

*“Save
Your
Breath
With*



MODERN SAFETY TECHNIQUES

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**MODEL RP200CMST-S1/4
RESPIRATORY PROTECTOR®
MANUAL**

WARNING: Do not attempt to operate this equipment without first reading and understanding the manual enclosed with this device. Suitability for use of this device lies solely with user.

SPECIFICATIONS
RESPIRATORY PROTECTOR®
MODEL RP200CMST-S1/4

INLET PRESSURE (MAX.)	150 PSIG STATIC (10.4bar)
RATED AIR FLOW (MAX.)	500 SCFM (236.0 L/s)
OPERATING PRESSURE	100 PSIG DYNAMIC (6.9bar)
OUTLET PRESSURE RANGE	0-125 PSIG (0-8.6 bar)
OPERATING RELATIVE HUMIDITY (INLET AIR)	30-100% RH
OPERATING TEMPERATURE RANGE (INLET AIR)	68-150°F (20-65°C)
INLET CARBON MONOXIDE CONCENTRATION (MAX.)	40 PPM (VOLUME)*
OUTSIDE DIMENSIONS	SEE FIGURE NO. 3 - GENERAL LAYOUT FOR APPROXIMATE DIMENSIONS
WEIGHT (INCLUDING MONITOR)	EST. 785 LBS. (357 kg.)
GRADE 10 ELEMENT FOR 80414 PREFILTER	80419
GRADE 6 ELEMENT FOR 80415 PREFILTER	80420
THIRD STAGE CHARCOAL CARTRIDGE W/ GASKETS	80174-203
FOURTH STAGE CATALYST CARTRIDGE W/ GASKETS	80174-204

***BASED ON MAXIMUM FLOW CONDITIONS (500 SCFM) FOR 40 HOURS MINIMUM CONTINUOUS PERFORMANCE.**

GENERAL OPERATION

The MST Respiratory Protector, a compressed breathing air purifier, is a system designed to remove or reduce selected contaminants, including Carbon Monoxide that is found in standard compressed air lines. The Respiratory Protector gives you the advantage of connecting directly to shop air from a standard compressed air source to help provide breathing quality air to face masks, helmets, hoods and other supplied air breathing devices. This eliminates the necessity of providing a separate breathing air compressor or air supply to your workers.

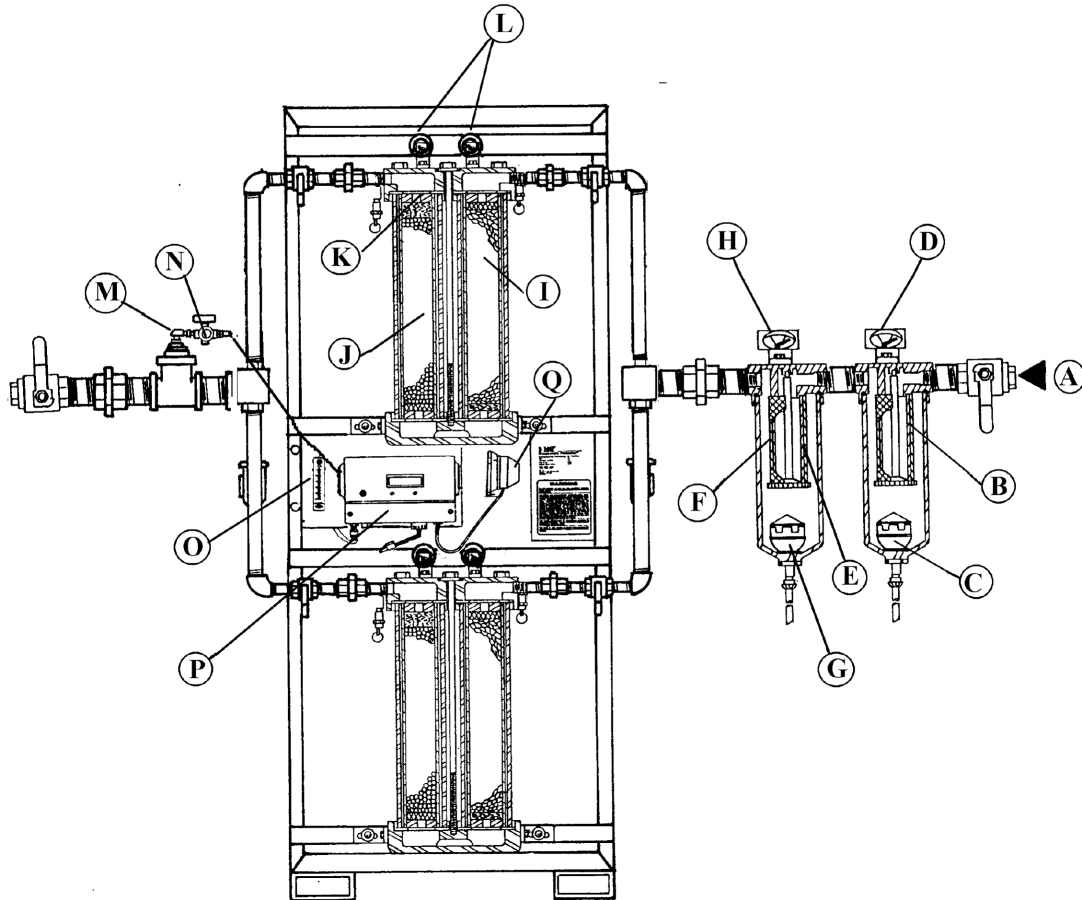
The Respiratory Protector is a Four Stage Purification System, mounted on floor stand(s), with the purified air being monitored continuously for carbon monoxide.

