

The logo for CELESTION, featuring the word in a bold, white, sans-serif font with a red triangle pointing left at the top of the letter 'C'.

CELESTION

Professional Loudspeakers

A large, circular, metallic speaker grille is shown in a close-up, angled view. The grille has a fine mesh pattern and is set against a background of a blue sky with white clouds, suggesting an outdoor or high-altitude environment.

NTR

Cast Aluminium Chassis, Neodymium Magnet Drivers

FTR

Cast Aluminium Chassis, Ferrite Magnet Drivers

CDX

Neodymium & Ferrite Magnet Compression Drivers

TN

Pressed Chassis, Neodymium Magnet Drivers

TF

Pressed Chassis, Ferrite Magnet Drivers

Custom Driver Development Services

Your Global Driver Solutions Partner

NTR Cast Chassis, Neo Magnet Drivers

- Lightweight, high-performance drivers designed for high-end sound reinforcement applications.
- BL and stiffness (K) symmetry contribute to low distortion.
- Intelligent heat management reduces thermal compression, further minimising distortion.
- High temperature, copper, 'Inside/Outside' voice coils wound in-house.
- Rigid cast aluminium chassis for maximum mechanical integrity.
- Compact chassis design for space-efficient mounting in arrays.
- Extremely light weight design results in exceptional power-to-weight ratio.

Drawing on expertise gained in pioneering the application of Neodymium magnet structures to high-performance PA drivers, the Celestion R&D team has created a new range of high-end cast aluminium chassis Neodymium drivers for professional sound reinforcement applications – NTR.

With 6.5", 8", 10" and 12" models available first in a range that will grow to include 15" and 18" drivers, the new NTRs make extensive use of Celestion's advanced FEA modelling techniques to achieve a number of important performance advantages.

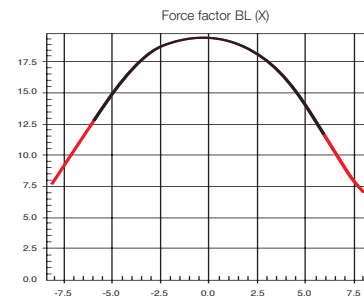
With particular focus on linear excursion via optimised suspension geometry and magnet topology, NTR provides application-specific control delivering more low frequency output, reduced distortion and increased longevity.

In addition to BL and stiffness (K) symmetry, NTR also achieves low thermal compression and distortion through intelligent heat management. Smart chassis design combines with vented magnet assemblies to dissipate heat quickly.

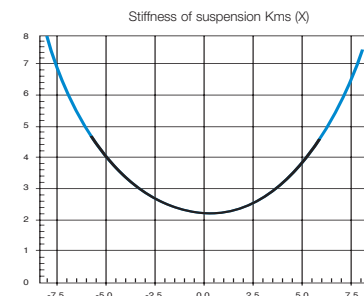
NTR also provides system builders with a particularly high power-to-weight ratio, and compact chassis designs well suited to close mounting in arrays.



