

Drive Train System



Performance. Period.

Setting the Pace



Built to Last

Land characteristics change as farming and irrigation expand. Slopes are more severe, tires get bigger, conditions become more challenging.

At Valley®, we make design changes to stay ahead of trends...and always provide the best products.

That's why the Valley Gearbox is designed and built to work better, work harder. With a stronger, heavier bull gear...pre-loaded worm gear...and our input and output shaft seals that keep oil in, keep problems out.

Exclusive input seal — 7-barrier construction keeps dirt and moisture out and oil in for longer life. Best performance in the industry.

Input bearings — large input bearing for long life

Largest capacity rubber diaphragm — allows expansion and contraction during operation

Worm gear — 25° tooth angle gives higher torque loads and load capabilities. Provides 40% longer life and better reliability in tough conditions.

Largest throat and keyway — for strength in critical load-bearing area.

Exclusive output seal — 7-barrier construction keeps dirt and moisture out and oil in for longer life. Best performance in the industry.





Expansion chamber — cap made of noncorrosive cast aluminum; rubber diaphragm allows oil to expand and contract during operation, minimizing pressure change to minimize water condensation.

Vented to the environment — prevents pressure buildup, prevents seals from leaking.

Threaded endcap — allows accurate bearing preload, to increase bearing life.

52:1 gear ratio — full recessed tooth design keeps oil engaged between gears.

Bull gear — highest load capacity in the industry and longest life. Longer keyway and thicker hub.

Multi-viscosity gearbox oil — exceeds 85w140 GL5 oil for long gear wear under extreme load conditions.

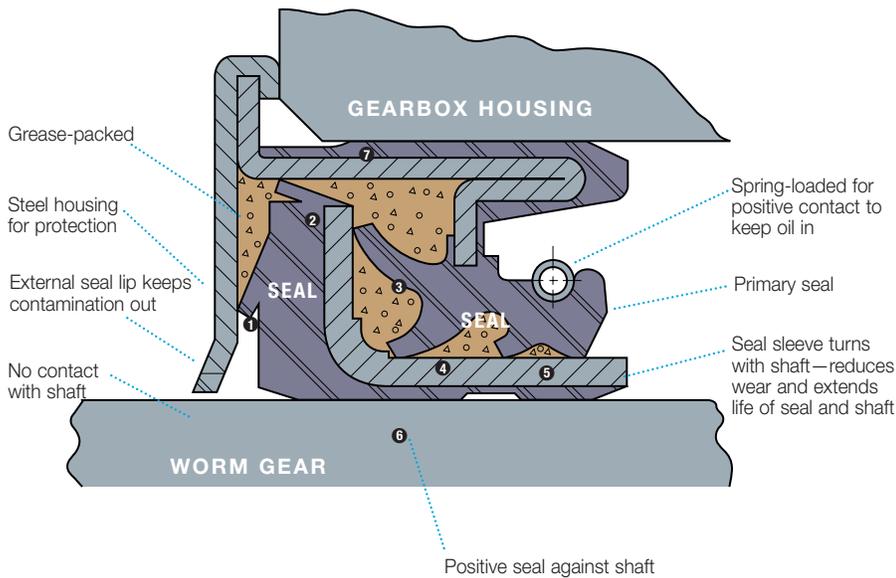
Heaviest gearbox housing — more material in high stress areas. Designed to distribute loads more evenly.

Longest output shaft (steel) — exclusive with Valley Gearboxes! Provides extra clearance between gearbox and tire, reducing mud buildup, which in turn prevents seal damage and extends the life of the gearbox. The shaft, combined with the special offset rim, provides a reduced overhang load . . . another Valley Gearbox exclusive!



Improved Performance

Gearbox Input and Output Seals



Seven barriers keep dirt out & protect against contamination of oil and wrapping of plants, vines, etc., before they can penetrate to the primary seal.

These are the seals designed for Valley Gearbox applications to help assure long life for gearbox components. A Valley exclusive ...these seals are standard on all new Valley equipment...or you can retrofit any existing Valley Gearbox.

