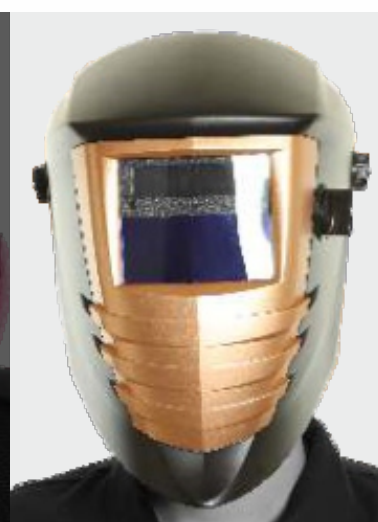




libus.com

FEEL SAFE





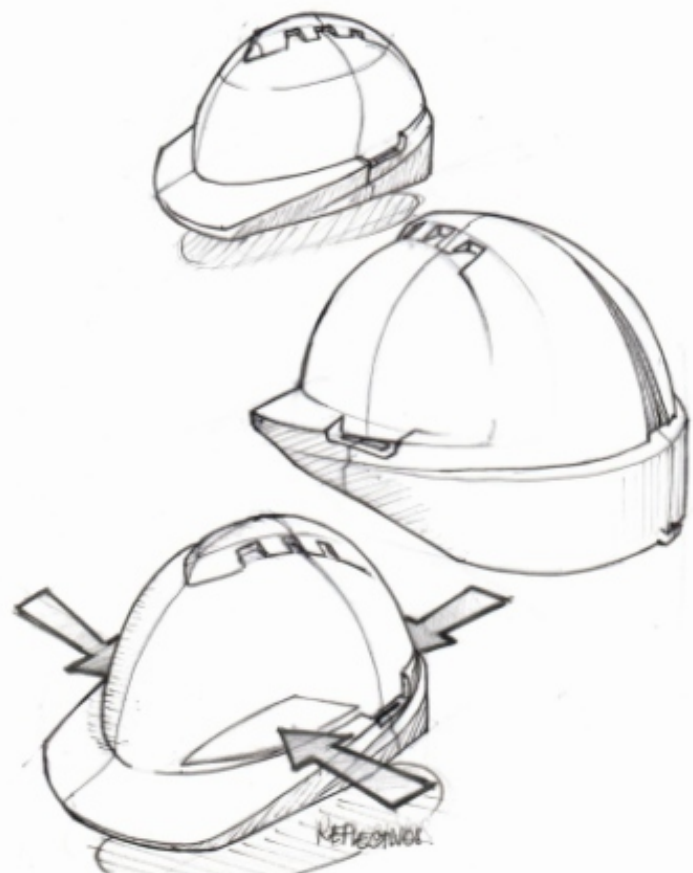
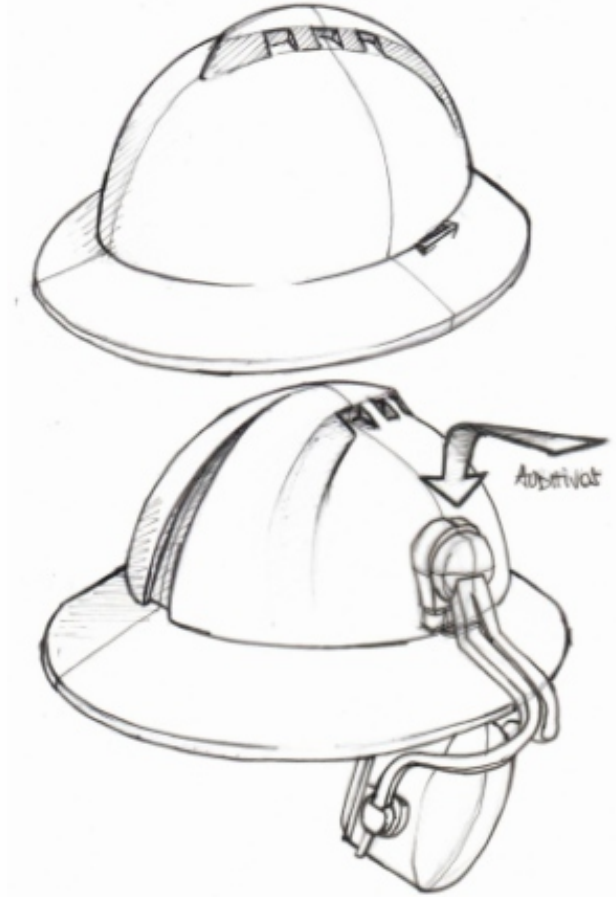
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*LEARN
ABOUT
OUR
DESIGN
PROCESS*

01 BRAIN STORMING



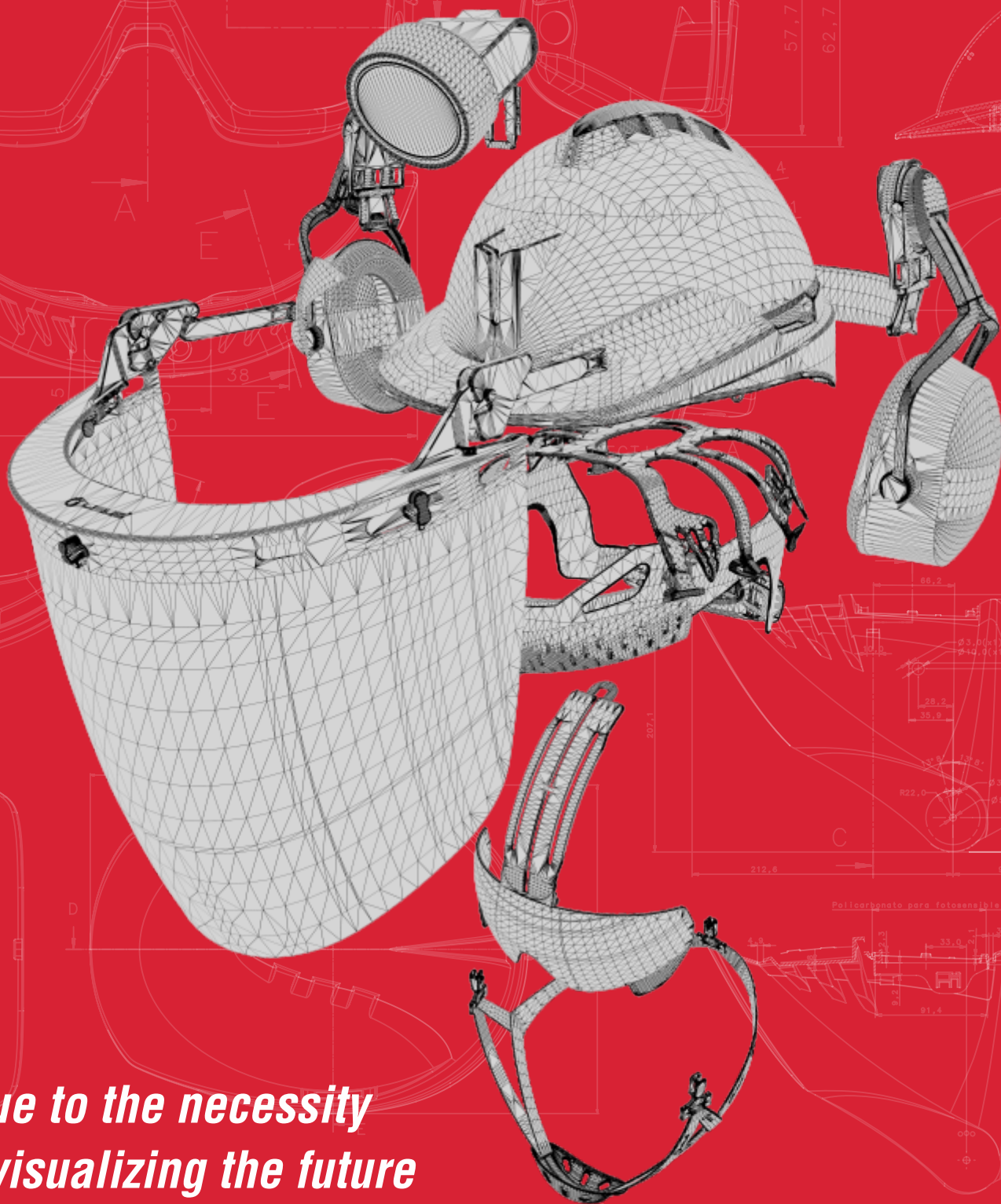
- + **SAFETY**
- + **TECHNOLOGY**
- + **QUALITY**
- + **DYNAMISM**
- + **INNOVATION**
- + **FUTURE**



