

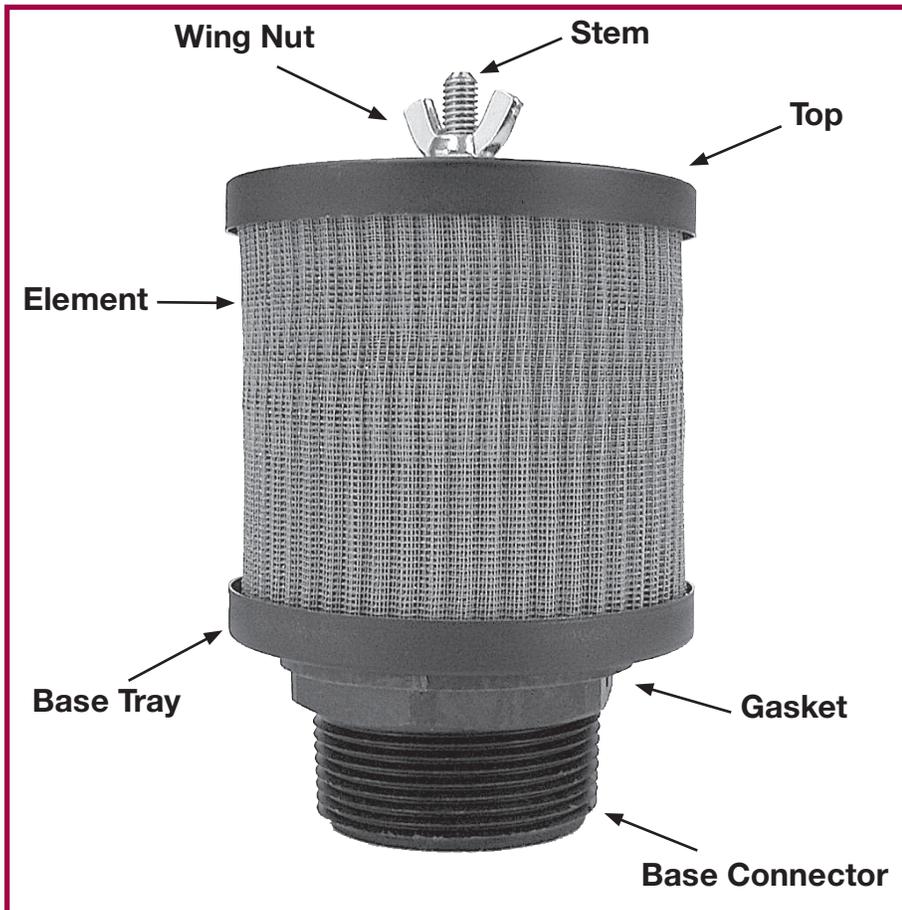
Falls
Filtration
Technologies, Inc.

Teamwork in Filtration Solutions

UNIMAZE SMALL FILTERS



filters and filter silencers



The elements are interchangeable in each model size to meet filtering requirements of different environment where equipments may operate. See performance chart for ratings of each. (See insert)

Features

- Simplified construction with four basic components.
- Three easily interchangeable filter elements.
- Nine standard MPT sizes from 3/4" to 4".
- Directly mounted on air intake.
- Operation in temperature range: -65° to 250°F.
- No sealant required on pipe connection.
- Lightweight and durable components.
- No sharp edges.
- Optional weatherhood protection.
- Satisfactory sound attenuation on silencer models.

Unimaze Small Filters and Filter Silencers have been designed and engineered for air intake of all small internal combustion engines, air compressors, and blowers with rated air flows to 450 CFM.

Filter Design

Unimaze Small Filters include just four component parts (1) element, (2) base connector, (3) top or optional weatherhood, and (4) base tray or body assembly.

Hardware includes wing nut, stem, and gasket.

The base connector is glass reinforced engineered plastic. It combines strength, stability, and chemical resistance, with distortion resistance and aesthetic appeal. The glass reinforced plastic forms a naturally tight bond to metal to eliminate air leakage.

