



DOUBLE A CONTROLS LTD.

EZ-dp[®] Differential Pressure Controls

Description

- Differential pressure/backpressure control unit used mainly to create differential pressure for recombining liquids into sales gas stream from wellsite separators.

Features/Advantages

Good DP Control:

- EZ-dp is an active control device, so it controls differential during line pressure, flow fluctuations.
- the only backpressure created on the separator is the DP required to dump liquids into the flowline downstream of the gas meter run. This avoids too much or too little backpressure on the separator, which could adversely affect either production or metering.
- consistent DP means more accurate condensate metering, especially with use of turbine meters. With a consistent dump rate, meters can be proved at a steady flow, one that they will see in daily use.
- tamper proof; once initially adjusted and installed in the line, the EZ-dp doesn't usually need further adjustment. This also helps to maintain a consistent dumping rate.

Installation:

- the EZ-dp fits between flanges like an orifice plate, so it is easy to install or retrofit in existing piping.
- no pressure rating to worry about, since the installation is the same as an orifice plate between two flanges.

Cost:

- very reasonable compared to using a controller and control valve. Savings of 80% of the cost of a Control Valve/DP controller setup are typical.
- no ongoing maintenance, making the EZ-dp very attractive compared to a control valve/controller setup.
- cost savings in initial installation, gas emissions and usage, maintenance, and good measurement of liquids.

Gas Usage:

- uses no gas or external source of fuel or power to operate.
- no greenhouse gas emissions.
- no venting of valuable gas.

Noise:

- makes virtually no sound during operation.
- enhances workplace safety, housekeeping and operator wellness by being extremely quiet, venting no gas, and no capacity for leaking.

Proven Performance:

- over 400 in service in six years (since 2000) in various applications; sweet, sour, wet, dry, plunger lift, timer, low flow, high flow.
- requested by operators due to reliability, flexibility, no leaks, quiet operation, ease of install, no maintenance.

Other Uses:

- used to create a pressure drop or hold backpressure for such equipment as: compressor blowcases, oil separators dumping liquids to tank, vapor tight tank pressure control.
- custom construction available: can be custom built to fit other flanges, insert in pipe unions, etc.





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Technical Information

Materials:

- the unit is constructed of all 316SS except for the spring.
- heat numbers are available for the orifice plates when bought for parts for construction.
- the spring is Inconel X-750. Documentation is available for the spring material.



Flow Characteristics:

The following table displays the maximum gas flow at which EZ-dp can control the differential pressure across the unit. At flows above those listed, the unit is wide open and acts as a regular orifice plate, with the DP increasing with flow. This does not mean that EZ-dp cannot exceed these flows, but it shouldn't be planned to exceed such on a continuous basis if controlled DP is desired.

Line diameter	Line pressure (psi)	E3M3/day (max)
2 inch	200	30
2 inch	400	42
2 inch	600	54
3 inch	200	90
3 inch	400	129
3 inch	600	160

“This has been one of the best advancements I have seen in 25 years to reduce operating costs, reduce safety risks and reduce capital costs as well. This device being a mechanical in line device eliminates any human error and maintains a constant backpressure that floats on line pressure, thus not incurring any unwanted back pressure on the well.”

**- Reg G. Beck, Operations Manager
Alberta/British Columbia
Northrock Resources Ltd.**

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Manufactured by: WSG Enterprises Ltd. - Rocky Mountain House, Alberta