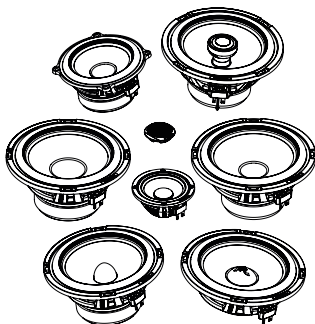


FLAX EVO™

**PS 165 FE | PS 165 FSE | PS 165 FXE
PS 165 F3E | PS 130 FE | PC 165 FE**

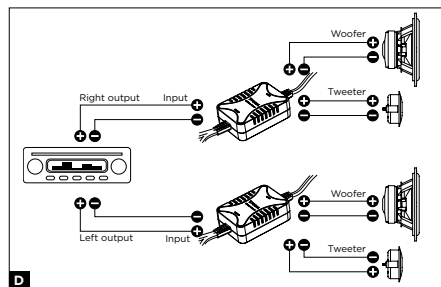
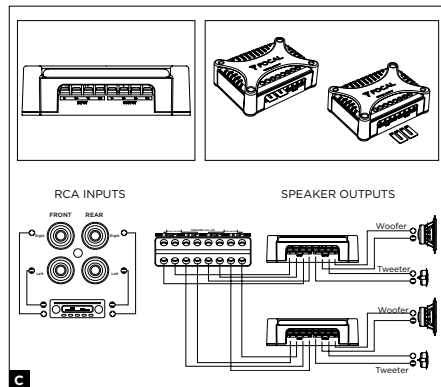
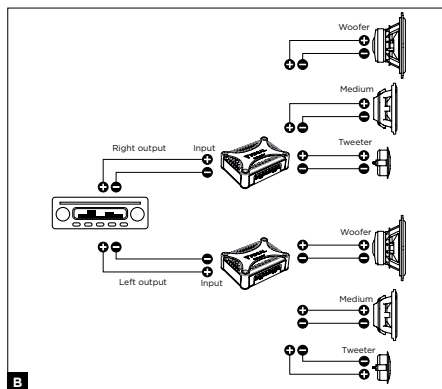
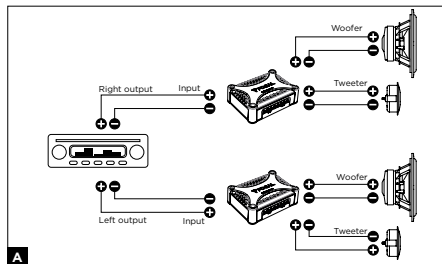
Manuel d'utilisation / User Manual / Gebrauchsanleitung /
Manuale d'uso / Manual de uso / Manual de utilização /
Handleiding / Instrukcja obsługi /
Руководство по эксплуатации / 使用手册 /
사용 설명서 / 取扱説明書 / دليل المستخدم

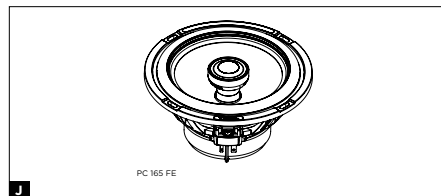
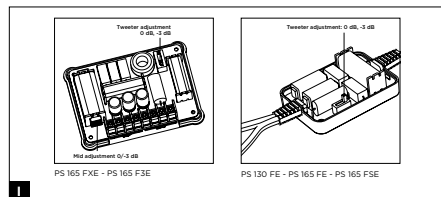
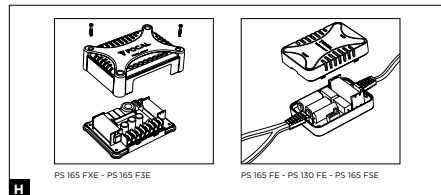
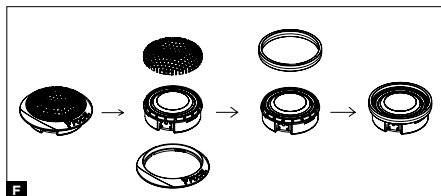
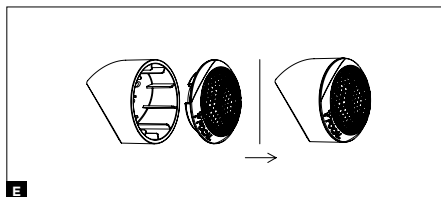
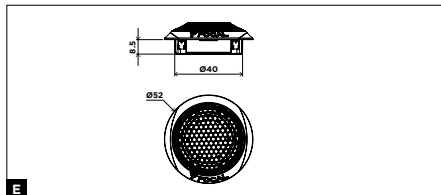


