

Welding Safety

PRODUCT CATALOGUE



SAFETY AND COMFORT
FOR YOUR WELDING LIFE

2020





CONTENTS

The Kemppi safety story	4
Your weld, your health, our mission	6
Safety products range	8
Gamma product range	10
Gamma features for added comfort and safety	12
Gamma welding helmets	14
Gamma 100P/100A	15
Gamma respiratory models	16
Gamma GTH3 XFA	17
Gamma GTH3 SFA/PFA	18
Gamma for supplied air	19
Delta product range	20
Delta welding helmets	21
Delta respiratory models	22
Beta product range	24
Beta welding helmets	26
Beta respiratory models	27
Alfa product range	28
Alfa welding helmets	29
Respiratory protection equipment	30
PFU 210e	32
FA Flow Control	33
RSA 230	34
FA Pressure Flow Control	35
Auto-darkening welding filters	36
ADF specification and compatibility	37
Filters for PAPR	38
Breathing air delivery solutions	39
Standards and approvals	40
Frequently asked questions	42
Recommended maintenance/Comparing standards and protection factors	44
Special symbols/Welding filter table	45
Product selection table	46
Ordering codes	48
Safety products warranty	86

THE KEMPPI SAFETY STORY

Kemppi is a reliable and trusted international welding brand. Designed and made in Finland since 1949, Kemppi is the company responsible for market changing innovations, including the electronic and digital welding power source.

Carefully studying the welding trades and wide ranging work environments, Kemppi design for the ordinary welder the very best welding performance and reliable protection for their health and safety.

Personal health is the most precious thing anyone can own. This catalogue describes Kemppi welding safety products, a mark of quality offering safety and comfort for your welding life.

Safety and comfort for your welding life



YOUR WELD YOUR HEALTH OUR MISSION

Health hazards in the workplace are a major concern for both employers and employees. However, it is important to remember that hazardous materials only present a health hazard when they come into contact with your body.

Occupational lung diseases are the number one cause of work-related illness in terms of frequency, severity and preventability. Most occupational lung diseases are caused by repeated, long-term exposure, but even a severe, single exposure to a hazardous agent can damage the lungs.

Respiratory protection equipment featuring the positive pressure principle are an efficient way of preventing the development of occupational lung diseases.

Occupational lung diseases are preventable!

There is new scientific evidence that exposure to all welding fume, including mild steel welding fume, can cause lung cancer. Where engineering controls are not adequate to control all fume exposure, adequate and suitable respiratory protective equipment (RPE) is also required to control risk from the residual fume.

Health and Safety Executive - Safety alert



Exposure to airborne contamination for lengthy periods may result in long-term health issues, including cancer.



Welding fume is composed of elements dangerous to human health.



If unprotected, tiny fume particles can pass deep into the lung structure.

4000

Typically, we breath 4000 litres of air per 8-hour work shift.



Occupational lung diseases are preventable by using proper respiratory protection.



One single welding operator can produce up to 40 grams of air-borne fume and particulate per hour.

SAFETY PRODUCTS RANGE



Protection for the eyes, ears, face, lungs
and head

Whether you're seeking a simple, low cost and lightweight welding helmet for occasional use, or the very best respiratory protection for prolonged exposure to airborne welding and grinding fumes, Kemppi offer the protection level to suit your needs – including work environments in challenging low light conditions.

Welding helmets



ALFA e60P/e60A

Lightweight welding and grinding shields. Flip-up passive or automatic welding lens models, large clear view visor. (Page 28)



Beta e90P/e90A/e90X

Lightweight welding and grinding shields. Flip-up passive or automatic welding lens models, large clear view visor, GapView setting, comfort headband. (Page 26)



Gamma 100P/100A

Maximum vision for welding, grinding and inspection operations. Passive and automatic lens models include market leading features for comfort and usability. (Page 14)

Welding respirator systems



Beta e90 PFA/SFA/XFA

TH2 rated PAPR and supplied air respirator packages, suitable for welding and grinding operations. Automatic welding lens options. (Page 27)

Gamma GTH3 PFA/SFA/XFA

TH3 rated PAPR and supplied air respirator packages for welding, grinding, cutting and inspection operations. Feature packed model options, including LED work lights. (Page 16)

Delta 90 SFA/Delta+ 90 XFA

TH2 rated PAPR and supplied air respirator packages, suitable for welding, grinding, cutting and inspection operations in work areas demanding head protection. Automatic welding lens options. (Page 21)

Hearing protection



Ear defenders

Quality ear defenders for connection with the Delta and Delta+ hard hat welding visors systems.



Optional neck protectors

Leather protector options for the neck and shoulders are available for use with Kemppi personal protection equipment.



GAMMA

Top level personal protection for professional welders and fabricators

Gamma product range represents premium levels of personal protection for professional welders and fabricators. Designed for all arc welding, cutting, grinding, gouging and inspection processes, Gamma range includes both standard welding helmets and welder's respirator models.

Gamma GTH3 respirator models meet the highest EU classification for respiratory performance (TH3) protecting you from 99.8 % of airborne fumes and particulate. Choose from either fast charging battery powered filter units, providing total independence of movement, or regulated supplied air models, connected to a breathing air source.

Designed from the user's perspective, Gamma GTH3 models include optimum vision performance and unique usability features including Axis regulation and GapView function. For low light working conditions XFA models integrate 70 lumen LED work lights, reaching new levels of safety and comfort for your welding life.

Gamma welder's respirators can lower PPE cost by up to 80 % when compared to separate PPE solutions where disposable welder's filter masks are used.



Welding helmets



Gamma 100P

Welding helmet with a passive welding filter, shade 11. (Page 15)



Gamma 100A

Welding helmet with an auto-darkening welding filter SA 60. (Page 15)



Optional neck protectors

Leather protector option for the neck and shoulders is available for use with all Gamma welding helmets and respirators.

Welding respirator systems



Gamma GTH3 PFA

Passive welding filter (shade 11) and powered air respirator PFU 210e. (Page 18)



Gamma GTH3 SFA

Auto-darkening welding filter SA 60 and powered air respirator PFU 210e. (Page 18)



Gamma GTH3 XFA

Auto-darkening welding filter XA 74 and powered air respirator PFU 210e and 70 lumen LED work lights. (Page 17)



Gamma GTH3 PFA Airline

Passive welding filter (shade 11) and RSA 230 regulator for breathing air systems. (Page 19)



Gamma GTH3 SFA Airline

Auto-darkening welding filter SA 60 and RSA 230 regulator for breathing air systems. (Page 19)

GAMMA GTH3
Excellent fit and usability keeps you
efficient and comfortable

GAMMA FEATURES

for added comfort and safety



Gamma GTH3 XFA features 70 lumen LED work lights, reaching new levels of safety and comfort for low light working conditions and powered directly from the rechargeable PAPR battery. Works lights can be switched on and off from the helmet mounted remote control.



ComFlex headband offers comfort and flexibility for the perfect fit to your individual head shape and preferences. Even distribution of the suspended weight lowers pressure to sensitive areas of the head, minimizing fatigue and headgear related headaches.



GapView switch sets a clear view beneath the welding visor providing a narrow 15 mm gap and clear vision of the working area. Ideal for work piece setting and tacking prior to welding. An excellent feature with passive welding lens models and ADF equipped models, where adjacent welding arcs can trigger nuisance ADF activations.



Inboard mounted ADF remote control for reliability and convenience. Remote control adjustment of the SA 60 or XA 74 automatic welding lenses features three silicon rubber selector switches. The large switches select parameter values up or down and the small switch selects either the parameter type, or a long press activates the work lights on the XFA model.



Axis regulator adjusts the Gamma visor position to your eye line.

Whether changing from overhead to down hand work piece targets, you can adjust for perfect field of view in seconds. Slightly lift the chin area and rotate the Axis control knob clockwise or counter clockwise. Easy, simple and convenient.



ClickLenz system allows replacement of clear lens plates

in seconds. No additional cover plates or components means maintenance is fast and simple. Lift, remove and click a new clear cover plate into place.

LiFE+ Color welding optics improve work accuracy, reduce eye fatigue and protect your sight. For fine and low current welding applications, magnifying lenses can be fitted to the ADF frame, providing a more detailed view of the weld piece.

Shade options:
SA 60: 4/5 8/9-13
XA 74: 4/5 8/9-13/14-15



GAMMA WELDING HELMETS

Gamma welding helmets offer maximum vision and safety for welding, grinding and inspection processes.

Choose from passive or automatic lens models including market leading features for comfort and usability.





GAMMA 100P/100A

Reliable protection with comfort features

Gamma product range contains two face shield models, offering premium protection for your eyes and face in working environments where respiratory protection is not needed. Separate leather protector option for the neck and shoulders is available for use with any Gamma welding helmet.

Gamma 100P

- Flip-up welding visor
- Passive welding lens 102 x 74 mm
- 198 cm² grinding visor with 170° work site view
- GapView welding visor setting
- Axis regulator tunes eye-line perspective
- Certified for welding and grinding work
- Magnifying lens options

Gamma 100A

- Flip-up welding visor
- SA 60 automatic welding filter
- 198 cm² grinding visor with 170° work site view
- GapView welding visor setting
- Axis regulator tunes eye-line perspective
- Certified for welding and grinding work
- Magnifying lens options



GAMMA RESPIRATORY MODELS

A safe breathing
environment throughout
your working day

The Gamma GTH3 welder's respirator range contains five models offering the best protection for your lungs and long-term health. Supplying clean fresh air from either a battery powered filter unit or airline breathing air source, Gamma GTH3 positive pressure respirators create a cool, comfortable and safe breathing environment throughout your working day. Gamma GTH3 models are certified to a maximum allowable inward leakage of 0.2 %, so 99.8 % efficient.

For further information on Kemppi powered filter units and supplied air regulators, please see page 31.

Positive pressure, clean breathing air lowers breathing resistance and fatigue. Fresh air flow rates can be adjusted to suit your preference. PAPR filter options include both particle and gas filters. See page 32.



LiFE+ Color ADFs increase the field of vision and work accuracy, plus reduce eye fatigue.

LED work lights improve safety, vision and work efficiency in poorly lit conditions.

Convenient and impact protected remote control for ADF lens setting.

GAMMA GTH3 XFA

Maximum protection, premium comfort, total control, LED work lights

Gamma GTH3 XFA offers top class safety and comfort with total freedom of movement. Even in the toughest working environments, Gamma GTH3 XFA is the ultimate welder's respirator, featuring class leading LiFE+ Color ADF, integrated LED work lights, fast charge Li-ion battery packs and all Gamma comfort features.

Gamma GTH3 XFA

- Respiratory protection class TH3
- XA 74 ADF filter with 75 cm² viewing area
- Integrated LED work lights
- 198 cm² grinding visor with 170° work site view
- GapView welding visor setting
- Axis regulator tunes eye-line perspective
- Air speed selection 160 and 210 lpm
- Heavy duty battery as standard

ADF

- LiFE+ Color Auto-darkening welding filter XA 74
- Viewing area 102 x 74 mm, 75 cm²
- Shade selections 5, 8, 9, 10, 11, 12, 13, 14, 15
- Protected remote control buttons
- Visible ADF parameter selection when wearing
- Clear optics for improved work accuracy
- Magnifying lens option





GAMMA GTH3 SFA/PFA

Lighter specification and weight with premium TH3 breathing protection

Premium TH3 class respiratory protection, plus all the safety and comfort offered throughout the Gamma GTH3 product range, SFA and PFA models include alternative welding lens options suiting differing user needs. Both packages include the PFU 210e battery powered filter unit, one equipped with the automatic welding lens SA 60 and the other with a passive welding lens.

Gamma GTH3 SFA (PFU 210e)

- LiFE+ Color auto-darkening welding filter SA 60
- Viewing area 102 x 60 mm, 61 cm².
- Shade selections 5, 8, 9, 10, 11, 12, 13
- Protected remote control buttons
- Visible ADF parameter selection when wearing
- Clear optics for improved work accuracy
- Magnifying lens option
- PFU 210e filter pack with particle and gas filter options
- All Gamma comfort and safety features

Gamma GTH3 PFA (PFU 210e)

- Passive welding filter 102 x 74 mm
- 198 cm² grinding visor with 170° work site view
- PFU 210e filter pack with particle and gas filter options
- All Gamma comfort and safety features





GAMMA FOR SUPPLIED AIR

Long work periods, lower costs

Connected to a certified breathing air source via an airline and belt-mounted regulator RSA 230, Gamma GTH3 Airline models provide an alternative to the battery powered systems. SFA and PFA models include alternative welding lens options suiting differing user needs, featuring the automatic welding lens SA 60 ADF or a passive welding lens.

Gamma GTH3 SFA (RSA 230)

- LiFE+ Color auto-darkening welding filter SA 60
- Viewing area 102 x 60 mm, 61 cm².
- Shade selections 5, 8, 9, 10, 11, 12, 13
- Protected remote control buttons
- Visible ADF parameter selection when wearing
- Clear optics for improved work accuracy
- Magnifying lens option
- RSA 230 belt mounted regulator and silencer
- All Gamma comfort and safety features

Gamma GTH3 PFA (RSA 230)

- Passive welding filter 102 x 74 mm
- 198 cm² grinding visor with 170° work site view
- RSA 230 belt mounted regulator and silencer
- All Gamma comfort and safety features



DELTA

Respiratory protection in hard hat working areas

Delta 90 SFA and Delta+ 90 XFA models provide head protection for welding and fabrication personnel working in extreme conditions, such as shipbuilding, heavy fabrication, mining and construction sites.

Delta respirator systems channel clean breathing air over the welder's face from either a rechargeable, Li-ion battery powered filter pack or locally supplied breathing air source. The adjustable face seal, combined with the 'positive air pressure' design, creates a comfortable breathing zone certified to TH2 European standards, ensuring that 98% of contaminated air remains outside the breathing zone.

- **Certified to EN 12941 TH2 and AS/NZS 1716**
- **Positive pressure design makes breathing effortless**
- **Li-ion battery powered filter pack or regulated supplied air breathing system**
- **Mounting for optional high quality ear defenders**



Welding helmets



Delta 90

Heavy duty hard hat and welder's visor meeting EN 397, EN 175, AS/NZS 1801 and AS/NZS 1337.1 (not certified for grinding operations). Includes SA 60B ADF lens.



Delta+ 90

Delta+ 90 XFA has a large and clear impact rated visor.

Note: If using Delta/Delta+ as standalone welding helmets the fabric face seal must be removed before use.



Optional neck protectors

Leather protector option for the neck and shoulders is available for use with all Delta and Delta+ welding helmets and respirators.

Respiratory protection



Optional ear defenders

Delta and Delta+ models connect with optional quality ear defenders.



Delta 90 SFA / Delta+ 90 XFA (PAPR)

Integrating head, face and respiratory protection for welding in designated head protection work areas. Features battery powered filter unit and ADF lens. (Page 23)



Delta 90 SFA / Delta+ 90 XFA (Airline)

Integrating head, face and respiratory protection for welding in designated head protection work areas. Features supplied air regulator and ADF lens specification. (Page 23)

Integrated head, face and respiratory protection for welders and fabricators



DELTA 90 SFA

Integrated welder's protection for the head, face, eyes and lungs

Delta 90 SFA offers welders protection for the head, face, eyes and the respiratory system in one high strength unit. Delta 90 SFA includes a hinged welding visor and optional ear defenders and can be supplied with clean breathing air from either the battery powered filter unit or FA Pressure Flow Control regulation valve.

Delta 90 SFA

- Heavy duty hard hat and welding visor
- Certified EN 397, EN 175, AS/NZS 1801 and AS/NZS 1337.1
- ADF welding filter, shades 9-13
- Li-ion battery powered filter pack or supplied air packages



FA Pressure Flow Control unit regulates the supplied air flow. Air source must meet the local breathing air standards.





DELTA+ 90 XFA

Maintain respiratory protection during all work processes

Delta+ 90 XFA protects the head, face, eyes and the respiratory system in one high strength unit and includes optional ear defenders. The hinged welding shield raises independently from the large impact rated clear visor, offering exceptional work site views. Ideal for pre and post welding processes, Delta+ 90 XFA maintains the face seal protected, clean breathing air environment.

Delta+ 90 XFA

- Heavy duty hard hat, welding and grinding visor
- Certified EN 397, EN 175 B, AS/NZS 1801 and AS/NZS 1337.1
- XA 47 ADF welding filter, shades 5 / 9-13 / 14-15
- Li-ion battery powered filter pack or supplied air packages
- Remain protected behind the large, clear impact rated visor



Lightweight, belt mounted, powered filter pack with Li-ion battery.



BETA

Better visibility, better protection

Beta welding helmets provide superb lightweight eye and face protection for all welding, cutting, grinding and inspection purposes. Designed for professional welders and certified to EN175 B, Beta welding helmet range includes either passive or auto-darkening filters.

All Beta models feature the same lightweight but strong shell construction, a comfort headband, GapView flip lens function and magnifying lens frame. When combined with a Kemppi PAPR system, Beta FA models offer TH2 respiratory protection for your lungs.

- Protection for welding, grinding and cutting
- Super lightweight, starting at just 473 g
- Flip-lens with GapView stage position
- Extra protection to face and neck
- ADF and passive lens models
- Comfort headband
- Leather neck protector option
- Magnifying lens frame



Welding helmets



Beta e90P/e90A/e90X

Lightweight welding and grinding shields. Flip-up passive or automatic welding lens models, large clear view visor, GapView setting, comfort headband. (Page 26)



Optional neck protectors

Leather welding bib option is available for use with all Alfa e and Beta e models. Snap buttons allow easy removal and attachment. Separate leather protector option for the neck and shoulders is available for use with all Kemppi personal protection equipment.

Welding respirator systems



Beta e90 PFA/SFA/XFA

TH2 rated PAPR packages, featuring solutions for both particle and gas filtration. Suitable for welding, grinding and inspection operations. Automatic welding lens options. (Page 27)



Beta e90 PFA/SFA/XFA Airline

Welder respirators for connection to a supplied breathing air source. Suitable for welding, grinding and inspection operations. Automatic welding lens options. (Page 27)

Lightweight comfort and protection
for the eyes, face and lungs



BETA

WELDING HELMETS

Designed for professional welders and certified to EN175 B and AS/NZS 1337.1 for welding, grinding and cutting processes, Beta welding helmet range includes three models equipped with either passive or automatic ADF lenses. All Beta models feature the same lightweight but strong shell construction, a comfort headband, GapView flip lens function and magnifying lens frame. The shell design features generous dimensions, providing facial areas excellent protection from arc radiation, whilst allowing good access for tight work-spaces.

Model options and features

- Beta e90P/e90A/e90X
- For welding, tacking, cutting, grinding and inspection
- Passive or ADF welding lens options
- Beta e90X features XA 47 LiFE+ Color ADF including shades 14 and 15
- Beta e90A features SA 60B LiFE+ Color ADF with 60 cm² viewing area
- Deeper protection for facial sides
- Comfort headband
- Light weight – Beta e90P only 473 g
- Magnifying lens option
- See page 46 for models specification



Beta models feature a range of automatic welding filters, plus optional magnifying lenses.





BETA RESPIRATORY MODELS

Beta FA respirators provide cool and clean breathing air, from either a PFU 210e battery powered filter unit offering optimal freedom of movement around the workspace, or a supplied breathing air solution where the air flow is regulated from the RSA 230. Although movement is controlled to a local area, supplied air solutions suit applications where welding and shielding gases may build up displacing the breathing air. Beta FA models are certified with a maximum inward leakage level of 2 % and when connected to the PFU 210e filter unit, offer the option of combined particle and gas filtration.

