REFERENZ AIR

inakustik

KABEL | LAUTSPRECHER | MUSIK

AIR high-end cables

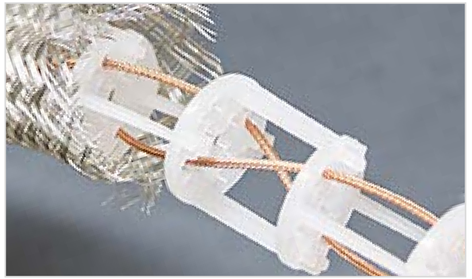
For a unique listening experience

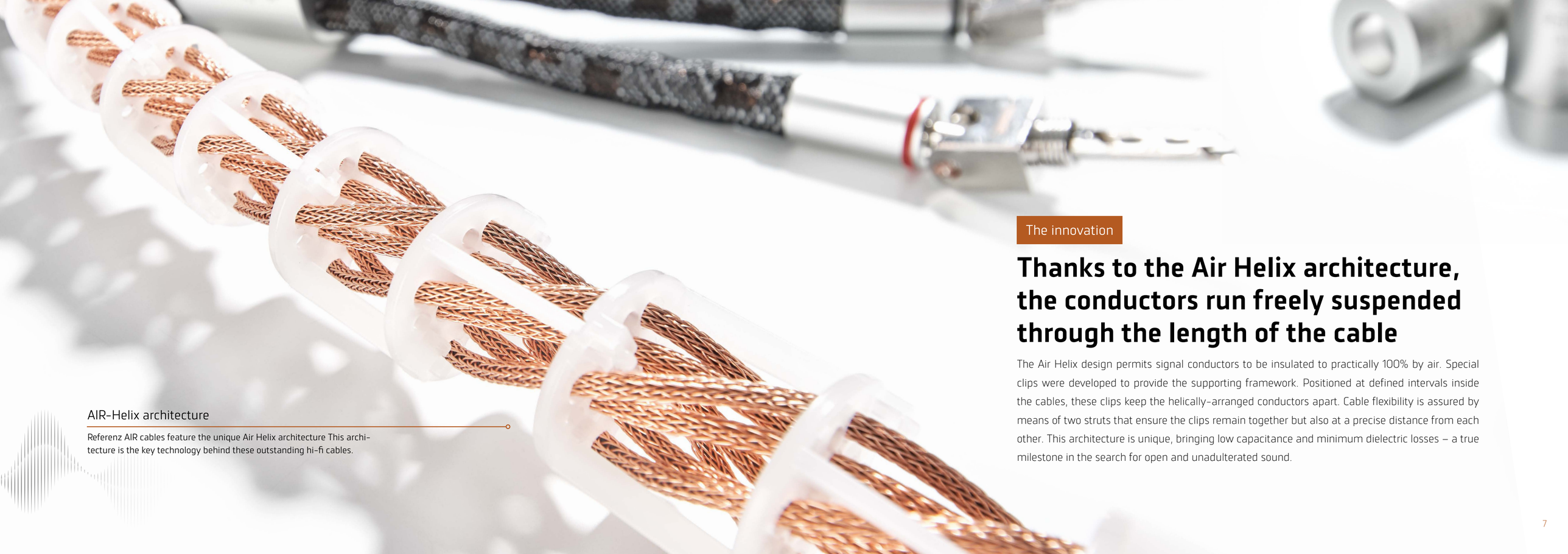
Delivering music that is clear and rich in emotions. Developed by our own in-house engineers, and used in combination with high-quality audio components, our AIR technology allows studio or live recordings to be reproduced in an authentic way and with minimum loss. The technology is now in its fifth generation.

Our approach

Minimizing losses

Our Referenz AIR cables transport audio signals between source, amplifier and speaker in an authentic way and with a minimum of loss. You can enjoy music that precisely expresses the emotions of the artists at the time of recording – sensual, subtle, light-hearted or orchestral right through to full-blooded and rocking. Vocals and instruments are delivered in unadulterated form. Everything remains vibrant and full of emotive energy. Favorite tracks and pieces continue to trigger strong feelings even when you've heard them a hundred times over.





AIR-Helix architecture

Referenz AIR cables feature the unique Air Helix architecture This architecture is the key technology behind these outstanding hi-fi cables.

The innovation

Thanks to the Air Helix architecture, the conductors run freely suspended through the length of the cable

The Air Helix design permits signal conductors to be insulated to practically 100% by air. Special clips were developed to provide the supporting framework. Positioned at defined intervals inside the cables, these clips keep the helically-arranged conductors apart. Cable flexibility is assured by means of two struts that ensure the clips remain together but also at a precise distance from each other. This architecture is unique, bringing low capacitance and minimum dielectric losses – a true milestone in the search for open and unadulterated sound.

The key features

Additional benefits of the AIR cables

Using air as a dielectric lowers capacitance to a minimum

The insulation between the conductors (also known as the "dielectric") is of key importance for the quality of the sound. Signal transport is impacted by the insulating material, the distance between the conductors and the surface of the conductors. In comparison with other insulators, using air as a dielectric leads to no increase in capacitance and creates no dielectric losses. Sound signals are not impeded or altered during transport, a vital advantage when it comes to audio playback. Our fifth-generation Referenz AIR cables use solely air as a dielectric.

Point-to-point Air Helix for end-to-end connections

A new feature in the fifth-generation of in-akustik's Air Helix architecture is the point-to-point connection. Specially designed transitions are available for each type of cable and connector. Across the complete length of the cable – point-to-point AIR Helix. It may sound trivial at first, but the results are impressive. Acoustic signals are transported with minimized losses, right through to the final centimeters. The sound is more detailed and dynamic than even before.

Polyethylene network jacket without sub-coating

There is a huge number of cables on the market, most with a PVC sheath surrounded by a textile or plastic braid. This sheath is meant to protect the cable from mechanical damage. In the hi-fi area, however, it is unsuitable because (depending on the cable type) the jacket may act as part of the dielectric, negatively impacting capacitance and causing dielectric losses. At in-akustik, we deliberately don't use a PVC sheath in order to avoid capacitance and any consequent dielectric losses. The sheaths for Referenz AIR cables are made of polyethylene monofilaments. These hold the conductors tightly together, reduce micro-vibrations and allow extreme dynamic peaks to be processed in an unadulterated fashion.

Multiple-nested multicore structures lower inductance

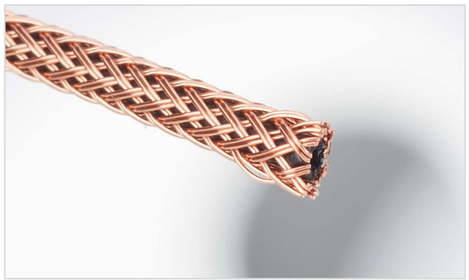
Inductance is critical to the capacitance of a loudspeaker cable, causing resistance to the signal flow, rising with the frequency. Current flow through a cable creates magnetic fields. Depending on how closely together cables are arranged, and on the direction in which the current is flowing, cables have an influence on each other. Their magnetic fields can be neutralized or increased. In our multicore architecture, we deliberately exploit stray magnetic fields. By cleverly arranging the conductors in the multiple nested multi-core structures, overlapping magnetic field areas are created that significantly reduce inductance. This allows the entire frequency spectrum, including high frequencies and dynamic impulse sequences, to be transported in an unimpeded way and with no delays. The music seems more exquisitely detailed, and the sound gains in fine dynamism. All details are kept distinct yet harmonious at the same time.

NEW: Point-to-point AIR Helix.
Air dielectric right through to the end of the cable

Cross Link Super Speed waveguides bring homogenous transport of electrical signals

The Cross Link Super Speed waveguide avoids so-called "skin effects" caused by eddy currents in the conductor that occur with increasing frequencies and high energetic impulses. It has a polyethylene core and a ring-shaped structure, with a usable cross-section that remains the same for all frequencies and in all situations. Thanks to the braided structure, the waveguide is able to precisely transport even extreme current peaks. A lacquer coating around each wire prevents eddy currents within the conductor and protects the wires against oxidation.

