



300 gallon tank, standard profile, 32" variable pitch fan, A/R 150 pump.

300 gallon tank, bullet profile, CV hitch, 28" variable pitch fan, Rears centrifugal pump.

Rears Pul-Blast. the fit kit



200 gallon tank, narrow profile, modular tongue, 28" fixed pitch fan, A/R 904 pump.



Boom

Long and skinny, or short and round: select the tank profile for your operation.

p. 7

Suction and discharge strainers keep the plumbing clean— and maintenance simple.

p. 4

The *bu-valve*: a simple, ingenious spray control system.

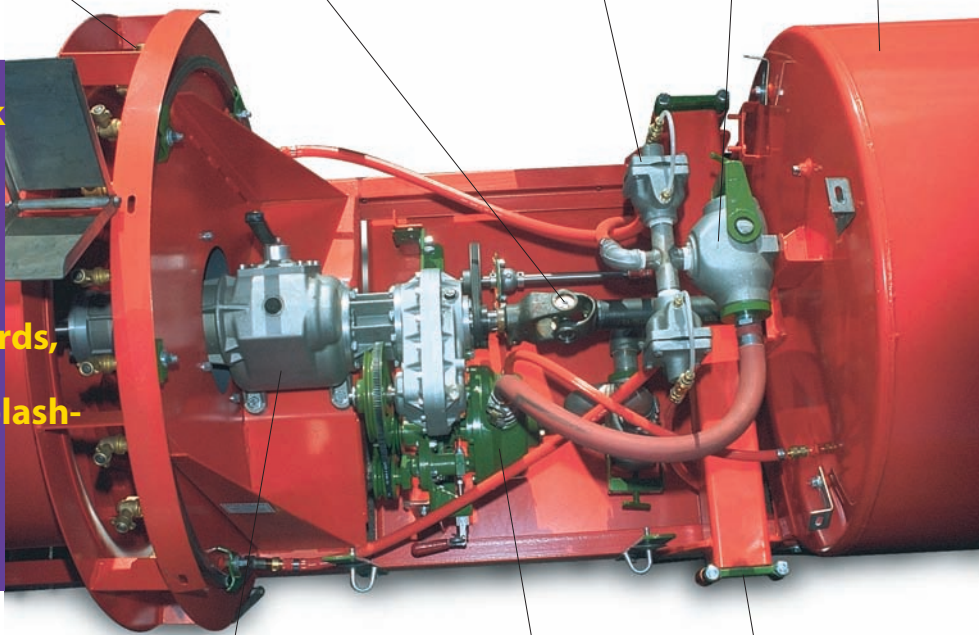
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Thru-tank driveline brings direct power from the hitch to the fan, pump, and mechanical agitation.

p. 6

Rears has a complete selection of Tee-Jet nozzles, screens, tips... call for information.

All Stainless steel construction: tank (100 - 500 gallon capacity), tank fittings and lid/latch, mechanical agitation, pump/gearbox hood, guards, access doors, spray manifolds, air splash-board, air straightening vanes.



Stainless steel is non-porous and rinses clean. It is a superbly functional material for chemical mixers and storage containers— unaffected by extreme temperature changes or ultra-violet light, stainless steel construction remains dependable and strong in use and in storage.

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Five fan diameters. Six or Eight blades. Fixed or variable pitch blades. All fans fitted to the fan housing for optimal performance.

Two speed gearbox with neutral. The thru-tank driveline brings direct drive power to the fan.

