

PROTECT

Catalogue
2024-'25



FEEL FREE
TO BREATHE

Breathe the future,
protect people,
produce innovation,
100% made in Europe.
For 50 years we have
dedicated ourselves
to only one thing:
your breathe.
Feel free to breathe.

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BLS MANIFESTO



We are specialists in respiratory protection, investing all our energies in the business. We were born in Italy in **1970** and we developed in Spain; today we are one of the largest producers in Europe and our goal is to become market leaders at international level. We promote **synergies** with partners in the industry who share our attention for innovation, for the use of BLS technology, who have implemented a vertical **integration** of production and distribution processes and believe in absolute transparency. We don't compromise on **quality**, because we know that **to breathe is to live**.

Protecting **people** is our core value. Our ethical commitment and our strict compliance of **safety** rules steer our work in every detail of the production and distribution chain. We believe that customers should be our constant object of attention and their voice is the first we want to listen to, in order to constantly improve our products. People are the foundation of our company: ideas and products emanate from their **creativity** and their experience constantly advances our **know-how**.

We offer solutions for respiratory protection for industrial, medical, military and urban environments. We generate **innovation** by engineering our own production machines. We are a boutique of the fourth industrial revolution based on **technological culture**, collaboration with universities, production automation and quality of relationships. We want each of our products to exceed customer expectations: we design and manufacture them according to top safety and **ergonomics** standards; we want them to be accurate and unique in every detail. We are a reliable, innovative and enthusiastic partner, because doing a great job is the best thing to offer.



BLS THE CHALLENGE



There are years that change lives of people and also of companies. For BLS, 2020 was one of those exceptional moments. The pandemic touched the heart of our work: the quality of breathing. It has sharpened its perception and amplified its echo: things have changed forever and we want to be actors in this change.

“As a company for professionals, we found ourselves at the centre of the market: producers of essential goods for all people.”

“In three months we have achieved the growth we had planned in three years, thanks to the research and automation that we had behind us”.

We were actors in the most critical phase of the emergency. During the first months of the pandemic, we tripled our production, doubled the number of employees and invested in new production lines in Italy and Spain. We donated over 40,000 masks, supplied over 100 European hospitals and gave technological support to the Italian Ministry of Defense to set up new production lines. We worked alongside the Civil Protection and the major Italian and European institutions for the supply of FFP2 and FFP3 masks.

“In three months we achieved the growth we had planned in three years, thanks to the research and automation that we had behind us.”

We want to be actors in the future and to protect people’s breath and air quality. Our products have found themselves at the centre of people’s interest and this makes us aware of the value of our work and the responsibility we have as a company. We want to be actors in our business by bringing product quality, innovation and research to our professional supply chain, but also by expanding the offer to a wider and increasingly aware audience.

“Our people felt they were at the forefront and their work was helping to save lives.”

We want to be actors of this cultural change by putting our skills at the disposal of institutions and communities to protect health and by helping to spread personal attitudes that are more attentive to the quality of one’s breath.

BLS ACHIEVEMENTS



When the whole world came to a standstill, we had to speed up. We were actors in the most critical phase of the emergency, but thanks to the prompt reaction of our people, who have always been the foundation of our company, we responded immediately to the hyperbolic increase of demands.

People made possible a change that was unthinkable few months earlier. Thanks only to the deep and shared **spirit of collaboration**, to the **technical expertise** and to the **sense of responsibility**, towards the company and the products we make, we have been able to transform BLS into the reality it is today.

Today, indeed, BLS is a more structured reality with a greater presence in Europe and a more complete range of products. We are among the leading companies in our sector, but we still maintain our **boutique company** soul based on technological culture, production automation, customer focus, product quality, innovation and research. In addition to a greater **social awareness** and corporate complexity, 2020 allowed us to develop new relationships and to forge links with new market partners, which we still

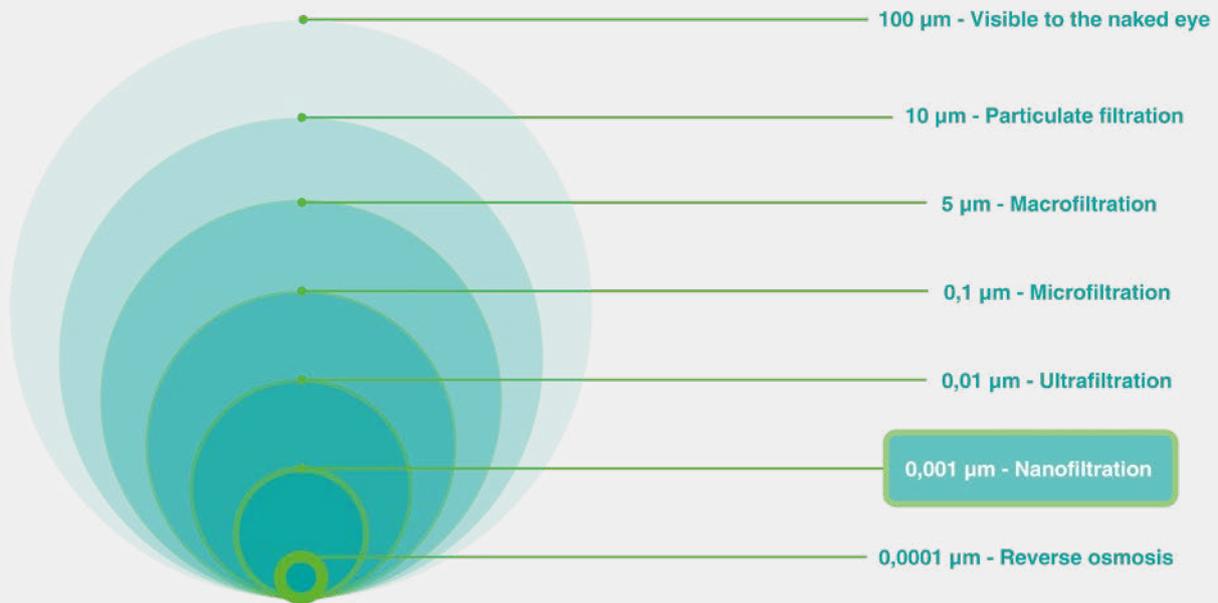
collaborate with today. Among the most important, there has been CONI (Italian National Olympic Committee), which has chosen BLS, as Italian company, to supply **customised FFP2 masks** to protect all the athletes of Italian national team and technical staff at the Tokyo 2020 and Beijing 2022 Olympics. The staff of the Italian Pavilion at Dubai Expo in 2021 also wore FFP2 Narvalo masks, manufactured by BLS and customised for this event.

Furthermore, BLS has become an official partner of **Yamaha Motor Racing** in 2022 and has supplied BLS 512 Yamaha special edition masks, meeting the criteria set by Dorna Sports and in line with YMR's safety standards and regulations. Our masks protected the riders Fabio Quartararo (MotoGP™ World Champion 2021 – Monster Energy Yamaha MotoGP

rider) and Franco Morbidelli (Monster Energy Yamaha MotoGP rider), as well as the entire Monster Energy Yamaha MotoGP Team and Yamaha corporate staff, who were present at the Grand Prix and were working at YMR's facilities, during the challenge to conquer the 2022 MotoGP championship.

The attention to the **quality** of breath has become fundamental in every aspect of people's lives, from work to sport, from community life to private life. This **awareness** is the legacy left to future generations by these difficult years, since breath is life.

NANO FILTRATION



NANOPARTICLES

Nanoparticles are a debating topic that has been discussed for years. They are generally identified as particles made of atomic or molecular aggregates with a diameter of approximately 1 to 100 nm. Sometimes the term is used to denote **ultrafine particles** (in particular the individual particles that make up nanopowders).

The use of nanoparticles in consumer goods is showing benefits and attracting investment, but it is also raising concerns because, under certain conditions, exposure to nanoparticles, being too small for our body's natural defences, can have negative effects on our health and on the environment.

Understanding how to assess these and, above all, how to take appropriate protective measures, has become of main importance here in BLS.

THE PROJECT: EPI4NANO

The **EPI4Nano** project, promoted by BLS and carried out over the two-years period 2021/2022 by the **Itene Research Institute**, based in Valencia (ES), had its main purpose in the development, optimisation and validation of specific BLS products for effective respiratory protection against nanoparticles, including carbon nanofibres and metal oxides. Studies have shown that some nanoparticles can penetrate cells and tissues, move through the body and brain, and cause biochemical damage. In particular, the small size of nanopowders allows them to behave in a way that can be described as intermediate between that of gases and the rest of suspended particulate matter.

For this reason, when one comes into contact with these materials or performs work that may cause their dispersion into the air, the use of appropriate respiratory protective equipment is essential.

Itene's study showed that the filtering materials of selected BLS devices (i.e. the BLS Zer0 and BLS Zer0 Flat series as filtering facepieces, as well as the BLS 8000next half-mask with integrated P3 filter, the BLS 401 P3 filter and the BLS 202 P3 filter as reusable products) **filter over 99% of these nanoparticles** – depending on the model and substance selected – and they are, as of today, the only ones on the market to have this certification. The final data were processed by obtaining the average particle concentration values in the test atmosphere before and after the filter and by establishing the difference in percentage terms.

Ever-evolving technological research creates new opportunities, new production processes and, inevitably, new dangers to our health.

For BLS, the EPI4Nano project was born precisely from this need: to defend our breath from one of the main emerging industrial risks of the last decade.

ABOUT US

BORN IN ITALY

MILAN, A CITY OF PRODUCERS

The business was established in **1970** in Milan, in the Bovisa district. Once an exclusively industrial area, today an urban fabric where sustainable construction, production laboratories, university campuses and cultural spaces mixed together. The Politecnico di Milano University, with which we collaborate in the research and creation of start-ups, is now based here. Here we started our production – initially disposable cup-shaped masks – and we have grown, always focusing on quality. As soon as the **CE mark** was introduced, in 1996, we were among the first manufacturers to obtain certification for our products.

BIG-HEARTED ENTREPRENEURS

At the beginning of the new millennium, in 2003, we broaden our offer to **reusable respiratory devices**: thanks to the acquisition of Tecnopro, an Italian manufacturer of full and half masks with 20 years of experience in the sector.

In 2010 we acquired a facility in Barcelona, specialised in the production of high performance filters, completing our product offer: **BLS Iberia** was born.

In 2012 we crossed the ocean and landed in Brazil. In order to follow and develop the South American market we established **BLS do Brasil** in Curitiba.

In 2017 we launched **BLS NorthWest** division in Rotterdam to follow the growing market of BeNeLux, UK and Ireland, to offer better service to our customers and to strengthen our commercial presence in the Northern European market.

In 2021 our group expanded to include **BLS France** and **BLS Germany**.

AN ENGINEER'S BRAIN

In 2014 we inaugurated the new Headquarter in Milan, with a touch of Milanese design and lots of technology. 5000 sqm. that allowed us to expand and optimize the production lines: the heart of our difference, which is based on internal **research** and continuous **innovation** of production processes. It is a business model that has

Operating in Milan since 1970, BLS is highly specialized in the production of negative pressure respiratory protection devices.



made us what we are today: a boutique of the fourth industrial revolution based on technological culture, collaboration with the university, automation of production and enhancement of human asset to offer a product that goes beyond customer expectations.

