

# CARTER DAY

## 24 and 48 SCALPERATOR

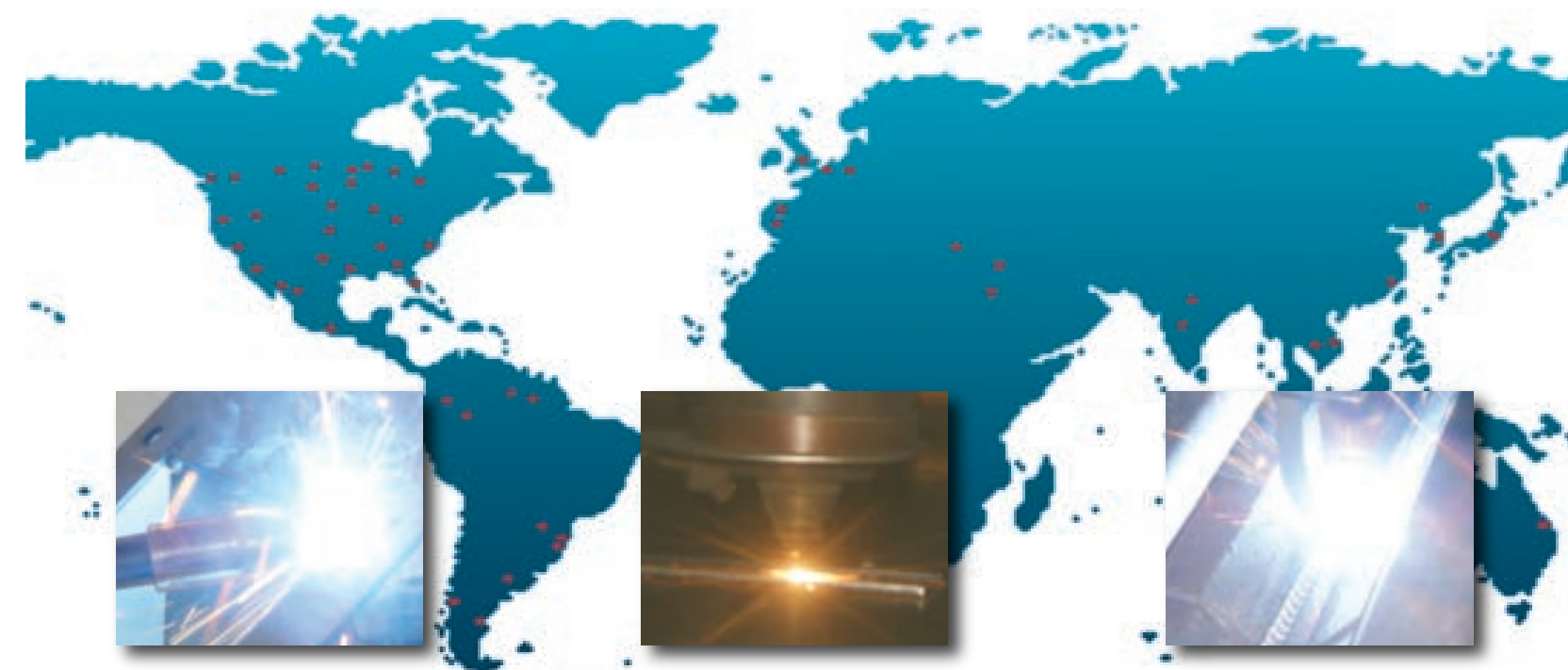
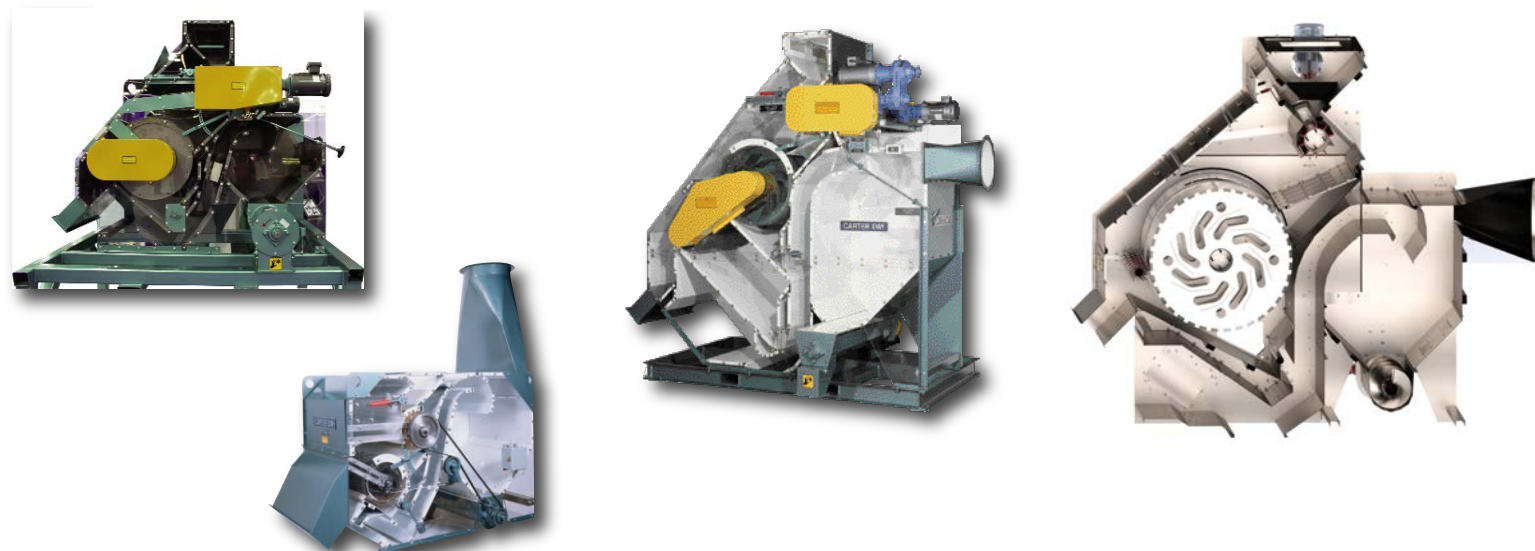
### AGRIBUSINESS CAPACITIES



