FILTERS

GENERAL CATALOG

FM DAB TV PASS BAND FILTERS

Telecomunicazioni Ferrara

antenne e componenti
alta frequenza

PRODUCT WARRANTY

Any product of **Telecomumicazioni Ferrara** is covered by a 12 (twelve) month warranty (standard).
Telecomumicazioni Ferrara S.r.l. extends to the original end-user purchaser all manufacturers warranties which are transferrable and all claims are to be made directly to **Telecomumicazioni Ferrara** per indicated procedures.

Warranty shall not include:

1. Connectors;
2. Re-shipment of the unit to **Telecomumicazioni Ferrara** for repair purposes;
3. Any unauthorized repair/ modification;
4. Incidental/ consequential damages as a result of any defect;
5. Nominal non-incidental defects;
6. Re-shipment costs or insurance of the unit or replacement units/ parts;

Any damage to the goods must be reported to the carrier in writing on the shipment receipt.

Any discrepancy or damage discovered subsequent to delivery, shall be reported to **Telecomumicazioni Ferrara** within **5** (five) days from delivery date.

To claim your rights under this warranty, you should follow this procedure:

- Contact the dealer or distributor where you purchased the unit. Describe the problem and, so that a possible easy solution can be detected. Dealers and Distributors are supplied with all the information about problems that may occur and usually they can repair the unit quicker than what the manufacturer could do. Very often installing errors are discovered by dealers.
- If your dealer cannot help you, contact **Telecomumicazioni Ferrara** and explain the problem. If it is decided to return the unit to the factory, **Telecomumicazioni Ferrara** will mail you a regular authorization with all the necessary instructions to sendback the goods.
- When you receive the authorization, you can return the unit. Pack it carefully for the shipment, preferably using the original packing and seal the package perfectly. DO NOT RETURN UNITS WITHOUT OUR AUTHORIZATION AS THEY WILL BE REFUSED.

Be sure to enclose a written technical report where mention all the problems found and a copy of your original invoice establishing the starting date of the warranty.

Replacement and warranty parts may be ordered from the following address:

Telecomunicazioni Ferrara

Telecomunicazioni Ferrara S.r.l.
Via Dei Calzolai, 156
44036 Francolino (Ferrara)
ITALY
Tel.: +39 0532 72.40.33
E-M ail: info@telecfe.it

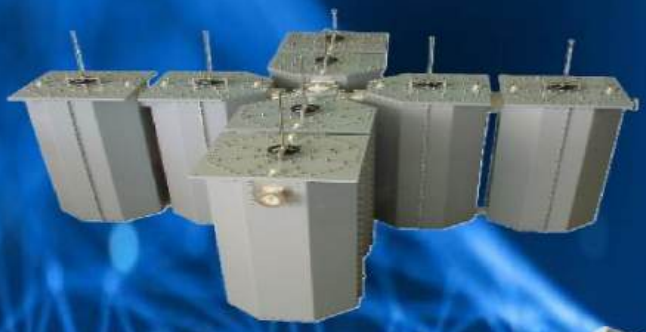
be sure to include the equipment model and serial number as well as part description and part number.

CUSTOMER SERVICE AND TECHNICAL ASSISTANCE

The technical assistance is aviable from **Telecomunicazioni Ferrara S.r.l.** by letter or prepaid telephone or telegram. Equipment requiring repair or over haul should be sent by common carrier, prepaid, insured and well protect. Do not mail equipment. We can assume no liability for inbound damage and necessary repairs become the obligation of the shipper.
Prior arrangement is necessary. Contact the dealer or distributor with all the informations about problems that may occur and usually thay can repair the unit quicker than what the manufacturer could do. Very often installing errors discovered by dealers.
If yoy dealer cannot help you, contact **Telecomunicazioni Ferrara S.r.l.** in Francolino (FE) and explain the problem. If it is decided to return the unit to the factory, **Telecomunicazioni Ferrara** will mail you a regular authirization with all the necessary instuctions to send back the goods.

Broadcast solutions

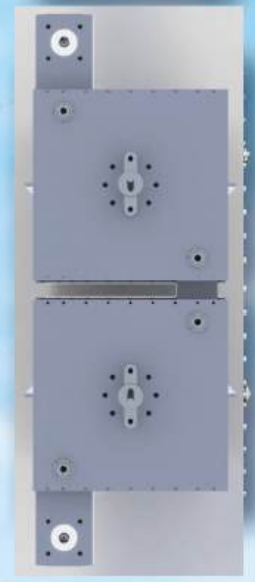
Telecfe



mail info@telecfe.it
www.telecfe.it
phone +39 0532 724033

For over 35 year, antenna , filters combiners accessories has been a benchmark in radio an tv broadcasting technology.

FM PASS BAND FILTER



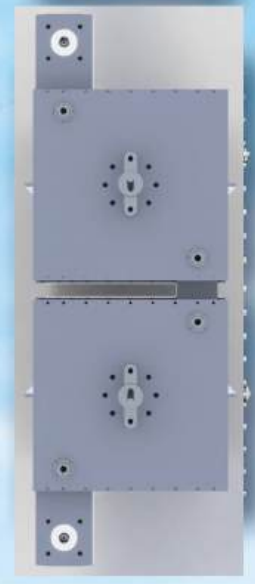
GENERAL CATALOG

- VARIOUS POWER
- FROM 50W TO 40KW POWER
- STANDARD CONFIGURATION OF 2 OR 3 CAVITIES
- SPECIAL CONFIGURATION 4 6 8 CAVITIES
- LOW LOSS, HIGH ISOLATION

TELECFE
BROADCAST SOLUTIONS

FM PASS BAND FILTER

GENERAL CATALOG



- STANDARD CONFIGURATION
2 CAVITIES

MODEL FFC01D

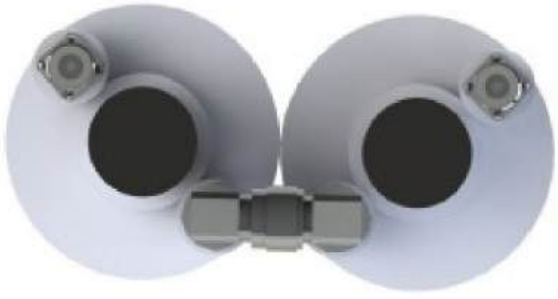
The band pass filters was designed as an extension of our band pass combiner technology.
The filter section is round, cavity filter design, the filter provides a one-time-buy filtering solution for the broadcaster located at multiple-user site.
The filter isolates the transmission/reception system to eliminate spurious emissions.

- **BAND-PASS FILTER**
  these are two standard resonant cavity filters special version with 3 and 4 it.

  All the model are used to make up mixer with several channels.
  It is used for trasmission / reception
- **FM BAND 87.5 – 108 mhz.**
- **BAND II**

OPTION MOUNTING RACK

TYPICAL SPECIFICATIONS	
Model	FFC01D
Impedance	50 ohm
Frequency Range	87.5-108 MHz
WSVR ± 150 KHz	1.1:1 Max
Insertion Loss	at f_0 0.60 – 1.65 dB Max
Return loss ± 150 KHz	≤ -26dB
Rejection	per customer's requirements (Typical ± 1MHz it's even to –8dB)
Connectors	N Input-Output
Max Power	100 - 150 W
Working Temperature	-20°C | +50°C
Colour	Enamel Gray Ral 7001
Materials	Aluminium, Brass, Copper, PTFE, Stainless Steel, Silvering (min. 12≈m thickness)



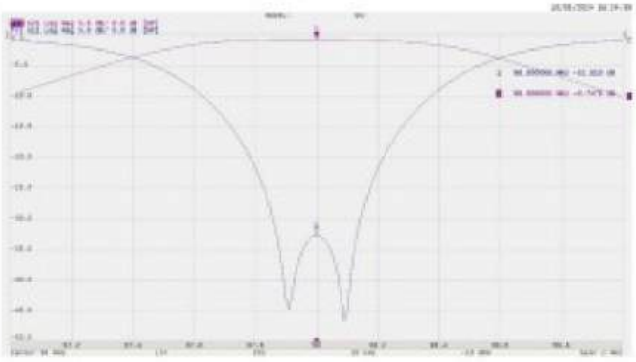
Features:

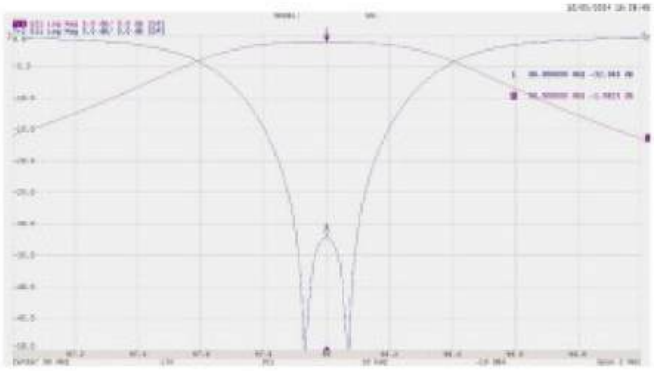
- Distortion – Free Transmission
- Standard configuration of 2 cavities
- Special configuration 3 and 4 cavities
- Low loss, high isolation
- Natural convection

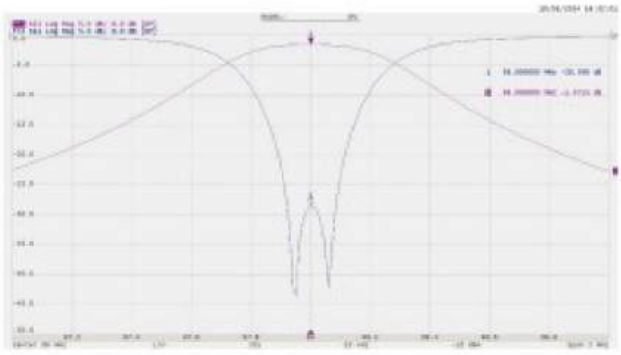
Dimensions	770(Max size)· 190· 90mm (30(Max size)· 7.5· 3.5 inch) (H· L· W)
Net Weight	≈6 Kg

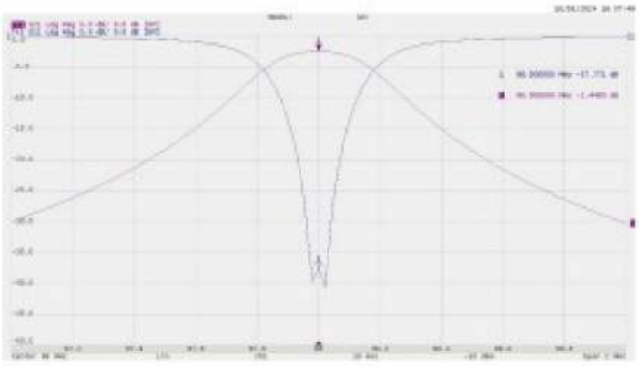
Rack version (optional)	
Panel Size	1 HE (1 HE=44,45 mm)
Net Weight	≈0.5 Kg

EXAMPLE OF RETURN LOSS AND INSERTION LOSS at 98.000 Mhz.

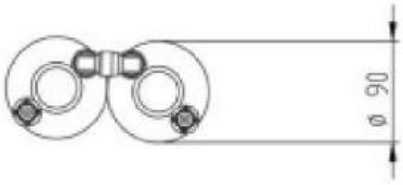


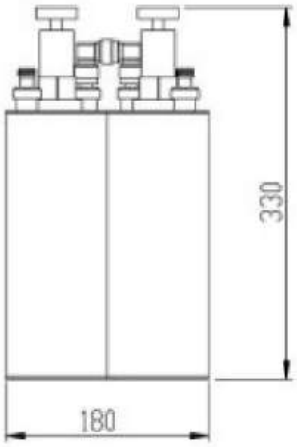






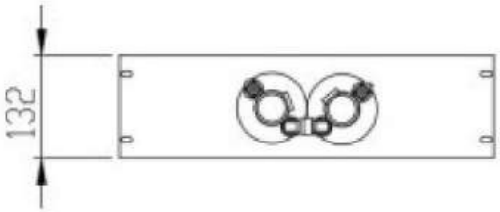
DIMENSIONS STANDARD VERSION mm.

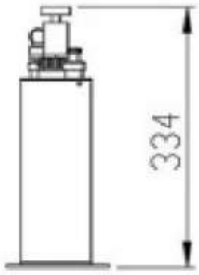


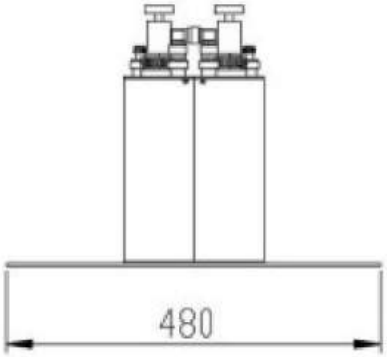


OPTION MOUNTING RACK

DIMENSIONS RACK VERSION mm.







MODEL FFC03

The band pass filters was designed as an extension of our band pass combiner technology. Using our industry-leading square, octagonal, cavity filter design, the filter provides a one-time-buy filtering solution for the broadcaster located at multiple-user site.
The filter isolates the transmission system to eliminate spurious emissions.

- **BAND-PASS FILTER**

  these are two standard resonant cavity filters special version with 3 and 4 it.

  All the model are used to make up mixer with several channels.

- **FM BAND 87.5 – 108 mhz.**
- **BAND II**

TYPICAL SPECIFICATIONS	
Model	FFC03
Impedance	50 ohm
Frequency Range	87.5-108 MHz
± 150 KHz	1.1:1 Max
Insertion Loss	at f_0 0.6 – O.75 dB Max
± 150 KHz	≤ -26dB
Rejection	per customer's requirements (Typical ± 1MHz it's even to –8dB)
Connectors	N Input-Output
Max Power	300 W
Working Temperature	-20°C | +50°C
Colour	Enamel Gray Ral 7001
Materials	Aluminium, Brass, Copper, PTFE, Stainless Steel, Silvering (min. 12≈m thickness)

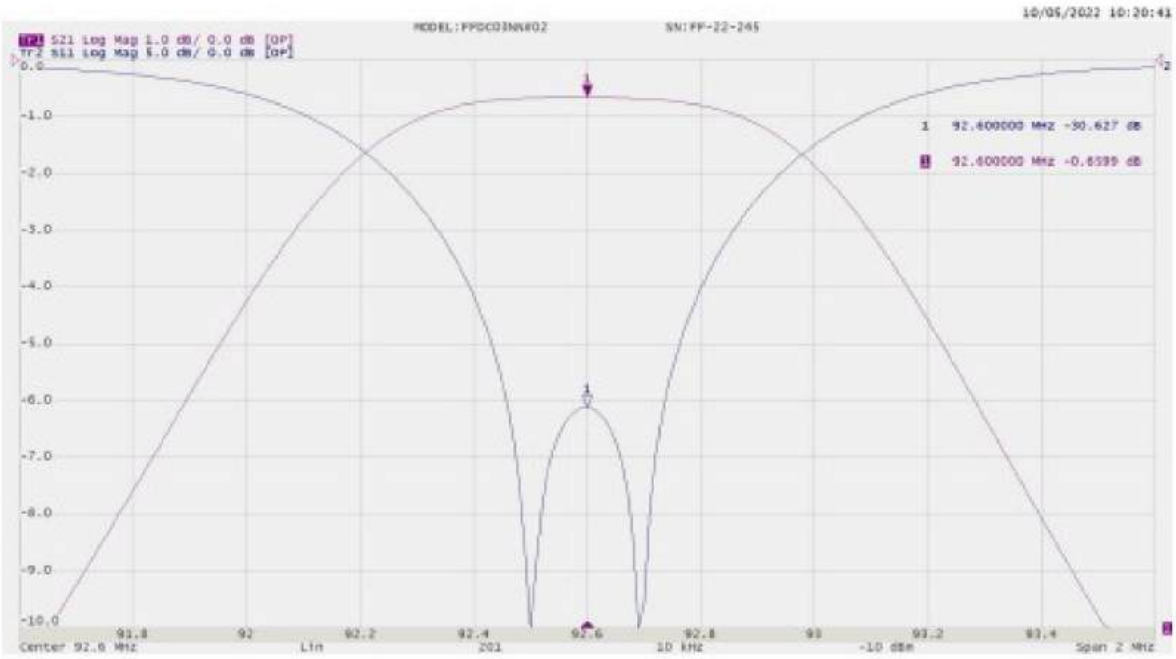
Features:

- Distortion – Free Transmission
- Standard configuration of 2 cavities
- Special configuration 3 and 4 cavities
- Low loss, high isolation
- Natural convection

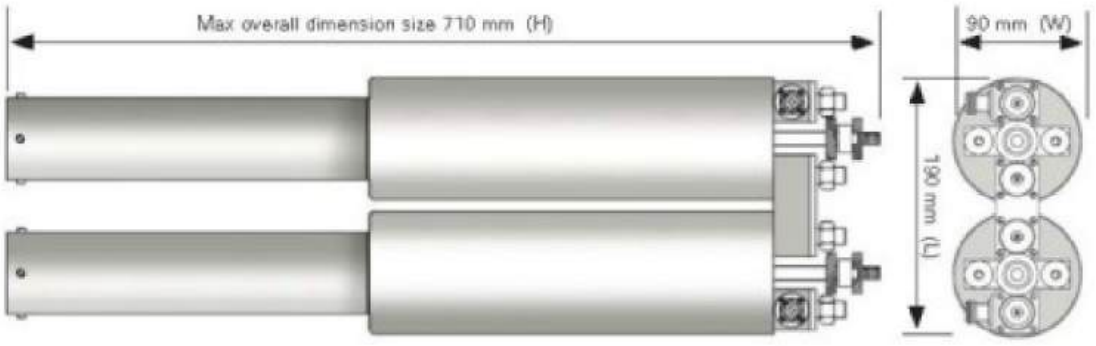
No rack version	
Dimensions	770(Max size)· 190· 90mm (30(Max size)· 7.5· 3.5 inch) (H· L· W)
Net Weight	≈6 Kg

Rack version (optional)	
Panel Size	2 HE (1 HE=44,45 mm)
Net Weight	≈6 Kg

EXAMPLE OF RETURN LOSS AND INSERTION LOSS



DIMENSIONS STANDARD VERSION



MODEL FFC05D

- **BAND-PASS FILTER**
- **FM BAND 87.5-108 MHz**
- **BAND II**

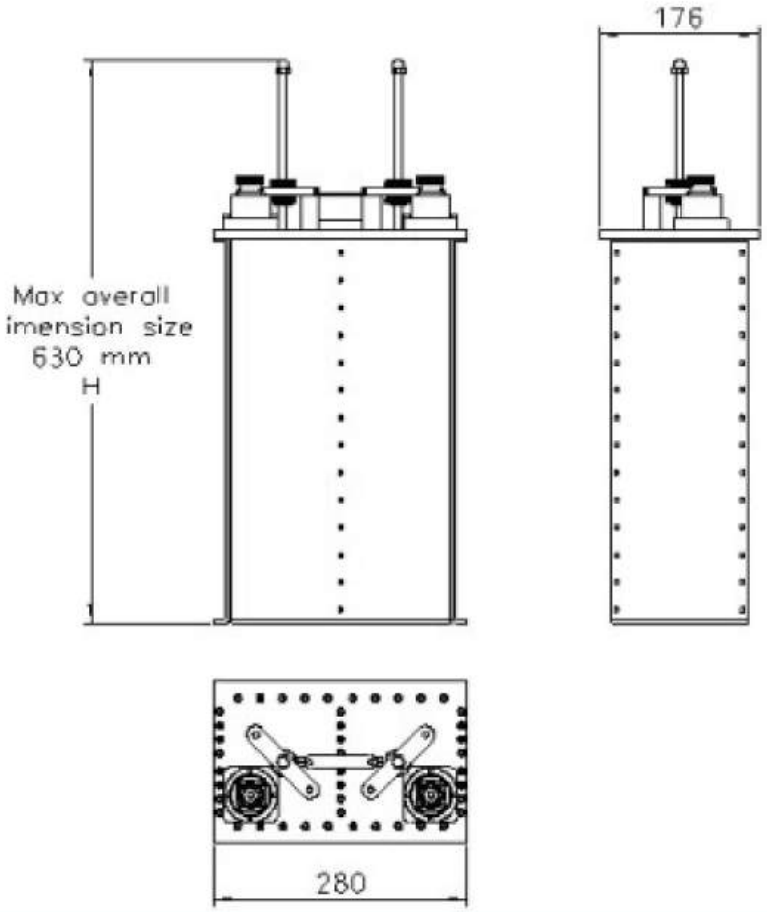
THESE ARE TWO STANDARD RESONANT CAVITY FILTERS.
ALL THE MODELS ARE USED TO MAKE UP MIXERS WITH SEVERAL CHANNELS.
The pass band filters was designed as an extension of our band pass combiner technology.
Using our industry-leading square, cavity filter design, the filter provides a one-time-buy filtering solution for the broadcaster located at multiple-user site.
The filter isolates the transmission system to eliminate spurious emissions.

TYPICAL SPECIFICATIONS

Model	FFC05D
Impedance	50 ohm
Frequency Range	87.5-108 MHz
VSWR ± 150 KHz	1.1:1 Max
Insertion Loss	at f_0 0.35 dB Max
Return Loss ± 150 KHz	≤ -26dB
Rejection	per customer's requirements (Typical ± 1 MHz it's even to –8dB)
Connectors	N-7/16" Input-Output Option 7/8" EIA
Max Power	600W
Working Temperature	-20°C ÷ +50°C
Colour	Enamel Gray Ral 7001
Materials	Aluminium, Brass, Copper, PTFE, Stainless Steel, Silvering (min. 12µm thickness)

Features:

- Distortion – Free Transmission
- Standard configuration of 2 cavities
- Low loss, high isolation
- Natural convection



No rack version	
Dimensions	630Max size)×280×176 mm (24.8(Max size)×11.0×6.9 inch) (H×L×W)
Net Weight	≈ 13 Kg

Rack version (optional)	
Panel Size	4 HE (1 HE = 44,45 mm)
Net Weight	≈ 14 Kg

Typical shape of a curves for S11 and S12 parameters

Model FFC2R

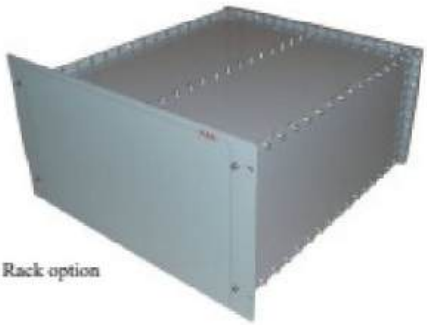
- DOUBLE CAVITY
- BAND-PASS FILTER
- FM BAND 87.5-108 MHz
- BAND II
- OPTION: RACK MOUNTING

TYPICAL SPECIFICATIONS	
Models	FFC2R
Impedance	50 ohm
Frequency Range	87.5-108 MHz
VSWR ± 150 KHz	1.1:1 Max
Insertion Loss	at f_0 0.25 – 0.34 dB Max
Return Loss ± 150 KHz	≤ -26dB
Rejection	12 dB @ ± 1MHz ADJUST
Connectors	7/16" Input/Output (Option 7/8")
Max Power	1.5 KW
Working Temperature	-20°C ÷ +50°C
Colour	Enamel Gray Ral 7001
Materials	Aluminium, Brass, Copper, PTFE, Stainless Steel, Silvering (min 12μm thickness)

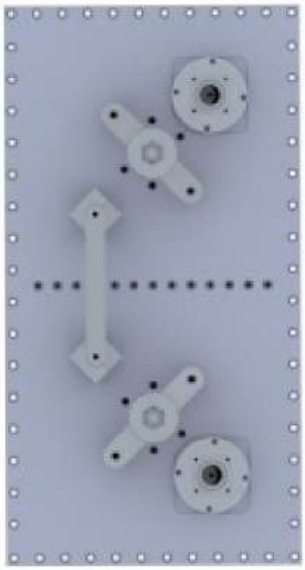
This Band Pass Filter has been designed as an extension of our Band Pass Combiner Technology. Using our industry-leading square, cavity filter design, this filter provides a one-time-buy filtering solution for the broadcaster located at multiple-user site.
This filter isolates the transmission system to eliminate spurious emissions.

Features:

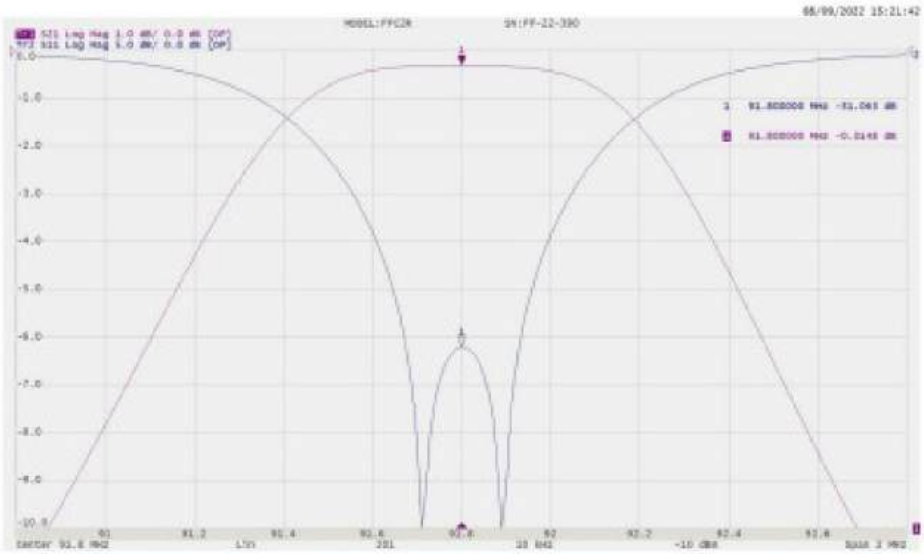
- Distortion – Free Transmission
- Low Loss, High Isolation
- Natural Convection
- Rack Mounting (Option from Panel 6HE)



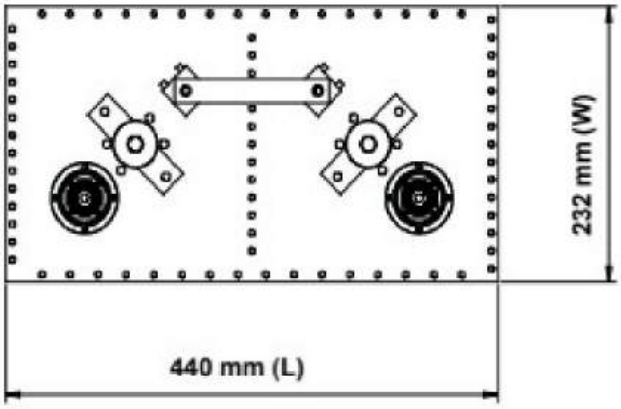
Version with Rack option

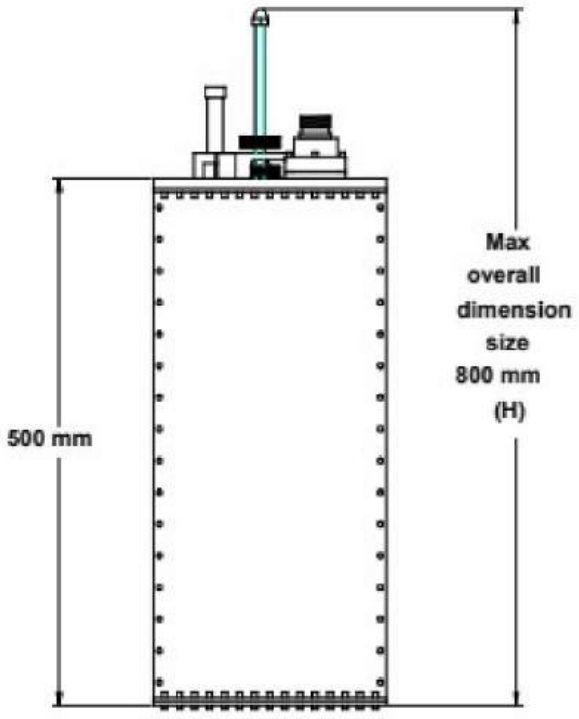


Example insertion loss and return loss

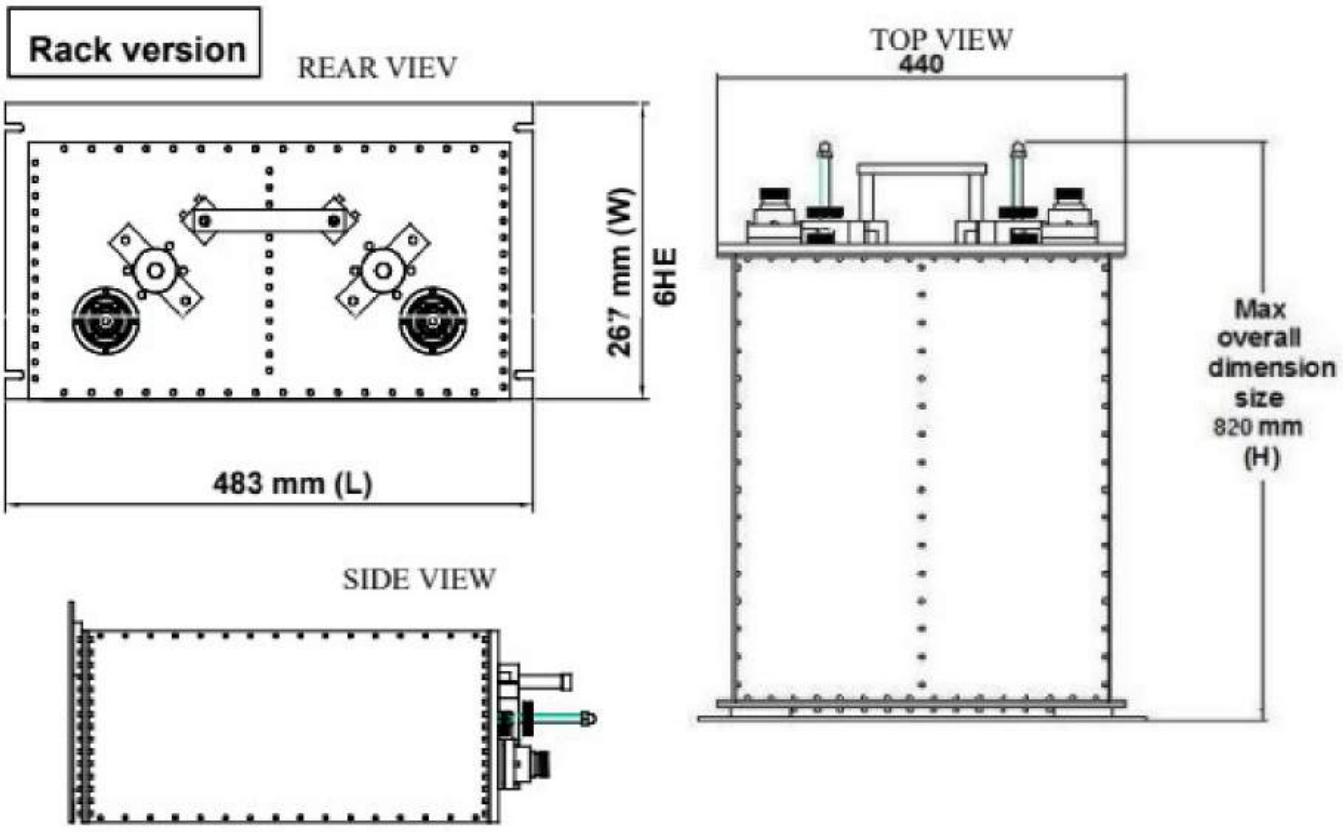


Dimensions standard version and rack version





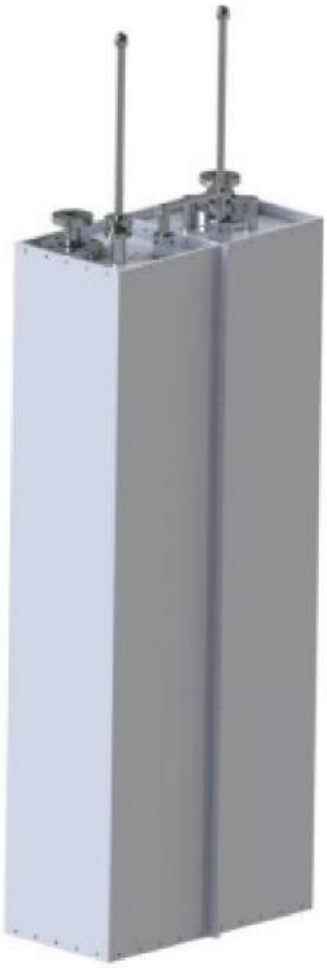
Standard version



Dimensions	800 (Max size) × 440 × 232 mm (31.5 (Max size)× 17.3 × 9.1 inch) (H×L×W)
Net Weight	≅ 17 Kg Standard - ≅ 18 Kg Rack Version
Dimensions whit Rack	635 (Max size) × 483 × 267 mm (25 (Max size)× 19× 10.5 inch) (H×L×W)

MODEL FFC08I-FFC2I-FFC2I/78

- **BAND-PASS FILTER**
- **FM BAND 87.5-108 MHz**
- **BAND II**



THESE ARE TWO STANDARD RESONANT CAVITY FILTERS, AND IN SPECIAL VERSION WITH 3 AND 4.
ALL THE MODELS ARE USED TO MAKE UP MIXERS WITH SEVERAL CHANNELS.

The pass band filters was designed as an extension of our band pass combiner technology. Using our industry-leading square, cavity filter design, the filter provides a one-time-buy filtering solution for the broadcaster located at multiple-user site.
The filter isolates the transmission system to eliminate spurious emissions.

TYPICAL SPECIFICATIONS

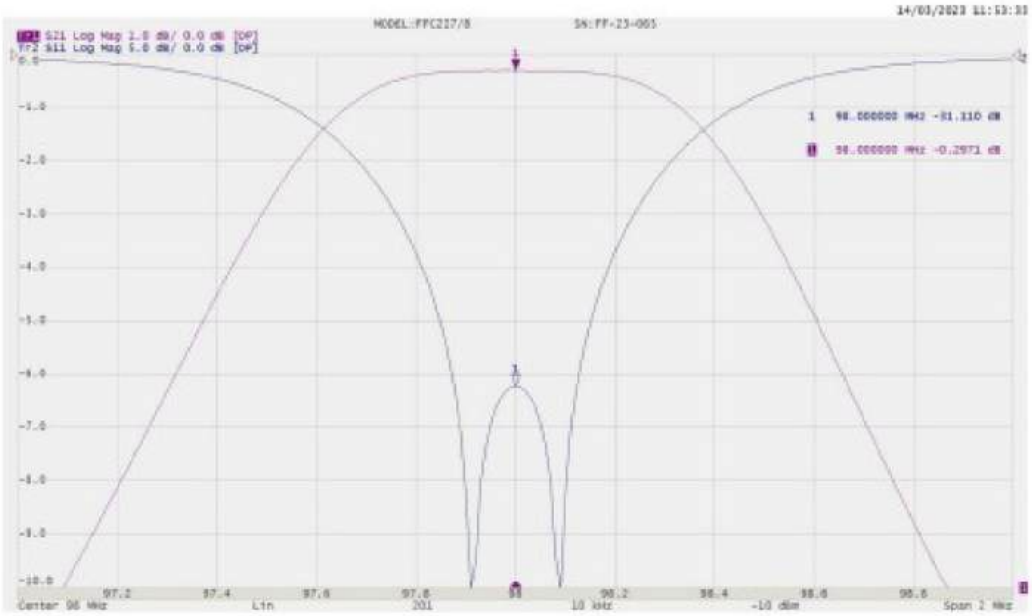
Models	FFC08I-FFC2I-FFC2I/78
Impedance	50 ohm
Frequency Range	87.5-108 MHz
VSWR ± 150 KHz	1.1:1 Max
Insertion Loss	at f_0 0.2 - 0.3 dB Max
Return Loss ± 150 KHz	≤ -26dB
Rejection	per customer's requirements (Typical ± 1MHz it's even to –14dB)
Connectors	FFC08I - N Input-Output FFC2I - 7/16" Input-Output FFC2I/78 - 7/8" EIA Input-Output
Max Power	2KW (FFC2I-FFC2I/78) 800 Watts (FFCI08)
Working Temperature	-20°C ÷ +50°C
Colour	Enamel Gray Ral 7001
Materials	Aluminium, Brass, Copper, PTFE, Stainless Steel, Silvering (min 12µm thickness)

Features:

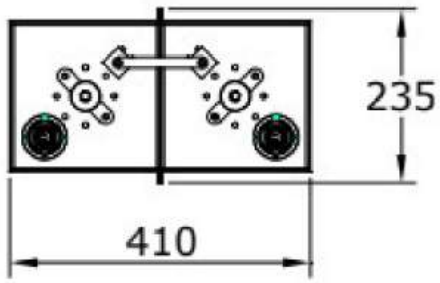
- Distortion – Free Transmission
- Standard configuration of 2 cavities
- Special configuration 3 and 4 cavities
- Low loss, high isolation
- Natural convection

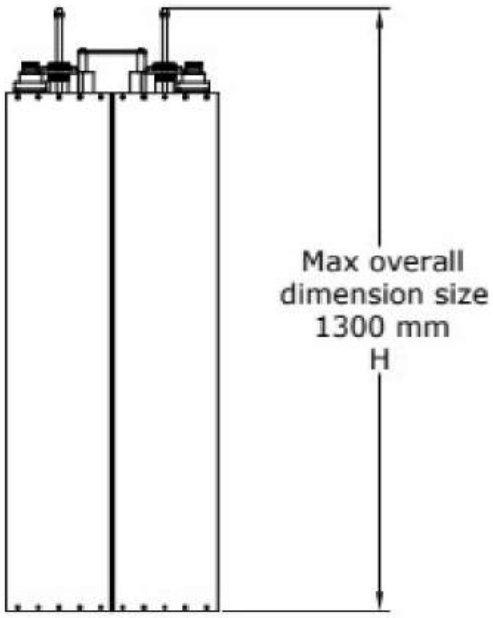
Dimensions	1300(Max size)×410×235 mm (51.2(Max size)×16.1×9.2 inch) (H×L×W)
Net Weight	≈ 20 Kg (double cavity)

Typical shape curves S11 and S12 parameters



Dimensions





MODEL FFC3

- BAND-PASS FILTER
- FM BAND 87.5 – 108 mhz.
- BAND II

THESE ARE TWO STANDARD RESONANT CAVITY FILTERS, AND IN THE SPECIAL VERSION WITH 3 AND 4.
ALL THE MODELS ARE USED TO MAKE UP MIXERS WITH SEVERAL CHANNELS.

The pass band filters was designed as an extension of our band pass combiner technology. Using our industry-leading square, cavity filter design, the filter provides a one-time-buy filtering solution for the broadcaster located at multiple-user site.
The filter isolates the transmission system to eliminate spurious emissions.

TYPICAL SPECIFICATIONS	
Model	FFC3
Impedance	50 ohm
Frequency Range	87.5-108 MHz
± 150 KHz	1.1:1 Max
Insertion Loss	at f_0 0.20 dB Max
± 150 KHz	≤ -26dB
Rejection	per customer's requirements (Typical ± 1MHz it's even to –14dB)
Connectors	7/8" EIA Input-Output
Max Power	3KW
Working Temperature	-20°C | +50°C
Colour	Enamel Gray Ral 7001
Materials	Aluminium, Brass, Copper, PTFE, Stainless Steel, Silvering (min. 12≈m thickness)

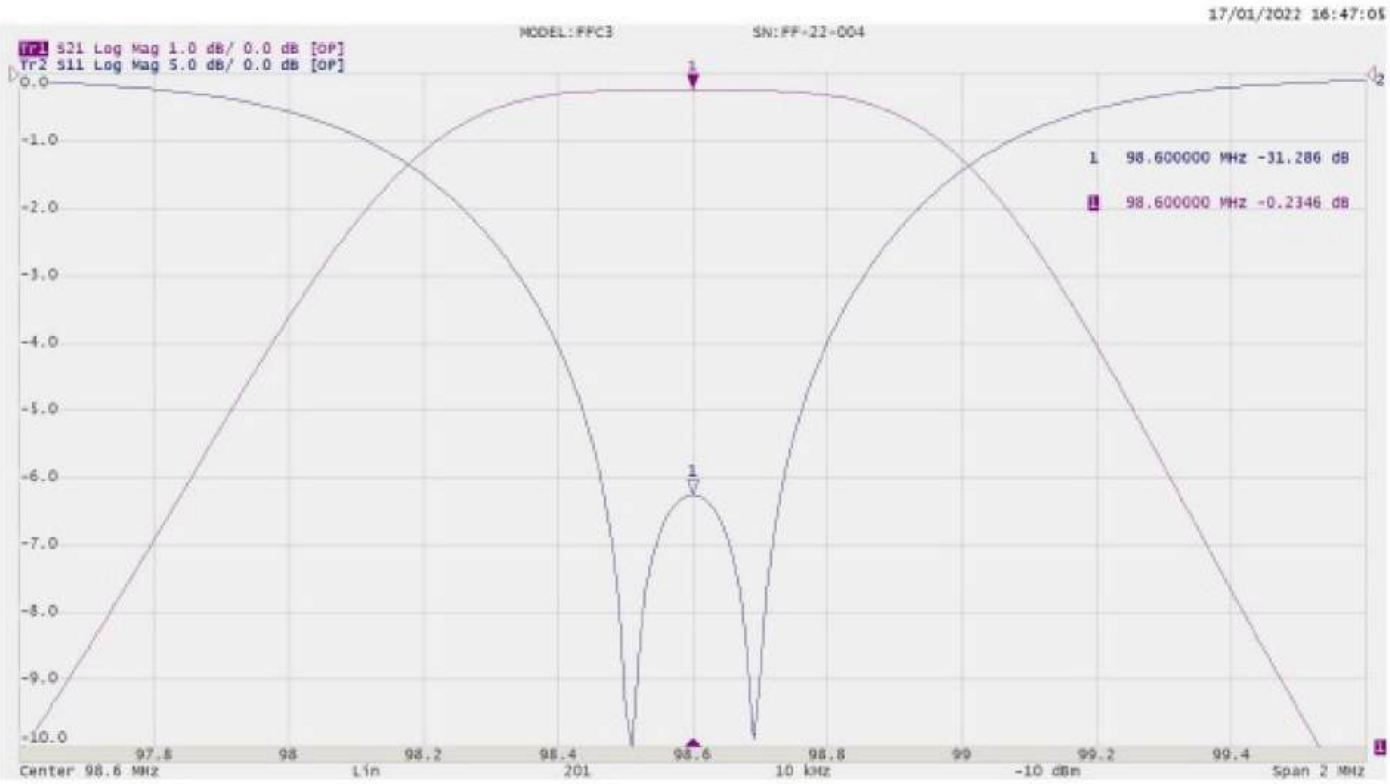
Features:

- Distortion – Free Transmission
- Standard configuration of 2 cavities
- Special configuration 3 and 4 cavities
- Low loss, high isolation
- Natural convection

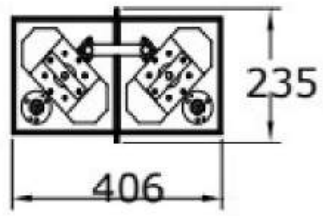
Dimensions	1300(Max size)· 406· 235 mm (51.2(Max size)· 16.0· 9.2 inch) (H· L· W)
Net Weight	≈25 Kg (double cavity)

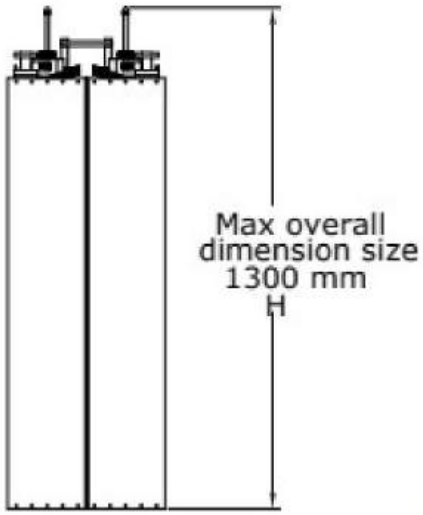
TELECFE
BROADCAST SOLUTIONS
www. telecfe.it email: info@telecfe.it phone: +39 0532 724033

Example of return loss and insertion loss



Dimensions is mm.





Dimensions	1300(Max size)- 406- 235 mm (51.2(Max size)- 16.0- 9.2 inch) (H- L- W)
Net Weight	≈25 Kg (double cavity)

MODEL

FFC5 double
FFTC5 triple
FFQC5 Quadruple

INPUT - OUTPUT 90° IS OPTION

- **BAND-PASS FILTER**
- **FM BAND 87.5-108 MHz**
- **BAND II**

THESE ARE TWO STANDARD RESONANT CAVITY FILTERS, AND IN THE SPECIAL VERSION WITH 3 AND 4.
ALL THE MODELS ARE USED TO MAKE UP MIXERS WITH SEVERAL CHANNELS.

The pass band filters was designed as an extension of our band pass combiner technology. Using our industry-leading square, cavity filter design, the filter provides a one-time-buy filtering solution for the broadcaster located at multiple-user site.
The filter isolates the transmission system to eliminate spurious emissions.

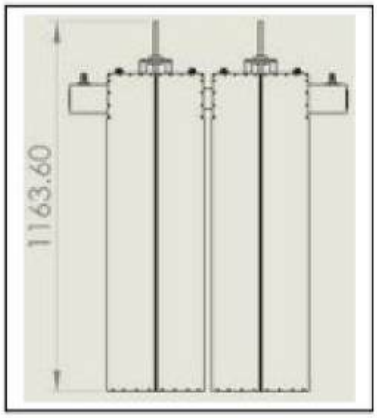
TYPICAL SPECIFICATIONS

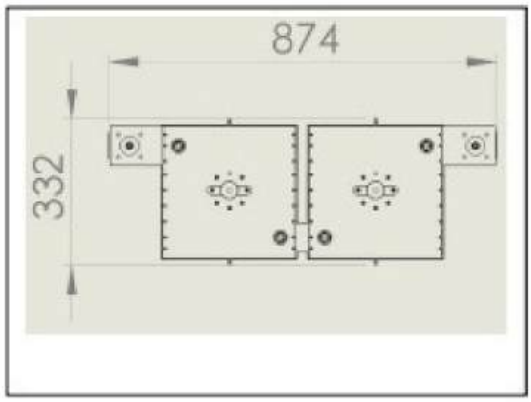
Model	FFC5
Impedance	50 Ohm
Frequency Range	87.5-108 MHz
VSWR ± 150 KHz	1.1:1 max
Insertion Loss	≤ 0.15 - 0.35 dB double cavity adjustable ≤ 0.25 - 0.45 dB triple cavity adjustable ≤ 0.35 - 0.55 dB quadruple cavity adjustable
Return Loss ± 150 KHz	≤ -26 dB
Rejection	per customer's requirements typical 30 dB ± 4 mhz. double cavity typical 30 dB ± 1.5 mhz. triple cavity typical 30 dB ± 1 mhz. quadruple cavity
Connectors	1+5/8" or 7/8" special version 3+1/8" Input - Output
Max Power	5 KW
Working Temperature	-20°C ÷ +50°C not significative variation in the range
Colour	Enamel Gray ral 7001
Materials	Aluminium, Brass, Copper, PTFE, Stainless Steel, Silvering

Features:

- Modular design
- Distortion – Free Transmission
- Standard configuration of 2 cavities
- Special configuration 3 and 4 cavities
- Low loss, high isolation
- Natural convection
- Special system temperature compensation

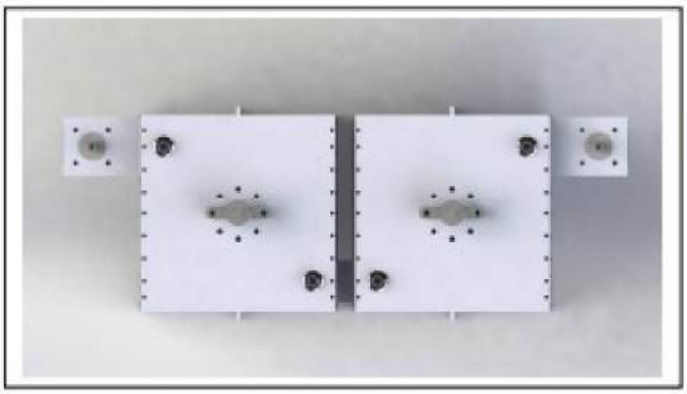
DIMENSIONS DOUBLE CAVITY (is mm.)



