BISON LIFE®

Designed For Safety. Value For Life.®

RESPIRATORY PROTECTION

Respiratory Protection
Essential for Workplace Safety

Why Respiratory Protection Matters?

Protecting your lungs is crucial for staying safe at work. Whether you're in construction, manufacturing, healthcare, or any other industry, FiltAer™, ProAer™ and ConAer™ range of respiratory protection can prevent serious health issues caused by inhaling harmful substances.

Understanding the Importance

Respiratory hazards, such as dust, fumes, smoke, and chemicals, can cause severe health problems, including lung diseases, asthma, and even cancer. Wearing respiratory protection, like Respirators and respirators, helps filter out these harmful substances, ensuring you breathe clean air.

Choosing the Right Respiratory Protection

Disposable Respirator: Lightweight and convenient for short-term use, these Respirators protect against dust and other particulates.

Half-Facepiece Respirators: Provide a better fit and protection against dust, fumes, and some gases. They require replaceable filters or cartridges.

Full- Facepiece Respirators: Offer complete protection for the face and eyes, ideal for more hazardous environments with higher levels of contaminants.

Powered Air-Purifying Respirators (PAPRs): Use a battery-powered blower to provide a steady flow of filtered air, suitable for long-duration use in high-risk areas.

Supplied-Air Respirators (SARs): SARs deliver clean air from an external source, ideal for hazardous environments or confined spaces where filtering ambient air isn't sufficient.

Self-Contained Breathing Apparatus (SCBA): Provide breathable air from a tank, essential for extremely hazardous environments where the air quality is severely compromised.

Making Safety a Priority

Prioritizing respiratory protection means understanding the risks and choosing the appropriate equipment. It's not just about following workplace rules; it's about protecting your lungs and overall health. Always use the right protection for the job and ensure it fits properly.

EN 140: Half Facepiece for Respiratory Protection

EN 140 is a European standard that specifies the requirements for half facepiece used in respiratory protective devices. These Respirators cover the nose, mouth, and chin (half facepiece) and are used with filters or breathing apparatus to protect against hazardous airborne substances.

Key Aspects of EN 140

● Design and Construction

Materials: Facepiece must be made from durable, non-toxic materials that are comfortable to wear and do not cause skin irritation.

Face Seal: Facepiece must have an effective seal around the face to prevent contaminants from leaking in.

Components: Respirators typically consist of the respirator body, head harness, and connections for filters or other respiratory devices.

● Performance Requirements

Breathing Resistance: Respirators must allow for easy breathing, with minimal resistance to airflow when inhaling and exhaling.

Filter Compatibility: Respirators should be compatible with various types of filters or cartridges depending on the specific hazards present.

Mechanical Strength: Respirators must be robust and able to withstand handling and environmental stresses without degrading.

● Testing and Certification

Leak Tightness: Respirators must be tested to ensure they maintain a tight seal around the face, preventing any contaminants from entering.

Mechanical Performance: Respirators must pass tests for durability and strength, ensuring they can handle impacts and other mechanical stresses.

Flammability: Respirators must be tested to ensure they do not easily catch fire or melt when exposed to high temperatures.

● Comfort and Fit

Adjustability: Respirators must have adjustable head straps to ensure a secure and comfortable fit for different face sizes and shapes.

Weight and Balance: The design should distribute weight evenly to minimize pressure points and increase comfort during prolonged use.

Ease of Use: Respirators should be easy to put on and take off, with simple mechanisms for attaching and detaching filters.

● Marking and Information

Manufacturer's Details: Respirators must be clearly marked with the manufacturer's name, model number, and size.

Compliance: Respirators must display a mark indicating compliance with the EN 140 standard.

User Instructions: Comprehensive instructions for use, maintenance, and cleaning must be provided to ensure proper handling and longevity of the respirator.

Respirator Cartridge Selection: Ensuring Proper Protection

Selecting the right respirator cartridge is crucial for providing adequate protection against specific airborne hazards. Different cartridges are designed to filter out various types of contaminants, including particulate matter, gases, and vapors. Here's a guide to help you choose the right respirator cartridge for your needs.

Steps for Selecting the Right Respirator Cartridge

● Identify the Hazard

Particulate Matter: Dust, fumes, mists, smoke.

Gases and Vapors: Organic vapors, acid gases, ammonia, formaldehyde, etc.

Combination Hazards: Environments with both particulates and gases/vapors.

● Understand Cartridge Types

Particulate Filters:

P1 Filters: Provide protection against low levels of dust and solid particles, suitable for environments with non-toxic dust.

P2 Filters: Offer protection against moderate levels of dust, mists, and fumes, commonly used in construction and industrial settings.

P3 Filters: Provide the highest level of protection against fine particles, including toxic dust, fumes, and asbestos, ideal for high-risk environments.

Gas and Vapor Cartridges:

Organic Vapor (OV): Protects against organic vapors such as solvents and hydrocarbons.

Acid Gas (AG): Protects against acid gases like chlorine, sulfur dioxide, and hydrogen chloride.

Ammonia/Methylamine (AM): Protects against ammonia and methylamine.

Formaldehyde (FM): Protects against formaldehyde vapors.

Combination Cartridges:

Multi-Gas/Vapor: Protects against a variety of gases and vapors.

PAPR Cartridges: Used with Powered Air-Purifying Respirators for extended use and higher comfort levels.

● Consider the Workplace Environment

Contaminant Concentration: Determine the levels of contaminants in the air to choose a cartridge with the appropriate protection factor.

Exposure Duration: Longer exposure may require more robust filtration or the use of powered air-purifying respirators (PAPRs).

Presence of Oils: If the environment contains oil aerosols, choose filters and cartridges rated for oil resistance (R or P series).

● Check Compatibility

Ensure that the cartridge is compatible with your respirator model. Not all cartridges fit all respirators, so refer to the manufacturer's compatibility chart.

● Follow Regulations and Standards

Adhere to guidelines set by occupational safety organizations such as OSHA (Occupational Safety and Health Administration) in the U.S., and ensure the selected cartridge meets relevant standards.

Color Coding for Respirator Cartridges (Based on EN Standard)

In Europe, the color coding for respirator cartridges follows the EN (European Norm) standard, ensuring that users can easily identify the type of protection each cartridge provides. Here is a guide to the color codes used for different types of contaminants according to the EN standard:

● Particulate Filters

White:

P1: Low efficiency filter (80% minimum efficiency) for protection against low levels of fine dusts.

P2: Medium efficiency filter (94% minimum efficiency) for protection against moderate levels of fine dusts, mists, and fumes.

P3: High efficiency filter (99.95% minimum efficiency) for protection against high levels of fine dusts, mists, and fumes, including carcinogenic and radioactive particles, as well as bacteria and viruses.

● Gas and Vapor Cartridges

Brown:

Type A: Organic gases and vapors with boiling points above 65°C (e.g., solvents and hydrocarbons).

Grey:

Type B: Inorganic gases and vapors (e.g., chlorine, hydrogen sulfide, hydrogen cyanide).

Yellow:

Type E: Acid gases (e.g., sulfur dioxide, hydrogen chloride).

Green:

Type K: Ammonia and organic ammonia derivatives.

Red:

Type CO: Carbon monoxide (used with specific devices that have an end-of-service-life indicator).

Blue:

Type NO: Nitrogen oxides

Brown & Green:

Type AX: Organic gases and vapors with boiling points below 65°C (e.g., low boiling point organic compounds). Note: AX filters are single-use only.

● Combination Filters

Brown/White:

A-P: Organic vapors and particulates.

Grey/White:

B-P: Inorganic gases and particulates.

Yellow/White:

E-P: Acid gases and particulates.

Green/White:

K-P: Ammonia and particulates.

Brown/Grey/White:

A-BE-P: Organic, inorganic gases, and acid gases and particulates.

Olive:

A-BE-K-P: Organic, inorganic gases, ammonia, acid gases, and particulates.

● Other Specific Filters

Olive & Red:

A-BE-K-Hg-P: Organic gases and vapors, inorganic gases, ammonia, mercury vapor, acid gases, and particulates.

Important Considerations

● Markings:

Each cartridge or filter should have clear markings indicating its type and the specific contaminants it protects against. Ensure that the markings are visible and legible.

● Expiration Date:

Cartridges have a shelf life, and expired cartridges should not be used. Check the expiration date before use.

● Fit Testing:

Ensure that the respirator with the selected cartridge fits properly. Conduct regular fit tests to ensure a secure seal.

By adhering to the EN standard color coding system, workers can easily select the appropriate cartridge for their specific needs, ensuring they have the necessary protection against various workplace hazards. Proper training and regular updates on cartridge selection and use are crucial for maintaining safety and compliance in the workplace.

