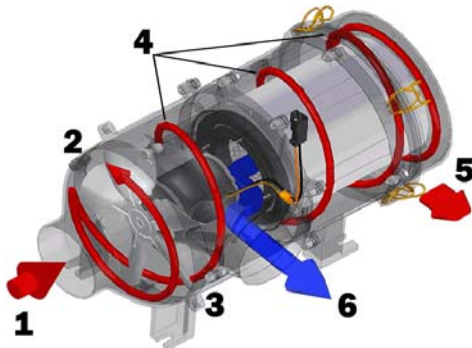


### RESPA™ CF+CFX+ICPS– How it Works



### RESPA™ CF / CFX+ IPCSensor Ultimate Solution

RESPA™ CF  
External Air  
Filtration +  
Cabin  
Pressurisation

RESPA™ CFX  
Recirculation  
Air Filtration  
+ Optimum  
Operator

IPCSensor  
In- Cabin Pressure  
Sensor +Warning  
Indicator- Filter Ex-  
change



### SPECIFICATIONS

Model No	RESPA™PFP 12V DC / PFP 24V DC
Unit Type	Precleaner+Filter+Pressuriser
Power Supply	12 VDC / 24 VDC
Current Draw (amps)	24-12 (12VDC) / 12-6 (24VDC)
Weight (nominal)	4.5 Kg
Pressurised Fresh Air	30-40 l/s (HEPA H13) / 50- 60 l/s (MERV16+ P2)
Dimension LxWxH (mm)	Approx 485 x 256 x 261
* Design Temperature -40 to +80 degC	

### RESPA™- How It Works

#### RESPA™ CF (External Air) PFP Unit:

##### Creating the VORTEX

1. Particulate-laden air enters the Precleaner inlet.
2. The fan creates a VORTEX, a tornado-like spinning motion, whipping the air and particulate to the outside wall as it approaches the fan blades.

##### Creating the HYPER spin Precleaner

3. Spinning air HYPER-accelerates as it passes through louvers, further enhancing centrifugal forces powerful enough to affect particle separation down to 5 µ.
4. The RESPA®-CF Vortex HyperFLOW™ External Air PFP provides for optimum (96- 98%) Pre-cleaning of the External Air and maintains correct Pressurisation of the Cabin.

##### Creating the continuous FLOW

5. Particulate is spun against the outside wall of the device and propelled rapidly around the filter to the rear of the device in one continuous FLOW of air.
6. Particulate is ejected back into the environment through two ejection ports located at the rear of the device. Precleaner air passes through the filter. Filtered air continues to the outlet.

#### RESPA™ CFX (Recirculation Air) PFP:

- The RESPA®-CFX Inline Recirculated Air Unit works in a similar way to the RESPA® CF External Air Unit except that there are **no Ejection Ports**.
- Provides Filtration of debris laden air that gets **entrapped** and **agitated (Operator / Machine Vibration, etc)** in the Cabin from **Opening / Closing Doors, Operator clothing, Boots, etc**.
- Fresh / clean Filtered air continues into the Evaporator coil box for optimising heating / cooling.

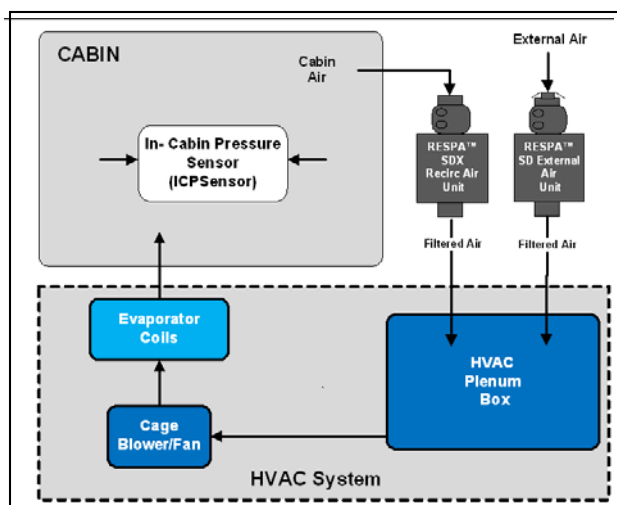
#### In- Cabin Pressure Sensor / Warning.

The In- Cabin Pressure Sensor / Warning Monitor (ICSPM) provides for monitoring the internal Cabin pressure.