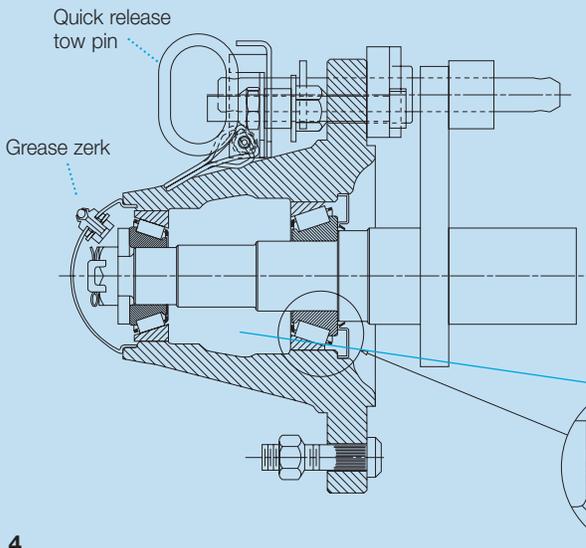
Benefits

- Improves performance
- Retrofits to existing Gearboxes
- Extends seal life; four times the life of competitive seals in independent laboratory tests
- Reduces maintenance cost
- Increases bearing life
- Reduces down time
- Increases profits
- Reduces shaft wear, forms positive seal against the shaft for longer life
- Extends gearbox life thanks to spring-loaded lip that keeps oil in

Towable Gearboxes

Increase the versatility of your Valley® investment—maximize use by towing one machine between fields.

It takes only a few minutes to switch to the towable configuration. Simply remove the drive torque pin and rotate the gearbox 90 degrees. The wheel will now rotate freely on the drive axle.



Valley® Towable Hubs

Inner bearing seal **(A)** resists the grease flow, causing a slight pressure to exist inside the housing – a Valley exclusive.

Any contaminant getting past the outer seal **(B)** is contained between the two seals and then flushed out during the next grease application.

Uncontaminated grease always fills both tapered roller bearings to insure long life.

V-3 Drive



In challenging soil conditions, the V-3 drive unit will add the extra traction required to move through the field. It provides 50% more flotation than a standard drive unit to help get through rough spots and reduce rutting.

Features	Benefits
• Lowest ground pressure available with tires	• Minimize ruts
• Accepts any current tire size	• No 'special' tires to purchase. Use existing supply.
• Special heavy-duty center gearbox	• Durability and reliability
• Heavy-duty basebeam	• Supports drive unit even on ridges and rocks

New Spider Dual Drive



The ultimate solution for those field conditions where nothing else has worked. The exclusive Valley tracked drive provides the maximum flotation and traction available for center pivots.

Features	Benefits
• Lowest ground pressure	Reduces rut depth 30-50%
• Maximum traction	Virtually eliminates getting stuck
• Heavy duty basebeam	Handles ridges and rocks
• Steel tracks	Long trouble free life
• Recapped truck tires	Long trouble free life

Select the best option for your given field situation.

Drive	Tire Size	Traction (Prevent Getting Stuck)	Flotation (Reduce Wheel Rut)	Rough Ground Capabilites
Spider Dual Drive	11R x 24.5 w/Tracks	XXXX	XXX	X
V-3	14.9 x 24	XXX	XX	X
2-Wheels	14.9 x 24	XX	X	XXX
2-Wheels	11.2 x 24	X	X	XXX

ROUGH GROUND: Significant change in slope in less than the length of a base beam

RATINGS: XXXX = best option

Industry Leading Center Drive

At Valley® we believe in the relationship you have with the land. We're dedicated to helping you produce more crops with less water; dedicated to helping you protect the land and our precious water resources.

Discover the superior performance and energy savings that come from our advanced engineering.