Disposable Respirators

D2K24 — Disposable Cup Shape Particulate Mask with Nuisance Level Acid Gas Relief

GB 2626-2019 KP95
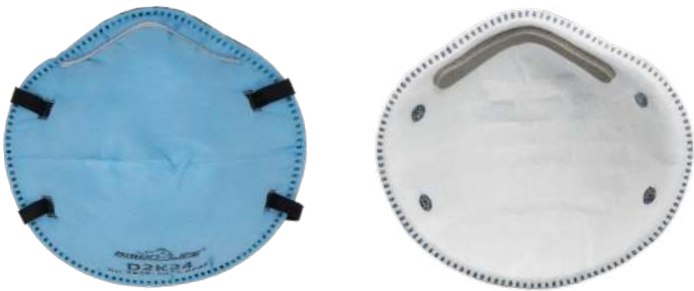
Product Specification

Type	Cup Shape
Wearing	Headband
Material	High efficiency BMF
Nose Foam	Yes
Activated Carbon	Yes

Packaging Information

20 Pcs / Box

200 Pcs / Carton

Product SKU	Colour	Inner pack UPC	Carton GTIN
BLSH-FA-H980A	Blue	810148533182	00810148533199

D3K24 — Disposable Cup Shape Particulate Mask (Activated carbon) with Nuisance Level Organic Vapor Relief

GB 2626-2019 KP95
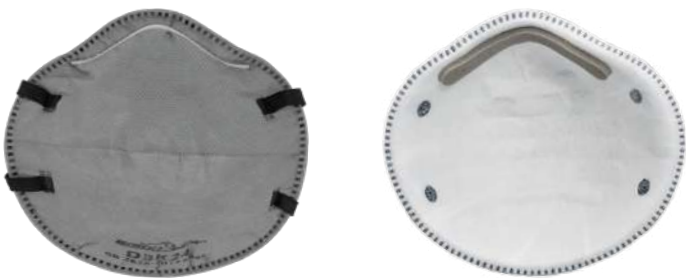
Product Specification

Type	Cup Shape
Wearing	Headband
Material	High efficiency BMF
Nose Foam	Yes
Activated Carbon	Yes

Packaging Information

20 Pcs / Box

200 Pcs / Carton

Product SKU	Colour	Inner pack UPC	Carton GTIN
BLSH-FA-H980C	Grey	810148533205	00810148533229

Reusable Half Face Respirators

H100 — Single Cartridge Half Face Respirator - TPE

CE 2834 EN 140:1998

Product Specification

Product Type	Half Face Piece
Cartridge Type	Single Cartridge
Faceseal	TPE
Connection Type	Snapped
Cool Flow Exhalation Valve	Yes
Head Harness Assembly	3 point adjustable
Strap Material	Spandex

Packaging Information

1 Piece / Polybag
20 Pieces / Carton

Product SKU	Size	Colour	Inner pack UPC	Carton GTIN
BLSH-PA-H4200	OSFM	Grey	810148531331	00810148531348

H200 — Single Cartridge Half Face Respirator - Silicone

GB 2890-2022

Product Specification

Product Type	Half Face Piece
Cartridge Type	Single Cartridge
Faceseal	Silicone
Connection Type	Snapped
Cool Flow Exhalation Valve	Yes
Head Harness Assembly	3 point adjustable
Strap Material	Spandex

Packaging Information

1 Piece / Polybag
20 Pieces / Carton

Product SKU	Size	Colour	Inner pack UPC	Carton GTIN
BLSH-PA-H9200	OSFM	Navy Blue	810148531355	00810148531362

Reusable Half Face Respirators

H300 — Dual Cartridge Half Face Respirator - TPE

CE 2834 EN 140:1998

Product Specification

Product Type	Half Face Piece
Cartridge Type	Dual Cartridge
Faceseal	TPE
Connection Type	Bayonet
Exhalation Valve	Hidden
Head Harness Assembly	3 point adjustable
Strap Material	Spandex
Compatible with ConAer™ SAR System	Yes

Packaging Information

1 Piece / Polybag
20 Pieces / Carton

Product SKU	Size	Colour	Inner pack UPC	Carton GTIN
BLSH-PA-H8300	OSFM	Grey	810148531379	00810148531386

H400 — Dual Cartridge Half Face Respirator - Silicone

CE 2834 EN 140:1998

Product Specification

Product Type	Half Face Piece
Cartridge Type	Dual Cartridge
Faceseal	Silicone
Connection Type	Bayonet
Exhalation Valve	Hidden
Head Harness Assembly	3 point adjustable
Strap Material	Spandex
Compatible with ConAer™ SAR System	Yes

Packaging Information

1 Piece / Polybag
20 Pieces / Carton

Product SKU	Size	Colour	Inner pack UPC	Carton GTIN
BLSH-PA-H9600	OSFM	Blue	810148531393	00810148531409

Reusable Half Face Respirators

H430 — Dual Cartridge Half Face Respirator - Silicone

CE 2834 EN 140:1998

Product Specification

Product Type	Half Face Piece
Cartridge Type	Dual Cartridge
Faceseal	Silicone
Connection Type	Bayonet
Exhalation Valve	Hidden
Head Harness Assembly	3 point adjustable
Strap Material	Spandex
Compatible with ConAer™ SAR System	Yes

Packaging Information

1 Piece / Polybag
20 Pieces / Carton

Product SKU	Size	Colour	Inner pack UPC	Carton GTIN
BLSH-PA-H8700	OSFM	Blue	810148531416	00810148531423

H450 — Dual Cartridge Half Face Respirator - Silicone

CE 2834 EN 140:1998

Product Specification

Product Type	Half Face Piece
Cartridge Type	Dual Cartridge
Faceseal	Silicone
Connection Type	Bayonet
Exhalation Valve	Hidden
Head Harness Assembly	3 point adjustable
Strap Material	Spandex
Compatible with ConAer™ SAR System	Yes

Packaging Information

1 Piece / Polybag
20 Pieces / Carton

Product SKU	Size	Colour	Inner pack UPC	Carton GTIN
BLSH-PA-H8600	OSFM	Grey	810148531430	00810148531447

F500

CE 2834   EN 136:1998 CL2

ProAer®
Reusable Full Face Respirator

Dual Cartridge Full Face Respirator - Silicone

Product Specification

Product Type	Full Face Piece
Cartridge Type	Dual Cartridge
Lens	Polycarbonate
Anti-Fog	Yes
Faceseal	Silicone
Connection Type	Bayonet
Exhalation Valve	Hidden
Head Harness Assembly	4 point adjustable
Strap Material	Silicone
Compatible with ConAer™ SAR System	Yes

Packaging Information

1 Piece / Box
4 Pieces / Carton

Product SKU	Size	Colour	Inner pack UPC	Carton GTIN
BLSH-PA-F8800	OSFM	Navy Blue	810148531454	00810148531461

F600

CE 2834   EN 136:1998 CL2

ProAer®
Reusable Full Face Respirator

Speaking Diaphragm

Dual Cartridge Full Face Respirator - Silicone

Dual Cartridge Respirator - Silicone

Product Specification

Product Type	Full Face Piece
Cartridge Type	Dual Cartridge
Lens	Polycarbonate
Anti-Fog	Yes
Faceseal	Silicone
Connection Type	Bayonet
Exhalation Valve	Hidden
Head Harness Assembly	6 point adjustable
Strap Material	Silicone
Compatible with ConAer™ SAR System	Yes
Speech Diaphragm	Yes

Packaging Information

1 Piece / Box
4 Pieces / Carton

Product SKU	Size	Colour	Inner pack UPC	Carton GTIN
BLSH-PA-F9800	OSFM	Grey	810148531478	00810148531485

Dual side Anti-fog coated polycarbonate lens

Hidden downward exhalation design

Six-point adjustable silicone harness

Reusable Respirator Filters

P101 — P2 Class Particulate Filter

GB 2626-2019 KN95

Product Specification

Product Type	Particulate Filter
Protection Class	P2
Cartridge Type	Single Cartridge
Compatible Facepiece	ProAer®-H100, H200
Compatible Retainer	ProAer®-R101
Compatible Cartridge	ProAer®-GF100, GF101

Packaging Information

50 Pieces / Polybag
500 Pieces / Carton

Product SKU	Inner pack UPC	Carton GTIN
BLSH-PA-H4N95	810148531331	00810148531348

P102 — P2 Class Pre-Filter

GB 2890-2022 KN95

Product Specification

Product Type	Particulate Filter
Protection Class	P2
Cartridge Type	Single Cartridge
Compatible Facepiece	ProAer®-H100, H200
Compatible Retainer	ProAer®-H102
Compatible Cartridge	ProAer®-GF100, GF101

Packaging Information

50 Pieces / Polybag
500 Pieces / Carton

Product SKU	Inner pack UPC	Carton GTIN
BLSH-PA-H5PF1	810148533250	00810148533267

P201 — P2 Class Particulate Filter

CE 2834 EN 143:2021 P2

Product Specification

Product Type	Particulate Filter
Protection Class	P2
Cartridge Type	Dual Cartridge
Compatible Facepiece	ProAer®-H300, H400, H430, H450, F500 & F600
Compatible Retainer	ProAer®-R201
Compatible Cartridge	ProAer®-GF200, GF201, GF202

Packaging Information

10 Pieces / Box
300 Pieces / Carton

Product SKU	Inner pack UPC	Carton GTIN
BLSH-PA-H8N95	810148533274	00810148533281

PF200 — P3 Class Particulate Filter for solid & liquid dust

CE 2834 EN 143:2021 P3

Product Specification

Product Type	Particulate Filter
Protection Class	P3
Cartridge Type	Dual Cartridge
Compatible Facepiece	ProAer®-H300, H400, H430, H450, F500 & F600

Packaging Information

1 Pair / Polybag
50 Pairs / Carton

Product SKU	Inner pack UPC	Carton GTIN
BLSH-PA-H8P100	810148531492	00810148531508

PF200OV — P3 Class Particulate Filter with Nuisance Level Organic Vapor Relief

CE 2834 EN 143:2021 P3

Product Specification

Product Type	Particulate Filter
Protection Class	P3
Cartridge Type	Dual Cartridge
Compatible Facepiece	ProAer®-H300, H400, H430, H450, F500 & F600

Packaging Information

1 Pair / Polybag
50 Pairs / Carton

Product SKU	Inner pack UPC	Carton GTIN
BLSH-PA-H8P100C	810148531515	00810148531522

PF200AG — P3 Class Particulate Filter (Carbon) with Nuisance Level Acid Gas Relief

CE 2834 EN 143:2021 P3

Product Specification

Product Type	Particulate Filter
Protection Class	P3
Cartridge Type	Dual Cartridge
Compatible Facepiece	ProAer®-H300, H400, H430, H450, F500 & F600