All this results in a conductor that delivers a balanced sound consisting of vibrant and never overemphasized timbres, even in complex musical passages and at high volume levels.



Excellent conductor materials: pure copper or silver

The conductor material is a crucial factor for the transmission of sound signals. Any impurity in the conductor material impedes the flow of current, diminishes the conductivity and increases background noise, also known as "shot noise". In our Referenz AIR cables we therefore use only pure oxygen-free copper (OFC) or pure silver. Both materials have an excellent conductivity value. When using copper, we ensure that only carefully selected batches of pure copper are processed. We take great pains to measure the quality of the copper before it is sent to the mill for drawing to the required cross-section over the course of a multi-stage process.

Pure silver conductors: A material's electrical conductivity depends on the number of free electrons and their drift speed. Pure silver is regarded as the best conductor, delivering more detail across all frequency ranges. The charismatic sound of pure silver is primarily due to its high drift speed. But there is one problem we need to mention: using pure silver is extremely costly.

Rhodium-coated connectors prolong cable lifetimes

Even the best cable deteriorates massively in quality when insufficient attention is paid to the connection technology. Pure copper is not suitable here due to the softness of the material. At in-akustik, we therefore use tellurium copper, an alloy of copper and tellurium. This alloy is a harder metal. Its great advantage is that the conductivity remains at a high level, far superior to that of brass connectors. The additional coating with rhodium ensures robust connectors with high longevity and high resistance to corrosion. The precious metal is capable of withstanding numerous connection cycles, continuing to display good contact characteristics even after frequent reconfigurations and experimentation. Conductivity also remains at a high, stable level. These are important advantages, particularly compared to contact enhancement using gold, a softer material that rubs off more quickly.

Securely pressure-grouted contacts (1.5 tonnes) for lower contact resistance

Soldering is normally regarded as a robust and reliable technique for use in connection technology. However, it has disadvantages when used for audio cables, such as less conductive solder in the signal path and the emergence of low thermoelectric emfs. Both factors diminish audio signal flow, even if the effect is minimal. The contact elements on the RCA and BFA plugs and lugs (spades) belonging to our Referenz AIR cable range are pressure-grouted together with the conductor material using a special tool that exerts a force of 1.5 tonnes. This ensures a stable and reliable connection between the connector and the Referenz AIR cable without needing ferrules or an additional material such as solder. Contact resistance and other negative effects are avoided.

Fifth-generation AIR cables

Making something special even better

Special things don't come into being by chance. Products become special through a combination of experience, an ongoing search for perfection, inspiration and feedback from users. The phenomenal feedback we received about previous generations of our outstanding AIR cables spurred us on to find ways we could improve our products even further. And so we set out to create the fifth generation of our Referenz AIR series. We have now reached a new stage on our evolutionary journey.

Point-to-point AIR Helix design

The fifth generation of our Referenz AIR cable is now available! Point-to-point Air Helix design ensuring seamless connections, special types of connector for easy attachment and all-round technical sophistication turn the outstanding AIR cables into true masterpieces.

What's new?

Point-to-point AIR Helix design

Specially designed transitions for each type of cable and connector ensure a seamless extension of the Air Helix architecture from cable beginning to cable end – from point to point. Up to now, it wasn't possible to extend the Air Helix design right through to the connector, meaning the last few centimeters were insulated using conventional methods. Our customers encouraged us to find an answer to this, and now we can present our solution! We thought the impact of these enhancements would be relatively small, but the actual results have come as a pleasant surprise. We look forward to your feedback.

BFA 360/Spade 360 connectors

Movement across three axes make the 360-degree BFA and spade connectors really easy to connect and disconnect. Difficult set-up operations that put a strain on both cables and devices are a thing of the past. The connectors can easily be attached to terminals from a wide range of manufacturers. No awkward bending is necessary, avoiding damage to surfaces and potential contact resistance. Set-up is fast and problem-free. The attractively designed connectors are the perfect complement to the outstanding sound. The new connectors are used with the LS-4005 and LS-2405. Both connector versions as well as the Basic version for the LS-1205 are pressure-grouted with a force of 1.5 tonnes.

XLR-180 connectors

It is usually only possible to insert XLR connectors in one direction. Because XLR sockets are arranged differently from device to device, this can sometimes prove tricky. Cables sometimes need to be rotated, putting extra strain on cables, connector and sockets. The newly developed XLR-180 connectors from in-akustik can be rotated by +/- 45 degrees (up to a total of +/- 90 degrees) for easy connectivity.

RCA SL connectors (RCA SolderLess)

Soldering is a reliable and well-established joining technique, but it has its drawbacks. Disadvantages include the presence of less conductive solder in the signal path and the emergence of low thermoelectric emfs. In our fifth generation, the signal conductors and contact elements are pressure-grouted together with a force of 1.5 tonnes. A further seemingly tiny improvement that brings great rewards in audio performance.

„Music is more than sound and frequency. It tells stories, awakens memories, and carries us back to moments that have shaped us. A song can lift us up, give us strength, and touch us like almost nothing else. To experience this magic in its purest form, we need a connection that adds nothing and takes nothing away – only the music itself.“

We do our utmost to ensure you can listen to music in the most authentic way possible and discern even the tiniest detail – music that is true to life and packed with vivid tones

Speaker Cable

LS-4005 AIR

- AIR Helix Point-to-Point
- Dielectric: air
- 16-fold multicore
- Cross Link Super Speed waveguide
- 2 x 9.6 mm² (16 x 1.2 mm²)
- Pure OFC copper
- Cable diameter: 40 mm
- Connectors: BFA 360°; Spade lug 360°
- Beryllium copper (BFA); tellurium copper (Spade)
- Rhodium-coated
- Single bi-wire; single wire
- Pressure-grouted contacts (1.5 tonnes)
- Individual inspection prior to shipping
- Lenth: 2m | 2,5m | 3m | 3,5m | 4m | 4,5m | 5m | Custom lengths on request

From 5.590 EUR

"This cable has what it takes to lift the performance of my chain into the next higher class! The difference between the not-too-bad entry-level strip of the system owner and the super-cable from the Black Forest was so great that it prompted me, with some cursing, to seriously go and check the balance of my bank account." Fidelity *

"A load of thought and craftsmanship has been put into this cable. The LS-4004 AIR is one of the best cables we have ever come across," stereoplay | *Previous model LS-4004 AIR

BFA & SPADE	MULTICORE	CROSS SECTION
360°	16	19,2

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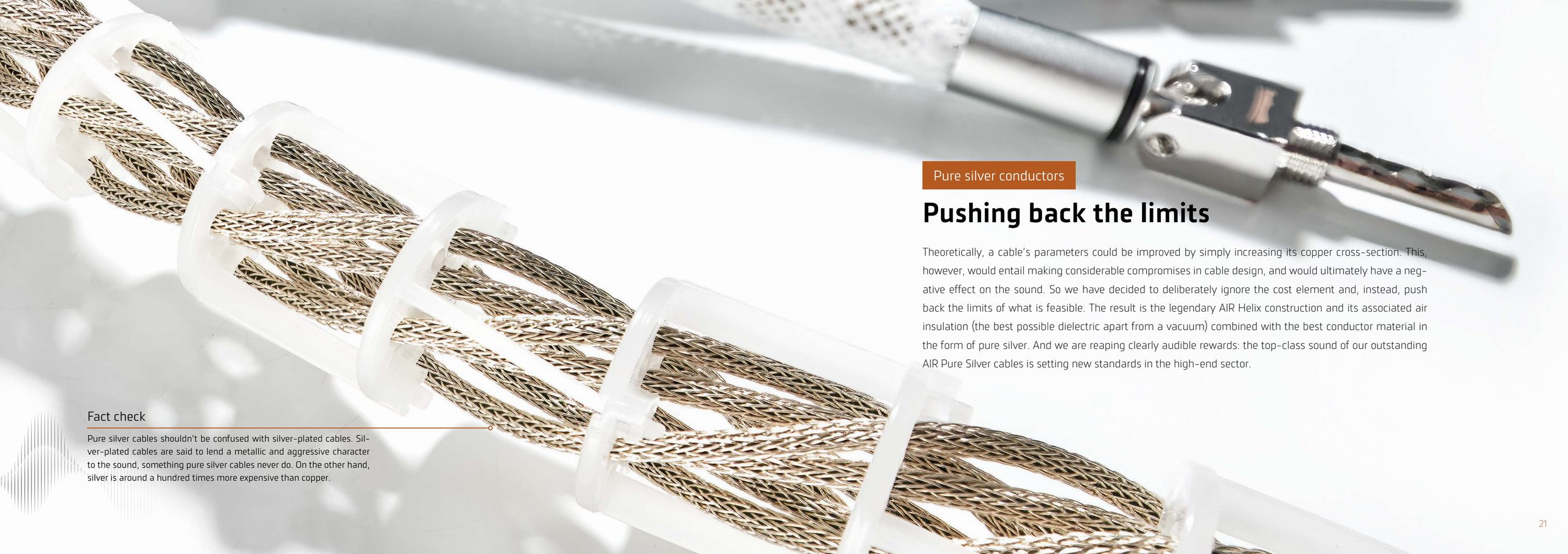
"This cable transmits such honest and authentic sound that at first you might not realize you're hearing it through a cable at all. It makes listening to music that much more enjoyable!"