Three filter elements are available: oil wetted wire mesh, synthetic with wrap around prefilter, and resin impregnated paper media.



(cont. on page 3)

Applications

NB Wire Mesh Media

Where filtration of dirt particles 10 micron or larger is required. The viscous impingement principle provides up to 94% arrestment efficiency on harmful dirt particles 10 micron and larger. Crimped cylindrical-shaped wire mesh element permits greater filter surface resulting in minimal pressure drop. The elements are reusable if cleaned properly and regularly.

DA Synthetic Media

Where high efficiency filtration



and long life at low pressure drop is required. Performance is better than 98% efficiency on particles of 3 micron mean diameter, over 99% efficiency on 5 micron mean particles, and virtually 100% efficiency on 10 micron particles and larger. The polyester media element comes with a wrap around prefilter providing extended service life.

DM Dry Paper Media

Where a high degree of filtration of extremely fine dirt particles is required. Standard laboratory tests indicate better than 99.3%



efficiency using SAC fine dust test. The element can be cleaned by washing and reused.

UD Low Profile Filter

Where maximum dirt holding capacity and a high degree of filtration of extremely fine dirt particles is required; but where filter space is limited. Also for where low initial air flow restriction is desired. Low pro-



file design eliminated need to sacrifice filter capacity due to cramped installation envelope. Efficiency, initial pressure loss identical to DM Dry Paper Media. For better protection, elements with foam safety media are also available.

Unimaze Filter Silencers

Unimaze Small Filters are available in Filter-Silencer models. They include a silencing chamber which attenuates in the frequency



range of 250 to 8000 hertz per second. An expansion chamber attenuates low frequency noise and an acoustical absorptive pad and baffles reduce high frequency sound emissions.

Optional Weatherhoods

All Unimaze Small Filter and Filter-Silencer models can be supplied with attractive, lightweight durable plastic weatherhoods.



UNIMAZE filters and filter silencers

SERVICING

NB Wire Mesh Media

Remove hood top and lift out element. Since element is oil wetted, they should be cleaned in any commercial cleaning solution such as Oakite and water. Dry thoroughly and immerse in SAE 30 engine oil. Drain off excess oil and reassemble. **DO NOT CLEAN FILTER ELEMENT IN GASOLINE** due to possible explosion on the receiver of a compressor.

DA Synthetic Media

DA Filters must be cleaned at regular intervals. Filter elements should be replaced if ruptured or torn. When the outside surface of the element appears to be evenly coated with dirt, it should be cleaned as follows. Remove wing nut and lift off hood or top; remove wrap-around prefilter element and replace or clean by washing in water; lift out the main element; shake or blow off heavy dirt accumulations; if required, wash main element in cold or warm water (a mild detergent solution will assist in cleaning); rinse and allow element to dry; reassemble using new or cleaned wrap around prefilter element.

DM Dry Paper Media

Dry Filters can be easily field serviced since accumulated dirt can be removed by tapping the element against the hand. Implant, clean by: (1) directing compressed air up and down the pleats on the element "clean" side (opposite the normal operating air flow direction) at nozzle pressure no greater than 30 psi; or (2) use garden hose to direct clean, warm water (70° to 100°F) up and down side of element at pressure no greater than 30 psi; or (3) wash in a mild detergent solution. Rinse and allow element to dry. Do not use other cleaning fluids. When washing fails to restore element, it should be replaced.

ISO 9001:2000 & AS9100 Certified



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Falls Filtration Technologies reserves the right to change any model or specification at any time without notice.

