

CONTINUOUSLY REMOVES OVER 99.99% OF OIL MIST, SOLID PARTICLES OF 0.01 MICRON AND 100% OF LIQUID WATER.

3 in 1 MULTI DRY FILTER

[PATENTS WORLDWIDE]

UNIQUE FEATURES



AWARDED '97 PM PRIZE from
JAPAN INSTITUTE OF PLANT MAINTENANCE

ULTIMATE PERFORMANCE WITH MINIMAL PRESSURE DROP

The 3-IN-1 MULTI DRY FILTER combines three separate filter elements (designed for different purposes) and two chambers in a single body. Together they eliminate 100% of the liquid water, 99.99% of the oil mist and solid particles larger than 0.01 micron.

3 STAGE FILTRATION SYSTEM

First coalescing filter, second fibre filter and third, specially designed oil mist filter element.

EXCELLENT DURABILITY & COOLING EFFECT

The superior thermal conductivity of the durable aluminum body helps cool the compressed air and enhances the elimination of oil and water droplets.

COMPACT & SPACE SAVING

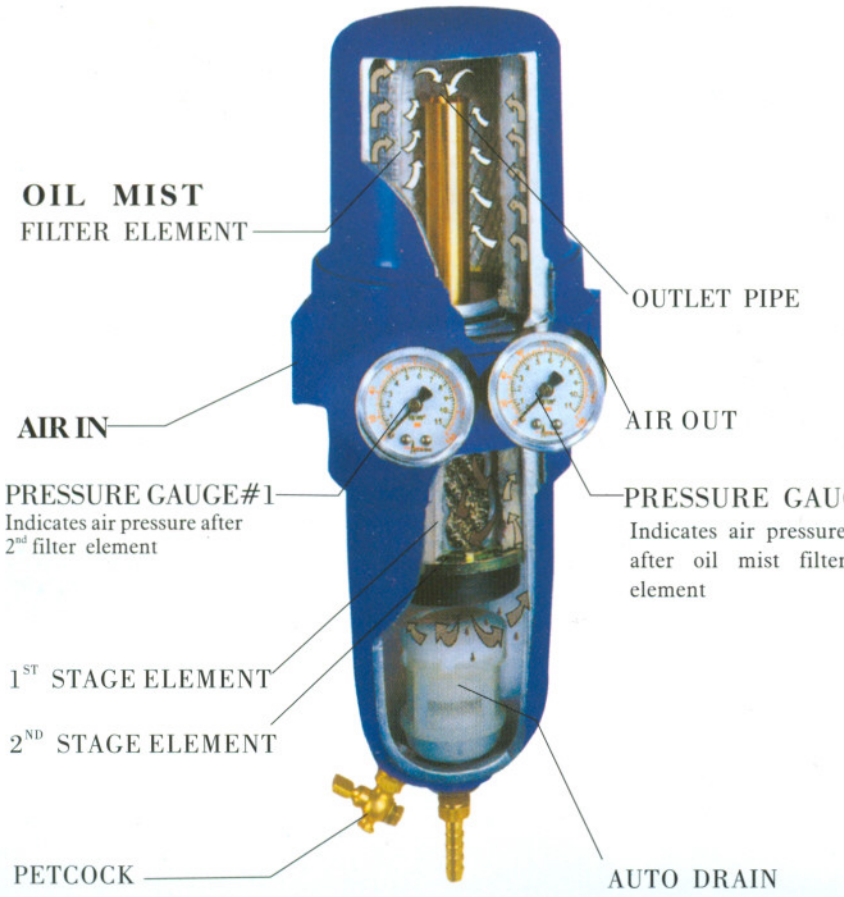
No pre-filter required. Single unit is compact and eliminates leakage between separate components.

QUICK AND EASY REPLACEMENT OF FILTER ELEMENTS

Replacement of elements in less than a minute.

PRESSURE GAUGES

Twin pressure gauges indicate when the filter elements should be replaced. The pressure gauges can be mounted in the ports provided one the other side, with the unused ports plugged.



STRUCTURE AND FUNCTIONS OF THE 3-IN-1 MULTI DRY FILTER

All unfiltered compressed air contains water, oil mist and solid particles. The air coming from the air line into 3-IN-1 MULTI DRY FILTER is accelerated and made to spin and tumble through the stainless steel mesh in the first element. Water droplets stick to the surfaces of the mesh and unite with other droplets. Droplets grow in size, collect other contaminants, and fall into the bowl and flow into the auto-drain. The water accumulates, lifts the float, and is instantly blown out through the drain tube. Approximately 95% of the liquid water are removed in the first element by combining a change in velocity, tumbling, spinning, and an expansion of the compressed air as it passes through.

