

783 Series FM Band Pass Filters

Features

- Cylindrical construction provides better mechanical and electrical stability than square or rectangular cavities
- Factory tuned to customer's specified channel, yet can be easily field converted to any FM channel
- Minor adjustments of cavity resonant frequency can be made during full power operation of filters
- High stability temperature compensated cavities
- ERI filters are loop coupled and fixed with bolted connections to couple cavities
- No Teflon or other insulating material used in the coupling between cavities, eliminating a primary point of failure, present in competitor's designs.
- Loop coupling provides an adjustment (without disassembly) at the input and output of each cavity
- Marman clamp connection allows close cavity placement
- Ability to change frequency quickly and with a minimum of disassembly
- Filter can be easily broken down for shipment and placement
- Temperature indicator provided on all filter sets
- Optional non-adjacent coupling and group delay compensation available
- Easily assembled floor standing units (hardware for ceiling suspension available on request)

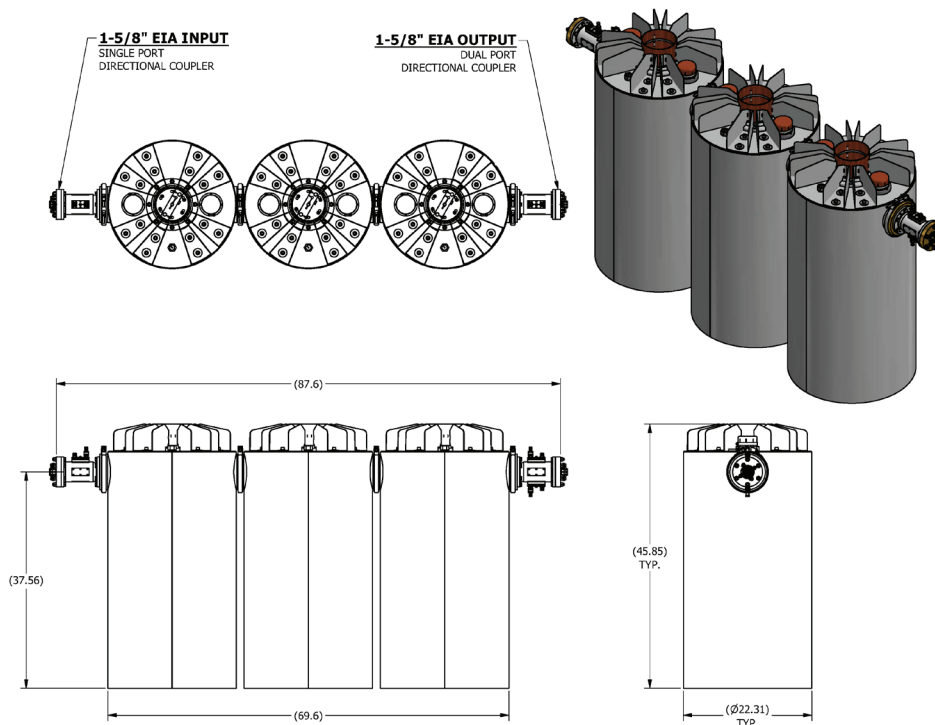


ERI FM filters and combiners have served the broadcast industry for over 40 years. The basic building block of ERI's combiner and multiplexers system is a unique filter cavity. Only ERI offers a cylindrical cavity and all internal components in the RF path are silver plated. The result is an extremely efficient (low loss) and stable filter. ERI filters include a unique bellows temperature compensation assembly which maintains filter performance from a cold start to normal operating temperature without causing high transmitter VSWR. Only ERI filters incorporate a loop coupled design that allows more control over the filter pass band and offers performance superior to what can be achieved with the iris coupled cavities used by other manufacturers.

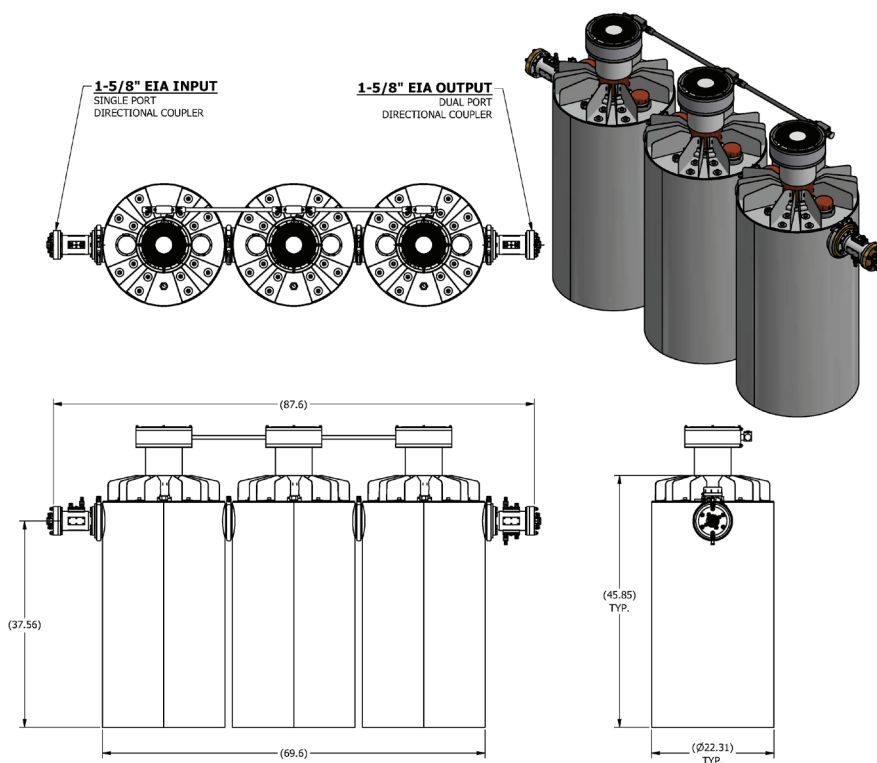
To further enhance system reliability ERI FM filter systems do not include air filters that require replacement. In filter systems designed to handle higher FM power levels the forced air-cooling option uses a high reliability motorized fans that are mounted on each cavity and requires no additional floor space and does not require filtering. These Bandpass filters sets are available for protection from undesirable intermodulation products. They can also be configured to combine multiple FM channels in branch or constant impedance configurations.

NOTE: Bandpass Filter sets include a single port fixed directional coupler at the filter input and a dual port directional coupler at the output.

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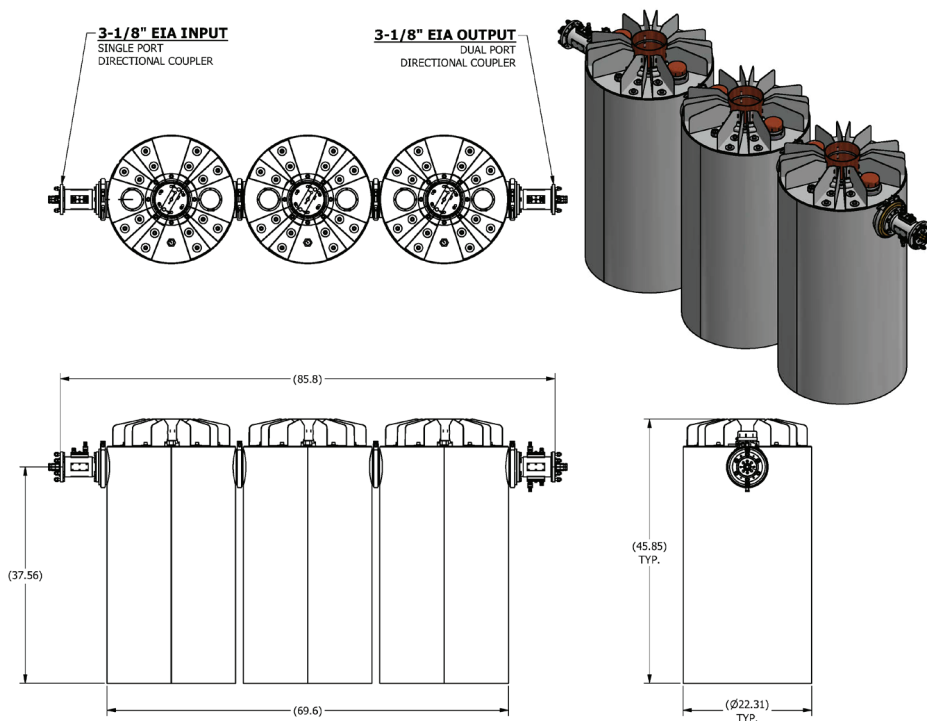