p. 7

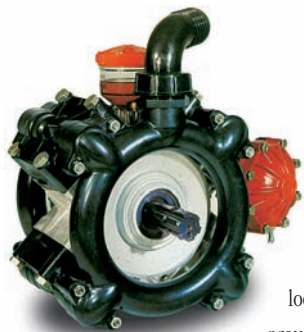
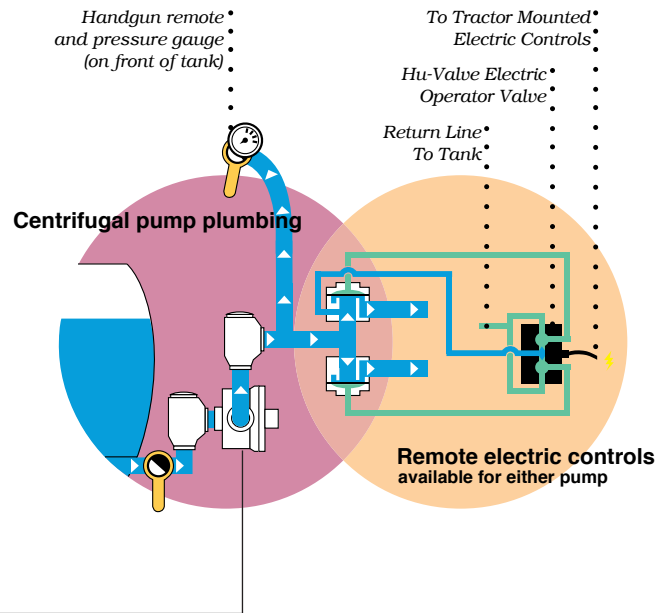
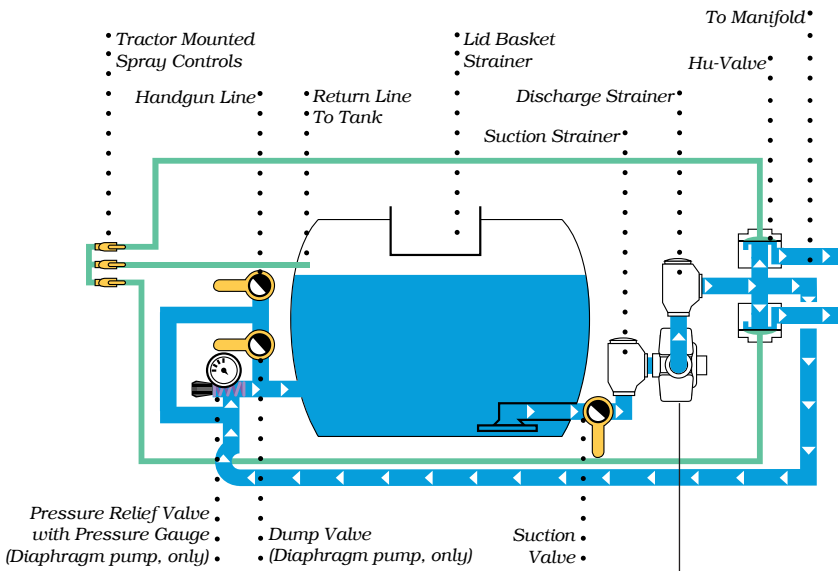
With our selection of tires and axle styles to choose from, Rears has your ground clearance.

p. 4

Self-priming centrifugal pump, pictured, or A/R piston actuated diaphragm pumps (photo as installed, page 4). Choose the model for your job.



a look inside plumbing and choosing a pump.



Rears offers a variety of Annovi Reverberi piston actuated diaphragm pumps. We have been putting A/R pumps on our equipment for fifteen years: all along, looking for a better pump. Today we are still proudly working with A/R. Keeping in step with technological advances, the performance and serviceability of these pumps keeps our customers doing quite well, thank-you-very-much.

Which A/R pump is right for you? That depends on your application. For airblast spraying we have diaphragm pumps that will provide from 700 psi/21 gpm to 250 psi/35 gpm. It may be that for your operation, a centrifugal pump would serve you best (see column, right). Your Rears dealer can help find the right match for you.

Dependability is designed into the A/R diaphragm pump. The oil in the crank-case lubricates all moving parts, eliminating the need to grease the pump. The oil is also cycled through the piston chambers to support the diaphragms: increasing performance and lengthening life. The built in air-dome absorbs the pulsation of the piston strokes.

No mechanical parts come into contact with spray material.

Pictured above: A/R 150 4 diaphragm pump; 250 psi/35 gpm.



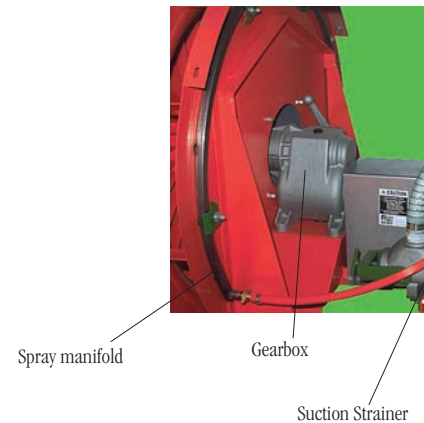
Our centrifugal pump was designed by Rears: all manufacturing, from machining the housing to balancing the impeller, is done by Rears. This is a dependable pump: the shaft with the impeller on it is the only moving part.

