

# TECHNICAL DATASHEET



WWW.clean-air.cz

## CleanAIR® Chemical 2F plus

Powered air purifying respirator



### Description

The battery-powered air purifying respirator (PAPR), the breathing protective device for increasing comfort and safety when combined with approved headtops.

### Application

In default Chemical 2F Plus provides protection against particulates, but is also capable to provide protection against wide range of contaminants when used with combined filters.

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### Technical specification

|                          |       |                                                                                                                                                 |                  |                           |
|--------------------------|-------|-------------------------------------------------------------------------------------------------------------------------------------------------|------------------|---------------------------|
| Product code             |       | 510000FCA                                                                                                                                       |                  |                           |
| Flow rate                |       | Airflow [lpm]                                                                                                                                   | Mode             | Filter category           |
|                          |       | 80 / 120 / 160                                                                                                                                  | Mask<br>EN 12942 | Particle                  |
|                          |       | 80 / 120 / 160                                                                                                                                  |                  | Light combined (class 1)  |
|                          |       | 80 / 120 / 160                                                                                                                                  |                  | Heavy combined (class 2)  |
|                          |       | 80 / 120 / 160                                                                                                                                  |                  | Heavy combined (class 3)  |
|                          |       | 160 / 185 / 210 / 235                                                                                                                           | Hood<br>EN 12941 | Particle                  |
|                          |       | 160 / 185 / 210                                                                                                                                 |                  | Light combined (class 1)  |
|                          |       | 160                                                                                                                                             |                  | Heavy combined (class 2)  |
|                          |       | 160                                                                                                                                             |                  | Heavy combined (class 3)  |
| Battery                  |       | Standard battery                                                                                                                                |                  | Heavy Duty battery        |
| Voltage                  |       | 14,4 V                                                                                                                                          |                  | 14,4 V                    |
| Capacity                 |       | 3,2 Ah                                                                                                                                          |                  | 4,9 Ah                    |
| Charging time            |       | < 3 hours                                                                                                                                       |                  | < 6 hours                 |
| Operation time*          |       | < 10 hour*                                                                                                                                      |                  | < 20 hours*               |
| Battery lifespan         |       | up to 500 charging cycles                                                                                                                       |                  | up to 500 charging cycles |
| Battery charger          |       | Microprocessor controlled, fully automatic<br>Input: 100 - 240 V (50/60 Hz)<br>Output: 18 V (max. 1 500 mA)<br>Available plugs: EUR, UK and AUS |                  |                           |
| Weight                   |       | 1 000 g (incl. standard battery, excl. filters)                                                                                                 |                  |                           |
| Dimensions               |       | 235 mm / 126 mm / 65 mm (with standard battery)                                                                                                 |                  |                           |
| Noisiness                |       | < 70 dB                                                                                                                                         |                  |                           |
| Materials                |       | Unit: high performance polyamide<br>Comfort Belt/Harness: textile part - polyester/nylon/rubber foam<br>plastic part - polyamide                |                  |                           |
| Motor                    |       | Ball-bearing brushless motor                                                                                                                    |                  |                           |
| Input / Output (threads) |       | Filter thread - RD40x1/7" - 2x<br>Airflow output thread - CA40x1/7" - 1x                                                                        |                  |                           |
| Belt - waist size:       |       | Comfort padded belt - up to 1 500 mm                                                                                                            |                  |                           |
| Standard                 |       | EN 12941                                                                                                                                        |                  | EN 12942                  |
| Protection class / NPF** |       | TH3 / 500                                                                                                                                       |                  | TM3 / 2000                |
| Ingress protection       | IP64: | When switched ON (without any further requirements)                                                                                             |                  |                           |
|                          | IP65: | When switched ON (set of spark arresters and pre-filter holders - 50 01 12)                                                                     |                  |                           |
|                          | IP68: | When switched OFF (with plugged inputs and output - 51 00 46)                                                                                   |                  |                           |
| Display                  |       | TFT display (262k colours, 160x160 px)<br>(showing actual working mode, airflow, filter condition and battery status)                           |                  |                           |
| Storage conditions       |       | – 10°C to + 55°C, humidity 20 - 95 % Rh                                                                                                         |                  |                           |
| Operating conditions     |       | 0°C to + 60°C, humidity 20 - 95 % Rh                                                                                                            |                  |                           |