783-3C11-01 Three Section FM Bandpass Filter, convection cooled, with 1-5/8-inch EIA flanged input and output. Includes single port fixed directional coupler at filter input and a dual port fixed directional coupler at filter output. Dimensions shown are inches.

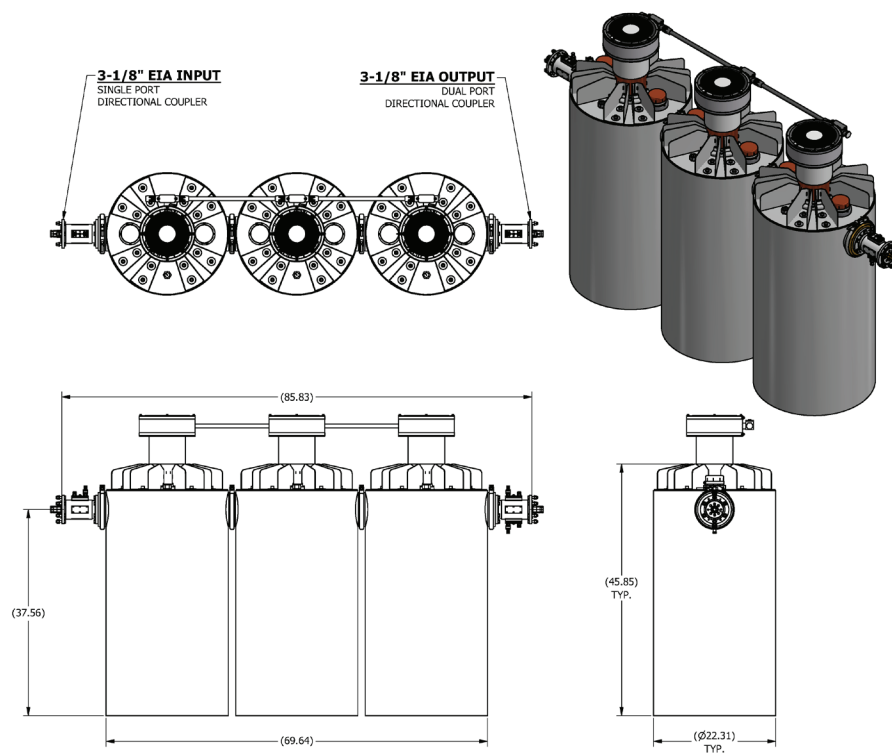


783-3A11-01 Three Section FM Bandpass Filter, forced air-cooled, with 1-5/8-inch EIA flanged input and output. Includes single port fixed directional coupler at filter input and a dual port fixed directional coupler at filter output. Dimensions shown are inches.

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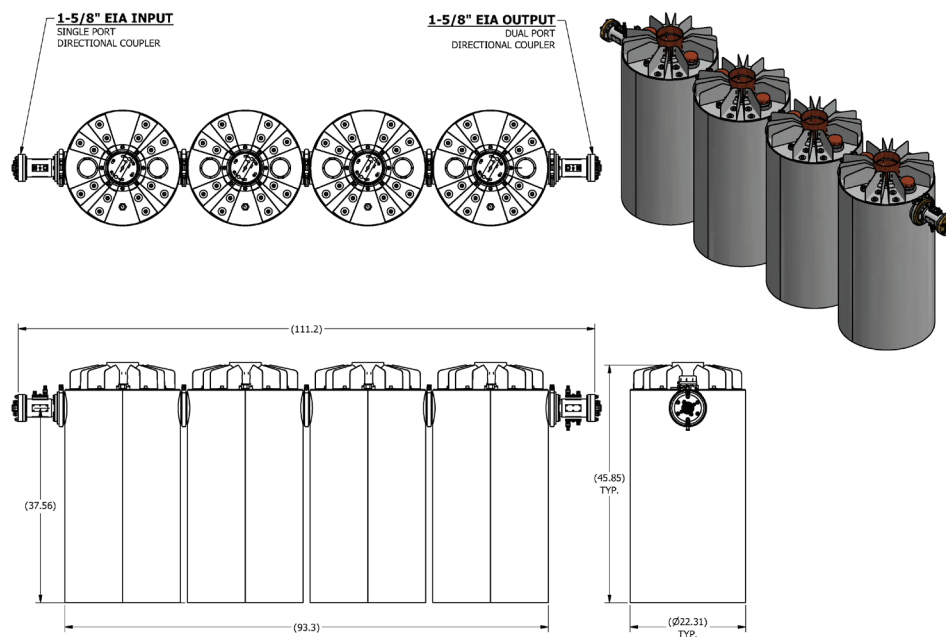


783-3C33-01 Three Section FM Bandpass Filter, convection cooled, with 3-1/8-inch EIA flanged input and output. Includes single port fixed directional coupler at filter input and a dual port fixed directional coupler at filter output. Dimensions shown are inches.

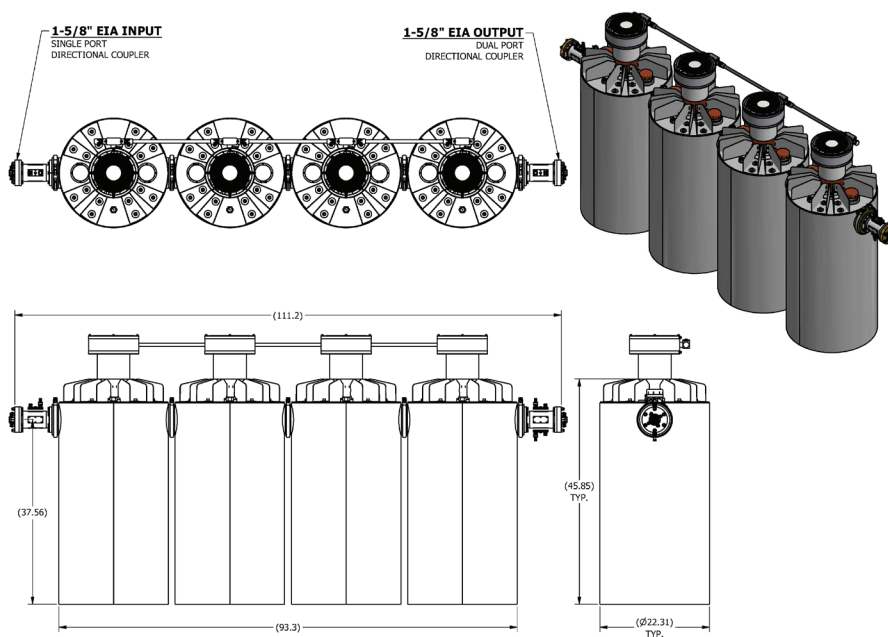


783-3A33-01 Three Section FM Bandpass Filter, forced air-cooled, with 3/1/8-inch EIA flanged input and output. Includes single port fixed directional coupler at filter input and a dual port fixed directional coupler at filter output. Dimensions shown are inches.