Packaging Information

1 Pair / Polybag
50 Pairs / Carton

Product SKU	Inner pack UPC	Carton GTIN
BLSH-PA-H8P100A	810148531539	00810148531546

Reusable Respirator Filters

PF201 — P3 Class Particulate Filter

CE 2834 EN 143:2021 P3

Product Specification

Product Type	Particulate Filter
Protection Class	P3
Cartridge Type	Dual Cartridge
Compatible Facepiece	ProAer®-H300, H400, H430, H450, F500 & F600

Packaging Information

1 Pair / Polybag
40 Pairs / Carton

Product SKU	Inner pack UPC	Carton GTIN
BLSH-PA-H8GF100	810148531553	00810148531560

GF100 — Organic Vapor Filter - A

CE 2834 EN 14387:2004+A1:2008 A1

Product Specification

Product Type	Gas Filter
Protection against	Organic Vapor
Cartridge Type	Single Cartridge
Compatible Facepiece	ProAer®-H100, H200
Compatible Filter	ProAer®-P101

Packaging Information

1 Piece / Polybag
60 Pieces / Carton

Product SKU	Inner pack UPC	Carton GTIN
BLSH-PA-H5001	810148531591	00810148531607

GF101 — Organic Vapor/Acid Gas Filter - AE

GB 2890-2022 A1E1

Product Specification

Product Type	Gas Filter
Protection against	Organic Vapor, Acid Gas
Cartridge Type	Single Cartridge
Compatible Facepiece	ProAer®-H100, H200
Compatible Filter	ProAer®-P101

Packaging Information

1 Piece / Polybag
60 Pieces / Carton

Product SKU	Inner pack UPC	Carton GTIN
BLSH-PA-H5003	810148531614	00810148531621

GF200 — Organic Vapor Filter - A

CE 2834 EN 14387:2004+A1:2008 A1

Product Specification

Product Type	Gas Filter
Protection against	Organic Vapor
Cartridge Type	Dual Cartridge
Compatible Facepiece	ProAer®-H300, H400, H430, H450, F500 & F600

Packaging Information

1 Pair / Polybag
30 Pairs / Carton

Product SKU	Inner pack UPC	Carton GTIN
BLSH-PA-H8001	810148531638	00810148531645

GF201 — Organic Vapor/Acid Gas Filter - AE

CE 2834 EN 14387:2004+A1:2008 A1E1

Product Specification

Product Type	Gas Filter
Protection against	Organic Vapor, Acid Gas
Cartridge Type	Dual Cartridge
Compatible Facepiece	ProAer®-H300, H400, H430, H450, F500 & F600

Packaging Information

1 Pair / Polybag
30 Pairs / Carton

Product SKU	Inner pack UPC	Carton GTIN
BLSH-PA-H8003	810148531652	00810148531669

Reusable Respirator Filters

GF202 — Multi Gas/Vapor filter - ABEK

CE 2834 EN 14387:2004+A1:2008 A1B1E1K1

Product Specification

Product Type	Gas Filter
Protection against	Multi Gas
Cartridge Type	Dual Cartridge
Compatible Facepiece	ProAer®-H300, H400, H430, H450, F500 & F600

Packaging Information

1 Pair / Polybag
30 Pairs / Carton

Product SKU	Inner pack UPC	Carton GTIN
BLSH-PA-H8006	810148531676	00810148531683

GF203 — Ammonia Methylamine filter - K

CE 2834 EN 14387:2021 K1

Product Specification

Product Type	Gas Filter
Protection against	Ammonia Methylamine
Cartridge Type	Dual Cartridge
Compatible Facepiece	ProAer®-H300, H400, H430, H450, F500 & F600

Packaging Information

1 Pair / Polybag
30 Pairs / Carton

Product SKU	Inner pack UPC	Carton GTIN
BLSH-PA-H8004	810148535896	00810148535902

GF201P3 — Organic Vapor & Acid Gas Filter - AE combined with P2 Filter

CE 2834 EN 14387:2004+A1:2008 A1E1P3 R

Product Specification

Product Type	Combined Gas Filter
Protection against	Organic Vapor, Acid Gas
Cartridge Type	Dual Cartridge
Compatible Facepiece	ProAer®-H300, H400, H430, H450, F500 & F600

Packaging Information

1 Pair / Polybag
20 Pairs / Carton

Product SKU	Inner pack UPC	Carton GTIN
BLSH-PA-H8003P3	810148531690	00810148531706

GF202P3 — Multi Gas/Vapor Filter - ABEK combined with P2 Filter

CE 2834 EN 14387:2004+A1:2008 A1B1E1K1P3 R

Product Specification

Product Type	Combined Gas Filter
Protection against	Multi Gas
Cartridge Type	Dual Cartridge
Compatible Facepiece	ProAer®-H300, H400, H430, H450, F500 & F600

Packaging Information

1 Pair / Polybag
20 Pairs / Carton

Product SKU	Inner pack UPC	Carton GTIN
BLSH-PA-H8006P3	810148531713	00810148531720

Reusable Respirators Accessories

R101 — Retainer for Single cartridge Particulate Filter

R201 — Retainer for Dual cartridge Particulate Filter

H102 — Holder for Particulate Filter
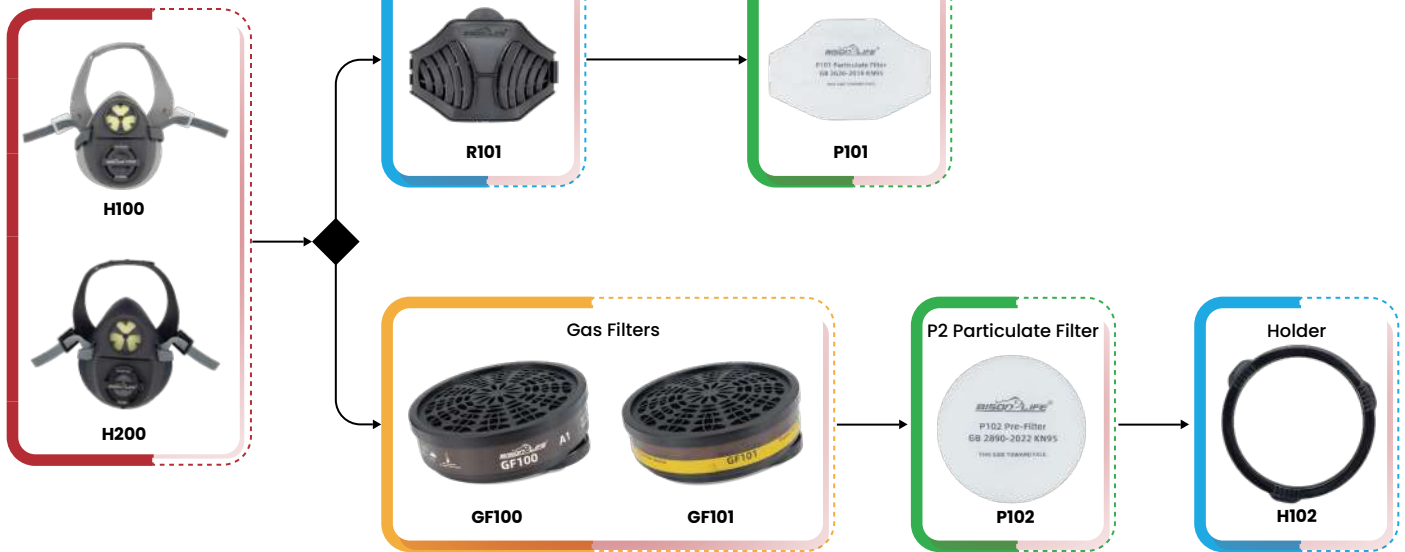
A201 — Adapter for Particulate Filter