# SCALPERATOR GUIDE

24 AND 48 SCALPERATOR AGRIBUSINESS AND PLASTICS

24 AND 11 SCALPERATOR LOW PROFILE AGRIBUSINESS



## 24 MODULAR SCALPERATOR

DIMENSIONS	28" WIDTH		56" WIDTH		84" WIDTH		112" WIDTH	
	US	METRIC	US	METRIC	US	METRIC	US	METRIC
OPEN CIRCUIT								
WIDTH	57"	1448 mm	85"	2159 mm	113"	2870 mm	141"	3581 mm
LENGTH	103"	2616 mm	110"	2794 mm	117"	2972 mm	124.5"	3162 mm
HEIGHT	98.5"	2502 mm	98.5"	2502 mm	98.5"	2502 mm	98.5"	2502 mm
WEIGHT	2175lbs	989 kgs	3075lbs	1398 kgs	4025lbs	1829 kgs	4875lbs	2216 kgs
CLOSED CIRCUIT								
WIDTH	72"	1828mm	102"	2590 mm	130"	3302 mm	162"	4114 mm
LENGTH	147"	3733 mm	158"	4013 mm	162"	4114 mm	158"	4014 mm
HEIGHT	98.5"	2501 mm	98.5"	2501 mm	98.5"	2501 mm	98.5"	2501 mm
WEIGHT	2915lbs	1331kgs	4220lbs	1926kgs	5425lbs	2477kgs	7200lbs	3287 mm

### CAPACITIES BASED ON 3/4" x 3/4" MESH SCALPING SCREENS and FEED VALVE NOTED BY \*

CAPACITIES	Bu/Hr	MT/Hr	Bu/Hr	MT/Hr	Bu/Hr	MT/Hr	Bu/Hr	MT/Hr
Wheat	2500/3125	568/85*	5000/6250	136/170*	7500/9375	204/255*	10000/1250	272/340*
Barley	2100/2625	45.7/57*	4200/5250	91.4/114*	6300/7870	137/171*	8400/1050	182/228*
Safflower	2100	53.3	4200	106.6	6300	159.9	8400	203.2
Corn	1700	43.1	3400	86.4	5100	129.6	6800	172.8
Soybeans	1700	46.3	3400	92.6	5100	138.9	6800	185.2
Oats	1500	21.8	3000	43.6	4500	65.4	6000	87.2
Sunflower (oil)	1500	21.8	3000	43.6	4500	65.4	6000	87.2
Paddy Rice(dry)	1000	20.4	2000	40.8	3000	61.2	4000	81.6
Paddy Rice(wet)	500	10.2	1000	20.4	1500	30.6	2000	40.8
Edible Beans	1500	40.8	3000	81.6	4500	122.4	6000	163.2
Canola	1000	27.2	2000	54.4	3000	81.6	4000	108.8
Mustard	1000	27.2	2000	54.4	3000	81.6	4000	108.8
Sorghum	2400	61.0	4800	122.0	7200	183.0	9600	244.0

\* (Alternative scalping screen sizes available)

## 48 MODULAR SCALPERATOR

DIMENSIONS	28" WIDTH		56" WIDTH		84" WIDTH		112" WIDTH	
	US	METRIC	US	METRIC	US	METRIC	US	METRIC
OPEN CIRCUIT								
WIDTH	79"	2007 mm	107"	2718 mm	134"	3404 mm	163"	4140 mm
LENGTH	135"	3430 mm	141"	3581 mm	149"	3785 mm	155"	3937 mm
HEIGHT	130"	3302 mm	130"	3302 mm	134"	3404 mm	134"	3404 mm
WEIGHT	5700lbs	2586 kgs	7300lbs	3312 kgs	9100lbs	4128 kgs	10700lbs	4854 kgs

### CAPACITIES BASED ON 3/4" x 3/4" MESH SCALPING SCREENS \*

CAPACITIES	Bu/Hr	MT/Hr	Bu/Hr	MT/Hr	Bu/Hr	MT/Hr	Bu/Hr	MT/Hr
Wheat	5000	136	10000	272	15000	408.0	20000	544
Barley	4200	91	8400	182	12600	274	16800	365*
Corn	3400	86	6800	172	10200	259	13600	345
Corn 5/8 Wire	3000	76	6000	152	9000	228	12000	304
Soybeans	3400	92	6800	185	10200	277	13600	370
Oats	3000	43	6000	87	9000	130	12000	174
Paddy Rice(dry)	2000	40	4000	81	6000	122	8000	163
Paddy Rice(wet)	1000	20	2000	40	3000	61	4000	81

\* (Alternative scalping screen sizes available)

#### NOTE:

- Hourly input ratings are directly influenced by the screen sizes, the amount of foreign materials, the physical characteristics of the product, and the moisture content.
- Capacities shown are in bushels and metric tons (one metric ton weighs 1,000 kilos or 2,205 pounds).
- Capacities shown are based on U.S. harvesting practices.
- Dry grains are considered to have a moisture content of less than 14%.
- The following volumetric weights (pounds/bushel) apply:

Barley	48	Safflower	56	Oats	32
Soybeans60		Corn (Maize)	56	Wheat	60
Canola	60	Paddy Rice	45	Sunflower Seed	32
Sorghum 56		Mustard	60	Edible Beans	60

