

PureTec

compressed air filtration



pure energy



Purifying your compressed air,
increasing your efficiency.



Cooling, conditioning, purifying.

WHY QUALITY FILTRATION?

Modern industrial applications require ever higher quality air. Applications such as pneumatic automation, electronics, pharmaceutical and food industries, to name just a few, are becoming ever more sophisticated and require ever greater levels of air purity.

The level of atmospheric contamination that can be found in air typically amounts to as much as 140 million particles per cubic metre. About 80% of these are smaller than 2 microns in size, and therefore pass through the air compressor's air intake filter and pass into the compressed air network itself. When compressed to a pressure of 7 barg the number of particles contained in the compressed air reaches 1120 million per cubic metre.

As if this were not bad enough, further impurities are added to the compressed air:

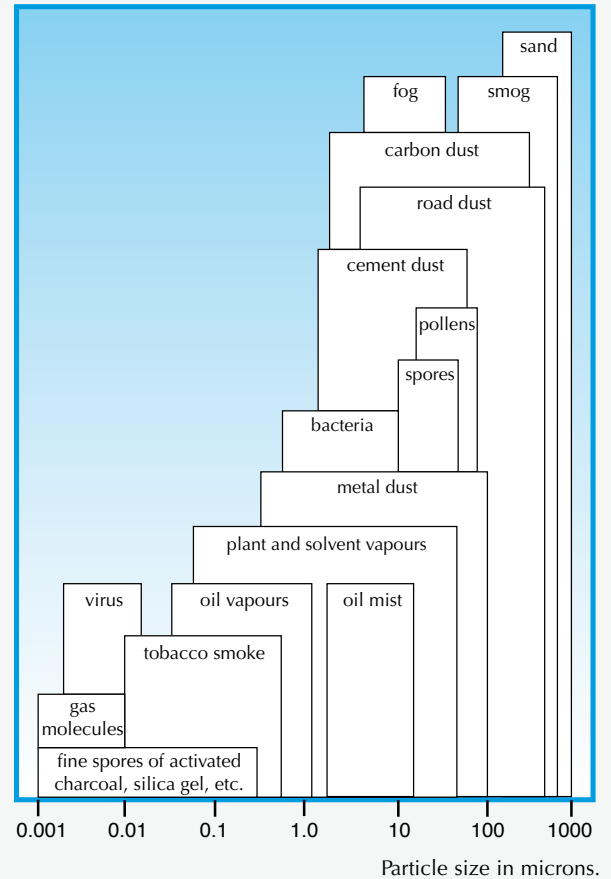
- Water vapour, which will condense to a liquid within the compressed air circuit.
- Oil vapour and air-borne oil particles produced during the compression process itself.
- Solid contaminants produced by the compressed air distribution network.

Failure to efficiently remove these impurities will lead to serious consequences, including:

- Increased maintenance costs.
- Interruptions in the production process.
- Costly tool wear.
- Damaged finished products.

All this can simply be avoided by the PureTec professional grade compressed air filters. PureTec has been designed to offer years of guaranteed high efficiency filtration in even the harshest conditions, safeguarding the User from the costly consequences of unfiltered or poorly filtered compressed air.

type and size of atmospheric polluting agents



Quality Housings

PureTec's housing has been designed for the rigours of industry. Aluminium housings are treated with the DURACHROM treatment, a process which creates a chrome surface on both the inside and the outside of the filter. Filter life is lengthened, and as there is no risk of the housing itself degrading to the point of particles coming off it, so air quality is increased and the risk of drain blockage is reduced.

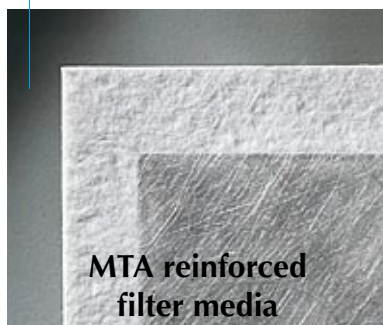
PureTec furthermore goes through a process of high temperature degreasing, antioxidation treatment and passivation which further adds to its durability. The paint process itself is a polyester powder treatment which ensures years of service. The consequence is that PureTec exceeds the criteria of a 250 hour salt bath test according to ASTM-117 norms.



Quality Elements

Where most filters rely only on the filter media, MTA adds an extra layer of non-woven fabric, which is laminated to the filter media itself. The pulsations and pressure changes which filter elements are subject to risk damaging the media; by adding the non-woven fabric layer MTA adds significant extra strength, ensuring element integrity and, as a consequence, the quality of the compressed air itself.

The glass microfibre filter media offers filtration in accordance to ISO standards; the media is tested to ensure its efficiency. Corrosion resistant materials and stainless steel support cylinders (with wide spacing for minimal pressure drops) ensure the element remains integral over its entire working life. 4 filtration grades are offered, including 2 coalescing and an activated carbon grade.



