

CM 314+A 815 压力场麦克风套件

产品规格书

CM 314+A 815 Pressure Microphone Kit

Product Specification

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从此文件发布日期起，在此发表的是当前或者拟定的信息。由于我们会不断对产品进行改进和增加特征此出版物中的信息如有变动恕不另行通知。

From the date of this document's release, the information published here is current or proposed. As we will continuously improve and add features to our products, the information in this publication is subject to change without further notice.

我们生产的测量用传声器，属于精密传感器，生产相关的各个方面都进行着严格管控，包括材料选择，生产工艺，测试管控，以及生产环境。



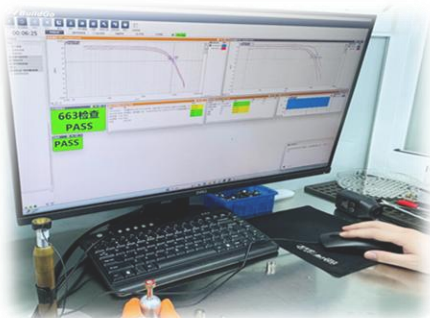
材料选择

经过多年持续改善，我们现采用特种镍合金材料作为膜片核心材料，相比其它合金材料有着更高灵敏度，更低失真率，以及更为稳定的长期使用表现；麦克风前置主体采用不锈钢材料使整支麦克风在各种装配场合下仍能拥有极为强壮的结构特性。



生产工艺

我们采用先进生产工艺，全自动化精密加工设备，最大程度减少了传统加工设备在进行二次装夹时带来的精度误差，从而显著提升了产品的尺寸一致性、几何精度及整体品质稳定性，为高要求的应用场景提供了可靠的技术保障。



测试管控

同时我们采用极其严苛的测试管控手段，对任何可能导致产品品质问题的环节都进行量化测试，并且进行测试顺序管控，防止跳站情况发生，完善的 MES 管控使得所有数据可追踪，确保传感器品质的高度一致性。



生产环境

所有我们的麦克风其整个生产流程均严格在无尘车间内完成，能最大程度降低空气中的灰尘数量，从而为传感器营造一个稳定、纯净的工作环境，以确保传感器长期稳定的寿命和并且在日常使用中始终展现出卓越的性能表现。

产品简介

CM 314+A 815 压力场麦克风套件

压力场人工耳是模拟耳塞导管插入耳道或耳廓方式的耳模拟器，模拟耳机与人耳耦合从而测量耳机的声学性能。

CM 314+A 815包括CM 314压力场人工耳腔和A 815前置放大器，它是预极化压力场测量传声器套件。

CM 314+A 815定位是性价比的压力场传声器，专门针对入耳式耳机产品的音频产线测试。

搭配MegaSig PM 0083等IEPE信号调理器达到最佳测试效果；

CM 314+A 815 + PM 0083 + AM 581的经典配置，以其极高的稳定性，已成为大多数国内外入耳式耳机音频测试系统的标准配置。

CM 314+A 815可以搭配AD 022(圆形底盘)+AD 021（二分之一前置L型转接适配器）组合，进行桌面测量，完整配置为：CM 314+A 815+ AD 022+ AD 021。