The compressed air now containing the remaining 5% of the liquid water then enters the highly absorbment tightly wound second element. The air spin violently trying to find its way through the elements. Thousands of small 'tornadoes' are formed. Remaining water droplets are pulled apart and vaporized in the vacuum of these vortices. Also, oil droplets and dust particles larger than 5 microns are eliminated in the second filter element.

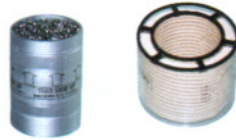
In the third element, 99.99% of oil mist and dust particles larger than 0.01 microns are eliminated. In this way, the 3-IN-1 MULTIDRY FILTER provides clean dry air that will not harm air-powered equipment.

DELIVERS ULTRA-CLEAN DRY AIR WITHOUT REFRIGERATION.

For 103 Model



For 105 Model

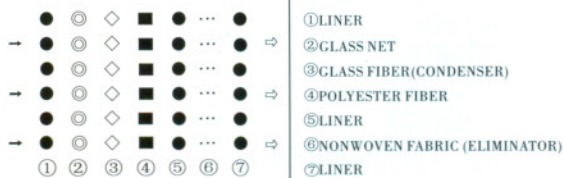


1ST & 2ND FILTER ELEMENT REPLACEMENT

The service life of the 1st filter element (made of stainless steel mesh for 105/T model and plastic deflector for 103 model) and the 2nd filter elements (made of special cotton cloth) depends on the amount of oil and contamination in the compressed air. Replace or clean the 1st element every 10-12 months or every 3600 operating hours.

Replace the 2nd element at the same intervals or whenever the pressure drops by 0.7kg/cm sq (10 psi) as indicated by pressure gauge #1.

FORMATION OF OIL MIST FILTER ELEMENT FOR T-105A

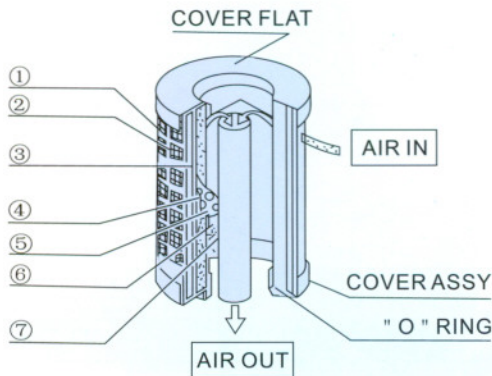


OIL MIST FILTER ELEMENT REPLACEMENT

Replace the oil mist filter element once a year or whenever the pressure increase of the pressure gauge #2 is more than 0.7kg/cm sq.(10psi).

STRUCTURE & FUNCTIONS OF OIL MIST FILTER ELEMENT

The filter captures oil and solid particles in the compressed air and supplies clean air. The inner structure basically consists of a glass fiber ply (condenser) and a nonwoven fabric ply (eliminator). When oil mist and solid particles collide against the glass fiber, a molecular attraction is generated and they contact and adhere to the glass fiber ply. Even if there is no airflow, tiny particles (less than 0.01 micron) will move in all directions by Brownian movement and contact and adhere to the glass fiber ply. Although solid particles cannot be eliminated indefinitely, captured oil mist goes down to the fiber intersections and gathers together to make large oil droplets that eventually travel to the bottom of the filter. By a series of these actions oil mist is continuously removed from the air. The inner nonwoven fabric ply contains these large oil droplets by preventing them from being dispersed by air pressure. The droplets drain down to the collection area naturally by gravity.



The complete body of Unicom 3-IN-1 and 2-IN-1 MULTI DRY FILTERS is made of aluminum to provide cooling effect. Carefully die-cast with high precision milling, made to last. It also goes through a process of impregnation to cover any porosity and guarantee 100% leakage proof. Lastly, another process of anodizing treatment before spray painting to prevent rust or corrosion on the inner body.

SPECIFICATION

MODEL	T-103A	T-103W	T-105A	T-105W	T-107A	T-107W	T-110A	T-110W	T-120A	T-120W
MAX. PRESSURE	9.9kg/cm sq.									
OPERATION TEMP	5-60deg C									
OIL ELIMINATION	0.01 ppm/ww									
MAX. FLOW RATE	300 liter/min		750 liter/min			1500liter/min		3000liter/min		
PORT SIZE	1/4 "		3/8 "		1/2 "		3/4 "		1 "	
DIMENSION (mm)	85×100×260		110×130×310			135×160×390		200×220×600		
WEIGHT (kg)	1.12	1.07	1.90	1.85	1.90	1.85	3.30	3.25	10.70	10.65