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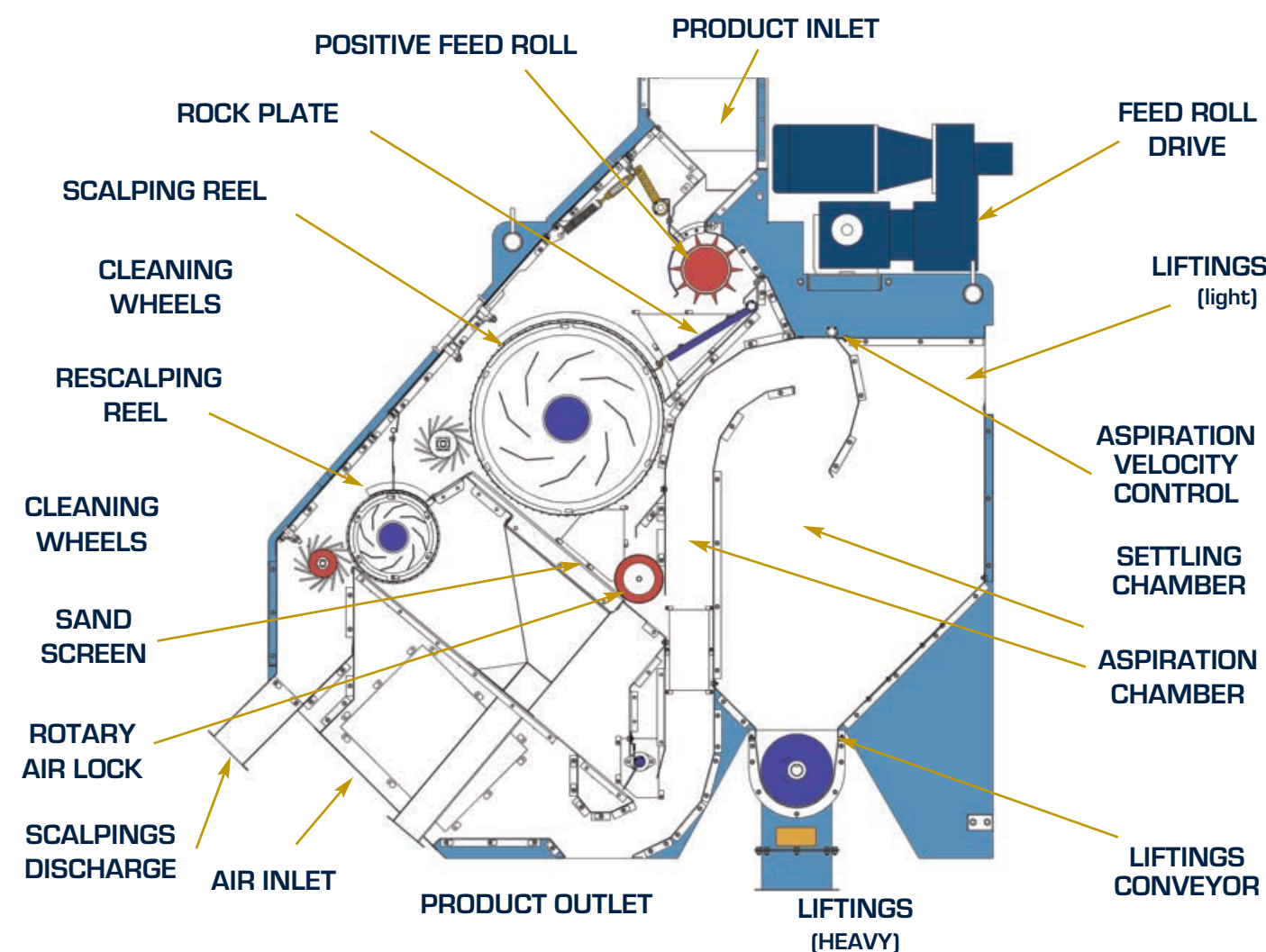
# CARTER DAY THE SCALPERATOR

For more than 75 years Carter Day has been manufacturing quality equipment. We continue this tradition with the 11,24 and 48 Scalperator for high capacity, one pass cleaning of incoming or outgoing grains, seeds, rice and plastic pellets.

The 24 Scalperator features scalping, rescalping and aspiration in a single machine to provide a high capacity method for removing roughage, light fines and chaff in a single pass. Incoming grain passes through a rotating wire mesh or perforated scalping reel eliminating roughage and other over-sized materials; high volume aspiration then removes the light materials. On wheat and barley, we're able to take standard dockage with levels of 2 percent, down to .5 percent or less.

When your application calls for fine scalping using a near size slot or round hole, the scalperator can handle the task. Using a 13 - 15/64th wire we can take wheat scalping to fine cleaning.

Our performance-engineered aspiration chamber and flow-modulated air valve provide consistent cleaning of the product and our simplified design provides for easy clean out and routine maintenance. The oversized settling chamber auger allows for high capacity take away when the application requires it.



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## 48 SCALPERATOR DOUBLES . STREAMERS . FINES REMOVAL



The 48 Scalperator is a machine for processors who need overall high capacity, fine scalping using smaller scalping apertures, or high capacity in a smaller foot print. The 48 Scalperator: for high capacity of scalping and aspiration of free flowing plastic pellets.

The 48 Scalperator features scalping and aspiration in a single machine, providing a high capacity method for removing streamers, agglomerates, and fines in a single pass; surpassing the capabilities of traditional Elutriators. Incoming pellets pass through a rotating perforated scalping reel eliminating angel hair and other oversized materials; high volume aspiration then removes the light materials.

Performance-engineered aspiration chamber and flow-modulated air valve provide consistent cleaning of the product and our simplified design provides for easy clean out and routine maintenance. The 48 Scalperator has both high capacity and standard capacity aspiration thickness dependent on the scalping reel aperture size defined at time of order.

Operator friendly machine controls of the rock plate and aspiration chamber provides accurate control of all process variables. Indicators on these controls provide enhanced repeatability and accurate machine set-up. Impact resistant polycarbonate windows allow the operator to monitor cleaning performance, and our simplified design provides for easy clean out, access for routine maintenance, along with reel and feed valve replacement.