Test listener Steffen B
in-akustik.de/probehoeren



Pure silver conductors

Pushing back the limits

Theoretically, a cable's parameters could be improved by simply increasing its copper cross-section. This, however, would entail making considerable compromises in cable design, and would ultimately have a negative effect on the sound. So we have decided to deliberately ignore the cost element and, instead, push back the limits of what is feasible. The result is the legendary AIR Helix construction and its associated air insulation (the best possible dielectric apart from a vacuum) combined with the best conductor material in the form of pure silver. And we are reaping clearly audible rewards: the top-class sound of our outstanding AIR Pure Silver cables is setting new standards in the high-end sector.

Fact check

Pure silver cables shouldn't be confused with silver-plated cables. Silver-plated cables are said to lend a metallic and aggressive character to the sound, something pure silver cables never do. On the other hand, silver is around a hundred times more expensive than copper.

Speaker Cable

LS-8005 AIR Pure Silver

- AIR Helix Point-to-Point
- Dielectric: air
- 16-fold multicore
- Cross Link Super Speed waveguide
- 2 x 9.6 mm² (16 x 1.2 mm²)
- High-purity silver
- Cable diameter:70 mm
- Connectors: BFA 360°; Spade 360°
- Beryllium copper (BFA); tellurium copper (Spade)
- Rhodium-coated
- Single Bi-Wire; Single Wire
- Pressure-grouted contacts (1.5 tonnes)
- Individual inspection prior to shipping
- Length: 2m | 2,5m | 3m | 3,5m | 4m | 4,5m | 5m | Custom lengths on request

From 62.800 EUR

For maximum conductivity, we have thoroughly analyzed the conductor material. Copper is already an excellent standard, but under real-world conditions, silver is the superior choice. With an electrical conductivity of 61.35 S/m, it surpasses copper by about six percent. Silver-plated conductors often alter the sound character in undesirable ways, while pure silver remains neutral. Thanks to the higher drift velocity of electrons, our pure-silver cable enables exceptionally precise signal transmission, although at material costs roughly one hundred times higher than copper.

BFA & SPADE	MULTICORE	CROSS SECTION
360°	32	38,4

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"There's nothing magical about cables. The best cables are not those that get the most out of a hi-fi chain, they're the ones that lose the least of the original sound."

Holger Wachsmann
Product developer at in-akustik

Power supply

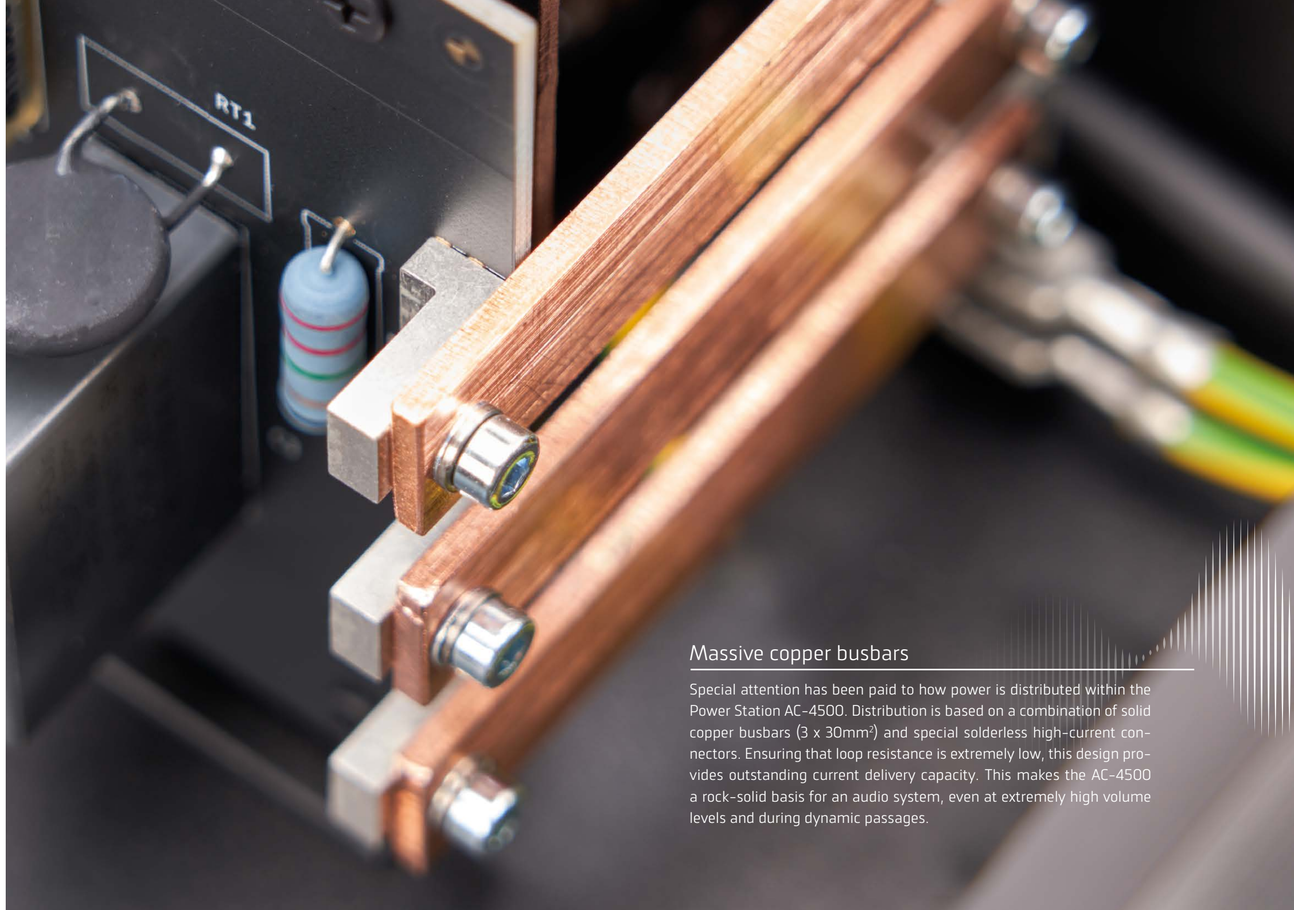
AC-4500 Power Station

- Filter type I for analog devices
- Filter type II for digital devices
- DC suppression high current
- High-quality sockets
- Copper busbars | 3 x 30mm²
- Metal housing
- Separately shielded socket groups
- Brushed aluminum front panel
- All-pole mains disconnection
- Surge protection
- CE compliance
- Number of outputs: 6
- Mains connection: IEC C-20 socket
- Operating voltage: 230 VAC / 50-60Hz
- Max. operating current: 16 amps (total)
- Max. connected load: 3680 watts (230VAC / 16A)
- Protection class 1
- Black or natural aluminum models
- Dimensions: approx. 450 x 386 x 122mm
- Weight: approx. 15 kg (fully equipped)

From €4.118

Where does fine sound begin? Where does it end? These questions ring constantly in our ears. The truth is, various factors have a major impact on the sound quality produced by audio systems, and one of these factors is power supply. It is subject to fluctuations that vary depending on the location of your home (in a city or a rural environment). If we look at things from a purely physics perspective, the music produced by a loudspeaker is ultimately nothing more than domestic current converted into sound. This statement sounds almost too banal compared to the hi-fi jargon we are all accustomed to. Unfortunately, all too often we ignore where the sound actually comes from and the importance of having a stable power supply. A "clean" current is the raw material of fine sound, and our new Power Station AC-4500 makes sure that this is what you get.