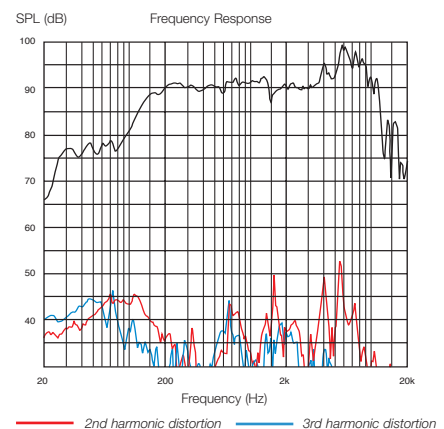
Typical NTR BL Symmetry



Typical NTR Stiffness (K) Symmetry



Typical NTR 2nd and 3rd harmonic distortion



CELESTION



NTR Range

NTR

	Nominal Diameter	Power Rating*	Impedance	Sensitivity	Frequency Range	Xmax	Voice Coil Diameter	Unit Weight
NTR06-1705B	6.5"/165mm	150Wrms	8Ω	95.5dB	150Hz-7kHz	2.0mm/0.8"	1.75"/44mm	0.85kg/1.87lb
NTR06-1705D	6.5"/165mm	175Wrms	8Ω	91dB	70Hz-7kHz	4.0mm/0.16"	1.75"/44mm	0.95kg/2.09lb
NTR08-2011D	8"/203mm	200Wrms	8Ω	92dB	70Hz-6kHz	4.0mm/0.16"	2.0"/51mm	1.5kg/3.1b
NTR10-2520D	10"/254mm	250W rms	8Ω	96dB	55Hz-3.5kHz	4.0mm/0.16"	2.5"/64mm	2.2kg/4.84lb
NTR10-2520E	10"/254mm	250W rms	8Ω	96dB	50Hz-3kHz	5.0mm/0.20"	2.5"/64mm	2.2kg/4.84lb
NTR12-3018D	12"/305mm	300W rms	8Ω	98dB	50Hz-4kHz	4.0mm/0.16"	3.0"/76mm	2.6kg/5.72lb

* AES Standard

Preliminary data.

FTR Cast Chassis, Ferrite Magnet Drivers

- High-performance LF drivers designed for high-end sound reinforcement applications.
- Smart chassis and magnet assembly design for efficient cooling, reducing thermal compression and minimising distortion.
- BL and stiffness (K) symmetry contribute to low distortion
- FEA optimised magnet topology reduces inductance, thereby minimising distortion.
- High temperature, copper, 'Inside/Outside' voice coils wound in-house.
- Water resistant, glass-fibre impregnated cones with sealed surrounds and added damping for reduced cone resonances.
- High excursion HDX subwoofers available.
- Lightest weight in class.

Typical of all high-end Celestion professional drivers, the Ferrite magnet FTR range combines linear excursion with advanced heat management to achieve low distortion and long product life.

Voice coils wound on both sides of a rigid glass-fibre former cool more quickly through greater contact with the air while vented magnets and a smart chassis design further enhance cooling efficiency.

The light weight, robust cast aluminium chassis is designed to minimise reflections back to the cone, significantly reducing acoustic distortion, and an FEA optimised magnet topology ensures even flux distribution around the air gap.

New FTR HDX

New to the FTR range are long-throw 12", 15" and 18" drivers designed specifically for subwoofer applications, featuring 4" voice coils and double suspensions for extra excursion control.



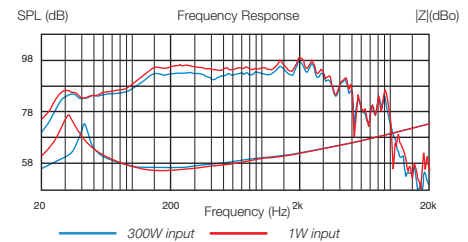
Smart chassis and magnet assembly design increases cooling efficiency.



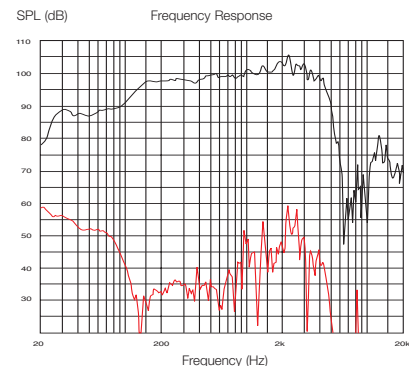
Voice coil wound 'Inside/Outside' for more effective cooling.



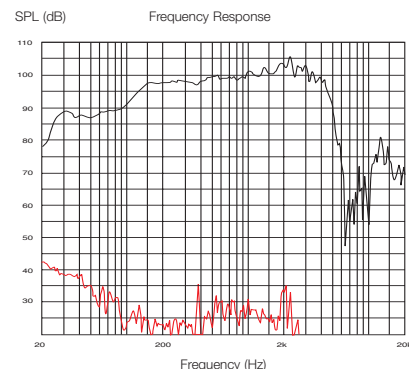
Efficient heat management reduces thermal compression. (Performance typical of an FTR driver).



