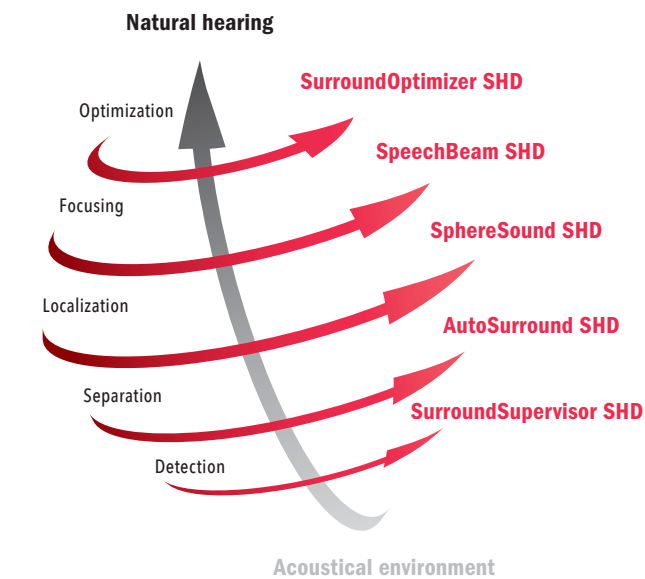


HearIntelligence™ hearing systems from HANSATON.

HearIntelligence™ hearing systems from HANSATON are able to take into account the complexity of natural hearing with innovative features. For people with hearing loss, this means not only a better but also a natural hearing experience and thus a whole new outlook on life.



1. Hearing impairment/Hearing loss – The customer is untreated.



2. Comparison/Aid – The customer is treated without HearIntelligence™.



HEAR Intelligence
powered by HANSATON

3. The HANSATON hearing systems added value: Treatment with HearIntelligence™ – More personal, more natural hearing experience with HANSATON HearIntelligence™.



Spatial acoustics for maximum naturalness. Intelligent hearing means natural hearing.

We are surrounded by a variety of different acoustic signals, speech sounds, and noises nearly 24 hours a day, every day, week after week, for our entire lives. Our perception is heavily influenced by the shapes of our heads and ears, so each person's concept of „natural sound“ is different. And a number of different, complex, intelligent processes happen inside our brains automatically, all at the same time: For example, they detect acoustic signals, determine the signals' spatial locations, and evaluate their importance. Each person has his or her own individual, natural hearing intelligence.

Thanks to the innovative SHD Technology, the new HANSATON hearing systems are able to reproduce a natural sound experience.

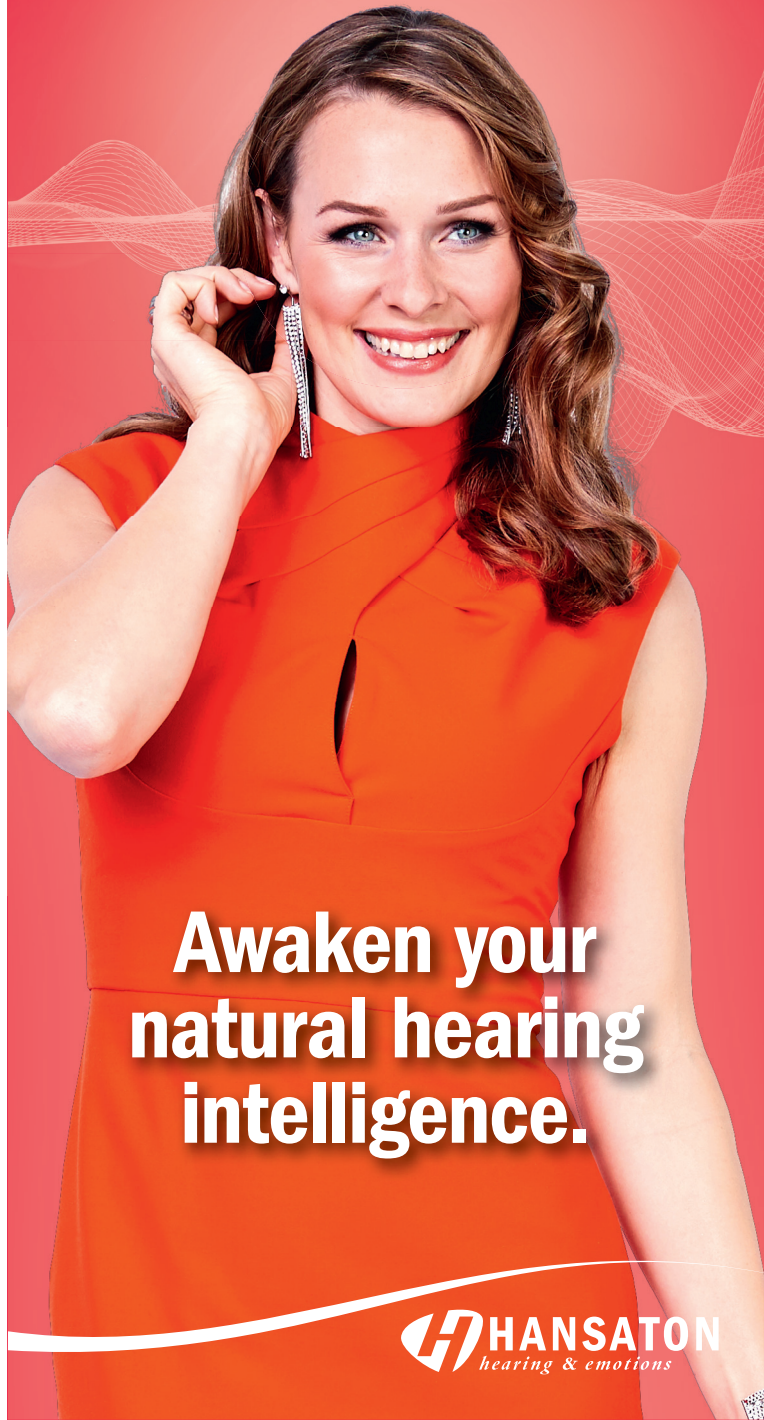
Hearing systems by HANSATON
AQ SHD rechargeable systems,
sound SHD RIC-systems, jam SHD BTE-systems
and jam SHD ITE-systems