Large 1 3/16" motor shaft

Pinion gear — integral with motor shaft

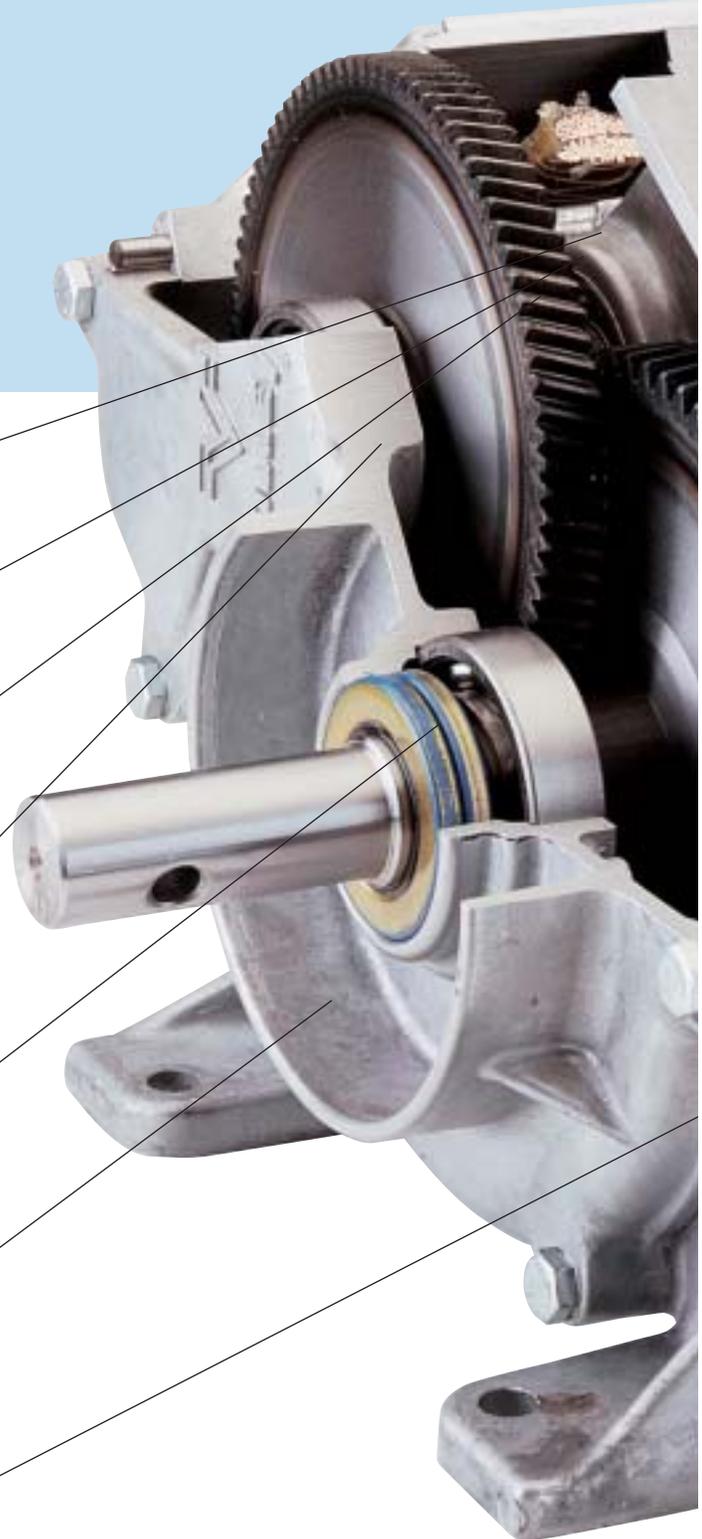
25° tooth angle — provides 40% greater load capacity and wear resistance than other manufacturers' 14° tooth angles

