

# 310 MULTI-LINK RECIPROCATOR

AUTOMATIC SPRAY SYSTEM  
FOR THE DIE CASTING INDUSTRY

- Consistency
- Quality
- Safety



Reducing Industry's Production Cost



**Full Rest Position**

In full rest position, the manifold and spray arm are completely removed from the die and core pull area, permitting unobstructed access. After cycle start, the machine moves to an approach position allowing for decreased cycle times.



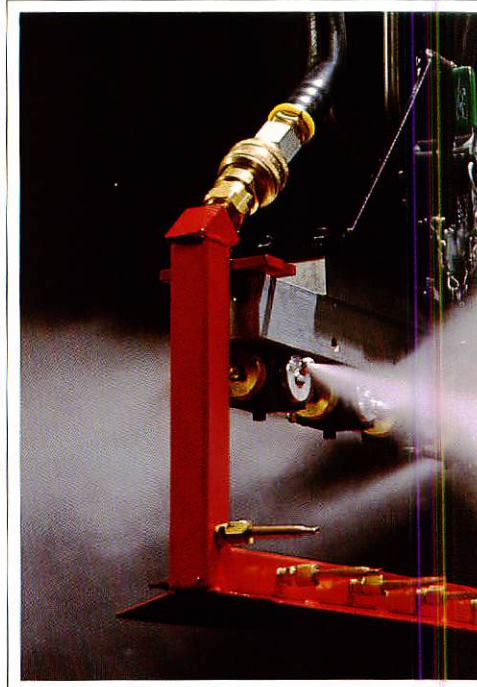
**Spray / Blow Program**

The 310 Reciprocator is designed to place the nozzles between the dies at a proper location for the nozzles to do their work. The 310 is completely programmable from the control panel and requires no on-machine adjustments. Speeds, functions, positions, and timers are easily set and changed by a few keystrokes. Together, with the machine's versatility and Rimrock manifolds, virtually any die can be sprayed automatically.

**Consistency, quality and safety** are the three areas most positively affected by automatic die lubrication. The **Rimrock 310 Multi-Link Reciprocator** offers the die caster a safe and consistent way to spray dies. Spray consistency leads to accuracy and control, which ultimately improves quality and salability of castings.

**Atomization**

The top center photo shows 026 nozzles doing their work from a straight bar, quick-release manifold. Nozzles are the mixing point for the lube and the spray air. It is here that the critical atomization is determined. Finely atomized particles remove more heat and adhere to the die surface better, reducing costly run-off and lube consumption. The Rimrock valve package is designed to provide the response and flow required for proper atomization and enables the nozzles to be purged. Shown in red, is the separate blow off tube for blowing off excess die lube, which may lie in pockets of the die.



**Spray Tips**

The same manifold is shown at the right in a close-up. The spray can be directed to specific locations by the spray tips. A wide variety of tips are available to create spray patterns from flat fans to conicals to pulsating spinners. These tips create successful automatic spraying by pinpointing the spray. The same spray tips used on the 026 nozzles fit on the 025 nozzles, in addition to tips designed especially for the higher volume 025. Consult the Rimrock Production Spray Catalog for specifications.



**Rimrock Common Controls**

The control panel is patterned after Rimrock's microprocessor based control system with a full keypad panel displays and allows changing of automatic cycle mode (Auto Teach), without cycle in nonvolatile memory so power losses or daily operation. The control system, with standard memory aids in troubleshooting set-up time and makes simple programming even using die cast language.

**310 MULTI-LINK**



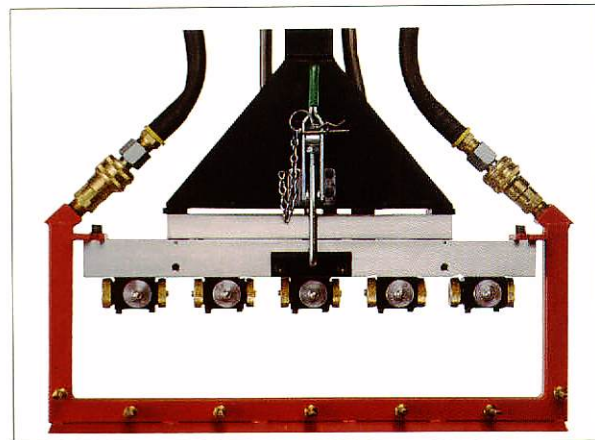
The quick release feature is standard for all Rimrock reciprocators and manifolds. Two quick disconnects and a clamp mean manifold changes in seconds, providing faster set ups and greater access for maintenance.

