



i5

CENTER

USER MANUAL

ENGINEERED IN GERMANY

Congratulations!

Dear Customer,

Congratulations on your purchase of this high-quality product.

HELIX COMPOSE highlights best quality, excellent manufacturing and state-of-the-art sound quality.

Thanks to more than 35 years of experience in research and development of audio products HELIX COMPOSE sets new standards in the car audio speaker market.

We wish you many hours of enjoyment with your new HELIX COMPOSE components.

Yours

AUDIOTEC FISCHER Team

General instructions

General instructions for installing HELIX loudspeakers

To prevent damage to the speakers and possible injury, read this manual carefully and follow all installation instructions. This product has been checked for proper function prior to shipping and is guaranteed against manufacturing defects.

For a proper performance and to ensure full warranty coverage, we strongly recommend having this product installed by an authorized HELIX dealer.

If you choose to perform your own installation read the following information and precautions carefully. Failure to follow the stated precautions may result in personal injury and / or damage to the audio system or vehicle.

1. Always make sure that the speaker will fit into the intended mounting location and that there is adequate depth for the magnet system.
2. Check for adequate space between speaker and window, window crank, power window mechanism, seat, rear deck torsion bars, and other items which may interfere with the speaker's mounting. This is very important if any hole cutting is required. Detailed size information is indicated in the dimension section of this manual. Take care that the mounting surface is flat and free from all obstructions.
3. Ensure that the loudspeakers are correctly connected in polarity. Exchanging plus and minus may result in significant loss of sound quality. The positive leads of the loudspeakers are marked red.
4. Make sure that all speaker wiring is fully protected from cutting or wear at sharp edges, which can lead to short circuits that may damage your head unit, amplifier and / or speaker system.

5. Verify that all connection wires are long enough in order to avoid any mechanical stress on the wires or the connectors.
6. Make sure that all components are mounted properly.
7. Do not mount the components where water may splash on them.
8. The quality of the installation has a significant effect on the overall performance of the speaker system. Treat each installation step with a high degree of attention.
9. Avoid low frequency cancellation caused by air leakage between the speaker basket and the mounting surface (e.g. mounted on a bent or uneven surface or mounted in an oversized hole).
10. Mounting panel reinforcement may be necessary in some cases in order to ensure a stable, torsion-free and even surface. This can be achieved by mounting the speaker on a metal, plastic or wooden sub-baffle behind the body or door panel. Consult an installation specialist for further advice.
11. In most cases you can use the original speaker mounting locations in the doors, A-pillars, body panels or the rear deck. If these are not available you have to prepare your own secure installation place. Due to their structural integrity and accessibility the precut mounting holes should be used whenever possible. Information on a proper mounting can be found in the section "Installation" of this manual.

IMPORTANT: Never cut any metal that is an integral part of an automobile's safety or structural car body.

We strongly recommend that you operate the complete audio system at low volume before final installation. So you can check whether each speaker is working before securing the loudspeakers into their mounting locations.

Find your composition

Go to www.audiotec-fischer.com/compose to explore the whole HELIX COMPOSE platform



Installation

Mounting Ci5 M80FM-D3 CTR

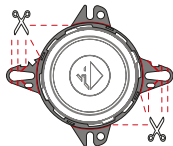
Option a:

Professional integration with universal **FlexMount 80** MULTI.1 or MULTI.2 (included) or optionally available car-specific **FlexMount 80**

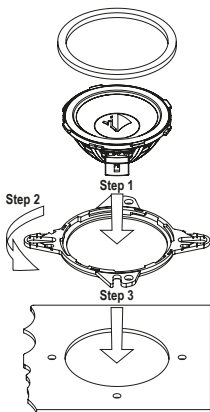
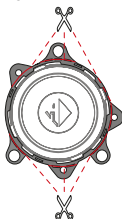
Note: the **FlexMount 80** adaptor rings can be mounted in two directions. Make sure to use the appropriate mounting option for your vehicle. Additionally, the rings MULTI.1 & MULTI.2 can be individually adapted to the installation position by removing superfluous mounting ears.