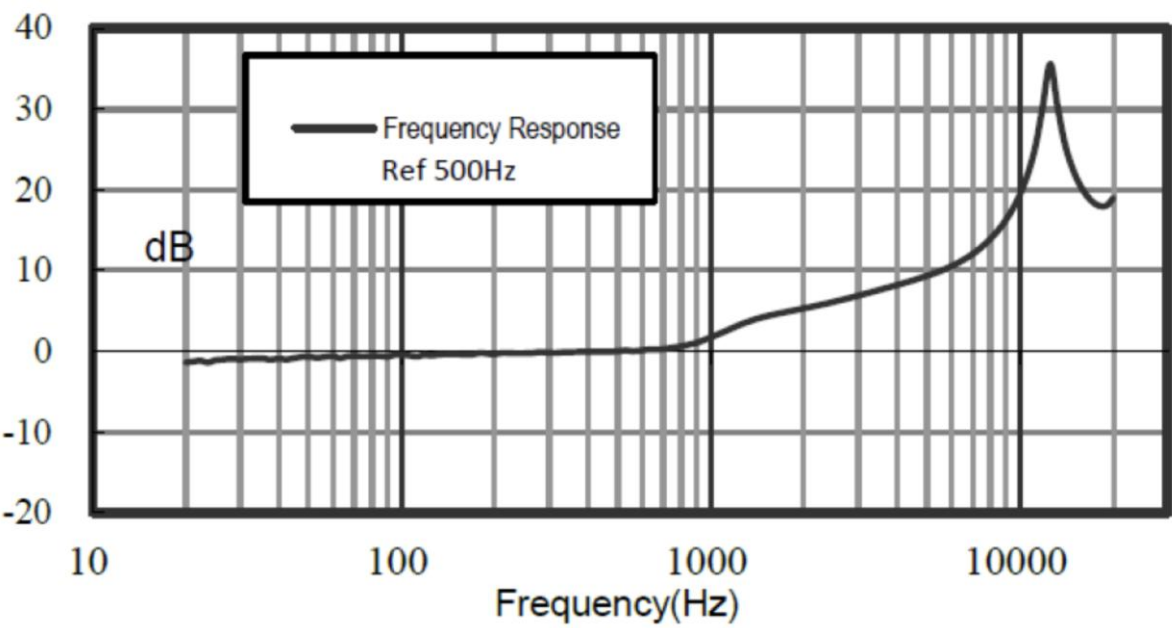
功能特点

- 符合IEC 60318-4:2010 Ed.1.0（原IEC 60711）电声学-人耳及头部的模拟器，第4部分：测量插入式耳机用堵塞耳模拟器
- 符合ITU-T建议P.57(08/96)P系列：电话传输质量，测量目标的设备：仿真耳
- 符合SJ/T 10659-1995测量插入式耳机用堵塞耳模拟器

规格参数

整体参数	
压力场麦克风频响	20Hz – 10KHz ± 0.5dB 10KHz – 20kHz ± 1dB
标准	ITU-T P.57, Type 2, IEC 60318-4:2010
底噪	<20dBA
动态范围	20dB(A) ~ 134dB (THD<3% @1000Hz)
灵敏度范围	50mV/Pa (-26dB±2dB) re 1V/Pa
接口	BNC
工作温度范围	-20°C至60°C
相对湿度	10- 90%无凝结
储存条件	温度：25°C±5°C，湿度：50%±15%RH（保证传感器的长期稳定性）