### 24 SCALPERATOR CAPACITIES

Pellet Size/Pellet/Reel Perforation	24x28/CFM *6"	24x56/CFM *6"	24x84/CFM *6"	24x112/CFM *6"
3x4.5 mm (PP, HDPE,LDPE) With Slip, 1/2 R	20/2500	40/5000	60/7500	80/10000
3x4.5 mm (PP, HDPE,LDPE) No Slip,1/2 R	17/2500	34/5000	51/7500	68/10000
3.2x3 mm (PP, HDPE,LDPE) Slip,1/2 R	25/2500	50/5000	75/7500	100/10000

### 48 SCALPERATOR CAPACITIES

Pellet Size/Pellet/Reel Perforation	48x28/CFM *6"	48x56/CFM *6"	48x84/CFM *6"	48x112/CFM *6"
3x4.5 mm (PP, HDPE,LDPE) With Slip, 1/2 R	79/2007	107/2718	134/3404	163/4140
3x4.5 mm (PP, HDPE,LDPE) No Slip,1/2 R	135/3430	141/3581	149/3785	155/3937
3.2x3 mm (PP, HDPE,LDPE) Slip,1/2 R	130/3302	130/3302	134/3404	134/3404

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## 24 SCALPERATOR

### STREAMERS AND FINES REMOVAL

The Scalperator features scalping and aspiration in a single machine to provide a high capacity method for removing agglomerates, light fines and brokens in a single pass. Incoming plastic passes through a perforated agglomerate plate and perforated scalping reel, eliminating agglomerates and other oversized materials; high volume aspiration then removes the light materials.

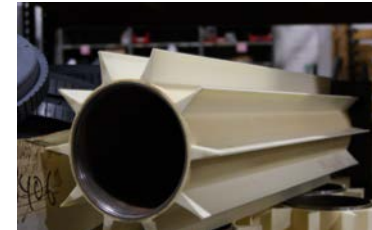
Performance-engineered aspiration chamber and flow-modulated air lock valves provide consistent cleaning of the product; our simplified design provides for easy clean out and routine maintenance.

Operator friendly machine controls provide accurate control of all process variables. Optional feedback indicators on critical process variables provide enhanced repeatability and accurate machine set-up. Impact resistant polycarbonate windows allow the operator to monitor cleaning performance. Simplified design provides for easy clean out and access for routine maintenance.



The Stainless Steel Scalperator features scalping and aspiration in a single machine providing a high capacity method for removing streamers, agglomerates, and fines in a single pass.

Incoming pellets pass through a rotating perforated scalping reel eliminating streamers and other oversized material. The high volume aspiration then removes fines from the pellet stream.

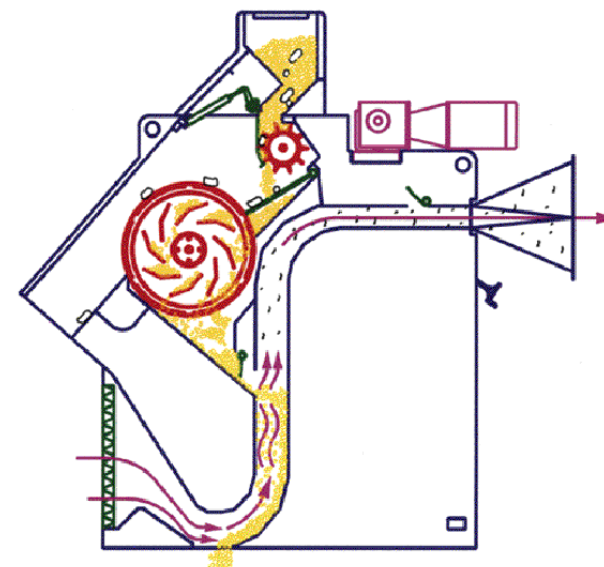


A **molded urethane feed roll** accurately controls the process feed rate and provides a positive shut-off. The urethane feed roll has high wear resistance and its smooth surface resists build-up of product and contamination.

The **agglomerate plate** ensures high capacity scalping performance and minimizes agglomerates and other particulate buildup behind the scalping reel.

**Rotating Scalping Reel** is constructed of a electro polished stainless steel perforated screen with 1/2" (12.7 mm) diameter holes. The perforated screen design eliminates blinding of the scalping reel.

**Performance-engineered aspiration chamber** and flow-modulated air lock valve provides high efficiency cleaning of the product.



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## SCALPERATOR ADVANTAGES

Operator friendly machine controls of the rock plate and aspiration chamber provide accurate control of all process variables. Indicators on these controls provide enhanced repeatability and accurate machine set-up. Impact resistant polycarbonate windows allow the operator to monitor cleaning performance. Simplified design provides for easy clean out, access for routine maintenance and reel and feed valve replacement.

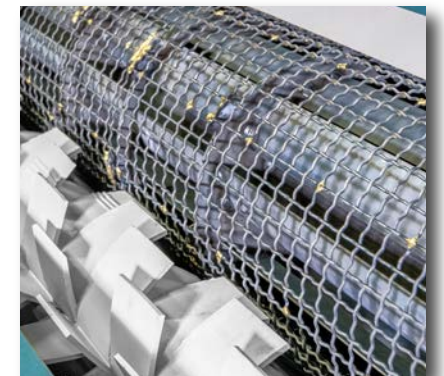


The **HTD drive package** provides increased reliability and decreased downtime with minimal adjustment and maintenance.



The **rock plate** ensures high capacity scalping performance and minimizes rock and other particulate buildup behind the scalping reel. The correct setting of the rock plate position establish stick separation.

A **molded urethane feed roll** accurately controls the feed rate and provides a positive shut-off. The urethane feed roll is highly wear resistant; its smooth surface resists build-up of product and contaminations. VFD controlled variable speed drive accommodates a variety of feed rate ranges.



**Feed valve feed roll** accurately controls the high capacity feed rate and provides a positive shut-off. Just like our urethane feed roll, the steel valved feed roll is highly wear resistant with a smooth surface, resisting build-up of product and contaminations. VFD controlled by customer to provide feed rate changes.



