

# ZTF

Compressed Air Filters  
15-1600 scfm



- FILTER ASSEMBLIES**
- ELEMENT OPTIONS**
- SPECIFICATIONS**
- ACCESSORIES**

# THE ZTF FILTRATION DIFFERENCE

## **The Necessity For Compressed Air Filtration**

Compressed air contains harmful solid, liquid and vaporous contaminants that may damage pneumatic equipment, foul controls and instruments and cause product spoilage. Removal of these contaminants is necessary to sustain equipment life, ensure accuracy, and continue efficient production operations.

The air compression process, itself, causes the increase in concentration of the contaminants and adds oil aerosols, vapors and abrasive metallic particulate to the compressed air as well. Heat that's generated during compression adds to the damaging effect these contaminants can have. Rust, scale and decay within compressed air system piping, and ambient air that contains gaseous and corrosive substances are common factors that contribute to the damaging effect of compressed air.

Whether used to trap solid particulates, coalesce liquids, or remove aerosols or vapors, installation of ZEK'S ZTF Filters and elements is an efficient way to purify compressed air and avoid costly equipment repair and production loss.

## **No Foam Sock**

*The outer layer of ZTF Filter elements is made of durable needle felt - not a foam material. Foam is subject to degradation and breaks down easily. Needle felt retains its integrity throughout the life of the element.*



*Coalescing/particulate grade element performance and integrity are guaranteed for 12 months from date of installation. Activated carbon grade elements are guaranteed for 6 months or 4,000 hours, whichever is first.*



*The ZTF line of compressed air filters and elements includes models for flow capacities from 15 - 1600 scfm with threaded connection sizes from 1/4" to 3" NPT.*

ZTF Filters incorporate all the factors necessary for efficient filtration of compressed air and gas, with features that allow them to be easily sized, installed, and maintained:

- **Low pressure drop**
- **One flow direction for all applications**
- **Push-fit element connection** (no tie-rod)
- **Extensive connection and flow selection**
- **Restricted height installations**
- **Multiple filter element grades**
- **300 psi pressure rating\***
- **250° F temperature rating**

\* Pressure rating without float drain installed.



# The Standard ZTF Filter Is Well Equipped...



## **O-ring Bowl Seal**

Remains in correct position and protects threads

## **Flange-Protected Threads**

Remain clean and allow safe depressurization before bowl removal

## **Double O-ring Seal**

Prevents compressed air bypass; holds element in place when bowl is removed

## **Pre-Filtration Layer**

Extends element service life

## **High-Efficiency Filtration Media**

Oilophobic media has excellent oil removal characteristics and maximum dirt holding capacity

## **Stainless Steel Support Cylinders**

Won't corrode; maintains strength throughout service life

## **Drainage Layer**

Ultrasonically bonded polyester needle felt will not decay or break free during service life

## **Ultrasonic Side Seam Weld**

Will not separate during service life

## **ZTF** Elements

**Performance Tested** – Stringent DOP\*\* type testing and integrity-testing program

**Low  $\Delta p$**  – Energy efficient

**Push-Fit, No Tie-Rod Design** – No tools needed for installation; Reduces clearance required for installation

**Suitable For Mineral and Synthetic Oils and Oil-Free Applications** – Won't degrade

**Silicone-Free** – Safe for painting and surface coating applications

**3 Coalescing/Particulate Filtration Grades** – Liquid coalescing to .01ppm; Solid particulate filtration to .01 micron for 99.999% efficiency

\*\* dioctylphthalate type test

# ZTF

Housings



**Modular Head Design** - Heads can be bolted together, simplifying multiple-filter installation and minimizing leak potential from threaded connections.

**Rugged Aluminum Construction** - 300 psi rating\*

**Electrophoretic Coating** - Eliminates corrosion on internal and external head and bowl surfaces

**Pressure Differential Indicator** - Clearly indicates element replacement time (Pop-Up 15 - 80 scfm,  $\Delta p$  Gauge 100 - 1600 scfm)

**Extensive Connection Selection** - 1/4"; 3/8"; 1/2"; 3/4"; 1"; 1 1/2"; 2"; 3" NPT

## Rugged, Ribbed Bowl

Ribs aid bowl removal

## Large Capacity Reservoir

Manages high condensate volume

## Side Drain Port

For low-clearance and balance line applications (65 - 1600 scfm)

