

Automatic depressurisation system



Ordering information:

3.20.1044

IHC Hytech has developed a portable automatic depressurisation system, shortly ADS, for all kinds of decompression chambers. The depressurization (ascend) has to be carried out slowly. Doing this by hand is difficult because the ascend rate has to be controlled accurately. This ADS ensures a gradual depressurisation of 0-2 msw/hour.

The whole system is built in a portable case with the dimensions of 380 x 265 x 165 mm.

The automatic depressurisation system consists of basically four items

- 6" HMI (Human Machine Interface) Screen
- PLC (Programmable logic controller)
- Pressure Transmitter on the chamber
- Actuator valve to control the chamber pressure



The screen displays

- Chamber depth in bar, this is the actual chamber pressure
- Target depth in bar, this is the pressure at which the chamber should be
- Error in bar, this is the difference between target and chamber depth
- Target speed, this is the speed at which the chamber changes pressure
- Runtime in seconds, The amount of seconds which has passed in run-mode
- A 60 min graph with both the chamber depth (in black) and the target depth (in red)

On the screen (and also selectable from the F1..F6 keys) are

- F1 : This key increases the Target speed with 0.05 msw/h (up to a maximum of 2 msw/hour)
- F2 : This key decreases the Target speed with 0.05 msw/h
- F5 : This activates run-mode
- F6 : This stops run-mode

Alarm indicators

- If the chamber depth goes outside set boundaries (0-10 Bar) the value on the screen will displayed in red
- If the error depth goes above 0.1 bar (approx. 1 msw) the error value will be displayed in red and an output will be activated to which for example an alarm buzzer can be connected (not included)

Power supply and connections

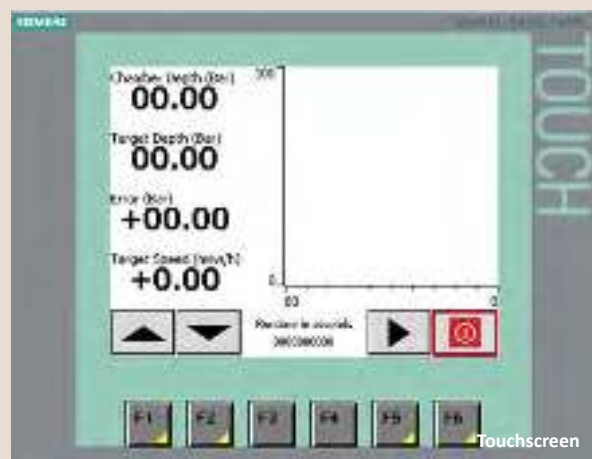
The case can be powered from either a 230 V or 24Vdc Power supply. Connection of the ADS to the chamber is done via 1 multicore cable. On the chamber itself this cable is split into cables for the pressure sensor and the actuator valve. Standard cable length is 30 meters.

Pressure connection

- The pressure sensor has to be mounted on its own penetrator on the chamber complete with internal and external skin valves (not included)
- The actuating valve is preferably mounted on its own penetrator complete with internal and external skin valves (not included). The valve may also be tied in with an existing penetrator used for exhaust purposes (main exhaust, secondary exhaust, flushing etc) provided that a shut off valve is used to isolate the actuator valve from the normal exhaust system.



Panel



Touchscreen

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