

The Green Machines Offering





The Breadth of Tennant's Offering

Breadth of Tennant's Offering



Broadest Line Available!



Scrubbers too...



Broom vs Air Technology



Broom vs Air Sweepers

What Differentiates the Technologies



	Broom Technology	Air Technology
Debris Conveyance	Broom	Air
Means of Dust Control	Air/Filter	Water/Screens
Location of Pick-Up	Mid	Front (non-truck)
Location of Dump	Front (most)	Rear
Wear Items	Main & Side Brooms Skirts	Sweeping Brushes Skids
Maintenance	Filters	Vac Head Glide (urethane)
Clean-Up	Water Used?	Water MUST be Used
Size	Tend to be Wider	Tend to be Longer

Broom vs Air Sweepers

Debris Capabilities



		Broom Technology	Air Technology
Heavy	Industrial Debris	Best	Not Recommended
	Sand	Best	Light
	Industrial Dust	Best	Not Recommended
Light	Street Dust	Yes, Dry/Wet	Yes, Wet
	Litter	Light	Best
	Bottles and Cans	Okay	Best
	Pine Needles/Leaves	Light	Best*

* Limited Capacity



The Compelling Value

Of the Green Machines Offering

Compelling Value

Model 400 Series

- Proven Concept - 40 Year Evolution
- Designed with the operator in mind
- Exceptional Maneuverability
- Debris Compaction
- Pedestrian Friendly Curb Appeal

Model 636

- Designed with the operator and mechanic in mind
- Superior Dust Control for an Air Machine
- 1st Class Construction
- Industry Leading Productivity
- People Friendly Curb Appeal

Operator Centered Design

Why is it important?

- Why is it important?
 - Less Fatigue
 - More Productive
 - Reduced Employee Turnover and training
 - Improved Morale
 - Equipment Utilization
 - Operators can't sign PO, but they can block it...

Operator Centered Design

What features support it?

Incredible Sightlines

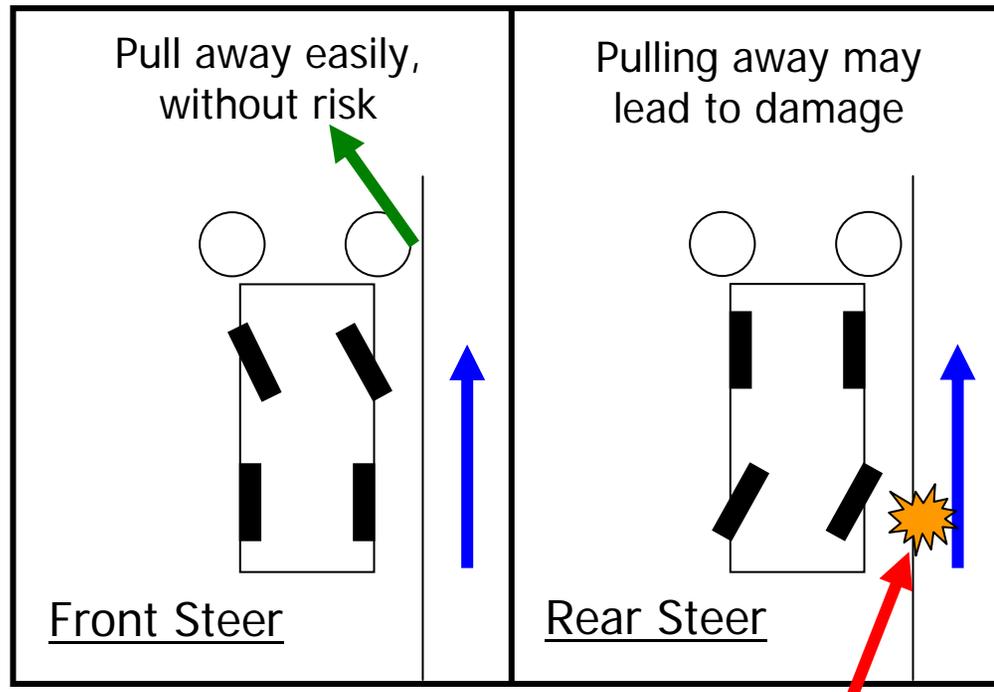


Resulting Benefit: Operator will be more responsive to their environment since they can see it...all of it.