## Hex Shape

Aids bowl removal in tight clearance applications

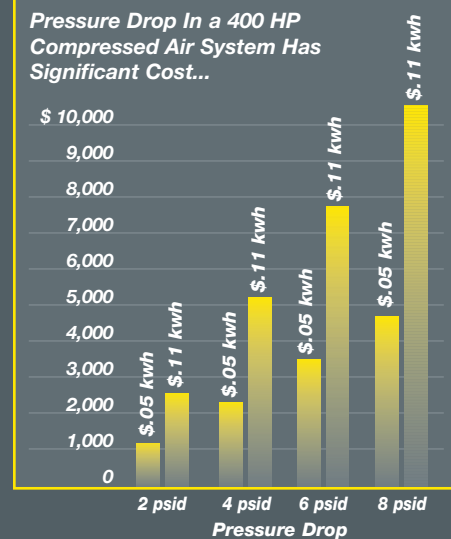
## Nylon/Glass Fiber End Caps

Will not corrode or break

## Energy Cost Savings Through Regular Filter Element Replacement

Regular, periodic replacement of the filter element minimizes the build up of costly drop in pressure through the filter. This pressure drop occurs as a result of a filter element that has been in service beyond the design capacity. Replacement should be performed based on a predetermined schedule or indication of differential pressure. Typically, there is a 1% loss of compressor efficiency due to a 2 psi drop in pressure.

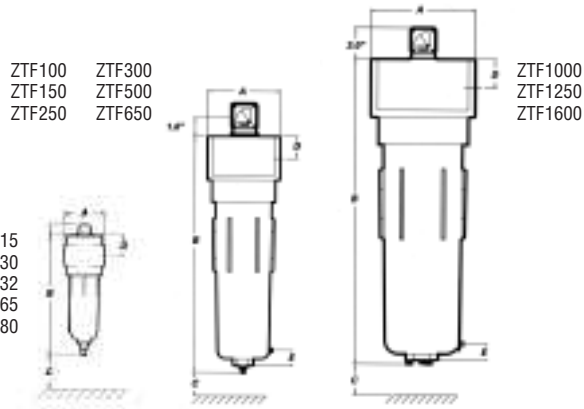
In an operation that requires the use of a 400 HP compressed air system for 8,000 operating hours per year, the cost of the loss in compressor efficiency due to a drop in pressure is illustrated here:



**Use of the correct ZTF element grade, and replacement of the element at the recommended 6 psid can help keep air system operating cost low.**

# ZTF

## Compressed Air Filters



### ZTF Element Grades:

- P** – 5 micron, Particulate
- G** – 1 micron, General Purpose
- H** – .01 micron, High Efficiency
- A** – Vapor and Odor Removal, Activated Carbon

### Specifications

Model No.	Flow scfm**	Connection In/Out	Side Drain	Bottom Drain***	Dimensions					Weight Lbs.	Element Grades			
					A	B	C	D	E		P	G	H	A
ZTF15*	15	1/4"	NA	3/8" TUBE	3.00"	7.50"	4.00"	1.50"	NA	1.5	E15P	E15G	E15H	E15A
ZTF30*	30	3/8"	NA	3/8" TUBE	3.00"	7.50"	4.00"	1.50"	NA	1.5	E30P	E30G	E30H	E30A
ZTF32*	32	1/2"	NA	3/8" TUBE	3.00"	7.50"	4.00"	1.50"	NA	1.5	E32P	E32G	E32H	E32A
ZTF65*	65	1/2"	1/4"	1/4" THD	4.50"	10.50"	6.00"	1.50"	1.25"	4.5	E65P	E65G	E65H	E65A
ZTF80*	80	3/4"	1/4"	1/4" THD	4.50"	10.50"	6.00"	1.50"	1.25"	4.5	E80P	E80G	E80H	E80A
ZTF100*	100	1"	1/4"	1/4" THD	4.50"	14.00"	6.00"	1.50"	1.25"	5.5	E100P	E100G	E100H	E100A
ZTF150*	150	1"	1/4"	1/4" THD	4.50"	14.00"	6.00"	1.50"	1.25"	5.5	E150P	E150G	E150H	E150A
ZTF250*	250	1 1/2"	1/2"	1/4" THD	5.75"	19.00"	6.50"	2.00"	1.50"	12.0	E250P	E250G	E250H	E250A
ZTF300*	300	1 1/2"	1/2"	1/4" THD	5.75"	19.00"	6.50"	2.00"	1.50"	12.0	E300P	E300G	E300H	E300A
ZTF500*	500	2"	1/2"	1/4" THD	5.75"	19.00"	6.50"	2.00"	1.50"	12.0	E500P	E500G	E500H	E500A
ZTF650*	650	2"	1/2"	1/4" THD	5.75"	26.75"	6.50"	2.00"	1.50"	12.5	E650P	E650G	E650H	E650A
ZTF1000*	1000	3"	1/2"	1/4" THD	9.00"	27.50"	7.00"	2.50"	1.50"	32.0	E1000P	E1000G	E1000H	E1000A
ZTF1250*	1250	3"	1/2"	1/4" THD	9.00"	32.50"	7.00"	2.50"	1.50"	33.5	E1250P	E1250G	E1250H	E1250A
ZTF1600*	1600	3"	1/2"	1/4" THD	9.00"	38.50"	7.00"	2.50"	1.50"	35.5	E1600P	E1600G	E1600H	E1600A

\* Add Element Grade P, G, H, or A    \*\*Flow rating at 100 psig; 100°F inlet air; 100°F ambient air    \*\*\*With installed drain

**Correction Factors:** For maximum flow rate, multiply model flow rate shown above by the correction factor corresponding to the working pressure.