A200 — Adapter for Particulate Filter

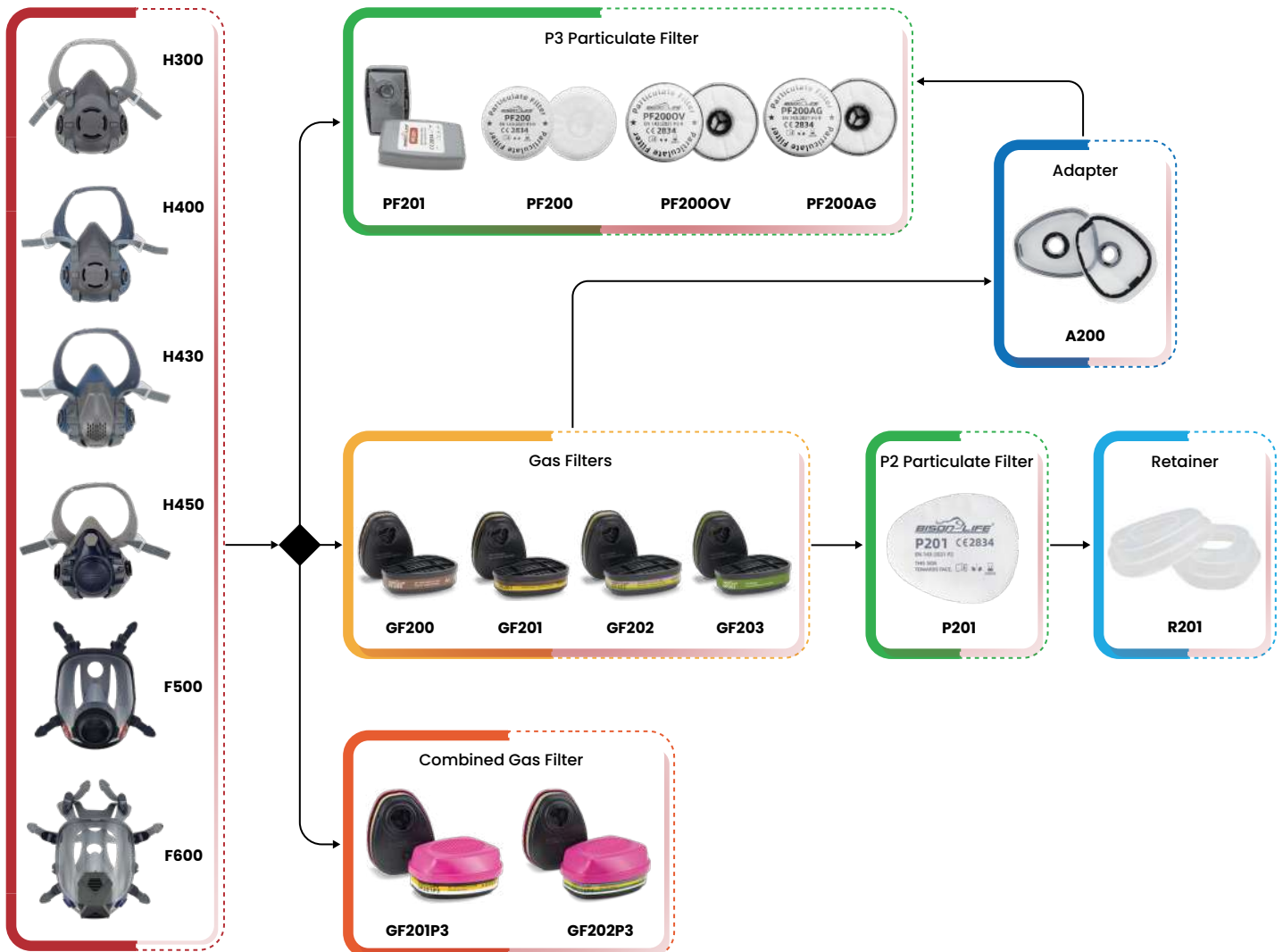| Model no.	Product description	Product SKU	Packaging information	Inner pack UPC	Carton GTIN
R101	Retainer for Single cartridge Particulate Filter	BLSH-PA-H4800	10 Pcs / Polybag, 60 Pcs / Carton	810148531577	00810148531584
R201	Retainer for Dual cartridge Particulate Filter	BLSH-PA-H801	20 Pcs / Polybag, 200 Pcs / Carton	810148533298	00810148533304
H102	Holder for Particulate Filter	BLSH-PA-H52CV	10 Pcs / Polybag, 200 Pcs / Carton	810148533311	00810148533328
A201	Adapter for Particulate Filter	BLSH-PA-H603	10 Pcs / Polybag, 200 Pcs / Carton	810148533335	00810148533342
A200	Adapter for Particulate Filter	BLSH-PA-H802	20 Pcs / Polybag, 200 Pcs / Carton	810148533359	00810148533366

COMPATIBILITY CHART
FOR REUSABLE FACEPIECE

SINGLE CARTRIDGE
Reusable Facepiece

H100

H200

Retainer

R101

P2 Particulate Filter

P101

Gas Filters

GF100   GF101

P2 Particulate Filter

P102

Holder

H102

DUAL CARTRIDGE
Reusable Facepiece

H300

H400

H430

H450

F500

F600

P3 Particulate Filter

PF201   PF200   PF200OV   PF200AG

Adapter

A200

Gas Filters

GF200   GF201   GF202   GF203

P2 Particulate Filter

P201

Retainer

R201

Combined Gas Filter

GF201P3   GF202P3

ConAer™

Powered Air Purifying Respirator

PAPR
A Critical Aspect of Workplace Safety

Understanding the Importance of Powered Air-Purifying Respirators (PAPR)

ConAer™ range of Powered Air-Purifying Respirators (PAPR) are essential for protecting workers in environments where air quality is compromised due to hazardous dust, fumes, vapors, or gases. By providing a continuous supply of filtered air, PAPRs enhance safety and comfort, particularly in challenging work conditions.

Why PAPR Matters?

● Comprehensive Respiratory Protection

Continuous Air Supply: PAPRs deliver a steady stream of clean, filtered air to the wearer, ensuring a consistent supply of breathable air.

Effective Filtration: Equipped with high-efficiency filters, PAPRs protect against a wide range of contaminants, including particulate matter, gases, and vapors.

● Enhanced Comfort

Reduced Breathing Effort: Unlike traditional respirators that rely on the wearer's breathing effort, PAPRs reduce the physical effort required to breathe by actively supplying filtered air.

Cooling Effect: The airflow from a PAPR system helps to keep the wearer cool, reducing heat stress and improving comfort during prolonged use.

● Improved Safety

Protection Against High Levels of Contaminants: PAPRs are crucial in environments with high concentrations of harmful substances, where other forms of respiratory protection may be inadequate.

High Protection Factor: PAPRs provide a high level of protection compared to other respirators, ensuring better safety in hazardous work environments.

Key Features of PAPR Systems

● Filter Types and Efficiency

Particulate Filters: Capture dust, fumes, and aerosols. HEPA filters are commonly used for high-efficiency particulate air filtration.

Gas and Vapor Filters: Protect against specific gases and vapors. These can include activated carbon filters for gases or specialized filters for specific chemical hazards.

Combination Filters: Some PAPRs use filters that combine both particulate and gas/vapor protection.

● Airflow Rate

Flow Rate: The airflow rate of a PAPR system is typically between 170 to 210 liters per minute, ensuring adequate ventilation and comfort.

Adjustability: Some systems allow for adjustable airflow settings to match the wearer's needs and the work environment.

● Battery Life and Power Source

Battery Types: PAPRs are usually powered by rechargeable batteries, with some models incorporating solar assists to extend battery life.

Runtime: Battery life should be sufficient for the entire work shift, with easy recharging and replacement options.

● Comfort and Fit

Headgear: PAPR systems come with various headgear options, including full-face masks, hoods, and helmets. The choice depends on the level of protection required and comfort preferences.

Adjustability: Ensure the system is adjustable for a secure fit and comfortable use, reducing strain on the wearer.

● Maintenance and Durability

Filter Replacement: Regular replacement of filters is essential for maintaining effective protection. Choose systems with easy access for filter changes.

Durability: The PAPR unit and components should be robust enough to withstand the conditions of the work environment.

Key EN Standards for PAPR Systems

- ## EN 12941 (Respiratory protective devices - Powered air purifying respirators)

  Scope:

  This standard specifies the requirements for the design, performance, and testing of powered air-purifying respirators used to protect against particulate contaminants.

  Requirements:

  Performance: Defines the minimum requirements for the protection provided by PAPRs against airborne particles.

  Filter Efficiency: Specifies the efficiency of particulate filters (e.g., P3 filters) in removing contaminants from the air.

  Airflow Rate: Ensures the PAPR system provides a sufficient airflow rate to maintain comfort and protection.

  Comfort: Addresses aspects such as the fit and comfort of the PAPR system to ensure it can be worn effectively for extended periods.

  Leakage: Tests for the ability of the PAPR system to prevent leakage of contaminants into the breathing zone.

  Maintenance: Includes requirements for the maintenance and durability of the PAPR system, including ease of filter replacement.

Key points about EN 12941 include:

- ## Types of Devices:

  The standard covers powered air-purifying respirators (PAPRs) that consist of a motor-driven fan unit that draws in contaminated air, passes it through a filter, and supplies clean air to the helmet or hood.

- ## Protection Classes:

  There are different protection classes defined by the standard, typically denoted as TH1, TH2, and TH3. These classes indicate the level of protection provided by the device:

  TH1: Lowest level of protection.

  TH2: Intermediate level of protection.

  TH3: Highest level of protection.

- ## Performance Criteria:

  The standard outlines various performance criteria that the devices must meet, including:

  Breathing resistance.

  Filter efficiency.

  Battery performance (for powered devices).

  Field of vision for the wearer.

  Inward leakage tests to ensure the device effectively seals against the wearer's face.

PAPR Filter Schematic

Constant air supply design delivers constant airflow even if battery is low or filter is clogged. Lightweight, portable, and easy-to-use, providing excellent respiratory protection.

01 Durable front cover

Protects blower unit from being damaged by high temperature and high-speed impact objects.

02 Spark screen

Blocks metal splashes from igniting other filter components.

03 Pre-filter

Blocks large particles and prolong service life of particle filter.

04 Particle filter

High-efficiency particle filter, filtration efficiency up to 99.997%.

05 Gas filter

Optional ABEK1 / A 1 / A2 for protection against organic, inorganic and acid gas vapors, gas filter sold separately.

06 Odor filter

Eliminates unpleasant odors (not required if a gas filter is installed), odor filter sold separately.

07 Fast rechargeable lithium battery

Standard battery can be fully charged within 1.2 hours, battery duration is 10 hours (170L/min airflow rate). Optional extended battery can be fully charged within 2.5 hours, battery duration is 19 hours (170L/min airflow rate).

08 High quality brushless motor

Low power consumption, long service life, high static pressure and low noise.

09 Optional airflow rates

Two levels of airflow rate (170L/min and 210L/min) available.

10 Hose

Connect respirator and welding helmet, delivering clean helmet for clean air delivery.

Powered Air Purifying Respirator

CA2100

CE 2834   EN 12941

Real-Time Monitoring

Real-time monitoring displays the air-flow, battery power, particle filter loading for the user.

Triple-Alarm System

The warning light will flicker to indicate clogged filter or low battery, while the respirator will sound an alarm and vibrate.

Battery Indicator

Filter Warning

Various Filter Options

User can choose P3/gas/odor filter according to different applications and work environments.

