











# 7. Installation

- Remove all IOUJHDGSRUWSURWHEWV to installation.
- Install the desuperheater in the steam pipe.
- Clean and dry the water pipe prior to connecting it to the desuperheater.
- Minimum straight pipe distance upstream: 6 times the pipe diameter or □ IHW or pipes with diameter equalWR or JUHDWHU than 700mm (28").
- Minimum straight pipe distance downstream: IHW.
- Temperature sensor minimum distance for installation: IHW .

## RECOMMENDATIONS:

Select the installation location carefully, this is very important in the cases where the steam velocity is low and its temperature is close to the point of saturation. The minimum straight pipe distance up and downstream shall be straightly followed such as the minimum distance between the temperature sensor and the desuperheater.

To avoid the clogging of injection orifices by solid particles, a filter shall be used with 100-200µm mesh before the water control valve.

On the steam line there shall not be interferences such as gate valves, orifices plate or intersection of other lines between the desuperheater and the temperature sensor.

The recommended minimum distance for installing the temperature sensor is at least 40 feet downstream from the desuperheater.

There should be no leads or interferences such as a valve, orifice plate, intersection of other lines, in the vapor line between the desuperheater and the temperature sensor.

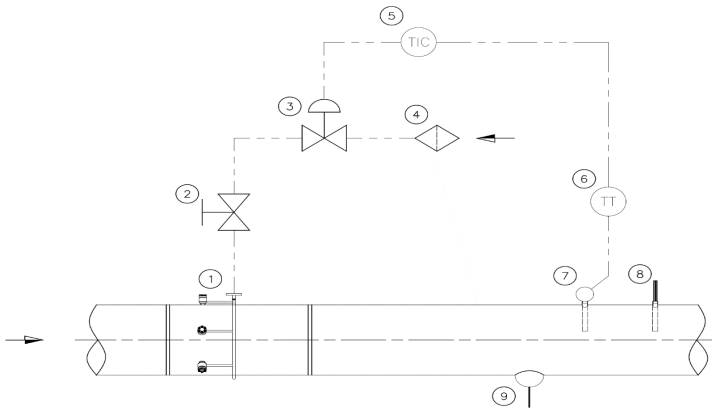


Figure 2 – Typical Installation

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|---|----------------------------|
| 1- DAB Series Desuperheater             | 6- Temperature Transmitter |
| 2- Check Valve Full Bore                | 7- Temperature Sensor      |
| 3- Valve for Water Injection            | 8- Thermometer             |
| 4- Water Filter                         | 9- Steam Trap              |
| 5- Temperature Indicator and Controller |                            |

# 8. Maintenance

- DAB Series Desuperheater requires low maintenance. Maintenance will be required when clogging occurs in the orifices of the water injection ports.
- Prior to shutdown and disassembly, relieve the pressure inside the lines, close the block valve for the cooling water.
- Loosen and remove the nuts (8).
- Remove the washers (7).
- Remove the cover (6).
- Remove a packing-retaining ring (5) and the packings (4).
- Remove the injection nozzle set (3).
- Remove the gasket (2).
- The nozzle and the injector nozzle set shall be inspected and/or cleaned for reuse. Do not try to disassemble the injection nozzle set. Please contact Spirax Sarco by Hiter Technical Assistance if there is need of repair in some part of injection nozzle set.
- Wash the desuperheater until it unclogs.
- Proceed with reassembly, following the reverse order of disassembly.

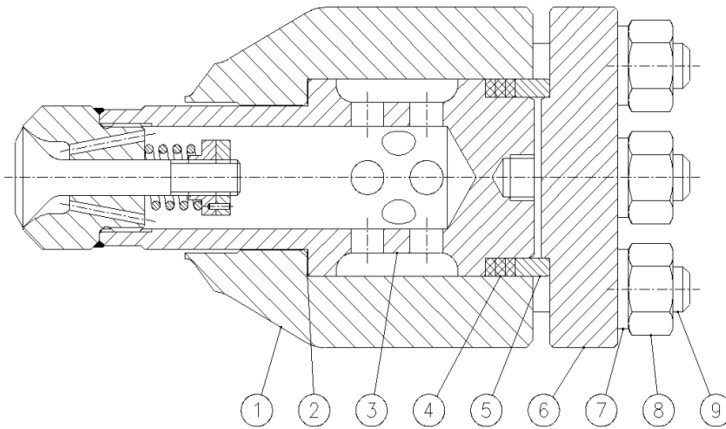


Figure 3 – Water Bocal de Injeção de Água

- 1- Body
- 2- Gasket
- 3- Injection Nozzle Set
- 4- Packings
- 5- Packing-Retaining Ring

- 6- Cover
- 7- Washer
- 8- Nut
- 9- Stud

## 9. Troubleshooting

Problem	Possible Case
Water in the steam line.	Verify if the steam traps are operating properly.
	Verify the upstream pipe design is free of any intersections or elbows/bends.
Water in the steam line when it is isolated.	Verify if there is leakage on the water control valve.
Desired temperature not reached.	Verify if there is clog in the orifices.
	Verify the water pressure.
	Verify if the steam saturation pressure is equivalent to a temperature higher than the desired setpoint.
Temperature is under the desired setpoint.	Verify the position of the temperature sensor.
	Verify the temperature control valve is operating.
Temperature oscillates around the adjusted setpoint.	Verify if the needed temperature is not too close to the saturation temperature.
	Verify system parameters adjust.

If the problem persists, please contact Spirax Sarco by Hiter Technical Assistance.



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## Notes

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