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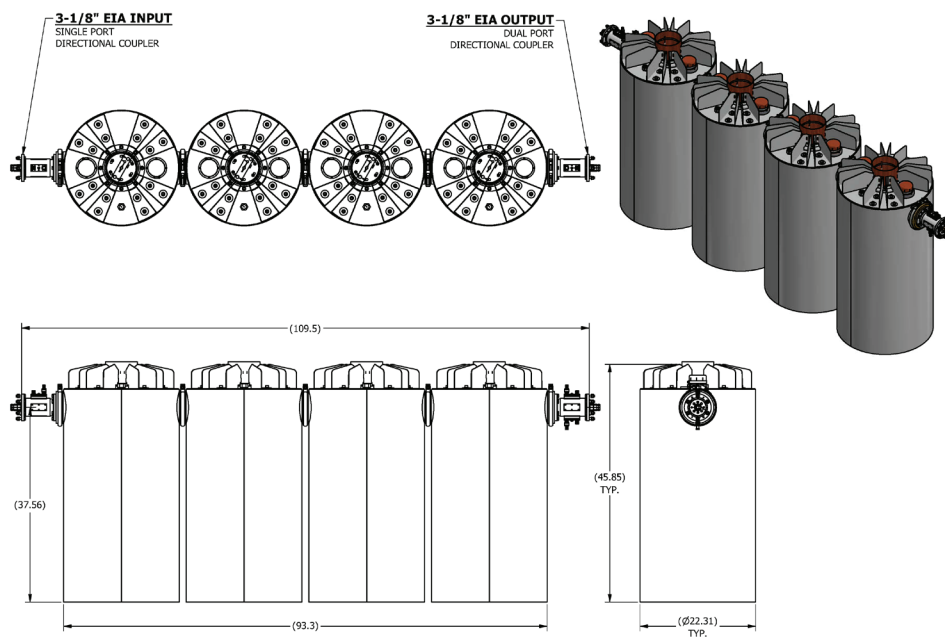


783-4C11-01 Four Section FM Bandpass Filter, convection cooled, with 1-5/8-inch EIA flanged input and output. Includes single port fixed directional coupler at filter input and a dual port fixed directional coupler at filter output. Dimensions shown are inches.

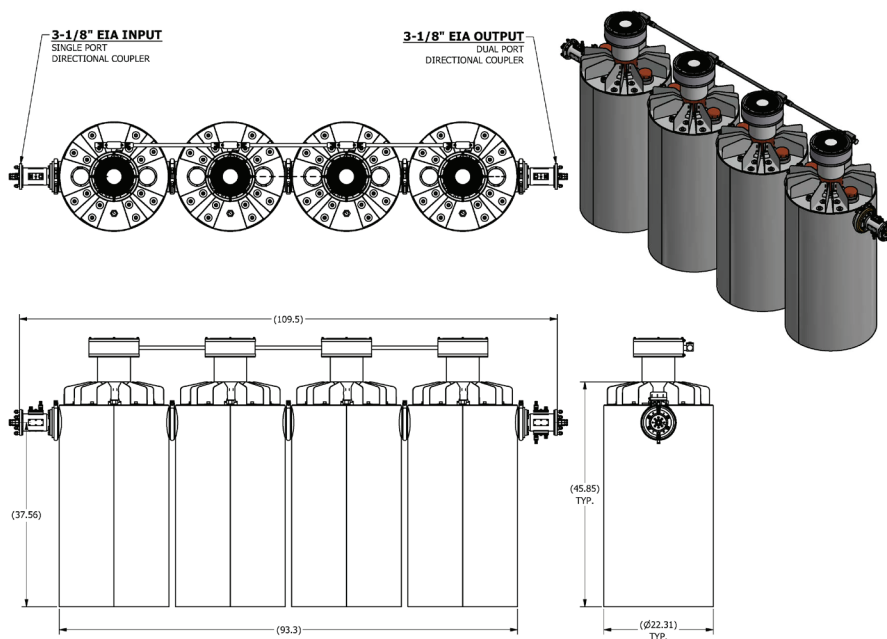


783-4A11-01 Four Section FM Bandpass Filter, forced air-cooled, with 1-5/8-inch EIA flanged input and output. Includes single port fixed directional coupler at filter input and a dual port fixed directional coupler at filter output. Dimensions shown are inches.

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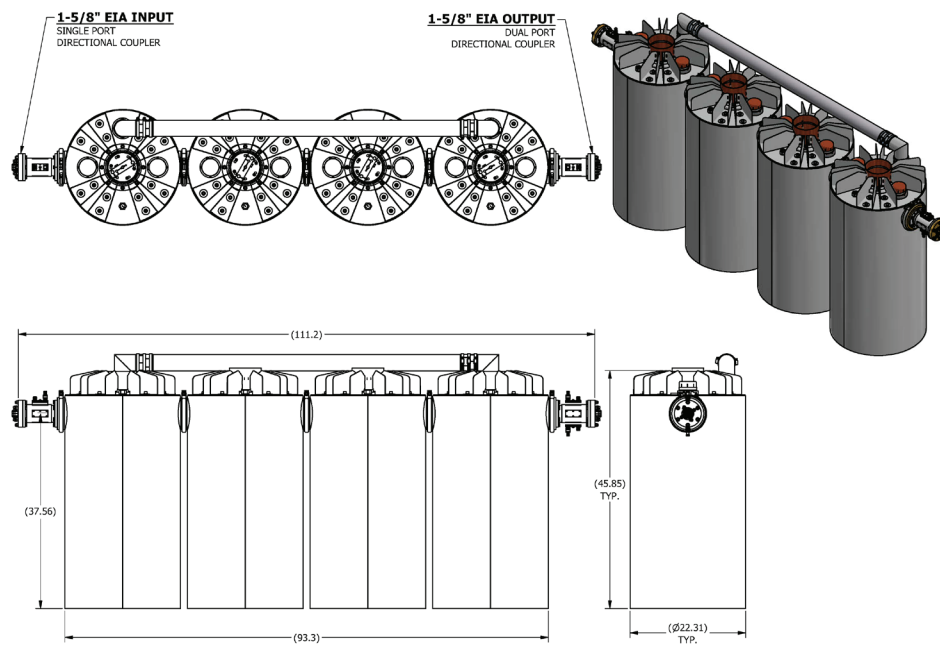


783-4C33-01 Three Section FM Bandpass Filter, convection cooled, with 3-1/8-inch EIA flanged input and output. Includes single port fixed directional coupler at filter input and a dual port fixed directional coupler at filter output. Dimensions shown are inches.