Delivering up to 80 gallons per minute (not theoretically, but as installed), our centrifugal pump allows a grower to select an application rate based on the requirements of the crop, not the limitations of the pump. For practical purposes, this volume allows full dilute and concentrate applications with equal efficiency.

The pump functions as an automatic flow metering device. As long as the tractor remains in the same gear, the application rate per acre will be constant— regardless of ground speed changes*. There is no pressure rise in the system when manifolds are shut off; one side or both: outside rows and row ends receive the same application rate per acre as the rest of the crop.

Pictured, above, is our self priming centrifugal pump. With the same performance curve as our standard RPA centrifugal pump, the self priming pump allows for re-priming on hill side applications.

The pump can simply be lifted from the machine for maintenance by removing four bolts. As with all Rears equipment, the Pulblast is designed with the common farm shop in mind: owner maintenance is the norm. Wherever possible we have tried to use commonly available parts in our machines. We list these generic part numbers in our manuals.



*assuming no drive wheel slippage or hydrostatic drive

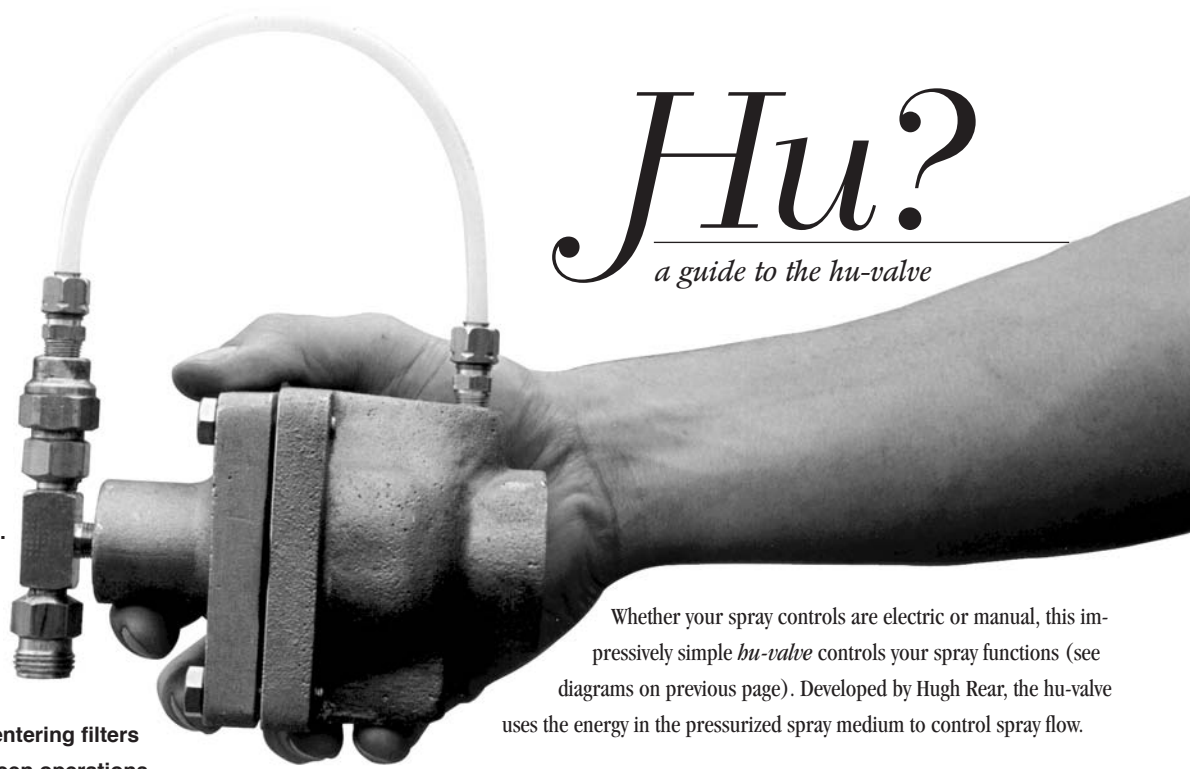
JHu?

a guide to the hu-valve

The plumbing of the Pul-blast was designed for ease of operation and maintenance. All sprayer functions are controlled from the seat of the tractor by a remote handset, either manual or electric.

Quick access suction and discharge strainers are mounted in line to maintain high pump performance and clear nozzles.

The strainers' self-aligning, self centering filters are easily cleaned during or between operations.