The Power Station AC-4500 is available in several versions – from a basic model with one filter for all six sockets through to the top model that comes equipped with six separate filters, one for each socket. The models differ not only in the number of filters they are equipped with, but also in the combination of filter types they provide – type I (for analog devices) and type II (for digital devices). The Power Station AC-4500 was developed



Massive copper busbars

Special attention has been paid to how power is distributed within the Power Station AC-4500. Distribution is based on a combination of solid copper busbars (3 x 30mm²) and special solderless high-current connectors. Ensuring that loop resistance is extremely low, this design provides outstanding current delivery capacity. This makes the AC-4500 a rock-solid basis for an audio system, even at extremely high volume levels and during dynamic passages.

Modular design

A particular highlight of the AC-4500 is its modular design. 6 sockets are provided, tailored for either analog or digital components. Smaller audio systems may initially require a version with only one or two modules, but this can always be expanded to cater for any devices added in the future.

completely in-house, and each unit is manufactured in the company's own facility. Units subsequently undergoes rigorous testing with documentation of the results. Because safety is paramount for this type of unit, we have also arranged for an accredited laboratory to verify CE/CB conformity.

Custom-made

Ferrite cores are the first line of defense against interference, suppressing high-frequency interference through their inductance-enhancing effect. That's why the Power Station AC-4500 comes equipped with powerful ferrite cores positioned directly downstream of the sockets.

Custom-made filter circuits are a further means of minimizing unwanted interference, but it is crucial that the filter type suits the application for which it is required. Countless tests and measurements using various circuit configurations have shown that digital and analogue devices require different filter designs. And this is why the Referenz Power Station AC-4500 comes equipped with two different filter types depending on the particular configuration: type I for analog devices and type II for digital devices. These two types have a radically different filter design.

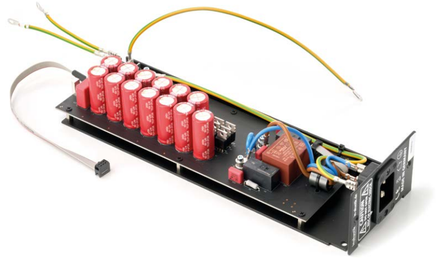
Type I is a series filter network in which coils conduct the useful current, offering a high level of resistance against interference.

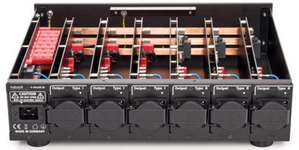
Type II, however, is a parallel filter network that diverts troublesome interference frequencies to ground. This filter network is also very finely tuned to the requirements of an audio system.

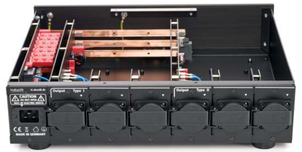
The central core

Many household devices use only a half-wave of the AC mains current. For this reason, the 50 Hz sine waveform is asymmetrical and DC voltage components appear (DC offset). This leads to an "asymmetrical" power supply to the connected hi-fi components, leading to potential saturation of the unit's internal transformers. On top of the many adverse sonic effects and impaired efficiency, this also results in the transformer making an annoying buzzing sound.

At the heart of every Referenz Power Station AC-4500 is its powerful DC suppression, filtering DC components from the power system. This ensures that the connected devices are re-supplied with "symmetrical" current, so protecting the transformers from magnetic saturation.







The versions

The Power Station AC-4500 is available in several versions – from a basic model with one filter for all six sockets through to the top model that comes equipped with six separate filters, one for each socket. The models differ not only in the number of filters they have, but also in the combination of filter types I and II they provide.

The housing

The Power Station's sensitive technology is protected by a robust metal housing made of 2 mm-thick galvanized sheet steel. It has an elegant front panel made of brushed aluminum. The interior of the housing is designed so that the socket groups are shielded from one another, and any interference stemming from the connected devices is unable to propagate.

Configuration FULL 6F
3 x analog filter boards &
3 x digital filter boards
(see image)

Configuration MID 3F
1 x analog filter board &
2 x digital filter boards

Configuration MID 3F
2 x analog filter boards &
1 x digital filter board

Configuration MID 2F
1 x analog filter board &
1 x digital filter board
(see image)

Configuration SMALL 1F
1 x digital filter board
(see image)

Configuration SMALL 1F
1 x analog filter board

Surge protection

The Referenz Power Station AC-4500 is surge protected in order to shield the unit and any connected devices from extreme voltage peaks (possibly stemming from household devices with poor interference suppression, building infrastructure, machinery or atmospheric interference). Unlike conventional units, the AC-4500 comes with an additional "gas discharge pill". Over time, recurring overvoltages (transients) can damage standard components or even destroy them, compromising the surge protection or even rendering it completely ineffective. In the case of the AC-4500, however, its gas discharge pill absorbs the majority of the energy peak and ensures long-lasting, reliable surge protection.

Power Cables

AC-4005 AIR

- AIR Helix Point-to-Point
- Dielectric: air
- 16-fold multicore
- 2 x 4.0 mm² (16 x 0.5 mm²)
- Pure copper
- Shielding: thick copper braiding, tin-plated (oxidation protection)
- Cable diameter: 40 mm
- Connectors: Referenz UHQ & open cable ends
- UHQ: SCHUKO | NEMA -> C15 (C13) & SCHUKO | NEMA -> C19
- Individual inspection: Function | Ground wire | Insulation | High voltage
- Certificate included | Protection Class 1
- Load C15: 2300 W (230 V AC / 10 A)
- Load C19: 3680 W (230 V AC / 16 A)
- Rated voltage: 250 V AC | 50/60 Hz
- Rated current: 10 A / 16 A
- Length: 1 m; 1.5 m; 2 m; 3 m | Custom lengths on request

From €2,799

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A hi-fi system basically reproduces nothing other than modulated household electricity. Ideally, this should be made available to the components without any further inhibition. However, dynamic music with complex bass runs places an impulsive load on the electronics of the integrated or power amplifiers belonging to a high-end hi-fi system. Here the power cable plays a significant role. The challenge for power cables on audio devices with a high sound quality are extreme current peaks that can generate strong magnetic fields and interference radiation, leading to power losses at line and transition resistances. These rapidly changing increases and decreases in current must be passed on to the electronic components with as little delay as possible, since a blocked current flow would have a negative effect on the sound. Physics tells us that an electrical conductor has capacitive and inductive characteristics in addition to its resistance, and these disturb the flow of energy between the power socket and the hi-fi device. The goal is always a power supply without any time-lag and with minimum loss, enabling large amounts of energy to be transported in a very short time. Accordingly, the power cord from the wall socket to the hi-fi equipment plays a very important role in the transmission chain.

PLUG	MULTICORE	CROSS SECTION
UHQ	16	8,0

"A better grip on the asphalt. Everything appeared sharper and darker – like a panther in the night."

stereoplay
Previous model AC-4004 AIR

Perfect sound for audiophiles: Specially designed for connecting up top-notch high-end audio systems, the Referenz AIR power supply cables are based on the already legendary in-akustik AIR technology. Their many special features effectively counteract the undesirable effects encountered while supplying power to high-performance audio components and make supply cables what they should ideally be: superb energy pipelines for perfect high-end sound.

Shielding against interference fields: Unlike most other power cables, the in-akustik Referenz AIR cables are encased in a dense shielding braid of tinned copper. This protects the hi-fi system from external interference and any nearby cables and audio components from radiating interference fields caused by the high current peaks in the cable. The tinning of the braid also prevents any oxidation of the cable.

