

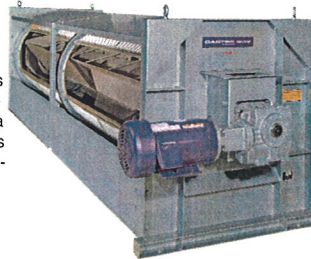
CARTER DAY PHAT BOY UNIFLOW

The Phat Boy Uniflow is our large diameter Uniflow providing high capacity length grading when high efficiency separation are not required.



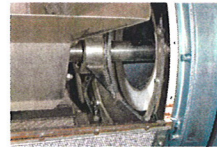
PHAT BOY TAPERED TROUGH AND SCREW AUGER

The patent pending tapered trough allows higher amounts of grain to flow thru the cylinder without the restriction of a tradition trough. This reduces back up to the seal and pinching of product giving you a false length grading. Our screen auger is bolted to the direct drive shaft for ease of replacement.



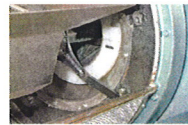
PHAT BOY DIRECT DRIVE DESIGN AND SPIDER CONNECTION

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.



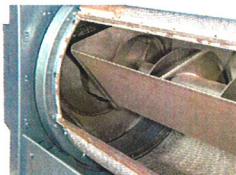
PHAT BOY SEAL CONE INLET ASSEMBLY AND UHMW SEAL

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 DISCHARGE TROUGH ASSEMBLY

The discharge assembly is also our standard Uniflow design. We also include a large window for studying the lifting process inside the machine.



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.

The Phat Boy Uniflow can be stacked 3 high or used in a Pyramid Flow to meet your application needs.

The Phat Boy Uniflow can also allow for Length Grading and Tribar Sizing in one pass such as processing white rice by length grading brokens rice and width sizing thin rice.

The Phat Boy Uniflow can also be used in conjunction with the Carter Day Modular Uniflow to meet your processing needs.

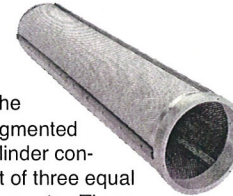
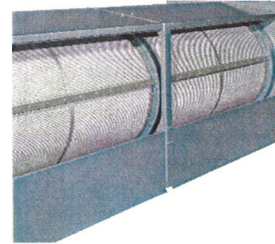
UNIFLOW INDENT CYLINDER DESIGN AND CONSTRUCTION



CARTER DAY cylinders are the most wear resistant and highest number of pockets per square inch in the industry. Our hardening process provides you with the most wear resistant cylinder in almost any application. Along with our superior dies we can provide you with the best length grading cylinder in the industry today.

PHAT BOY CYLINDER CONSTRUCTION

The cylinder is made up of 12 patented segmented cylinders mounting to the end rings and center ring. We use a Trunnion Ring Support System to provide strength and ease of cylinder replacement. There is no discharge spider allowing for unrestricted product flow thru the cylinder discharge. This cylinder design provides a round cylinder that the 4 piece segments just cannot do.



The Segmented Cylinder consist of three equal segments. These segments are joined together by three solid bars which are attached to the ends of the cylinder assembly. The folded edges of the shell segments nest over these bars and are clamped in place with a clamping channel which provides a secure leakproof joint. The segmented cylinder design increases clean-out capabilities and minimizes cylinder removal downtime and maintenance.