Operator Centered Design

What features support it?

Front Wheel Steering...places the operator where the steering motion takes place...Operator Confidence



Resulting Benefit: operator confidence will translate into better performance, less equipment downtime and reduced potential for collateral damage.

Operator Centered Design

What features support it?

Creature Comforts

- Center Located operator
- Heater and opt AC
- Suspension Seat
- Heated Windshield



Operator Centered Design

What features support it?

Creature Comforts

- Center Located operator
- Heater and opt AC
- Suspension Seat
- **Heated Windshield**
- AM/FM CD Player
- Reverse Camera (opt)



Operator Centered Design

What features support it?

Creature Comforts

- Center Located Operator
- Heater and opt AC
- Suspension Seat
- **Heated Windshield**
- AM/FM CD Player
- Reverse Camera
- Simple Controls



Resulting Benefit: A more professional cleaning job from a more attentive, less fatigued, and more confident operator.

Operator Centered Design

What features support it?

Model 400 Series

- Balanced Center Steering



Operator Centered Design

What features support it?

Model 400 Series

- **Balanced Center Steering**
- **Simple Ergonomic Controls**



Operator Centered Design

Who it Matters to...



Superior Dust Control

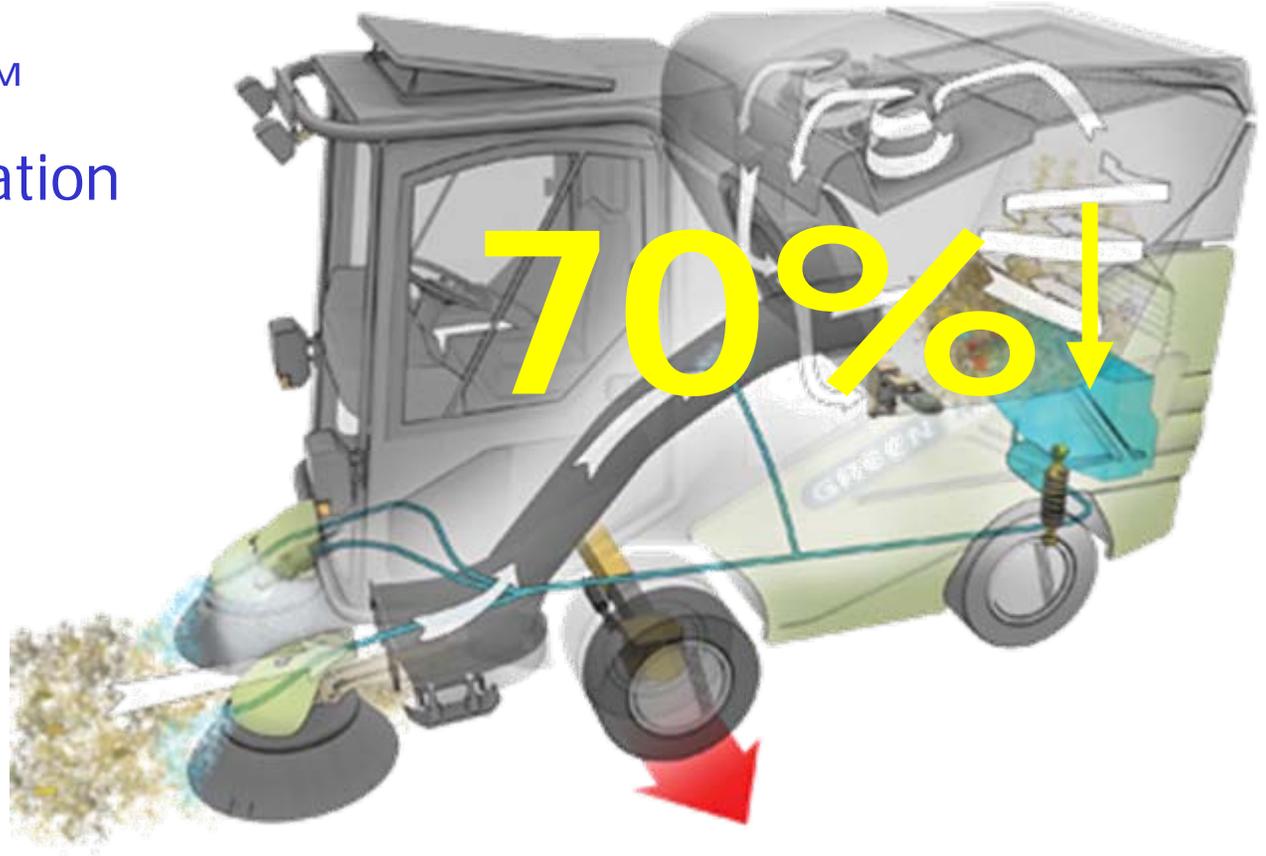
Why is it important?

