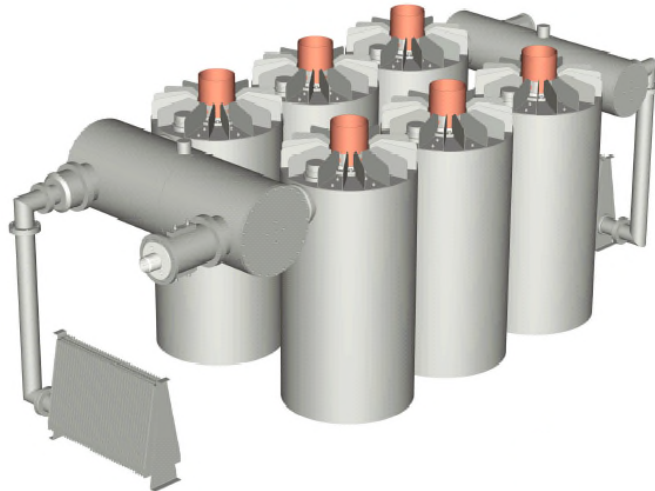


783-6 Series Constant Impedance FM Combiners

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. The use of cylindrical tanks provides the benefit of a mechanically rigid tank design. ERI's 783-6 constant impedance combiner module is modular in construction and is designed so that additional stations may be added in the future. The frequency of the additional station may be located anywhere within the FM broadcast band 2.0 MHz or more from any other system frequency.

Electronics Research, Inc. • 7777 Gardner Road • Chandler, IN 47610-9219 • USA
+1 812 925-6000 (tel) • +1 812 925-4030 (fax)

Your Single Source for Broadcast Solutions™ • Call Toll-free at 877 ERI-LINE • Visit Online at www.eriinc.com

The filter system offered is configured in a floor mounted configuration to maximize heat transfer, power handling capability, and simplify system modification in the future. The individual modules can be optionally forced air cooled, for higher power handling capability. There are also optional configurations that include ceiling hung frames and floor stands to accommodate a wide variety of physical space requirements. The combiner module can also be equipped with circulators for the dump load ports of the system to enable the capability or "reverse feeding" the combiner with the digital IBOC FM signals.

783-6 Series Constant Impedance Combiner Specifications:

Model:	783-6	
Combiner Type:	Band Pass Constant Impedance	
VSWR:	1.1:1 \pm 200kHz, maximum	
Injected Port to Broad Port Isolation:	\geq -30 dB	
Injected Port to Injected Port Isolation:	\geq -55 dB, with two or more modules	
Output Connector:	3-1/8-inch, 4-1/16-inch, 6-1/8-inch, or 9-3/16-inch, 50 ohms	
Output Power Capability:	280 kW capability (limited by line size)	
Combiner Module Size and Weight:		
Convection cooled model:		
6-1/8-inch Output		
Height:	50 in	127 cm
Width:	53 in	135 cm
Length:	123 in	312 cm
Weight:	900 lbm	408 kg
With forced air cooling:		
Height:	58 in	147 cm
Width:	46 in	117 cm
Length:	96 in	244 cm
Weight:	1020 lbm	463 kg
AC power required for forced air cooling:	115 VAC	3 amps

Multiple Station Broad Port:

Frequency:	All FM Broadcast Channels (88 to 108MHz)
Connector:	3-1/18-inch, 4-1/16-inch, 6-1/8-inch, or 9-3/16-inch 50-Ohm (flanged)
VSWR ¹ :	<1.06:1
Insertion Loss ² :	-0.05dB Typical
Group Delay ³ :	<75ns Overall Variation, Carrier \pm 150kHz