A NEW RESPONSIBILITY

We have grown in Italy and in the global market by offering products of the highest quality, certified and continuously innovated, for respiratory protection in the industrial, military and medical sectors. Today a new challenge arises. **Respiratory protection**, which previously involved only a few professional segments, is now at the centre of everyone's attention. This makes our work even more important and our **social responsibility** even more relevant. To this we dedicate all our energies.



ABOUT US

A EUROPEAN STORY



Our products follow a long path of growth before they reach us. They are born from research, they go through the development phase, they pass the quality and comfort tests, they make a leap into the University, they stimulate us to invent and engineer new processes. Even when they arrive at their destination, we do not leave them alone: we are always there, by your side.

RESEARCH AND DEVELOPMENT

Innovating is a process that leads to explore new materials, new forms of aggregation, to experiment their use and find effective technological solutions to create the best possible products. Those who work using our products must feel safe and comfortable.

BLS' long industrial tradition has always been synonymous of the ability to innovate, the quality of our products and the strength of the brand. All these elements have made the company one of the lead-

ing global operators in the sector, with an experience of **over 50 years** in respiratory protection. The R&D philosophy adopted by BLS allows its products to achieve very high **performance** in terms of safety and comfort.

INDUSTRY AND UNIVERSITY

BLS has always firmly believed in the collaboration between the academic world and the productive world.

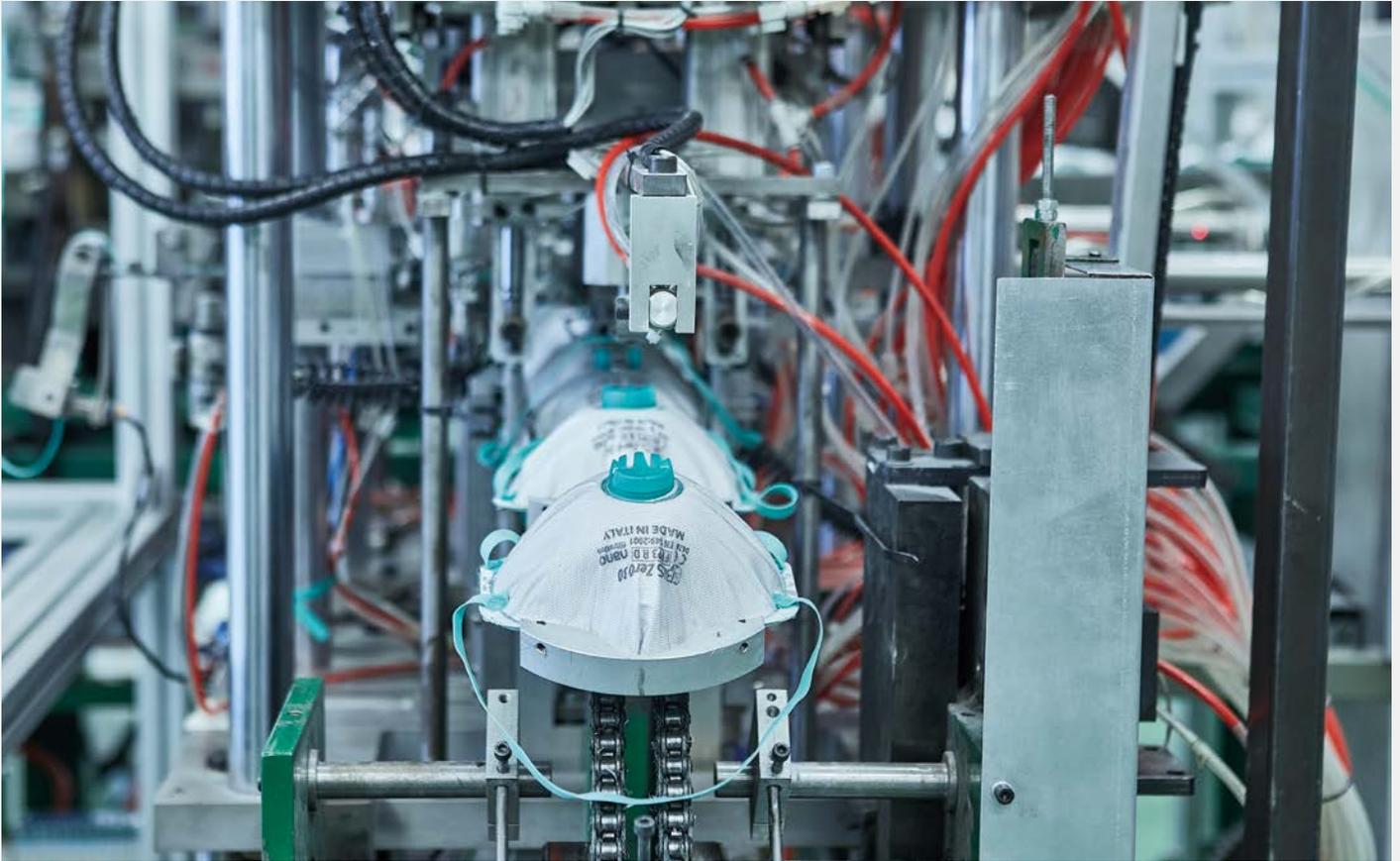
The relationship between the company and the universities triggers **virtuous pro-**

cesses for the benefit of education and economic growth. To make its most innovative projects concrete and to improve its products, BLS has created a dense network of collaborations with numerous university departments, including the Politecnico di Milano and the University of Rome, which represent excellence at international level.

PROTECTION AND COMFORT

BLS products aim to provide maximum **protection** without sacrificing **comfort**.

BLS has always been at the forefront both in the design and production of its products and in respect of the environment.



Each of our products is designed to provide, in addition to absolute safety in line with all the most stringent regulations in force, absolute comfort. The design of the shape, the ergonomics, the research of materials are essential concepts of BLS quality.

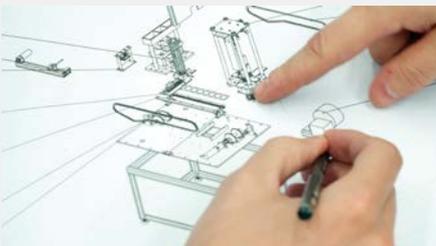
tion of the internal technical personnel, it also differs in the design and **proprietary production** of the machinery, thus being able to count on highly automated and controlled production lines.

PRODUCTION AND AUTOMATION

Strong investments in **process automation** and careful selection of raw materials make the Barcelona plant, BLS group second production site, an innovation laboratory. Here, as in the other factories, automation allows you to optimize production flows, guaranteeing excellence in production and the control of the entire process.

QUALITY AND TEST LAB

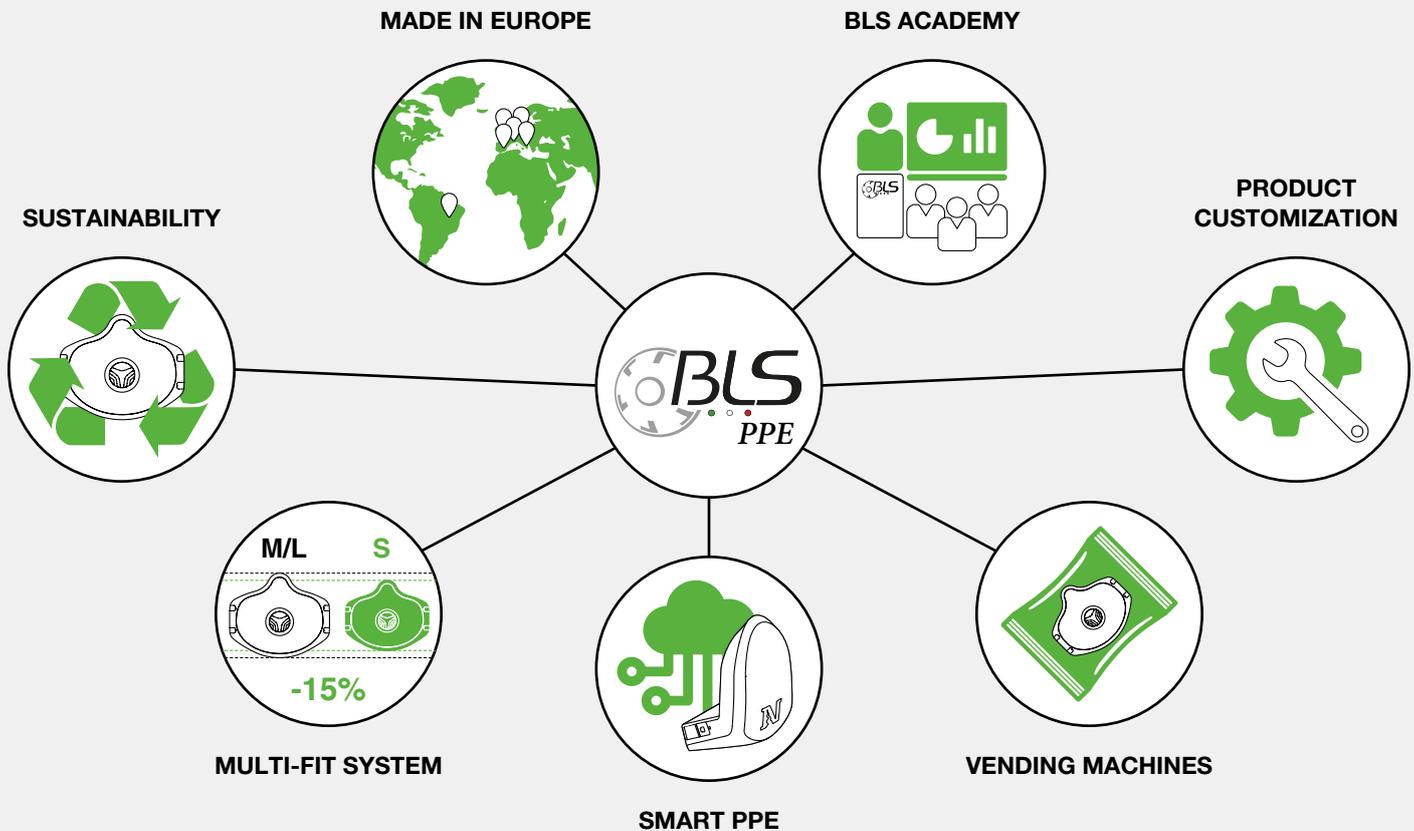
BLS, thanks to sophisticated equipment, constantly monitors the **quality** of its products, from raw materials to the final product, respecting the requirements established by the new EU Regulation 2016/425.



ENGINEERING

BLS designs, develops and produces all its products internally, taking care of the entire production process, from concept to shipment. Thanks to a high specialisa-

THE NEW TRENDS



Rapid global change over the past few years has compelled the formation of new trends and orientations, many of which pervade our daily lives and have significant implications for workplace prevention and safety.

There are a number of new themes that are starting to take shape, some of which are more established while others are still in their early stages. Consider the **reshoring** phenomenon, for instance. In the 1980s, we saw a rush on the part of many businesses to relocate or outsource their manufacturing to Asia and use Asian suppliers in an effort to substantially cut production costs. However, due to a number of market disruptions as pandemics and dramatic increases in transportation costs, there is now a need to shorten production and supply chains in order to reduce any issues with the availability of raw materials and speed up manufacturing processes. In order to guarantee

continuity and certainty of supply to its customers, BLS has always favoured Europe as the location of its production sites, using exclusively European suppliers.