Model options and features

- Beta e90 PFA/SFA/XFA
- For welding, tacking, cutting, grinding, inspection
- Battery powered PAPR or airline supplied models
- XFA model features LiFE+ Color ADF technology including shades 14 and 15
- EN 175 B, AS/NZS 1337.1, EN 12941 TH2 and AS/NZS 1716
- Particle and gas filter options
- Fast charging PAPR battery packs
- Leather belt and metal buckle
- Comfort headband
- Light weight – Beta e90 PFA with face seal only 650 g
- Magnifying lens option



XA 47 features LiFE+ Color technology and shade adjustment 5, 8, 9-13 and 14, 15, plus grinding and cutting modes.



SA 60B features LiFE+ Color technology and shade adjustment 3.5, 9-13, plus grinding and cutting modes.



ALFA

Lightweight, comfortable, efficient

- Protection for welding, grinding and cutting
- Super lightweight, starting at just 467 g
- Flip-lens with GapView stage position
- Extra protection to face and neck
- ADF and passive lens models
- Comfort headband
- Leather neck protector option
- Magnifying lens frame



Optional neck protectors

Leather welding bib option is available for use with all Alfa e and Beta e models. Snap buttons allow easy removal and attachment. Separate leather protector option for the neck and shoulders is available for use with all Kemppi personal protection equipment.

ALFA

Perfect balance and excellent fit

If weight, comfort and protection are your focus parameters, then look no further. Alfa models start at just 467g. They represent the most compact, lightweight face shield in the Kemppi welder's protection range. A durable, low cost solution for light to medium duty welding tasks. Alfa models offer easy-to-wear eye and face protection for all general welding applications and grinding. The shell design features generous dimensions, providing facial areas excellent protection from arc radiation, whilst allowing good access for tight work-spaces. The flip-up welding lens is perfectly positioned for pre and post weld inspection.

Model options and features

- Alfa e60P and Alfa e60A
- For welding, tacking, cutting, grinding and inspection
- Passive or ADF welding lens options
- Flip-up welding lens with GapView setting
- ComFlex headband allows the perfect fit
- Optional leather neck protectors
- Lightweight – only 467 g
- Certified to EN 175 B (Alfa e60A)
- Certified to EN 175 B and AS/NZS 1337.1 (Alfa e60P)



Alfa e60A features
SA 35 ADF filter with
shade range 4, 9-13 and
viewing area 35x96 mm.



RESPIRATORY PROTECTION EQUIPMENT



POWERED FILTER UNITS FOR SAFE AND EASY BREATHING

Portable unit gives you freedom of movement

Powered filter units, or Powered Air Purifying Respirators (PAPR), are the most advanced group of personal protective equipment providing a high level of protection even for long lasting applications. Battery powered portable fan units drive the local air through a particulate or chemical filter and blow it into the breathing zone.

Major user advantages are derived from the excellent mobility, independence of movement provided by the battery powered filter pack and providing positive over pressure by the fan forcing air into the breathing zone. This eliminates difficulty in breathing associated with negative pressure respirators and reduces the importance of a good facial fit.

SUPPLIED AIR RESPIRATORS

Long working periods, lower cost

Supplied air respirators provide an ideal solution for workplaces equipped with breathing air supplies and where freedom of movement is not an issue. Ideal for long work periods and fixed work stations, supplied air respirators offer lower running costs compared to PAPR systems. Supplied air respirators are also recommended where there may be a temporary build-up of gases. (See table on page 39).

Note: Supplied air sources must meet mandatory local breathable air quality regulations. See page 40 for Standards and Approvals and page 42 for Frequently Asked Questions.



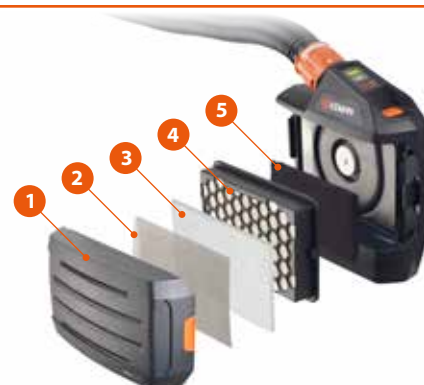
PFU 210E

The best protection for your lungs

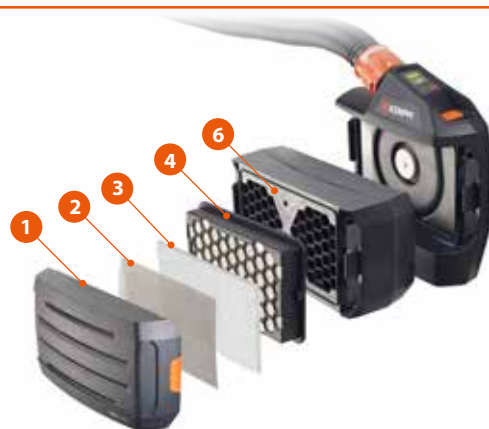
PFU 210e means 'Powered Filter Unit with a maximum air speed of 210 liters per minute'. Representing the highest level of filtration performance, PFU 210e is available with both Gamma GTH3 and Beta FA respirator systems, so you can be sure of receiving clean and safe air to breathe.

Robust and durable, PFU 210e offers selectable fan speeds of 160 lpm and 210 lpm, battery and filter status indicators, plus a choice of either standard duty or heavy duty batteries. Lithium-Ion battery technology guarantees fast charging times and the power to protect with either particle filter or a combined filter set with the A1B1E1 gas filter. When A1B1E1 gas filter is in use, Smart Sense technology automatically regulates the PFU 210e to air speed 160 lpm, extending filter and battery lifetime.

- 1 Filter cover
- 2 Spark arrester
- 3 Pre-filter
- 4 Particle filter
- 5 Odor filter: Removes unpleasant odors. Optional accessory. Do not use if a gas filter is present.
- 6 Gas filter: Removes gases and vapors



Protection against particles



Protection against particles and gas





FA FLOW CONTROL

Efficient, lightweight and compact

FA Flow Control is a battery powered filter unit with adjustable motor fan speeds from 140 lpm to 210 lpm. Powered from a Li-ion battery pack and providing protection against particulate contaminants associated with welding and fabrication operations, FA Flow Control offers excellent freedom of movement and breathing protection.

FA Flow Control unit

- 140 lpm to 210 lpm air flow regulation
- Status indicators for motor speed, battery and filter
- Li-ion rechargeable battery pack
- Excellent freedom of movement in the workplace
- Supports Delta/Delta+ models only



Filter cover, particle filter and motor unit.





RSA 230

RSA 230 regulation valve enables a controlled air flow to the welder's respirator head-top fitted with a fabric face seal, and is supplied together with Gamma and Beta supplied air models. The positive air pressure created inside the head-top controls the ingress of contaminated air to the breathing zone and ensures a supply of clean breathing air. The RSA 230 regulation valve features a replaceable silencer, decreasing audible airflow noise and is mounted to a comfort back pad, secured to the body with a leather belt.

RSA 230

- Supports Gamma and Beta respirators
- Cost efficient alternative to PAPR models
- Recommended for specified environments
- Comfortable and light in weight
- Alarm alert should the air flow fall below 120 lpm
- Quick release connector to the Airline
- Easily adjusts airflow to the breathing zone
- Must be connected with known breathing air source.



Supplied breathing air solutions offer excellent protection and costs efficiency.





FA PRESSURE FLOW CONTROL

FA Pressure Flow Control system ensures easy and reliable airflow control and monitoring for Delta and Delta+ hard hat supplied air respirators. The belt mounted airflow regulation valve enables simple air flow adjustment to the breathing zone and is an ideal and cost efficient solution for more static work place locations and applications.

FA Pressure Flow Control

- Supports Delta and Delta+ respirators
- Easy and reliable airflow control
- Belt mounted and light in weight
- Quick release connector to the Airline
- Air monitoring gauge
- Must be connected with known breathing air source



Supplied air solutions are ideal where welding gases may build up displacing breathing air.



AUTO-DARKENING WELDING FILTERS

Digitally controlled protection for your eyes

Welding shields fitted with auto-darkening filters (ADF) protect your eyes from the intense light of the welding arc and UV/IR radiation. The ADF technology is based on liquid crystals that have the ability to switch their state when exposed to bright light, automatically switching from clear to dark instantly when you strike the arc and back to clear again when the arc is extinguished. The lens shade and its sensitivity to light is set by you according to the welding task and your personal needs.

Kemppi's ADF selection offers five models with different shade ranges and features. Please see the compatibility table.

LiFE+ Color ADF technology enables greater clarity of vision and improved work accuracy, which reduces user eye strain and fatigue. LiFE+ Color lenses improve color recognition and optical quality.

Remote-RC feature is included to Gamma welding helmets fitted with an ADF lens, making adjustment of the ADF extremely easy whilst wearing the helmet. The remote control buttons are protected from impact and conveniently placed, making adjustment simple without taking the helmet off. Gamma ADF parameters are marked by color LEDs and can be clearly seen and recognized from inside the helmet, ideal for parameter adjustment when moving between tasks.



Before



During



After



Gamma ADF remote control is designed for operation whilst wearing the helmet. The orange silicone rubber remote buttons are located inside the helmet shell wall, adding protection from knocks and abrasions. The wearer can adjust the ADF settings and view the changes on the large ADF panel interface, plus switch on and off the LED work lights in Gamma GTH3 XFA model.

ADF SPECIFICATION

and compatibility



ADF model	SA 35	SA 60B	XA 47	SA 60	XA 74
Ordering code	SP9873061	SP9873064	SP9873063	SP012422	SP012421
Inner protection plate item number	SP012951	SP012425	SP012952	SP012425	SP012424
CE classification	1/1/1/2	1/1/1/1	1/1/1/2	1/1/1/2	1/1/1/2
LiFE+ Color	No	Yes	Yes	Yes	Yes
View size	96 x 35	100 x 60	97 x 47	102 x 60	102 x 74
Filter dimension	110 x 61	110 x 90	110 x 90	Customized	Customized
Size of inner protection plate	108 x 37	106.5 x 65.5	104 x 54	106.5 x 65.5	106.5 x 75
Arc sensor	2	3	2	2	2
Shade range	4/9-13	3.5/9-13 CUTTING 5	4/9-13/14-15 CUTTING 5	4/5,8/9-13 CUTTING 5	4/5,8/9-13/14-15 CUTTING 5
Power ON/OFF	Fully automatic	Fully automatic	Fully automatic	Fully automatic	Fully automatic
Shade control	Internal	Internal	Internal, digital display	External	External
Switching time (ms)	0.1	0.1	0.1	0.1	0.1
Grinding function	No	Yes	Yes	No	No
Low battery indicator	No	Yes	Yes	Yes	Yes
Low amperage TIG rated (A)	5	3-5	5	5	5
Power supply	Solar Cell, 2 x CR2032, replaceable	Solar Cell, 2 x CR2032, replaceable	Solar Cell, 1 x CR2450, replaceable	Solar Cell, 1 x CR2450, replaceable	Solar Cell, 1 x CR2450, replaceable PAPR battery
Certification	CE, ANSI, CSA	CE, AS/NZS	CE, ANSI, CSA, AS/NZS	CE, ANSI, CSA, AS/NZS	CE, ANSI, CSA, AS/NZS

ADF compatibility

SA 35	Alfa e60A
SA 60B	Beta e90A / Beta e90 SFA / Delta 90 SFA
XA 47	Beta e90X / Beta e90 XFA / Delta+ 90 XFA
SA 60	Gamma 100A / Gamma GTH3 SFA
XA 74	Gamma GTH3 XFA

FILTERS FOR PAPR

A key component of any respirator is the filter. They are divided into gas, particle and combined filters according to the type of protection they provide. There are standards setting the minimum requirements, test methods and markings for the filters. Gas filters are divided into different types (A, B, E, K etc.) according to the group of substances they are capable of absorbing, and by their absorption capacity they are classified into groups 1, 2 and 3.

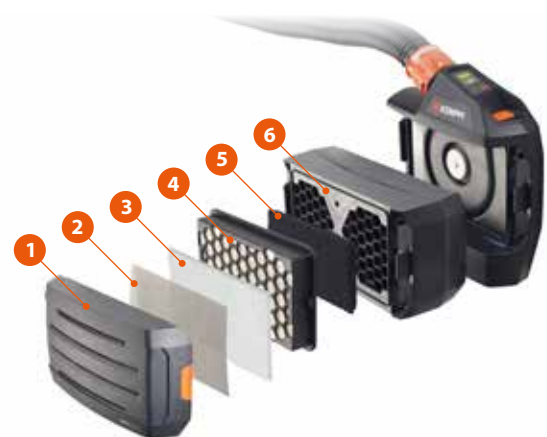
Kemppi particle filters in combination with Kemppi PAPR devices provide excellent protection for most welding processes and applications. But your local independent air measurement specialist can provide an air quality report in order for you to accurately select the correct respiratory solution

Kemppi combined filters are divided into gas and particle filters. They have an absorption capacity against organic vapors with boiling points over 65 °C, acid/inorganic gases and vapors, sulfur dioxide. The filtration efficiency is 99,9 % against dust, fumes and mists. Every substance that falls into the above mentioned categories is covered by a Kemppi combined filter set. See the table opposite for further guidance.

For further information regarding standards and approvals please see page 40.



- 1 Filter cover
- 2 Spark arrester
- 3 Pre-filter
- 4 Particle filter
- 5 Odor filter: Removes unpleasant odors. Optional accessory. Do not use if a gas filter is present.
- 6 Gas filter: Removes gases and vapors



Protection against particles and gas



BREATHING AIR DELIVERY SOLUTIONS

	Gamma GTH3 XFA	Gamma GTH3 SFA	Gamma GTH3 PFA	Gamma GTH3 SFA Airline	Gamma GTH3 PFA Airline	Gamma 100A	Gamma 100P	Delta models	Beta e90 SFA XFA (Airline)	Beta e90 PFA (Airline)
PFU 210e	•	•	•						•	•
RSA 230				•	•				(•)	(•)
FA Flow Control								•		
FA Pressure Flow Control								•		
FA Pressure Conditioner								•		
Work lights	•									
ADF	•	•		•		•		•	•	
Passive lens (shades 8-13)			•		•		•			•

Chemical	Filtering devices		Isolating devices
	Particle	Particle & Gas ABE	Supplied air
Aluminum	•	•	•
Argon			•
Beryllium	•	•	•
Bromine		•	•
Cadmium	•	•	•
Carbon Dioxide			•
Carbon Monoxide			•
Chlorine		•	•
Chlorine Dioxide		•	•
Chromium Hexavalent	•	•	•
Copper	•	•	•
Fluorides		•	•
Fluorine		•	•
Helium			•
Isocyanates	•	•	•
Hydrogen Chloride		•	•
Hydrogen Cyanide	•	•	•
Hydrogen Fluoride		•	•
Hydrogen Sulphide		•	•

Chemical	Filtering devices		Isolating devices
	Particle	Particle & Gas ABE	Supplied air
Iron Oxide	•	•	•
Lead	•	•	•
Magnesium	•	•	•
Manganese	•	•	•
Nickel	•	•	•
Nitrogen Dioxide			•
Nitric Oxide			•
Ozone		•	•
Phosgene			•
Phosphine			•
Silicon Dioxide	•	•	•
Sulfur Dioxide		•	•
Trichloroethylene		•	•
Vanadium Oxide	•	•	•
White Spirit		•	•
Zinc	•	•	•
Zinc Chloride	•	•	•
Zinc Oxide	•	•	•

Note: Gas filters must always be used in combination with a particle filter.

STANDARDS AND APPROVALS

Personal protective equipment must be certified in compliance with specified standards before being placed on the market. Kemppi personal protective equipment meets European standards and is CE marked. Models marked accordingly also meet the defined standards for Australia and New Zealand.

PPE product selection table

Correct product selection is essential to provide the best protection and performance for your personal needs and application. Please refer to page 46 for Kemppi PPE product selection table, including product features and standards conformity.

Protection for the eyes and face

Helmets and visors featuring protective welding filters are classified under the European standards EN 175, EN 166 and EN 169 for passive welding filters (colored glass welding filters). EN 379 defines automatic welding filters (ADF).

EN 175 and EN 166 define the mechanical strength of personal protective equipment, measuring increased robustness as 'S' and resistance to high speed particles as 'F or B'. PPE must also be tested for protection against droplets and splashes from molten metals, penetration from hot solids and electric arcs.

The optical quality of the welding or clear visor plates are measured as either 1, 2 or 3, where 1 and 2 offer the best optical performance. Glass welding filters (Passive welding filters) only have one optical classification.

For automatic welding filters (ADF) there are four defining parts to the classification. Optical class, Diffusion of light, Variation in luminous transmittance and angular dependency. Kemppi automatic welding filters are typically defined as 1/1/1/2.

Standards for powered air respirators

Welding helmets and visors fitted with a fabric face seal and supplied with filtered air from a battery powered filtering device are defined under the European standard EN 12941, listing three levels of protection performance as either TH1, TH2 or TH3. The number references define the products level of inward leakage performance and mechanical strength of hose couplings. Product certified as TH1 have a maximum inward leakage to the breathing zone of 10 %, TH2 products a maximum inward leakage of 2 %, and TH3 products offering the best respiratory protection with a maximum inward leakage of 0.2 %.

Particle and gas filters

The performance of particle filters fitted to powered air respirators are classified together with the complete filtering device under EN 12941. However the performance of gas filters are defined by letters, number and a color code system, indicating the performance level and gases for which the filter protects. The letters represent 'A' for organic, 'B' for inorganic, and 'E' for acid gases and numbers '1, 2 or 3 indicate the filters capacity, either low, medium or high capacity. Kemppi PFU 210e gas filter is classified as A1B1E1.

Standards for supplied air respirators

Supplied air respirators offer lower running costs compared to PAPR systems, and are also recommended where there may be a temporary build-up of welding gases. (See table on page 39).

Welder's respirators connected with a breathable air supply from a compressor meeting EN 12021 are defined under EN 14594. Kemppi welder's respirators must only be used in areas where the oxygen content exceeds 17% and must not be used as self contained breathing apparatus, or for escape purposes.

Protection factors

The occupational exposure limit of general welding fumes is 5 mg/m³. OEL = the level of air contamination where respiratory protection is recommended under EN standards. (Levels and factors stated may differ in other regions.)

A respirator with a protection factor of 10 will provide protection up to $10 \times 5 \text{ mg/m}^3 = 50 \text{ mg/m}^3$ provided that 50 mg/m³ is still below the IDLH of the given substance (IDLH = Immediately Dangerous to Life and Health).

The nominal protection factors assigned by the European Standard Authorities to a class of respirator (PAPR or Airline supplied device fitted with hood or helmet under EN12941), define a Nominal Protection Factor (NPF) based on the tested inward leakage efficiency of the respirator device.

TH1: inward leakage max. 10%

NPF = 10 ($10 \times 5 \text{ mg/m}^3 = 50 \text{ mg/m}^3$) APF 10

TH2: inward leakage max. 2%

NPF = 50 ($50 \times 5 \text{ mg/m}^3 = 250 \text{ mg/m}^3$) APF 20

TH3: inward leakage max. 0.2 %

NPF = 500 ($500 \times 5 \text{ mg/m}^3 = 2500 \text{ mg/m}^3$) APF 40

FREQUENTLY ASKED QUESTIONS

Why do the prices differ for welder's respirators?

The main reason is system performance and this affects several areas - safety and standards conformity, specification, plus usability and comfort. For example, the primary value of wearing a respirator is to protect your lungs. Lower priced PAPR units normally have higher levels of inward leakage, meaning higher levels of unfiltered air entering the breathing zone. For example TH1 rated units = 10 % inward leakage, TH2 rated units = 2 % inward leakage and TH3 rated units = 0.2 % inward leakage.

PAPR or supplied air respirator?

Health and safety regulations and welding environments can vary enormously, therefore always consult your local Safety officer before commencing work. The best way to select the most appropriate respiratory device is to first measure the local air quality through an independent and qualified testing body and know the contaminants present. This analysis can be carried out by a local expert service provider.