Increased cooling efficiency combines with FEA optimised chassis, motor and suspension designs to reduce distortion. (Performance typical of an FTR driver).



2nd harmonic distortion



3rd harmonic distortion

CELESTION



FTR HDX Range

	Nominal Diameter	Power Rating*	Impedance	Sensitivity	Frequency Range	Xmax	Voice Coil Diameter	Unit Weight
FTR12-4080HDX	12"/305mm	1000Wrms	8Ω	93dB	47Hz-3kHz	8.0mm/0.32"	4.0"/102mm	9.6kg/21.12lb
FTR15-4080HDX	15"/381mm	1000Wrms	8Ω	96dB	40Hz-2kHz	8.0mm/0.32"	4.0"/102mm"	9.7kg/21.34lb
FTR18-4080HDX	18"/457mm	1000Wrms	8Ω	95dB	30Hz-3kHz	8.0mm/0.32"	4.0"/102mm"	9.8kg/21.56lb

FTR Range

FTR15-3070C	15"/381mm	400Wrms	8Ω	99dB	40Hz-4kHz	3.0mm/0.12"	3.0"/76mm	6.4kg/14.08lb
FTR15-3070E	15"/381mm	400Wrms	4Ω/8Ω	97dB	40Hz-4kHz	5.0mm/0.20"	3.0"/76mm	6.4kg/14.08lb
FTR15-4080F	15"/381mm	600Wrms	8Ω	97dB	35Hz-3kHz	6.0mm/0.24"	4.0"/102mm	9.4kg/20.68lb
FTR15-4080FD	15"/381mm	1000Wrms	8Ω	97dB	35Hz-2.5kHz	6.0mm/0.24"	4.0"/102mm	9.5kg/20.9lb
FTR15-4080HD	15"/381mm	1000Wrms	8Ω	94dB	35Hz-2.5kHz	7.0mm/0.28"	4.0"/102mm	9.5kg/20.9lb
FTR18-4080F	18"/457mm	600Wrms	8Ω	97dB	30Hz-3kHz	6.0mm/0.24"	4.0"/102mm	9.7kg/21.34lb
FTR18-4080FD	18"/457mm	1000W ms	8Ω	97dB	30Hz-2.5kHz	6.0mm/0.24"	4.0"/102mm	9.8kg/21.56lb

* AES Standard

Preliminary FTR HDX data

CDX 14 Series Compression Drivers

- High-performance, Neodymium magnet HF compression drivers for demanding sound reinforcement applications.
- FEA optimised balance of light weight and low distortion.
- Powerful, light weight Neodymium magnet structure.
- Rigid aluminium diaphragm with elastomer suspension minimises distortion.
- Voice coil wound directly onto diaphragm skirt for improved performance through enhanced cooling.
- Two slot phase plug for coherent wavefront at the horn throat.
- Copper sleeved pole reduces inductive rise for increased HF performance.



Providing a choice of flange or screw mounting devices, Celestion's CDX range has earned a reputation for performance and value among system builders.

Applying FEA to examine the behaviour of sound waves within a compression driver has resulted in a phase plug design for the CDX 14 Series that produces a more coherent wavefront at the driver exit.

The CDX-1430 incorporates an aluminium heat sink designed to conduct heat rapidly away from the Neodymium magnet, achieving an impressive 50Wrms power handling from a driver weighing less than 500g.



34mm aluminium diaphragm radiates from the convex side. FEA modelling is used to achieve the optimum balance of high SPL with minimum distortion.

Elastomer suspension allows long, smooth excursions for reduced distortion and increased driver life.



A two slot phase plug ensures that wavefronts radiated across the convex surface of the dome arrive coherently at the horn throat.

The voice coil is wound directly onto the 'skirt' of the diaphragm, increasing stiffness and improving cooling.