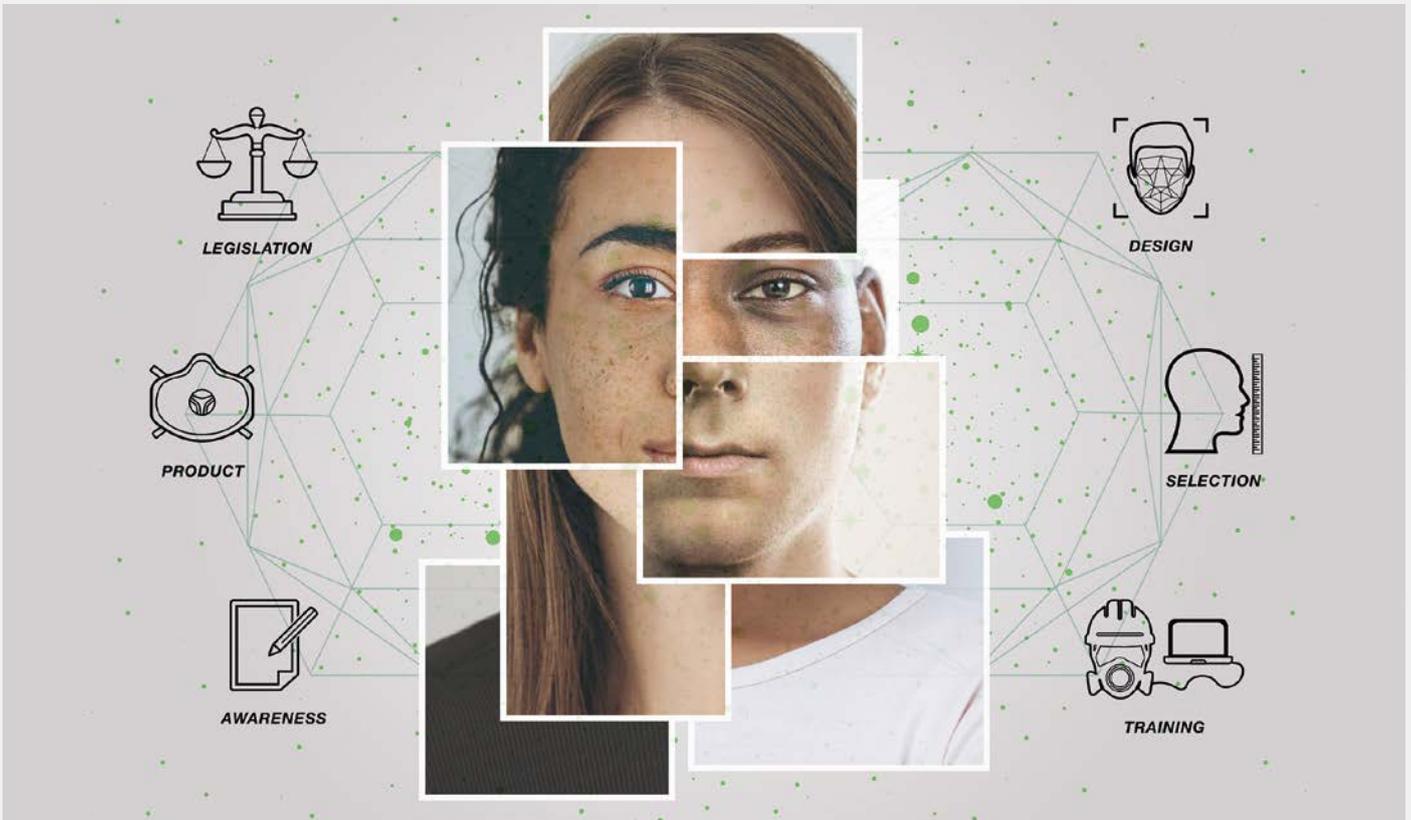
Sustainability: for many, sustainability is a trend, for BLS, it is a standard to be committed to. In fact, in order to reduce waste, our engineers and designers assess each material at the earliest stages of product design, not only in terms of performance requirements but also in terms of its degree of recyclability or, where this aspect is not currently relevant, its durability.

The idea of **smart PPE** is another trend that has been developing in the PPE industry for a while and is expected to have widespread adoption. IoT and personal protective equipment work to move the focus away from protection towards prevention, in order to transform how people perceive safety. Although there are still

gaps in the law and regulations that need to be filled, PPE is becoming more active and aims to provide the operator with greater comfort while also giving the safety manager access to data that will make it easier to monitor and evaluate how well the PPE is being used.

For a long time, PPE manufacturers have concentrated their efforts on developing "universal" products that could be used by all users. In reality, we have come to the conclusion that one piece of PPE, no matter how carefully designed and shaped, is very unlikely to fit a wide array of facial conformations in a multi-ethnic working environment with a large female presence. BLS **multi-fit system** concept reflects our focus on offering as many products as possible in various sizes to ensure comfort and great fit on all faces.

Finally, let's not forget that for years now many industrial sites have chosen



vending machines as the method of dispensing PPE to their employees. The automatic distribution of the devices entails special attention to hygiene requirements, which must be respected both by those who load the machines and by the user who picks up the product and does not necessarily use it immediately. Always at-

tentive to this aspect, BLS offers almost all of its products, including disposable ones, in practical and hygienic single packs.

Therefore, ensuring optimal **comfort** for individuals who will use the product is now the primary goal in the production

of personal protective equipment, with a focus on its sustainability. All of the aforementioned trends are pointing in this direction and BLS is a supporter of it.



BLS INNOVATION



NEW BLS TECHNOLOGIES

Quality and innovation are the heart of the path that BLS has taken over time. Indeed, BLS has always placed the quality of its products at the top of its scale of values, aware of the importance they have in protecting people, choosing always market partners who share and respect these values at every stage of their production chain.

The protection of people is the value that inspires us and why we continue to invest in **research and development** in order to find progressive solutions to meet or anticipate the increasingly evolved needs in terms of safety and sustainability.

What makes BLS different is the **autonomy** in engineering and managing its production machinery, thanks to its historical experience and the technology behind the automation of in-house production. The collaboration with some of Italy's leading universities, including foremost the Milan Polytechnic and the Biomedical Campus in Rome, has contributed also to the formation of an in-house R&D department,

which has actualized the most innovative projects and it constantly improves the performance of our products.

Maximum protection, design and new generation technology are the goals behind '**Narvalo**' start-up: a spin-off of the Politecnico di Milano, incubated in PoliHub and institutional participant of Fondazione Politecnico di Milano, which combines know-how, design and Made in Italy manufacturing.

Narvalo project, which BLS believes in from its beginning, was born in 2018 on the desks of the School of Design of Politecnico di Milano from the idea of the young designer of Dutch origin, Ewoud Westerduin, together with Venanzio Arquilla, Professor of the Department of Design. The goal was to design a protective mask for smog and other urban pollutants with a filtering capacity superior to a standard FFP3, with Made in Italy design and production, and with an **integrated IoT technology** capable of dialogue with a dedicated app that monitors simultaneously both the user's respiratory perfor-

mance and the quality of the surrounding air, building a **connected ecosystem**.

Since the academic stage, the project attracts institutional partners and it is incubated in the POLIHUB as part of the Switch2Product initiative: the programme that enhances innovative solutions, new technologies and business ideas proposed by students, researchers and lecturers of Politecnico di Milano (which Narvalo is one of the winners in the 2018 edition) and that navigates the POLIMI innovation system. Ewoud is also selected as "Talent in residence" in POLIFACTORY, the Makerspace and Fablab of the Politecnico di Milano, where the first prototypes are made using various digital fabrication technologies. The project thus concretely interprets the Third Mission of the Politecnico di Milano, which aims to support the social, economic and cultural development of its area of reference: Bovisiana district.



THE FIRST IoT MASK (Internet of Things)

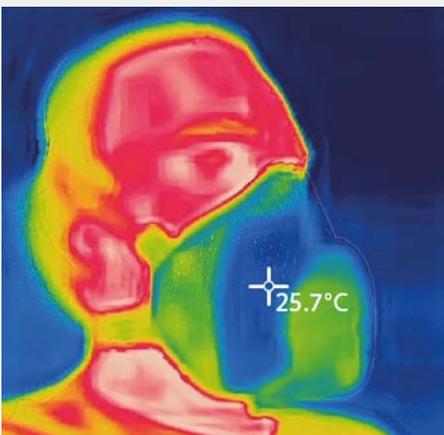
BLS has always been convinced of the value of **collaboration between the academic and manufacturing worlds** so much to include in its own ranks some of the young minds that have developed innovative university projects, decides to support Narvalo in the development of air filtration aspects, on the base of its strong experience over 50 years in the field.

Narvalo wants to revolutionise the way of conceiving respiratory protection devices by raising awareness among an ever-widening public about the issues of air quality and the impact it has on their breathing and health, ensuring urban commuters a unique breathing experience: **maximum comfort** and, at the same time, the best filtering protection available thanks to **innovative technologies**.

Narvalo Urban Mask with **Active Shield** derives from this ambitious purpose as the first IoT mask that integrates **protec-**

tion, versatility, design and technology. The proprietary and **patented** Active Shield device integrates a smart fan with an adaptive speed (based on the user's respiratory frequency), capable of constantly optimising the flow of air inside the mask by reducing the accumulation of heat and humidity, through the latest generation of **on-board sensors** capable of highlighting important data on respiratory performance and communicating directly (thanks to a **dedicated app**) with the smartphone.

The collaboration with Narvalo, which is more related to the consumer world, allows BLS to open up new scenarios for the industrial world as well, by implementing its product range with models compatible with the new technology developed by Narvalo, once again confirming itself as a pioneer of innovative products and virtuous processes.



BLS SUSTAINABILITY



We have to think about the future of our planet in order to keep breathing clean air. The circular economy, as a **model of production and consumption**, aims to extend the life cycle of products, trying to generate additional value by **reusing materials and products** that would have ended their life cycle.

The **reduction of product-life-related CO2** is the first step on a path towards sustainability for BLS, which has always been involved in respiratory protection. In order to contain CO2 emissions, it is useful to improve the production and logistical processes of each company.

One of our priorities is also the optimisation of products, materials and resources through the use of **recycled material**, minimising waste and scrap. We are currently working to develop new solutions for **innovative management of the raw materials** used in the production of disposable PPE (disposables).

BLS CIRCULAR ECOSYSTEM

'BLS Circular Eco System' project comes to life in the university lecture halls of the Politecnico di Milano. The design cues, indeed, come from a master's thesis in Integrated Product Design with a focus on the Circular Economy. The thesis aims at the **virtuous management of waste materials** generated by BLS in order to achieve their revalorisation in its own or other supply chains. The challenge is, therefore, to optimise business processes and the resources employed by progressing towards product management from design to end-of-life. Today, BLS is already working to reduce emissions related to scrap disposal and to feed production chains capable of converting scrap materials into secondary raw materials.

BLS's commitment to the development of a **circular supply chain** touches many aspects of the production process:

- use of regenerated compounds dedicated to in-house prototyping;
- processing of scrap for the production of compounds to be used for moulding rigid components in disposable masks;

- use of raw materials with a percentage of regenerated material;
- use of packaging and instructions with regenerated paper and cardboard.