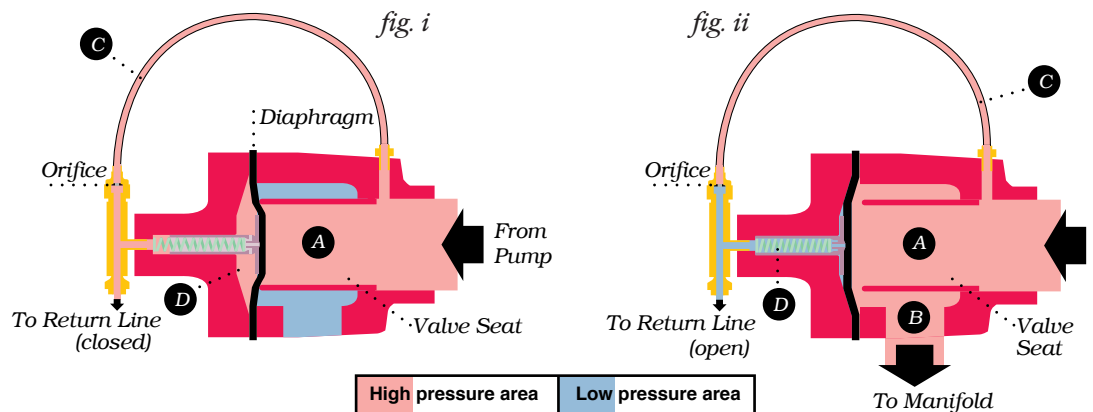
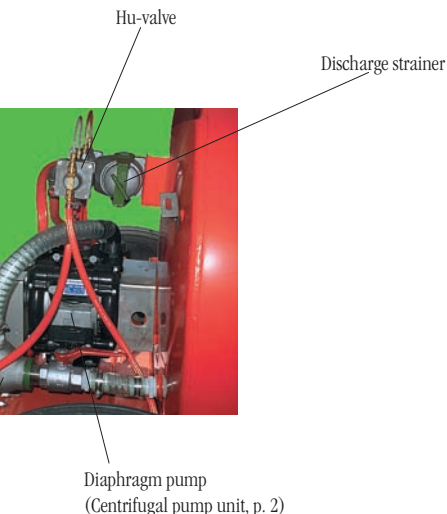
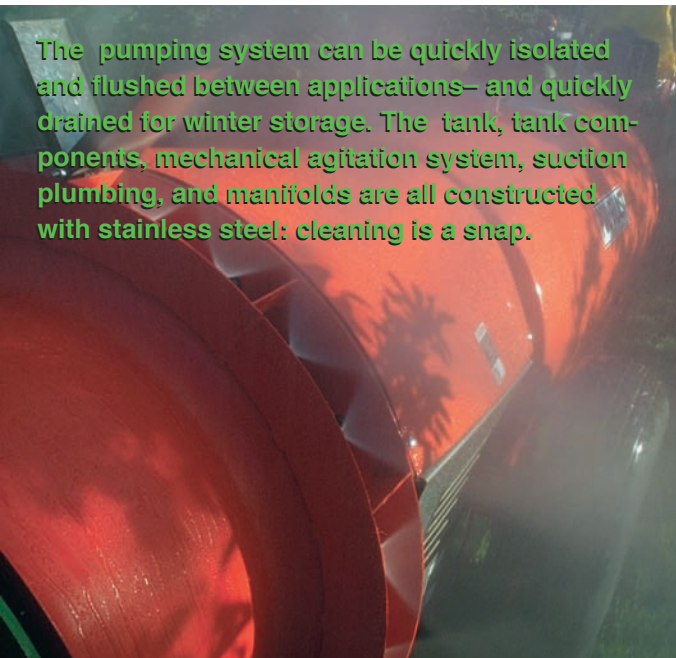
Whether your spray controls are electric or manual, this impressively simple *hu-valve* controls your spray functions (see diagrams on previous page). Developed by Hugh Rear, the hu-valve uses the energy in the pressurized spray medium to control spray flow.

In *fig i*, below, your hu-valve is closed. You have switched the control on your handset to *off*, and what this does, quite simply, is close the return line from the hu-valve to the tank. During operation, whether the valve is open or closed, the pressure in chamber **A** and pilot line **C** remain the same: these are fed a constant pressure from the pump. By opening and closing the hu-valve's return line to the tank, the pressure in chamber **D** is changed, actuating the valve.