- Environmental pressures are increasing
 - Air quality standards are getting tougher
 - Water quality standards are being enforced NPDES
“Reduce runoff and keep *finer* out of waterways”
- Dust Containment vs. Dust Suppression
- Operating During the Day Around Adults and Children

Superior Dust Control

What features support it?

- CloudMaker™
- 3 Stage Filtration



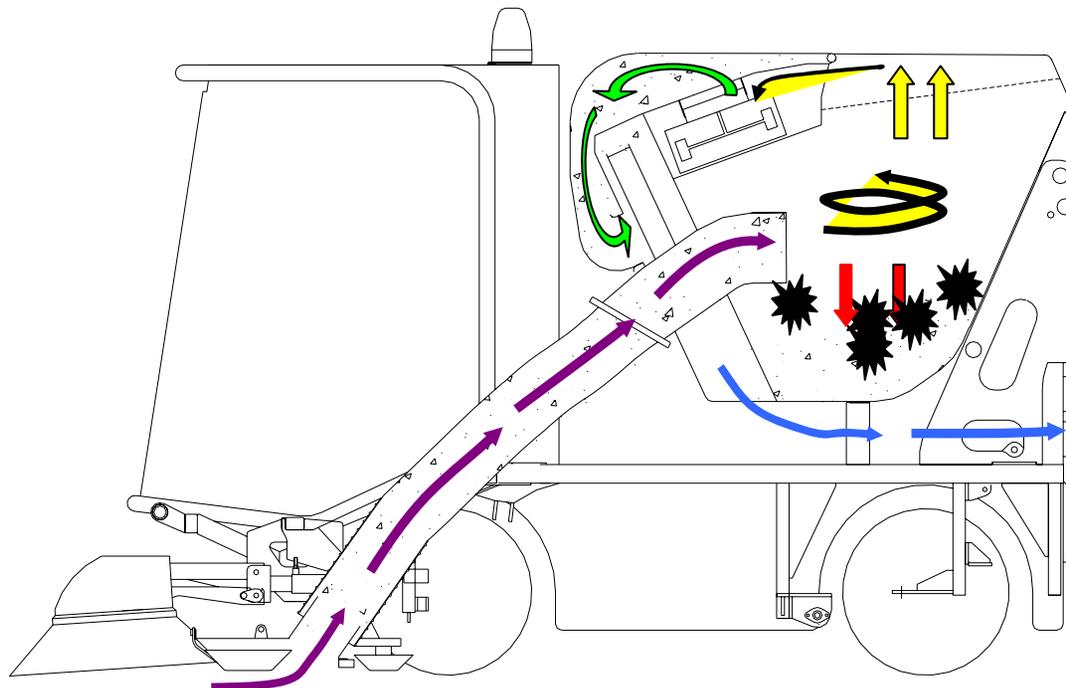
Resulting Benefit: More pleasant operating around people because the dust is controlled at the brushes.

Superior Dust Control

How it works...

Final high speed Cyclonic action to drop-out fine dust prior to air entry into Suction fan

Screen-out of light material by mesh screens



Main cyclonic action in hopper giving drop-out of heavy material

Exit of air, substantially to rear of machine

Superior Dust Control

What features support it?