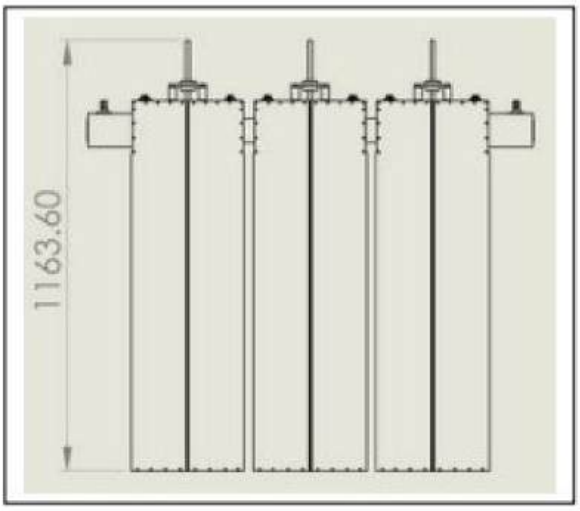


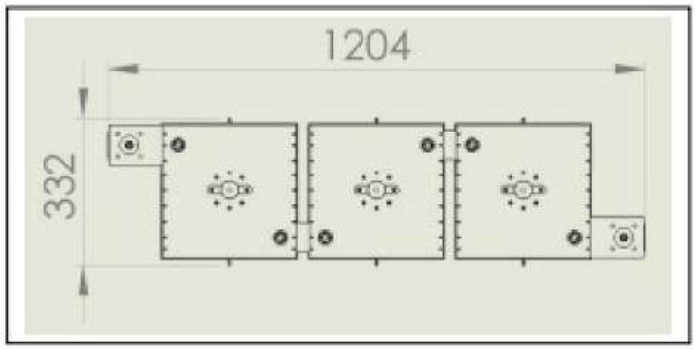
Dimensions	1400(Max size)×874×332 mm (H×L×W)
Net Weight	= 45 Kg (double cavity)

VIEW IN VARIOUS DIRECTIONS



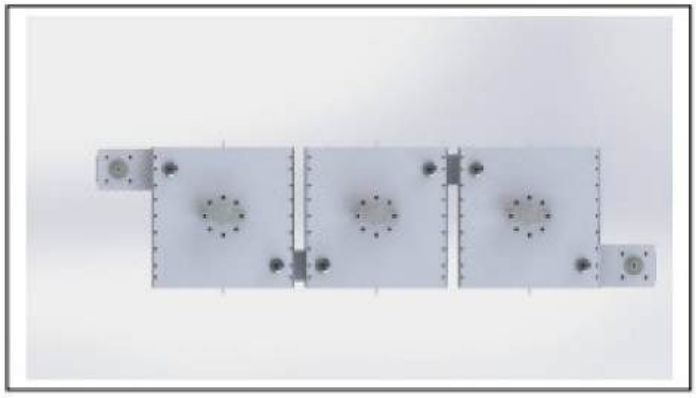
DIMENSIONS TRIPLE CAVITY (is mm.)



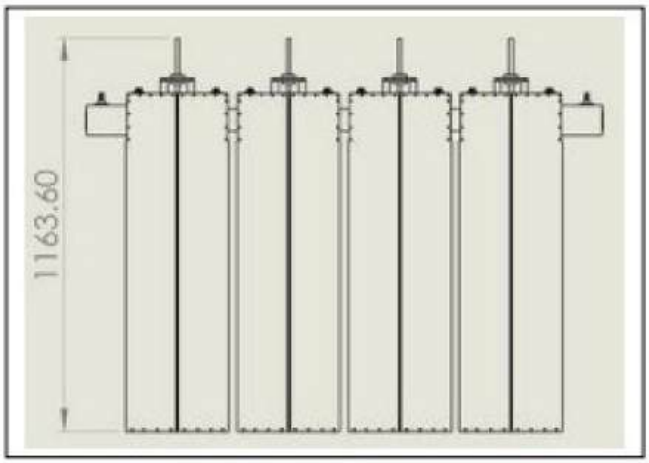


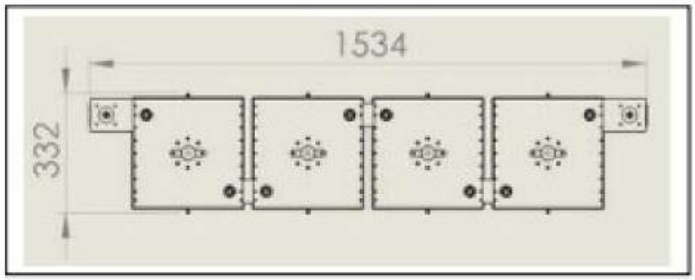
Dimensions	1400(Max size)×1204×332 mm (H×L×W)
Net Weight	≈ 65 Kg APROX

VIEW IN VARIOUS DIRECTIONS



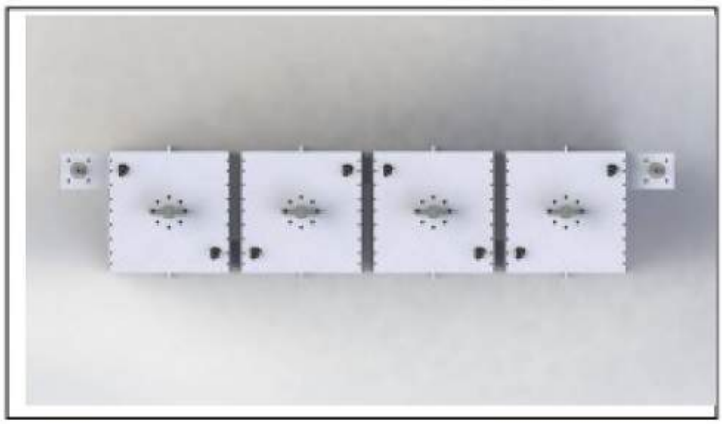
DIMENSIONS QUADRUPLE CAVITY (is mm.)

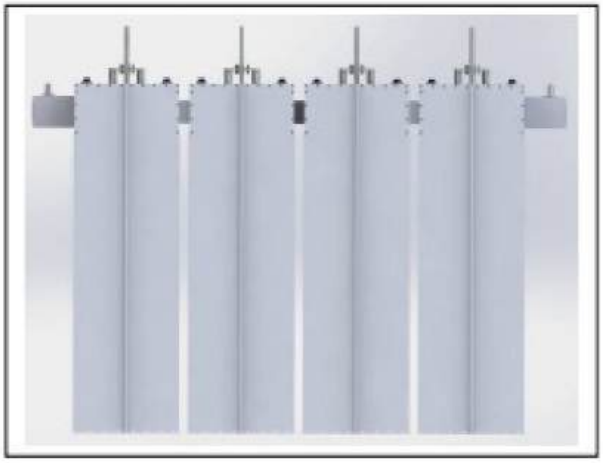




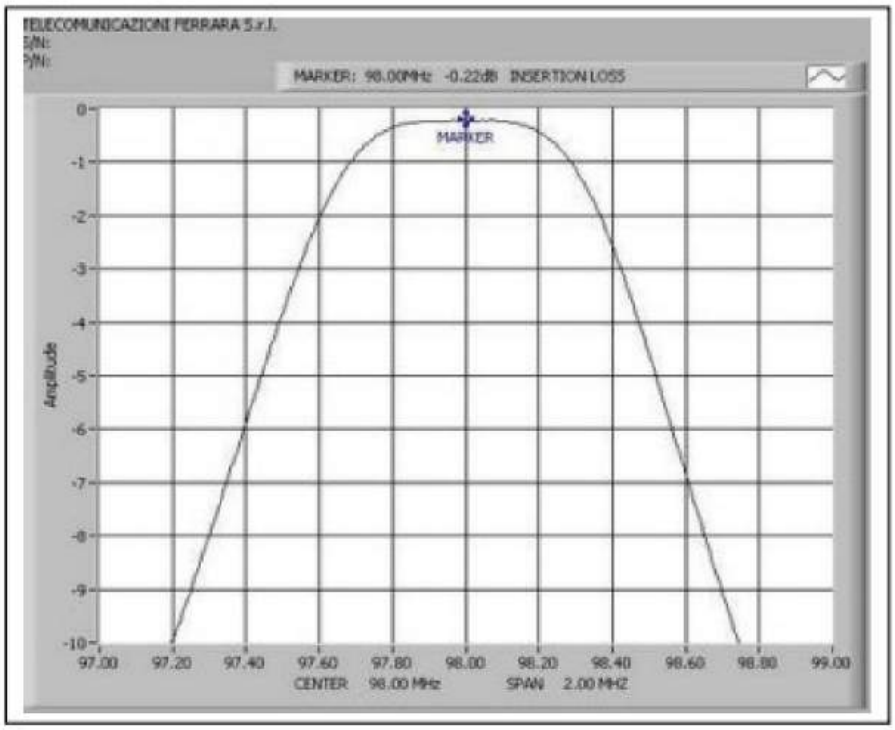
Dimensions	1400(Max size)×1534×332 mm (H×L×W)
Net Weight	≈ 85 Kg APROX

VIEW IN VARIOUS DIRECTIONS

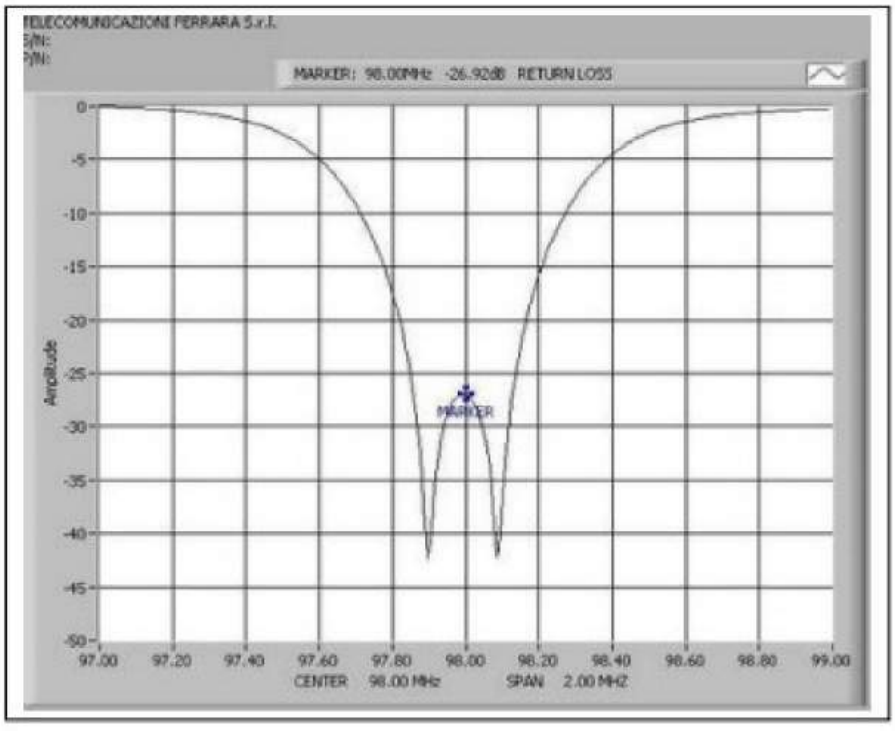




TYPICAL RESPONSE (DOUBLE CAVITY)



INSERTION LOSS



RETURN LOSS

MODEL FFC7/C

- **BAND-PASS FILTER**
- **FM BAND 87.5-108 MHz**
- **BAND II**

THESE ARE TWO STANDARD RESONANT CAVITY FILTERS, AND IN THE SPECIAL VERSION WITH 3 AND 4.
ALL THE MODELS ARE USED TO MAKE UP MIXERS WITH SEVERAL CHANNELS.

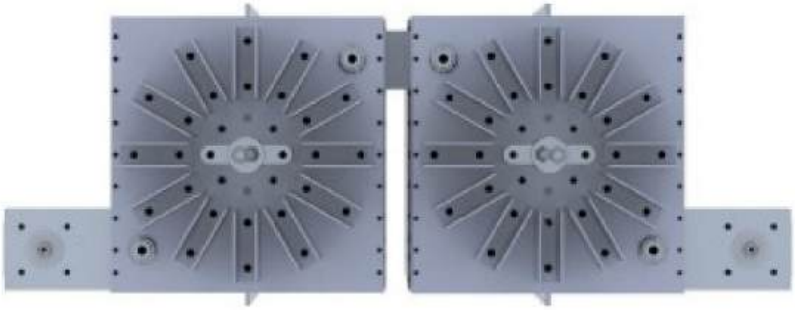
The pass band filters was designed as an extension of our band pass combiner technology. Using our industry-leading square, cavity filter design, the filter provides a one-time-buy filtering solution for the broadcaster located at multiple-user site.
The filter isolates the transmission system to eliminate spurious emissions.

TYPICAL SPECIFICATIONS

Model	FFC7/C
Impedance	50 ohm
Frequency Range	87.5-108 MHz
VSWR ± 150 KHz	1.1:1 max
Insertion Loss	≤ 0.16 – 0.21 dB max
Return loss ± 150 KHz	≤ -26 dB
Rejection	per customer's requirements (Typical ± 1MHz it's even to –14dB)
Connectors	1+5/8" Input – Output (Option 3+1/8")
Max Power	7 KW
Working Temperature	-20°C | +50°C
Colour	Enamel Gray Ral 7001
Materials	Aluminium, Brass, Copper, PTFE, Stainless Steel, Silvering (min 12≈m thickness)

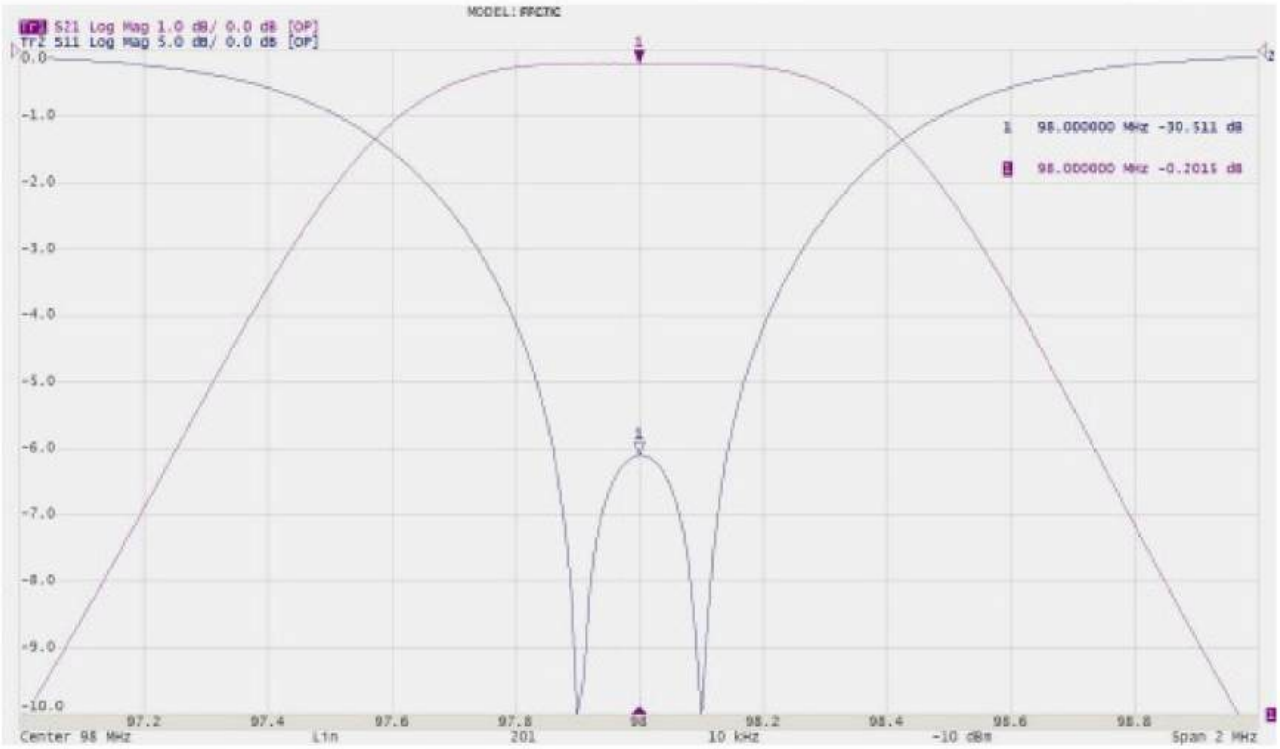
Features:

- Modular design
- Distortion – Free Transmission
- Standard configuration of 2 cavities
- Special configuration 3 and 4 cavities
- Low loss, high isolation
- Forced air cooling

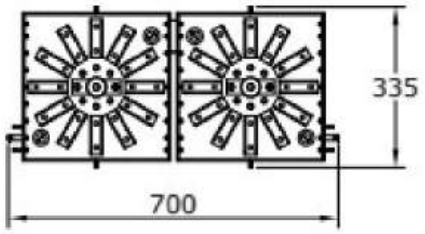


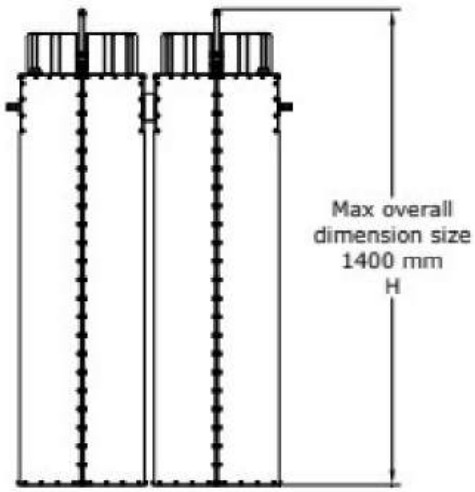
INPUT OUTPUT 90° OPTION

Example of return loss and insertion loss



Dimensions





Dimensions	1400(Max size)· 700· 335 mm (55.1(Max size)· 27.5· 13.2 inch) (H· L· W)
Net Weight	≈38 Kg (double cavity)

MODEL FFC10C

- **BAND-PASS FILTER**
- **FM BAND 87.5-108 MHz**
- **BAND II**

THESE ARE TWO STANDARD RESONANT CAVITY FILTERS, AND IN THE SPECIAL VERSION WITH 3 AND 4.
ALL THE MODELS ARE USED TO MAKE UP MIXERS WITH SEVERAL CHANNELS.

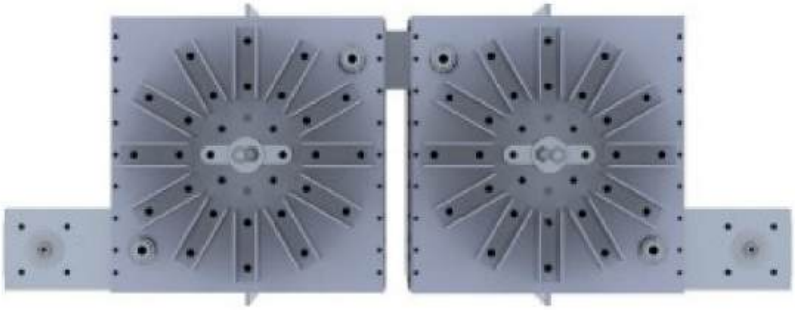
The pass band filters was designed as an extension of our band pass combiner technology. Using our industry-leading square, cavity filter design, the filter provides a one-time-buy filtering solution for the broadcaster located at multiple-user site.
The filter isolates the transmission system to eliminate spurious emissions.

TYPICAL SPECIFICATIONS

Model	FFC10C
Impedance	50 ohm
Frequency Range	87.5-108 MHz
VSWR ± 150 KHz	1.1:1 max
Insertion Loss	≤ 0.16 – 0.21 dB max
Return loss ± 150 KHz	≤ -26 dB
Rejection	per customer's requirements (Typical ± 1MHz it's even to –14dB)
Connectors	1+5/8" Input – Output (Option 3+1/8")
Max Power	11 KW
Working Temperature	-20°C | +50°C
Colour	Enamel Gray Ral 7001
Materials	Aluminium, Brass, Copper, PTFE, Stainless Steel, Silvering (min 12≈m thickness)

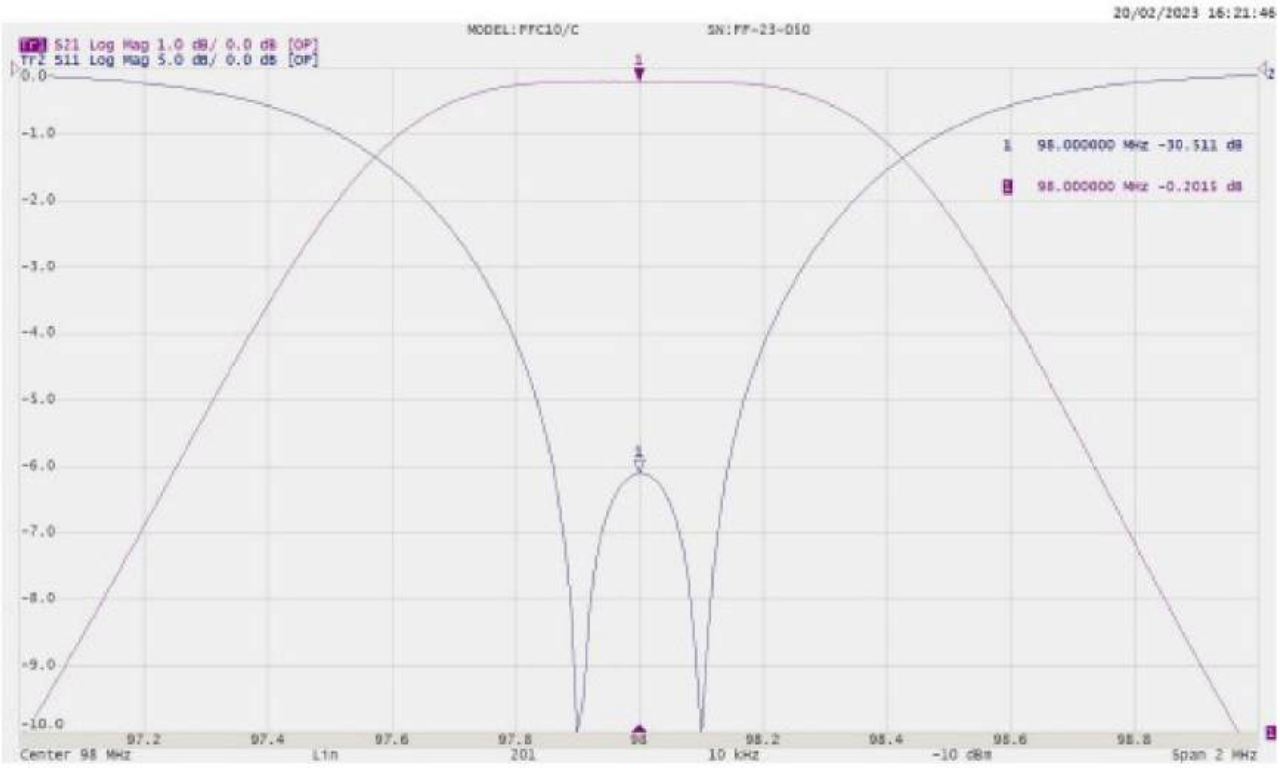
Features:

- Modular design
- Distortion – Free Transmission
- Standard configuration of 2 cavities
- Special configuration 3 and 4 cavities
- Low loss, high isolation
- Forced air cooling

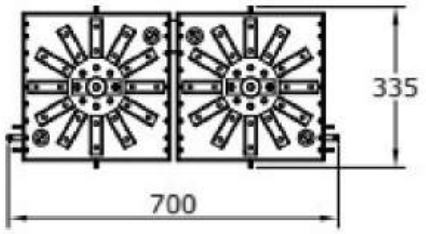


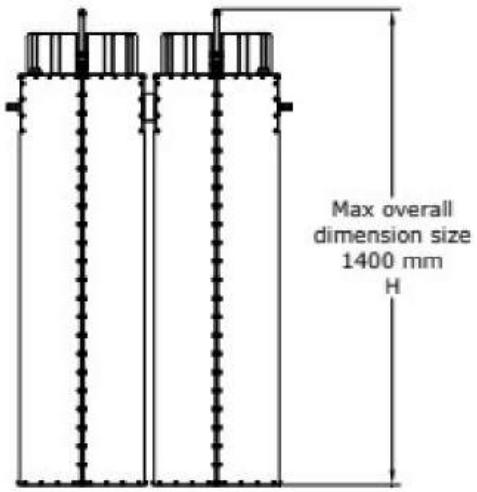
INPUT OUTPUT 90° OPTION

Example of return loss and insertion loss



Dimensions





Dimensions	1400(Max size)· 700· 335 mm (55.1(Max size)· 27.5· 13.2 inch) (H· L· W)
Net Weight	≈46 Kg (double cavity)

Model FFC10

- **Band-Pass Filter**
- **FM Band 87.5 - 108 MHz**
- **Band II**

THESE ARE TWO STANDARD RESONANT CAVITY FILTERS, AND IN THE SPECIAL VERSION WITH 3 AND 4.

ALL THE MODELS ARE USED TO MAKE UP MIXERS WITH SEVERAL CHANNELS.

The band pass filters was designed as an extension of our band pass combiner technology.

Using our industry-leading square cavity filter design the filter provides a one-time-buy

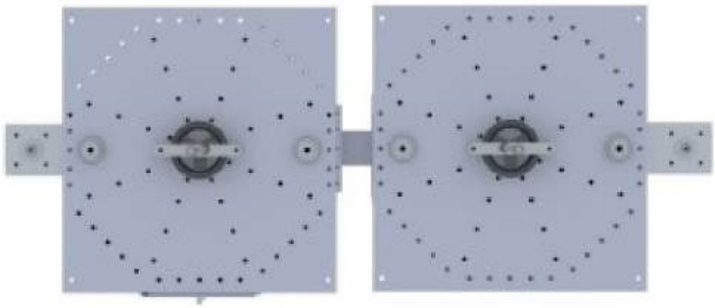
filtering solution for the broadcaster located at multiple-user site.

The filter isolates the transmission system to eliminate spurious emissions.

TYPICAL SPECIFICATIONS	
Model	FFC10
Impedance	50 Ohm
Frequency Range	87.5 - 108 mhz.
VSWR ±150 KHz	1.1:1 Max
Insertion Loss	≤0.1 - 0.15 dB
Return Loss± 150 KHz	≤-26 dB
Rejection	per customer's requirements (Typical ± 1 mhz. It's even to -14 dB.)
Connectors	1+5/8" Input-Output (Option 3+1/8")
Max Power	10 - 15 KW
Working Temperature	-20 - +50 C°
Colour	Enamel gray ral 7001
Materials	Aluminium, silver brass, copper, PTFE, stainless ste silver plated.

Features:

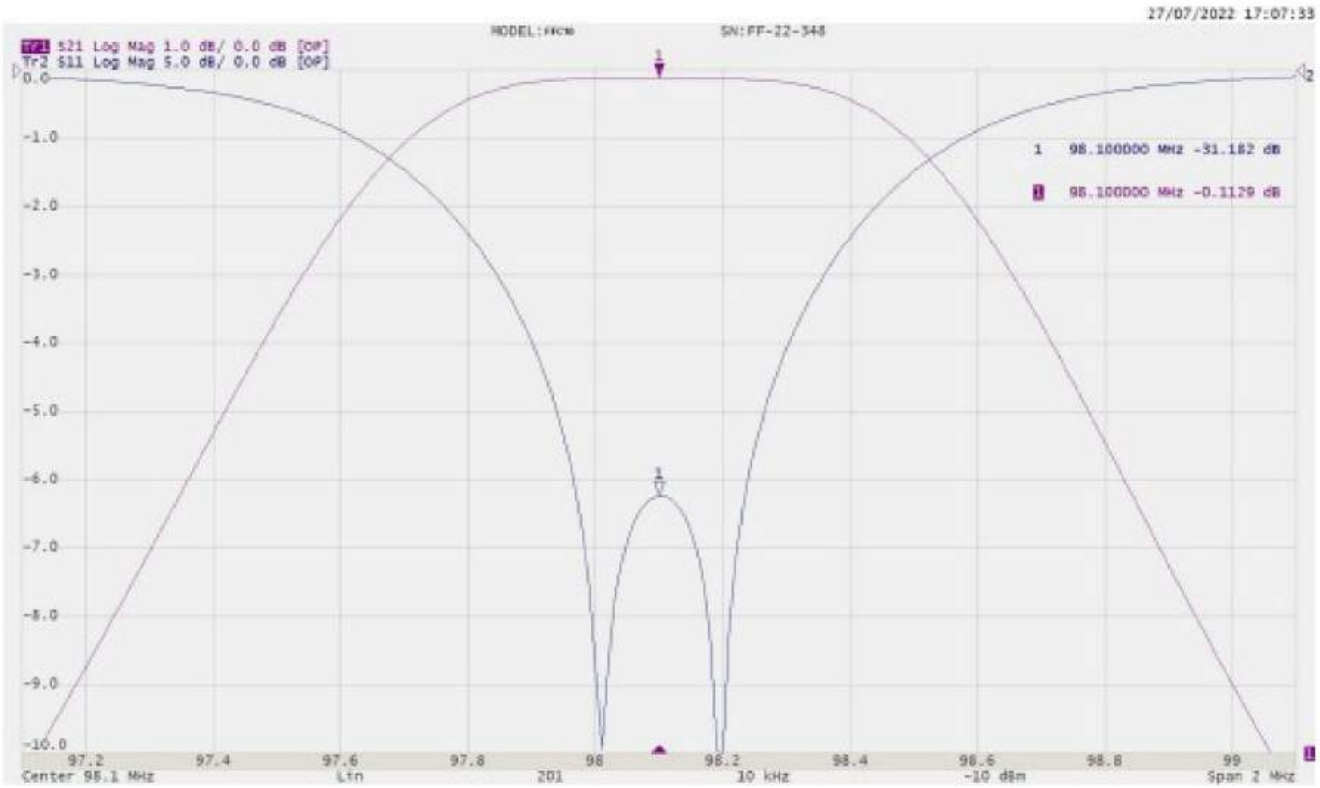
- Modular design
- Distortion - Free Transmission
- Standard configuration of 2 cavities
- Special configuration 3 and 4 cavities
- Low loss, high isolation
- Natural convection



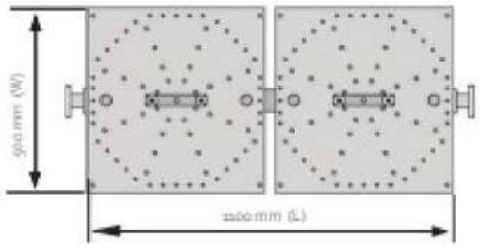
Standard Version	
Dimensions	1500 (Max size) x 1100 x 500 mm HxLxW
Net Weight	60 Kg (double cavity aprox.)

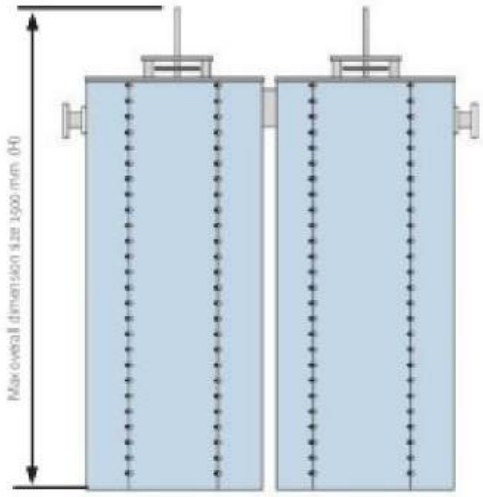
TELECFE BROADCAST SOLUTIONS
www. telecfe.it email: info@telecfe.it phone: +39 0532 724033

Example of return loss and insertion loss



Dimensions





MODEL FFC20

- BAND-PASS FILTER
- FM BAND 87.5-108 MHz
- BAND II

OUTPUT 90° OPTION

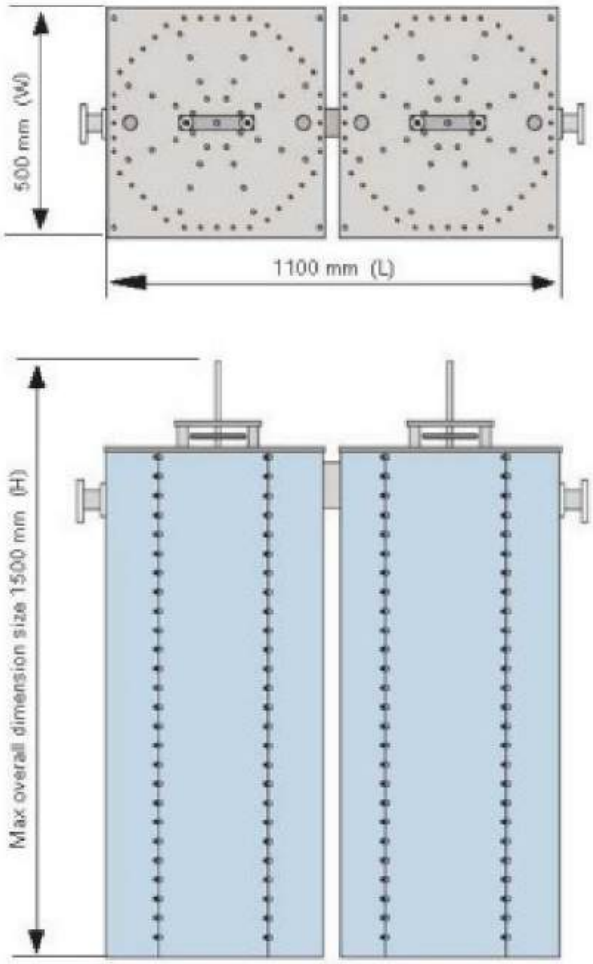
THESE ARE TWO STANDARD RESONANT CAVITY FILTERS, AND IN SPECIAL VERSION WITH 3 AND 4.
ALL THE MODELS ARE USED TO MAKE UP MIXERS WITH SEVERAL CHANNELS.
The pass band filters was designed as an extension of our band pass combiner technology. Using our industry-leading square, cavity filter design, the filter provides a one-time-buy filtering solution for the broadcaster located at multiple-user site.
The filter isolates the transmission system to eliminate spurious emissions.

TYPICAL SPECIFICATIONS

Model	FFC20
Impedance	50 ohm
Frequency Range	87.5-108 MHz
150 KHz	1.1:1 max
Insertion Loss	≤ 0.1 dB
150 KHz	≤ -26 dB
Rejection	per customer's requirements (Typical ± 1MHz it's even to –14dB)
Connectors	3+1/8" Input - Output
Max Power	20 KW
Working Temperature	-20°C | +50°C
Colour	Enamel Gray Ral 7001
Materials	Aluminium, Brass, Copper, PTFE, Stainless Steel, Silvering (min. 12≈m thickness)

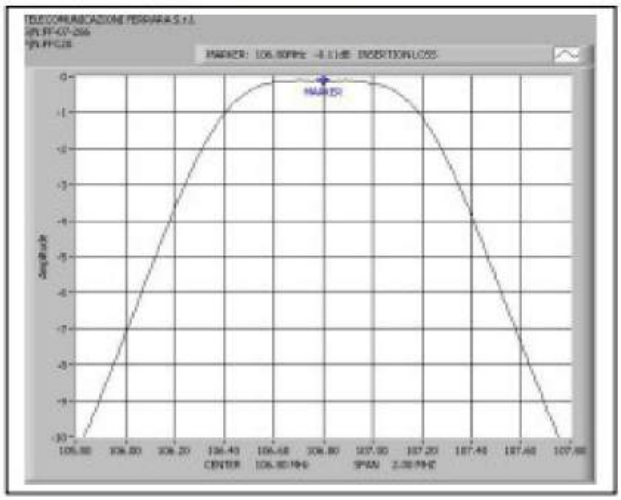
Features:

- Modular design
- Distortion – Free Transmission
- Standard configuration of 2 cavities
- Special configuration 3 and 4 cavities
- Low loss, high isolation
- Natural convection

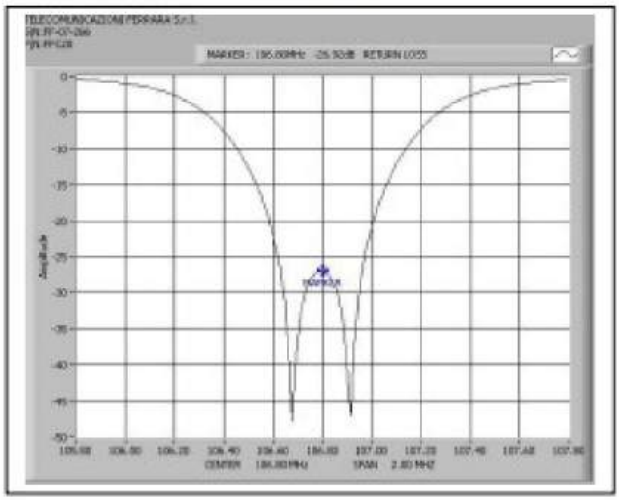


Dimensions	1500(Max size)· 1100· 490 mm (59.0(Max size)· 43.3· 19.3 inch) (H· L· W)
Net Weight	≃60 Kg (double cavity)

Example of
Return Loss



Example of
Insertion Loss



MODEL FFC20

- BAND-PASS FILTER
- FM BAND 87.5-108 MHz
- BAND II

OUTPUT 90° OPTION

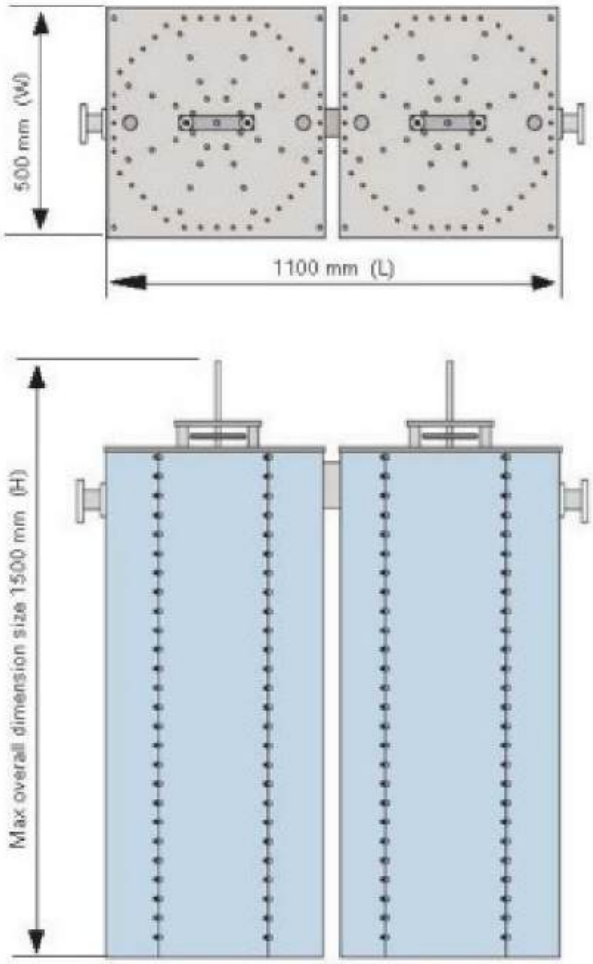
THESE ARE TWO STANDARD RESONANT CAVITY FILTERS, AND IN SPECIAL VERSION WITH 3 AND 4.
ALL THE MODELS ARE USED TO MAKE UP MIXERS WITH SEVERAL CHANNELS.
The pass band filters was designed as an extension of our band pass combiner technology. Using our industry-leading square, cavity filter design, the filter provides a one-time-buy filtering solution for the broadcaster located at multiple-user site.
The filter isolates the transmission system to eliminate spurious emissions.

TYPICAL SPECIFICATIONS

Model	FFC20
Impedance	50 ohm
Frequency Range	87.5-108 MHz
150 KHz	1.1:1 max
Insertion Loss	≤ 0.1 dB
150 KHz	≤ -26 dB
Rejection	per customer's requirements (Typical ± 1MHz it's even to –14dB)
Connectors	3+1/8" Input - Output
Max Power	20 KW
Working Temperature	-20°C | +50°C
Colour	Enamel Gray Ral 7001
Materials	Aluminium, Brass, Copper, PTFE, Stainless Steel, Silvering (min. 12≈m thickness)

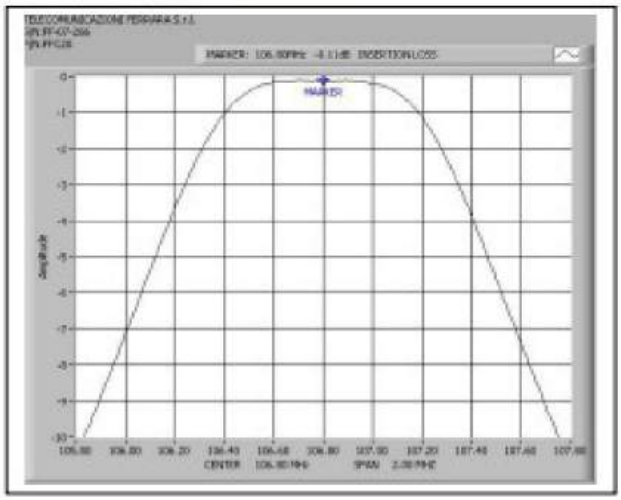
Features:

- Modular design
- Distortion – Free Transmission
- Standard configuration of 2 cavities
- Special configuration 3 and 4 cavities
- Low loss, high isolation
- Natural convection

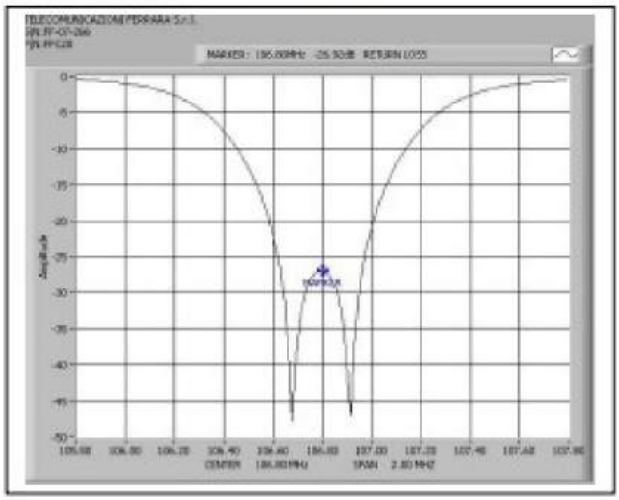


Dimensions	1500(Max size)· 1100· 490 mm (59.0(Max size)· 43.3· 19.3 inch) (H· L· W)
Net Weight	≃60 Kg (double cavity)

Example of
Return Loss



Example of
Insertion Loss



MODEL FFC30

- **BAND-PASS FILTER**
- **FM BAND 87.5-108 MHz**
- **BAND II**

OUTPUT 90° OPTION

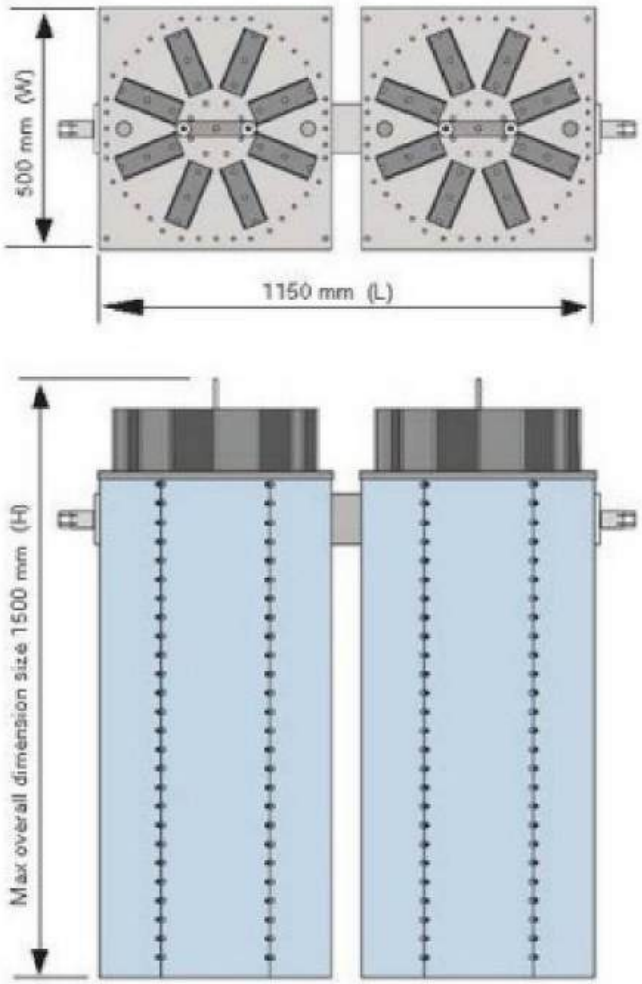
THESE ARE TWO STANDARD RESONANT CAVITY FILTERS, AND IN SPECIAL VERSION WITH 3 AND 4.
ALL THE MODELS ARE USED TO MAKE UP MIXERS WITH SEVERAL CHANNELS.
The pass band filters was designed as an extension of our band pass combiner technology. Using our industry-leading square, cavity filter design, the filter provides a one-time-buy filtering solution for the broadcaster located at multiple-user site.
The filter isolates the transmission system to eliminate spurious emissions.

TYPICAL SPECIFICATIONS

Model	FFC30
Impedance	50 ohm
Frequency Range	87.5-108 MHz
VSWR ± 150 KHz	1.1:1 max
Insertion Loss	≤ 0.1 dB
Return Loss ± 150 KHz	≤ -26 dB
Rejection	per customer's requirements (Typical ± 1MHz it's even to −14dB)
Connectors	3•1/8" Input - Output
Max Power	35 KW
Working Temperature	-20°C ÷ +50°C
Colour	Enamel Gray Ral 7001
Materials	Aluminium, Brass, Copper, PTFE, Stainless Steel, Silvering (min. 12µm thickness)

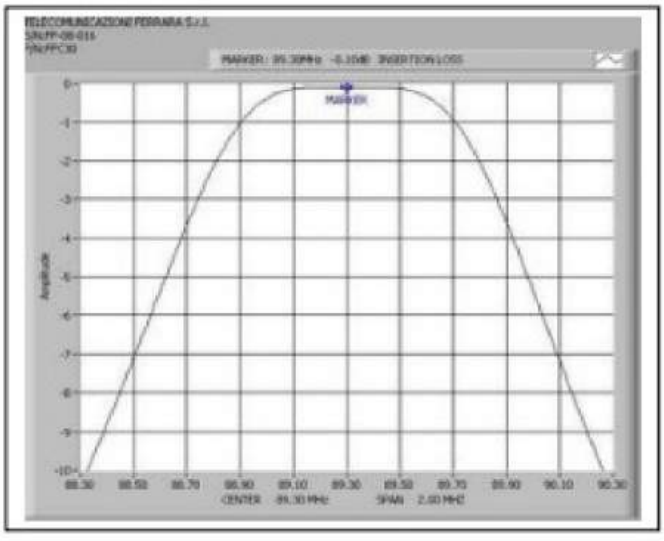
Features:

- **Modular design**
- **Distortion – Free Transmission**
- **Standard configuration of 2 cavities**
- **Special configuration 3 and 4 cavities**
- **Low loss, high isolation**
- **Natural convection**

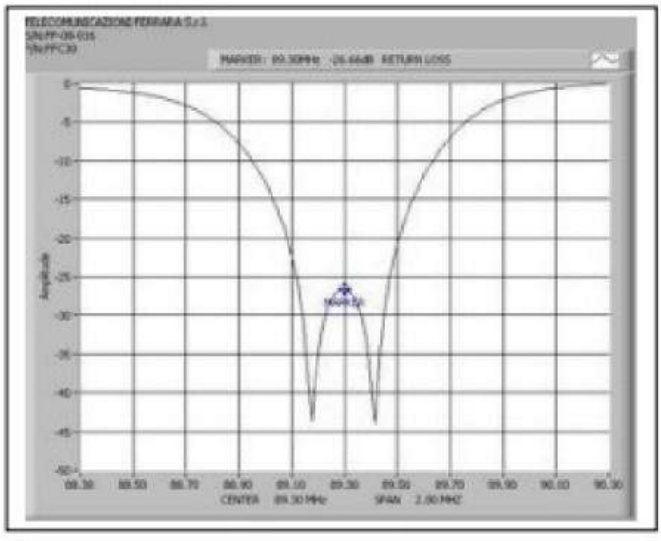


Dimensions	1500(Max size)×1150×500 mm (59.0(Max size)×45.3×19.7 inch) (H×L×W)
Net Weight	≅ 60 Kg (double cavity)

Example of Insertion Loss



Example of Return Loss



MODEL FFC40

- **BAND-PASS FILTER**
- **FM BAND 87.5-108 MHz**
- **BAND II**

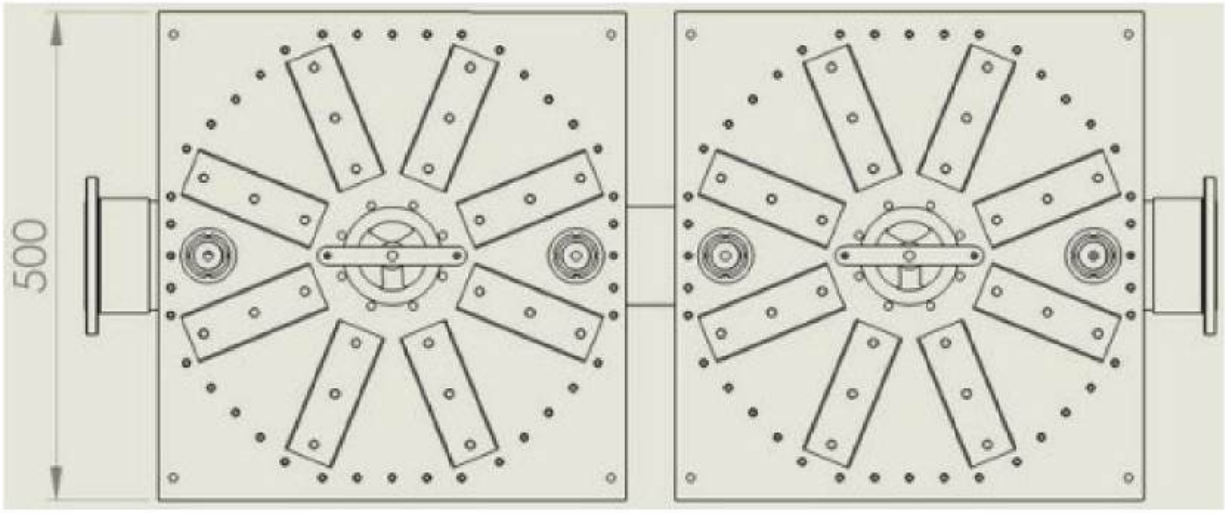
THESE ARE TWO STANDARD RESONANT CAVITY FILTERS, AND IN SPECIAL VERSION WITH 3 AND 4.
ALL THE MODELS ARE USED TO MAKE UP MIXERS WITH SEVERAL CHANNELS.
The pass band filters was designed as an extension of our band pass combiner technology. Using our industry-leading square, cavity filter design, the filter provides a one-time-buy filtering solution for the broadcaster located at multiple-user site.
The filter isolates the transmission system to eliminate spurious emissions.