Safety is of the utmost priority to us: However much we focus on high-end sound, safety plays a particularly important role in this cable category. That's why every Referenz AIR power cable is tested and inspected extremely carefully. In addition to an exhaustive functional test, each cable is also subjected to an insulation and high-voltage test. The results are documented, and each cable is given an individual serial number.

Entering the high-end world

Micro AIR technology

Our Referenz AIR cables have already caused something of a sensation in the world of high-end connections. And we have used the very same principles of physics to develop our Referenz Micro AIR series. As the name suggests, air plays a central role in this technology due to its excellent dielectric properties.

Cables in general don't produce any sound; they have a filtering effect and interact with the other audio components. We believe audio connections should be as unobtrusive as possible and cause no sound coloration. Although such effects may be astonishing to hear the first time around, they actually distort the original, and become annoying over time. The challenge is therefore to keep any losses and interactions to an absolute minimum. This was our aim during development of the Micro Air series – and once again we achieved our goal.

Background

Our physical approach

Micro AIR technology

We are not able to switch off the laws of nature, so the best we can do is use them as ingeniously as possible. Due to the laws of nature, every cable exerts so-called parasitic effects. These include capacitance – the capacity to store energy like a battery and release it again with a time delay. This effect has a considerable impact on the transmission of audio signals and is therefore unwelcome. Capacitance is a physical property, and its value depends on a number of different factors, one of the most important of which is the insulation material used, also known as the "dielectric". The dielectric material can considerably increase the capacitance of the cable. Because air doesn't do this, it's ideal for insulation purposes. One of the insulation elements in the MICRO AIR technology is a complex, diamond-shaped structure. The tiny chambers created by this structure increase the distance between the conductors and raise the air content of the insulation. This method reduces troublesome capacitance effects and optimizes the cable's transmission characteristics for the sensitive audio signals it needs to transport.

Electrostatics and capacitance

It's something we're all familiar with: when you take off a sweater with a high synthetic content you hear a crackling sound. The reason for this is that the integrated plastic material stores electrical energy, and then discharges it again. The same thing happens in the dielectric material of a cable. It "absorbs" electrical energy like a sponge and then releases it again. In the case of an audio cable, however, this electrical energy is part of the audio signal.

This problematic storage capacity of a cable is referred to as its "capacitance". While capacitors intended to store energy should have a correspondingly high capacitance, the capacitance of a cable should be as low as possible. If this is not the case, it can have a serious detrimental effect on the transmission characteristics and also lead to interactions with connected electronic devices. The ideal solution is therefore air insulation such as that implemented with the Micro AIR (and previous AIR technology), reducing the capacitance to an absolute minimum.

Concentric copper

Unlike the sometimes chaotic arrangement of individual wires in conventional conductor designs, concentric copper conductors are arranged in a precisely defined multi-layer pattern. This design reduces irregular contacts between the wires, so harmonizing the signal flow and minimizing run-time differences. Impulses are reproduced with pinpoint accuracy and the spatial information in the music is preserved. A thin layer of polyethylene protects the pure copper against oxidation.

Speaker cable

LS-404

- Micro AIR technology
- Dielectric: air chambers
- 8-fold multicore
- Conductor design: concentric copper
- 2 x 10.48 mm² (8 x 2.62 mm²)
- Pure OFC copper
- Cable diameter: 16.5 mm
- Connectors: BFA; Spade lug; Easy Plug
- Connector material: solid metal
- Contact material: brass (Spade) | beryllium copper (BFA)
- Rhodium-coated
- Single bi-wire; single wire
- Screw-type contacts
- Length: from 2m | Custom lengths on request

From €651

Product overview
Micro AIR cable
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"Inakustik recommends the LS-404 Micro Air 'first and foremost for full-size floor-standing loudspeakers'. Personally, I would phrase this a little differently. The Inakustik LS404 Micro Air is a fantastic cable for all full-range broadband speakers that don't require 'support' in a specific frequency range and are able to adequately deal with the extremely high resolution and precise dynamics transported by the Inakustik LS-404 Micro Air." Value for money: excellent. HiFi-Test

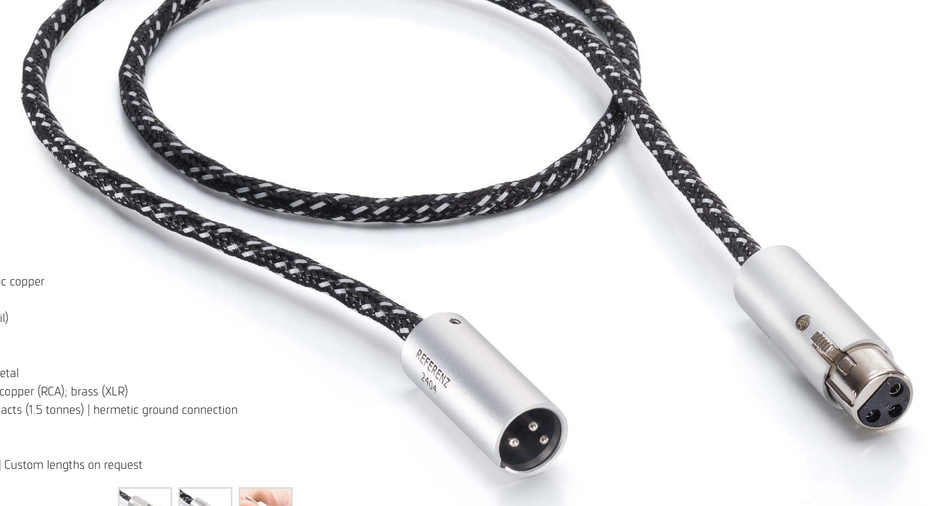
MULTICORE	CROSS SECTION	DIAMETER
8	20,96	16,5

Interconnect

NF-204

- Micro AIR technology
- Dielectric: air chambers
- Symmetrical design
- Conductor design: concentric copper
- Pure OFC copper
- Shielding: 2-fold (braid + foil)
- Cable diameter: 6.5 mm
- Connectors: RCA; XLR
- Connector material: solid metal
- Contact material: tellurium copper (RCA); brass (XLR)
- RCA: pressure-grouted contacts (1.5 tonnes) | hermetic ground connection
- XLR: soldered
- Rhodium-coated
- Length: 0.75 m; 1 m; 1.5 m | Custom lengths on request

From 350 EUR



Product overview
Micro AIR cable
page 60

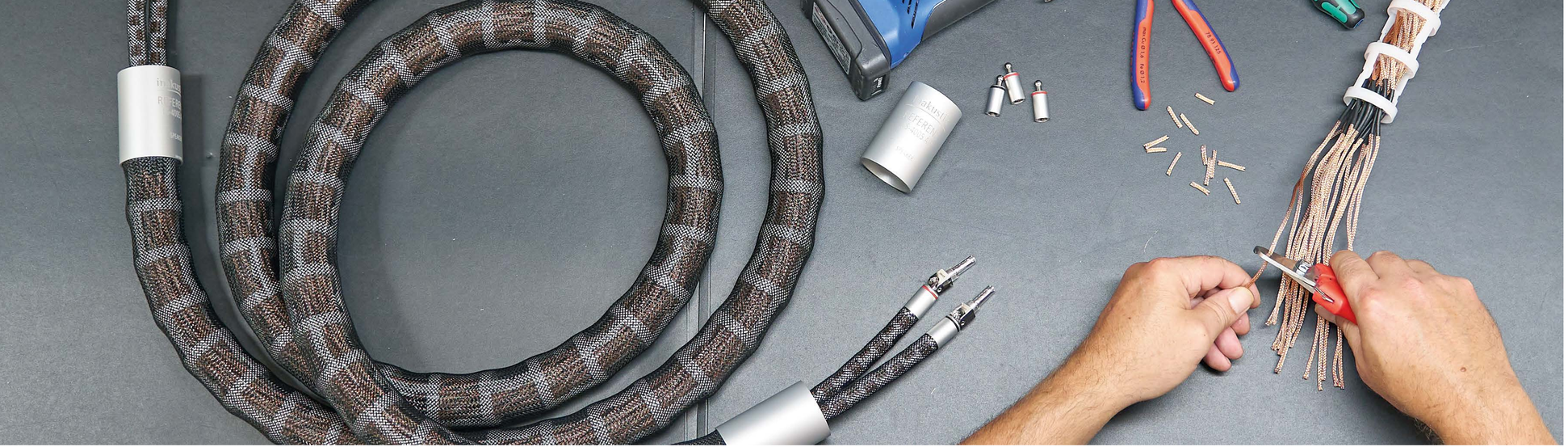
SHIELDING	DIAMETER	DESIGN
2	6,5	RCA | XLR

Our beating heart

The cable manufacturing unit

MADE IN GERMANY

The beating heart of in-akustik, its in-house cable plant, is located in Ballrechten-Dottingen, Germany. This is where our success story is rooted – permeated by a congenial working atmosphere, a love of music and a passion for detail. At in-akustik, we believe musical enjoyment stems from a listening experience that remains as close as possible to the original recording and the artist's interpretation of the piece. That's why we boast a committed workforce that combines curiosity with a keen sense of precision. With a fascination for music and things that are really special – like the development of our complex AIR cables.