PureTec

Modern industrial processes are reaching ever higher levels of sophistication, and their Compressed Air networks require ever higher air purity levels; the consequences of inadequate or low efficiency filtration are increased downtime, high maintenance costs and reduced product quality. MTA's PureTec filters avoid these undesired consequences, offering guaranteed and lab tested filtration efficiency levels within an extensive range which satisfies all individual User needs.



A complete range for all your filtration needs

PureTec HEF (threaded aluminium)

The HEF range covers air flows from 1.0 to 46 m³/min. The extremely durable housing ensures years of trouble free operation what ever the conditions. Numerous accessories simplify installation and operation, whilst the "CleanFit" design allows easy element substitution.

PureTec B (flanged carbon steel)

Designed for higher air flows (46 to 150 m³/min.), PureTec B filters feature a multi-element design offering maximum filtration surface area for lowest pressure drops within a compact housing. Element access is simplified thanks to the light-weight top access flange.

PureTec F (filters for higher pressures)

PureTec F filters offer operation up to pressure of 40 barg, in a carbon steel configuration. The same high efficiency element as the standard range is utilised. PureTec F complements the complete range of MTA compressed air products for higher pressure applications.

PureTec for special applications

Customer specific versions are available on request, including stainless steel housings (AISI 304 or 316) for aggressive gases, versions for special gases, special approvals (ASME, SELO, etc.) and versions for pressures beyond the standard PureTec range (up to 100barg).





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EASY TO USE AND MAINTAIN

CLEANFIT element installation:

CLEANFIT (standard on HEF005-150) greatly simplifies element substitution. Simply place the element in the bowl and screw the bowl onto the head; the element will position itself into its guide in the head, with an O-ring ensuring a tight fit. The advantages are multiple:

No dirty hands – Used elements are covered in oil; with CLEANFIT there is no need to touch the element itself during substitution.

Quick substitution – CLEANFIT drastically reduces the time needed to substitute an element.

Reduced installation space – Given that CLEANFIT does not require a tie-rod, so the space required below the filter is notably reduced. PureTec can thus be installed in very limited spaces.



Audible warning – An orifice within the filter housing itself warns the User if the bowl has not been tightened enough during element substitution, or if the bowl is being removed whilst the filter is still under pressure.

Multiple installation kits – A complete range of accessories and kits ensures that PureTec can easily be installed in all situations.

Designed for the vigors of industrial use – The durable housing and quality elements ensure years of optimum filtration in even the most harsh conditions.

Mounting kits

In-series kits - available for the installation of either 2 filters or 3 filters in series, reducing both installation times and costs (HEF005-70).

Wall mounting kits – allow the filter to be wall mounted, and are compatible with the in-series mounting kits (HEF005-070).

Element monitors

Indicator - gives a simple to understand indication when the filter needs to be changed.

Gauge - shows the progressive increase towards the moment the element needs changing. The gauge can be rotated by 180° and can also be fitted onto B filters using a mounting kit.

Condensate drains

Internal float – zero-loss design, fits inside the housing.

External float – zero-loss, no power supply required.

Timed – safe and reliable.

Electronic – zero-loss, very reliable, alarm security.

Manual – for Grade A filters.

Element Filtration Grades

filtration grade	
type	
application	
maximum particle size	micron ISO Class
maximum oil concentration	mg/m ³ ISO Class
temperature limit	

Applications by Filtration Grade

application	configuration
dust filtration	
general purpose	
fine filtration	
oil free	
critical applications	
unchanged dew points	



Complete your compressed air system with adsorption dryers, aftercoolers

Filter Housings

P	M	S	A
pre-filter	coalescing	coalescing	activated carbon
general purpose	fine	oil-free	critical applications
3	1	0,01	N.A.
3	2	1	N.A.
N.A.	0,5	0,01	0,003
N.A.	3	1	1
max 65°C	max 65°C	max 65°C	max 65°C

model	Airflow		air connections	max operating pressure (bar)	dimensions (mm)				weight (kg)	Filter element n° / model
	m³/h	m³/min			A	B	C	D		
HEF 005	60	1,0	1/2"	16	88	188	20	70	0,9	1 / 06050
HEF 007	78	1,3	1/2"	16	88	188	20	70	1,0	1 / 07050
HEF 010	120	2,0	1/2"	16	88	258	20	70	1,1	1 / 14050
HEF 018	198	3,3	1"	16	125	261	33	80	2,3	1 / 12075
HEF 030	335	5,6	1"	16	125	363	33	80	3,4	1 / 22075
HEF 047	510	8,5	1 1/2"	16	125	463	33	80	3,9	1 / 32075
HEF 070	780	13,0	1 1/2"	16	125	642	33	80	5,4	1 / 50075
HEF 094	1000	16,7	2"	16	163	686	48	95	8,0	1 / 51090
HEF 150	1500	25,0	2"	16	163	933	48	95	10,0	1 / 76090
HEF 240	2760	46,0	3"	12	248	1060	74	760	23,0	1 / 75140