Uniflow Model	Wheat	Barley	White Rice	Oats	Seed Corn
Modular 1 High	Splitter 8-9 Mt/hr	Splitter 5.4-6.5 mt/hr	3/4Lift 1.75- 2 mt/hr	Splitter 2.5-5	1.1-2.9 mt/hr
Modular 1 High	Seed 1.5-3.6 Mt/Hr	Seed 1.75-3 mt/hr	1/4Lift .75-1.25 mt/hr	Seed/Wheat .7-2	10% Lift 1.5 mt/hr
Modular 1 High	Oat 5.4 Mt/Hr	Oat 3.5-4.8 mt/hr		Stick 1.8-3 mt/hr	
Modular 3 High	Series 19,13,22 4-9mt	Series 19,13,22 6-8 mt	Ser. 13,11,8.5 - 3 mt/hr	Ser.19,16,13 2.5-4mt	
Modular 3 High	Parralel Splitter 24mt	Parralel Splitter 20mt	Par. #13 5.25-6 mt/hr	Parralel Splitter 15 mt	
No 3 SI	2.7 Seed - 5.4 Oat	1.75 Seed - 3.5 Oat	1/4 Lift .75mt/hr	.7 Seed -1.8 Oats	
Phat Boy 1 high	Splitter 24 mt/hr	Splitter 20 mt/hr	3/4 Lift 6 mt/hr	Splitter 13.75	
Phat Boy 1 high	Seed 10 mt/hr	Seed 8 mt/hr	1/4 Lift 3.5 mt/hr	Seed/Wheat 5.5 mt/hr	
Phat Boy 1 High	Oat 14 mt/hr	Oat 12 mt/hr		Stick 8.25 mt/hr	
Phat Boy Pyramid	Series19,8.5,24mt	Ser.19,8.5,22 20mt	Ser. 13,11,8.5 - 6 mt/hr	Series19,8.5,22mt	

Uniflow Model	Height	Length	Width	Net Weight	Motor
Modular 1 High	38"/965 mm	115"/2921 mm	28"/711 mm	700/318 kg	2 HP
Modular 3 High	91"/2311 mm	115"/2921mm	28"/711 mm	1975 lbs/896 kgs	2 HP
No 3SI	33"/838 mm	115"/2921 mm	27"/686 mm	703 lbs	.75 Hp
Phat Boy 1 High	50"/1270mm	212/5385 mm	46"/1168 mm	5000/2268 mm	7.5 hp

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

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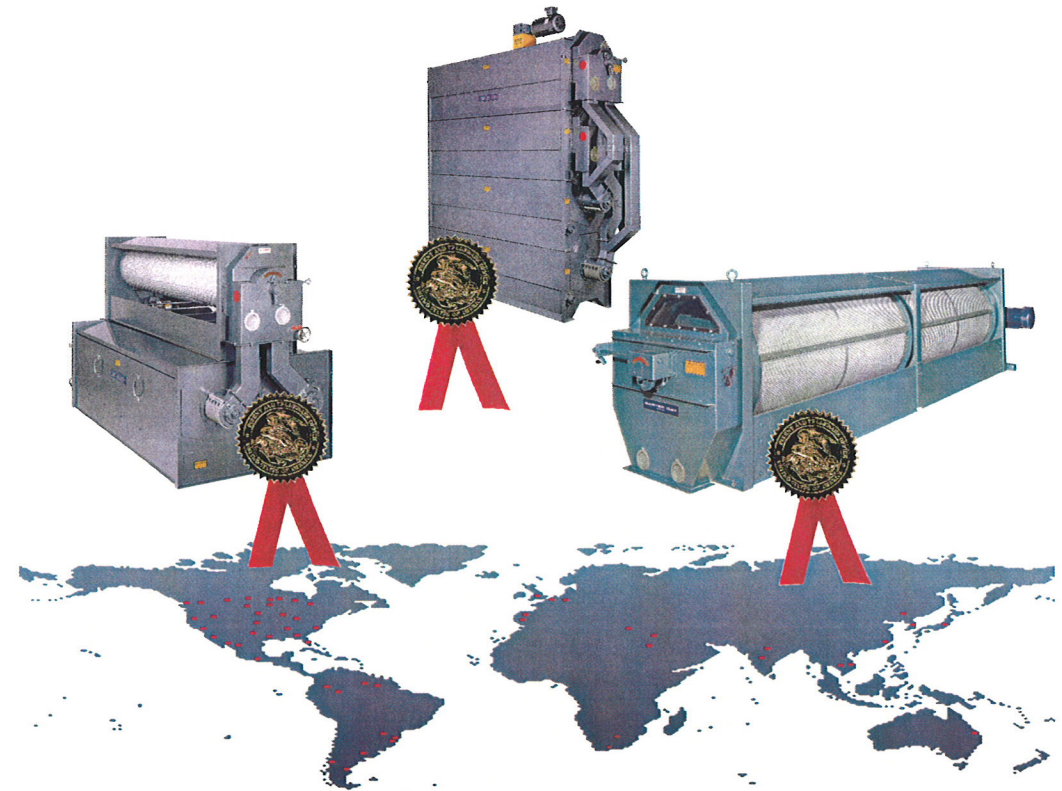
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CARTER DAY Sizing & Separating Equipment



