

PRECISION SIZER  
CAPACITIES AND DIMENSIONS



PRECISION SIZER

12 PRECISION SIZER

24 PRECISION SIZER

PHAT BOY TRIBAR

COMBO SIZER/UNIFLOW

PRECISION MESH SIFTER

PRECISION SIZER CAPACITIES 12 AND 24 DIAMETER					
CYLINDER TYPE		CYLINDER TYPE	5% Thrus Bu/Hr - Kg/Hr	50% Thrus Bu/Hr - Kg/Hr	95% Thrus Bu/Hr - Kg/Hr
CORN	12" Diameter Shell	Funlizer®	45 - 1142	75 - 1904	88 - 2234
CORN	12" Diameter Shell	Large Slot	25 - 635	40 - 1015	57 - 1447
BARLEY	12" Diameter Shell	Small Slot	30 - 653	35 - 762	60 - 1306
WHITE RICE	12" Diameter Shell	Small Slot	20 - 590		40 - 1179
WHEAT	12" Diameter Shell	Small Slot	40 - 1008		80 - 2200
OATS	12" Diameter Shell	Small Slot	30 - 400		50 - 665
CORN	24" Diameter Shell	Round Funlizer	90 - 2285	150 - 3809	176 - 4469
CORN	24" Diameter Shell	Large Slot	50 - 1270	80 - 2031	114 - 2895
BARLEY	24" Diameter Shell	Small Slot	60 - 1306	70 - 1524	120 - 2612
RICE	24" Diameter Shell	Small Slot	40 - 1179		80 - 2385
WHEAT	24" Diameter Shell	Small Slot	80 - 2176		160 - 4400
OATS	24" Diameter Shell	Small Slot	60 - 800		100 - 1330
SUNFLOWER	12" Diameter Shell	Funlizer®	10 - 145	15 - 215	20 - 290
SUNFLOWER	12" Diameter Shell	Small Slot	15 - 215	20 - 290	50 - 725
PEANUTS	12" Diameter Shell	Funlizer®	20 - 227	25 - 295	40 - 450
PEANUTS	12" Diameter Shell	Slot	25 - 295	50 - 490	75 - 850

COMBO SIZER AND PHAT BOY SIZER CAPACITIES				
APPLICATION	DOCKAGE/FM	CYLINDERS	FLOW CONFIGURATION	CAPACITY
WHEAT COMBO PRIMARY	6.5% No Seed or Broken	#19,#19,8/64,4,5	4 HIGH STACK	400 BU/HR/11 MT/HR
WHEAT COMBO RECLAIM	20-30% FM (TBD)	#13,6/64,19,10	4 HIGH STACK	150 BU/HR /
BARLEY COMBO PRIMARY	6.5% No Seed or Broken	#19,#19,8/64,5	4 HIGH STACK	320 BU/HR/7 MT/HR
BARLEY COMBO RECLAIM	20-30% FM (TBD)	#16,6/64,19,10	4 HIGH STACK	120 BU/HR /
PHAT BOY				
PADDY RICE WIDTH SIZING	10% PADDY THINS & BROKENS	4.25 SLOT TRIBAR	SINGLE PARALLEL	10 MT/HR
BARLEY WIDTH GRADING	10-15% IMMATURE BARLEY	5.5 64TH SLOT TRIBAR	SINGLE PARALLEL	10 MT/HR
WHITE RICE WIDTH SIZING	5% IMMATURE WHITE RICE	4.25-4.5 SLOT TRIBAR	SINGLE PARALLEL	11 MT/HR
WHITE RICE SCALPING	0-2% FM LARGER THAN 6/64	6/64th Slot	SINGLE PARALLEL	13-20 MT/HR
WHEAT CLEANING	0-5% TBD	4.25/64th Slot, 1/2 round Perf	SINGLE PARALLEL	25 -30 MT/HR
BARLEY CLEANING	0-5% TBD	4.25/64th Slot , 1/2 round Perf	SINGLE PARALLEL	15-20 MT/HR
CORN CLEANING	0-5% TBD	4.25/64th Slot, 1/2 round Perf	SINGLE PARALLEL	20 MT/HR

