

NICHOLSON STEAM TRAPS & SPECIALTIES DESIGNER'S GUIDE

- Mechanical Steam Traps
- Thermostatic Steam Traps
- Thermodynamic Steam Traps
- Condensate Pumps
- Compressed Air Products
- Gasketed Unions
- Sanitary Steam Products
- Drain Orifice Steam Traps



NICHOLSON
STEAM TRAP

A division of CIRCOR International, Inc.

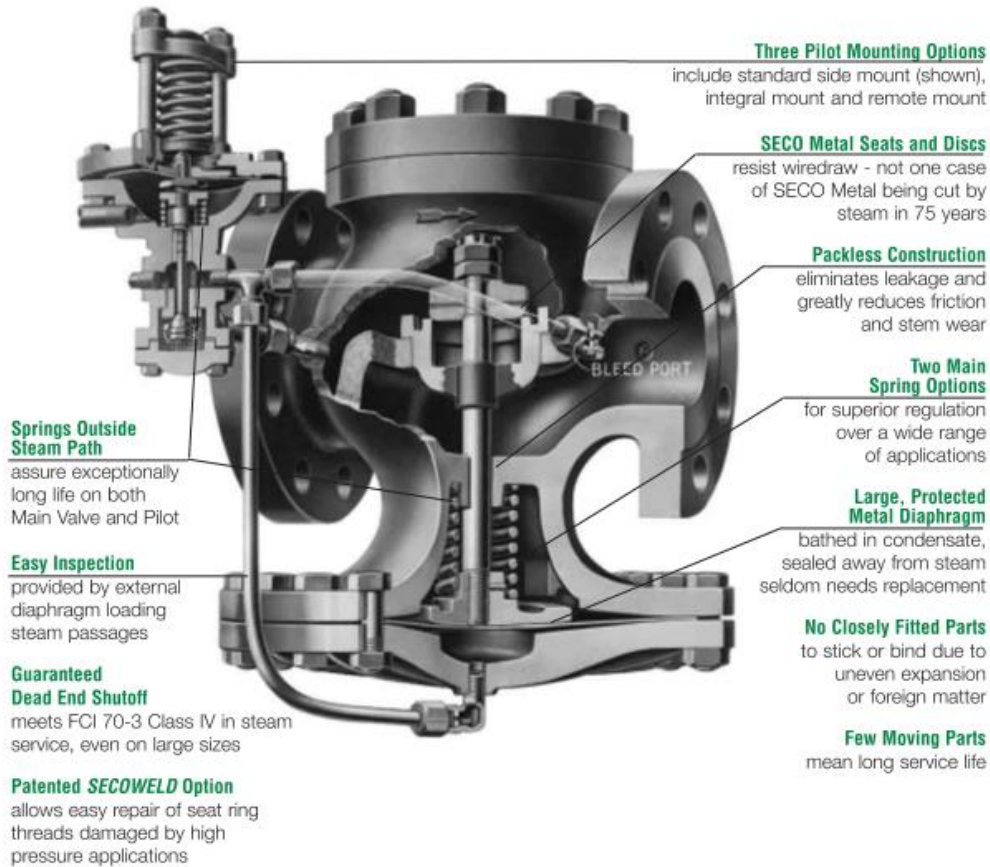
Nicholson steam traps are manufactured by Spence Engineering.

Applications

- Pressure Regulation for Steam Distribution
- Single Point or Multiple Use Applications
- Pressure Control for Steam Plants
- District Heating Systems
- Single Stage Reduction Stations
- Two Stage Reduction Stations
- Parallel Reduction Stations