When you switch your spray manifold *on* (opening the return line, see *fig ii*), water from the pump flows from chamber **A**, into **C**, and is pushed through an orifice to return to the tank. The water pressure in the return line and in chamber **D** is the same as the tank: *zero*. The pressure on the other side of the orifice— pilot line **C** and chamber **A**, is equal to the pump pressure: 300 psi, for example. This 300 : 0 difference pushes the diaphragm into chamber **D**, allowing water to flow out of the valve seat and through **B** to the manifolds: the valve is open.

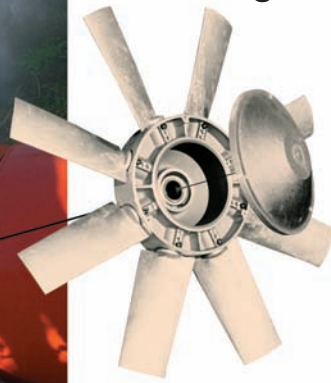
When the spray manifolds are shut off, *fig i*, the return line and chamber **D** fill with water (you'd be amazed at how quickly this happens) and pressure across the orifice is equalized. This effectively cancels any pressure advantage between **A** and **D**. The spring loaded plunger in chamber **D** displaces the diaphragm to cover the valve seat. At this point chamber **D** has a mechanical advantage over **A**: the pressurized surface area of side **D** is approximately *10 times greater* than the pressurized surface area of side **A**. The diaphragm seals the valve seat: the hu-valve is closed. This control system is quick, simple, and ingenious.

The pumping system can be quickly isolated and flushed between applications— and quickly drained for winter storage. The tank, tank components, mechanical agitation system, suction plumbing, and manifolds are all constructed with stainless steel: cleaning is a snap.



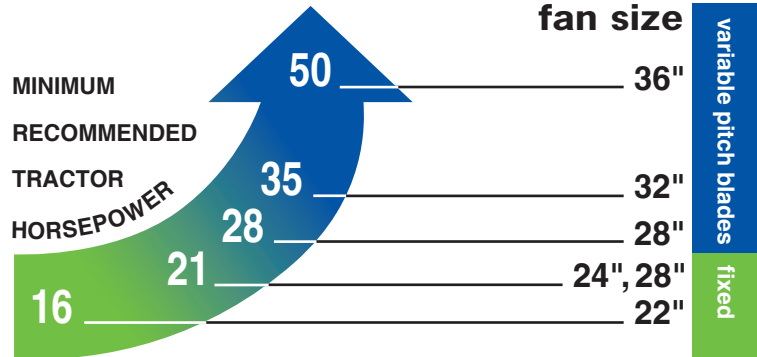


selecting fan size.



The Pul-blast has a selection of aluminum alloy axial flow fans ranging from 22"-36" diameter. Each fan is fitted to its fan housing to produce optimal performance. 22" and 24" diameter fans have six blades with a fixed pitch. 32" and 36" fans have 8 blades, each with a 3-position variable pitch. 28" diameter fans are available with 6 fixed blades or 8 variable pitch blades.

Louvered air straightening vanes are mounted in line with the fan to take the twist out of the air stream and equalize the velocity around the periphery of the air slot.



This chart illustrates a general rule-of-thumb-starting-point for selecting the right fan size for your available tractor horsepower. These horsepower ratings are slightly on the conservative side to better accommodate the wide variety of tractors compared... but this chart does not take into consideration the needs of your crop.

