COMPRESSED AIR
& GAS TREATMENT

PureTec

Compressed air filters

Purifying your compressed air,
increasing your efficiency.

MTA®

Cooling, conditioning, purifying.

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 35 to 989 SCFM. The extremely durable housing ensures years of trouble free operation what ever the conditions, thanks to standard anodization treatment. Numerous accessories simplify installation and operation, whilst the "CleanFit" design allows easy element substitution.

PureTec B (flanged carbon steel)

Designed for higher air flows (1,511 to 7,389 SCFM), 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 HEF/50 and F (filters for high pressure)

PureTec F filters offer operation up to pressure of 725 psig, in a carbon steel configuration. The same high efficiency element as the standard range is utilized. PureTec HEF/50 (101 to 1,136 SCFM) complements the complete range of MTA compressed air products for higher pressure applications.

PureTec for special applications

Versions are available for higher pressures on request. Customer specific versions are also available, including stainless steel housings (AISI 304 or 316) for aggressive gases, versions for special gases and special approvals (ASME, etc.).

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 4 million particles per cubic foot. 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 100 psig the number of particles contained in the compressed air reaches 32 million per cubic foot.

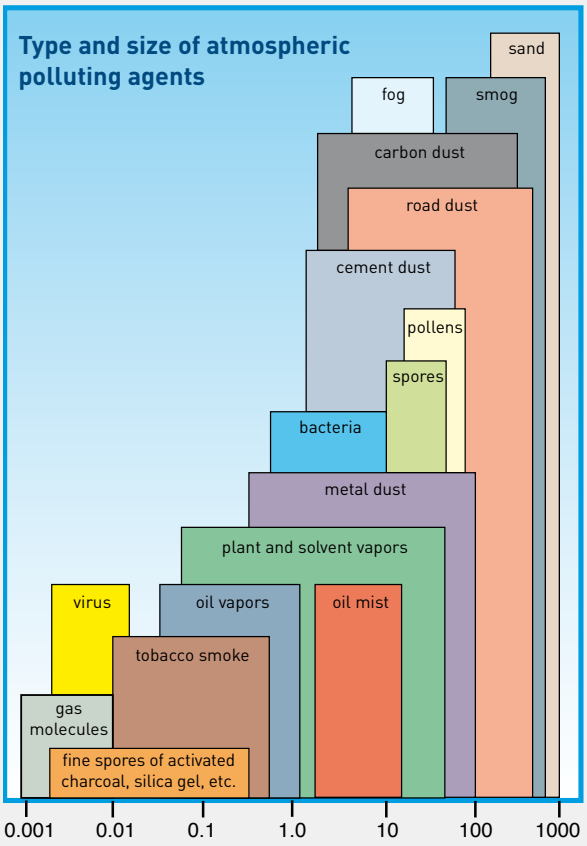
As if this were not bad enough, further impurities are added to the compressed air:

- Water vapor, which will condense to a liquid within the compressed air circuit.
- Oil vapor 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.



Quality Housings

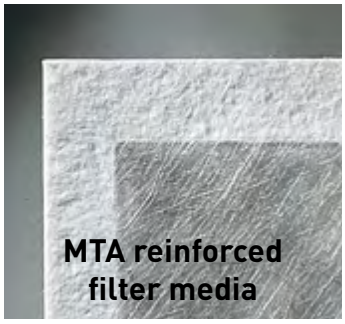
PureTec HEF are designed for demanding conditions. All aluminum bodies are subjected to ANODIZATION treatment, a very resistant process that leads to the formation of a protective surface able to prolong the life of the body. The absence of the risk of detachment of the surface particles, determines a better air quality and reduces the risk of obstruction of the discharge.

The process of degreasing at a high temperature, the antioxidant and the passivation treatment to which all bodies are subjected, further improves the resistance. The polyester powder coating provides years of perfect service.

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.



Cooling, conditioning, purifying.

Easy to use and maintain

CLEANFIT element installation:

CLEANFIT (standard on HEF005-070) 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.

