



BREATHING APPARATUSES

DIABLO ADVANCED



DIABLO range is enriched by the **ADVANCED** apparatus which, besides introducing highly innovative elements, resumes in one single model all the best key features of the previous ones. Based on the requirements of the latest revision of EN 137, **DIABLO ADVANCED** is certified and available in Type 1 version, for general use, and in Type 2 version, which positively passed the flashover test. Such test based on a heat and flame exposure of the complete apparatus for 10 seconds at 900°, followed by a drop. During and after the test the apparatus shall continue to work granting positive pressure inside the mask and being self extinguishing. Diablo Advanced Type 1 is available with ATEX approval.

CERTIFICATIONS:

- EC Certified according to Article 10 of 89/686/EEC PPE Directive
- EC Certified according to 2014/68/UE PED Directive

FUNCTIONAL COMPONENTS

- The **back pack** consists of an anatomic plate made of self extinguishing synthetic resin, light and robust thanks to the fibre glass reinforcement. The carefully designed shape allows to fit all the below listed cylinders which are firmly locked by a quick action buckle. Two practical handles are present on both sides to allow both for easy transportation and to shelter the medium and high pressure hoses inside. The pressure reducer is locked as to make easy and fast the connection of the cylinder. It is also designed to download the weight of the cylinder along the strain lines without imposing unnecessary stress on the pneumatic components of the pressure reducer. On the lower part of the back pack, a rubber edge protects the complete apparatus and particularly the cylinder valve.
- The **body harness** is a composite structure made of self extinguishing textile. The buckles are made both in metal and synthetic resin for an optimal balance between robustness, flame resistance and ease of adjustment. The padded shoulder webbings host internally the high and medium pressure hoses thus protecting them from heat flames and abrasion. The remaining parts of the hoses are protected as well by the handles of the back pack. The two shoulder webbings are linked on the chest by a strap and an adjustable buckle for an enhanced stability of the apparatus. The geometry of the back pack and the design of the harness allows to download correctly the weight to the legs through the basin, relieving the shoulders which otherwise would transfer it to the spine. In order to improve the comfort is also available, as an option, a padded belt to be added to the standard one.
- The **compensated C2000 pressure reducer** (patented), uses an active compensation principle exploiting the closing thrust of the main valve which has been tested on over hundred thousand pieces produced. A careful design of the internal parts allowed to minimize the dimensions thus reducing the air paths e related pressure losses resulting in an extremely fast response, a very slim medium pressure cycle and a very high stability also at maximal air demand. C2000 allows a free flow in excess of 1000 litres/minute (we remind that the average air consumption of a user under medium strain is assumed as 40 litres/minute). C2000 pressure reducer is fitted with an high pressure outlet for the pressure gauge and the warning whistle, and with a medium pressure outlet for the lung governed demand valve. Any access to internal components of C2000 pressure reducer as well as to adjustable parts are sealed in order to prevent and show unauthorised interventions. The main cover seal of the medium pressure setting is made in rubber in order to improve extreme temperature and humidity performance and it is locked by a stainless steel fastener anti tampering. Medium pressure hoses are hold in place by "U" shaped pins which allow for easy maintenance and free pivoting of the hoses during use. The pressure reducer is also equipped with an auxiliary warning device placed on the medium pressure safety valve which warns about malfunctions if any.
- The **chest pressure unit**, connected only to a light and flexible high pressure hose, reinforced by aramidic fibre, includes, besides the APR(auxiliary pressure reducer), also the pressure gauge and the warning device. The APR is additionally protected from potential malfunctions by an ASV (auxiliary safety valve).

