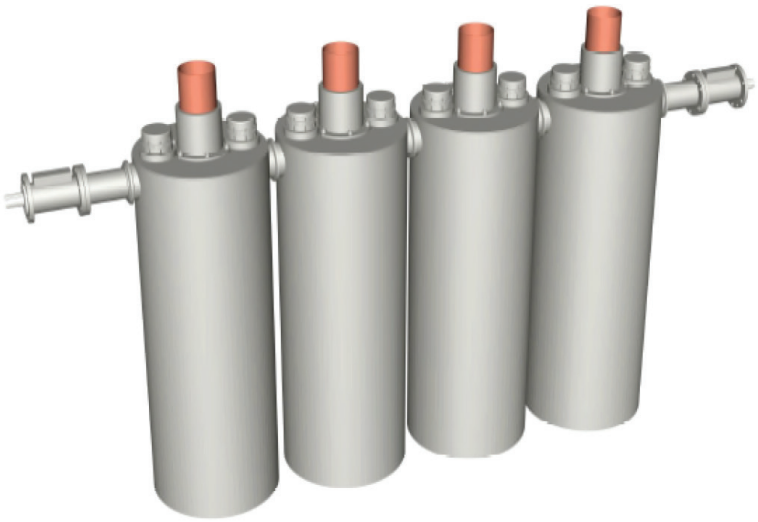
780 Series FM Band Pass Filter

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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780 Series Reflective FM Band Pass 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
780-3C11-01	1-5/8-inch	3	-0.30 dB	±1.5 MHz	5 kW	No	No
780-3A11-01	1-5/8-inch	3	-0.30 dB	±1.5 MHz	10 kW	Yes	No
780-4C11-01	1-5/8-inch	4	-0.50 dB	±1.0 MHz	5 kW	No	No
780N-4C11-01	1-5/8-inch	4	-0.50 dB	±1.0 MHz	5 kW	No	Yes
780-4A11-01	1-5/8-inch	4	-0.50 dB	±1.0 MHz	10 kW	Yes	No
780N-4A11-01	1-5/8-inch	4	-0.50 dB	±1.0 MHz	10 kW	Yes	Yes
780-3C33-01	3-1/8-inch	3	-0.30 dB	±1.5 MHz	5 kW	No	No
780-3A33-01	3-1/8-inch	3	-0.30 dB	±1.5 MHz	10 kW	Yes	No
780-4C33-01	3-1/8-inch	4	-0.50 dB	±1.0 MHz	5 kW	No	No
780N-4C33-01	3-1/8-inch	4	-0.50 dB	±1.0 MHz	5 kW	No	Yes
780-4A33-01	3-1/8-inch	4	-0.50 dB	±1.0 MHz	10 kW	Yes	No
780N-4A33-01	3-1/8-inch	4	-0.50 dB	±1.0 MHz	10 kW	Yes	Yes

	Size							
Model	Height		Width		Length		Weight	
780-3C11-01	48.75 in	1238 mm	15.12 in	384 mm	62.90 in	1598 mm	198 lbm	90 kg
780-3A11-01	53.50 in	1359 mm	15.12 in	384 mm	62.90 in	1598 mm	212 lbm	96 kg
780-4C11-01	48.75 in	1238 mm	15.12 in	384 mm	79.20 in	2012 mm	261 lbm	118 kg
780N-4C11-01	53.50 in	1359 mm	15.12 in	384 mm	79.20 in	2012 mm	269 lbm	122 kg
780-4A11-01	53.50 in	1359 mm	15.12 in	384 mm	79.10 in	2009 mm	279 lbm	127 kg
780N-4A11-01	53.50 in	1359 mm	15.12 in	384 mm	79.10 in	2009 mm	287 lbm	130 kg
780-3C33-01	48.75 in	1238 mm	15.12 in	384 mm	72.30 in	1836 mm	205 lbm	93 kg
780-3A33-01	53.50 in	1359 mm	15.12 in	384 mm	72.30 in	1836 mm	219 lbm	99 kg
780-4C33-01	48.75 in	1238 mm	15.12 in	384 mm	88.50 in	2248 mm	268 lbm	122 kg
780N-4C33-01	53.50 in	1359 mm	15.12 in	384 mm	88.50 in	2248 mm	276 lbm	125 kg
780-4A33-01	53.50 in	1359 mm	15.12 in	384 mm	88.50 in	2248 mm	286 lbm	130 kg
780N-4A33-01	53.50 in	1359 mm	15.12 in	384 mm	88.50 in	2248 mm	294 lbm	133 kg

General Specifications

Group Delay Variation: 780-3 < 75 nsec overall variation ±200 KHz carrier,
780-4 < 100 nsec overall variation ±200 KHz carrier

Minimum Channel Spacing: 780-3 2.0 MHz
780-4 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.