Hand-crafted, custom-made cables

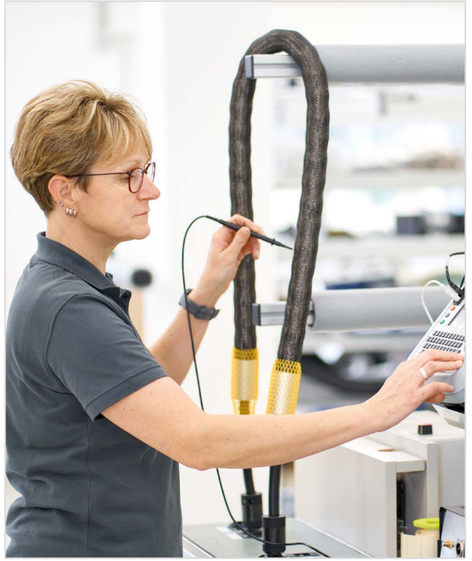
Every single cable in our Excellence and Referenz series is carefully made by hand in Ballrechten-Dottingen. Our in-house expertise and the skills of our workforce enable us to manufacture technically intricate cables and customize them in line with the wishes of our customers. Apart from the finest of materials, our most importance resource is the manual dexterity of our cable makers. In assembling our outstanding cables, our team needs to demonstrate meticulousness, composure, enthusiasm and dedication.

High-quality materials

Crucial to the quality of cables are their design, shielding and materials. Alongside architecture, we place a special emphasis on high-quality materials. We use only the purest and most conductive copper for our cables. Cast to a thickness of around 10 mm, the coils of copper wire are subjected to stringent purity tests. After passing these tests, the copper wire is drawn in several stages until the required diameter is reached, and then further processed in a cable plant in Germany. Finally, the cable is refined and assembled in our in-house manufacturing unit.

Rigorous quality control

We manufacture in accordance with the highest standards. Rigorous quality control is carried out before, during and subsequent to assembly. We verify the tolerances of ever individual component. At every stage of manufacturing, we check the configuration and electrics for short-circuits. We also conduct functional and mechanical testing. No product leaves our manufacturing unit without a final quality check.



Power Station AC-4500

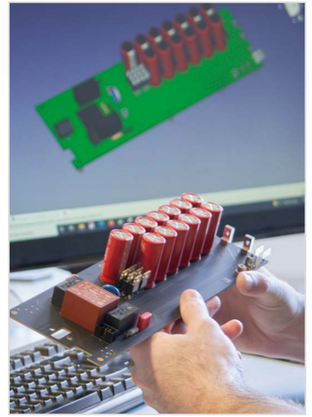
The Power-Station AC-4500 is our latest innovation. Developed entirely in-house, like our AIR cables this power filter is also manufactured at our own production facility.

Innovative development and manufacturing of cables and electronic components

We specialize in developing cables that enable practically loss-free signal transport between playback device, amplifier and speakers.

Developing a new cable is a slow and arduous process. The various design and construction phases between conception and production are accompanied by frequent tests, rejections, corrections, variations and checks.

Cables and connections are highly sensitive objects. Keeping the typical physical phenomena that occur during transmission of signals in check requires technical skills and the very best materials. We work day in and day out on further refinements. Utilizing our AIR technology, developed in-house, we have created cables that transport audio signals with scarcely any loss over the entire frequency range. The sound spectrum is enhanced in terms of both clarity and precision.



Logistics

We operate an ERP-driven logistics center that ensures rapid availability and smooth material flows.

Who we are

A manufacturer, a music label and compelling brands

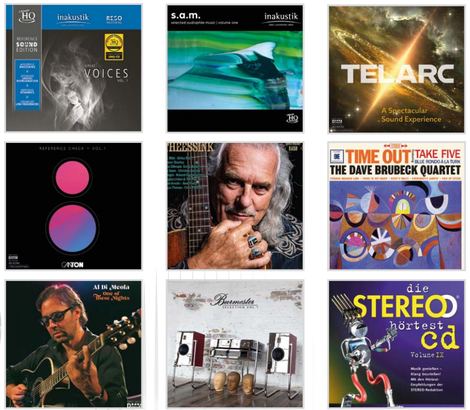
Since 1977 we have been zealously striving to bring you an authentic and "low-loss" sound experience. Our production facility, located in Ballrechten-Dottingen in the southwest of Germany, is the beating heart of our company. Why not make something special even better? This is our motto on the ongoing journey to create an extraordinary sound experience for our customers.

- Over 45 years of market success
- A workforce of 40 music enthusiasts
- Employees who average 16 years of service
- Production facilities covering 450 m²
- 10 cable assemblers
- 3,000 storage locations over 1,350 m²
- Brands: in-akustik Cables & in-akustik Music
- Partners: Primare & Audiovector

Music label

in-akustik music label

When we founded our own music label in 1986, our aim was to offer music fans exceptional listening experiences featuring outstanding artists. And we remain true to this principle.



Here too, our primary goal is to turn music into pure pleasure. Providing authentic recordings, precisely as the artists on the stage or in the studio intended. Our complete music repertoire is available on our website at www.in-akustik.de.

Renowned brands

Primare & Audiovector

For audiophile connoisseurs and novices: top-class hi-fi, streaming and home cinema components, hand-built loudspeakers, amplifiers or preamps for turntables – in addition to our cables and high-end recordings, music fans can find everything else they need to complete their listening enjoyment, from renowned brands like Primare and Audiovector.

in-akustik Service

Test listening at home

Are you looking around for new audio components or want to know how far top-class cables will improve you existing system? Are you still unsure about which components you should opt for? If so, our test listening shop is the ideal address for you. For a 14-day period you can test Primare audio components, Audiovector loudspeakers or our AIR cables as part of your own system at home – with no strings attached. Service only available in Germany an Austria.

- Test high-end equipment at home for 14 days.
- Completely free of charge. No risks involved.
- We arrange for deliveries and collections.
- Sounds interesting? We'll put you in touch with a dealer.

in-akustik.de/probehoeren

in-akustik Akademie

Free hi-fi webinars

Our audio experts organize regular informative webinars on a broad range of hi-fi topics. By participating, you can profit from their wealth of experience and pick up useful tips about many aspects of hi-fi in general. Learn how to raise your enjoyment of music to a new level, or find out why your system isn't delivering the sound quality you would expect, and what measures you can take to improve this. Join in and let our experts guide you through the fascinating world of hi-fi. We look forward to sharing our knowledge and enthusiasm with you.

- Practical tips for better sound!
- Hi-fi for beginners – explained in simple language!
- The fascination of sound: an audio signal's long journey
- Optimum placement of loudspeakers
- Busting the bi-wiring myth
- Streaming – only convenience or even sounding well
- Electricity – the raw material of fine sound!