B 360	3000	50,0	DN 100	12	500	1667	317	-	111	2 / 76090
B 450	4500	75,0	DN 125	12	500	1667	317	-	115	3 / 76090
B 600	6000	100	DN 150	12	640	1692	342	-	138	4 / 76090
B 900	9000	150	DN 200	12	790	1766	342	-	213	6 / 76090

de

typical applications
dry particle removal, dust filtration, adsorption dryer post-filter, low pressure dust filtration
pre-filtration for refrigeration dryers, general purpose filtration, vacuum pump pre-filtration, air blowers, bulk removal of liquids & solids, pneumatic tools
offshore, pneumatic tools & controls, sand blasting, air conveyors, shipyards, metal working, compressed air motors, sand blasting equipment, vacuum pump post-filtration, surface treatment
pre-filtration for adsorption dryers, instrumentation, pneumatic bearings, fine pneumatic tools, air logistics, air conveyors, spray painting processes, air gauging
pharmaceutical, medical, critical instrumentation, air conveyors, pneumatic equipment, surface treatment, film processing, vacuum pump post-filtration, compressed air motors, offshore, shipyards, production & packaging & transport in breweries & dairies & food/drink industries, removal of taste/smell/oil vapour, non-critical breathing air applications, sand blasting processes
electronics, cosmetics, pharmaceutical, hospitals, aviation, automotive, plastics, refineries, railways, textiles, food/drink, dairies, breweries, chemical. (Certain applications also require grade A filtration downstream).

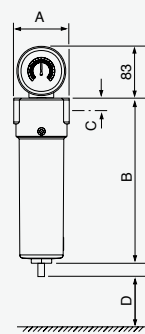
Nominal air flows refer to FAD conditions, 20°C, 1 bar(A) and 7 barg operating pressure. For differing operating pressures apply the correction factors from the below table.

Filters for higher pressures and with differing materials available on request. Minimum operating temperature 1 °C

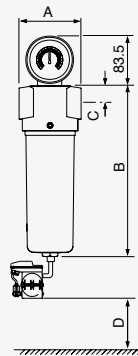
Air flow correction factors for differing operating pressures:

Pressure barg	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Correction factor	0.25	0.38	0.50	0.63	0.75	0.88	1	1.13	1.25	1.38	1.50	1.63	1.75	1.88	2	2.13

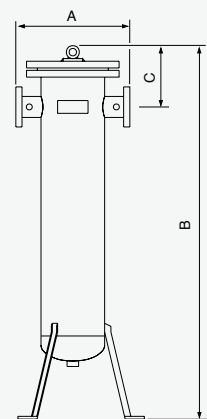
filter element grade	P	M	S	A
rated initial pressure drops (barg.)	0.04	0.05	0.08	0.05



HEF 005 - 070



HEF 094 - 240



B 360 - 900

air treatment system with MTA refrigeration dryers, separators, drain, oil-water separatings and chillers.





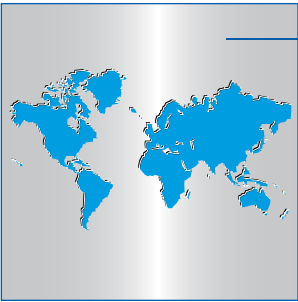
PURE INNOVATION, PURE SATISFACTION, PURE ENERGY

MTA was born over 25 years ago with a clear objective: improving mankind's relationship with two distinct natural resources, air and water, and optimising their transformation into energy sources. Our investment in Innovation ensures we offer the very latest technologies, whilst an expert team worldwide ensures our Customers achieve the highest levels of Satisfaction. At MTA energy is our business, and improving your relationship with your energy is our aim.



STRATEGIC DIVERSIFICATION

MTA covers three distinct market segments. As well as Compressed Air & Gas Treatment solutions, we offer a complete series of products for the Industrial Process Cooling market, as well as an extensive range of Air Conditioning products. MTA has always been known for the innovation it has brought into each of these three sectors; in fact our strategic diversification offers our Customers unique benefits unseen in their individual fields.



FAR REACHING BUT ALWAYS CLOSE BY

MTA is officially represented in some 60 countries worldwide. 8 MTA Sales Companies cover 4 continents. Our staff and representatives boast expert knowledge and benefit from continuous training. Accurate attention to service support guarantees that our Customers can look forward to long term peace of mind and an optimized energy solution. We always remain close to our Customers, so wherever you may be, we will be near to you.

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