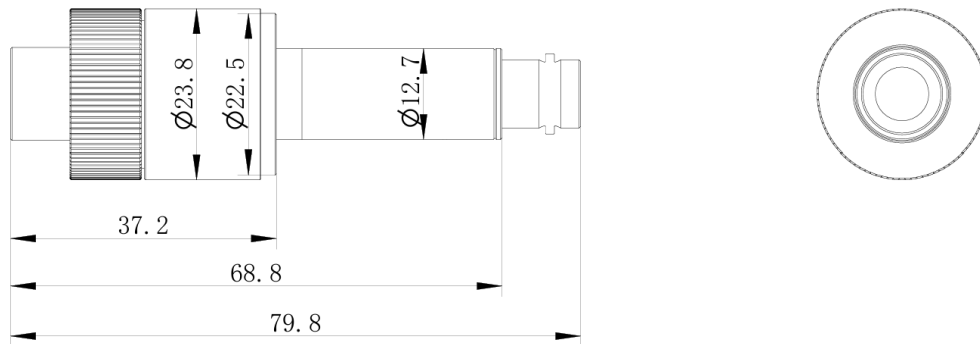
典型频响曲线（500Hz为参考0点）



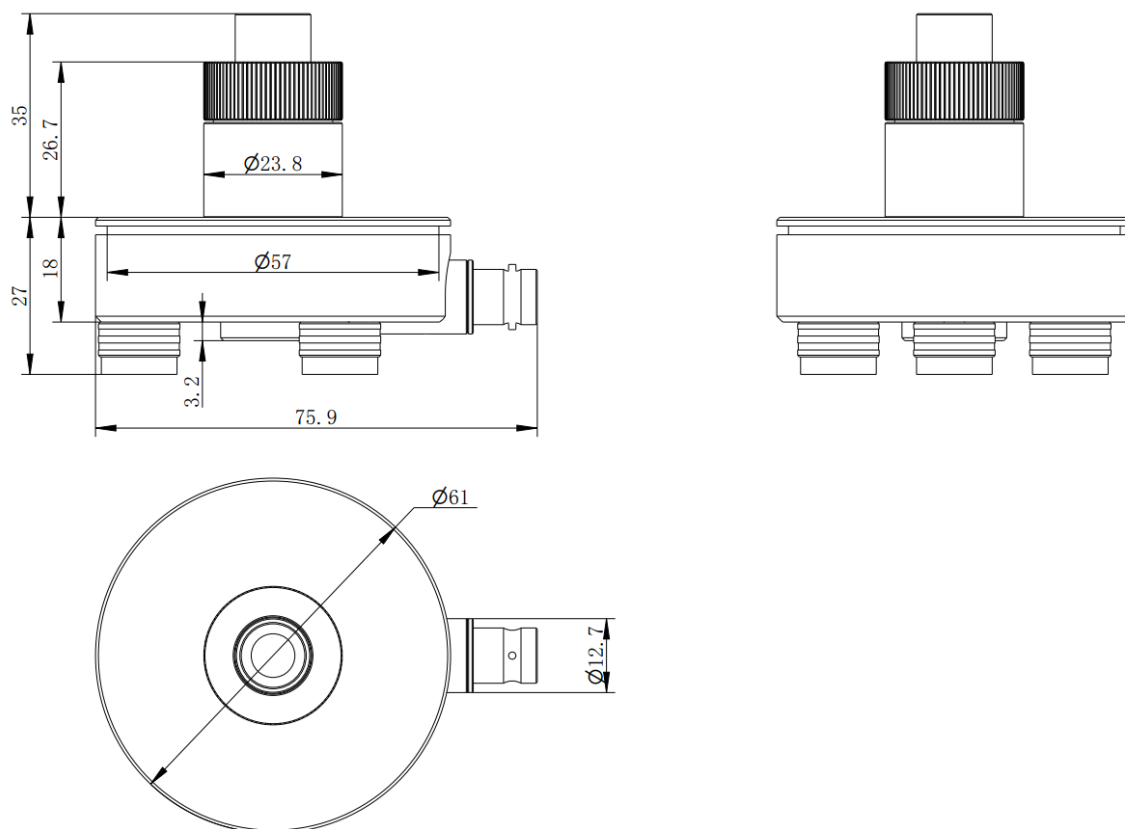
尺寸与结构

单位: mm

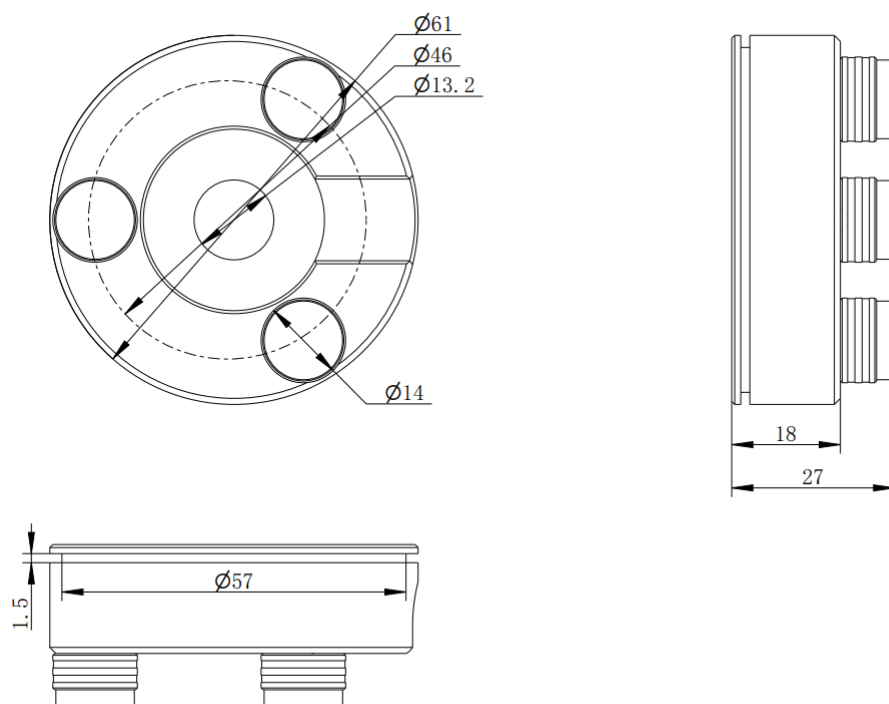
CM 314+A 815结构尺寸图



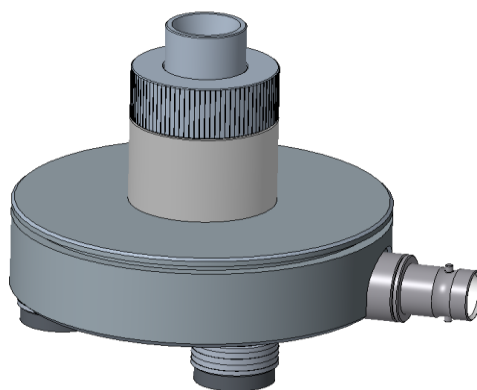
CM 314+A 815+ AD 022+ AD 021结构尺寸图



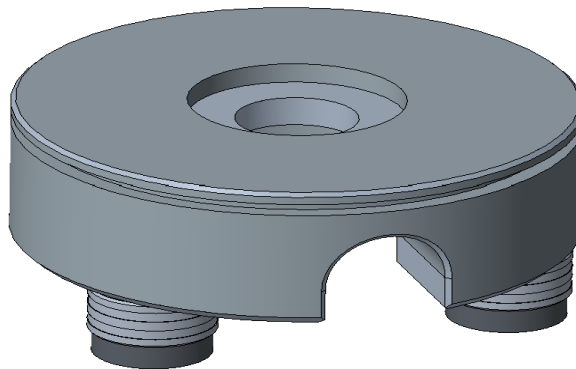
AD 022 结构尺寸图



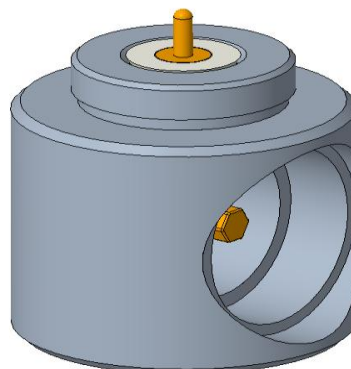
CM 314+A 815+ AD 022+ AD 021组合效果图



AD 022(圆形底盘)效果图



AD 021 (二分之一前置L型转接适配器)



订购信息

PN号	型号	说明
900010-17	A 815	前置放大器
900011-27	CM 314+A 815	压力场麦克风套件
900014-12	AD 022	圆形底盘
900014-08	AD 021	二分之一前置L型转接适配器
910024-01	PM 0083	功率放大器
920062-01	AM 581	人工嘴
900011-28	CM 314	声学耦合腔

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The measuring microphones we produce are precision sensors, and all aspects related to production are strictly controlled, including material selection, production processes, testing control, and production environment.



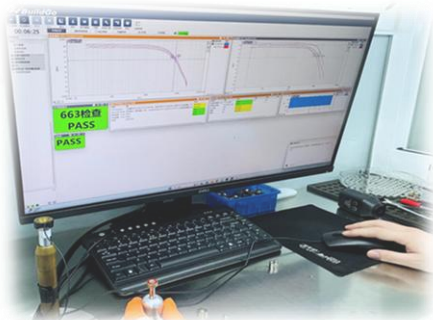
Material selection

After years of continuous improvement, we now use special nickel alloy materials as the core material for the diaphragm. Compared to other alloy materials, it exhibits higher sensitivity, lower distortion rate, and more stable long-term performance. The front body of the microphone is made of stainless steel, ensuring that the entire microphone maintains extremely robust structural characteristics even under various assembly conditions.



Production process

We adopt advanced production processes and fully automated precision machining equipment, which significantly reduces the accuracy errors caused by secondary clamping in traditional machining equipment. This greatly enhances the dimensional consistency, geometric accuracy, and overall quality stability of the products, providing reliable technical support for demanding application scenarios.



Testing control

At the same time, we employ extremely rigorous testing and control measures, conducting quantitative testing on any links that may lead to product quality issues, and implementing test sequence control to prevent skip-station situations. The comprehensive MES control enables all data to be traceable, ensuring a high degree of consistency in sensor quality.



Production environment

The entire production process of all our microphones is strictly carried out in a dust-free workshop, which can minimize the amount of dust in the air, thus creating a stable and pure working environment for the sensors. This ensures a long and stable lifespan for the sensors and maintains their excellent performance throughout daily use.