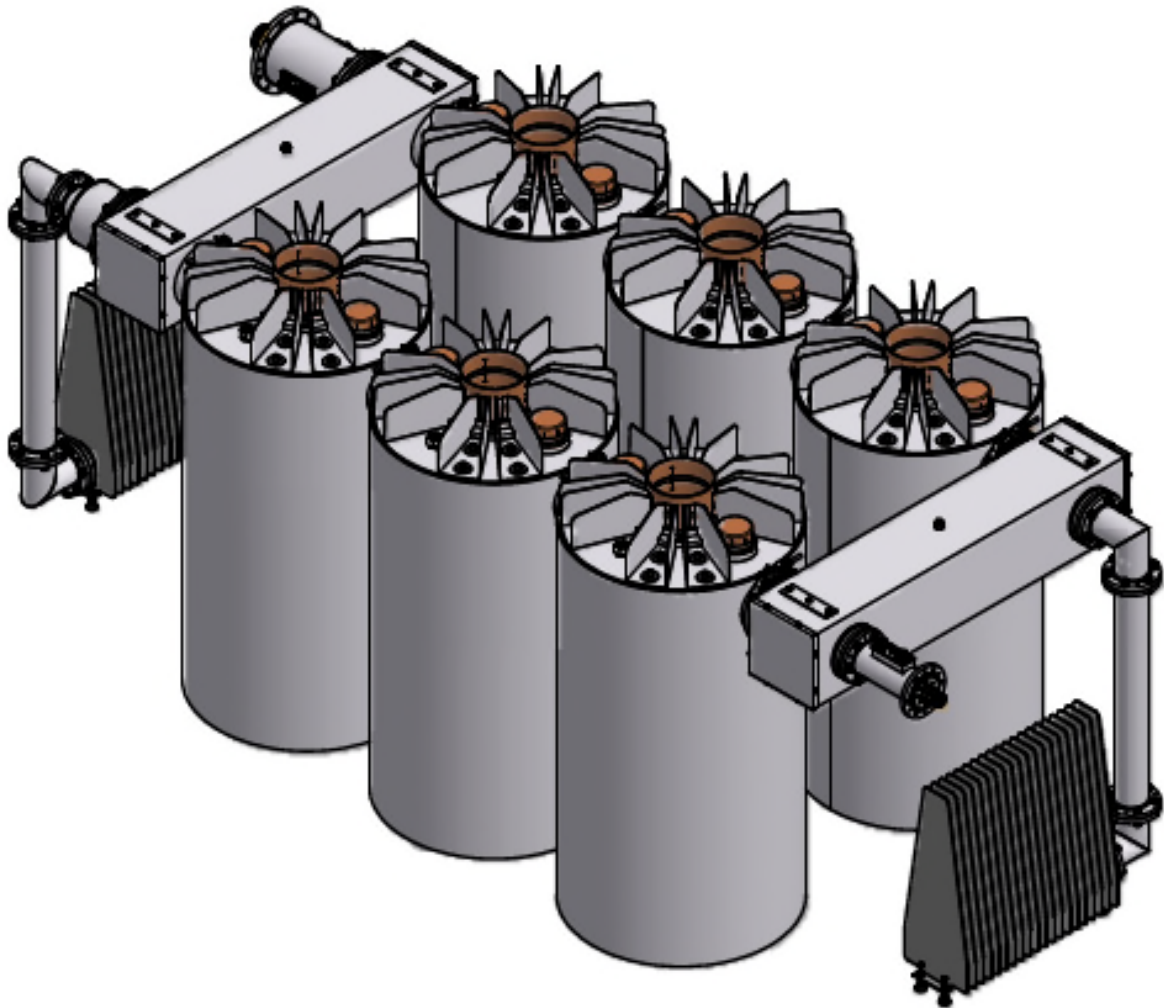
Injected Station Port Performance:

Frequency ⁴ :	All FM Broadcast Channels (88 to 108MHz)
Power Rating:	60 kW
Connector:	3-1/8-inch or 6-1/8-inch 50-Ohm EIA (flanged)
VSWR ¹ :	<1.06:1 at \pm 150 kHz
Insertion Loss ² :	<0.35 dB
Group Delay ³ :	<75 nsec overall variation \pm 150 kHz

1) When terminated in 50-Ohm resistive load.