MACHINE SPECIFICATIONS					
MODEL	HEIGHT- Inches	LENGTH - Inches	WIDTH - Inches	WEIGHT - lbs	MOTOR H.P.
112	31"	91"	26"	500	1/2
212	45	91	33	800	3/4
412	70	93	33	1460	1.5
612	94	96	33	1900	3
124	49	92	42	800	3/4
224	67	97	59	1500	2
424	110	100	59	3300	5
624	152	106	59	5100	7.5
COMBO 2UNI/2SIZERS	118	140	28	3200	3
PHAT BOY SINGLE	50	207	53	5000	7.5

NOTE:  
1. 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.  
2. Capacities shown are in bushels and metric tons (one metric ton weighs 1,000 kilos or 2,205 pounds).  
3. Capacities shown are based on U.S. harvesting practices.  
4. Dry grains are considered to have a moisture content of less than 14%.  
5. The following volumetric weights (pounds/bushel) apply:  
Barley 48  
Sorghum 60  
Cinola 60  
Sorghum 56  
Safflower 56  
Cotton (Midd) 56  
Paddy Rice 45  
Mustard 60  
Oats 32  
Wheat 60  
Sunflower Seed 32  
Edible Beans 60

CARTER DAY INTERNATIONAL  
500 73rd Ave. N.E. Minneapolis, Minnesota 55432  
carterday.com Tel: (763) 571-1000 Fax: (763) 571-3012



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WORLDWIDE REPRESENTATION



# CARTER DAY

## PRECISION SIZER

For more than 100 years Carter Day has been manufacturing quality processing equipment. We continue this tradition with all of our PRECISION SIZER width separators. Carter Day Precision Sizers are the original and preferred width sizers in agribusiness worldwide. Carter Day offers four different model Sizers each offering a different advantage for the user.

The Carter Day Precision Sizers have the performance efficiencies and capacities for virtually any sizing/separating requirement for seed corn, sunflower, barley, wheat, oats, rice, shelled peanuts, soybean, and most other free flowing granular material. The Modular Precision Sizers utilize four different styles of sizing cylinders with over 125 different size apertures.

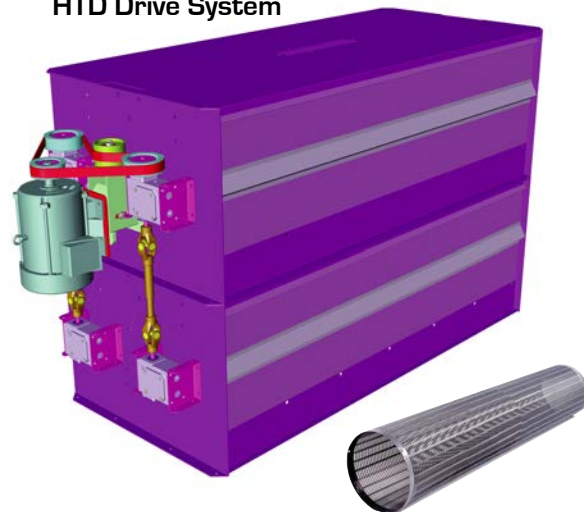
As the product enters the cylinders of a CDI width Sizer, the rotating action presents the material in the most efficient manner to the close tolerance perforations to provide a precise separation. Each cylinder has indexed cleaning wheels located at the top of the cylinder where near sized material is gently pushed back into the cylinder without damaging the grain. This system is completely self-cleaning.

All four of our Precision Sizers offer specific advantages to certain width grading applications. The Welded body construction of the 12 and 24 Modular Precision Sizer is traditionally used for 24 hour precision width grading application. The 24 Modular Precision Sizer offers high capacity precision width grading applications. The Phat Boy Tribar offers super high capacity precision width separation using a 33 diameter tribar shell. Lastly our Combo Uniflow Sizer machine provides precision width and length grading in one pass or parallel width grading.