Welding must always be carried out in well ventilated work areas with oxygen levels exceeding 17% by volume. Certified powered air purifying respirators and supplied air respirators offer effective protection for wide ranging welding environments, where fume and gaseous contamination remains within the scope of the device and the occupational exposure limits (OEL) set by the Health & Safety Executive or equivalent national authority. Never use a welder's respirator in atmospheres that present 'Immediate Danger to Life or Health' (IDLH). In enclosed welding environments where there could be a build-up of gases such as argon, helium, CO₂ or carbon monoxide, supplied air respirators should be used.

For further information please refer to page 40 'Standards and Approvals' plus page 38-39 'Filter for PAPR' and 'Breathing Air Solutions'.

Isn't it cheaper to buy disposable welder's face masks?

Disposable welder's face masks are a cheaper solution if only welding occasionally. However professional welders and fabricators would typically use 1 x disposable mask per day and over time those costs would multiply and outweigh the investment cost of a quality PAPR or supplied air system, including replacement maintenance filters.

Do welder's respirators filter ozone gas?

Ozone is a naturally occurring gas in the upper and lower atmosphere, however it can be created in the welding environment to a greater or lesser extent by ultraviolet radiation from the welding arc breaking down molecular oxygen.

Typically welder's respirators do not 'filter' ozone in the same way that they protect us against welding gases and airborne particles, but the process of conversion back to oxygen is positively influenced as ozone gas comes into contact with and impacts solid surfaces such as the particle filter substrate and hard plastic surfaces of the PAPR respirator, air tubes and diffuser. Gas filters such as the Kemppi A1B1E1 gas filter are filled with tightly packed carbon granules and these are more effective to accelerate the conversion process and therefore more suitable where higher concentrations may be present from higher welding currents and productivity.

Why should I use respiratory protection?

Dangerous elements are present in the welding workplace and suitable respiratory protection should be used in order to protect both short and long-term health (see page 46-47). Welding fumes and gases are created through the burning of parent metals, welding filler materials, their coverings, shielding gases, paints, chemical reactions from the arcs ultraviolet light and heat process, plus contaminants in the air from solvents and cleaners.

Exposure to welding fumes is a serious occupational hazard and can cause numerous health problems if carried out without respiratory protection. Ultraviolet radiation given off by welding reacts with oxygen and nitrogen in the air to form ozone and nitrogen oxides, which can be life threatening in high concentrations, cause lung disease, and in small concentrations, irritate the nose and throat.

A single production welder can produce 20-40 g of fumes per hour, which corresponds to about 35-70 kg of welding fumes per year. Occupational exposure limit levels (OEL) to welding fume particulate is defined by mg/m^3 , i.e. the concentration of fume in the air, measured by its weight in milligrams per cubic meter of air. For general welding fumes the point at which it is recommended to use respiratory protection is $5 \text{ mg}/\text{m}^3$. Check your local standards authority and recommendations and ensure the Kemppi respiratory device you select meets your personal needs.

RECOMMENDED MAINTENANCE GUIDE

Item	Check	Frequency	Typical replacement frequency	Note
Clear protection plates	Spatter, scratches, heat damage	Daily	Weekly	Scratches, pitting, spatter, fumes and dirt impair your vision. Replace as necessary.
Clear grinding visor plate	Dirt, fumes and scratches	Daily	Monthly	Wash in warm soapy water and dry with a soft cloth.
Fabric face seals	Holes and hygiene	Daily	3 months	Check for burn holes and tears effecting to respiratory performance.
Breathing tubes and covers	Holes and tears	Daily	Only if damaged or leaking	Breathing tubes should be replaced if holed. Holes and Leaks reduces respiratory protection
Batteries	Charge state	Daily	12 months	Charge batteries daily when in use or at least every four months if in storage.
Safety plates	Scratches	Weekly	3 months	Clean with a soft dry cloth and replace as necessary.
Sweatbands	Hygiene	Weekly	Monthly	Can be washed in warm soapy water - dry before use.
Pre-filters	Contamination	Weekly	Weekly	Pre filters extend particle filter life. Replace as required depending on environment.
Particle filters	Contamination	Weekly	Monthly	Do not attempt to clean particle filter. Replace when necessary and follow the PAPR filter status lights and alarm.
Filter cover	Damage	Weekly	Only if damaged	Always ensure the filter cover and internal spark arrestor plate is correctly fitted.
Gas filters	Contamination	As needed	As needed	A guide to a gas filters life expiration is a change in odour. Gas filter life time is a matter of local contamination levels.

Comparing standards and protection factors

The table below assists understanding of how respiratory protection systems are classified and performance levels defined. Ultimately performance values define total inward leakage of contaminated air to the breathing zone and factors occupational exposure limits for a given concentration of contaminant.

Respirator device	EN12941	Maximum inward leakage %	Nominal Protection Factor (NPF)	Assigned Protection Factors (Values vary between countries, see examples below)	Australia and New Zealand standards for maximum inward leakage	
Powered Air Purifying Respirator (PAPR) fitted with a helmet and fabric face seal	TH1	10 %	NPF = 10	UK = 10 / Finland = 5	P1	5 %
	TH2	2 %	NPF = 50	UK = 20 / Finland = 20	P2	1 %
	TH3	0.2 %	NPF = 500	UK = 40 / Finland = 200	P3	0.05 %

SPECIAL SYMBOLS



Suitable for all welding process



Product fitted with LED work lights



ADF shade range (5-15)



Suitable for manual grinding process



Respiratory protection



ADF shade range (5-13)



Suitable for plasma arc cutting process



Protection for the eyes when welding



ADF shade range (9-13)



Suitable for pre and post weld inspection



Combined head and hearing protection



Passive welding filter



Lightweight and portable



Extended protection



Grinding visor viewing area cm²



Maximum operating altitude 3000 m (700 mbar)



Battery charging time to full charge state. Standard = 4 h



Battery charging time to full charge state. Standard = 2 h Heavy Duty = 3 h

Welding filter table

Shade number selection for arc welding filters, SF 5143, EN 379.

	MMA (E-Hand)	MIG, Ss	MIG, Al	TIG	MAG, (CO ₂)	Carbon arc gouging	Plasma cutting
15 A				9			
20 A	9			10			
30 A							
40 A	10				10		
60 A		10	10	11			
80 A					11		
100 A	11						11
125 A		11	11	12	12	10	
150 A							
175 A						11	
200 A			12	13			12
225 A	12	12			13	12	
250 A							
275 A			13			13	
300 A				14			13
350 A					14		
400 A	13	13	14			14	
450 A							
500 A	14	14	15		15	15	

Product selection table, features and standards conformity



	Alfa e60P	Alfa e60A	Beta e90P	Beta e90A	Beta e90X	Beta e90 PFA	Beta e90 SFA	Beta e90 XFA	Beta e90 PFA Airline	Beta e90 SFA Airline	Beta e90 XFA Airline
Page number for ordering details	49	50	51	52	53	54	56	58	60	62	64
Welding	●	●	●	●	●	●	●	●	●	●	●
Cutting	-	-	-	●	●	-	●	●	-	●	●
Grinding	●	●	●	●	●	●	●	●	●	●	●
Finishing	●	●	●	●	●	●	●	●	●	●	●
Positional welding	●	●	●	●	●	●	●	●	●	●	●
Welding lens type	P	A	P	A	A	P	A	A	P	A	A
Viewing lens size (mm)	99 x 52	96 x 35	100 x 78	100 x 60	97 x 47	100 x 78	100 x 60	97 x 47	100 x 78	100 x 60	97 x 47
Hard hat protection	-	-	-	-	-	-	-	-	-	-	-
Tack welding feature	●	●	●	●	●	●	●	●	●	●	●
Magnifying lens option	●	●	●	●	●	●	●	●	●	●	●
MMA	●	●	●	●	●	●	●	●	●	●	●
MIG/MAG	●	●	●	●	●	●	●	●	●	●	●
TIG	●	●	●	●	●	●	●	●	●	●	●
Plasma welding		●		●	●		●	●		●	●
Gouging	●	●	●	●	●	●	●	●	●	●	●
Welding helmet weight	470 g	490 g	475 g	505 g	525 g	650 g	680 g	700 g	650 g	680 g	700 g
EN 175	B	B	B	B	B	B	B	B	B	B	B
AS/NZS 1337.1 face protectors	●	-	●	●	●	●	●	●	●	●	●
EN 166	●	●	●	●	●	●	●	●	●	●	●
EN 12941	-	-	-	-	-	TH2	TH2	TH2	-	-	-
EN 14594 pressured air systems	-	-	-	-	-	-	-	-	2B	2B	2B
AS/NZS 1716;	-	-	-	-	-	P1	P1	P1	●	●	●
EN 379, ADF	-	●	-	●	●	●	●	●	●	●	●
EN 169, passive welding filters	●	-	●	-	-	-	-	-	-	-	-
AS/NZS 1338.1 welding filters	●	-	●	●	●	●	●	●	●	●	●
EN 397, AS/NZS 1801 safety helmets	-	-	-	-	-	-	-	-	-	-	-

P = Passive
A = Auto-darkening

X = Extended
S = Standard

FA = FreshAir



	Delta 90 SFA	Delta+ 90 XFA	Delta 90 SFA Airline	Delta+ 90 XFA Airline	Gamma 100P	Gamma 100A	Gamma GTH3 PFA	Gamma GTH3 SFA	Gamma GTH3 XFA	Gamma GTH3 PFA Airline	Gamma GTH3 SFA Airline
	66	70	68	72	74	75	76	78	80	82	84
	●	●	●	●	●	●	●	●	●	●	●
	●	●	●	●	-	●	-	●	●	-	●
	●	●	●	●	●	●	●	●	●	●	●
	●	●	●	●	●	●	●	●	●	●	●
	●	●	●	●	●	●	●	●	●	●	●
A	A	A	A	A	P	A	P	A	A	P	A
	100 x 60	97 x 47	100 x 60	97 x 47	101 x 73	102 x 60	101 x 73	102 x 60	102 x 74	101 x 73	102 x 60
	●	●	●	●	-	-	-	-	-	-	-
-	-	-	-	-	●	●	●	●	●	●	●
	●	●	●	●	●	●	●	●	●	●	●
	●	●	●	●	●	●	●	●	●	●	●
	●	●	●	●	●	●	●	●	●	●	●
	●	●	●	●	●	●	●	●	●	●	●
	●	●	●	●	●	●	●	●	●	●	●
	●	●	●	●	●	●	●	●	●	●	●
950 g	1145 g	950 g	1145 g	735 g	775 g	960 g	1000 g	1100 g	960 g	1000 g	
B	B	B	B	B	B	B	B	B	B	B	B
	●	●	●	●	●	●	●	●	●	●	●
	●	●	●	●	●	●	●	●	●	●	●
TH2	TH2	-	-	-	-	-	TH3	TH3	TH3	-	-
-	-	2A	2A	-	-	-	-	-	-	3B	3B
P1	P1	●	●	-	-	P2	P2	P2	●	●	
●	●	●	●	-	●	-	●	●	-	●	●
-	-	-	-	●	-	●	-	-	●	-	-
	●	●	●	●	●	●	●	●	●	●	●
	●	●	●	●	-	-	-	-	-	-	-

For full ADF specifications (auto-darkening welding filters) see page 37.
Welding helmet weights include magnifying lenses if optional.
Ear defenders for Delta model = 300 g.

ORDERING CODES

Sales packages,
spare parts,
accessories

These pages contain information about the suitability and ordering of the spare parts and accessories available for Kemppei welding helmets and respiratory protection systems.



ALFA e60P



Alfa e60P

9873020

Alfa e60P welding helmet with shade 11 passive welding filter.

Spare parts and accessories

Protection plate (60 x 110 x 1.0), 10 pcs	SP9873252
Passive welding filter (shade 11, size 60 x 110)	9873191
Safety plate (90 x 110 x 1.5), 10 pcs	SP9873254
Filter retaining spring	SP3149840
Headband	SP009023
Sweatband, 2 pcs	SP9873018
Hatch set	SP015663
Universal leather neck protector	SP015579
Leather welding bib (Alfa and Beta)	SP015177
Comfort band padding, 5 pcs	SP013231

Welding filters

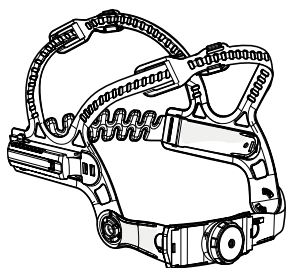
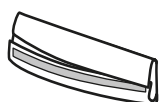
Shade 8	9873161
Shade 9	9873171
Shade 10	9873181
Shade 11	9873191
Shade 12	9873202
Shade 13	9873211

Magnifying lenses

Diopter 1.0 (51 x 108 mm)	9873260
Diopter 1.5 (51 x 108 mm)	9873261
Diopter 2.0 (51 x 108 mm)	9873262
Diopter 2.5 (51 x 108 mm)	9873263

SP9873018

SP009023



SP9873252

SP015663

9873191

SP3149840

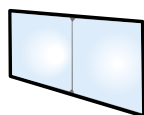
SP9873254

9873260

9873261

9873262

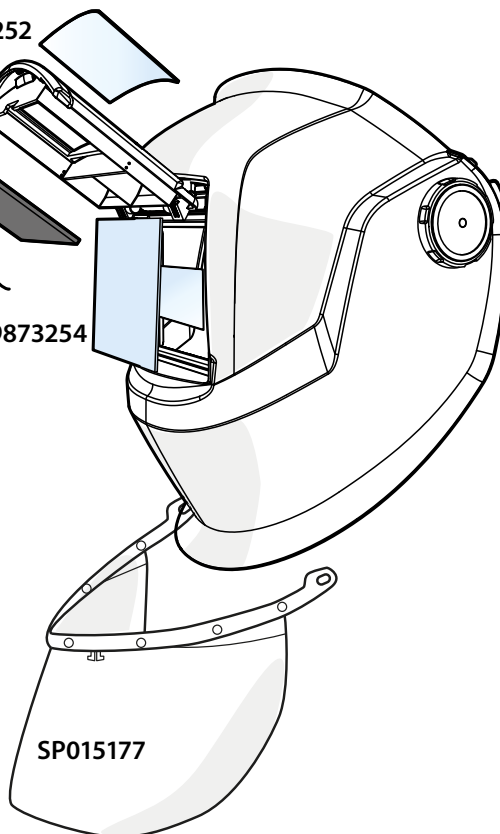
9873263



SP015579



SP015177



ORDERING CODES

ALFA e60A

Alfa e60A

9873021

Alfa e60A welding helmet with auto-darkening welding filter SA 35.

Spare parts and accessories

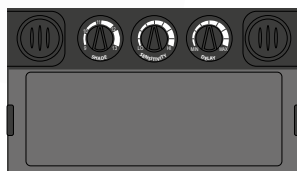
Protection plate (60 x 110 x 1.0), 10 pcs	SP9873252
ADF welding filter SA 35 (shades 9-13, viewing area 96 x 35)	SP9873061
Inner protection plate for SA 35 (108 x 37), 5 pcs	SP012951
Safety plate (90 x 110 x 1.5), 10 pcs	SP9873254
Filter retaining spring	SP3149840
Headband	SP009023
Sweatband, 2 pcs	SP9873018
Hatch set	SP015663
Universal leather neck protector	SP015579
Leather welding bib (Alfa and Beta)	SP015177
Comfort band padding, 5 pcs	SP013231

Magnifying lenses

Diopter 1.0 (51 x 108 mm)	9873260
Diopter 1.5 (51 x 108 mm)	9873261
Diopter 2.0 (51 x 108 mm)	9873262
Diopter 2.5 (51 x 108 mm)	9873263

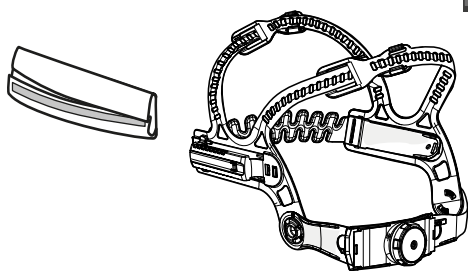


SP9873061



SP9873018

SP009023



SP015579

SP9873252

SP015663

SP9873061

SP012951

SP3149840

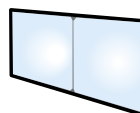
SP9873254

9873260

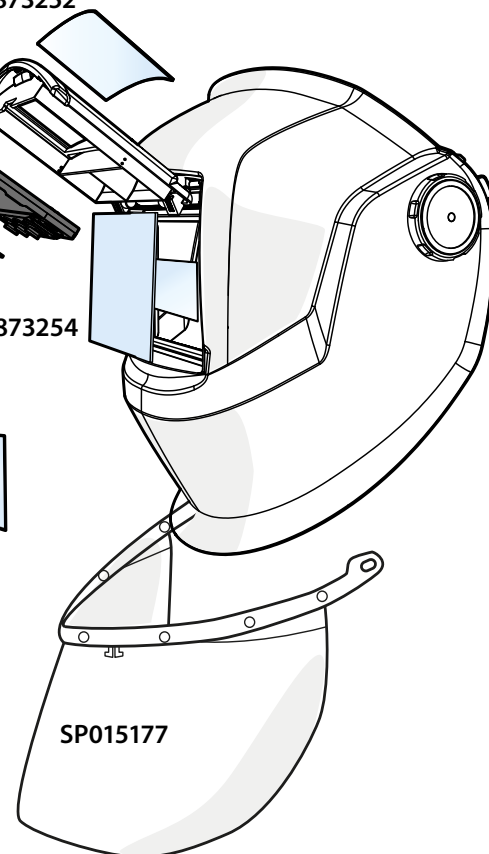
9873261

9873262

9873263



SP015177



BETA e90P



Beta e90P

9873022

Beta e90P welding helmet with shade 11 passive welding filter.

