

# KemppiBeta 90 / 90A / 90X

Welding helmets



- KemppiBeta 90 standard glass lens model
- KemppiBeta 90A fixed shade EN3/11 electronic lens model
- KemppiBeta 90X variable shade and sensitivity EN4/9-13 electronic lens model
- Welding and grinding impact rated for eye and face protection to EN175B
- Two stage pivoting filter glass including 'peep' position
- Deep cut design ensures additional face and neck protection

## Better visibility, better protection

**KemppiBeta welding helmets provide excellent protection for welding and post weld cleaning and grinding processes.** Equipped with either a standard glass filter or electronic arc sensitive lens, in fixed or variable filter shade specification. All KemppiBeta models feature the same lightweight shell that includes grinding impact rating. So whichever model you choose, you can be sure to enjoy the same safety protection.

### Technical specifications

KemppiBeta		90	90A	90X
Filter lens dimensions	mm	90 x 110	90 x 110	90 x 110
Viewing window	mm	90 x 110	46.5 x 95	46.5 x 95
Shade range		EN 8-14	EN 3 / 11	EN 4 / 9 - 13
Sensitivity			Fixed	Adjustable
Switching time			0.0005	0.00015
Delay (dark → bright), (s)			0.2	0.2-0.8 adjustable

## Ordering information

### Welding helmet

KemppiBeta 90	9873045
KemppiBeta 90 A	9873046
KemppiBeta 90 X	9873047

### A. Protection plate

KemppiBeta 90, 90A, 90X	90 x 110 x 1.0	9873253
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### B. Filter glass

90 x 110 mm EN 8	9873241
90 x 110 mm EN 9	9873242
90 x 110 mm EN 10	9873243
90 x 110 mm EN 11	9873244
90 x 110 mm EN 12	9873245
90 x 110 mm EN 13	9873246
90 x 110 mm EN 14	9873247

### B. Auto-darkening welding filter lens

KemppiBeta 90 A, DIN 3/11	90 x 110	9873059
KemppiBeta 90 X, DIN 4/9-13	90 x 110	9873058

### C. Protection plate

KemppiBeta 90A, 90X	52 x 96 x 1.0	W007521
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### D. Safety plate

Clear safety plate	90 x 110 x 1.5	9873254
Colored safety plate Beta, polycarb. DIN 3	90 x 110 x 1.5	9873255

### Magnifying filter glass

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

### Glass support spring

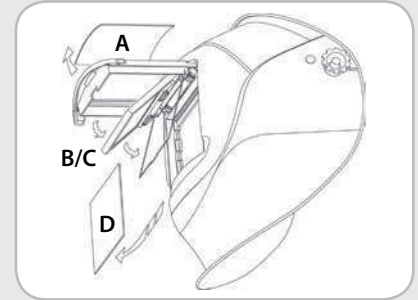
KemppiBeta 90, 90 A, 90 X	3149850
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### Headband

KemppiBeta	4306370
Alfa	9873012

### Sweatband

**9873018**



A - Protection plate

B - Filter glass, auto-darkening welding filter

C - Protection plate

D - Safety plate



KemppiBeta 90



KemppiBeta 90A/90X



Pivoting filter glass including 'peep' position. Particularly useful with KemppiBeta 90 standard model.

## Degrees of protection for lenses

Welding processes	Current strength, A											
	15	30	60	100	150	200	250	300	400	500		
		20	40	80	125	175	225	275	350	450		
MMA Welding			9	10	11		12		13		14	
MIG, steels					10	11		12		13		14
MIG, aluminium					10	11		12		13		14
TIG, all metals	9		10	11		12		13		14		
MAG (CO <sub>2</sub> welding)					10	11		12		13		14
Carbon arc gouging							10	11	12	13	14	15
Plasma cutting								11		12		13

