

UF1500/UF3000/UF5000 Series UHF Band Pass Filter

The UF1500, UF3000 and UF5000 UHF band pass filters are tunable and exceptionally efficient. The UF1500 is rated for 1.5 kW average power at the filter output and the UF3000 is rated for 3.0 kW, both models are convection cooled. The Model UF5000 adds forced air cooling and this increases the power handling capability to 5.0 kW. The filters are constructed of lightweight Aluminum Brass resonators. The Evanescent coupled TEM resonators are durable and provide a rugged design that tunes easily. Tuning elements are designed with the tuner in mind, allowing precise tuning for today's stringent applications in significantly less time for additional cost savings. Multiple cross couplings are provided to increase rejection of transmitter out of band emissions. Six and eight pole designs are available for 8-VSB and COFDM applications and listed below. Input and output connections are 1-5/8 or 3-1/8-inch, unflanged.



UF5000-82 eight-section UHF band pass filter

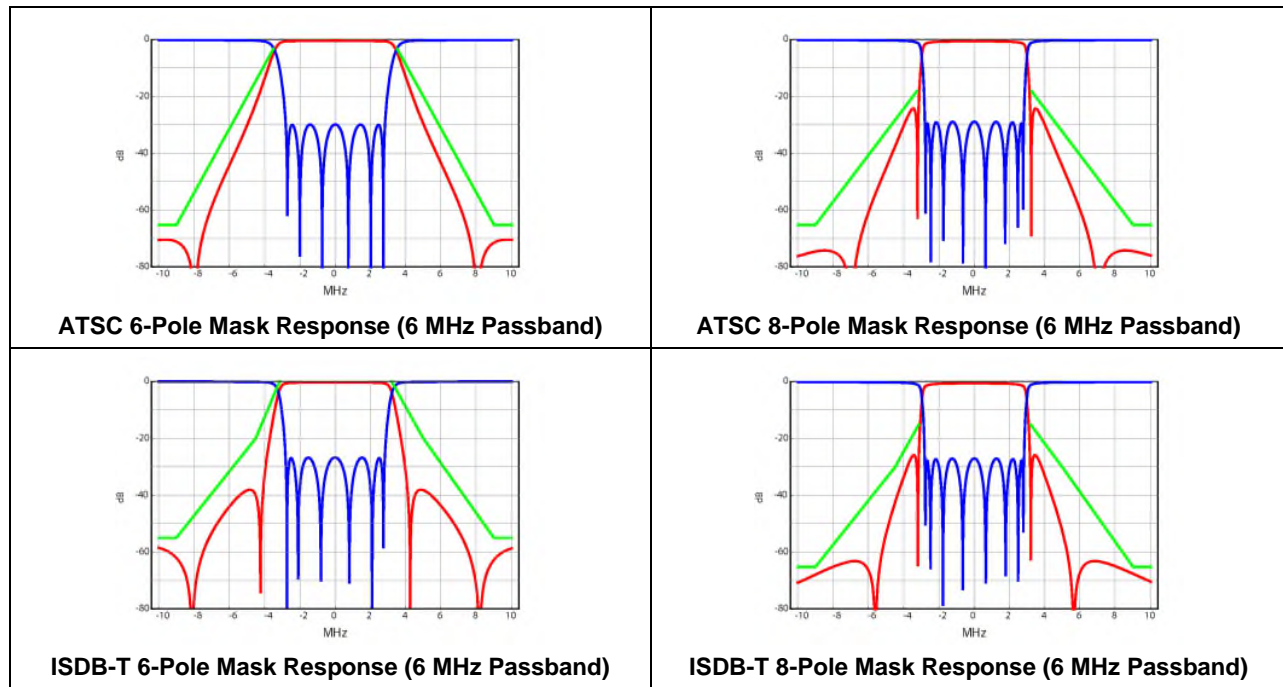
UF1500/UF3000/UF5000 Series Filter:

- ATSC, DVB-T and ISDB-T
- Tunable for 6, 7, or 8 MHz Channels
- Non-Critical and Critical Masks
- Temperature Compensated

Optional Items:

- Forced Air for higher power handling
- Fine-Matchers to optimize system performance
- Directional Couplers to monitor system performance
- Output Switching/Patching to test system performance
- Low Pass Harmonic Filters