02 SKETCHING

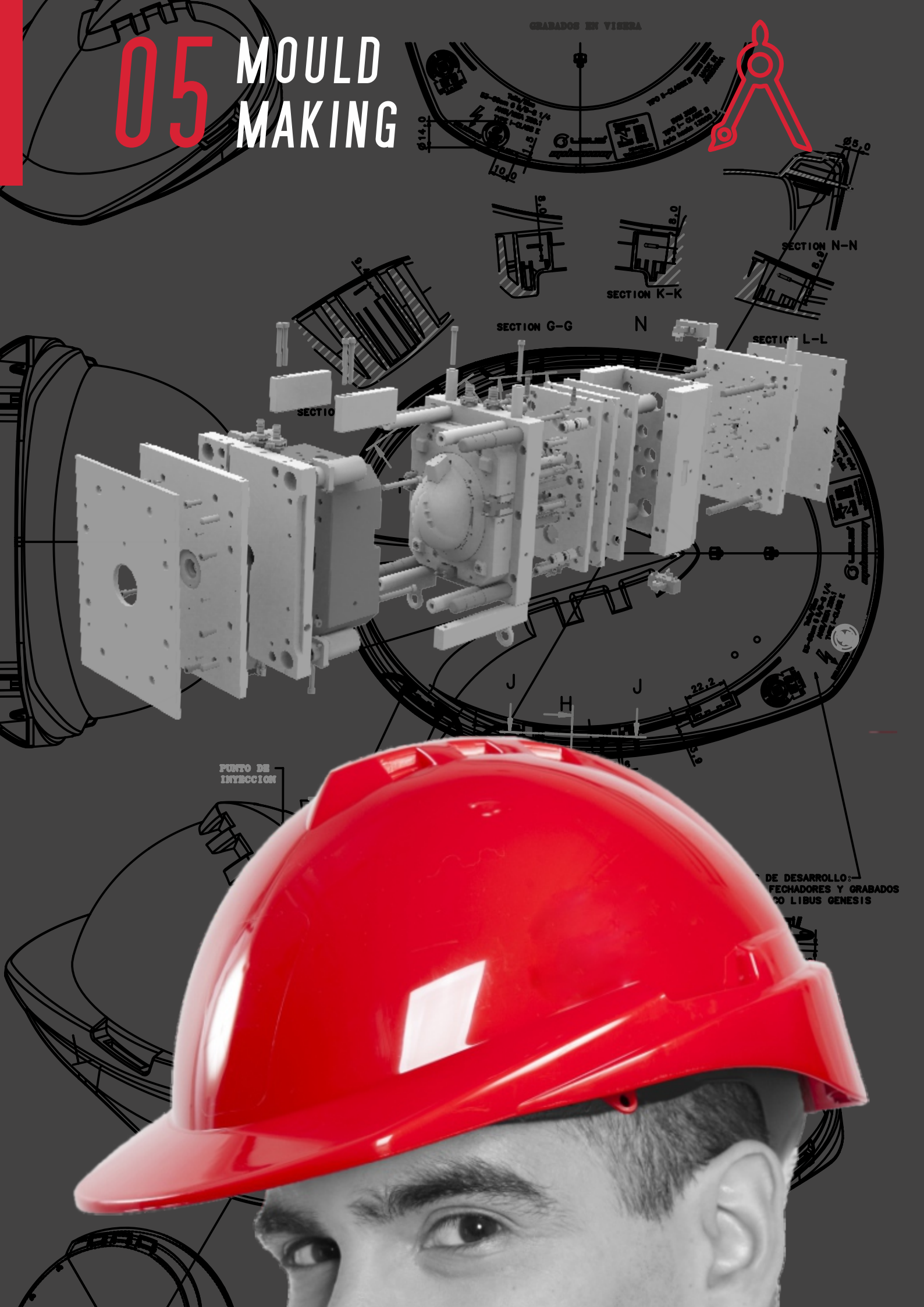


03 ^{3D} RENDER



+ Due to the necessity for visualizing the future of a project, the digital image has become a fundamental resource.

05 MOULD MAKING



GRABADOS EN VISERA

SECTION N-N

SECTION K-K

SECTION G-G

N

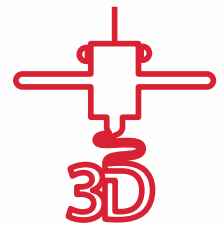
SECTION L-L

SECTION

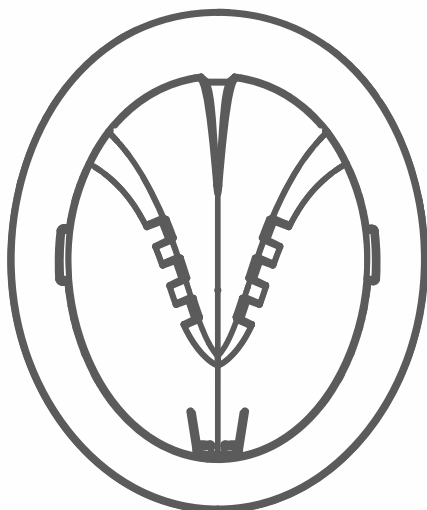
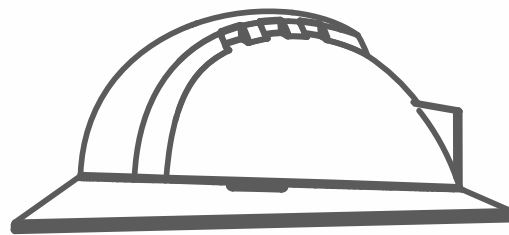
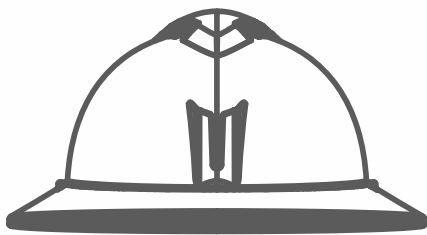
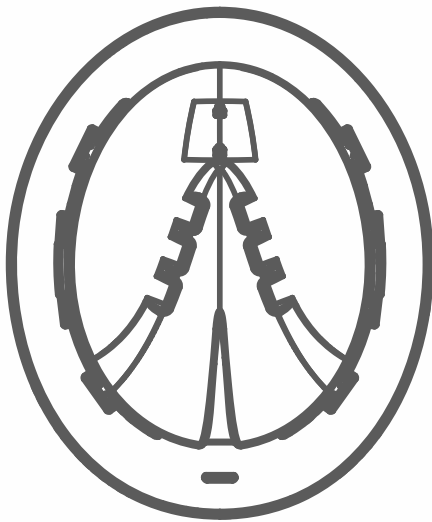
PUNTO DE INYECCION

DE DESARROLLO:
FECHADORES Y GRABADOS
CO LIBUS GENESIS

04 RAPID PROTOTYPING



***+ Useful for
evaluating
aesthetic and
ergonomic aspects,
they are used to
test geometric
concordance,
shape and
assemblies.***





ABOUT US

LIBUS is a company specialized in the manufacture of personal protection elements for the head. It commercialize six types of protection: Cranial Protection, Eye Protection, Face Protection, Welder Protection, Respiratory Protection and Hearing Protection.

At the moment the company has 3 High-Tech industrial production plants in Argentina, Brazil and Chile, subsidiaries in Mexico, Peru and Bolivia, as well as distributors in the main Latin American markets.

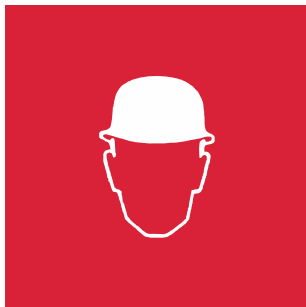
In order for us to provide quick delivery of our products to our USA customers Libus maintains a distribution center in Miami, Florida.

VERTICALLY INTEGRATED PRODUCTION PROCESS

LIBUS has a vertically integrated production process, which starts from the selection of raw materials, product design, the design and manufacture of molds, to the distribution of products in the market.







Libus offers different lines of head protection and a great variety of accessories and complements that optimize and/or make more comfortable their use.

The skull fulfills the function of protecting the brain, the eyes, the ears. It does it well, it is resistant, but it has its limits. A small object, such as a golf ball, flying at a moderate speed that hits the skull can fracture it.

If the mass and/or speed are greater; the injuries will be more serious. In certain types of work, the injuries in the skull can be very serious, so it is necessary to wear an element that protects it. The element designed to fulfill this function is the protective hard hat for industrial use.

Formally, a safety helmet is designed to provide the user with protection from falling objects that impact on the upper part of its case.



QUALITY STANDARDS

The degree of protection it provides is limited to fulfill the requirements of current regulations; for example:

IRAM 3620 (Argentina)
NBR 8221 (Brazil)
ANSI/ISEA Z89.1 (United States)
UNIT 687 (Uruguay)
EN 391 (Europe)

COMPONENTS OF A PROTECTIVE HELMET FOR INDUSTRIAL USE

The hard hat is composed of a case and a harness or suspension, components that must be designed specifically to work together. As the hard hat is certified and fulfills the required function of protection as a whole, we then can talk about its components:

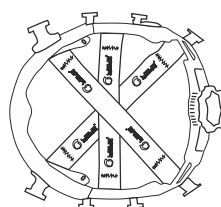
CASE

External cover made of thermoplastic polymer, has the function of resisting the bumps and deviating the object.

HARNESS or SUSPENSION

Internal part made of thermoplastic polymer that can include textile components. It has two very important functions: positioning and securing the case to the head and cushioning the impact.

The LIBUS hard hat line will only fulfill its function (certified) when a LIBUS case is mounted on a LIBUS harness (all lines).



HEAD PROTECTION





MILENIUM LINE

FEATURES

- Designed to protect the head from the impact of freely falling objects
- Modular design that allows the placement of face, hearing, eye and welding protection products.
- Made of Polyethylene, it is distinguished by its modern design and excellent finish.
- Back buckle to fit a 3-point chinstrap
- Versions: No Ventilation (N/V)
- 3.5cm front brim that allows an optimal upward vision while maintaining safety features.