ON / OFF Button

Airflow Indicator

Intelligent Control

Respirator motor automatically adjusts the power and air-flow depending on the filter box loading.

High-Performance Motor

High-quality brushless motor, strong air volume, low power consumption, ultra-quiet running and up to 3 times longer motors life.

Powered Air Purifying Respirator - Turbo Unit

Product Specification

Air Flow Rate (Low speed)	170+lpm
Air Flow Rate (High speed)	210+lpm
Battery type	Rechargeable Li-ion battery
Charge time	1 hour
Battery life	At least 500 charges
Fast Charging Std Battery duration	9 hours at 170+lpm; 5-6 hours at 210+lpm
Fast Charging Heavy Dusty Battery duration	15 hours at 170+lpm; 9 hours at 210+lpm
Weight	1020g (Turbo Unit + Fast Charging Standard Battery)
Filter efficiency	＞99.997%
Operating temp.	-5°C to 55°C
Storing temp.	-10°C to 55°C
Relative operating humidity (R.H.)	＜90%
Relative storage humidity (R.H.)	＜85%
Alarm	Audible, Visible, Vibration

Packaging Information

1 Set / Box

Package Includes

Turbo Unit x 1
Fast Charging Standard Battery x 1
Battery Charger x 1
P3 Filter (TH3 P Filter) x 1
Standard Waist Belt x 1

Product SKU	Product Description	Inner pack UPC
BLSH-CA-2100	PAPR Systems with standard waist belt	810148536879

Powered Air Purifying Respirator

CA2100-ECB

CE 2834   EN 12941

The CA2100-ECB ConAer Powered Air Purifying Respirator (PAPR) is engineered for pharmaceutical environments, offering high-efficiency respiratory protection without compromising on comfort or hygiene.

Packaging Information

1 Set / Box

Package Includes

Turbo Unit x 1
Fast Charging Standard Battery x 1
Battery Charger x 1
Particle Filter (TH3 P Filter) x 1
Easy Clean Belt x 1
Std. Breathing Tube x 1
Breathing Tube White Sleeve x 1
Soft Hood x 1

Product SKU	Product Description	Inner pack UPC
CA2100-ECB	PAPR Systems with soft hood & Easy Clean Belt	810188141194

Parts & Accessories

Product SKU	Model No.	Product Description	Inner Pack Qty	Inner pack UPC
BLSH-CA-BM2000	CABM2000	CA2100 Body alone	1pc/bag	810148536886
BLSH-CA-2101	CA2101	Charging Standard Lithium Battery 14.4V, 3.2 Ah, 46.08 Wh	1pc/bag	810148536893
BLSH-CA-2111	CA2111	Battery Charger - Class 2	1pc/box	810148536909
BLSH-CA-P302	CAP302	Particulate Filter (P3)	1pc/box	810148536916
BLSH-CA-PF01	CAPF01	Pre-Filter	5pcs/box	810148536923
BLSH-CA-SC01	CASC01	Spark Screen	10pcs/bag	810148536930
BLSH-CA-FC01	CAFC01	Filter Cover	1pc/bag	810148536947
BLSH-CA-OR01	CAOR01	O-Ring	2pcs/bag	810148536954
BLSH-CA-BTA01	CABTA01	Standard Breathing Tube with Air Indicator	1 Set/bag	810148536961
BLSH-CA-BT01	CABT01	Standard Breathing Tube	1pc/bag	810148536978
BLSH-CA-AI01	CAAI01	Air Indicator for standard breathing tube	1pc/bag	810148536985
BLSH-CA-BTA02	CABTA02	Quick Release Breathing Tube with Air Indicator	1 Set/bag	810148536992
BLSH-CA-BT02	CABT02	Quick Release Breathing Tube	1pc/bag	810148537005
BLSH-CA-AI02	CAAI02	Air Indicator for Quick release breathing tube	1pc/bag	810148537012
BLSH-CA-BTCW	CABTCW	Breathing Tube Cover - White	1pc/bag	810148537142
BLSH-CA-BTCG	CABTCG	FR Breathing Tube Cover	1pc/bag	810148537159
BLSH-CA-SS01	CASS01	Shoulder Strap	1pc/bag	810148537029
BLSH-CA-BC02	CABC02	Easy Clean Belt Cushion	1pc/bag	810148537036
BLSH-CA-BC03	CABC03	High End Waist Belt (Flame Retardant)	1pc/bag	810148537043
BLSH-CA-GF01	CAGF01	Gas Filter A2	1pc/bag	810148537050
BLSH-CA-GF02	CAGF02	Gas Filter A1B1E1K1	1pc/box	810148537067
BLSH-CA-OF01	CAOF01	Odour Filter	1pc/box	810148537074
BLSH-CA-2102	CA2102	Fast Charging Heavy Duty Lithium Battery 14.4V, 6.4 Ah, 92.16 Wh	1pc/box	810148537081
BLSH-CA-BC01	CABC01	Standard Waist Belt	1pc/bag	810148537098
BLSH-CA-BP01	CABP01	Back Pack	1pc/bag	810148537104
BLSH-CA-SH300	SH300	Soft Hood with Shroud	1pc/bag	810148537111
BLSH-CA-SH400	SH400	Soft Hood with long Shroud	1pc/bag	810148537128
BLSH-CA-HH500	HH500	Hard Hood	1pc/bag	810148537135

Powered Air Purifying Respirator
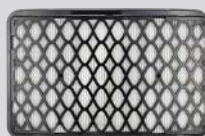
Parts &
Accessories

Turbo Unit

CA2100
PAPR Turbo Unit Body

Filter

CAP302
Particle filter (P3 filter)

CAGF01
Gas Filter A2 with
NFC Label

CAGF02
Gas Filter A1B1E1K1
with NFC Label

CAOF01
Odour Filter with
NFC Label

Battery & Charger

CA2101
Fast Charging Standard
Lithium Battery

CA2102
Fast Charging Heavy Duty
Lithium Battery

CA2111
Battery Charger

Breathing Tube & Sleev

CABT01
Standard
Breathing Tube

CABT02
Quick Release
Breathing Tube

CABTCG
FR Breathing Tube Cover

CABTCW
Breathing Tube Cover

Belt

CASS01
Shoulder Strap

CABC02
Standard Belt Cushion

CABC01
Standard Waist Belt

CABC03
High End Waist Belt
(Flame Retardant)

CABP01
Turbo Unit Back Pack

Hood / Face Shield & Welding Helmet

W400 Air
Auto Darkening
Welding Shield

W500 Air
Flip-up Auto Darkening
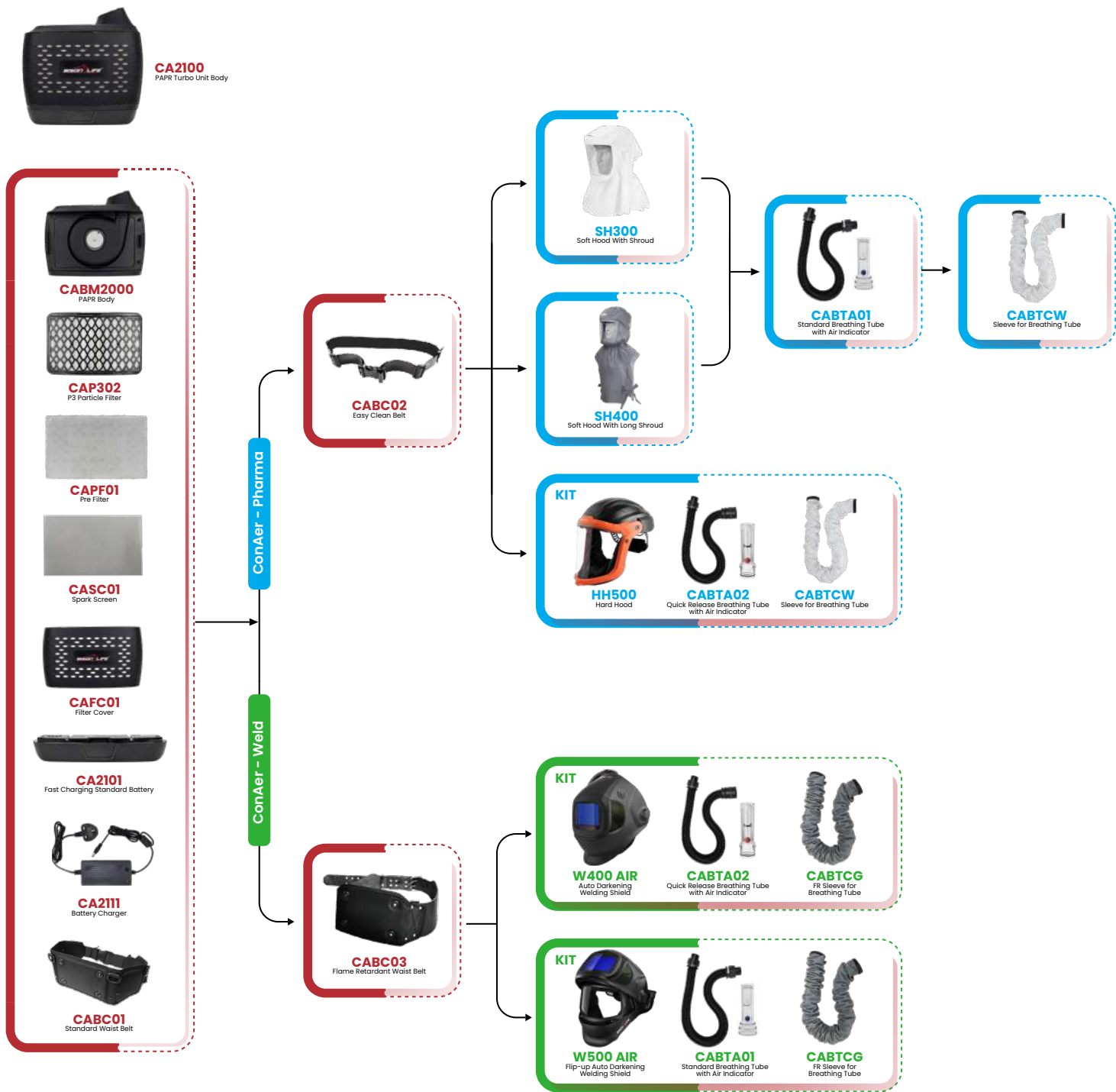Welding Shield

