

## DRL - Decompression Rate Limiter

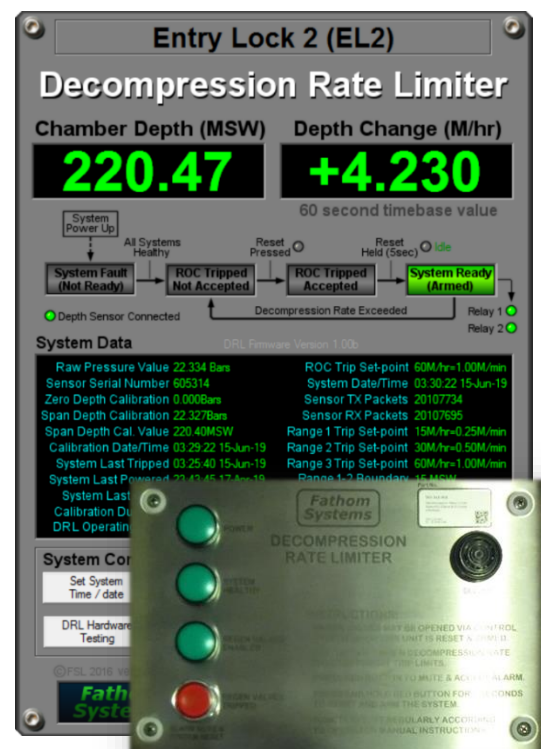
DNVGL-OS-D202/E402 compliant failsafe independent protection system (IPS)



COMMERCIAL DIVE SYSTEM PRODUCTS

### Key Features and Benefits:

- Enhancing Diver Safety
- DNVGL-OS-D202/E402 compliant
- Decompression protection independent of primary automation and shutdown
- High accuracy digital depth sensor
- Rate of change of depth over time trip
- Rapid change 'Flow Fuse' trip
- Protect against controls malfunction and operator caused decompression events
- Integral fault detection and watchdog
- Setup and diagnostics software included