- **The pressure gauge**, placed on the left side of the user and hooked to the shoulder webbing, is extremely thin, of innovative design and extra light, though effectively protected by a rubber shell.
- **The warning whistle** is of the dual stage type, i.e. it is driven by the high pressure but actuated by medium pressure. In addition it is equipped with the patented autotest feature which allows the automatic testing of the correct setting and operation. Usually, the check of the correct operation and setting of the warning device is a long and complex operation. With DIABLO it is sufficient just to open the cylinder valve and the test is performed automatically: a few seconds delay imposed to the first pressurization of the circuits and of the pressure gauge makes it easy to follow the rise of the needle on the dial. The pressure gauge will be efficient and correctly set if the whistle will be clear and loud as long as the needle is within the red sector of the dial and stops immediately after.
- **E400 lung governed demand valve** is of the first breath type i.e. it automatically switches from the stand-by mode (without any waist of air). In positive pressure mode it is able to deliver up to a respiratory demand in excess of 10 times the average air consumption needed during normal use and is characterized by a fast response and a smooth action. The energy required for breathing is given by the surface of the breathing cycle, which in the case of DIABLO is extremely small: the less this area is, the less the breathing strain results. The diagrams of the breathing cycles of DIABLO also shows, besides the limited energy required, also the regularity of the shape by varying the high pressure supply value. The optimal compensation of the pressure reducer and the perfect match with the demand valve allows this outstanding performance.
- **A quick coupling version** is also available. It allows an easy and fast connection/disconnection of the medium pressure hose between the pressure reducer side and the demand valve side.
- **E 400 Demand valve** is available both in the AP/A version, equipped with an M 45x3 standardized threaded connection to the mask, or in the ESA version equipped with a plug in system, also certified by the German Fire Fighters. The connection is obtained simply by pushing the demand valve into the mask connector until the typical "click" can be heard, while the disconnection, for safety reasons, requires the pressure on two stainless steel buttons. The accidental disconnection is furthermore prevented by the presence of two spring loaded plastic winglets which inhibit access to the steel buttons unless they are intentionally displaced. After connection a simple check by gently pull and rotation of the demand valve will confirm safe engagement. During use the demand valve will be free to pivot around its axis reaching the optimal orientation for increased comfort of the wearer.
- **C607 SP/A or SFERA SP/A** positive pressure full face masks available in EPDM or SILICONE versions, with standard thread or plug in connector.

CASCADE CONFIGURATIONS

- **DIABLO ADVANCED** is also available in three additional configurations, which allow the connection to a second outlet (*OUT*), or to an external air line system (*IN*), or both (*IN & OUT*). Namely:
 1. **OUT** configuration for the connection to a second outlet is achieved by a "T" connection which derives the medium pressure and ends with a quick coupling valve placed on the belt.
 2. **IN** configuration for the connection to an external compressed air source. In this case the "T" connector which derives the medium pressure, ends with a male connector, placed on the belt, equipped with a check valve to prevent air loss when disconnected.
 3. **IN & OUT** configuration consists of a medium pressure hose ending with a "T" connector equipped with a male coupling, fitted with a check valve, for the connection to an external compressed air source or large size cylinder(s) in addition to a quick coupling valve for the connection to a second outlet.
- The cylinder valve can be fitted with an auxiliary pressure gauge, constantly pressurised which informs at all times about the filling status of the cylinder.
- On demand, the cylinder valve is also available in the **Push and Turn** version which makes impossible both opening and shutting off in use and during handling or transportation of the cylinder.

CYLINDERS

DIABLO code numbers refer to the SCBA not including the cylinder. On demand, the available cylinders range is the following:

| CYLINDER CODE NUMBER | MATERIAL | WATER CAPACITY (LITRES) | FILLING PRESSURE (BAR) | AIR CAPACITY (LITRES) | AUTONOMY (MIN) ** |
|----------------------|--------------------------|-------------------------|------------------------|-----------------------|-------------------|
| 4200 0755/60 (1) | steel | 6 | 300 | 1800 | 45 |
| 4200 0775/80 (1) | steel | 7 | 200 | 1400 | 35 |
| 4200 0893/0892 (1) | composite (liner in PET) | 6,8 | 300 | 2000 | 50 |
| 4200 0897/0896 (1) | composite (liner in PET) | 9 | 300 | 2700 | 67 |

(1) versions with/without pressure gauge;

(**) with average consumption 40 l/min approx.

PRODUCT CODES*

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|-----------------|---|---------------|
| DIABLO ADVANCED | C 607 SP/A, DIN 300, without cylinder | Cod. 43429009 |
| DIABLO ADVANCED | C 607 SP/A, DIN 300, with secondary outlet, without cylinder | Cod. 43429011 |
| DIABLO ADVANCED | C 607 SP/A, DIN 300, with Plug-in, without cylinder | Cod. 43429058 |
| DIABLO ADVANCED | C 607 SP/A, DIN 300, with secondary outlet, without cylinder , ATEX | Cod. 43429016 |
| DIABLO ADVANCED | IDEA SP/A, DIN 300, without cylinder | Cod. 43520001 |
| DIABLO ADVANCED | IDEA SP/A, DIN 300, with secondary outlet, without cylinder | Cod. 43520002 |

* Here only a few configurations of Diablo Advanced included in our range. A look of the complete range is possible by downloading our price list from our website www.dpisekur.com.