Caution: When cutting or trimming the mounting ears, sharp edges may form and small fragments may break off. To avoid injury, it is recommended to wear appropriate protective gear such as gloves and safety glasses.

MULTI.1

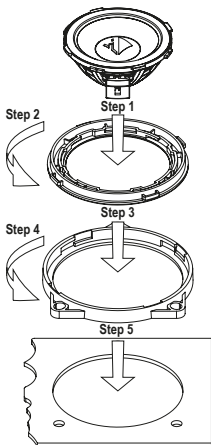


MULTI.2



Option b:

Mounting with **FlexMount 80** to **FlexMount 100** adaptor (included)



Installation

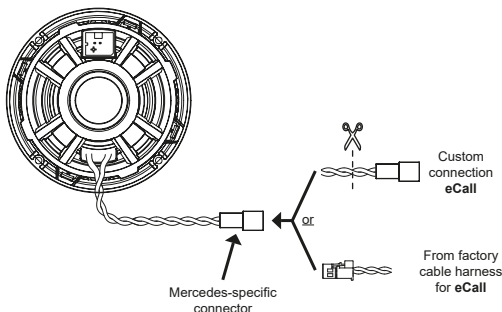
OPTIONAL: Wiring eCall function

This center speaker features an additional dedicated voice coil for eCall applications. This secondary voice coil may be optionally connected if the vehicle is equipped with an eCall system.

Pre-assembled cables with a vehicle-specific (Mercedes) connector are already attached to facilitate installation.

Note: This voice coil is exclusively intended for eCall functionality and is not suitable for audio playback.

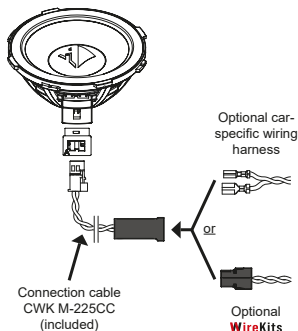
For standard audio operation, the primary voice coil with the FlexConnect terminal must be used. Connection examples are provided on the following pages under Wiring options.



Wiring options for audio playback

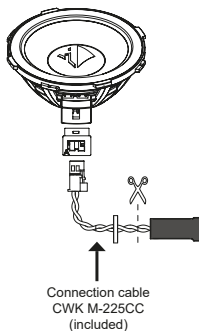
Option a: Universal connection via optional car-specific wiring harness, e.g. in active applications

Insert the enclosed **FlexConnect** inlay A and plug in the enclosed connection cable. Then connect it to the optional car-specific wiring harness.

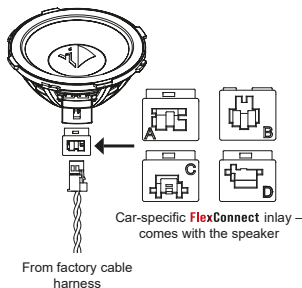


Option b: Universal connection, e.g. in active applications

Insert the enclosed **FlexConnect** inlay A and cut off the plug of the enclosed connection cable and connect it to the amplifier.



Option c: Direct connection to OEM connector with car-specific **FlexConnect** inlay

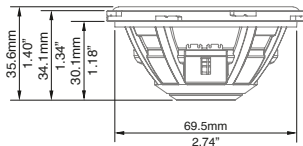
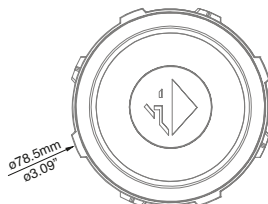


Inlay	Vehicle compatibility
A	Mercedes
B	Audi Tesla
C	BMW Ferrari Mini Rolls-Royce
D	Porsche

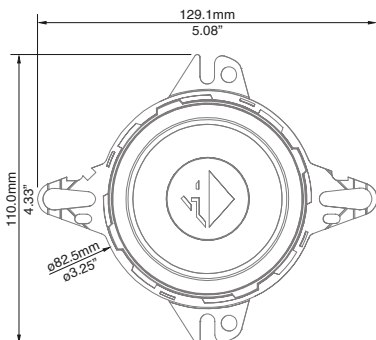
Ensure that all components are correctly connected in polarity, i.e. plus to plus and minus to minus. The positive leads of the loudspeaker system are marked red.