HH500
Hard Hood

SH300
Hood with
Shroud

SH400
Hood with
long Shroud

PAPR CONFIGURATIONS

CA2100
PAPR Turbo Unit Body

CABM2000
PAPR Body

CAP302
P3 Particle Filter

CAPF01
Pre Filter

CASC01
Spark Screen

CAFC01
Filter Cover

CA2101
Fast Charging Standard Battery

CA2111
Battery Charger

CABC01
Standard Waist Belt

ConAer – Pharma

CABC02
Easy Clean Belt

SH300
Soft Hood With Shroud

SH400
Soft Hood With Long Shroud

CABTA01
Standard Breathing Tube with Air Indicator

CABTCW
Sleeve for Breathing Tube

KIT

HH500
Hard Hood

CABTA02
Quick Release Breathing Tube with Air Indicator

CABTCW
Sleeve for Breathing Tube

ConAer – Weld

CABC03
Flame Retardant Waist Belt

KIT

W400 AIR
Auto Darkening Welding Shield

CABTA02
Quick Release Breathing Tube with Air Indicator

CABTCG
FR Sleeve for Breathing Tube

KIT

W500 AIR
Flip-up Auto Darkening Welding Shield

CABTA01
Standard Breathing Tube with Air Indicator

CABTCG
FR Sleeve for Breathing Tube

Filter Options

CAGF01
Gas Filter A2

CAGF02
Gas Filter A1B1E1K1

Battery Options

CA2102
Fast Charging Heavy Duty Battery

Filter Options
TM3 Particulate Filter and
Gas Cartridge Options

Silicone Mask & ABS Body
Silicone Mask and ABS Body respirator
main unit for Easy Cleaning and
Comfortable Wear.

Speaking Diaphragm
Equipped with Speaking Diaphragm
for Enhanced Auditory Perception
and Increased Work Efficiency

Battery
Intrinsically Safe
ExiIIC Battery

Dual Alarm
Sound and Light for Safe
Operation Every Time

CA1000
CE 2834   EN 12942

Powered Adaptive Respirator
Airflow adjusts according to breathing frequency

Product Specification

Air Flow Rate	Adaptive Breathing (Tested at No Less Than 65 lpm)
Noise Level	60dB
IP Rating	IP54
Indicators	Low Battery Indicator, Sound and Light Alarm, Electromagnetic Compatibility
Operating temp.	-5°C to 55°C
Storage temp.	-10°C to 65°C, 20% to 80% RH
Std Battery duration	>8 hours
Heavy-Duty Battery duration	>12 hours
Charging time for Std Battery	4.5 hours
Charging time for Heavy-Dusty Battery	6.5 hours
Battery life	At least 500 charges
Main unit protection	IP54; the unit complies with intrinsic safety standards (ExiIIC / ExiIIIC)
Particulate filter standards	CE: TM3, GB: P100
Gas filter standards	GB/CE: A1/A1B1E1K1
Leakage rate	≤2%
Inhalation resistance	≤350 Pa (when powered on)
Exhalation resistance	≤700 Pa (when powered on)

ConAer™

Half Face Intelligent
Powered Air Purifying Respirator
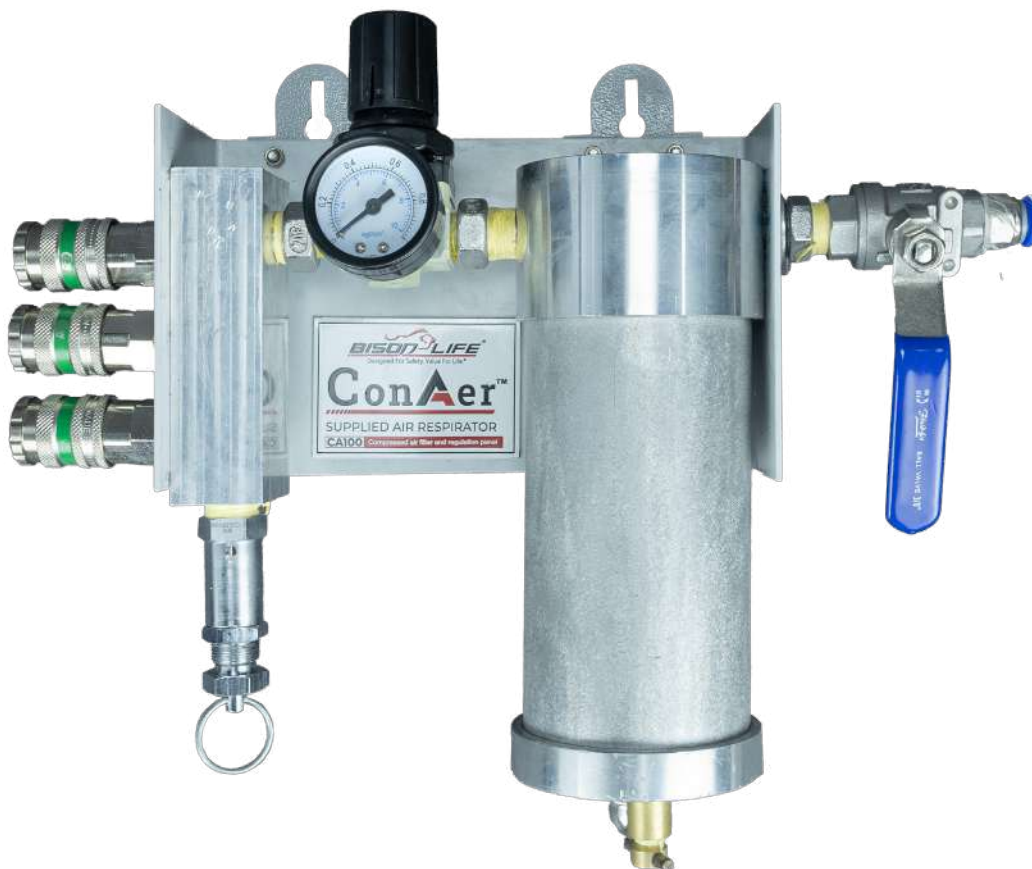
BISON LIFE®

HYBRID
TECHNOLOGY

ConAer™

CA100

Single Stage Filtration Supplied Air Respirators

ConAer - CA100 Filter and Regulator Panel is a compressed breathing air purifier system designed to help Applications remove or reduce selected contaminants that are found in standard compressed airlines.

Specification

Inlet pressure (max.)	150 psi static
Rated air flow (max.)	50 scfm (1416 L/min) at 105 psi
Inlet pressure (recommended)	90 to 120 psi (6.2-8.3 bar)
Outlet pressure range	0 to 115±5 psi (0 to 7.2±0.34 bar)
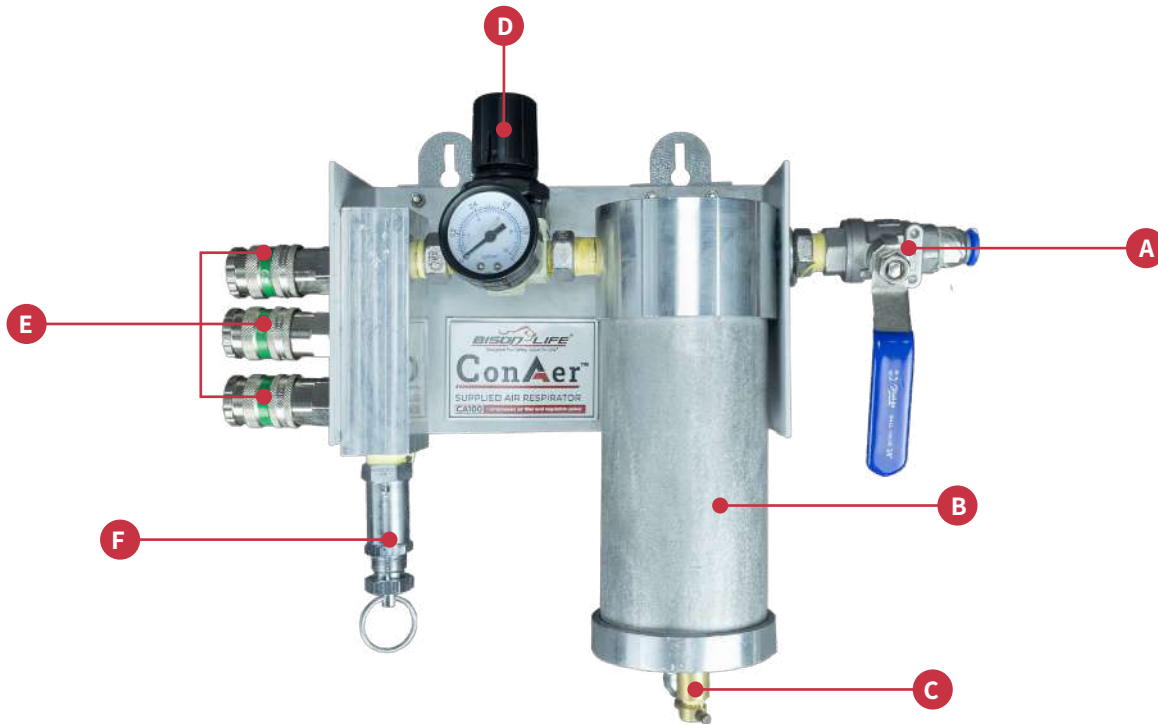
1. Air Entry:

- Air entering the filtration system at the inlet may be contaminated with oil, water, dirt, rust, scale and vaporous hydrocarbons.
- Air enters the panel through the Air Inlet-On/Off Valve **(A)**. When the On/Off handle is down, airflow is restricted from entering the SAR filter assembly.