Typical DTV Mask Filter Response

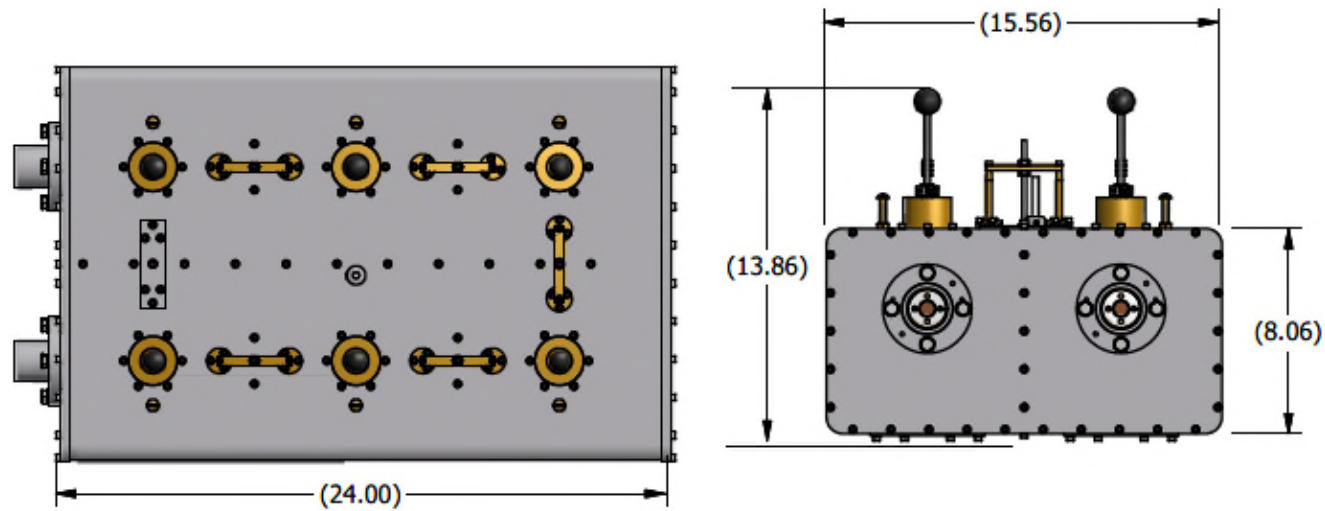


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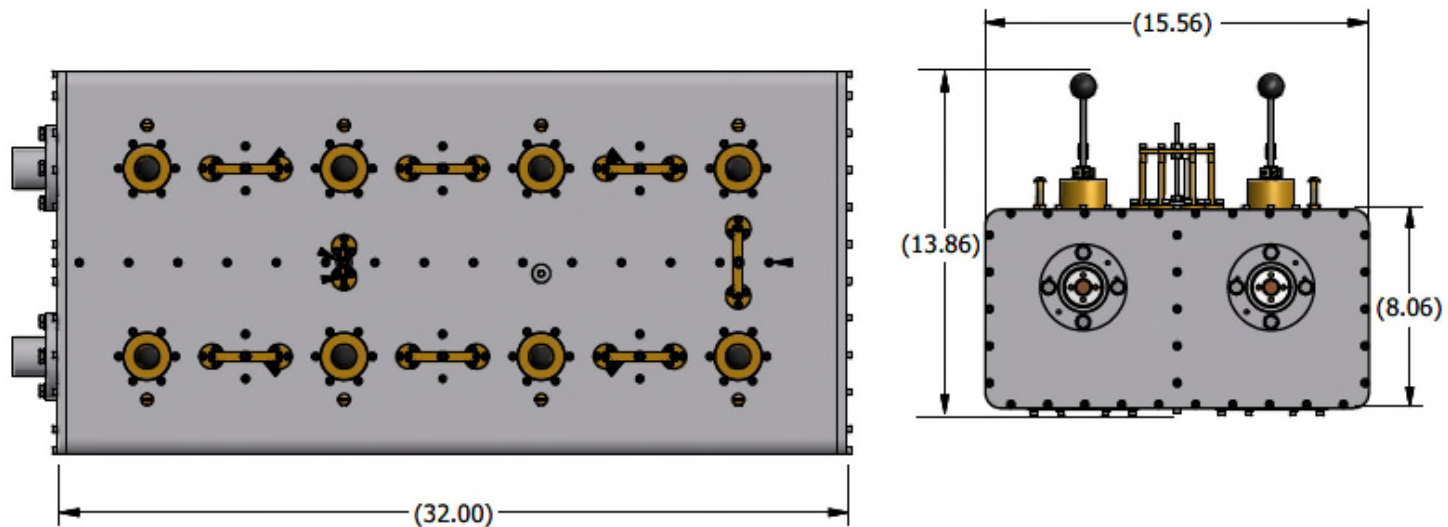
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Typical Specifications