Options and accessories

Mounting kits

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

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

Mounting kits

PDI 16: clogging indicator.
MDA 60: aluminum differential pressure gauge.
MDM 60C: magnetic differential pressure gauge with free contact alarm.
MDM 60E: magnetic differential pressure gauge with alarm led.
MDH 50: differential pressure gauge with maximum operating pressure of 725 psig.

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.

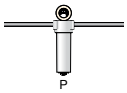
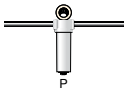
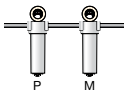
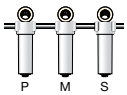
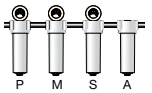
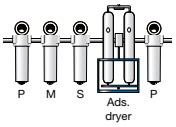
Manual - for Grade A filters.

Element Filtration Grades

Filtration grade		
type		
application		
maximum particle size	micron	
	ISO Class (**)	
maximum oil concentration	mg/m³	
	ISO Class (**)	
temperature limit	min/max °F	

(*) The grade A filters must always be
(**) ISO 8573.1

Applications by Filtration Gr

Application	Configuration
dust filtration	
general purpose	
fine filtration	
oil free	
critical applications	
enhanced dew points	

Complete your compressed
separators, filters, adsorption

P	M	S	A
pre-filter	coalescing	coalescing	activted carbon
general purpose	fine	oil-free	critical applications
3	0,1	0,01	N.A.
3	2	1	-
N.A.	0,1	0,01	0,005
N.A.	2	1	1 (*)
35 / 149 °F	35 / 149 °F	35 / 149 °F	35 / 149 °F

e preceded by a grade S filter.

ade

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).

air treatment system with MTA aftercoolers, dryers, drains, oil-water separators and chillers.

Filter Housings

Model	Airflow (1) (2) SCFM	Max operating pressure (psig)	Air connections NPT	Dimensions (in) A	B	C	D	Weight (lbs)	Filter element n° / model
HEF 005	35	232	3/8"	7 3/8	3 1/2	13/16	2 3/8	1.54	06050
HEF 007	46	232	1/2"	7 3/8	3 1/2	13/16	2 3/8	1.54	07050
HEF 010	71	232	3/4"	10 2/16	3 1/2	13/16	3 1/8	1.76	14050
HEF 018	117	232	1"	10 6/16	4 15/16	1 4/16	3 7/8	3.97	12075
HEF 030	197	232	1"	14 1/4	4 15/16	1 4/16	4 12/16	5.51	22075
HEF 047	300	232	1 1/2"	18 1/4	4 15/16	1 4/16	5 1/2	5.51	32075
HEF 070	459	232	1 1/2"	25 3/16	4 15/16	1 4/16	6 1/4	7.05	50075
HEF 094	589	232	2"	26 7/8	6 3/8	1 6/8	20 1/2	11.24	51090
HEF 150	883	232	2"	36 3/4	6 3/8	1 6/8	30 5/16	15.65	76090
HEF 175	989	232	2 1/2"	36 3/4	6 3/8	1 6/8	30 5/16	15.21	76090
B 280	1,511	232	NPS 3" 150 LB	17.3	55.1	8.9	40.2	165.4	1/75140
B 310	1,708	232	NPS 5" 150 LB	19.7	65.7	12.4	39.4	264.6	2/76090
B 460	2,529	232	NPS 5" 150 LB	19.7	65.7	12.4	39.4	264.6	3/76090
B 660	3,612	232	NPS 6" 150 LB	25.2	66.7	13.4	39.4	343.9	4/76090
B 900	4,926	232	NPS 8" 150 LB	31.1	69.6	13.4	39.4	478.4	6/76090
B 1350	7389	232	NPS 10" 150 LB	33.1	85.0	20.6	47.2	659.2	9/76090
HEF 007/50	101	725	1/2"	9 7/8	4 5/16	1 3/16	3 1/8	4.63	HF 6060
HEF 010/50	159	725	3/4"	9 7/8	4 5/16	1 3/16	3 9/16	4.63	HF 7060
HEF 018/50	290	725	1"	9 7/8	4 5/16	1 3/16	5 1/2	4.63	HF 12060
HEF 047/50	401	725	1 1/2"	21 1/16	6 5/16	1 3/4	10 4/16	20.94	HF 22090
HEF 070/50	569	725	1 1/2"	21 1/16	6 5/16	1 3/4	14 3/16	20.94	HF 32090
HEF 094/50	702	725	2"	28 1/8	6 5/16	1 3/4	21 4/16	26.90	HF 50090
HEF 150/50	1,136	725	2"	28 1/8	6 5/16	1 3/4	21 10/16	26.90	HF 51090