CERTIFICATIONS

MILENIUM CLASS HARD HAT

IRAM 3620 Type I-Class B

NBR 8221:2003 Type II-Class B

ANSI/ISEA Z89.1 Type I-Class E

NCH 461:1977 NOM – 115-STPS-2009

MILENIUM CLASS HARD HAT W/ SLOT

IRAM 3620 TYPE 1 - Class B

MILENIUM CLASS HARD HAT PHOTOLUMINIC

IRAM 3620 Type I-Class B

NBR 8221:2003 Type II-Class B

ANSI/ISEA Z89.1 Type I-Class E

NCH 461:1977 NOM – 115-STPS-2009

COLOURS

MILENIUM CLASS



MILENIUM CLASS W/SLOT



- 1 Versions: No ventilation.
- 2 3.5cm front brim that allows an optimal upward vision while maintaining safety features.
- 3 Back buckle to fit a 3-point chinstrap.
- 4 Self-adhesive reflective strips that provide 360° visibility (optional).
- 5 IN BODY incorporated Lamp Holder. No holes or screws. No subsequent ultrasonic welding processes.

MILENIUM CLASS NO VENTILATION



MILENIUM CLASS N/V WITH SLOT

Integrated with a front support for placing a mining lamp. This support is part of the case; it is injected in the manufacturing process (it is not welded or screwed)



MILENIUM CLASS PHOTOLUMINIC



It has the property of emitting light in environments with low or absent luminosity, denoting the presence of the user

PE

Made of
polyethylene

MILENIUM FULL BRIM CLASS N/V



PE Made of
polyethylene

MILENIUM FULL BRIM CLASS N/V WITH SLOT



FEATURES

- Industrial safety hard hat for the mining and oil industries
- Full brim model
- Made of Polyethylene (PE), it is distinguished by its modern design and excellent finish.

CERTIFICATIONS

MILENIUM FULL BRIM CLASS HARD HAT

ANSI/ISEA Z89.1 Type I-Class E

NCH 461:1977 NOM-115-STPS-2009

IRAM 3620 Type II-Class B

MILENIUM FULL BRIM CLASS HARD HAT W/S

ANSI/ISEA Z89.1 Type I-Class E

NCH 461:1977 NOM-115-STPS-2009

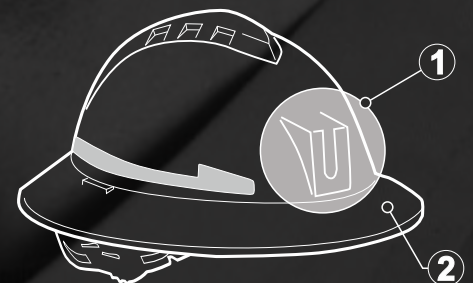
IRAM 3620 Type II-Class B

COLOURS

MILENIUM FULL BRIM CLASS HARD HAT



MILENIUM FULL BRIM CLASS HARD HAT W/S



- 1 IN BODY incorporated lamp holder, without holes or screws. Without subsequent ultrasonic welding
- 2 Full brim model.



MILENIUM HARNESSES

FEATURES

MILENIUM RATCHET FABRIC HARNESS

- Designed to be worn with the LIBUS MILENIUM line of hard hats
- 3-position height adjustment and 2-position neck strap
- Greater depth in the neck strap, which generates a better support, being able to avoid the use of a chinstrap
- 3 fabric straps that ensure a perfect fit to the head
- Perforated synthetic fabric front strap for perspiration absorption, it is removable, washable and can be replaced by a spare part.

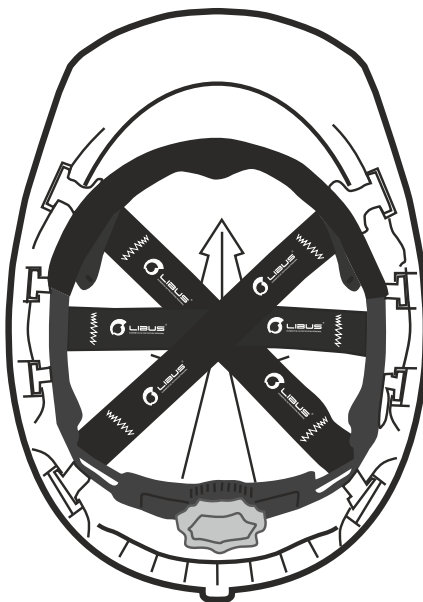
MILENIUM RATCHET PLASTIC HARNESS

- Designed to be worn with the LIBUS MILENIUM line of hard hats
- 8 anchorage points to the hard hat
- Ratchet mechanism with adjusting knob for continuous size adjustment
- Allows size to be adjusted while the hard hat is being worn on head
- 3-position height adjustment and 2-position neck strap
- Greater depth in the neck strap, which generates a better support, being able to avoid the use of a chinstrap
- Injected plastic harness with a ring in the center for supporting the head
- Perforated synthetic fabric front strap for perspiration absorption, it is removable, washable and can be replaced by a spare

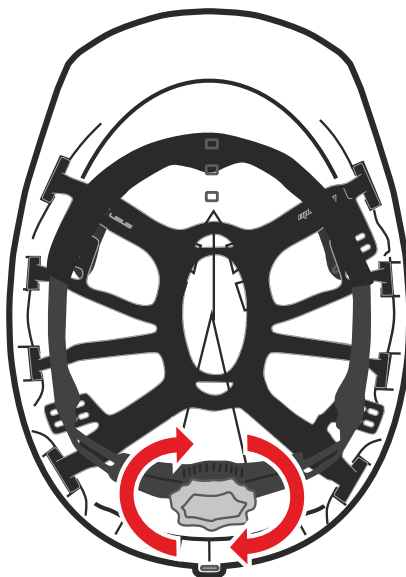
CERTIFICATION

According to MILENIUM HARD HAT

MILENIUM RATCHET FABRIC HARNESS

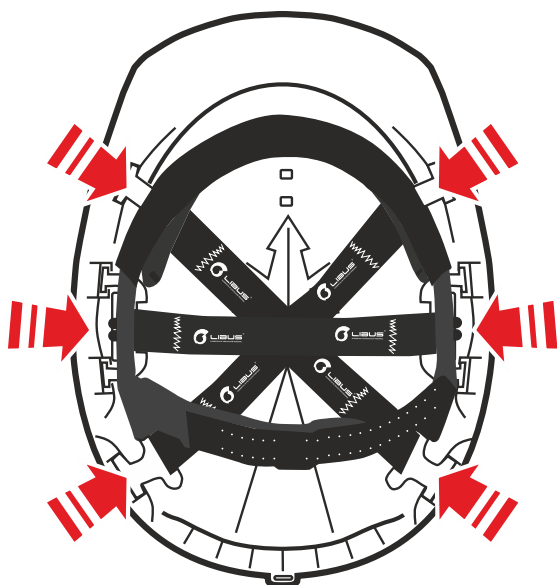


MILENIUM RATCHET PLASTIC HARNESS

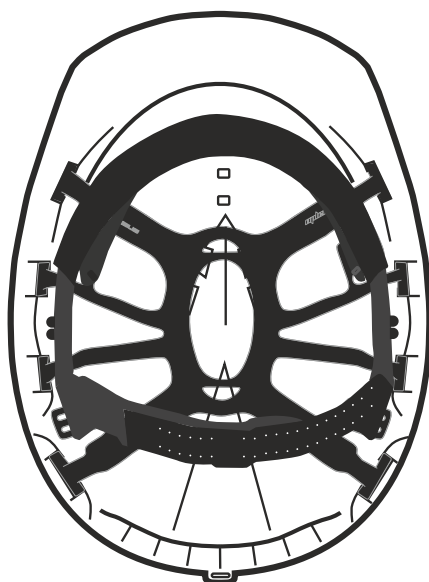


MILENIUM STANDARD FABRIC HARNESS

Perforated synthetic fabric front strap for perspiration absorption, it is removable, washable and replaceable.



MILENIUM STANDARD PLASTIC HARNESS



FEATURES

MILENIUM PINLOCK FABRIC HARNESS

- Designed to be used with the LIBUS MILENIUM line of hard hats
 - 3-position height adjustment and 2-position neck strap
 - Greater depth in the neck strap, which generates a better support, being able to avoid the use of a chinstrap
 - 3 fabric straps that ensure a perfect fit to the head
- Perforated synthetic fabric front strap for perspiration absorption, it is removable, washable and can be replaced by a spare part.

MILENIUM PINLOCK PLASTIC HARNESS

- Designed to be worn with the LIBUS MILENIUM line of hard hats
- 3-position height adjustment and 2-position neck strap
- Greater depth in the neck strap, which generates a better support, being able to avoid the use of a chinstrap
- Injected plastic harness with a ring in the center for head support
- Perforated synthetic front strap for perspiration absorption, it is removable, washable and replaceable.

CERTIFICATION

According to MILENIUM HARD HAT



ACCESSORIES

FEATURES

INTEGRATED EYESHIELD FOR MILENIUM HARD HAT

- Safety Glasses that easily attach to LIBUS hard hats for eye protection
- LIBUS safety glasses with polycarbonate lenses that offer protection against particles impact from any direction, metal bits, sparks and intense light

• CERTIFICATIONS

IRAM En166

• TREATMENTS

Anti-scratch (HC)

• COLORS



HARD HAT HARNESS TERRY-CLOTH SEATBAND

- An addition that is more absorbent than the sweatband supplied with the hard hat
- Made of absorbent fabric towel
- Easy harness mounting; suitable for all hard hat models

MILENIUM CLASS FB REFLECT STRIPING KIT

- Reflective material for LIBUS s FB Hard Hats.
- High visibility performance in low light to help workers to be seen.

