

Constant Flow Steam Injection Liquid Heating System

Superior to Venturi and Static Mixer Designs

Applications

- Reactor Vessels
- CIP
- Sterilization
- Centrifuge or Filter Backflush
- Jacketed Kettles
- Tempered Water
- Retorts
- Extruders
- Pasteurizers
- Tank Filling
- Slurries
- Green Liquor Heating
- Felt Washing
- Boiler Feed Water
- Condensate Mixing

Benefits

- Eliminates harmful vibration and steam hammer
- Widest operating range of any steam injection heater
- Smooth, quiet operation within acceptable dBA limits
- Precise, accurate temperature control
- Complete absorption of steam into liquid at point of contact - not dependent on high velocity mixing in downstream piping
- Low liquid pressure drop
- 100% heat transfer - cuts fuel costs as much as 30% compared with indirect heat exchangers

Features

- 10 sizes - steam capacity ratings from 700 to 50,000 lbs/hr
- Available in 316 stainless steel, carbon steel, cast iron or special alloys on request
- Complete instrumentation available
- Over 65 years of experience in design, installation and service of steam injection heating systems



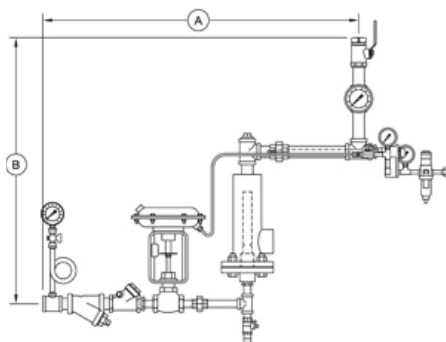
Specifications - 10 Standard Sizes

Model No.		6X7-3	6X10-3	6X25-3	6X50-3	6X75-3	6X100-3	6X150-3	6X200-3	6X350-3	6X500-3
Steam Capacity	Lb/hr	700	1,250	2,500	5,000	7,500	10,000	15,000	20,000	35,000	50,000
	Kg/hr	320	565	1,130	2,260	3,390	4,520	6,780	9,040	15,820	22,600
Liquid Pipe Size Range (inches). See selection chart below	Threaded	½ - 1 ½	1 - 2	1 ¼ - 2 ½	1 ½ - 3	2 - 4	2 ½ - 4	3	--	--	--
	Flanged	¾ - 2	1 - 3	1 ½ - 4	2 - 4	2 - 6	2 ½ - 6	3 - 8	4 - 10	4 - 10	6 - 12
Approximate Dimensions (inches)	A	44	48	54	60	66	74	80	110	120	130
	B	32	38	44	50	65	68	82	94	105	122
Shipping Weight (lbs)		275	300	350	440	600	825	950	1,800	2,400	3,000

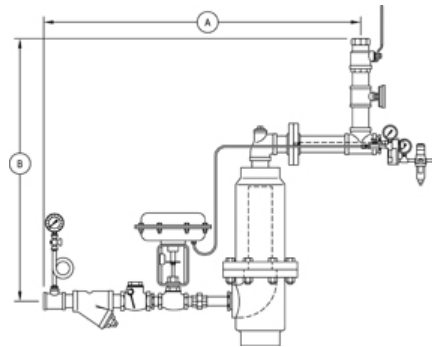
Liquid Pipe Selection Chart – Choose best pipe size based on water flow rate in GPM

Pipe Size	1	1-1/4	1-1/2	2	2-1/2	3	4	6	8	10
Max. GPM	15	30	45	90	140	230	500	1000	1800	3000

Dimensions are approximate. Heaters are available with cast iron, carbon steel, or 316SS materials of construction.



6X7-3 ONLY



6X10-3 Thru 6X500-3

Sizing the Constant Flow Heater

Steam demand (lb/hr) = 0.43 x flow(GPM) x Δ T (°F)

or

Steam demand (kg/hr) = 0.092 x flow(LPM) x Δ T (°C)

Example: 200 GPM x 50°F temperature rise x 0.43 = 4,300 lb/hr of steam. You would require a 6X50-3 which has a maximum rated steam capacity of 5,000 lb/hr, and a maximum water flow rate of 230 GPM with threaded connections (500 GPM with welded flanged connections).

- Use wherever a constant flow of hot water or liquid is needed -
- Handles liquid flow rates up to 5,500 gpm -
- Handles steam flow rates from 700 to 50,000 lbs/hr -
- Ideal for heating liquids above normal boiling point -



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