

M - Mechanical, Structure and Furniture (INTERLOCKING MECHANISM)

DESCRIPTION:

The Interlocking Mechanism is a safety device intended to protect any pressure vessel subject to be opened during routine operation procedures - this also includes soda lime pots, food and material locks, and diving bell mating clamps.

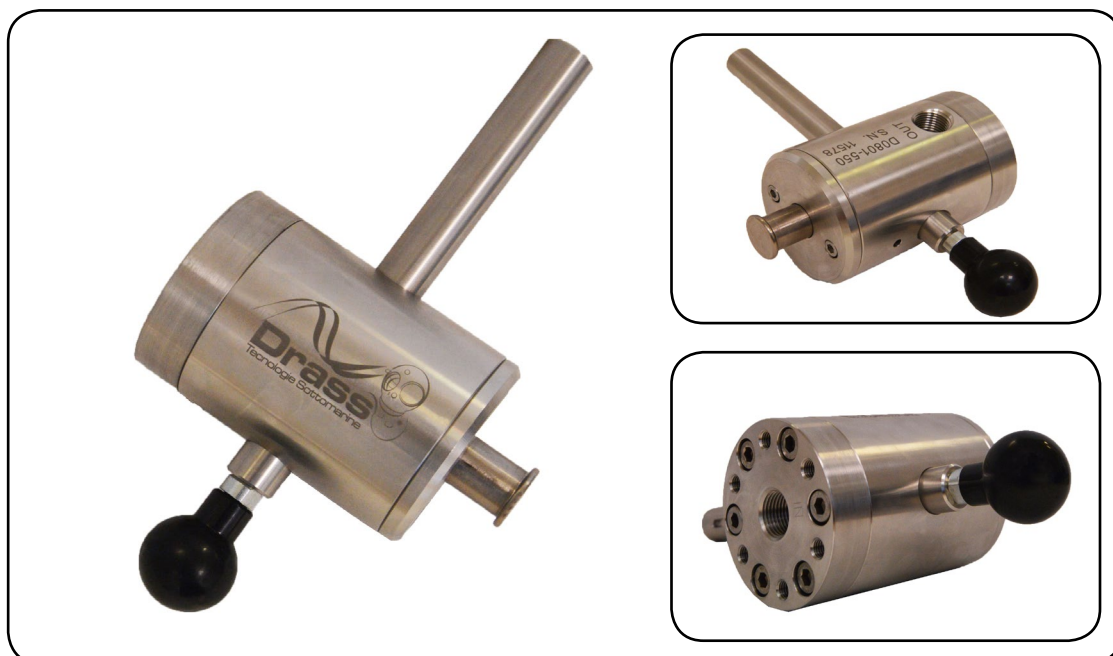
The requirement for such a device is present in all regulations and guidelines, including DNV-GL, IMCA, Norsok, etc. According to safety standards, this safety device has to be completely pneumatic – electric or electronic components are not allowed.

The scope of the interlocking mechanism is twofold: firstly it prevents the opening of the pressure vessel in the event an unsafe pressure is present inside the vessel; secondly it prevents the pressurization of the vessel until it is fully closed and the interlocking mechanism is engaged.

Drass R&D introduce this new interlocking mechanism following rigorous safety evaluations and approval from DNV-GL, and also in conformity to IMCA and Norsok standards. This Interlocking Mechanism is suitable for installation to secure any pressure vessel. It is constructed of stainless steel and composed of an inlet port, an outlet port and a vent.

The working principle is the following:

When the interlock is not fully engaged, the inlet port is closed, while the outlet port is open to ensure that any residual pressure in the vessel is discharged. The discharge of residual gas is accompanied by an audible noise, useful for operators to be informed about such event.



DESCRIPTION	COMMERCIAL CODE
Interlocking Mechanism with 70 bar working pressure, applicable to DDC (on Food and Material Locks), part of the ECU, of the Diving Bell Mating Clamp, and of the SPHL Mating Clamp	97CM-06-01-01-00-00

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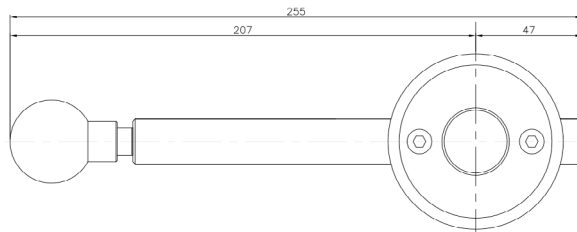


Figure 1 - Top view, not engaged

To engage the interlocking mechanism, the shaft is pushed in by means of the knob.

When the interlock is fully engaged, and the vent closed, the inlet port is connected with the outlet port, enabling the pressurization of the vessel.

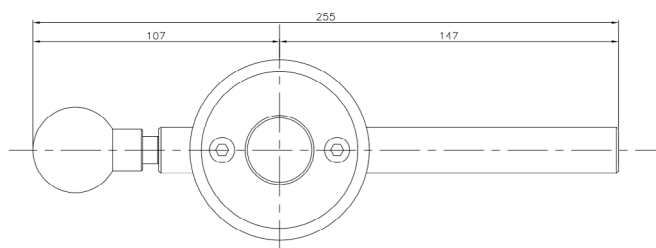


Figure 2 - Top view, fully engaged

To disengage the interlocking mechanism the central hole is pushed. When the pressure of the vessel is lower than 2 MSW (0.2 bar), the interlocking mechanism is disengaged by using the knob to pull out the shaft. Conversely, when the pressure is greater than 2 MSW, it is physically impossible to disengage the interlocking, because the shaft will remain blocked in its engaged position.

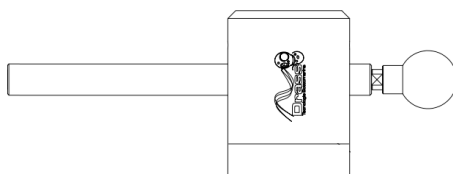


Figure 3 - Side view, fully engaged

Working pressure is 70 bar, while test pressure is 1.5 times more (105 bar). The interlock can be installed in any position, by means of the 6 M8 holes present on the bottom part of the body. Each interlocking mechanism has its own serial number and is individually tested both for pressure and for correct functionality.