Spare parts and accessories

Protection plate (90 x 110 x 1.0), 10 pcs	SP9873253
Passive welding filter (shade 11, size 90 x 110)	9873244
Safety plate (90 x 110 x 1.5), 10 pcs	SP9873254
Filter retaining spring	SP3149850
Headband	SP009023
Sweatband, 2 pcs	SP9873018
Hatch set	SP015664
Universal leather neck protector	SP015579
Leather welding bib (Alfa and Beta)	SP015177
Comfort band padding, 5 pcs	SP013231

Welding filters

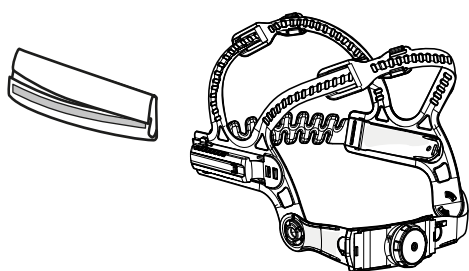
Shade 8	9873241
Shade 9	9873242
Shade 10	9873243
Shade 11	9873244
Shade 12	9873245
Shade 13	9873246

Magnifying lenses

Diopter 1.0 (51 x 108 mm)	9873260
Diopter 1.5 (51 x 108 mm)	9873261
Diopter 2.0 (51 x 108 mm)	9873262
Diopter 2.5 (51 x 108 mm)	9873263

SP9873018

SP009023



SP015579

SP9873253

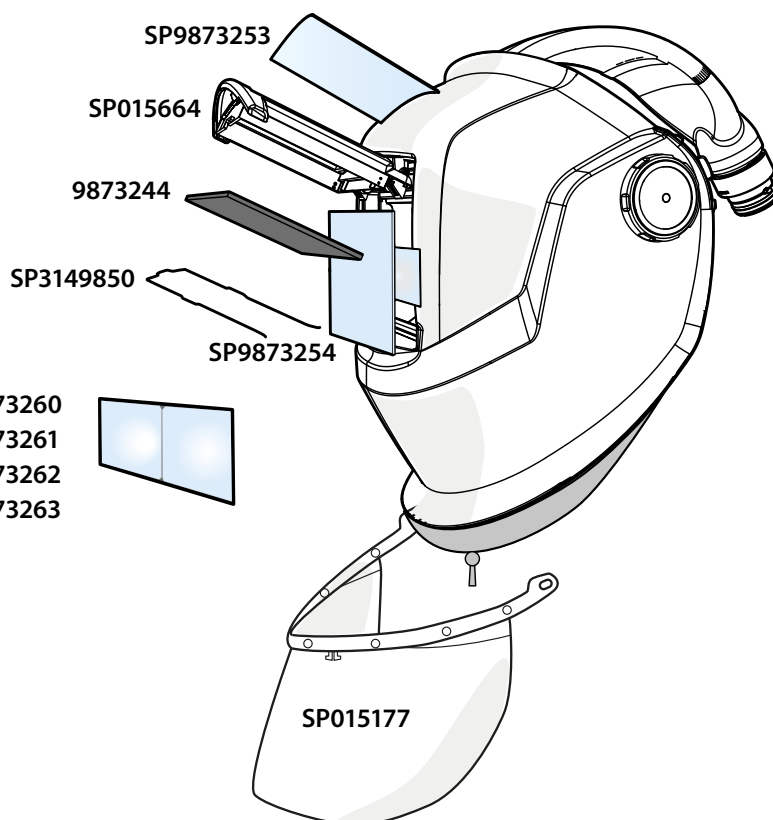
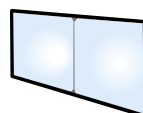
SP015664

9873244

SP3149850

SP9873254

9873260
9873261
9873262
9873263



SP015177

ORDERING CODES

BETA e90A



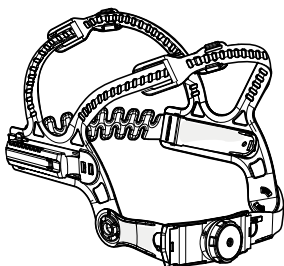
SP9873064



SP9873018



SP009023



SP015579



Beta e90A

9873023

Beta e90A welding helmet with auto-darkening welding filter SA 60B.

Spare parts and accessories

Protection plate (90 x 110 x 1.0), 10 pcs	SP9873253
ADF welding filter SA 60B (shades 9-13, viewing area 100 x 60)	SP9873064
Inner protection plate for SA 60B (106 x 65), 5 pcs	SP012425
Safety plate (90 x 110 x 1.5), 10 pcs	SP9873254
Filter retaining spring	SP3149850
Headband	SP009023
Sweatband, 2 pcs	SP9873018
Hatch set	SP015664
Universal leather neck protector	SP015579
Leather welding bib (Alfa and Beta)	SP015177
Comfort band padding, 5 pcs	SP013231

Magnifying lenses

Diopter 1.0 (51 x 108 mm)	9873260
Diopter 1.5 (51 x 108 mm)	9873261
Diopter 2.0 (51 x 108 mm)	9873262
Diopter 2.5 (51 x 108 mm)	9873263

SP9873253

SP015664

SP9873064

SP012425

SP3149850

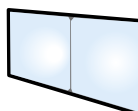
SP9873254

9873260

9873261

9873262

9873263



SP015177

BETA e90X



Beta e90X

9873024

Beta e90X welding helmet with auto-darkening welding filter XA 47.

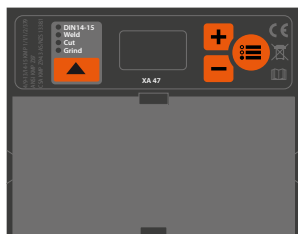
Spare parts and accessories

Protection plate (90 x 110 x 1.0), 10 pcs	SP9873253
ADF welding filter XA 47 (shades 9-15, viewing area 97 x 47)	SP9873063
Inner protection plate for SA 47 / XA 47 (104 x 54), 5 pcs	SP012952
Safety plate (90 x 110 x 1.5), 10 pcs	SP9873254
Filter retaining spring	SP3149850
Headband	SP009023
Sweatband, 2 pcs	SP9873018
Hatch set	SP015664
Universal leather neck protector	SP015579
Leather welding bib (Alfa and Beta)	SP015177
Comfort band padding, 5 pcs	SP013231

Magnifying lenses

Diopter 1.0 (51 x 108 mm)	9873260
Diopter 1.5 (51 x 108 mm)	9873261
Diopter 2.0 (51 x 108 mm)	9873262
Diopter 2.5 (51 x 108 mm)	9873263

SP9873063



SP9873253

SP015664

SP9873063

SP012952

SP3149850

SP9873254

9873260
9873261
9873262
9873263

SP015177

SP9873018

SP009023

SP015579

ORDERING CODES

BETA e90 PFA + PFU 210e



Beta e90 PFA + PFU 210e

9873030

Beta e90 PFA welding helmet, shade 11 passive welding filter, powered air respirator PFU 210e, air hose, pre-filter, particle filter, battery 3.2 Ah, battery charger, flow meter, leather belt with comfort padding.

Spare parts

Beta e90 FA welding helmet, ADF excluded	SP9873004
Protection plate (90 x 110 x 1.0), 10 pcs	SP9873253
Passive welding filter (shade 11, size 90 x 110)	9873244
Safety plate (90 x 110 x 1.5), 10 pcs	SP9873254
Filter retaining spring	SP3149850
Headband	SP009023
Sweatband, 2 pcs	SP9873018
Comfort band padding, 5 pcs	SP013231
Hatch set	SP015664
Powered air respirator PFU 210e	SP011996
Filter cover for PFU 210e	SP012095
Spark shield Kemppi, 1 pc	SP9320003
Pre-filter, 10 pcs	SP9320002
Pre-filter, 100 pcs	SP9320002MP
Particle filter, 2 pcs	SP015757
Particle filter, 5 pcs	SP010415
Particle filter, 20 pcs	SP010415MP
Gas filter LIFE+	SP009934
Odor filter, 5 pcs	SP012223
Air hose	SP012253
Hose protection cover	SP010788
Li-ion battery (SD), 3.2 Ah	SP012584
Li-ion battery (HD), 6.4 Ah	SP012021
Battery charger	SP012426
Flow meter	SP012492
Face seal	SP015537

Welding filters

Shade 8	9873241
Shade 9	9873242
Shade 10	9873243
Shade 11	9873244
Shade 12	9873245
Shade 13	9873246

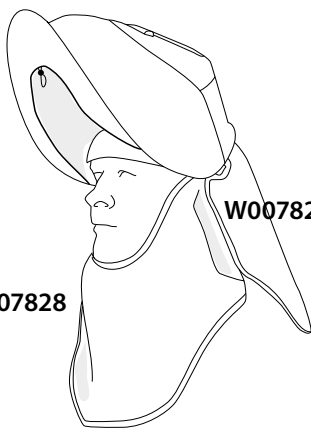
Magnifying lenses

Diopter 1.0 (51 x 108 mm)	9873260
Diopter 1.5 (51 x 108 mm)	9873261
Diopter 2.0 (51 x 108 mm)	9873262
Diopter 2.5 (51 x 108 mm)	9873263

Accessories

Protective head cover	W007827
Protective neck cover	W007828
Universal leather neck protector	SP015579
Leather welding bib (Alfa and Beta)	SP015177
Leather belt	SP010243
Leather belt with comfort padding	SP012999
Shoulder harness	SP011894
Kemppi Tool bag	SP010090

SP015537



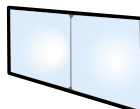
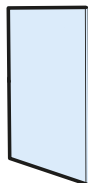
W007827

W007828



SP015579

SP9873254

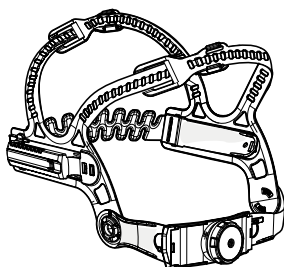


9873260
9873261
9873262
9873263

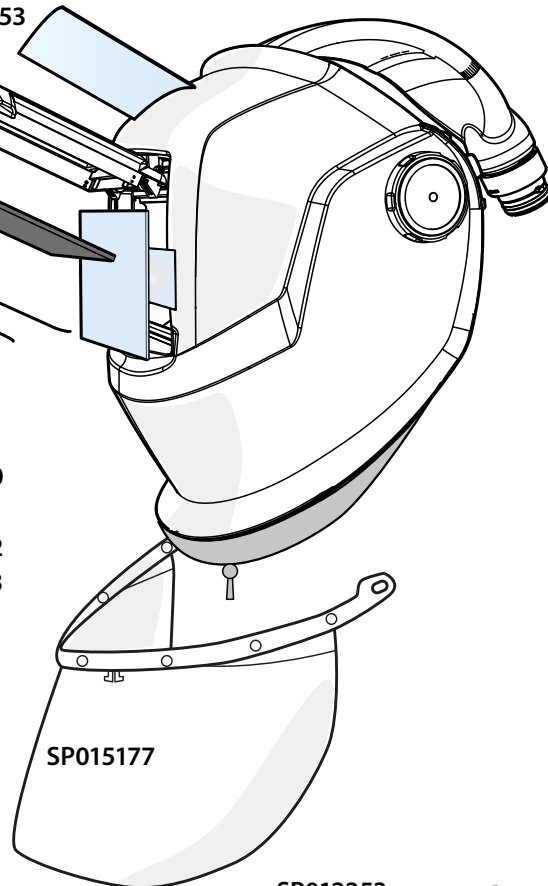
SP9873018



SP009023



SP015177



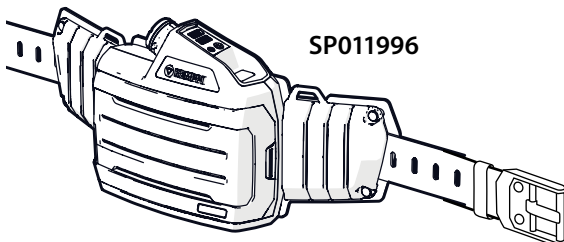
SP012253



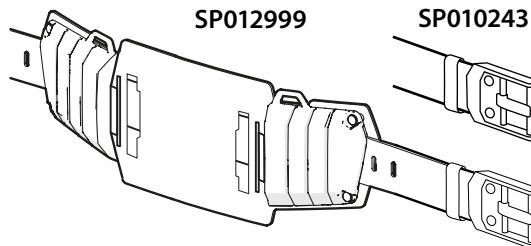
SP010788



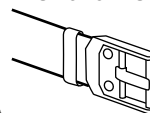
SP011996



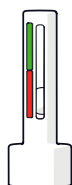
SP012999



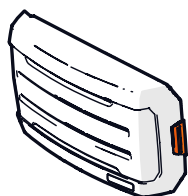
SP010243



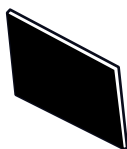
SP012492



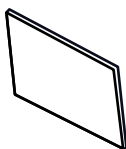
SP012095



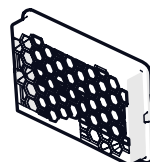
SP9320003



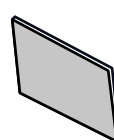
SP9320002
SP9320002MP



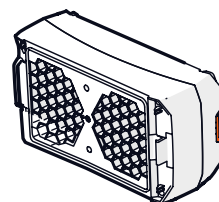
SP010415
SP010415MP



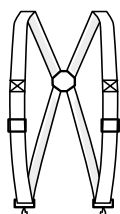
SP012223



SP009934



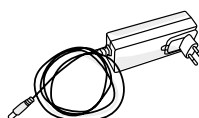
SP011894



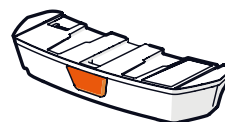
SP010090



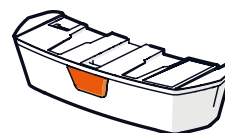
SP012426



SP012584



SP012021



ORDERING CODES

BETA e90 SFA + PFU 210e



Beta e90 SFA + PFU 210e 9873032

Beta e90 SFA welding helmet with auto-darkening welding filter SA 60B, powered air respirator PFU 210e, air hose, pre-filter, particle filter, battery 3.2 Ah, battery charger, flow meter, leather belt with comfort padding.

Spare parts

Beta e90 FA welding helmet, ADF excluded	SP9873004
Protection plate (90 x 110 x 1.0), 10 pcs	SP9873253
ADF welding filter SA 60B (shades 9-13, viewing area 100 x 60)	SP9873064
Inner protection plate for SA 60B (106 x 65), 5 pcs	SP012425
Safety plate (90 x 110 x 1.5), 10 pcs	SP9873254
Filter retaining spring	SP3149850
Headband	SP009023
Sweatband, 2 pcs	SP9873018
Comfort band padding, 5 pcs	SP013231
Hatch set	SP015664
Powered air respirator PFU 210e	SP011996
Filter cover for PFU 210e	SP012095
Spark shield Kemppi, 1 pc	SP9320003
Pre-filter, 10 pcs	SP9320002
Pre-filter, 100 pcs	SP9320002MP
Particle filter, 2 pcs	SP015757
Particle filter, 5 pcs	SP010415
Particle filter, 20 pcs	SP010415MP
Gas filter LIFE+	SP009934
Odor filter, 5 pcs	SP012223
Air hose	SP012253
Hose protection cover	SP010788
Li-ion battery (SD), 3.2 Ah	SP012584
Li-ion battery (HD), 6.4 Ah	SP012021
Battery charger	SP012426
Flow meter	SP012492
Face seal	SP015537

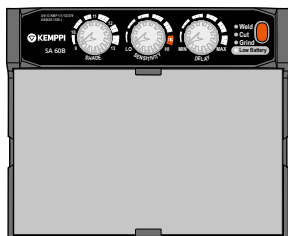
Magnifying lenses

Diopter 1.0 (51 x 108 mm)	9873260
Diopter 1.5 (51 x 108 mm)	9873261
Diopter 2.0 (51 x 108 mm)	9873262
Diopter 2.5 (51 x 108 mm)	9873263

Accessories

Protective head cover	W007827
Protective neck cover	W007828
Universal leather neck protector	SP015579
Leather welding bib (Alfa and Beta)	SP015177
Leather belt	SP010243
Leather belt with comfort padding	SP012999
Shoulder harness	SP011894
Kemppi Tool bag	SP010090

SP9873064



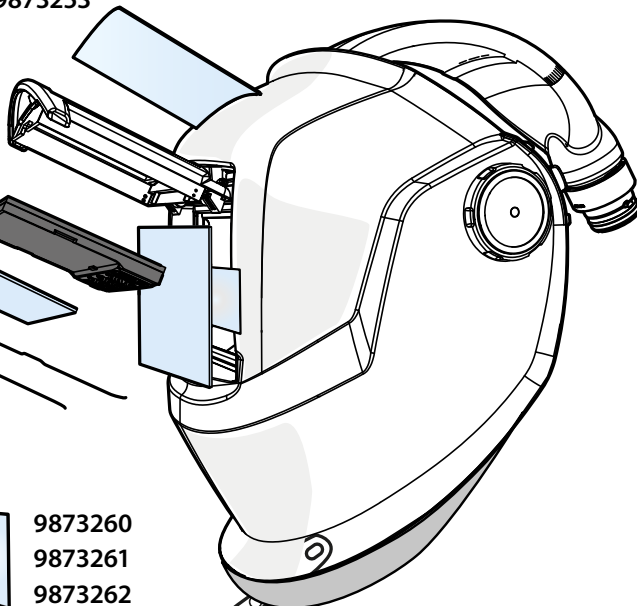
SP9873253

SP015664

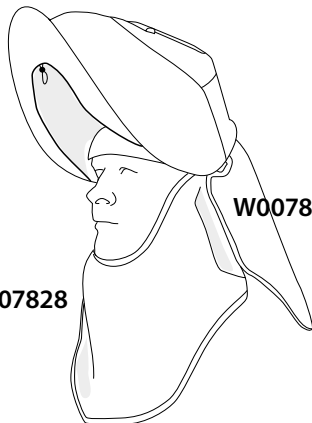
SP9873064

SP012425

SP3149850



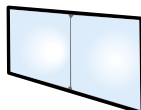
SP015537



W007827

W007828

SP9873254



9873260

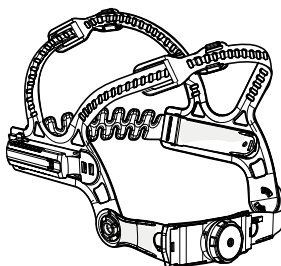
9873261

9873262

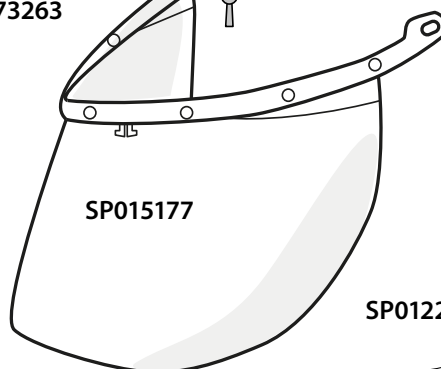
9873263

SP9873018

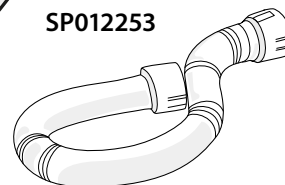
SP009023



SP015177



SP012253



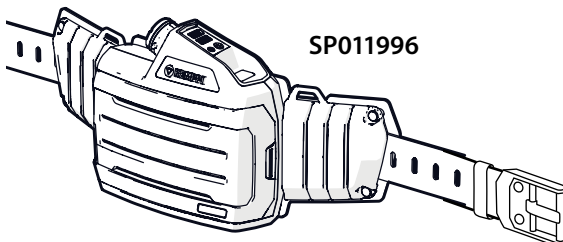
SP015579



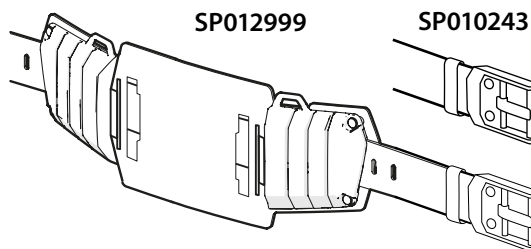
SP010788



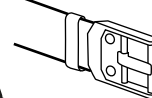
SP011996



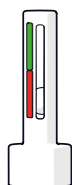
SP012999



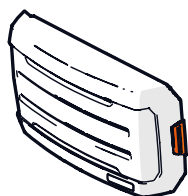
SP010243



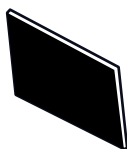
SP012492



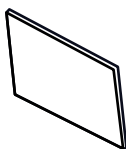
SP012095



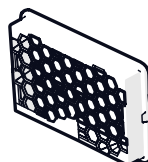
SP9320003



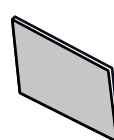
SP9320002
SP9320002MP



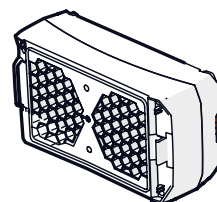
SP010415
SP010415MP



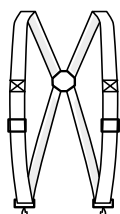
SP012223



SP009934



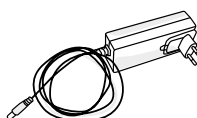
SP011894



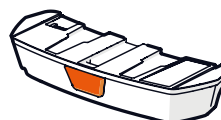
SP010090



SP012426



SP012584



SP012021



BETA e90 XFA + PFU 210e



Beta e90 XFA + PFU 210e 9873036

Beta e90 XFA welding helmet, auto-darkening welding filter XA 47, powered air respirator PFU 210e, air hose, pre-filter, particle filter, battery 3.2 Ah, battery charger, flow meter, leather belt with comfort padding.