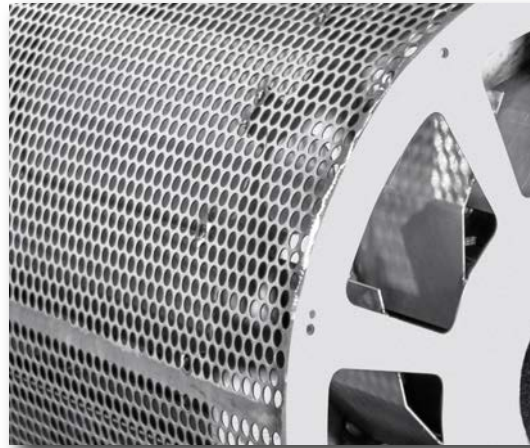
A **molded urethane feed roll gate** accurately controls the process feed rate as the product enters the air wash. The VFD controlled variable speed drive of the feed roll controls the feed roll and feed roll gate RPM to accommodate a variety of feed rate ranges.



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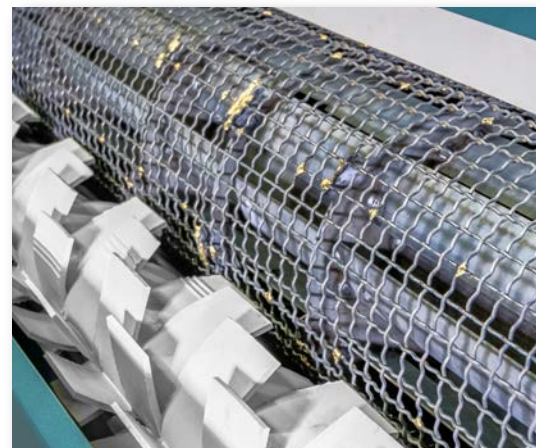


# CARTER DAY SCALPING REELS & WIPERS



**Round Hole Perforated Scalping Reels custom punched and specially hardened by Carter Day provides unmatched Scalping Cleaning.** The terrific cleaning of sticks, straw, pods, string etc. comes from the proper selection of the punched round hole diameter.

**Mesh Scalping Reels custom made with hardened wire for high capacity cleaning of sticks, straw, pods, string etc. comes from the proper selection of the mesh size.**



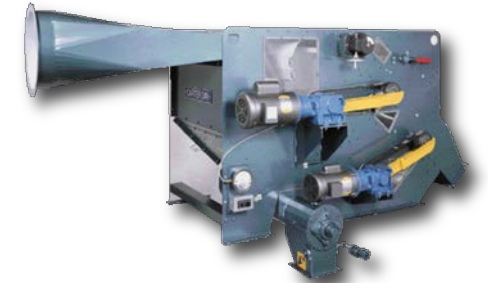
**Round Hole Perforated Stainless Steel Scalping Reels custom punched and specially polished by Carter Day provides unmatched Scalping Cleaning.** The terrific cleaning of streamers, agglomerates and triples. High performance comes from the proper selection of punched round hole diameter.



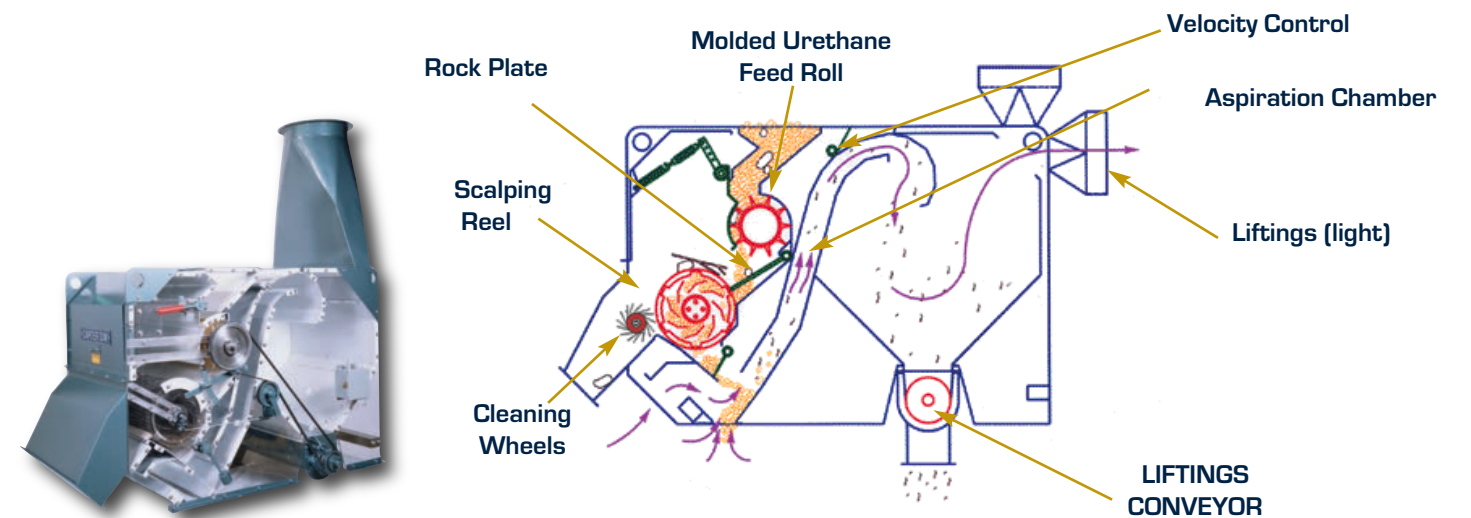
**Patented Molded Elastomer Wiper Blades** provide critical cleaning of the Scalping and Rescalping Reel. The terrific cleaning of sticks, straw, pods, string etc. comes from the proper matching of round hole or mesh scalping reels and wiper blades.

# CARTER DAY 11" LOW PROFILE SCALPERATOR

The 11" Scalperator provides lower capacities in a low-profile design, sharing many of the features of the 24" Scalperator. The 11" Scalperator line is designed to be coupled directly to many of our cleaning machines, requiring pre-cleaning of the incoming product before final cleaning. It can also be used as a stand-alone pre-cleaner where installation conditions demand a low-profile machine.