CDX 14 Series

	Magnet Type	Voice Coil Diameter	Throat Exit	Mounting	Diaphragm Material	Power Rating*	Impedance	Sensitivity	Frequency Range	Min Crossover Frequency	Unit Weight
CDX1-1415	Neodymium	1.4"/35.6mm	1"/25.4mm	Flange	Aluminium	20Wrms	8Ω	104dB	2kHz-20kHz	2.5kHz	0.25kg/0.55lb
CDX1-1425	Neodymium	1.4"/35.6mm	1"/25.4mm	Flange	Aluminium	25Wrms	8Ω	108dB	2kHz-20kHz	2.5kHz	0.39kg/0.86lb
CDX1-1430	Neodymium	1.4"/35.6mm	1"/25.4mm	Flange	Aluminium	50Wrms	8Ω	108dB	2kHz-20kHz	2.5kHz	0.47kg/1.03lb

* AES Standard

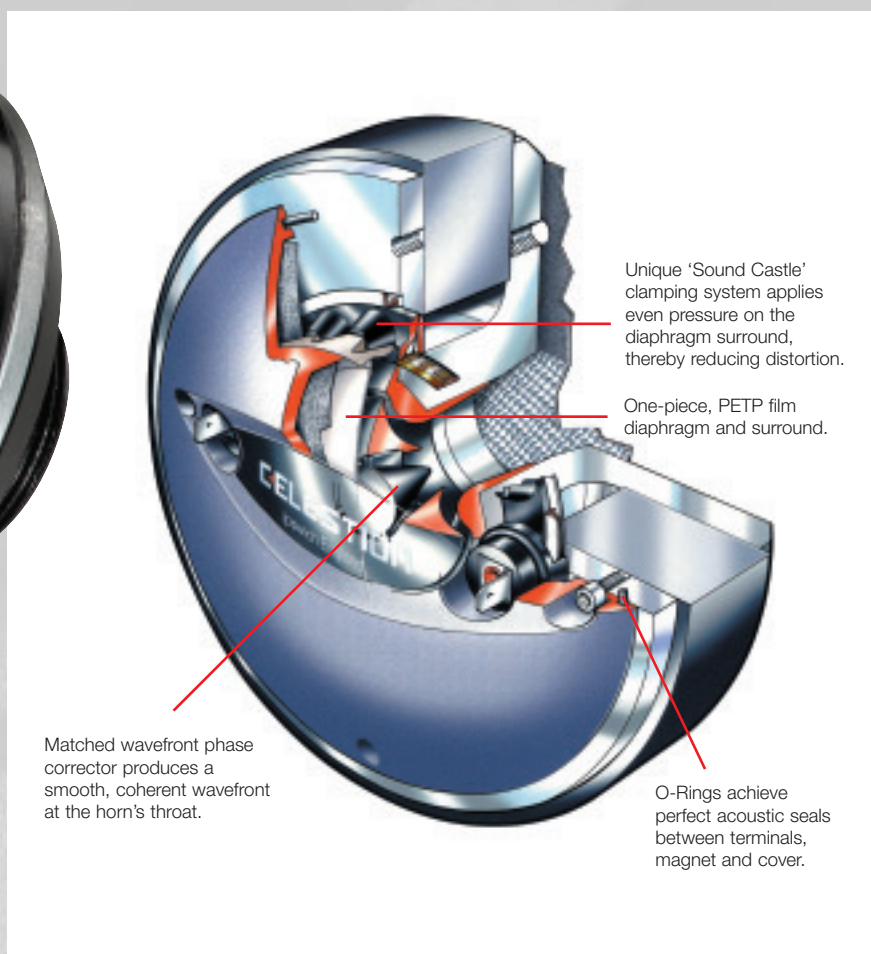
Screw mount adaptor available.

CDX 17 Series Compression Drivers

- Versatile range of Neodymium and Ferrite magnet HF compression drivers with screw and flange mountings.
- FEA optimised magnetic and acoustic design.
- Proprietary 'Sound Castle' diaphragm clamping system minimises distortion.
- Matched wavefront phase corrector produces a coherent wavefront at the horn throat.
- O-Rings for perfect acoustic seals between magnet terminals, magnet and cover.
- Polyimide insulated copper clad aluminium voice coils are edgewound on a glass-fibre former.
- Neodymium models are lightest and most compact in class.



