

MR206Q + MR108Q + MF108Q - compact bass enclosures from Musway



practical diversity

► A subwoofer doesn't have to be big. More and more compact bass solutions are entering the market to enable practical drivers to enjoy powerful bass music without wasting a lot of space. We tested three small bass boxes from Musway.

They all want bass, but you should start to hide the subwoofer in the double trunk floor, but not every vehicle has space or free space for a bass enclosure. All that's left is a compact subwoofer that leaves enough usable trunk space for everyday use and that can be removed quickly without breaking it. This is exactly where Musway comes with a whole range of bass boxes around the corner. There are eight compact bass boxes to choose from, three of which we have loaded for testing.

What they have in common is that with an internal volume of 15 liters they really aren't too big, but they differ in terms of driver equipment and shape. For the sake of completeness, the remaining Musway housings should also be mentioned; we already tested the MW300Q spare wheel solution in issue 2/2019.

Then there's the MT169Q, which is also 15 liters but slightly flatter with its 6 x 9 inch speaker. Finally, the Musway dealer also has two slightly larger models with double equipment, one as 2 x 20s and one as 2 x 6 x 9s.

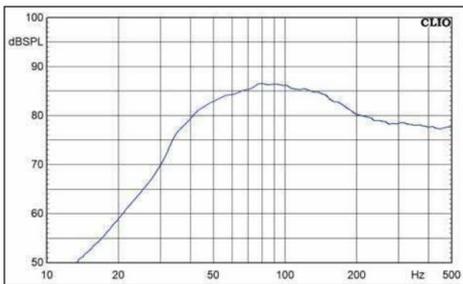


All Musway subs come with 2 x 2 ohm dual terminals. A quick connection via Molex connector is available as an option

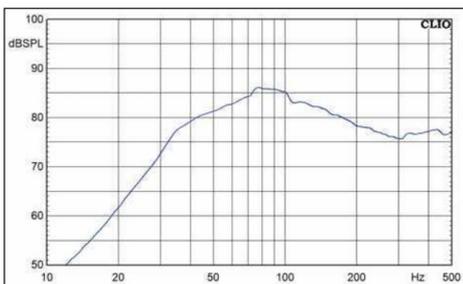
Our three are the MR108Q, a "quite normal" 20-gauge subwoofer in the shape of a cube, the MF108Q with a flat design, and the elongated MR2016Q with two 16-gauge speakers instead of one 20-g. As mentioned, nothing is happening with the volume,



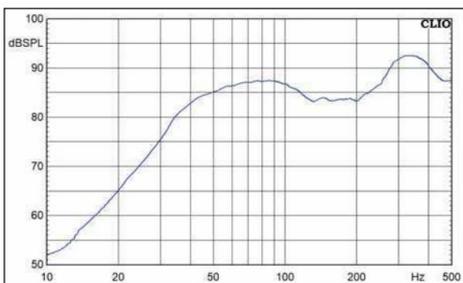
The MF woofer (left) is significantly flatter than the 20 in the MR108Q (middle). All woofers have solid sheet metal baskets and pressed pole cores, the 20s work with 2 x 2 ohm double voice coils



Musway MR206Q: The two 16s in the MR206Q ensure 86 dB characteristic sound pressure, the cut-off frequency of almost 50 Hz is fine for 15 liters



Musway MR108Q: The MR108Q is tuned to 46 Hz, with 85 dB at 1 W it is not too quiet for a 20



Musway MF108Q: With the MF108Q you can see a hump between 200 and 300 Hz, which comes from the downfire principle, this frequency range is of course affected by the Soft filtered away

however, the prices are different. The standard MR108Q design is the cheapest at 170 euros, the more complex flat woofer is available for 200 euros and the MR206Q with two drivers costs 230 euros. All Musway subwoofers have above-average workmanship, they are made of 16 millimeter MDF, with the baffles being reinforced with 28 millimeters to give the milled woofers stability. The felt covers are neatly made, and there are plexi plates with logos.

All boxes are equipped with 2 x 2 ohm dual terminals, which not only have the usual terminals for bare cables, but also a four-pin Molex connector, which allows lightning-fast removal without dangerous cable ends. When it comes to components, we have the choice between an eight-inch or two six-inch woofers.

The latter even have a bit more membrane surface than a larger colleague, so the 8s provide a little more depth - here we have a stalemate. But the two 8-inch drivers are not the same either. the fl at MF108Q also requires a fl ater driver, as the woofer is built into the fl atest part of the cabinet.

This is necessary to make the case only 16 centimeters high. A cuboid box on feet would be much easier and cheaper to offer – but also higher. The arrangement of the bass reflex opening in one of the two feet is also well thought out on the MF – very clever. With the same volume, the choice remains. Either flat and loadable or



The MF driver (left) and the 16 work with glass fiber reinforced membranes, with the MR108Q paper is used in the classic way

Musway MR206Q + MR108Q + MF108Q



The 8" woofer of the MF108Q is on the underside of the housing. The bass refl export ends in one of the feet

elongated and narrow as a particularly space-saving woofer, or the standard cube for bargain hunters.

