

**Manual of use and maintenance
Cylindricone MID
Cylindricone KOB**



Section 1

Guarantee and serial number

Comelli S.r.l. warrants for two years from date of purchase by the original consumer the free replacement of parts and components proved to be defective in the following device:

Cylindricone serial nr..... purchase date...../..../ 20 reseller.....

In this case the labor is charged to the Comelli srl, shipment costs are charged to the purchaser. The above guarantee shall be decay if the device has been removed or tampered with by unauthorized personnel and where they have been done wrong or improper use and / or maintenance.

The guarantee for the duration of the air charge is one year.

The Comelli srl exempts from any damage caused to persons or things to use and misuse of the device.

Purchaser and user of the device makes it obligatory to knowledge of this booklet and to strictly follow the indications given.

Comelli srl require to receive data about the user in order to ensure maximum availability, photocopying or cutting out this coupon and send it to Comelli srl. , Via Montanara 101 / A, 43124 Parma Tel. 0521-968650, by mail, by e-mail: giordano@comellisrl.com, communicating by telephone or the requested data.

In the case of sale or exchange of the device, data from the new owner must likewise reach the Comelli srl. : Attached any coupon can be cut.

3rd owner

Full Name.....

Address:

City Province Country.....

Tel..... Mobile..... e-mail

2nd owner

Full.Name.....

address:

City Province Country.....

Tel..... Mobile..... e-mail

1st owner

Full

Name.....

address:

City Province Country.....

Tel..... Mobile..... e-mail

Section 2

Drawings and legend

Section 3

Description and Operation

Subject:

Cylindricone is a launching device pneumatic or manual of emergency parachutes for paragliding, small trike. In the releases Cylindricone MID and Cylindricone KOB have been increased the capacity of the container of the parachute increasing the diameter to 160 and 152 mm, respectively.

Description

The device has been designed to present a reduced danger to the ground, as accidental operation involves the launch of the parachute contained in a compressed fabric bag and not the launch of weights or rockets. The dynamics of the launch is expulsive (all the parachute is thrown with force away from the pilot, distention of sail begins only when the rope is already in tension) and the launch is not extractive (the parachute begins to lie from the apical foramen very close to the aircraft). In almost all cases the pneumatic launch system is more advantageous for speed and power of the manual launch of the emergency

Pneumatic operation

In case of necessity of use of the device grasp the operating handle and pull thoroughly for a stroke of 10 cm. This requires an effort of about 6 kg . If you pull the handle a little laterally, such effort can be greatly reduced. The rapid emptying of the cylinder loaded with compressed air at 160 bar inflates instantly a fabric bellows that gives a powerful and progressive boost to the entire parachute that quickly stretching and putting immediately in a position to "get some air" and it swells. In the first centimeters of stroke of the moving parts , the thrust of the parachute breaks the elastic loops at the muzzle and accelerates the parachute throw.

Manual launch (if required)

The presence of the device leaves intact the possibility of the manual launching of emergency. Manual actuation means pull the traditional handle on the head of the pack at the muzzle of the Cylindricone as long as you the three plastic plugs take off, keep to pull the drive in a robust way until the pack remaining totally escapes hanging on the hand by a bond of approximately 40 cm, then launch the package in the appropriate direction.

The manual launch can be suppressed during assembly, putting a stop to the pins without hand grip.

Pressure gauge

The device is equipped with a pressure gauge to check the charge of the cylinder before each flight. The reading of the pressure gauge must be between 120 and 180 bar; lower readings signify loss of air: in this case the device is no longer suitable for use and must be sent back immediately to the Comelli srl , which until a year from the sale or the last revision, accepts the cost of replacing seals or defective parts and recharging. The service is carriage forward: the cost of shipping is paid by the customer.

Readings that oscillate depending on the environmental temperature also of 20 bar are normal, and indeed testify to the proper functioning of the pressure gauge.

The red breech of the Cylindricone has in its rear central part a transparent surface tat can be inspected: by this it is possible to verify by matching with reference signs the state of the turntable rotation steel and then that the device is unchanged.

Inadvertent or accidental firing

In relation to the possibility of accidental launches of the parachute, we drawn the attention of the user of this equipment to the fact that in all phases of flight, but most of all of take-off, the utmost care must be taken not to implement postures and behaviors which may have the effect of forcing and unseat from the seat the handle of the pneumatic launch.

