Description:
Control valve for reducing and stabilising downstream pressure.

Functions:
- Reduces and stabilises the pressure of a downstream network, supplied by an upstream pipe at a greater pressure, regardless of variations in the upstream pressure and flow rate.
- Closes distribution and restores manual control.

Examples of applications:
- Controlling and linking staged networks.
- Supplying a low-pressure network from a high-pressure network
- Balancing supply to a gridiron system from several supplies with different higher pressures.

Operation of the pressure reducing pilot circuit (Fig. I):
- The action of the pilot’s spring (blue arrow) determines the downstream pressure setting value and tends to open water flow into the pilot.
- The downstream pressure (green zones) is exerted under the pilot’s diaphragm and counters the action of the spring. Increasing the downstream pressure tends to reduce water flow into the pilot (see T manual Pressure reducing pilot series 51).
- Dark blue zone = upstream pressure, green zone = downstream pressure, light blue zone = variable balance pressure between the orifice plate (01) and the pilot.
- The opening speed controller RO (02) enables to control the draining of the chamber. The filling of the chamber is not adjustable to ensure the safe closing of the device.

Operation of Hydrostab pressure reducing control valve:
- The control valve reproduces the movements of the pilot device:
  - Downstream pressure increases: the pilot closes, Hydrostab closes.
  - Downstream pressure decreases: the pilot opens, Hydrostab opens.
  - Downstream pressure is stable: the pilot regulates, Hydrostab regulates.

This manual supplements:
Choosing the model:

- XGS model is recommended for network operations in which the Δp available is higher than or equal to 1 bar (Fig. III).
- If the Δp available is constantly lower than 1 bar, we recommend an XG model (Fig. IV).
- When the flow rate is low and the Δp available is higher than or equal to 1 bar (Fig. III) and falls below 1 bar when the flow rate is high (Fig. IV), it may be necessary to install an in-line model to withstand high flow rates and a small Ø model as bypass for minimum flow rates. Please consult our Customer Technical Support.

Installation:

In-line mounting

- Make sure the manhole is drained and ventilated for the safety of the operators and the proper operation of the 3-function air valve.
- 01 - Gate valve Series B1 20, 25 or 92, essential for the setting and for the yearly maintenance of the strainer box and the 3-yearly maintenance of the control valve.
- 02 - Strainer box Series F3 10, necessary for protecting the device in the presence of foreign bodies.
- 03 - Hydrostab pressure reducing valve Series K1 10.
- 04 - Dismantling joint Series C1 55 or C4 30.
- 05 - Pressure reducing valve Series B1 20, 25 or 92, useful for the safe filling of the downstream network with water.

Optional depending on the network configuration:

- 06 - Vannair air valve Series F1 10 or 20, to guarantee a stable control and a safe and optimal operation of the installation. Placed downstream.
- 07 - Djet safety valve Series F1 30.