



A Division of CIRCOR International, Inc.

Application Guide

SPENCE ENGINEERING COMPANY, INC. 150 GOLDENHAM ROAD, WALDEN, NY 12586-2035

TYPE EN DIFFERENTIAL REGULATOR

APPLICATION:

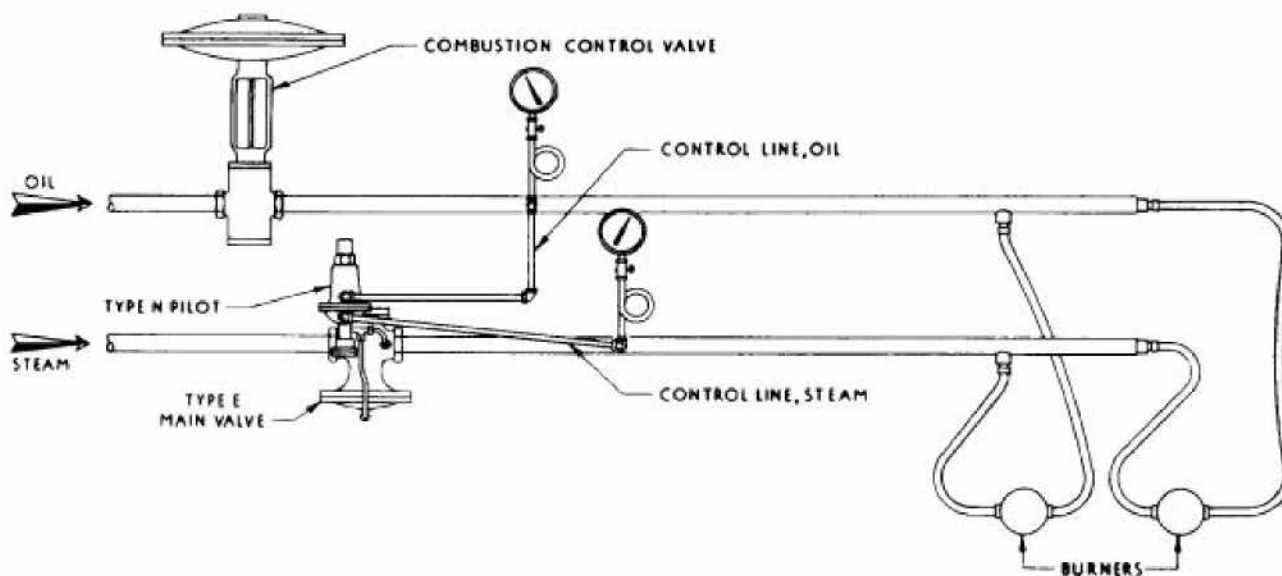
To regulate the atomizing steam pressure to an oil burner by pre-setting that amount higher than the oil pressure.

OPERATION:

The steam pressure under the diaphragm of the Type N Pilot is balanced by the oil pressure and the adjusting spring on top. Once set, the adjusting spring force is constant. Therefore, as the combustion control valve raises the oil pressure, the regulator raises the steam pressure until the pilot diaphragm is again in balance.

EN DIFFERENTIAL
FOR OIL BURNER

APPLICATION GUIDE
OTHER PRODUCTS



ADVANTAGES:

- Accurate pilot control.
- Valve can be balanced for greater rangeability.
- Self contained.



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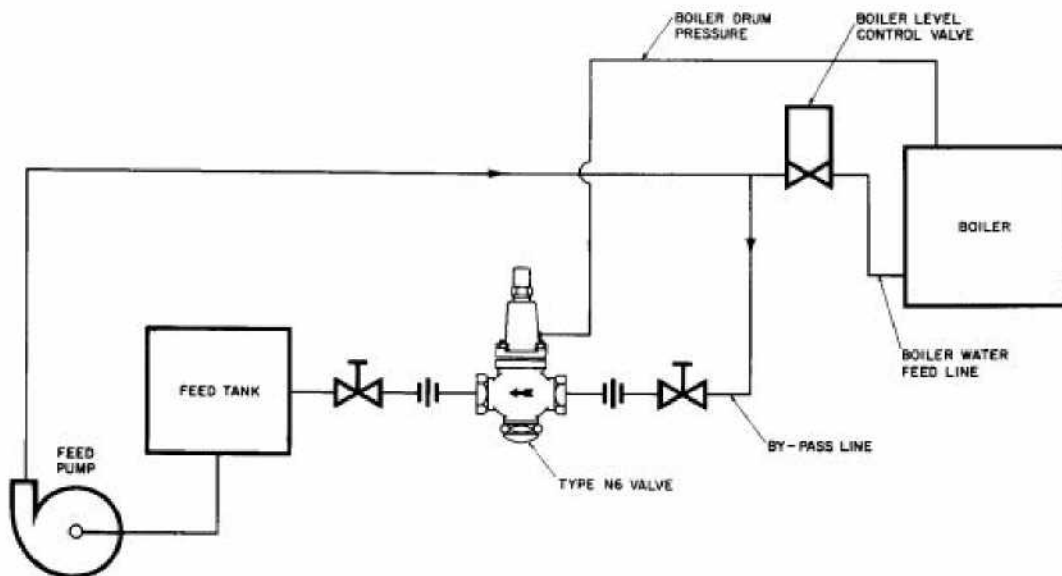
TYPE N6 DIFFERENTIAL PRESSURE VALVE

APPLICATION:

To maintain pump discharge pressure at a constant differential above boiler steam pressure.

OPERATION:

The desired differential is made by the adjusting spring. The boiler feed pressure will then be maintained by the N6 at a constant pressure above the steam drum pressure by modulating the quantity of water by-passed to pump suction.



