#### The new green class of industrial cleaning technology has arrived.

In a single broad stroke, the Advance CS7000 Combination Sweeper-Scrubber reinvents an entire class of equipment by reducing total cost of ownership — including operation, labor and maintenance, while effectively doubling fuel economy and runtime efficiency. Now, the most economical solution is also the most ecological.

**ePower™ BATTERY EXTENDS RUNTIME BY 64%**

Competition

**e POWER CS7000**

0.....1.....2.....3.....4.....5  
Single charge runtime (in hours)

Available in three models, LPG-Hybrid, Diesel-Hybrid and ePower™ Battery, the CS7000 delivers unparalleled performance, while replacing power-hungry, high-maintenance hydraulic systems with efficient, state-of-the-art Electric Drive technology. Whichever model you choose, the CS7000 delivers the lowest cost of ownership and the most sustainable cleaning solution in its class.

**HYBRID TECHNOLOGY DOUBLES FUEL EFFICIENCY**

Competition

**HYBRID CS7000**

.....  
Relative operational runtime (on identical fuel)

#### The CS7000 by the numbers.

Compared to other sweeper-scrubbers in its class, the CS7000 offers:

- **Up to 45%** reduced LPG fuel consumption and cost\*
- **Up to 45%** lower carbon dioxide (CO<sub>2</sub>) emissions than other LPG fueled machines\*
- **100%** indoor emission-free ePower battery operation
- **64% increased** battery runtime vs. competitors
- **One** innovative machine with dedicated sweeping and scrubbing functions

\* In specific tests vs. previous generation products



## AVAILABLE IN THREE HIGH-EFFICIENCY MODELS.



### ePower™ Battery

With an extended runtime rating up to 5.4 hours on a single charge, the CS7000 ePower model offers a new, low-noise, emission-free green solution for facilities once deemed too large to utilize a battery-powered sweeper-scrubber. The CS7000 ePower easily surpasses all other machines in its class offering one-pass sweeping and scrubbing of up to 640,000 ft<sup>2</sup> (60,000 m<sup>2</sup>) per charge.\*

\* Measured run time using low scrubbing and sweeping mode at normal operating speeds on smooth floors (actual results will be application dependent)



### CS7000 LPG-Hybrid

For indoor and outdoor operational versatility with unlimited runtime and high efficiency, the CS7000 LPG-Hybrid can save you thousands in fuel costs alone. Expect unprecedented operational runtime of up to 5.5 hours per 32 lb (14.5 kg) LPG tank, up to 45% lower CO<sub>2</sub> emissions per square foot\*, and much lower operation costs compared to other machines in its class.

### CS7000 Diesel-Hybrid

For demanding outdoor environments, the CS7000 Diesel-Hybrid offers superior performance with up to 45% fuel savings, up to 15.5 hours of operation per 9.2 gal (35 L) tank and up to 45% lower CO<sub>2</sub> emissions with nearly twice the productivity.\* The CS7000 makes an immediate impact by reducing your operational, labor and maintenance costs as well as your environmental footprint.

\* In specific tests vs. previous generation products





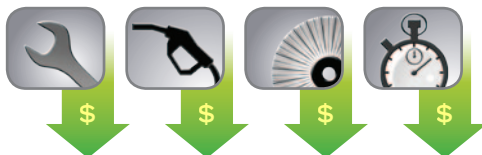
# THE MOST ADVANCED CLEANING PLATFORM EVER.



**All the power. Twice the efficiency. None of the hydraulic headaches.**

## **Lower total cost of ownership.**

The CS7000 dispels the complexity and high maintenance of hydraulic systems that power conventional sweepers-scrubbers. We've eliminated large hydraulic reservoirs, filters and oil coolers as well as 98% of the leak-prone hydraulic hoses, pumps, motors and valves. Hydraulic drives have been replaced with an intelligent system of electronically-controlled, low-maintenance electric drives. This technology shift alone will save the average owner thousands of dollars in reduced maintenance costs.



## **More efficient power delivery, management and controls.**

The CS7000 features zero-maintenance brushless AC drives for steering and propulsion with high-efficiency DC drives for scrub and sweep functions. This state-of-the-art system is driven by optimally-sized, high-efficiency Kubota industrial engines in the Hybrid models, or powered by an extended range 36 V battery in the ePower model. By eliminating all but a small hydraulic power unit and cylinder for the debris hopper, the CS7000's electric drive platform operates with twice the efficiency, for increased floor cleaning without sacrificing performance.