Product introduction

CM 314+A 815 Pressure Microphone Kit

The pressure field artificial ear is an ear simulator that emulates the method of inserting earphone nozzles into the ear canal or pinna, simulating the coupling between earphones and the human ear to measure their acoustic performance.

CM 314 + A 815 consists of the CM 314 pressure field artificial ear cavity and the A 815 preamplifier, which together form a pre-polarized pressure field measurement microphone kit.

CM 314 + A 815 is positioned as a cost-effective pressure field microphone, specifically designed for audio production line testing of in-ear headphone products.

When paired with IEPE signal conditioners such as the MegaSig PM 0083, it achieves optimal testing performance.

The classic configuration of CM 314 + A 815 + PM 0083 + AM 581, known for its exceptional stability, has become the standard setup for most domestic and international in-ear headphone audio testing systems.

CM 314+A 815 can be paired with AD 022 (circular chassis) + AD 021 (half-front L-shaped adapter) for desktop measurement. The complete configuration is: CM 314+A 815 + AD 022 + AD 021.



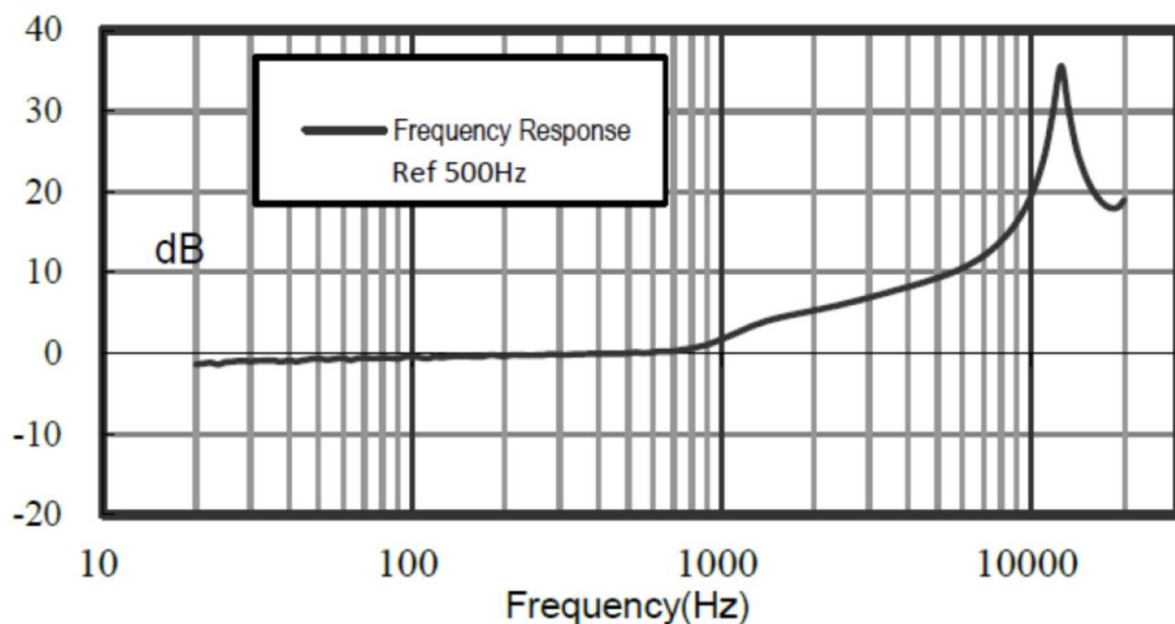
Features

- Complies with IEC 60318-4:2010 Ed.1.0 (formerly IEC 60711) – Electroacoustics – Simulators of human head and ear, Part 4: Occluded-ear simulator for the measurement of insert earphones
- Complies with ITU-T Recommendation P.57 (08/96) – P-Series: Telephone transmission quality, equipment for objective measurements – Ear simulator
- Complies with SJ/T 10659-1995 – Occluded-ear simulator for the measurement of insert earphones

Specification parameters

Overall parameters	
Frequency response of pressure field microphone	20Hz – 10KHz $\pm 0.5\text{dB}$ 10KHz – 20kHz $\pm 1\text{dB}$
Standard	ITU-T P.57, Type 2, IEC 60318-4:2010
Noise Floor	<20dBA
Dynamic Range	20dB(A) ~ 134dB (THD<3% @1000Hz)
Sensitivity Range	50mV/Pa (-26dB $\pm$ 2dB) re 1V/Pa
Interface	BNC
Operating Temperature Range	-20°C至60°C
RH	10- 90%(Non - condensing)
Storage Conditions	Temperature:25°C $\pm$ 5°C, Humidity : 50% $\pm$ 15%RH(To ensure long-term stability of the sensor)