The shared features of the 24" Scalperator found in the 11" model are defined in the below flow diagram:



11" MODULAR SCALPERATOR									
DIMENSIONS	28" WIDTH		56" WIDTH		84" WIDTH		112" WIDTH		
	US	METRIC	US	METRIC	US	METRIC	US	METRIC	
OPEN CIRCUIT									
WIDTH	49"	1245 mm	77"	1956 mm	105"	2667 mm	133"	3379 mm	
LENGTH	106"	2692 mm	106"	2692 mm	106"	2692 mm	106"	2692 mm	
HEIGHT	48"	1219 mm	50"	1270 mm	51"	1295 mm	52"	1320 mm	
WEIGHT	1225lbs	557 kgs	1750lbs	796 kgs	2300lbs	1046 kgs	2900lbs	1319 kgs	
CAPACITIES BASED ON 3/4" x 3/4" MESH SCALPING SCREENS *									
CAPACITIES	28" WIDTH		56" WIDTH		84" WIDTH		112" WIDTH		
	Bu/Hr	MT/Hr	Bu/Hr	MT/Hr	Bu/Hr	MT/Hr	Bu/Hr	MT/Hr	
Wheat	630	16.3	1250	34.0	1900	51.4	2500	68.0	
Barley	500	10.9	1050	22.9	1600	34.8	2100	45.7	
Safflower	450	11.4	950	24.1	1400	35.6	1900	48.2	
Corn	400	10.2	800	20.3	1200	30.5	1600	40.6	
Soybeans	400	10.8	800	21.6	1200	32.6	1600	43.2	
Oats	400	5.8	800	11.6	1200	17.4	1600	23.2	
Sunflower	300	4.4	600	8.7	900	13.1	1200	17.4	
Paddy Rice (dry)	300	6.1	600	12.2	900	18.4	1200	24.4	
Paddy Rice (wet)	175	3.6	350	7.2	500	10.2	700	14.4	
Edible Beans	325	8.8	650	17.7	1000	16.3	1300	35.4	
Canola	250	6.8	500	13.6	750	24.0	1000	27.2	
Mustard	250	6.8	500	13.6	750	20.4	1000	27.2	
Sorghum	600	15.2	1200	30.4	1800	45.7	2400	60.8	

\* (Alternative scalping screen sizes available)

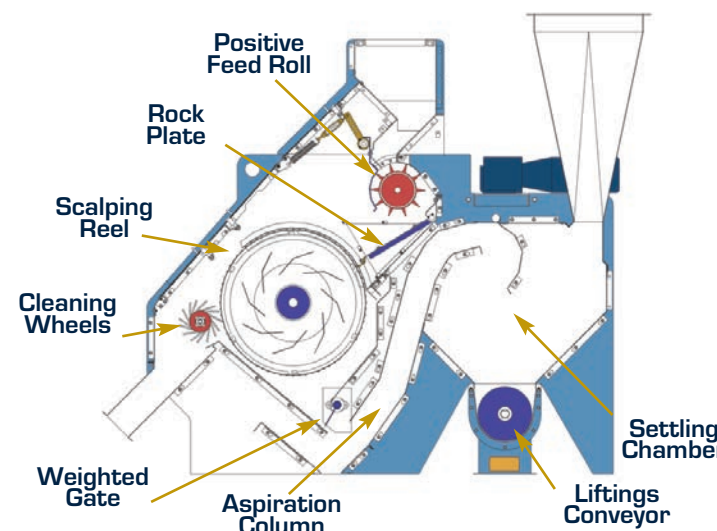
#### NOTE:

- Hourly input ratings are directly influenced by the screen sizes, the amount of foreign materials, the physical characteristics of the product, and the moisture content.
- Capacities shown are in bushels and metric tons (one metric ton weighs 1,000 kilos or 2,205 pounds).
- Capacities shown are based on U.S. harvesting practices.
- Dry grains are considered to have a moisture content of less than 14%.
- The following volumetric weights (pounds/bushel) apply:



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## 24 LOW PROFILE SCALPERATOR



The 24" Low Profile Scalperator features scalping and aspiration in a single machine to provide a high capacity method for removing roughage, light fines and chaff in a single pass.

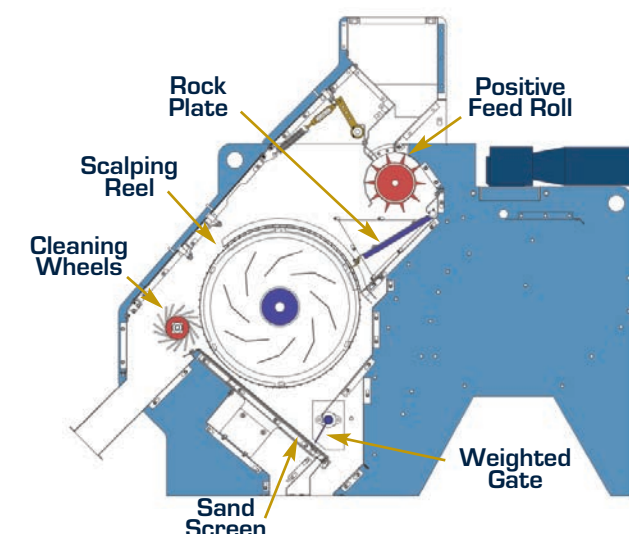
High capacity stand-alone pre-cleaning where installation conditions demand a low-profile machine.

We use all of the features of our 24" Scalperator in our low profile size less the feed roll gate.

The 24" Low Profile Scalper features scalping and sifting in a single machine to provide a high capacity method for removing roughage and fines in a single pass.

High capacity stand-alone scalping and sifting where installation conditions demand a low-profile machine.

We use all of the features of our 24" Scalperator in our low profile size less the feed roll gate.