2. Single Stage Filtration:

- The Filter and Regulator Panel contains a single filter **(B)** embedded with carbon layer designed to remove liquid, particles and nuisance levels of odour.
- Liquid contaminants are trapped in the filter assembly and expelled through the drain valve **(C)**.

3. Pressure Regulator:

The air is then passed through the air pressure regulator **(D)**, which is used to adjust the air pressure going to the respirators.

- Maximum capacity of 50 cfm at 105 psi,
- Require a source of clean breathing air such as compressed air systems or bottled air
- No batteries to maintain
- Cost effective respiratory protection for All-Day use

4. Outlet Valve:

- Three standard quick coupling **(E)** are ready to supply air to helmets, hoods or tight-fitting facepieces.
- Quick couplings are incompatible with outlets for other gas systems to prevent inadvertent servicing of airline respirators with non-respirable gases or oxygen.
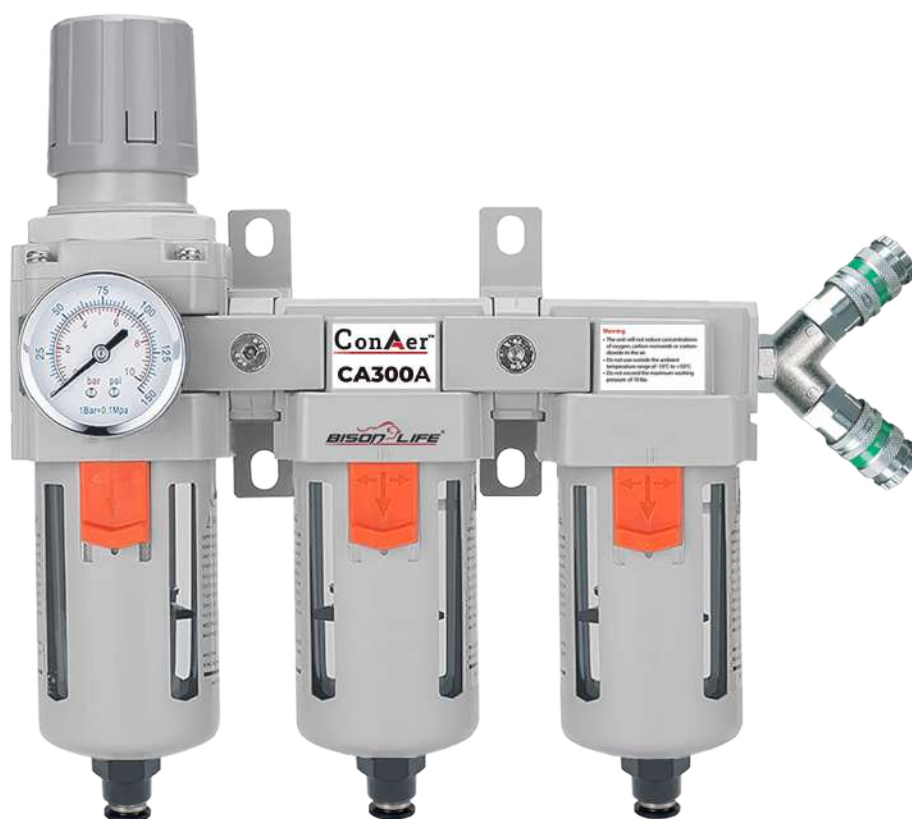- Various pre-assembled hose kit can connect to the filter panel quick coupling.

5. Pressure Relief Valve:

- The final component of the panel, the pressure relief valve **(F)**, prevents pressure at the hose connection from exceeding 110 psi (± 5 psi).
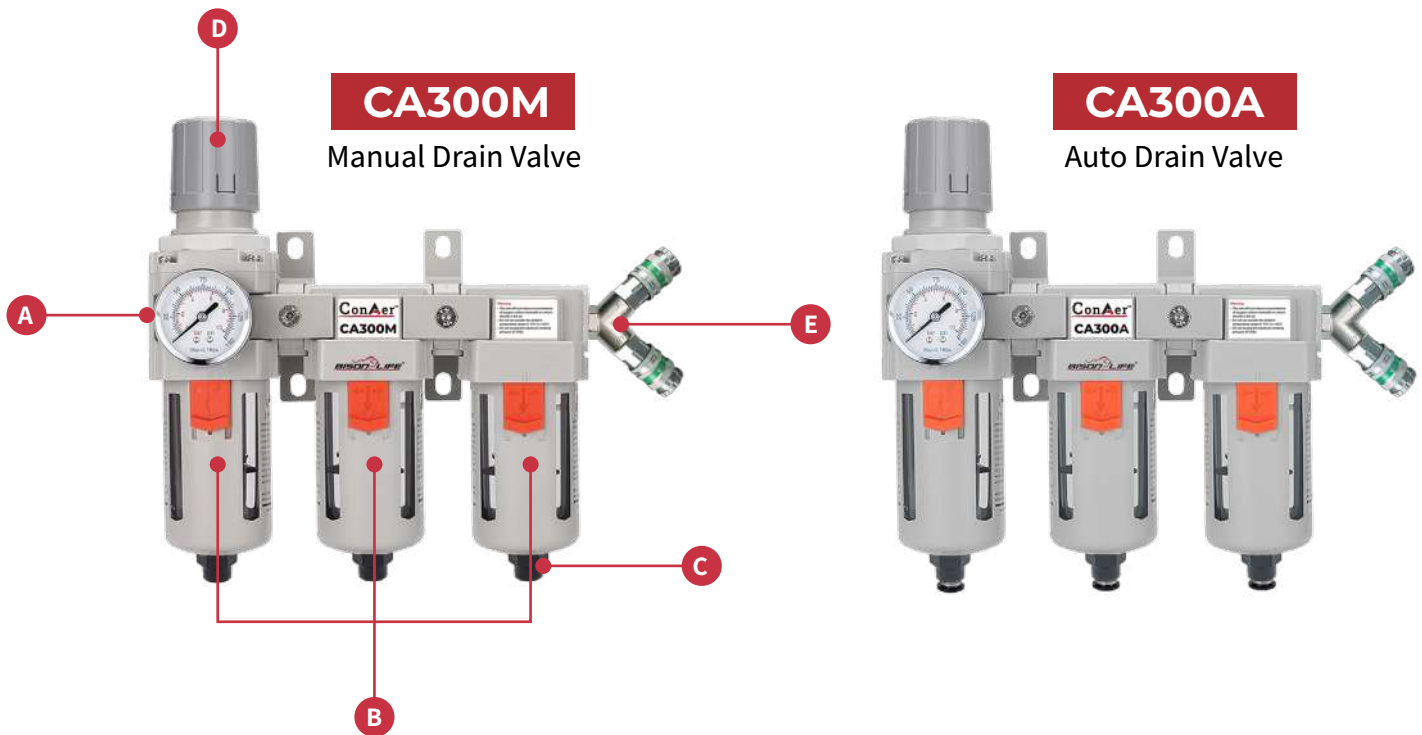
ConAer™

CA300A & CA 300M

Three Stage Filtration Supplied Air Respirators

ConAer - CA300 Series Filter and Regulator Panel is a compressed breathing air purifier system designed to help remove or reduce selected contaminants that are found in standard compressed airlines.

Specification

Inlet pressure (max.)	150 psi static
Rated air flow (max.)	50 cfm (1416 L/min) at 105 psi
Inlet pressure (recommended)	90 to 120 psi (6.2-8.3 bar)
Outlet pressure range	0 to 115±5 psi (0 to 7.2±0.34 bar)

Supplied Air Respirators

CA300M
Manual Drain Valve

CA300A
Auto Drain Valve

1. Air Entry:

- Air entering the filtration system at the inlet may be contaminated with oil, water, dirt, rust, scale and vaporous hydrocarbons.
- Air enters the panel through the Air Inlet point 1/2" female thread port **(A)**.

2. Three Stage Filtration:

- The Filter and Regulator Panel contains three filters **(B)** designed to remove liquid droplets, particles, and nuisance odors.
- Liquid contaminants are trapped in the filter assembly and expelled through the auto drain valve **(CA300A)** or Manual **(CA300M) (C)**.
- It contains air pressure regulator **(D)**, which is used to adjust the air pressure going to the respirators.

3. Filter Panel

- Maximum capacity of 50 cfm at 105 psi,
- Require a source of breathable compressed air system or air cylinder
- No battery requirement to maintain
- Cost-effective respiratory protection for All-Day use

4. Couplings:

- It has CEJN 342 series quick couplings **(E)** that are ensure to supply breathing air to helmets, hoods or tight-fitting facepieces.
- Quick couplings are compatible with Bisonlife provided breathing air hose for SAR application only.

5. Filter Elements:

5 µm Brass filter element (CA301B): Excellent filtration performance, longer life and possibility to reuse

0.5 µm filter element (CA301C): Effective filter out smaller particles and coalescing filter effect to eliminate water & oil droplets from the air stream.

0.01 µm filter element (CA301P): Effective filter out the smallest particles and odor from the air stream.