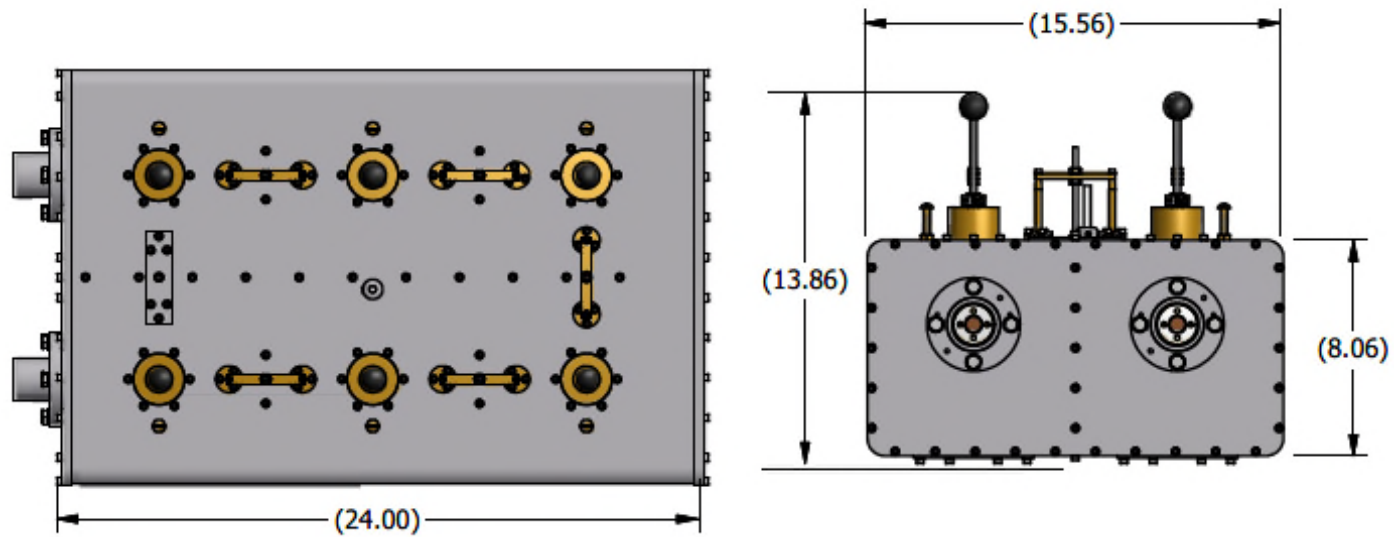
Model:	UF1500-62	UF1500-82	UF3000-6x	UF3000-8x	UF5000-6x	UF5000-8x	
Poles:	Six (6)	Eight (8)	Six (6)	Eight (8)	Six (6)	Eight (8)	
Cooling:	Convection		Convection		Forced Air		
Power Handling at Filter Output:	1.5 kilowatts		3.0 kilowatts		5.0 kilowatts		
VSWR (Passband), maximum							
ATSC 1.0 (6 MHz)	1.08	1.10	1.08	1.10	1.08	1.10	
ATSC 3.0 (6 MHz)	1.12	1.12	1.12	1.12	1.12	1.12	
ISDB-T (6 MHz)	1.13	1.13	1.13	1.13	1.13	1.13	
DVB-T (8 MHz)	1.12	1.12	1.12	1.12	1.12	1.12	
DVB-T (7 MHz)	1.12	1.12	1.12	1.12	1.12	1.12	
DVB-T (6 MHz)	1.15	1.15	1.15	1.15	1.15	1.15	
Insertion Loss, Fc							
ATSC 1.0 (6 MHz)	0.50 dB	0.65 dB	0.35 dB	0.40 dB	0.35 dB	0.40 dB	
ATSC 3.0 (6 MHz)	0.50 dB	0.65 dB	0.35 dB	0.40 dB	0.35 dB	0.40 dB	
ISDB-T (6 MHz)	0.40 dB	0.60 dB	0.30 dB	0.35 dB	0.35 dB	0.35 dB	
DVB-T (8 MHz)	0.30 dB	0.45 dB	0.25 dB	0.30 dB	0.25 dB	0.30 dB	
DVB-T (7 MHz)	0.35 dB	0.50 dB	0.30 dB	0.30 dB	0.30 dB	0.30 dB	
DVB-T (6 MHz)	0.40 dB	0.60 dB	0.35 dB	0.40 dB	0.35 dB	0.40 dB	
Group Delay							
ATSC 1.0 (6 MHz)	< 150 nsec	< 400 nsec	< 150 nsec	< 400 nsec	< 150 nsec	< 400 nsec	
ATSC 3.0 (6 MHz)	< 250 nsec	< 800 nsec	< 250 nsec	< 800 nsec	< 250 nsec	< 800 nsec	
ISDB-T (6 MHz)	< 250 nsec	< 400 nsec	< 250 nsec	< 400 nsec	< 250 nsec	< 400 nsec	
DVB-T (8 MHz)	< 200 nsec	< 400 nsec	< 200 nsec	< 400 nsec	< 200 nsec	< 400 nsec	
DVB-T (7 MHz)	< 250 nsec	< 500 nsec	< 250 nsec	< 500 nsec	< 250 nsec	< 500 nsec	
DVB-T (6 MHz)	< 275 nsec	< 450 nsec	< 275 nsec	< 450 nsec	< 275 nsec	< 450 nsec	
Rejection							
ATSC (6 MHz)	+/- 3.25 MHz	N/A	> 18 dB	N/A	> 18 dB	N/A	> 18 dB
	+/- 3.5 MHz	> 0 dB	> 23 dB	> 0 dB	> 23 dB	> 0 dB	> 23 dB
	+/-9.0 MHz	> 64 dB	> 64 dB	> 64 dB	> 64 dB	> 64 dB	> 64 dB
ISDB-T (6 MHz)	+/- 3.15 MHz	> 0 dB	> 15 dB	> 0 dB	> 15 dB	> 0 dB	> 15 dB
	+/- 4.5 MHz	> 20 dB	> 30 dB	> 20 dB	> 30 dB	> 20 dB	> 30 dB
	+/-9.0 MHz	> 55 dB	> 65 dB	> 55 dB	> 65 dB	> 55 dB	> 65 dB
DVB-T (8 MHz)	+/- 4.2 MHz	> 4 dB	> 15 dB	> 4 dB	> 15 dB	> 4 dB	> 15 dB
	+/- 6.0 MHz	> 20 dB	> 40 dB	> 20 dB	> 40 dB	> 20 dB	> 40 dB
	+/-12.0 MHz	> 40 dB	> 55 dB	> 40 dB	> 55 dB	> 40 dB	> 55 dB
DVB-T (7 MHz)	+/- 3.7 MHz	> 3.5 dB	> 15 dB	> 3.5 dB	> 15 dB	> 3.5 dB	> 15 dB
	+/- 5.25 MHz	> 18 dB	> 28 dB	> 18 dB	> 28 dB	> 18 dB	> 28 dB
	+/-10.5 MHz	> 43 dB	> 53 dB	> 43 dB	> 53 dB	> 43 dB	> 53 dB
DVB-T (6 MHz)	+/- 3.2 MHz	> 4 dB	> 15 dB	> 4 dB	> 15 dB	> 4 dB	> 15 dB
	+/- 5.0 MHz	> 20 dB	> 40 dB	> 20 dB	> 40 dB	> 20 dB	> 40 dB
	+/-9.0 MHz	> 40 dB	> 55 dB	> 40 dB	> 55 dB	> 40 dB	> 55 dB
RF Connectors							
Size	1-5/8-inch, unflanged		X=2 1-5/8-inch or X=3 3-1/8-inch, unflanged				
Length							
Length	24.0 inches (610 mm)	32.0 inches (813 mm)	24.0 inches (610 mm)	32.0 inches (813 mm)	30.5 inches (775 mm)	30.5 inches (775 mm)	
Width							
Width	15.6 inches (395 mm)	15.6 inches (395 mm)	15.6 inches (395 mm)	15.6 inches (395 mm)	23.3 inches (591 mm)	23.3 inches (591 mm)	
Height							
Height	13.9 inches (352 mm)	13.9 inches (352 mm)	13.9 inches (352 mm)	13.9 inches (352 mm)	28.8 inches (732 mm)	36.8 inches (935 mm)	
Weight							
Weight	58 pounds (26.3 kg)	75 pounds (34.0 kg)	58 pounds (26.3 kg)	75 pounds (34.0 kg)	84 pounds (38.1 kg)	100 pounds (45.4 kg)	