\* with new P3 filters and fully charged battery / \*\* depends on used headtop

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## **CleanAIR® Chemical 2F Plus**

Powered air purifying respirator



### *Technical features*

**Warning system** - visual and audible warning for low airflow and low battery charge..

**Flow control system** - maintains level of airflow constant regardless filter clogging or battery charge.

**Automatic closing system** - reduces the risk of unwanted contamination of the unit while the filters are being changed

**Allows immersion disinfection** - with input and output threads plugs on (Sodium hypochloride or Persteril).

**Built-in barometric sensor** – automatic airflow compensation depending on altitude. Works from -500m up to 4500m.

**LED display** - LED display visualises airflow, filter clogging and battery charge.

### *Product sets / variations*

|              |                                                                                                                                |
|--------------|--------------------------------------------------------------------------------------------------------------------------------|
| 51 00 00FCA* | Powered air purifying respirator CA Chemical 2F, standard battery, charger (EURO - plug), comfort padded belt, flow indicator  |
| 51 00 00FDA* | Powered air purifying respirator CA Chemical 2F, standard battery, charger (EURO - plug), decontaminable belt, flow indicator  |
| 51 00 00LA*  | Powered air purifying respirator CA Chemical 2F, standard battery, charger (EURO - plug), comfort leather belt, flow indicator |

\* for ordering variation with UK plug please add „U" at the end of the product code; for AUS plug please add „AUS" at the end of the product code

### *Spare parts and accessories*

|          |                                                                           |
|----------|---------------------------------------------------------------------------|
| 510010   | Battery CA Chemical 2F, Li-Ion (14,4V / 3,2Ah)                            |
| 510020   | Battery CA Chemical 2F Heavy Duty, Li-Ion (14,4V / 4,9Ah)                 |
| 710092   | Comfort padded belt                                                       |
| 720092   | Comfort leather belt                                                      |
| 510011   | Primary Li-Ion battery, non-rechargeable                                  |
| 510015.1 | Power adaptor 230 V / 24 V for the main socket                            |
| 510015.2 | Power adaptor 12 V -24 V – car power socket                               |
| 510051   | Decontaminable belt PVC - 2F/3F                                           |
| 510052   | Decontaminable harness PVC - 2F                                           |
| 510148/5 | Protective cover for Chemical 2F - disposable, pck of 5 pcs               |
| 520044.1 | Comfort padded harness                                                    |
| 710060   | Light flexi hose QuickLOCK™ - CA40x1/7"                                   |
| 710086   | Rubber hose QuickLOCK™ – CA40x1/7"                                        |
| 710062F  | Hose cover flameproof                                                     |
| 700062C  | Hose cover chemical resistant                                             |
| 700060   | Light flexi hose CA40x1/7" - CA40x1/7" - mask compatible only             |
| 700086CA | Rubber hose CA40x1/7" - CA40x1/7" - mask compatible only                  |
| 700086L  | Rubber hose CA40x1/7" - CA40x1/7" straight - 900mm - mask compatible only |
| 700086R  | Rubber hose CA40x1/7" - CA40x1/7" 90° - mask compatible only              |
| 700086RL | Rubber hose CA40x1/7" - CA40x1/7" 90° - longer - mask compatible only     |
| 710060L  | QuickLOCK Light flexi hose, extended                                      |

