

LOG WASHERS



 **McLanahan**[®]

mclanahan.com



Log Shaft



Wear Collar



Box Construction



V-Belt Drive

Eliminate out of spec products contaminated with clay, silts and other deleterious materials by using the McLanahan Log Washers. Used around the world for washing gravel, cemented aggregates, limestone, phosphate and various ores, McLanahan Log Washers have set the standard by which all others are measured. These high quality, highly durable machines perform well under the toughest clay conditions with minimum power, water and downtime.

Feed material is normally delivered between two to four feet from the feed end of the box and is subjected to an aggressive washing action resulting from the intermeshing paddle design. The paddles perform two functions: they help convey material and are the catalyst for material on material scrubbing. The clean material works uphill, between the shafts, and is discharged out the bottom of the box after a final rinse from the spray bar. Deleterious materials are absorbed into the water and carried over a weir on either side of the box. A rising current system helps lift waste fractions to the top of the water level and over the weir. The length of the washer box is dependent upon the percentage and tenacity of clay or the waste to be removed.

Log Washers can effectively remove up to roughly 15 percent clay and deleterious materials in the feed. In order to maximize the scrubbing action, McLanahan recommends that the minus 1/4" (6mm) fines, which tend to act as a cushion, be screened out prior to the Log Washer.

LOG SHAFTS

The correct log and paddle design, which McLanahan has developed through years of experience, is fundamental to cleaning large tonnages with less power and less water. The McLanahan log shafts are designed to be highly resistant to twisting, bending, misalignment and other damage.

The logs are fabricated from extra-heavy one-piece steel pipe which is flanged at both ends to facilitate maintenance. After the paddle bases are welded, the log shafts are straightened to less than .010" (.25mm) run-out at the bearing locations. This straightening process provides for maximum bearing, shaft and gear reducer life.

A wear collar (standard on all McLanahan Log Washers) is utilized at the feed-end flanged connection to protect the hardware from wearing away during operation.

BOX CONSTRUCTION

Each McLanahan Log Washer is fabricated from large sheets of heavy steel plate to minimize welded seams. The bottom of the washer box is reinforced for additional strength and rigidity. The sides of the box are gusseted and braced and the top is flanged to further strengthen the design and provide maximum stability. This eliminates undue vibration and ensures years of trouble-free service.

DRIVES

All McLanahan Log Washers employ a V-belt driven, single input, dual output gear reducer, which can be uncoupled from the log shafts and frame for maintenance. The reducer utilizes helical gearing that incorporates 50 percent more horsepower capacity than conventional spur gear design reducers. Internal spherical roller bearings have a minimum B10 life exceeding 140,000 hours. Overall, this drive utilizes superior materials to improve the operational performance of McLanahan Log Washers.

**McLANAHAN OFFERS PARTS AND SERVICE
24 HOURS A DAY, EVERY DAY!**

SLOPE ADJUSTMENT

Operating slopes vary from 1-1/2" to 3" (38mm to 76mm) per foot, depending upon the tenacity of waste to be removed. Log Washers should be run at minimum slope to reduce parts wear, power consumption and maximize capacity. Standard slope adjustment uses a trunnion support at the center bottom of the washer box. For more frequent changes in slope, adjustable support brackets can be furnished at each of the four corners where two screw jacks provide for a quick change.

CLEAN-OUT GATES

Available clean-out gates speed up the process of emptying material from the box for maintenance or end-of-season procedures.



Straight Row Paddles



Spiral Row Paddles

STRAIGHT VERSUS SPIRAL

Go straight to profitable production. McLanahan still manufactures Log Washers with both straight and spiral rows of paddles (and has for decades), but believes that shafts with straight rows of paddles are the most beneficial design for producers because more horsepower is transmitted to scrubbing action. Material must work harder to climb up the slope of the box, thereby increasing the washing action. The spiral action of paddles helps convey material too much, cushioning the washing action.

SPRAY BARS

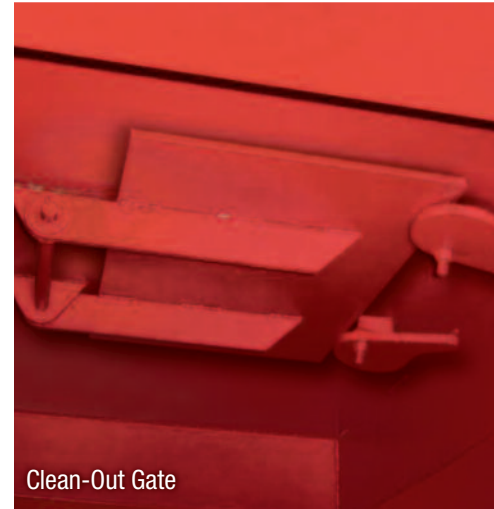
All McLanahan Log Washers come standard with a center spray bar to provide a final rinse before material is discharged from the box. The use of a rinse or wash screen following the Log Washer is recommended to ensure that any residual coatings and/or films are removed.