MILENIUM CLASS REFLECT STRIPING KIT

- Reflective material for LIBUS Hard Hat.
- High visibility performance in low light to help workers to be seen.

INTEGRATED EYESHIELD FOR HARD HAT



HARD HAT HARNESS TERRY-CLOTH SEATBAND



MILENIUM CLASS FB REFLECT STRIPING KIT



MILENIUM CLASS REFLECT STRIPING KIT



SIMPLE CHINSTRAP



LIBUS 2 POINT CHINSTRAP



LIBUS 3 POINT CHINSTRAP



LIBUS 4 POINT CHINSTRAP



FEATURES

SIMPLE CHINSTRAP

- Chinstrap for safety industrial hard hat
- Fully adjustable

LIBUS 2 POINT CHINSTRAPHAT

- Chinstrap for safety industrial hard hat
- Fully adjustable

LIBUS 3 POINT CHINSTRAPHAT

- Chinstrap for safety industrial hard hat
- Fully adjustable

LIBUS 4 POINT CHINSTRAPHAT

- Chinstrap for safety industrial hard hat
- Fully adjustable



LIBUS offers a great variety of safety glasses and goggles and all the necessary information for a correct choice according to your requirements.

The focus of eye protection is on protecting the eyes from two primary risks:

- **Impact of particles (solid and liquid).**
- **Radiation generated by visible light and by ultraviolet (UV) and infrared (IR) (both invisible).**

We all understand that the function of the eye protection against impacts is intuitive; but not against the radiation generated by the sun or industrial processes such as high temperature furnaces, electric or gas welding, UV lamps, etc.

Because of all LIBUS safety glasses and goggles are made of optical grade polycarbonate, they absorb more than 99.9% of UV radiation.

With lens tinting, it is also possible to absorb different areas of the light spectrum (visible, UV and IR), preventing that unwanted radiation reaches the eye.

SAFETY GLASSES

It is primarily designed to protect the eye from frontal or lateral impact of particles up to 45 meters per second (150 feet per second). When the lenses are tinted or colored, in addition to its impact performance, they protect the eye from harmful electromagnetic radiation.

SAFETY GOGGLES

They form a protective seal around the eyes. There are basically two types:

Impact: protect from direct impact or large particles. They have direct ventilation.

Chemical: they have indirect ventilation or have slots in order to avoid the entrance of liquids. They protect from splashes.

LENS COLORS

Colorless: general use.

Yellow: The yellow lens block the blue color of the visible light spectrum, increasing the contrast and depth perception. Indicated for tasks in environments with low light level. They are not recommended for using in bright light environments or when accurate color recognition is required.

Smoke gray: Indicated for outdoor use where sunlight can cause eyestrain. Provide good color recognition.

Green: Provide protection to reflections and UV radiation. Not suitable for welding tasks.

Dark Green W3: Meet the requirements of ANSI Z87.1 for shade W3.

Dark Green W5: Meet the requirements of ANSI Z87.1 for shade W5.

Orange BL: Filter the violet and blue light present in the emission of UV lamps. Absorb visible light up to 540nm. **Applications:** dentistry, medicine, laboratories, UV curing of coatings and inks.

COATING

Mirrored(E): Metallized film that reflects a large part of the incident light. Indicated for outdoor use with intense reflections of sunlight.

Anti-fogging(AF): Film resistant to condensation of moisture on the lens.

Outdoor / Indoor (O/I): Slightly metallized film that attenuates sunlight, maintaining an adequate performance with artificial light. Suitable for personnel who usually perform their tasks alternating between environments with artificial light and bright natural light.

Anti-scratch (HC): Film that protects the lens from natural deterioration by daily manipulation, prolonging its useful life and improving vision.

EYE PROTECTION





CLASSIC LINE

FEATURES

SAFETY GLASSES

- Designed to protect eyes against bumps, particles impact, dust and sparks.
- They have front and side protection.
- Classic and wraparound design that allows a peripheral vision.
- Polycarbonate lens.
- UV filter.
- Stainless steel screw.

CERTIFICATIONS

ARGON
IRAM En166
ANSI Z87.1 (Z87+)
ARGON ELITE
ANSI Z87.1-2020
MIG
IRAM EN 166

COATING

ARGON
AF(Anti-fog)/HC(Anti-Scratch)/O/I (Outdoor-Indoor)/E
(Silver Mirror)
ARGON ELITE
AF(Anti-fog)/HC(Anti-Scratch)/O/I (Outdoor-Indoor)
ARGON ELITE FLEX
AF(Anti-fog)
MIG
AF(Anti-fog)/HC(Anti-Scratch)/O/I (Outdoor-Indoor)

LENS COLORS

ARGON



ARGON ELITE



ARGON ELITE FLEX



MIG



ARGON



ARGON ELITE



Adjustable and flexible
temples with 4 length
positions.

ARGON ELITE FLEX



MIG

Nylon rim with universal nose
bridge. Ergonomic with thin and
flexible nylon temples.



ECO LINE



ECO REFLECT



High visibility reflective Pad to prevent detachment.

ECO SPORT



Reinforced adjustable strap. Goggles feature that is adjustable in both directions.

ECO PLUS



Soft foam lining for a comfortable fit. Also suitable for sports activities.

FEATURES

SAFETY GLASSES

- Designed to protect eyes against bumps, particles impact, dust and sparks.
- They have front and side protection.
- Sporty and wraparound design that allows a peripheral vision.
- Polycarbonate lens and temples.
- UV filter.
- Stainless steel screw.

CERTIFICATIONS

ECO LINE / ECO REFLECT
ANSI Z87.1 (Z87+)

COATING

ECO LINE
AF(Anti-fog)/ HC(Anti-Scratch)/ O/I (Outdoor-Indoor)
E(Silver Mirror)
ECO REFLECT/ECO SPORT/ ECO PLUS
AF(Anti-fog)

LENS COLOR

ECO LINE



ECO REFLECT / ECO SPORT / ECO PLUS





CLASSIC LINE

FEATURES

SAFETY GLASSES

- Designed to protect eyes against bumps, particles impact, dust and sparks.
- They have front and side protection.
- Classic and wraparound design that allows a peripheral vision.
- Polycarbonate lens.
- UV filter.
- Stainless steel screw.

CERTIFICATIONS

EVOLUTION

IRAM EN 166

ANSI Z87.1 (Z87+)

IMPACT

IRAM En166

NEON

ANSI Z87.1-2020

NEON PLUS

IRAM En166

COATING

EVOLUTION

AF(Anti-fog)

IMPACT

AF(Anti-fog)/HC(Anti-Scratch)

NEON / NEON PLUS

AF(Anti-fog)/HC(Anti-Scratch)

LENS COLOR

EVOLUTION



IMPACT



NEON



NEON PLUS



EVOLUTION



Polycarbonate lens and temples with an insert of elastomer for better comfort and fit.

IMPACT



Rotatory mechanism for adjusting the lens angle. Adjustable and flexible temples with 4 length positions.

NEON

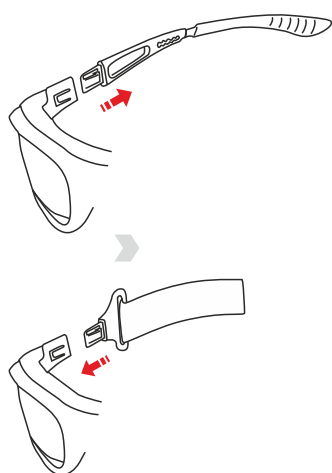


Universal bridge with injected soft insert that provides comfort and prevents slippage.

NEON PLUS



FALL DUAL



**Interchangeable pin
system between temples
and elastic strap**



SPORT LINE

FEATURES

- Designed to protect eyes against bumps, particles impact, dust and sparks.
- UV filter optical grade polycarbonate lens.
- Interchangeable temples with elastic strap.
- Telescopic temples with 5 adjustable positions.
- Detachable inside rim with soft foam lining.
- Built-in nose bridge.
- Full rim.
- Side protection.
- Temple.
- Stainless steel screw.

COATING

AF(Anti-fog)

LENS COLOR

FALL DUAL





CLASSIC GOGGLES

FEATURES

SAFETY GOGGLES

- Flexible safety goggle for general use. Designed to protect the eyes against bumps, particles impact, dust, sparks and chemical splash.
- They have front and side protection.
- Wraparound design. Universal nose bridge.
- Polycarbonate lens. UV filter.
- Extra flexible elastomer rim for perfect fit and comfort
- Elastic strap of 15mm with an adjusting buckle
- Panoramic vision and a wide distance between the eye and the lens

INDIRECT VENTILATION

A slot system located in the upper and lower part of the rim provides a continuous flow throughout the visual field, protecting against splashes.

CERTIFICATIONS

AVIATOR

ANSI Z87.1 (Z87+)

NEW CLASSIC

ANSI Z87.1-2020

COATING

AVIATOR

AF(Anti-fog)

NEW CLASSIC

AF(Anti-fog)/ HC (Anti-Scratch)

LENS COLOR

AVIATOR



NEW CLASSIC



RIM COLOR

AVIATOR



AVIATOR



Extra flexible elastomer frame for perfect seal and comfort. Universal nose bridge.