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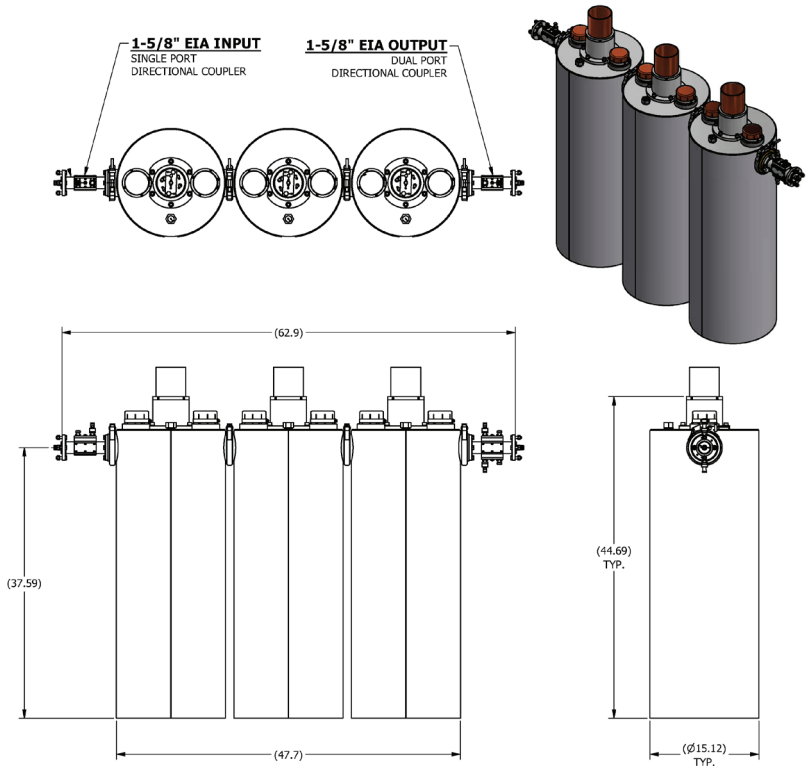
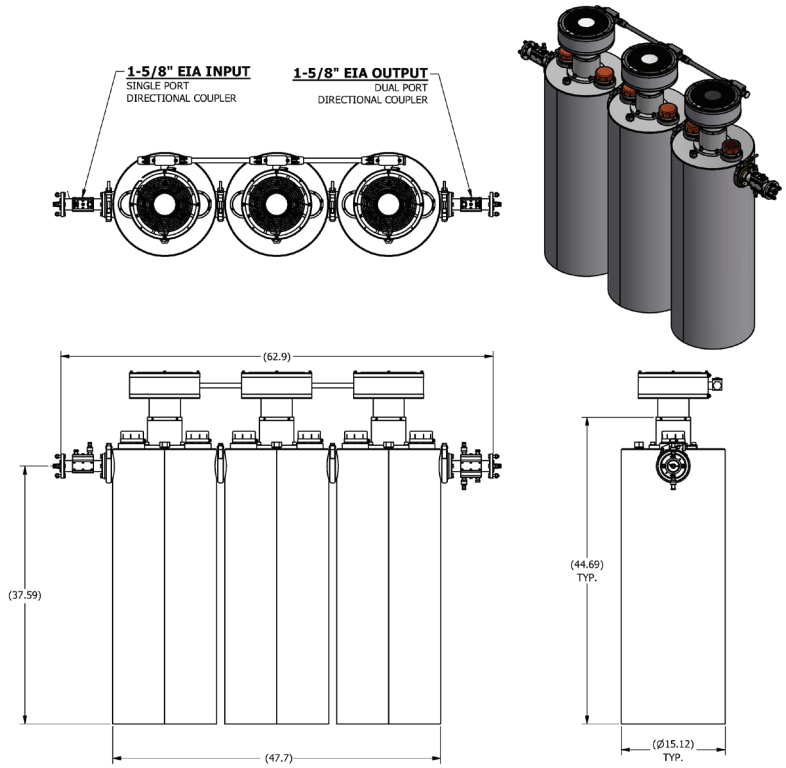


780-3C11-01 Three Section FM Bandpass Filter, convection cooled, with 1-5/8-inch EIA flanged input and output. Includes single port fixed directional coupler at filter input and a dual port fixed directional coupler at filter output. Dimensions shown are inches.