With a choice of Neodymium or Ceramic magnet models, the CDX 17 Series drivers make extensive use of Celestion's industry-leading experience in Finite Element Analysis to optimise magnetic and acoustic design, achieving outstanding performance at highly competitive price points.



CDX 17 Series

	Magnet Type	Voice Coil Diameter	Throat Exit	Mounting	Diaphragm Material	Power Rating*	Impedance	Sensitivity	Frequency Range	Min Crossover Frequency	Unit Weight
CDX1-1745	Ferrite	1.75"/44.45mm	1"/25.4mm	Flange	PETP Film	75Wrms	8Ω	110dB	1.2kHz-20kHz	2.2kHz	2.3kg/5.06lb
CDX1-1746	Ferrite	1.75"/44.45mm	1"/25.4mm	Screw	PETP Film	75Wrms	8Ω	110dB	1.2kHz-20kHz	2.2kHz	2.3kg/5.06lb
CDX1-1730	Neodymium	1.75"/44.45mm	1"/25.4mm	Flange	PETP Film	75Wrms	8Ω	110dB	1.2kHz-20kHz	2.2kHz	0.75kg/1.65lb
CDX1-1731	Neodymium	1.75"/44.45mm	1"/25.4mm	Screw	PETP Film	75Wrms	8Ω	110dB	1.2kHz-20kHz	2.2kHz	0.75kg/1.65lb

* AES Standard

TN Pressed Chassis, Neo Magnet Drivers

- Versatile range of cost-efficient and dependable pressed steel chassis, Neodymium magnet drivers.
- FEA optimised Neodymium magnet designs reduce weight and cost.
- Rigid chassis designs for maximum energy transfer and vented magnet assemblies for efficient cooling.
- Kevlar-impregnated cones with sealed surround and damping for reduced distortion.
- High temperature copper voice coils wound on polyimide formers for increased reliability.
- Double roll surround for greater excursion control.
- Magnetically shielded.



Celestion's pressed steel drivers are widely acclaimed for their first-class performance, excellent reliability and price-performance ratio.

The TN range features optimised Neodymium magnet topology for improved efficiency, advanced flux control for increased sensitivity and smart venting to reduce thermal compression.

TN Range

TN	Nominal Diameter	Power Rating*	Impedance	Sensitivity	Frequency Range	Voice Coil Diameter	Unit Weight
TN820	8"/203mm	150Wrms	8Ω	94dB	60Hz-4kHz	2.0"/51mm	1.33kg/2.93lb
TN1020	10"/254mm	150Wrms	8Ω	98dB	65Hz-4kHz	2.0"/51mm	1.53kg/3.37lb
TN1225	12"/305mm	250Wrms	8Ω	97dB	50Hz-4kHz	2.5"/64mm	2.0kg/4.4lb
TN1230	12"/305mm	300Wrms	4Ω/8Ω	99dB	50Hz-4kHz	3.0"/76mm	2.1kg/4.62lb
TN1525	15"/381mm	250Wrms	8Ω	100dB	45Hz-3kHz	2.5"/64mm	2.35kg/5.17lb
TN1530	15"/381mm	300Wrms	8Ω	98dB	40Hz-3kHz	3.0"/76mm	2.8kg/6.16lb

* AES Standard

TF

Pressed Chassis, Ferrite Magnet Drivers

- Versatile range of cost-efficient and dependable pressed steel chassis, Ferrite magnet drivers.
- FEA optimised Ferrite magnet designs reduce weight and cost.
- Rigid chassis designs for maximum energy transfer.
- Vented magnet assemblies for enhanced cooling.
- Kevlar-impregnated cones with sealed surround and damping for reduced distortion.
- High temperature copper voice coils wound on polyimide formers for increased reliability.
- Double roll surround for greater excursion control.