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 **FOCAL**®
LISTEN BEYOND





FLAX EVO™ Specifications

8

	PS 165 FE	PS 165 FSE
Type	2-way component kit	2-way component kit
Woofer	6 ^{1/2"} (165mm)	6 ^{1/2"} (165mm)
Woofer depth	2 ^{7/8"} (72.7mm)	2 ^{1/8"} (54.5mm)
Cone	Flax	Flax
Tweeter	TAM tweeter (aluminium / magnesium 'M'-profile inverted dome tweeter)	TAM tweeter (aluminium / magnesium 'M'-profile inverted dome tweeter)
Max. power	140W	120W
Nom. power	70W RMS	60W RMS
Sensitivity (2.83V/3' 3 ^{1/8"} (1m))	91.5dB	91.5dB
Frequency response	60-28000Hz	70-28000Hz
Voice coil diameter	1" (25mm)	1 ^{1/4"} (32mm)
Magnet	Ferrite	Ferrite
Surround	TMD	TMD
Impedance	4Ω	4Ω
Crossover	12dB/Oct @3kHz	12dB/Oct @3kHz

	PS 130 FE	PS 165 FSE
Type	2-way component kit	2-way component kit
Woofer	5" (130mm)	6 ^{1/2"} (165mm)
Woofer depth	2 ^{5/8"} (59.7mm)	3 ^{1/8"} (77mm)
Cone	Flax	Flax
Tweeter	TAM tweeter (aluminium / magnesium 'M'-profile inverted dome tweeter)	TAM tweeter (aluminium / magnesium 'M'-profile inverted dome tweeter)
Max. power	120W	160W
Nom. power	60W RMS	80W RMS
Sensitivity (2.83V/3' 3 ^{1/8"} (1m))	90.5dB	90.5dB
Frequency response	75-28000Hz	55-28000Hz
Voice coil diameter	1" (25mm)	1 ^{1/4"} (32mm)
Magnet	Ferrite	Ferrite
Surround	TMD	TMD
Impedance	4Ω	4Ω
Crossover	12dB/Oct @3kHz	12dB/Oct @3kHz

FLAX EVO™ Specifications

9

	PS 165 F3E
Type	3-way component kit
Woofer/Midrange	6 ^{1/2"} (165mm) / 3" (80mm)
Woofer/Midrange depth	2 ^{7/8"} (72.7mm) / 1 ^{5/16"} (33.5mm)
Cone	Flax
Tweeter	TAM tweeter (aluminium / magnesium 'M'-profile inverted dome tweeter)
Max. power	160W
Nom. power	80W RMS
Sensitivity (2.83V/3' 3 ^{1/8"} (1m))	90.5dB
Frequency response	60-28000Hz
Voice coil diameter	1 ^{1/4"} (32mm)
Magnet	Ferrite
Surround	TMD
Impedance	4Ω
Crossover	18dB/Oct @600-4000Hz

	PC 165 FE
Type	2-way coaxial kit
Woofer	6 ^{1/2"} (165mm)
Woofer depth	2 ^{7/8"} (72.7mm)
Cone	Flax
Tweeter	Aluminium / magnesium 'M'-profile inverted dome coaxial tweeter
Max. power	140W
Nom. power	70W RMS
Sensitivity (2.83V/3' 3 ^{1/8"} (1m))	90dB
Frequency response	60-28000Hz
Voice coil diameter	1" (25mm)
Magnet	Ferrite
Surround	TMD
Impedance	4Ω
Crossover	6dB/oct



READ FIRST! IMPORTANT SAFETY INSTRUCTIONS!



The exclamation mark represented in an equilateral triangle is intended to alert users to the existence of important instructions in the user manual relating to the use and maintenance of the device.

1. Read these instructions.
2. Keep these instructions.
3. Heed all the warnings.
4. Follow all the instructions.
5. To avoid damaging your hearing, do not listen to loudspeakers at high volumes for long periods of time. Listening to loudspeakers at high volumes can cause damage to the user's ears and may lead to hearing problems (temporary or permanent deafness, buzzing in the ears, tinnitus, hyperacusis). Exposure to excessive volumes (over 85 dB) for more than one hour can cause irreparable damage to your hearing.

6. If a subwoofer is installed in your vehicle, it is important to secure it firmly. We recommend that you attach the enclosure to the floor or chassis of the vehicle for safety. If the subwoofer is not properly secured, it could become a projectile in the event of an accident. This point is even more important if the subwoofer is installed in a hatchback, a station wagon, a utility vehicle or a van.



(CEI 60417-6044)

7. If cables or harnesses are provided, use them the proper way (like mentioned in this user manual) without replacing or modifying them.
8. If a fuse is included in the kit or harness, use only same rating one in case of replacement.