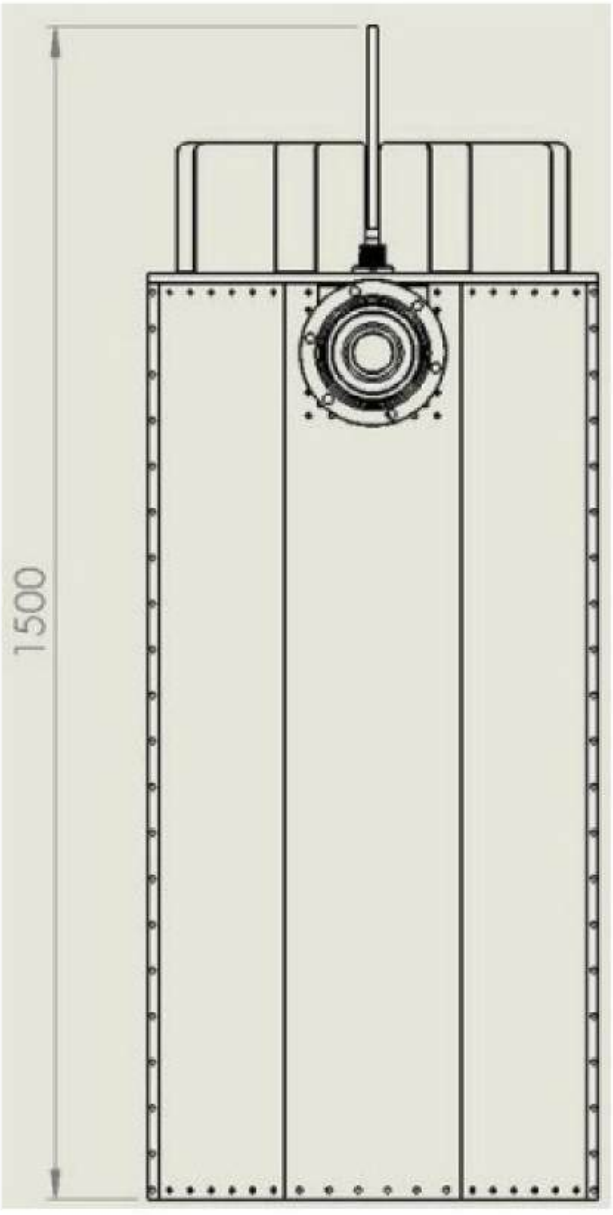
TYPICAL SPECIFICATIONS	
Model	FFC40
Impedance	50 Ohm
Frequency Range	87.5-108 MHz
VSWR ±150 KHz	1.1:1 max
Insertion Loss	≤ 0.09 dB
Return Loss ± 150Khz	≤ -26dB
Rejection	per customer's requirements (Typical ± 1MHz it's even to –14dB)
Connectors	Input - Output 4+1/2"
Max Power	40 KW
Working Temperature	-20°C ÷ +50°C
Colour	Enamel gray ral 7001
Materials	Aluminium, Brass, Copper, PTFE, Stainless Steel, Silvering (min 12µm thickness)

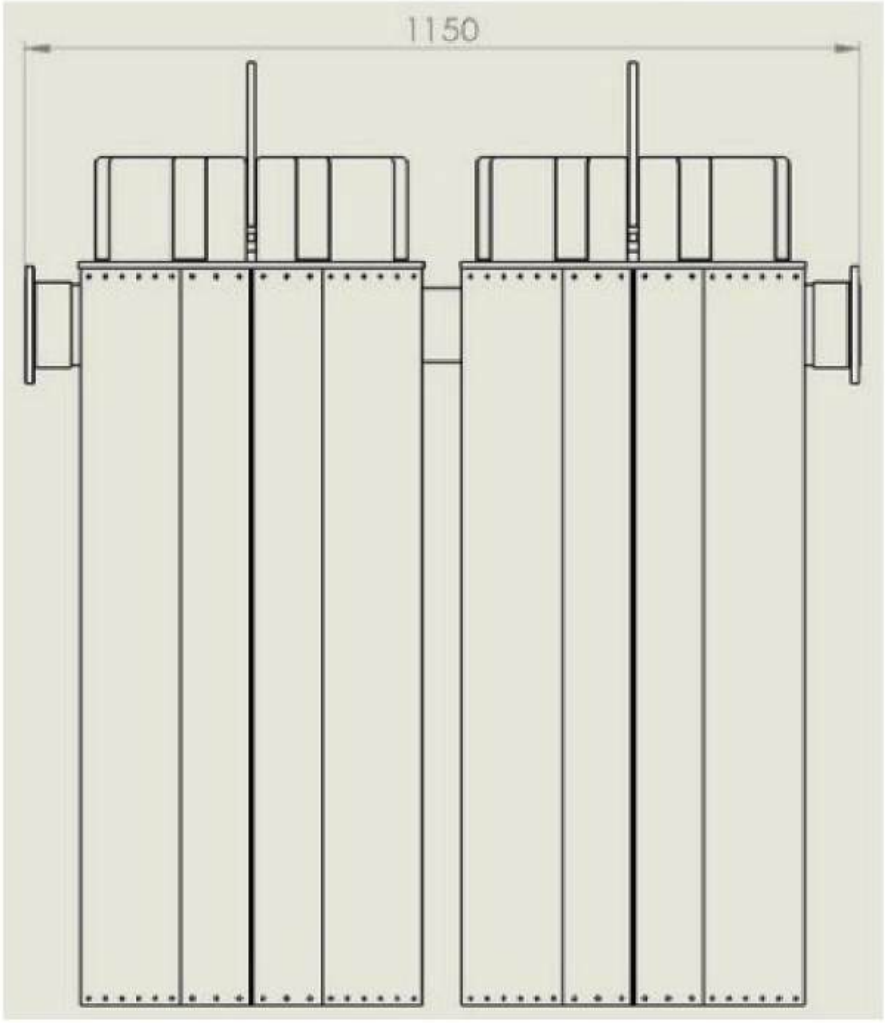
Features:

- **Modular design**
- **Distortion – Free Transmission**
- **Standard configuration of 2 cavities**
- **Special configuration 3 and 4 cavities**
- **Low loss, high isolation**
- **Natural convection**

DIMENSIONS (mm)

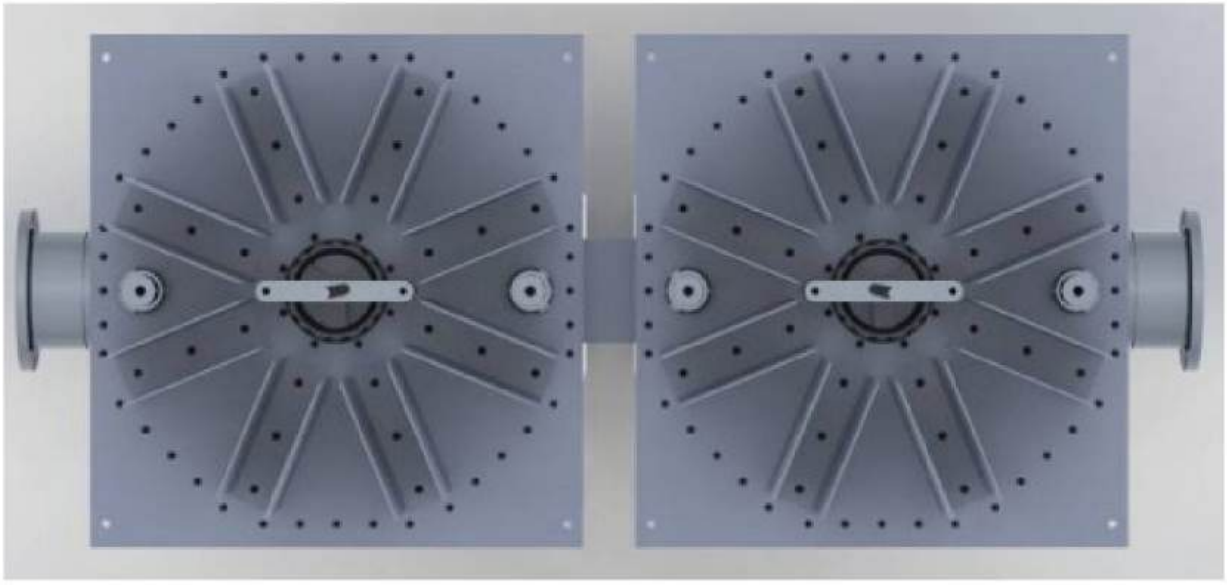




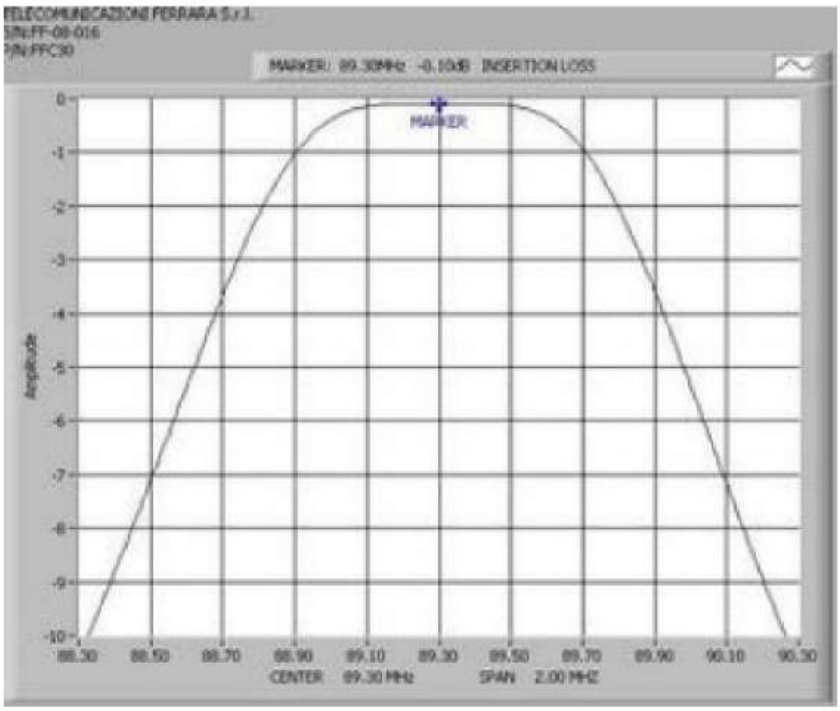


Dimensions	1500 (Max size)×1150×500 mm (59 (Max size)×45.2×19.6 inch) (H×L×W)
Net Weight	≅ 58 Kg (double cavity)

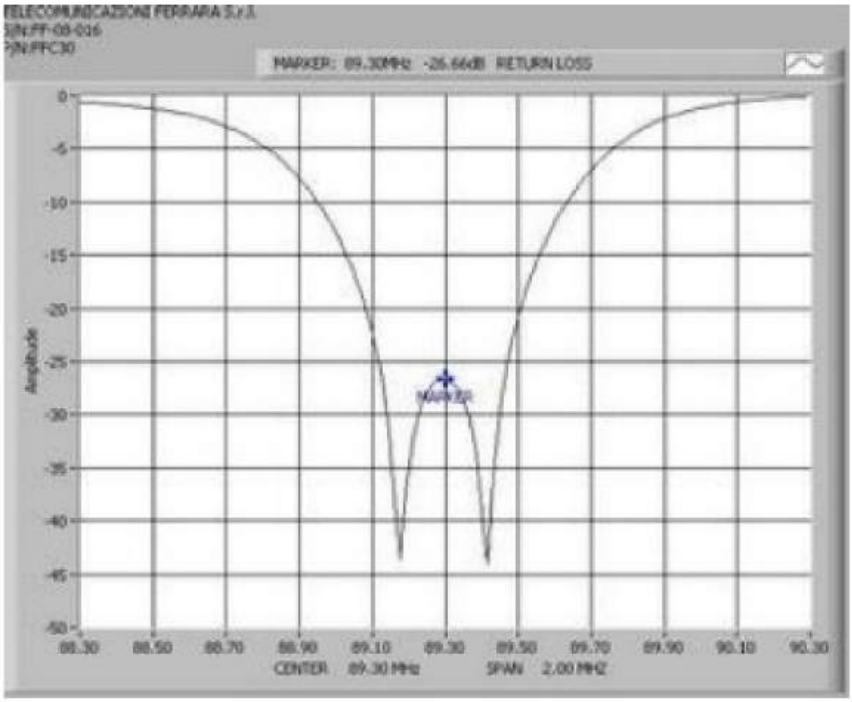
VIEWS OF THE SYSTEM



Example of Insertion Loss

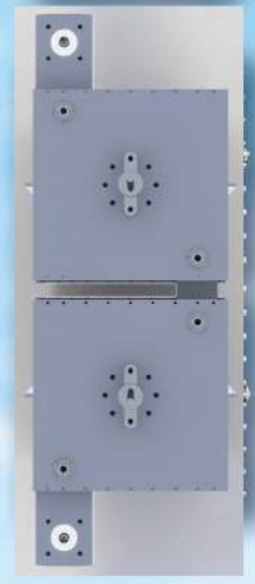


Example of Return Loss



FM PASS BAND FILTER

GENERAL CATALOG



- STANDARD CONFIGURATION
3 CAVITIES

MODEL FFTC03

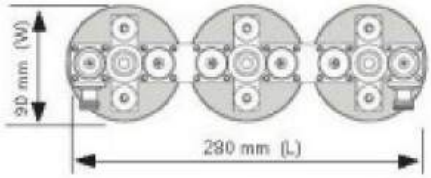
- BAND-PASS FILTER
- FM BAND 87.5 | 108 MHz
- BAND II

VERSION WITH RACK (OPTION)

THESE ARE THREE STANDARD RESONANT CAVITY FILTERS AND IN THE SPECIAL VERSION WITH 4.
ALL THE MODELS ARE USED TO MAKE UP MIXERS WITH SEVERAL CHANNELS.

The band pass filters was designed as an extension of our band pass combiner technology. Using our industry-leading round, square, octagonal, cavity filter design, the filter provides a one time-buy filtering solution for the broadcaster located at multiple-user site.
The filter isolates the transmission system to eliminate spurious emissions.

TYPICAL SPECIFICATIONS	
Model	FFTC03
Impedance	50 ohm
Frequency Range	87.5-108 MHz
SWR ± 150 KHz	1.1:1 Max
Insertion Loss	at f_0 0.8 dB Max
Return loss ±150 KHz	≤-26dB
Rejection	per customer's requirements (Typical ± 1MHz it's even to –8dB)
Connectors	N Input-Output
Max Power	300 W
Working Temperature	-20°C | +50°C
Colour	Enamel Gray Ral 7001
Materials	Aluminium, Brass, Copper, PTFE, Stainless Steel, Silvering (min. 12=m thickness)



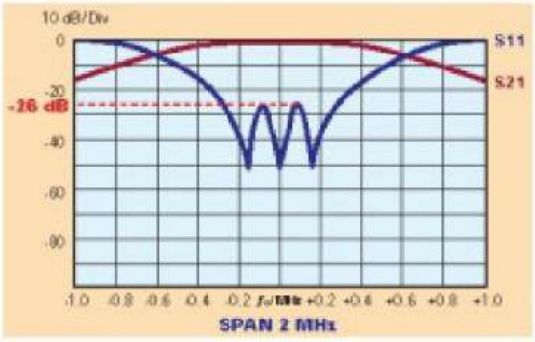
Features:

- Distortion – Free Transmission
- Special configuration 4 cavities
- Low loss, high isolation
- Natural convection

Dimensions	770(Max size)- 280- 90mm (30(Max size)- 11- 3.5 inch) (H- L- W)
Net Weight	≈9 Kg (triple cavity)

Rack version (optional)	
Panel Size	2 HE (1 HE=44,45 mm)
Net Weight	≈9 Kg (triple cavity)

Typical shape of a curves for S11 and S12 parameters



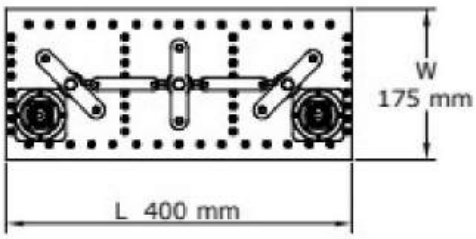
MODEL FFC05

- **BAND-PASS FILTER**
- **FM BAND 87.5-108 MHz**
- **BAND II**

THESE ARE THREE STANDARD RESONANT CAVITY FILTERS. ALL THE MODELS ARE USED TO MAKE UP MIXERS WITH SEVERAL CHANNELS.

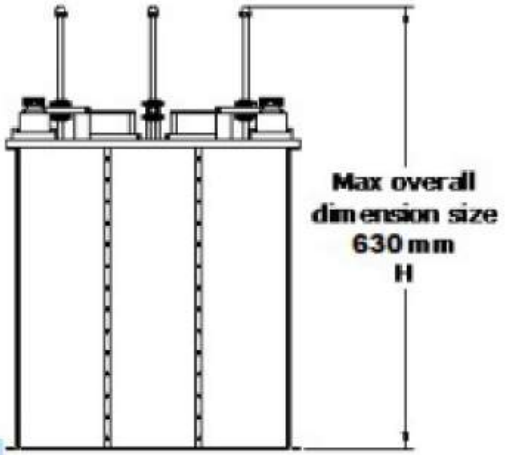
Rack version (optional)

The pass band filters was designed as an extension of our band pass combiner technology. Using our industry-leading square, cavity filter design, the filter provides a one-time-buy filtering solution for the broadcaster located at multiple-user site. The filter isolates the transmission system to eliminate spurious emissions.



TYPICAL SPECIFICATIONS

Model	FFC05
Impedance	50 ohm
Frequency Range	87.5-108 MHz
VSWR ± 150 KHz	1.1:1 Max
Insertion Loss	at f_0 0.58 dB Max
Return Loss ± 150 KHz	≤ -26dB
Rejection	per customer's requirements (Typical ± 1MHz it's even to –14dB)
Connectors	N-7/16" Input-Output Option 7/8" EIA
Max Power	600W
Working Temperature	-20°C ÷ +50°C
Colour	Enamel Gray Ral 7001
Materials	Aluminium, Brass, Copper, PTFE, Stainless Steel, Silvering (min. 12µm thickness)



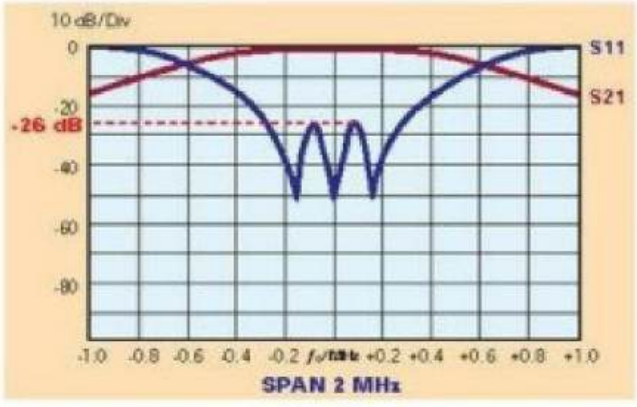
Features:

- Distortion – Free Transmission
- Standard configuration of 3 cavities
- Low loss, high isolation
- Natural convection

No rack version	
Dimensions	630(Max size)×400×175 mm (24.8(Max size)15.7×6.9 inch) (H×L×W)
Net Weight	≈ 19 Kg

Rack version (optional)	
Panel Size	4 HE (1 HE=44,45 mm)
Net Weight	≈ 20 Kg

Typical shape of a curves for S11 and S12 parameters



MODEL FFTC2I

- BAND-PASS FILTER
- FM BAND 87.5 – 108 MHZ.
- BAND II

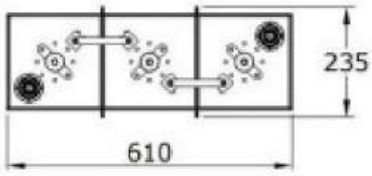
THESE ARE THREE STANDARD RESONANT CAVITY FILTERS, AND IN THE SPECIAL VERSION WITH 4.
ALL THE MODELS ARE USED TO MAKE UP MIXERS WITH SEVERAL CHANNELS.

The pass band filters was designed as an extension of our band pass combiner technology. Using our industry-leading square, cavity filter design, the filter provides a one-time-buy filtering solution for the broadcaster located at multiple-user site.
The filter isolates the transmission system to eliminate spurious emissions.

TYPICAL SPECIFICATIONS	
Model	FFTC2I
Impedance	50 ohm
Frequency Range	87.5-108 MHz
VSWR± 150 KHz	1.1:1 Max
Insertion loss ± 150 Khz	at f_0 0.3 - 0.35 dB Max
Return loss ± 150 Khz	≤ -26dB
Rejection	per customer's requirements (Typical ± 1MHz it's even to –18dB)
Connectors	7/8" EIA Input-Output (Opt. 1+5/8")
Max Power	2KW
Working Temperature	-20°C | +50°C
Colour	Enamel Gray Ral 7001
Materials	Aluminium, Brass, Copper, PTFE, Stainless Steel, Silvering (min. 12≈m thickness)

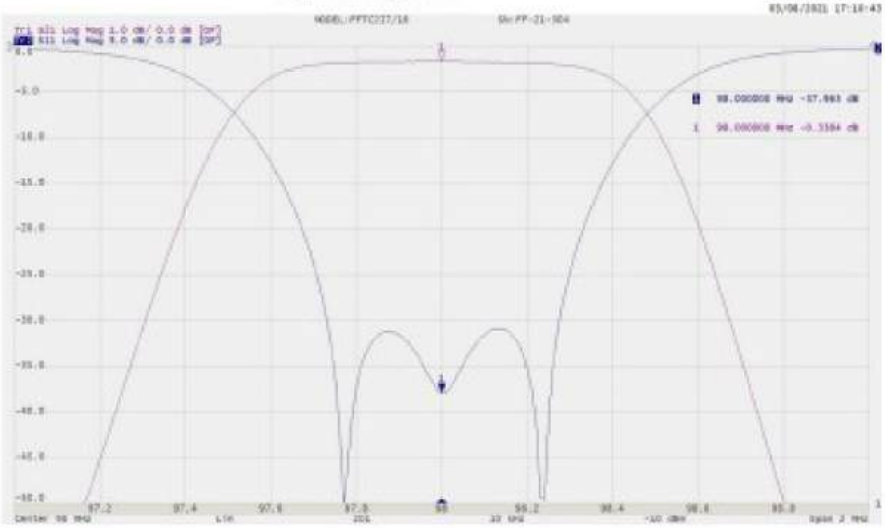
Features:

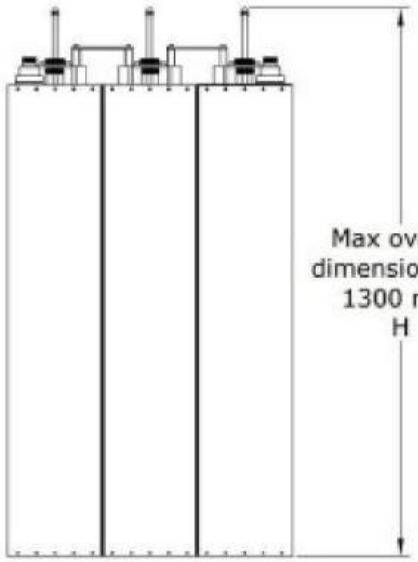
- Distortion – Free Transmission
- Standard configuration of 3 cavities
- Special configuration 4 cavities
- Low loss, high isolation
- Natural convection



Dimensions	See figure
Net Weight	≈30 Kg (triple cavity)

Typical response



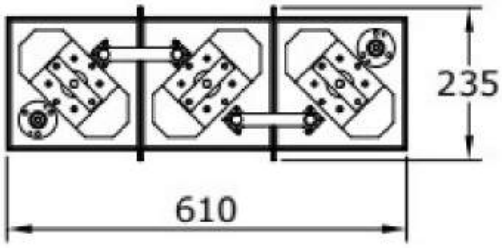


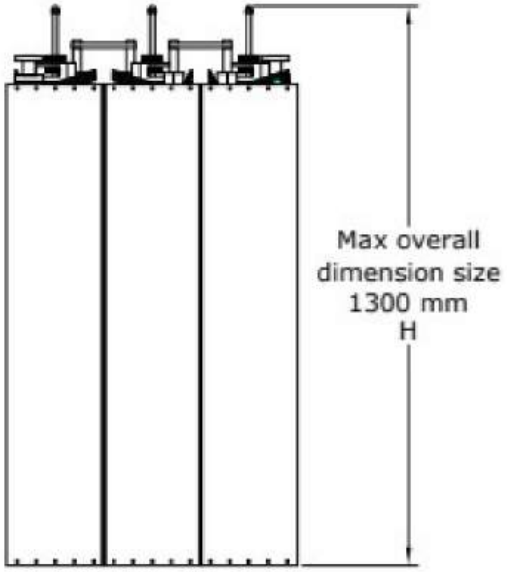
MODEL FFTC3

- BAND-PASS FILTER
- FM BAND 87.5 | 108 MHz
- BAND II

THESE ARE THREE STANDARD RESONANT CAVITY FILTERS, AND IN THE SPECIAL VERSION WITH 4.
ALL THE MODELS ARE USED TO MAKE UP MIXERS WITH SEVERAL CHANNELS.

The pass band filters was designed as an extension of our band pass combiner technology. Using our industry-leading square, cavity filter design, the filter provides a one-time-buy filtering solution for the broadcaster located at multiple-user site.
The filter isolates the transmission system to eliminate spurious emissions.





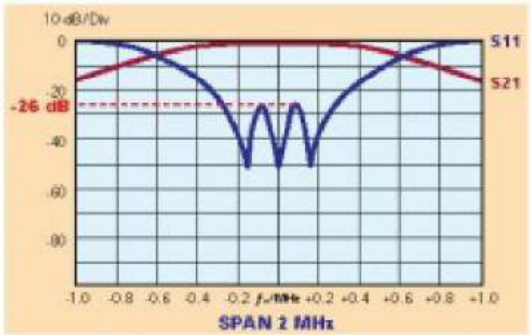
TYPICAL SPECIFICATIONS	
Model	FFTC3
Impedance	50 ohm
Frequency Range	87.5-108 MHz
150 KHz	1.1:1 Max
Insertion Loss	at f_0 0.35 dB Max
150 KHz	≤ -26dB
Rejection	per customer's requirements (Typical ± 1MHz it's even to –16dB)
Connectors	7/8" EIA Input-Output (Opt. 1+5/8")
Max Power	3KW
Working Temperature	-20°C | +50°C
Colour	Enamel Gray Ral 7001
Materials	Aluminium, Brass, Copper, PTFE, Stainless Steel, Silvering (min. 12≈m thickness)

Features:

- Distortion – Free Transmission
- Standard configuration of 3 cavities
- Special configuration 4 cavities
- Low loss, high isolation
- Natural convection

Dimensions	1300(Max size)- 610- 235 mm (51.2(Max size)- 24.0- 9.2 inch) (H- L- W)
Net Weight	≈37 Kg (triple cavity)

Typical shape of a curves for S11 and S12 parameters



MODEL FFTC5

- BAND-PASS FILTER
- IMPEDANCE 50 Ohm
- FM BAND *87.5 +108 MHz*
- BAND II

SPECIAL VERSION
WITH ELBOWS 1+5/8"

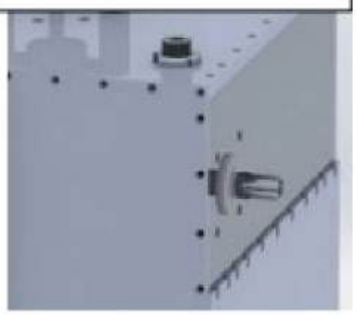
THESE ARE THREE RESONANT CAVITY FILTERS.
ALL THE MODELS ARE USED TO MAKE UP MIXERS WITH SEVERAL CHANNELS.
The pass band filters was designed as an extension of our band pass combiner technology.
The modular design allows a high level of customization.
Using our industry-leading square, modular cavity filter design, the filter provides a one-time-buy filtering solution for the broadcaster located at multiple-user site.
The filter isolates the transmission system to eliminate spurious emissions.

TYPICAL SPECIFICATIONS

Models	FFTC5
Impedance	50 ohm
Frequency Range	87.5-108 MHz
VSWR ± 150 KHz	1.1:1 Max
Insertion Loss	≤ 0.18 ÷ 0.4 dB adjustable
Return Loss ± 150 KHz	≤ -26dB
Rejection	per customer's requirements Typical 30 ÷ 35 dB ± 1.5 MHz
Connectors	1+5/8"(option 7/8" – 3+1/8")Input – Output(standard or with elbows)
Max Power	6 KW
Working Temperature	-20°C ÷ +50°C
Colour	Enamel Gray Ral 7001
Materials	Aluminium, Brass, Copper, PTFE, Stainless Steel, Silvering (min 12μm thickness)

Features:
- Modular design
- Distortion – Free Transmission
- Standard configuration of 2 cavities
- Special configuration 3 and 4 cavities
- Low loss, high isolation
- Natural convection

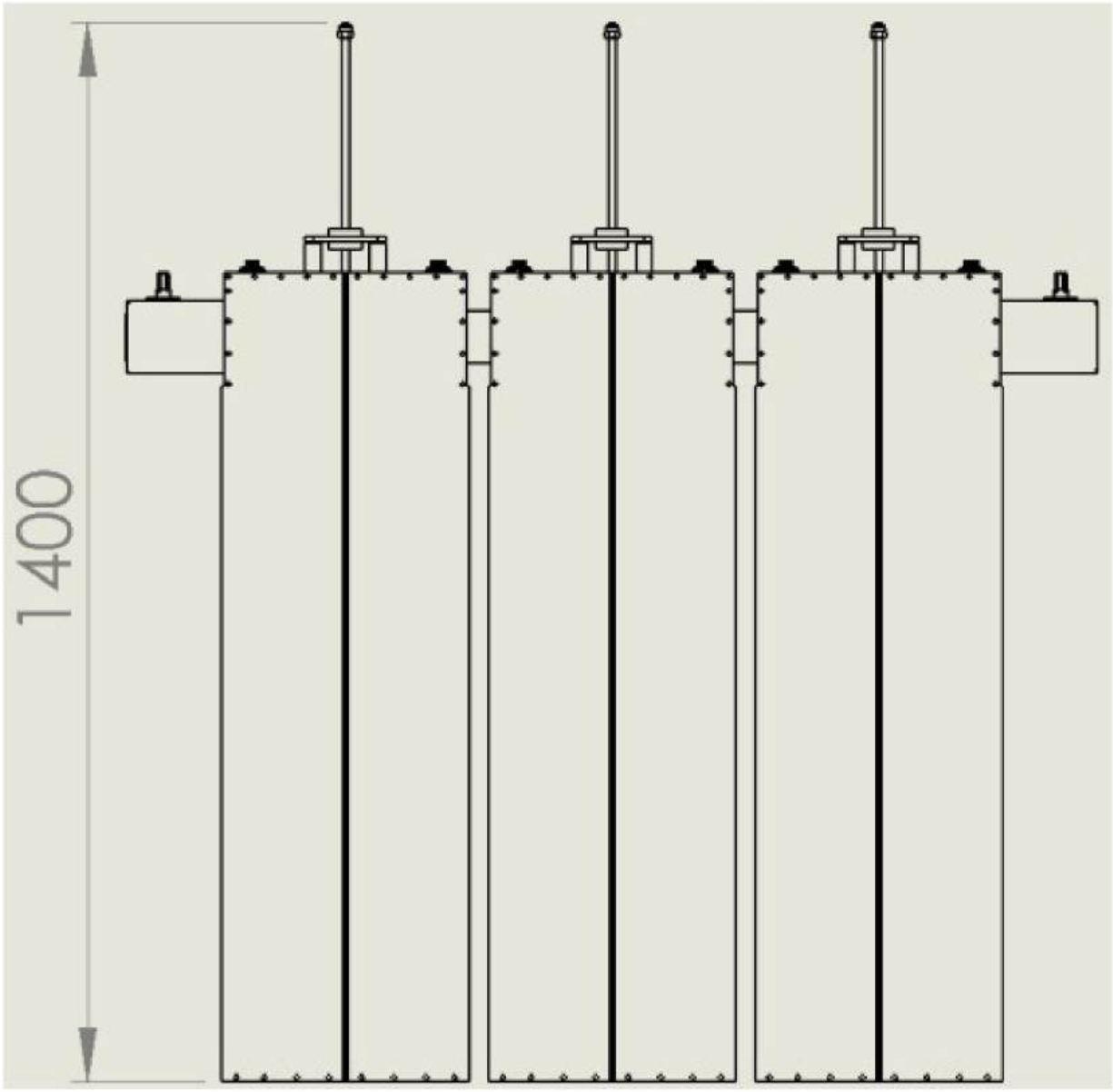
STANDARD VERSION
1+5/8" CONNECTOR

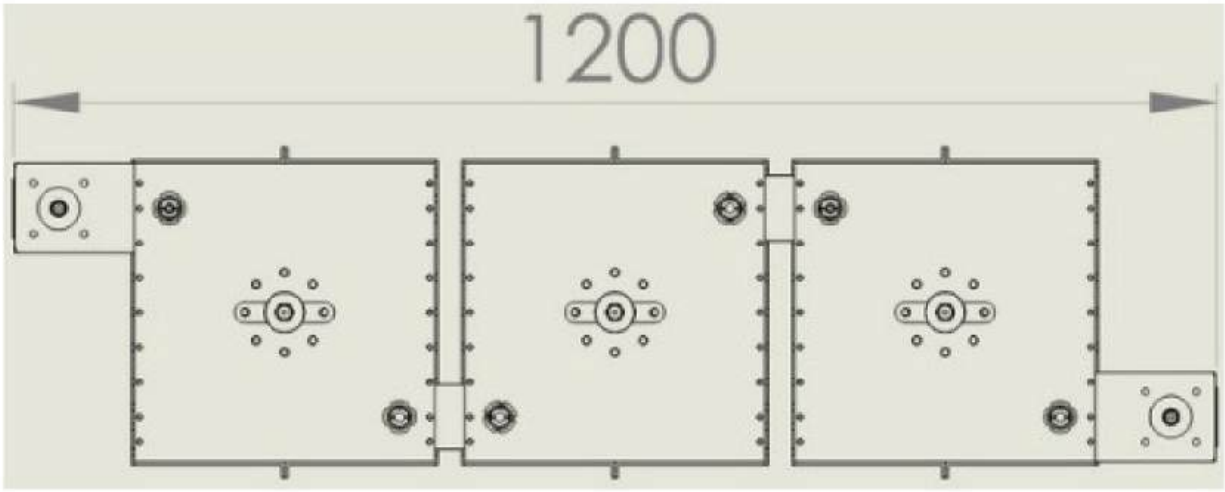


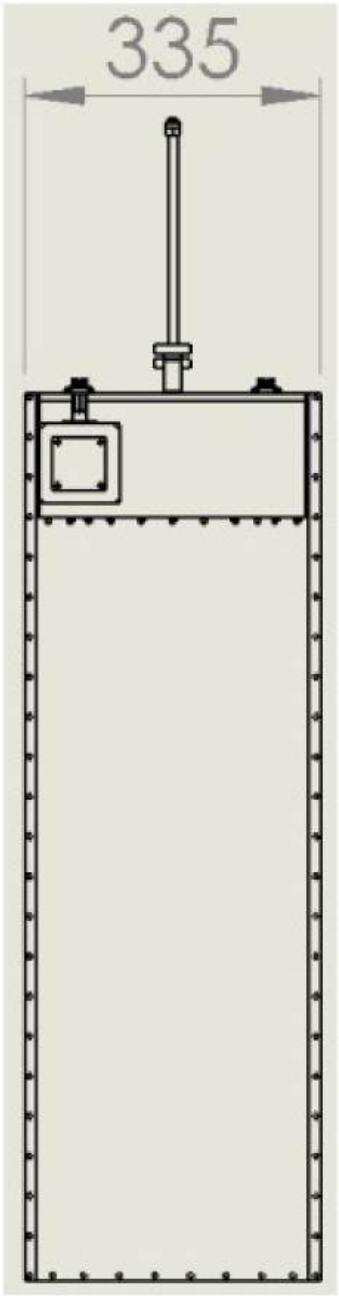
SPECIAL VERSION
WITH ELBOWS 1+5/8"

TELECFE BROADCAST SOLUTIONS
www. telecfe.it email: info@telecfe.it phone: +39 0532 724033

DIMENSIONS (mm)

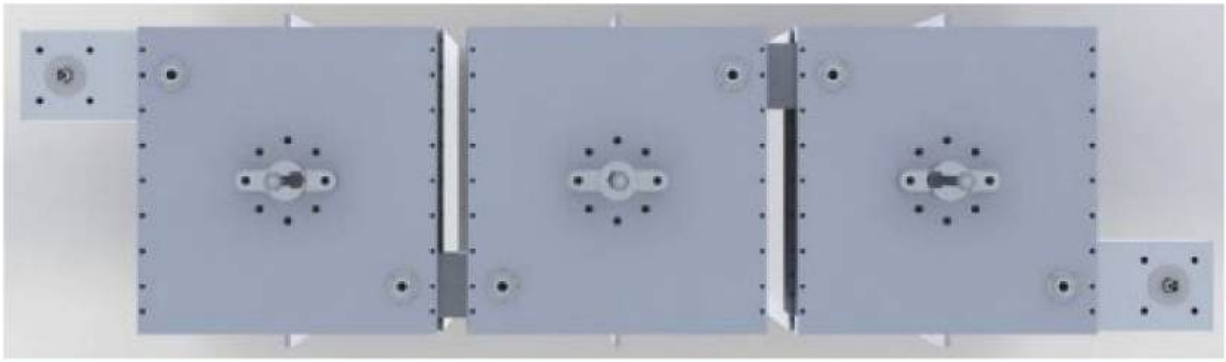


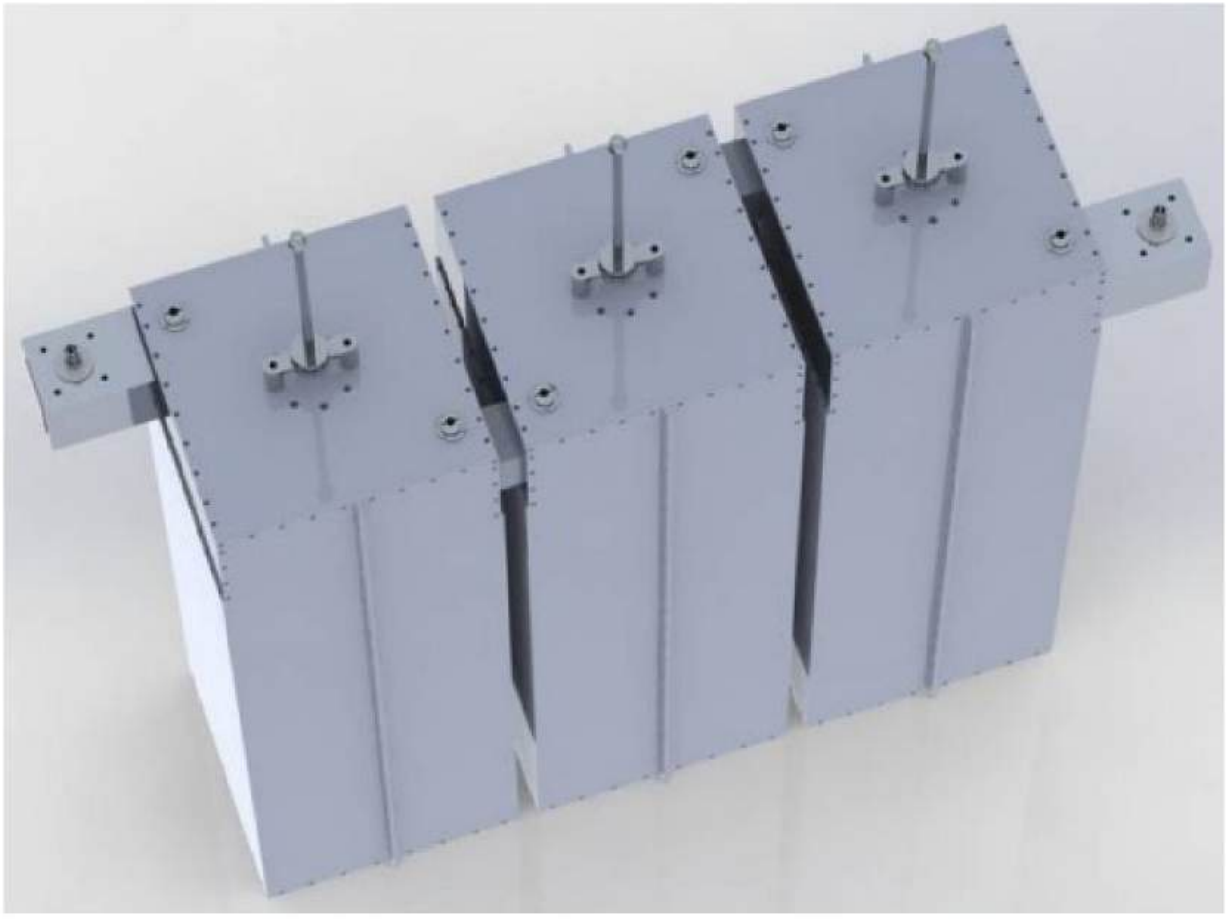




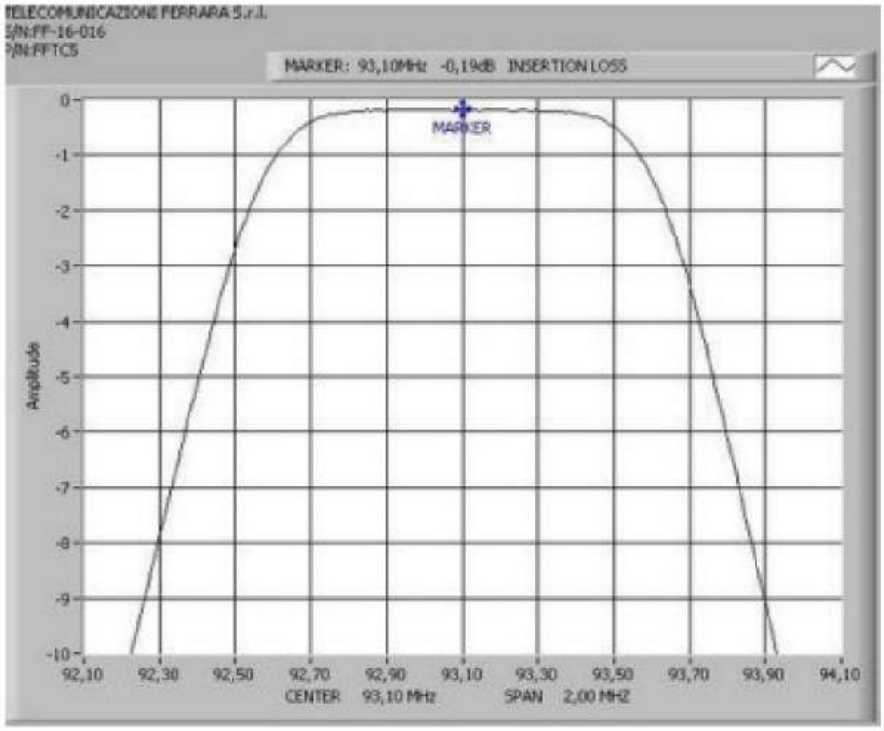
Dimensions	1400 (Max size)×1200×335 mm (55.1(Max size)×47.2×13.1inch) (H×L×W)
Net Weight	≅ 65 Kg approx.

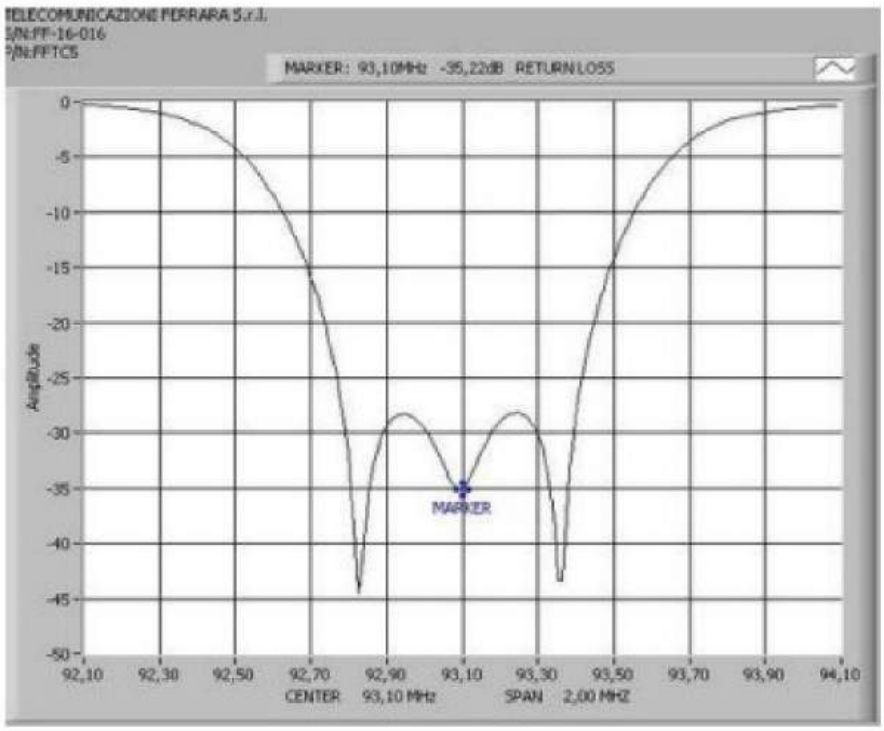
VIEWS OF THE SYSTEM (VERSION 1+5/8" WITH ELBOWS)





EXAMPLE FINAL TEST





MODEL FFTC10/C 3 resonant version

- **BAND-PASS FILTER**
- **FM BAND 87.5-108 MHz**
- **BAND II**

THESE ARE TWO STANDARD RESONANT CAVITY FILTERS, AND IN THE SPECIAL VERSION WITH 3 AND 4.
ALL THE MODELS ARE USED TO MAKE UP MIXERS WITH SEVERAL CHANNELS.