NEW CLASSIC



CASE



GENERIC/ CORD



SHEATH



SPRAY ANTI-FOG



ACCESSORIES

FEATURES

- Resistant polyester fabric with ratchet closure.
 - With belt loop and plastic hook for hanging.
 - Functional with the entire LIBUS line
-
- Polyester fiber cord with flexible terminals for pin support.
-
- Elasticized cord for eyeglass support.
 - It is inserted in each pin and allows:
 - Hold the glasses when not in use.
 - Using the loop length regulator button, fix the eyeglass to the head.
 - Length (rest): 60 cm. Width: 9 mm
 - Functional with the entire LIBUS line.
 - Color: BLACK.
-
- Standard nylon fiber sheath with strap closure.
 - Functional with the entire LIBUS line.

- 15ml



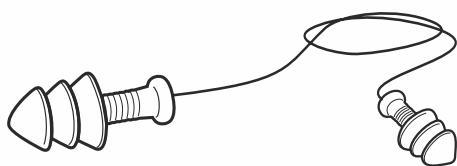
Hearing protectors are very important devices in the passive control of noise. When the selection is adequate, they provide the necessary attenuation that ensures the reduction of the effective noise exposure.

PLUGS

They are those that provide protection inserted in the ear canal. Depending on their constituent material they are divided into:

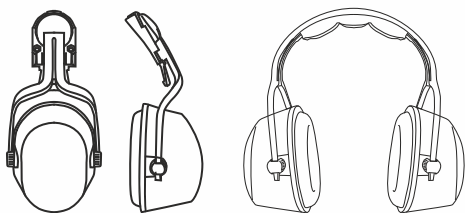
Reusable: They are manufactured in some thermoplastic elastomer.

Disposable: They are composed of self-expanding foamed polyurethane, they adapt to the shape of the ear canal.



EARMUFFS

Placed on the ears, they work as an acoustic barrier. This type of protector is manufactured with a rigid material, coated by a circular foam pad and is specially designed to cover completely the ear.



+

Efficacy of the Hearing Protector

It is very important to outstand that the effectiveness of a hearing protector depends on:

- The ability of the user to put it on (especially when you have chosen plugs).
- The time of continuous use of determined hearing protection.

For those reasons it is essential to implement a hearing protection program that takes into account:

- Training for the correct placement and use of the protector.
- Awareness of the permanent use of the equipment delivered.
- Procedures on maintenance, cleaning and replacement of the equipment.

CRITERIA FOR SELECTING THE HEARING PROTECTOR THAT BEST SUITS YOU:

- In general, the plugs offer greater protection than the earmuffs, but the final attenuation depends on the ability of the user in putting them on.

- The plugs are recommended for workplaces with a high constant level noise and with long work hours.

- The user must put the protection on at the moment of starting the task and take it off just when the user finishes.

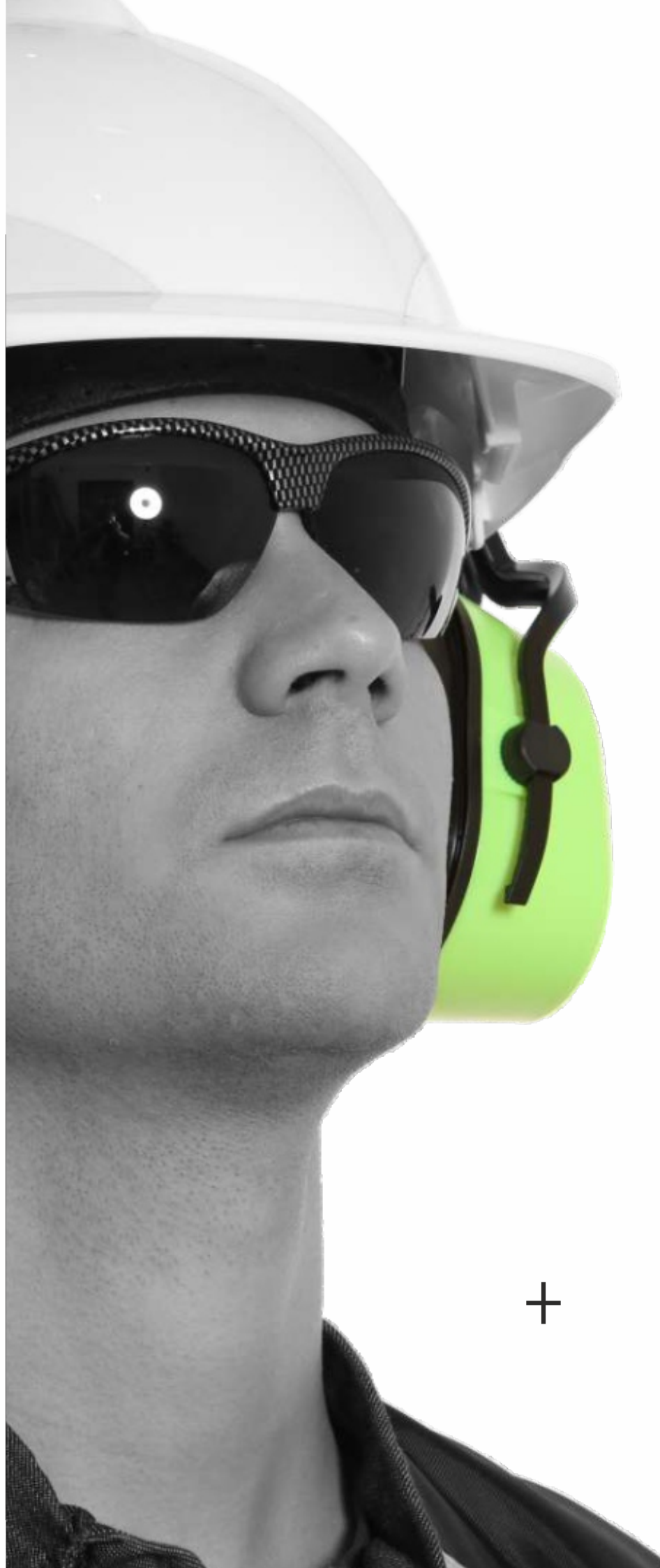
- On the contrary, when the user alternates his/her tasks between places where the protection is required and places of work where using this protection is not necessary, it is recommendable the use of earmuffs. As it is comfortable to put it on and take it off, the attenuation is almost independent from the worker's use experience.

- We also recommend the use of plugs in workplaces where the high temperature and humidity affect sensibly the user's control.

- The plugs are also preferred to use in unclean workplaces, because if earmuffs were used, the dust in suspension could accumulate between the pad and the skin, producing irritation or discomfort.

HEARING

PROTECTION



+



QUANTUM LINE

FEATURES

- Earplug that provides noise protection by insertion into the ear canal.
- Made of ultra-soft hypoallergenic polymer for a comfortable and effective fit.
- Reusable.
- Ear wax resistant and washable.
- Triple flange design that fits any ear canal.
- Strong grip to facilitate the positioning and the correct insertion/removal.
- Fluorescent green color helps to identify workers easily when they are wearing them.
- Supplied with polyester textile cord.
- Recommended for moderate noise levels.

• **Detectable model:** Includes a metal ring for detection in case of loss (e.g.: food industry)
Only available corded

- Recommended for moderate noise levels. The textile band has the function of keeping the earmuff correctly positioned, preventing them from sliding down when the protector is worn with the bonnet folder towards the neck

CERTIFICATIONS

ANSI S3.19-1974
IRAM EN 352-2:2002
Nch 1331/2-2001

ATTENUATION

NRR 26 dB SNR 28 dB

DISPENSER

Contains 250 It contains 250 units. Each earplug in its individual pack.



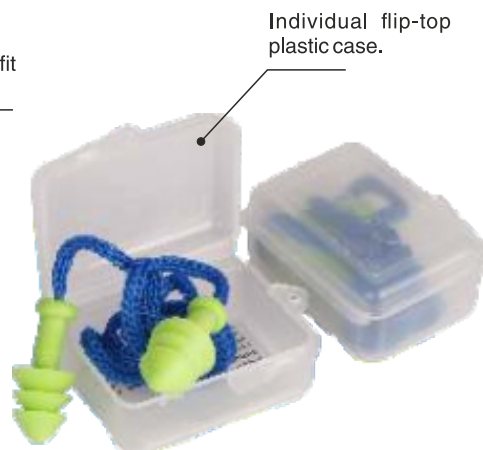
DISPENSER DETECTABLE



PLASTIC CASES



Case with a belt clip to fit it in the waistband.



Individual flip-top plastic case.

QUANTUM DETECTABLE PLASTIC CASE



DISPENSER SMART



FEATURES

- Earplug that provides noise protection by insertion into the ear canal.
- Made of ultra-soft hypoallergenic polymer for a comfortable and effective fit.
- Reusable.
- Ear wax resistant and washable.
- Triple flange design that fits any ear canal.
- Strong grip to facilitate the positioning and the correct insertion/removal.
- Recommended for moderate noise levels.

• **Detectable model: Includes a metal ring for detection in case of loss (e.g.: food industry)**
Only available corded

CERTIFICATIONS

ANSI S3.19-1974
IRAM EN 352-2:2002
Nch 1331/2-2001

ATTENUATION

NRR 26 dB SNR 28 dB

FEATURES

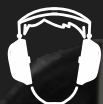
- Earplug that provides noise protection by insertion into the ear canal.
- Made of ultra-soft hypoallergenic polymer for a comfortable and effective fit.
- Reusable.
- Ear wax resistant and washable.
- Triple flange design that fits any ear canal.
- Strong grip to facilitate the positioning and the correct insertion/removal.
- Recommended for moderate noise levels.