Iron Horse ED Series Pressure Regulator

**Pressures To 600 PSIG
Temperatures to 750°F**



Springs Outside Steam Path

assure exceptionally long life on both Main Valve and Pilot

Easy Inspection

provided by external diaphragm loading steam passages

Guaranteed Dead End Shutoff

meets FCI 70-3 Class IV in steam service, even on large sizes

Patented SECOWELD Option

allows easy repair of seat ring threads damaged by high pressure applications

Three Pilot Mounting Options

include standard side mount (shown), integral mount and remote mount

SECO Metal Seats and Discs

resist wiredraw - not one case of SECO Metal being cut by steam in 75 years

Packless Construction

eliminates leakage and greatly reduces friction and stem wear

Two Main Spring Options

for superior regulation over a wide range of applications

Large, Protected Metal Diaphragm

bathed in condensate, sealed away from steam seldom needs replacement

No Closely Fitted Parts

to stick or bind due to uneven expansion or foreign matter

Few Moving Parts

mean long service life



STEAM ATOMIZING DESUPERHEATER

DESUPERHEATERS

PRESSURES to 600 PSIG at 750°F

- Reduces the temperature of superheated steam by controlled direct injection of cooling water
- Mechanical atomizing 2.5:1 turndown
- Steam atomizing 20:1 turndown
- Line Sizes 3" to 24" (larger sizes available upon request)
- Velocities to 8000 feet per minute
- Air operated only

Canadian Registration # OH6267.51

APPLICATION DATA

- Reduce Temperature of Superheated Steam

SPENCE SAFETY RELIEF VALVE

- Safety Relief Valves
- Safety Relief Valve Sizing
- Crossover Chart
- ASME Code



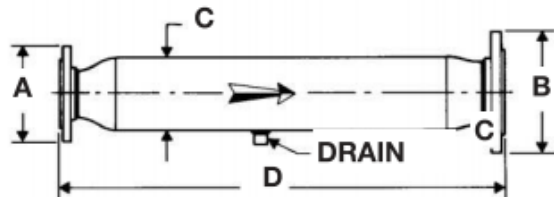
NOISE SUPPRESSOR

SPECIFICATION

Noise Suppression equipment shall be of the dissipative reactive type. Suppressor shall not induce back pressure. It shall have expanded outlet flange for attachment to downstream piping. Equipment shall provide a minimum of 10 dBA reduction in noise. Installation must be insulated.

MATERIALS OF CONSTRUCTION

Pressure ShellWelded Steel Components
Acoustic MaterialStainless Steel



MAXIMUM OUTLET VELOCITY

feet per minute
(meters per minute)

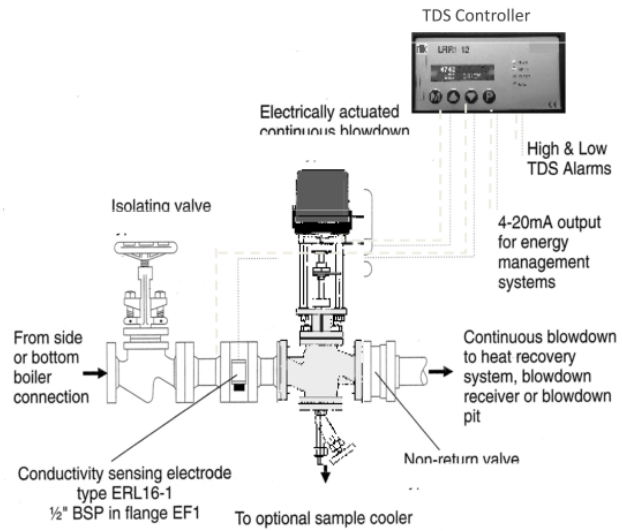
NOMINAL PIPE SIZE	MAXIMUM VELOCITY
0 - 2 (0 - 51)	17,000 (5182)
2 1/2 - 8 (64 - 203)	11,000 (3353)
>8 (>203)	9,000 (2734)

Control TDS Calderas y Generadores de vapor – Sensor Externo

Control de sólidos disueltos

Alternativa

- Si no se tiene conexión lateral en la caldera, es posible utilizar un sensor en la línea de purga de lodos para el control de TDS
- En este tipo de control se debe permitir un flujo continuo para que el sensor pueda detectar la concentración de los sólidos en suspensión.
- Para valores próximos al límite de concentración de sólidos disueltos, el controlador abre la válvula para purgar y alcanzar valores de operación.