UNIFLOW LENGTH GRADING

MODULAR UNIFLOW 3SI UNIFLOW PHAT BOY UNIFLOW



WORLDWIDE REPRESENTATION

CARTER DAY INTERNATIONAL

CARTER DAY UNIFLOW LENGTH GRADER

For more than 100 years Carter Day has been manufacturing quality processing equipment. We continue this tradition with all of our Uni-Flow Length Separators. Carter Day Uniflows are the original and preferred length graders in agribusiness worldwide. Carter Day offers three different model Uniflows each offering a different advantage for the user.

The UniFlow Length Grader indented cylinder separator relies upon centrifugal force, the shorter material is lifted by indent pockets that line the inside surface of the cylinder. The operator controls the separation by adjusting the position of the separating edge of the trough, into which the product falls. The trough control makes possible a selection of the exact degree of separation desired. The operator also controls the speed of the cylinder which holds the particle in the indent, lifting it out of the mass until the indent is inverted to the point where gravity causes the particle to fall out of the indent. The Patented Tapered Trough arrangement allows for limited restriction of incoming flow and minimal pinching of grain at the point of separation. A screw conveyor then discharges the short lifted material separate from the tailed long material. The amount of product which can be length separated depends on the number of pockets coming in contact with the product and lifting edge. The optional adjustable retarder system found on the Modular Uniflow and No. 3SI may also be used to control the amount of product maintained in the cylinder. The adjustable retarder can be positioned out of the product flow when it is not required.

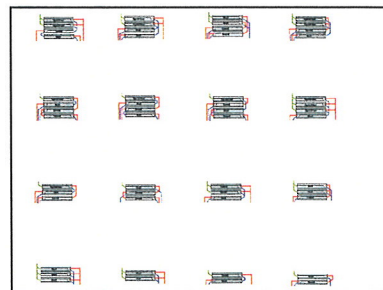


All three Uniflows offer specific advantages to certain length grading applications. The Modular Uniflow is traditionally used for 24 hour high capacity precision length grading application where independent speed control is not required. The No 3SI is used for standard length grading applications where independent cylinder speed control is required. The Phat Boy Uniflow is used for 24 hour Super high capacity non-precision length grading.

The Modular Uniflow and No 3SI (17" diameter cylinder offers more efficiency from a given length (ours 2286 mm or 90") than our larger diameter Phat Boy cylinder. This is because a cylinder's efficiency is related to the number of lifting pockets that pass the edge of the lifting trough in a given period of time. As the cylinder diameter gets larger the speed of the cylinder must be reduced to control the effect of centrifugal acceleration on the product. The Phat Boy Cylinder (36") is traditionally used for higher capacity application where 60 to 80% efficiency in length separation is required or when the length separation is extreme.

The Uniflow Length Graders can be configured in many different flow arrangement in order to provide the highest efficiency and capacity.

To the right are typical flow arrangements in order to allow for certain processing needs.



CARTER DAY MODULAR UNIFLOW

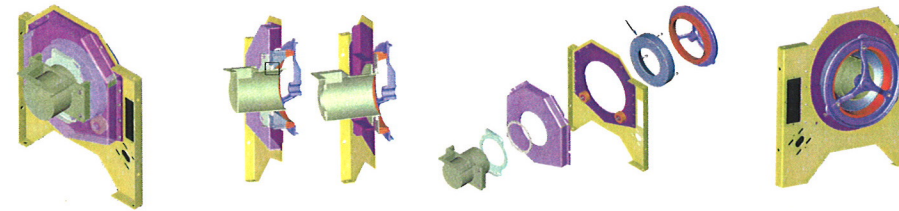
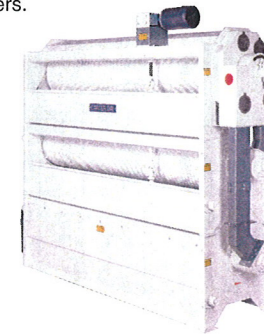
The Modular Uniflow is our standard diameter Uniflow providing high efficiency length separation using a Universal Drive. The Modular Uniflow offers a wide number of cylinder arrangements using our patented drive system. The Modular Uniflow can use both segmented and solid cylinders.

