

Desuperheater 5090

DN50

Pneumatic control valve for cooling steam and process gas.

- robust design
- quiet operation
- Variable Kvs values
- minimal leakage
- long service life

Technical data

Body design	flange design for flanges acc. DIN EN 1092-1, form B
Nominal size cooling water inlet	DN 25 - DN 50
Nominal size cooling water supply	DN 100
Nominal pressure	PN 40 / ANSI 300
Temperature injection fluid	up to +220°C
Ambient temperature*	-30°C up to +100°C
Rangeability	14 : 1
Characteristic	modifiziert linear
Leakage % of Kvs	<0,001
* Please consider the limitation of use of the positioner!	



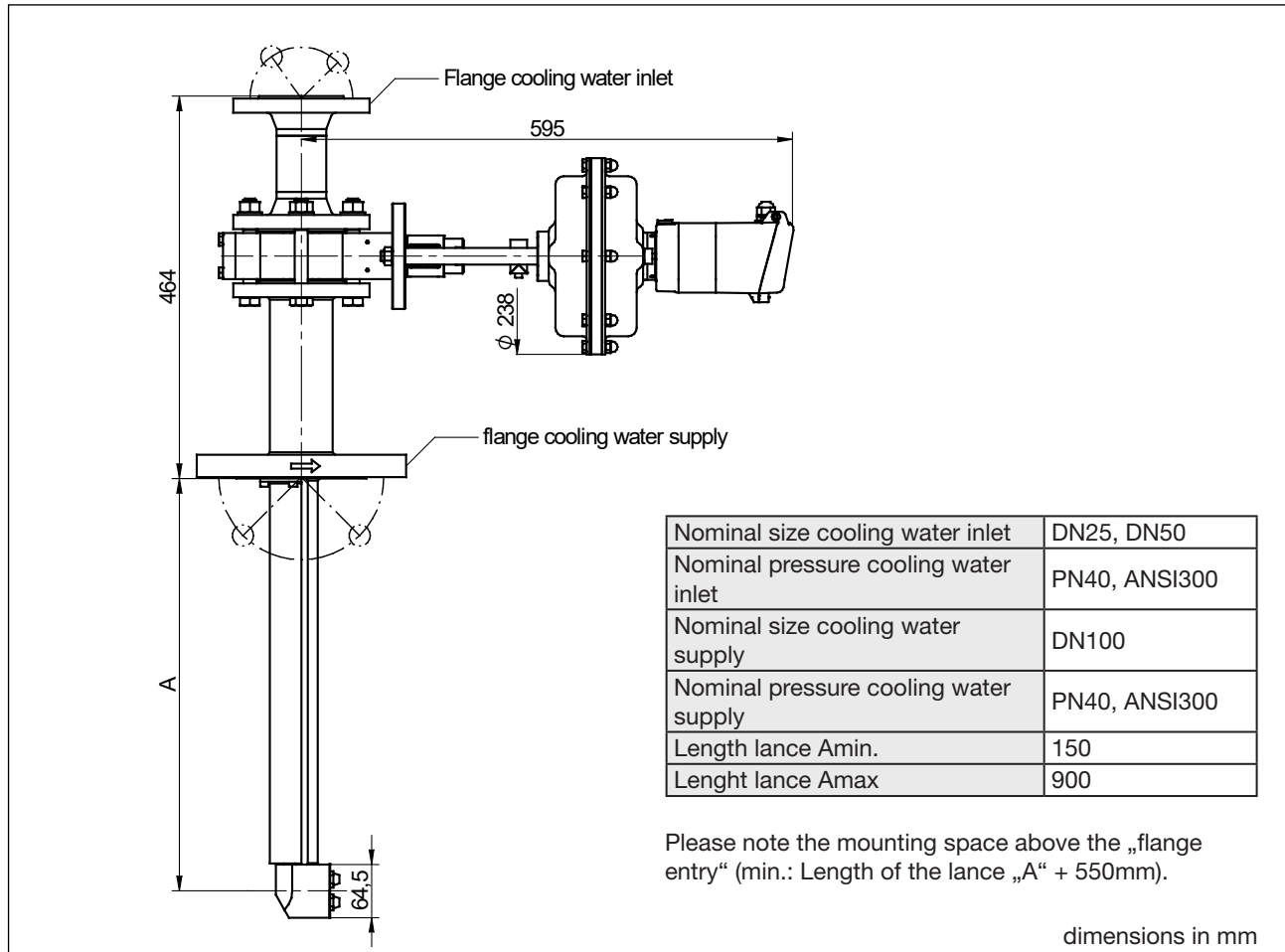
Materials

body	Stainless steel 1.4571
rack	Stainless steel 1.4112, treated
pressure spring	Stainless steel 1.4310
Fixed valve plate	Stainless steel 1.4112, treated
Moving valve disc	Stainless steel 1.4112, treated
slide ring	Stainless steel 1.4112, treated alternatively bronze
spring support	Stainless steel 1.4571
wear ring	Stainless steel 1.4571
body positioner	Aluminium anodized, synthetic

Positioners

For technical information of our positioners please refer to the corresponding data sheets.

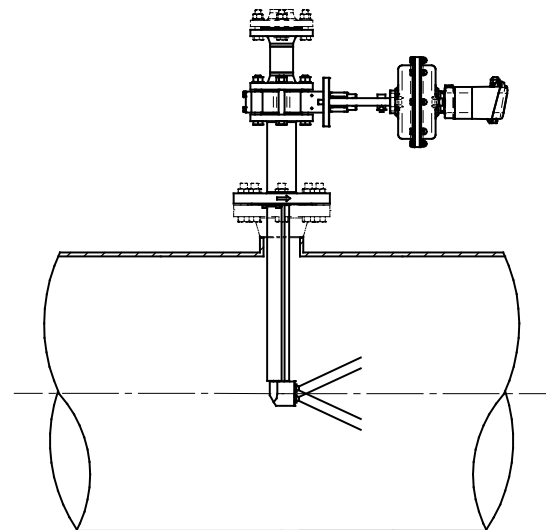
Dimensions



functional principle

The desuperheater controls the required quantity of injection water for cooling steam to the desired steam temperature.

This is done by opening and closing the four injection nozzles. The water pressure at the injection nozzle is thereby approximately constant. A fine atomization of the water is ensured by that. The control is done by the proven positioner type 8049 of Schubert & Salzer (mounting of third party positioners possible). The amount of cooling water is controlled outside of the fluid due to the design. This provides the advantage that no thermal distortion occurs due to the temperature difference. Therefore the leakage is low.



Ordering Number:

3/4

ordering example: 5090/050V1102M-----ZC--S111

desuperheater type 5090, size DN50, PN 10 - PN 40, body material stainless steel, spring closes, with pneumatic actuator 250cm², with positioner 8049-4, cooling water inlet DN25, connection cooling water supply DN100, length of the lance 500mm

Admissible Differential Pressure (For temperatures of up to 120°C)

For temperatures of 120°C and above: obey application limits !

effective area of the actuator (cm ²)	250 cm ²	500 cm ²
pilot pressure (bar)	5	5
springs	10	20
	max. differential pressure [bar]	
max.	25	40
min.	2	2

minimum information for the dimensioning

steam values	
inlet pressure	
inlet temperatur	
outlet pressure	
outlet temperature	
steam quantity max.	
steam quantity std.	
steam quantity min.	

water values	
pressure of cooling water	
temperature of cooling water	