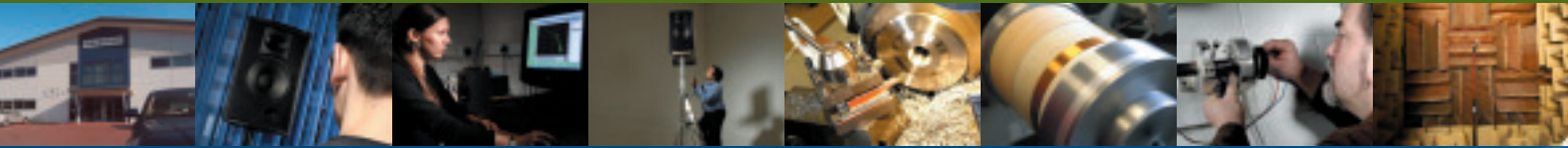


With eighteen models including closed-back midrange designs, Celestion TF provides system builders with a dependable, comprehensive range of conventional, pressed steel, Ferrite magnet drivers.

TF Range

TF	Nominal Diameter	Power Rating*	Impedance	Sensitivity	Frequency Range	Voice Coil Diameter	Unit Weight
TF0510 MR	5"/127mm	30Wrms	8Ω	91dB	480Hz-5kHz	1.0"/25mm	1.1kg/2.42lb
TF0510	5"/127mm	30Wrms	8Ω	91dB	130Hz-8kHz	1.0"/25mm	1.0kg/2.2lb
TF0615 MR	6"/152mm	50Wrms	8Ω	97dB	500Hz-5kHz	1.5"/38mm	1.4kg/3.08lb
TF0818 MR	8"/203mm	100Wrms	8Ω	99dB	800Hz-5kHz	1.75"/44mm	1.9kg/4.18lb
TF0818	8"/203mm	100Wrms	8Ω	94dB	70Hz-6kHz	1.75"/44mm	2.3kg/5.06lb
TF1015	10"/254mm	70Wrms	4Ω/8Ω	95dB	80Hz-6kHz	1.5"/38mm	1.7kg/3.74lb
TF1018	10"/254mm	100Wrms	8Ω	96dB	70Hz-6kHz	1.75"/44mm	2.4kg/5.28lb
TF1020	10"/254mm	150Wrms	8Ω	97dB	60Hz-3kHz	2.0"/51mm	3.7kg/8.14lb
TF1215	12"/305mm	100Wrms	8Ω	95dB	60Hz-5kHz	1.5"/38mm	2.4kg/5.28lb
TF1218	12"/305mm	100Wrms	8Ω	97dB	60Hz-4.5kHz	1.75"/44mm	2.7kg/5.95lb
TF1218 TC	12"/305mm	100Wrms	8Ω	98dB	50Hz-8kHz	1.75"/44mm	4.7kg/10.34lb
TF1220	12"/305mm	150Wrms	8Ω	97dB	60Hz-4kHz	2.0"/51mm	4.0kg/8.8lb
TF1225	12"/305mm	250Wrms	8Ω	97dB	40Hz-4kHz	2.5"/64mm	4.1kg/9.02lb
TF1225 e	12"/305mm	300Wrms	8Ω	96dB	50Hz-3kHz	2.5"/64mm	4.4kg/9.68lb
TF1520	15"/381mm	150Wrms	4Ω/8Ω	96dB	45Hz-4kHz	2.0"/51mm	5.0kg/11.0lb
TF1525	15"/381mm	250Wrms	8Ω	98dB	40Hz-3kHz	2.5"/64mm	5.2kg/11.44lb
TF1525 e	15"/381mm	300Wrms	4Ω/8Ω	97dB	45Hz-3.5kHz	2.5"/64mm	4.8kg/10.56lb
TF1530	15"/381mm	400Wrms	8Ω	99dB	40Hz-3kHz	3.0"/76mm	6.1kg/13.42lb

* AES Standard



Custom Driver Development Services

- Highly experienced, UK-based R&D team for custom driver development.
- Strong track record in developing proprietary drivers that meet and exceed the performance and budget requirements of the world's leading system builders.
- Industry leaders in Finite Element Analysis.
- Equipped with cutting edge measurement and characterisation tools including Klippel® analysis and one of the most advanced Loudspeaker Listening Facility available anywhere in the world.
- Sophisticated, secure on-line system for custom sample and data tracking.