The pass band filters was designed as an extension of our band pass combiner technology. Using our industry-leading square, cavity filter design, the filter provides a one-time-buy filtering solution for the broadcaster located at multiple-user site.
The filter isolates the transmission system to eliminate spurious emissions.

TYPICAL SPECIFICATIONS

Model	FFCT10/C *(compact version- 3 resonant)*
Impedance	50 ohm
Frequency Range	87.5-108 MHz
VSWR ± 150 KHz	1.1:1 max
Insertion Loss	≤ 0.25 dB max
Return Loss ± 150 KHz	≤ -26 dB
Rejection	per customer's requirements (Typical ± 1MHz it's even to –14dB)
Connectors	1+5/8" Input – Output (Option 3+1/8")
Max Power	10 KW
Working Temperature	-20°C ÷ +50°C
Colour	Enamel Gray Ral 7001
Materials	Aluminium, Brass, Copper, PTFE, Stainless Steel, Silvering (min 12µm thickness)

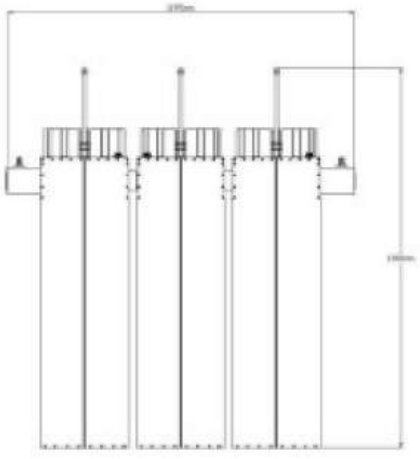
OUTPUT 90° OPTION

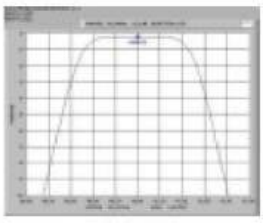
Features:

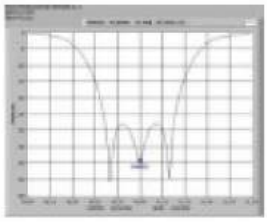
- Modular design
- Distortion – Free Transmission
- Standard configuration of 2 cavities
- Special configuration 3 and 4 cavities
- Low loss, high isolation
- Forced air cooling

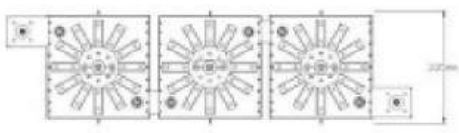
Dimensions	1300 x 1195 x 335 (H×L×W)
Net Weight	≈ 46 Kg (double cavity)

Example tuning filter









MODEL FFTC10

- **BAND-PASS FILTER**
- **FM BAND 87.5-108 MHz**
- **BAND II**

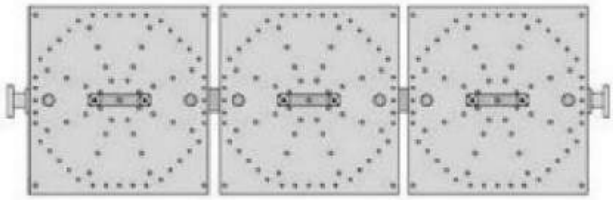
OUTPUT 90E OPTION

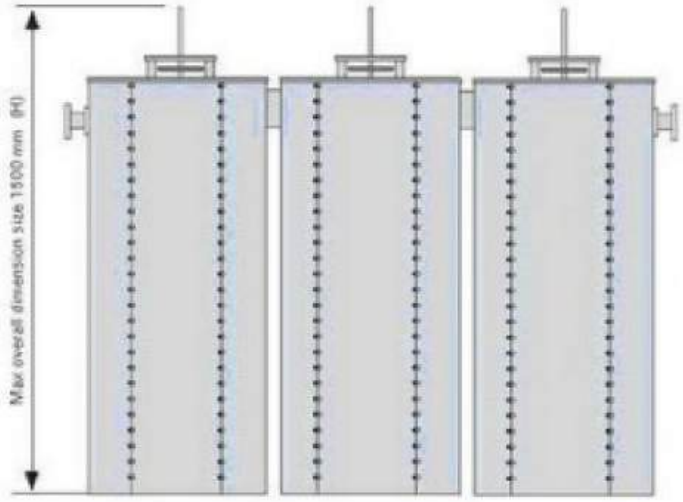
THESE ARE THREE STANDARD RESONANT CAVITY FILTERS, AND IN SPECIAL VERSION ALL THE MODELS ARE USED TO MAKE UP MIXERS WITH SEVERAL CHANNELS.
The pass band filters was designed as an extension of our band pass combiner technology. Using our industry-leading square, cavity filter design, the filter provides a one-time-buy filtering solution for the broadcaster located at multiple-user site.
The filter isolates the transmission system to eliminate spurious emissions.

TYPICAL SPECIFICATIONS	
Model	FFTC10
Impedance	50 ohm
Frequency Range	87.5-108 MHz
VSWR ± 150 KHz	1.1:1 max
Insertion Loss	≤ -0.15 – 0.20 dB
Return Loss ± 150 KHz	≤ -26 dB
Rejection	per customer's requirements (Typical ± 1MHz it's even to –25dB)
Connectors	1+5/8" Input - Output
Max Power	15 KW
Working Temperature	-20C ÷ +50C
Colour	Enamel Gray Ral 7001
Materials	Aluminium, Brass, Copper, PTFE, Stainless Steel, Silvering (min. 12μm thickness)

Features:

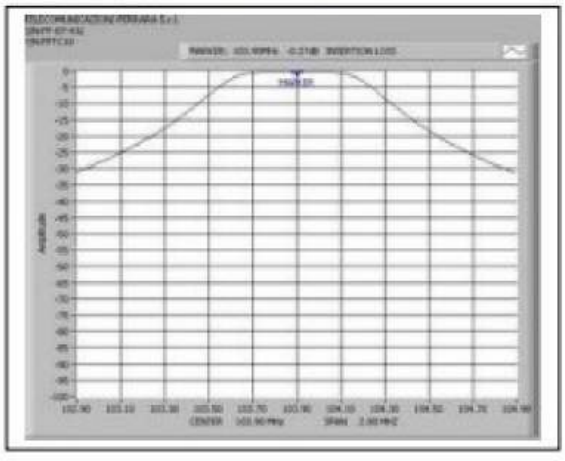
- **Modular design**
- **Distortion – Free Transmission**
- **Standard configuration of 3 cavities**
- **Special configuration 4 cavities**
- **Low loss, high isolation**
- **Natural convection**



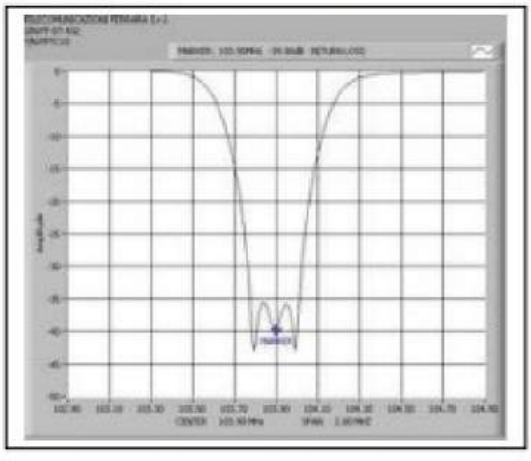


Dimensions	1500(Max size)×1100×490 mm (59.0(Max size)×43.3×19.3 inch) (H×L×W)
Net Weight	≅ 60 Kg (double cavity)

Example of Return Loss



Example of Insertion Loss



MODEL FFTC20

- **BAND-PASS FILTER**
- **FM BAND 87.5-108 MHz**
- **BAND II**

OUTPUT 90€ OPTION

THESE ARE TWO STANDARD RESONANT CAVITY FILTERS, AND IN SPECIAL VERSION

ALL THE MODELS ARE USED TO MAKE UP MIXERS WITH SEVERAL CHANNELS.

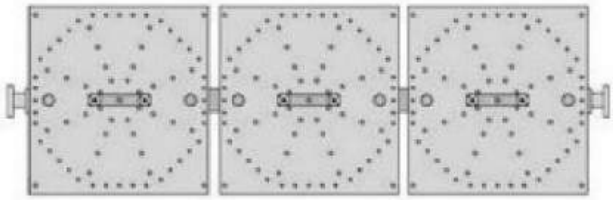
The pass band filters was designed as an extension of our band pass combiner technology. Using our industry-leading square, cavity filter design, the filter provides a one-time-buy filtering solution for the broadcaster located at multiple-user site.
The filter isolates the transmission system to eliminate spurious emissions.

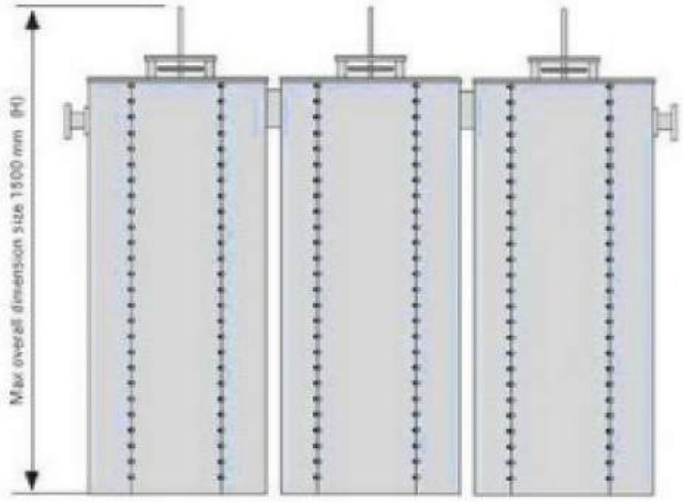
-0.15 – 0.20 dB

TYPICAL SPECIFICATIONS	
Model	FFTC20
Impedance	50 ohm
Frequency Range	87.5-108 MHz
VSWR ± 150 KHz	1.1:1 max
Insertion Loss	≤ -0.15 – 0.20 dB
Return Loss ± 150 KHz	≤ -26 dB
Rejection	per customer's requirements (Typical ± 1MHz it's even to –25dB)
Connectors	3+1/8" Input - Output
Max Power	20 KW
Working Temperature	-20ƒC ÷ +50ƒC
Colour	Enamel Gray Ral 7001
Materials	Aluminium, Brass, Copper, PTFE, Stainless Steel, Silvering (min. 12µm thickness)

Features:

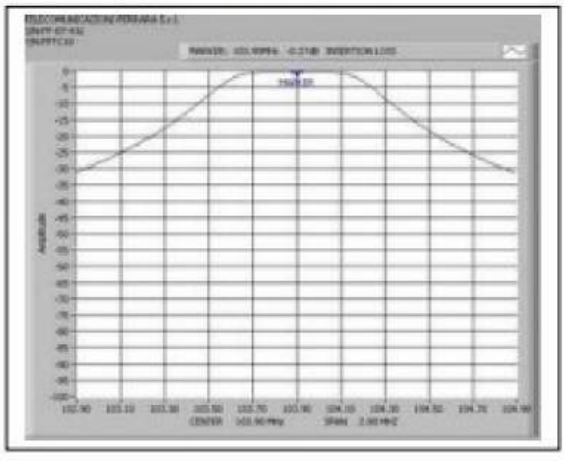
- **Modular design**
- **Distortion – Free Transmission**
- **Standard configuration of 2 cavities**
- **Special configuration 3 and 4 cavities**
- **Low loss, high isolation**
- **Natural convection**



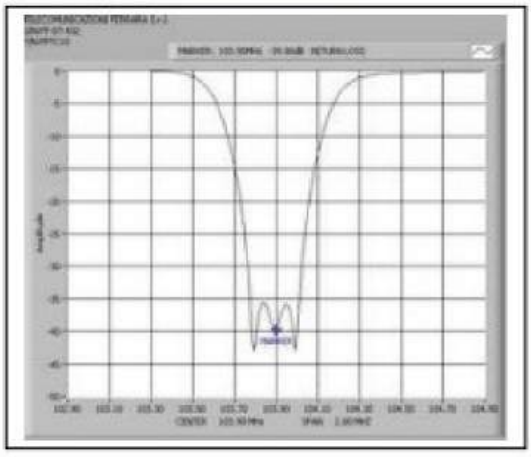


Dimensions	1500(Max size)×1100×490 mm (59.0(Max size)×43.3×19.3 inch) (H×L×W)
Net Weight	≅ 60 Kg (double cavity)

Example of Return Loss



Example of Insertion Loss



MODEL FFTC30

- **BAND-PASS FILTER**
- **FM BAND 87.5-108 MHz**
- **BAND II**

OUTPUT 90° OPTION

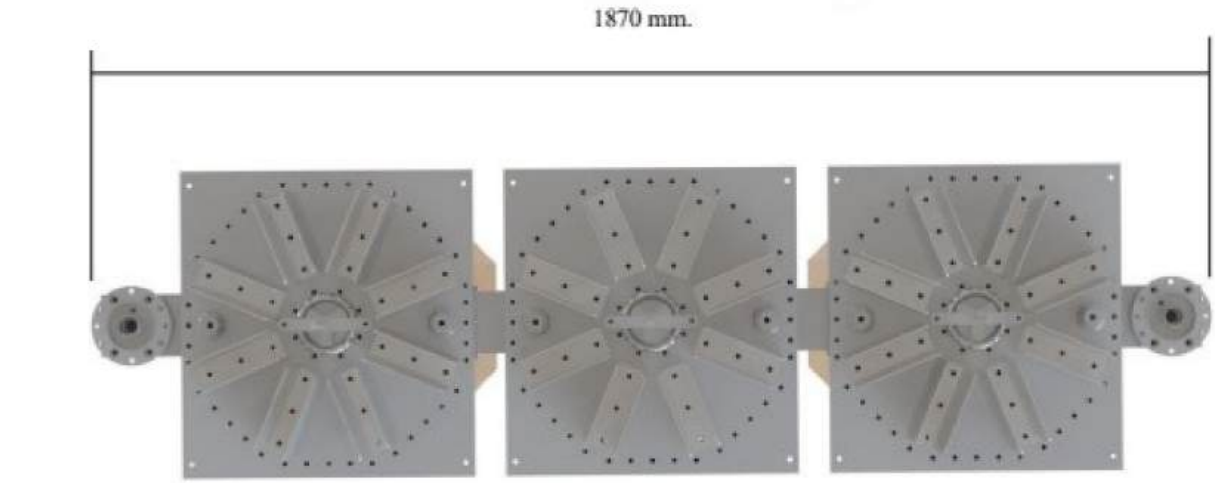
THESE ARE TWO STANDARD RESONANT CAVITY FILTERS, AND IN SPECIAL VERSION ALL THE MODELS ARE USED TO MAKE UP MIXERS WITH SEVERAL CHANNELS.

The pass band filters was designed as an extension of our band pass combiner technology. Using our industry-leading square, cavity filter design, the filter provides a one-time-buy filtering solution for the broadcaster located at multiple-user site.
The filter isolates the transmission system to eliminate spurious emissions.

TYPICAL SPECIFICATIONS	
Model	FFTC30
Impedance	50 ohm
Frequency Range	87.5-108 MHz
VSWR ± 150 KHz	1.1:1 max
Insertion Loss	≤ -0.15 - 0.18 dB typical
Return Loss ± 150 KHz	≤ -26 dB
Rejection	per customer's requirements (Typical ± 1MHz it's even to –15 – 20 dB)
Connectors	3+1/8" Input - Output
Max Power	30 – 35 KW
Working Temperature	-20°C ÷ +50°C
Colour	Enamel Gray Ral 7001
Materials	Aluminium, Brass, Copper, PTFE, Stainless Steel, Silvering (min. 12µm thickness)

Features:

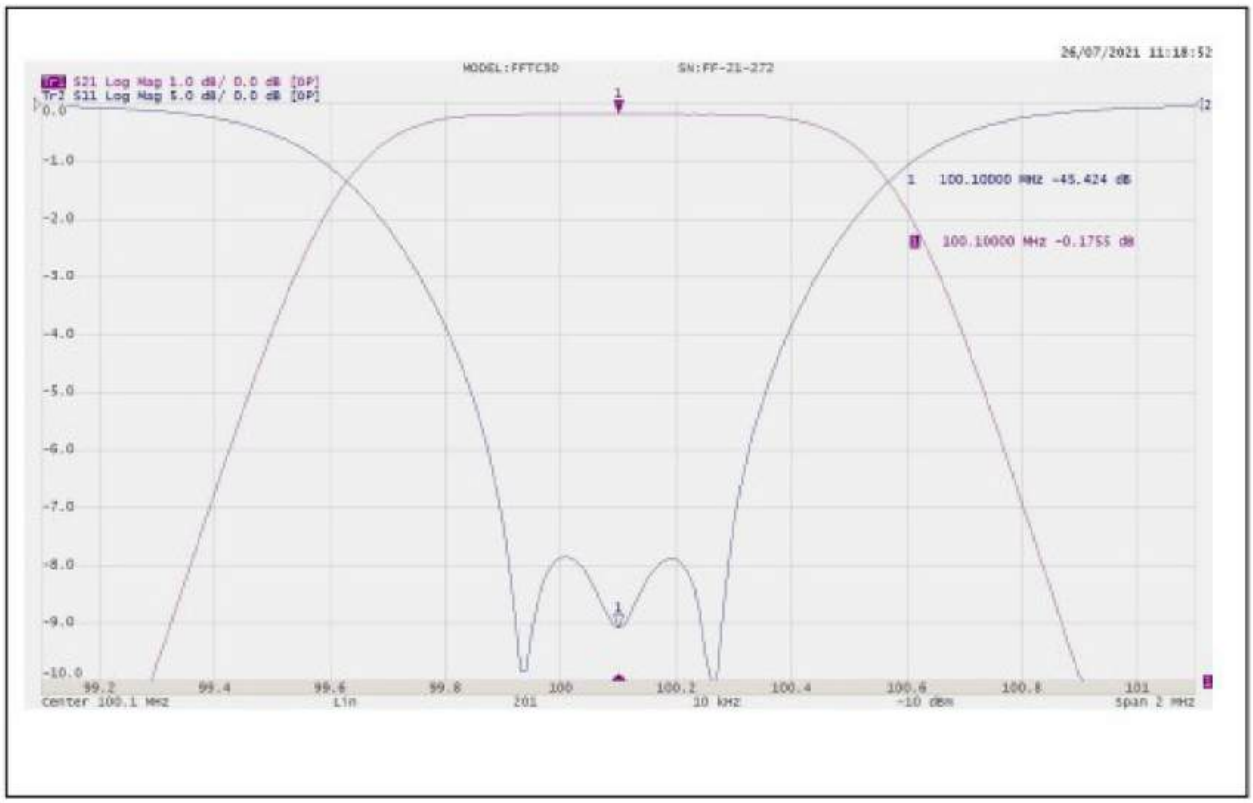
- **Modular design**
- **Distortion – Free Transmission**
- **Configuration 3 cavities**
- **Low loss, high isolation**
- **Natural convection**



Dimensions	1350 H ×1870 L ×490 W mm
Net Weight	≅ 90 Kg (triple cavity)

Example of Return Loss

Example of Insertion Loss



MODEL FFTC40

- **BAND-PASS FILTER**
- **FM BAND 87.5-108 MHz**
- **BAND II**

OUTPUT 90° OPTION

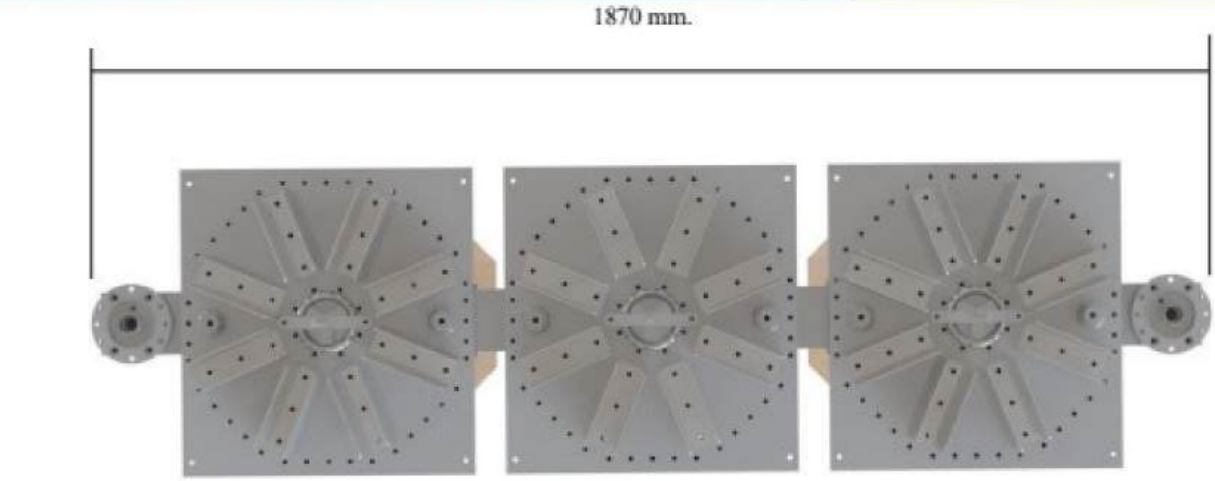
THESE ARE TWO STANDARD RESONANT CAVITY FILTERS, AND IN SPECIAL VERSION ALL THE MODELS ARE USED TO MAKE UP MIXERS WITH SEVERAL CHANNELS.

The pass band filters was designed as an extension of our band pass combiner technology. Using our industry-leading square, cavity filter design, the filter provides a one-time-buy filtering solution for the broadcaster located at multiple-user site.
The filter isolates the transmission system to eliminate spurious emissions.

TYPICAL SPECIFICATIONS	
Model	FFTC40
Impedance	50 ohm
Frequency Range	87.5-108 MHz
VSWR ± 150 KHz	1.1:1 max
Insertion Loss	≤ -0.15 - 0.18 dB typical
Return Loss ± 150 KHz	≤ -26 dB
Rejection	per customer's requirements (Typical ± 1MHz it's even to –15 – 20 dB)
Connectors	4+1/2" Input - Output
Max Power	35 – 40 KW
Working Temperature	-20°C ÷ +50°C
Colour	Enamel Gray Ral 7001
Materials	Aluminium, Brass, Copper, PTFE, Stainless Steel, Silvering (min. 12µm thickness)

Features:

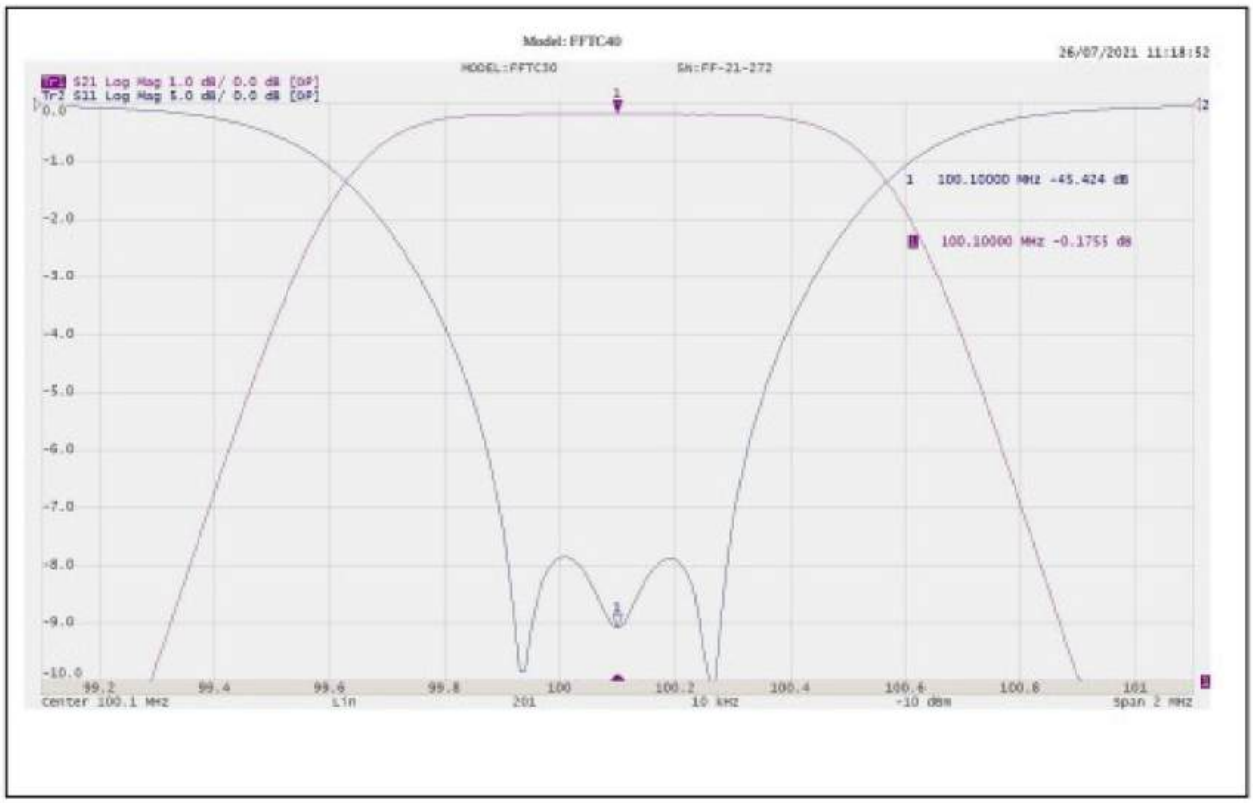
- **Modular design**
- **Distortion – Free Transmission**
- **Configuration 3 cavities**
- **Low loss, high isolation**
- **Natural convection**



Dimensions	1350 H ×1870 L ×490 W mm
Net Weight	≅ 90 Kg (triple cavity)

Example of Return Loss

Example of Insertion Loss

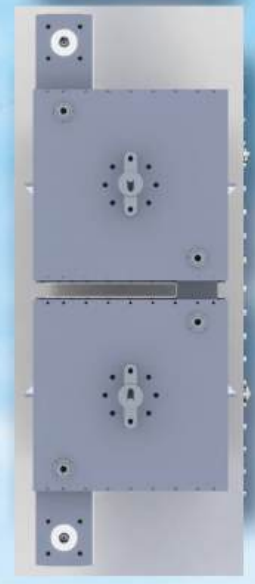


FM PASS BAND FILTER

GENERAL CATALOG

SPECIAL CONFIGURATION

4 CAVITIES AND CROSS COUPLING



MODEL FFC01Q

The band pass filters was designed as an extension of our band pass combiner technology.
The filter section is round, cavity filter design, the filter provides a one-time-buy filtering solution for the broadcaster located at multiple-user site.
The filter isolates the transmission/reception system to eliminate spurious emissions.

- **BAND-PASS FILTER**
  these are quadruple resonant cavity filters

  All the model are used to make up mixer with several channels.
  It is used for trasmission / reception

- **FM BAND 87.5 – 108 mhz.**
- **BAND II**

OPTION MOUNTING RACK

TYPICAL SPECIFICATIONS	
Model	FFC01Q
Impedance	50 ohm
Frequency Range	87.5-108 MHz
WSVR ± 100 KHz	1.15:1 improves with different calibration
Insertion Loss	at f_0 -2.60 – 4.00 dB Max
Return loss ± 100 KHz	≤ -26dB typical, improves with different calibration
Rejection	per customer's requirements see diagram
Connectors	N Input-Output
Max Power	100 W with different calibration
Working Temperature	0°C +50°C
Colour	Enamel Gray Ral 7001
Materials	Aluminium, Brass, Copper, PTFE, Stainless Steel, Silvering (min. 12≈m thickness)

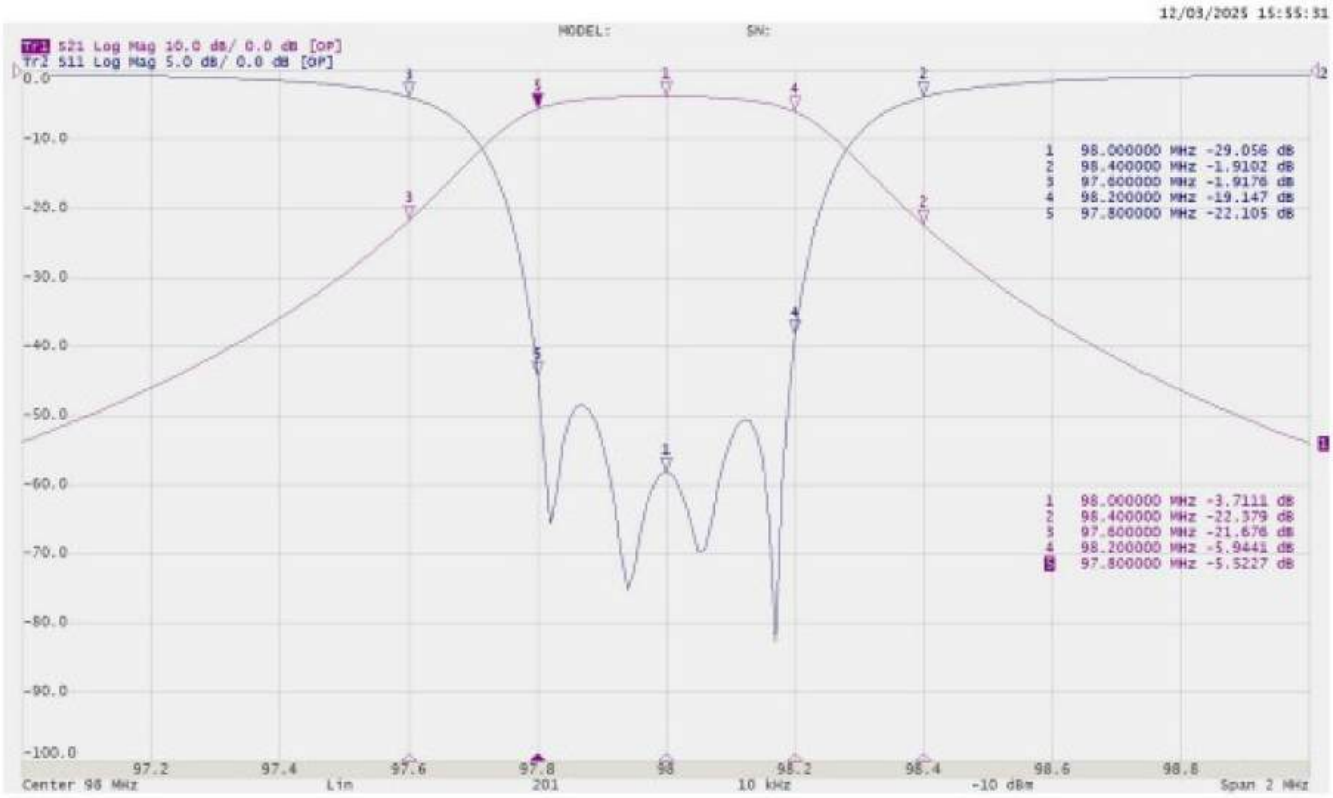
Features:

- Distortion – Free Transmission
- Standard configuration of 2 cavities
- Special configuration 3 and 4 cavities
- Low loss, high isolation
- Natural convection

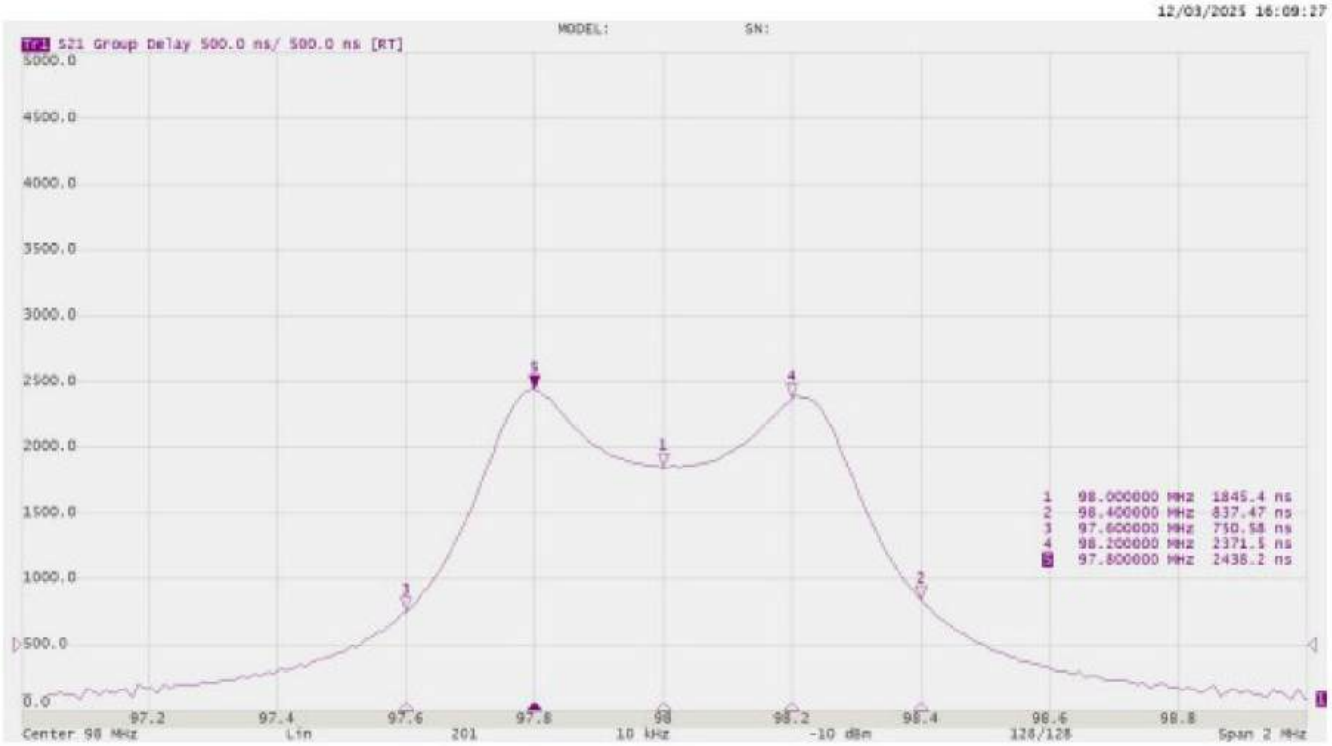
Dimensions	**see table**
Net Weight	≈10 Kg

Rack version (optional)	
Panel Size	2 HE (1 HE=44,45 mm)
Net Weight	≈0.5 Kg

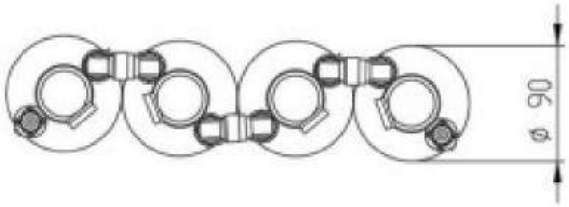
EXAMPLE OF RETURN LOSS AND INSERTION LOSS at 98.000 Mhz. Quadruple version

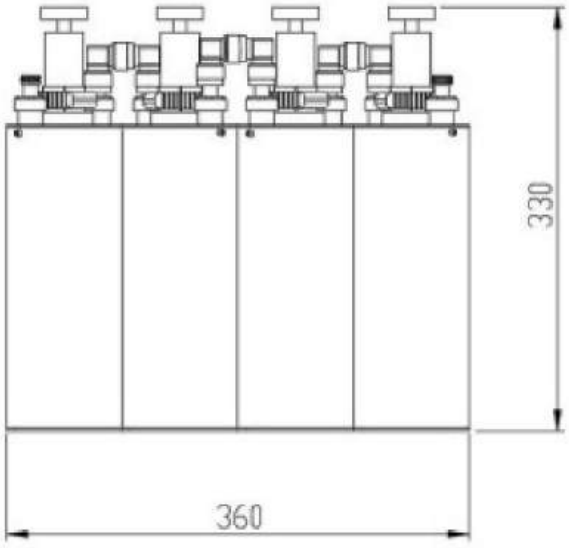


GROUP DELAY ± 200 Khz 526 ns.



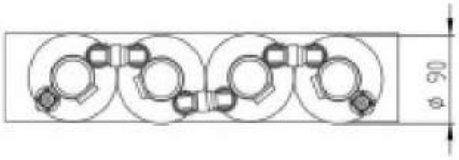
NO RACK MOUNTING MEASURE IS IN mm.

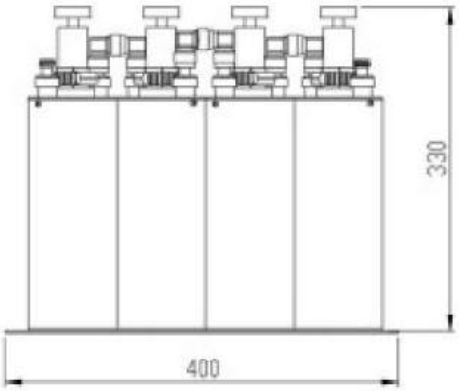




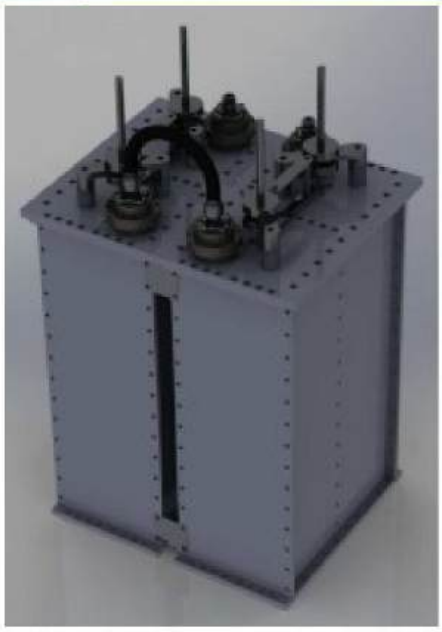
OPTION MOUNTING RACK

DIMENSIONS RACK VERSION mm.





MODEL FFQC05

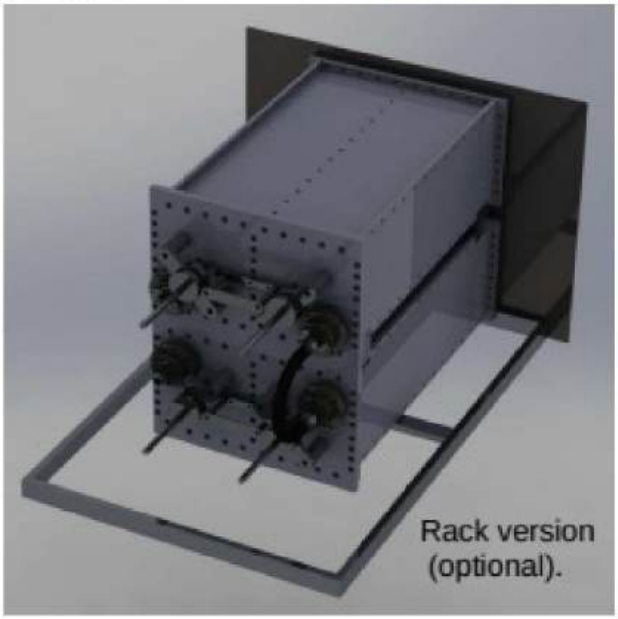


- BAND-PASS FILTER
- FREQUENCY RANGE 87.5- 108 MHz
- IMPEDANCE 50 Ohm
- BAND II

This model is a four resonant cavity filter.
All the models are used to make up mixers with several channels. The pass band filters was designed as an extension of our band pass combiner technology. Using our industry-leading square, cavity filter design, the filter provides a one-time-buy filtering solution for the broadcaster located at multiple-user site.
The filter isolates the transmission system to eliminate spurious emissions.

TYPICAL SPECIFICATIONS

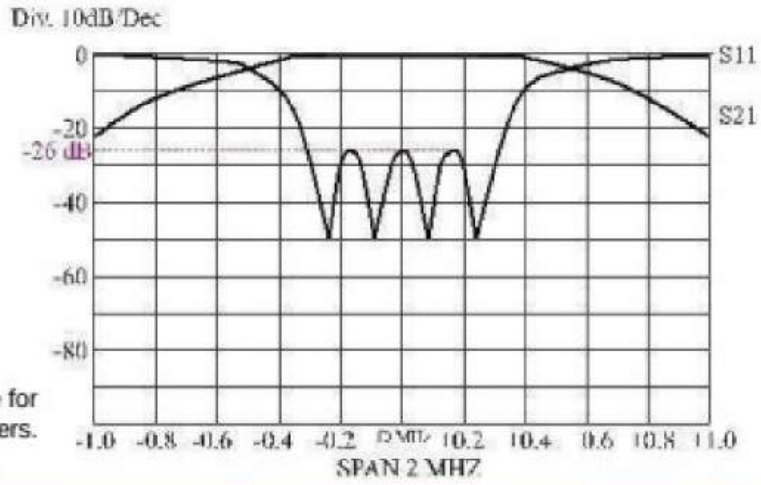
Model	FFQC05
Impedance	50 ohm
Frequency Range	87.5-108 MHz
VSWR ±150 KHz	1.1:1 Max
Insertion Loss	at f_0 0.6-0.7 dB Max
Return Loss ±150 KHz	≤ -26dB
Rejection	per customer's requirements (Typical ± 1 MHz it's even to –8dB)
Connectors	N-7/16" Input-Output Option 7/8" EIA
Max Power	500W
Working Temperature	-20°C | +50°C
Colour	Enamel Gray Ral 7001
Materials	Aluminium, Brass, Copper, PTFE, Stainless Steel, Silvering (min. 12µm thickness)



Rack version (optional).

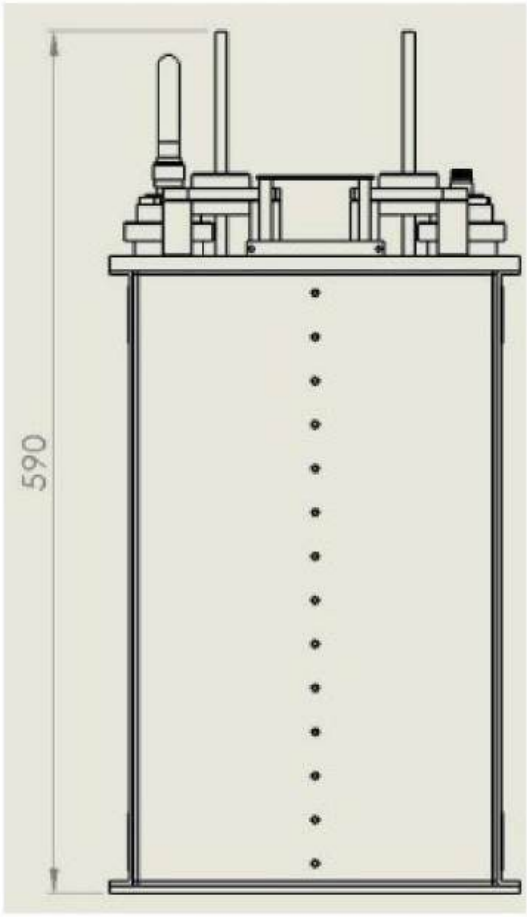
Features:

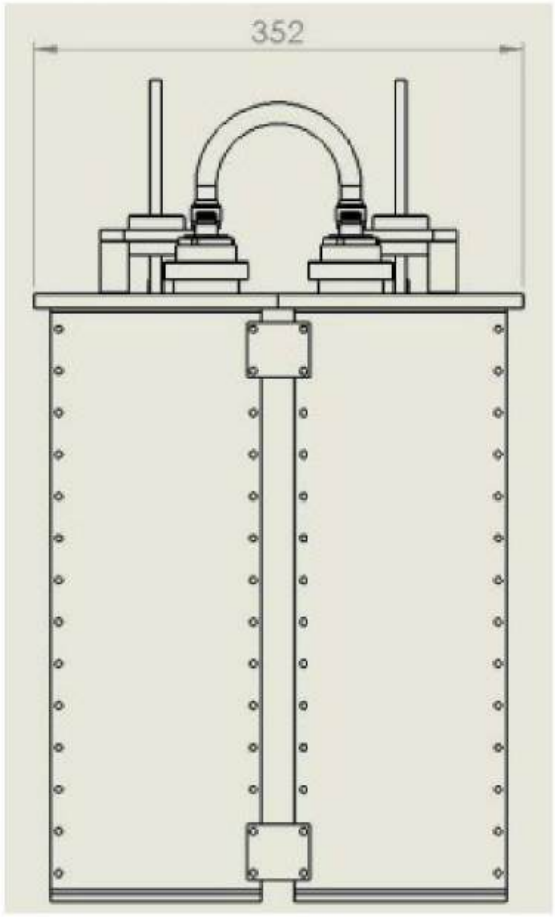
- Distortion – Free Transmission
- Low loss, high isolation
- Natural convection

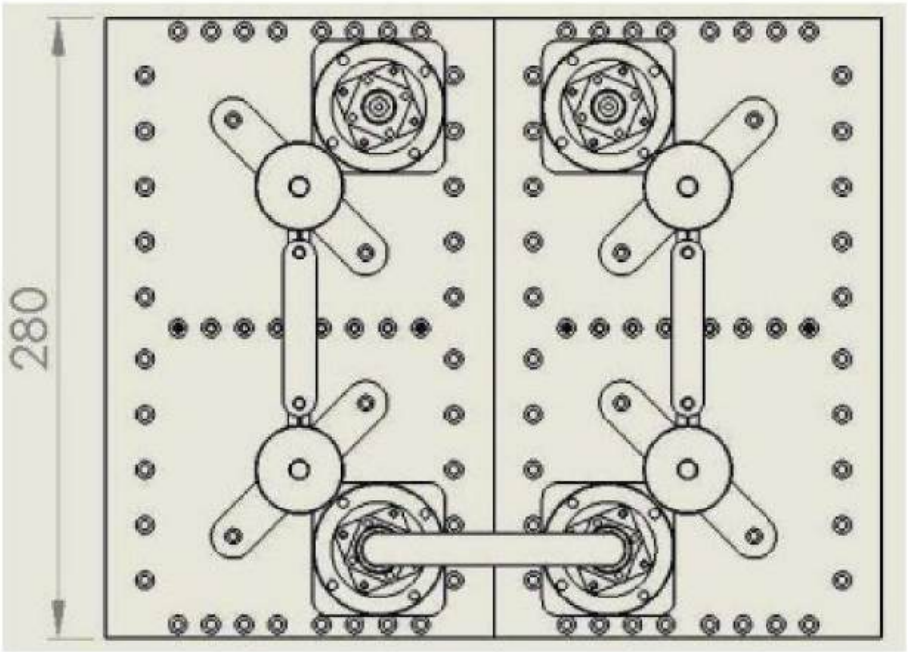


Typical shape of a curve for S1 and S2 parameters.

