

PPE RESPIRATORY EQUIPMENT



PAPR REVIEW

Why PAPRs?

- Welding fume consists of many substances that can harm the lungs or cause disease.
 - Powered Air Purifying Respirators offer a high level of filtration along with convenience and portability.
 - **How it works:**
 1. Air is drawn into the PAPR by a fan.
 2. Air passes through a 2-stage filter that removes particulates down to 1 micron in size.
 3. The fan forces the purified air through a tube, and down the front, inside part of a welding helmet.
 4. The helmet itself is equipped with a shroud to keep the positive airflow from the PAPR over the face of the user, ensuring clean air.
 - “N95” style and other non-sealed, passive respirators are not as effective, nor preferred by welders.



A PAPR SYSTEM CAN REDUCE AIRBORNE PARTICULATES (I.E. FUME SMOKE) BY UP TO 99%+

GAS FILTRATION

Why GAS filtration?

- In addition to visibly-seen particulates, some welding activities produce hazardous gases, most of which are **invisible and can cause serious harm to the welder.**

When are these gases present?

- Includes, but not limited to:
 - Stainless steel
 - Aluminum
 - Some painted or other treated surfaces
 - Other environmental conditions (other than the welding activity)
- **The use of a gas filter should be determined by a safety professional**
 - Gas composition and concentration should be measured by an industrial hygienist or other safety pro.
 - **ESAB DOES NOT HAVE THE EXPERTISE OR TOOLS TO DETERMINE EXACT REQUIREMENTS RELATED TO RESPIRATORY PROTECTION**
 - ESAB manufactures and sells EN12941-certified respiratory products, but we are NOT safety engineers.



ESAB A1B1E1 TH3P COMBINATION FILTER

How it works:

- This is a multi-stage filter that includes:
 - TH3P particulate filter
 - Particulate prefilter (provided with the PAPR system)
 - Spark Arrestor (provided with the PAPR system)
 - Activated carbon gas filtration media
- **IMPORTANT!** There is no electronic or PAPR-provided notification to the user as to WHEN the gas filtration capability has expired!
 - A safety professional must perform an environmental analysis and advise the user of filter exchange interval.
 - If a safety professional is not available, it is common and accepted practice for a user to replace the filter when a gas smell or taste is present



ESAB EPR-X1.1 gas filtration system

ADVICE: IF IT IS NOT NATURALLY-OCCURRING IN THE ATMOSPHERE, THEN IT SHOULD NOT BE IN YOUR LUNGS!

A1B1E1 TH3P FILTER

- Our filter uses combined particulate filtration AND gas filtration for specific gases
- Protects from common gases emitted during certain types of welding activities and materials
 - Examples:
 - Stainless steel
 - Galvanized (zinc-coated) steel
 - Painted or treated surfaces
- Gas protection level is determined as noted in Chart 2

Certified to: EN12941:1998/A2:2008

Marking: TH3A1B1E1P R SL





Identifying Letter	Colour	Protection against
A	 BROWN	Organic gases and vapours, solvents with a boiling point above 65°C
B	 GREY	Inorganic gases and vapours
E	 YELLOW	Sulphur dioxide and hydrogen chloride
P	 WHITE	Particles (solid or liquid)

Chart 1: Gas and particle protection letter and color definitions

Filter type	Gas type	Test gas	Gas Concentration	Minimum breakthrough time
A1	Organic Vapours	Cyclohexane C6H12	500ppm	70 minutes
B1	Inorganic Vapours	Chlorine Cl2 Hydrogen sulphide H2S Hydrogen cyanide HCN	500ppm	20 minutes 40 minutes 25 minutes
E1	Sulphur Dioxide	Sulphur dioxide SO2	500ppm	20 minutes

Chart 2: Gas protection numeral definitions

Filter type	Protection against	Particulate size	Filtration %
FFP3	Particles, fine dust, fibres, aqueous mists, oil mists	<2µ	99%

Chart 3: EPR-X1.1 Particulate filtration rating

Identifying letter, number and color will be located on the top of the filter (identified by red box)



EPR-X1.1 PAPR

GIN 0700500920 Includes the following

Desc	GIN	Quantity
EPR-X1.1 PAPR Blower Unit	0700500921	1
EPR-X1.1 PAPR Prefilter	0700500902	5
EPR-X1.1 PAPR P3 Filter	0700500903	2
EPR-X1.1 PAPR Battery	0700500904	1
EPR-X1.1 PAPR Filter Cover	0700500905	1
EPR-X1.1 PAPR Spark Arrestor	0700500906	2
ESAB Breathing Tube for EPR-X1.1 PAPR	0700500907	1
Anti-fire Cloth for EPR -X1.1 Breathing Tube	0700500908	1
Waist Belt and Shoulder Harness	0700500909	1
Universal Battery Charger	0700500910	1
EPR-X1 Safety manual		1
PAPR air flow test device		1
Optional Parts (available separately)		
EPR-X1.1 Carbon Prefilter	0700500913	1
EPR-X1.1 A1B1E1 TH3P Combination filter	0700500914	1



Complete kit for immediate installation to any ESAB Air-equipped helmet

EPR-X1.1 PAPR UNIT



Complete PAPR kit comes with: blower unit; long-life LiPo battery; 5 prefilters; 2 main filters; premium harness with waist extension; charger; ultra-flex hose; air testing device; replacement spark arrestor; safety manual (full user manual available online).



Premium waist harness that securely holds the PAPR close to the user's body.



Simple push-button interface for power on/off, three selectable speeds and audible / visible / vibratory alarms for clogged filter and low battery.



Ultra-flexible and expandable hose that comfortably fits all users.



A1B1E1 TH3P combination filter
available separately



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