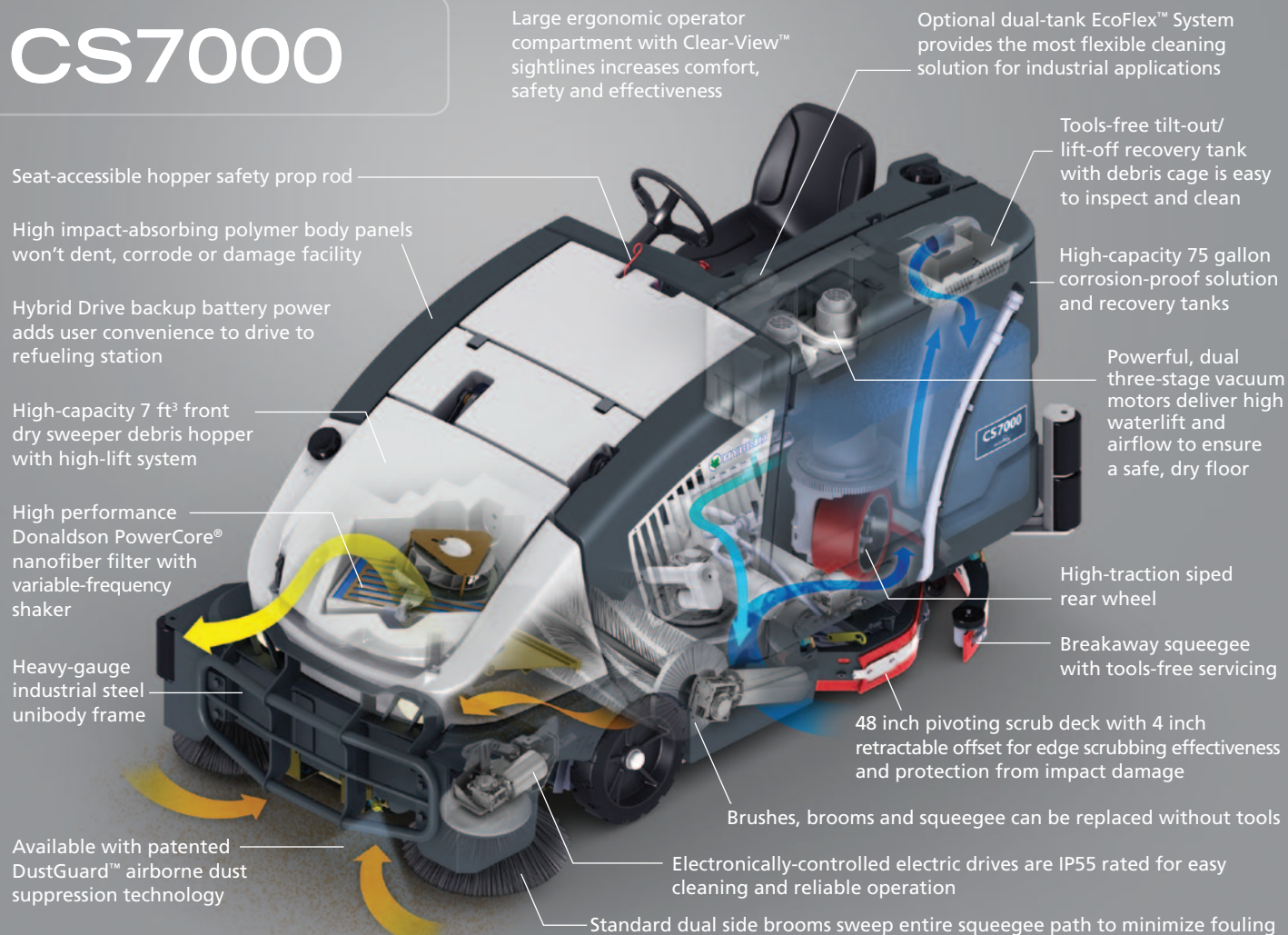
## **The quietest machines in their class.**

When it comes to which machines are the most ergonomic and environmentally-sensitive, noise is a critical emission that factors heavily. By eliminating noisy hydraulic pumps and using compact industrial engines, the CS7000 is not only the most efficient, but also the quietest machine in its class too. The ePower Battery model operates at only 72 dB A, with the LPG and diesel Hybrid models operating at 82 and 81 dB A respectively – again, much quieter than comparable machines.





# CS7000



## Independent sweeping and scrubbing functions leave nothing behind but a clean, dry surface.

### Dedicated dry sweep and wet scrubbing for one-pass cleaning.

Like other combination sweeper-scrubbers, the CS7000 lets you sweep and scrub in a single pass. But that's where the similarities end. Compared to competitive dual cylindrical sweeper-scrubber designs, the CS7000 utilizes a cylindrical sweeping system and a separate disc scrubbing system. Dedicated sweeping and scrubbing functions with one-pass cleaning power keep dry debris dry without introducing scrub solution into the debris hopper. This provides operators and equipment owners with increased productivity and reduced maintenance.