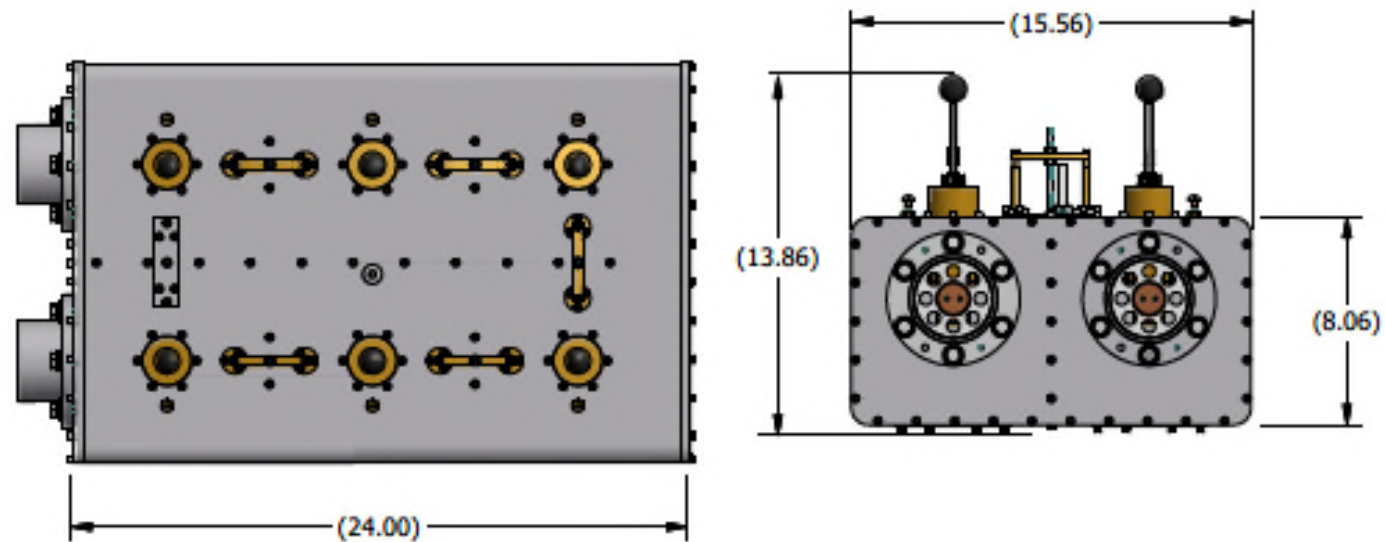
ERI UF1500-62 Series UHF Digital Television Mask Filter, six (6) section filter with 1-5/8-inch unflanged input and output, (dimensions shown in inches)