- Side Entry Suction Tube
- #1 Swirl Plates
- #2 Stainless Steel Screen
- #3 Self Cleaning Twin Cyclonic Filters

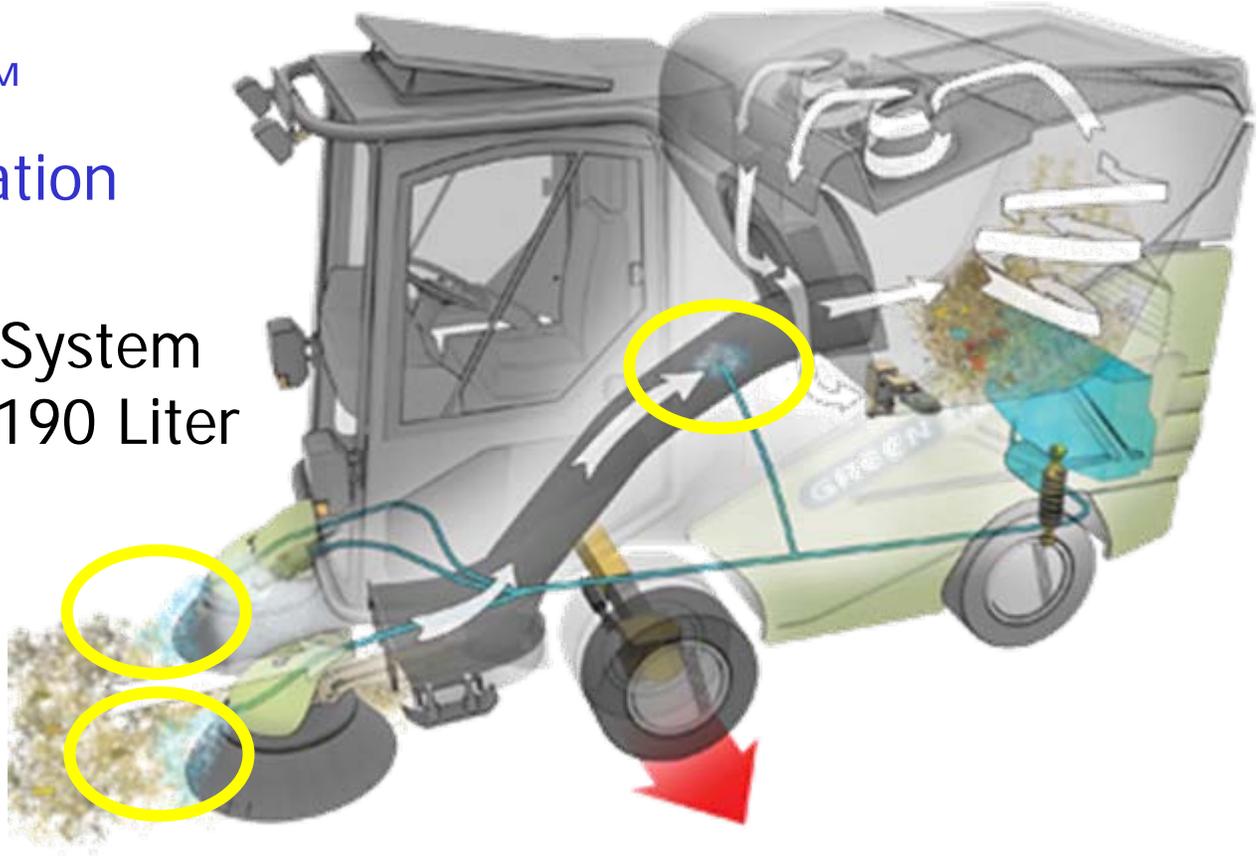


Resulting Benefit: Long-term dust control requiring only daily wash down.

Superior Dust Control

What features support it?

- CloudMaker™
- 3 Stage Filtration
- Water Dust Suppression System (50 Gallon / 190 Liter Tank)



Resulting Benefit: Ability to conserve water as necessary and achieve needed dust control as the application demands.

Superior Dust Control

What features support it?

Dust Suppression



CloudMaker™

Dust Containment

Resulting Benefit: More pleasant operating around people because the dust is controlled at the brushes.

Superior Dust Control

Who it Matters to...



1st Class Construction

Why is it important?

- Lower Total Cost of Ownership
 - Quality Materials
 - Uptime
 - Ease of Maintenance and Service
- Improves Safety
- Versatility

1st Class Construction

What features support it?