PADDLES

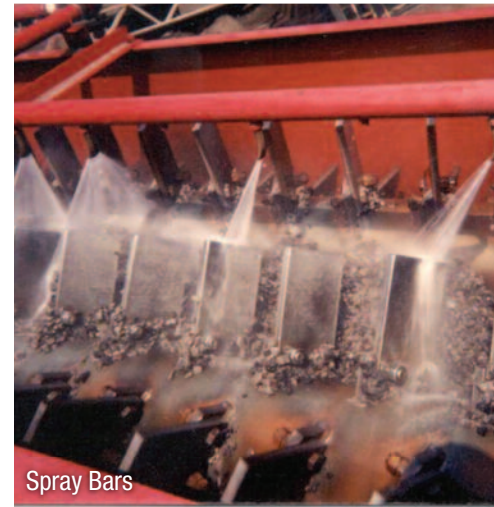
Standard on all McLanahan Log Washers is the McL5X paddle that was designed to optimize the combination of hardness and ductility to maximize abrasion resistance. This specially developed fine grain steel is subjected to a proprietary water quench process that produces a minimum through hardness of 500 Brinell (BHN) while maintaining its tensile strength. McL5X will not break during shipment or crack during installation and the design reduces the coefficient drag during operation. Each McL5X paddle is secured to the paddle base with two bolts, each equipped with two nuts for positive locking.



Slope Adjustment



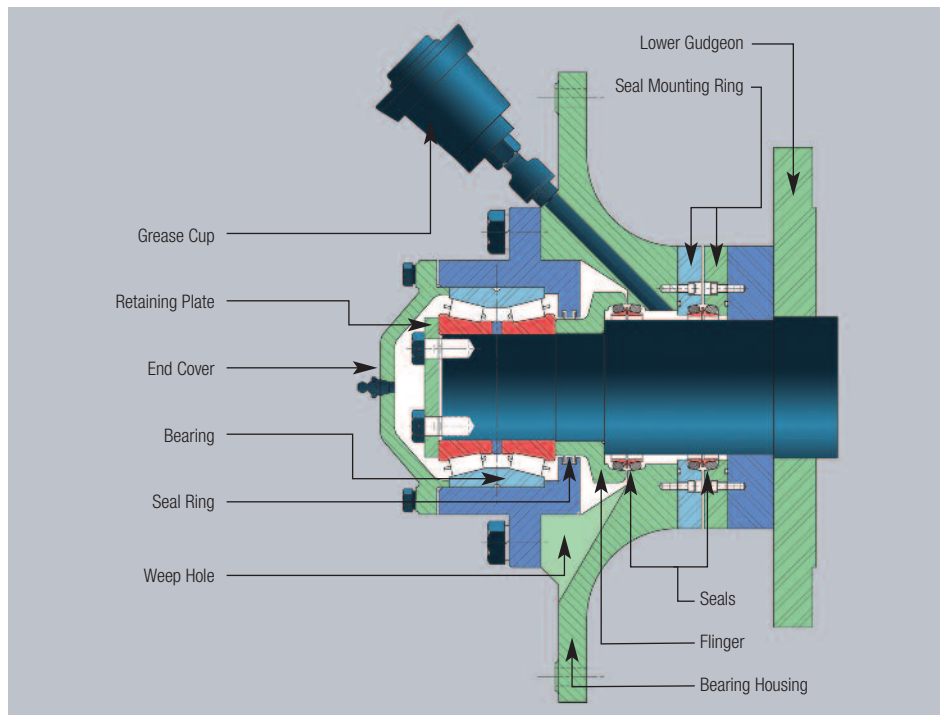
Clean-Out Gate



Spray Bars



Paddles



SUBMERGED BEARINGS

Changing a “boot” every season? Tired of leaky bearings that lead to catastrophic failure? Then use McLanahan Twin-Seal Pak submerged rear bearings, which are standard on all washing equipment. This design incorporates Duo-Cone® seals that keep water and even the smallest particles from reaching the bearing. Pressure in the bearing housing is maintained between the seals to provide constant seal face lubrication and a weep hole eliminates any possibility of seal damage from over greasing. A plunger in the grease cup even lets you know how much grease is in the bearing seal cavity. The roller bearing is mounted outboard, so it can be removed for easy maintenance.

Duo-Cone® is a registered trademark of Caterpillar Inc.

McLANAHAN X-TREME LOG WASHER

Need to process 500 TPH of material in just one machine? Use the McLanahan X-Treme Log Washer that incorporates extra heavy-duty paddle bases, extra motor Horsepower, extra clean out gates and overall lower operating slope. Consult with your McLanahan Regional Sales Manager today to see if the X-Treme Log Washer can be used on your application.

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