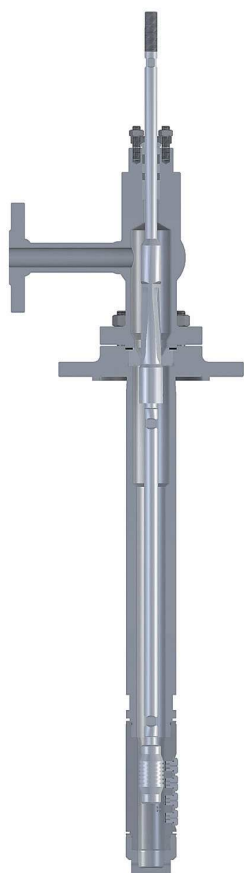# PSD Desuperheater

Application

PSD desuperheater has a piston design. It is suitable for the installations with very high load changes. Especially, if there is high rangeability of: temperature of the medium to be chilled or pressure of the cooling medium.

Description

PSD desuperheater consists of: sets of highly efficient nozzles, piston, and tight system of water cutoff. The cooling water is injected straight into the steam pipeline. Traveling stem-controlled piston opens nozzles one after another, thus regulate the volume of the cooling water. The upper part of cooler's body has attached the system of water cutoff. It is to protect the nozzles against non-controlled increase of the pressure and appearance of a „bubble" after the flow's shut-down through hot pipeline. PSD steam cooler is reverse-acting appliance (push-down-to-open action) and does not need any injection valves. It is assembled to the flanged connection pipe of the steam pipeline, and handles applications requiring load changes (rangeability) up to 40:1.

Technical data

	steam pipeline		pipeline of injected water	
Nominal diameter	DN200÷DN600		DN15÷DN50	
Nominal pressure	PN40÷PN400		PN25÷PN400	
Connections	bolted flanges		bolted flanges; welding ready	
Flow coefficient Kvs	≥ 0,16 m³/h			
Body	1.0460 (P250GH) 1.5415 (16Mo3)	1.7335 (13CrMo4-5) 1.7380 (10CrMo9-10)	1.7715 (14MoV6-3) 1.4903 (X10CrMoVNb9-1)	1.4901 (X10CrWMoVNb9-2)
Injection nozzles	1.4305 (X8CrNiS18-9)	1.4571 (X6CrNiMoTi17-12-2)		
Piston	1.4057(X17CrNi16-2)			
Stem	1.4057 (X17CrNi16-2)	1.4923 (X22CrMoV12-2)		
Rangeability	40:1			
Leakage class	V (improved), metal/metal sealing			
Body's gland	spiral, metal+graphite			
Seal bushing	graphite or PTFE			
Orientation of water's inlet connection pipe towards direction of steam's flow	0°; 90°; 180°; 270°; 360°			