### 24" MODULAR SCALPERATOR LOW PROFILE

DIMENSIONS	28" WIDTH		56" WIDTH		84" WIDTH		112" WIDTH	
	US	METRIC	US	METRIC	US	METRIC	US	METRIC
OPEN CIRCUIT								
WIDTH	63"	1600 mm	91"	2311 mm	119"	2870 mm	147"	3581 mm
LENGTH	86"	2185 mm	86"	2185 mm	86"	2972 mm	86"	3162 mm
HEIGHT	73"	1854 mm	73"	1854 mm	73"	2502 mm	73"	2502 mm
WEIGHT	1800lbs	819 kgs	2510lbs	1142 kgs	3290lbs	1829 kgs	3975lbs	2216 kgs

CAPACITIES	CAPACITIES BASED ON 3/4" x 3/4" MESH SCALPING SCREENS *							
	Bu/Hr	MT/Hr	Bu/Hr	MT/Hr	Bu/Hr	MT/Hr	Bu/Hr	MT/Hr
Wheat	2500	68.0	5000	136.0	7500	204.0	10000	272.0
Barley	2100	45.7	4200	91.4	6300	137.1	8400	182.4
Safflower	2100	53.3	4200	106.6	6300	159.9	8400	203.2
Corn	1700	43.1	3400	86.4	5100	129.6	6800	172.8
Soybeans	1700	46.3	3400	92.6	5100	138.9	6800	185.2
Oats	1500	21.8	3000	43.6	4500	65.4	6000	87.2
Sunflower (oil)	1500	21.8	3000	43.6	4500	65.4	6000	87.2
Paddy Rice(dry)	1000	20.4	2000	40.8	3000	61.2	4000	81.6
Paddy Rice(wet)	500	10.2	1000	20.4	1500	30.6	2000	40.8
Edible Beans	1500	40.8	3000	81.6	4500	122.4	6000	163.2
Canola	1000	27.2	2000	54.4	3000	81.6	4000	108.8
Mustard	1000	27.2	2000	54.4	3000	81.6	4000	108.8
Sorghum	2400	61.0	4800	122.0	7200	183.0	9600	244.0

\* (Alternative scalping screen sizes available)

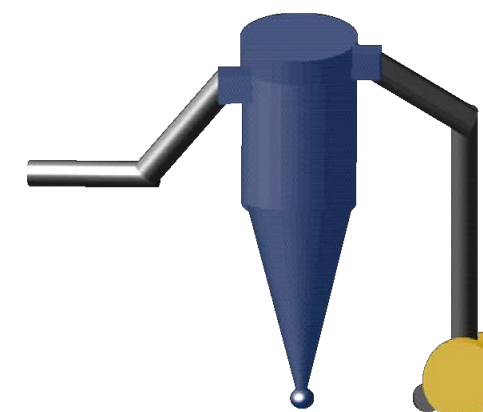
**Complete laboratory service is at your disposal.** Carter Day's facility enables us to test your unique product sample in our laboratory or on full size equipment to aid in determining the right machine for your application. This test equipment is also for sale. We invite you to participate in tests conducted at our facility in Minneapolis, Minnesota USA.

# CARTER DAY

## OPTIONS AND UPGRADES



CLOSED CIRCUIT



OPEN CIRCUIT

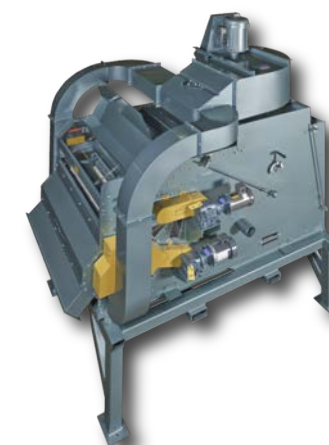
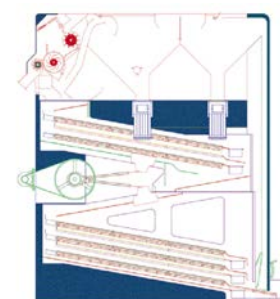
24" Closed Circuit Air options can be field added, and conversions between closed and open-circuit machine configurations can be accomplished as future needs arise.

**Self contained closed circuit designs** are available in all size ranges and features high-efficiency. Use dust pick ups to reduce dust recirculation.



**Product Wear Liners** are a great option to increase machine life. We offer replaceable bolt in AR and Rhino Hyde® with Ceramic Panels. Plus permanently installed high wear resistant Ceramic Tile.

The ASC Top Air Scalperator features scalping and aspiration in a single machine to provide a high capacity method for removing roughage, light fines and chaff in a single pass.