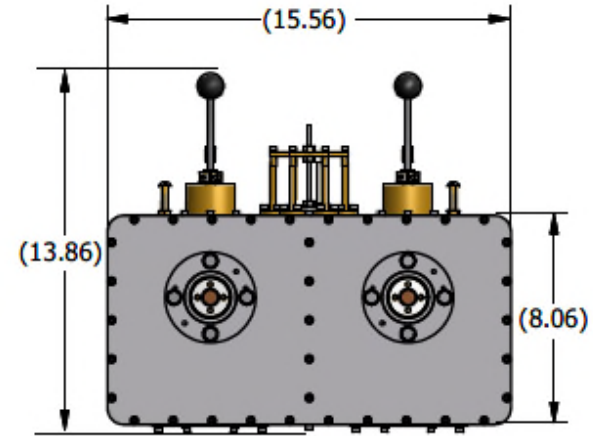
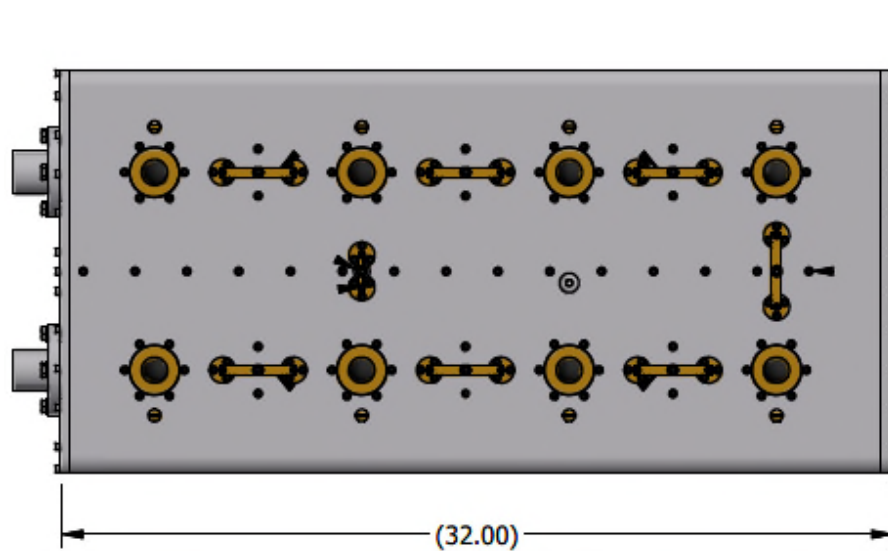
ERI UF1500-82 Series UHF Digital Television Mask Filter, eight (8) section filter with 1-5/8-inch unflanged input and output, (dimensions shown in inches)



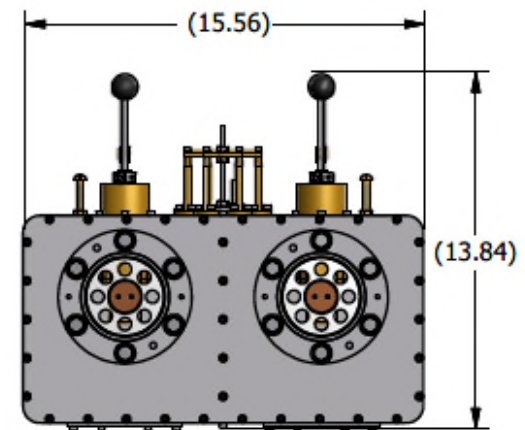
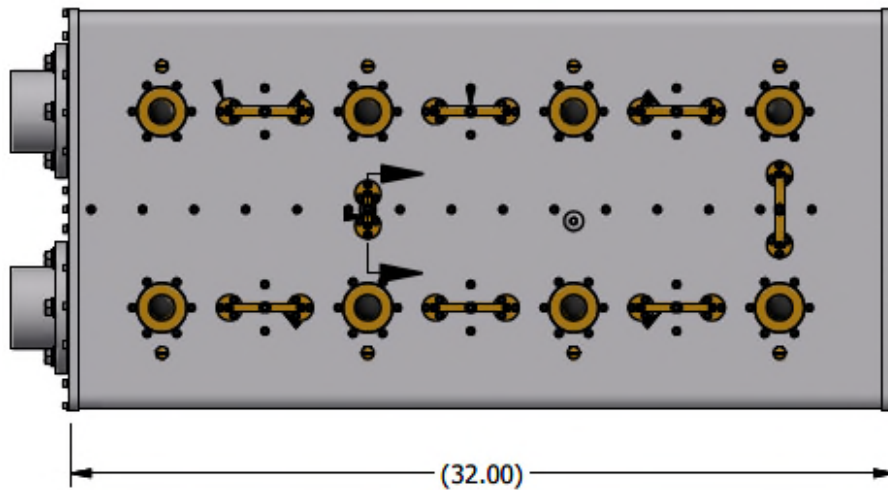
ERI UF3000/UF5000-62 Series UHF Digital Television Mask Filter, six (6) section filter with 1-5/8-inch unflanged input and output, (dimensions shown in inches)