At Celestion, our 'off the shelf' products are just the beginning of the story. Based in the UK, an experienced R&D team led by Technical Director Ian White has earned an enviable reputation for developing proprietary loudspeakers that meet precisely the very demanding requirements of our OEM customers.

Following consultation with the customer, the team uses Finite Element Analysis (FEA) to model the behaviour of virtual designs before committing to physical prototypes, optimising the choice of materials and driver design to best meet performance and cost requirements. Pioneering users of FEA for the prediction of motor distortion, mechanical and thermal properties, Celestion was the first loudspeaker manufacturer to use FEA for vibro-acoustic modelling, and also to predict magnetic inductance, subsequently combining these results with magneto-static modelling to provide a complete, voltage-coupled model.



Celestion engineers enjoy access to one of the best equipped loudspeaker design, development, testing and measurement facilities available anywhere in the world. A drawing office equipped with the latest CAD technology is located above a



laboratory which is itself fully equipped to produce prototype designs, with direct access to an anechoic chamber for precision measurement and a power testing room for ensuring long-term reliability.



Celestion engineers make extensive use of industry-standard measuring equipment including a scanning laser velocity meter, and a Klippel® distortion analyser to optimise motor design, voice coil alignment and cone suspension in pursuit of BL and stiffness (K) symmetry.



In addition to these sophisticated measurement facilities, Celestion's R&D facility also houses one of the world's most advanced loudspeaker listening rooms. Leading recording studio designer Philip Newell has created a 'room within a room' – the outer chamber constructed from sand filled concrete blocks to provide noise isolation while the inner chamber incorporates the floating floor, membrane absorbers and bass traps that apply the acoustic treatment. The result is a controlled and perfectly isolated, acoustically neutral environment for critical listening.



Throughout the development, sampling, measurement and production engineering processes, customers are able to track progress and data in a secure, password-protected area on the Celestion Professional website.



From a minor modification to an existing product through to a completely new design, Celestion is equipped and resourced to provide system builders with dependable, high-performance, cost-efficient loudspeaker drivers.



Customer Services and Global Operations

- OEM account managers located in all major territories.
- Warehousing and logistics centres in the US (East and West Coast), Europe, China and Hong Kong.
- As part of the US\$ 1 Billion Gold Peak group, Celestion manufacturing takes place at our own, 30,000m² facility in China.
- ISO9000 quality and ISO14000 environmental management accreditations.
- Close integration of worldwide R&D, manufacturing and logistics operations.



● International Sales ● Warehouse Locations ● Manufacturing ● Custom Driver Development Services



**OEM Sales
Western USA**

Rick Skillman
+1 951 833 4155
rick.skillman@celestion.com



**OEM Sales
Eastern USA**

Stan Burjek
+1 815 600 4718
stan.burjek@celestion.com



US Sales Manager

Andy Farrow
+1 732 616 7217
andy.farrow@celestion.com



**Head Of Sales &
Marketing**

Paul Richardson
+44 (0) 797 349 3471
paul.richardson@celestion.com



**OEM Sales
Europe & Asia**

Kevin Shove
+44 (0) 772 193 9646
kevin.shove@celestion.com



**OEM Sales
Europe**

Mehmed Murtic
+386 (0)40 419 000
mehmed.murtic@celestion.com



**OEM Sales
China**

Kevin Yeung
+86 13825205710
kevin.yeung@celestion.com

CELESTION



CELESTION

Professional Loudspeakers

Your Global Driver Solutions Partner

Celestion International Ltd., Claydon Business Park, Great Blakenham, Ipswich IP6 0NL, UK Tel: +44 (0)1473 835300

www.celestionprofessional.com

Celestion adopts a progressive policy and we reserve the right to alter drive unit specifications and/or appearance without prior notice.
LIT 0680 / 0703