# Beta 90 FreshAir

## Welding helmets



### BETA

- Protection for arc welding, plasma cutting, gouging and grinding operations
- Provides safe, clean and cool breathing air
- Positive pressure design makes breathing effortless
- Light-weight 900 g battery powered filter pack or airline supply
- Air flow reduces weld lens misting
- Three stage flip lens for welding, tacking and grinding operations
- Lightweight and comfortable
- Welding visor inc fixed shade ADF lens
- Welding and grinding rated to EN 175 B and AS/NZS 1337.1
- Together with FreshAir Flow control rated to EN 12941 TH2 and AS/NZS 1716
- Filter efficiency no less than 99.998 % of the airborne particles

### Respiratory protection for welding and grinding

**Beta 90 FreshAir is a lightweight head unit providing protection against welding, grinding and associated airborne fume and dust contamination.**

**Designed for welders working in all positions,** Beta 90 FreshAir provides improved protection for the eyes, face and lungs. The multi-point head harness ensures maximum adjustment and comfort, and the 3-stage flip lens makes welding, tacking and grinding operations effortless and safe. The shield design also incorporates a perimeter deflection rim, offering additional protection in overhead welding applications. Further protection and comfort is provided by the dual-skin hatch design, which reduces heat transfer to the welders face.

**Beta 90 FreshAir can be combined with either a battery powered FreshAir filter pack or locally supplied breathing air sources.** Cool and clean breathing air is channeled through a filter and directed over the welders face, and the adjustable fabric face seal creates a safe and easy breathing zone for all day welder comfort. Due to the 'positive pressure' principle, any harmful airborne welding fumes and dust contamination is eliminated, and this also prevents the welding lens from misting.

# Delta 90 / Delta+ 90 FreshAir

## Welding helmets



*The new Delta+ model features both, welding and grinding visors.*

### Respiratory protection for welding in hard hat work areas

Delta 90 and Delta+ 90 FreshAir are robust units providing all round head protection for welding and fabrication personnel working in extreme conditions, such as shipbuilding, heavy fabrication, mining and construction sites, where designated hard hat protection is advisory or essential.

Delta 90 FreshAir integrates head, face and respiratory protection in one high strength unit, providing welder's maximum protection and comfort. In addition, high quality hearing protection can also be integrated as an optional extra.

Delta 90 and Delta+ 90 FreshAir units can be combined with either a rechargeable, battery powered FreshAir filter pack or locally supplied breathing air sources. Cool, clean, filtered breathing air is channeled over the welders face, eliminating harmful airborne welding fume and dust contamination. The adjustable face seal, combined with the 'positive air pressure' design, creates a safe and easy breathing zone for all day welder comfort and helps to prevent the lens from misting.

Delta+ 90 FreshAir features additional protection and safety, including a separately hinged welding visor that can be raised independently from a large and clear impact grade face shield, offering exceptional vision of the work area for pre and post welding and fabrication processes, whilst always providing its user a safe and clean air breathing environment. Also, the welding visor can be easily removed for specific personnel and functions where welding protection is not required, but high quality respiratory, head, face and hearing protection are essential.

- Welding and hard hat protection
- Provides safe, clean and cool breathing air
- Positive pressure design makes breathing effortless
- FreshAir prevents welding lens misting
- Choose battery powered filter pack or airline supply
- Mounting for optional high quality ear defenders
- Choose from standard or automatic welding lens options
- Meets hard hat standard EN397, and welding certification EN175. With Delta+ additionally EN175B and SAI XXX
- Separate hinged welding visor can be fitted with either standard or ADF welding lens (Delta+)
- Impact rated full face clear visor for exceptional protection and work area visibility (Delta+)

# Beta 90 FreshAir/ Delta 90 / 90+ FreshAir

**FreshAir Flow control with Alarm:** Battery powered / Filter pack / Blower unit / Comfort belt / Connection Hose / Mains battery charger



