

TMTTV

Gimpel® Top Mechanism Trip Throttle Valve (Latch Type)

Dresser-Rand acquired the Gimpel 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

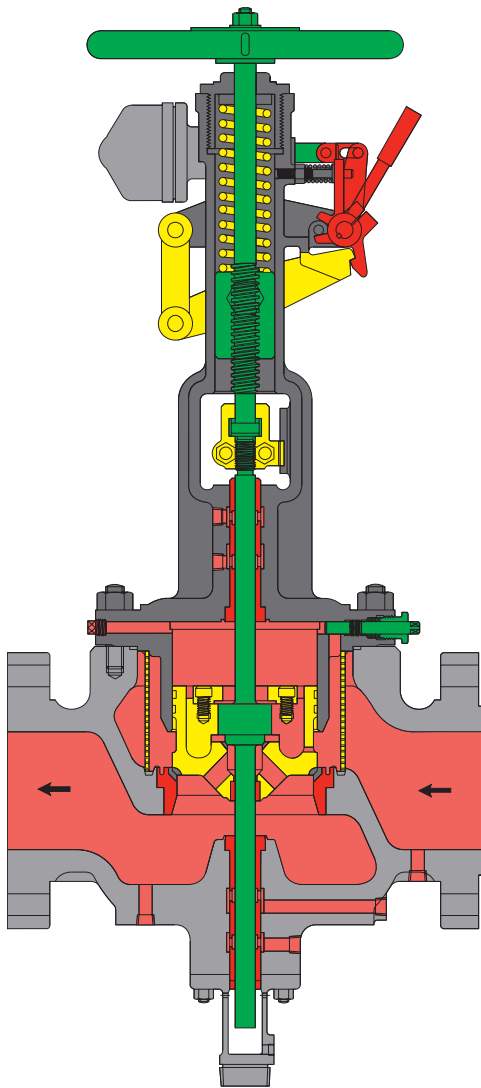
Dresser-Rand Gimpel® top mechanism latch type trip throttle valve (TMTTV) is suited for single-valve single-stage and single-valve multi-stage steam turbines that drive chillers, fans, generators, and pumps in air conditioning service, correctional facilities, food processing plants, hospitals, pulp and paper plants, chemical and petrochemical plants, refineries, and universities.

The primary function of the Gimpel TMTTV is to function as an emergency closing safety valve that trips at oil pressure loss. It can also be used to slow roll the steam turbine during start-up. The valve is designed so that once tripped it cannot be opened unless safe oil pressure exists in the oil system. It is normally installed with the handwheel in a vertical or horizontal position.

The valve can be furnished in several body styles and assembly arrangements.

The design incorporates more than 50 years of reliable operation and experience with proven technology, including:

- ANSI nominal pipe sizes (NPS) 2 to 12 and pressure classes 150 to 900
- Steam temperature up to 950 °F (510 °C)
- Tripping in 0.5 seconds (or less)
- Poppet design with pilot valve capable of opening against full differential steam pressure
- Cast alloy steel valve body with bolted yoke (cover) available in straight-through, corner-body, and tip-inlet flow arrangements
- Nitralloy-nitrided valve stem/pilot valve and steam bushings
- Chrome moly steel main disc and valve seat (seating contact surfaces are overlaid with stellite)
- Stainless steel, integral, replaceable, steam strainer basket
- Handwheel (provides throttling for use during start-up)
- Hydraulic and pneumatic trip cylinders and trip solenoid (optional)
- Local trip lever standard
- Factory hydrostatic and seat leakage tests
- Factory operational test without steam
- Final surface inspection
- Optional limit switches and electric valve actuator available.



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

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TMTTV Features

Straight-through or corner: 90-degree body construction available

Corrosion resistant: materials of construction for outdoor use; copperless materials available

Handwheel provides throttling operation during turbine start-up, manual closing, and resetting after trip; motor operator available for remote operation.

Hydraulic/spring-actuated relay instantly trips valve closed upon loss of oil pressure by releasing trip hook.