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|           |                                                                                      |
|-----------|--------------------------------------------------------------------------------------|
| 710086L   | QuickLOCK Rubber hose, extended                                                      |
| 710094    | Comfort harness - backpack                                                           |
| 510030EUR | Charger Li-Ion 14,4 V - EURO                                                         |
| 510030UK  | Charger Li-Ion 14,4 V - UK                                                           |
| 510030AUS | Charger Li-Ion 14,4 V - AUS                                                          |
| 707051    | Multicharger 2F - 5 slots, without power supply                                      |
| 707051P   | Multicharger 2F -5 slots, incl. power supply and AC cords                            |
| 51 00 46  | Set of plugs (2x external thread, 1x internal thread) for decontamination of unit 2F |
| 52 01 01  | TFT display protective foil                                                          |

### **Compatible headtops**

|            |                                                                                |     |
|------------|--------------------------------------------------------------------------------|-----|
| 704441 600 | Welding helmet AerTEC™ OptoMAX Air incl. ADF with air distribution, silver     | TH3 |
| 704441 601 | Welding helmet AerTEC™ OptoMAX Air incl. ADF with air distribution, black      | TH3 |
| 720101     | Short hood CA-1 Lite                                                           | TH3 |
| 720201     | Long hood CA-1 Lite                                                            | TH3 |
| 720102B    | Short protective hood CA-1, blue                                               | TH3 |
| 720102     | Short protective hood CA-1, orange                                             | TH3 |
| 720112     | Short protective hood CA-1+, orange                                            | TH3 |
| 720112B    | Short protective hood CA-1+, blue                                              | TH3 |
| 720202B    | Long protective hood CA-2, blue                                                | TH3 |
| 720202     | Long protective hood CA-2, orange                                              | TH3 |
| 721002     | Chem-proof protective hood CA-10                                               | TH3 |
| 721002G    | Chem-proof protective hood CA-10, grey                                         | TH3 |
| 721202     | Protective hood CA-12 with garment interface, chemically resistant, yellow     | TH3 |
| 721203     | Protective hood CA-12 with garment interface, chemically resistant, grey       | TH3 |
| 721204     | Protective hood CA-12 with garment interface, chemically resistant, white      | TH3 |
| 721205     | Protective hood CA-12 with garment interface, chemically resistant, CLF, olive | TH3 |
| 720300.01  | Protective face shield UniMask, grey                                           | TH3 |
| 720300.02  | Protective face shield UniMask, blue                                           | TH3 |
| 720300.03  | Protective face shield UniMask, orange                                         | TH3 |
| 720300.04  | Protective face shield UniMask, red                                            | TH3 |
| 720300.08  | Protective face shield UniMask, neoprene                                       | TH3 |
| 703100     | Protective faceshield Omnira air                                               | TH3 |
| 710401Y    | Safety helmet CA-4 yellow face seal                                            | TH2 |
| 710403B    | Safety helmet CA-4 additional flip-up visor, earmuffs                          | TH2 |
| 704000     | Helmet CA - 40 with welding visor                                              | TH3 |
| 704100     | Safety helmet CA-40G grinding shield                                           | TH3 |
| 704203     | Safety helmet CA-40GW grinding + welding shield, V5-8/9-13 AerTEC X110         | TH3 |

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|           |                                                          |     |
|-----------|----------------------------------------------------------|-----|
| 703001    | Welding helmet CleanAIR® Verus air, incl. ADF S60+       | TH3 |
| 703201    | Welding helmet CleanAIR Omnira COMBI air, incl. ADF S60F | TH3 |
| 700500    | Half mask CA-5 Eurmask DIN                               | TM2 |
| 710600    | Full face mask GX02, size [S, M, L]                      | TM3 |
| 720600    | Full face mask CF02, size [M, L]                         | TM3 |
| 740600.05 | Full face mask CM-6, 6-point                             | TM3 |
| 740600.15 | Full face mask CM-6M, 6-point, fluid intake              | TM3 |

