

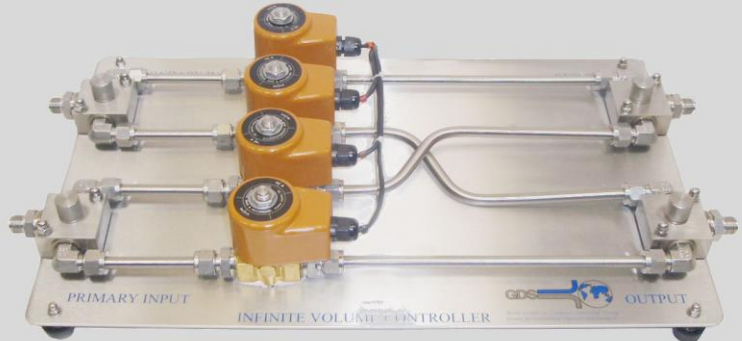
Allows the following functionality:

- Continuous pressure targeting.
- Continuous Volume Flow (either target or ramp).
- Cumulative Volume Change Measurement.

Notes:

- Can be used with all types of GDS controller (RS232, IEEE, or USB).

Infinite Volume Controller (GDSIVC)



What is it?

The GDS Infinite Volume Controller (IVC) is designed to remove constraints of volume capacity such that a test can continuously flow fluid under pressure control or volume control.

When using a single pressure/volume controller, once the volumetric capacity of the barrel has been reached (either 100% full or 100% empty), the user is required to manually fill or empty the controller accordingly. By connecting 2 GDS pressure/volume controllers in parallel, the IVC system automatically switches between them when they run out of volume.

How does it work?

One controller called the primary is used to provide the pressure source. While acting as the pressure source the controller is called the 'master' controller. At the same time the secondary 'slave' controller can refill and centre itself ready for when the master controller exceeds its volumetric limit.

When this happens the secondary controller takes over providing the pressure and thus becomes the master. The primary controller becomes the slave and so can refill/empty and re-centre itself. When this is complete the primary controller resumes pressure control and becomes the master again and the secondary controller re-centres.

The secondary pressure controller is only used as the master temporarily (to provide pressure or volume change) when the primary controller exceeds its volume capacity and thus needs to refill/empty and re-centre itself.

Careful switching sequencing in the software ensures that valves are energized for the minimum period necessary, and remain unenergised for most of the test. The configuration also ensures any pressure calibration differences between the primary and the secondary controller are compensated for.

IVC Control Box

The IVC valve panel comes complete with a 4 channel IVC control box which connects the IVC valve panel to the computer via a comm port using the 9 to 25 pin cable provided. The control box connects to the valve panel using DIN plugs from the valves.

Compatibility

The system can use any combination of GDS controllers including the Enterprise level (ELDPC), Standard (STDDPC), Standard version 2 (STDDPCv2) and Advanced (ADVDPCC) digital pressure controllers.

Technical specification

Overall dimensions of panel: H = 100mm, L = 440mm, W = 260mm

Overall dimensions of control box: H = 50mm, L = 440mm, W = 260mm

Pressure rating: Up to 3MPa & up to 64MPa

Average time between switchover: between 5 and 10 seconds.

Required devices: 2 x GDS DPC's connected to a PC and GDSLAB software.