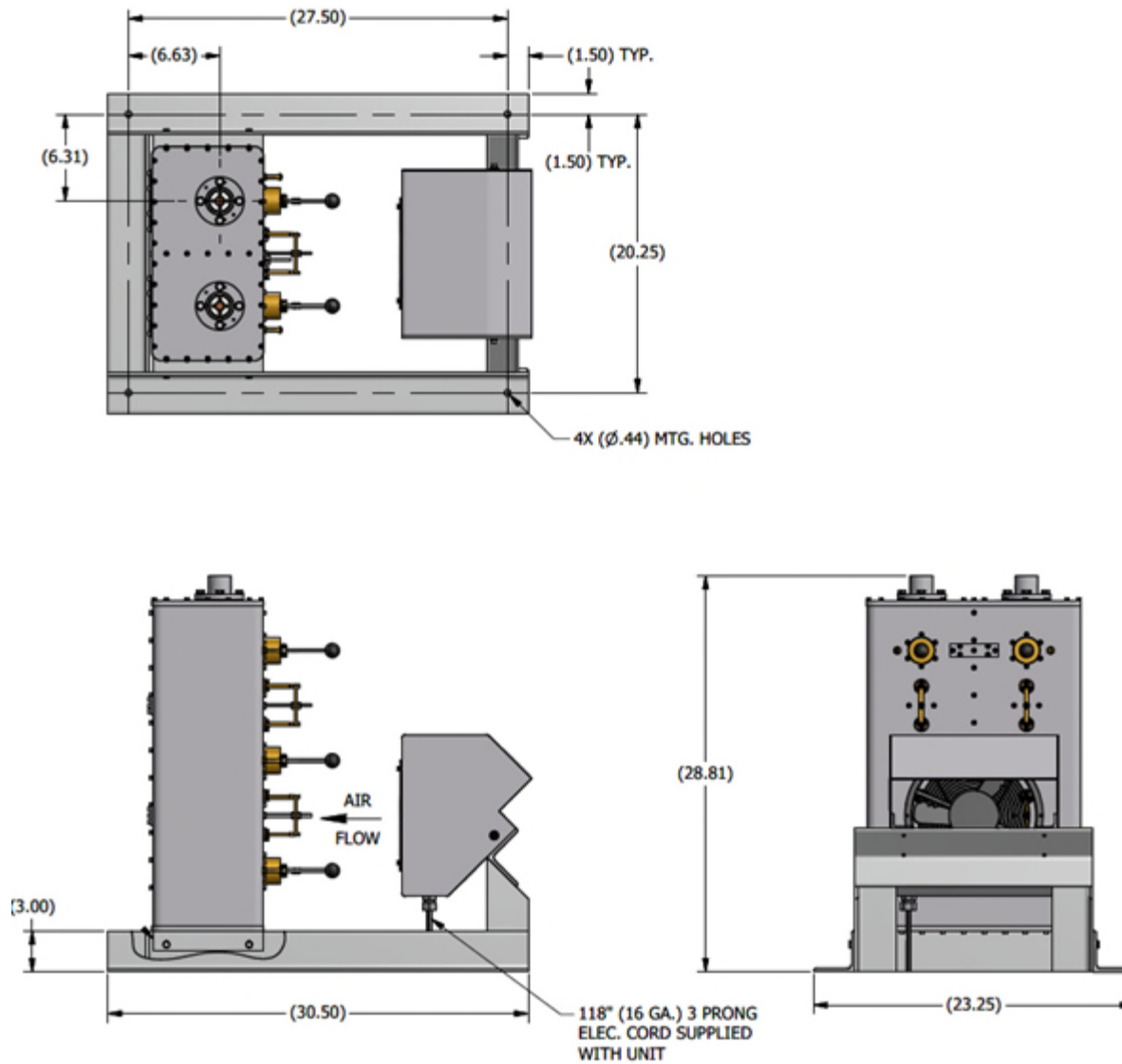
ERI UF3000/UF5000-63 Series UHF Digital Television Mask Filter, six (6) section filter with 3-1/8-inch unflanged input and output, (dimensions shown in inches)



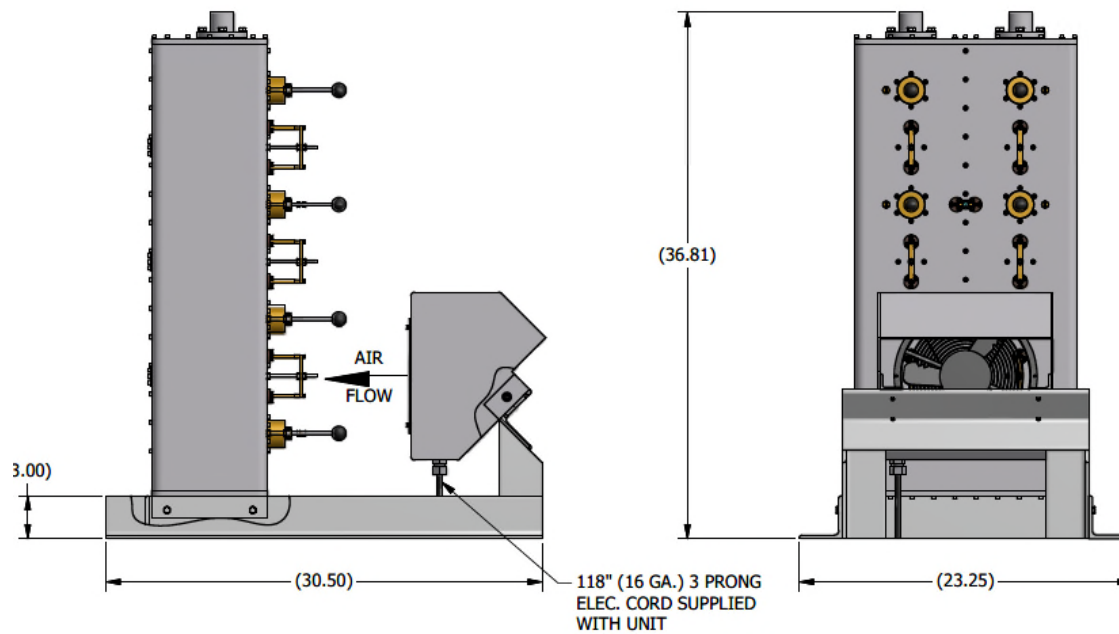
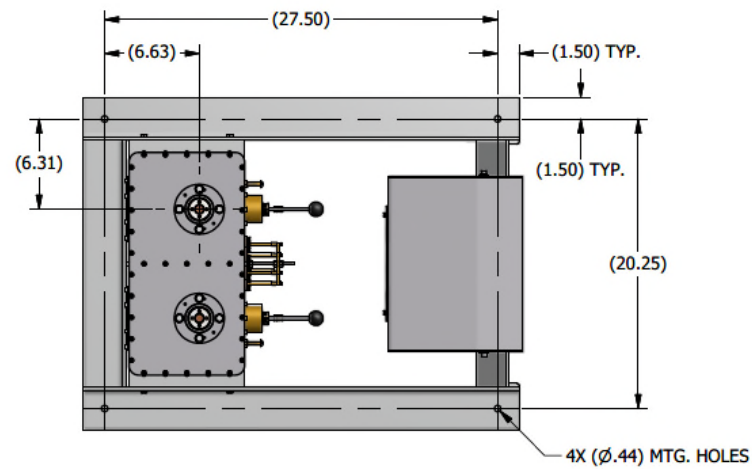
ERI UF3000/UF5000-82 Series UHF Digital Television Mask Filter, eight (8) section filter with 1-5/8-inch unflanged input and output, (dimensions shown in inches)