## Main filter cartridge, pre-filter and odour filter

- **Main particle filter PSL R**, provides protection against all types of particulate contaminants such as dusts, non-toxic and toxic fumes, solid and liquid aerosols, bacteria and viruses. The filter separates no less than 99.998 % of the airborne particles.
- **Certification:** EN 12941, type PSL R
- **Temperature range of storage and service:** 0...+ 40 °C
- **Dimensions:** (diameter / height): 132 / 55 mm
- **Filter weight:** 100 g
- **Optional pre-filter** prolongs the main filter life, preventing premature clogging by larger particles. Adhesive tapes placed on both sides of the pre-filter make fitting fast and easy. Made from 100 % PES and suitable for all filtration.
- **Odour filter** removes unpleasant odours and thus provides additional user comfort.

*FreshAir Flow control with alarm incorporates an intelligent warning system, including visual and acoustic signals if the battery is drained, the filter is clogged or the airflow is insufficient.*

## Efficient, intelligent, lightweight and compact

**The FreshAir Flow control with alarm** is a blower and filter unit designed to provide protection against particulate contaminant associated with welding and fabrication operations, such as dust, non-toxic and toxic fumes, solid and liquid aerosols, bacteria and viruses. Despite its compact shape and low weight, the unit is designed for long-term operation in welding environments.

**The rechargeable battery powered system provides total freedom of movement in the workplace**, when compared to the static, airline fed option. Reliable respiratory protection is based on the overpressure created in the breathing zone of the head top unit. The positive pressure and fresh, filtered air eliminates difficulty in breathing, prevents fogging of the welding lens and improves user comfort throughout the working day.

**The Flow control system automatically maintains the chosen air-flow rate** and the intelligent warning system provides both visual and acoustic signals if the battery is drained, the filter is clogged or the airflow is insufficient. The rechargeable NiMH battery ensures operations for up to 10 hours. The airflow is manually adjustable from 140 l/min up to 210 l/min, and the advanced flow control system allows the operator to manage airflow and battery life.

## Welding lens choice

Kemppi FreshAir units are fitted as standard with either glass or auto darkening welding filter lenses (ADF), depending on the head-top model and design. Head-top models with flip-up lens set or separate hinged welding visors, are fitted as standard with glass welding filter lenses (BETA and DELTA+ models), however fixed welding visor models are fitted as standard with a fixed shade 11 automatic filter lens (DELTA model). You can upgrade any model with Kemppi's top-line automatic darkening filter pack offering variable EN 9-13 shade adjustment, plus sensitivity and grinding mode settings. (ADF 710S - 9873058.)

## FreshAir supply choice

Choose either the battery powered PAPR filter pack unit (Powered Air Purification Respirator), which provides complete independence of movement in workshop or site, or the airline fed solution, which uses your local breathing air supply channeled through a FreshAir pre-filter to remove contaminants and odours before supplying the headtop via a FreshAir regulator valve.

## Respiratory protection factor

The protection factor provided from Beta 90 FreshAir, Delta 90 FreshAir and Delta+ 90 FreshAir positive pressure units meets the European TH2/A2 standard levels under EN 12941/A2 and EN 14594:2005. The units provide respiratory protection against airborne contamination not exceeding 250 mg/m<sup>3</sup>, providing that 250 mg/m<sup>3</sup> is below the IDLH level (Immediate Danger to Life and health). The units are not designated for use in environments where the oxygen level is below 17 % by volume, or as respiratory devices for escape purposes.

## FreshAir PRESSURE flow control system

**FreshAir PRESSURE flow control system** provides an ideal solution for workplaces equipped with breathing quality, compressed air supplies and distribution systems, or a mobile compressor. In addition, the belt mounted FreshAir Flow Control valve is equipped with a pressure gauge for easy workplace airflow monitoring of the supply.