FLAX EVO™ User manual

English

Please validate your Focal-JMlab warranty, it is now possible to register your product online:
www.focal.com/warranty

Thank you for choosing Focal kits and sharing our passion for sound and for music, expressed with precision and purity: "Listen Beyond". These high-tech speaker drivers incorporate enhanced Focal features in speaker driver design to achieve a powerful, high-quality sound. To get the very best out of your system and to exploit the full performance of its speaker drivers, we recommend that you read this booklet, then store it in a safe place to refer to in the future. Any problems caused by failure to follow the instructions may invalidate your guarantee. For optimum results, we recommend that you have the system installed by a professional.

Important recommendations

First of all, check the space available for fitting the speaker drivers (refer to the plans on the packaging) then proceed with the cutting required. If mounted in the factory location, check that there is sufficient space between the speaker driver and the protective grille.

- Clear the speaker drivers of any metal shavings and dust particles.
- Clean carefully before mounting the speaker drivers.

Our policy of continual product improvement means that Focal-JMlab reserves the right to modify the technical specifications of its products without notice. Product may vary from images.

Conditions of warranty

All Focal loudspeakers are covered by warranty drawn up by the official Focal distributor in your country. Your distributor can provide all details concerning the conditions of warranty. Warranty cover extends at least to that granted by the legal warranty in force in the country where the original purchase invoice was issued.

- **2-way kit connections - PS 165 FXE - (fig A)**
- **3-way kit connections - PS 165 F3E - (fig B)**
- **2-way bi-amplification kit connections PS 165 FXE (4-channel amplification) - (fig C)**
- **2-way kit connections PS 130 FE, PS 165 FE, PS 165 FSE - (fig D)**
- **Aluminium-magnesium tweeter installation (PS 165 FXE/PS 165 F3E/PS 130 FE/PS 165 FE/PS 165 FSE)**

There are 3 mounting options:

Flush-fitted mounting - (fig E)

Allow for custom cutting; insert the tweeter as delivered.

Angled surround mounting - (fig F)

Choose the angle (25 or 45°), fix the surround using the screws supplied, thread the wires then insert the tweeter with its grille into the surround.

Free integrated mounting - (fig G)

Detach the grille by pushing the "Focal" ring towards the back of the tweeter. Insert the mounting spacer around the tweeter. Fit the whole unit behind the mounting location grille.

Fitting the crossovers - (fig H)

The crossovers must be fitted (using supplied screws or double-sided screws) in a dry, preferably well-ventilated, place. To open the enclosure, press following the arrows on the diagram opposite. If the filters are not easily accessible, proceed with the wiring and adjustments before fitting permanently.

• **Tweeter level adjustment - (fig I)**

The switch placed inside the crossover allows you to adjust the tweeter level according to your taste and the location of speaker drivers in your cabin, in order to achieve the best possible sound reproduction.

Too much treble produces an aggressive sound, and too little alters the definition and dynamics.

If the tweeter is installed very close to the bass-midrange speaker driver, adjust it to 0.

If the tweeter is installed on the dashboard or above the door, and the woofer is located in the door, adjust it to -3 or 0dB.

• **Coaxial kit PC 165 FE - (fig J)**

This coaxial kit is equipped with an integrated tweeter crossover (6dB/oct); please follow the general installation recommendations.

NB: the tweeter stand cannot be angled or rotated; it has been designed to be as compact as possible, and therefore compatible with as many different spaces as possible.

**Élimination correcte de ce produit.**

Ce marquage indique que ce produit ne doit pas être éliminé avec les autres déchets ménagers au sein de l'UE. Par mesure de prévention pour l'environnement et pour la santé humaine, veuillez le recycler de manière responsable, pour favoriser la réutilisation des ressources matérielles. Pour retourner votre appareil usé, veuillez utiliser les systèmes de retour et de collecte ou contactez le détaillant chez lequel le produit a été acheté. Celui-ci pourra procéder au recyclage du produit en toute sécurité.

**Correct elimination of this product.**

This marking indicates that within the EU this product should not be disposed of with other household wastes. To prevent any risk to the environment or human health, please recycle them responsibly to encourage the reuse of material resources. To return your used device, please use the return and collection systems available, or contact the retailer where you purchased the product. They can recycle this product safely.

**Ordnungsgemäße Entsorgung des Produkts.**

Diese Kennzeichnung weist darauf hin, dass dieses Produkt innerhalb der EU nicht mit anderen Haushaltsabfällen entsorgt werden darf. Als Präventivmaßnahme für die Umwelt und die menschliche Gesundheit muss auf eine verantwortungsbewusste Wiederverwertung zur Förderung der Wiederverwendung von materiellen Ressourcen geachtet werden. Für die Rückgabe von Gebrauchsgütern verwenden Sie bitte zur Verfügung stehende Rückgabe- und Recyclingsysteme oder wenden Sie sich an den Händler, bei dem Sie das Produkt erworben haben. Letzterer kann das Gerät sicher dem Wertstoffkreislauf zuführen.