Spare parts and accessories

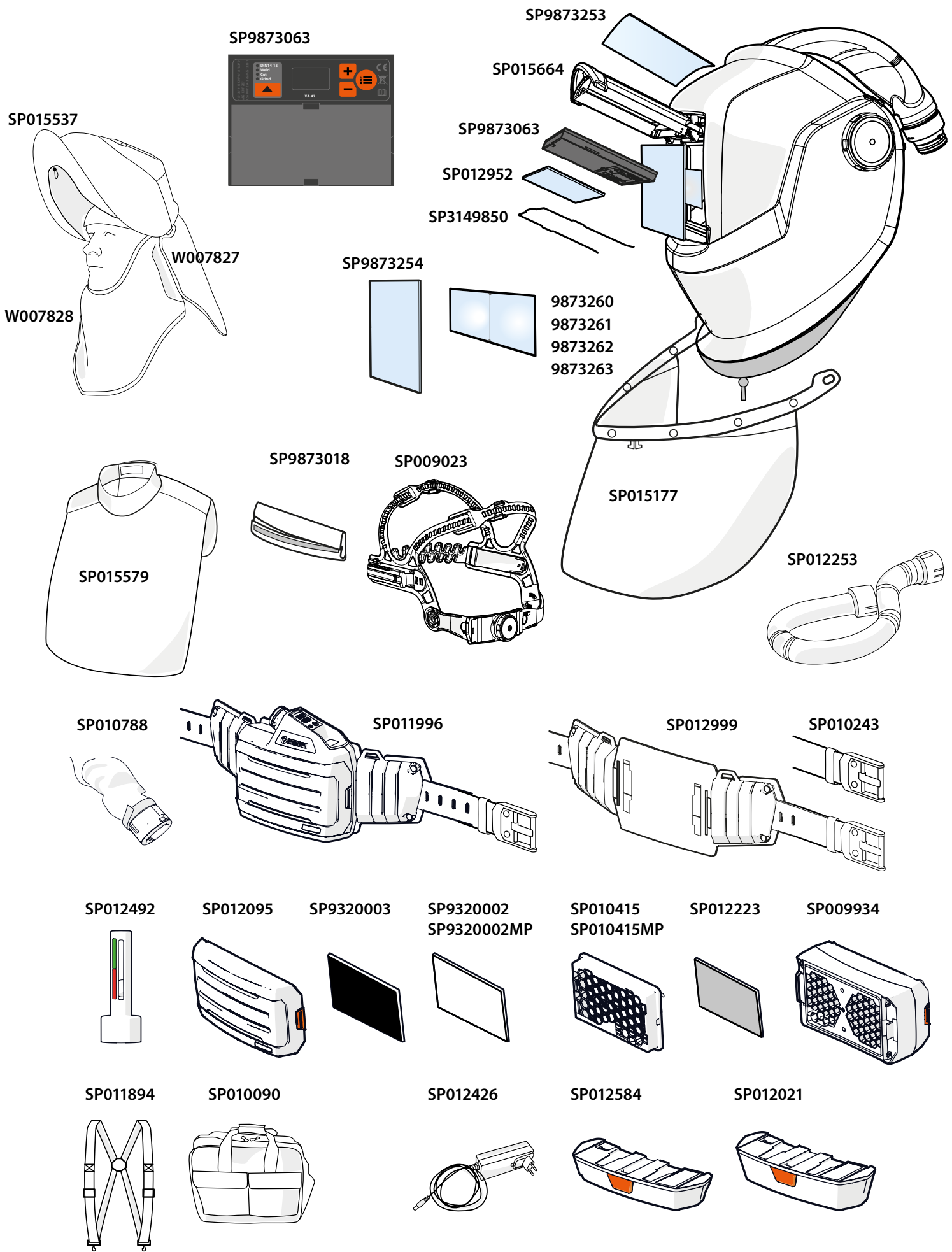
Beta e90 FA welding helmet, ADF excluded	SP9873004
Protection plate (90 x 110 x 1.0), 10 pcs	SP9873253
ADF welding filter XA 47 (shades 9-15, viewing area 97 x 47)	SP9873063
Inner protection plate for XA 47 (104 x 54), 5 pcs	SP012952
Safety plate (90 x 110 x 1.5), 10 pcs	SP9873254
Filter retaining spring	SP3149850
Headband	SP009023
Sweatband, 2 pcs	SP9873018
Comfort band padding, 5 pcs	SP013231
Hatch set	SP015664
Powered air respirator PFU 210e	SP011996
Filter cover for PFU 210e	SP012095
Spark shield Kemppi, 1 pc	SP9320003
Pre-filter, 10 pcs	SP9320002
Pre-filter, 100 pcs	SP9320002MP
Particle filter, 2 pcs	SP015757
Particle filter, 5 pcs	SP010415
Particle filter, 20 pcs	SP010415MP
Gas filter LIFE+	SP009934
Odor filter, 5 pcs	SP012223
Air hose	SP012253
Hose protection cover	SP010788
Li-ion battery (SD), 3.2 Ah	SP012584
Li-ion battery (HD), 6.4 Ah	SP012021
Battery charger	SP012426
Flow meter	SP012492
Face seal	SP015537

Magnifying lenses

Diopter 1.0 (51 x 108 mm)	9873260
Diopter 1.5 (51 x 108 mm)	9873261
Diopter 2.0 (51 x 108 mm)	9873262
Diopter 2.5 (51 x 108 mm)	9873263

Accessories

Protective head cover	W007827
Protective neck cover	W007828
Universal leather neck protector	SP015579
Leather welding bib (Alfa and Beta)	SP015177
Leather belt	SP010243
Leather belt with comfort padding	SP012999
Shoulder harness	SP011894
Kemppi Tool bag	SP010090



BETA e90 PFA + RSA 230



Beta e90 PFA + RSA 230

9873031

Beta e90 PFA welding helmet, shade 11 passive welding filter, supplied air regulator RSA 230, air hose and air hose adapter for RSA 230, flow meter, leather belt with comfort padding.

Spare parts

Beta e90 FA welding helmet, ADF excluded	SP9873004
Protection plate (90 x 110 x 1.0), 10 pcs	SP9873253
Passive welding filter (shade 11, size 90 x 110)	9873244
Safety plate (90 x 110 x 1.5), 10 pcs	SP9873254
Filter retaining spring	SP3149850
Comfort band padding, 5 pcs	SP013231
Headband	SP009023
Sweatband, 2 pcs	SP9873018
Hatch set	SP015664
Supplied air regulator set RSA 230	SP011617
Supplied air regulator RSA 230	SP012857
Air hose adapter for RSA 230	SP011227
Air hose	SP012253
Silencer for RSA 230, 2 pcs	SP011735
Hose protection cover	SP010788
Flow meter	SP012492
Face seal	SP015537

Welding filters

Shade 8	9873241
Shade 9	9873242
Shade 10	9873243
Shade 11	9873244
Shade 12	9873245
Shade 13	9873246

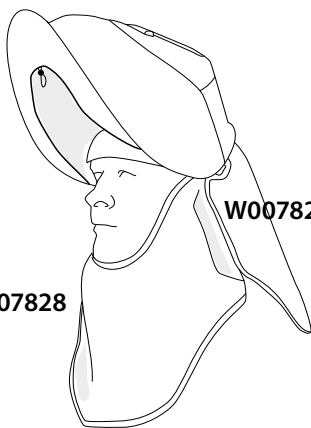
Magnifying lenses

Diopter 1.0 (51 x 108 mm)	9873260
Diopter 1.5 (51 x 108 mm)	9873261
Diopter 2.0 (51 x 108 mm)	9873262
Diopter 2.5 (51 x 108 mm)	9873263

Accessories

Protective head cover	W007827
Protective neck cover	W007828
Universal leather neck protector	SP015579
Leather welding bib (Alfa and Beta)	SP015177
Leather belt	SP010243
Leather belt with comfort padding	SP012999
Shoulder harness	SP011894
Kemppi Tool bag	SP010090
Pressure hose, 10 m	SP013848
Pressure hose, 20 m	SP013849
Pressure hose, 30 m	SP013850

SP015537



SP9873253

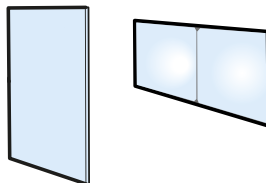
SP015664

9873244

SP3149850

9873260
9873261
9873262
9873263

SP9873254



SP015579

SP9873018

SP009023

SP015177

SP011894

SP010090

SP012999

SP010243

SP011617

SP012857

SP011735

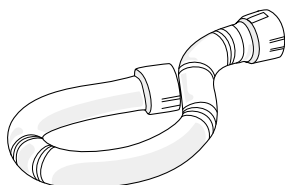
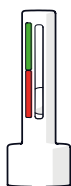
SP012492

SP012253

SP011227

SP010788

SP013848
SP013849
SP013850



BETA e90 SFA + RSA 230



Beta e90 SFA + RSA 230 9873033

Beta e90 SFA welding helmet with auto-darkening welding filter SA 60B, supplied air regulator RSA 230, air hose and air hose adapter for RSA 230, flow meter, leather belt with comfort padding.

Spare parts

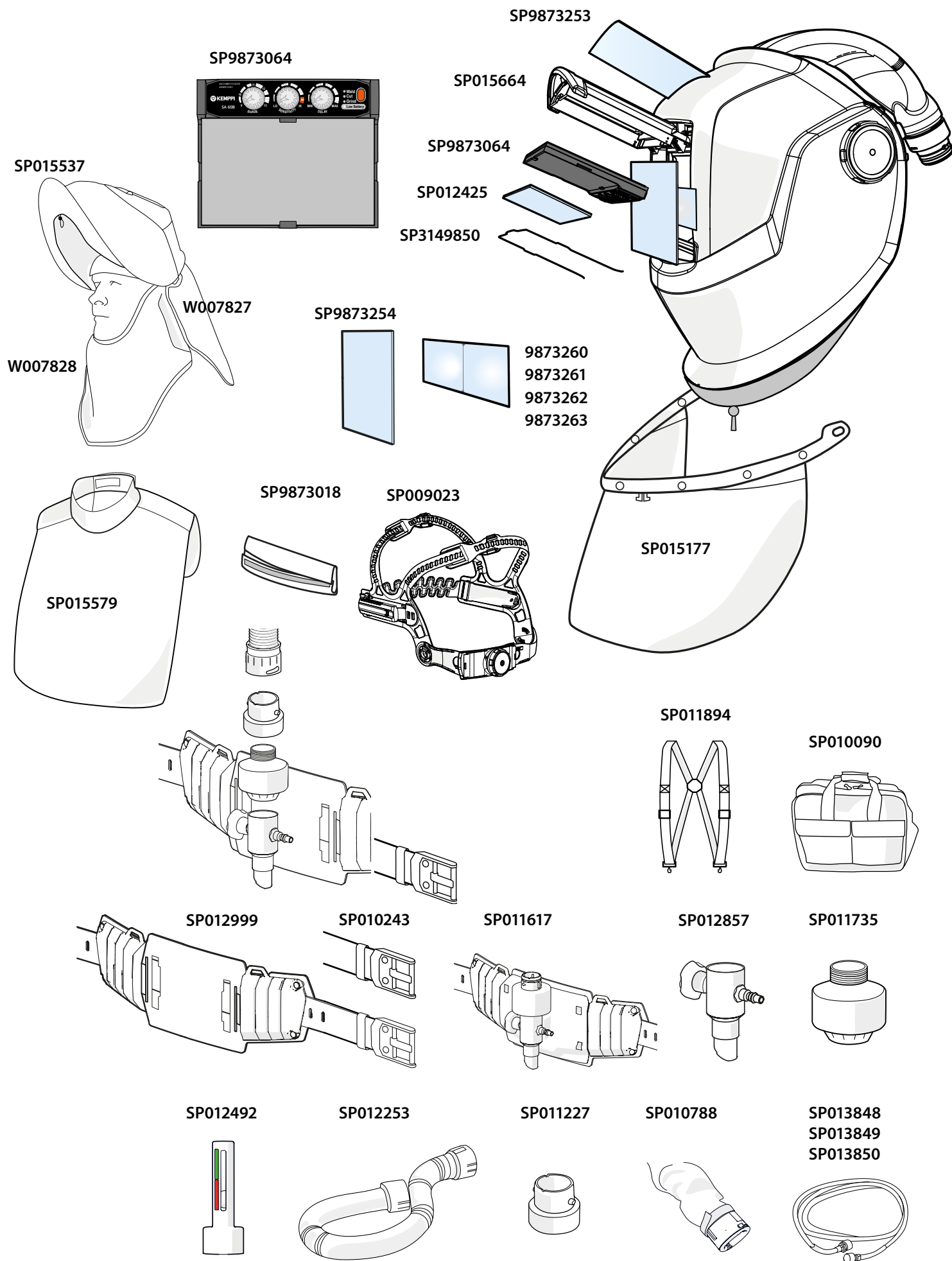
Beta e90 FA welding helmet, ADF excluded	SP9873004
Protection plate (90 x 110 x 1.0), 10 pcs	SP9873253
ADF welding filter SA 60B (shades 9-13, viewing area 100 x 60)	SP9873064
Inner protection plate for SA 60B (106 x 65), 5 pcs	SP012425
Safety plate (90 x 110 x 1.5), 10 pcs	SP9873254
Filter retaining spring	SP3149850
Headband	SP009023
Sweatband, 2 pcs	SP9873018
Comfort band padding, 5 pcs	SP013231
Hatch set	SP015664
Supplied air regulator set RSA 230	SP011617
Supplied air regulator RSA 230	SP012857
Air hose adapter for RSA 230	SP011227
Air hose	SP012253
Silencer for RSA 230, 2 pcs	SP011735
Hose protection cover	SP010788
Flow meter	SP012492
Face seal	SP015537

Magnifying lenses

Diopter 1.0 (51 x 108 mm)	9873260
Diopter 1.5 (51 x 108 mm)	9873261
Diopter 2.0 (51 x 108 mm)	9873262
Diopter 2.5 (51 x 108 mm)	9873263

Accessories

Protective head cover	W007827
Protective neck cover	W007828
Universal leather neck protector	SP015579
Leather welding bib (Alfa and Beta)	SP015177
Leather belt	SP010243
Leather belt with comfort padding	SP012999
Shoulder harness	SP011894
Kemppi Tool bag	SP010090
Pressure hose, 10 m	SP013848
Pressure hose, 20 m	SP013849
Pressure hose, 30 m	SP013850



BETA e90 XFA + RSA 230



Beta 90 XFA + RSA 230

9873037

Beta 90 XFA welding helmet, auto-darkening welding filter XA 47, supplied air regulator RSA 230, air hose and air hose adapter for RSA 230, flow meter, leather belt with comfort padding.

Spare parts

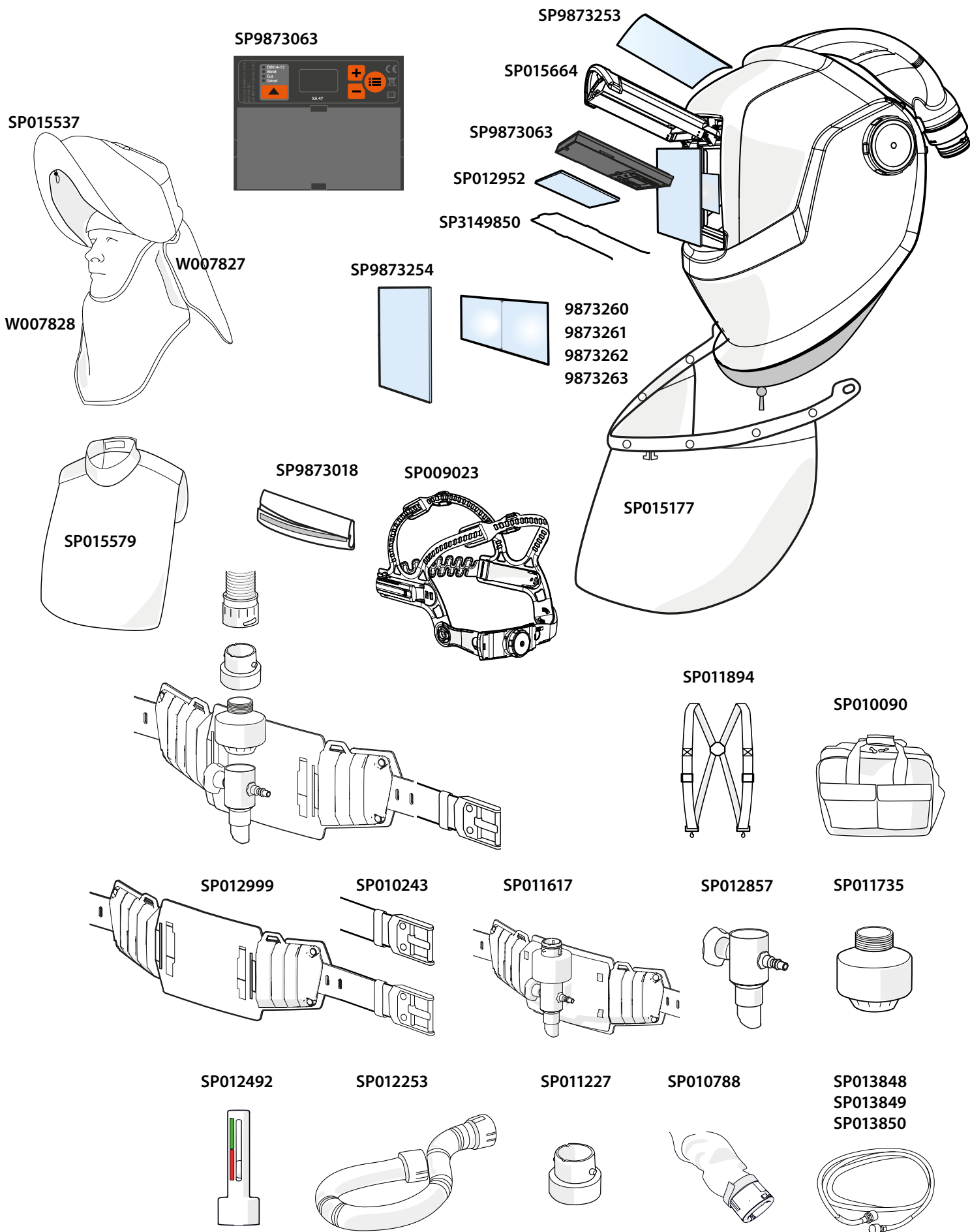
Beta e90 FA welding helmet, ADF excluded	SP9873004
Protection plate (90 x 110 x 1.0), 10 pcs	SP9873253
ADF welding filter XA 47 (shades 9-15, viewing area 97 x 47)	SP9873063
Inner protection plate for XA 47 (104 x 54), 5 pcs	SP012952
Safety plate (90 x 110 x 1.5), 10 pcs	SP9873254
Filter retaining spring	SP3149850
Headband	SP009023
Sweatband, 2 pcs	SP9873018
Comfort band padding, 5 pcs	SP013231
Hatch set	SP015664
Supplied air regulator set RSA 230	SP011617
Supplied air regulator RSA 230	SP012857
Air hose adapter for RSA 230	SP011227
Air hose	SP012253
Silencer for RSA 230, 2 pcs	SP011735
Hose protection cover	SP010788
Flow meter	SP012492

Magnifying lenses

Diopter 1.0 (51 x 108 mm)	9873260
Diopter 1.5 (51 x 108 mm)	9873261
Diopter 2.0 (51 x 108 mm)	9873262
Diopter 2.5 (51 x 108 mm)	9873263

Accessories

Protective head cover	W007827
Protective neck cover	W007828
Universal leather neck protector	SP015579
Leather welding bib (Alfa and Beta)	SP015177
Leather belt	SP010243
Leather belt with comfort padding	SP012999
Shoulder harness	SP011894
Kemppi Tool bag	SP010090
Pressure hose, 10 m	SP013848
Pressure hose, 20 m	SP013849
Pressure hose, 30 m	SP013850



DELTA 90 SFA

+ FA Flow Control



Delta 90 SFA + FA Flow Control 9873310

Delta 90 SFA welding helmet, auto-darkening welding filter SA 60B, FA Flow Control unit, air hose, Li-ion battery and charger, flow meter, comfort belt.