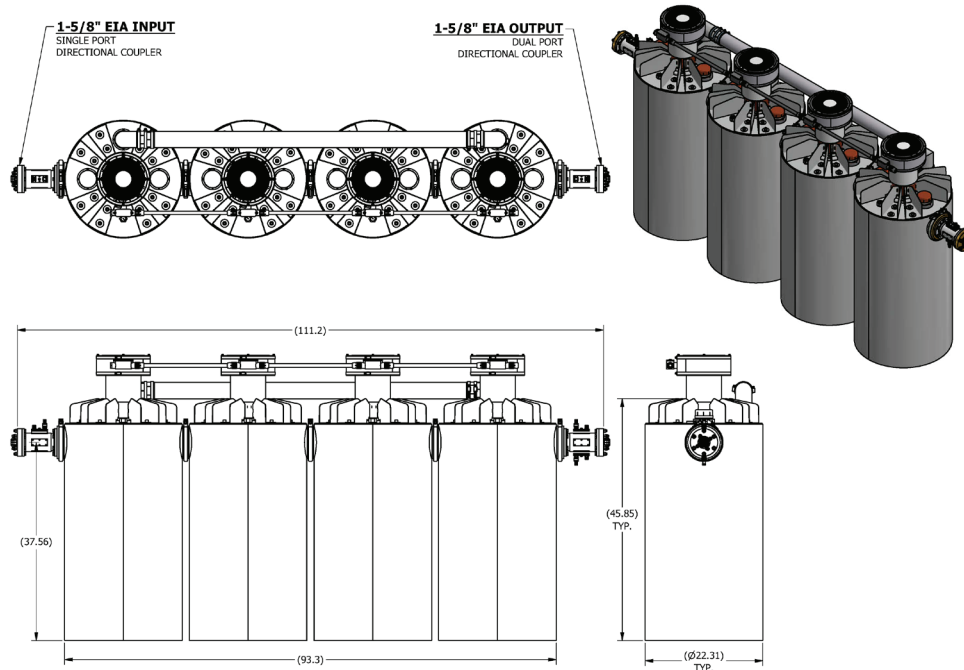


783-4A33-01 Four Section FM Bandpass Filter, forced air-cooled, with 3-1/8-inch EIA flanged input and output. Includes single port fixed directional coupler at filter input and a dual port fixed directional coupler at filter output. Dimensions shown are inches.

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783N-4C11-01 Four Section FM Bandpass Filter with optional non-adjacent coupling loop, convection cooled, with 1-5/8-inch EIA flanged input and output. Includes single port fixed directional coupler at filter input and a dual port fixed directional coupler at filter output. Dimensions shown are inches.



783N-4A11-01 Four Section FM Bandpass Filter with optional non-adjacent coupling loop, forced air-cooled, with 1-5/8-inch EIA flanged input and output. Includes single port fixed directional coupler at filter input and a dual port fixed directional coupler at filter output. Dimensions shown are inches.

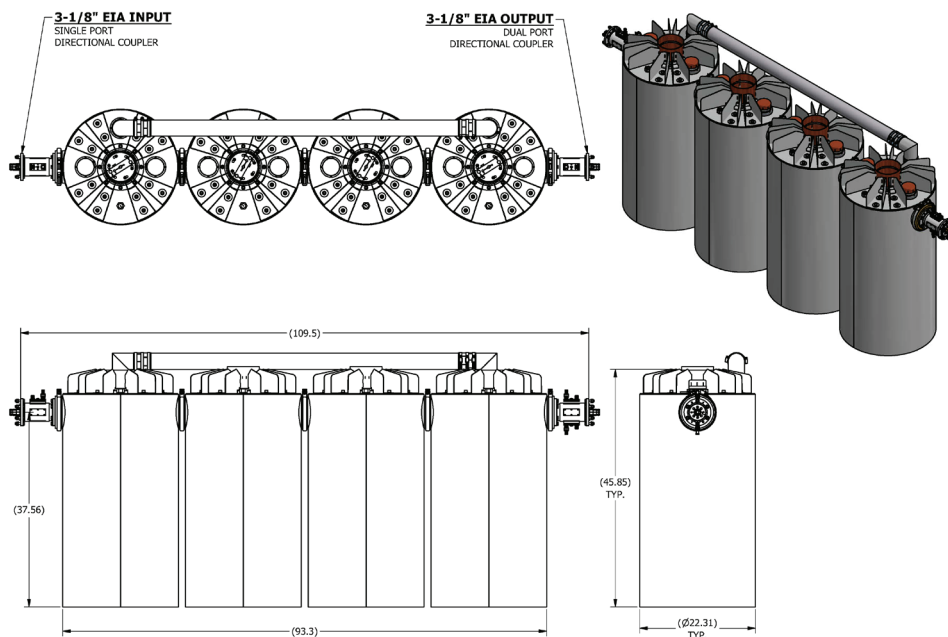
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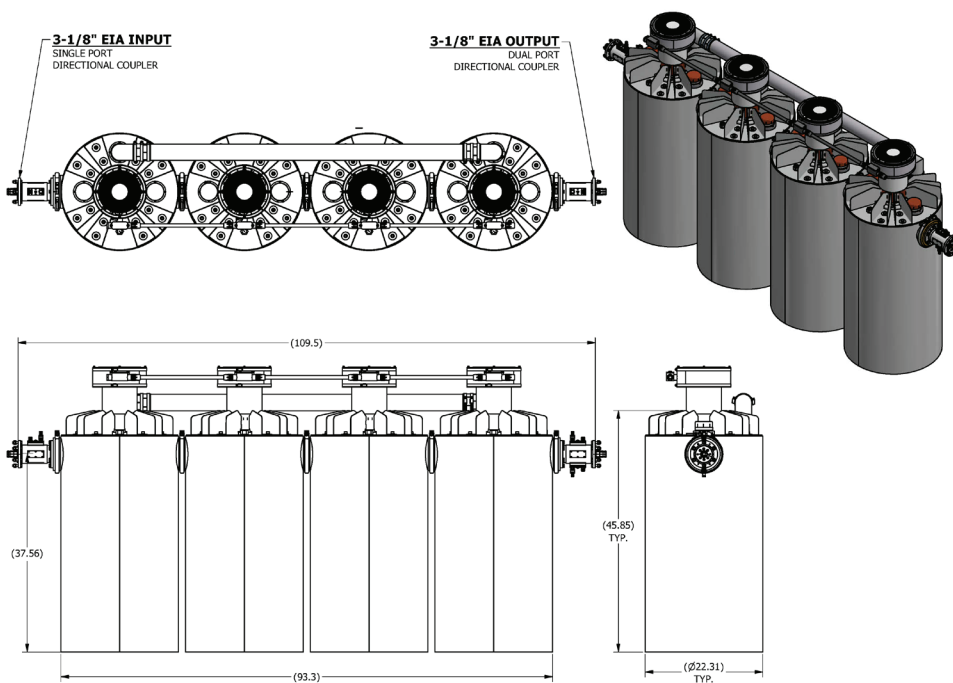
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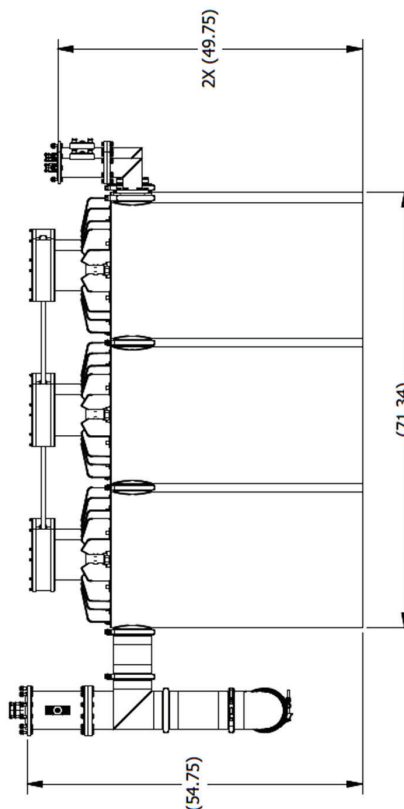
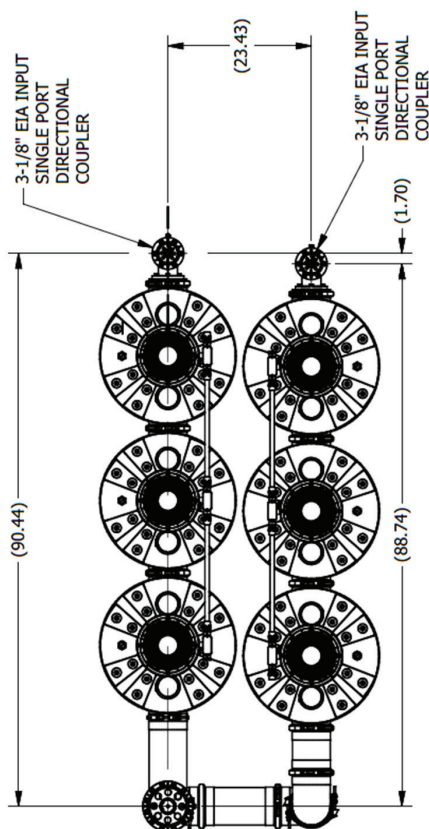
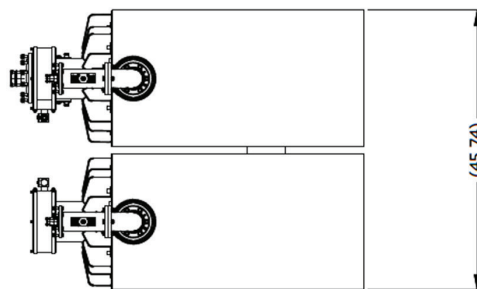
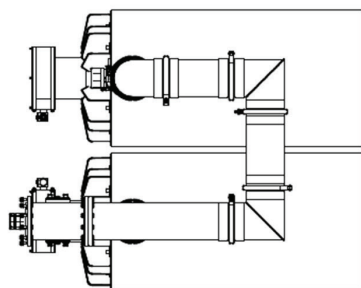
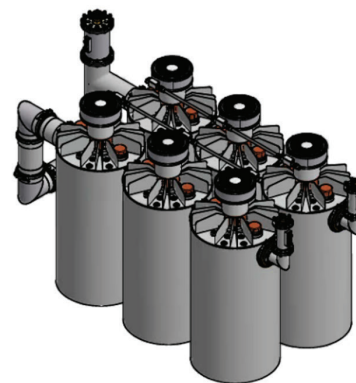


