

## STEAM INJECTORS SI 20

### DESCRIPTION

The SI20 series steam injectors from ADCA are injection condensers. They ensure low noise and vibration and rapid heating of still or flowing fluids in basins and vessels due to direct steam injection.

Steam enters through the inlet housing, passes along the centre of the heater, through holes in the inner rings, through spaces between the element plates where it condensates under light load and partly condensates under heavy load to be discharged through the serrated periphery of the element plates. Under heavy load if any steam pass through the periphery of the element plates, will do so in very small jets and will condensate in the surrounding liquid with very little noise and vibration.

Connections are female screwed.



### MAIN FEATURES

Quiet operation.  
Corrosion-resistant.  
No moving parts.

**OPTIONS:** Complete system including vacuum breaker and self operated controller.  
Different capacities and design available under request.

**USE:** Direct steam injection heating systems.  
See IMI installation and maintenance instructions.

**AVAILABLE MODELS:** SI 20-4; SI 20-5,5; SI 20-7; SI 20-8,5

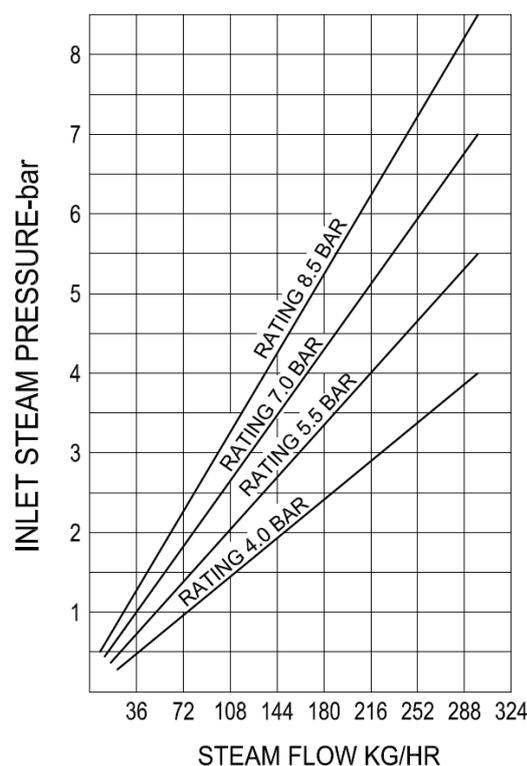
**SIZES:** 3/4".

**CONNECTIONS:** Female screwed ISO 7/1 Rp (BS21)

**INSTALLATION:** Horizontal or vertical installation.

**LIMITING CONDITIONS:** PMO: Max. operating pressure 8,5 bar  
TMO: Max. operating temperature 180 °C

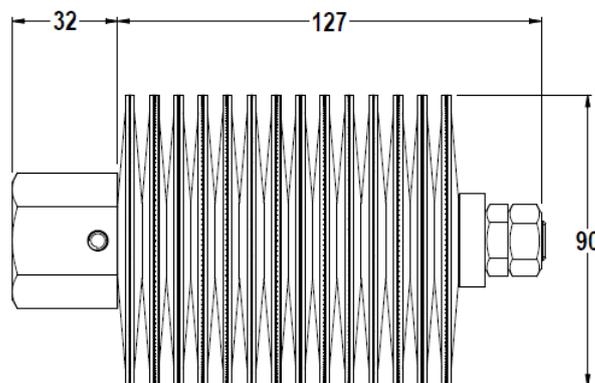
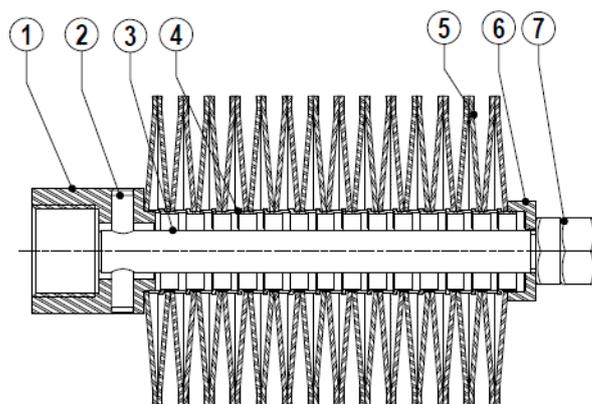
CAPACITY CHART



Example: We require the injection of 950Kg/hr of steam with a pressure of 5bar. Assuming 20% pressure drop across the control valve, therefore the steam supply to the injectors will be 4bar. From the injector capacity chart we see that the 4bar injector will pass 293Kg/hr and 950 divided by 293=3,24.

Three injectors of this size will barely cope, so we recommend installing four injectors, which will meet the demand. The pressure rating is stamped on the inlet housing (1). The SI 20 injector is made in one size and if one device does not pass sufficient steam, two or more should be fitted to a common supply pipe.

MATERIALS		
POS. Nr.	DESIGNATION	MATERIAL
1	Inlet housing	AISI304 / 1.4301
2	Cross pin	AISI304 / 1.4301
3	Tie-rod	AISI304 / 1.4301
4	Inner rings	AISI304 / 1.4301
5	Element plates	AISI304 / 1.4301
6	Retaining plate	AISI304 / 1.4301
7	Retaining nut	AISI304 / 1.4301



Position	Designation
1	ADCA SI-20 steam injector
2	Adcatrol V25 control valve and positioner
3	GV32B Bronze globe valve
4	Adca IS140 Y strainer
5	ADCA VB21 vacuum breaker
6	PT100 resistance thermometer
7	Temperature controller
8	Temperature indicator

Typical Installation