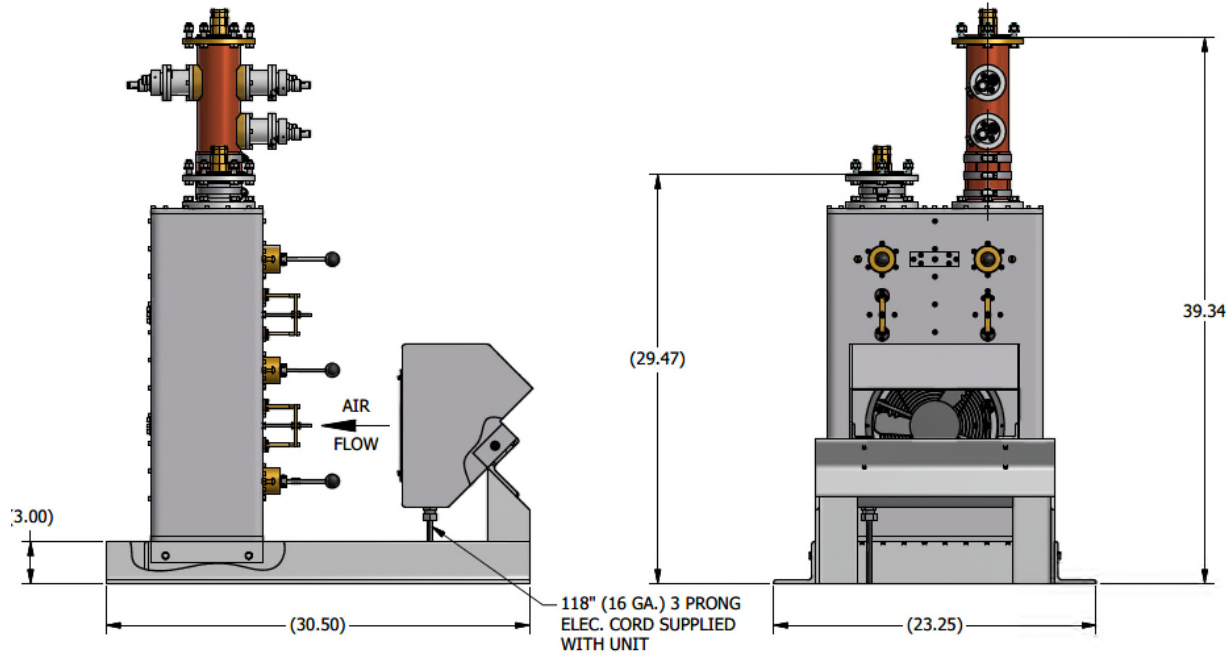
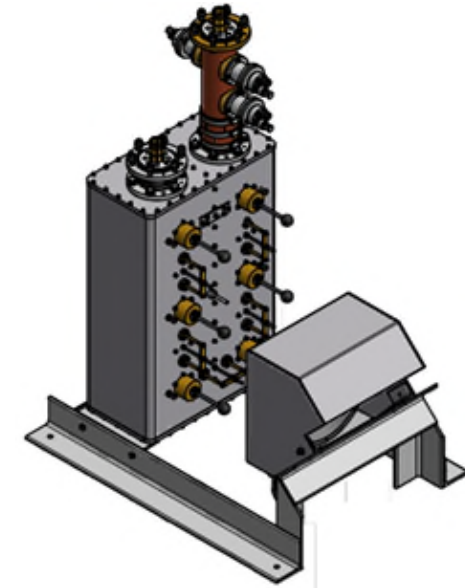
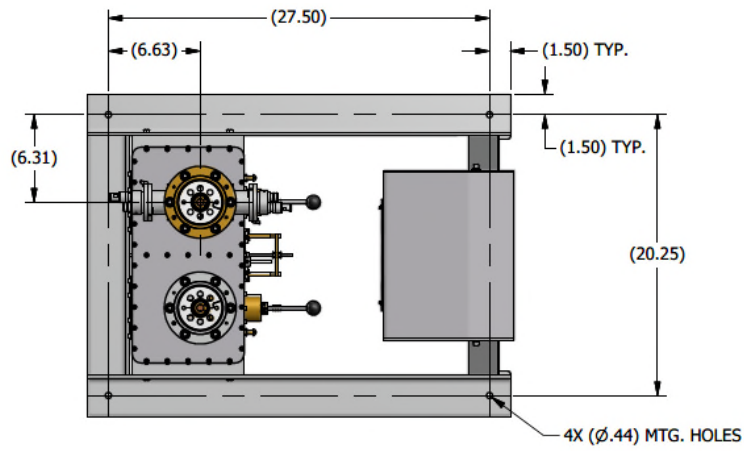
ERI UF3000/UF5000-83 Series UHF Digital Television Mask Filter, eight (8) section filter with 3-1/8-inch unflanged input and output, (dimensions shown in inches)