780-3A11-01 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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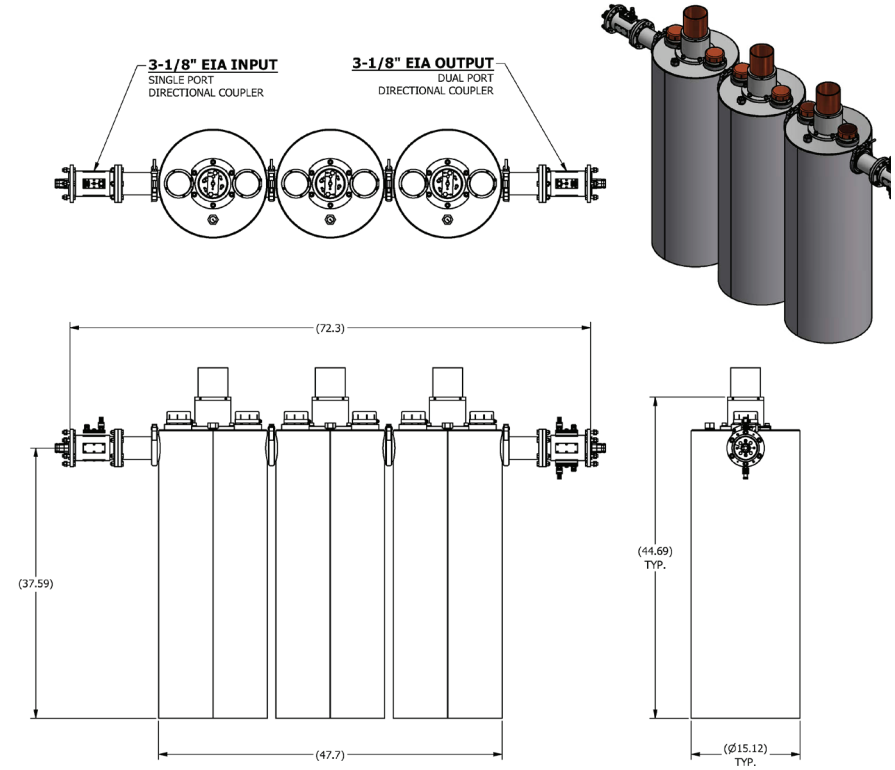
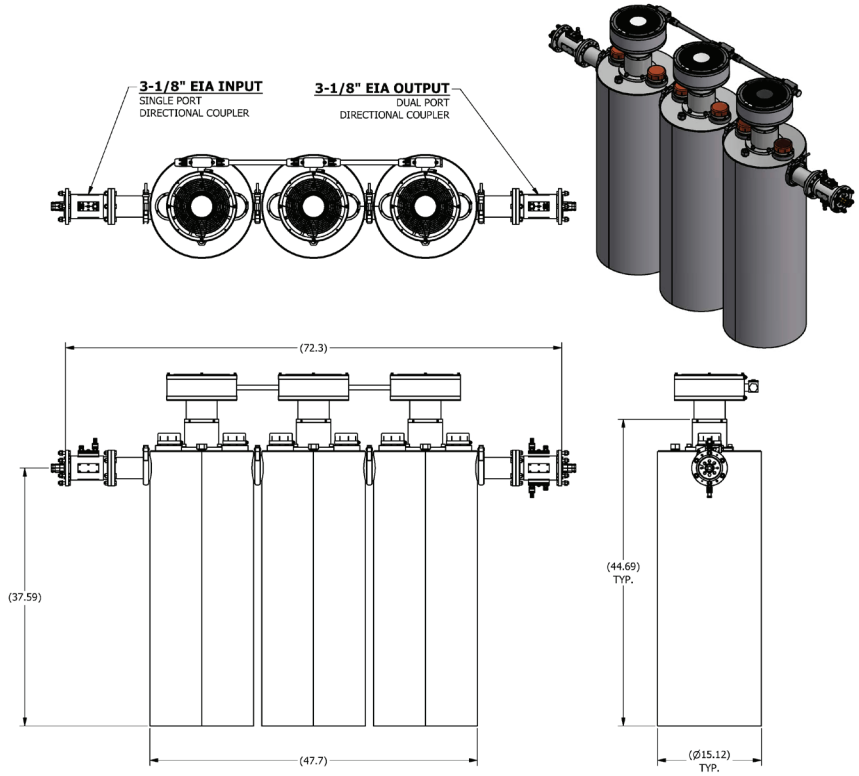


780-3C33-01 Three Section FM Bandpass Filter, convection cooled, with 3-1/8-inch EIA flanged input and output. Includes single port fixed directional coupler at filter input and a dual port fixed directional coupler at filter output. Dimensions shown are inches.