CERTIFICATIONS

ANSI S3.19-1974
IRAM EN 352-2:2002

ATTENUATION

NRR 26 dB SNR 28 dB



EAR-MUFFS

FEATURES

ALTERNATIVE

- Provides non-invasive protection by isolating the ear from the source of noise.
- Usually called cup protectors.
- An economic design that maintains security benefits.
- Basically consist of 2 earmuff connected by a headband.
- Padded cups; comfortable wear even after long hours.
- One size adjustable to fit all users.
- Flexible plastic headband in order to adjust the earmuff perfectly to the ear.
- Double anchorage system on both cup sides: provides a balanced pressure on the ears and allows fine-tuning of height, rotation and angle.
- Multi-position height adjustment.
- Washable earmuff.
- Replacement kit (optional) for all replaceable pieces: earmuff, and internal cup foam.

CERTIFICATIONS

ALTERNATIVE

IRAM EN 352
ANSI S3.19-1974
ANSI S12.8-2008

ATTENUATION

ALTERNATIVE

NRR 20 dB SNR 24 dB

ALTERNATIVE MULTIPURPOSE ON THE HEAD

NRR 20 dB SNR 24 dB

ALTERNATIVE MULTIPURPOSE HEADBAND ON THE

BACK OF THE HEAD

SNR 22 dB

ALTERNATIVE

Specifically designed for the food industry. Its white color allows to detect quickly whether the product is clean or not.



The textile band has the function of keeping the earmuff correctly positioned, preventing them from sliding down when the protector is used with the bonnet folder towards the neck.



L-340 PHOTOLUMINOUS FOR HARD HAT



L-320



L-340



L-360



Ear Protector with High Visibility



300 LINE

FEATURES

- Provides non-invasive protection by isolating the ear from the source of noise.
- Usually called cup protectors.
- An economic design, adjustable to fit most of the users.

Headband Model: Consists of 2 earmuffs connected by a headband:

- Padded cups; comfortable wear even after long hours
- One size adjustable to fit all users
- Soft padded headband strap for comfortable fit
- Double anchorage system on both cup sides: provides a balanced pressure on the ears and allows fine-tuning of height, rotation and angle.
- Multi-position height adjustment
- Washable earmuff
- Includes belt holder to carry the protector on the waistband when it is not in use

Hard Hat model: In this model the headband is replaced by 2 pins on a pivoting holder:

- Attachments allow cups to be mounted onto hard hat slots.
- Offers two working positions: on/off ear.
- In rest position, the cups can be rotated 360°.
- The regulation of height and rotation of cups is the same as in the Headband model.
- Includes a pair of adapting clips for mounting on LIBUS hard hats.

CERTIFICATIONS

L-320 / L-360 / L-360 HV

IRAM EN 352

ANSI S3.19-1974

L-340

IRAM EN 352

ANSI S3.19-1974

ANSI S12.8-2008

ATTENUATION

L-320 V

NRR 22 dB SNR 20 dB

L-320 C

NRR 19 dB SNR 20 dB

L-340 V

NRR 26 dB SNR 29 dB

L-340 C

NRR 22 dB SNR 29 dB

L-360 V / V HC

NRR 29 dB SNR 32 dB

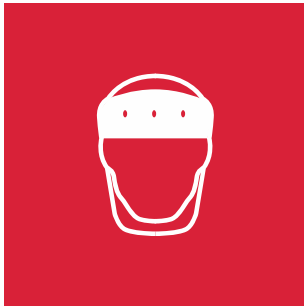
L-360 C / C HC

NRR 26 dB SNR 32 dB

L-360 C FB

NRR 24 dB SNR 26 dB

* Attenuation tables can be viewed at www.libus.com



The focus on facial protection is to safeguard the face (from forehead to chin) from two primary risks:

- **Particle impact (solid and liquid).**
 - **Generated radiation by visible light and by invisible one such as ultraviolet (UV) and infrared (IR).**
-

All of us understand the function of the face shield on the protection against impacts, but not against the radiation generated by the sun or industrial processes such as high temperature furnaces, electric or gas welding, UV lamps, etc.

All LIBUS face shields are made of optical grade polycarbonate, thus they absorb more than 99.9% of UV radiation.

Also, the face shield tinting, makes it able to absorb different areas of the light spectrum (visible, UV and IR), preventing that unwanted radiation reaches the face.

The metallized face shield helps to improve task performance in high temperature areas. LIBUS also offers face shields with plastic or metallic mesh addressed to forestry applications.

The line is completed with different models of supporting suitable for all facial line and the assembled kits.

COLORS

Colorless: General use.

Yellow: They block the blue color from the visible light spectrum, increasing the contrast and depth perception.

Smoke gray: Indicated for outdoor use where sunlight can cause eyestrain. Provide good color recognition.

Outdoor / Indoor (O/I): Indicated for staff who usually perform their tasks on alternating environments with artificial and bright natural light.

Green: : Provide protection from reflections and from IR radiation. (They filter about 80% of the IR radiation). Suitable for tasks on high furnaces. Not suitable for welding tasks.

Dark Green W3: Meet the requirements of ANSI Z87.1 for shade W3. **Green W5:** Meet the requirements of ANSI Z87.1 for shade W5.

COATING TREATMENTS

Anti-fogging (AF): Film resistant to condensation of moisture on the visor.

Outdoor / Indoor (O/I): Slightly metallized film that attenuates sunlight, maintaining an adequate performance with artificial light. Suitable for personnel who usually perform their tasks alternating between environments with artificial light and bright natural light.

Anti-scratch (HC): Film that protects the visor from natural deterioration by daily manipulation, prolonging its useful life and improving vision

Gold Mirrored: They provide protection against reflects and IR radiation. Greater resistance to temperature. Suitable for tasks on high furnaces. No suitable for welding tasks.

FACIAL **PROTECTION**





KITS

FEATURES

FORESTRY KIT

- Integrated head, ear and face protection.
- 90° flip up visor.
- For industrial forestry work.

CODES

- 902391 MILENIUM Class N/V ORANGE HARD HAT
- 902412 MILENIUM Ratchet FABRIC Harness
- 902493 Milenium Hard hat Face/Ear P.Adapter
- 900487 L-340 CUP ear protector for Hard Hat
- 901389 Forestry PLASTIC mesh 8" x 14"
- 901684 L-320 / 340 ear protection replacement kit HARD HAT
- 902003 15 mm LIBUS chinstrap w/logo (C clip)
- 300317 Pre-assembled KIT Box

Head, Face and Hearing Protection Kit

GARDENER KIT

- Integrated ear and face protection.
- 90° flip up visor.
- Ergonomic nape strap with 2 adjustment positions for adequate head fit
- For weeding, harvesting and road and park maintenance work that does not require high impact face protection.

CODES

- 901374 ALTERNATIVE CUP ear protector
- 401442 Nape holder for ALTERNATIVE kit
- 901389 Forestry PLASTIC mesh 8" x 14"
- 401440 Mesh holder set for ALTERNATIVE kit
- 300317 Pre-assembled KIT Box

Face and Hearing Protection Kit

VISITOR KIT

- Eyewear, hearing and respiratory protection kit.

CODES

- 900473 - earplugs QUANTUM
- 901798 - Respirator N95 – 1730
- 900558 - safety glasses ECO LINE clean HC

Eyewear, hearing and respiratory protection kit



FORESTRY

GARDENER

VISITOR

WEED REMOVER



FEATURES

WEED REMOVER KIT

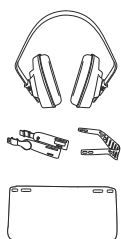
- Face protector holder with ratchet adjuster.
- For weeding, harvesting and road and park maintenance work that does not require high impact face protection.

CODES

- **901383** Face protector holder w/ratchet harness
- **901389** Forestry PLASTIC mesh 8" x 14"
- **901467** QUANTUM ear protector plast belt BX
- **300317** Pre-assembled KIT Box Rev.04 LIBUS

Face protector, mesh and holder set

LIGHTWORK



LIGHTWORK KIT

- Integrated ear and face protection.
- 90° flip up visor.
- Ergonomic nape strap with 2 adjustment positions for adequate head fit.
- For polishing, sanding and brushing work that does not require high impact face protection.

CODES

- **901374** ALTERNATIVE CUP ear protector
- **404112** Nape holder for ALTERNATIVE kit
- **901543** Flat face protector CLEAR
- **401440** Mesh holder set for ALTERNATIVE kit
- **300317** Pre-assembled KIT Box

Face and Hearing Protection Kit

METALWORK



METALWORK KIT

- Set includes: Hearing protection and Bubble face shield with holder
- For cutting and mechanized work that requires high impact face protection.

CODES

- **902877** All-purpose ALTERNATIVE ear protector
- **901386** Bubble face shield - CLEAR
- **901383** Face protection holder w/ratchet harness
- **300317** Pre-assembled KIT Box

Face and Hearing Protection Kit



FACESHIELD

FEATURES

BUBBLE FACE SHIELD

- Screen manufactured with polycarbonate to protect the face against bumps, particle impact, dust sparks and chemical splashes.
- Wraparound design for front and side protection from forehead to chin.
- Spherical (Bubble) Premium Face shield design that fits the face lines. Made of polycarbonate. UV filter.
- 7 slots in the upper band for secure mounting on holder.