- The External Air RESPA PFP provides Fresh Air as well as the positive pressure inside the Cabin. As the Filter Element becomes loaded with Particulate then Air flow / Pressure will begin to diminish inside the Cabin.
- The ICPS Monitor provides the Operator with an indication that Cabin Pressure has diminished to a unsafe level that could be a result of Seals needing maintenance- but in **most cases** it signifies that the **External Air Filter** Element is **loaded** (restrictive airflow) and so needs **re- placement**
- Should the set- point pressure diminish to unsafe levels then ingress of particulate can occur.
- In addition, as pressure diminishes, so does the **Fresh Air Flow** and rapid [Co2 concentration](#).

## RESPA™ PFP "Quality Cabin Air" TECHNOLOGY The Solution for Fixed / Mobile Plant Cabin Precleaner + Filtration + Pressurisers

### HVAC- RESPA™ PFP Design Concept



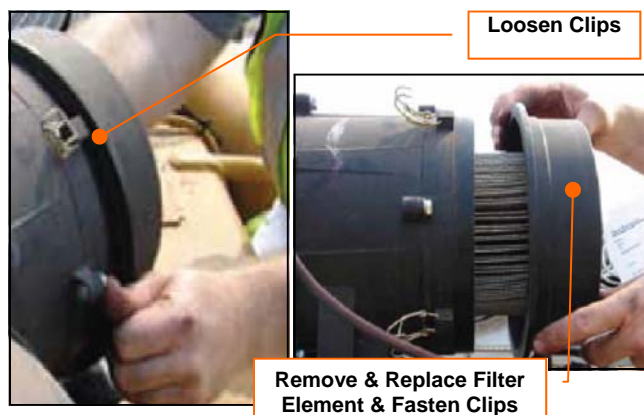
### RESPA™ Filter Element Technology

The RESPA™ Technology provides **Filter Elements** provide the **highest protection / arrestance efficiency** and **longest Service Life** of upto **1,000 hours**.



- **HEPA> H13 (EN1822) Grade.**
- Media conforms to arrestance of >0.3 micron Particulate / Fibre @ 99.995 % Efficiency (DOP Certified).
- **Effective against:** This Filter media has the highest protection factor and should be utilised where exposure is to combustion smoke; diesel particulate matter (DPM); respirable crystalline silica (RCS); radon progeny; carbon dust; sea salt; and other respirable particulate within the size range.
- **Applications:** Nuclear Clean-up, working with friable Asbestos, Carcinogenic Materials.
- **MERV16+ ASHRAE 52.2: EN779-2012: F9**
- Media conforms to arrestance of >0.3- 1.0 micron Particulate / Fibre @ 98.0 % Efficiency.
- **Effective Against:** This Filter media has the highest protection factor and should be utilised to remove Particulate, such as: all bacteria; most tobacco smoke; proplelet nucleli (sneeze); respirable crystalline silica (RCS); diesel particulate matter (DPM); and other respirable particulate within the size range.
- **Applications:** Mining, Agriculture, Demolition, Construction, Waste, Indoor Recycling, all applications where respirable dust is present.

### RESPA™ PFP Filter Change



### RESPA™ PFP "Quality Cabin Air" Solution

The ultimate solution to your **Mobile & Fixed Plant Cabin HVAC Filtration** & all Enclosures (eg. Electrical Cabinets, Crusher Cabins, etc). Key features of this new generation of RESPA™ PFP Technology:

This synergy of the latest RESPA™ PFP technology:

- Protects the Health of the Operator to OEL Legislation Compliance.
- Extends service life of Filter Elements– upto 1000 hours).
- Dramatically reduces maintenance of the HVAC System.
- Maintains correct pressurisation of the Operators Cabin.
- Off– sets Co2 concentration & avoids Fatigue /Micro-sleeps.
- Enhances your Productivity up time.

RESPA™ PFP is a combination of a Motorised Powered **Precleaner + Filtration** & Pressuriser- all integrated into one unit that can be mounted on stationary or mobile equipment & replaces other conventional existing HVAC Air Intake / Pressuriser / Filter units for both External & Recirculation Air.

RESPA™ PFP has been tested & certified to provide the highest Protection Factor for Operator OEL (Occupational Exposure Limits) by:

- [Queensland Mines & Energy- Mines Inspectorate- Health Surveillance Unit.](#)
- [NIOSH: National Institute of Occupational Health & Safety- USA.](#)

To achieve the maximum / optimum results then it is essential that all HVAC Systems are designed with a complete RESPA™ PFP configuration, consisting of the following:

- **RESPA™ CF** for External Air.
- **RESPA™ CFX** for Recirculation Air.
- **IPCSensor** In- Cabin Pressure Sensor Warning Device.