- Stainless Steel
- Excellent Surface Finish
- Steel Hydraulic Tubing

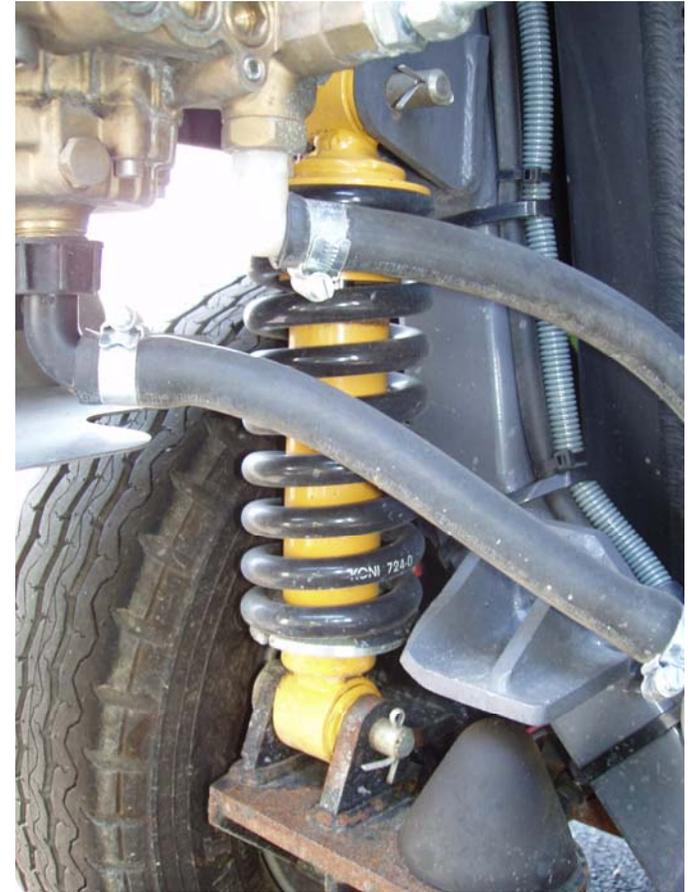


Resulting Benefit: Lower costs of operation and better looking machine result from the use of high grade stainless steel in the hopper and elsewhere on the machine.

1st Class Construction

What features support it?

- Stainless Steel
- Excellent Surface Finish
- Steel Hydraulic Tubing
- **Koni Suspension**



Resulting Benefit: Lower maintenance costs and better ride as a result of 4 wheel independent Koni suspension that reduces shock and vibration.

1st Class Construction

What features support it?



- 4 Wheel Drive
- Curb Climbing (4 inch/100mm)
- 4 Wheel Automatic Braking w/Auto Brake Lights

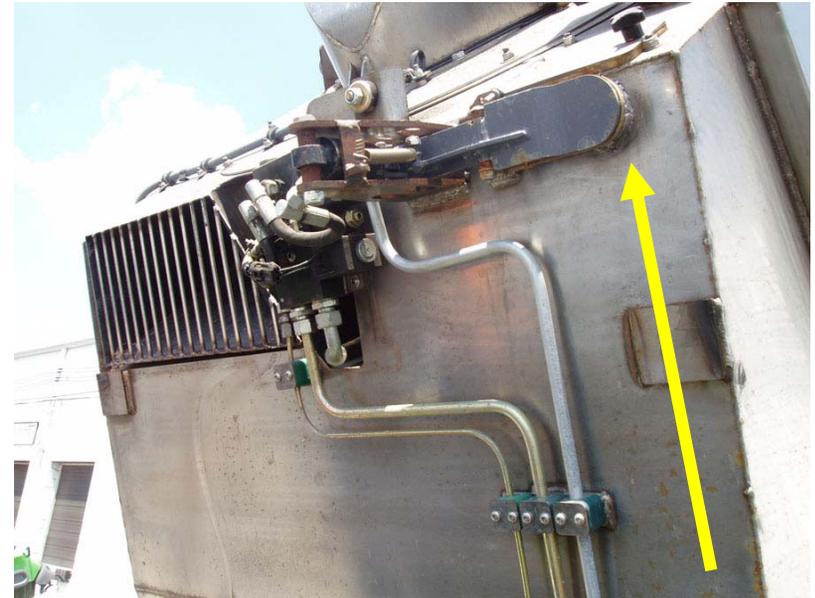


Resulting Benefit: Safer more versatile operation.

1st Class Construction

What features support it?