**FreshAir PRESSURE Flow control provides a high level of protection from a variety of airborne contaminants.** The adjustment valve on the belt unit enables the user to regulate the air flow between 170 and 400 l/min and therefore adapt the air flow to individual needs, providing comfortable and reliable respiratory protection in accordance with EN 14594.

**Beta 90 FreshAir, Delta 90 FreshAir and Delta+ 90 FreshAir head tops** can be connected in combination with the FreshAir PRESSURE Flow control system. Ideal for long work periods and more static work place locations where mobility is not a key requirement. FreshAir PRESSURE Flow control system benefits from lower initial purchase and operating costs.

**FreshAir PRESSURE Conditioner** is an in-line filter station designed for improving the quality of supplied air. The strong metal pressure container incorporates a high capacity combined filter. The FreshAir PRESSURE conditioner removes particles and unpleasant odours from airline supply systems, substantially improving the quality of the breathing air. The quick couplings allow single-handed assembly of the device and the outlet connection is prepared for two operators. A standard pressure gauge measures the outlet pressure.



*FreshAir flow control filter pack automatically regulates the fan motor speed to compensate filter clogging and battery state.*



*The comfort belt mounts the battery powered FreshAir filter pack and also provides additional back support throughout the working day.*



*FreshAir pressure flow control valve regulates supply air flow and includes an air supply monitoring gauge*



*The rechargeable NiMH 4.8/4.5Ah battery lasts up to 10 hrs of operation. Purchasing a second battery ensures you always have a back-up power supply ready charged.*



*Kemppi FreshAir welding respirators provide an economic solution for high level personal protection.*



*Optical magnifying lenses can also be fitted for improved visibility and close, low current work.*



*Kemppi auto darkening welding filter ADF 710S (9873058) can be fitted to Beta 90 FreshAir, Delta 90 FreshAir and Delta+ 90 FreshAir. Kemppi auto darkening welding filter ADF 200F fixed shade EN11 (9873059) is fitted to Beta 90 and Delta 90 FreshAir as standard.*

# Beta 90 FreshAir/ Delta 90 / 90+ FreshAir

## Technical specifications

### FreshAir Flow Control

Airflow	140 – 210 l/min at 8 adjustable flow rates
Weight of the blower unit incl. filter and battery	900 g
Noise level	55 – 61 dB
NiMh battery lifetime	500 – 700 charging cycles
One charging cycle	10 – 14 hours
Belt size	80 – 100 cm
Recommended temperature range	10 – 40 °C
Recommended humidity range	20 – 80 % Rh
Certification	EN 12 941 TH2

### FreshAir Pressure Flow Control

Minimum air flow	170 l/min-1
Maximum air flow	> 400 l/min-1
Weight of unit	250 g
Inlet connection	
Outlet connection	MINI DN 5
Noise level	61 dB
Belt size	60 – 150 cm
Supply pressure range	300 – 1000 kPa
Recommended temperature range	10 – 60 °C
Recommended air humidity range	20 – 80 % Rh
Certification	Class 2A

### FreshAir Pressure Conditioner

Maximum air flow	500 l/min
Weight without filter	6300 g
Weight including filter	6800 g
Inlet connection	Compatible with RECTUS series 25, 26 a CEYN320
Outlet connection	Compatible with RECTUS series 25, 26 a CEYN320
Recommended temperature range	10 – 60 °C
Recommended air humidity range	20 – 80 % Rh
Certification	If the requirements of TP-610050-1 are met, it complies with EN 12 021