780-3A33-01 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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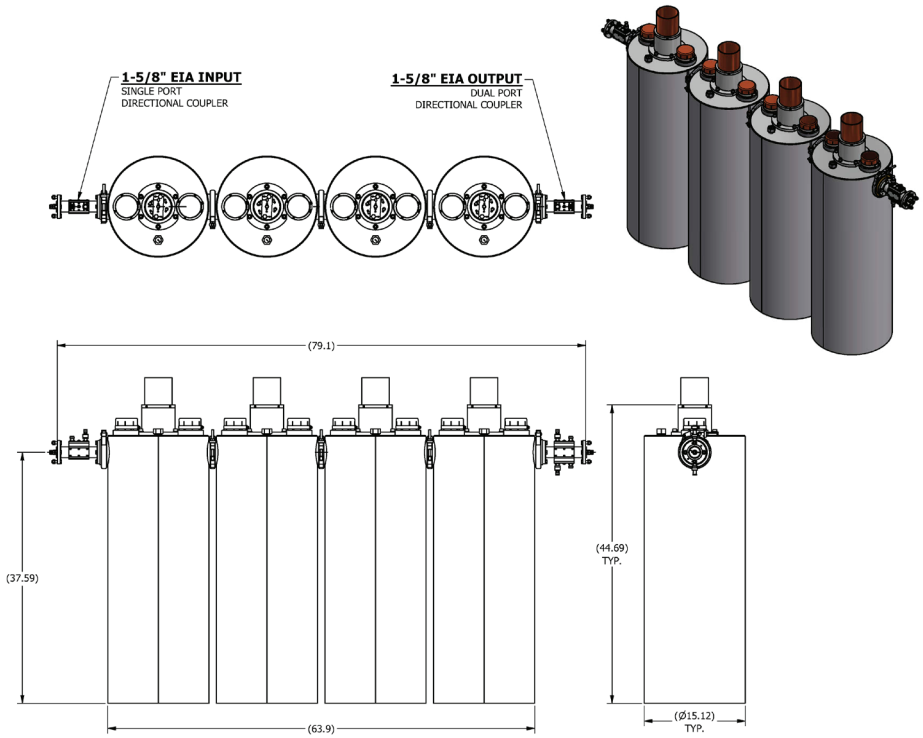
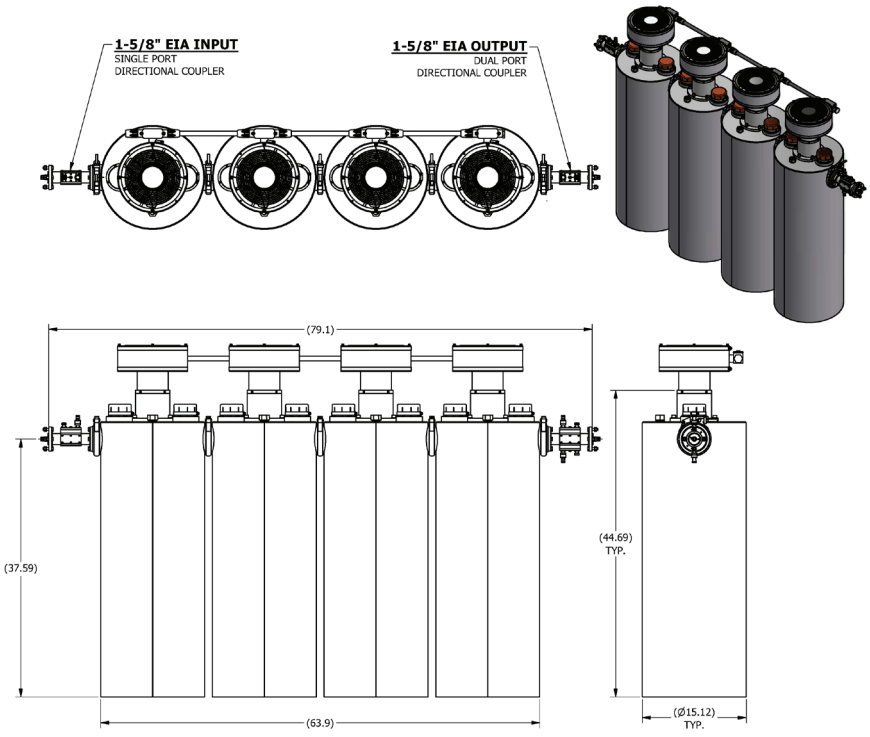


780-4C11-01 Four Section FM Bandpass Filter, convection cooled, with 1-5/8-inch EIA flanged input and output. Includes single port fixed directional coupler at filter input and a dual port fixed directional coupler at filter output. Dimensions shown are inches.