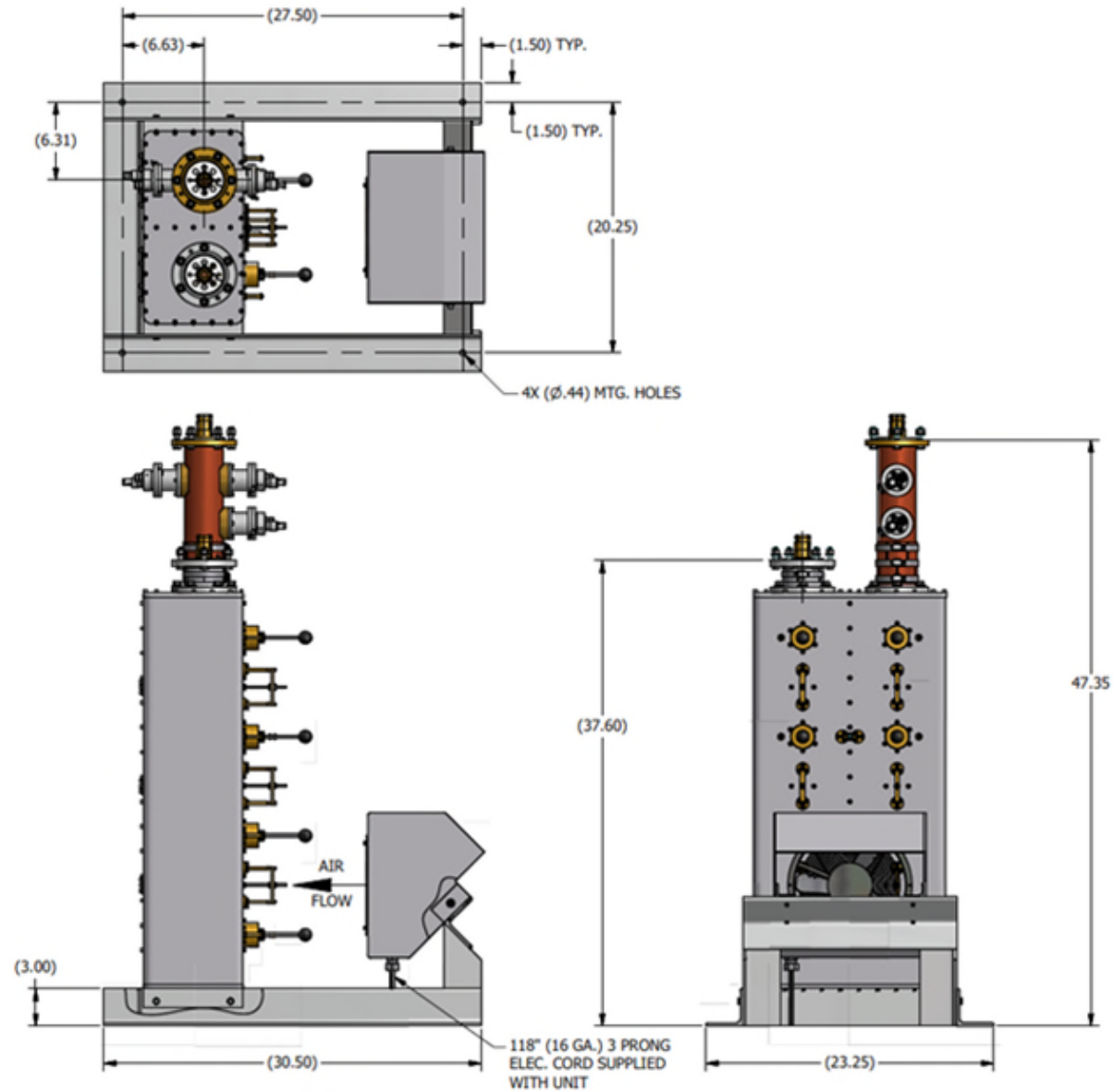
ERI UF5000-62 Series UHF Digital Television Mask Filter, six (6) section filter, (dimensions shown in inches) shown with 1-5/8-inch unflanged coaxial input and output connections. 3-1/8-inch connections are also available.



ERI UF5000-82 Series UHF Digital Television Mask Filter, eight (8) section filter, (dimensions shown in inches) shown with 1-5/8-inch unflanged coaxial input and output connections. 3-1/8-inch connections are also available.



ERI Model UF5000-63 Six (6) Section UHF Band Pass Filter mounted in support frame with cooling fan. System shown with optional DC3011-N 3 port adjustable directional coupler. Shown with 3-1/8-inch EIA flanged input and output.



ERI Model UF5000-83 Eight (8) Section UHF Band Pass Filter mounted in support frame with cooling fan. System shown with optional DC3011-N 3 port adjustable directional coupler. Shown with 3-1/8-inch EIA flanged input and output.