### Compatible filters

Product code:    Product name

Note:

|                                    |                    | P-white | A-brown | AX-brown | B-grey | E-yellow | K-green | Hg-red | Ozone [10 ppm] | EN 14387 | EN 143 | EN 12941 | EN 12942 | EN 148-1<br>[RD40x1/7"] |                   |
|------------------------------------|--------------------|---------|---------|----------|--------|----------|---------|--------|----------------|----------|--------|----------|----------|-------------------------|-------------------|
| Combined filters, thread RD40*1/7" |                    |         |         |          |        |          |         |        |                |          |        |          |          |                         |                   |
| 500357                             | A1P3               | ✓       | ✓       |          |        |          |         |        |                |          |        | ✓        | ✓        | ✓                       | -                 |
| 500157                             | A2P3               | ✓       | ✓       |          |        |          |         |        |                | ✓        |        | ✓        | ✓        | ✓                       | -                 |
| 500557                             | A3AXP3             | ✓       | ✓       | ✓        |        |          |         |        |                |          |        | ✓        | ✓        |                         | -                 |
| 500162                             | B2P3               | ✓       |         |          | ✓      |          |         |        | ✓              | ✓        |        | ✓        | ✓        | ✓                       | -                 |
| 500160                             | K2P3               | ✓       |         |          |        |          | ✓       |        | ✓              | ✓        |        | ✓        | ✓        | ✓                       | -                 |
| 500167                             | A2B2P3             | ✓       | ✓       |          | ✓      |          |         |        | ✓              | ✓        |        | ✓        | ✓        | ✓                       | -                 |
| 500164                             | A2B2E2P3           | ✓       | ✓       |          | ✓      | ✓        |         |        | ✓              | ✓        |        | ✓        | ✓        | ✓                       | -                 |
| 500364                             | A1B1E1P3           | ✓       | ✓       |          | ✓      | ✓        |         |        |                |          |        | ✓        | ✓        | ✓                       | -                 |
| 500168                             | A2B2E2K2P3         | ✓       | ✓       |          | ✓      | ✓        | ✓       |        | ✓              | ✓        |        | ✓        | ✓        | ✓                       | -                 |
| 500165X                            | NBC - A2B2E2K2P3   | ✓       | ✓       |          | ✓      | ✓        | ✓       |        | ✓              | ✓        |        | ✓        | ✓        | ✓                       | NBC filter        |
| 500166                             | A2B2E2K2HgP3       | ✓       | ✓       |          | ✓      | ✓        | ✓       | ✓      | ✓              | ✓        |        | ✓        | ✓        | ✓                       | max. 50 hours     |
| 500257                             | A2P - ZERO         | ✓       | ✓       |          |        |          |         |        |                | ✓        |        | ✓        | ✓        | ✓                       | two-thread filter |
| 500266                             | A2B2E2K2HgP - ZERO | ✓       | ✓       |          | ✓      | ✓        | ✓       | ✓      | ✓              | ✓        |        | ✓        | ✓        | ✓                       | two-thread filter |
| 500268                             | A2B2E2K2P - ZERO   | ✓       | ✓       |          | ✓      | ✓        | ✓       |        | ✓              | ✓        |        | ✓        | ✓        | ✓                       | two-thread filter |
| Particle filters, thread RD40*1/7" |                    |         |         |          |        |          |         |        |                |          |        |          |          |                         |                   |
| 500048                             | P3                 | ✓       |         |          |        |          |         |        |                |          |        | ✓        | ✓        | ✓                       | -                 |
| 500249                             | ZERO               | ✓       |         |          |        |          |         |        |                |          |        | ✓        | ✓        | ✓                       | two-thread filter |
| 504048                             | P3 lite            | ✓       |         |          |        |          |         |        |                |          |        | ✓        | ✓        | ✓                       | -                 |
| 504249                             | ZERO lite          | ✓       |         |          |        |          |         |        |                |          |        | ✓        | ✓        | ✓                       | two-thread filter |

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