780-4A11-01 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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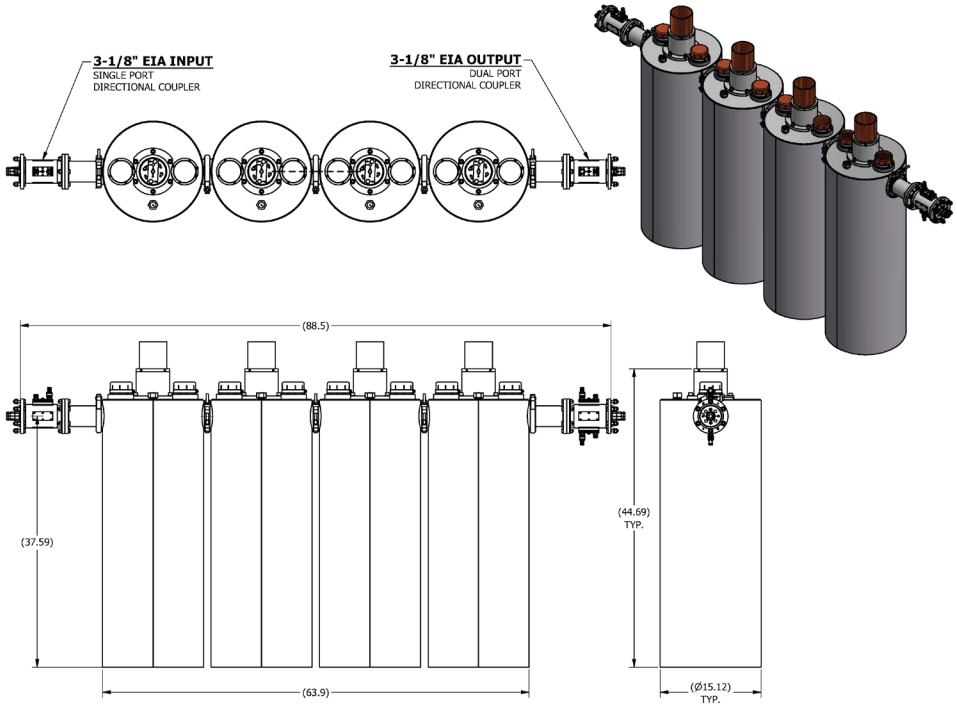
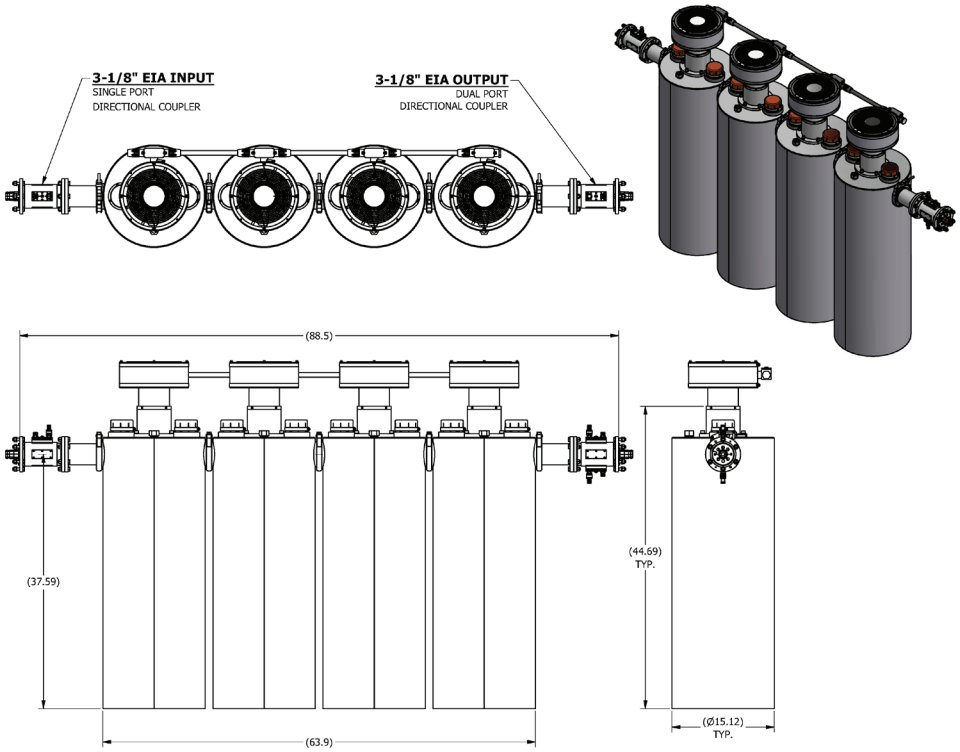


780-4C33-01 Three Section FM Bandpass Filter, convection cooled, with 3-1/8-inch EIA flanged input and output. Includes single port fixed directional coupler at filter input and a dual port fixed directional coupler at filter output. Dimensions shown are inches.