DIMENSIONS WITHOUT RACK (mm)

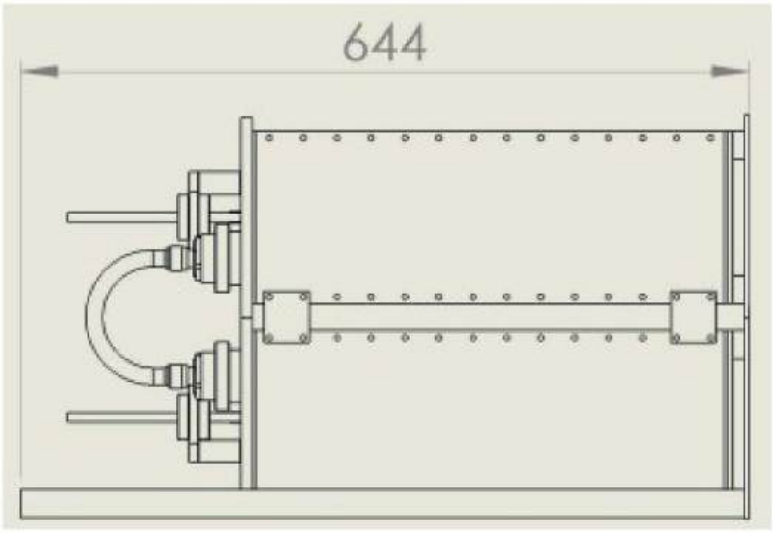


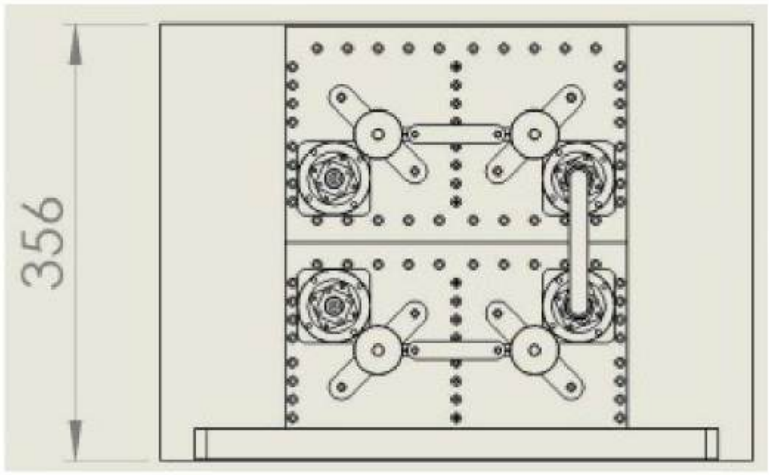


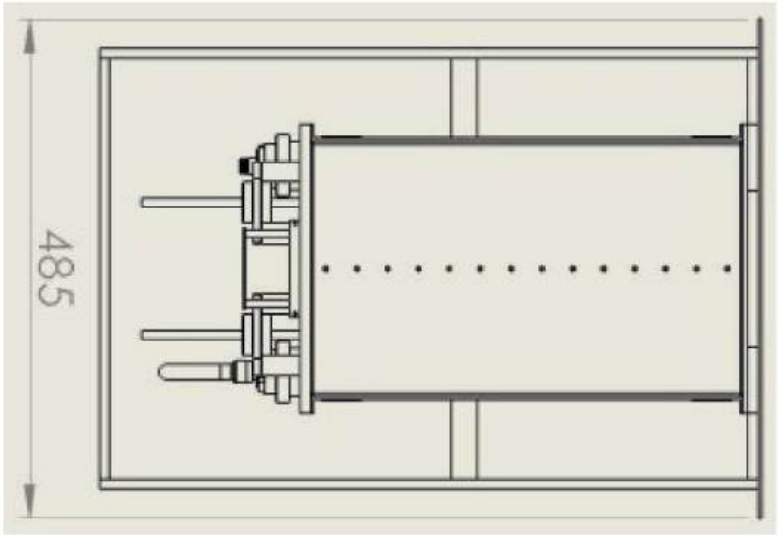


No rack version	
Dimensions	590(Max size)· 280· 352 mm (27.9(Max size)· 11.0· 6.9 inch) (H· L· W)
Net Weight	≈35 Kg

DIMENSIONS RACK VERSION (OPTIONAL) (mm)

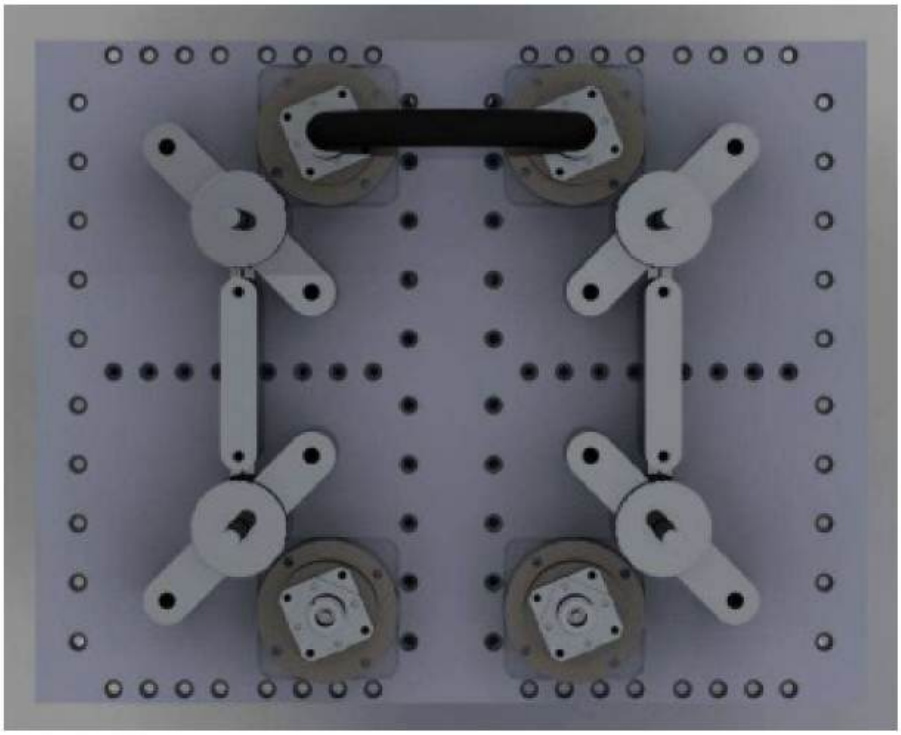


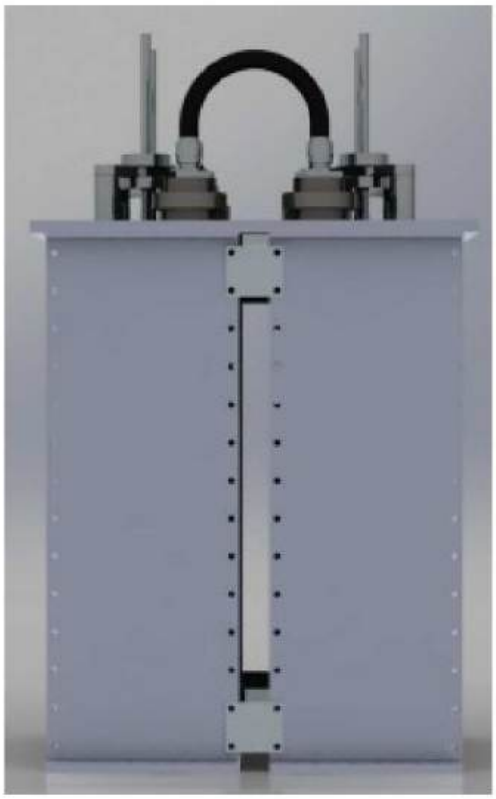


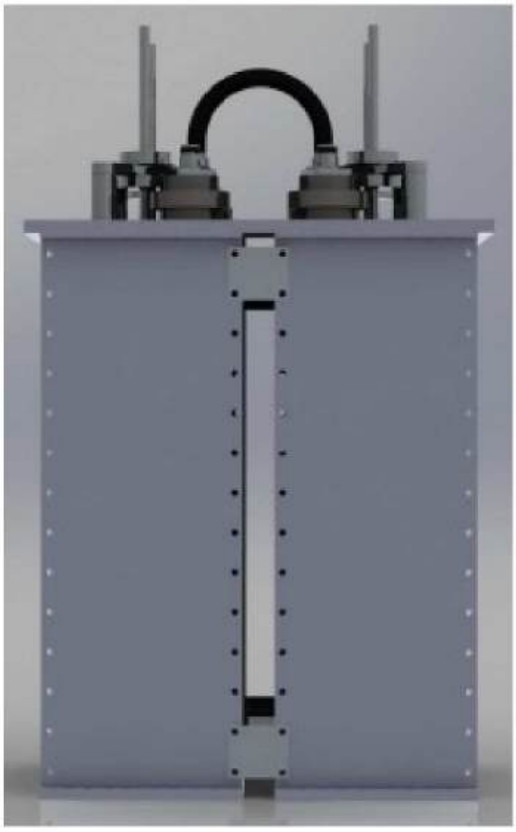


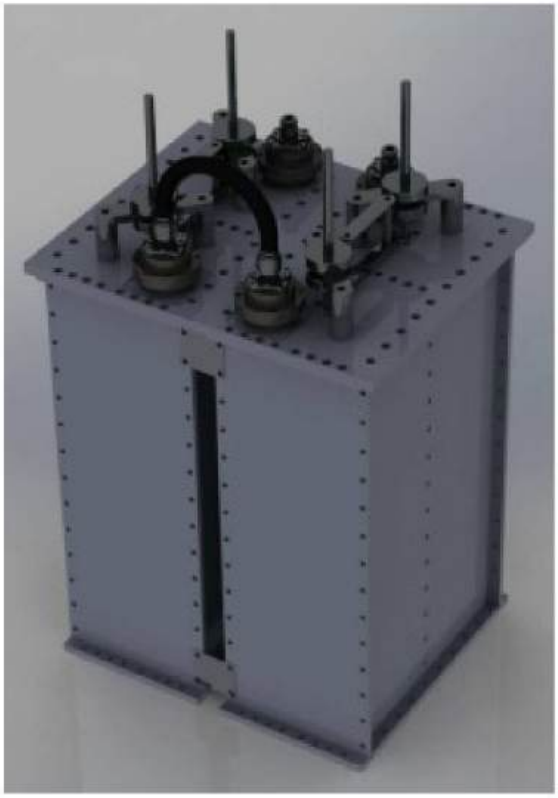
Rack version (optional)	
Panel Size	8 HE (1 HE = 44,45 mm) 356· 485· 644 mm (14· 19· 25.3 inch) (H· L· W)
Net Weight	≈38 Kg

VIEWS OF THE SYSTEM - NO RACK VERSION

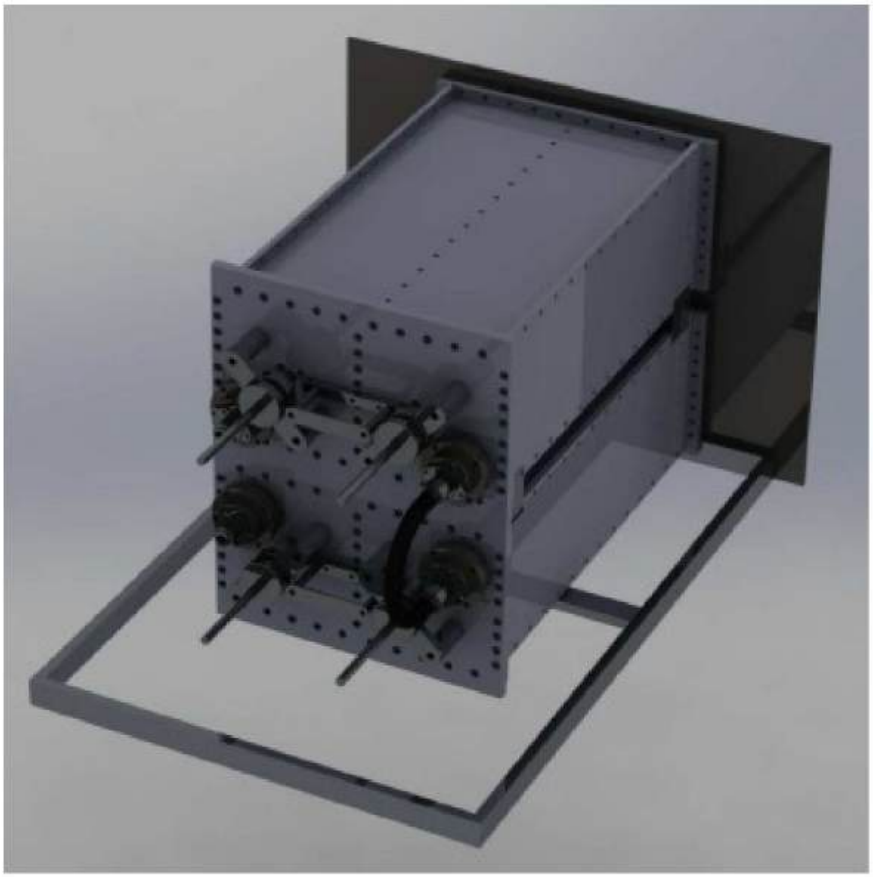


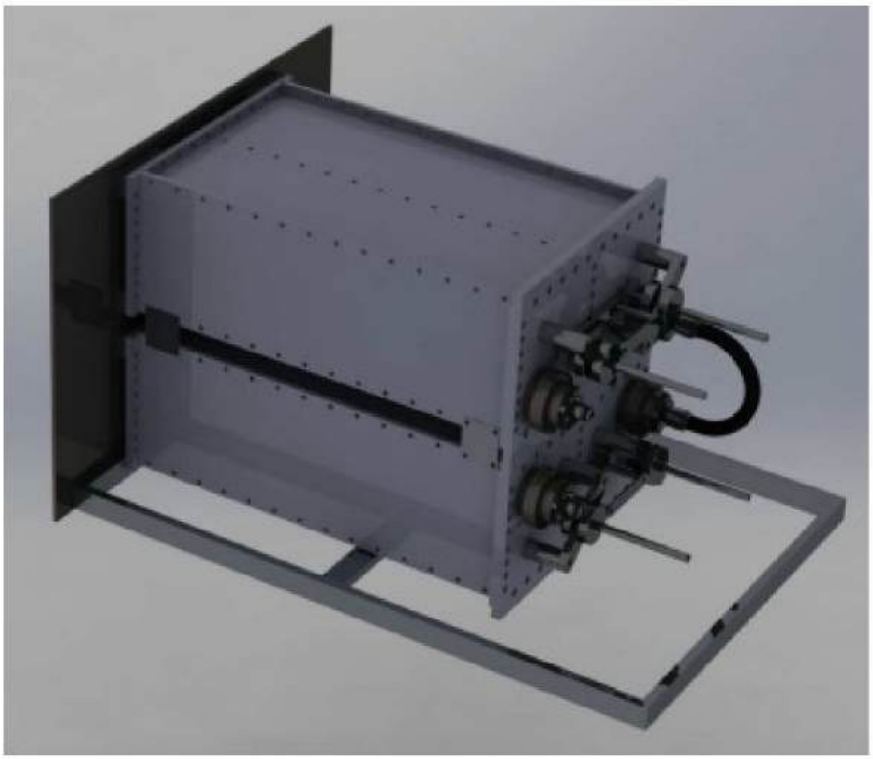


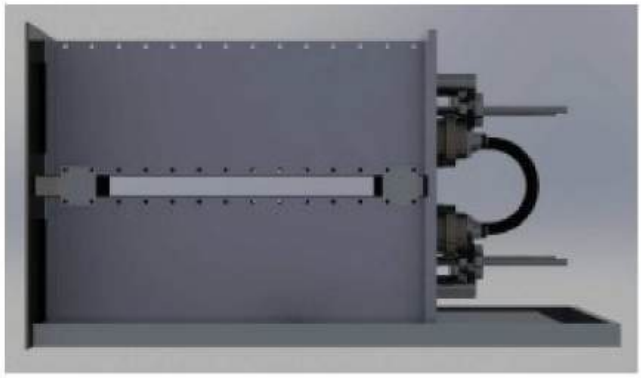


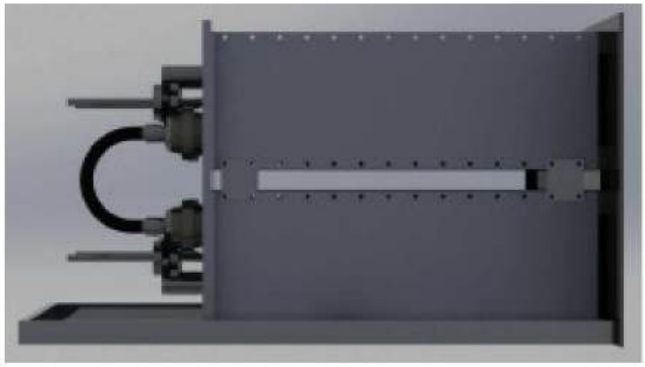


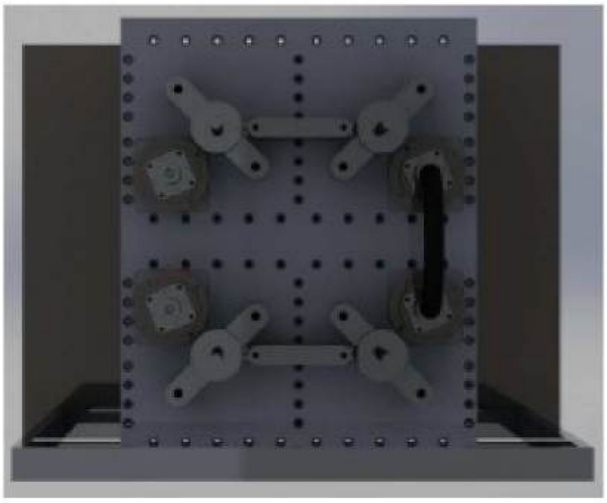
VIEWS OF THE SYSTEM - RACK VERSION (OPTIONAL)

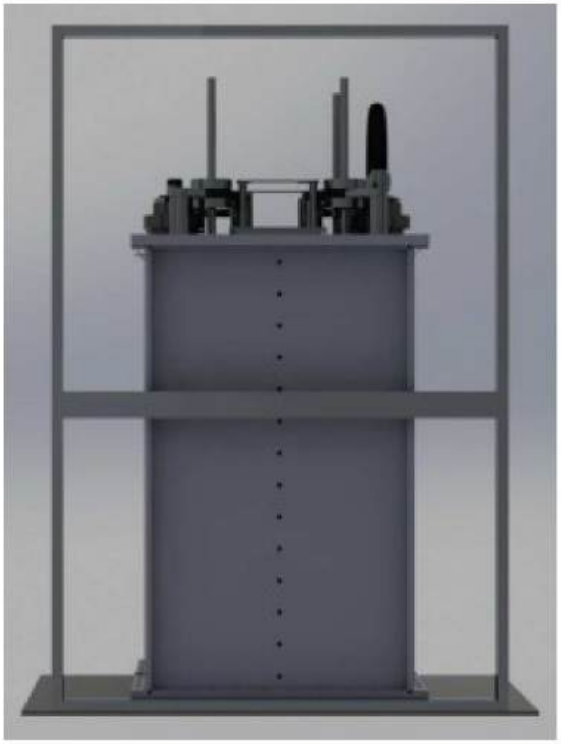












MODEL FFC2RELF

- BAND-PASS FILTER
- IMPEDANCE 50 Ohm
- FM BAND *87.5 ÷108 MHz*
- BAND II
- SPECIAL VERSION 6 RESONANT CAVITY

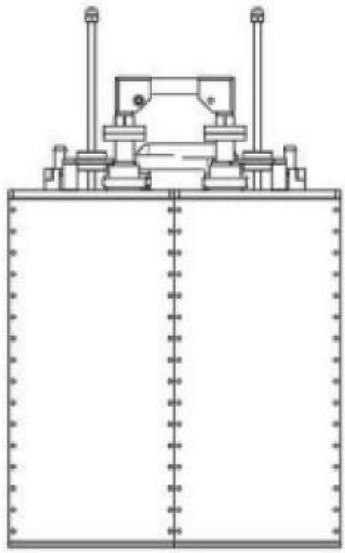
This quadruple cavity filter is used to set up starpoint combiners with very low spacing between channels.
The pass band filters was designed as an extension of our band pass combiner technology. Using our industry-leading square, cavity filter design, the filter provides a one-time-buy filtering solution for the broadcaster located at multiple-user site. The filter isolates the transmission system to eliminate spurious emissions.

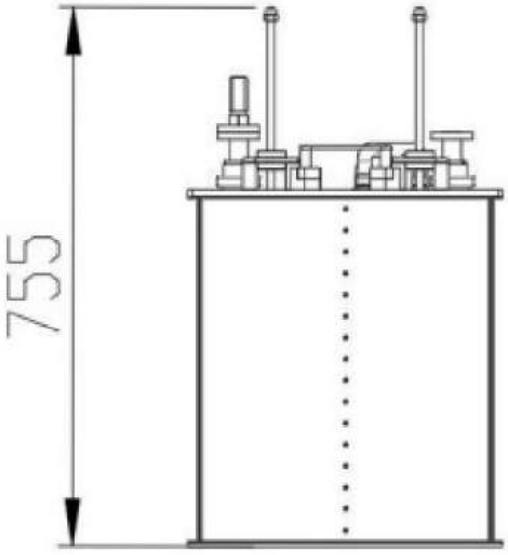
TYPICAL SPECIFICATIONS	
Models	FFC2RELF
Impedance	50 ohm
Frequency Range	87.5-108 MHz
VSWR ± 150 KHz	1.1:1 Max
Insertion Loss	at f_0 0.8 - 1.5 dB Max
Return Loss ± 150 KHz	≤ -26dB
Rejection	per customer's requirements (Typical ± 500 kHz it's even to –30dB approx.)
Connectors	N - 7/16" - 7/8" on customer request
Max Power	1KW with 7/16" – 7/8" connectors 800 W with N connector
Working Temperature	-20°C ÷ +50°C
Colour	Enamel Gray Ral 7001
Materials	Aluminium, Brass, Copper, PTFE, Stainless Steel, Silvering (min 12μm thickness)

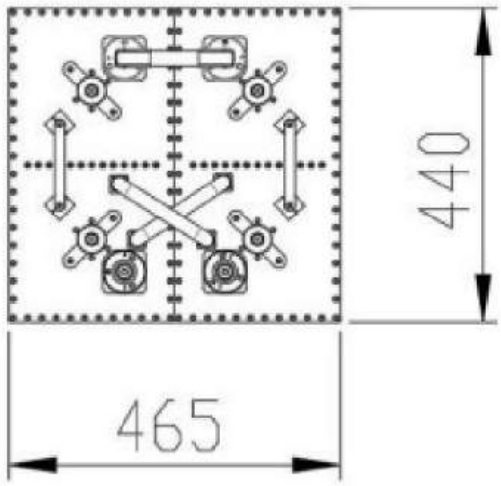
Features:

- Distortion – Free Transmission
- Very low spacing between channels if used in starpoint combiners
- Low loss, high isolation
- Natural convection

DIMENSIONS (mm)

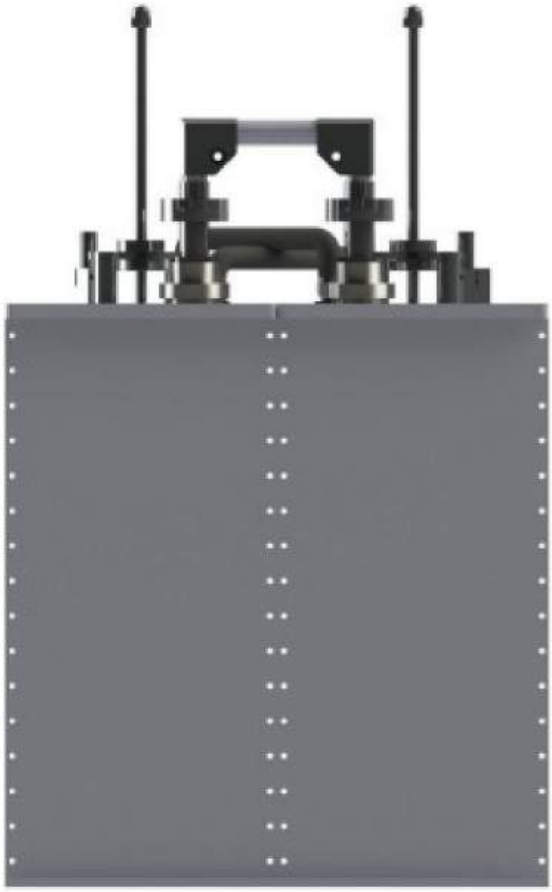


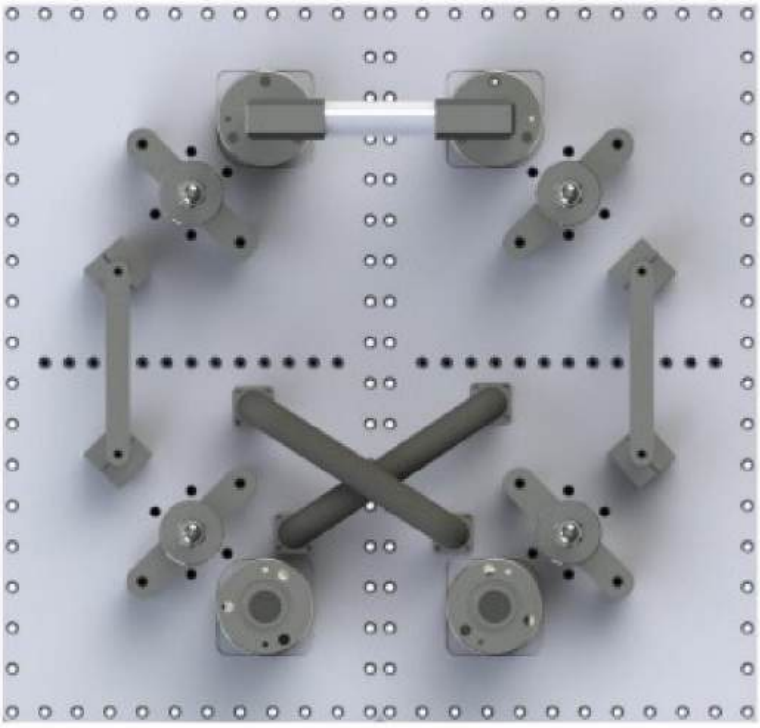




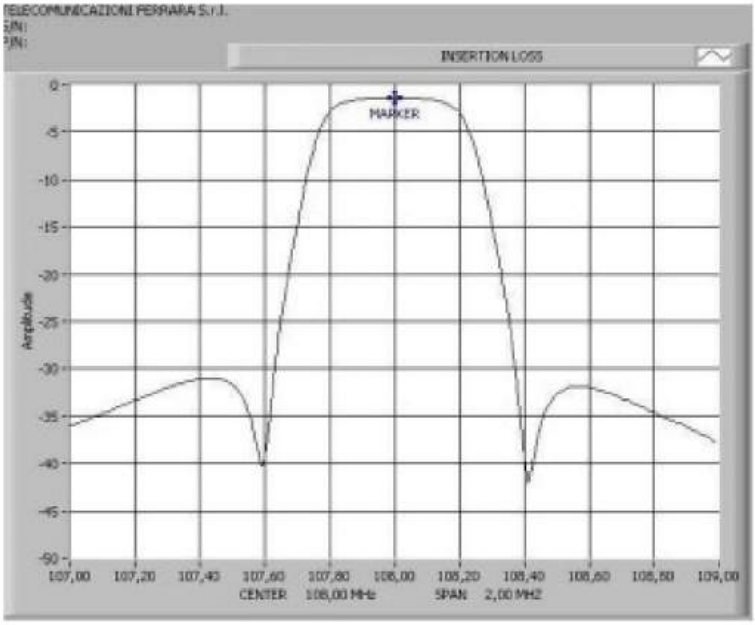
Dimensions	See figure dimensions
Net Weight	≈ 50 Kg approx.

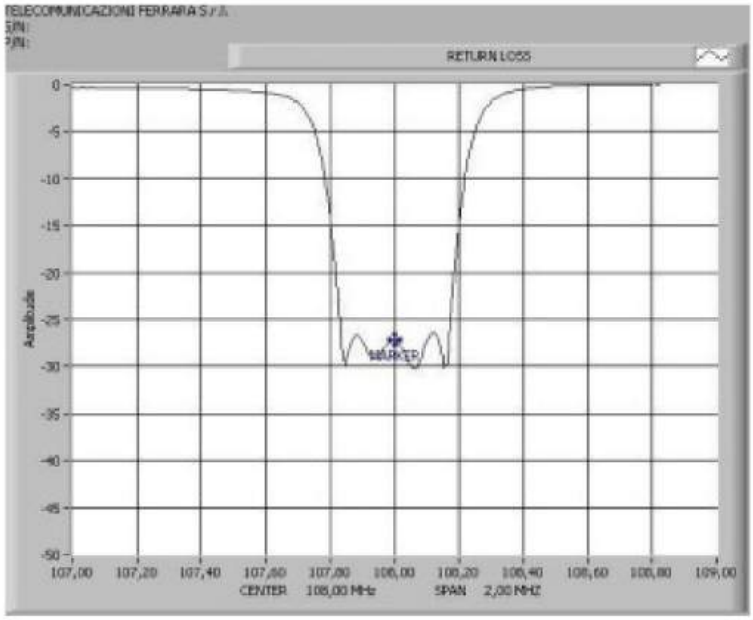
VIEWS OF THE SYSTEM





FINAL TEST





MODEL FFQC2I

- BANDPASS FILTER
- FREQUENCY RANGE 87.5- 108 MHz
- BAND II
- IMPEDANCE 50 Ohm

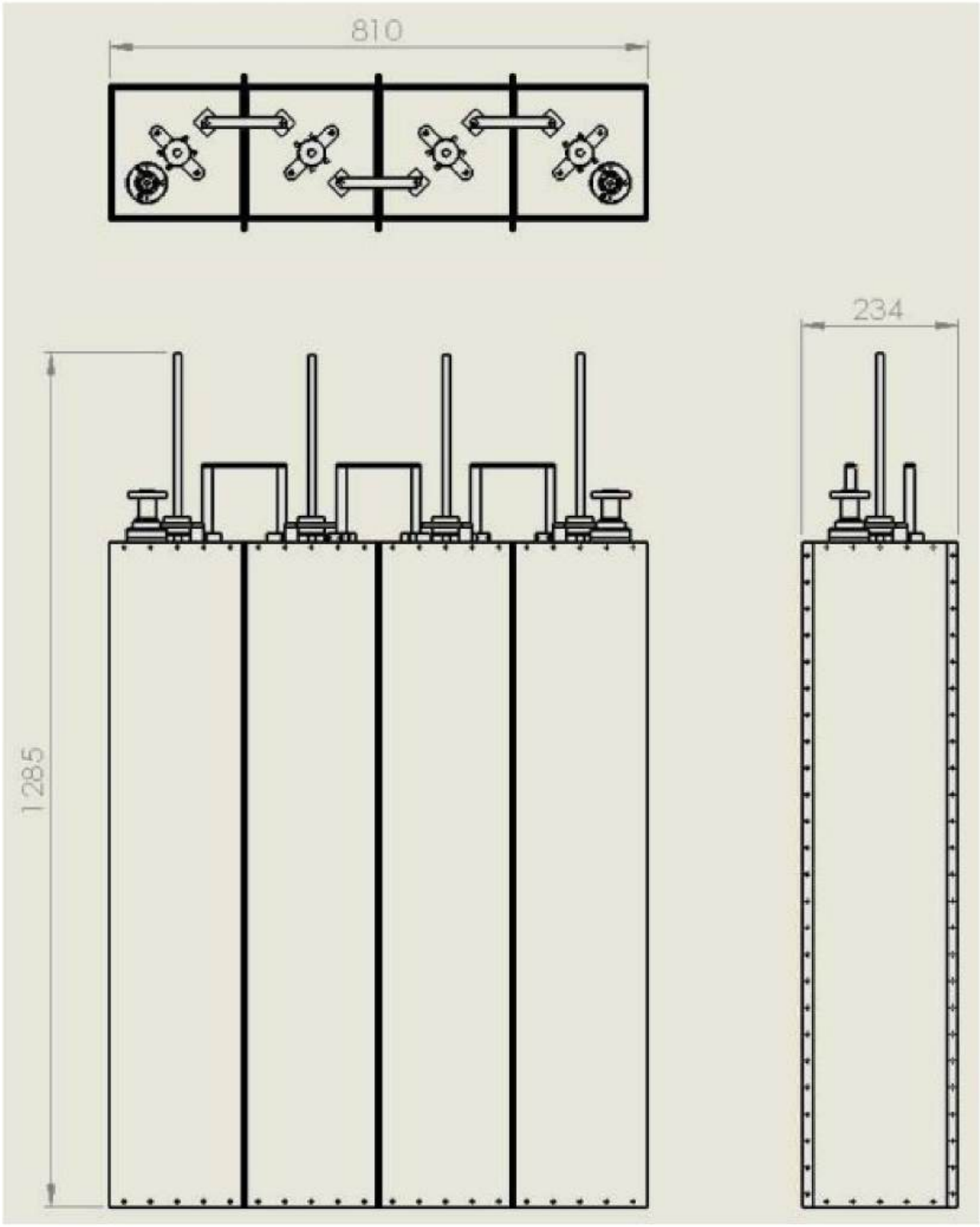
In the standard version there are two resonant cavity filters and in the special version 3 and 4. All the models are used to make up mixers with several channels. The pass band filters was designed as an extension of our band pass combiner technology.
Using our industry-leading square, cavity filter design, the filter provides a one-time-buy filtering solution for the broadcaster located at multiple-user site. The filter isolates the transmission system to eliminate spurious emissions.

TYPICAL SPECIFICATIONS	
Model	FFQC2I
Impedance	50 Ohm
Frequency Range	87.5-108 MHz
VSWR ± 150 KHz	1.1:1 Max
Insertion Loss	at f_0 -0.45 -0.55 dB Max
Return Loss ± 150 KHz	≤ -26dB
Rejection	18 dB at -0.45, 22 dB at -0.55
Connectors	7/8" EIA Input-Output (Optional 7/16")
Max Power	2KW
Working Temperature	-20°C | +50°C
Colour	Enamel gray ral 7001
Materials	Aluminium, silver brass, copper, PTFE, stainless steel, silver plated (min 12 thickness)

Features:

- Distortion – Free Transmission
- Low loss, high isolation
- Natural convection

DIMENSIONS (mm)



Dimensions	1300(Max size)- 810- 234 mm (51.1(Max size)- 31.8- 9.2 inch) (H- L- W)
Net Weight	≃50 Kg

VIEWS OF THE SYSTEM

MODEL FFC2IELF

- BAND-PASS FILTER
- IMPEDANCE 50 Ohm
- FM BAND *87.5 +108 MHz*
- BAND II
- SPECIAL VERSION WITH SPECIAL DOUBLE CROSS COUPLING

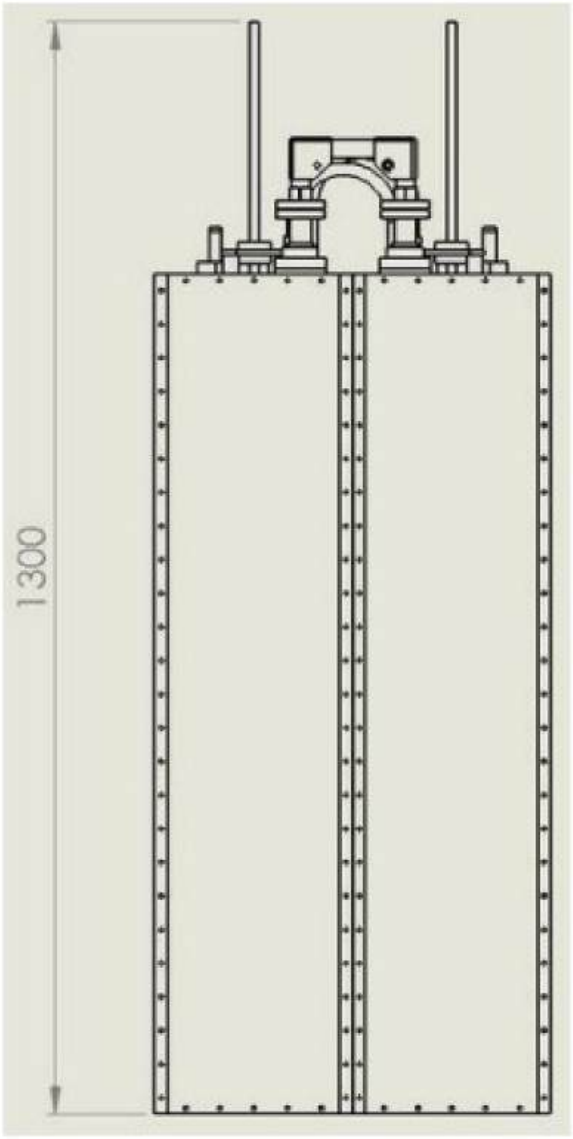
This quadruple cavity filter is used to set up starpoint combiners with very low spacing between channels.
The pass band filters was designed as an extension of our band pass combiner technology. Using our industry-leading square, cavity filter design, the filter provides a one-time-buy filtering solution for the broadcaster located at multiple-user site. The filter isolates the transmission system to eliminate spurious emissions.

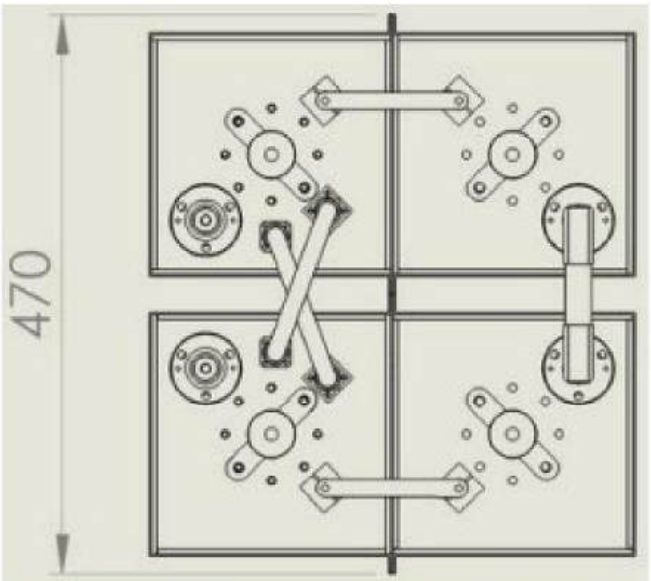
TYPICAL SPECIFICATIONS	
Models	FFC2IELF
Impedance	50 ohm
Frequency Range	87.5-108 MHz
VSWR ± 150 KHz	1.1:1 Max
Insertion Loss	at f_0 0.6 - 1.5 dB Max
Return Loss ± 200 KHz	≤ -26dB
Rejection	per customer's requirements (Typical ± 350 kHz it's even to –30dB approx.)
Connectors	N - 7/16" - 7/8" on customer request
Max Power	1KW with 7/16" – 7/8" connectors 800 W with N connector
Working Temperature	-20°C ÷ +50°C
Colour	Enamel Gray Ral 7001
Materials	Aluminium, Brass, Copper, PTFE, Stainless Steel, Silvering (min 12μm thickness)

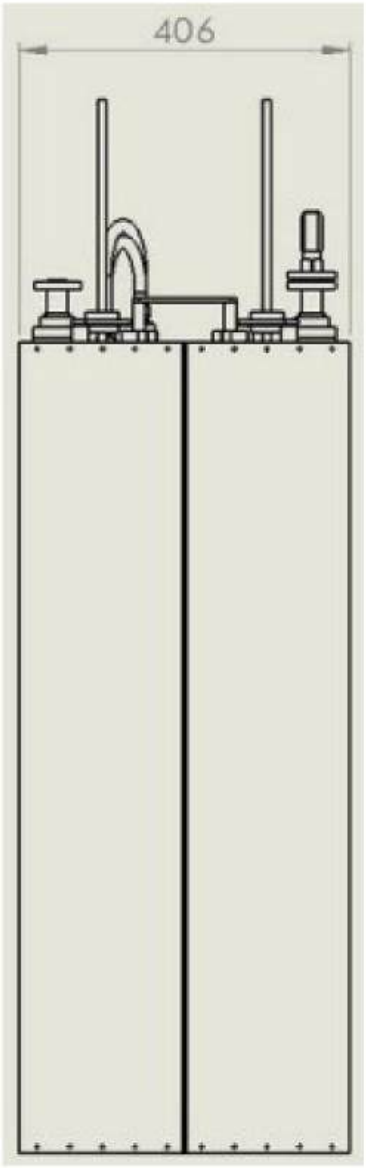
Features:

- Distortion – Free Transmission
- Very low spacing between channels if used in starpoint combiners
- Low loss, high isolation
- Natural convection

DIMENSIONS (mm)

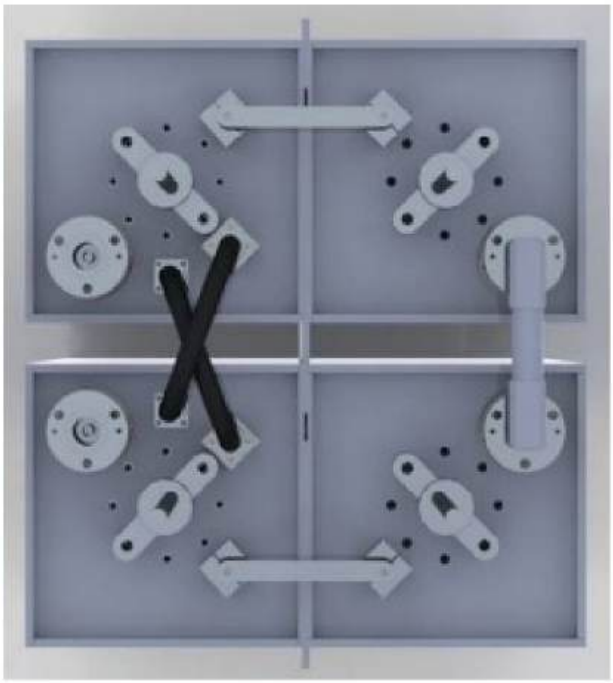


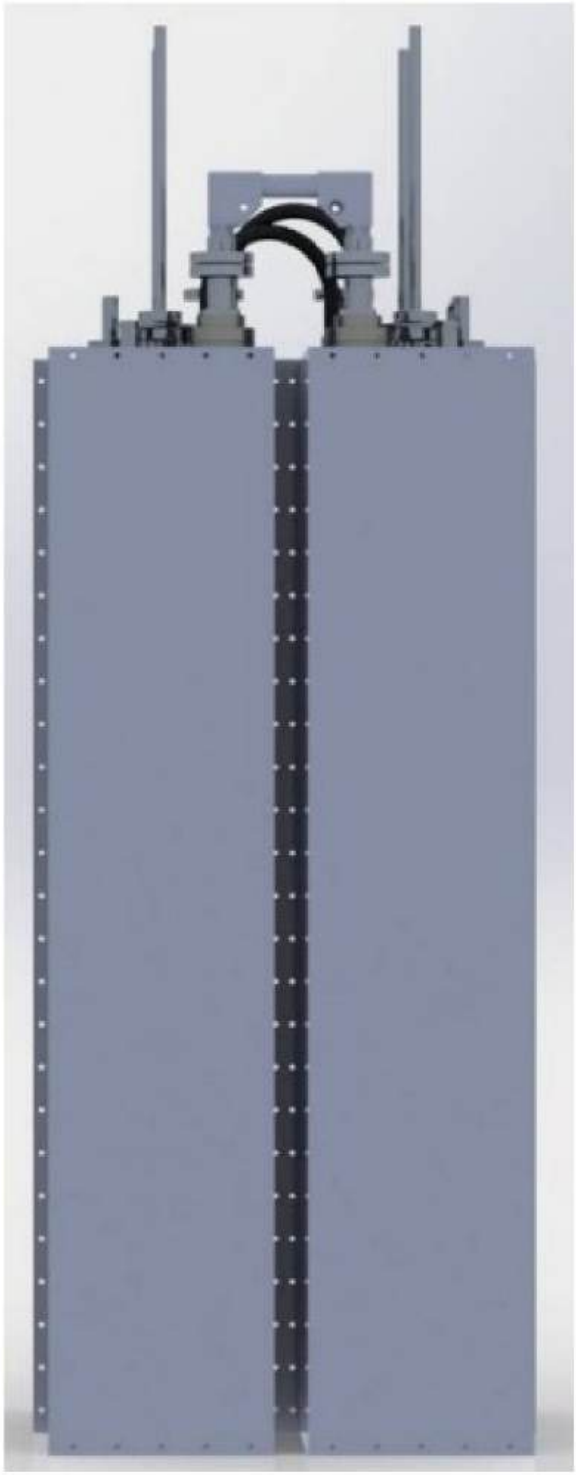


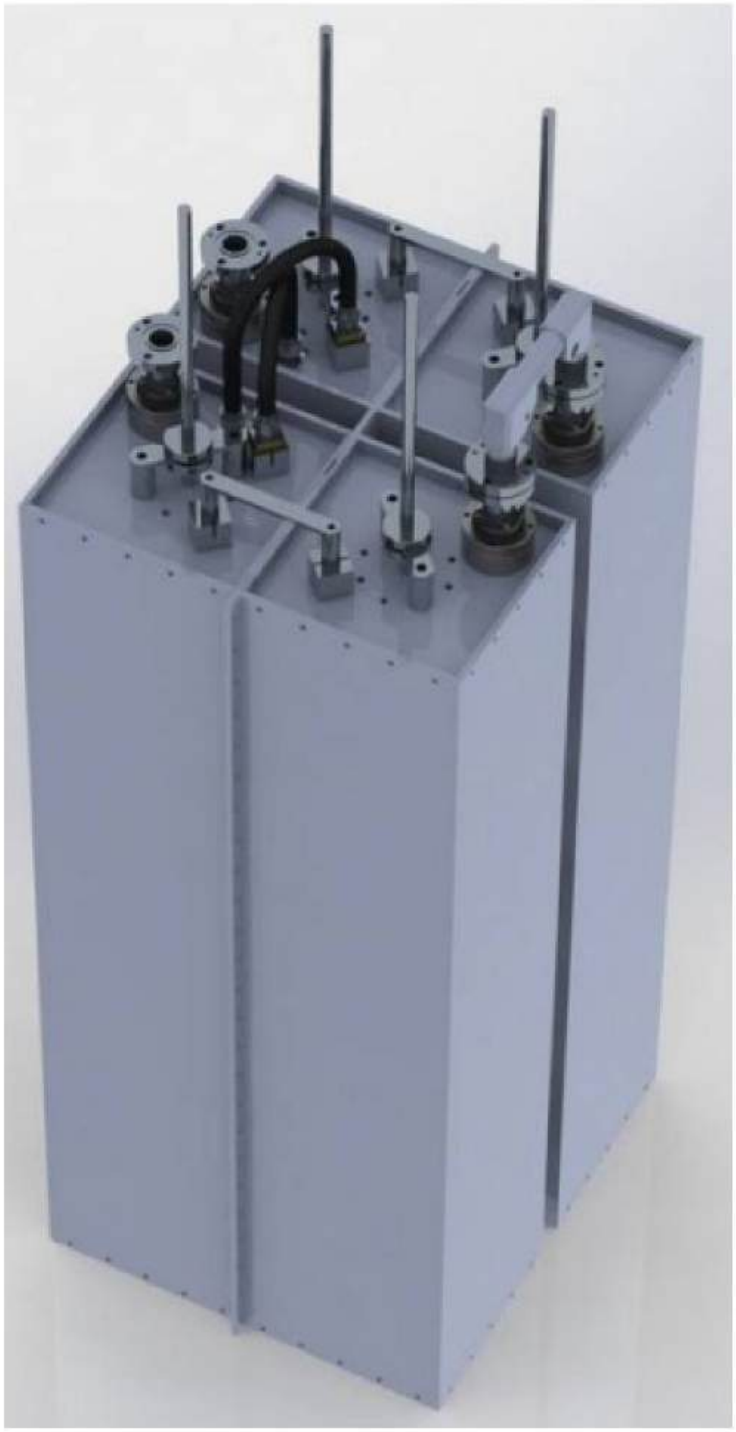


Dimensions	1300 (Max size)×470×406 mm (51.1(Max size)×18.5×15.9inch) (H×L×W)
Net Weight	≅ 50 Kg approx.