### 12 and 24 Modular Precision Sizer Drive System

The 12 and 24 Modular Precision Sizer drive system eliminates the use of chains & sprockets and uses a single v-belt drive between each module. By placing a reducer at each cylinder, the belt drive is optimized for both speed & tension for a smoother, quieter & more reliable system. The V-Belt Precision Sizer comes with a manually adjustable speed range to meet your sizing requirements. We also offer in our 12" Modular Precision sizer HTD drive belt system. This uses an HTD Belt and direct couples with U-Joint drive shafts to the gear boxes. Variable speed changes are done using a customer supplied VFD.

HTD Drive System



V-BELT Drive System



# CARTER DAY

## PRECISION MESH SIFTER COMPONENTS

Precision Mesh Sifter drive system uses a single v-belt drive between each module. By placing a reducer at each cylinder, the belt drive is optimized for both speed & tension for a smoother, quieter & more reliable system. The V-Belt Precision Mesh Sifter comes with a manually adjustable speed range to meet your sizing requirements.

**24" Segment Mesh Cylinder** design offers Patented Segmented Screen design which provides unique structural integrity and the ease of screen configuration in the field. Our optional lifter blade design can be used for special products or removed when not required.

**24" Tribar Cylinder** design offers high open area fine openings with unmatchable strength.

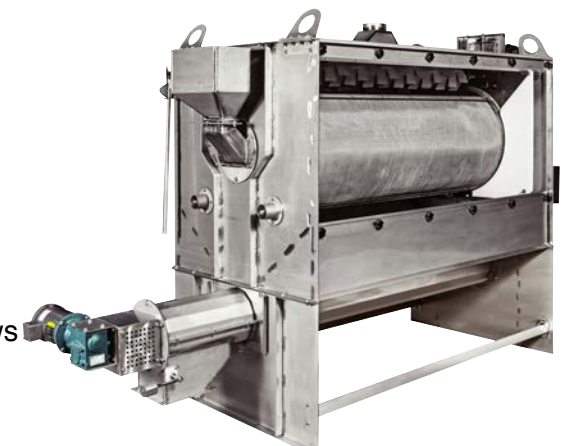


**The Patented Molded Elastomer Indexed Cleaning Wheels** provide an offset sequential contact area. We also have the optional cleaning devices available for special applications.



Our UHMW and Felt inlet seals provide excellent sealing. Our inlet seal prevents leakage as the product enters the cylinder.

**The High Capacity Screw Conveyor** utilizes a spring steel flexure design for reduced maintenance. The new design allows the discharge point to be easily reversed in the field.



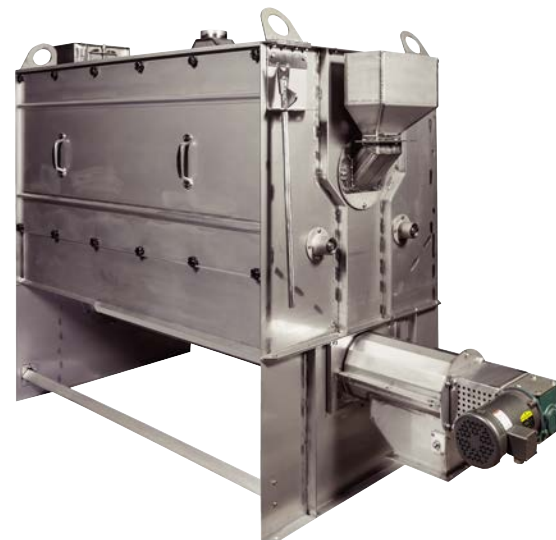


# CARTER DAY

## PRECISION MESH SIFTER

For more than 100 years Carter Day has been manufacturing quality processing equipment. We continue this tradition with our introduction of the Precision Mesh Sifter width and thickness separator. Carter Day Precision Mesh Sifter uses standard mesh screens in our patented segment screen design. Carter Day offers 4 different sizes of mesh sifters providing up to 6 cylinders for maximum capacity and performance.