GENERAL FILTER SYSTEM DESCRIPTION

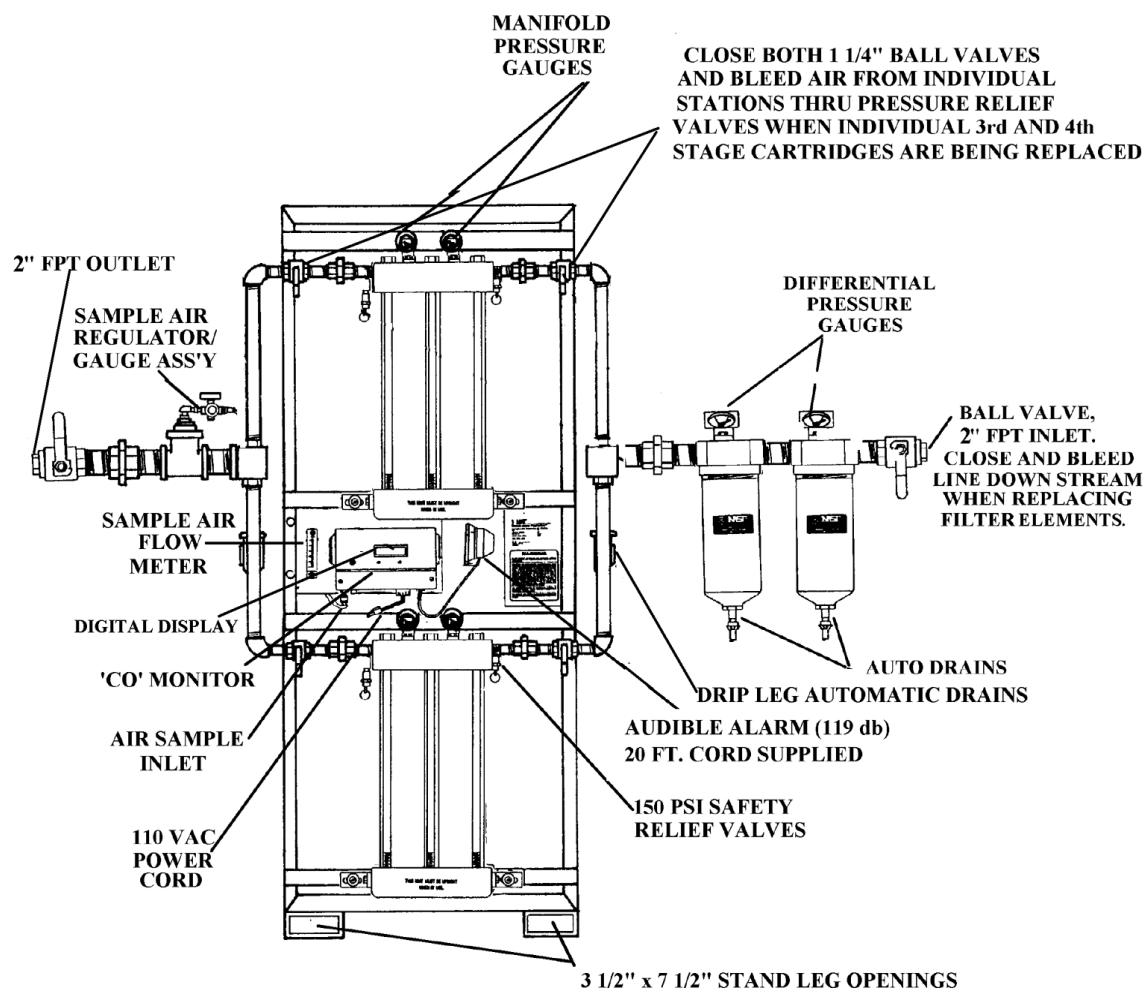
(Refer to Figure No. 1 & 2)