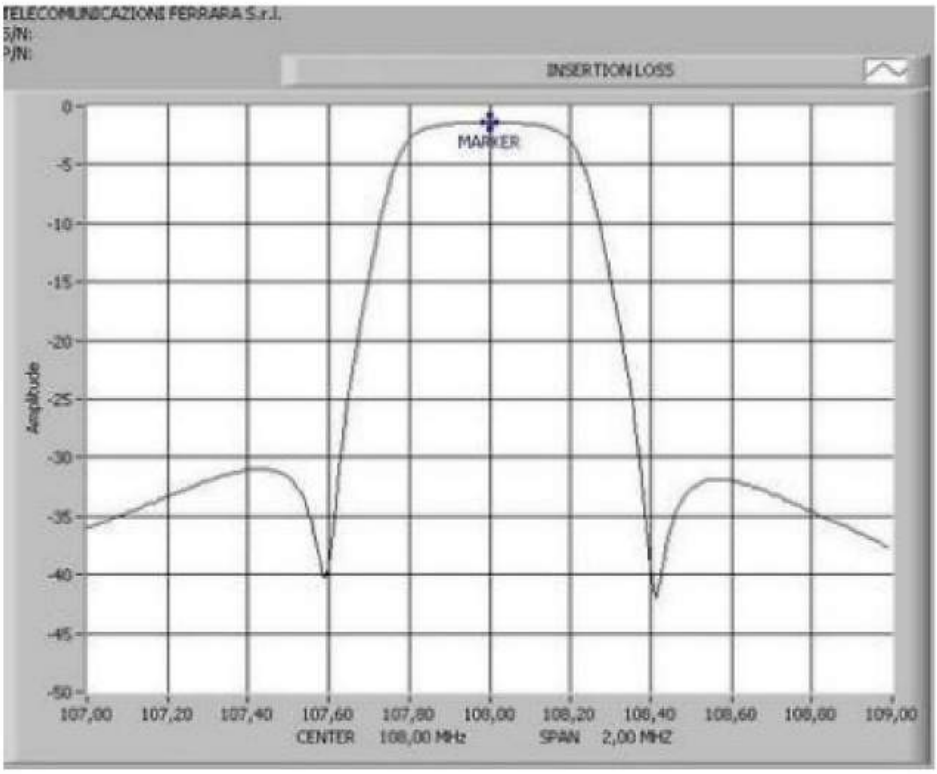
VIEWS OF THE SYSTEM

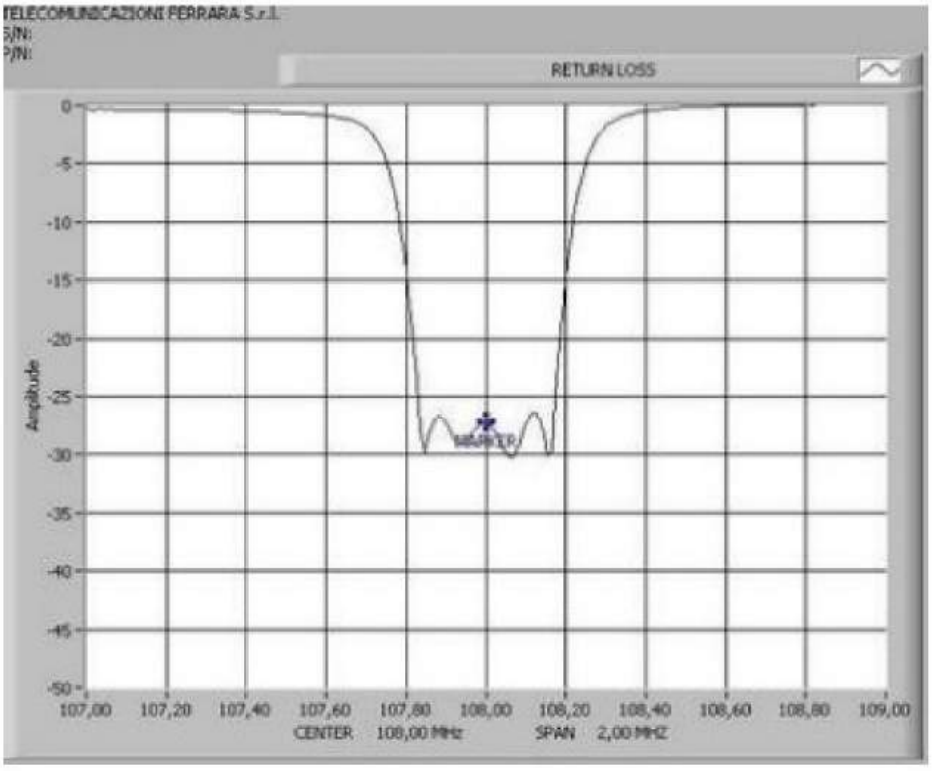






FINAL TEST





MODEL FFC5ELF

- BAND-PASS FILTER
- IMPEDANCE 50 Ohm
- FM BAND *87.5 ÷108 MHz*
- BAND II
- SPECIAL VERSION WITH DOUBLE CROSS COUPLING

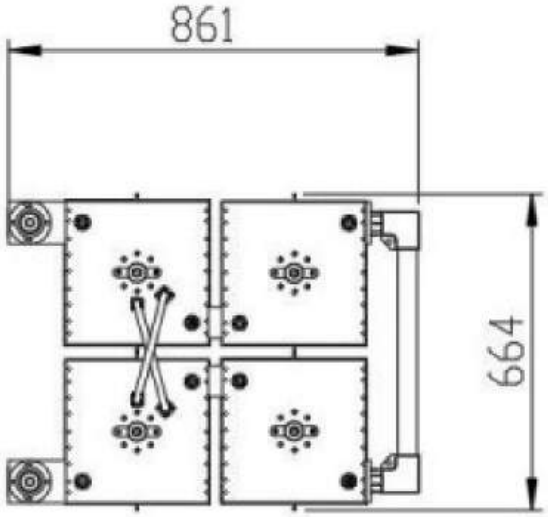
This quadruple cavity filter is used to set up starpoint combiners with very low spacing between channels.
The pass band filters was designed as an extension of our band pass combiner technology. Using our industry-leading square, cavity filter design, the filter provides a one-time-buy filtering solution for the broadcaster located at multiple-user site. The filter isolates the transmission system to eliminate spurious emissions.

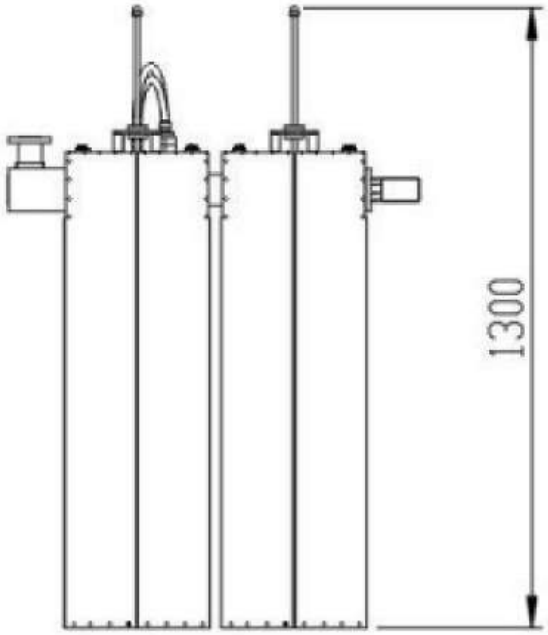
TYPICAL SPECIFICATIONS	
Models	FFC5ELF
Impedance	50 ohm
Frequency Range	87.5-108 MHz
VSWR ± 100 KHz	1.1:1 Max
Insertion Loss	at f_0 0.7 - 1 dB Max
Return Loss ± 100 KHz	≤ -26dB
Rejection	per customer's requirements (Typical ± 200 kHz from -20 to –30dB approx.)
Connectors	7/8" or 1+5/8" on customer request
Max Power	3KW
Working Temperature	-20°C ÷ +50°C
Colour	Enamel Gray Ral 7001
Materials	Aluminium, Brass, Copper, PTFE, Stainless Steel, Silvering (min 12μm thickness)

Features:

- Distortion – Free Transmission
- Very low spacing between channels if used in Starpoint combiners
- Low loss, high isolation
- Natural convection

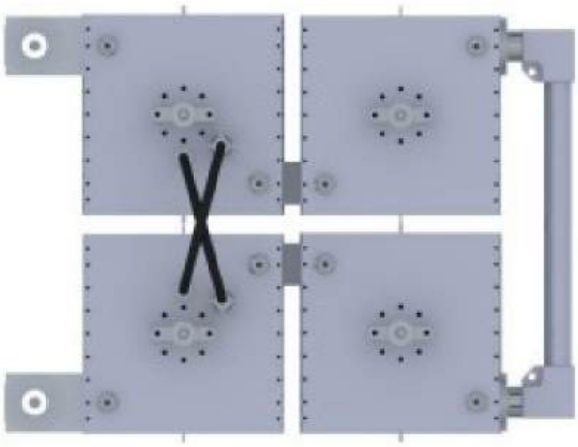
DIMENSIONS (mm)





Dimensions	1300 (Max size)×664×861 mm (H×L×W)
Net Weight	≡ 100 Kg approx.

VIEWS OF THE SYSTEM



MODEL FFQC5 (Quadruple)

- **BAND-PASS FILTER**
- **FM BAND 87.5-108 MHz**
- **BAND II**

THESE ARE QUADRUPLE STANDARD RESONANT CAVITY FILTERS

ALL THE MODELS ARE USED TO MAKE UP MIXERS WITH SEVERAL CHANNELS

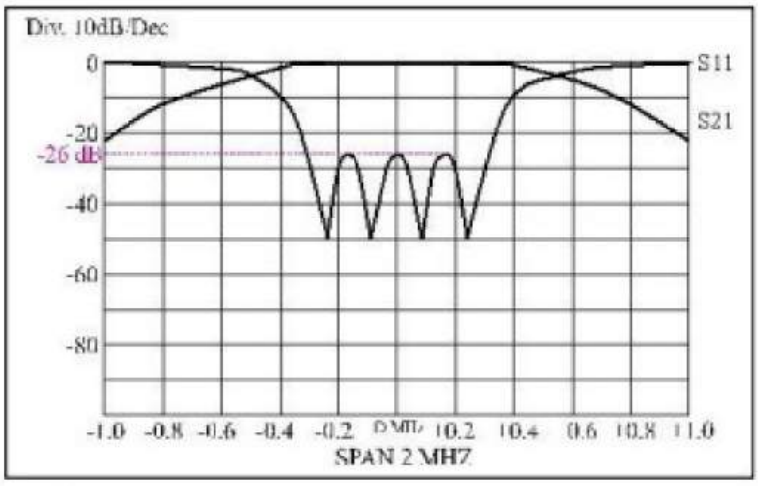
The pass band filters was designed as an extension of our band pass combiner technology. Using our industry-leading square, cavity filter design, the filter provides a one-time-buy filtering solution for the broadcaster located at multiple-user site.
The filter isolates the transmission system to eliminate spurious emissions.

TYPICAL SPECIFICATIONS

Model	FFQC5
Impedance	50 Ohm
Frequency Range	87.5-108 MHz
VSWR ± 150 KHz	1.1:1 max
Insertion Loss	≤ 0.30 - 0.45 dB quadruple cavity adjustable
Return Loss ± 150 KHz	≤ -26 dB
Rejection	per customer's requirements typical -20 dB at 1 mhz. quadruple cavity
Connectors	1+5/8" or 7/8" special version 3+1/8" Input - Output
Max Power	5 KW
Working Temperature	-20ƒC÷ +50ƒC not significative variation in the range
Colour	Enamel Gray ral 7001
Materials	Aluminium, Brass, Copper, PTFE, Stainless Steel, Silvering (min. 12μm thickness)

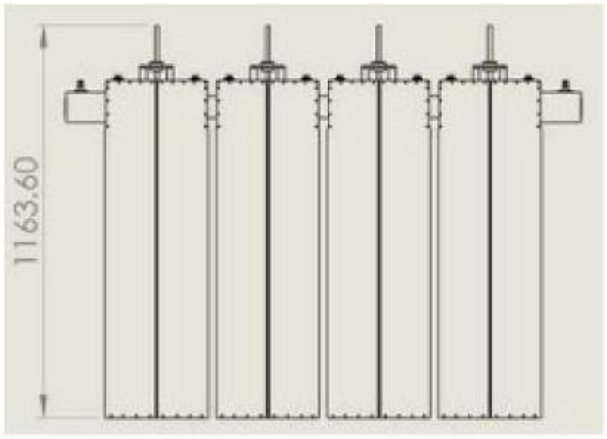
Features:

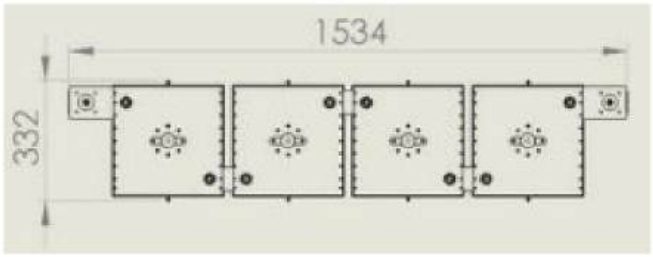
- Modular design
- Distortion – Free Transmission
- Special configuration 4 cavities
- Low loss, high isolation
- Natural convection
- Special system temperature compensation



Typical shape of a curves for S11 and S12 parameters

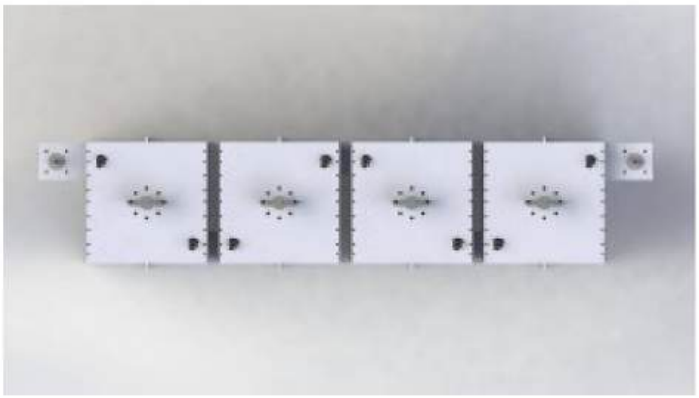
DIMENSIONS QUADRUPLE CAVITY (is mm.)

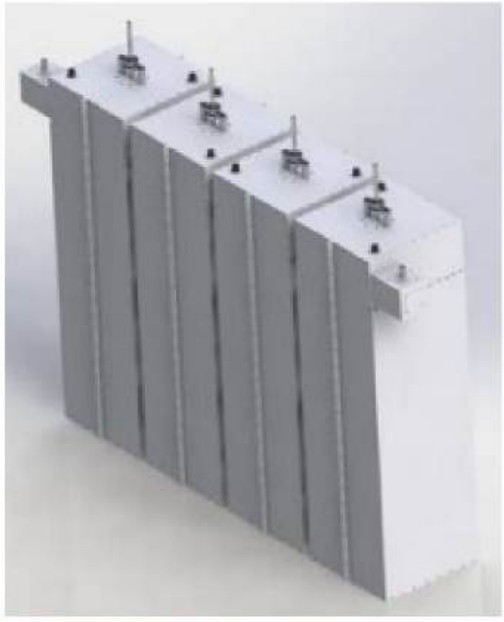




Dimensions	1400(Max size)×1534×332 mm (H×L×W)
Net Weight	= 85 Kg APROX

VIEW IN VARIOUS DIRECTIONS





MODEL FFQC10

- **BAND-PASS FILTER**
- **FM BAND 87.5-108 MHz**
- **BAND II**

THESE ARE QUADRUPLE STANDARD RESONANT CAVITY FILTERS.
ALL THE MODELS ARE USED TO MAKE UP MIXERS WITH SEVERAL CHANNELS.
The pass band filters was designed as an extension of our band pass combiner technology. Using our industry-leading square, cavity filter design, the filter provides a one-time-buy filtering solution for the broadcaster located at multiple-user site.
The filter isolates the transmission system to eliminate spurious emissions.

TYPICAL SPECIFICATIONS

Model	FFQC10
Impedance	50 ohm
Frequency Range	87.5-108 MHz
VSWR ± 150-250 KHz	1.1:1 max
Insertion Loss	≤ 0.25-0.35 dB typical
Return Loss ± 150 KHz	≤ -26 dB
Rejection	per customer's requirements (Typical ± 1MHz it's even to –25-30 dB)
Connectors	3+1/8" Input – Output (option Input – Output 1+5/8")
Max Power	10 KW
Working Temperature	-20°C ÷ +50°C
Colour	Enamel Gray Ral 7001
Materials	Aluminium, Brass, Copper, PTFE, Stainless Steel, Silvering (min. 12μm thickness)

Features:

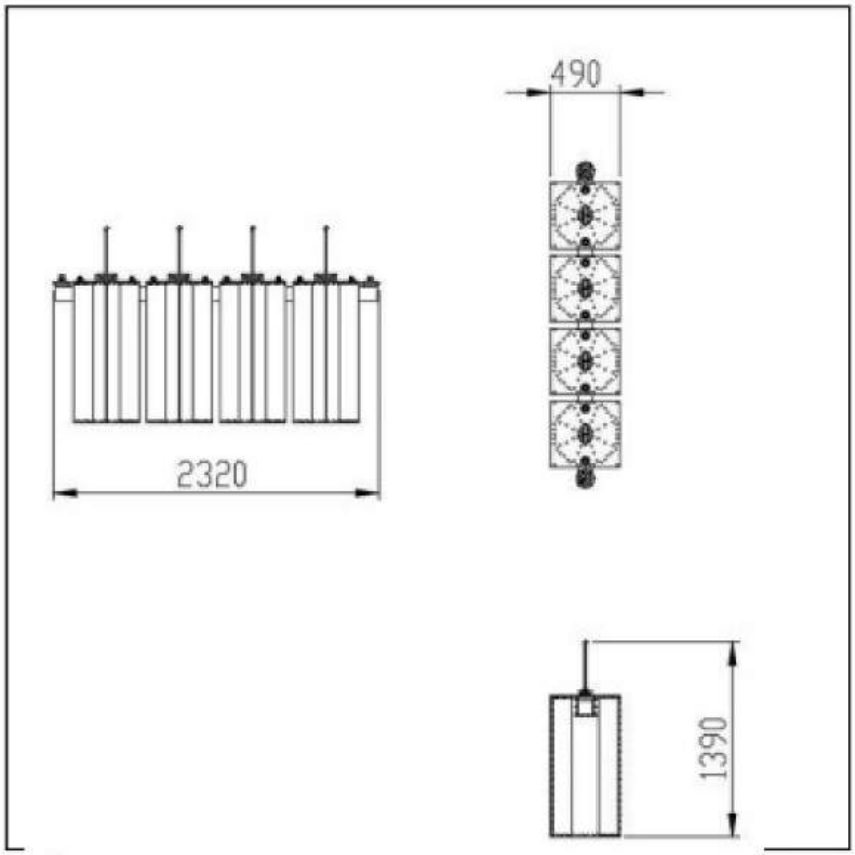
- **Modular design**
- **Distortion – Free Transmission**
- **configuration 4 cavities**
- **Low loss, high isolation**
- **Natural convection**

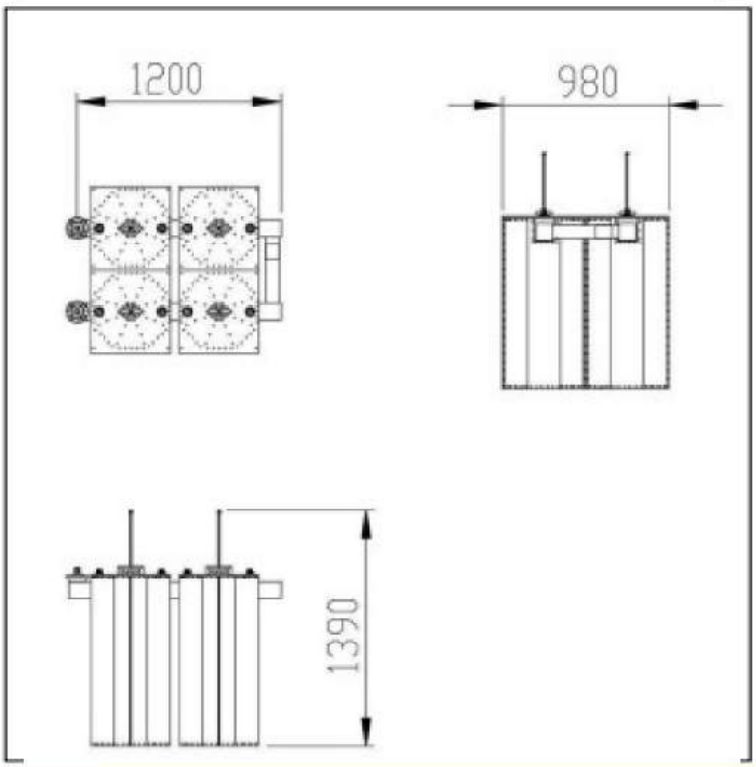
VERSION

Standard version

Folded version

DIMENSIONS mm.





Dimensions	See dimensions.
Net Weight	≡ 110 Kg aprox.

MODEL FFQC20

- **BAND-PASS FILTER**
- **FM BAND 87.5-108 MHz**
- **BAND II**

THESE ARE QUADRUPLE STANDARD RESONANT CAVITY FILTERS.
ALL THE MODELS ARE USED TO MAKE UP MIXERS WITH SEVERAL CHANNELS.
The pass band filters was designed as an extension of our band pass combiner technology. Using our industry-leading square, cavity filter design, the filter provides a one-time-buy filtering solution for the broadcaster located at multiple-user site.
The filter isolates the transmission system to eliminate spurious emissions.

TYPICAL SPECIFICATIONS

Model	FFQC20
Impedance	50 ohm
Frequency Range	87.5-108 MHz
VSWR ± 150-250 KHz	1.1:1 max
Insertion Loss	≤ 0.25-0.35 dB typical
Return Loss ± 150 KHz	≤ -26 dB
Rejection	per customer's requirements (Typical ± 1MHz it's even to –25-30 dB)
Connectors	3+1/8" Input – Output (option Input – Output 1+5/8")
Max Power	20 KW
Working Temperature	-20°C ÷ +50°C
Colour	Enamel Gray Ral 7001
Materials	Aluminium, Brass, Copper, PTFE, Stainless Steel, Silvering (min. 12μm thickness)

Features:

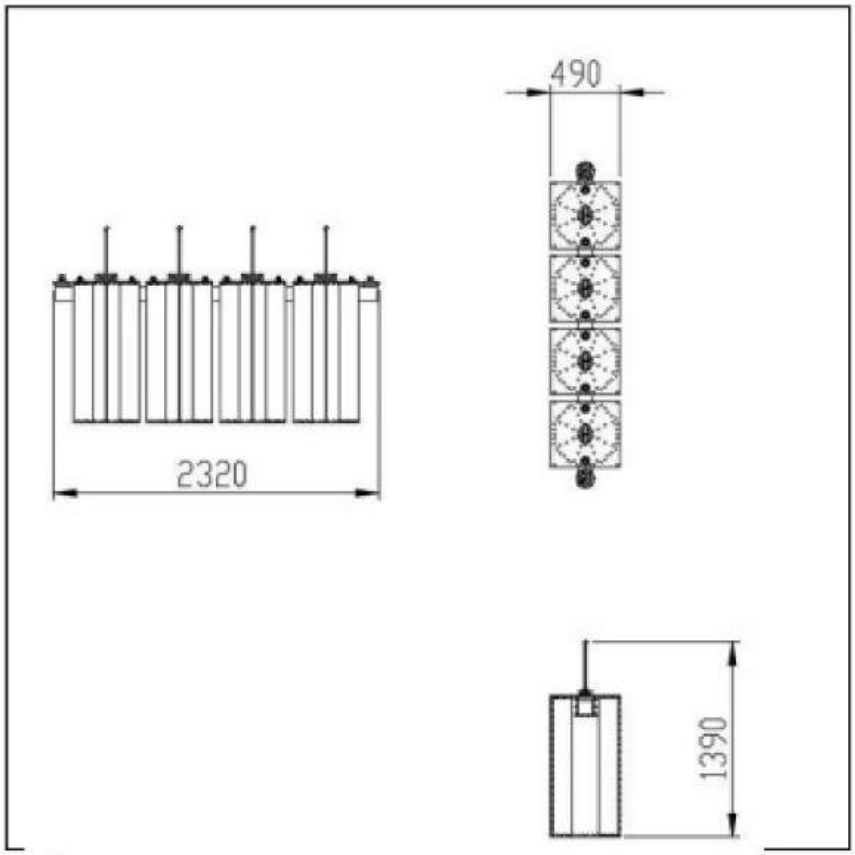
- **Modular design**
- **Distortion – Free Transmission**
- **configuration 4 cavities**
- **Low loss, high isolation**
- **Natural convection**

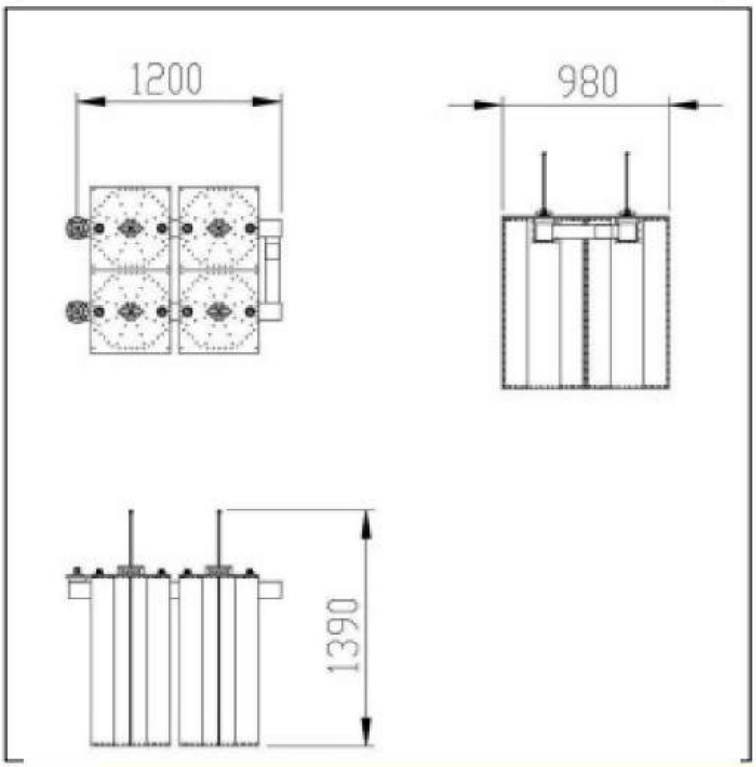
VERSION

Standard version

Folded version

DIMENSIONS mm.





Dimensions	See dimensions.
Net Weight	≡ 110 Kg aprox.

- *BAND-PASS FILTER*
- *FM BAND 87.5-108 MHz*
- *BAND II*
- *MOD. FFQC30*

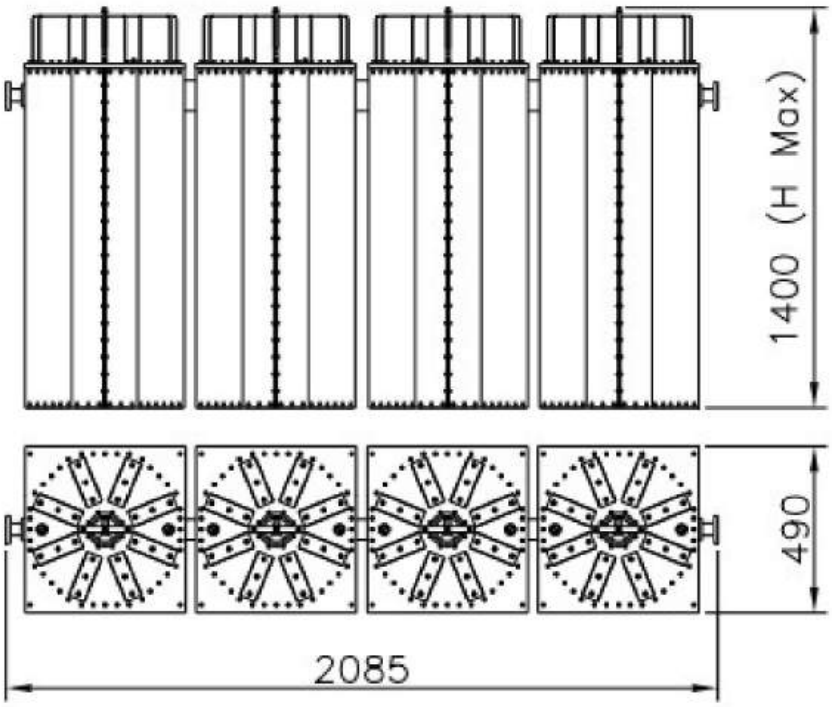
The pass band filters was designed as an extension of our band pass combiner technology.
Using our industry-leading square, cavity filter design, the filter provides a one-time-buy filtering solution for the broadcaster located at multiple-user site.
The filter isolates the transmission system to eliminate spurious emissions.

TYPICAL SPECIFICATIONS

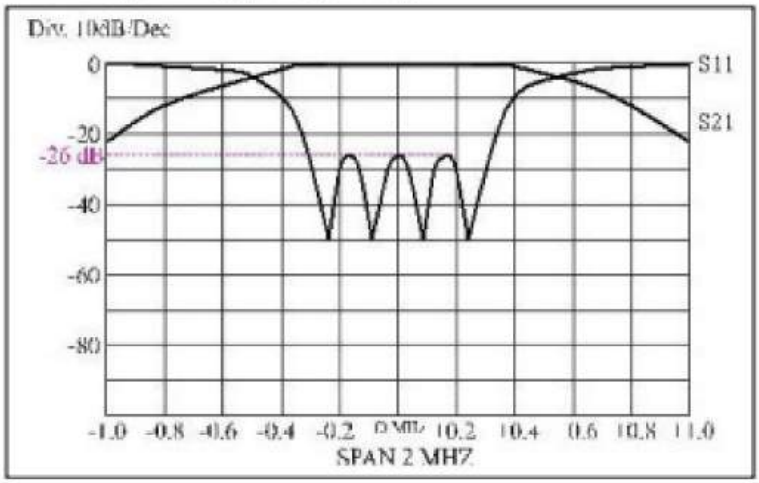
Model	FFQC30
Impedance	50 ohm
Frequency Range	87.5-108 MHz
VSWR ± 150 KHz	1.1:1 max
Insertion Loss	≤ -0.20 - 0.25 dB max.
Return Loss ± 150 KHz	≤ -26 dB
Rejection	per customer's requirements (Typical ± 1MHz it's even to ≥ 20dB)
Connectors	3+1/8" option 4+1/2" Input - Output
Max Power	30 KW
Working Temperature	-20°C | +50°C
Colour	Enamel Gray Ral 7001
Materials	Aluminium, Brass, Copper, PTFE, Stainless Steel, Silvering (min 12 ∞m thickness)

Features:

- Modular design
- Distortion – Free Transmission
- Standard configuration of 2 cavities
- Special configuration 3 and 4 cavities
- Low loss, high isolation
- Natural convection



Dimensions	1400(Max size)· 2085· 490 mm (55.1(Max size)· 82.1· 19.3 inch) (H· L· W)
Net Weight	≅120 Kg (quadruple cavity)



Typical shape of a curves for S11 and S12 parameters

- *BAND-PASS FILTER*
- *FM BAND 87.5-108 MHz*
- *BAND II*
- *MOD. FFQC40*

The pass band filters was designed as an extension of our band pass combiner technology.
Using our industry-leading square, cavity filter design, the filter provides a one-time-buy filtering solution for the broadcaster located at multiple-user site.
The filter isolates the transmission system to eliminate spurious emissions.

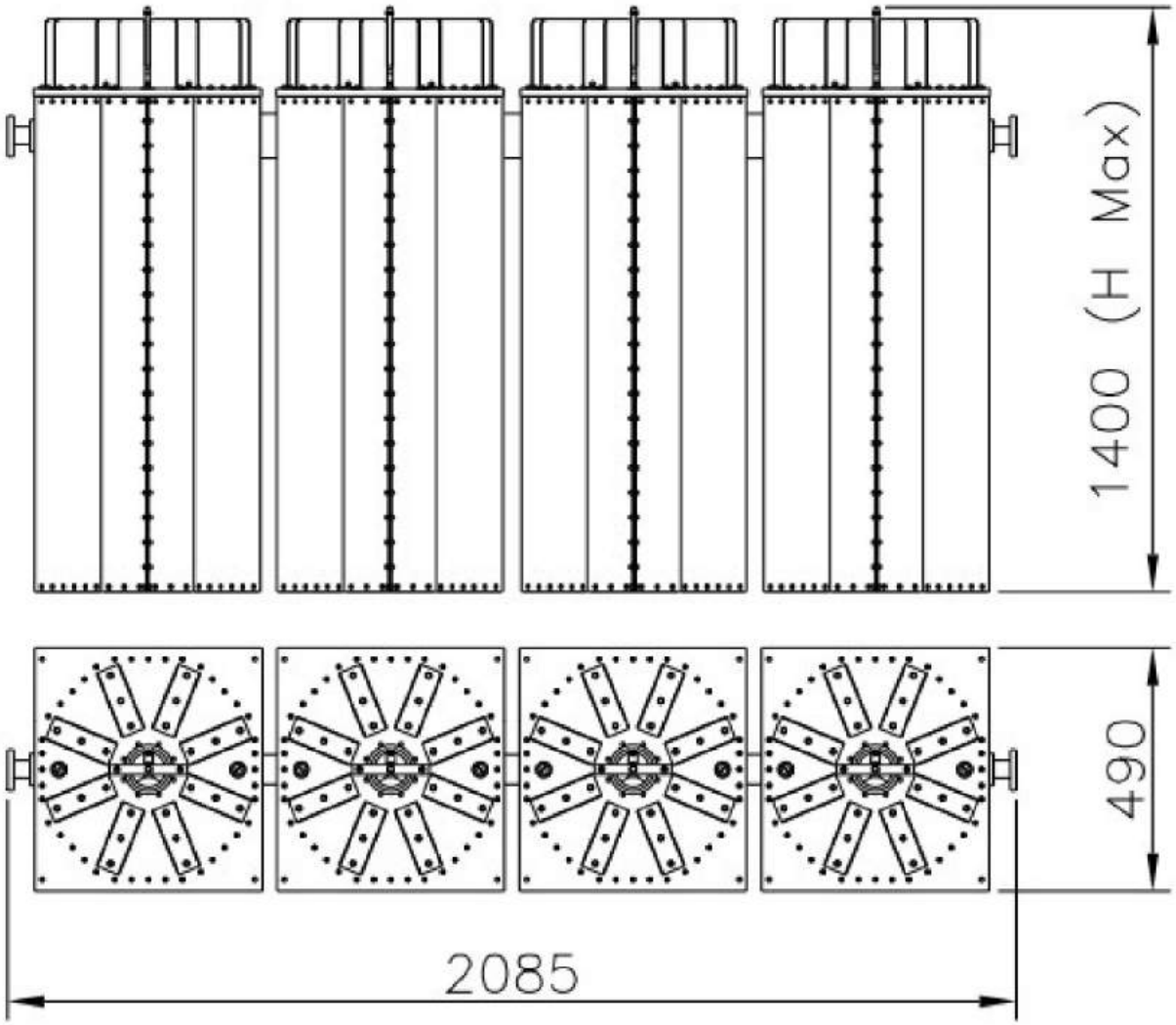
TYPICAL SPECIFICATIONS

Model	FFQC40
Impedance	50 ohm
Frequency Range	87.5-108 MHz
VSWR ± 150 KHz	1.1:1 max
Insertion Loss	≤ -0.20 - 0.25 dB max.
Return Loss ± 150 KHz	≤ -26 dB
Rejection	per customer's requirements (Typical ± 1MHz it's even to ≥ 20dB)
Connectors	4+1/2" Input - Output
Max Power	40 KW
Working Temperature	-20°C | +50°C
Colour	Enamel Gray Ral 7001
Materials	Aluminium, Brass, Copper, PTFE, Stainless Steel, Silvering (min 12∞m thickness)

Features:

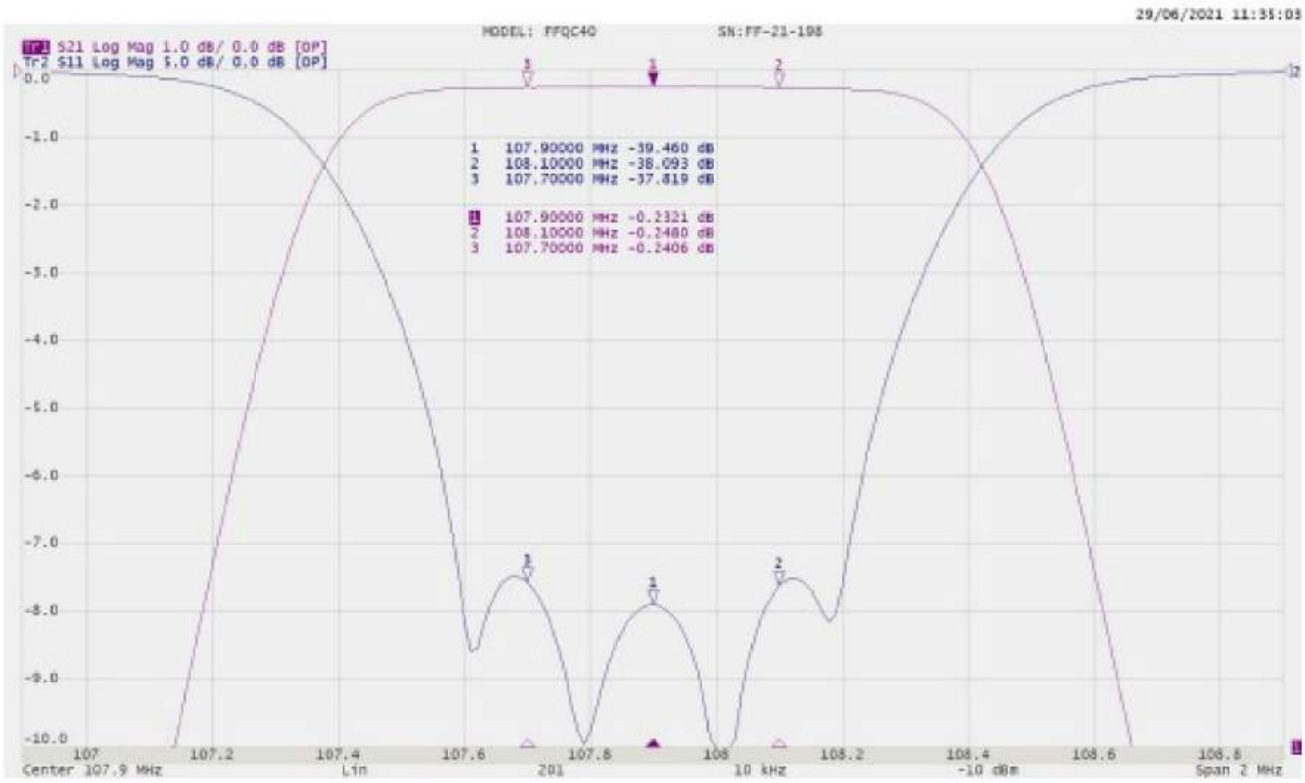
- Modular design
- Distortion – Free Transmission
- Standard configuration of 2 cavities
- Special configuration 3 and 4 cavities
- Low loss, high isolation
- Natural convection

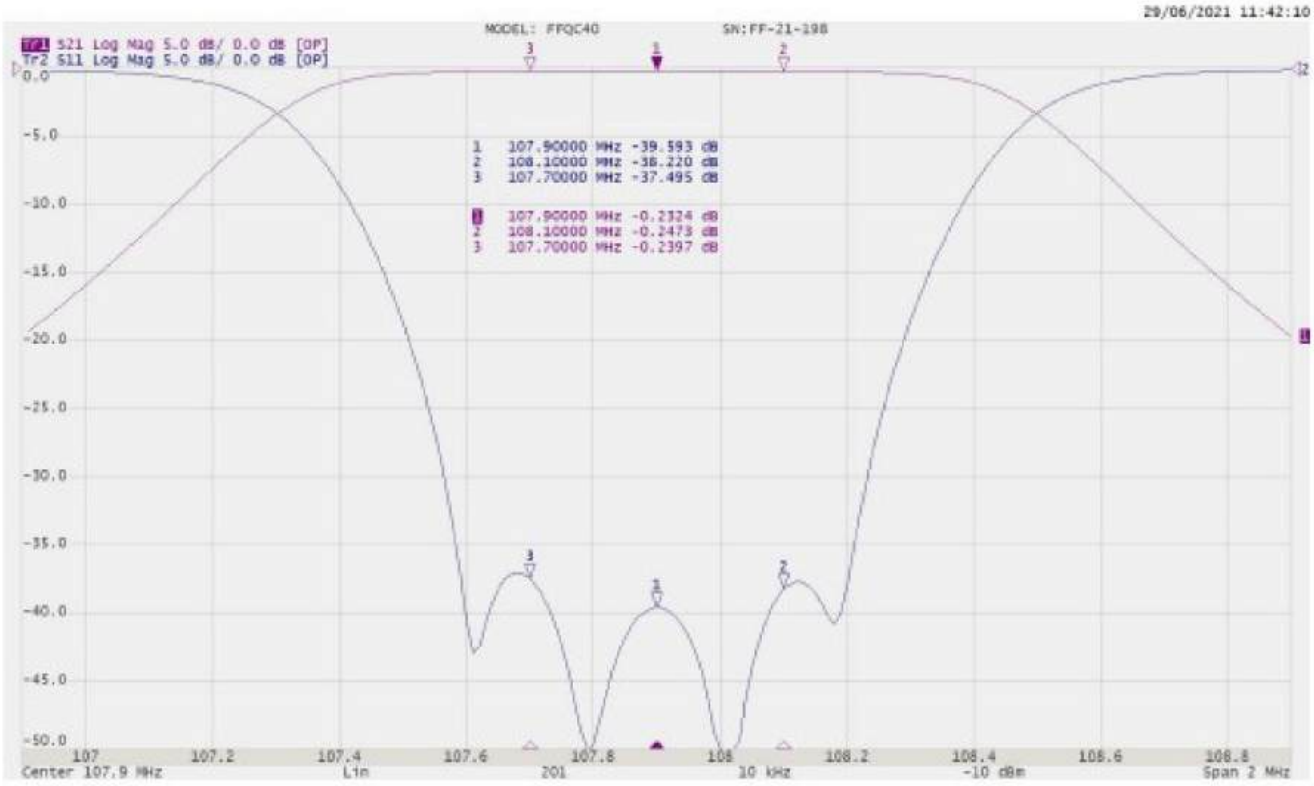
DIMENSIONS

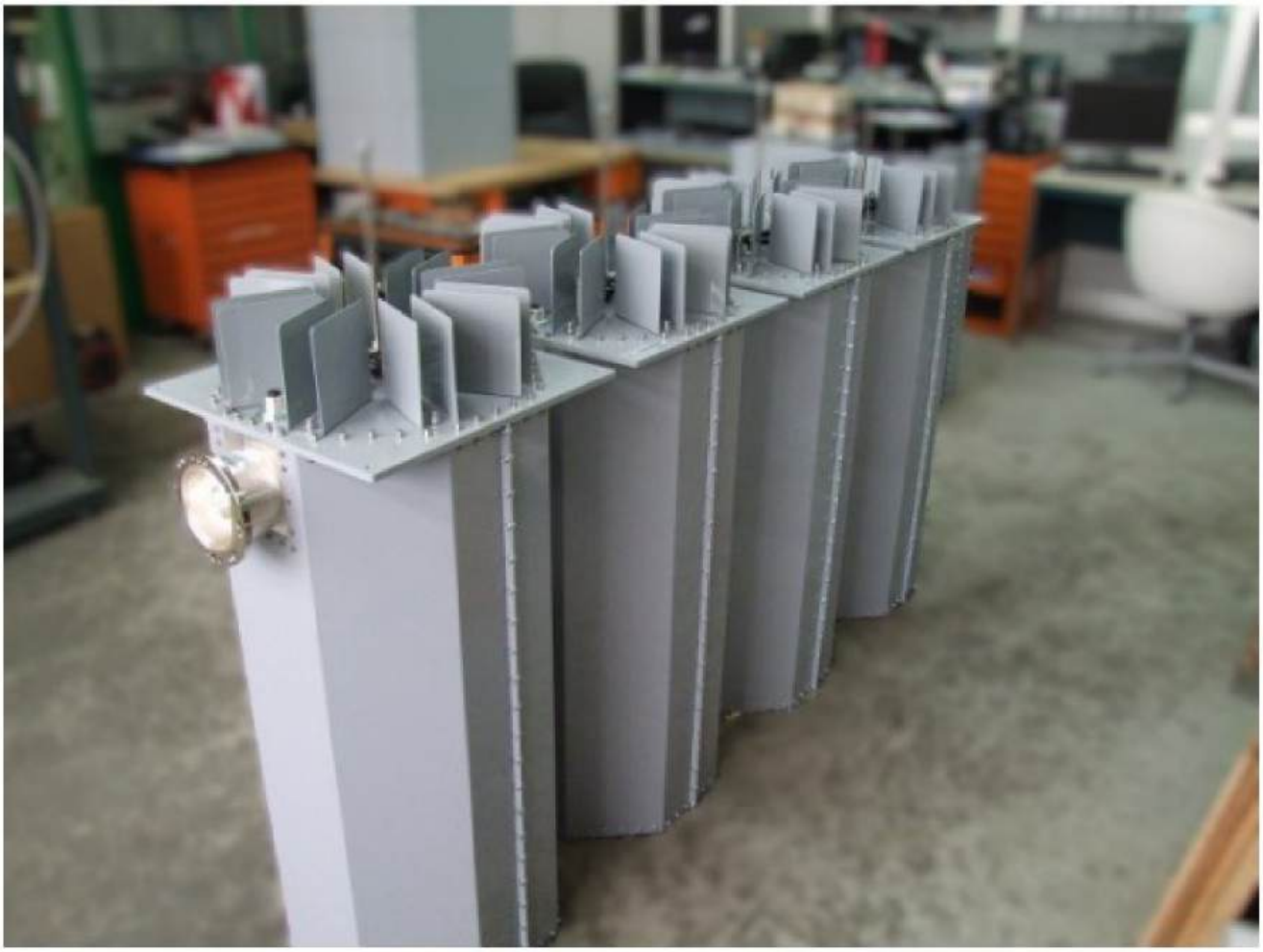


Dimensions	1400(Max size)· 2085· 490 mm (55.1(Max size)· 82.1· 19.3 inch) (H· L· W)
Net Weight	≃120 Kg (quadruple cavity)

Typical shape of a curves for S11 and S12 parameters

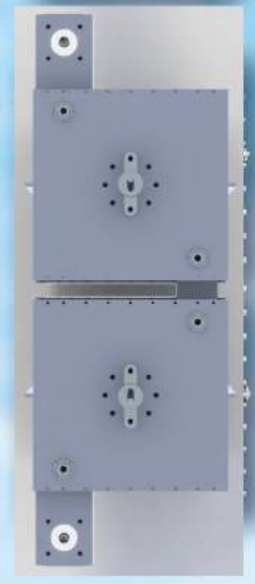






FM PASS BAND FILTER

GENERAL CATALOG



SPECIAL CONFIGURATION

6 CAVITIES AND CROSS COUPLING

MODEL FFELF1K

- BAND-PASS 6 CAVITIES FILTER
- IMPEDANCE 50 Ohm
- FM BAND *87.5 +108 MHz*
- BAND II
- SPECIAL VERSION WITH SPECIAL DOUBLE CROSS COUPLING

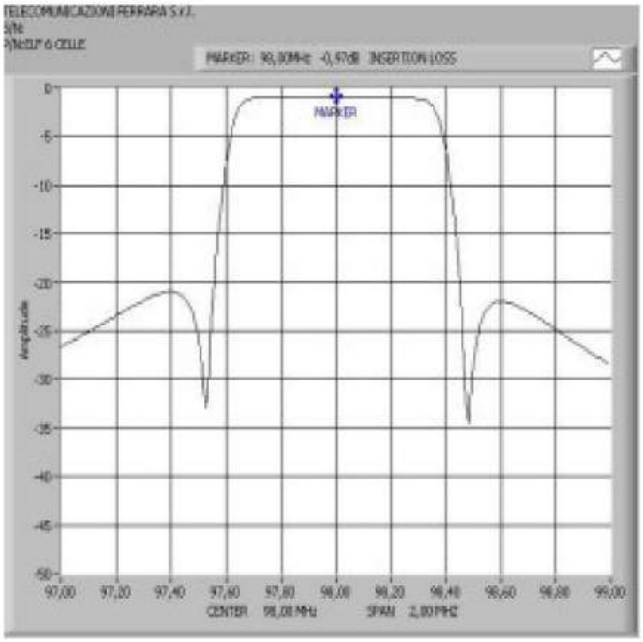
This six-cavities filter is used to set up starpoint combiners with very low spacing between channels.
The pass band filters was designed as an extension of our band pass combiner technology. Using our industry-leading square, cavity filter design, the filter provides a one-time-buy filtering solution for the broadcaster located at multiple-user site. The filter isolates the transmission system to eliminate spurious emissions.

