# TA-110 & TA-210 Tonearms



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### Technical Data

#### TA-110 9 inch static-balance tonearm

Effective mass without headshell Effective arm length (distance between	3.5	g
the stylus and pivot point)	231	mm
Mounting distance (distance between		
the pivot point and turntable centre)	213	mm
Offset angle	23.9	degre
Overhang	18	mm
Tracking force adjusting range		
(direct reading)	0-3 g/ 0-4	g
Height adjustment range	35-55	mm
Diameter of the armbase mounting hole	19-20	mm
Diameter of the centre shaft of tonearm	18	mm
Inner null point	66	mm
Outer null point	120.9	mm
Counterweight for cartridge + headshell mass 18 and 28 g included	between	
Headshell LH-2000E included	45.5	
Headshell weight	15.5	0
TA-110 total weight including headshell	470	g
Tonearm cable 6NX-TSW-1010 included		
Extra mass ring for heavier cartridges included		
Extra mass ring weight	45	g

#### TA-210 12 inch static-balance tonearm

Effective mass without neadshell	5	g	
Effective arm length (distance between			
the stylus and pivot point)	329	mm	
Mounting distance (distance between			
the pivot point and turntable centre)	316.6	mm	
Offset angle	16.5	degrees	
Overhang	12.4	mm	
Tracking force adjusting range			
(direct reading)	0-3 g/ 0-4	g	
Height adjustment range	35-55	mm	
Diameter of the armbase mounting hole	19-20	mm	
Diameter of the centre shaft of tonearm	18	mm	
Inner null point	66	mm	
Outer null point	120.9	mm	
Counterweight for cartridge + headshell mass between			
21 and 28 g included			
Headshell LH-2000E included			
Headshell weight	15.5	g	
TA-210 total weight including headshell	536	9	
Tonearm cable 6NX-TSW-1010 included			
Extra mass ring for heavier cartridges included			
Extra mass ring weight	45	g	



## TA-110 & TA-210 Tonearms



Built upon the TA-100 and two areas of Ortofon's technological know-how, TA-110 and the new TA-210 have gone to the next level by reducing unwanted vibrations in the tonearm.

Expertise in materials and compounds is one of the cornerstones of Ortofon's technology platform that was applied along developing the TA-110 and TA-210 tonearms. As a specialist in technical rubber, Ortofon used one of its special rubber compounds when creating the specially shaped rubber insert with high vibration dampening properties for TA-110 tonearm. The TA-110 was given a precision machined slit in the middle of the aluminium tube, and a piece of Ortofon's special vibration damping rubber was inserted into the slit. An armtube without slit and rubber damper is symmetrical in a vertical and lateral plane with respect to vibrations. The slit breaks this symmetry, and mounting the rubber insert gives the desired damping.

The TA-210 tonearm is further improved with two important changes. The tonearm is given a precision machined slit in each end of the aluminum tube. Due to positioning of slits, the tube retains its strength, and distributed damping is provided. A piece of Ortofon special vibration damping compound is integrated into each slit: Rubber inserts with high vibration damping properties and Special proprietary TPE compound with excellent damping properties are integrated respectively in the bottom and top slit of the arm tube. Due to these two different materials an extended damping effect is obtained in the largest possible range.

The TA-110 and TA-210 armtubes are a lot less stressed than conventional armtubes due to the Technical rubber and TPE excellent damping properties. Both inserts integrated in the tonearm tube are manufactured at the Ortofon technical facilities in Nakskov, Denmark.

Ortofon's extensive knowledge of vibration properties and characteristics in different shapes and materials has been applied for optimization of TA-110 and TA-210 tonearms. TA-110 and TA-210 are the products with great benefits for the discerning analogue user.



- Tonearms are static balanced gimbal type arms, easy to use and adjust for optimal VTF settings.
- Tonearms are equipped with a standard headshell connector
- The tonearms have a standard 5-pin DIN connector for tonearm cable
- The tonearms geometry allows for a Baerwald alignment (also the IEC recommendations)
- Counterweight will work with headshell+cartridge mass approximately in the range 20 to 28 gram
- Extra mass ring for heavier combinations is included



TA-110 and TA-210 tonearms can ideally be combined with Ortofon Exclusive series cartridges: MC Windfeld, MC A90 and the new Expression.

The new High-end headshell LH-10000, incorporating damping technology similar to the tonearms, will be a perfect interface between TA-110/210 and Ortofon Cadenza series cartridges, MC Windfeld and MC A90.