783N-4C33-01 Four Section FM Bandpass Filter with optional non-adjacent coupling loop, convection cooled, with 3-1/8-inch EIA flanged input and output. Includes single port fixed directional coupler at filter input and a dual port fixed directional coupler at filter output. Dimensions shown are inches.



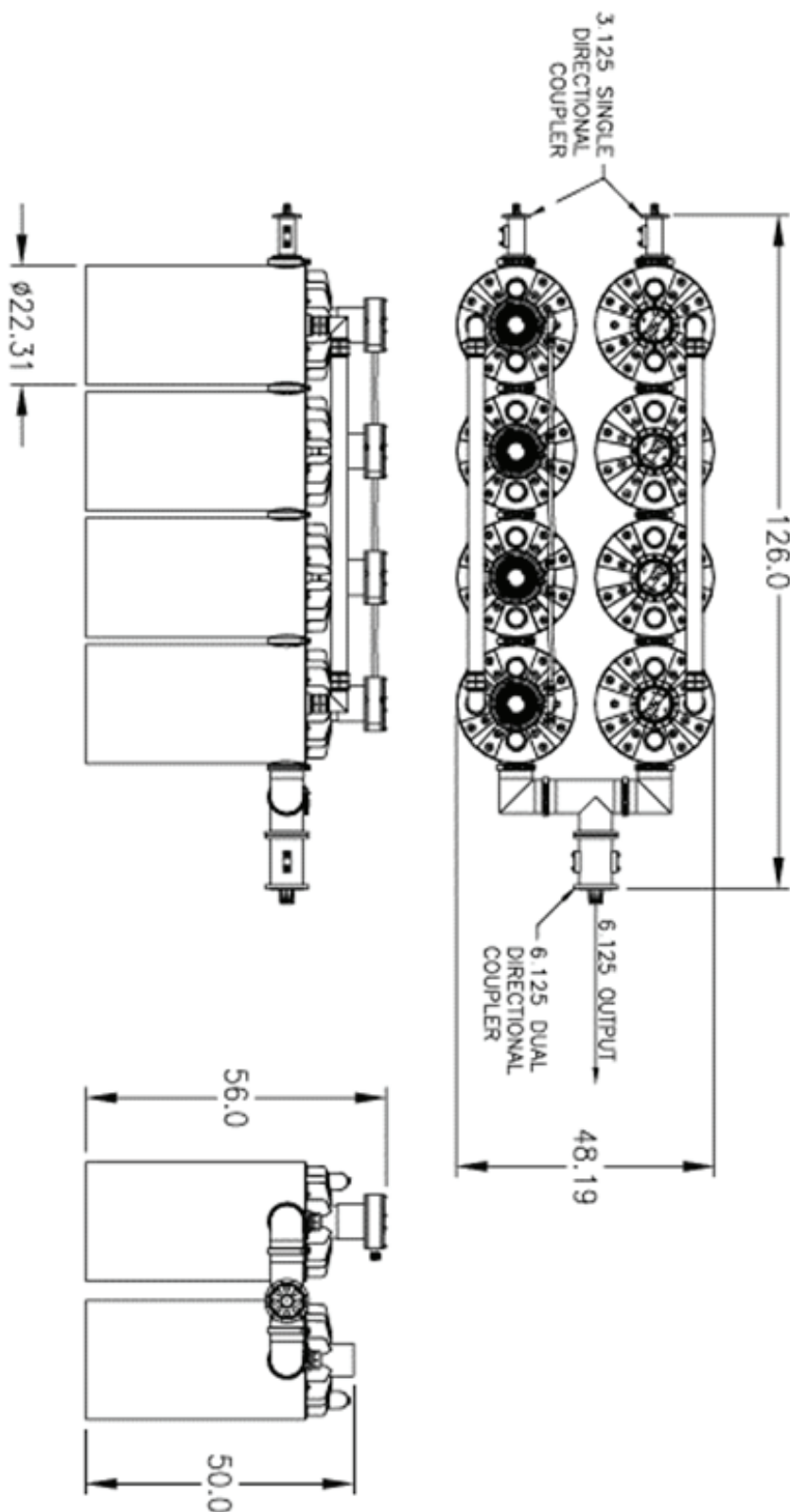
783N-4A33-01 Four Section FM Bandpass Filter with optional non-adjacent coupling loop, forced air-cooled, with 3-1/8-inch EIA flanged input and output. Includes single port fixed directional coupler at filter input and a dual port fixed directional coupler at filter output. Dimensions shown are inches.

783 Series FM Band Pass Filters



ERI 783 (TB83-6A/3) Series TEE Combiner ("U" Configuration). Two (2) 783-3A FM Bandpass Filters. 3-1/8-inch inputs and 3-1/8-inch combined output. Forced Air-Cooling. Note that overall dimensions vary with frequencies combined. Dimensions shown are inches.

783 Series FM Band Pass Filters



ERI 783 (TB83-8/7) Series TEE Combiner ("U" Configuration). Two (2) 783-4 FM Bandpass Filters with optional non-adjacent coupling loops. 3-1/8-inch inputs and 6-1/8-inch combined output. Convection Cooled. Note that overall dimensions vary with frequencies combined. Dimensions shown are inches.