2) 2.0 MHz or more removed from any signal appearing at the broad port.

Model:	783-6 (6-1/8-inch output)	
Height:	50 in	127 cm
Width:	53 in	135 cm
Length:	123 in	312 cm
Weight:	900 lbm	408 kg



ERI Model 783-6 Constant Impedance FM Combiner Module

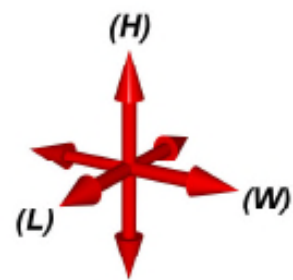
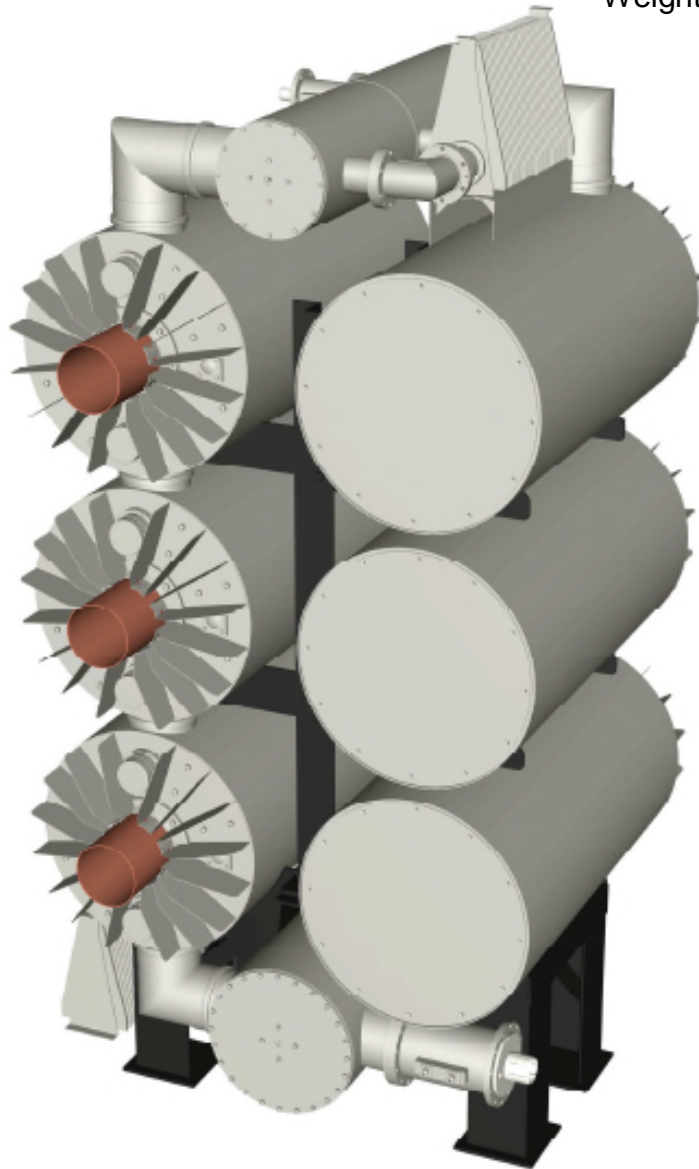
Model: 783-6 (6-1/8-inch output)

Height: 105 in 2667 mm

Width: 53 in 135 mm

Length: 54 in 137 mm

Weight: 1766 lbm 801 kg



NOTE: DIMENSIONS & WEIGHTS ARE APPROXIMATE AND SUBJECT TO CHANGE PER TUNING.

**ERI Model 783-6 Constant Impedance FM Combiner Module
(Shown in Optional Floor Stand)**