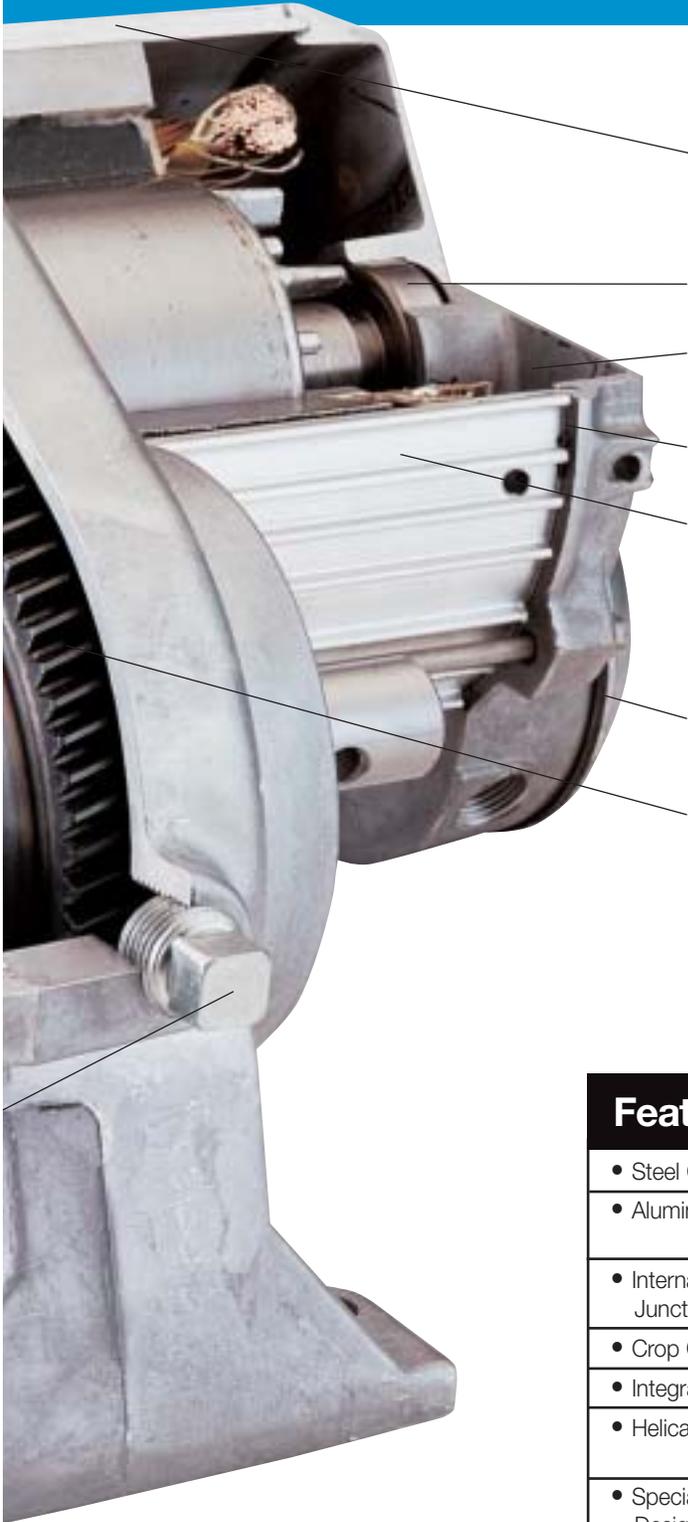
Extra-large intermediate gear bearings — assure longer life

Double output shaft seals

Built-in crop guard over U-joint — prevents crop wrapping in or near oil seals

Drain plug — easily accessible, extra large





Stator — can be replaced independent of rotor, and is held in place with corrosion-resistant, stainless steel bolts for easy maintenance

Extra-large motor bearing

Exclusive coating — applied to internal surfaces to prevent corrosion

Watertight seal — between housing components

Finned aluminum housing — for cool-running efficiency. Operates at temperatures 20° F (11° C) lower than comparable motors with steel housing, because the Valley aluminum housing and fins dissipate heat more effectively. This doubles insulation life and increases motor life.

Exclusive junction box seal and internal vent — keeps motor lead connections dry

Case-hardened steel helical gears — More teeth in mesh at all times for smoother power transmission. Gears require fewer reductions, fewer gears, fewer shafts and bearings. Fewer reductions also mean greater operating efficiency.