Spare parts

Delta 90 SFA welding helmet, ADF excluded	SP9873066
Protection plate, 10 pcs	W007520
ADF welding filter SA 60B (shades 9-13, viewing area 100 x 60)	SP9873064
Inner protection plate for SA 60B, 5 pcs	SP012425
Welding visor	W007522
Fixing screws, 2 pcs	W007518
Headband	W007519
Comfort band padding, 5 pcs	SP013231
FA Flow Control unit with Li-ion battery	W013560
Filter cover for FA Flow Control	W013565
Basic filter, 2 pcs	W007490
Sealing ring for FA Flow Control	W007491
Pre-filter for FA Flow Control, 10 pcs	W007492
Odor filter for FA Flow Control, 10 pcs	W007494
Air hose	W007487
Hose protection cover	W007788
Li-ion battery, 4.4 Ah	W007507
Li-ion battery charger	W013564
Flow meter	W007488
Face seal	W007516

Magnifying lenses

Diopter 1.0 (51 x 108 mm)	9873260
Diopter 1.5 (51 x 108 mm)	9873261
Diopter 2.0 (51 x 108 mm)	9873262
Diopter 2.5 (51 x 108 mm)	9873263

Accessories

Protective head cover	W007827
Protective neck cover	W007828
Universal leather neck protector	SP015579
Ear defenders, Secure 3C	W007517
Comfort belt	W007489
Heavy duty comfort belt	W007789
Kemppi Tool bag	SP010090

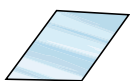
W007520



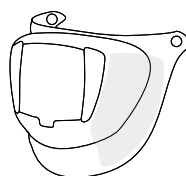
SP9873064



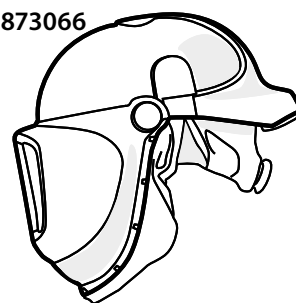
SP012425



W007522



SP9873066

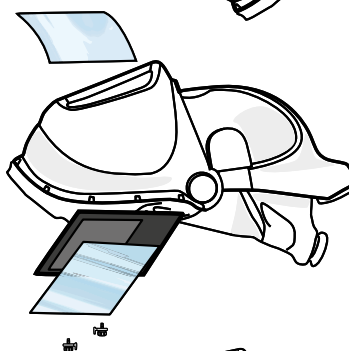
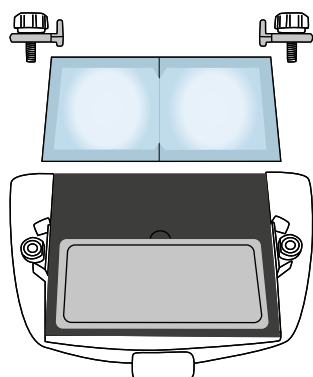


9873260

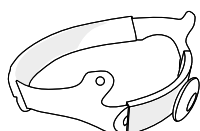
9873261

9873262

9873263



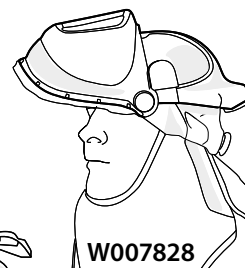
W007519



W007518



W007516



W007517



W007827

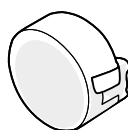
W007828



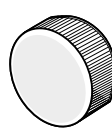
W007492
W007494

SP015579

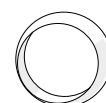
W013565



W007490



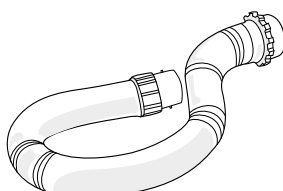
W007491



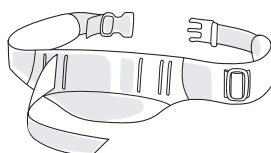
W007788



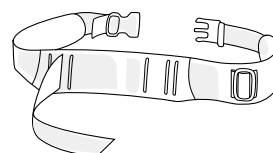
W007487



W007789



W007489



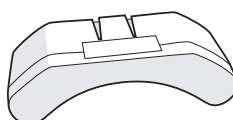
SP010090



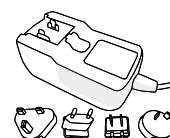
W007488



W007507



W013564



ORDERING CODES

DELTA 90 SFA

+ FA Pressure Flow Control



Delta 90 SFA + FA Pressure Flow Control 9873311

Delta 90 SFA welding helmet, auto-darkening welding filter SA 60B, FA Pressure Flow Control unit, flow meter, belt for FA Pressure Flow Control.

Spare parts

Delta 90 SFA welding helmet, ADF excluded	SP9873066
Protection plate, 10 pcs	W007520
ADF welding filter SA 60B (shades 9-13, size 100 x 60)	SP9873064
Inner protection plate for SA 60B, 5 pcs	SP012425
Welding visor	W007522
Fixing screws, 2 pcs	W007518
Headband	W007519
Comfort band padding, 5 pcs	SP013231
FA Pressure Flow Control unit with pressure hose	W007515
Air hose	W007501
Hose protection cover	W007788
FA Pressure Flow Control unit	W007496
Silencer for FA Pressure Flow Control	W007498
Valve cap for FA Pressure Flow Control	W007499
Fitting for FA Pressure Flow Control	W007500
FA Pressure Conditioner unit	W007504
Filter for FA Pressure Conditioner	W007505
Flow meter	W007503
Face seal	W007516

Magnifying lenses

Diopter 1.0 (51 x 108 mm)	9873260
Diopter 1.5 (51 x 108 mm)	9873261
Diopter 2.0 (51 x 108 mm)	9873262
Diopter 2.5 (51 x 108 mm)	9873263

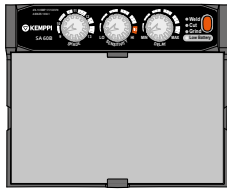
Accessories

Protective head cover	W007827
Protective neck cover	W007828
Universal leather neck protector	SP015579
Ear defenders, Secure 3C	W007517
Belt for FA Pressure Flow Control	W007502
Spiral hose, 10 m	W007506
Kemppi Tool bag	SP010090

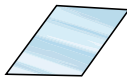
W007520



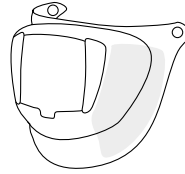
SP9873064



SP012425



W007522

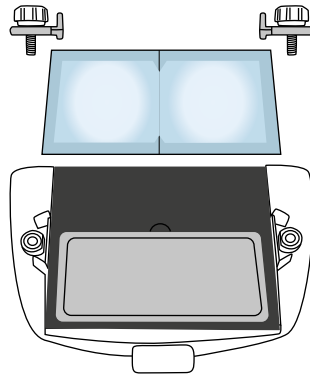


9873260

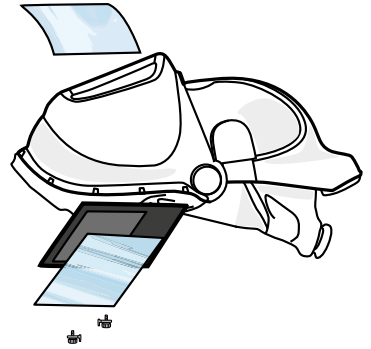
9873261

9873262

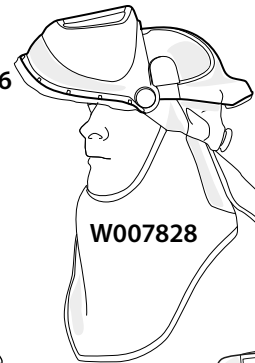
9873263



SP9873066



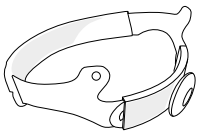
W007516



W007827

W007828

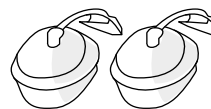
W007519



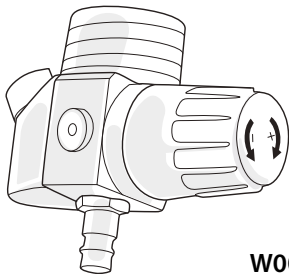
W007518



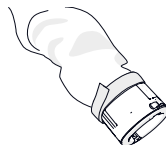
W007517



W007496



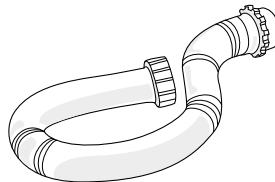
W007788



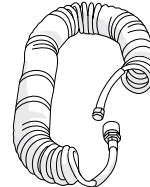
W007498



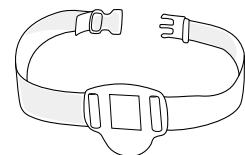
W007501



W007506



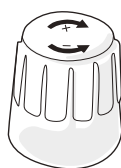
W007502



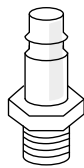
SP010090



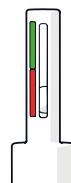
W007499



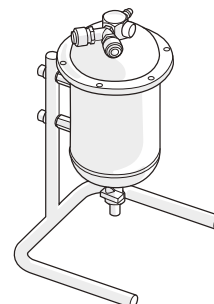
W007500



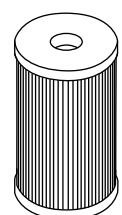
W007503



W007504



W007505



ORDERING CODES

DELTA+ 90 XFA + FA Flow Control



Delta+ 90 XFA + FA Flow Control 9873320

Delta+ 90 XFA welding helmet, auto-darkening welding filter XA 47, air hose, FA Flow Control unit, Li-ion battery and charger, flow meter, comfort belt.

Spare parts

Delta+ 90 XFA welding helmet, ADF excluded	SP9873069
Protection plate, 10 pcs	W007520
ADF welding filter XA 47 (shades 9-15, viewing area 97 x 47)	SP9873063
Inner protection plate for XA 47 (104 x 54), 5 pcs	SP012952
Welding visor	W009234
Grinding visor	W009233
Fixing screws, 2 pcs	W007518
Headband	W007519
Comfort band padding, 5 pcs	SP013231
FA Flow Control unit with Li-ion battery	W013560
Filter cover for FA Flow Control	W013565
Basic filter, 2 pcs	W007490
Sealing ring for FA Flow Control	W007491
Pre-filter for FA Flow Control, 10 pcs	W007492
Odor filter for FA Flow Control, 10 pcs	W007494
Air hose	W007487
Hose protection cover	W007788
Li-ion battery, 4.4 Ah	W007507
Li-ion battery charger	W013564
Flow meter	W007488
Face seal	W007516

Magnifying lenses

Dioptr 1.0 (51 x 108 mm)	9873260
Dioptr 1.5 (51 x 108 mm)	9873261
Dioptr 2.0 (51 x 108 mm)	9873262
Dioptr 2.5 (51 x 108 mm)	9873263

Accessories

Protective head cover	W007827
Protective neck cover	W007828
Universal leather neck protector	SP015579
Ear defenders, Secure 3C	W007517
Comfort belt	W007489
Heavy duty comfort belt	W007789
Kemppi Tool bag	SP010090

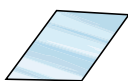
W007520



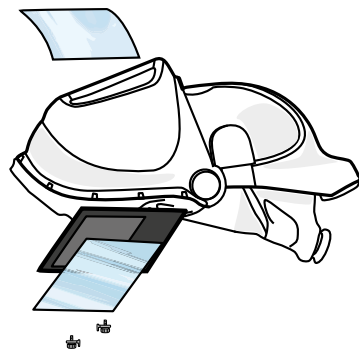
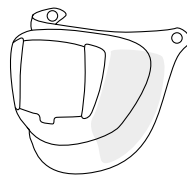
SP9873063



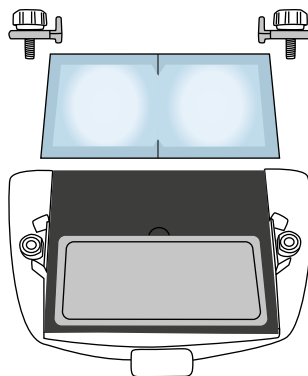
SP012952



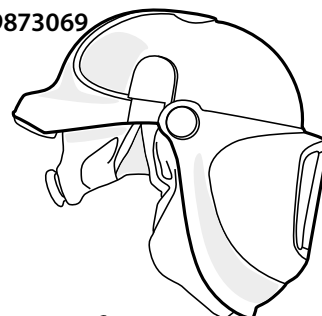
W009234



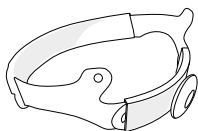
9873260
9873261
9873262
9873263



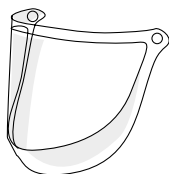
SP9873069



W007519



W009233



W007518

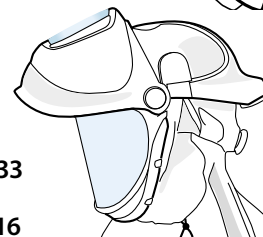


W007517



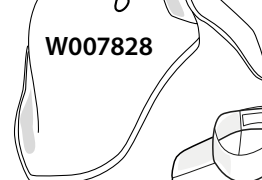
W009233

W007516

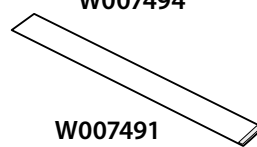


W007827

W007828

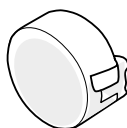


W007492
W007494

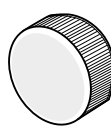


SP015579

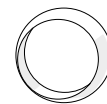
W013565



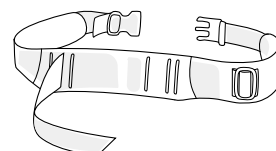
W007490



W007491



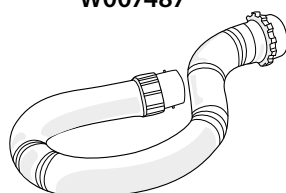
W007489



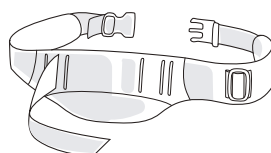
W007788



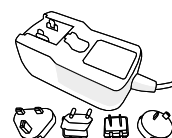
W007487



W007789



W013564



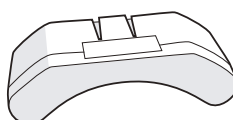
SP010090



W007488



W007507



ORDERING CODES

DELTA+ 90 XFA

+ FA Pressure Flow Control



Delta+ 90 XFA + FA Pressure Flow Control 9873321

Delta+ 90 XFA welding helmet, auto-darkening welding filter XA 47, FA Pressure Flow Control unit, flow meter, belt for FA Pressure Flow Control, grinding visor.

Spare parts

Delta+ 90 XFA welding helmet, ADF excluded	SP9873069
Protection plate, 10 pcs	W007520
ADF welding filter XA 47 (shades 9-15, viewing area 97 x 47)	SP9873063
Inner protection plate for XA 47 (104 x 54), 5 pcs	SP012952
Welding visor	W009234
Grinding visor	W009233
Fixing screws, 2 pcs	W007518
Headband	W007519
Comfort band padding, 5 pcs	SP013231
FA Pressure Flow Control unit with pressure hose	W007515
Air hose	W007501
Hose protection cover	W007788
FA Pressure Flow Control unit	W007496
Silencer for FA Pressure Flow Control	W007498
Valve cap for FA Pressure Flow Control	W007499
Fitting for FA Pressure Flow Control	W007500
FA Pressure Conditioner unit	W007504
Filter for FA Pressure Conditioner	W007505
Flow meter	W007503
Face seal	W007516

Magnifying lenses

Diopter 1.0 (51 x 108 mm)	9873260
Diopter 1.5 (51 x 108 mm)	9873261
Diopter 2.0 (51 x 108 mm)	9873262
Diopter 2.5 (51 x 108 mm)	9873263

Accessories

Protective head cover	W007827
Protective neck cover	W007828
Universal leather neck protector	SP015579
Ear defenders, Secure 3C	W007517
Belt for FA Pressure Flow Control unit	W007502
Spiral hose, 10 m	W007506
Kemppi Tool bag	SP010090

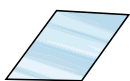
W007520



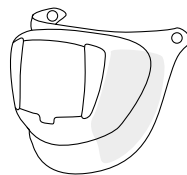
SP9873063



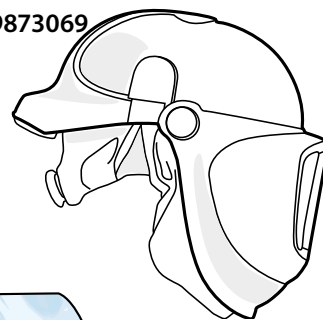
SP012952



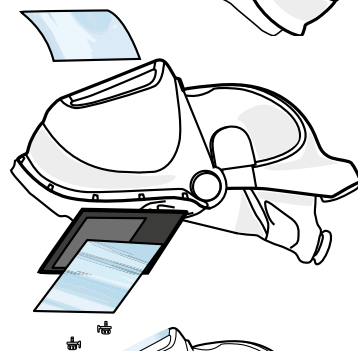
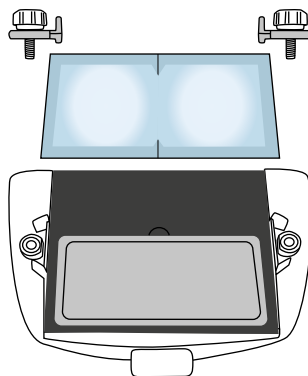
W009234



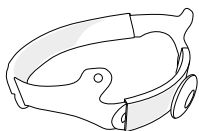
SP9873069



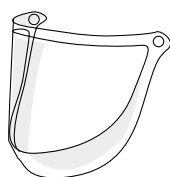
9873260
9873261
9873262
9873263



W007519



W009233

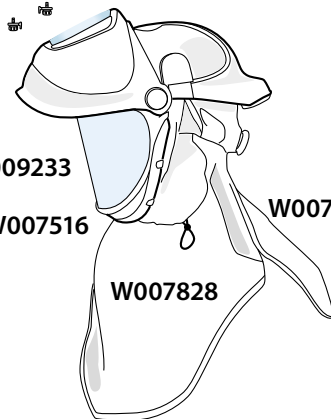


W007518



W009233

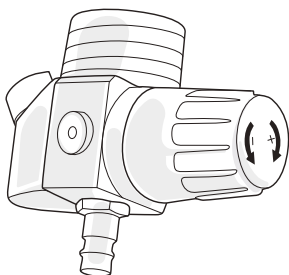
W007516



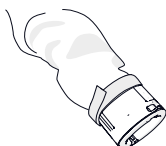
W007827

W007828

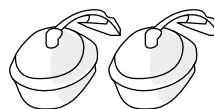
W007496



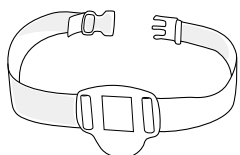
W007788



W007517



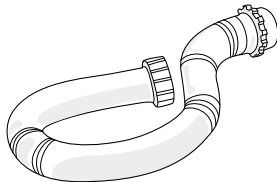
W007502



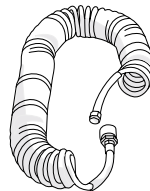
W007498



W007501



W007506



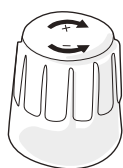
SP015579



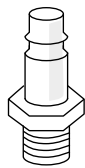
SP010090



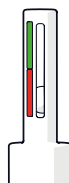
W007499



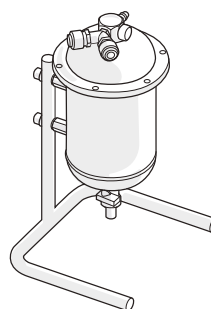
W007500



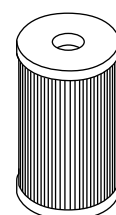
W007503



W007504



W007505



ORDERING CODES

GAMMA 100P



Gamma 100P 9873080

Gamma 100P welding helmet with shade 11 passive welding filter.