The standard 18" manifold design with five 026 nozzles lends itself to general die spray by sweeping and dwelling at multiple positions. The 026 is a two outlet nozzle with a metering device for both sides of the nozzle.

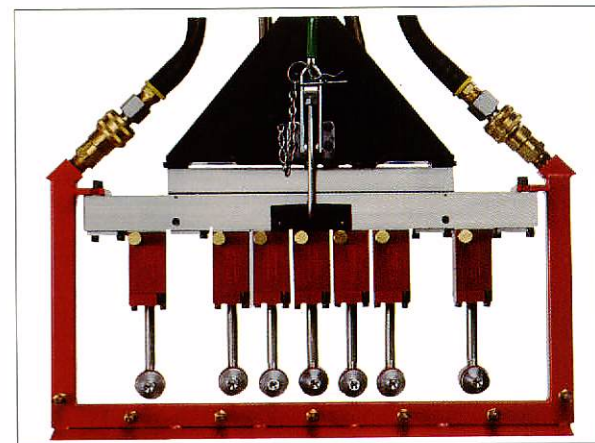
The optional 18" manifold bar with seven 025 nozzles is similar to the standard manifold. The 025 nozzle has a greater range of lube and spray air volume for a higher level of atomization. The manifold has extra mounting positions available to allow for different nozzle placement configurations. Several manifold lengths are available.

Both of these standard straight bar manifolds typically reduce spray cycle times by 15% as compared to hand spray.

Optional custom manifolds are designed to spray in a singular dwell location, using the 025 or 026 nozzles. Rimrock can design a manifold to spray dies faster and with less lube, this promotes longer die life and gives quicker start up times. A custom manifold is kept and maintained with the die.

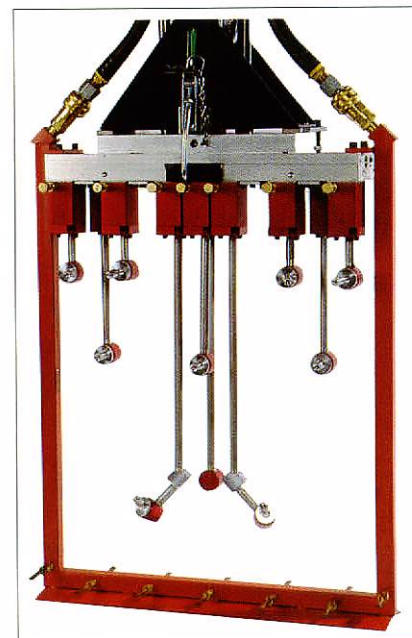


**Standard 18" Manifold / 026 Nozzles**



**Optional 18" Manifold / 025 Nozzles**

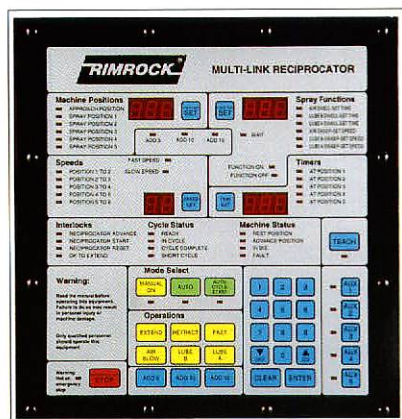
Custom manifolds can reduce spray cycle times by an additional 15% compared with straight manifolds. A 30% decrease in time is not uncommon when compared to hand spray cycles.



**Optional Custom Designed Manifold with 025 Nozzles**



multi-link products. It uses a highly reliable programmable keypad entry system. The numerical settings and positions while in the interruption. The current program is stored shut-downs do not necessitate reprogramming. s, allows for smooth high speed machine shooting, which reduces downtime, decreases in simpler. All parameters are easily taught