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783 Series FM Band Pass Filters

783 Series Reflective FM Bandpass Filter Specifications

Model	Input and Output	Number of Poles	Insertion Loss	Frequency Band Width to 30 dB Limit	Power Handling Capability	Forced Air Cooling Required	Non-Adjacent Coupling
783-3C11-01	1-5/8-inch	3	-0.20 dB	±1.5 MHz	15 kW	No	No
783-3A11-01	1-5/8-inch	3	-0.20 dB	±1.5 MHz	15 kW	Yes	No
783-4C11-01	1-5/8-inch	4	-0.30 dB	±1.0 MHz	15 kW	No	No
783N-4C11-01	1-5/8-inch	4	-0.30 dB	±1.0 MHz	15 kW	No	Yes
783-4A11-01	1-5/8-inch	4	-0.30 dB	±1.0 MHz	15 kW	Yes	No
783N-4A11-01	1-5/8-inch	4	-0.30 dB	±1.0 MHz	15 kW	Yes	Yes
783-3C33-01	3-1/8-inch	3	-0.20 dB	±1.5 MHz	20 kW	No	No
783-3A33-01	3-1/8-inch	3	-0.20 dB	±1.5 MHz	35 kW	Yes	No
783-4C33-01	3-1/8-inch	4	-0.30 dB	±1.0 MHz	20 kW	No	No
783N-4C33-01	3-1/8-inch	4	-0.30 dB	±1.0 MHz	20 kW	No	Yes
783-4A33-01	3-1/8-inch	4	-0.30 dB	±1.0 MHz	35 kW	Yes	No
783N-4A33-01	3-1/8-inch	4	-0.30 dB	±1.0 MHz	35 kW	Yes	Yes
783-3C66-01	6-1/8-inch	3	-0.20 dB	±1.5 MHz	20 kW	No	No
783-3A66-01	6-1/8-inch	3	-0.20 dB	±1.5 MHz	35 kW	Yes	No
783-4C66-01	6-1/8-inch	4	-0.30 dB	±1.0 MHz	20 kW	No	No
783N-4C66-01	6-1/8-inch	4	-0.30 dB	±1.0 MHz	20 kW	No	Yes
783-4A66-01	6-1/8-inch	4	-0.30 dB	±1.0 MHz	35 kW	Yes	No
783N-4A66-01	6-1/8-inch	4	-0.30 dB	±1.0 MHz	35 kW	Yes	Yes

Model	Size							
	Height		Width		Length		Weight	
783-3C11-01	45.85 in	1165 mm	22.31 in	567 mm	87.60 in	2225 mm	330 lbm	150 kg
783-3A11-01	54.26 in	1378 mm	22.31 in	567 mm	87.60 in	2225 mm	353 lbm	160 kg
783-4C11-01	45.85 in	1165 mm	22.31 in	567 mm	111.20 in	2824 mm	430 lbm	195 kg
783N-4C11-01	45.85 in	1165 mm	22.31 in	567 mm	111.20 in	2824 mm	451 lbm	205 kg
783-4A11-01	54.26 in	1378 mm	22.31 in	567 mm	111.20 in	2824 mm	461 lbm	209 kg
783N-4A11-01	54.26 in	1378 mm	22.31 in	567 mm	111.20 in	2824 mm	482 lbm	219 kg
783-3C33-01	45.85 in	1165 mm	22.31 in	567 mm	85.83 in	2180 mm	321 lbm	146 kg
783-3A33-01	54.26 in	1378 mm	22.31 in	567 mm	85.83 in	2180 mm	344 lbm	156 kg
783-4C33-01	45.85 in	1165 mm	22.31 in	567 mm	109.50 in	2781 mm	420 lbm	191 kg
783N-4C33-01	45.85 in	1165 mm	22.31 in	567 mm	109.50 in	2781 mm	442 lbm	200 kg
783-4A33-01	54.26 in	1378 mm	22.31 in	567 mm	109.50 in	2781 mm	451 lbm	205 kg
783N-4A33-01	54.26 in	1378 mm	22.31 in	567 mm	109.50 in	2781 mm	472 lbm	214 kg
783-3C66-01	45.85 in	1165 mm	22.31 in	567 mm	92.96 in	2361 mm	332 lbm	151 kg
783-3A66-01	54.26 in	1378 mm	22.31 in	567 mm	92.96 in	2361 mm	355 lbm	161 kg
783-4C66-01	45.85 in	1165 mm	22.31 in	567 mm	116.63 in	2962 mm	431 lbm	195 kg
783N-4C66-01	45.85 in	1165 mm	22.31 in	567 mm	116.63 in	2962 mm	453 lbm	205 kg
783-4A66-01	54.26 in	1378 mm	22.31 in	567 mm	116.63 in	2962 mm	462 lbm	210 kg
783N-4A66-01	54.26 in	1378 mm	22.31 in	567 mm	116.63 in	2962 mm	483 lbm	219 kg

783 Series FM Band Pass Filters

783 Series Reflective FM Bandpass Filter Specifications

General Specifications

Group Delay Variation:	783-3	< 75 nsec overall variation ± 200 KHz carrier,
	783-4	< 100 nsec overall variation ± 200 KHz carrier
Minimum Channel Spacing:	783-3	2.0 MHz
	783-4	0.8 MHz

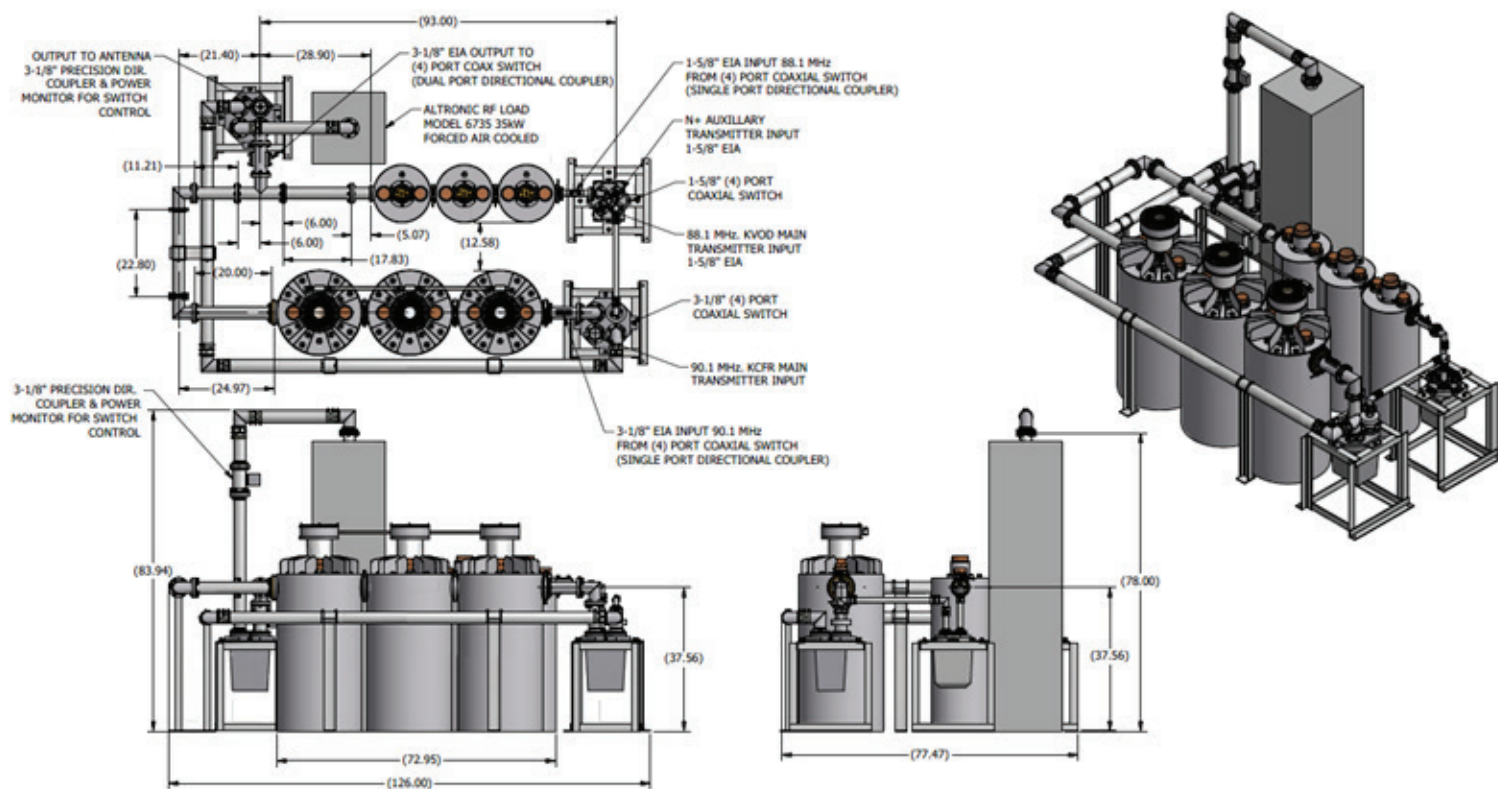
VSWR: < 1.10 : 1 at ± 200 KHz, with combiner terminated into a 50-ohm resistive load
 Optional non-adjacent coupling loops or group delay correction recommended for frequency separations less than 1.2 MHz.