CA301B   CA301C   CA301P

ConAer™

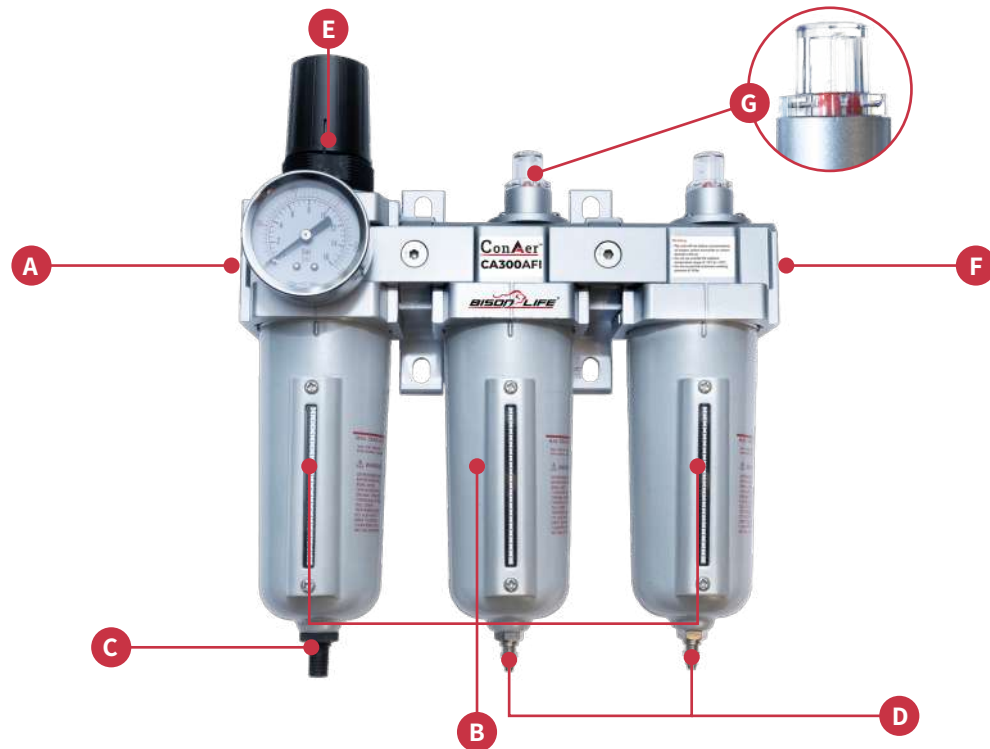## Supplied Air Respirators

CA300AFI

Three Stage Filtration Supplied Air Respirators

ConAer - CA300AFI Filter and Regulator Panel is a compressed breathing air purifier system designed to help remove or reduce selected contaminants that are found in standard compressed airlines.

Specification

Inlet pressure (max.)	150 psi static
Rated air flow (max.)	50 cfm (1416 L/min) at 105 psi
Inlet pressure (recommended)	90 to 120 psi (6.2-8.3 bar)
Outlet pressure range	0 to 115±5 psi (0 to 7.2±0.34 bar)

Supplied Air Respirators

1. Air Entry:

- Air entering the filtration system at the inlet may be contaminated with oil, water, dirt, rust, scale and vaporous hydrocarbons.
- Air enters the panel through the Air Inlet point 1/2" female thread port **(A)**.

2. Three Stage Filtration:

- The Filter and Regulator Panel contains three filters **(B)** designed to remove liquid droplets, particles, and nuisance odors.
- Liquid contaminants are trapped in the filter assembly and expelled through the auto drain valve **(C)** manual drain valve **(D)**.
- It contains air pressure regulator **(D)**, which is used to adjust the air pressure going to the respirators.

3. Filter Panel

- Maximum capacity of 50 cfm at 105 psi,
- Require a source of breathable compressed air system or air cylinder
- No battery requirement to maintain
- Cost-effective respiratory protection for All-Day use

4. Couplings:

- It has CEJN 342 series quick couplings **(E)** that are ensure to supply breathing air to helmets, hoods or tight-fitting facepieces.
- Quick couplings are compatible with Bisonlife provided breathing air hose for SAR application only.

5. Filter Elements:

5 µm Brass filter element: Excellent filtration performance, longer life and possibility to reuse

0.5 µm filter element: Effective filter out smaller particles and coalescing filter effect to eliminate water & oil droplets from the air stream.
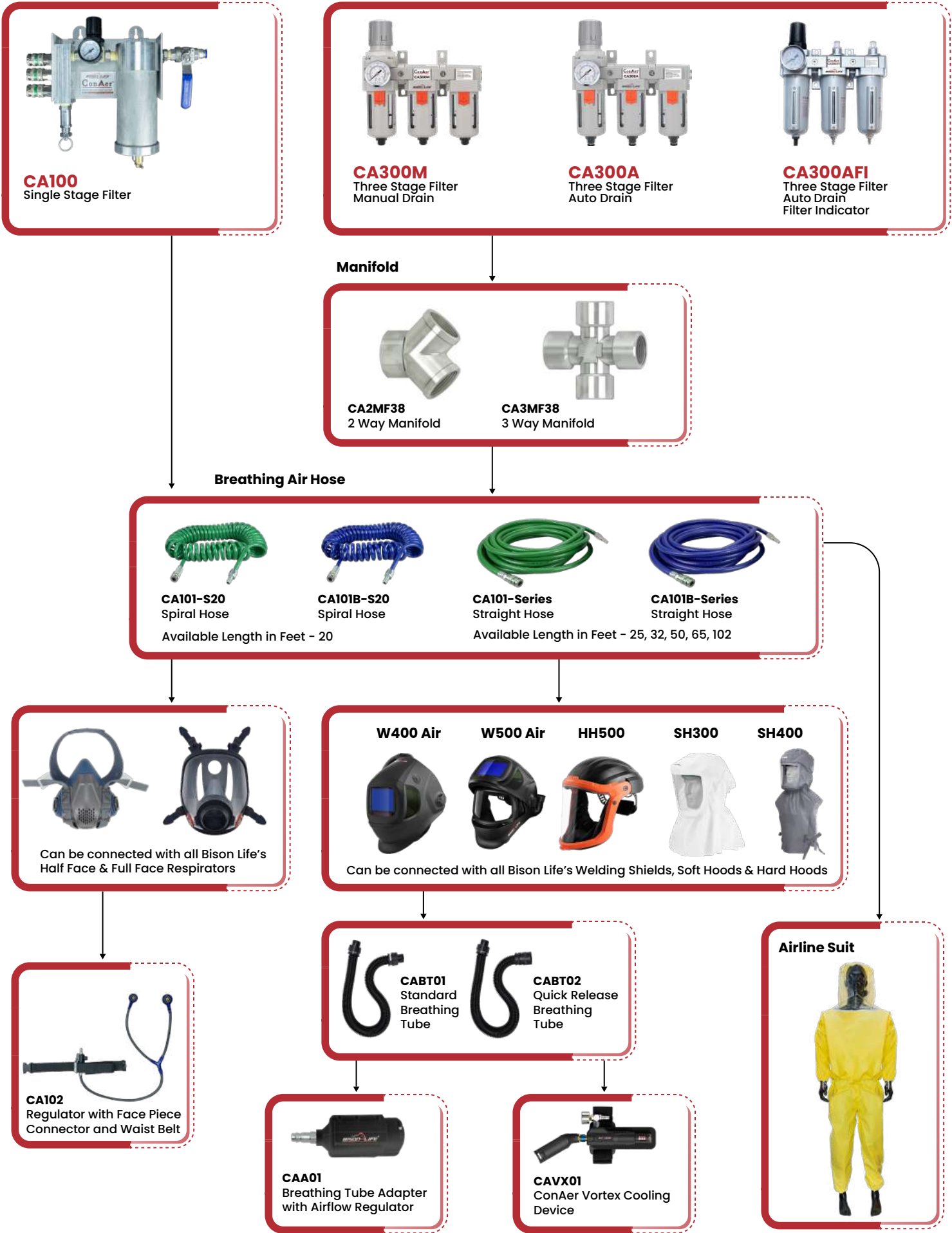
0.01 µm filter element: Effective filter out the smallest particles and odor from the air stream.

6. Filter Change Indicator:

- The filter change indicators **(G)** signals when the filter element needs to be replaced.
- Whenever the red indicator pops up, the element must be replaced.

Supplied Air Respirators

CA100
Single Stage Filter

CA300M
Three Stage Filter
Manual Drain

CA300A
Three Stage Filter
Auto Drain

CA300AFI
Three Stage Filter
Auto Drain
Filter Indicator

Manifold

CA2MF38
2 Way Manifold

CA3MF38
3 Way Manifold

Breathing Air Hose

CA101-S20
Spiral Hose

CA101B-S20
Spiral Hose

CA101-Series
Straight Hose

CA101B-Series
Straight Hose

Available Length in Feet - 20

Available Length in Feet - 25, 32, 50, 65, 102

Can be connected with all Bison Life's
Half Face & Full Face Respirators

W400 Air   **W500 Air**   **HH500**   **SH300**   **SH400**

Can be connected with all Bison Life's Welding Shields, Soft Hoods & Hard Hoods

Airline Suit

CA102
Regulator with Face Piece
Connector and Waist Belt

CABT01
Standard
Breathing
Tube

CABT02
Quick Release
Breathing
Tube

CAA01
Breathing Tube Adapter
with Airflow Regulator

CAVX01
ConAer Vortex Cooling
Device

EXPERT

For all your product availability & distribution related queries

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North Region : north@bisonlife.com
East Region   : east@bisonlife.com
West Region   : west@bisonlife.com

Technical Queries
Ask the Expert

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GA 30004, United States

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Bison Life® India Private Limited
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Regional Headquarters UK
Bison Life® UK
124 City Road, London,
EC1V 2NX, UK