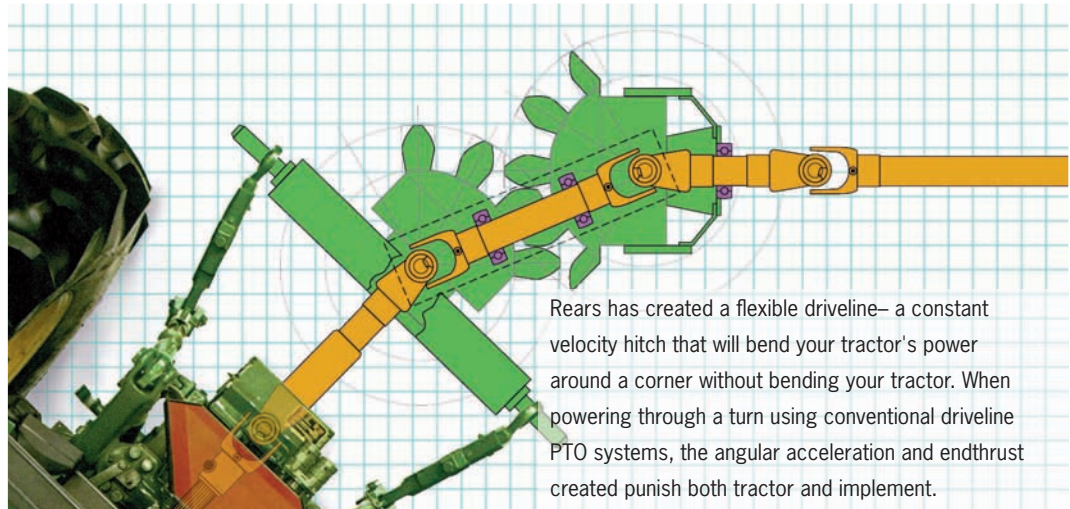
The most important considerations when selecting a fan are application specific.

Rears offers a choice of fan styles to match your crop, ground speed, and planting density.

Your Rears dealer can help with the selection process— to find a match for your operation.



Rears Pul-Blast sprayers attach to your tractor with an adjustable modular tongue— tongue height can be raised or lowered, levelling the sprayer to your tractor's drawbar. Incorporated into the tongue assembly is a bearing block which couples to your tractor's PTO drive shaft. The bearing block absorbs angular force from the tractor driveline, transferring torque back, through the tank, to the pump and fan. The tongue can be removed to install an optional constant velocity hitch (*right*).



Rears has created a flexible driveline— a constant velocity hitch that will bend your tractor's power around a corner without bending your tractor. When powering through a turn using conventional driveline PTO systems, the angular acceleration and endthrust created punish both tractor and implement.

The constant velocity hitch is a vastly more efficient conduit: utilizing two monster u-joints and an equal angle pivot system, the Rears hitch removes angular acceleration and endthrust.

Turns are smoother— PTO systems last longer.

Our constant velocity hitch, by connecting to the lift arms of your tractor, is automatically aligned with your tractor's PTO shaft: swap tractors easily, there is no need to establish a center point for a hitch pin.

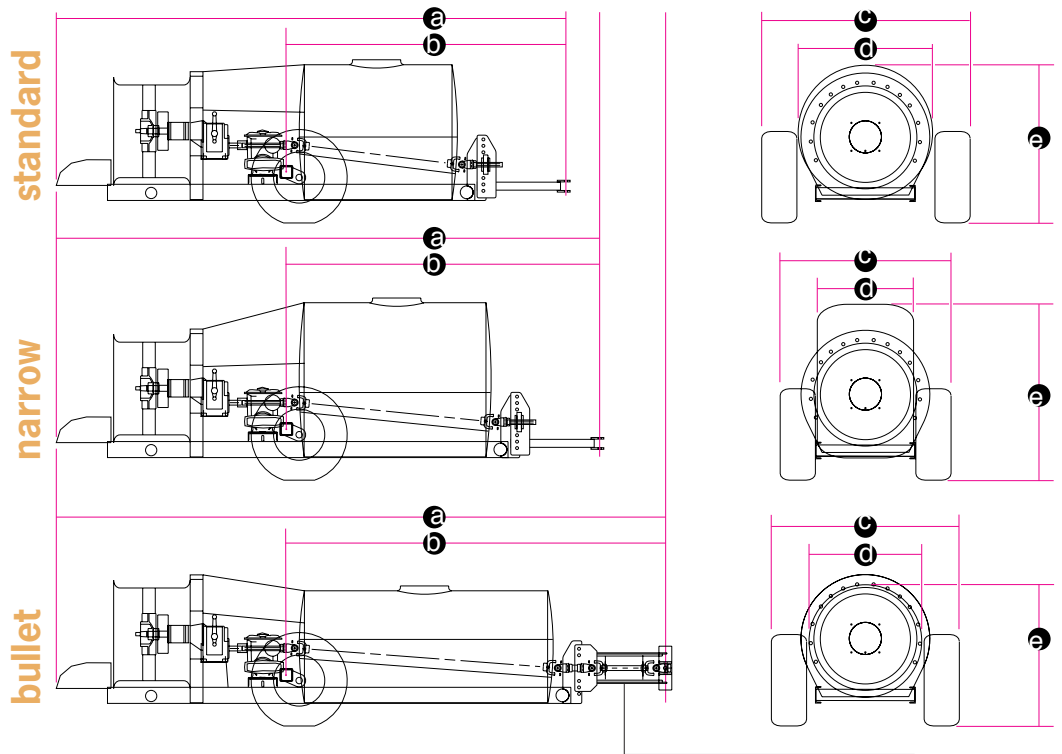
selecting profile.