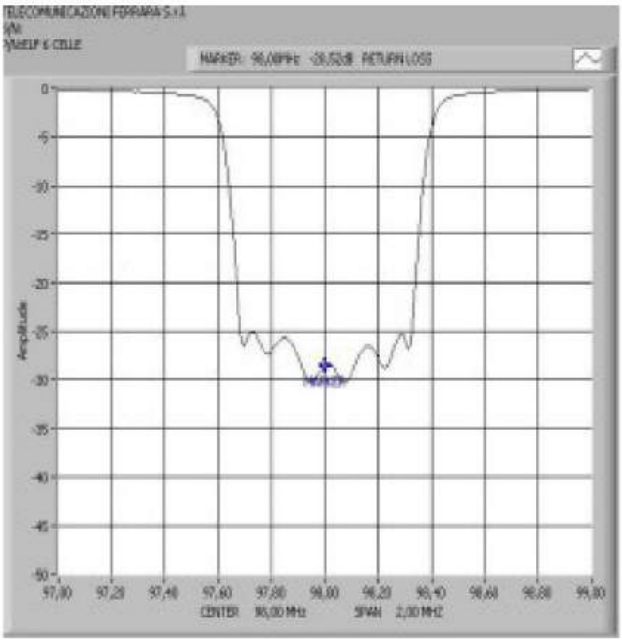
TYPICAL SPECIFICATIONS	
Model	FFELF1K
Impedance	50 ohm
Frequency Range	87.5-108 MHz
VSWR ± 150 KHz	1.1:1 Max
Insertion Loss	at f_0 0.7 - 1.5 dB Max
Return Loss ± 200 KHz	≤ -26dB
Rejection	per customer's requirements (Typical ± 350 kHz it's even to –30dB approx.)
Connectors	N - 7/16" - 7/8" on customer request
Max Power	1KW with 7/16" – 7/8" connectors 800 W with N connector
Working Temperature	-20°C ÷ +50°C
Colour	Enamel Gray Ral 7001
Materials	Aluminium, Brass, Copper, PTFE, Stainless Steel, Silvering (min 12µm thickness)

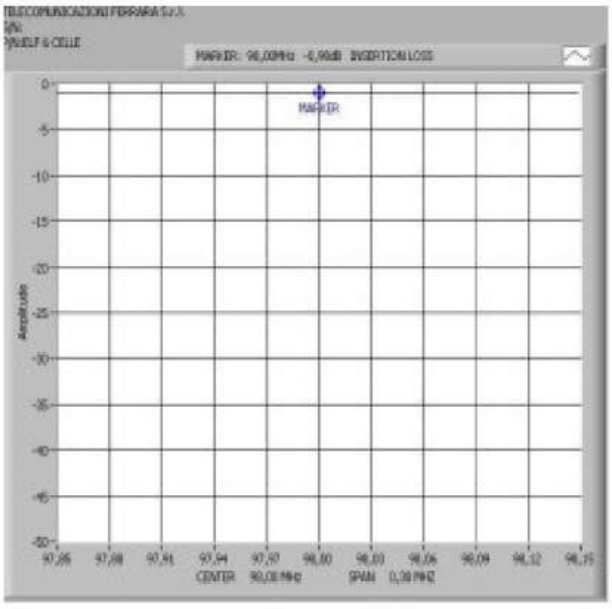
Features:

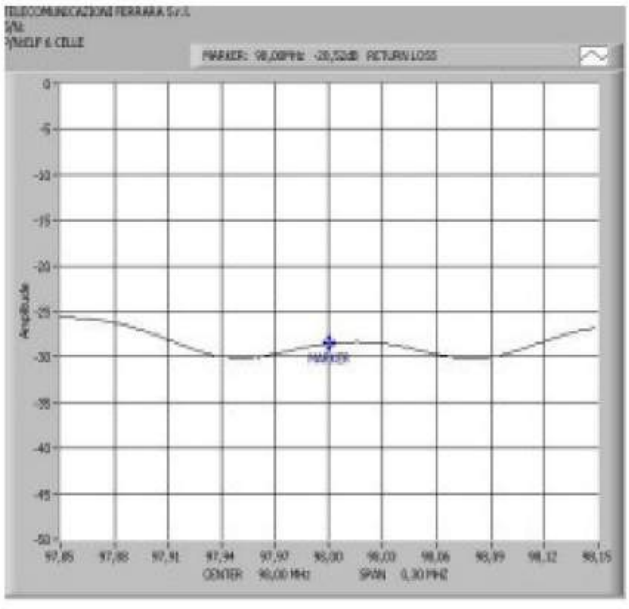
- Distortion – Free Transmission
- Very low spacing between channels if used in starpoint combiners
- Low loss, high isolation
- Natural convection

TYPICAL DIAGRAM

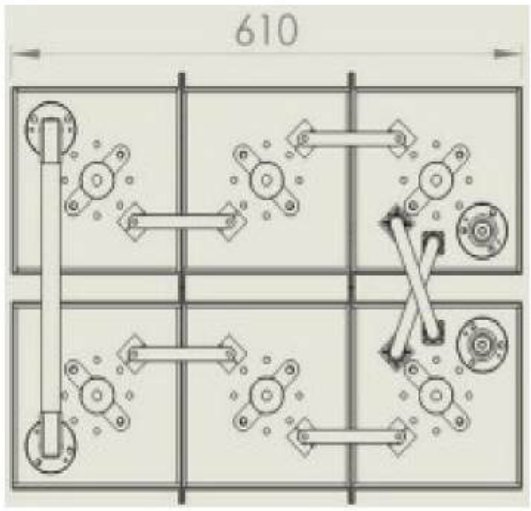


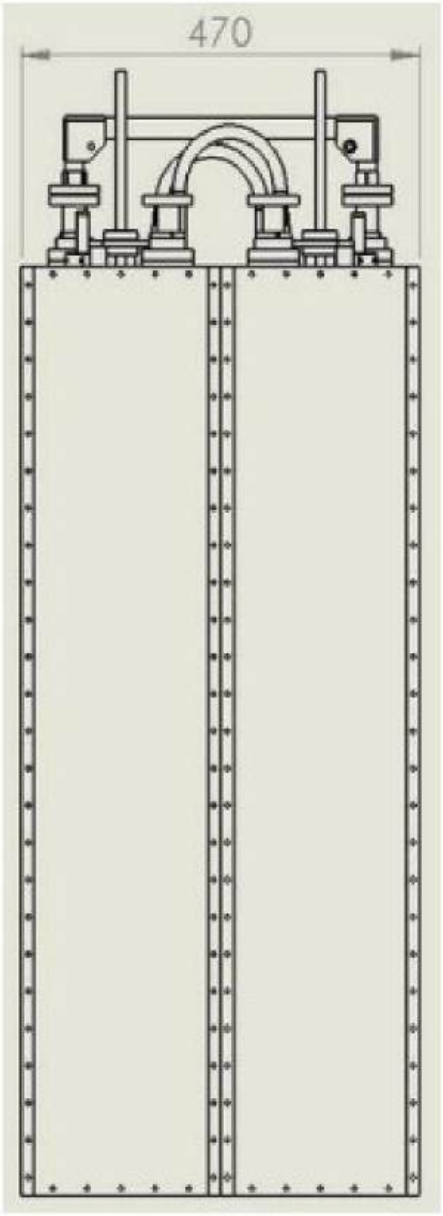






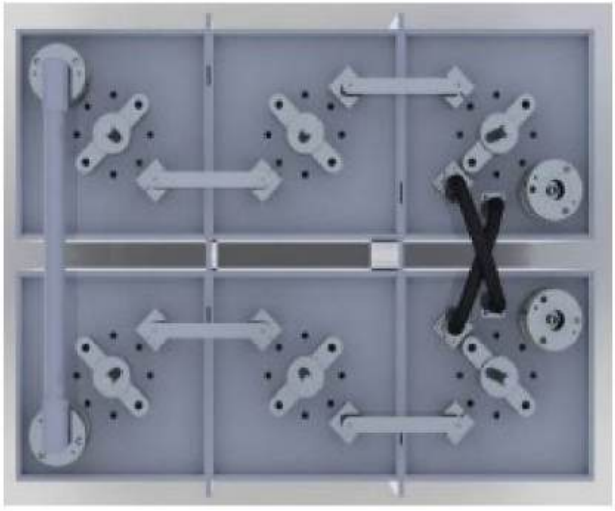
DIMENSIONS (mm)

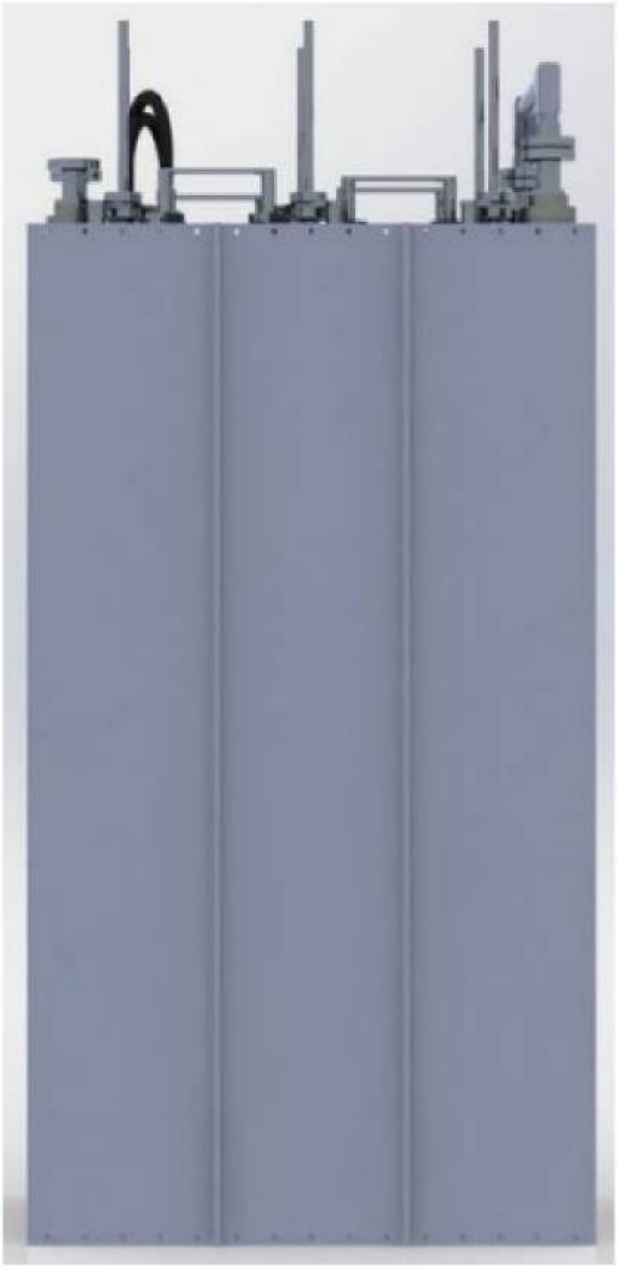




Dimensions	1300 (Max size)×470×610 mm (51.1(Max size)×18.5×24 inch) (H×L×W)
Net Weight	≡ 60 Kg approx.

VIEWS OF THE SYSTEM





MODEL FFELF2K

- BAND-PASS 6 CAVITIES FILTER
- IMPEDANCE 50 Ohm
- FM BAND *87.5 +108 MHz*
- BAND II
- SPECIAL VERSION WITH SPECIAL DOUBLE CROSS COUPLING

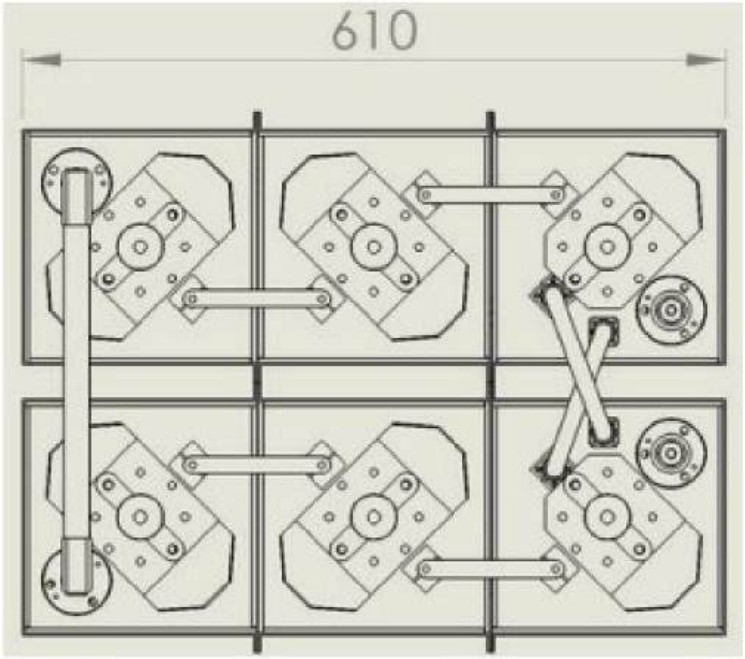
This six-cavities filter is used to set up starpoint combiners with very low spacing between channels.
The pass band filters was designed as an extension of our band pass combiner technology. Using our industry-leading square, cavity filter design, the filter provides a one-time-buy filtering solution for the broadcaster located at multiple-user site. The filter isolates the transmission system to eliminate spurious emissions.

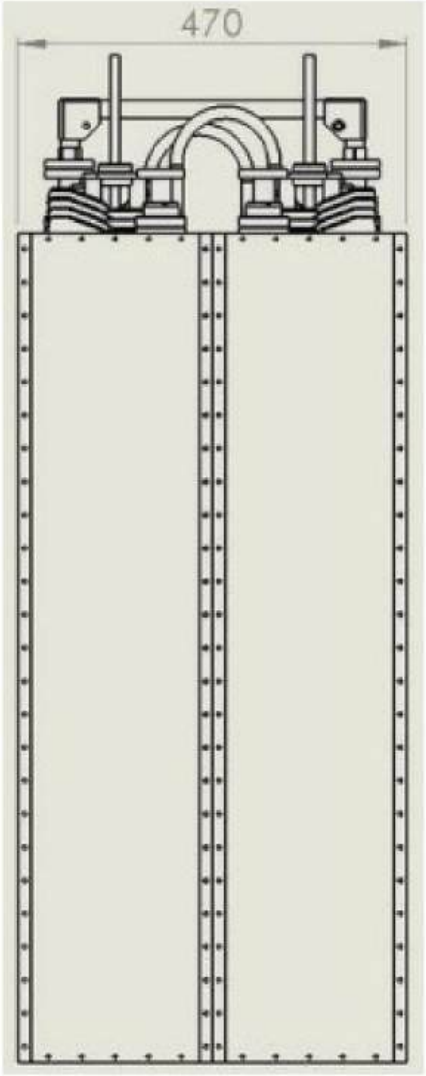
TYPICAL SPECIFICATIONS	
Model	FFELF2K
Impedance	50 ohm
Frequency Range	87.5-108 MHz
VSWR ± 150 KHz	1.1:1 Max
Insertion Loss	at f_0 0.6 - 1.4 dB Max
Return Loss ± 200 KHz	≤ -26dB
Rejection	per customer's requirements (Typical ± 350 kHz it's even to –30dB approx.)
Connectors	7/8"
Max Power	2 KW
Working Temperature	-20°C ÷ +50°C
Colour	Enamel Gray Ral 7001
Materials	Aluminium, Brass, Copper, PTFE, Stainless Steel, Silvering (min 12µm thickness)

Features:

- Distortion – Free Transmission
- Very low spacing between channels if used in starpoint combiners
- Low loss, high isolation
- Natural convection

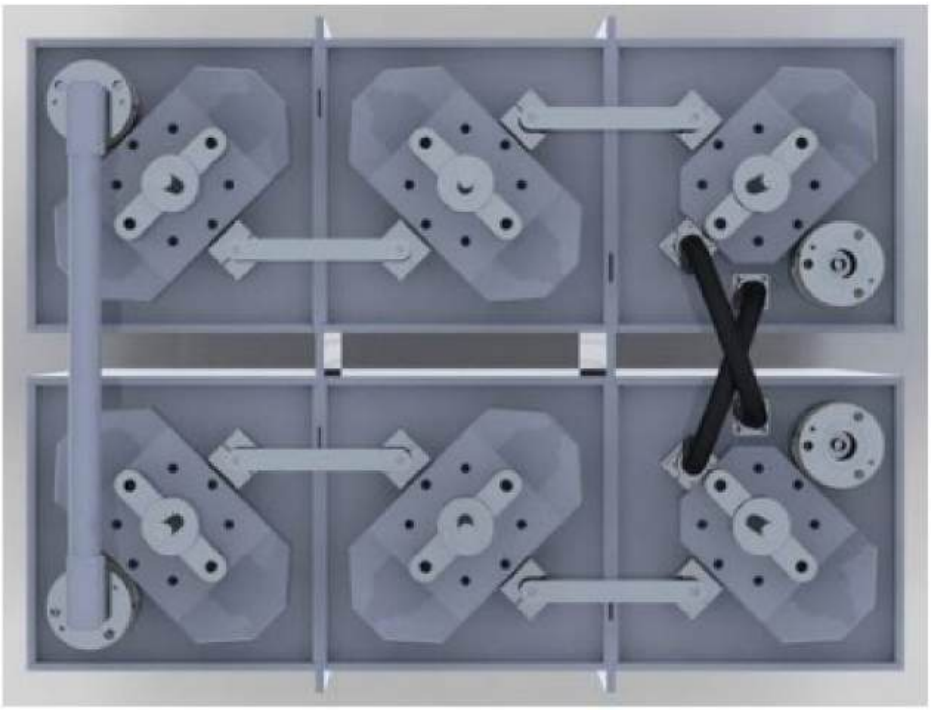
DIMENSIONS (mm)

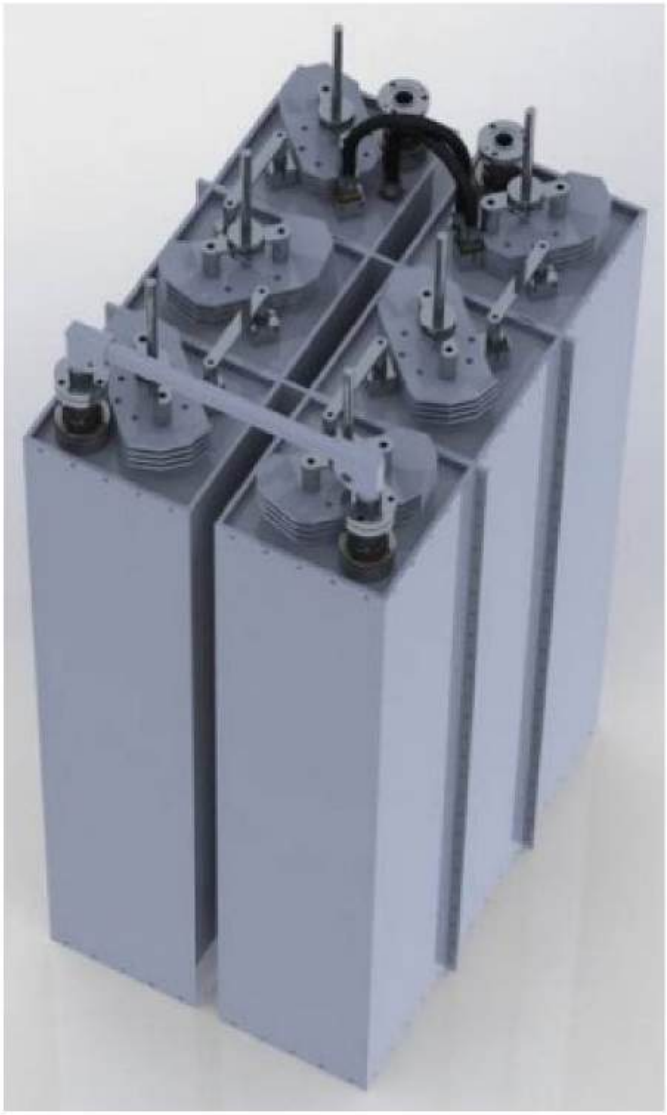




Dimensions	1300 (Max size)×470×610 mm (51.1(Max size)×18.5×24 inch) (H×L×W)
Net Weight	≅ 75 Kg approx.

VIEWS OF THE SYSTEM





MODEL FFELF3K

- BAND-PASS 6 CAVITIES FILTER
- IMPEDANCE 50 Ohm
- FM BAND *87.5 +108 MHz*
- BAND II
- SPECIAL VERSION WITH SPECIAL DOUBLE CROSS COUPLING

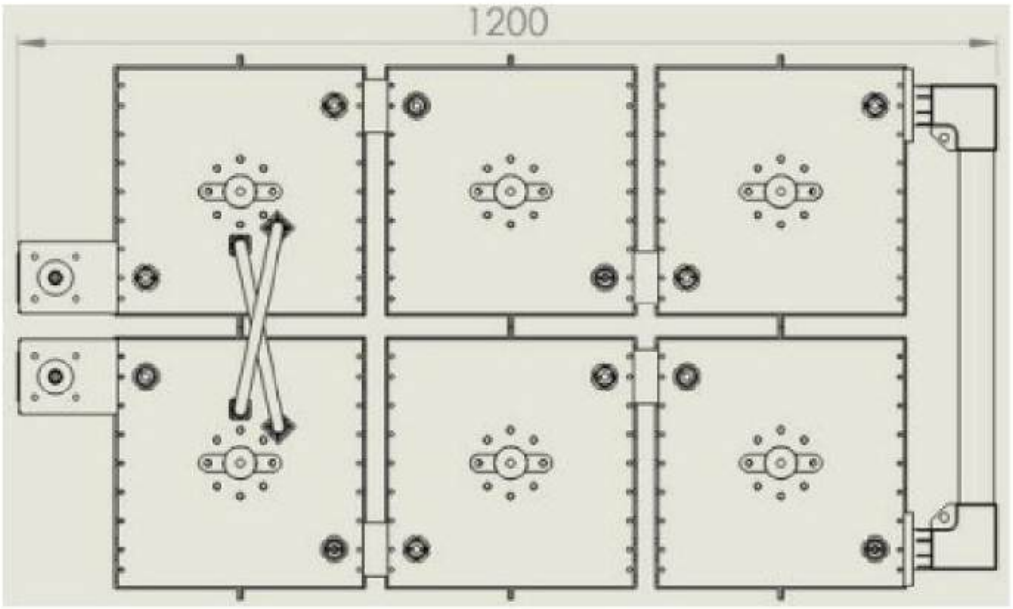
This six-cavities filter is used to set up starpoint combiners with very low spacing between channels.
The pass band filters was designed as an extension of our band pass combiner technology. Using our industry-leading square, cavity filter design, the filter provides a one-time-buy filtering solution for the broadcaster located at multiple-user site. The filter isolates the transmission system to eliminate spurious emissions.

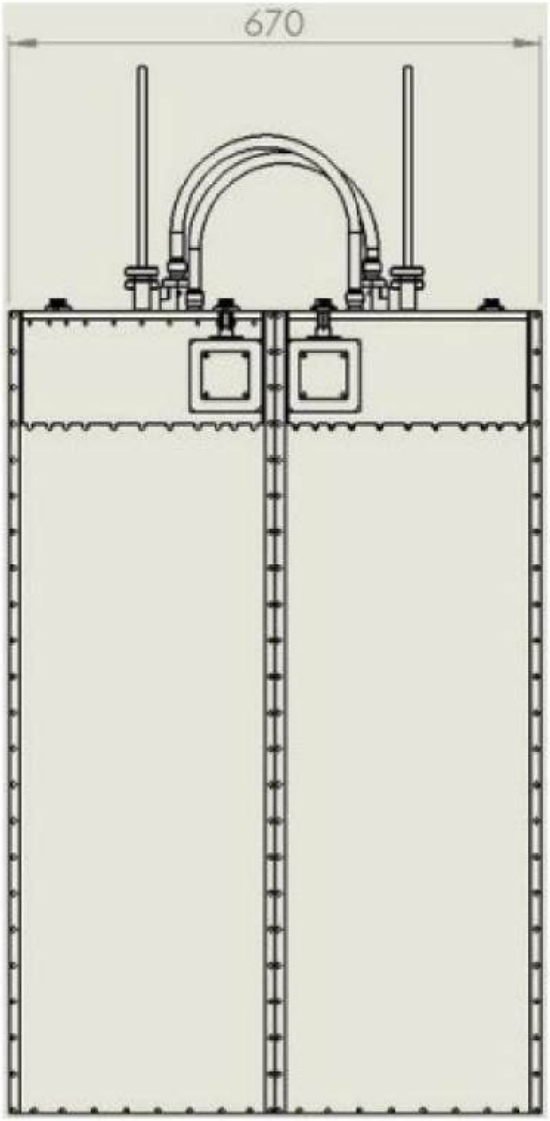
TYPICAL SPECIFICATIONS	
Model	FFELF3K
Impedance	50 ohm
Frequency Range	87.5-108 MHz
VSWR ± 150 KHz	1.1:1 Max
Insertion Loss	at f_0 0.5 – 1.2 dB Max
Return Loss ± 200 KHz	≤ -26dB
Rejection	per customer's requirements (Typical ± 300 kHz it's even to –30dB approx.)
Connectors	1+5/8"
Max Power	3 KW
Working Temperature	-20°C ÷ +50°C
Colour	Enamel Gray Ral 7001
Materials	Aluminium, Brass, Copper, PTFE, Stainless Steel, Silvering (min 12µm thickness)

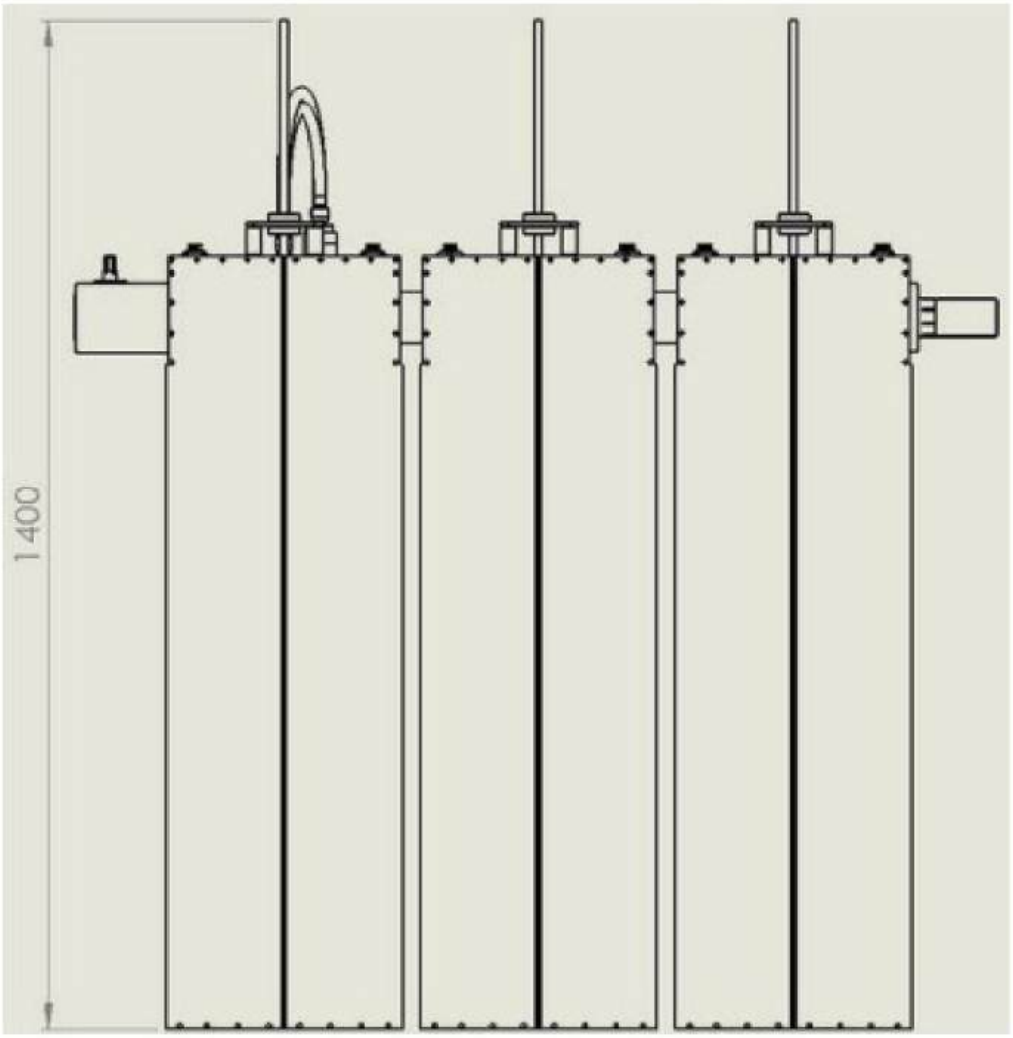
Features:

- Distortion – Free Transmission
- Very low spacing between channels if used in starpoint combiners
- Low loss, high isolation
- Natural convection

DIMENSIONS (mm)

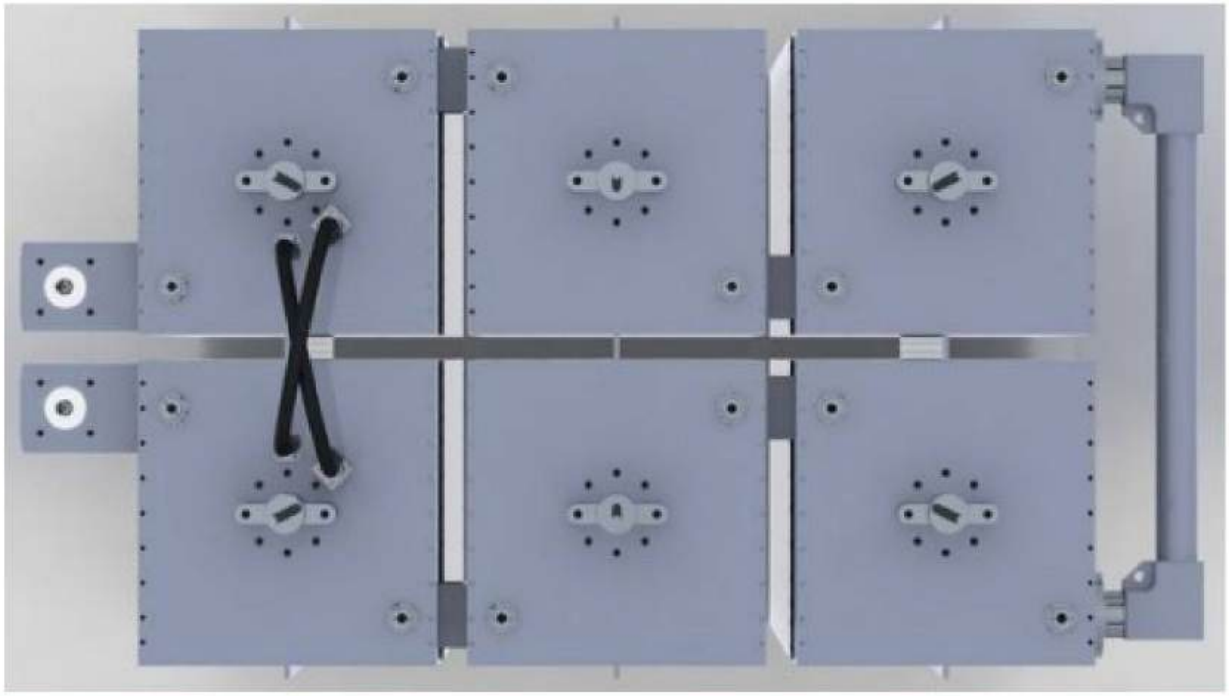


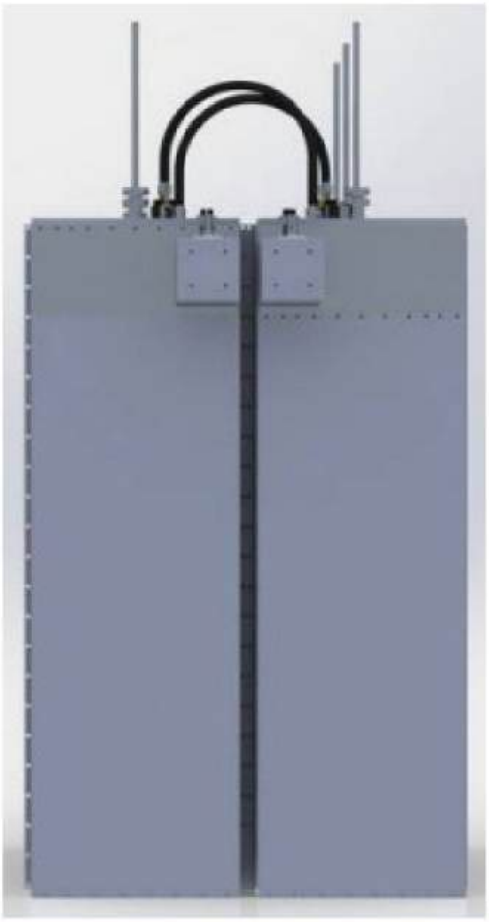


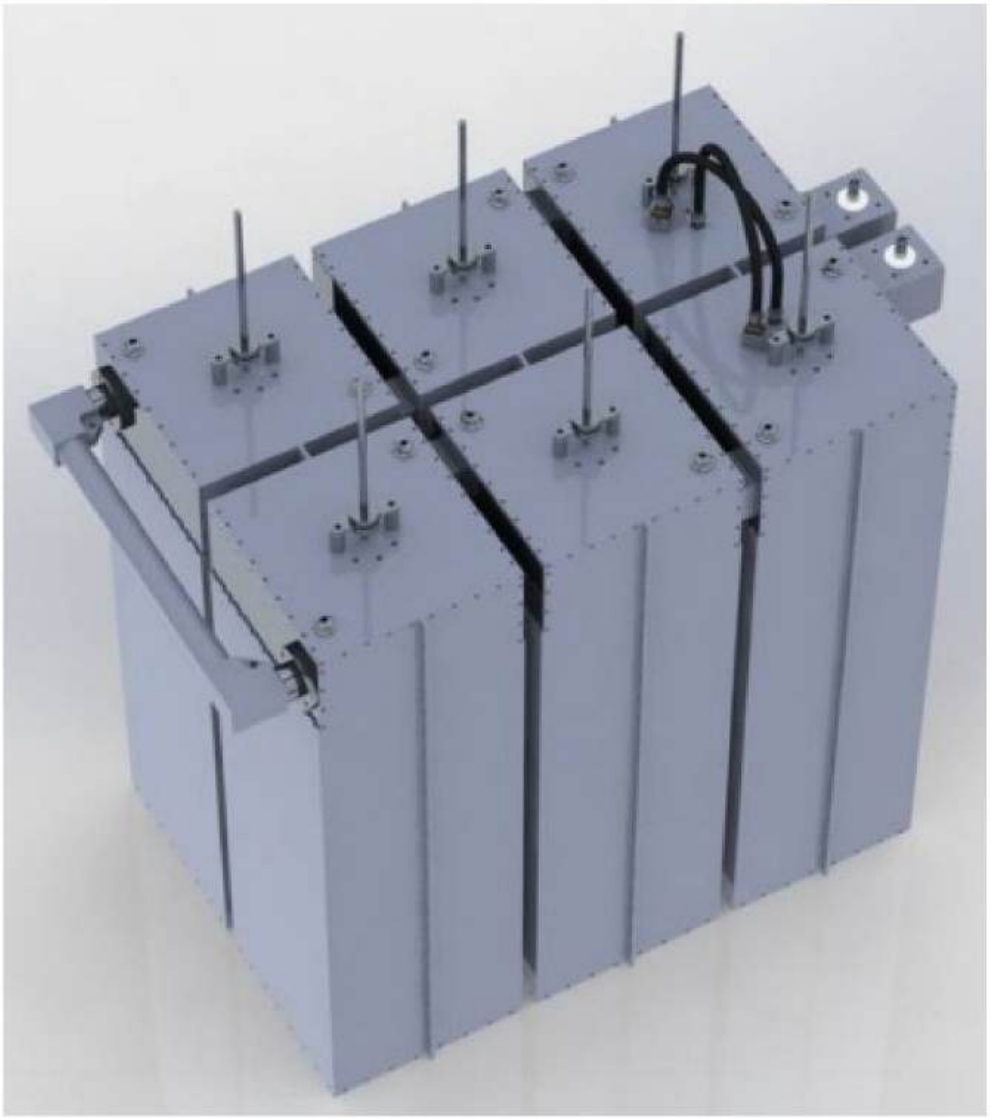


Dimensions	1400 (Max size)×1200×670 mm (55.1(Max size)×47.2×26.3 inch) (H×L×W)
Net Weight	≅ 140 Kg approx.

VIEWS OF THE SYSTEM







MODEL FFELF10K

- BAND-PASS 6 CAVITIES FILTER
- IMPEDANCE 50 Ohm
- FM BAND *87.5 +108 MHz*
- BAND II
- SPECIAL VERSION WITH SPECIAL DOUBLE CROSS COUPLING

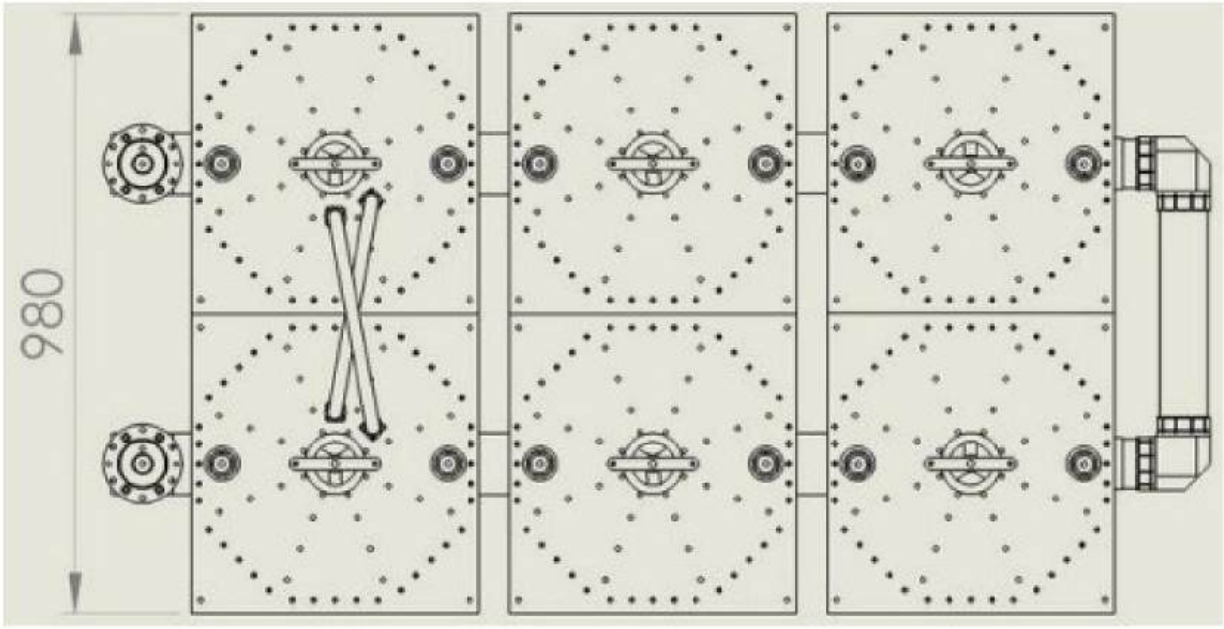
This six-cavities filter is used to set up starpoint combiners with very low spacing between channels.
The pass band filters was designed as an extension of our band pass combiner technology. Using our industry-leading square, cavity filter design, the filter provides a one-time-buy filtering solution for the broadcaster located at multiple-user site. The filter isolates the transmission system to eliminate spurious emissions.

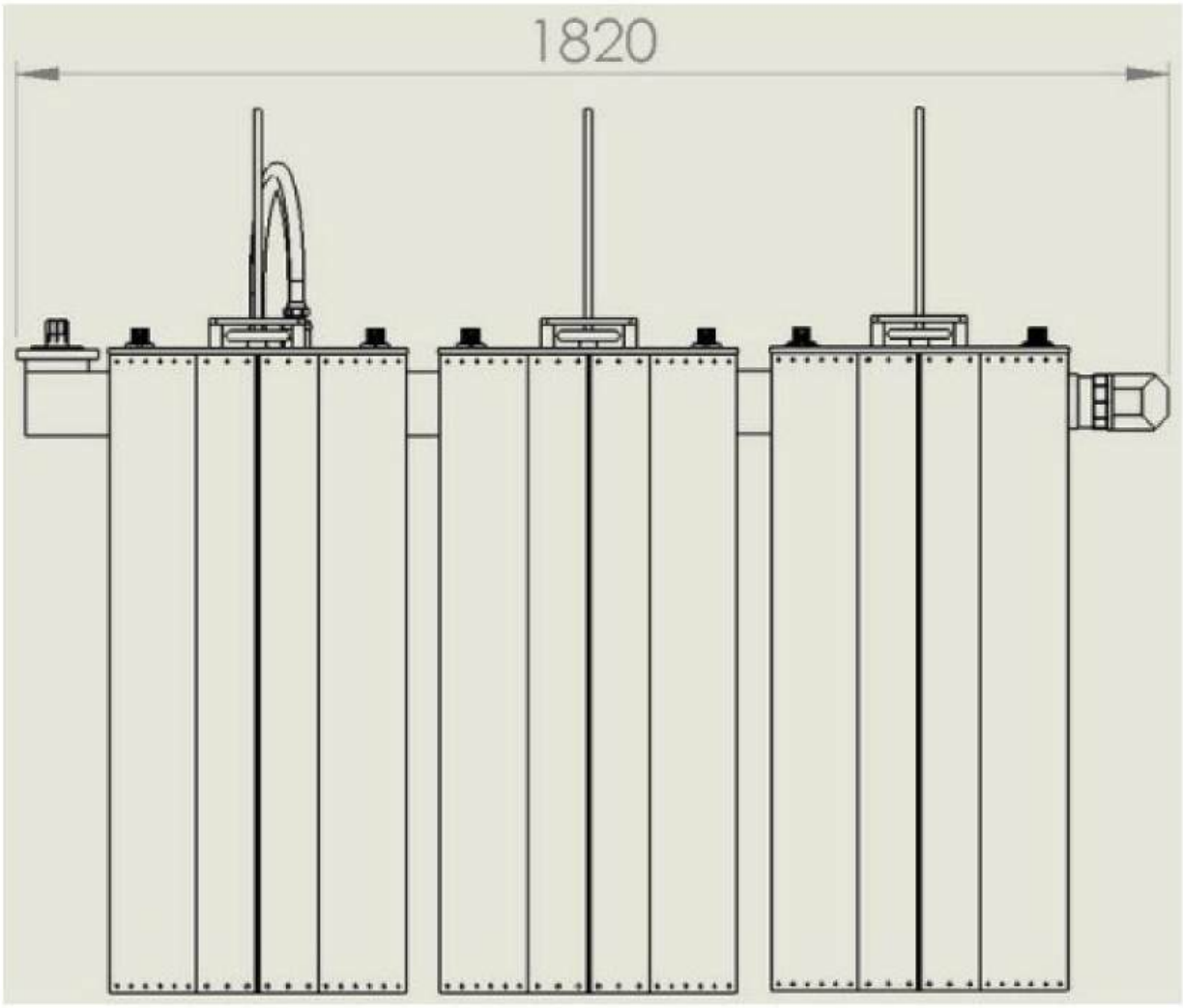
TYPICAL SPECIFICATIONS	
Model	FFELF10K
Impedance	50 ohm
Frequency Range	87.5-108 MHz
VSWR ± 150 KHz	1.1:1 Max
Insertion Loss	at f_0 0.4 – 1.1 dB Max
Return Loss ± 200 KHz	≤ -26dB
Rejection	per customer's requirements (Typical ± 350 kHz it's even to –30dB approx.)
Connectors	3+1/8"
Max Power	10 KW
Working Temperature	-20°C ÷ +50°C
Colour	Enamel Gray Ral 7001
Materials	Aluminium, Brass, Copper, PTFE, Stainless Steel, Silvering (min 12µm thickness)

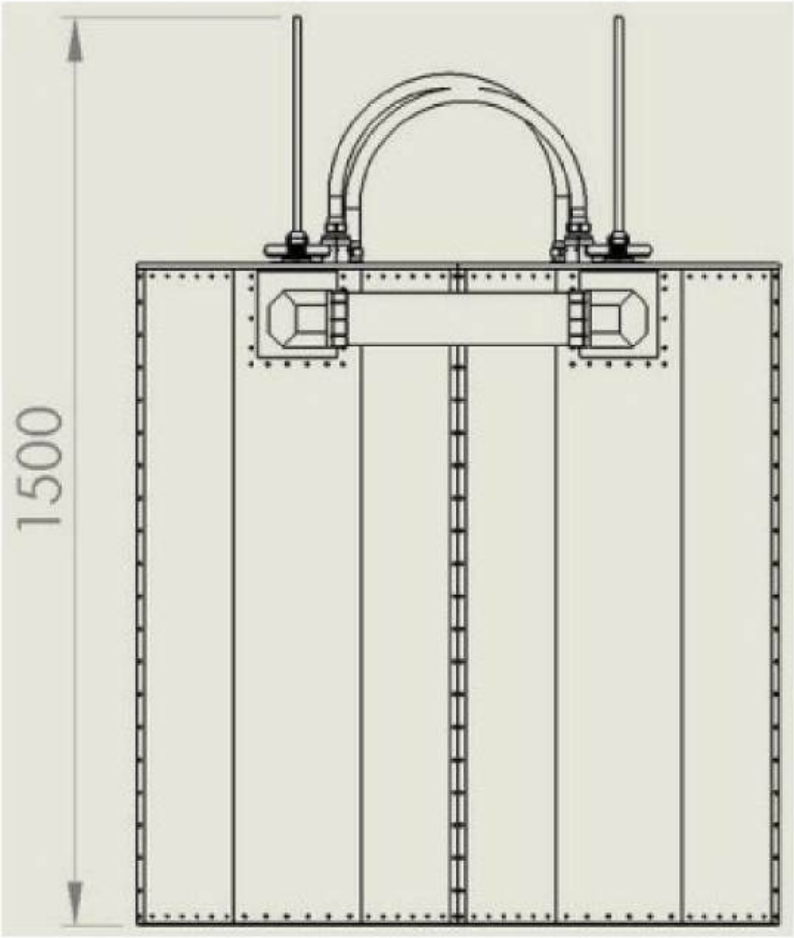
Features:

- Distortion – Free Transmission
- Very low spacing between channels if used in starpoint combiners
- Low loss, high isolation
- Natural convection

DIMENSIONS (mm)

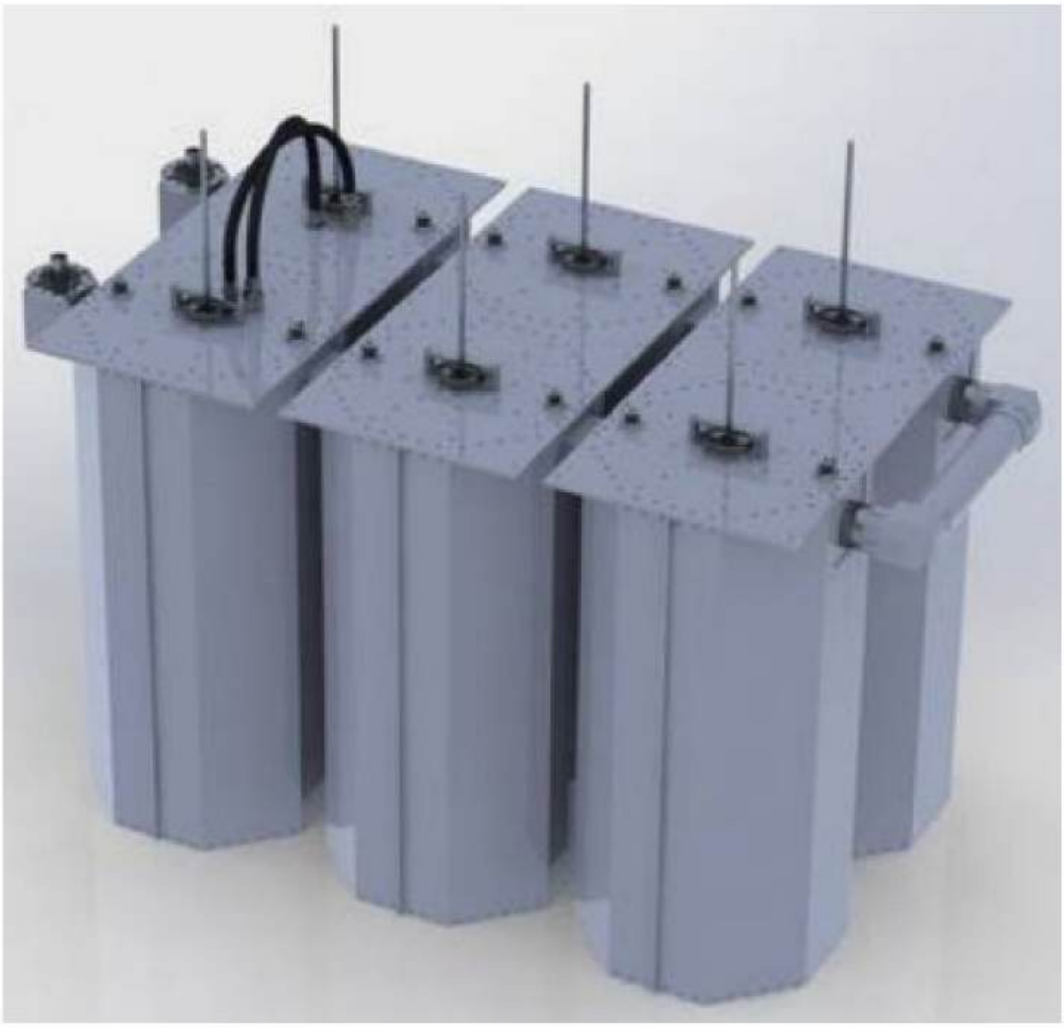


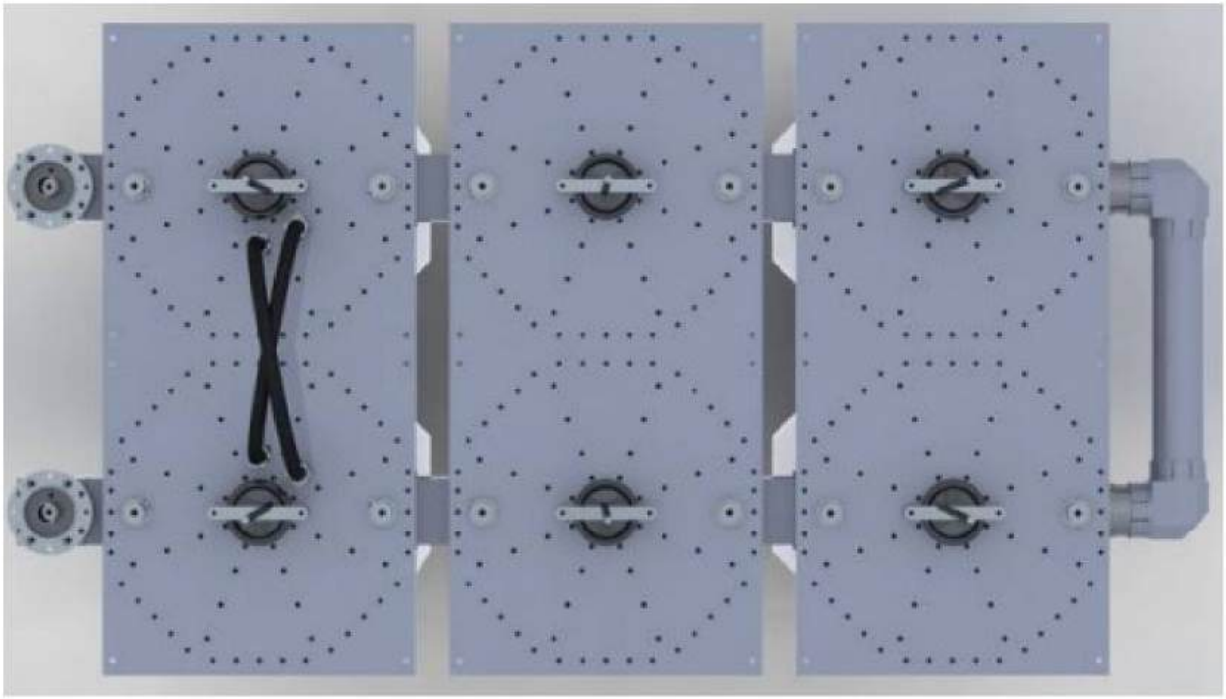


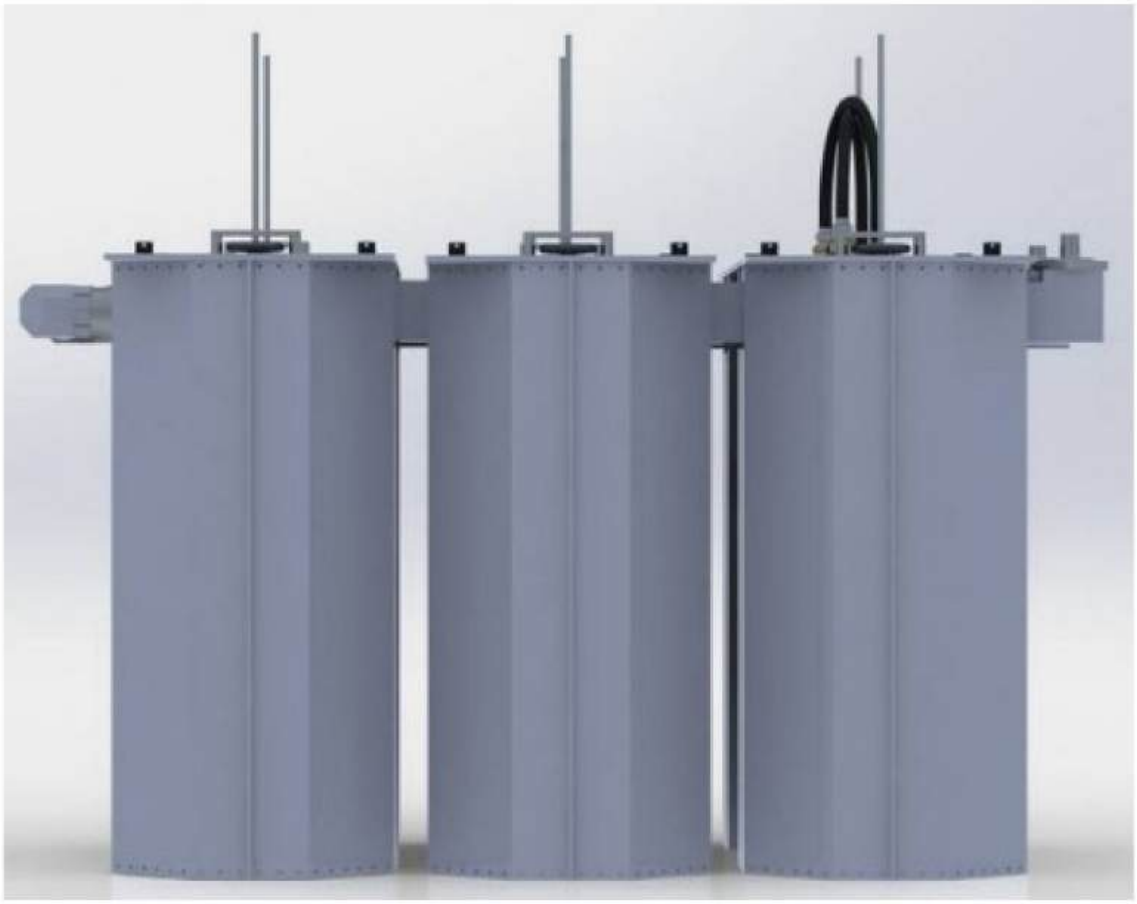


Dimensions	1500 (Max size)×1820×980 mm (59(Max size)×71.6×38.5 inch) (H×L×W)
Net Weight	≅ 180 Kg approx.

