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# Information about the cylinder

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## Cylinder provided with Snowpulse "Life Bag"

Snowpulse product are proposed with two differents cylinder:

- A cylinder for Europe, having a work pressure of 300 bar (=4350 PSI) and a volume of 0,25 Liter. This one is authorized only in Europe (in accordance to ADR legislation) and has the Pi marking (evidence that the cylinder is certified for Europe).
- A cylinder for other countries and provided with any bag sold in America. This cylinder has a work pressure of 207 bar (=3000PSI) and a volume of 0,36 Liter. This cylinder has also the Transport Canada (TC), Departement Of Transport (DOT), and Pi marking which means that this cylinder is allowed on USA + Canada + Europe Teritory. Snowpulse is the only airbag manufacturer that proposes a cartridge allowed in all this countries!

## Working pressure

The work pressure of your cartridge is marked on it. The Snowpulse "Life Bag" is designed to work at temperatures between -30 C and + 50C. The pressure gauge on the top of the cylinder allows you to simply and continuously monitor the cylinder pressure. To function properly the cylinder is designed to be filled at  $20^{\circ}$ C (=  $68^{\circ}$ F), at which point the gauge needle should be in the "green" zone. At very cold temperatures the pressure needle will remain in the "blue" zone, and at high temperatures within the "red" zone,

A cylinder with a pressure of 3'000 PSI (American Cylinder) or 300 bar (European Cylinder) at a temperature of 20°C will ensure proper inflation of the airbag for temperature range of -30°C +50°C. A pressure below at 20°C will result in incomplete inflation of the airbag and will not provide the user any protection. Variations in temperature will change the pressure of the cylinder. At cold temperatures, it's normal that the gauge needle is in the blue area indicating a pressure lower than that checked at 20°C. This does not alter the function of the airbag.

Do not use if the pressure is over 3100 PSI (American Cylinder) or 310 BAR (European Cylinder) at 20°C as it could damage the system and injure the user.



## 3. Cylinder Exchange/Refill

After your «Life Bag» has been deployed the cylinder will need to be refilled. You can have your cylinder refilled or exchanged for a full one at several Snowpulse retailers and at specific dive shops throughout North America.

Only individuals/shops who have gone through the training with a Snowpulse representative are authorized to refill the Snowpulse cylinders. The training is available to all organizations, as well as individual customers. Once the training is completed the user will require a source of dry compressed air (compressor or scuba tank) and specific attachments to refill the Snowpulse cylinders.

The refill of the cartridge can be a real added value for ski lodge or associations as it allow them to train their teams or their customers on a regular basis without expensive costs.

#### 4. Cylinder transport

For any shipment, the 2 yellow thread protectors must be in place. The cylinder must always be shipped within the Snowpulse pack or in its original packaging. Air transport according to the International Air Transport Association (IATA)

- Transport of a Snowpulse airbag with a European (300 bar) cylinder under pressure is allowed for private purpose but it is required that you declare the «Life Bag» before checkin. (norm OACI under the description of « Avalanche Rescue Backpack » reference: IATADGR. Table. 2.3. A). Despite air transport of the European cylinder is allowed regarding the IATA worldwide regulation, you must follow the regulation of your country; the European cylinder is for example not allowed in Canada nor USA. Following status of the regulation in 2008, the "Life Bag" with a full European cylinder is accepted for air transport in all Europe
- Transport of a Snowpulse airbag with an American (3000 PSI) cylinder under pressure is regulated and is allowed only for transport linked to rescue missions (and that for any country). Only in Canada the transportation of a Snowpulse «Life Bag» with the American Cartridge is allowed for air transportation as the system is classify as UN2990 LIFE-SAVING APPLIANCES, SELFINFLATING. This includes heli-skiing activities.

In all cases it is always possible to empty the cylinder by triggering the airbag. Never try to empty a cylinder by any other means than deploying the «Life Bag» using the trigger handle. Transport of an empty cylinder is not regulated.

#### 5. Cylinder shipment

Freight companies must be made aware of the content of your shipment. It is your responsibility to respect the regulations within your country. In most cases it is required that if you are shipping a full cylinder it must properly labelled as a dangerous good. Below is a list of information which your carrier may require.

Snowpulse cylinders are a dangerous good according to the European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR).

ONU official number: UN 1002

Official designation: Compressed air, 2,

Official label: 2.2 Classification: 2

Small quantity notification: Exemption: Transport not

overpassing free limits described in chapter 1.1.3.6".