AQ sound SHD S sound SHD S312 jam SHD S312 jam SHD IIC

HearIntelligence™.
Intelligent hearing.

HEAR Intelligence
powered by HANSATON



Awaken your natural hearing intelligence.

HANSATON
hearing & emotions



Detection.



The natural hearing process involves capturing and assessing the acoustic environment quickly and precisely at each moment. Our brains do this completely automatically and without our being aware of it at all. This is the only way that the brain can process and evaluate the auditory experience. Speed plays a decisive role in the detection of the acoustic environment because the input signal serves as the basis for all further processes.

HANSATON feature: SurroundSupervisor SHD

The SphereHD chip from HANSATON is able to detect the environment practically in real-time. It uses more than 30 high-resolution sensors to analyze the acoustic environment nearly 700 times per second. As a result, the hearing system not only detects the acoustic environment quickly, but also very precisely. This creates a realistic model of the acoustic environment, which is passed on to signal processing as a starting input value. By optimizing our algorithms and storage capacity management, we have made our environmental detection program significantly faster, and improved the precision of our speech detection module. This allows the detection process to happen imperceptibly, thereby conveying a natural auditory experience.

Separation.



The automation function of natural hearing intelligence refers to acoustic versatility whereby the ear receives, passes on to the brain as information and can produce correspondingly appropriate reactions. Thus no acoustic situation is the same as another. Our acoustic environment not only consists of speech, sounds or noises. It is composed of many of these individual components. There is no single standard situation. Instead, there is a mixture of the individual components, which reflects the actual acoustic situation. Since acoustic situations can change abruptly, the natural hearing intelligence reacts automatically to these changes and for humans, completely unnoticeably.

HANSATON feature: AutoSurround SHD

HearIntelligence™ hearing systems aim to reproduce these natural conditions with their signal processing in order to make the hearing experience natural. The high speed and precision of the SphereHD chips make it possible to model the environment quickly, precisely and in a multi-faceted way. In order to restore hearing intelligence, HearIntelligence™ hearing systems do not work with fixed programs, but are able to detect and mix different acoustic features – automatically, infinitely variably, and naturally.

Localization.



When we cross a road, we hear a car approaching before we see it. And good hearing is also important for our orientation. So we know not only that a car is approaching us, but also where it's coming from. Thus, while the eyes only report to our brain whatever is precisely in our field of vision, hearing plays a large part in the orientation of spatial hearing, and even completely takes that role over in difficult viewing conditions or in the dark. The localization of sound sources helps with spatial orientation and is the prerequisite for being able to focus on certain sound sources. The outer ear is of great importance in this ability because of the different ways high and low frequencies influence it. And at the same time, it also compresses and amplifies the sound. Also, the pinna and concha as well as the individual shape of a person's head have an influence on the sound impression.

HANSATON feature: SphereSound SHD

Accounting for these circumstances so that hearing system users can once again localize sound signals, and thus hear naturally, is a central aspect of the HANSATON hearing system development process and is a central aspect of HearIntelligence™. Thanks to SphereSound SHD, the way the ear and head individually and acoustically influence sound is recreated. This results in more natural sound and makes it possible to localize sound sources more easily.

Focusing.



Properly functioning hearing ensures that we feel comfortable in conversation and during leisure activities. It is able to eliminate noise so that we are able to focus very intensively on a different signal source. This works, for example, at the movies, when you understand the film perfectly, even though the people sitting next to us are rustling their bag of popcorn, or, in the case of the best-known acoustic example, when you're at a party with loud music, where despite that, you have no problem understanding the person you are talking to. In the case of a hearing loss, the hearing system technology has assumed this function. In the natural hearing process, listeners can automatically localize speakers and focus in on their words, while at the same time other, non-relevant sources of noise are simply blocked, regardless of what direction they are coming from. This is the only way to ensure impeccable understanding without unnecessary distraction.

HANSATON feature: SpeechBeam SHD

HANSATON hearing systems with HearIntelligence™ help the hearing system user to focus on conversation partners in challenging situations such as loud family celebrations or restaurant outings. Regardless of which direction speech is coming from, SpeechBeam SHD focuses in on that speaker. In combination with innovative localization algorithms, the result is crystal-clear speech and greater ease of hearing.

Optimization.



The human body is capable of ignoring disruptive noise and concentrating on speech or sounds, or of identifying the signals it deems relevant and then perceiving them clearly and brilliantly. The HANSATON hearing systems with HearIntelligence™ also make it possible to optimize the incoming sound, thereby enabling natural hearing.

HANSATON feature: SurroundOptimizer SHD

SurroundOptimizer SHD combines speech amplification, background noise suppression, and intelligent directional microphone characteristics in various acoustic environments to ensure that ideal, natural hearing is always the end result.