Spare parts and accessories

Protection plate, 5 pcs	SP008034
Passive welding filter (shade 11, size 86 x 109)	W011257
Welding visor frame	SP007996
Grinding visor, 5 pcs	SP008040
Side cover plate	SP012053
Headband	SP009023
Neck band	SP010728
Sweatband, 2 pcs	SP9873018
Comfort band padding, 5 pcs	SP013231
Welding filter frame	SP009755
Visor knob and adjuster set	SP008152
Work light solid cover plate, 3 pcs	SP011026

Universal leather neck protector SP015579

Welding visor positioning spring, 10 pcs SP008158

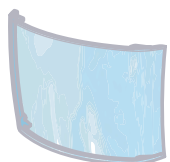
Welding filters

Shade 8	W011254
Shade 9	W011255
Shade 10	W011256
Shade 11	W011257
Shade 12	W011258
Shade 13	W011259

Magnifying lenses

Diopter 1.0 (51 x 108 mm)	9873260
Diopter 1.5 (51 x 108 mm)	9873261
Diopter 2.0 (51 x 108 mm)	9873262
Diopter 2.5 (51 x 108 mm)	9873263

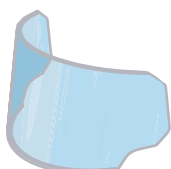
SP008034



W011257



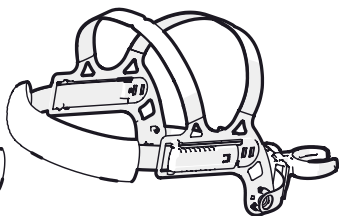
SP008040



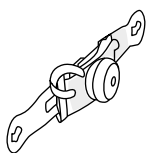
SP9873018



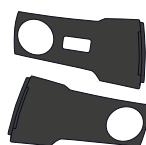
SP009023



SP010728



SP012053

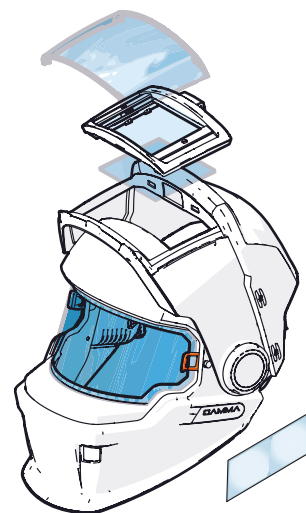


9873260

9873261

9873262

9873263

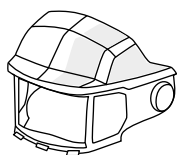


SP013231



SP015579

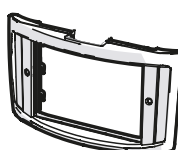
SP007996



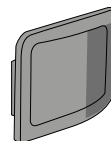
SP008152



SP009755



SP011026



SP008158



GAMMA 100A



Gamma 100A 9873090

Gamma 100A welding helmet with auto-darkening welding filter SA 60.

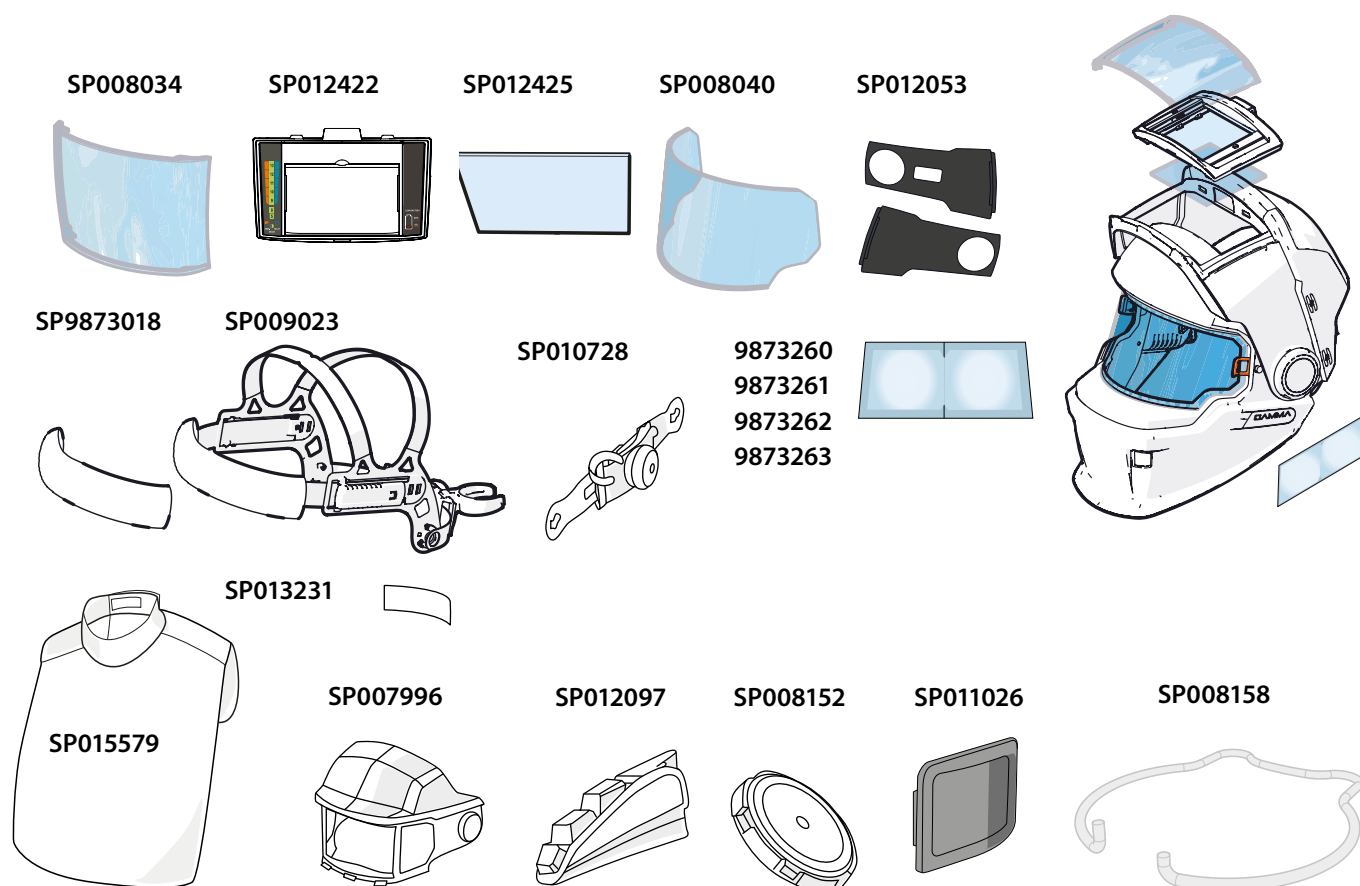
Spare parts and accessories

Protection plate, 5 pcs	SP008034
ADF welding filter SA 60 (shades 5, 8, 9-13, viewing area 102 x 60)	SP012422
Inner protection plate (106.5 x 65.5), 5 pcs	SP012425
Welding visor frame	SP007996
Grinding visor, 5 pcs	SP008040
Remote control	SP012097
Side cover plate	SP012053
Headband	SP009023

Neck band	SP010728
Sweatband, 2 pcs	SP9873018
Comfort band padding, 5 pcs	SP013231
Visor knob and adjuster set	SP008152
Work light solid cover plate, 3 pcs	SP011026
Universal leather neck protector	SP015579
Welding visor positioning spring, 10 pcs	SP008158

Magnifying lenses

Diopter 1.0 (51 x 108 mm)	9873260
Diopter 1.5 (51 x 108 mm)	9873261
Diopter 2.0 (51 x 108 mm)	9873262
Diopter 2.5 (51 x 108 mm)	9873263



GAMMA GTH3 PFA + PFU 210e



Gamma GTH3 PFA + PFU 210e 9873100

Gamma GTH3 PFA welding helmet, shade 11 passive welding filter, powered air respirator PFU 210e, air hose, pre-filter, particle filter, battery 3.2 Ah, battery charger, flow meter, Gamma leather belt.

Spare parts

Gamma GTH3 PFA welding helmet, ADF and remote control excluded	SP012252
Protection plate, 5 pcs	SP008034
Passive welding filter (shade 11, size 86 x 109)	W011257
Grinding visor, 5 pcs	SP008040
Side cover plate	SP012053
Headband	SP009023
Neck band	SP010728
Sweatband, 2 pcs	SP9873018
Comfort band padding, 5 pcs	SP013231
Welding filter frame	SP009755
Powered air respirator PFU 210e	SP011996
Filter cover for PFU 210e	SP012095
Spark shield Kemppi, 1 pc	SP9320003
Pre-filter, 10 pcs	SP9320002
Pre-filter, 100 pcs	SP9320002MP
Particle filter, 2 pcs	SP015757
Particle filter, 5 pcs	SP010415
Particle filter, 20 pcs	SP010415MP
Gas filter LIFE+	SP009934
Odor filter, 5 pcs	SP012223
Air hose	SP012253
Hose protection cover	SP010788
Li-ion battery (SD), 3.2 Ah	SP012584
Li-ion battery (HD), 6.4 Ah	SP012021
Battery charger	SP012426
Flow meter	SP012492
Face seal	SP009794
Welding visor positioning spring, 10 pcs	SP008158

Welding filters

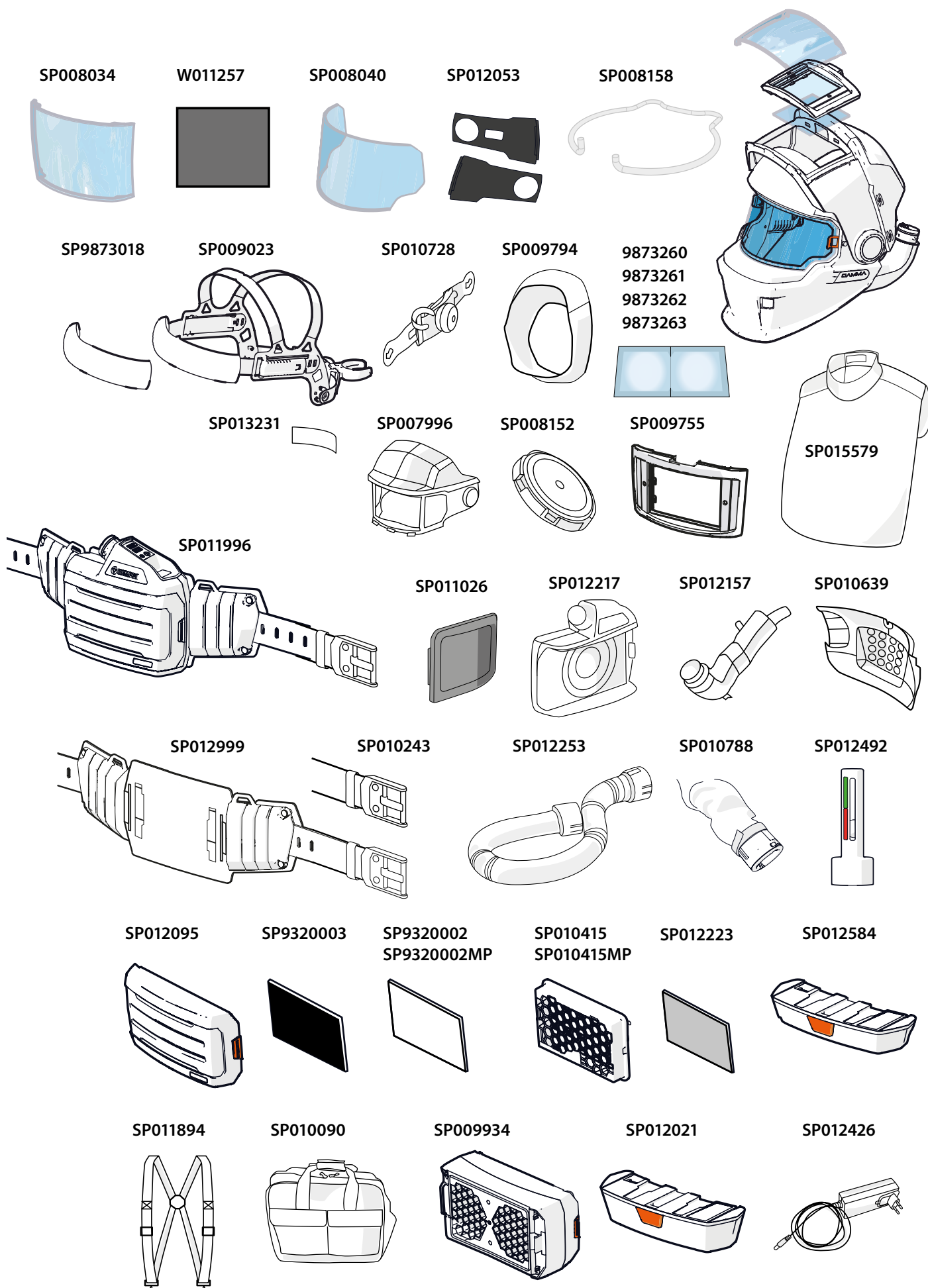
Shade 8	W011254
Shade 9	W011255
Shade 10	W011256
Shade 11	W011257
Shade 12	W011258
Shade 13	W011259

Magnifying lenses

Diopter 1.0 (51 x 108 mm)	9873260
Diopter 1.5 (51 x 108 mm)	9873261
Diopter 2.0 (51 x 108 mm)	9873262
Diopter 2.5 (51 x 108 mm)	9873263

Accessories

PFU 210e body	SP012217
Welding visor frame assembly	SP007996
Visor knob and adjuster set	SP008152
Air duct (PFA, SFA)	SP012157
Air duct nozzle	SP010639
Work light solid cover plate, 3 pcs	SP011026
Belt assembly	SP012999
Gamma leather belt	SP010243
Shoulder harness	SP011894
Kemppi tool bag	SP010090
Universal leather neck protector	SP015579



GAMMA GTH3 SFA + PFU 210e



Gamma GTH3 SFA + PFU 210e 9873120

Gamma GTH3 SFA welding helmet, auto-darkening welding filter SA 60, powered air respirator PFU 210e, air hose, pre-filter, particle filter, battery 3.2 Ah, battery charger, flow meter, Gamma leather belt.

Spare parts

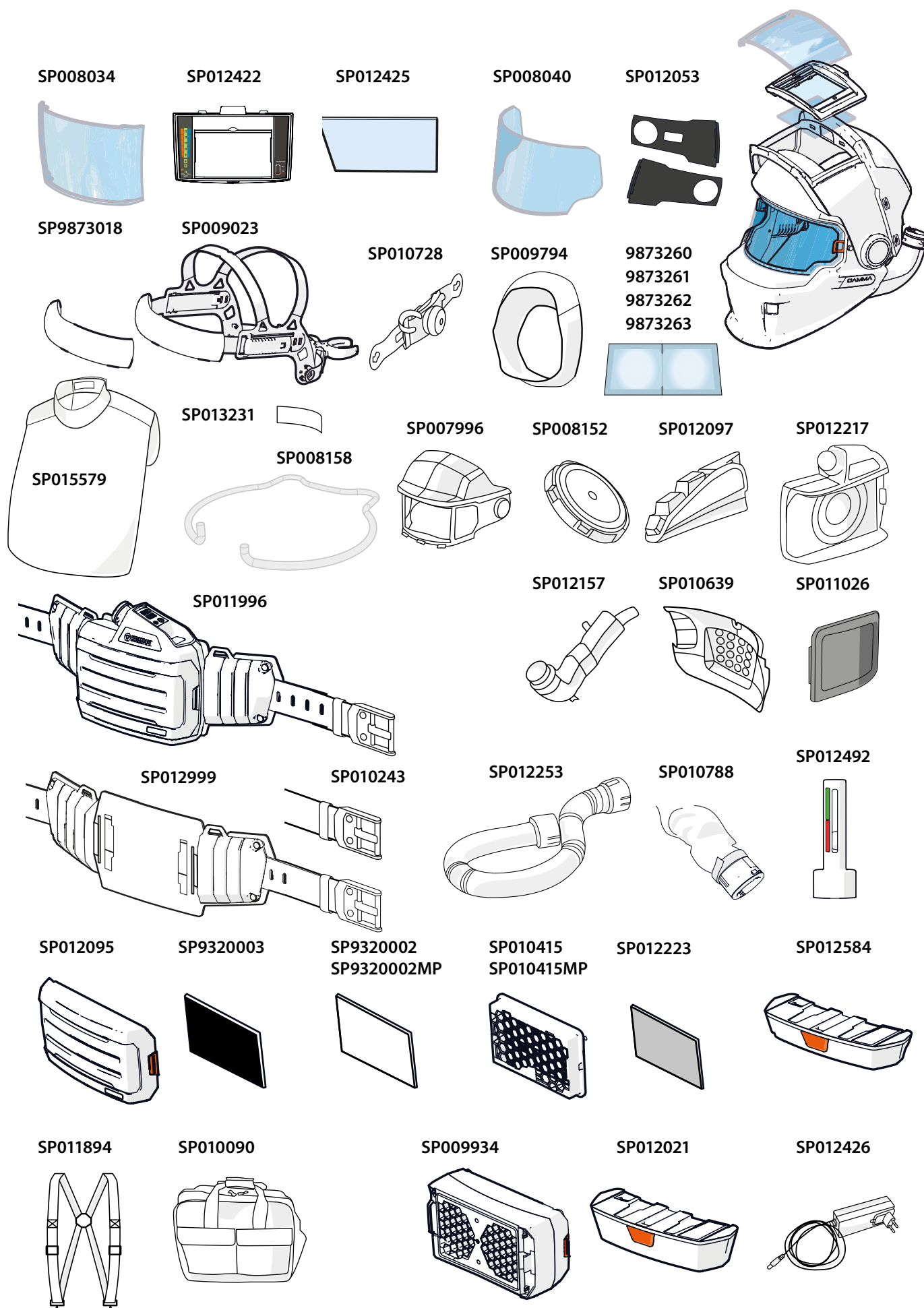
Gamma GTH3 SFA welding helmet, ADF and remote control excluded	SP013232
Protection plate, 5 pcs	SP008034
ADF welding filter SA 60 (shades 5, 8, 9-13, viewing area 102 x 60))	SP012422
Inner protection plate (106.5 x 65.5), 5 pcs	SP012425
Grinding visor, 5 pcs	SP008040
Side cover plate	SP012053
Headband	SP009023
Neck band	SP010728
Sweatband, 2 pcs	SP9873018
Comfort band padding, 5 pcs	SP013231
Powered air respirator PFU 210e	SP011996
Filter cover for PFU 210e	SP012095
Spark shield Kemppi, 1 pc	SP9320003
Pre-filter, 10 pcs	SP9320002
Pre-filter, 100 pcs	SP9320002MP
Particle filter, 2 pcs	SP015757
Particle filter, 5 pcs	SP010415
Particle filter, 20 pcs	SP010415MP
Gas filter LIFE+	SP009934
Odor filter, 5 pcs	SP012223
Air hose	SP012253
Hose protection cover	SP010788
Li-ion battery (SD), 3.2 Ah	SP012584
Li-ion battery (HD), 6.4 Ah	SP012021
Battery charger	SP012426
Flow meter	SP012492
Face seal	SP009794
Welding visor positioning spring, 10 pcs	SP008158

Magnifying lenses

Diopter 1.0 (51 x 108 mm)	9873260
Diopter 1.5 (51 x 108 mm)	9873261
Diopter 2.0 (51 x 108 mm)	9873262
Diopter 2.5 (51 x 108 mm)	9873263

Accessories

Remote control for SA 60, XA 74	SP012097
PFU 210e body	SP012217
Welding visor frame assembly	SP007996
Visor knob and adjuster set	SP008152
Air duct for PFA, SFA	SP012157
Air duct nozzle	SP010639
Work light solid cover plate, 3 pcs	SP011026
Belt assembly	SP012999
Leather belt	SP010243
Shoulder harness	SP011894
Kemppi tool bag	SP010090
Universal leather neck protector	SP015579



GAMMA GTH3 XFA + PFU 210e



Gamma GTH3 XFA + PFU 210e 9873130

Gamma GTH3 XFA welding helmet, auto-darkening welding filter XA 74, powered air respirator PFU 210e, air hose, pre-filter, particle filter, battery 6.4 Ah, battery charger, flow meter, Gamma leather belt.