780-4A33-01 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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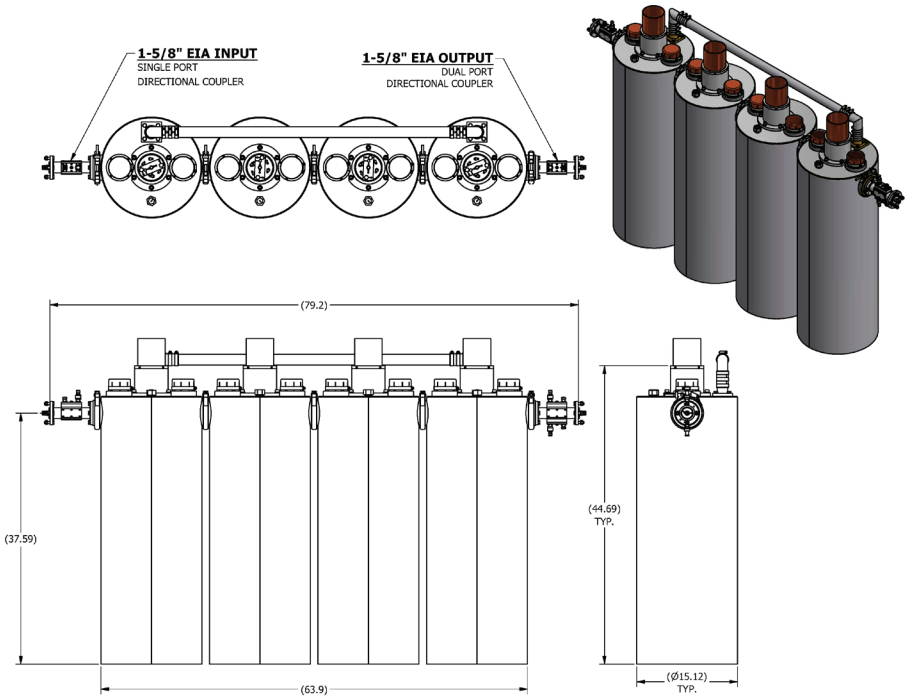
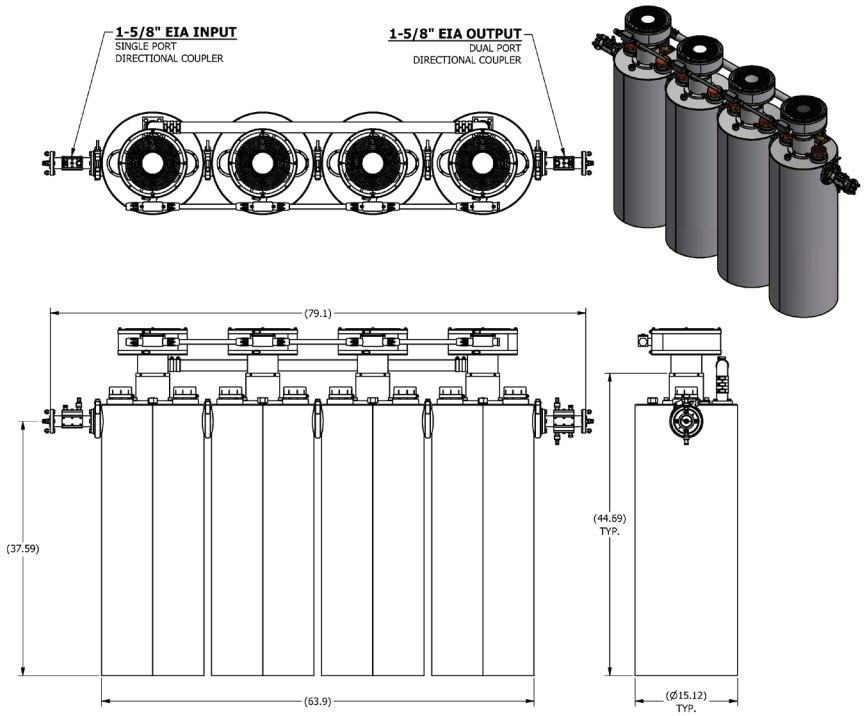


780N-4C11-01 Four Section FM Bandpass Filter with optional non-adjacent coupling loop, convection cooled, with 1-5/8-inch EIA flanged input and output. Includes single port fixed directional coupler at filter input and a dual port fixed directional coupler at filter output. Dimensions shown are inches.