Control TDS Calderas y Generadores de vapor

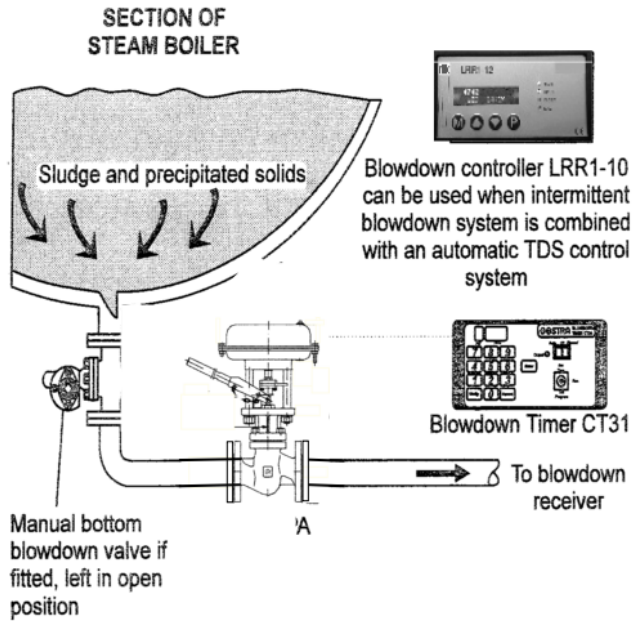


Control Purga de Lodos Calderas y Generadores de vapor

Sólidos en suspensión

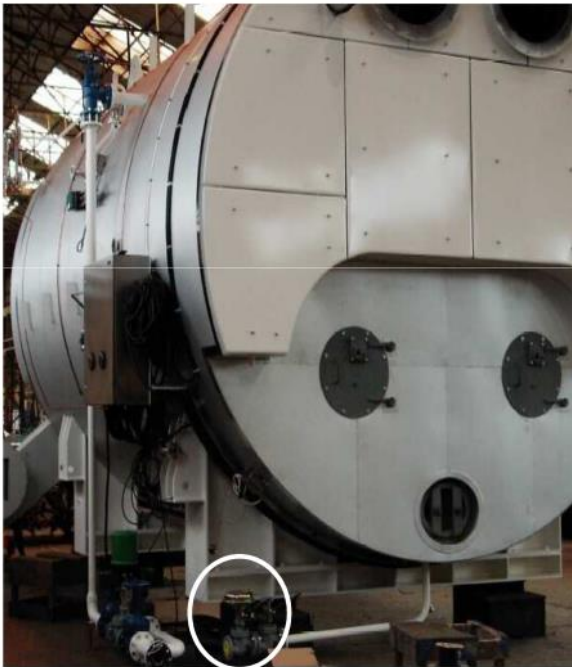
Purga de lodos

- Los sólidos en suspensión se precipitarán al fondo de la caldera. La no-remoción de estos provocará acumulación y disminuirán la eficiencia térmica de la caldera (Bajas transferencias de calor) Además, se puede causar sobrecalentamiento y daños en los tubos de transferencia de calor.
- La purga de lodos se lleva a cabo a través de la apertura rápida e instantánea de una válvula en el fondo de la caldera. Esto se puede hacer manual o automáticamente.