**Eliminación correcta de este producto.**

Este símbolo indica que este producto no debe eliminarse con el resto de residuos domésticos dentro de la UE. Con el objetivo de proteger el medioambiente y la salud pública, recicle de forma responsable para favorecer la reutilización de los recursos materiales. Para devolver su aparato usado, utilice los sistemas de devolución y recogida o póngase en contacto con el vendedor del producto. Este podrá proceder al reciclaje del producto de forma totalmente segura.

**Corretto smaltimento di questo prodotto.**

Questa marcatura indica che, nell'UE, questo prodotto non deve essere smaltito insieme agli altri rifiuti domestici. A titolo preventivo per l'ambiente e la salute, deve essere riciclato in modo responsabile per favorire il riutilizzo delle risorse materiali. Per mandare indietro l'apparecchio usato, si prega di utilizzare il sistema di reso e raccolta o di contattare il rivenditore da cui è stato acquistato il prodotto, il quale potrà procedere a riciclare il prodotto in totale sicurezza.

**Eliminação correta deste produto.**

Esta marca indica que, na UE, este produto não deve ser eliminado com outro lixo doméstico. Como medida de prevenção para o ambiente e para a saúde humana, deve ser reciclado de modo responsável, para promover a reutilização dos recursos materiais. Para devolver o seu dispositivo usado, recorra aos sistemas de devolução e recolha ou contacte o comerciante em que o produto foi adquirido. Este poderá proceder à reciclagem do produto com toda a segurança.

**Prawidłowe usuwanie produktu.**

To oznaczenie informuje, że produkt nie należy usuwać wraz z innymi odpadami z gospodarstwa domowego na terenie UE. W celu ochrony środowiska i zdrowia człowieka, należy w sposób odpowiedzialny prowadzić recykling i wspierać ponowne wykorzystywanie materiałów. Aby zwrócić swoje urządzenie, należy skorzystać z systemu zwrotu i odbioru prowadzonego przez sprzedawcę detalicznego, u którego produkt został nabyty. Sprzedawca będzie w stanie w sposób bezpieczny przeprowadzić recykling produktu.

**Tuotteen asianmukainen hävittäminen.**

Tämä merkintä osoittaa, että EU:ssa tätä tuotetta ei saa hävittää muiden kotitalousjätteiden mukana. Kierrättä se vastuullisesti eikäistääksesi mahdollisia vaaroja ympäristölle tai ihmisten terveydelle ja edistääksesi aineellisten voimavarojen uudeelleenkäyttöä. Palauta käytetty laite käyttämällä saatavilla olevia palautus- ja keräysjärjestelmiä tai ota yhteyttä jälleenmyyjään, jolta ostit tuotteen. He voivat kierrättää tämän tuotteen turvallisesti.

**Правильная утилизация продукта.**

Данная маркировка указывает на то, что в пределах ЕС этот продукт не может утилизироваться вместе с бытовым мусором. В целях предотвращения загрязнения окружающей среды и нанесения ущерба здоровью человека утилизируйте продукт должным образом, позволяющим произвести его повторную переработку. Для того чтобы вернуть бывшее в употреблении устройство, используйте системы возврата и сбора сырья либо обратитесь в пункт розничной торговли, в котором вы приобрели продукт, для организации повторной переработки с соблюдением всех норм безопасности.

**Correcte verwijdering van dit product.**

Deze markering geeft aan dat dit product in de EU niet samen met ander huishoudelijk afval mag worden weggegooid. Om het milieu en de gezondheid van de mens te beschermen, dient u het product op verantwoorde wijze te recyclen om hergebruik van materiële hulpbronnen te stimuleren. U kunt uw gebruikte apparaat retourneren bij een recyclepunt of milieustation, of neem contact op met de winkel waar u het product hebt gekocht. Zo kan het product op verantwoorde wijze worden gerecycled.