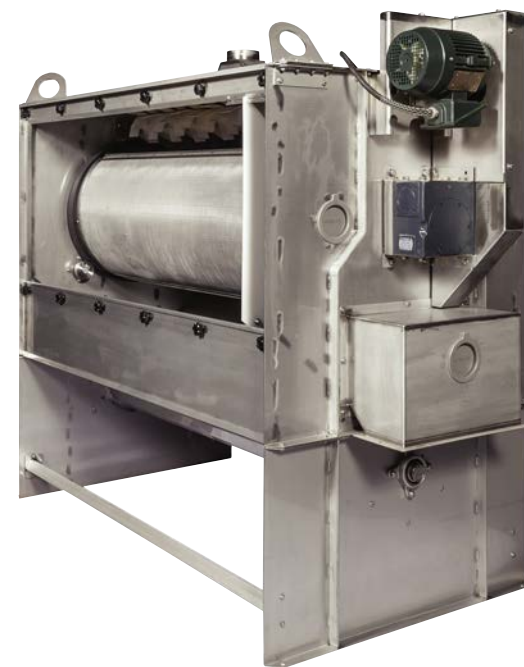
The Carter Day Precision Mesh Sifters have the performance efficiencies and capacities for virtually any sizing/separating requirement for most free flowing granular material.



As the product enters the cylinders of the Precision Mesh Sifter, the rotating action presents the material in the most efficient manner to the mesh which provides a precise separation. The tumbling action the cylinder delivers to the product provides a much more efficient separation than traditional flat mesh sifters. The addition of our lifter blades further de-stratifies the product allowing the smaller particles more chances to see the opening.

Each cylinder has indexed cleaning wheels located at the top of the cylinder where near sized material is pushed back into the cylinder. We have additional cleaning wheels to allow for lighter mesh applications.

The Welded body construction of the 24 Precision Mesh Sifter in either stainless or mild steel can match your application needs. We specialize in stainless steel products so many grades and polishes are available.



# CARTER DAY

## 12 & 24 MODULAR PRECISION SIZER



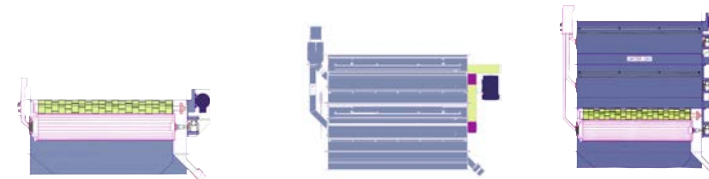
**Precision Sizers Inlet Flow Control** is critical in controlling the feed rate to allow for a proper width grading separation.

Our Inlet Flow Control system provides 3 advantages. Larger inlet hopper offering a surge of product prior to the machine width grading process. Angled slide gates and cut-offs provide clean out. Larger inlet tubing offers more inlet capacity, surge capacity and stronger tubing.

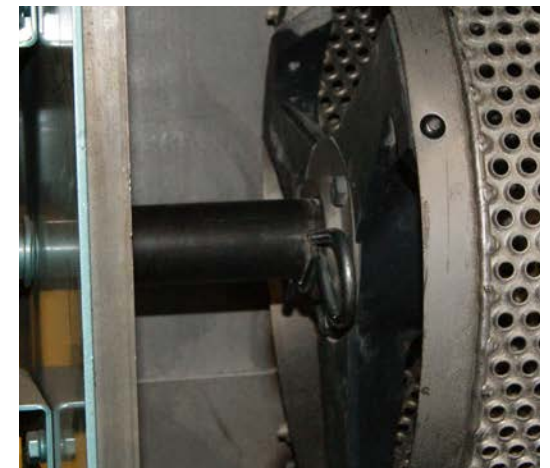
Our UHMW and Felt inlet seals provide excellent sealing. The inlet seal prevents leakage as the product enters the cylinder.