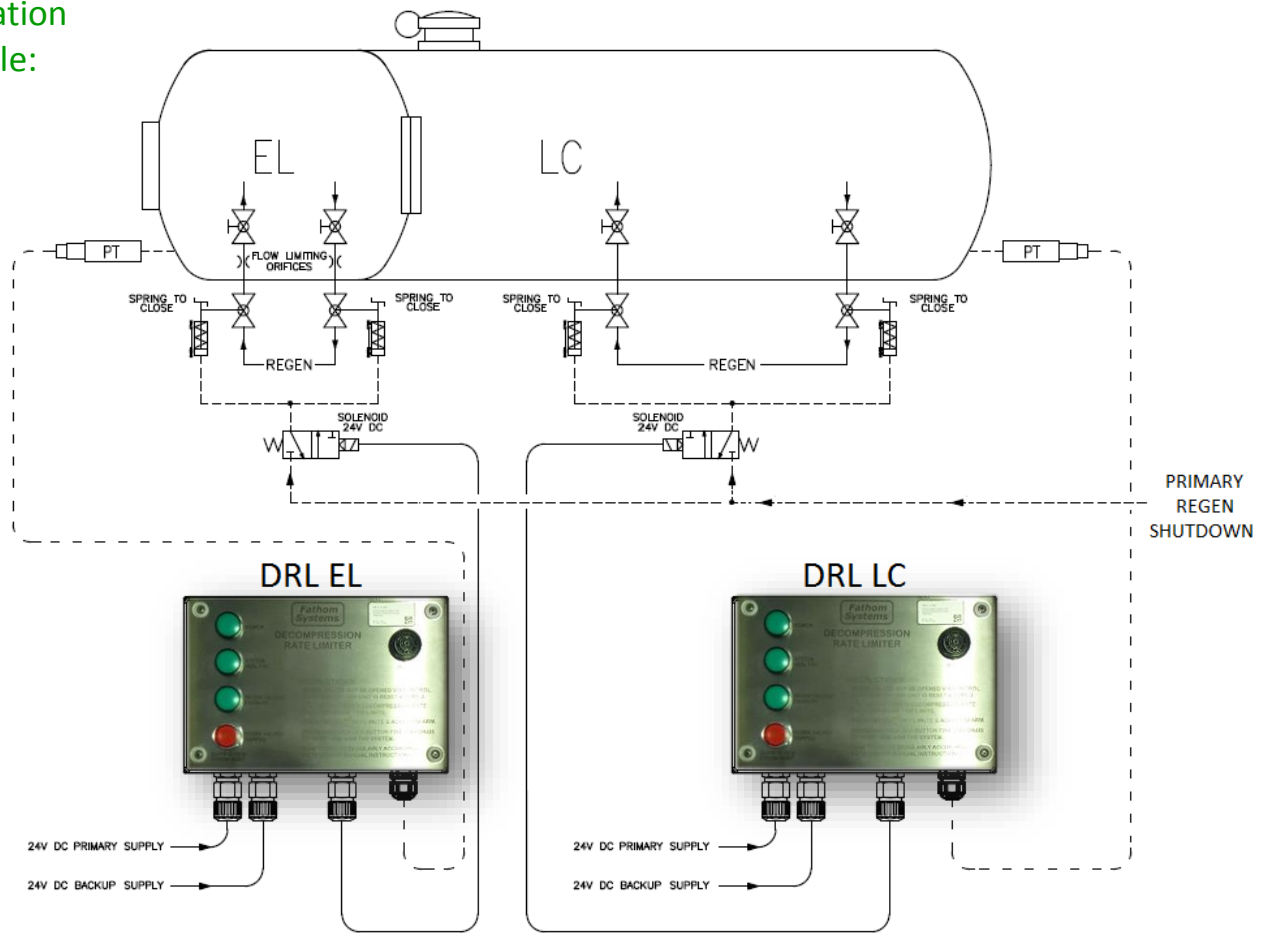
### Product Overview

In the event of failure of the pressure regulating systems or unintentional loss of pressure at any point in the diving system, the pressure safety systems must operate automatically in accordance with fail-safe principles and be mutually independent of the control and alarm systems.

The Decompression Rate Limiter (DRL) from Fathom Systems, part of JFD, offers operators of new or existing SAT chambers a route to compliance for fail-safe independent pressure protection. Continuously monitoring the chamber pressure conditions, the DRL comprises a compact stainless-steel control unit fixed to the outside of the chamber and a dedicated precision digital pressure transducer monitoring chamber depth.

If the rate of change of pressure in the chamber changes too rapidly (flow fuse) or exceeds set parameters over time, the DRL safety relays automatically shut-in the chamber regeneration safety valves. Integral fault detection circuits also are monitoring for sensor or system failures.

## Installation Example:



## Decompression Rate Limiter:

### HIGH ACCURACY TRANSMITTER:

- 24VDC power and isolated RS485
- 0-400 MSW (0-40Bar vented gauge digital transducer)
- Depth Accuracy:
  - $\pm 0.05\%$  full scale ( $\pm 0.2$  MSW)
  - $\pm 1$  m/hr on rate of change of depth

### INDICATIONS:

- Power
- System Healthy
- Regen Valves Enabled
- Regen Valves Tripped (hold to reset DRL)

### OUTPUTS:

- 2 x Safety Relays, 24VDC 8A (Normally open, in series)
- Audible Alarm of Regen Valves Tripped

### INTERNAL DIAGNOSTIC PORT:

- Monitor depth and ROC depth values
- Set alarm limits

## Specifications:

- ELECTRICAL
  - Primary and backup power inputs
  - Supply Voltage 24VDC
  - Supply Current 130mA
- MECHANICAL
  - 304 Stainless Steel Enclosure, IP66
  - 300mm wide x 200mm high (front panel)
  - 92mm deep (excl fixings)
  - Weight approx. 4Kg
- ENVIRONMENTAL
  - Operating Temperature:
    - $0^{\circ}\text{C}$  to  $40^{\circ}\text{C}$  (for sensor accuracy)
  - Storage Temperature:
    - $-10^{\circ}\text{C}$  to  $70^{\circ}\text{C}$
  - Operating Humidity:
    - 0%RH to 90%RH (non-condensing)



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