

## STEAM INJECTORS SI20

### DESCRIPTION

The SI20 series steam injectors from ADCA are condensate injectors. 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.



### MAIN FEATURES

Quiet operation.  
Corrosion-resistant.  
No moving parts.

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

**USE:** Direct steam injection heating systems.

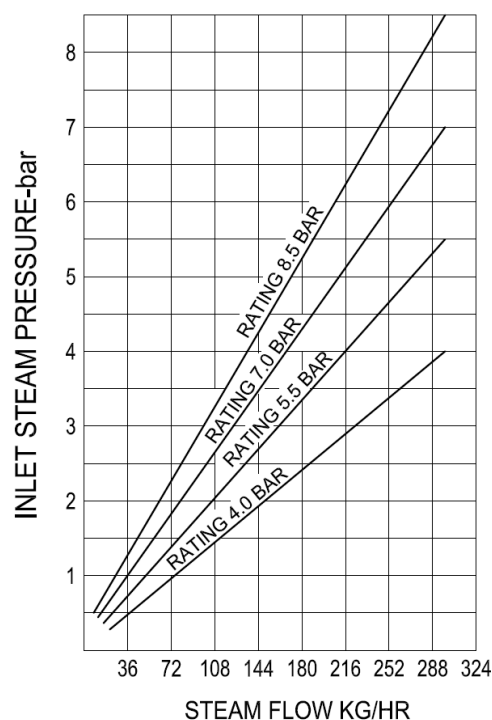
**AVAILABLE MODELS:** SI20-4, SI20-5,5 , SI20-7 and SI20-8,5.

**SIZES:** 3/4".

**CONNECTIONS:** Female threaded ISO 7 Rp.

**INSTALLATION:** Horizontal or vertical installation.  
See IMI – Installation and maintenance instructions.

CAPACITY CHART



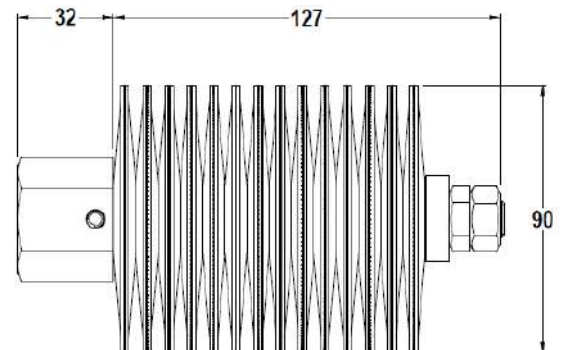
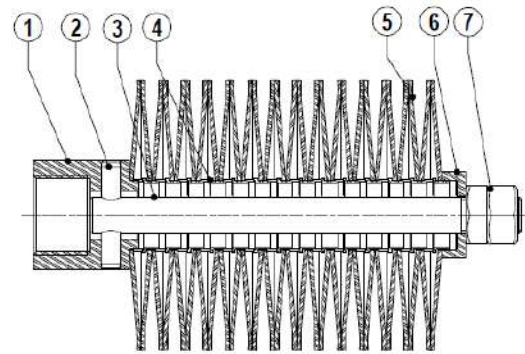
| LIMITING CONDITIONS                 |         |
|-------------------------------------|---------|
| PMO – Maximum operating pressure    | 8,5 bar |
| TMO – Maximum operating temperature | 180 °C  |

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

Three injectors of this size will barely cope, so it is recommended to install four injectors, which will meet the demand. The pressure rating is stamped on the inlet housing (1). The SI20 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. N° | DESIGNATION     | MATERIAL          |
|---------|-----------------|-------------------|
| 1       | Inlet housing   | AISI 304 / 1.4301 |
| 2       | Cross pin       | AISI 304 / 1.4301 |
| 3       | Tie-rod         | AISI 304 / 1.4301 |
| 4       | Inner rings     | AISI 304 / 1.4301 |
| 5       | Element plates  | AISI 304 / 1.4301 |
| 6       | Retaining plate | AISI 304 / 1.4301 |
| 7       | Retaining nut   | AISI 304 / 1.4301 |



**TYPICAL INSTALLATION**

| POS. N° | DESIGNATION                               |
|---------|---|
| 1       | ADCA SI20 Steam injector                  |
| 2       | ADCATrol V25 Control valve and positioner |
| 3       | GV32B Bronze globe valve                  |
| 4       | ADCA IS140Y Strainer                      |
| 5       | ADCA VB21 Vacuum breaker                  |
| 6       | PT100 Resistance thermometer              |
| 7       | Temperature controller                    |
| 8       | Temperature indicator                     |