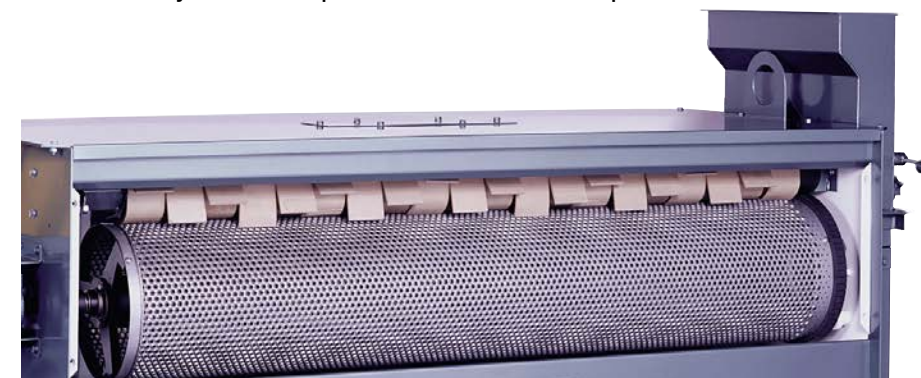
### PRECISION SIZER MACHINE CONFIGURATIONS



**Quick Change Cylinder Design** provides ease of cylinder removal for product change-overs and cylinder replacement. The quick lock cylinder coupling provides a fast yet positive connection to the cylinder drive.



**Patented Molded Elastomer Indexed Cleaning Wheels** provide an offset sequential contact area on the 12" and 24" cylinder for quieter and smoother operation.





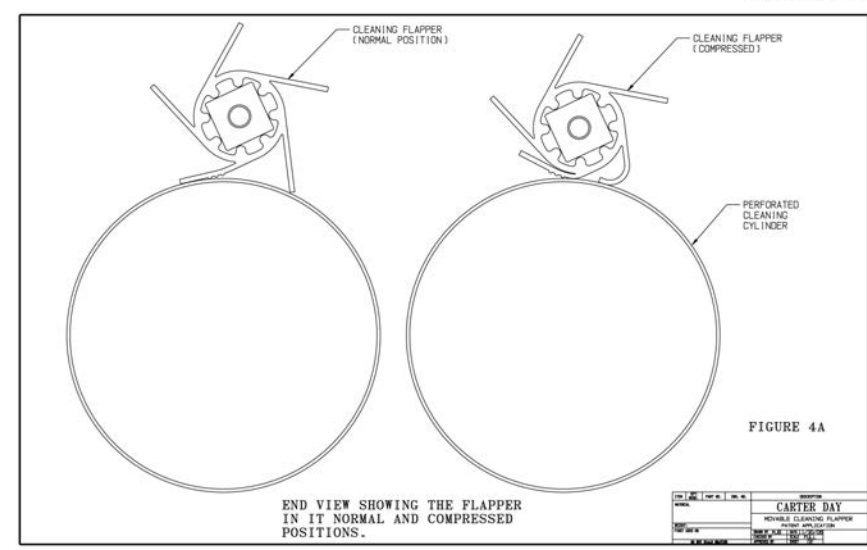
# CARTER DAY

## PRECISION SIZER COMPRESSION WIPER

**PATENT PENDING Compression Wiper System** found on our 12" Modular Precision Sizers uses optional existing internal wiper blades to allow for extra cylinder cleaning. Check out website for details and video presentation. We can provide you with our standard wiper hardness or upgrade to a harder wiper for specific applications. If extreme cylinder cleanout is required you may choose to use the compression wiper system and our slotted door and hand roller for extreme applications. Check out website for details and video presentation.



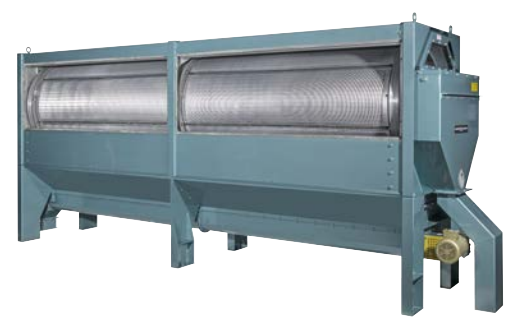
The Compression Wiper System uses the patent pending wiper design by compressing the wiper into a wheel providing a more aggressive cleanout.



# CARTER DAY

## PHAT BOY PRECISION SIZER

The Phat Boy Tribar is our 33" large diameter width separator providing high capacity width grading and cleaning when high efficiency separation are not required.



