**Complete range of DeSuperheaters, Pressure Reducing & DeSuperheating Systems (PRDS) for steam, including interconnecting Piping in CS / P11 / P22 with all instruments, Valves, manifolds, Temperature and Pressure Control loops. Chemtrols PRDS / DeSuperheaters are available with CE marking. Control valves are manufactured in-house for steam and water service.**

Pressure Reducing and DeSuperheater [PRDS] • Turbine Bypass Valves [TBV]• Control Valves for severe applications of Water & Steam. • DeSuperheaters, Dump PRDS.

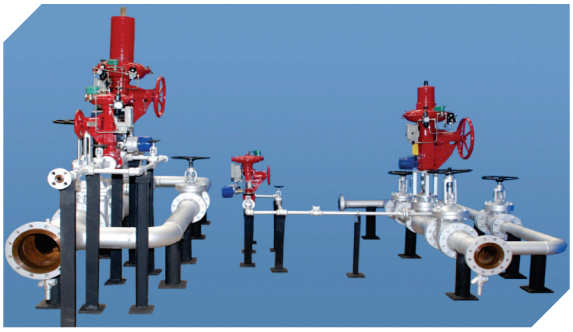
## PRDS

**PRDS:** Pressure Reducing and DeSuperheating System.

Steam PRDS is used for Steam Conditioning Services for reduction of pressure and temperature of steam. It is a combination of Control Valve for the pressure reduction purpose & atomizing nozzles, through which water is sprayed into steam for reducing the temperature.

- Split PRDS: Separate PRV (Pressure Reducing Valve) and DeSuperheater
- Combined PRDS: Both PRV and DeSuperheater in a compact single unit

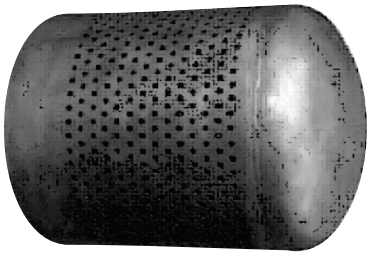
Combined PRDS helps to save the space and also cost of piping, as the unit is single and compact. For PRDS control system, there will be one Pressure loop and one temperature loop. Pressure control system includes pressure sensor, pressure transmitter, controller, I/P Converter, Pressure gauges, etc. Temperature control system includes temperature sensor, transmitter, controller, I/P Converter, Temperature gauges, etc. Spray water quantity required for the temperature reduction of the steam is controlled by separate spray water valve.

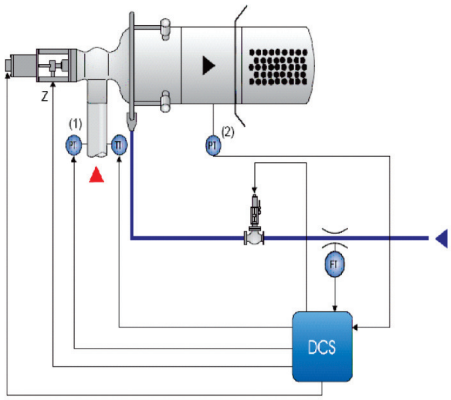


**DUMP PRDS**

Designed to achieve final pressure reduction and allows steam to expand into the condenser.

Pressure class : Up to ANSI 2500#. •IBR certified. •Compliance to ASME Section VIII, Div. I, 2010 • International Stampings, PED, CE on request, for export jobs.





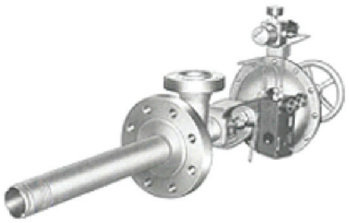
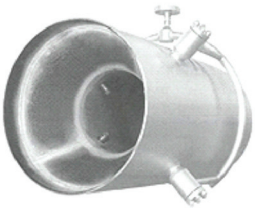
## DeSuperheaters

Steam DeSuperheater is used to spray water into steam, so that it gets mixed, resulting in reduction in the temperature at the outlet. DeSuperheater can be classified into two:

**a. Non-Integral type DeSuperheater:** DeSuperheater nozzle and water valve are separate units **b. Integral type DeSuperheater:** DeSuperheater is in-built with actuator, so that there is no need of separate spray water valve.

Nozzles are also classified into:

**a. Venturi type:** Where nozzle orifice is fixed irrespective of flow variation **b. Variable orifice:** Where orifice area opening will vary according to the flow and pressure variations.

## Control Valves

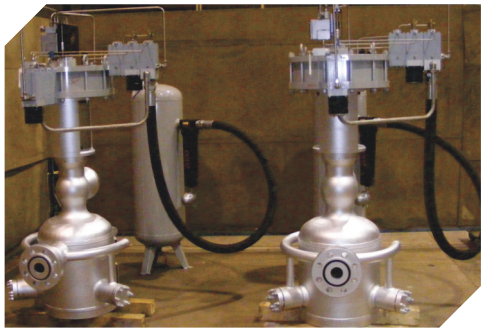
The CGV Series control valves are suitable for handling steam and water. The valve body is designed for smooth flow profile, which minimizes pressure loss and provides better Cv and rangeability.

| Features | |
|---|---|
| Body | Inline Globe, Drag design |
| Sizes | from 1” (25NB) to 12” (300NB) |
| Rating | Upto 2500# |
| Materials | F11, F22, F91 |
| Actuator | Diaphragm, Piston Cylinder |

## Turbine Bypass Valves

### Benefits

- PRDS used in turbine bypass applications help to protect the turbine during start-up, power trip and also for part load generation. Turbine by pass valve prevent venting of steam into atmosphere and allow the steam to be dumped into condenser, so that energy can be saved to generate high temperature Boiler Feed Water.



**Applications:** • Thermal Power Plants and Co-generation Plants • All process plants like Fertilizers, Petrochemical, Refineries, Pharmaceuticals, Sugar Pulp & Paper, Steel, etc.

**Specifications:** • Inlet Size: 3" to 20" • Outlet Size: 4" to 64" • Pressure class: ANSI 150# to ANSI 2500# • Material: A182F12 / A182F22 / A182F91 / F92 • Rangeability up to 1 : 100 • Actuator type: Pneumatic, Hydraulic, Electro-hydraulic, Electric. • Trim type: Multi stage with perforated cage type • Body spherical form, with transitions radially designed with surfaces nearly without marks.