Free registration: in-akustik.com/webinars

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Manufacturing and warehouse team

Not often in the spotlight, but crucial to our success: our manufacturing and warehouse team

Speaker Cables

	LS-8005 AIR Pure Silver	LS-8005 AIR	LS-4005 AIR Pure Silver	LS-4005 AIR	LS-2405AIR Pure Silver	LS-2405 AIR
						
Point-to-Point Air Helix	x	x	x	x	x	x
Air dielectric for low capacitance	x	x	x	x	x	x
Pure silver	x		x		x	
Pure OFC copper		x		x		x
Cross Link Super Speed waveguide	x	x	x	x	x	x
Multicore	32	32	16	16	8	8
Grounding Option	x	x				
Conductor cross-section	2 x 19,2 mm²	2 x 19,2 mm²	2 x 9,6 mm²	2 x 9,6 mm²	2 x 4,8 mm²	2 x 4,8 mm²
PE network jacket	x	x	x	x	x	x
Lacquered wires	x	x	x	x	x	x
Cable diameter	70 mm	70 mm	40 mm	40 mm	25 mm	25 mm
Made in Germany	x	x	x	x	x	x
Singlewire	x	x	x	x	x	x
Single-Bi-Wire	x	x	x	x	x	x
BFA 360°	x	x	x	x	x	x
BFA Basic						
Spade lug 360°	x	x	x	x	x	x
Spade lug Basic						
Tellurium copper	Spade	Spade	Spade	Spade	Spade	Spade
Beryllium copper	BFA	BFA	BFA	BFA	BFA	BFA
Rhodium-coated	x	x	x	x	x	x
Pressure-grouted contacts (1.5 tonnes)	x	x	x	x	x	x
Standard length	from 2m	from 2m	from 2m	from 2m	from 2m	from 2m
Custom lengths	x	x	x	x	x	x
RRP (from)	62.800 EUR	14.850 EUR	24.624 EUR	5.590 EUR	14.950 EUR	3.532EUR

	LS-1205 AIR Pure Silver	LS-1205 AIR
		
Point-to-Point Air Helix	x	x
Air dielectric for low capacitance	x	x
Pure silver	x	
Pure OFC copper		x
Cross Link Super Speed waveguide	x	x
Multicore	4	4
Grounding Option		
Conductor cross-section	2 x 2,4 mm²	2 x 2,4 mm²
PE network jacket	x	x
Lacquered wires	x	x
Cable diameter	13 mm	13 mm
Made in Germany	x	x
Singlewire	x	x
Single-Bi-Wire		
BFA 360°		
BFA Basic	x	x
Spade lug 360°		
Spade lug Basic	x	x
Tellurium copper	Spade	Spade
Beryllium copper	BFA	BFA
Rhodium-coated	x	x
Pressure-grouted contacts (1.5 tonnes)	x	x
Standard length	from 2m	from 2m
Custom lengths	x	x
RRP (from)	8.776 EUR	1.760 EUR

Interconnect & Digital

	NF-4005 AIR Pure silver	NF-4005 AIR	NF-2405 AIR Pure silver	NF-2405 AIR	NF-1205 AIR Pure silver	NF-1205 AIR
						
Point-to-point Air Helix	x	x	x	x	x	x
Air dielectric for low capacitance	x	x	x	x	x	x
Pure silver	x		x		x	
Pure OFC copper		x		x		x
Cross Link Super Speed waveguide	x	x	x	x	x	x
RCA design	symm.	symm.	symm.	symm.		koaxial
XLR design	symm.	symm.	symm.	symm.	symm.	symm.
Shielding: thick copper braiding, tin-plated	x	x	x	x	x	x
PE network jacket	x	x	x	x	x	x
Lacquered wires	x	x	x	x	x	x
Cable diameter	40 mm	40 mm	25 mm	25 mm	13 mm	13 mm
Wave impedance						
Made in Germany	x	x	x	x	x	x
RCA SL	x	x	x	x		x
XLR 180°	x	x	x	x	x	x
Tellurium copper	x	x	x	x	x	x
Rhodium-coated	x	x	x	x	x	x
Pressure-grouted contacts (1.5 tonnes)	RCA SL	RCA SL	RCA SL	RCA SL		RCA SL
Soldered	XLR 180°	XLR 180°	XLR 180°	XLR 180°	XLR 180°	XLR 180°
Standard length	1 m; 1,5 m; 2 m	1 m; 1,5 m; 2 m	1 m; 1,5 m; 2 m	1 m; 1,5 m; 2 m	1 m; 1,5 m; 2 m	1 m; 1,5 m; 2 m
Custom lengths	x	x	x	x	x	x
RRP (from)	7.209 EUR	4.118 EUR	4.016 EUR	1.802EUR	3.089 EUR	1.009 EUR

	Digital-2405 AIR Pure Silver	Digital-2405 AIR
		
	x	x
	x	x
	x	
		x
	x	x
	2-fach symm.	2-fach symm.
	2-fach symm.	2-fach symm.
	x	x
	x	x
	x	x
	25 mm	25 mm
	75 Ω RCA | 110 Ω XLR	75 Ω RCA | 110 Ω XLR
	x	x
	x	x
	x	x
	x	x
	x	x
	RCA SL	RCA SL
	XLR 180°	XLR 180°
	1 m; 1,5 m; 2 m	1 m; 1,5 m; 2 m
	x	x
	2.779 EUR	1.029 EUR

CAT & USB cables

	CAT-2405 AIR	USB-2405 AIR Pure Silver	USB-2405 AIR
			
Point-to-point Air Helix	x	x	x
Air dielectric for low capacitance	x	x	x
Pure silver		x	
Pure OFC copper	x		x
Cross Link Super Speed waveguide	x	x	x
Design	4-fach Twisted Pair	symm.	symm.
Conductor cross-section	26 AWG		
Shielding: thick copper braiding, tin-plated	x	x	x
PE-Network Jacket	x	x	x
Bandwidth	2000 MHz		
Data rate	40 Gbit/s	480 Mbit/s	480 Mbit/s
Data Sync | Power		x	x
HD audio support	x	x	x
Connector assembly	IDC	Löten	Löten
Plug rotatable by +/- 45°	x	x	x
Lacquered wires	x		
Cable diameter	25 mm	25 mm	25 mm
Characteristic impedance		90 Ohm	90 Ohm
Made in Germany	x	x	x
Specification	CAT 8.1		
Individual test: bandwidth	x		
Individual test: continuity	x	x	x
Individual test: short circuit	x	x	x
Standard length	1 m; 1,5 m; 2 m	1 m; 1,5 m; 2 m	1 m; 1,5 m; 2 m
Custom lengths	x	x	x
RRP (from)	1.189 EUR	3.285 EUR	1.225EUR

Phono cables

	Phono-2405 AIR Pure silver	Phono-2405 AIR	Phono-1205 AIR Pure silver	Phono-1205 AIR
				
Point-to-point Air Helix	x	x	x	x
Air dielectric for low capacitance	x	x	x	x
Pure silver	x		x	
Pure OFC copper		x		x
Cross Link Super Speed waveguide	x	x	x	x
Design	2-fach symm.	2-fach symm.	2-fach symm.	2-fach symm.
Shielding: thick copper braiding, tin-plated	x	x	x	x
PE network jacket	x	x	x	x
Lacquered wires	x	x	x	x
Cable diameter	25 mm	25 mm	13 mm	13 mm
Made in Germany	x	x	x	x
RCA SL -> RCA SL	x	x	x	x
SME -> RCA SL	x	x	x	x
SME -> XLR 180°	x	x		
SME 90° -> RCA SL	x	x		
SME 90° -> XLR 180°	x	x		
Tellurium copper	x	x	x	x
Rhodium-coated	x	x	x	x
Pressure-grouted contacts (1.5 tonnes)	RCA SL	RCA SL	RCA SL	RCA SL
Soldered	XLR 180°	XLR 180°		
Standard length	1 m; 1,5 m; 2 m	1 m; 1,5 m; 2 m	1 m; 1,5 m; 2 m	1 m; 1,5 m; 2 m
Custom lengths	x	x	x	x
RRP (from)	3.295 EUR	1.132 EUR	2.779 EUR	1.029 EUR