FLAT FACE SHIELD

- Polycarbonate shield to protect the face against bumps, particle impact, dust sparks and chemical splashes.
- Wraparound design for front and side protection from forehead to chin. Flat model.
- Economic design.
- Flat and Flexible, perfect fit on holding accessories.
- Made of polycarbonate.
- 9 slots in the upper band for secure mounting on holder.

CRONOS

- Transparent protective mask with anti-fog treatment.
- Offers protection from forehead to chin and allows excellent visibility.
- Comfortable to wear, ultralight facial.

CERTIFICATIONS

BUBBLE FACESHIELD WINDOW

IRAM En166

ANSI Z87.1 (Z87+)

PLANO FACESHIELD WINDOW

IRAM En166

TREATMENTS

BURBUJA FACESHIELD

AF(Anti-fog)/HC(Anti-Scratch)/O/I (Outdoor-Indoor)

LENS COLOR

BUBBLE FACE SHIELD



FLAT FACE SHIELD



BUBBLE

- Dimensions: 8" x 15.5"
- Thickness: 2mm
- Suitable for high impact.



FLAT

- Dimensions: 8" x 15.5"
- Thickness: 1mm
- Only colorless available
- Must be worn with a Z87+ high impact eye protector when necessary
- Colorless: General use



CRONOS

- Reusable and easy to clean.
- Comfortable structure to use and with elegant design.
- Integrated clips to attach to the face shield.



CYLINDRICAL



CYLINDRICAL W/ CHIN GUARD



PLASTIC MESH



Dimensions: 8" x 14"



FEATURES

CYLINDRICAL FACE SHIELD

- Polycarbonate shield to protect the face against bumps, particle impact, dust sparks and chemical splashes.
- Wraparound design for front and side protection from forehead to chin.
- UV Filter.
- Cylindrical model provides more lateral protection.

CYLINDRICAL FACE SHIELD WITH CHIN GUARD

- Same features that the Cylindrical face shield.
- It has a protective extension to chin and neck zone.

PLASTIC MESH FACE SHIELD

- Face protection shield with a plastic mesh on a plastic frame
- Useful in forestry works such as felling, pruning, etc. which does not require high impact protection.
- Protects the face from splinters, vegetation and particles.
- Nylon plastic mesh
- Mesh size: 20 x 20
- Vented polypropylene frame
- 3 slots in the upper band for secure mounting on holder.

CERTIFICATIONS

CILÍNDRICO / CILÍNDRICO W-CHIN G

IRAM En166

PLASTIC MESH FACESHIELD WINDOW

IRAM EN 1731

ANSI Z87.1-2010

TREATMENTS

CYLINDRICAL FACE SHIELD

HC(Anti-Scratch)

CYLINDRICAL FACE SHIELD WITH CHIN STRAP

HC(Anti-Scratch)

LENS COLOR

CYLINDRICAL FACE SHIELD



CYLINDRICAL FACE SHIELD WITH CHIN GUARD



PLASTIC MESH FACE SHIELD





SUPPORTS

FEATURES

L-300 - MILENIUM FACES HIELD SUPPORT FOR HARD HAT

- Support for simultaneous mounting of a face shield and a cup ear protector from the L-300 line on a LIBUS industrial safety hard hat.
- Provides the user with a simultaneous face, ear and head protection.
- "Keep up/Keep down" mechanical anchorage system.
- Made of nylon.
- 5 Universal anchorage buttons.
- Articulated to allow the face shield to flip up.
- Includes a pair of adapting clips for mounting on LIBUS line hard hats.

CERTIFICATIONS

According to mounted face protector.

L-300 - UNIVERSAL FACES HIELD SUPPORT FOR HARD HAT

- Support for simultaneous mounting of a face shield and a cup ear protector to some industrial safety hard hat.
- Provides the user with a simultaneous face, ear and head protection.
- "Keep up/Keep down" mechanical anchorage system.
- Made of nylon.
- 5 Universal anchorage buttons.
- Articulated to allow the face shield to flip up.
- Includes a pair of adapting clips for mounting on LIBUS line hard hats.

CERTIFICATIONS

According to mounted face protector.

MILENIUM

"keep-up
keep-down"
system



UNIVERSAL

"keep-up
keep-down"
system



HEADGEAR RATCHET



"keep-up
keep-down"
system

HEADGEAR STANDARD



"keep-up
keep-down"
system



HEADGEAR

FEATURES

FACE SHIELD HEADGEAR - RATCHET HARNESS

- Designed for mounting different types of face shields (screen, mesh) to be worn separately.
- Suitable for work that DOES NOT require head protection.
- Articulated system that allows the face shield to flip up and to adjust the fit of the harness to the nape.
- Supplied with safety front brim.
- 5 universal anchorage buttons for visors/mesh.
- 3 present height positions.
- Ratchet with adjusting knob for continuous size adjustment.
- Operable whit protection on.
- Padded synthetic fabric front band for absorbing sweat (sweatband) detachable and washable.

CERTIFICATIONS

According to mounted face protector.

FACE SHIELD HEADGEAR - STANDARD HARNESS

- Designed for mounting different types of face shields (screen, mesh) to be worn separately.
- Suitable for work that DOES NOT require head protection.
- Articulated system that allows the face shield to flip up and to adjust the fit of the harness to the nape.
- Supplied with safety front brim.
- 5 universal anchorage buttons for visors/mesh.
- 3 present height positions.
- Size can be regulated by hooking the holes on one side of the headband to the pins on the other (pin-lock). Pin-lock system with 3 guide buckles that prevents displacement and securing the harness to the head.
- Plastic injected harness system with 7 position pin-lock system for vertical light adjustment.
- Padded synthetic fabric front band for absorbing sweat (sweatband) detachable and washable.

CERTIFICATIONS

According to mounted face protector.



The health risks generated for the welding processes can be summarized as:

- **Burning produced by Ultraviolet (UV) and Infrared radiation.**
- **Particle impact.**
- **Breathing of particles and toxic gases.**
- **Noise.**

TYPES OF PROTECTION FOR WELDERS

Basically, the protection consists of an opaque mask which protects against the radiation. This mask has a reduced visor with the capacity of absorbing (filtrating) the radiation emitted by the processes of welding.

There are two types:

1. PASSIVE

2. ACTIVE (Automatic or photosensitive)

1. PASSIVE

The visor is a mineral glass that due to its components has the property of absorbing UV and IR radiation.

They are named according to their shadow degree: DIN (Europe) or SHADE (USA).

Depending on the welding method and the energy involved, the necessary shadow degree is defined. To a greater energy present in the welding, a greater shadow degree will be needed.

2. ACTIVE

The mask is activated automatically at detecting the welding arc.

The complete visor is a photosensitive electronic device of technology LCD which in absence of a welding arc, it acts as a filter with a low protection. (for example, DIN 4).

When the welding arc is shot the visor detects it and the degree of selected shadow darkens automatically.

The photosensitive welding masks normally can regulate their shadow degree between 9 and 13.

It is important to be clear that the welding processes are very aggressive and there is, always emissions of harmful radiation. Therefore, a worker who is exposed without protection is not taking a potential risk but getting an actual health damage.

WELDER

PROTECTION





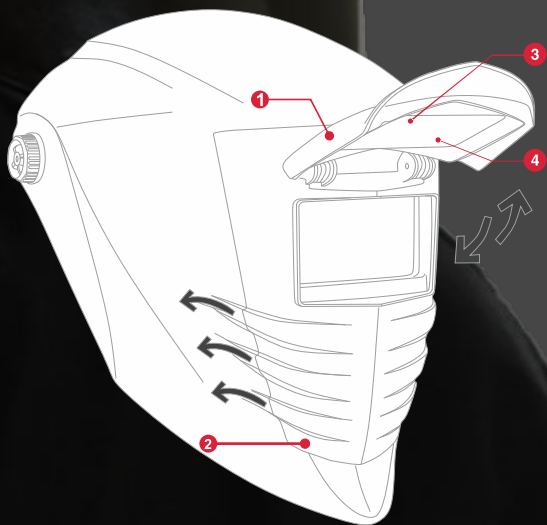
PASSIVE LINE

FEATURES

- Ergonomic and lightweight design.
- Filter cover made of PETG.
- Side ventilation slots for quick release of exhaled CO₂.
- Heat reflecting front panel.
- Extended neck cover. Flip-up filter holder frame.
- Fixed shade number filter 50 x 105mm.
- Pre-lens screen made of PETG.
- Ratchet harness for head adjustment and pin-lock for vertical light adjustment.
- Padded sweatband.
- Removable and washable.

CERTIFICATIONS

EN 175



STRONG WELDER 500



Exhaled air diffuser. Reduces fogging of the visor by directing the exhaled air towards the vents. Improves comfort by decreasing hot and humid air build up inside the helmet.



- 1 Flip-up type filter holder frame.
- 2 Heat reflecting front panel.
- 3 Filter cover made of PETG.
- 4 Fixed shade number filter.

ASSEMBLY KIT



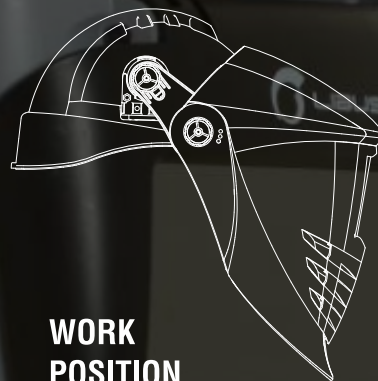
NEW!

