

“BROWN” AUTOMATIC INJECTORS

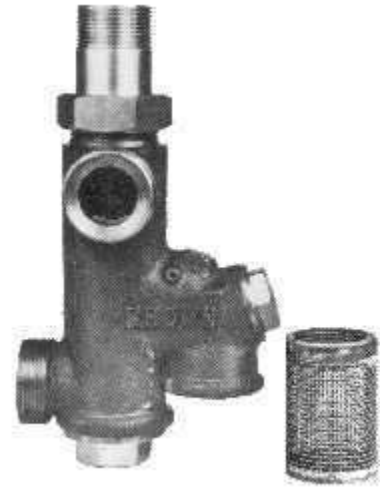
USES:

Primary Boiler Feed Pump, to pump feed water supply.

Emergency Stand by Pump, acting as a reliable back up where a mechanical feed water pump is already fitted to the boiler.

Preheating ‘Make-up’ water, where the water supply pressure exceeds the boiler steam pressure.

Injection of Feed Water Treatment Compounds, in suitable diluted mixtures.



SIZES:

1/2" to 1 1/2" (15 – 20mm)

CONSTRUCTION:

Bronze and Brass.

Capacities								
Size	Horsepower Based on Ordinary Tub Boiler	Horsepower Based on 30 lb. Water Per HP per Hour	Pipe Connection		Capacity Per Hour 60 – 110 lb. Steam Pressure. 1' – 3' Lift			
			B.S.P	mm	Maximum		Minimum	
					Gallons	Litres	Gallons	Litres
A	8 to 16	10 to 20	1/2"	15	135	614	70	318

AA	12 to 22	15 to 30	1/2"	15	180	819	100	455
B	17 to 32	22 to 45	3/4"	20	260	1183	140	637
BB	20 to 45	25 to 60	3/4"	20	360	1638	180	819
C	40 to 65	45 to 80	1"	25	475	2161	250	1137
CC	45 to 80	50 to 100	1"	25	600	2730	325	1478
D	50 to 100	60 to 135	1 1/4"	32	800	3640	425	1933
DD	75 to 135	85 to 165	1 1/4"	32	1000	4450	525	2388
E	100 to 180	125 to 235	1 1/2"	40	1400	6370	740	3367

“BROWN” INJECTORS

“Brown” Automatic and Auto-positive injectors are designed and built to give the purchaser a dependable and lasting service. Each individual Injector must pass an actual boiler test before leaving our factory, and is guaranteed faultless; but must be used as we recommend.

If it should be found that a newly fitted Injector is not functioning properly, it is almost certain that the trouble can be traced to the connections. The Injector derives its power through the steam pipe, and its capacity comes through the suction pipe. The suction pipe must deliver sufficient cold water to condense the steam so that they may combine and pass through the small delivery jet. Too much water will allow the Injector to work well at high pressures but stifles its performance at low pressures. Too little, or too hot water may give good results at low pressure, but fail to condense all the steam at high pressures. An

indication of shortage of steam or water is often revealed by continued overflow of hot water.

THE SIZE INJECTOR REQUIRED

This will depend upon the rate at which the boiler is called upon to evaporate water. The catalogue capacities are based upon 7 1/2 to 8 gallons of water per horsepower per hour, which is equivalent to 60 to 65 pounds per hour. Since the boiler H.P. is defined as the evaporation of 30 to 34 pounds of water per hour, the above allowance is ample for all ordinary conditions. In any event, the Injector should deliver at least 30% more water than is ever being evaporated, so as to provide a reserve capacity. The injector capacity can always be reduced nearly 50% by throttling the water supply line.

POSSIBLE CAUSES OF STOPPAGE

1. Leak in suction pipe or around steam or water supply.
2. Sediment in the pipes.
3. Using a stock model Injector at low steam pressure for pressure water supply without substituting a special steam jet.
4. Failure to regulate water supply properly at low steam pressures.
5. Using an Injector unsuited to the conditions.
6. Water supply choked (loose hose lining, strainer fouled, foot valve stuck).
7. Discharge line choked (Pipes lined up).
8. Steam line not bringing in enough power.
9. Water supply too hot.
10. Injector overheated from leaky steam valve or discharge line checked.