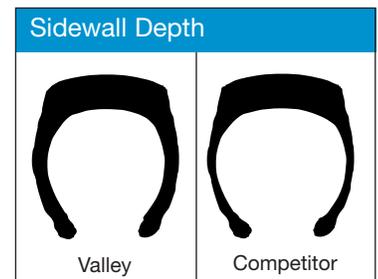
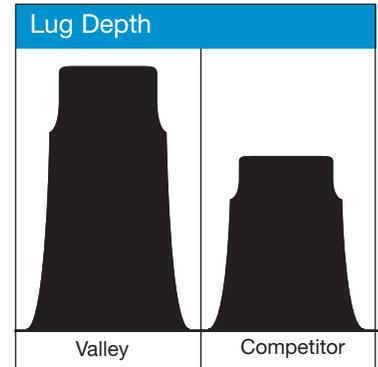
Features	Benefits
• Steel Gears	• Provides more strength than powdered metal
• Aluminum Finned Housing	• Runs 20° cooler for a longer motor life • No paint to chip, scratch and corrode
• Internally Vented Junction Box	• Prevents moisture and contaminants from corroding the wire connections
• Crop Guard	• Protects shaft seals to extend its life
• Integral Pinion Gear	• Eliminates coupler, improves reliability
• Helical Gears	• More tooth contact than spur gears, providing more torque capacity and quieter operation
• Special Motor Windings Designed for High-Torque Applications	• 40% higher operating torque than the competition

The Only Tires Worthy of Being on a Valley®

Any way you measure them, Valley® Irrigation Tires beat the competition's irrigation specials. New or retread, they're everything you'd expect in tires designed and provided by the world's irrigation leader.

NEW TIRES

Features	Benefits
<ul style="list-style-type: none"> • Larger size 	<ul style="list-style-type: none"> • Full-size tractor tire - thicker, longer lugs than the competition's "irrigation specials" - delivers longer-lasting performance
<ul style="list-style-type: none"> • Lug quantity 	<ul style="list-style-type: none"> • More lugs per tire (36 vs. 32 on 11.2 x 24" tire) provide better traction
<ul style="list-style-type: none"> • Lug depth 	<ul style="list-style-type: none"> • Greater bar height (1.375" vs. .875" on 11.2 x 24" tire) increases traction and durability
<ul style="list-style-type: none"> • Lug length 	<ul style="list-style-type: none"> • Longer lugs (7.5" vs. 7.0" on 11.2 x 24" tire) for better traction
<ul style="list-style-type: none"> • Durable sidewall 	<ul style="list-style-type: none"> • Thicker 4 & 6-ply construction lasts longer and resists punctures
<ul style="list-style-type: none"> • Special rims for high-stress applications 	<ul style="list-style-type: none"> • Special reinforcement on 11.2 x 38" rims for extra strength



RETREAD TIRES

Features	Benefits
<ul style="list-style-type: none"> • Steel valve stem 	<ul style="list-style-type: none"> • Stronger than competitors' rubber valve stems, lasts longer
<ul style="list-style-type: none"> • Radial tire 	<ul style="list-style-type: none"> • 30% larger footprint than competitors' bias ply means more even weight distribution and less damage to fields and crops
<ul style="list-style-type: none"> • Thicker sidewall 	<ul style="list-style-type: none"> • 12 & 14-ply construction lasts longer and resists punctures
<ul style="list-style-type: none"> • Mounts tubeless 	<ul style="list-style-type: none"> • Eliminates tube chafing, a leading cause of flats
<ul style="list-style-type: none"> • Hot mold application 	<ul style="list-style-type: none"> • More rubber applied for longer life
<ul style="list-style-type: none"> • Deeper lugs 	<ul style="list-style-type: none"> • Provide better traction and longer wear
<ul style="list-style-type: none"> • Full 2-year warranty 	<ul style="list-style-type: none"> • Peace of mind protection against wear and puncture

The Valley Drive Train is unmatched in performance and design. We work hard to deliver the best quality products in the industry to you. Our new U-joints continue this tradition, including the Ultra Heavy Duty U-joint with a 3/8" steel rod for the most demanding application. Also, the standard Valley U-joint now includes a urethane puck for extended life.



Conserving Resources. Improving Life.

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See your local authorized Valley Dealer:

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