AC power required for forced air-cooling: 115 VAC, 0.25 amps per fan. One (1) fan provided for each cavity.

Loss values may be somewhat greater for frequency separations less than 1.8 MHz.

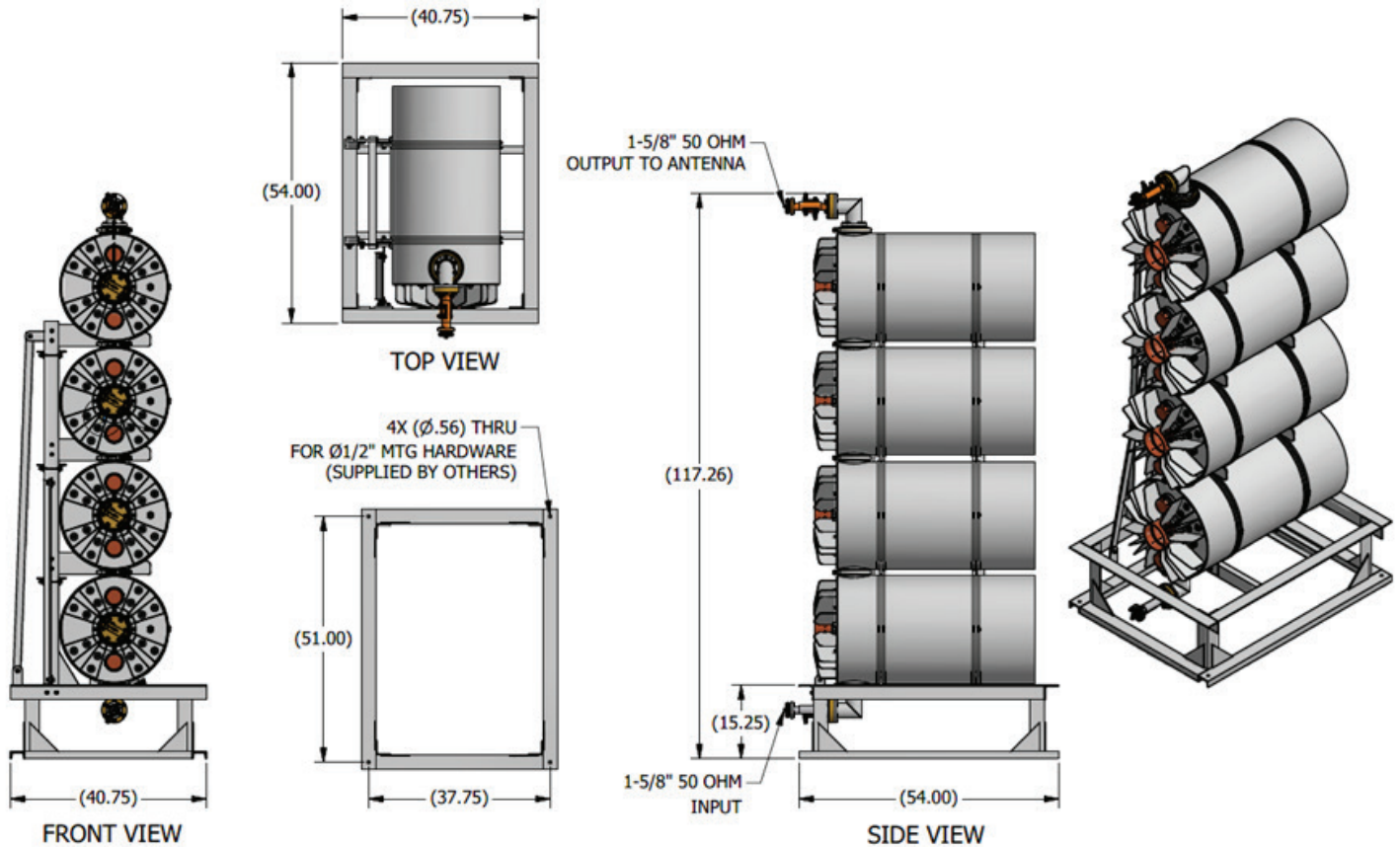
Specifications presented are typical, total system performance may vary. ERI reserves the right to change specifications and features.

Input power rating is valid to 2,000 feet (610 meters) above mean sea level, contact ERI for rating at higher elevations.