Power cord

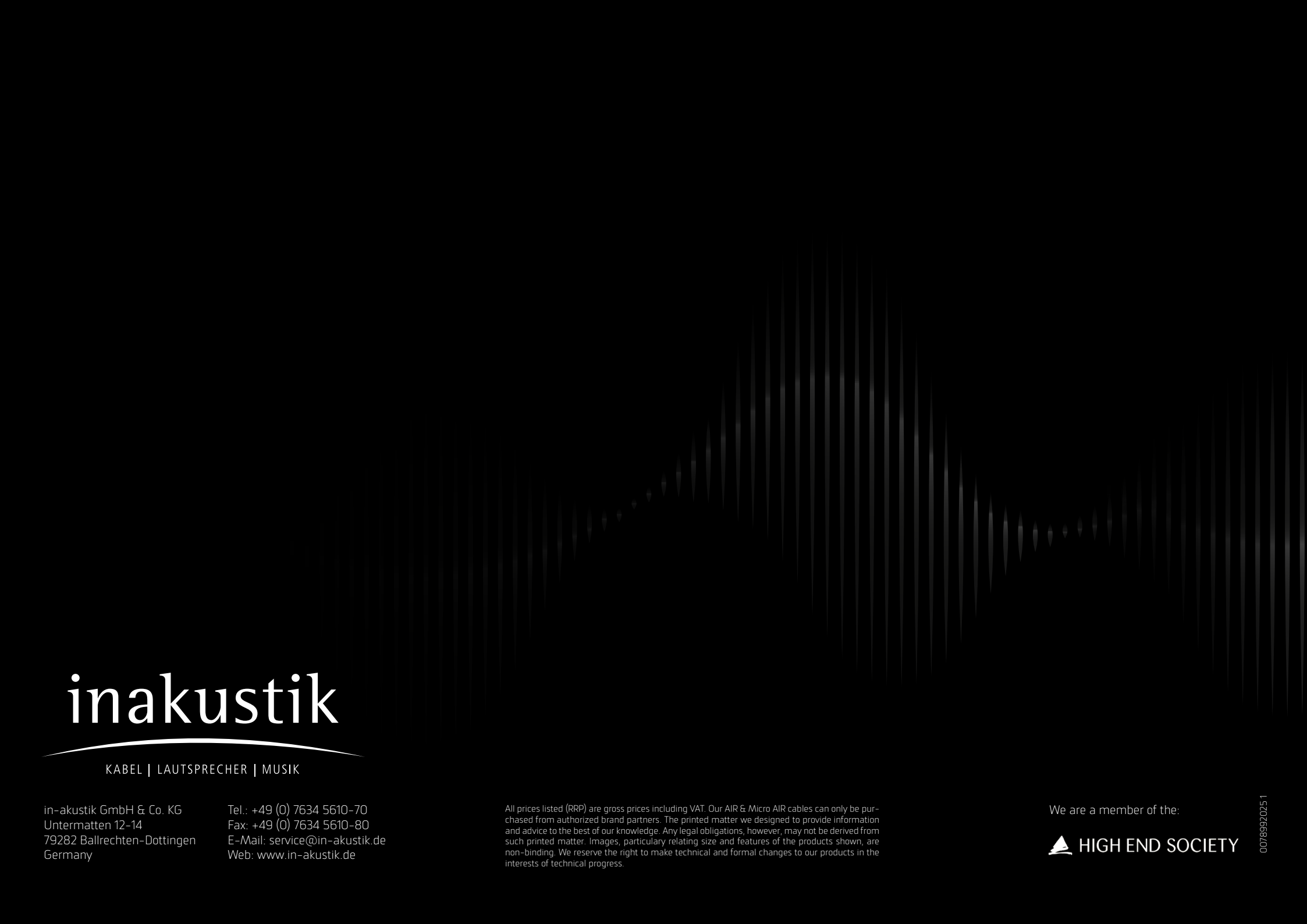
	AC-4005 AIR	AC-2405 AIR	AC-1205 AIR
Point-to-point Air Helix	x	x	x
Air dielectric for low capacitance	x	x	x
Pure copper	x	x	x
Multicore	16	4	4
Conductor cross-section	2 x 4.0 mm² (16 x 0.5 mm²)	2 x 3.0 mm² (4 x 1.5 mm²)	2 x 1.5 mm² (4 x 0.75 mm²)
PE network jacket	x	x	x
Cable diameter	40 mm	25 mm	13 mm
Protection class 1	x	x	x
Phase marking	x	x	x
Certificate included	x	x	x
Load C19:	3680 W (230 V AC / 16 A)	3680 W (230 V AC / 16 A)	3680 W (230 V AC / 16 A)
Load C15:	2300 W (230 V AC / 10 A)	2300 W (230 V AC / 10 A)	2300 W (230 V AC / 10 A)
Rated voltage	250 V AC | 50/60 Hz	250 V AC | 50/60 Hz	250 V AC | 50/60 Hz
Rated current	10 A / 16 A	10 A / 16 A	10 A / 16 A
CE | RoHS | REACH conformity	x	x	x
Made in Germany	x	x	x
Connectors: Referenz UHQ	x	x	
Connectors: Referenz Basic		x	x
SCHUKO | NEMA -> C19	x	x	x
SCHUKO | NEMA -> C15 (C13)	x	x	x
Open end -> open end | C19 | C15 (C13)	x	x	x
Standard length	1 m; 1.5 m; 2 m; 3 m	1 m; 1.5 m; 2 m; 3 m	1 m; 1.5 m; 2 m; 3 m
Custom lengths	x	x	x
RRP (from)	2.883 EUR	1.287 EUR	1.019 EUR

Speaker cables

	LS-404 Micro AIR	LS-204 XL Micro AIR	LS-204 Micro AIR	LS-104 Micro AIR
				
Construction / Structure	8-core Multicore	6-coreMulticore	4-coreMulticore	paarverseilt
Dielectric	Air chambers	Air chambers	Air chambers	Air chambers
Cable diameter	16 mm	13 mm	10,5 mm	8,5 mm
Conformity	CE, REACH, RoHS	CE, REACH, RoHS	CE, REACH, RoHS	CE, REACH, RoHS
Contact material	Beryllium copper, brass	Beryllium copper, brass	Beryllium copper, brass	Beryllium copper, brass
Contact finish	Rhodium plated	Rhodium plated	Rhodium plated	Rhodium plated
Conductor construction	Concentric Copper	Concentric Copper	Concentric Copper	Concentric Copper
Conductor material	High-purity OFC copper	High-purity OFC copper	High-purity OFC copper	High-purity OFC copper
Conductor cross-section	2 x 10,48 mm² (8 x 2,62 mm²)	2 x 7,86 mm² (6 x 2,62 mm²)	2 x 5,24 mm² (4 x 2,62 mm²)	2 x 2,62 mm²
Made in Germany	x	x	x	x
Singlewire	x	x	x	x
Single-Bi-Wire	x		x	
BFA Banana	x	x	x	x
Spade	x	x	x	x
Easy Plug	x	x	x	x
Connector housing	full metal	full metal	full metal	full metal
Length	from 2 m	from 2 m	from 2 m	from 2 m
Custom length	x	x	x	x
RRP (from)	651 EUR	637 EUR	526 EUR	401 EUR

Interconnect cables

	NF-204 Micro AIR	NF-104 Micro AIR
		
Shielding	2-layer (braid + foil)	2-layer (braid + foil)
Structure / Construction	symmetrical	coaxial
Dielectric	Air chambers	Air chambers
Cable Diameter	6,5 mm	4,2 mm
Floating Shield:	x	
Conformity	CE, REACH, RoHS	CE, REACH, RoHS
Contact material	Tellurium copper	Tellurium Kupfer
Contact finish	Rhodium-coated	Rhodium-coated
Conductor construction	Concentric Copper	Concentric Copper
Conductor material	High-purity OFC copper	High-purity OFC copper
Jacket	PE-Network Jacket	PE-Network Jacket
Made in Germany	x	x
Connector housing	Full metal	Full metal
RCA	x	x
XLR	x	
Pressure-grouted contacts (1.5 tonnes)	RCA	RCA
Soldering	XLR	
Length	0,75 m, 1 m, 1,5 m	0,75 m, 1 m, 1,5 m
Custom length	x	x
RRP (from)	350 EUR	288 EUR



inakustik

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