Spare parts

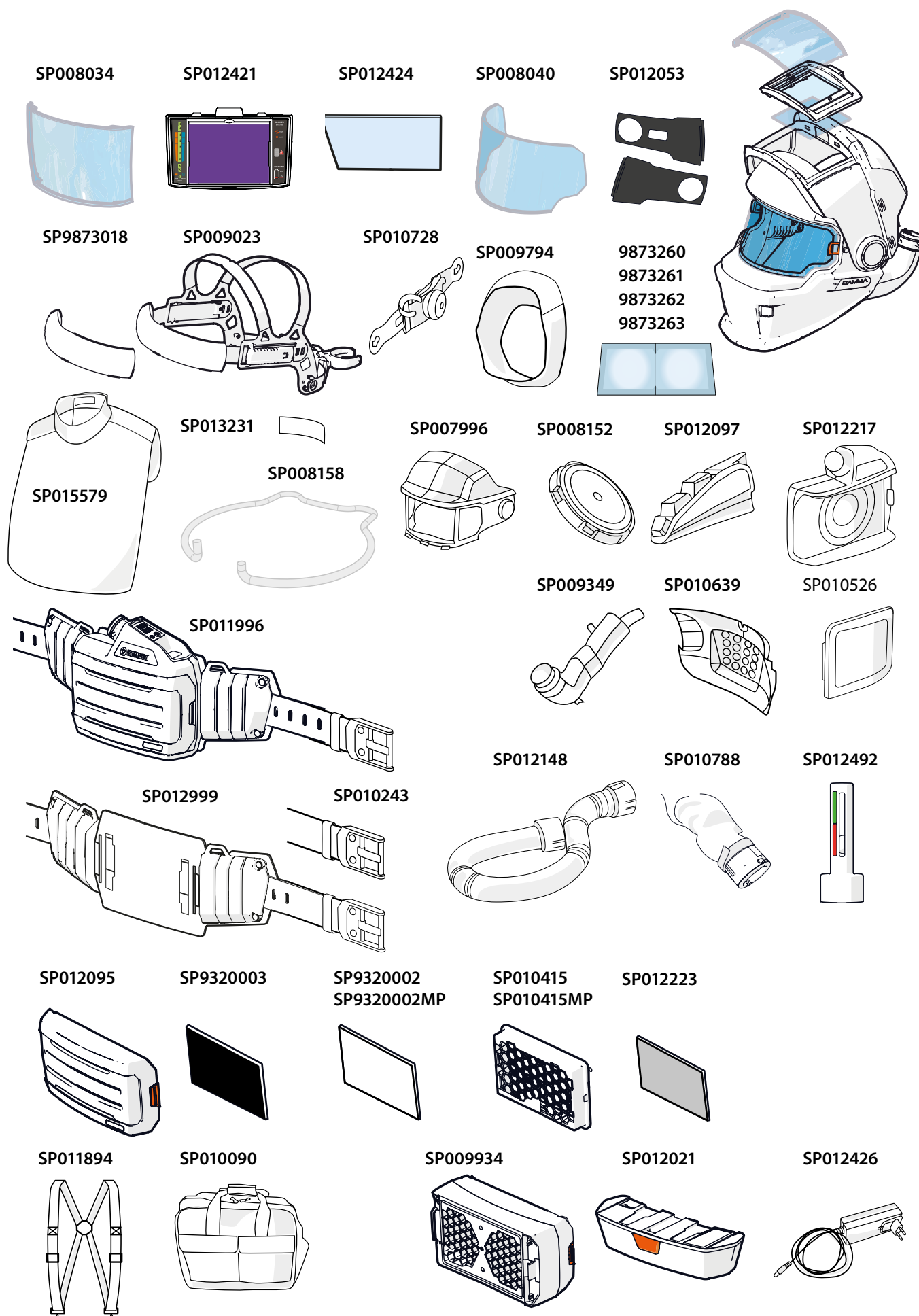
Gamma GTH3 XFA welding helmet, ADF and remote control excluded	SP013238
Protection plate, 5 pcs	SP008034
ADF welding filter XA 74 (shades 5,8,9-15, viewing area 102 x 74)	SP012421
Inner protection plate (106.5 x 75), 5 pcs	SP012424
Grinding visor, 5 pcs	SP008040
Side cover plate	SP012053
Headband	SP009023
Neck band	SP010728
Sweatband, 2 pcs	SP9873018
Comfort band padding, 5 pcs	SP013231
Powered air respirator PFU 210e	SP011996
Filter cover for PFU 210e	SP012095
Spark shield Kemppi, 1 pc	SP9320003
Pre-filter, 10 pcs	SP9320002
Pre-filter, 100 pcs	SP9320002MP
Particle filter, 2 pcs	SP015757
Particle filter, 5 pcs	SP010415
Particle filter, 20 pcs	SP010415MP
Gas filter LIFE+	SP009934
Odor filter, 5 pcs	SP012223
Air hose	SP012148
Hose protection cover	SP010788
Li-ion battery (HD), 6.4 Ah	SP012021
Battery charger	SP012426
Flow meter	SP012492
Face seal	SP009794
Welding visor positioning spring, 10 pcs	SP008158

Magnifying lenses

Diopter 1.0 (51 x 108 mm)	9873260
Diopter 1.5 (51 x 108 mm)	9873261
Diopter 2.0 (51 x 108 mm)	9873262
Diopter 2.5 (51 x 108 mm)	9873263

Accessories

Remote control for SA 60, XA 74	SP012097
PFU 210e body	SP012217
Welding visor frame assembly	SP007996
Visor knob and adjuster set	SP008152
Air duct XFA	SP009349
Air duct nozzle	SP010639
Work light lens cover plate, 3 pcs	SP010526
Belt assembly	SP012999
Gamma leather belt	SP010243
Shoulder harness	SP011894
Kemppi tool bag	SP010090
Universal leather neck protector	SP015579



GAMMA GTH3 PFA + RSA 230



Gamma GTH3 PFA + RSA 230 9873140

Gamma GTH3 PFA welding helmet, shade 11 passive welding filter, supplied air regulator RSA 230, air hose for RSA 230, flow meter, Gamma leather belt.

Spare parts

Gamma GTH3 PFA welding helmet, ADF and remote control excluded	SP012252
Protection plate, 5 pcs	SP008034
Passive welding filter (shade 11, size 86 x 109)	W011257
Grinding visor, 5 pcs	SP008040
Side cover plate	SP012053
Headband	SP009023
Neck band	SP010728
Sweatband, 2 pcs	SP9873018
Comfort band padding, 5 pcs	SP013231
Welding visor frame assembly	SP007996
Visor knob and adjuster set	SP008152
Supplied air regulator set RSA 230	SP011617
Supplied air regulator RSA 230	SP012857
Air duct for PFA, SFA	SP012157
Air duct nozzle	SP010639
Work light solid cover plate, 3 pcs	SP011026
Welding filter frame	SP009755
Air hose adapter for RSA 230	SP011227
Air hose	SP012253
Hose protection cover	SP010788
Silencer for RSA 230, 2 pcs	SP011735
Flow meter	SP012492
Face seal	SP009794
Welding visor positioning spring, 10 pcs	SP008158

Welding filters

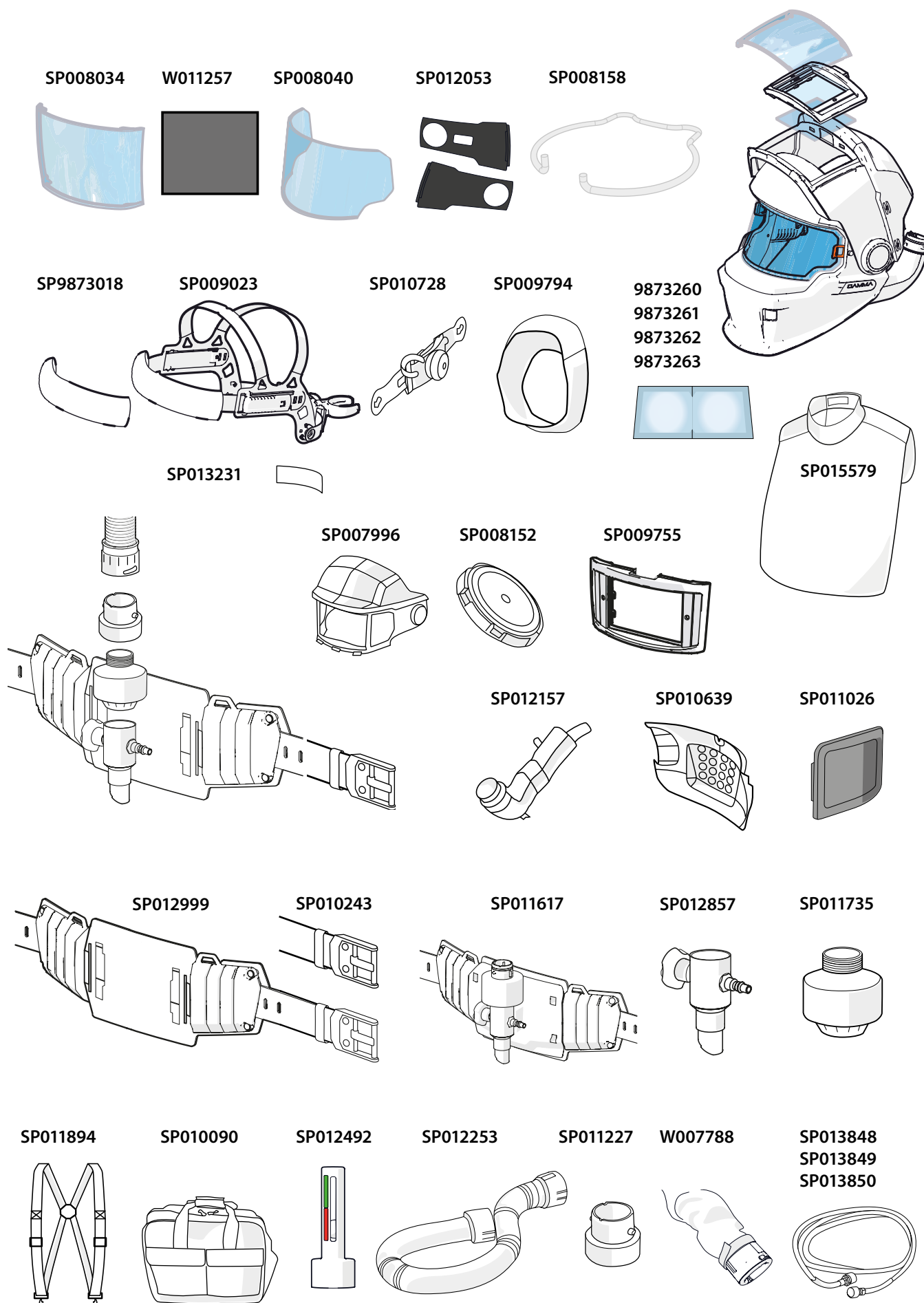
Shade 8	W011254
Shade 9	W011255
Shade 10	W011256
Shade 11	W011257
Shade 12	W011258
Shade 13	W011259

Magnifying lenses

Diopter 1.0 (51 x 108 mm)	9873260
Diopter 1.5 (51 x 108 mm)	9873261
Diopter 2.0 (51 x 108 mm)	9873262
Diopter 2.5 (51 x 108 mm)	9873263

Accessories

Belt assembly	SP012999
Gamma leather belt	SP010243
Shoulder harness	SP011894
Kemppi tool bag	SP010090
Pressure hose, 10 m	SP013848
Pressure hose, 20 m	SP013849
Pressure hose, 30 m	SP013850
Universal leather neck protector	SP015579



GAMMA GTH3 SFA + RSA 230



Gamma GTH3 SFA + RSA 230 9873150

Gamma GTH3 SFA welding helmet, auto-darkening welding filter SA 60, supplied air regulator RSA 230, air hose for RSA 230, flow meter, Gamma leather belt.

Spare parts

Gamma GTH3 SFA welding helmet, ADF and remote control excluded	SP013232
Protection plate, 5 pcs	SP008034
ADF welding filter SA 60 (shades 5, 8, 9-13, viewing area 102 x 60)	SP012422
Inner protection plate (106.5 x 65.5), 5 pcs	SP012425
Grinding visor, 5 pcs	SP008040
Side cover plate	SP012053
Headband	SP009023
Neck band	SP010728
Remote control for SA 60, XA 74	SP012097
Sweatband, 2 pcs	SP9873018
Comfort band padding, 5 pcs	SP013231
Welding visor frame assembly	SP007996
Visor knob and adjuster set	SP008152
Supplied air regulator set RSA 230	SP011617
Air duct for PFA, SFA	SP012157
Air duct nozzle	SP010639
Work light solid cover plate, 3 pcs	SP011026
Air hose adapter for RSA 230	SP011227
Air hose	SP012253
Silencer for RSA 230, 2 pcs	SP011735
Hose protection cover	SP010788
Flow meter	SP012492
Face seal	SP009794
Welding visor positioning spring, 10 pcs	SP008158

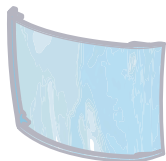
Magnifying lenses

Diopter 1.0 (51 x 108 mm)	9873260
Diopter 1.5 (51 x 108 mm)	9873261
Diopter 2.0 (51 x 108 mm)	9873262
Diopter 2.5 (51 x 108 mm)	9873263

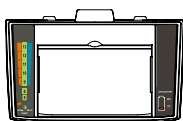
Accessories

Belt assembly	SP012999
Gamma leather belt	SP010243
Shoulder harness	SP011894
Kemppi tool bag	SP010090
Pressure hose, 10 m	SP013848
Pressure hose, 20 m	SP013849
Pressure hose, 30 m	SP013850
Universal leather neck protector	SP015579

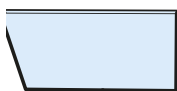
SP008034



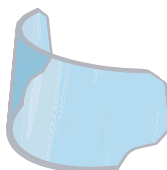
SP012422



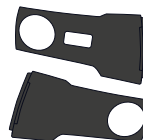
SP012425



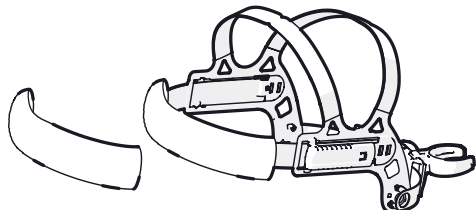
SP008040



SP012053

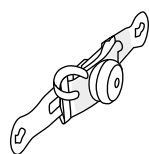


SP9873018

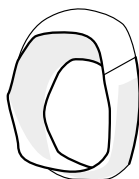


SP009023

SP010728



SP009794

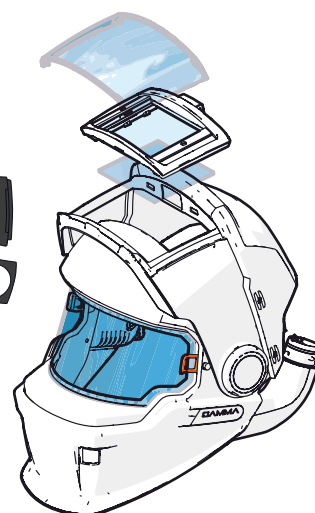


9873260

9873261

9873262

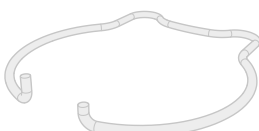
9873263



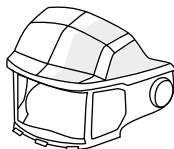
SP013231



SP008158



SP007996



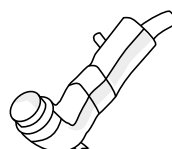
SP008152



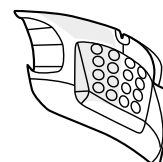
SP015579



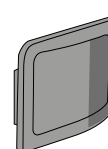
SP012157



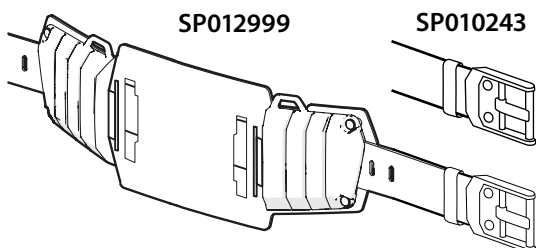
SP010639



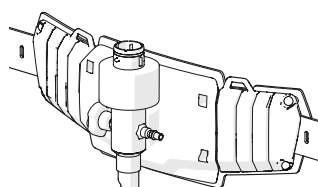
SP011026



SP012999

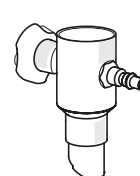


SP010243

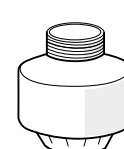


SP011617

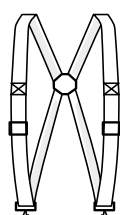
SP012857



SP011735



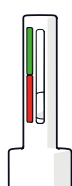
SP011894



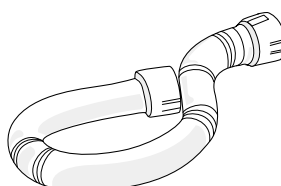
SP010090



SP012492



SP012253



SP011227



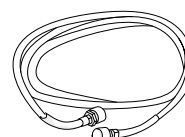
W007788



SP013848

SP013849

SP013850



SAFETY PRODUCTS WARRANTY

Kemppi warrants that its safety products will be free from defects in materials and workmanship. Auto-darkening filters (ADF), Powered Air Purifying Respirators (PAPR) and supplied air regulation valves are covered by 24 months warranty from the date of sale when supported by the original sales invoice.

PAPR batteries and chargers are covered for a period of 12 months from the date of sale. Kemppi will replace or repair faulty items presented for claim, providing that the product has been used in accordance with the operating instructions.

The warranty is invalid if an item(s) has been modified, damaged, opened or manufacturers markings, dates and or numbers tampered with or removed. Warranty terms and conditions may be subject to change.

For full Kemppi warranty terms and conditions, please visit www.kemppi.com



A black and white photograph of three welders in an industrial setting. The welder on the left is wearing a cap and work clothes, holding a welding helmet. The welder in the middle is wearing a full protective suit and helmet. The welder on the right is also in a full protective suit and helmet, with safety glasses. They are standing behind a large metal structure.

WWW.KEMPPI.COM

Kemppi is the pioneering company within the welding industry. It is our role to develop solutions that make you win business. Headquartered in Lahti, Finland, Kemppi employs over 800 welding industry experts in 17 countries and has a revenue of more than 150 MEUR. Our offering includes welding solutions - intelligent equipment, welding management software and expert services - for both demanding industrial applications and ready-to-weld needs. Local expertise is available via our global partner network covering over 60 countries.