Regione Lombardia has also believed in the company's project, awarding it as part of the 'Innovation of Circular Economy Chains in Lombardia 2021' tender.

Innovation and sustainability in all the company's choices: from the selection of suppliers, giving preference to those who use **regenerated material** in production, to **logistics optimisation** in serving European customers. In terms of transport emissions, in fact, the choice of suppliers in areas close to BLS's corporate reality represents the best compromise between emissions, distance travelled and delivery times, to the benefit of the environment and service.

OUR SERVICES

Thanks to the fully European production of all BLS products, both disposable and reusable, EUR1 movement certificate can be requested.



CONSULTING

We help you choosing the most suitable mask for your job

Consultancy service to support customers in choosing the most suitable protection device based on the activity performed and the contaminant they come into contact with. BLS responds to customer requests in a professional, precise and timely manner in 6 languages. BLS exports its products in over 60 countries.



FIT TEST

Test your mask to check its compatibility with your face

Validation service through quantitative fit test of PPE for respiratory protection. The quantitative fit test is used to evaluate the degree of compatibility between a specific protection device and the user's face. The test is carried out with a particle counter which allows to obtain the numerical value corresponding to the seal factor of the used PPE. On request, a qualitative fit test service is also available.



TRAINING

Learn about PPE and you will increase the safety of your company

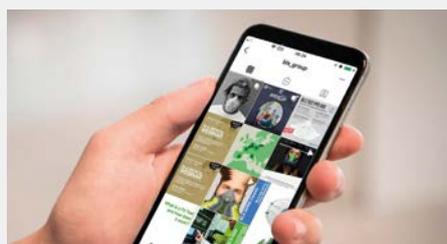
The course responds to what is required in terms of training on the correct use of PPE for the protection of the respiratory tract. Classroom activity can be integrated with specific training through fit test done in "live" mode on each course participant. At the end of the course a certificate of attendance will be issued for each participant.



MAINTENANCE

A well-fitted mask increases your safety

Training course on the maintenance of BLS full face masks. The course provides complete training on the operations necessary for the revision, disassembly, replacement and reassembly of the components. At the end of the course a certificate of attendance will be issued for each participant.



SOCIAL

Where to always find the latest updates and videos of our products

Our social channels are also an information and training tool. In addition to the latest updates of the group's activities, you will find product videos, explanatory maintenance and donning instructions videos, full videos of our webinars and much more. Follow us on all platforms.

PROTECTION FROM DUST, MISTS AND FUMES

DUSTS are formed when a solid material is decomposed into tiny fragments.

MISTS are tiny droplets that are formed from liquid materials through condensation and atomization processes.

FUMES are formed when a solid material (e.g.: a metal) is vaporized through high temperature. The vapour cools quickly and condenses into extremely fine particles.

The term **PARTICULATE** commonly identifies the collection of these solid particles in the air.

There are two families of products for protection against particulates:

A) FILTERING FACEPIECES, indicated with “FFP”; EN 149 standard.

B) FILTERS (for half or full face masks), indicated with “P” (associated with the color white); EN 143 and EN 14387 standard.

In reference to the protection from particulates, the legislation confers an increased protection with the increase of the filtering efficiency: FFP1, FFP2, FFP3 / P1, P2, P3.

MINIMUM FILTERING EFFICIENCY

EN 149		EN 143	
FFP1	80%	P1	80%
FFP2	94%	P2	94%
FFP3	99%	P3	99,95%

CLASS OF PROTECTION

The European Standard EN 529:2005 shows how to select the correct breathing apparatus based on the risk assessment.

An important distinction concerns the **nominal protection factor (NPF)** and the **assigned protection factor (APF)**.

The nominal protection factor (NPF) is a number derived from the maximum percentage of total loss (towards the inside of the breathing apparatus) allowed by European standards. The assigned protection factor (APF) is the level of respiratory protection that one can realistically expect in the workplace by 95% of

the PPE users. Furthermore, an important reference for choosing the breathing apparatus is the **threshold limit value (TLV)**, or rather the “exposure limit value”, which indicates the environmental concentrations of airborne chemicals below which most workers can remain repeatedly exposed to day after day for their working life without any negative effect on their health.

FILTERING FACEPIECES			HALF MASK WITH FILTERS			FULL FACE MASK WITH FILTERS		
CLASS	NPF	MAX CONC.	FILTER CLASS	NPF	MAX CONC.	CLASS	NPF	MAX CONC.
FFP1	4	4xTLV	P1	4	4xTLV	P1	5	5xTLV
FFP2	12	12xTLV	P2	12	12xTLV	P2	16	16xTLV
FFP3	50	50xTLV	P3	48	48xTLV	P3	1000	1000xTLV

If the concentration of the pollutant in the workplace is unknown, the first rule for selecting the minimum level of protection can be provided by the following table:

PROTECTION LEVEL	P1	P2	P3
POLLUTANT TLV / MINIMUM EFFICIENCY	$\geq 10\text{mg/m}^3$	$0,1 < > 10\text{mg/m}^3$	$\leq 0.1\text{mg/m}^3$

PROTECTION FROM GASES AND VAPOURS

For protection against this type of contaminant it requires a carbon layer filter suitably treated to selectively absorb different substances.

GASES are substances which at ambient temperature and pressure are in a gaseous state (e.g.: oxygen, nitrogen, carbon dioxide). **VAPOURS** are substances which at ambient temperature and pressure are in a liquid or solid state and pass to a gaseous state through boiling or evaporation processes (e.g.: acetone, toluene, hexane).

The EN 14387: 2004+A1:2008 Standard defines protection against gases and vapours according to the following table:

TYPE	COLOUR	PROTECTION
A	BROWN	Organic gases and vapours with a boiling point higher than 65°C
B	GREY	Inorganic gases and vapours
E	YELLOW	Acid gases
K	GREEN	Ammonia and derivatives
AX	BROWN	Organic gases and vapours with a boiling point lower than 65°C
Hg	RED	Mercury vapour
NO	SKY BLUE	Nitrous gases
CO	BLACK	Carbon oxide
Reaktor	ORANGE	Radioactive iodine, including radioactive iodomethane

CLASS OF PROTECTION

To select the right protection, it is necessary to know the chemical nature of the pollutant making sure that the oxygen level is higher than 17%. Regulations provide three filter capacity classes: low (class 1), medium (class 2), high (class 3); the duration of filter increases with the increase of the capacity.

For protection against gases and vapours, the nominal protection factor is determined by the type of mask (half mask or full-face mask) and not by the filter used.

CLASS	1	2	3
CAPACITY	LOW	MEDIUM	HIGH
EXPOSURE LIMIT	1000 ppm	5000 ppm	10000 ppm

	HALF MASK		FULL FACE MASK	
	FPN	MAX CONCENTRATION	FPN	MAX CONCENTRATION
GAS	50	12xTLV	2000	2000xTLV
GAS P3	48	48xTLV	1000	1000xTLV

COMBINED FILTERS

In the presence of both gases/vapours as well as particulates, protection with combined filters is required. These filters combine a gas filter with a dust filter. BLS offers its customers a complete range of filters.

When the games get tough, the tough ones get to breathe.

At the top of standards, with attention to every detail and for any profession that requires high respiratory protection with a full or half mask.

SOME BASICS ON REUSABLE DEVICES

In EN 136 Standard, full face masks are classified according to the type of application:

* Source: EN 529:2005

- 1) Light use (use with small capacity filters)
- 2) General use (for heavier uses, they have higher resistance to flammability)
- 3) Special use (they offer greater resistance to radiant heat and flame. They can be used for firefighting)*

The filters differ according to the type of filtration:

- 1) Carbon filters for gases and vapours, which include 3 classes, each with different duration, weight and protection (low class 1, medium class 2, high class 3)
- 2) Dust filters, which provide 3 protection classes based on filtering efficiency (P1, P2, P3)
- 3) Combined filters (combination of the above)

Products



HALF MASKS

They protect the nose and mouth and can be used if protection for the eyes is not required or in combination with safety goggles. However, it is essential to analyse each risk and determine the correct protection needed.



FULL FACE MASKS

They protect the entire face and ensure a greater protection factor. They can be used in combination with supplied-air products or PAPR.



FILTERS

They are connected to the mask. They can protect from both particulates, gases and vapours, or from the combination of the two. The same filter can sometimes be used in both half or full face mask, depending on its features.

Filter types



PARTICULATES

Particles filtration is ensured by a pleated medium. The pleating of the material ensures a higher filtering surface and reduces breathing fatigue.



GASES & VAPOURS

Gases and vapours are adsorbed by activated carbons grains. This material is characterized by a high porosity structure that traps gases and vapours in its surface. They can be treated to adsorb selectively one or more groups of specific substances.



COMBINED

Combined filters are built with two sections, the first one with a pleated medium for particles filtration, the second one with activated carbons, for gases and vapours protection.

FILTERS TECHNOLOGY FOR REUSABLE DEVICES

IN ADDITION TO THE UNIVERSAL CONNECTION (EN 148-1), BLS DEVELOPED A SIMPLIFIED BAYONET CONNECTION TO MEET THE HIGHEST PERFORMANCES AND SECURITY STANDARDS.

BAYONET CONNECTION

This connection is highly intuitive, allowing a quick and safe hold on the mask. It has a locking feedback allowing the user to know if the filter has been properly placed. The double filter offers better weight distribution on the mask and a wider field of vision.



RD-40 UNIVERSAL CONNECTION

Standard thread connection according to EN 148-1, universal among all respiratory protection devices.



ACTIVATED CARBONS

The quality of the activated carbons used by BLS for the filtration of gases and vapours meets high standards of safety ensuring excellent filtration performances. They are produced without toxic additives such as Hexavalent Chromium (Cr VI).

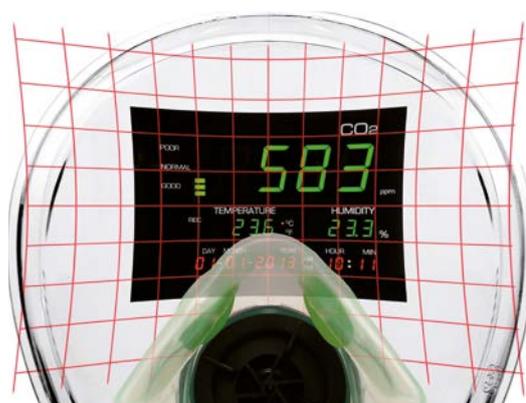


BLS TECHNOLOGY FOR FULL FACE MASKS

LIVE VISOR

In BLS 5000 series masks, the visor is in optical class 1* (EN 166), which is synonymous with a panoramic field of vision without optical distortions. A vitrification treatment on its surface makes it scratch resistant.

** Eye protection devices are divided into 3 classes according to spherical, astigmatic and prismatic optical deformations (EN 166). Class 1 is the best existing class. BLS 5000 series devices series have been tested according to the guidelines of EN 166.*



VISOR

Optical class 1

VISOR

Lower optical class

K-OMFORT

BLS 5000 series masks' harness is fixed on 6 attachment points directly to the rigid frame so as not to deform the face seal. It allows to distribute the weight of the device evenly without leaving face marks.



ANTI-FOG

Designed to avoid visor fogging through the control of the cold and hot air flows inside the mask without perishable surface treatments.