### It's twice the machine.

The design of the CS7000 is a remarkable feat of engineering. Under the hood you'll find a powerful dedicated dry sweep function supported by standard dual side brooms and a cylindrical main broom. The high-dump front debris hopper provides a safe, visible approach to the dumpster and empties without having to leave the seat. The Donaldson PowerCore® nanofiber filter won't clog like others, as the variable frequency shaker clears trapped dust easily. A fully

swept surface virtually eliminates squeegee fouling, and the CS7000's 48 inch triple disc scrub deck delivers more effective cleaning with up to 400 lb of scrub pressure.

Clean out is easier and less frequent too. The tilt-out recovery tank and removable debris cage makes cleaning easier and more complete compared to competitive cylindrical scrubbers with a shared wet scrub/dry sweep hopper. With the CS7000, you'll find everything just works better. Just like you will.





The optional EcoFlex™ System puts multiple cleaning modes at your fingertips, making it the most efficient single-machine solution for every surface and cleaning requirement in your facility.

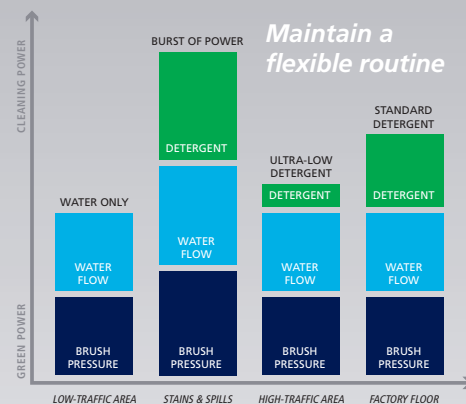
## Green

The EcoFlex System lets you clean green and still meet the highest expectations for clean floors. With metered dispensing of detergent at the scrub deck, you can clean effectively while reducing impact on the environment. Using only what you need to do the job right is the cornerstone of a sustainable cleaning routine, and the EcoFlex System gives you that capability.



## Clean

No two cleaning challenges are alike, and EcoFlex is the ideal solution to help you clean most effectively in the way you require. Make on-the-fly adjustments between water-only cleaning and various pre-calibrated settings for water flow, down pressure and detergent strength. A touch of a button delivers a 60 second burst of maximum cleaning power. From light traffic and surface dirt to the greasiest, most stubborn industrial surface, the CS7000 with EcoFlex gives you the power to tackle your daily cleaning challenges.



## Cost-efficient

Efficiency means doing more with one machine. And the CS7000 with EcoFlex cuts your toughest surface cleaning requirements down to size. With EcoFlex, now you can instantly dial up cleaning power or reduce solution strength and flow as you need it. EcoFlex lets you add greater flexibility to your cleaning capabilities and schedule, while reducing labor, time and costs.

## Exclusive features. Smarter design. It all adds up to a superior solution.

### MaxAccess™

Unlike conventional machines that require a lot of tools and a lot of time for even the most routine service, we designed the CS7000 to provide quick access to all vital systems for easier inspection and maintenance. Features like swing-out LP tanks and a roll-out battery make service simple.



### DustGuard™

Available as a popular option on the CS7000, our patented DustGuard™ technology is the only system of its kind, proven to reduce airborne dust generated by side broom sweeping by up to 85%. An ultra-fine fog suppresses fugitive dust particles which are redirected back into the brooms, greatly improving cleaning results and surrounding air quality.

### Clear-View™

The CS7000 represents our commitment to user-friendly design and optimal productivity. Visibility from the operator's seat offers clear sightlines for greater safety and consistent edge cleaning. Our forward-facing, high-dump hopper lets you dump debris easier and safer. Compared to some competitors' backward, rear-facing hopper designs that make dumping debris a challenge, we think you'll like our forward thinking.





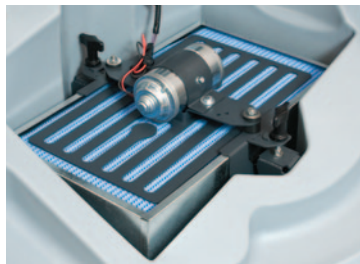
## Standard features that perform.



- **48 inch pivoting scrub deck** with 4 inch retractable offset enhances edge scrubbing and resists damage from accidental impact.
- **Breakaway squeegee** won't damage if hooked by obstacles; raises and lowers easily for double scrubbing if desired.



- **Ergonomic operator compartment** with tilt steering wheel and fully adjustable seat.
- **High-capacity 75 gallon tanks** for water and recovery improve productivity by reducing refilling and dumping frequency.
- **Rear wheel steer** delivers greater maneuverability and tighter aisle turning of just 104 inches.