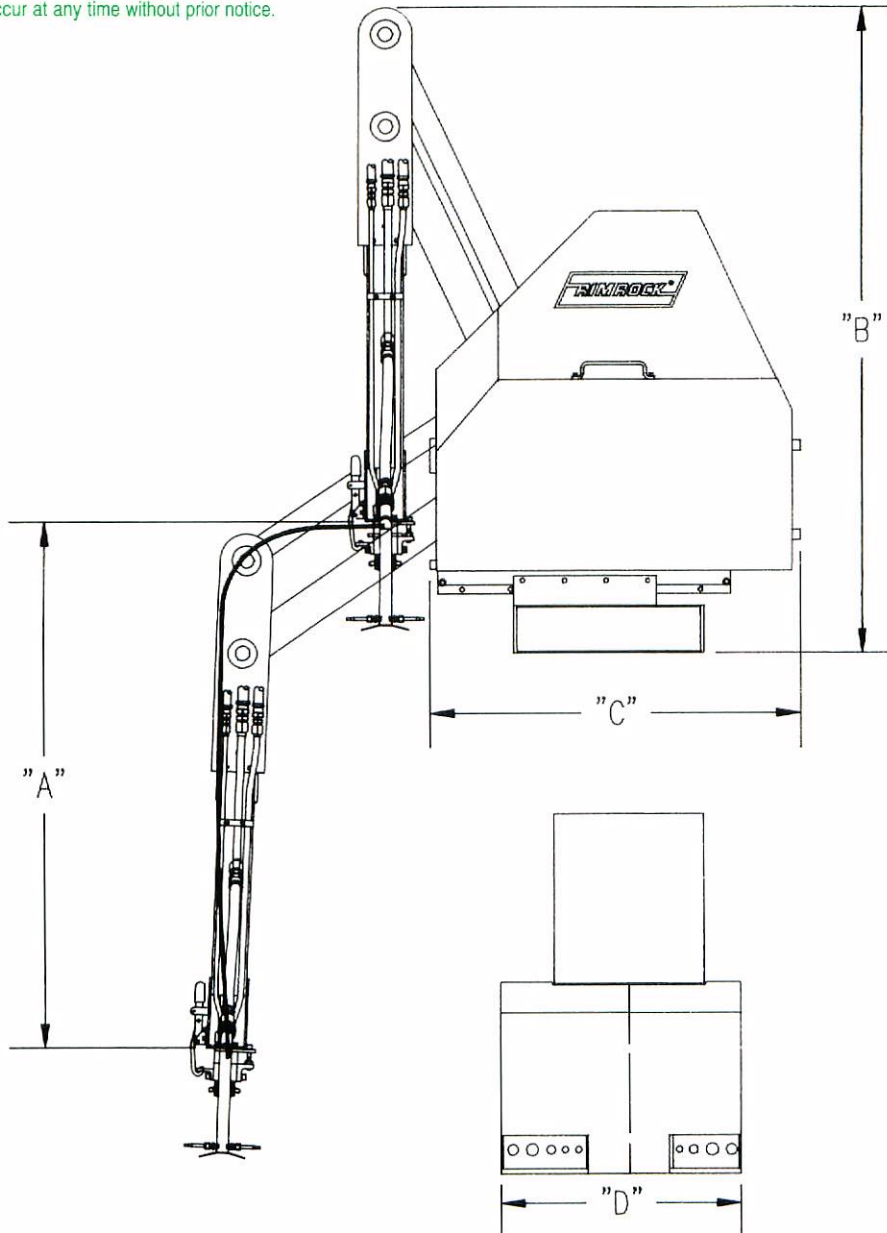


# RECIPROCATOR

Stroke "A"	"B"	"C"	"D"	"E"
47	54	30	20	10.5
60	70	30	20	10.5
80	96	32	23	13.5

Dimensions in inches  
Die height adjustments are shown in "E"

Changes and amendments to our products and specifications may occur at any time without prior notice.



Back view of Reciprocator shown.

## What Rimrock's 310 Multi-Link Reciprocator can do for die casters.

### Increase safety:

- Removes operator from between the dies

### Reduce set up time with:

- Memory areas for program storage
- Quick change manifolds
- Auto teach
- Powered horizontal base drive

### Reduce cycle time with:

- Advance position
- Short cycle
- Multiple nozzle manifolds

### Spray complicated dies consistently:

- Custom manifolds
- Wait function
- 025 and 026 nozzles
- Two lube option
- Separate air blow off
- Spray tips
- Separate pilot air circuit
- 20 positions

### Ease of maintenance and operation:

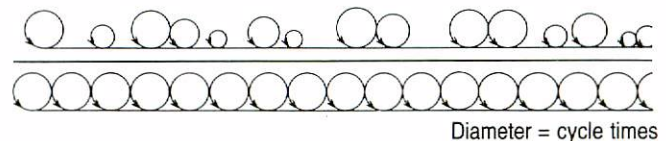
- Keypad entry system
- User friendly
- Message center diagnostics
- Interlock status display
- Common controls
- Permanent lubrication
- Purging

### Sells castings:

- More consistency
- Better quality
- Lower scrap

Inconsistent castings produced without the use of automation equipment.

Use automation equipment and your castings will be the same every time.



# 310 MULTI-LINK RECIPROCATOR