### PHAT BOY DIRECT DRIVE DESIGN AND SPIDER CONNECTION

The shaft mounted direct drive offers reliability and ease of VFD control. The direct drive shaft connects via a Ring Feder bolted connection. The spider design is non-tubular in construction using welded plate and angle to create the spider.



### PHAT BOY SEAL CONE INLET ASSEMBLY AND UHMW SEAL

The Seal Cone Inlet is a patent pending design that moves the seal point away from the length grading process. The seal cone is tapered so the seal is moved up 2-4 inches and back 4 inches away from the length grading process. We match the seal cone with a split UHMW seal mounting on the inside of the cylinder around the inlet.

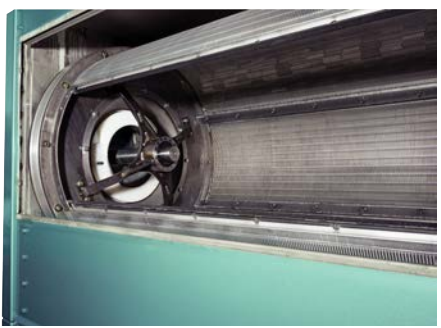
### PHAT BOY SPOUTING

We have used our standard removable Uniflow spouting arrangements on the Phat Boy. This provides quick replacement and lower cost than spouting found inside the end plates of the machine.

**Molded Elastomer Indexed Cleaning Wheels** provide an offset sequential contact area. **We also offer at an option our compression wiper system for extra cylinder cleaning.**



The Phat Boy Tribar can be stacked up to 3 high to meet your processing needs or be used in a pyramid fashion. The Phat Boy Tribar can also allow for Length Grading and Tribar Sizing in one pass such as high capacity rice applications of length grading broken rice and width sizing thin rice. The Phat Boy Tribar can also be used in con-

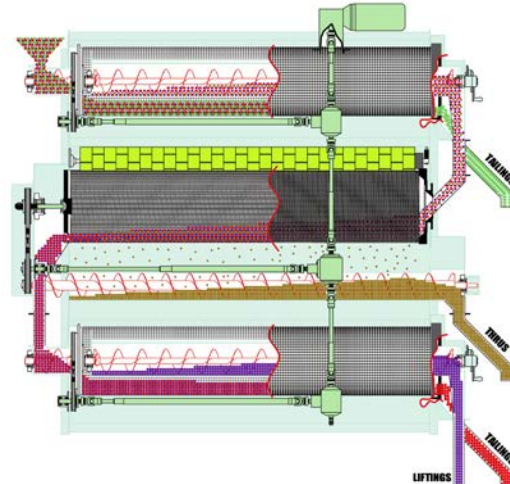


# CARTER DAY MODULAR COMBO SIZER

The Combo Machine combines the Modular Uniflow and 18" Sizer providing high efficiency width and length grading or just width separation using our Universal Drive. We use the same patented drive package as the Modular Uniflow allowing many flow configurations. This drive system uses a reducer to PTO drive system and then final HTD Belt running the cylinders and screws.

This configuration combining length grading and width/thickness sizing in one pass which allows for endless cleaning applications. We widely use this machine on reclaim systems for large grain terminals. We also use it as a primary cleaner when length grading and width grading combinations are required.

Because of the modular design, each vertical stack will have identical components and few of those are subject to replacement at overhaul time.



## 12" and 18" RETRO FIT PRECISION SIZER



Carter Day also offers the Retro Sizer which is our retro style sizer for replacement applications of existing machines. This is also an option for applications where our newest drive systems are not required but only require our highest quality Precision Sizer Shells. We offer this machine in our 12" Cylinder Design such as the 1VT, 212,412,612. We also offer the 218,418 and 618 designs.

The Retro - Fit Precision sizer provides a gear reduced V-Belt drive and quick change cylinders.