Spring loaded “push-to-close” design shuts off steam in 0.5 second (or less); spring is enclosed for further protection.

Slide nut moves freely in machined bore of yoke during trip; when trip hook is set, slide nut is fixed and stem moves (screws) up or down (throttling).

Non-rotating split coupling with bearing

One-piece stem and pilot valve is top- and bottom-guided to maintain alignment during trip closure; pilot valve reduces the opening thrust required.

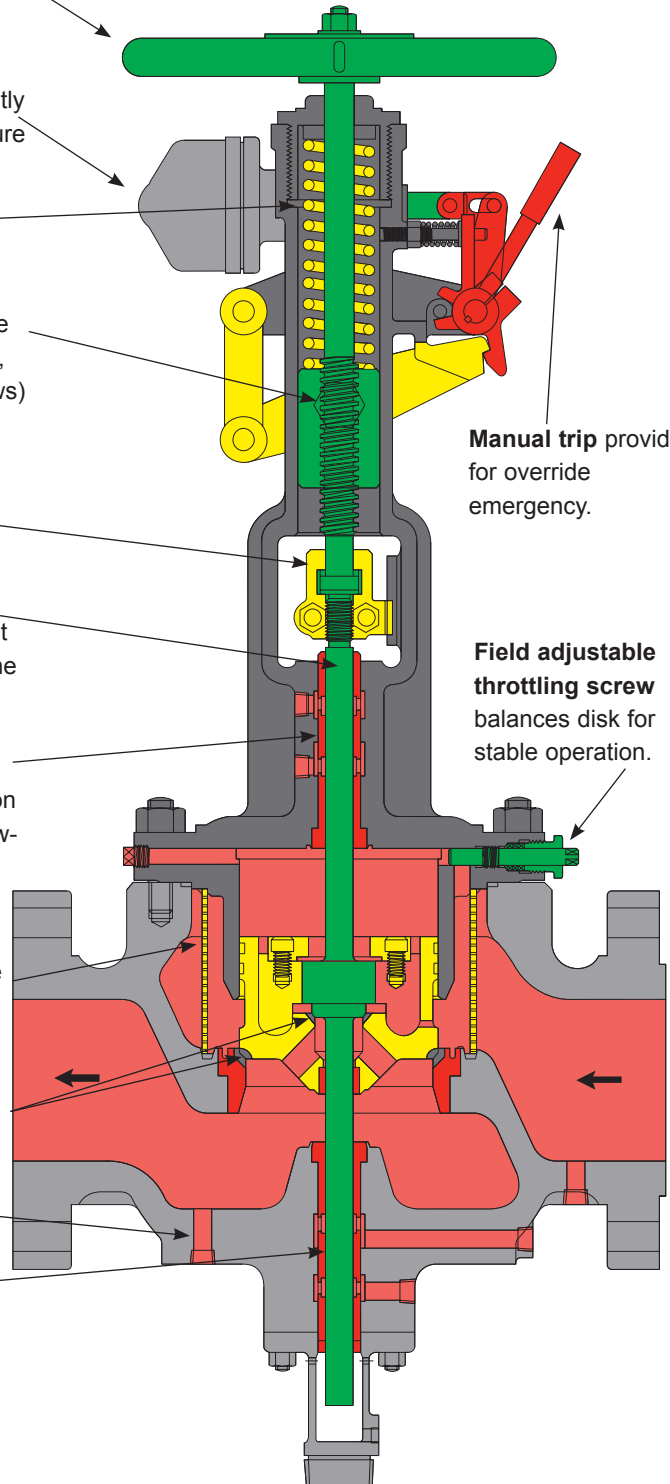
Stems and bushings are precision ground and honed for smooth, low-friction operation and minimal stem leakage (low- and high-pressure leak-off connections are provided).

Drilled strainer protects sealing surface from debris while protecting turbine.

Stellited disk and seat offers reduced erosion and sealing longevity.

Drain connection (before and after seat).

Lower guide bushing ensures alignment during trip.



Manual trip provided for override emergency.

Field adjustable throttling screw balances disk for stable operation.