

# TECHNICAL SPECIFICATION



## Powercap® Infinity® Respirator

Black / CEA646-001-100



### DESCRIPTION

The PowerCap® Infinity® PAPR – a fully integrated TH3 powered air respirator offering four of the highest levels of protection in one intuitive head-mounted unit. Offering 4-in-1 above the neck protection, PowerCap® Infinity® is the perfect choice for many industries where dust poses a danger to health. The unit represents the very latest in Powered Air Purifying Respiratory technology, combining decades of innovation from JSP in the fields of respiratory, head, eye and face protection.

### OPTIONS

**Black (CEA646-001-100)**

Blue (CEA646-000-500)

White (CEA646-000-100)

### SAFETY STANDARDS

EN 12941 • EN 397 • EN 166 • ANSI/ISEA Z89.1 Type I



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## SPECIFICATIONS

Impact Resistance  
**50 Joules**

Resistance to Molten Metals and Hot Solids Helmets (optional)  
**Yes - Helmet Only**

Minimum Temperature  
**+5°C**

Recyclable  
**Shell**

Depth Adjustment  
**3D Harness**

Ventilation  
**No**

JSPCheck  
**Yes**

Classification  
**TH3**

Exhalation Valve  
**Twin Exhalation Valve To Reduce CO2 Build-Up**

Maximum Total Inward Leakage (TIL)  
**0.2% When Fitted To PowerCap® Infinity® Respirator**

UK Assigned Protection Factor  
**40**

Face Seal Type  
**Hypoallergenic Material**

Metal Free  
**No**

Filter Material  
**Pleated Media**

RADIATION PROTECTION BREAKDOWN filtering effect  
Scale Number  
**2**

Manufacturer's Trademark  
**JSP Dagger**

Medium Energy Impact resists a 6 mm, 0.86g ball @ 120 m/s Maximum protection for goggles.  
**B**

BSI Kitemark  
**Yes**

Noise Level  
**61.1dB**

Lateral Deformation  
**Yes**

Maximum Temperature  
**+50°C**

ABS Shell  
**Yes**

Textile  
**Harness**

Slip Ratchet  
**Wheel**

Reflective Option  
**Fitted**

Optional 4 point chinstrap (EN397 Compliant)  
**Optional**

Usage  
**P R SL (A Reusable Solid & Liquid Particulate Aerosol Filter)**

Minimum Filtration Efficiency  
**99.8%**

Nominal Protection Factor  
**500**

Mask Design  
**A Turbo Hood Powered Air Purifying Respirator (Loose Fitting)**

Latex free  
**Yes**

Filter Shelf Life  
**5 Years**

Battery Type  
**Rechargeable Lithium-ion 3.6v, 5.2Ah, 18.72Wh. Expected Life Of 500 Cycles When Charged, Stored and Used In Accordance With User Instructions**

LIGHT TRANSMISSION BREAKDOWN Lens Shade number  
**1.2**

Optical Class (1 – Class 1 – High quality for regular use. 2 – Class 2 – Medium quality for occasional use. 3 – Class 3 – Low quality for exceptional use)  
**1**

Resistance to Molten Metals and Hot Solids Helmets (optional)  
**9**

Product Weight  
**1042g**



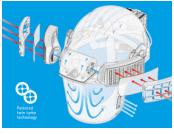
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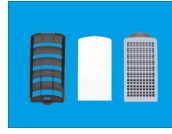
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### Powerful Twin Turbo Performance

The patented Twin Turbo Technology controls the airflow through the headtop to maximise user comfort and optimise energy efficiency. Real time diagnostics ensure that the twin impeller motor unit delivers the optimum level of airflow depending on the wearer's demands and regulates the intake and internal pressure delivering a minimum of 160 litres a minute of filtered clean air.



### TH3 Performance

PowerCap® Infinity® offers respiratory protection to TH3, with a Nominal Protection Factor of 500 (UK APF 40). TH3 is the highest possible rating in the EN12941:1998 + A2:2008 standard.



### No need to FACE FIT test

PowerCap® Infinity® removes the need for fit testing, ensuring that a high volume of clean air is delivered to the breathing zone giving a high level of protection.



### Smart PPE

Real time diagnostics monitor the system and the wearer twice per second, giving the user accurate, dynamic feedback. Periods of high respiratory demand are monitored and catered for by constantly maintaining a positive pressure inside the respirator. Feedback is given on battery and filter condition via the heads up display and audible notifications.



### Head Protection

PowerCap® Infinity® is built around the super strong ABS shell of the EVO®5 Olympus® industrial safety helmet. Fitted with the Revolution® Flex wheel ratchet harness, the helmet is designed to reduce pressure for the perfect fit and all-day comfort.



### Panaromic Impact Visor

The optical class 1 visor conforms to EN166.B offering impact protection at speeds of up to 270 mph (tested using a 6mm steel ball bearing). The visor has a replaceable peel-off visor protector to prolong its life.



### High Efficiency Filters

The high capacity HEPA filters coupled with the aerodynamically optimised pre-filter covers ensure that PowerCap® Infinity® delivers 160 litres per minute of clean air to the user with maximum battery efficiency. Filters can be effortlessly replaced using an intuitive quick-change bayonet system.



### Ear Defenders

The PowerCap® Infinity® has been developed to seamlessly integrate with the optional Sonis® helmet mounted ear defenders. Designed by the JSP R&D team and working with a leading UK acoustic engineering research facility, the Sonis® helmet mounted range peaks at an unbeaten SNR 36dB. The helmet adaptor and the cushion surface area work together to provide optimum cushion pressure and comfort.



### Tested to the MAX

Hundreds of hours of human treadmill tests were conducted in a purpose built salt dust challenge chamber to optimise mass, balance and sealing elements. Extensive user trials were conducted, putting the PowerCap® Infinity® to the test in a variety of harsh conditions.



### Perfect Fit to Combat Dust

Dust in the workplace is a significant issue. The latest HSE figures (2017) show that 18,000 new cases of work-related respiratory disease were diagnosed. A significant proportion of these were the result of exposure to silica. While the problem is widely acknowledged and use of respiratory equipment is high, it is often not suitable for the person or the environment it is being used in.



### Minimal Maintenance

PowerCap® Infinity® has been developed as a modular system, making it easy to disassemble and reassemble for ease of cleaning and maintenance. To ensure the optimal performance of PowerCap® Infinity® it is important that maintenance is carried out on a regular basis. No specialist tools required.

APPLICATIONS

General guidance only and should not be considered a substitute for a full risk assessment

Aerospace

Agricultural



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