gal.	unit style	fan size					
		22"	24"	28"	28"*	32"*	36"*
100	Bullet	x	x				
200	Standard	x	x	x	x	x	
	Narrow	x	x	x	x	x	
300	Standard	x	x	x	x	x	
	Bullet	x	x	x	x		
	Narrow	x	x	x	x	x	
400	Standard	x	x	x	x	x	
	Bullet	x	x	x	x	x	
	Narrow	x	x	x	x	x	
500	Standard	x	x	x	x	x	

* 3-position variable pitch fan

Rears offers 46 profiles in the Pul-blast series (count the **x**, above). The profiles illustrated, above right, are of 300 gallon units with 28" fans— these are representative of Pul-Blast profile differences. For a detailed comparison of profiles, refer to the fit chart, right.

Rears has a fit for your plantings.



gal.	unit style	a ³	b ²	c ¹	d	e ¹
100	Standard	126.25"	67.25"	48"	25"	35.5"
	Narrow	170.75"	97.25"	47"	24"	48.5"
300	Standard	159.25"	85.75"	66"	43"	49.5"
	Bullet	189.25"	115.75"	58"	35"	43.5"
400	Standard	175.50"	102"	66"	43"	50.5"
	Bullet	189.25"	115.75"	60"	37"	49.25"
	Narrow	170.50"	97"	60"	37"	56.25"
500	Standard	182.50"	109"	69"	46"	53.5"
	Narrow	Call for information				

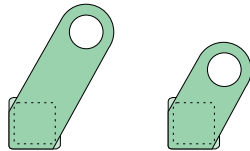
Constant velocity hitches are standard equipment on Bullet style sprayers.

Fan size	Fan housing width
22"	33"
24"	33"
28"	40"
32"	43"
36"	43"

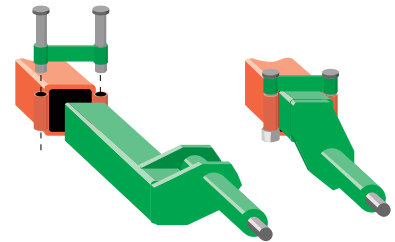
selecting ground clearance.

selecting a hitch.

Change your ground clearance by simply rotating the axle mount tube: rotating the tube is quickly done (loosen the axle clamp as illustrated) and provides the operator with a range of options.



With a number of offset axles to choose from, Rears has your ground clearance in stock.



- ¹ Assumes 11L x 15 tires with standard axle offset
- ² For CV hitch option, add 2.5"
- ³ Assumes 28" fan size and standard hitch for unit style: (22" or 24" fan size on 100 gallon sprayers)
For CV hitch option, add 2.5"
For 24" fan subtract 5"
For 32" fan add zero
For 36" fan add 4"





If you need help with any Rears agricultural product, or have an application question, one of our dealers will be happy to help. We have collected a nationwide network of the most helpful and outgoing agricultural professionals in the business who want nothing but to help you do your job more easily. If you don't have a dealer in your area, call our offices in Oregon.

1. 400 gallon narrow Pul-Blast half stack with 28" fan in blueberries.
2. 500 gallon narrow Pul-Blast half stack with 36" fan in vineyard.
3. 100 gallon standard Pul-Blast with 22" fan and fenders.
4. 500 gallon Powerblast in citrus.
5. 50 gallon *Nifty* utility tank with *Nifty* boom in pasture.
6. *b/w* 50 gallon Pak-Blast with 22" fan in christmas trees.
color 150 gallon Pak-Blast with 28" fan.
7. Field mixing station with triple rinse attachment, fresh water line, batch and fresh tanks.
8. 500 gallon narrow Powerblast short stack with Tree-see[®] tree sensor in apple trellis.
9. Seven foot, standard profile 400 series OMF flail mower/shredder in filbert orchard.
10. 50 foot one sided Airboom on 1000 gallon Powerblast in containerized nursery.
11. Over the row Airboom on 400 gallon narrow Powerblast in blueberries.
12. Eight foot, low profile Pak-Flail shredder with rake teeth in apples.

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