The shape and texture of the handle are appropriate for the hand grip and are instead elusive for an accidental hooking, "as the annular handles could be". The color and visible location should help to determine the quickest and easiest operation possible

Features:

- Weight device = 2,5 Kg
- Outside Diameter MID = 160 mm
- Outside Diameter KOB = 152 mm
- Charging pressure = 160 bar
- Volume of air charge = 45 cc
- Total length of small size = 35 cm
- Total length of medium size = 40 cm
- Total length of big sizes = 45 cm

Sails of emergency

In Cylindricone MID and KOB is possible to install in the sails of the manufacturers on the market.

In the case of PD30 Paradelta sail is approved to a maximum weight of 100 kg, the rate of fall of paraglider usually 5.5 m/s.

In the case of PD37 Paradelta sail is approved to a maximum weight of 130 kg, the rate of fall of paraglider usually 5.5 m/s.

In the case of PD45 Paradelta sail is recommended by the manufacturer for the maximum weight two-seater paraglider of 190 kg at the rate of fall around 6m / s.

For flights with paramotor and small trike the drop rate can reach 7-7.5 m / s with significant extension of the maximum load values : up to 115 kg for PD30, up to 160 kg for PD37 and up to 220 kg for PD45.

Total length of small size	35 cm	Paradelta sail PD30 suitable for 115Kg
Total length of medium size	40 cm	Paradelta sail PD37 suitable for 160Kg
Total length of big sizes	45 cm	Paradelta sail PD45 suitable for 220Kg

The size of sail that we could be put in the different measures of sheath depends also on the bridle length and volume.

Section 4

Location of the device

Installation

The sheath of Cylindricone must be fixed with the specific tapes or bands onto a suitable part in the direction adapted to the dynamics of the flight and of the aircraft.

The operating handle will be located conveniently and accessible. There are different lengths of the Bowden cable, with measurements every 10-12.5 cm. Strings of Velcro are available for fastener float longitudinally along the harness straps.

Section 5

Service

The device must be inspect in the mechanical part by Comelli srl within the period of 3 years. On that occasion, the air seals are replaced and the device is controlled in all its parts. Unquestionable replacements or improvements can be made by Comelli srl in order to keep all Cylindricone updated to the latest dictates of security and reliability. This one has got advantageously an impact on the resale value which is reviewed and updated at any time.

Section 6

Folding

It is possible repacking the parachute without affecting on pneumatic launch device.

It can be performed by qualified personnel with the use of the booklet with a special equipment of pressing and with the permission of Comelli srl.

Section 7

Maintenance

In cases of heavy fall on Cylindricone, it must be inspected by checking that you have not damaged anything and in particular the sheath of plastic material: this must be done by removing the launcher and checking that there are no cracks even practicing severe pressure. We have to make sure that the tapes and the elements responsible for fixing them have maintained their integrity.

The device does not fear the heat, much less warming due to sun exposure: the most sensitive parts at high temperatures are the synthetic fabric of parachute.

No special maintenance is required only the observance of time limits for inspection.

The verification of the charge gauge before each flight according to the specifications in Section Description and Operation , assures you of the charge of the cylinder. The device must not be removed in any part of it, nor operated without authorization and instructions of the manufacturer

Section 8

Flights by plane

With regard to boarding Cylindricone on scheduled flights and others, there is no technical problem. Pressurization more or less "thrust" affects a fraction of a unit of atmospheric pressure, while the loaded cylinder is tested to 700 bar. In any case, the air volume is 45 cc and the operation of the parachute does not develop devastating impact. If you found that technology and security on the one hand and on the other bureaucracy can not get along with, the best way to discharge Cylindricone is disassemble the red breech, unscrewing the five Phillips-head screws, unscrew counterclockwise the pressure gauge and when the 'air begins to come out, stop turning and wait for the complete emptying

Section 9

Legend

It requires the users of Cylindricone reading this booklet.

- Section1 Guarantee, serial number and availability
- Section 2 Drawings and legend
- Section 3 Operation and description
- Section 4 Location
- Section 5 Revision
- Section 6 Folding
- Section 8 Flights by plane
- Section 9 Legend