ADVANTAGES:

- Self contained.
- Easily adjustable.
- Stainless steel trim.

N6 DIFFERENTIAL

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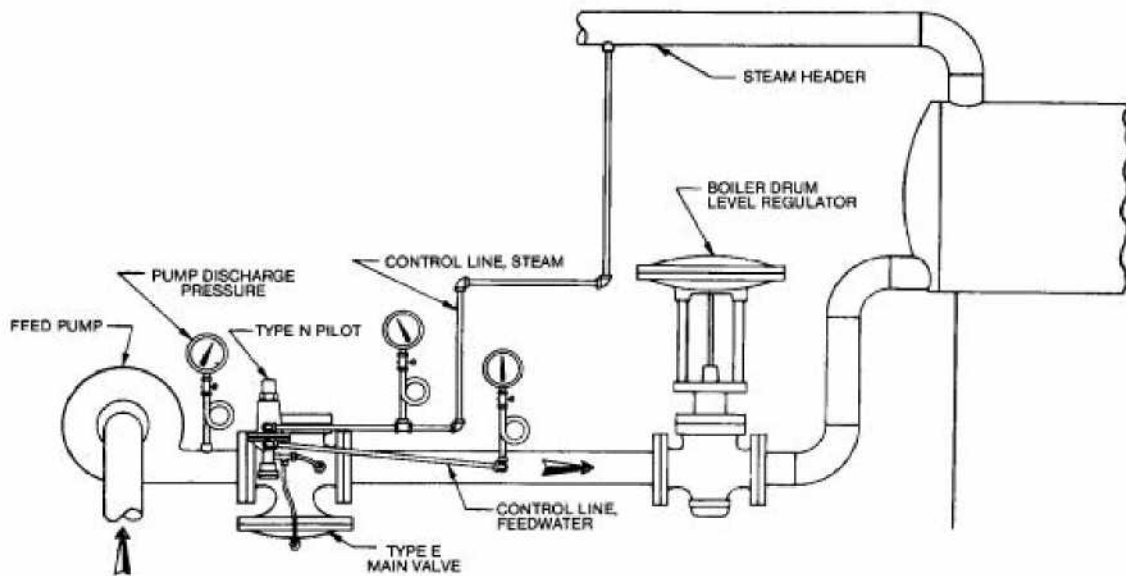
TYPE C34N DIFFERENTIAL PRESSURE REGULATOR

APPLICATION:

To provide control of pressure drop across the boiler level regulator, when boiler is supplied by a motor driven centrifugal pump.

OPERATION:

As the demand for feedwater decreases and the level regulator throttles, the C34N also throttles, offsetting the increased pump discharge pressure and maintaining the inlet pressure to the level regulator at a constant differential over the boiler pressure. For high temperature water over 200° F., use E main valve instead of C34.



ADVANTAGES:

- Reduces maintenance on level regulator.
- Self operated.
- Accuracy of pilot operation.

C34N DIFFERENTIAL
BOILER LEVEL

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OTHER PRODUCTS



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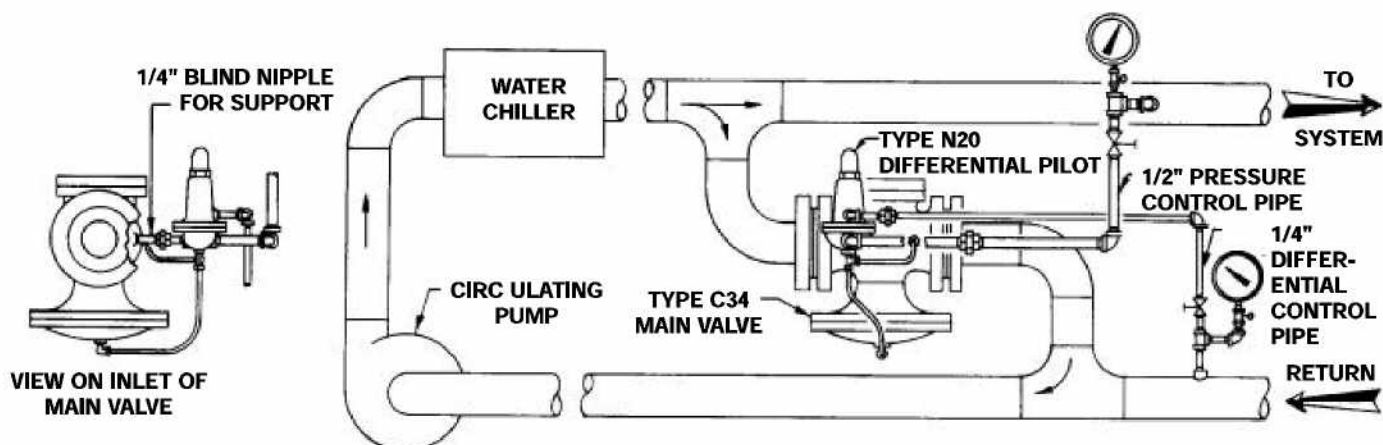
TYPE C34N20 DIFFERENTIAL REGULATOR

APPLICATION:

To maintain a constant pressure differential across the terminal units of a chilled water system.

OPERATION:

The differential pressure across the system is adjusted by increasing or decreasing the spring compression on the N20 pilot. This spring force, plus the return line pressure, is balanced by the supply line pressure. A change in flow through the terminal units will be compensated by the C34 valve, with the result that the pressure drop across the system will be held at a constant value.



ADVANTAGES:

- Optimizes performance of terminal units and circulating pump.
- Prevents chiller freeze-up by maintaining continuous flow.
- Permits use of two-way rather than three-way valves at terminal units.
- Economical, self-contained unit.
- E valve may be used instead of C34.

C34N20 DIFFERENTIAL

APPLICATION GUIDE