Dimensions

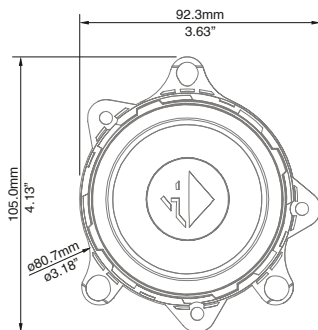
Speaker without **FlexMount 80** and without grille



Speaker with assembled universal **FlexMount 80 MULTI.1**



Speaker with assembled universal **FlexMount 80 MULTI.2**



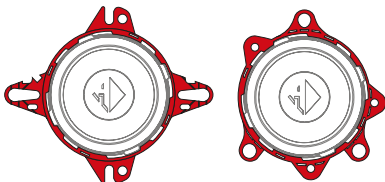
Technical data

		Ci5 M80FM-D3 CTR
Power RMS / Max.	<i>P</i>	90 / 135 Watts
Impedance	<i>Z</i>	2 x 3 Ω
DC resistance	<i>R_e</i>	3.1 Ω
Frequency response		200 Hz - 16,000 Hz
Resonance frequency	<i>F_s</i>	175 Hz
Mechanical Q factor	<i>Q_{ms}</i>	4.29
Electrical Q factor	<i>Q_{es}</i>	2.15
Total Q factor	<i>Q_{ts}</i>	1.43
Compliance	<i>C_{ms}</i>	260 μm/N
Equivalent air volume	<i>V_{as}</i>	0.44 L
Force factor	<i>B*<i>I</i></i>	2.24 Tm
Sensitivity	<i>SPL</i>	87 dB @ 2.83V / 1m 83 dB @ 1W / 1m
Cone area	<i>S_d</i>	36 cm ²
Moving mass	<i>M_{ms}</i>	3.19 g
Cone material		Silicon coated paper cone
Mechanical resistance	<i>R_{ms}</i>	0.82 kg/s
Voice coil diameter	Ø	21 mm
Voice coil winding height		7.3 mm
Max. linear excursion	<i>X_{lin}</i>	+/- 2.5 mm
Max. mechanical excursion	<i>X_{max}</i>	+/- 4.5 mm
Features		FlexConnect terminal, powerful push-pull neodymium magnet system and FlexMount 80

FlexMount car-specific adaptors

The **FlexMount 80** adaptor rings enable acoustically optimized and professional speaker integration in vehicles. Below are the included adaptor rings and compatible car brands.

For additional vehicle-specific variants, please contact your retailer or visit www.audiotec-fischer.com/compose for the most up-to-date overview of available adaptors.



FlexMount 80 MULTI.1 & MULTI.2

Chrysler
Ferrari
Ford
Jaguar
Land Rover
Lexus

Mazda
Mercedes-Benz
Porsche
Tesla
Toyota
Volvo
and universal use

Legal information

Warranty disclaimer

The warranty service is based on the statutory regulations. Defects and damage caused by overload or improper handling are excluded from the warranty service. Any return can only take place following prior consultation, in the original packaging together with a detailed description of the error and a valid proof of purchase.

Technical modifications, misprints and errors excepted! For damages on the vehicle and the device, caused by handling errors of the device, we cannot accept liability.

Correct disposal of this product



This symbol means the product must not be discarded as household waste, and should be delivered to an appropriate collection facility for recycling. Follow local rules and never dispose of the product with normal household waste. Correct disposal of old products helps prevent negative consequences for the environment and human health.

Regulatory notes



This product has been issued a CE marking. This means that the device is certified for use in vehicles within the European Union (EU).



This product has been issued a UKCA marking. This means that the device is certified for use in vehicles within the United Kingdom.



This product has been issued an EAC marking. This means that the device is certified for use in vehicles within the Eurasian Customs Union.

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