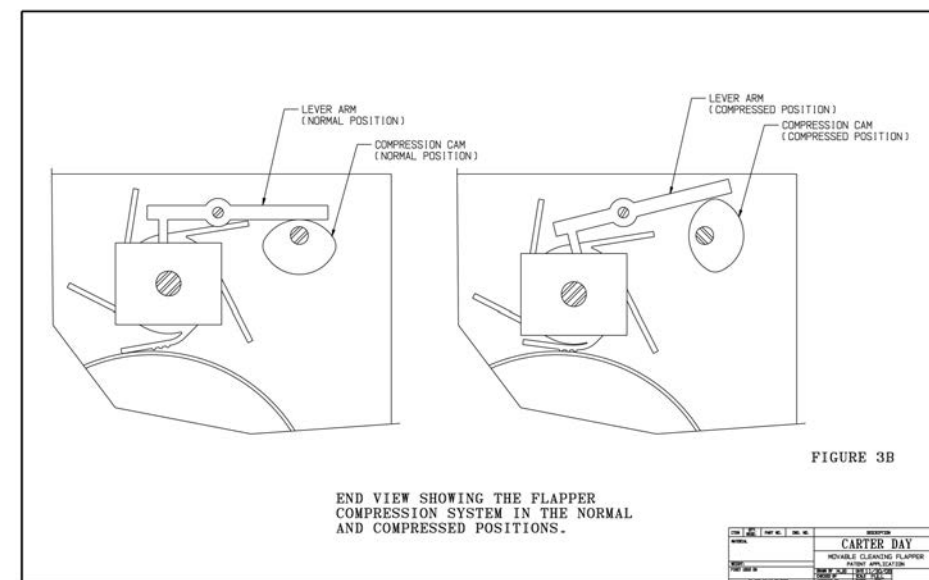
CARTER DAY INTERNATIONAL

# CARTER DAY PRECISION SIZER COMPRESSION WIPER

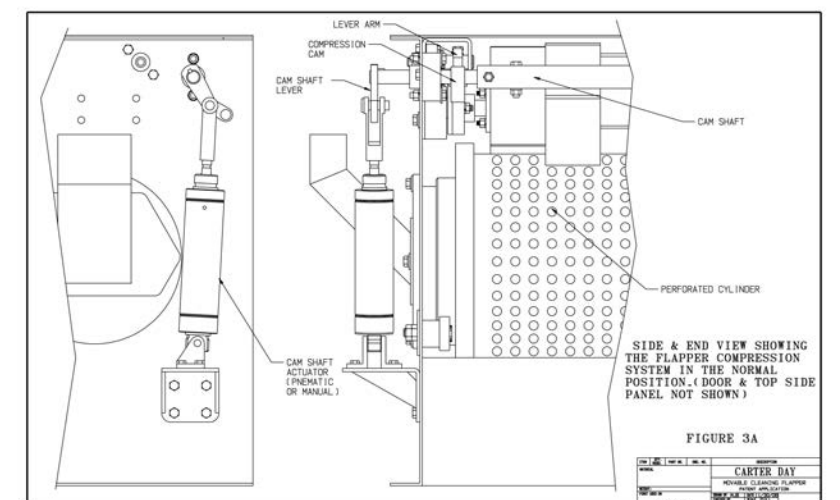
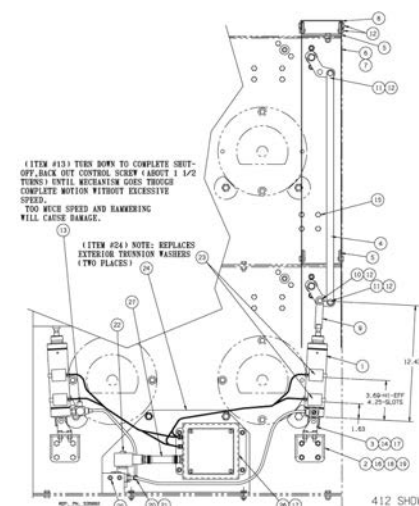
**PATENT PENDING Compression Wiper System** found on our 12" Modular Precision Sizers uses an air assisted control system. Check out website for details and video presentation.



The Compression Wiper System uses an air cylinder on each side of the machine to compress and release the wiper blade.



The Compression Wiper System can be used with an optional electronics control package





## PRECISION SIZER CYLINDER DESIGN AND CONSTRUCTION

CARTER DAY Sizer cylinders are the most wear resistant and highest number of openings per square inch in the industry delivering superior performance. Carter Day Slots on average have a hole aperture tolerance which is superior in tolerance by .001 to .002. Our hardening process provides you with the most wear resistant cylinders in almost any application. Along with our superior dies we can provide you with the best width grading sizing cylinder in the industry today.