UNIMAZE performance data

AIR-FLOW VS. RESISTANCE Resistance (inches of water) at Rated CFM

Model No.	WIRE ELEMENTS (NB)								PAPER ELEMENTS (DM / DS)								SYNTHETIC ELEMENTS (DA)									
	MPT	1¼	1½	2	2½	3	3½	4	MPT	1	1½	1¾	2	2½	3	3½	4	MPT	1	1¼	1½	2	2½	3	3½	4
UM01	CFM 75	7.5	3.9	3.0					CFM 35	7.1	2.1	1.3					CFM 25	2.1	1.7	0.8						
UM02	100	11.2	7.1	6.9					50		3.5	2.5	2.5				N/A									
UM03	125	17.5	12.1	11.8	11.8				100		12.0	8.9	8.4	8.4			40		2.1	1.5	1.4					
UM04	175		11.1	6.6	4.0	1.8	1.9		150				5.2	3.4	1.6		70			4.1	1.1	0.7				
UM05	225			10.3	6.6	3.2	3.2		225					7.4	3.6	3.7	100				2.4	1.6	0.8	0.8		
UM07	300				9.7	5.5	5.4	5.4	300					12.6	6.2	5.9	140					2.6	1.5	1.5		
UM08	450					12.5	12.8	12.8	450						13.0	13.5	13.5	185						3.0	2.5	2.4
US10	25								25								20									
US15	45								45								30									
US20	100	8.7	7.0						100		9.3	7.4					50		2.3	1.9						
US30	165			7.1	4.0	3.6			165				7.0	3.9	3.7		70			3.6	2.0					
US40	240				6.2	3.8	4.0		240					6.6	4.5	4.8	110				2.3	1.4				
US50	350					5.0	5.0	5.0	350						5.2	5.1	5.1	165					3.0	1.6	1.6	
UD62	50								50		4.0	2.9	2.8				50		4.3	3.1	2.9					
UD63	95								95			7.9	7.5	7.5			95			8.1	7.7	7.7				
UD83	150								150				6.2	3.8	2.0		150				6.5	4.5	4.2			
UD84	225								225					7.9	6.9	5.9	225					8.3	6.1	6.1		
UD94	300								300					13.0	6.5	6.6	300					13.5	6.9	6.9	6.8	
UD95	450								450						12.5	12.8	12.9	450						12.8	12.9	12.9

filter silencer ATTENUATION TEST DATA

Filter Model	Filter Element	Pipe Size (Inches)	Rated CFM	OCTAVE BAND INSERTION LOSS (dB)*					
				250	500	1000	2000	4000	8000
US10TNBGB	wire	¾	25	10	21	28	25	18	18
US10TDAGB	synth	¾	20	7	20	31	23	19	24
US15TNBGA	wire	1	45	12	22	33	16	12	20
US15TDAGA	synth	1	30	11	23	33	16	16	26
US20TNBGK	wire	1½	100	11	23	9	9	12	6
US20TDAGK	synth	1½	50	11	22	9	9	12	8
US20TDMGK	paper	1½	100	12	23	9	10	10	7
US30TNBGL	wire	2	165	18	20	9	9	9	8
US30TDAGL	synth	2	70	19	20	9	9	7	16
US40TNBGM	wire	2½	240	18	9	9	9	4	3
US40TDAGM	synth	2½	110	17	10	9	9	6	7
US40TDMGM	paper	2½	240	18	11	9	9	5	6
US50TNBGN	wire	3	350	20	9	10	9	2	5
US50TDAGN	synth	3	165	20	9	10	9	4	10