(1) Air inlet temperature 95 °F, air pressure 101.5 psig. Flow rate condition: air temperature 68 °F; air pressure 14,6 psi(A). For differing operating pressures apply the correction factors from the below table.
(2) The HEF/50 flow rate remains unchanged over the whole range of nominal pressures from 246 to 725 psig. Air inlet temperature 95 °F flow rate condition: air temperature 68 °F; air pressure 14,6 psi(A).
Filters for higher pressures and with differing materials available on request. Minimum operating temperature 35 °F.
For B filters contact MTA for technical data confirmation.
Filtration efficiency is in accordance to ISO 8573.1. On request are available filters for high operating pressure and with different materials.

Air flow correction factors for differing operating pressures for HEF and B filters:

Pressure (psig)	15	29	44	58	72	87	100	115	130	145	160	174	189	203	218	232
Correction factor	0.25	0.38	0.50	0.63	0.75	0.88	1.00	1.13	1.25	1.38	1.50	1.63	1.75	1.88	2.00	2.13

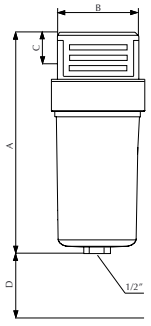
Air flow correction factors for differing operating pressures for HEF/725 psig filters:

Pressure (psig)	15	29	44	58	72	87	100	115	130	145	160	174	189	203	218	232
Correction factor	0.11	0.17	0.22	0.28	0.33	0.39	0.44	0.50	0.56	0.61	0.67	0.72	0.78	0.83	0.89	0.94

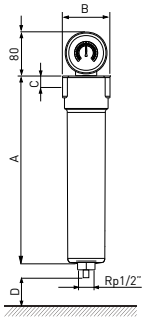
Pressure drops for HEF, B, HEF/725 psig filters:

Filter element grade	P	M	S	A
Rated initial pressure drops dried/humid filter (psig)	0.58	0.72	1.16	0.72

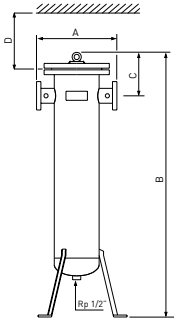
HEF 007/50 - HEF 150/50



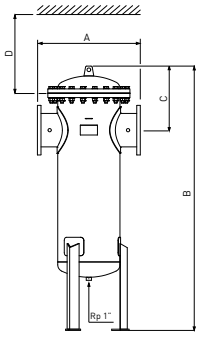
HEF 005-175



B 280 - 900



B 1350



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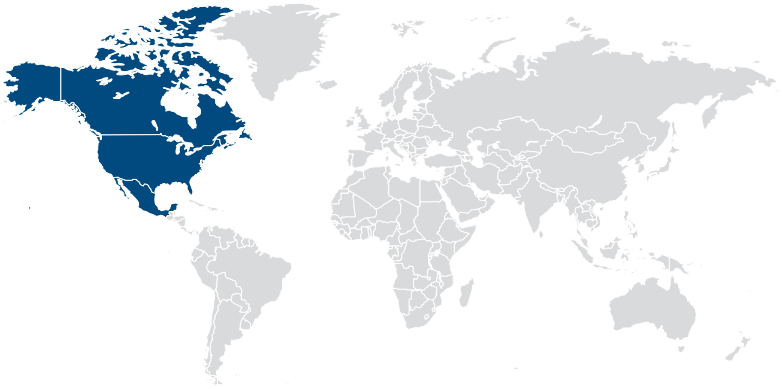

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ISO 9001 BUREAU VERITAS Certification

MTA is ISO9001 certified, a sign of its commitment to complete customer satisfaction.

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cUL Certification

Cooling, conditioning, purifying.