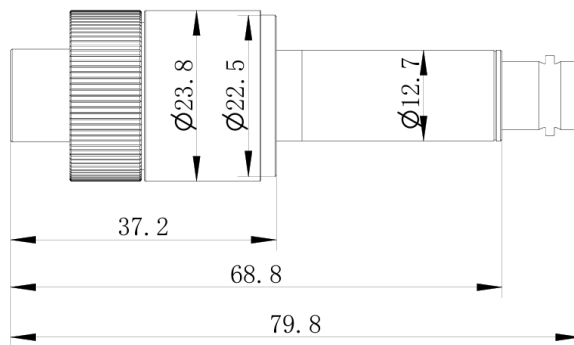
Frequency response



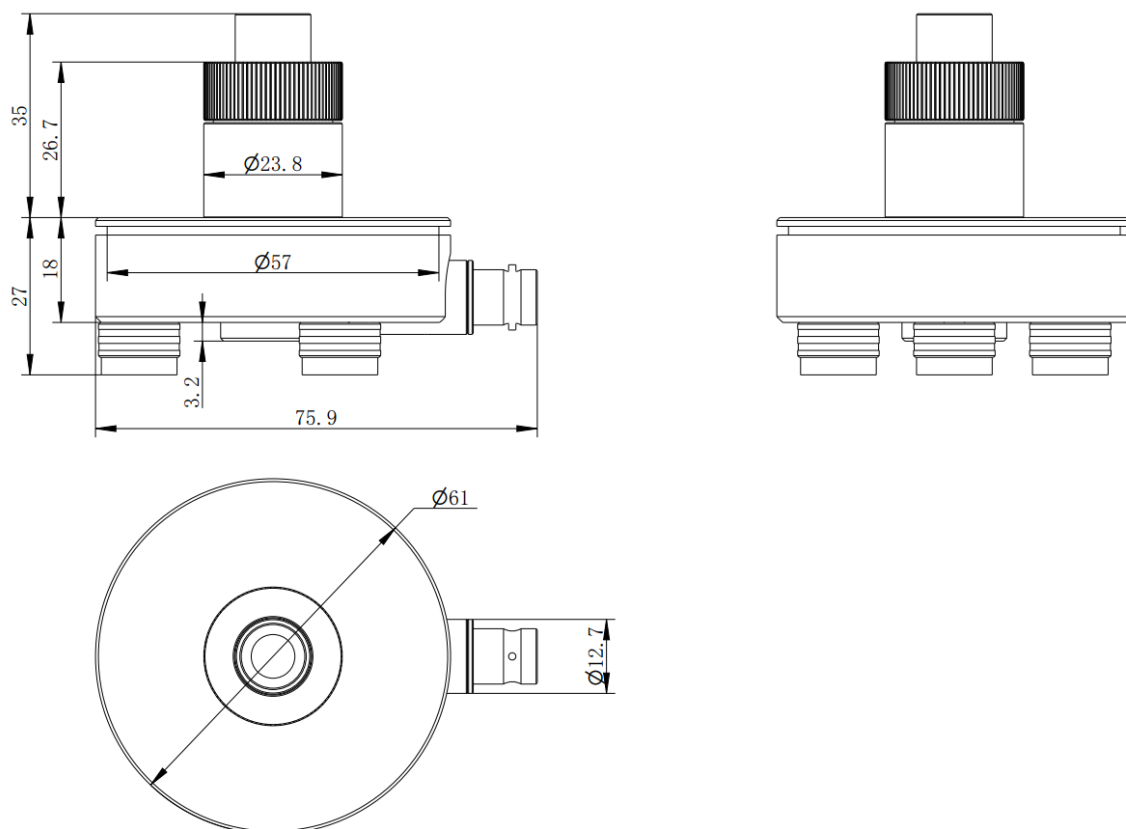
Size and Structure

Unit: mm

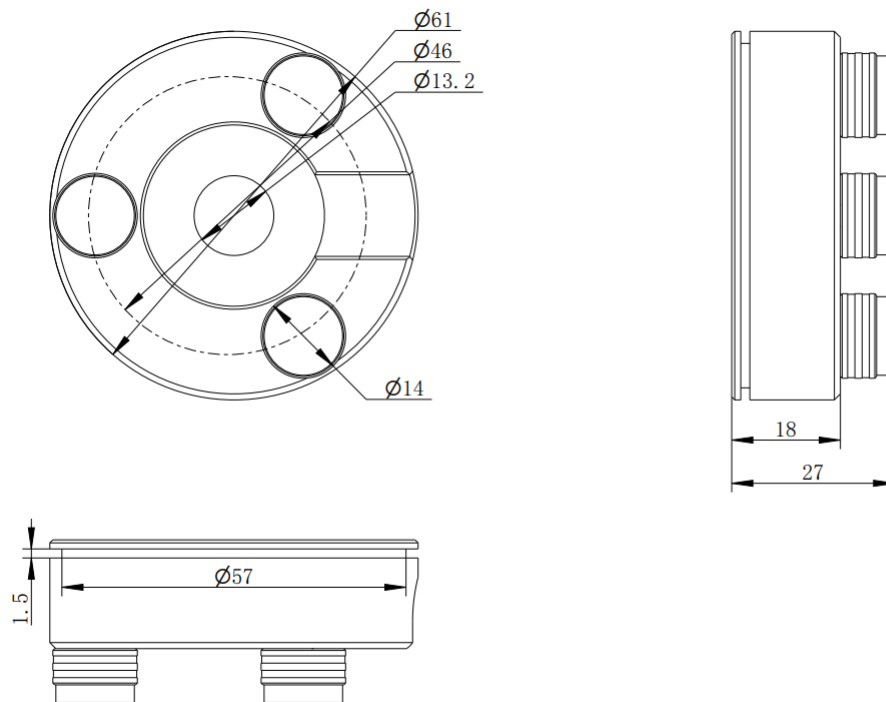
CM 314+A 815 structural dimension drawing



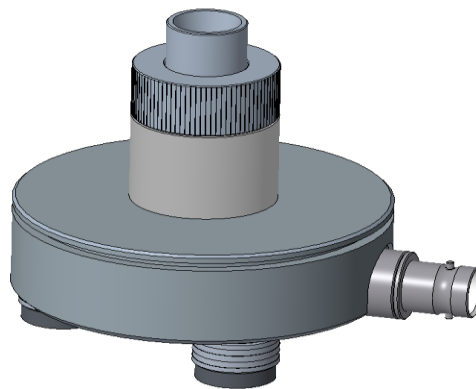
CM 314+A 815+ AD 022+ AD 021 structural dimension drawing



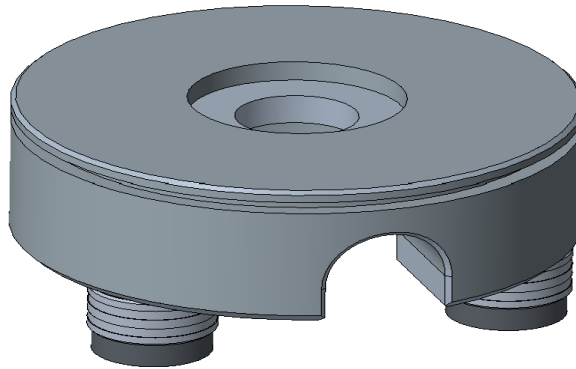
AD 022 structural dimension drawing



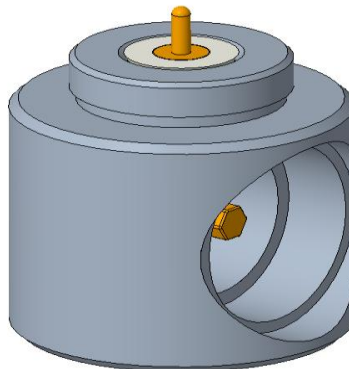
CM 314+A 815+ AD 022+ AD 021 combination effect diagram



AD 022(circular chassis) combination effect diagram



AD 021 (half-front L-shaped adapter) combination effect diagram



Ordering Information

PN	Model	Description
900010-17	A 815	Preamplifier
900011-27	CM 314+A 815	Pressure microphone kit
900014-12	AD 022	Circular chassis
900014-08	AD 021	Half-front L-shaped adapter
910024-01	PM 0083	Power Amplifier
920062-01	AM 581	Mouth Simulator
900011-28	CM 314	Acoustic coupling cavity

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