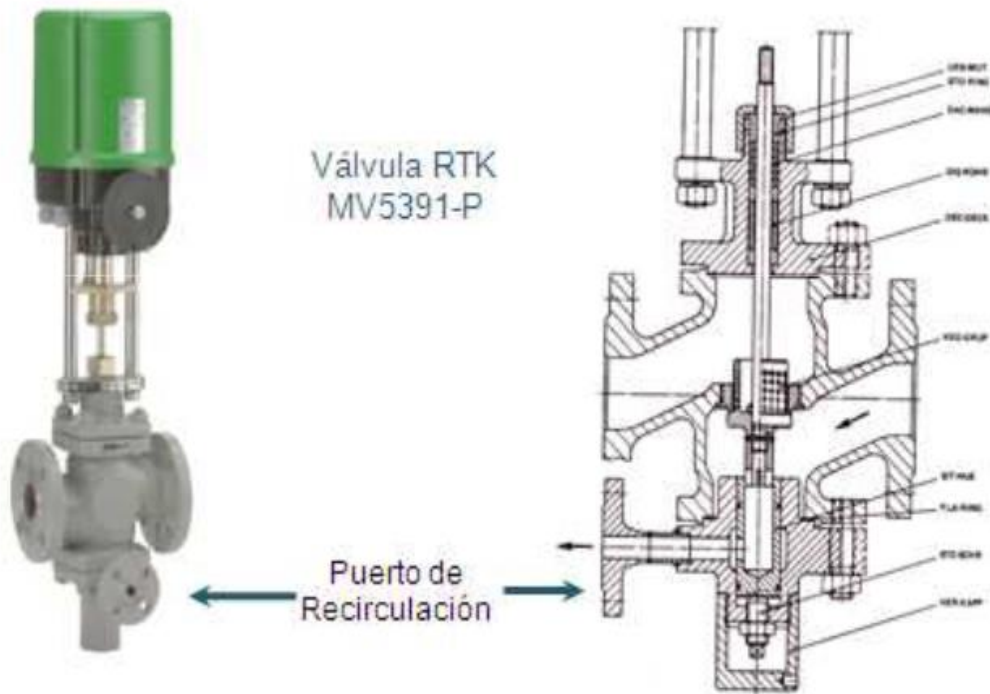


Control Purga de Lodos Calderas y Generadores de vapor

Válvula de Purga RTK PV 6291

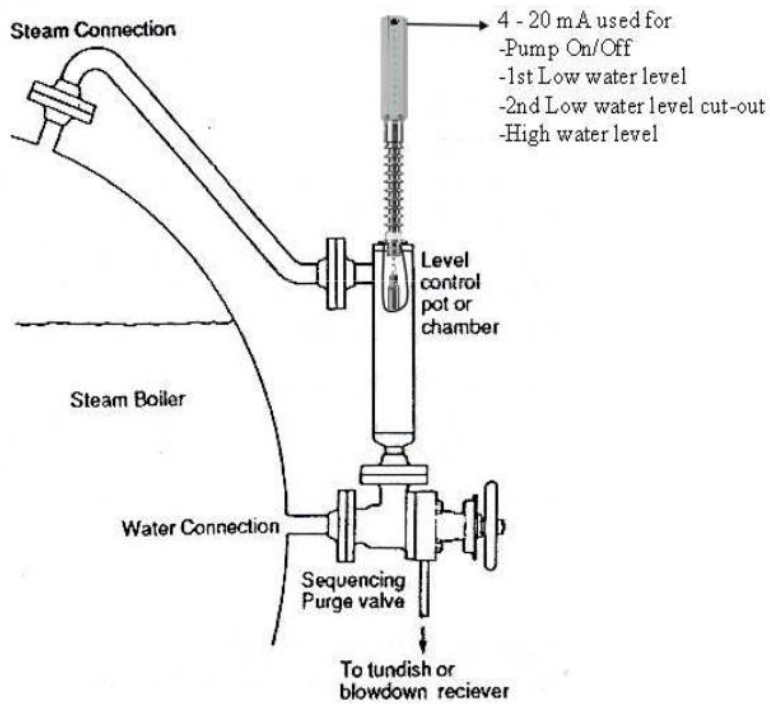


Control Modular – Válvula RTK con puerto de recirculación



Control Modular – Sensor de Nivel

RTK NI 1331
Sensor de Nivel



Paquete RTK Control de Nivel Modular

Control Modular – Control de nivel RTK