Focal-JMlab® - BP 374 - 108, rue de l'Avenir -
42353 La Talaudière cedex - France - www.focal.com
Tel. (+33) 04 77 43 57 00 - Fax (+33) 04 77 43 57 04 -
SCPP-190812/1 - CODO1592

FLAX EVO

PS 165 FE

Product Data Sheet

MADE IN
FRANCE

2-way component kit



Key points

- High sensitivity
- Focal last technology
- Wider diffusion angle
- Unique and patented Flax cone (N°1350116)

Type	2-way component kit
Woofer	6 ¹ / ₂ " (165mm)
Woofer depth	2 ⁷ / ₈ " (72.7mm)
Cone	Flax sandwich
Tweeter	TAM tweeter (Aluminium/Magnesium 'M'-profile inverted dome tweeter)
Max. power	140W
Nom. power	70W RMS
Sensitivity (2,83 V/1 m)	91.5dB
Frequency response	60Hz-28kHz
Voice coil diameter	1" (25mm)
Magnet	Ferrite
Surround	TMD
Impedance	4Ω
Crossover	12dB/oct @3kHz

FLAX EVO

PS 165 FE

Technical Sheet

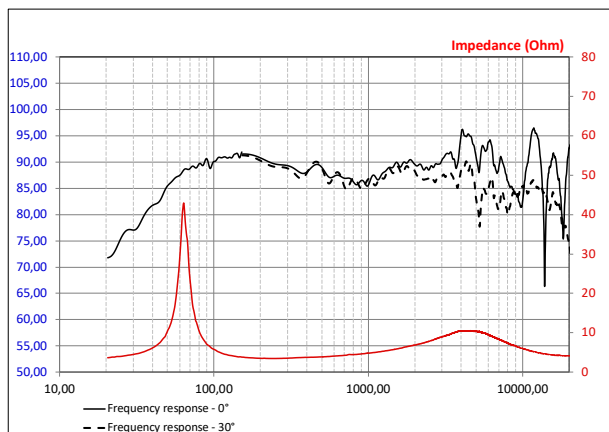
6½" Woofer



SPECIFICATIONS

Nominal power	70W
Maximum power	140W
Sensitivity	91.5dB
Nom. impedance	4Ω
Cone	Flax
Surround	TMD - Rubber
DC resistance	3.3Ω
VC diameter	25mm 1"
Former	Kapton
Layers	2
Wire	Copper
Net weight	1,050g 2.32lbs
Frequency response	60-28kHz
Crossover	12 dB/Oct @3kHz

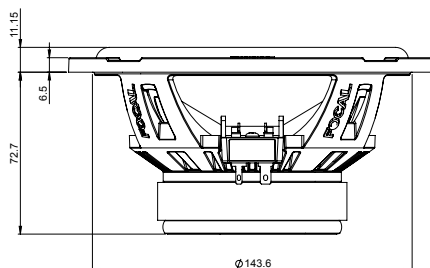
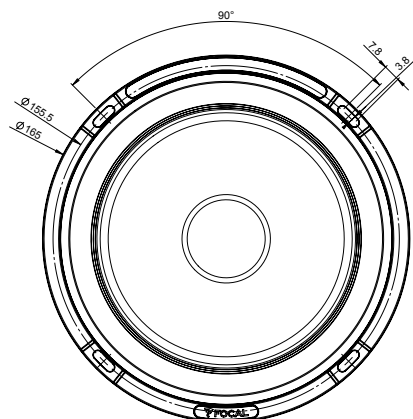
FREQUENCY RESPONSE/IMPEDANCE



PARAMETERS

Rdc	3.3Ω
Fs	56Hz
Mms	15.2g
Cms	0.52mm/N
Vas	12 l
Qts	0.56
Qes	0.61
Qms	7
Bxl	5.4N/A
Sd	127cm²
SPL	91.5dB
Xmax	4mm

MECHANICAL DRAWING



FLAX EVO TAM

Technical Sheet

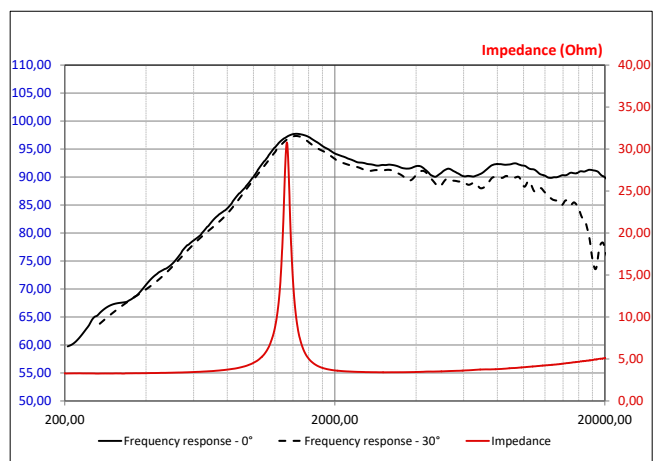
Tweeter



SPECIFICATIONS

Nominal power	20W
Maximum power	150W
Sensitivity	92dB
Nom. impedance	4Ω
Cone	Al - Mg
Surround	TMD - Rubber
DC resistance	3.4Ω
VC diameter	23mm 15/16"
Former	Kapton
Layers	2
Wire	Alu
Net weight	60g 0.13lb