Air entering the Respiratory Protector purification system at the inlet **(A)** is usually contaminated with oil, water, dirt, rust, scale and often deadly Carbon Monoxide gas. As the air passes through the Prefilter Stage **(B)**, particulates and liquid contaminants will be trapped - coalesced out (0.7 micron max. solids and liquids down to 2.0 microns at an efficiency rating of 95%). The liquids are trapped and expelled through the Automatic Float Drain **(C)**. The Differential Pressure Gauge (DPG) at **(D)** will indicate when element requires changing. The First Stage **(E)** traps and retains particulate matter down to 0.3 microns. As air enter the Second Stage **(F)**, liquid contaminants are coalesced down to 0.75 microns with an efficiency rating of 99.97% (meets Underwriters Laboratories Specification UL 586 for High Efficiency, Particulate, Air Filter Units). The liquids are trapped and expelled through Automatic Float Drain **(G)**. The "DPG" at **(H)** will indicate when element requires changing. The Third Stage **(I)** contain an odor absorbing activated charcoal which also collects various gaseous Hydrocarbons (such as oil fumes, benzene, etc.). The Fourth Stage **(J)** contains a low temperature catalyst which converts Carbon Monoxide gas into Carbon Dioxide. The unique catalyst also coverts or absorbs Ozone, Nitric Oxide, Sulfur Dioxide, Nitrogen Dioxide, Hydrogen Sulfide, Ammonia, Acetaldehyde, Methyl Chloride, Methyl Ketone, Acetone and Methyl Alcohol. Finally, the air passes through a one (1) micron Filtration Disk **(K)** to complete the purification of the compressed air. The mounted gauges at **(L)** are supplied to determine the pressure drop across the Third and Fourth Stages for maintenance reference. A sample of the purified air is taken at **(M)** and is regulated at **(N)** to provide a constant air pressure to the Air Sample Flow Meter at **(O)**. The metered air sample is then continuously monitored by the Carbon Monoxide Monitor **(P)**, and checks the air quality per OSHA/CSA requirements for Carbon Monoxide. The monitor digitally displays the amount present. An audible alarm **(Q)** will alert operators if any dangerous levels of Carbon Monoxide exist.

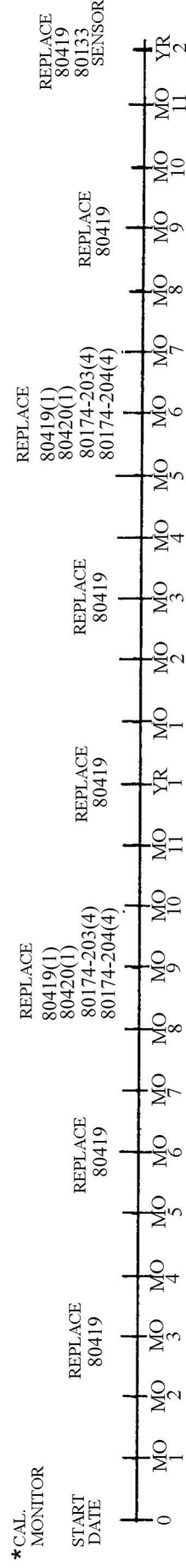
MODEL RP200CMST-S1/4 FILTER SYSTEM



MODEL RP200CMST-S1/4 RESPIRATORY PROTECTOR



ESTIMATED MAINTENANCE
REQUIREMENTS - MODEL RP200C () -S1/4
500 SCFM RESPIRATORY PROTECTOR
AIR PURIFICATION SYSTEM



THE ABOVE IS A RECOMMENDED MAINTENANCE SCHEDULE AND IS FOR ESTIMATING PURPOSES ONLY. ADVERSE CONDITIONS, UNEXPECTED AIR CONTAMINATION, ETC. CANNOT BE CONTROLLED BY MST, AND MST CANNOT WARRANT ACTUAL FILTER LIFE OR EQUIPMENT LIFE EXCEPT FOR OUR STANDARD WARRANTY ON DEFECTS IN MATERIALS AND WORKMANSHIP DURING OUR STANDARD WARRANTY PERIOD. CUSTOMER MUST EVALUATE THEIR OWN PARTICULAR CONDITIONS TO DETERMINE THEIR SPECIAL REQUIREMENTS. PLEASE SEE OUR STANDARD WARRANTY POLICY.

* Note: CO monitor should be calibrated prior to first use, re-checked after two weeks and then calibrated on a monthly basis and/or whenever third and fourth stage filter elements are replaced.