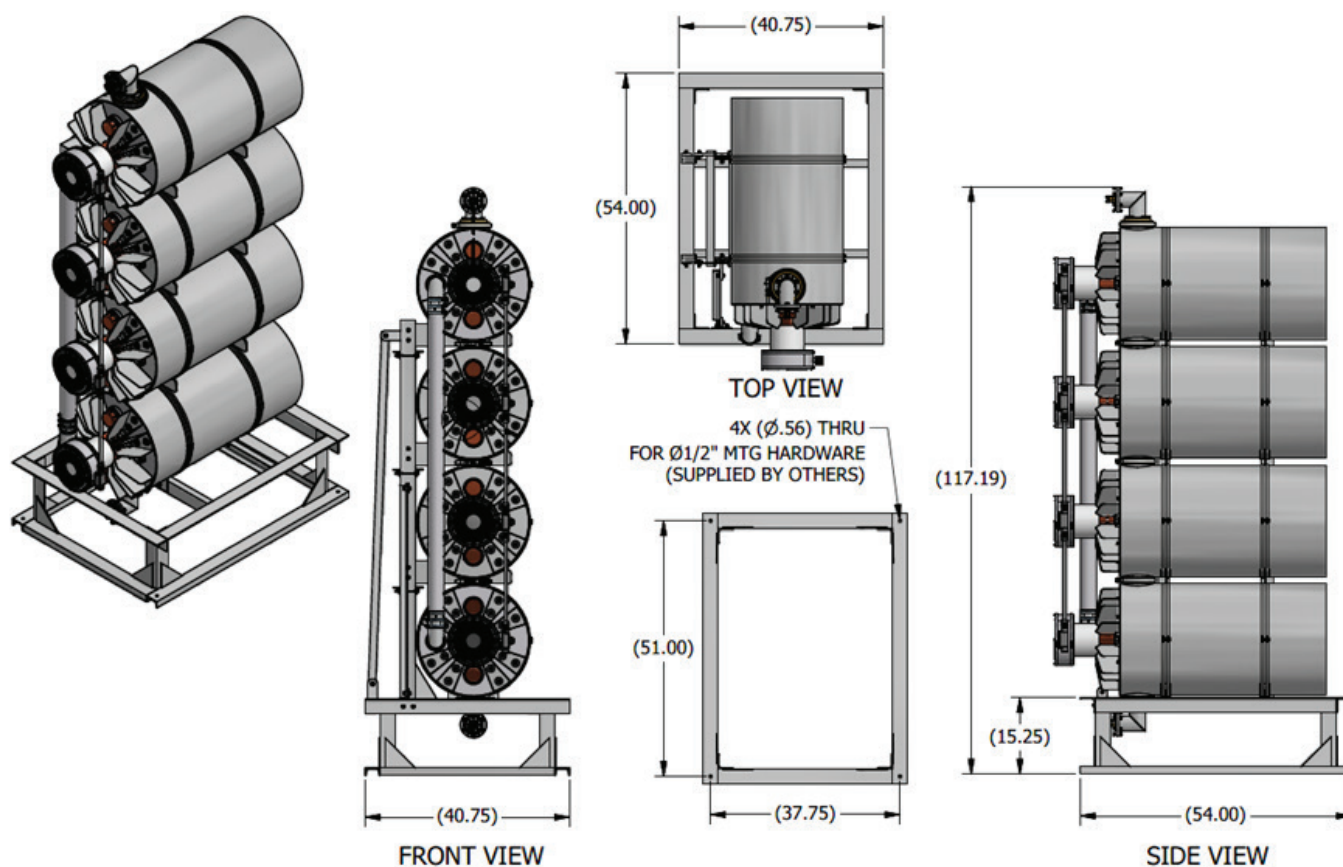
780/783 Series FM "Tee" Combiner with one 783-3 three-section FM Bandpass filter and one 783-3 three section FM Bandpass filter. This combiner system was provided with switching to allow the combiner to be bypassed by either transmitter and also provided switching to put a frequency agile FM transmitter into either of the combiner inputs as a standby transmitter for both stations. Note that overall dimensions vary with frequencies combined. Dimensions shown are inches.

783 Series FM Band Pass Filters



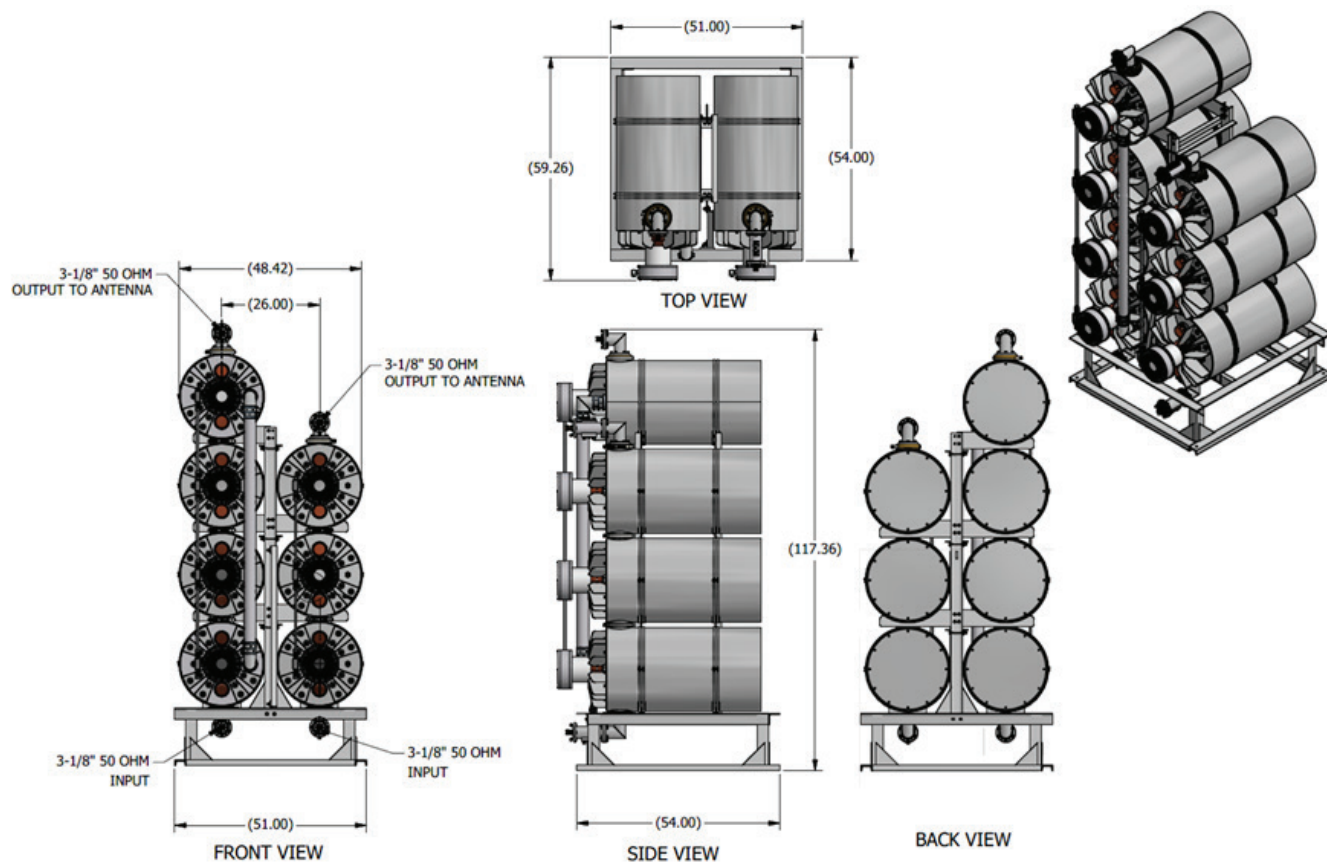
Model 783-4 four-section FM bandpass filter, convection cooled. This filter includes adapters 1-5/8-inch and 1-5/8-inch directional couplers at the filter input and output. The filter set is supplied standard with 3-1/8-inch flanged input and output with a single port directional coupler at the filter input and a dual port directional coupler at the filter output. The filter set is mounted in an optional vertical rack stand. Dimensions shown are inches.

783 Series FM Band Pass Filters



Model 783-4A-NA four-section FM bandpass filter, with optional forced air-cooling. This filter includes an optional non-adjacent coupling loop to provide additional suppression at the edges of the filter pass band. The filter set is supplied standard with 3-1/8-inch flanged input and output with a single port directional coupler at the filter input and a dual port directional coupler at the filter output, directional couplers are not shown. The filter set is mounted in an optional vertical rack stand. Dimensions shown are inches.

783 Series FM Band Pass Filters



Model 783-4A four-section FM bandpass filter, with optional forced air-cooling, and a Model 783-3A three-section FM bandpass filter, with optional forced air-cooling, mounted in a single optional vertical floor stand. Dimensions shown are inches.