- Stainless Steel
- Excellent Surface Finish
- Steel Hydraulic
- Koni Suspension
- Thoughtful design
- Service Access



Water Ejector

10 Year Warranty on FRAME Against Rust Through

Resulting Benefit: Improved safety and load management with the water ejector that drains the water in the hopper.

1st Class Construction

What features support it?

- Excellent access for serviceability



1st Class Construction

What features support it?

- No Tool Side Panel Removal
- Hopper Safety Leg
- **Tilting Cab**
- Total Service Access
- Work Gets DONE!
... Quickly

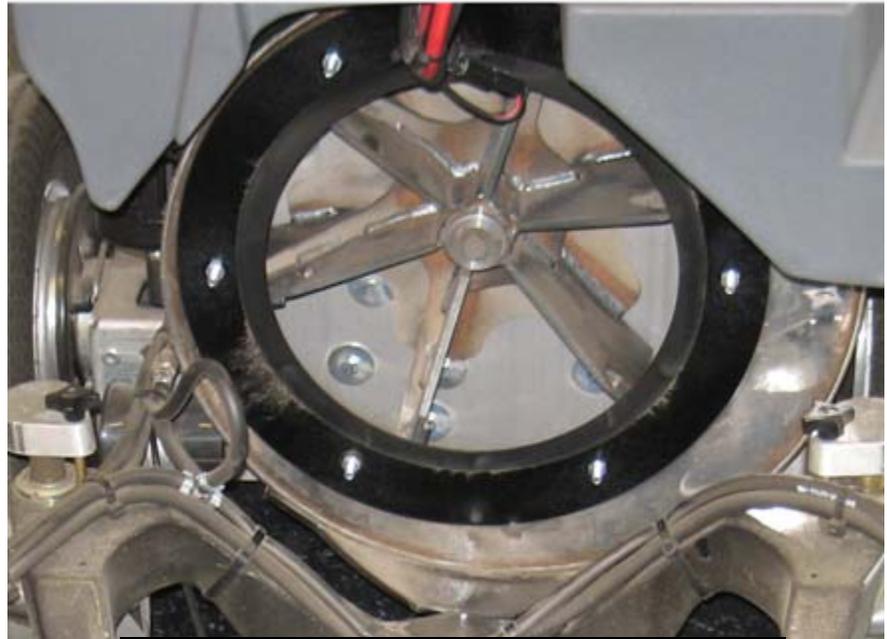


Resulting Benefit: Lower repair and operating costs are possible because of the unsurpassed access to the vital components of the machine.

1st Class Construction

What features support it?

- Over 40 yrs of Improvements
- Stainless Steel Impeller Housing
- Tungsten Carbide Hard Faced Impeller Edges
- Replaceable Wear Plates Around Housing



400 Series Impeller

Lifetime Warranty on IMPELLER

Resulting Benefit: Lower operating costs and improved safety are delivered by the Model 400's high performance compacting fan that reduces debris (as high as 3:1 compaction) and is protected from premature wear.

1st Class Construction

Who it Matters to...



Break



Industry Leading Productivity

Why is it important?

- Why is it important?
 - Reduce the Cost of Cleaning
 - More Time Spent Cleaning
 - Larger Area Covered
 - Potential to Reduce Cleaning Fleet and Staff
 - Easier Storage
 - Drive to Site vs Trailer
 - No Specialized Local Storage

Industry Leading Productivity

What features support it?

What Features Support It?

