OOTV

Gimpel® Oil Operated Trip Valves (Globe and Offset Bodies)

Dresser-Rand acquired the Gimpel valve business in April, 2007. Gimpel products include a line of trip, trip throttle, and non-return valves to protect steam turbines and related equipment in industrial and marine applications.

Dresser-Rand Gimpel® Oil Operated Trip Valve (OOTV) is an “open or closed” steam turbine protection valve designed to trip closed during a drop in oil pressure and to reopen when oil pressure has been re-established. By design, an OOTV does not have a throttling capability.

The OOTV is commonly used at the main inlet of steam turbines driving synchronous generators in power generation facilities with automated start-up and at induction/admission inlets of both generator and mechanical drive steam turbines where a throttling capability is not required.

The OOTV is designed to use hydraulic pressure supplied by the turbine control oil system to compress a fully enclosed, large diameter trip spring. The OOTV is designed with pull-to-close operation and features a back-seated stem that eliminates continuous stem leakage when the valve is operating in its normal fully-open position.

The OOTV can be furnished in several body styles and flow arrangements and is normally installed with the valve stem in a vertical position.

Standard Features

- ANSI nominal pipe sizes 4 to 24 and pressure classes 150 to 2,500
- Steam temperature to 1004°F (540°C)
- Trip in 0.4 second or less
- Poppet design with pilot valve capable of opening against full differential steam pressure
- Cast alloy steel valve body and cover available in straight-through, globe, and offset designs with corner body and top inlet flow arrangements
- Raised face (RF) and ring-type joint (RTJ) inlet and outlet connections available
- RF valve body drain and valve stem leak-off connections standard
- Chrome moly steel valve seat and main disc – contact surface overlaid with stellite
- Stainless steel, integral, replaceable, steam strainer basket
- Low-pressure (100 – 200 psig) and high-pressure (1,100 – 1,600 psig) hydraulic actuators available
- Factory hydrostatic test for strength, porosity, and seat leakage
- Factory operational test (without steam)
- Final surface inspection

Optional Features

- Limited position control available using a high-pressure actuator with servo valve and linear variable differential transformer (LVDT) interfacing with the turbine control system
- Limit switches to monitor valve stem open, closed, and exercised positions
- Solenoid exerciser for remote on-line exercising
- Protective cover (for harsh climate installations)
- Temporary start-up screen and spare cover gasket
- Blowdown kits

DRESSER-RAND®

For more information on **Gimpel valves** please contact the following location:

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Form 2183

OOTV Features (globe body)

Cover provides easy access to valve internals and seat inspection without removing from line or removal of actuator.

Field adjustable throttling screw provides steam pressure balance. Above main seat during initial throttling of the valve.

Drilled strainer is an integral replaceable steam strainer that protects seating surfaces from debris while adding protection to the turbine.

Pilot valve provides controlled throttling and reduced thrust during the initial opening of the main seat.

Stellited seats reduce erosion and enhance sealing longevity.

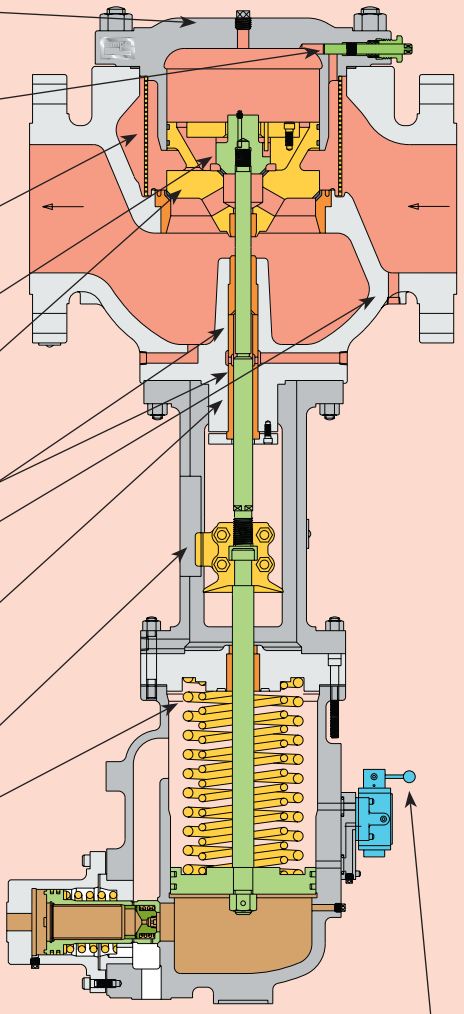
(Removable) back seat design eliminates steam leakage from valve during normal operation.

Before and after seat drains remove condensate.

Valve Stems and leak-off bushings are precision ground and honed for smooth, low-friction operation and provide design clearances for minimal stem leakage at the leak-off connections.

Non-rotating coupling eliminates wear and provides non-rotating stem.

Spring pulls "inverted" disc closed in less than 0.4 second.

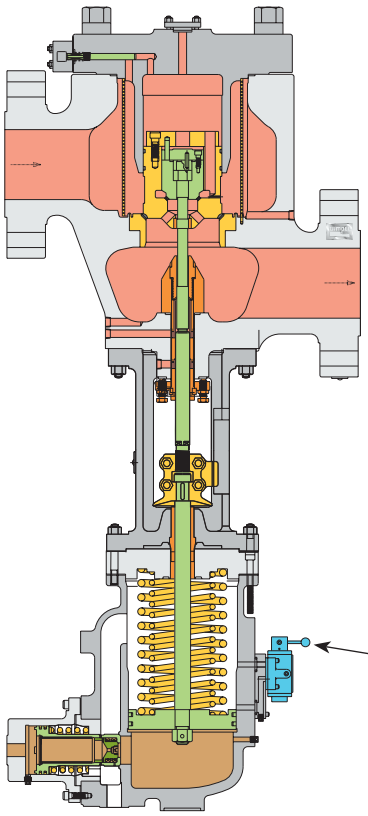


Lever-operated exerciser partially strokes the valve at full load without reducing steam flow.

Hydraulic actuators are integral to the unit; low- and high-pressure actuators available.

Double relay design with integral strainer minimizes oil drain piping size and ensures fast tripping by dumping oil.

OOTV Features (offset body)



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