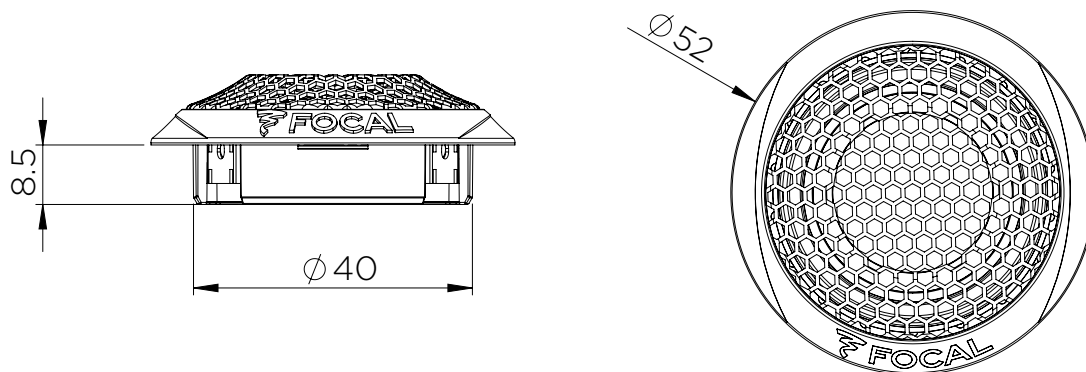
FREQUENCY RESPONSE/IMPEDANCE



PARAMETERS

Rdc	3.4Ω
Fs	1,200Hz

MECHANICAL DRAWING



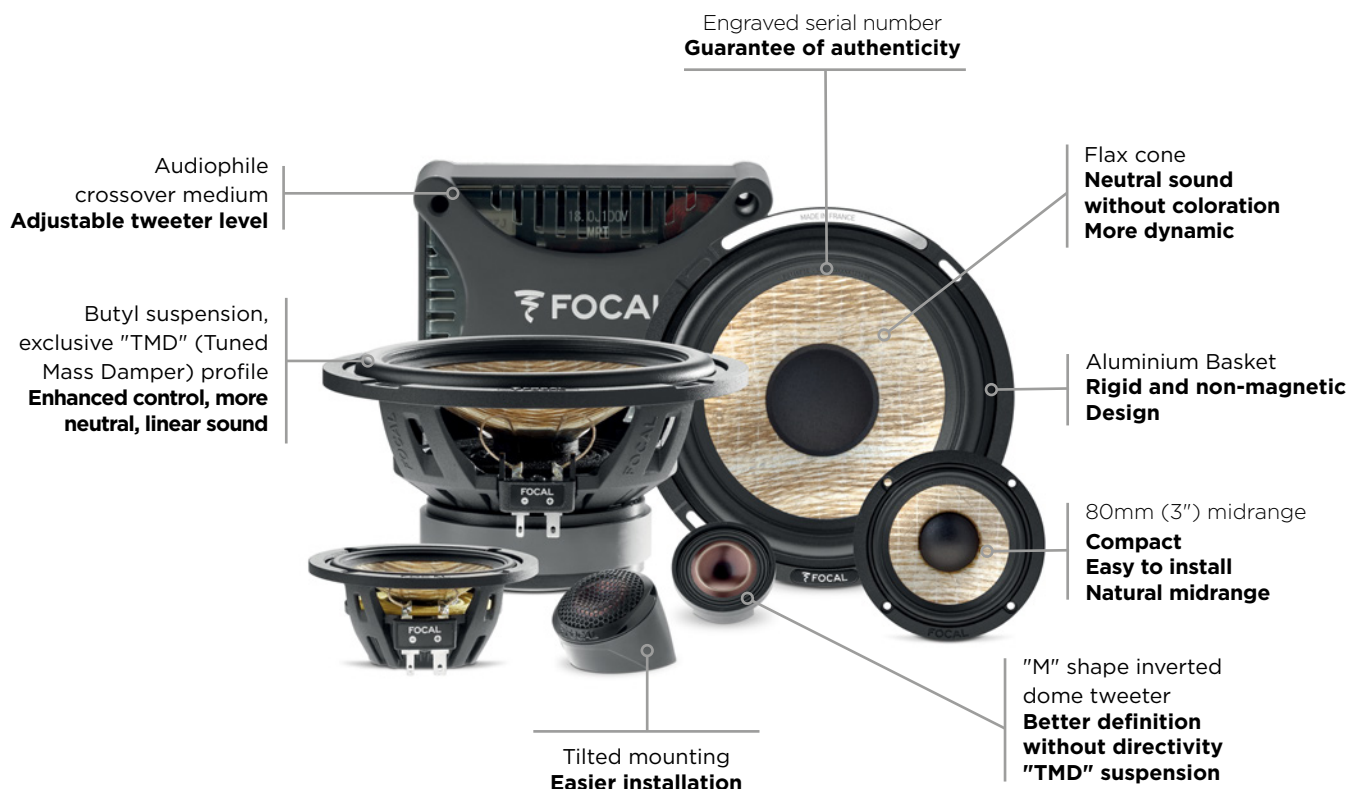
FLAX EVO

PS 165 F3E

Product Data Sheet

MADE IN
FRANCE

3-way component kit



Key points

- High power handling
- Very low deep bass
- Compact midrange
- Wider diffusion angle
- Unique and patented Flax cone (N°1350116)

Type	3-way component kit
Woofer / Medium	6 ¹ / ₂ " (165mm) / 3" (80mm)
W. / M. Depth	2 ⁷ / ₈ " (72.7mm) / 1 ⁵ / ₁₆ " (33.5mm)
Cone	Flax sandwich
Tweeter	TAM tweeter (Aluminium/Magnesium 'M'-profile inverted dome tweeter)
Max. power	160W
Nom. power	80W RMS
Sensitivity (2,83 V/1 m)	90.5dB
Frequency response	60Hz-28kHz