- Transport Mode
 - 20 mph / 32 km/h

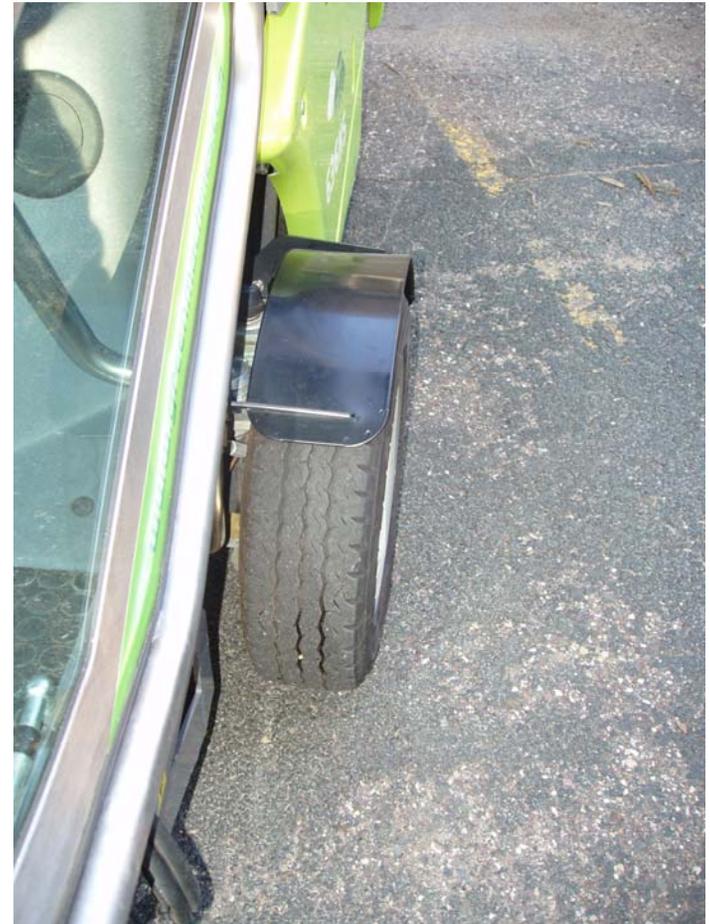


Industry Leading Productivity

What features support it?

What Features Support It?

- Transport Mode
- Vari-track™



Resulting Benefit: Safely transport due to wider track providing more stability

Industry Leading Productivity

What features support it?

What Features Support It?

- Transport Mode
- Vari-track™
- Whoosh Wander Hose
- Suction Nozzle Flap



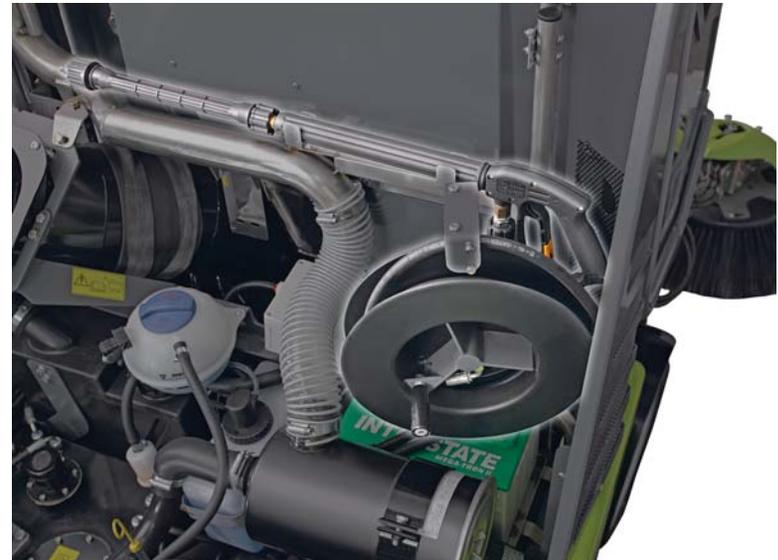
Resulting Benefit: Cleaner path from fewer passes from higher performance from pulsing air to raise hard to lift items.

Industry Leading Productivity

What features support it?

What Features Support It?

- Transport Mode
- Vari-track™
- Whoosh Wander Hose
- Suction Nozzle Flap
- Pressure Washer (opt)



Industry Leading Productivity

Who it Matters to...



People Friendly

Why is it important?

- Why is it important?
 - Allows for Cleaning During the Day
...be seen cleaning
 - Won't Disrupt Employees, Students, Visitors,
Residents or Customers
 - Progressive Impression

People Friendly

What features support it?

What Features Support It?

- Styling



Resulting Benefit: Able to clean when people are around.

People Friendly

What features support it?

What Features Support It?

- Styling
- Full View of Operator



People Friendly

What features support it?

What Features Support It?

- Styling
- Full View of Operator
- Quiet Operation



People Friendly

What features support it?

What Features Support It?

- Styling
- Full View of Operator
- Quiet Operation
- All Exhaust Air Out Rearward



People Friendly

What features support it?



What Features Support It?

- Styling
- Full View of Operator
- Quiet Operation
- All Exhaust Air Out Back
- It works...

