

## Air-Hydraulic Power Feed Units, Series J2 & A2

The Holomatic air-hydraulic system uses a double acting Air Cylinder to develop the stroke thrust, and a self-contained closed hydraulic system to control the rate of feed.

At the start of the cycle, the Directional Control Solenoid (4-Way Air Valve) is energized and directs compressed air to the rear of the Air Cylinder Piston. This causes the Air Piston and Spindle to advance forward. This forward action also advances the Hydraulic Piston which has fluid on both sides. The fluid from the front of the Hydraulic Piston flows through the Rapid Travel Feed Control Valves.

Cams "A" and "R"\*, furnished with units with retract stroke control, move with the Spindle and control the amount of rapid advance and rapid retract distance by opening and

closing the spring loaded Rapid Travel Valves. When the spring loaded Rapid Travel Valves are off the Cams and in a closed position, the fluid is directed through the adjustable Compensating Feed Valves. The amount of flow through the Feed Valves determines the rate of Spindle feed. Opening the Feed Valves increases the amount of flow and rate of Spindle feed. Adjusting the Feed Valves by turning them in the opposite direction will reduce the flow rate and the feed rates.

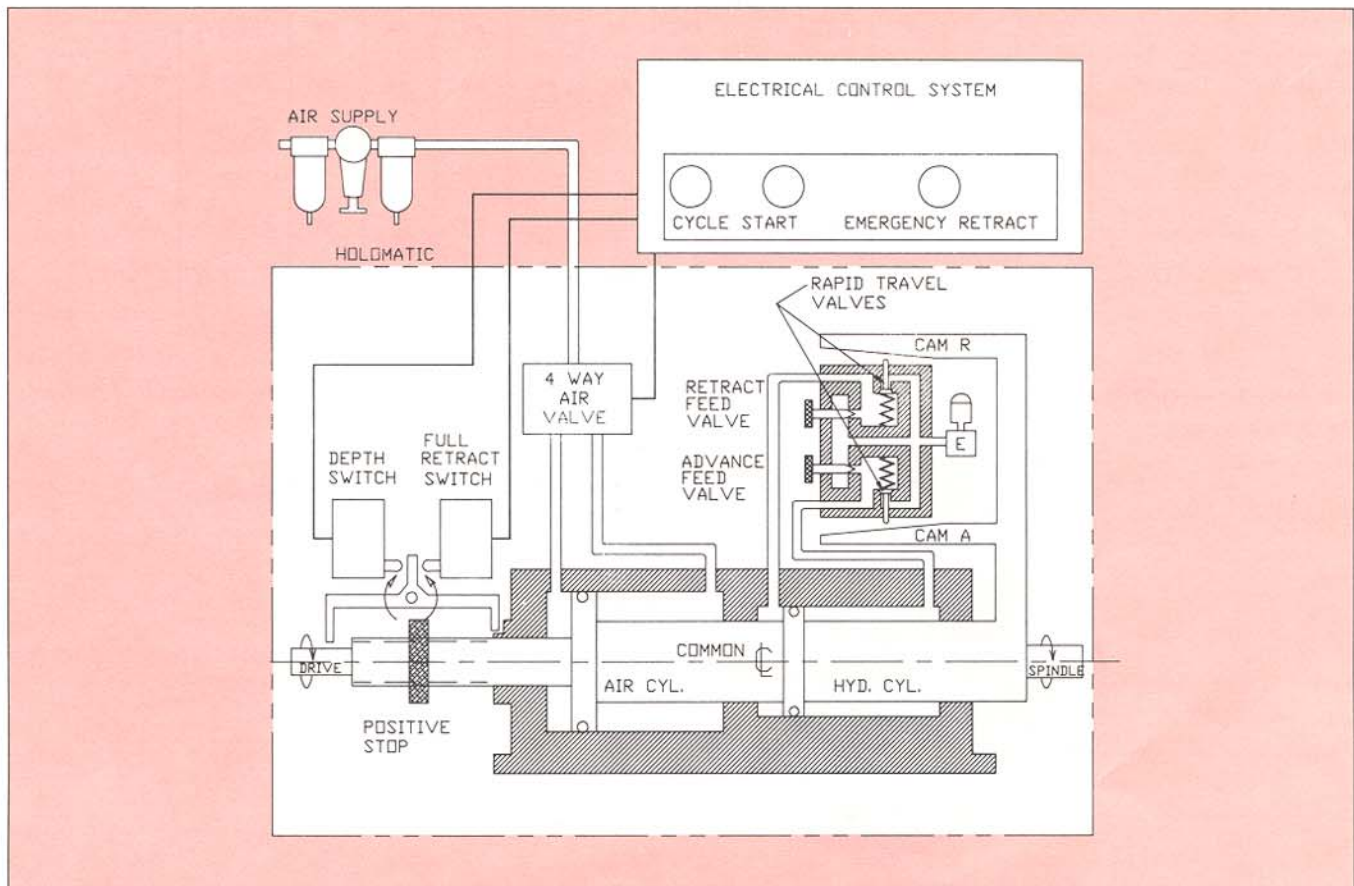
The Spindle continues forward, moving the Cam Bars with it until the Positive Stop actuates the Depth Switch. This signals the 4-Way Directional Control Valve to shift and reverse the air flow to the front of the Air Piston, to retract the Spindle. As the Spindle retracts, the hydraulic

fluid flow is reversed. The Spindle continues to retract until the Positive Stop actuates the Full Retract Limit Switch.

Cam "R" can be adjusted to provide retract feed for back feed applications. It can also be used to provide rapid travel before retract feed, when an optional Cam Bar is used. The Cam Bar allows the Spindle to operate from an extended position. Also, a Retract Midpoint Switch can be furnished for interlock use.

The Positive Stop can be adjusted to provide a precision forward stroke limit. Other standard features furnished on the Holomatic Air Hydraulic Power Feed Units include an Automatic Fluid Filler Valve and Reservoir to maintain the hydraulic supply, and a telescoping Spline to transfer the rotational power to the Spindle.

\* Cam "R" and retract feed valve furnished standard on some models.



## Air-Hydraulic Systems

Capacity	Controls											Tooling		
	Stroke	Retract Feed or Extended Stroke Control	Tapping or Threading Capability	Thrust LBS./80 PSI Air*	Deep Hole	Motor Reverse	Dual Feed	Threading Head	Boring Spindle	Spindle Support	Quill Support	Model	Series	New Models
3/8" Drill 7/16"-14 Tap or Thread	2"	x	x	440		xx	xx		xx	xx	xx	2292	J	
	2"			440			xx		xx	xx	xx	2293	J	
	2"	x		440	x	xx				xx		2294	J	
3/4" Drill 1"-14 Tap or Thread	4"	x	x	680		xx	xx		xx	xx	xx	2496	A	
	4"			680			xx	xx	xx	xx	xx	2497	A	
	4"	x		680	x	xx						2498	A	
	6"	x	x	680		xx	xx		xx	xx	xx	2686	A	
	6"			680			xx	xx	xx	xx	xx	2697	A	
	6"	x		680	x	xx						2698	J	
	10"	x	x	680		xx	xx		xx	xx	xx	2196	A	
	10"			680			xx	xx	xx	xx	xx	2197	A	
	10"	x		680	x	xx					2198	A		

x - Furnished on Unit Shown  
xx - Optional Item

\*Unit thrust shown are to their theoretical stall points. For efficient operation, thrust requirements in either direction should not exceed 2/3's of values shown.



Model 2293 Shown

### Standard Features on All Models

- Electric Depth Control
- Rapid Advance
- Advance Feed Control
- Switch Box