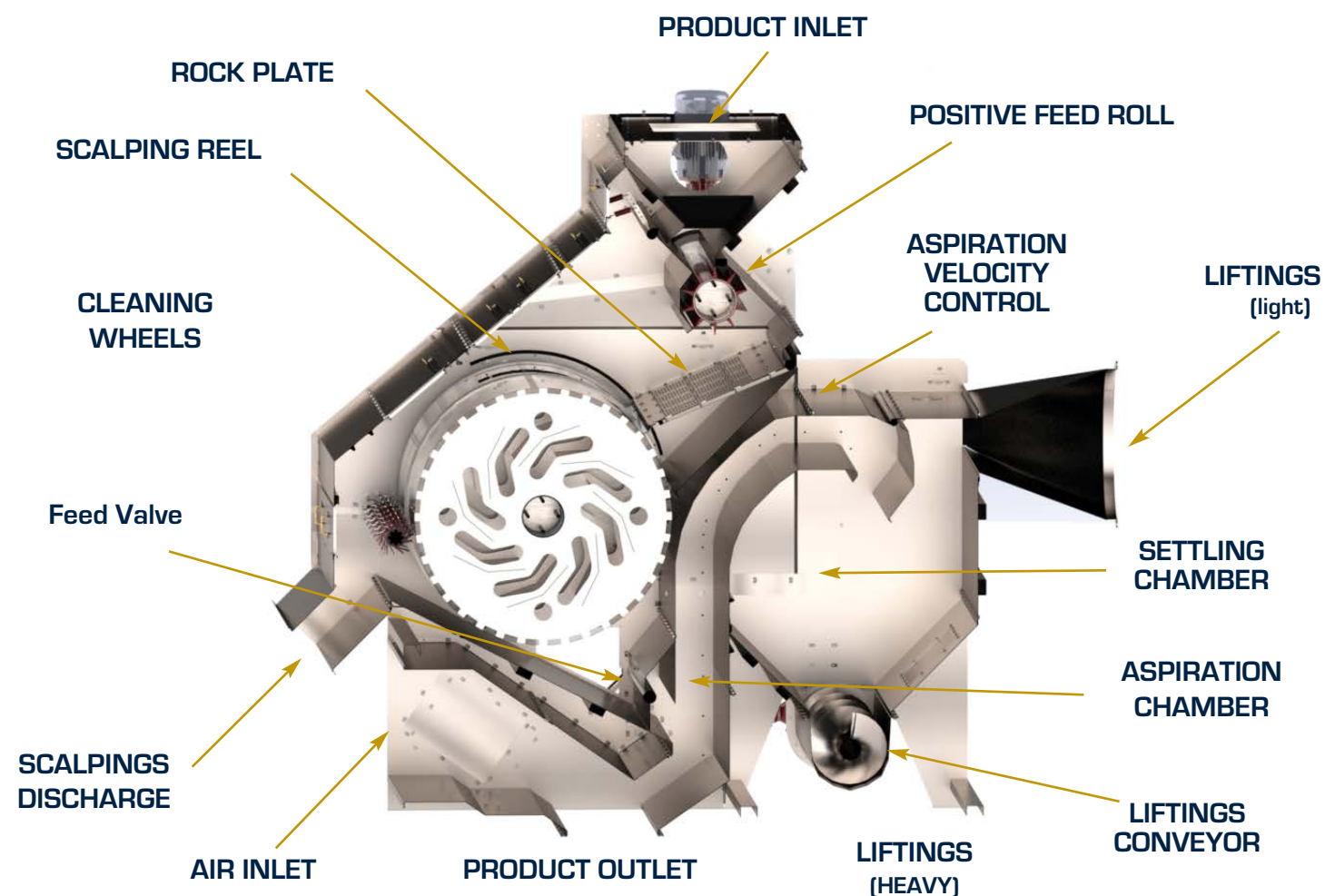
# CARTER DAY

## 48 SCALPERATOR

### HIGH CAPACITY CLEANING

The 48 Scalperator features scalping and aspiration in a single machine to provide a high capacity method for removing roughage, light fines and chaff in a single pass. Incoming grain passes through a rotating wire mesh or perforated scalping reel eliminating roughage and other over-sized materials and high volume aspiration then removes the light materials. On wheat and barley we are able to take standard dockage with levels of 2 percent down to .5 percent or less.

When your application calls for fine scalping using a near size slot or round hole the scalperator can handle the task. Using a 13 - 15/64th wire we can take wheat scalping to fine cleaning. On wheat and barley we are able to take standard dockage with levels of 2 percent down to .5 - .25 percent.



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## 48 SCALPERATOR

### HIGH CAPACITY SCALPING

Performance-engineered aspiration chamber and flow-modulated air valve provide consistent cleaning of the product and our simplified design provides for easy clean out and routine maintenance. The 48 Scalperator has both high capacity and standard capacity aspiration thickness dependent on the scalping reel aperture size defined at time of order. Our oversized settling chamber auger allows for high capacity take away when the application requires it.

Operator friendly machine controls of the rock plate and aspiration chamber provides accurate control of all process variables. Indicators on these controls provide enhanced repeatability and accurate machine set-up. Impact resistant polycarbonate windows allow the operator to monitor cleaning performance. Simplified design provides for easy clean out, access for routine maintenance and reel and feed valve replacement.

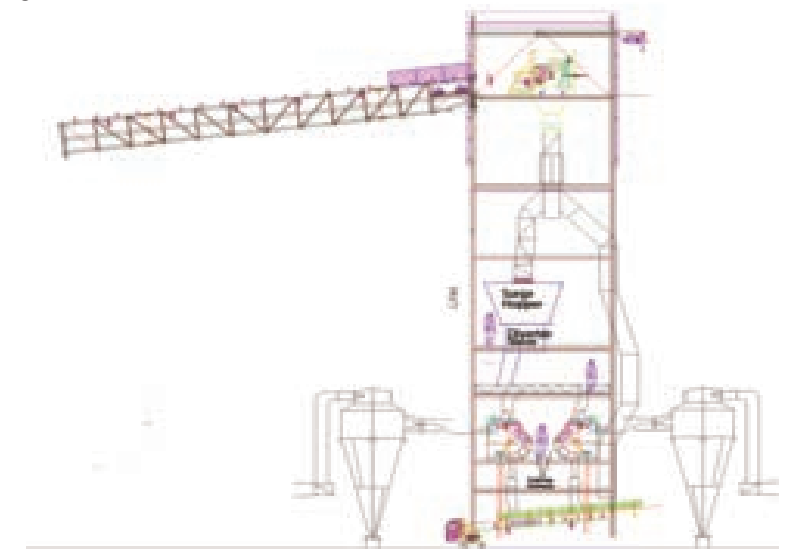
Our 48 Scalperator can be broken down into modules for shipping and ease of installation.

Our extra large **molded urethane feed roll** accurately controls the process feed rate and provides a positive shut-off for high capacity applications.

The **agglomerate plate** ensures high capacity scalping performance and minimizes agglomerates and other particulate buildup behind the scalping reel.

**Rotating Scalping Reel** is constructed of either wire mesh or hardened perforated plate. The perforated screen design eliminates blinding of the scalping reel.

**Performance-engineered aspiration chamber** and flow-modulated air valve provides high efficiency cleaning of the product. While the weighted gate valve allows for high capacity aspiration control.



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