**KIT FOR COUPLING
PROTECTIONS**

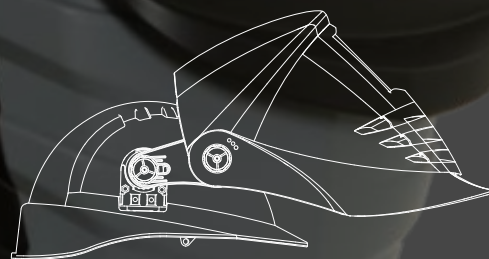


FEATURES

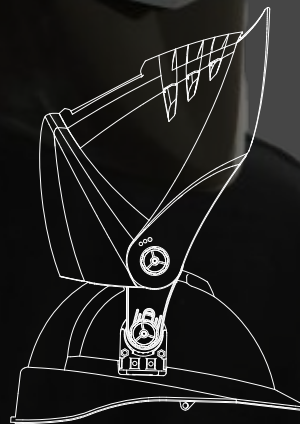
- Adapter that works with STRONG WELDER series of hard hats and that should attach to most of them.
- Compatible with Milenium LIBUS Strong Welder 500, 100, 1500 and 2000 and SW 510.
- Do not include the mask.



**WORK
POSITION**



**RESTING
POSITION**



**RESTING
POSITION**

* Spare parts available for Filters, Harnesses, Screen.



ACTIVE LINE

FEATURES

- Ergonomic and lightweight design.
- Automatic darkening filter.
- The STRONG WELDER helmet is compatible with LIBUS filters from Series 800, 1000, 1500 and 2000.
- Heat reflecting front panel.
- External adjustment of shade number.
- Extended neck cover.
- Side ventilation slots for quick release of exhaled CO₂.

STRONG WELDER 800



Exhaled air diffuser.
Reduces fogging of the visor
by directing the exhaled air
towards the vents.
Improves comfort by
decreasing hot and humid
air build up inside the
helmet.



- 1 Ergonomic and lightweight design.
- 2 Automatic darkening filter.
- 3 Heat reflecting front panel.
- 4 External adjustment of shade number.
- 5 Extended neck cover.
- 6 Side ventilation slots for quick release of exhaled CO₂.

SPECIFICATIONS

Model	STRONG WELDER 800
Viewing field	3.62 x 1.65"
Cartridge size	4.33 x 3.54"
Shade	W9 to W13
Light state	W4
Shade control	External/Continuous
UV/IR protection	W14 (continuous)
Sensors (independent/redundant)	2
Automatic Power off	Yes
Power supply	Solar cell
Reaction time	1/25000 sec
Sensitivity control	Internal/Continuous
Delay control	0.2 ~ 0.8 sec Internal/Continuous
TIG rating	$\geq 10A_{DC}$ / $\geq 10A_{AC}$
Grinding	Yes
Operating temperature	14°F to 131°F
Storage temperature	-4°F to 158°F
Applications	Stick Welding (SMAW); TIG DC&AC; TIG Pulse DC; TIG Pulse AC; MIG/MAG/CO2; MIG/MAG Pulse; Plasma Arc Cutting (PAC); Plasma Arc Welding (PAW); Air Carbon Arc Cutting (CAC-A); Grinding. DO NOT USE IN LASER WELDING / CUTTING OR OXY-ACETYLENE WELDING / CUTTING.



ACTIVE LINE

FEATURES

- Ergonomic and lightweight design.
- Automatic darkening filter.
- The STRONG WELDER helmet is compatible with LIBUS filters from Series 800, 1000, 1500 and 2000.
- Heat reflecting front panel.
- External adjustment of shade number.
- Extended neck cover.
- Side ventilation slots for quick release of release of exhaled CO2.

CERTIFICATIONS

S1000/S1500/S2000
EN 175



DIN 3.5



UV/IR Protection



Wide vision



Variable
Dimming



Solar Cell



Speed
Performance



STRONG WELDER 1000

Stick welding (SMAW); TIG DC&AC;
TIG Pulse DC; TIG Pulse AC;
MIG/MAG/CO2; MIG/MAG Pulse;
Plasma Arc Cutting (PAC); Plasma Arc
Welding (PAW); Air Carbon Arc Cutting
(CAC-A); Grinding. DO NOT USE IN
LASER WELDING / CUTTING OR OXY.
ACETYLENE WELDING / CUTTING.



STRONG WELDER 1500

Stick welding (SMAW); TIG DC&AC;
TIG Pulse DC; TIG Pulse AC;
MIG/MAG/CO2; MIG/MAG Pulse;
Plasma Arc Cutting (PAC); Plasma
Arc Welding (PAW); Air Carbon Arc
Cutting (CAC-A); Grinding. DO NOT
USE IN LASER WELDING / CUTTING.

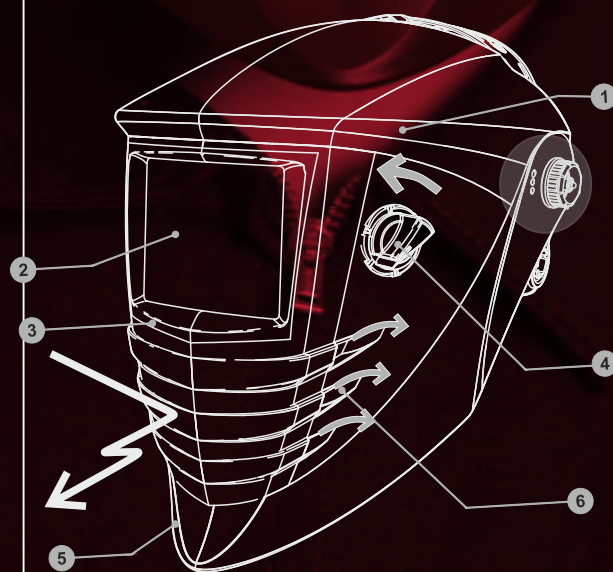


STRONG WELDER 2000

Stick Welding (SMAW); TIG
DC&AC; TIG Pulse DC; TIG Pulse
AC; MIG/MAG/CO2; MIG/MAG
Pulse; Plasma Arc Cutting (PAC);
Plasma Arc Welding (PAW); Air
Carbon Arc Cutting (CAC-A);
Grinding. DO NOT USE IN LASER
WELDING / CUTTING.



- ① Ergonomic and lightweight design.
- ② Automatic darkening filter. The STRONG WELDER helmet is compatible with LIBUS filters from Series 800, 1000, 1500 and 2000.
- ③ Heat reflecting front panel.
- ④ External adjustment of shade number.
- ⑤ Extended neck cover.
- ⑥ Side ventilation slots for quick release of exhaled CO₂.



SPECIFICATIONS

Model	Strong Welder 1000
Viewing field	3.93 x 1.97"
Cartridge size	4.33 x 3.54"
Shade	W9 to W13
Light state	W4
Shade control	External/Continuous
UV/IR protection	W14 (continuous)
Sensors (independent/redundant)	2
Automatic Power off	Yes
Power supply	Solar cell
Reaction time	1/25000 sec
Sensitivity control	Internal/Continuous
Delay control	0.2 ~ 0.8 sec Internal/Continuous
TIG rating	≥10A _{DC} / ≥10A _{AC}
Grinding	Yes
Operating temperature	14°F to 131°F
Storage temperature	-4°F to 158°F
Applications	Stick Welding (SMAW); TIG DC&AC; TIG Pulse DC; TIG Pulse AC; MIG/MAG/CO2; MIG/MAG Pulse; Plasma Arc Cutting (PAC); Plasma Arc Welding (PAW); Air Carbon Arc Cutting (CAC-A); Grinding. DO NOT USE IN LASER WELDING / CUTTING OR OXY-ACETYLENE WELDING / CUTTING.

Strong Welder 1500**3.82 x 1.85"****4.33 x 3.54"****W9 to W13****W4****External/Continuous****W14 (continuous)****2****Yes****Replaceable Lithium battery****1/25000 sec****Internal/Continuous****0.1 ~ 1.0 sec
Internal/Continuous** **$\geq 2A_{DC}$ / $\geq 2A_{AC}$** **Yes****14°F to 131°F****-4°F to 158°F****Strong Welder 2000****3.74 x 2.44"****4.33 x 3.54"****W5 to W8 / W9 to W13****W4****External/Continuous****W14 (continuous)****4****Yes****Replaceable Lithium battery****1/25000 sec****Internal/Continuous****0.1 ~ 1.0 sec
External/Continuous** **$\geq 2A_{DC}$ / $\geq 2A_{AC}$** **Yes****14°F to 131°F****-4°F to 158°F**

Stick Welding (SMAW); TIG DC&AC; TIG Pulse DC; TIG Pulse AC; MIG/MAG/CO₂; MIG/MAG Pulse; Plasma Arc Cutting (PAC); Plasma Arc Welding (PAW); Air Carbon Arc Cutting (CAC-A); Grinding. **DO NOT USE IN LASER WELDING / CUTTING OR OXY-ACETYLENE WELDING / CUTTING.**

Stick Welding (SMAW); TIG DC&AC; TIG Pulse DC; TIG Pulse AC; MIG/MAG/CO₂; MIG/MAG Pulse; Plasma Arc Cutting (PAC); Plasma Arc Welding (PAW); Air Carbon Arc Cutting (CAC-A); Grinding. **DO NOT USE IN LASER WELDING / CUTTING.**



libus.com





libus.com