Measurements and sound As already mentioned, all housings have an impedance of 2 x 2 ohms including a double terminal. This is a very good choice to work with the modern multi-channel mini power amps, which are also available with M6 and D8 as DSP power amps. Here, the power of two channels can be bundled onto the subwoofer, so that one mini power amplifier is sufficient for the entire system. Of course, the woofers also work with a monoblock or almost any two-channel system. In our mess kitchen, the musways then have to put their cards on the table. The two eight-inch speakers are both tuned to 46 Hz, the 206 with the smaller chassis to 54 Hz. However, this difference in depth is not visible in the amplitude frequency responses, they are rather arranged according to the characteristic sound pressure. The cube is the quietest at 85 dB, the double 16 creates 86 dB and the flat woofer is the most efficient at 87 dB. The three woofers do nothing at maximum volume, the 16s pop a little more at higher bass frequencies, and the 20s below. The MF always keeps up with the MR, although its woofer has the smaller voice coil, but it has a stronger magnetic field and the load capacity is sufficiently high. The sound check reveals that the cube has the softest bass. Mind you, as an eight-incher it is by no means spongy, only the MR206Q and MF108Q play a bit more crisply. The MR108Q feels like it has a slightly deeper bass than the two competitors, but we're talking about Nunacen here. The midgets aren't all real deep bass woofers, but they're easily enough for music styles that aren't too deep bass-heavy. When it comes to dynamics or precision, the Musways are the first choice, they play straight to the point and make even demanding music fans happy.

Conclusion At just 15 liters, the Musways are small enough that they don't take up too much space. Musically, on the other hand, they are very big. The variety of shapes available ensures that the right sub is always available.

Elmar Michels



Housing subwoofer		Musway MR206Q	Musway MR108Q	Musway MF108Q
sales hotline Internet		Audio Design 07253 9465-0 www.audiodesign.de	Audio Design 07253 9465-0 www.audiodesign.de	Audio Design 07253 9465-0 www.audiodesign.de
▶ sound	50%	1.1 1.1 1.1 1.1 1.0 1.0	1.0 1.5 1.5 1.5 1.5 1.0	1.0 1.0 1.0 1.0 1.0 1.0
draft	12.5%	yyyyyy	.0 yyyyyy 0.5 yyyyyy	1.0 yyyyyy 1.0
Print	12.5%			
cleanliness	12.5%			
dynamics	12.5%			
▶ laboratory	30%	2.0 2.2 2.0 1.5 1.5 1.5	1.5 1.5 1.5 1.5 1.5 1.5	1.5 2.5 3.0 2.5 2.0 2.0 2.0
frequency response	20%		.0 yyyyyy	
efficiency	5%			
maximum level	5%			
▶ processing	25%	1.0 yyyyyy	1.0 yyyyyy	1.0 yyyyyy
Technical specifications				
basket diameter		16.0cm	21.0cm	21.0cm
installation diameter		13.5cm	18.2cm	18.2cm
installation depth		7.9cm	10.3cm	7.8cm
magnet diameter		10.0cm	12.0cm	12.0cm
case width		45.0cm	29.0cm	55.0cm
case height		23.0cm	29.0cm	35.0cm
case depth		20/25cm	24/29cm	16.0cm
Weight		8.7kg	7.4kg	10.1kg
nominal impedance		2 x 2 ohms	2 x 2 ohms	2 x 2 ohms
DC resistance Rdc		1.81ohm	3.81ohm	3.30ohm
Voice coil inductance Le		0.88mH	1.50mH	1.36mH
voice coil diameter		38mm	50mm	38mm
membrane surface		123cm ²	222cm ²	219cm ²
Resonance frequency fs		61Hz	55Hz	48Hz
mechanical quality Qms		5.60	2.66	4.61
electrical quality Qes		0.73	0.90	0.47
Total Quality Qts		0.65	0.67	0.43
Equivalent Volume Vas		4.1L	10.6L	13.9L
Moving Mass Mms		35g	55g	53g
rms		2.37kg/s	7.07kg/s	3.46kg/s
cms		0.20mm/N	0.15mm/N	0.21mm/N
W xl		5.74Tm	8.92Tm	10.54Tm
Sound pressure 1 W, 1 m		86dB	85dB	87dB
performance recommendation		100-300W	100-300W	60-200W
test case		BR 15L	BR 15L	BR 15L
Reflex channel (dxl)		50cm ² x 28cm	40cm ² x 24cm	42cm ² x 25cm
valuation				
Price		around 230 euros	around 170 euros	around 200 euros
sound	40%	1.1 1.1 1.1 2.0 2.2 2.0	2.0 2.2 2.0 1.0 1.0 1.0	1.0 1.0 1.0 1.0 1.0 1.0
laboratory	35%	1.0 1.0 1.0 1.0		
Practice	25%			
Price-performance		outstanding	outstanding	outstanding
CAR & HiFi Issue 4/2019		Abs. top class top class	Abs. Top class Top class Upper class Middle class Entry	Abs. Top class Top class Upper class Middle class Entry
	grade	1.4	1.3	1.5
"Practical, compact subwoofers with a choice for all situations."				