**The Modular Precision Sizer can utilize all types and sizes of cylinder openings for a wide range of applications.**

**ROUND RIBBED** - These cylinders are designed with ribs that run the length of the cylinder between each of several rows of round perforations. These ribs provide gentle agitation that upends the material for proper presentation to the perforations. The round perforations are available in sizes from 3/64 inch (1.2mm) in diameter to 12.5/64 inch (5mm) in diameter. Best for separating small particles by width.



**FUNLSIZER®** This patented cylinder is the latest in technological design. The perforations are funnel shaped round holes. The funnel design upends the grain directly into the hole and either allows passage through the hole or rejects the grain and passes it down the cylinder. The funnel style holes are available from 13/64 inch (5.2mm) to 23/64 inch (9.1mm) in diameter. Best for separating large particles by width having 20% more open area than the competition.. The Funlsizer use a specially designed funnel corrugation which tips the product to the opening which is not found in another sizer in the industry..



**SLOTTED CYLINDER** - This cylinder design has rectangular slot perforations with indented grooves with 10-20% more open area than the competition. Slot perforations are available in sizes from 2.5/64 inch (1mm) wide to 36/64 inch (14.3mm) wide. Best for separating particles by thickness with close tolerances. Precision Sizer slotted shells use a specially designed internal corrugation which tips the product to the opening which is not found in another sizer in the industry..

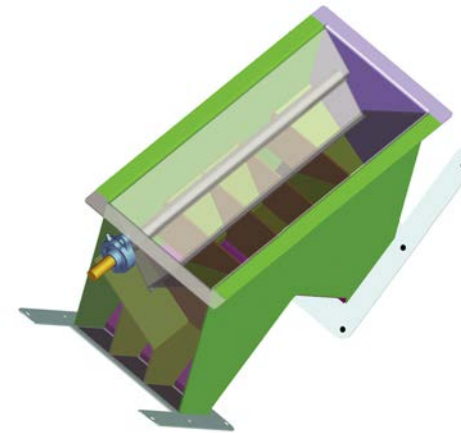


**TRI-BAR** - The Carter Day Tri-Bar slotted cylinder can double the cylinder capacity depending on slot width. The Tri-Bar operates by using a triangular shaped wire, instead of punched slots, producing more open area. Rigid construction maintains opening tolerance longer. Slot widths are available in sizes from 2.5/64 inch (1mm) wide to 36/64 inch (14.3mm) wide. Best for separating particles by thickness with high capacity.



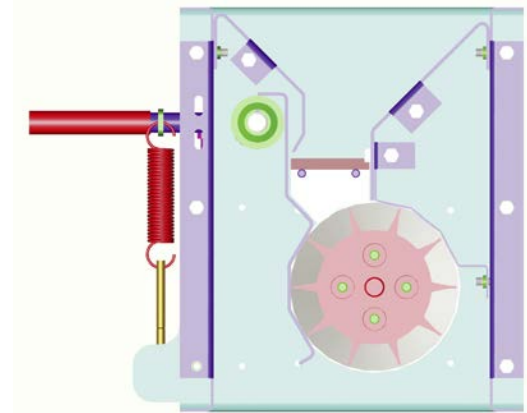
**24" Segment Cylinder** design offers Melonite Hardened Patented Segmented Screen design which provides unique structural integrity and the ease of screen configuration in the field.

## CARTER DAY PRECISION SIZER OPTIONS



**Weighted Gate Feeder** for 12" Modular Precision Sizer. The weighted gate offers a more controlled feed rate when surge hoppers and volumetric feeders are not available.

**Feedroll Feeder** for 12" Modular Precision Sizer. The Feedroll Feeder offers the best controlled feed rate when surge hoppers and volumetric feeders are not available.



**The 12 and 24 High Capacity Vibrating Conveyor** utilizes a spring steel flexure design for reduced maintenance. The new design allows the discharge point to be easily reversed in the field.