780N-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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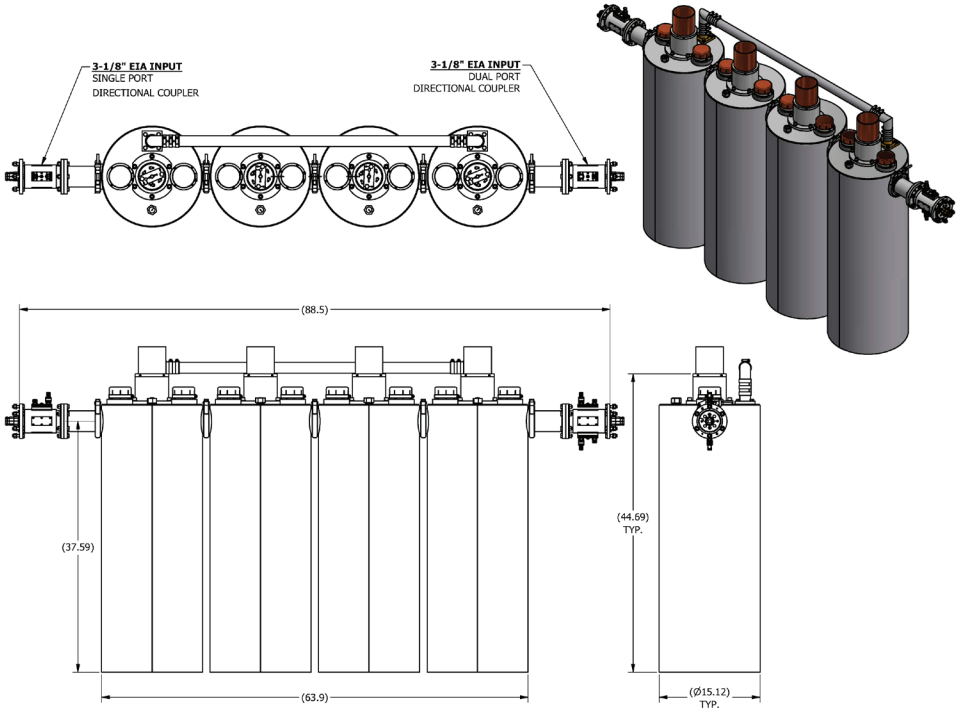
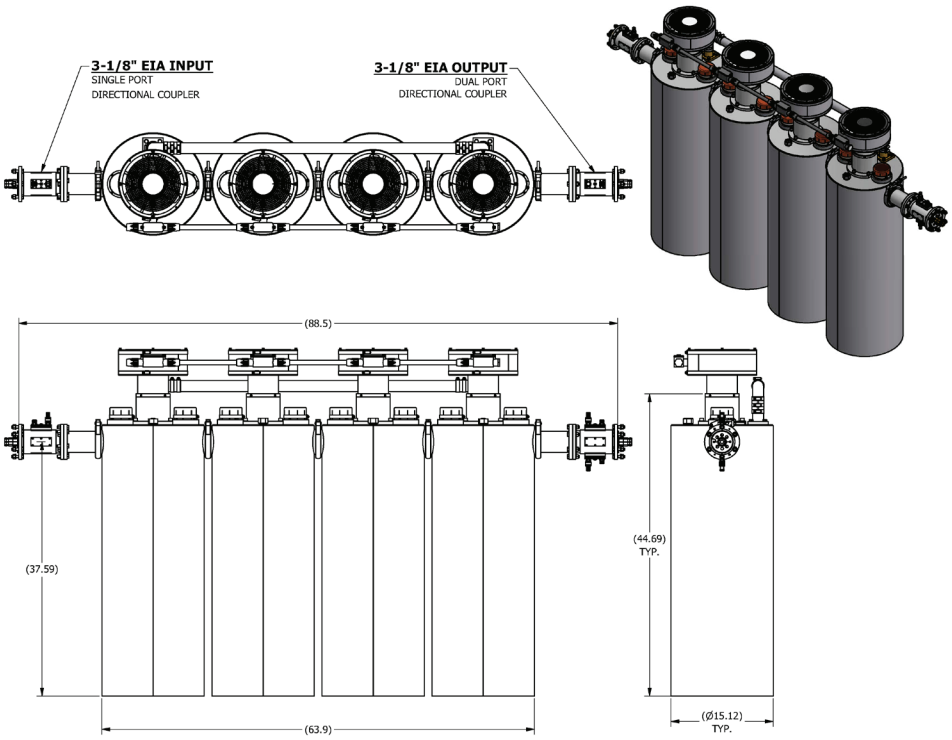


780N-4C33-01 Four Section FM Bandpass Filter with optional non-adjacent coupling loop, convection cooled, with 3-1/8-inch EIA flanged input and output. Includes single port fixed directional coupler at filter input and a dual port fixed directional coupler at filter output. Dimensions shown are inches.



780N-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.