VIEWS OF THE SYSTEM

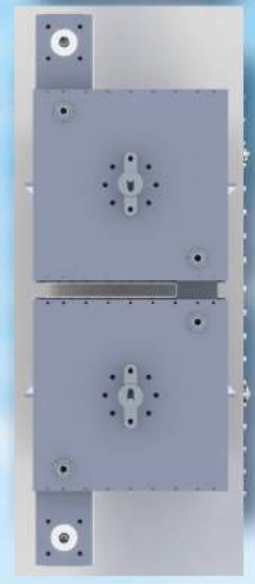






FM PASS BAND FILTER

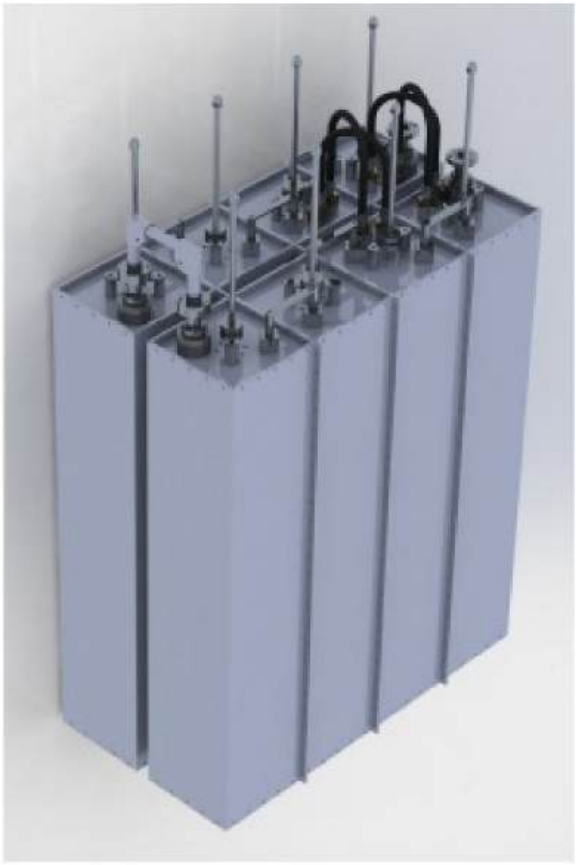
GENERAL CATALOG



SPECIAL CONFIGURATION

8 CAVITIES AND CROSS COUPLING

MODEL FFELF1K8



- **BAND-PASS 8 CAVITIES FILTER**
- **IMPEDANCE 50 Ohm**
- **FM BAND *87.5 +108 MHz***
- **BAND II**
- **SPECIAL VERSION WITH SPECIAL DOUBLE CROSS COUPLING**

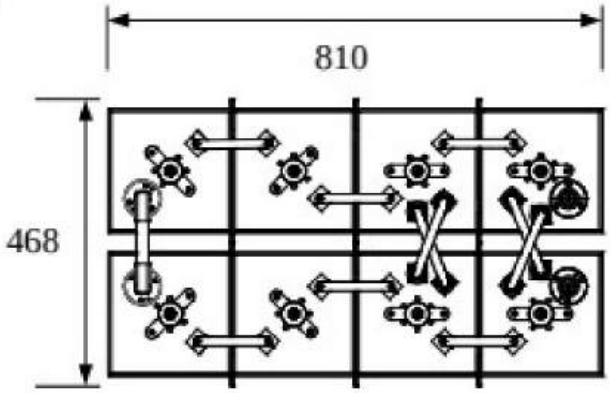
This six-cavities filter is used to set up starpoint combiners with very low spacing between channels. The pass band filters was designed as an extension of our band pass combiner technology. Using our industry-leading square, cavity filter design, the filter provides a one-time-buy filtering solution for the broadcaster located at multiple-user site. The filter isolates the transmission system to eliminate spurious emissions.

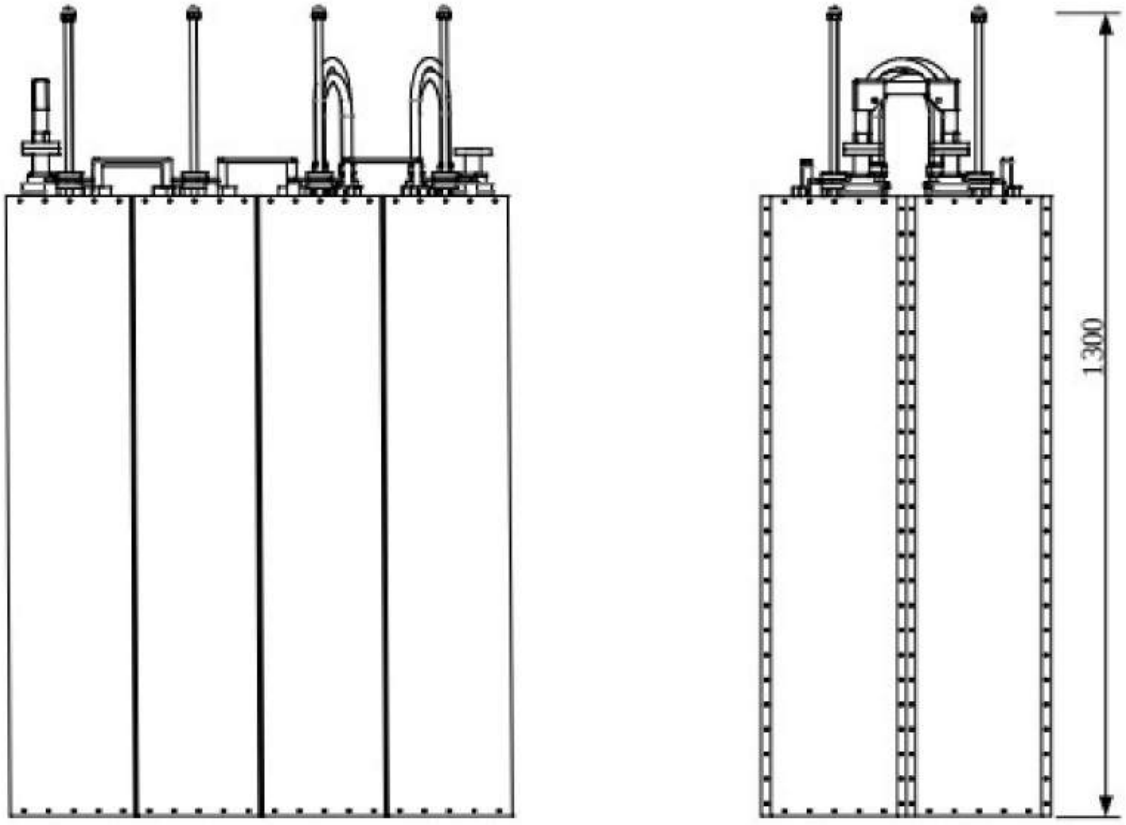
TYPICAL SPECIFICATIONS	
Model	FFELF1K8
Impedance	50 ohm
Frequency Range	87.5-108 MHz
VSWR ± 150 KHz	1.1:1 Max
Insertion Loss	at f_0 0.8 - 1.5 dB Max
Return Loss ± 200 KHz	≤ -26dB
Rejection	per customer's requirements (Typical ± 300 kHz it's even to –30dB approx.)
Connectors	N - 7/16" - 7/8" on customer request
Max Power	1KW with 7/16" – 7/8" connectors 800 W with N connector
Working Temperature	-20°C ÷ +50°C
Colour	Enamel Gray Ral 7001
Materials	Aluminium, Brass, Copper, PTFE, Stainless Steel, Silvering (min 12μm thickness)

Features:

- Distortion – Free Transmission
- Very low spacing between channels if used in starpoint combiners
- high isolation
- Natural convection

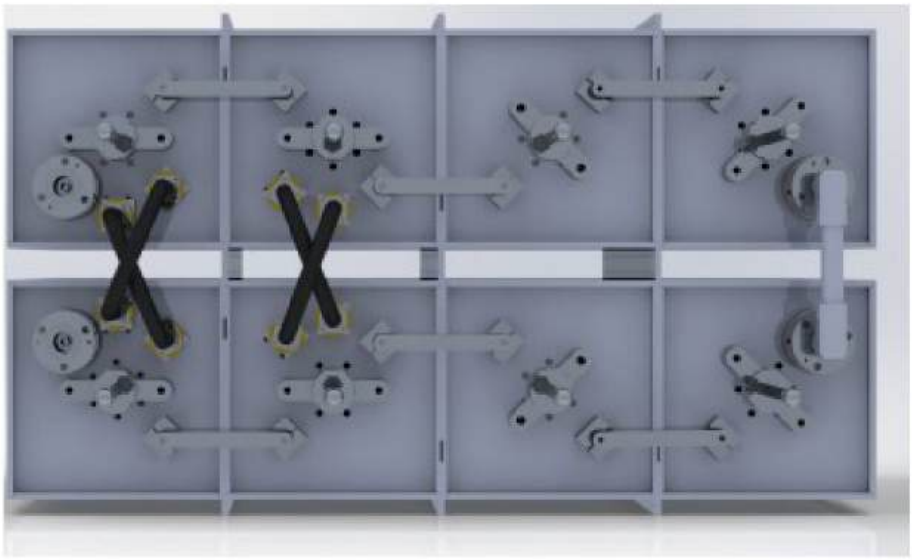
DIMENSIONS (mm)

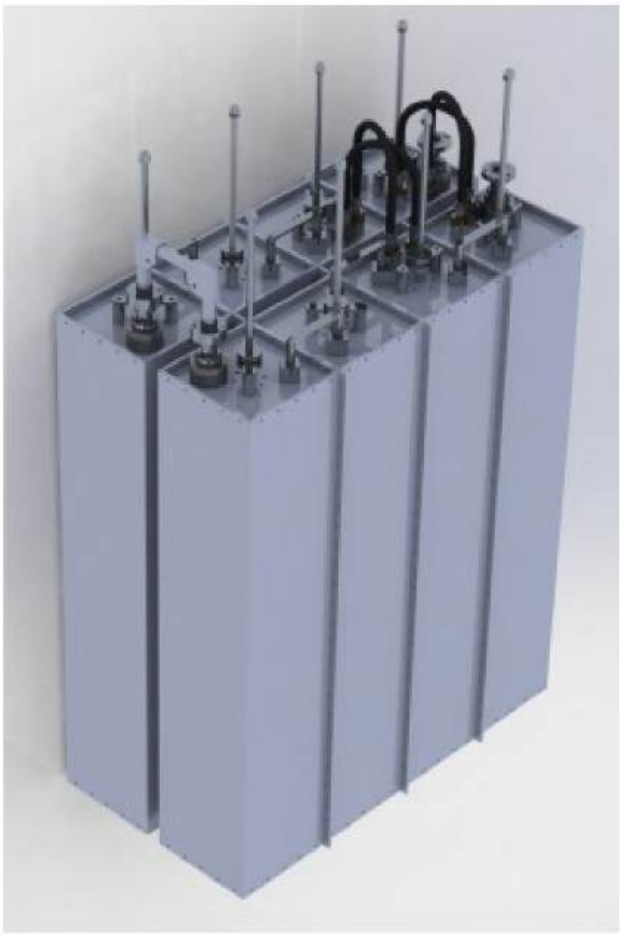


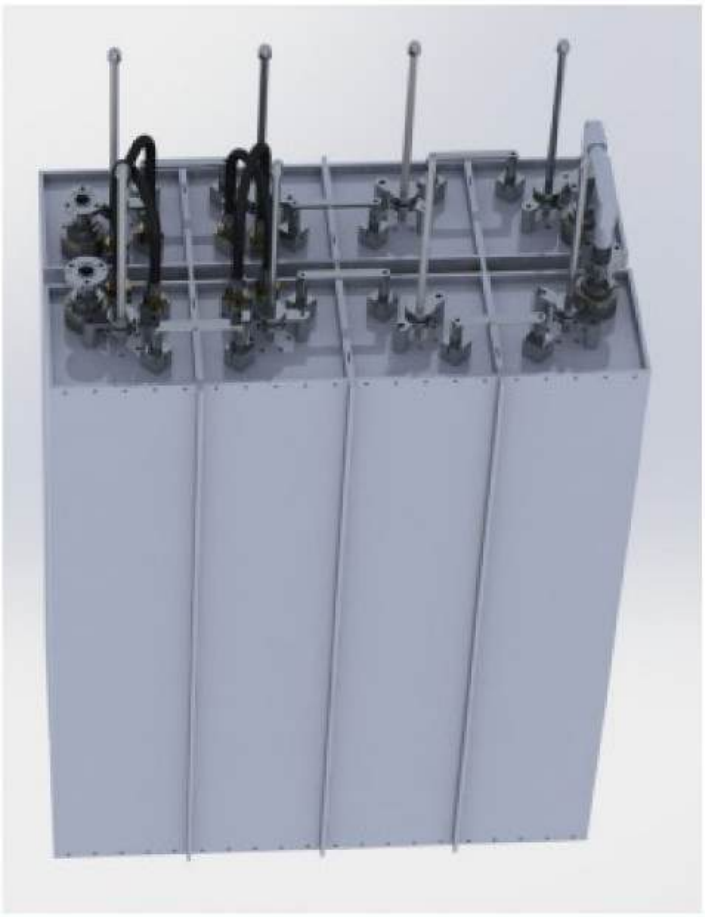


Dimensions	1300 (Max size)×468×810 mm.
Net Weight	≅ 85 Kg approx.

VIEWS OF THE SYSTEM

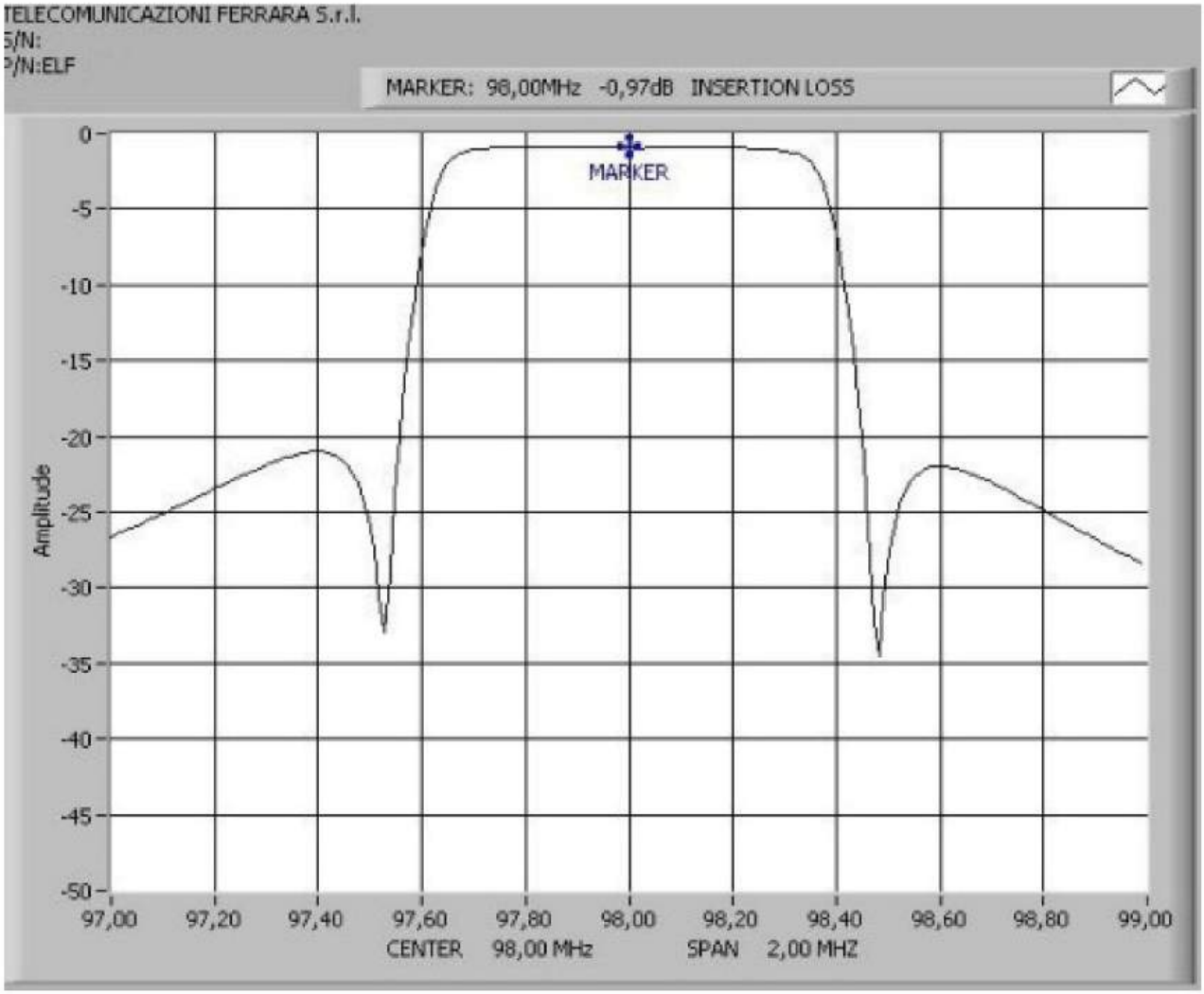






TELECFE
BROADCAST SOLUTIONS
www. telecfe.it email: info@telecfe.it phone: +39 0532 724033

EXAMPLE TYPICAL DIAGRAM



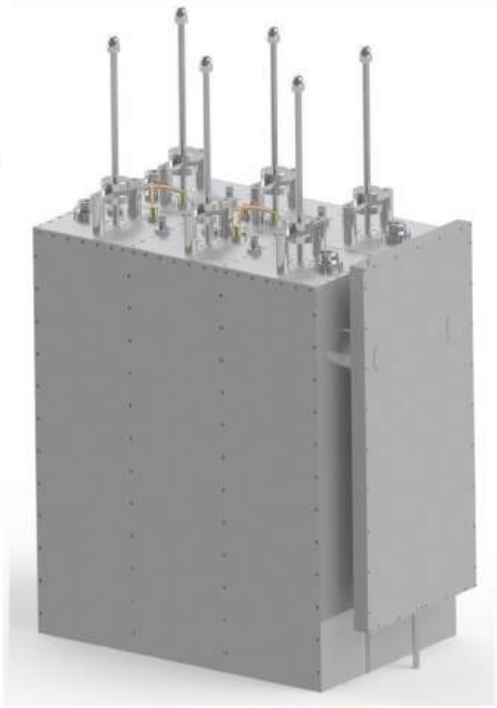
TV PASS BAND FILTER

GENERAL CATALOG

- VARIOUS POWER

BAND III DAB

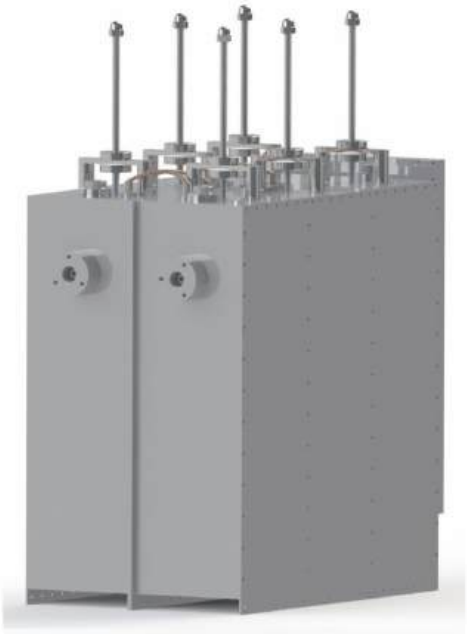
MODEL FFC500T



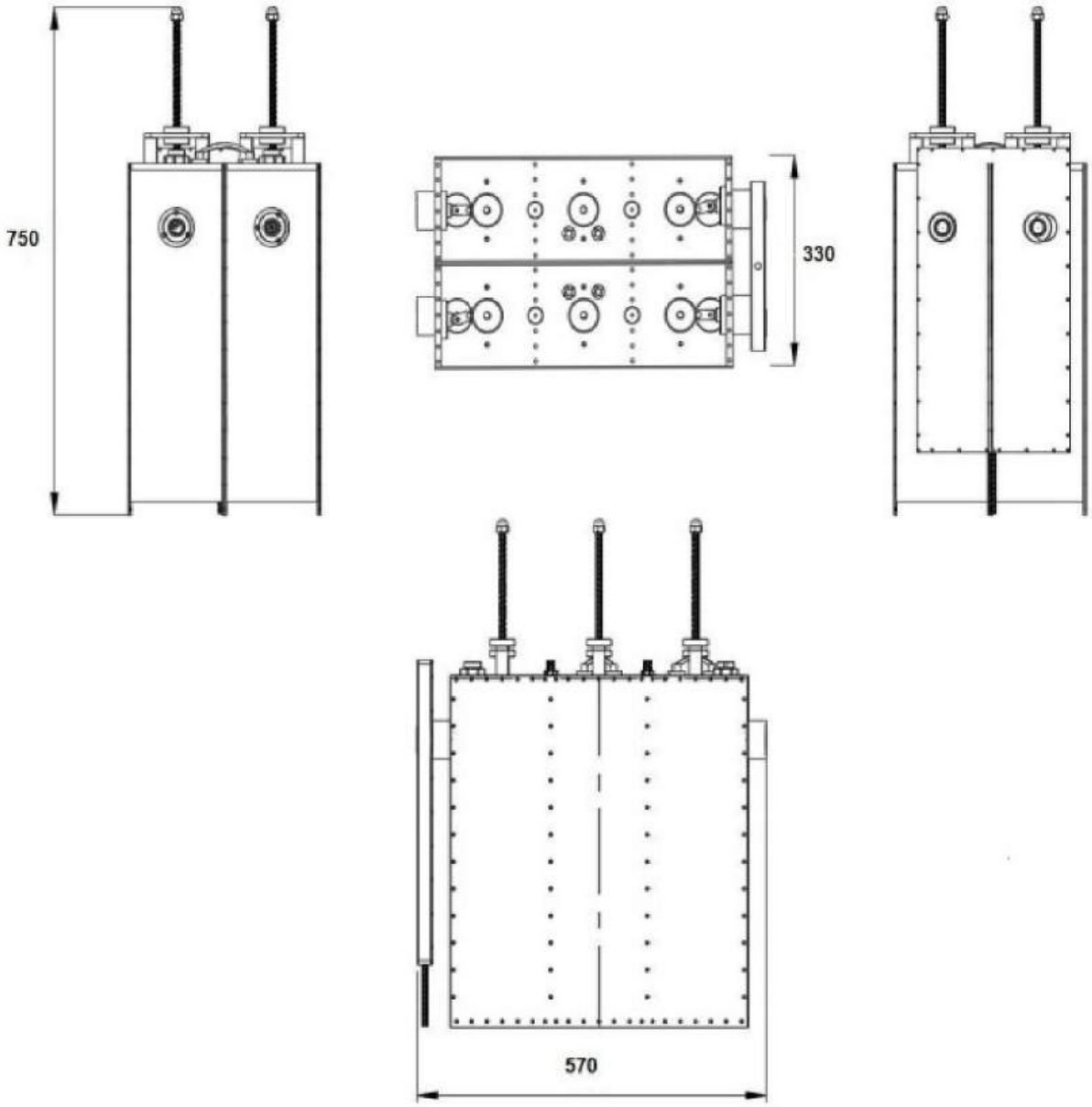
- **BAND-PASS FILTER** STANDARD VERSION
- **SUITABLE FOR DIGITAL AUDIO BROADCASTING**
- **IMPEDANCE 50 Ohm**
- **BAND *174 ÷ 240 MHz (TUNABLE)***
- **SPECIAL VERSION WITH SPECIAL DOUBLE CROSS COUPLING**
- **RACK VERSION OPTION**

This six-cavity filter is used to set up starpoint combiners with very low spacing between channels.
The pass band filters was designed as an extension of our band pass combiner technology. Using our industry-leading square, cavity filter design, the filter provides a one-time-buy filtering solution for the broadcaster located at multiple-user site. The filter isolates the transmission system to eliminate spurious emissions.

TYPICAL SPECIFICATIONS	
Models	FFC500T
Impedance	50 ohm
Frequency Range	174 ÷ 240 MHz
VSWR ± 150 KHz	1.1:1 Max
Insertion Loss	1.05 dB Max at f_0 2.5 dB max at $f_0 \pm 770$ kHz (Depending by adjustment)
Return Loss	≤ -26dB
Selectivity	15 dB min at $f_0 \pm 970$ kHz 45 dB min at $f_0 \pm 1.75$ MHz 45 dB min at $f_0 \pm 2.2$ MHz 45 dB min at $f_0 \pm 3$ MHz
Rejection	per customer's requirements
Group Delay Variation	Typical 950 ns max
Connectors	7-8"
Max Power	500 W
Working Temperature	-20°C ÷ +50°C
Colour	Enamel Gray Ral 7001
Materials	Aluminium, Brass, Copper, PTFE, Stainless Steel, Silvering (min 12μm thickness)



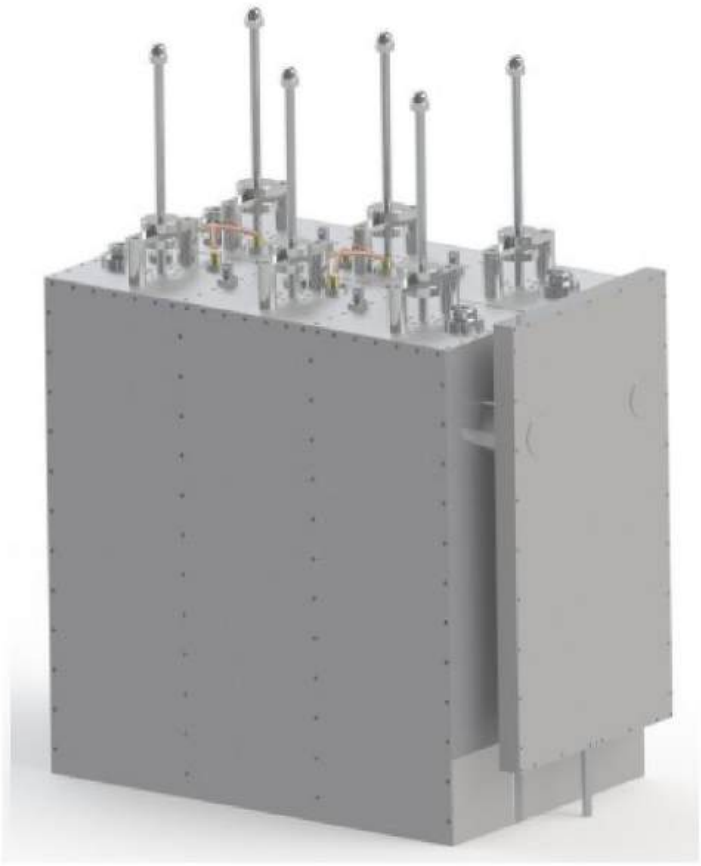
DIMENSIONS (mm)
STANDARD VERSION

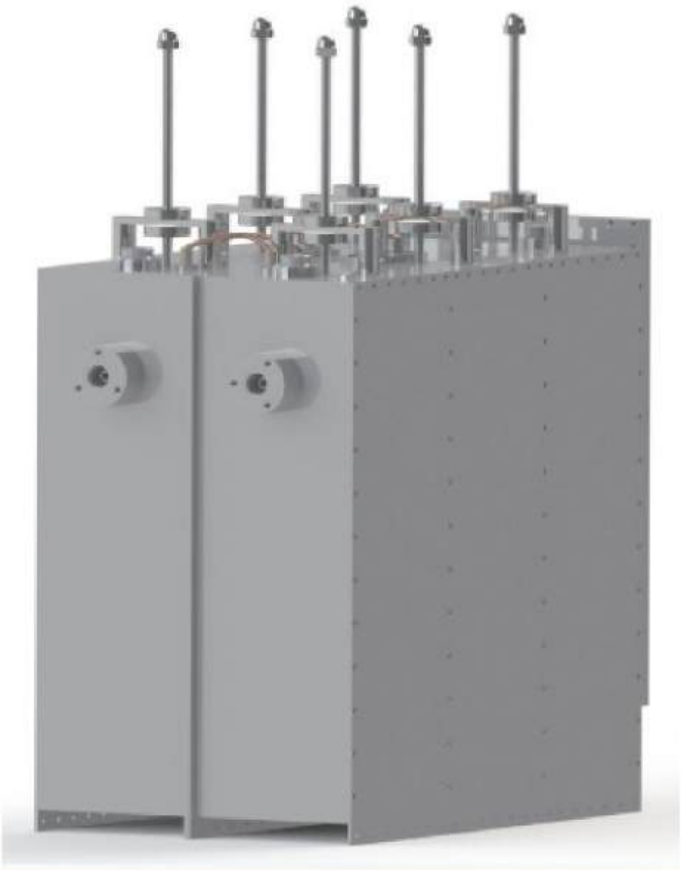


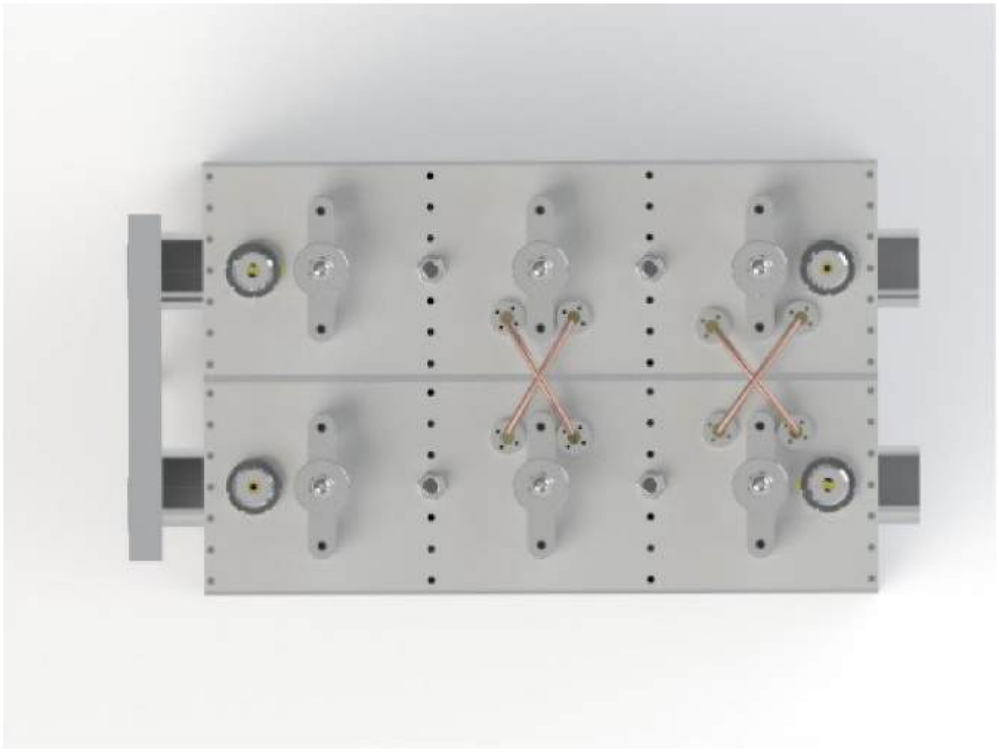
No rack version	
Dimensions	750(Max size)×330×570 mm (H×L×W)
Net Weight	≅ 30 Kg Approx

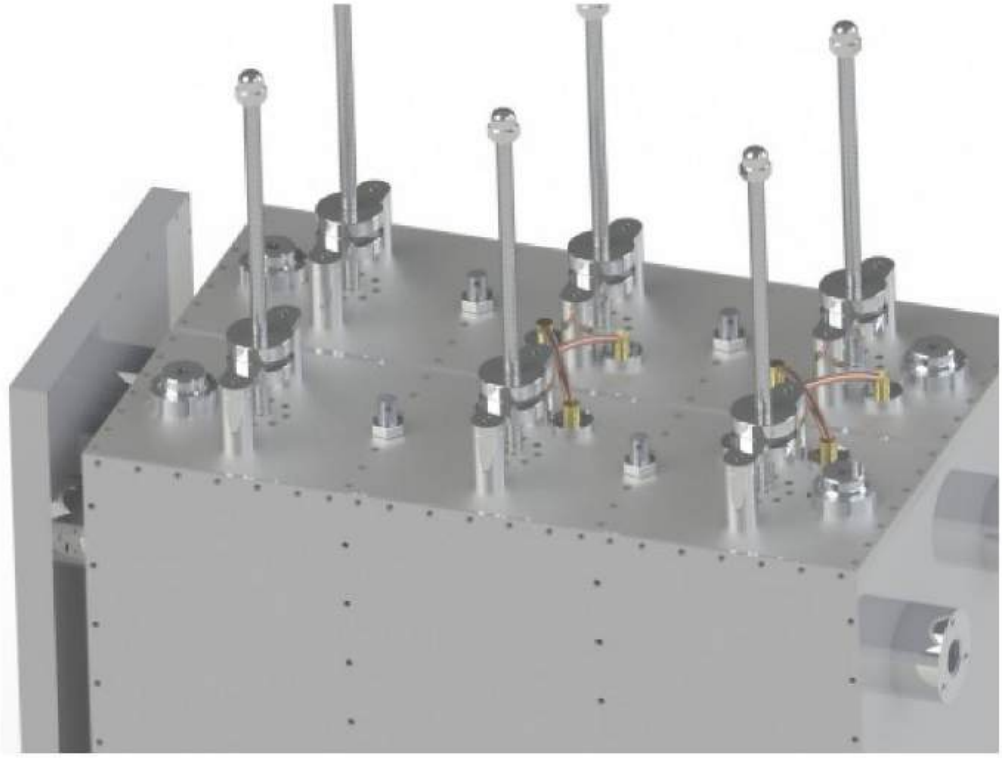
VIEWS OF THE SYSTEM

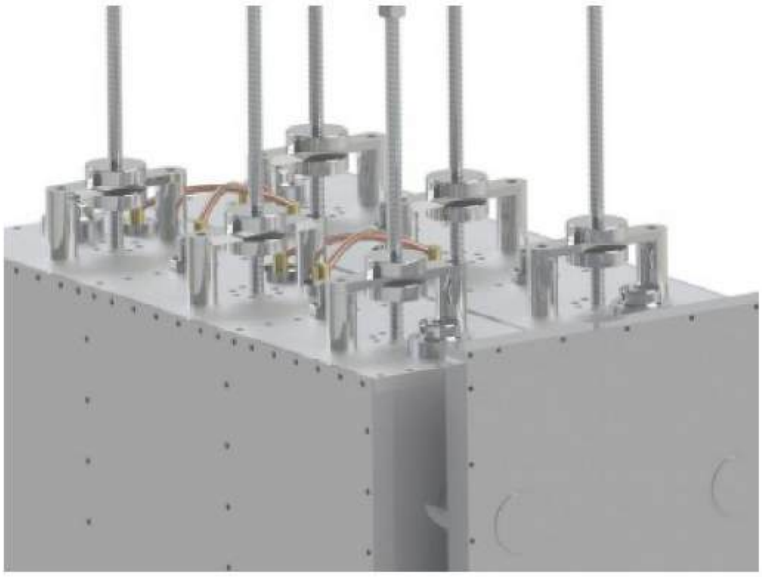
STANDARD VERSION

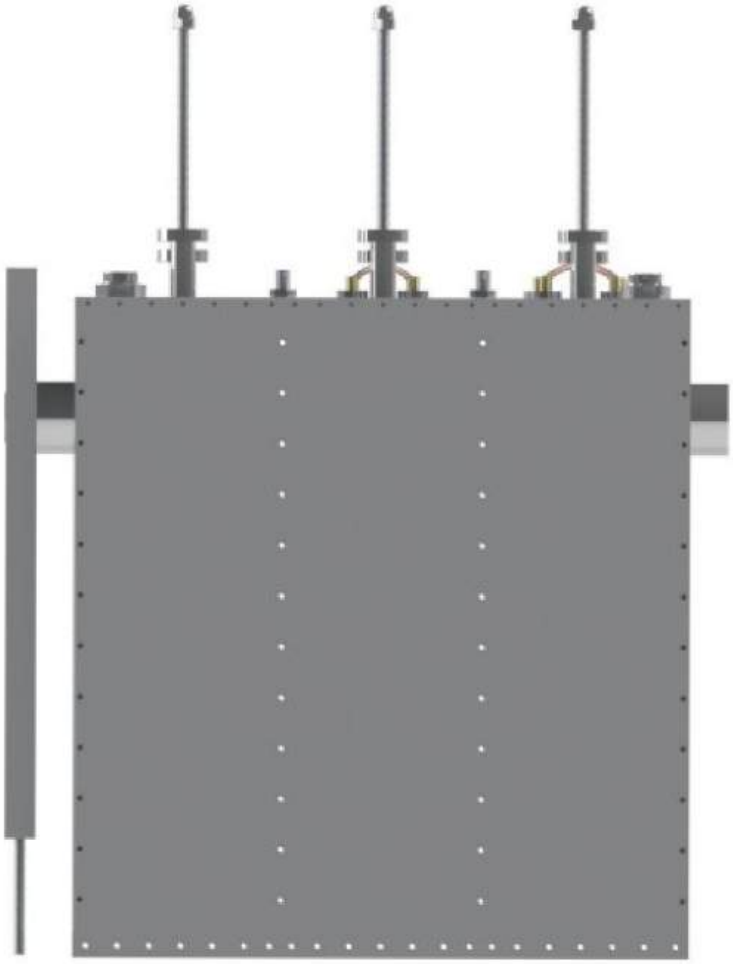


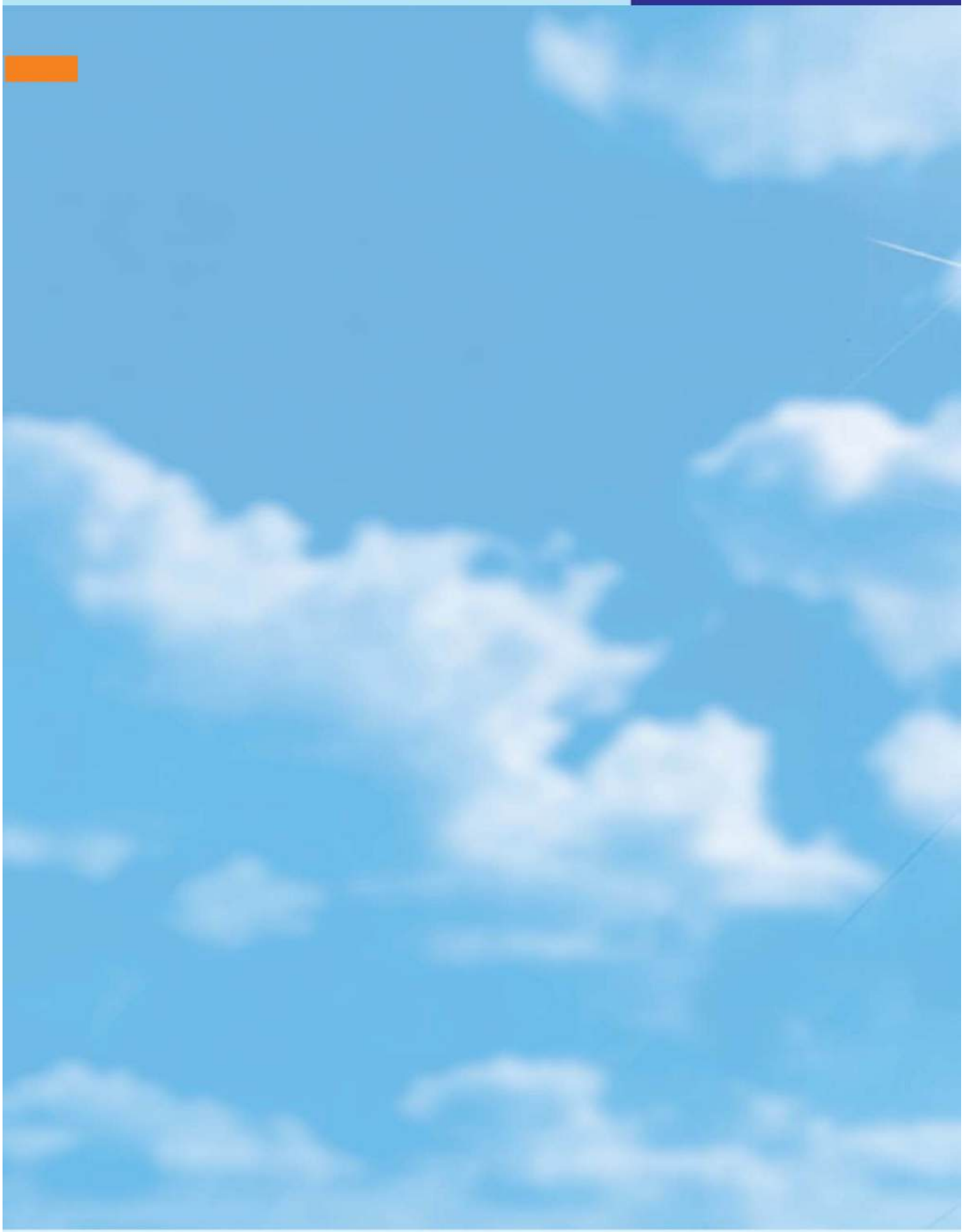












www. telecfe.it email: info@telecfe.it phone: +39 0532 724033