W. / M. Voice coil diameter	1 ¹ / ₄ " (32mm) / 1" (25mm)
Magnet	Ferrite
Surround	TMD
Impedance	4Ω
Crossover	18dB/Oct @600-4000Hz

FLAX EVO

PS 165 F3E

Technical Sheet

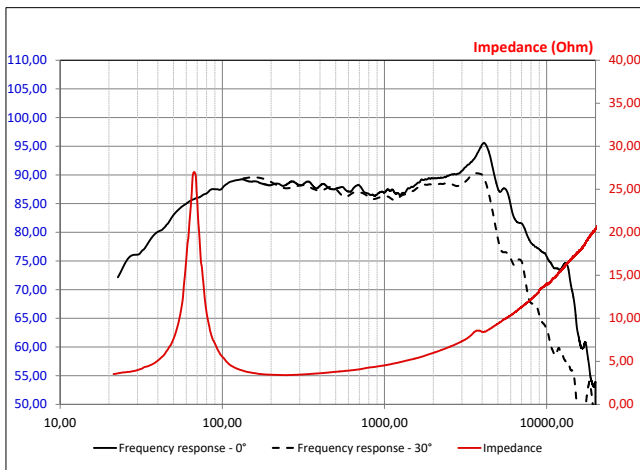
6½" Woofer



SPECIFICATIONS

Nominal power	80W
Maximum power	160W
Sensitivity	90.5dB
Nom. impedance	4Ω
Cone	Flax
Surround	TMD - Rubber
DC resistance	3.2Ω
VC diameter	32mm 1¼"
Former	Kapton
Layers	2
Wire	Copper
Net weight	1,150g 2.54lbs
Frequency response	60-28kHz
Crossover	18dB/Oct @600-4,000 Hz

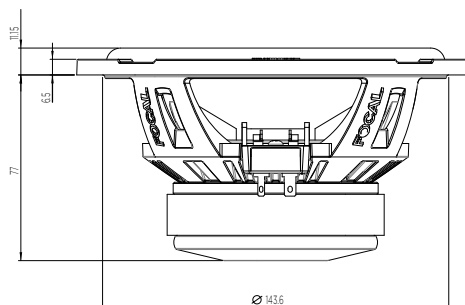
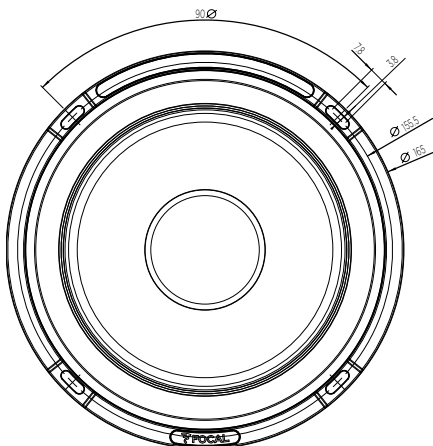
FREQUENCY RESPONSE/IMPEDANCE



PARAMETERS

Rdc	3.2Ω
Fs	60Hz
Mms	14.5g
Cms	0.44mm/N
Vas	12l
Qts	0.8
Qes	0.9
Qms	9
Bxl	4.5N/A
Sd	127cm²
SPL	90.5db
Xmax	5