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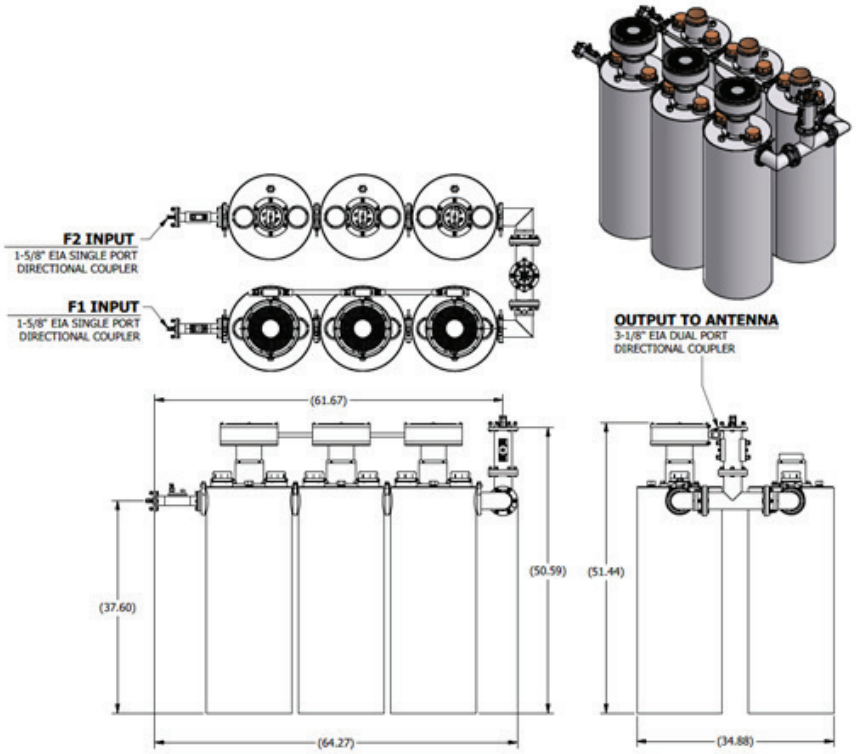
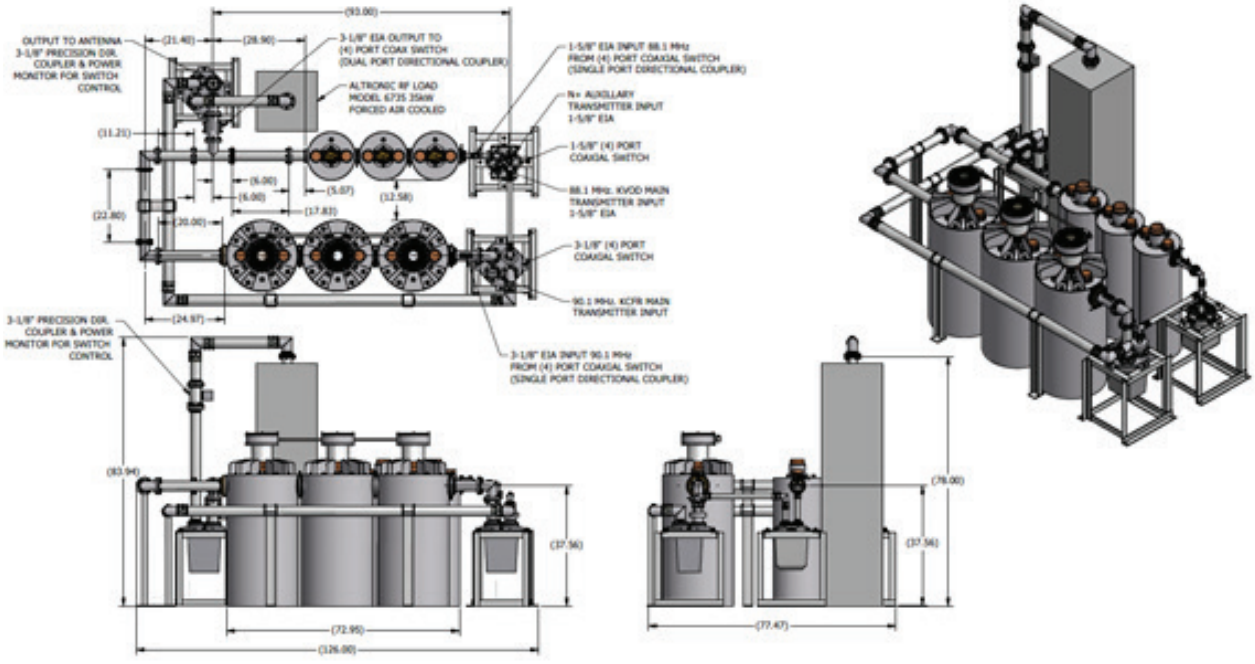


780 Series FM "Tee" Combiner with two (2) 780-3 three-section FM Bandpass filters. F1 Bandpass filter includes optional forced air-cooling for higher power handling capability. 3-1/8-inch coaxial combining Tee with 3-1/8-inch dual port directional coupler at output. Note that overall dimensions vary with frequencies combined. Dimensions shown are inches.



780/783 Series FM "Tee" Combiner with one (1) 780-3 three-section FM Bandpass filter and one (1) 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 astandby transmitter for both stations. Note that overall dimensions vary with frequencies combined. Dimensions shown are inches.