- **High-capacity Donaldson PowerCore® UltraWeb® nanofiber synthetic media filter with MERV 13 rating**, combined with a variable-frequency shaker, offers high dust/dirt holding capacity in a more compact package, plus longer filter life and more consistent performance compared to conventional pleated filters.



- **Intuitive controls with One-Touch™ operation** reduce training time, improve productivity and deliver more consistent cleaning results.



- **IP55-rated electric motors** allow for pressurized washdown of machine.\*
- **Tilt-out recovery tank** makes inspection and clean-out much easier.



## Other available options

- **EcoFlex™ System with interchangeable dual detergent cartridges** are refillable with your favorite brand of detergents.



- **Heated water supply** offers the added cleaning effectiveness and fast dry times of heated water with no fuel penalty.
- **Optional extended scrub recycling system** greatly extends runtimes in low traffic areas while reducing water use.



- **Overhead guard, bumper guards, tail lights** available as optional equipment.
- **Optional onboard pressure washer or low pressure spray hose** are both cab-accessible and can be used for convenient cleaning. Pressure washer is rated at 2,200 psi.

\*Pressurized washdown should not be performed on control board or operator compartment. Consult your operators manual for more information.

## CS7000 Specifications

Models	CS7000 Battery	CS7000 LPG Hybrid	CS7000 Diesel Hybrid
Configuration	Independent front dry sweeping w/dust control and rear scrubbing functions Electronically controlled electric drives for all sweeping and scrubbing functions Electrically driven hydraulic power unit for hopper raise/lower functions		
	Sweeping System		
Sweeping Path w/Dual Side Brooms	61 in (154 cm) - Squeegee path width is fully swept		
Main Broom	36 in (90 cm) x 12.2 in (31 cm)		
Sweeping Coverage Rate Per Hour	146,400 ft² (13,600 m²)		
Dust Control System	115 ft² (10.7 m²) Donaldson high-capacity PowerCore® UltraWeb® filter w/synthetic media. Variable frequency automatic filter shaker		
Hopper Dump Height (Max.)	60 in (152 cm)		
Hopper Capacity	7 ft³ (198 L) 300 lb (136 kg)		
DustGuard™ Tank Capacity¹	29 gal (110 L)		
	Scrubbing and Recovery Systems		
Scrubbing Path and Brushes	48 in (122 cm) - 3 x 17 in (43 cm) disc		
Scrubbing Coverage Rate Per Hour	118,600 ft² (11,000 m²)		
Scrub Pressure	Three scrub pressure settings up to 400 lb (182 kg) of down force at maximum setting		
Recovery/Solution Tank Capacity	75 gal (285 L) each		
Recovery Vacuum	Dual vac fan motors capable of 48 in (122 cm) waterlift		
	Power and Propulsion Systems		
Power System	Battery: 36 V/770 Ah	Kubota WG972: 3 cyl., 0.96 L 30 hp (22.0 kw)	Kubota D1305: 3 cyl., 1.26 L 29 hp (21.7 kw)
Propulsion System	Variable speed brushless A/C drive		
Propel Speed (Variable) Transport Sweeping/Scrubbing	5.5 mph (8.9 km/h) 3.5 mph (5.6 km/h) w/override capability		
Operational Run Time Sweeping/Scrubbing²	5.4 hrs. w/770 Ah battery	5.5 hrs. w/32 lb (14.5 kg) tank	15 hrs. w/9.2 gal (35 L) tank
Gradeability Transport @ Gross Weight Scrubbing/Sweeping	21% (12 deg.) 17.6% (10 deg.)		
	Dimensions/Weight/Sound/Environmental		
Length	103 in (262 cm)		
Width	48 in (122 cm)		
Height	[59 in (150 cm)]	[82 in (208 cm) std. overhead guard]	[79 in (201 cm) low clearance overhead guard]
Minimum Aisle Turn	104 in (264 cm)		
Weight : GVW Empty	5,716 lb (2,593 kg) 4,682 lb (2,124 kg)	4,676 lb (2,121 kg) 3,636 lb (1,649 kg)	4,537 lb (2,058 kg) 3,511 lb (1,593 kg)
Sound Level (IEC60335-2-72)	72 dB A	82 dB A	81 dB A
Water Ingression	All electric drive motors and actuators rated IP55 for water washdown		

<sup>1</sup> DustGuard™ optional

<sup>2</sup> Measured run time using low scrubbing and sweeping mode at normal operating speeds on smooth floors (actual results will be application dependent)

Note: Specifications subject to change without notice

CS7000 models shown in photos may feature optional accessories.



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