Modular Design allows for greater overall flexibility to meet most application demands. Self contained vertical modules can be broken down for shipment and easily re-assembled on job site. Modular design allows reconfiguration in the field if processing needs change.

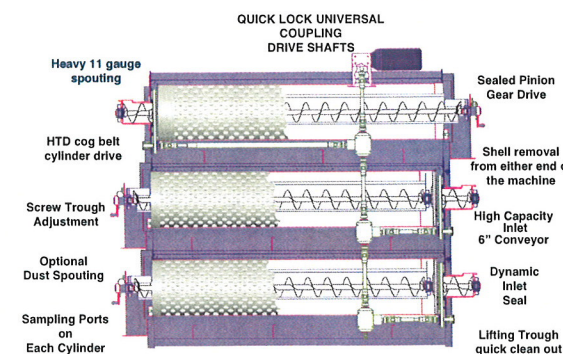
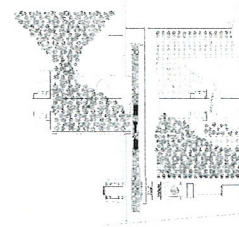
Because of the modular design, each vertical stack of will have identical components and few of those are subject to replacement at overhaul time.

The options of the Modular Uniflow are the seal packages, dust collection and Scalperator mounting kits.

The Modular Uni-Flow provides optional inlet seal packages to meet your needs. The Patent Pending Trunion Inlet with Split or Bushing Seal is just one of the packages. The High Capacity Mached inlet provides a tight seal contact area offering better inlet sealing. The Patented Pending Trunion Inlet Split Seal and Standard Inlet Split Seal is yet another option Allowing seal removal without cylinder removal.



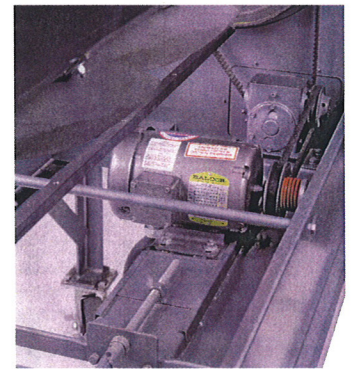
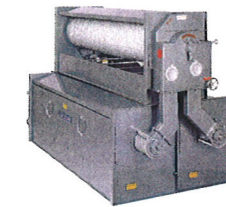
Patent Pending Tapered Trough Assembly Allows increased product flow at the inlet and in the kidney. Reduced lifted product pinching at the lifting edge and length grading errors.



MODULAR UNIFLOW 3 HIGH

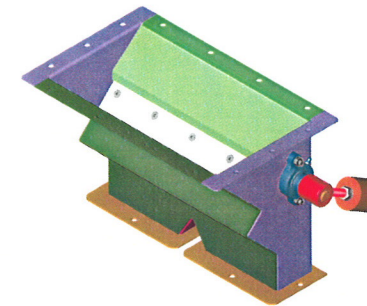
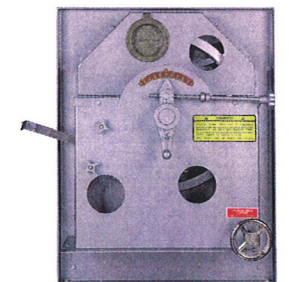
CARTER DAY NO. 3SI UNIFLOW

The No 3SI Uniflow is our standard diameter Uniflow providing high efficiency length separation with manual individual speed adjustments.



The No. 3SI variable speed HTD drive system consist of a spring loaded V belt sheave on the motor. The rotation speed of the cylinder may be changed by the external cylinder speed adjustment wheel which slides the motor base changing the input speed to the worm gear reducer which changes the speed of cylinder.

The optional adjustable retarder system found on the Modular Uniflow and No. 3SI may improve separation results by controlling the amount of product maintained in the cylinder.



The optional Weighted Gate Feeder for the Modular Uniflow and No. 3SI for inlet feed control. The weighted gate offers a more controlled length separation and restricts over filling of the cylinder which may cause inlet leaking.