MECHANICAL DRAWING



FLAX EVO

PS 165 F3E

Technical Sheet

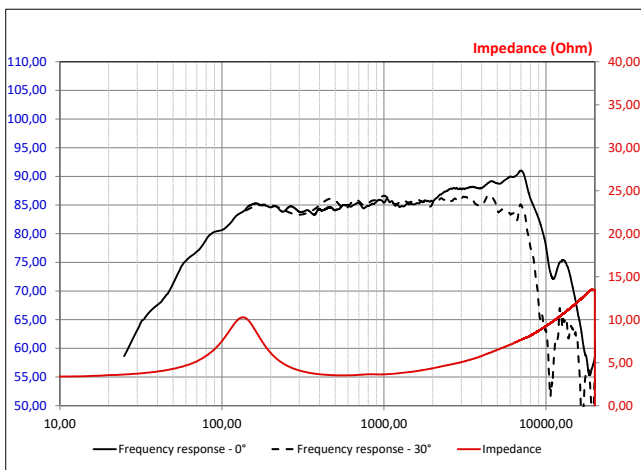
3" Midrange



SPECIFICATIONS

Nominal power	30W
Maximum power	160W
Sensitivity	87.5dB
Nom. impedance	4Ω
Cone	Flax
Surround	TMD - Rubber
DC resistance	3.3Ω
VC diameter	25mm 1"
Former	Kapton
Layers	2
Wire	Copper
Net weight	160g 0.35lbs
Frequency response	60-28kHz
Crossover	18dB/Oct @600-4,000 Hz

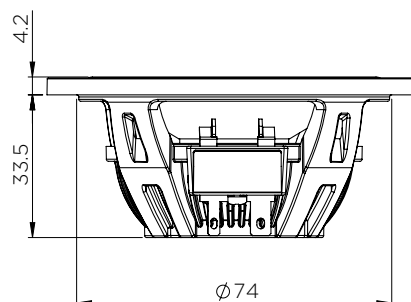
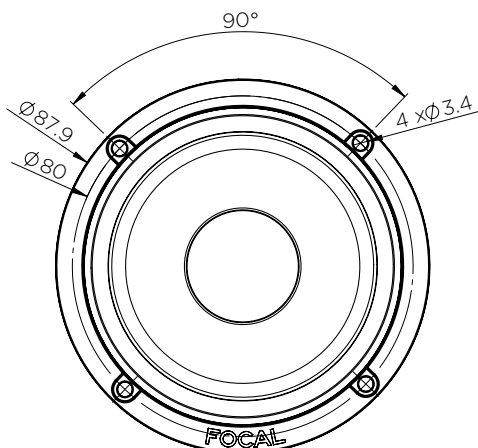
FREQUENCY RESPONSE/IMPEDANCE



PARAMETERS

Rdc	3.3Ω
Fs	145Hz
Mms	4.1g
Cms	0.28mm/N
Vas	0.5 l
Qts	0.7
Qes	1
Qms	3
Bxl	43.5N/A
Sd	34cm ²
SPL	87.5db
Xmax	1

MECHANICAL DRAWING



FLAX EVO TAM

Technical Sheet

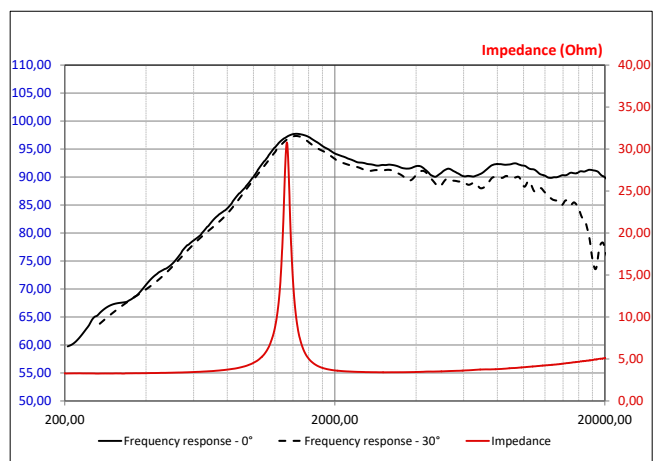
Tweeter



SPECIFICATIONS

Nominal power	20W
Maximum power	150W
Sensitivity	92dB
Nom. impedance	4Ω
Cone	Al - Mg
Surround	TMD - Rubber
DC resistance	3.4Ω
VC diameter	23mm 15/16"
Former	Kapton
Layers	2
Wire	Alu
Net weight	60g 0.13lb

FREQUENCY RESPONSE/IMPEDANCE



PARAMETERS

Rdc	3.4Ω
Fs	1,200Hz

MECHANICAL DRAWING