REUSABLE DEVICES / HALF MASK

BLS 8000next SERIES

READY TO USE AND MAINTENANCE FREE

BLS 8000next series bi-filter thermoplastic rubber half masks are ready to use, with no need for maintenance of filters replacement. Once the filtering capacity of the device is exhausted, it is completely replaced.



SIMPLICITY
of disposable product



PROTECTION
of reusable product



Available products

CODE	PRODUCT	FACEPIECE	PROTECTION
8116006	BLS 8100next	Thermoplastic rubber	A1P2 R D
8116005	BLS 8400next	Thermoplastic rubber	ABEK1P3 R D
8116004	BLS 8600next	Thermoplastic rubber	A2P3 R D

Features

- 01 SIMPLE LIKE A DISPOSABLE PROTECTING LIKE A REUSABLE**
This mask combines the simplicity of disposable products with the protection of the reusable ranges offering an easy-to-implement and certified protection against both particles and gases.
- 02 ACTIVATED CARBONS**
The quality of the activated carbons used by BLS for the filtration of gases and vapours meets high standards of safety ensuring excellent filtration performances. They are produced without toxic additives such as Hexavalent Chromium (Cr VI).
- 03 FACEPIECE**
Made with a high quality thermoplastic elastomer: non-deformable and durable.
- 04 DESIGN AND VISUAL FIELD**
The shape of the half mask offers a perfect seal without any unpleasant pressure on the nose or mouth of the user. It also allows high visibility and low interference with the visual field thanks to the lower positioning of the filters and to its compact size.
- 05 FILTER PROTECTIVE LAYER**
External layer that ensures the protection of the filtering material from dirt, dust and liquids as well as the normal mechanical stress due to prolonged use thus extending and preserving filtering efficiency and making the device safer. It also prevents the release of fibers, which is of the utmost importance in painting applications.
- 06 DROP-OFF SYSTEM**
Quick attachment/release system and sliding elastics, which allow you to remove and lower the half mask without removing the head harness. If necessary, the drop-off system can be easily disabled.
- 07 NANO FILTRATION**
P3 filters of BLS 8400next and BLS8600next are tested against nanoparticles (down to 0,001 micron).



Watch the video



REUSABLE DEVICES / HALF MASKS

REUSABLE DEVICES / HALF MASK

BLS 4000next SERIES

SIZES AND MATERIALS AVAILABLE



Silicone rubber

(S/M) (M/L)



Thermoplastic rubber

(S/M) (M/L)

DROP-OFF PROCEDURE



Available products

CODE	PRODUCT	FACEPIECE	SIZE
8002111	BLS 4000next R	Thermoplastic rubber	S/M
8002112	BLS 4000next R	Thermoplastic rubber	M/L
8002113	BLS 4000next S	Silicone rubber	S/M
8002114	BLS 4000next S	Silicone rubber	M/L

Features

- 01 EASY AND FAST MAINTENANCE**
It can be disassembled in less than a minute making cleaning and maintenance much easier.
- 02 25% LIGHTER FACEPIECE**
Reducing the thickness of the facepiece enabled the weight of the half mask to be reduced by 25% versus previous version, making it one of the lightest on the market.
- 03 HEAD HARNESS**
Thin and light design with quick adjustment, allowing excellent compatibility with other PPE.
- 04 DROP-OFF**
New front mask with quick attachment/release system and sliding elastics, which allow you to remove and lower the half mask without removing the head harness.
- 05 BAYONET CONNECTION**
This connection is highly intuitive, allowing a quick and safe hold on the mask. It has a locking feedback allowing the user to know if the filter has been properly placed. The double filter offers better weight distribution on the mask and a wider field of vision.

*** Compatible with
BLS 200/201 SERIES FILTERS**
(pg 40/41)



Watch the video



REUSABLE DEVICES / HALF MASKS



Ready to use kit – BLS 4000next half masks + Filters

CODE	KIT	SIZE	FILTERS	PROTECTION	DESCRIPTION
8002115 8002116	BLS 4100next	S/M M/L	+ BLS 211 + BLS 301 (prefilters)	A2P2 R	Organic gases and vapours (bp > 65°C) and dust
8002117 8002118	BLS 4400next	S/M M/L	+ BLS 222	ABEK1P3 R	Organic, inorganic and acid gases and vapours and ammonia, dust
8002119 8002123	BLS 4500next	S/M M/L	+ BLS 202	P3 R	Dust
8002120 8002124	BLS 4600next	S/M M/L	+ BLS 221	A2P3 R	Organic gases and vapours (bp > 65°C) and dust
8002121	BLS 4100next R*	S/M	+ BLS 211 + BLS 301 (prefilters)	A2P2 R	Organic gases and vapours (bp > 65°C) and dust

* with BLS 4000next R (thermoplastic rubber facepiece).

REUSABLE DEVICES / HALF MASK

BLS SGE46

OPTIMAL FIT



Features

- 01 FACEPIECE**

The facepiece made of silicone rubber is designed to universally adapt to all face sizes giving a better comfort and perfect fit.
- 02 HARNESS**

Fixed on 2 points directly on the rigid body of the mask allowing to distribute the weight of the respirator evenly without leaving face marks.
- 03 UNIVERSAL CONNECTION**

Standard thread connection according to EN 148-1, universal among all respiratory protection devices.

Available products

CODE	PRODUCT	FACEPIECE	SIZE
8002059	BLS SGE46	Silicone rubber	U

* Compatible with
BLS 400 SERIES FILTERS
(pg 42)



REUSABLE DEVICES / FULL FACE MASK

BLS 5000 SERIES

HIGH RESISTANCE



BLS 5700/C HOOD

Protective hood with significant resistance to the aggression of acids; it covers head, shoulders and upper torso.



LENS FRAME

A corrective lens frame is available as accessory, compatible with BLS 5000 and BLS 2000 series masks.

Features

- 01 **FACE SEAL**
Available in soft thermoplastic rubber (BLS 5600) or silicone rubber (BLS 5700, BLS 5700/C).
- 02 **BAYONET CONNECTION**
This connection is highly intuitive, allowing a quick and safe hold on the mask. It has a locking feedback allowing the user to know if the filter has been properly placed. The double filter offers better weight distribution on the mask and a wider field of vision.
- 03 **ANTI-FOG**
Designed to avoid visor fogging through the control of the cold and hot air flows inside the mask without perishable surface treatments.
- 04 **PHONIC MEMBRANE**
An aluminium layer, inside the breathing unit of the device (BLS 5700, BLS 5700/C), enables the transmission of vocal sound.
- 05 **SCRATCH RESISTANT VISOR, OPTICAL CLASS 1 (EN 166)**
The screen allows a panoramic visual field without optical distortions. A vitrification treatment on its surface makes it scratch resistant.
- 06 **6-POINT HARNESS**
Fixed on 6 connection points, BLS 5000 series harness guarantees a highly precise adjustment by distributing the pressure on the face uniformly.
- 07 **AVAILABLE IN THREE SIZES**
Silicon models (BLS 5700, BLS 5700/C) are available in three different sizes to perfectly fit all face profiles.

* Compatible with
BLS 200/201 SERIES FILTERS
(pg 40/41)

Available products

CODE	PRODUCT	CLASS	FACIAL GASKET	VISOR	HOOD	SIZE
8001083	BLS 5600	2	Thermoplastic rubber	Live Visor		M
8102017	BLS 5700	2	Silicone rubber	Live Visor		S
8001036						M
8102018						L
8102022						S
8001097	BLS 5700/C	2	Silicone rubber	Live Visor	✓	M
8102023						L



Watch the video



REUSABLE DEVICES / FULL FACE MASKS

REUSABLE DEVICES / FULL FACE MASK

BLS 5000 SERIES

EASY REMOVAL



LENS FRAME

A corrective lens frame is available as accessory, compatible with BLS 5000 and BLS 2000 series masks.

Features

- 01 FACE SEAL**
Available in soft thermoplastic rubber (BLS 5150) or silicone rubber (BLS 5400).
- 02 UNIVERSAL CONNECTION**
Standard thread connection according to EN 148-1, universal among all respiratory protection devices.
- 03 ANTI-FOG**
Designed to avoid visor fogging through the control of the cold and hot air flows inside the mask without perishable surface treatments.
- 04 PHONIC MEMBRANE**
An aluminium layer, inside the breathing unit of the device (BLS 5400), enables the transmission of vocal sound.
- 05 SCRATCH RESISTANT VISOR, OPTICAL CLASS 1 (EN 166)**
The visor allows a panoramic visual field without optical distortions. A vitrification treatment on its surface makes it scratch resistant.
- 06 6-POINT HARNESS**
Fixed on 6 connection points, BLS 5000 series harness guarantees a highly precise adjustment by distributing the pressure on the face uniformly.
- 07 CLASS 3**
The masks classified in class 3 offer greater resistance to radiant heat and flame. They can be used for firefighting.
- 08 AVAILABLE IN THREE SIZES**
Silicone model (BLS 5400) is available in three sizes to perfectly fit all face types.

*** Compatible with
BLS 400 SERIES FILTERS**
(pg 42)

Available products

CODE	PRODUCT	CLASS	FACE SEAL	VISOR	SIZE
8001035	BLS 5150	3	Thermoplastic rubber	Live Visor	M
8102019	BLS 5400	3	Silicone rubber	Live Visor	S
8001039					M
8102020					L



Watch the video



REUSABLE DEVICES / FULL FACE MASKS

REUSABLE DEVICES / FULL FACE MASK

BLS 2000 SERIES

GLASS VISOR AVAILABILITY



LENS FRAME

A corrective lens frame is available as accessory, compatible with BLS 5000 and BLS 2000 series masks.

Features

- 01 **FACE SEAL**
Made of thermoplastic rubber, as well as the inner facepiece. They form together a single mask body.
- 02 **UNIVERSAL CONNECTION**
Standard thread connection according to EN 148-1, universal among all respiratory protection devices.
- 03 **ANTI-FOG**
Designed to avoid visor fogging through the control of the cold and hot air flows inside the mask without perishable surface treatments.
- 04 **AVAILABLE WITH GLASS VISOR**
The visor of the BLS 2150V model is made of glass. To ensure maximum safety during use, the tripartite glass is stratified with an anti-fragmentation EVA layer. It is most suitable for providing high resistance to chemicals.
- 05 **QUICK AND INTUITIVE MAINTENANCE**
Thanks to overmoulding production, the number of components is extremely reduced, enabling quick and easy product maintenance.
- 06 **DOUBLE EXHALATION VALVE**
The new BLS 2000 series is equipped with a double front exhalation valve to increase comfort by reducing breathing resistance during use.
- 07 **COMPACT DIMENSIONS**
The compact dimensions of the product provide an excellent field of vision through the visor. In both configurations, polycarbonate and glass, a distortion-free vision is guaranteed.
- 08 **6-POINT HARNESS**
Fixed on 6 connection points, BLS 2000 series harness guarantees a highly precise adjustment by distributing the pressure on the face uniformly.

Available products

CODE	PRODUCT	CLASS	FACE SEAL	VISOR
8102015	BLS 2150	2	Thermoplastic rubber	Polycarbonate
8102016	BLS 2150V	2	Thermoplastic rubber	Glass

* Compatible with
BLS 400 SERIES FILTERS
(pg 42)



- 09 **SPEECH DIAPHRAGM**
The mask is equipped with a speech diaphragm, to improve communication.