# Beta 90 FreshAir/ Delta 90 / 90+ FreshAir

## Ordering information

<b>Beta 90 FreshAir with Flow Control pack</b>	<b>P1700</b>
BETA 90 FreshAir	9873065
FreshAir Flow Control pack	W007513
<b>Delta 90 FreshAir with Flow Control pack</b>	<b>P1701</b>
Delta 90 FreshAir	9873066
FreshAir Flow Control pack	W007513
<b>Beta 90 FreshAir with Pressure Flow Control pack</b>	<b>P1702</b>
BETA 90 FreshAir	9873065
FreshAir Pressure Flow Control pack	W007515
<b>Delta 90 FreshAir with Pressure Flow Control pack</b>	<b>P1703</b>
Delta 90 FreshAir	9873066
FreshAir Pressure Flow Control pack	W007515
<b>Delta+ 90 FreshAir with Flow Control pack</b>	<b>P1704</b>
Delta+ 90 FreshAir	9873068
FreshAir Flow Control pack	W007513
<b>Delta+ 90 FreshAir with Pressure Flow Control pack</b>	<b>P1705</b>
Delta+ 90 FreshAir	9873068
FreshAir Pressure Flow Control pack	W007515
<b>Delta+ 90 FreshAir helmet (with welding and grinding visors)</b>	<b>9873068</b>
Face seal	x 1 W007516
Ear muffs	x 1 W007517
Fixing screws	x 2 W007518
Headband	x 1 W007519
Protection plate, outside	x 10 W007520
Welding visor	x 1 W009234
Grinding visor	x 1 W009233
Head cover	x 1 W007827
Protective neck cover	x 1 W007828
Flexi-hose protection cover	x 1 W007788

<b>Beta 90 FreshAir helmet</b>	<b>9873065</b>
Protection plate	x 1 9873253
Hatch spring	x 2 4300700
Safety plate (90x110x1.5)	x 1 9873254
Filter retaining spring	x 1 3149850
Face seal	x 1 W007523
Hatch set Beta	4301050
Headband	4306370
Sweat band	9873018
Head cover	W007827
Protective neck cover	W007828
Flexi-hose protection cover	W007788

<b>FreshAir Flow Control pack</b>	<b>W007513</b>
FreshAir Flow Control with alarm	W007512
FreshAir Battery charger	Euro plug W007485
FreshAir Flow Control Flexi hose	W007487
FreshAir Flow Control Flow indicator	W007488
Comfort belt	W007489

<b>Accessories</b>	
Basic filter, 2 pcs, standard	W007490
Flow Control pre-filter	10 pcs W007492
Basic odour prefilter	10 pcs W007494
Heavy duty comfort belt	W007789
Flow Control Sealing ring	for filter W007491
Battery pack, NIMH 4.8 V/4.5 AH	W007493
Flow Control Filter cover	W007495

<b>Delta 90 FreshAir helmet</b>	<b>9873066</b>
Face seal	x 1 W007516
Ear muffs	x 1 W007517
Fixing screws	x 2 W007518
Headband	x 1 W007519
Protection plate, outside	x 10 W007520
Welding visor	W007522
Head cover	W007827
Protective neck cover	W007828
Flexi-hose protection cover	W007788
Safety plate (90x110x1.5)	x 1 9873254

<b>FreshAir Pressure Flow Control pack</b>	<b>W007515</b>
FreshAir Pressure Flow Control set (valve and belt)	W007496
FreshAir Pressure Flow Flexi hose	W007501

<b>Accessories</b>	
Pressure Noise silencer	W007498
Pressure Control valve cap	W007499
Pressure Air fitting	W007500
Pressure Flow control belt	W007502
Pressure Flow indicator	RD40x1/7" W007503
Pressure CONDITIONER UNIT	W007504
Pressure CONDITIONER FILTER	W007505
Pressure FLOW SPIRAL HOSE 10m	W007506

<b>Beta/Delta welding lens options</b>	
<b>Glass welding filter lens</b>	
DIN 8 90x110	9873241
DIN 9 90x110	9873242
DIN 11 90x110	9873244
DIN 12 90x110	9873245
DIN 13 90x110	9873246
DIN 14 90x110	9873247

<b>Automatic welding lens</b>	
ADF 9-13 welding filter pack	9873058
Inside protection plate	5 pcs W007521
51x107 mm	



Scan or click to see the product video.