Working Press. (psig)	10	20	30	40	50	60	70	80	90	100	110	125	150	175	200	225	250	275	300
<b>Correction Factor</b>	.32	.45	.55	.64	.71	.78	.84	.90	.95	1.00	1.05	1.12	1.22	1.32	1.41	1.49	1.57	1.65	1.72

### ZTF Element Grade Selection & Filter Application

ZTF Filters are used for the separation and removal of oil carryover, dust, dirt, and some aerosols and vapors from air before it enters air system conditioning equipment, piping, or pneumatic tools. Selection of the correct element grade ensures optimum coalescing and particulate filtration, or vapor removal:

#### PARTICULATE/BULK LIQUID FILTRATION - GRADE P

**5 microns; 5 ppm oil carryover; .5 psi Δp clean & dry; 1 psi Δp saturated; 6 psi Δp recommended replacement.**

For removal of small particles and dirt, and for liquid coalescing. Also used where high concentrations of airborne dirt are present in the ambient air.

#### GENERAL PURPOSE FILTRATION - GRADE G

**1 micron; 0.1 ppm oil carryover; 1 psi Δp clean & dry; 2 psi Δp saturated; 6 psi Δp recommended replacement.**

For general use to protect pneumatic tools and actuators from dirt, oil, and dust. Used to coalesce air compressor lubricant carryover out of the air stream. Element of choice for desiccant dryer afterfilter.

#### HIGH EFFICIENCY FILTRATION - GRADE H

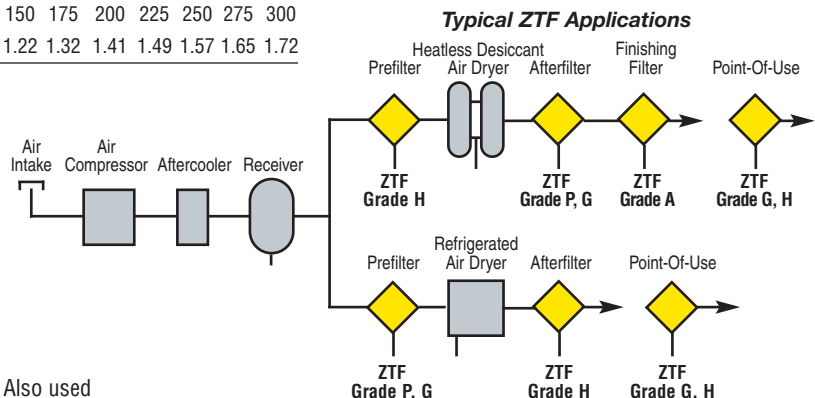
**.01 micron; .01 ppm oil carryover; 1.5 psi Δp clean & dry; 3 psi Δp saturated; 6 psi Δp recommended replacement.**

Used for fine coalescing and when removal of very small particles is required.

#### ACTIVATED CARBON FINISHING - GRADE A

**.01 micron; .003 ppm oil carryover; 1 psi Δp clean & dry; NA psi Δp saturated; NA psi Δp recommended replacement.**

For removal of vapors and odors. A .01 high efficiency (Grade H) filter must be installed upstream of the Grade A filter. Residual vapors bind to the surface of the activated carbon grain molecules. Grade A elements must be replaced at 6 months or 4,000 hours, whichever is first. Warranty applies to 6 month, 4,000 hour guideline.



Note: A 30% reduction in rated flow equals a 50% reduction in filter pressure drop



# ZTF

## Compressed Air Filters

15-1600 scfm

### Options And Accessories

#### Wall Mounting Brackets

Hardware for convenient wall mounting.

#### Head Connection Kits

For multiple-filter installation (maximum of 3).

#### Port Plate Kit

Allows filter to be piped into air system with different pipe diameter. Sizes available from 1/2" - 2.0".

Kit includes O-ring seal and 4 bolts.

#### Spanner Wrench

Aids bowl removal – especially helpful for large diameter bowls.



#### Drain Options

- Timed Electric Solenoid
- Enterprize™ No Air Loss



Enterprize™ NCC1701-D

### Warranty

ZTF Filter housing assemblies are covered under the standard ZEKS warranty policy. ZTF elements are covered for 12 months (Grade A; 6 months/4,000 hour coverage) from date of installation following ZEKS installation guidelines. See ZEKS' published Warranty Policy for complete information.

**Contact ZEKS or your local ZEKS Distributor if you have questions about ZTF Compressed Air Filters.**



ZTF filter housings and elements are manufactured in accordance with ISO 9001 Quality Assurance Standards.

Assembled ZTF filters conform to ISO 8573.1 Air Quality Classification.

ZTF filter housings conform to all US and Canadian certification requirements.

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