REUSABLE DEVICES / FULL FACE MASKS

REUSABLE DEVICES / FULL FACE MASK

BLS 3000 SERIES

CERTIFIED IN CLASS 3



Features

- 01 FACE SEAL**
Available in EPDM. The inner facepiece is made of thermoplastic elastomer.
- 02 UNIVERSAL CONNECTION**
Standard thread connection according to EN 148-1, universal among all respiratory protection devices.
- 03 ANTI-FOG**
Designed to avoid visor fogging through the control of the cold and hot air flows inside the mask without perishable surface treatments.
- 04 CLASS 3**
The masks classified in class 3 offer greater resistance to radiant heat and flame. They can be used for firefighting.

Available products

CODE	PRODUCT	CLASS	FACE SEAL	VISOR
8102021	BLS 3150	3	EPDM	Polycarbonate

* Compatible with
BLS 400 SERIES FILTERS
(pg 42)



REUSABLE DEVICES / FULL FACE MASKS

BLS 2600next

POWERED AIR PURIFYING RESPIRATOR WITH DUST FILTER



Features

- 01 AUTOMATIC FLOW ADJUSTMENT**
Thanks to the automatic flow adjustment, BLS 2600next guarantees a flow of 160 l/min even when the filter is clogged.
- 02 BATTERY**
The performing and light battery guarantees a duration of more than 8h in maximum comfort. For the charging phase, the BLS 2600next is equipped with a sturdy and ergonomic connector, while the status of charge is returned both by the LEDs on the motor unit and by the LED on the battery charger.
- 03 INTUITIVE MANAGEMENT OF ALARMS**
The innovative management system provides the operator with the following feedbacks via the 3 coloured LEDs: battery charge status, low battery alarm, flow block alarm, filter clogging alarm, recharging status. All alarms are also signalled by a sound and a vibration.
- 04 FILTER**
The TMP3 dust filter provides high filtration for long periods. It is protected by an easily removable ring nut. A practical anti-water cap protects the filter during the decontamination shower phase.
- 05 COMFORT**
The PVC belt with adjustment buckles guarantees an optimal hold around the waist, while the padded support provides maximum comfort and perfect decontamination thanks to the quick release system.
- 06 ANTI-CONTAMINATION STORAGE KIT**
Possibility of storage in maximum safety thanks to the DIN cap for the motor unit, the filter cap, the hose that can be closed on itself and the practical and sturdy container box, equipped with four handles, gasket and arrangement for the padlock.

Available products

CODE	PRODUCT	DESCRIPTION
8103001	BLS 2600next	Powered air respirator
8117003	TMP3 Filter	High-efficiency dust/fume/fibre filter

*** Compatible with**
BLS 5400 – BLS 5150
FULL FACE MASK
(pg 32/33)



FILTERS / BAYONET CONNECTION

BLS 200 SERIES



- ✱ Compatible with
 - HALF MASKS BLS 4000ne»xt SERIES**
(pg 26/27)
 - FULL FACE MASKS BLS 5000 SERIES (5600, 5700, 5700/C)**
(pg 30/31)



Available products

CODE	PRODUCT	PROTECTION	COLOUR CODE
8011118	202 P3 R ⁽⁵⁾	Dust	○
8011109	211 A2	Organic gases and vapours, class 2	●
8011205	212 AX	Organic gases and vapours with a boiling point ≤ 65° C	●
8011110	213 ABE1	Organic, inorganic and acid gases and vapours, class 1	● ● ●
8011111	214 ABEK1	Organic, inorganic and acid gases, vapours, ammonia and derivatives, class 1	● ● ● ●
8011112	221 A2P3 R	Organic gases and vapours, class 2 and dust	● ○
8011113	222 ABEK1P3 R ⁽²⁾	Organic, inorganic and acid gases and vapours and ammonia and derivatives, class 1 and dust	● ● ● ● ○
8011206	225 AXP3 NR ⁽¹⁾	Organic gases and vapours with a boiling point ≤ 65°C and dust	● ○
8011145	226 ABE1P3 R	Organic, inorganic and acid gases and vapours, class 1 and dust	● ● ● ○
8117029	227 ABEK1HgP3	Organic, inorganic and acid gases and vapours and ammonia and derivatives, class 1, mercury vapours and dust	● ● ● ● ● ○
8011133	242 ABE2 ⁽³⁾	Organic, inorganic and acid gases and vapours, class 2	● ● ●
8011114	243 ABEK2 ⁽³⁾	Organic, inorganic and acid gases, vapours, ammonia and derivatives, class 2	● ● ● ●
8011134	244 K2	Ammonia and derivatives, class 2	●
8011140	253 ABE2P3 R ⁽¹⁾	Organic, inorganic and acid gases and vapours, class 2 and dust	● ● ● ○
8011141	254 ABEK2HgP3 R D ⁽¹⁾	Organic, inorganic and acid gases and vapours and ammonia and derivatives, class 2, mercury vapours and dust	● ● ● ● ● ○
8117008	301 P2 R ⁽⁴⁾	Dust	○
8117030	301 P3 R ⁽⁴⁾	Dust	○

(1) these filters cannot be used with half masks because their weight is >300g

(2) these filters are tested against hydrogen fluoride

(3) these filters are tested against formaldehyde

(4) dust prefilter to be mounted on BLS 200 series gas filters

(5) these filters have been tested with Nano Filtration technology

FILTERS / BAYONET CONNECTION

BLS 201 SERIES



- * Compatible with
 - HALF MASKS BLS 4000ne»t SERIES**
(pg 26/27)
 - FULL FACE MASKS BLS 5000 SERIES (5600, 5700, 5700/C)**
(pg 30/31)



Available products

CODE	PRODUCT	PROTECTION	CARBON LAYER
8011218	BLS 201-3 P3 R	Dust	
8011219	BLS 201-3C P3 R	Dust and nuisance odours	✓

These filters are very light and, thanks to their slim profile, they are the best solution when used with a half-mask in combination with a welding mask.

FILTERS / UNIVERSAL CONNECTION RD40

BLS 400 SERIES



* Compatible with
HALF MASK BLS SGE46

(pg 28/29)

FULL FACE MASKS BLS 5000 SERIES (5150, 5400)

(pg 32/33)

FULL FACE MASKS BLS 2000 AND BLS 3000 SERIES

(pg 34/35 and 36/37)



Available products

CODE	PRODUCT	PROTECTION	COLOUR CODE
8011013	401 P3 R ⁽²⁾	Dust	○
8011002	411 A2	Organic gases and vapours, class 2	●
8011023	412 AX	Organic gases and vapours with a boiling point lower than 65° C	●
8011005	413 K2	Ammonia and derivatives, class 2	●
8011016	414 ABE2	Organic, inorganic and acid gases and vapours, class 2	● ● ●
8011007	415 ABEK2	Organic, inorganic and acid gases and vapours and ammonia and derivatives, class 2	● ● ● ●
8011008	421 A2P3 R	Organic gases and vapours, class 2 and dust	● ○
8011024	422 AXP3 NR	Organic gases and vapours with a boiling point lower than 65°C and dust	● ○
8011017	423 ABE2P3 R ⁽¹⁾	Organic, inorganic and acid gases and vapours, class 2 and dust	● ● ● ● ○
8011022	424 ABEK1P3 R	Organic, inorganic and acid gases and vapours, ammonia, class 1 and dust	● ● ● ● ○
8011012	425 ABEK2P3 R ⁽¹⁾	Organic, inorganic and acid gases and vapours, ammonia, class 2 and dust	● ● ● ● ○
8011014	430 ABEK2HgP3 R ⁽¹⁾	Organic, inorganic and acid gases and vapours and ammonia and derivatives class 2 mercury vapours and dust	● ● ● ● ● ○
8117004	441 ABEK2HgNOCOP3 R ⁽¹⁾	Organic, inorganic, acid gases and vapors, ammonia and derivatives, mercury vapor, sulfur dioxide, nitrous gases, carbon monoxide, and dust	● ● ● ● ● ● ● ○
8117005	442 Reaktor A2P3 R D ⁽¹⁾	Dust, radioactive iodine, including radioactive iodomethane	● ○

(1) these filters cannot be used with half masks because their weight is >300g

(2) these filters have been tested with Nano Filtration technology

REUSABLE DEVICES ACCESSORIES



C43
Washable bag for half mask and filters.



C41
Washable bag with shoulder belt for full face masks and filters.



C22
Frame for prescription lenses for BLS 5000 and BLS 2000 series full face masks.



C90
Wall mounted container for full face mask and filters.



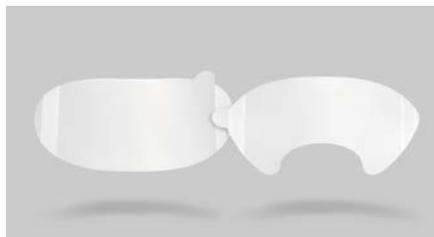
Q409
150 ml disinfectant spray bottle.



Q530
Multi-purpose disinfectant wipes in non-woven fabric for half masks and full face masks.



K15
Polycarbonate visor cover for BLS 5000 series full face masks. Applications: in sandblasting and in presence of abrasive substances.



K19 / K16
Acetate for BLS 5000 series (K19), BLS 2000 and BLS 3000 series (K16) full face masks. Applications: Industrial painting and in presence of chemical splashes.



C10
Textile harness for full face mask more comfortable especially with long hair.



BLS 202 DUST FILTER COVER
BLS 200 b-lock dust filter cover kit (pack of 16).



BLS 200 COMBINED FILTER COVERS
Kit caps for BLS 200 b-lock combination filters (pack of 16 pcs).



BLS 200 FILTER CONNECTION CAP
Kit of connecting caps for BLS 200 b-lock series filters (pack of 16 pcs).



BLS 401 DUST FILTER COVER
Kit of dust filter caps for BLS 400 universal series (pack. 16 pcs.).

**BLS is a manufacturer
specialized in
respiratory protection
devices.**

Always with you, while
doing the most important
thing: breathing.

SOME BASICS ON DISPOSABLE PRODUCTS

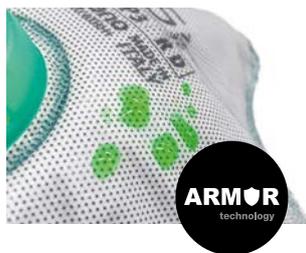
The duration of the product is for one or more work shifts. They can only protect from particles. There are three classes of devices divided according to filtering and fitting efficiency (FFP1, FFP2, FFP3).

Features



EOLO VALVE

The Eolo technology of BLS valves drastically reduces breathing resistance and allows an air passage 30% higher than classic valves, concentrating it in two points of maximum opening.



ARMOR

It's an external layer that ensures the protection of the filtering material from dirt, dust and liquids extending and preserving filtering efficiency and making the device safer.



NOSE CLIP

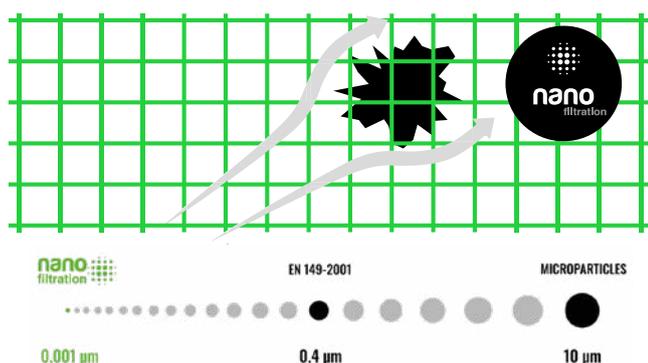
Along with the face seal it secures the fit of the filtering facepiece to the most critical part of the face, the upper part of the nose, and it improves performance in the fit test phase.