Resulting Benefit: Clean when the people are around. Recognition that the job is getting done

People Friendly

Who it Matters to...



What's Green About Green Machines?

- Why its Important:
 - “Green” is not only about reducing the carbon footprint of a given product, but it also involves how a given product impacts the environment in which it operates.
- What Features Support It:
 - Reduce engine emissions with a **EPA Tier 3 engine**
 - Reduce engine emissions further through the use of **B5 Bio-Diesel**
 - Reduce run-off through **dust containment** rather than dust suppression using the CloudMaker™ which traps dust in the hopper vs. spraying it down on the surface
 - Reduce water usage **70%** compared to traditional air sweepers by using the CloudMaker™
 - Reduce landfill waste with the **3 stage filtration system** that does not utilize disposable media filters, simply rinse out system and it's ready to go another day
 - Maintain consistent **high performance cleaning ALL DAY LONG**, because there are no filters to plug (which would reduce suction performance)
 - Increase utilization and therefore cleaning activity because of the overall **operator comfort and ease of use** means the unit will be out working
 - Increase notice of the cleaning program with its **crisp lines & unique green color**.



Competition

Madvac CN100



CUSTOMER RESULT

Engine	Kubota 3-cyl Turbo 31hp	Engine performance	35%	Kubota 4-cyl Turbo 42hp
Suction	2,680 c.f.m. at 3100 r.p.m.	Superior vacuum	37%	4,236 c.f.m. at 2700 r.p.m.
Suspension	Leaf springs w/stabilizer bars	Operator comfort		Koni Coil springs w/shock
Payload	1,276 lbs.	Heavier debris loads	38%	1,760 lbs.
Braking	Front wheel hydrostatic plus foot operated rear discs	Public safety		4 wheel hydrostatic plus foot operated front & rear drums

Advance RS850



CUSTOMER RESULT



Transport	15 m.p.h.	More time sweeping 33%	20 m.p.h.
Height	90"	Low clearance 15%	78"
Sweep Width	63" Fixed	Flexible sweeping path 28%	47" to 80.7" Joystick controlled
Suction	3,212 c.f.m.	Enhanced lift 31%	4,236 c.f.m.
Steering	Rear wheel	Less damage and danger	Front wheel

Madvac PS300



CUSTOMER RESULT

Capacity	40 gallons No compaction	Fewer dumps	225 gallons Shredding impeller ratio of 3:1
Suction	1343 c.f.m. at 3100 r.p.m.	One pass productivity	2050 c.f.m. at 2800 r.p.m.
Collection Bag	Estimated 4 year cost \$6,000 Uses special porous bags	Lower cost of ownership	Estimated 4 year cost - \$900 Uses regular standard bag available anywhere.
Safety	Debris retains it's original shape including jagged edges and sharp objects	Less risk of injury	Fan safely pulverizes objects and glass into small pieces with no sharp edges
Stopping	Continues downhill when drive lever is released on a grade	Potential for damage	Comes to a complete stop immediately when drive lever is released

52%

"The Business"



Special Colors

- Only green changes color
- Brush Covers to Gray
- Green Side Panels to Customer Color



Product Line Changes

Some Product Rationalization & Changes Underway

East	Current Line	New Line
Model 400 Series	414 2DS 414 RS 414 RSD 424 TR 424 HS	414 w/optional "RS" seat 424 (high speed only) (January 1 st , 2009)
Model 636	636 Scotland	636 Minneapolis (Q1 '09) Full Gray Cab
Model 525	525	Discontinued (Sept '08)

Sales Materials and Timing

Sales Tools	636HS	400 Series
Literature	Now e/f	Existing-Nov e/f
Sales Video	Existing	Existing
Flip Chart Presenter	Now	NA
Product Tutorial	Now	
Product Solutions & Application Guide	Now	Now
Tradeshow Booth (10 x 20)	Now	Now
Bid Specifications	Now	Existing
Competitive Comparisons	Existing	Existing
On-Line Photo Gallery	Now	Now
CD Presenter	Q1 '09	Q1 '09
On-Line Demonstration	Q1 '09	Q1 '09
Full Demo Fleet – 1 per Region	Q1 '09	Q1 '09



Thank You

- Any Questions?