*Nearest whole decibel

UNIMAZE filter selection and parts list

Model No.	CFM Range	Base Size	Element Selection			Unit Height w/o Base	Diameter		Tops	Hoods	Base Trays	Stems
			Wire NB	Synthetic DA	Paper DM		w/Top	w/Hood				
UNIMAZE FILTER SERIES												
UM01	20-75	¾"	1NB-007	1DA-007	1DM-007	3.75"	3.56"	6.88"	1NB-001	1SPH-018	1NB-045	1NB-004
UM02	50-100	1"	2NB-007	N/A	2DM-007	4.25	4.06	6.88	2NB-001	1SPH-018	2NB-045	2NB-004
UM03	40-125	1¼"	3NB-007	3DA-007	3DM-007	4.75	4.56	6.88	3NB-001	1SPH-018	3NB-045	3NB-004
UM04	60-150	1½"	4NB-007	4DA-007	4DM-007	5.50	5.38	8.88	4NB-001	3SPH-018	4NB-045	4NB-004
UM05	100-225	2"	5NB-007	5DA-007	5DM-007	6.25	5.94	8.88	5NB-001	3SPH-018	5NB-045	5NB-004
UM07	140-300	2½"	7NB-007	7DA-007	7DM-007	7.12	7.31	11.88	7NB-001	5SPH-018	7NB-045	7NB-004
UM08	185-450	2½"	8NB-007	8DA-007	8DM-007	8.25	8.12	11.88	8NB-001	5SPH-018	8NB-045	8NB-004
UNIMAZE FILTER – SILENCER SERIES												
US10	20-25	¾"	10NB-007	10DA-007	10DM-007	4.25"	5.38"	6.56"	4NB-001	2SPH-018	S10-825*	–
US15	30-45	1"	15NB-007	15DA-007	15DM-007	6.38	5.38	6.56	4NB-001	2SPH-018	S15-825*	–
US20	50-100	1¼"	20NB-007	20DA-007	20DM-007	8.69	6.56	8.44	20T-800	20H-800	S20-825	20B-004
US30	70-165	2"	30NB-007	30DA-007	30DM-007	9.38	7.62	11.31	30T-800	30H-800	S30-825	30B-004
US40	110-240	2½"	40NB-007	40DA-007	40DM-007	11.62	8.12	14.88	40T-800	50H-800	S40-825	40B-004
US50	165-350	3"	50NB-007	50DA-007	50DM-007	12.81	10.12	14.88	50T-800	50H-800	S50-825	50B-004
*Suffix 825=Silencer Body/Base Assembly												
UNIMAZE FILTER – LOW PROFILE SERIES												
UD62	50	¾"	N/A	62DS-007**	62DM-007	2.19"	5.94"	8.44"	5NB-001	4SPH-018	6NB-045	6NB-004
UD63	95	1"	N/A	63DS-007	63DM-007	3.44	5.94	8.44	5NB-001	4SPH-018	6NB-045	1NB-004
UD83	150	1¼"	N/A	83DS-007	83DM-007	3.19	8.12	11.31	8NB-001	6SPH-018	8NB-045	1NB-004
UD84	225	1½"	N/A	84DS-007	84DM-007	4.44	8.12	11.31	8NB-001	6SPH-018	8NB-045	3NB-004
UD94	300	2"	N/A	94DS-007	94DM-007	3.94	10.12	14.56	9NB-001	8SPH-018	9NB-045	2NB-004
UD95	450	2½"	N/A	95DS-007	95DM-007	5.56	10.12	14.88	9NB-001	7SPH-018	9NB-045	5NB-004
**DS=Paper Element with foam safety liner.												
BASE CONNECTOR SELECTION AND CODES						FILTER UNIT NUMBERING SYSTEM						
MPT	¾"	1"	1¼"	1½"	2"	2½"	3"	3½"	4"	U M O 3 H N B G L – Part Number 1 2 3 4 5 6 7 8 9 10 Position (10 digits) Color Choice (standard black) Base connector size Wire element construction (use DA for synthetic or DM for paper) Weatherhood (use T for top) Model size Filter model designation		
CODE	GB	GA	GJ	GK	GL	GM	GN	GE	GS			
Selection UM01, UM02, UM03, UM62 & UD63:						Gasket No. 12B-006						
P/N	12PGB	12PGA	12PGJ	12PGK	12PGL	12PGM						
Sel. for UM04 to UM08, US20 to US50, UD83 to UD95:						Gasket No. 71B-006						
P/N		71PGA	71PGJ	71PGK	71PGL	71PGM	71PGN	71PGE	71PGS			
Wing Nut — P/N 20515			Seal Washer — P/N 22852									