FACE SEAL

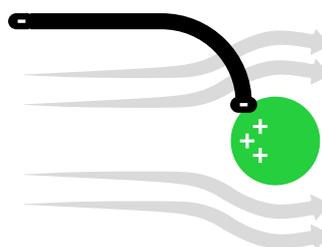
A foamy strip placed around the respirator is essential to guarantee maximum protection avoiding air flows passing through unsealed borders. It can be partial (sealing the upper part of the device) or complete.

Filtration principles



MECHANICAL

If inhaled, nanoparticles (between 1 and 100 nanometers wide), can pass through cellular membranes reaching internal organs and potentially cause severe harm to the body being very difficult to dispose. Specific tests have helped us to develop a filtering medium able to successfully block the access of such substances. With **NANOFILTRATION**, BLS can guarantee a new standard of protection against nanoparticles.



ELECTROSTATIC

Smaller particles are subject to a further filtration by the electrostatically charged filtering material. Therefore, smaller the particulate is, the stronger is the electrostatic attraction.



ACTIVATED CARBONS

A layer impregnated with activated carbons could be added to the filtering material enhancing the protection and comfort of the product in presence of nuisance odours.

**To each their own
protection:**

anatomical comfort,
adjustability of the elastic
straps, breathable fabrics,
different fits.

Protection standards
tailored to your size.

DISPOSABLE PRODUCTS / CUP SHAPED FILTERING FACEPIECES

BLS ZERO SERIES

Features

01 ANATOMIC
The pre-formed cup and elastic support makes an easier and reliable fit, perfectly adapting to different physiognomies and ensuring an excellent hold. It offers an excellent visual and a great compatibility with glasses.

02 WELDED OR ADJUSTABLE ELASTICS
The elastics, ultrasonically welded to eliminate the exposed metal parts, are made of hypoallergenic material without latex, while the adjustable ones, thanks also to the innovative drop-off system, facilitate the correct positioning of the facepiece on the user's face.

03 AVAILABLE WITH ACTIVATED CARBONS
Activated carbons protect from acid and organic gases-vapours and ozone below the Threshold Limit Value (TLV), specific for every substance.



PROTECTION Better than a FFP3	STANDARD EN 149:2001+A1:2009	*BLS ZerO				
	99%	> 99%				
BREATHING RESISTANCE Better than a FFP1	INSPIRATION 30 l/m		INSPIRATION 95 l/m		EXPIRATION 160 l/m	
	< 0,6 mbar	0,5 mbar	< 2,1 mbar	1,4 mbar	< 3,0 mbar	1,1 mbar
	FFP1	BLS ZerO FFP3	FFP1	BLS ZerO FFP3	FFP1	BLS ZerO FFP3

DISPOSABLE PRODUCTS / CUP SHAPED FILTERING FACEPIECES

BLS ZERO SERIES

BLS Zer0 30 or BLS Zer0 31/32



SHELF LIFE

The shelf life of our BLS Zer0 series is 10 years (5 years for the activated carbon models).

Features

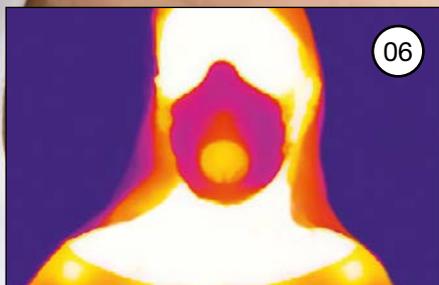
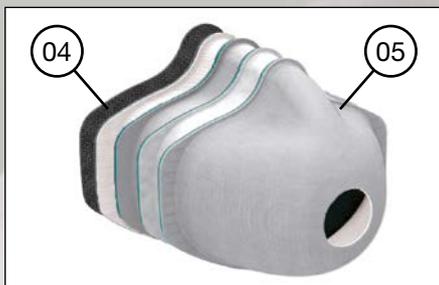
- 04 GASKET**
Made with a new soft technical foam, which allows an excellent fit on any face and guarantees a high comfort on contact with the skin.
- 05 ARMOR PROTECTIVE LAYER**
It is an external protective layer that ensures the protection of the filtering material from dirt, dust and liquids extending and preserving filtering efficiency and making the device safer.
- 06 IT BREATHES!**
The ratio of transmission of water vapour through the material is 3500 g/sqm. This value is much higher than the one of the large majority of our competitors. Tests performed according to ASTM E96/E96M.
- 07 INTERNAL NOSE CLIP**
The nose clip, placed internally between the layers of filtering material, adapts optimally to the profile of the nose and eyes, ensuring good visibility and maximum compatibility with glasses.
- 08 HIGH EFFICIENCY EOLO VALVE**
Eolo Technology is our system for fixing the valve's membrane on three points instead of one, which allows an air passage in exhalation 30% higher than traditional valves, concentrating it in two points of maximum opening.

Available products

CODE	CODE for SINGLE PACKED	PRODUCT	PROTECTION	EXHALATION VALVE	ELASTICS	CARBON LAYER	GASKET
8006334	8006339	BLS Zer0 30 NV	FFP3 R D		WELDED		PARTIAL
8006332	8006337	BLS Zer0 30	FFP3 R D	●	WELDED		PARTIAL
8006335	8006340	BLS Zer0 31	FFP3 R D	●	WELDED		COMPLETE
8006398	8006305	BLS Zer0 32	FFP3 R D	●	ADJUSTABLE		COMPLETE
8006333	8006338	BLS Zer0 30 C	FFP3 R D	●	WELDED	✓	PARTIAL
8006336	8006341	BLS Zer0 31 C	FFP3 R D	●	WELDED	✓	COMPLETE
8006300	8006307	BLS Zer0 32 C	FFP3 R D	●	ADJUSTABLE	✓	COMPLETE
8006342	8006343	BLS Zer0 32 C flame retardant	FFP3 R D	●	ADJUSTABLE	✓	COMPLETE



DISPOSABLE PRODUCTS



CUP SHAPED FILTERING FACEPIECES WITH ACTIVE SHIELD VALVE

BLS ZERO 32 ACTIVE SERIES

ACTIVE SHIELD



SHELF LIFE

The shelf life of our BLS Zer0 32 Active series is 10 years (5 years for the activated carbon models).

The Active Shield electronic valve warranty is 1 year.

Features

- 01 ANATOMIC**
The pre-formed cup and elastic support make an easier and reliable fit, perfectly adapting to different physiognomies and ensuring an excellent hold. It offers an excellent visual field and a great compatibility with glasses.
- 02 ADJUSTABLE ELASTICS**
The sliding and adjusting system of elastics facilitates the balancing of the filtering facepiece, ensuring correct positioning on the face. The release of the rear hooks allows rapid removal of the facepiece, via the drop-off system.
- 03 AVAILABLE WITH ACTIVATED CARBONS**
Activated carbons protect from acid and organic gas-vapours and ozone below the Threshold Limit Value (TLV), specific for every substance.
- 04 GASKET**
Made with a new soft technical foam, which allows an excellent fit on any face and guarantees a high comfort on contact with the skin.
- 05 ARMOR PROTECTIVE LAYER**
It is an external protective layer that ensures the protection of the filtering material from dirt, dust and liquids extending and preserving filtering efficiency and making the device safer.
- 06 INTERNAL NOSE CLIP**
The nose clip, placed internally between the layers of filtering material, adapts optimally to the profile of the nose and eyes, ensuring good visibility and maximum compatibility with glasses.

Available products

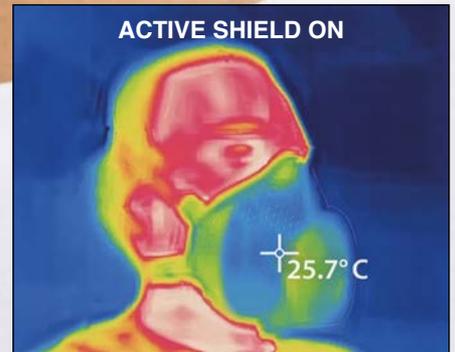
CODE	PRODUCT	PROTECTION	ELASTICS	CARBON LAYER	GASKET
8101019	BLS Zer0 32 Active	FFP3 R D	ADJUSTABLE		COMPLETE
8101020	BLS Zer0 32 C Active	FFP3 R D	ADJUSTABLE	✓	COMPLETE
0003041	Narvalo Active Shield	-	-	-	-

07 **SMART VENTILATION**

The adaptive ventilation system extracts the CO2 produced during breathing by reducing heat and moisture retained inside the mask. Thanks to the pressure sensor, Narvalo Active Shiled modulates the fan speed according to the user's breathing frequency, ensuring constant breathing comfort even during strenuous activities.

08 **LITHIUM BATTERY**

The lithium battery (800 mAh) gives the device up to 5 hours of autonomy and it is easily rechargeable via the micro USB charging socket on the side of the device.



DISPOSABLE PRODUCTS / FLAT FILTERING FACEPIECES

BLS ZERO FLAT SERIES

FLAT 3-FLAP DESIGN



SHELF LIFE

The shelf life of our BLS Zer0 Flat series is 10 years (5 years for the activated carbon models).

Features

- 01 FLAT 3-FLAP DESIGN**

Thanks to the three-flap design, the device adapts perfectly to all facial movements, ensuring maximum protection and efficiency at all times. The folded lower flap allows easy opening of the facepiece without contaminating the inside. Excellent field of vision and great compatibility with glasses.
- 02 INTERNAL NOSE CLIP**

The nose clip, placed internally between the layers of filter material, adapts optimally to the profile of the nose and eyes, guaranteeing good visibility and maximum compatibility with glasses.
- 03 TEXTILE ELASTICS**

The elastic bands are made of enduring and high-performance textile material. The addition of a backing layer allows the elastics to adhere to the filter body without the use of exposed metal parts.
- 04 ARMOR PROTECTIVE LAYER**

It is an external protective layer that ensures the protection of the filtering material from dirt, dust and liquids extending and preserving filtering efficiency and making the device safer.
- 05 RIGID INNER CORE**

The addition of the innovative inner core ensures solidity to the filtering facepiece and high breathability, while maintaining low breathing resistance.
- 06 IT BREATHES!**

The ratio of transmission of water vapour through the material is 3380 g/sqm. This value is much higher than the one of the large majority of our competitors. Tests performed according to ASTM E96/E96M.

Available products

CODE	PRODUCT	PROTECTION	EXHALATION VALVE	ELASTICS	CARBON LAYER	GASKET	SIZE
8101033	BLS Zer0 33 NV	FFP3 R D		WELDED		PARTIAL	S
8101032							M/L
8101031	BLS Zer0 33	FFP3 R D	●	WELDED		PARTIAL	S
8101030							M/L
8101029	BLS Zer0 33 C	FFP3 R D	●	WELDED	✓	PARTIAL	S
8101021							M/L



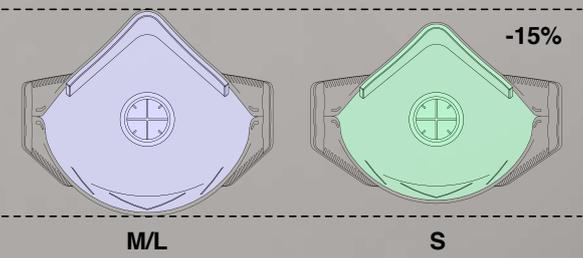
07 AVAILABLE IN TWO SIZES
 It has been ascertained that it is quite unlikely that 1 size can fit all facial profiles. The M/L size fits the majority of users while the S size is designed for thinner or smaller faces.

08 HIGH-EFFICIENCY EOLO VALVE
 Eolo Technology is our three-point, instead of one-point, valve diaphragm attachment system which allows 30% of air passing through exhalation more than conventional valves, concentrating it at two points of maximum opening.

09 AVAILABLE WITH ACTIVATED CARBONS
 Activated carbons protect from acid and organic gases-vapours and ozone below the Threshold Limit Value (TLV), specific for every substance.

10 OPTIMAL VISUAL FIELD
 The shape of the filtering facepiece guarantees a large filtering surface area, leaving the field of vision totally free.

11 SINGLE PACKED
 The single hygienic package protects the filtering facepiece from any contamination before use, allowing it to be stored in a practical way and distributed in the work environment.



07

BLS 600next SERIES

FLAT 3-FLAP DESIGN



SHELF LIFE

The shelf life of our BLS 600next series is 10 years.

Features

- 01 FLAT 3-FLAP DESIGN**
Thanks to the three-flap design, the device adapts perfectly to all facial movements, ensuring maximum protection and efficiency at all times. The folded lower flap allows easy opening of the facepiece without contaminating the inside. Excellent field of vision and great compatibility with glasses.
- 02 INTERNAL NOSE CLIP**
The internal nose clip, placed between the layers of filter material, it adapts optimally to the profile of the nose and eyes, guaranteeing good visibility and maximum compatibility with glasses.
- 03 AVAILABLE WITH EXHALATION VALVE**
Low respiratory resistance exhalation valve, which allows hot humid exhaled air to escape more easily and ensures high comfort for the user, making the filtering facepiece suitable for hot humid work environments.
- 04 RUBBER ELASTICS**
The rubber bands are made of hypoallergenic latex-free material. The addition of a supporting layer allows the elastics to adhere to the filter body without the use of exposed metal parts.
- 05 RIGID INNER CORE**
The addition of the innovative inner core ensures solidity to the filtering facepiece and high breathing performance.

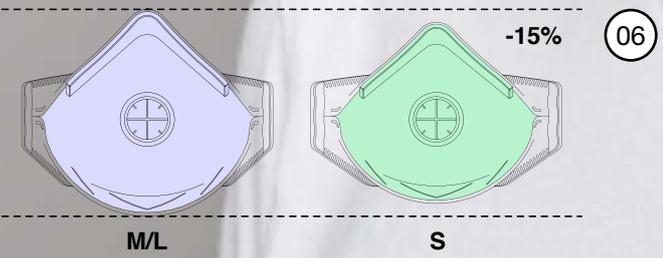
Available products

CODE	PRODUCT	PROTEZIONE	EXHALATION VALVE	ELASTICS	GASKET	SIZE
8101026	BLS 670next	FFP2 NR D		WELDED	PARTIAL	S
8101022						M/L
8101028	BLS 680next	FFP2 NR D	✓	WELDED	PARTIAL	S
8101027						M/L

06 AVAILABLE IN TWO SIZES
 It has been ascertained that it is quite unlikely that 1 size can fit all facial profiles. The M/L size fits the majority of users while the S size is designed for thinner or smaller faces.

07 OPTIMAL VISUAL FIELD
 The shape of the filtering facepiece guarantees a large filtering surface area, leaving the field of vision totally free.

08 SINGLE PACKED
 The single hygienic package protects the filtering facepiece from any contamination before use, allowing it to be stored in a practical way and distributed in the work environment.



DISPOSABLE PRODUCTS / CUP SHAPED FILTERING FACEPIECES

BLS CLASSIC SERIES

CLASSIC SERIES

Wide range of protection factors and features to accommodate any specific need.



SHELF LIFE

The shelf life of our BLS Classic range is 10 years (5 years for the activated carbon models).

Features

- 01 FACEPIECE**
 The large surface of the facepiece contributes to reduce the breathing resistance.
- 02 INTERNAL NOSE CLIP**
 The nose clip, placed internally between the layers of filtering material, adapts optimally to the profile of the nose and eyes, ensuring good visibility and maximum compatibility with glasses.
- 03 AVAILABLE WITH ACTIVATED CARBONS**
 Activated carbons protect from acid and organic gas-vapours and ozone below the Threshold Limit Value (TLV), specific for every substance.
- 04 ELASTICS**
 Ultrasonically welded elastics, made in synthetic rubber without latex, are designed to eliminate the exposed metal parts. BLS 226 with activated carbons, on the other hand, has textile stapled elastics.
- 05 AVAILABLE WITH EXHALATION VALVE**
 Low respiratory resistance exhalation valve, which allows hot humid exhaled air to escape more easily and ensures high comfort for the user, making the filtering facepiece suitable for hot humid work environments.

Available products

CODE	CODE for SINGLE PACKED	PRODUCT	PROTECTION	EXHALATION VALVE	ELASTICS	CARBON LAYER	GASKET
8006186	-	BLS 120BW	FFP1 NR D		WELDED		PARTIAL
8006187	-	BLS 122BW	FFP1 NR D	✓	WELDED		PARTIAL
8006188	8006214	BLS 128BW	FFP2 R D		WELDED		PARTIAL
8006184	8006211	BLS 129BW	FFP2 R D	✓	WELDED		PARTIAL
8006154	8006037	BLS 226B	FFP2 NR D	✓	STAPLED	✓	PARTIAL



DISPOSABLE PRODUCTS / VERTICAL FILTERING FACEPIECES

BLS 510-520 SERIES

ONE SIZE FITS ALL



Features

- 01 2-PANEL VERTICAL DESIGN**
The filtering facepiece adapts to different types of faces with different sizes and shapes, is comfortable to wear and easy to store when not in use.
- 02 INTERNAL NOSE CLIP**
The nose clip, placed internally between the layers of filtering material, adapts optimally to the profile of the nose and eyes, ensuring good visibility and maximum compatibility with glasses.
- 03 AVAILABLE WITH EXHALATION VALVE**
Low respiratory resistance exhalation valve, which allows hot humid exhaled air to escape more easily and ensures high comfort for the user, making the filtering facepiece suitable for hot humid work environments.
- 04 WELDED OR SLIDING ELASTICS**
They facilitate the correct positioning of the facepiece on the face, for optimal stability and comfort, without metal staples.
- 05 SINGLE PACKED**
The single hygienic package protects the filtering facepiece from any contamination before use, allowing it to be stored in a practical way and distributed in the work environment.

SHELF LIFE

The shelf life of our BLS 510-520 series is 10 years.

Available products

CODE	PRODUCT	PROTECTION	EXHALATION VALVE	ELASTICS
8101004	BLS 512	FFP2 NR D		SLIDING
8101005	BLS 512V	FFP2 NR D	✓	SLIDING
8101013	BLS 513	FFP3 NR D		SLIDING
8101014	BLS 513V	FFP3 NR D	✓	SLIDING
8101015	BLS 522	FFP2 NR D		WELDED
8101016	BLS 522V	FFP2 NR D		WELDED



DISPOSABLE PRODUCTS / HORIZONTAL FILTERING FACEPIECES

BLS 500 SERIES

HIGH BREATHABILITY



SHELF LIFE

The shelf life of our BLS 500 series is 10 years.

Features

- 01 2-PANEL HORIZONTAL DESIGN**

The mask adapts to all kinds of faces with different sizes and shapes, it is comfortable to wear and easy to store when not worn.
- 02 INTERNAL NOSE CLIP**

The nose clip, placed internally between the layers of filtering material, adapts optimally to the profile of the nose and eyes, ensuring good visibility and maximum compatibility with glasses.
- 03 HIGH BREATHABILITY**

The breathing resistance is comparable to that of a surgical mask, making breathing very comfortable. Indeed, a clinical study conducted in collaboration with the Campus Biomedico in Rome has shown that this device, thanks to its design and its adaptability to faces of different sizes and shapes, allows lower levels of respiratory resistance and seems to be preferred by healthcare workers during their work activities. In addition, thanks to the extremely limited release of fibers of the inner layer, the comfort of the face piece is enhanced, even when worn during long hours.
- 04 TEXTILE ELASTICS**

BLS 500 disposable filtering facepieces have a resistant and performing textile elastics welded to eliminate all exposed metal parts.
- 05 SINGLE PACK**

The single hygienic pack protects the device from any contamination before use, allowing practical storage and distribution in the workplace.

Available products

CODE	PRODUCT	PROTECTION	ELASTICS
8101006	BLS 502	FFP2 NR D	WELDED
8101003	BLS 503	FFP3 NR D	WELDED



DISPOSABLE PRODUCTS / CUP SHAPED FILTERING FACEPIECES

BLS 100 SERIES

SIMPLE AND SAFE



SHELF LIFE

The shelf life of our BLS 100 series is 10 years.

Features

- 01 FACEPIECE**
 The shape of the device offers a reduced breathing resistance.
- 02 NOSE CLIP**
 It is externally positioned and adapts perfectly to the profile of the nose and eyes ensuring good visibility and great compatibility with glasses.
- 03 AVAILABLE WITH EXHALATION VALVE**
 Low respiratory resistance exhalation valve, which allows hot humid exhaled air to escape more easily and ensures high comfort for the user, making the filtering facepiece suitable for hot humid work environments.

Available products

CODE	PRODUCT	PROTECTION	EXHALATION VALVE	ELASTICS
8006180	BLS 102	FFP2 NR D		STAPLED
8006181	BLS 102V	FFP2 NR D	✓	STAPLED
8006182	BLS 103V	FFP3 NR D	✓	STAPLED



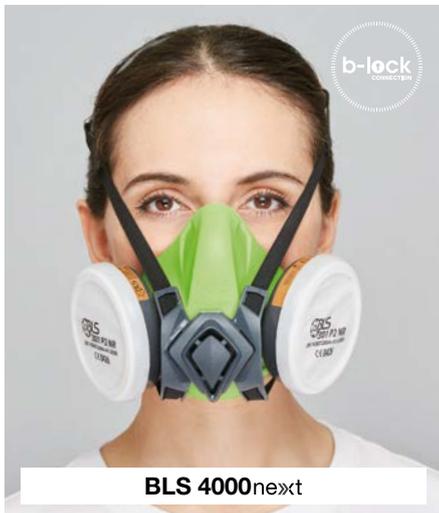
OVERVIEW

BLS PRODUCTS



OVERVIEW

BLS PRODUCTS



Respect for the environment is reflected in all the choices we make. For this catalogue, printed on 100% recycled and recyclable papers, we have chosen the A4 format that allows you to eliminate waste as much as possible.

The entire catalogue was printed on Sappi RAW paper, a recyclable and biodegradable paper made from sustainably sourced and controlled fibres; bleached without the use of chlorine, it is PEFC™ (PEFC™ 07-32-76) and FSC™ (FSC™ C015022) certified.

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BLS srl declines any responsibility, direct or indirect, from any misuse of both devices and instructions. The user is responsible for the determination of product compliance with the intended use.



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