



GRAS 40LA 高精度表面传声器是一种用于平面和曲面测量的高精度传声器。它的实用频率范围很宽，最高可达 70 kHz 动态范围很大，最高约为 178 dB

典型应用和用途

- 航空航天业
- 飞机风噪分析
- 飞行测量
- 风洞测试
- 声疲劳测试

设计

GRAS 40LA

1/4" CCP 高压精密表面传声器

40LA 厚度仅为 2.5 毫米，集成了 CCP 前置放大器，内置 TEDS 芯片，可作为一个完整的单元进行校准。

40LA 需要恒流电源，如 GRAS 12AL CCP 电源或任何其他 CCP 兼容电源。制造公差小，加上 TEDS 芯片的优势 40LA 具有很高的互换性；这是它的一大优势，可以排除个别特性的影响。

40LA 非常稳定和坚固。它集成了一条 1.5 米长的同轴电缆，配有 Microdot 连接器，并配有柔软、可拆卸的硅橡胶整流罩 GRAS 40LA 还可根据客户要求定制电缆长度，更多选项请参见订购信息。

由于重量轻，带整流罩的传声器可以方便地使用双面胶带安装在表面上。宽广的温度范围使 40LA 非常适合航空航天工业。

所有 GRAS 传声器在出厂前都经过单独检查和校准。每个传声器都随附一张单独的校准表。

校准

出厂时，所有 GRAS 传声器都已在受控实验室环境中使用可追踪校准设备进行了校准。根据使用情况、测量环境和内部质量控制程序，我们建议传声器至少每年重新校准一次。

我们提供两种校准作为可选的售后服务 GRAS 可追溯校准和 GRAS 认可校准。

GRAS 可追溯校准是由训练有素的人员在受控条件下根据既定程序和标准执行的可追溯校准。这与所有 GRAS 传声器都要经过的严格校准相同，是我们质量保证不可分割的一部分。

GRAS 认可校准由 GRAS 认可校准实验室执行，该实验室已获得丹麦认可基金 DANAK 按照 ISO 17025 标准认可。

如果您希望交付的新传声器组带有认可校准，而不是默认的出厂校准，请在订购时说明。

如需了解更多信息，请访问 gras/calib。

质量和质保

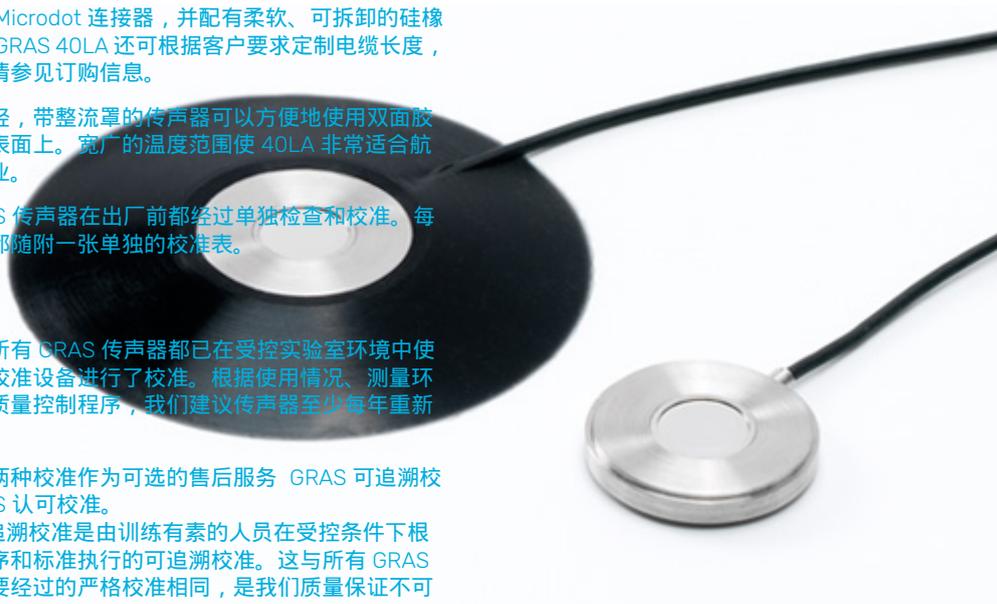
GRAS 传声器套件由我们久经考验的标准产品组合中的部件组成，全部采用优质材料和品牌部件制造，这些材料和部件都经过精挑细选和加工，以确保终身稳定和坚固耐用。

所有部件均在丹麦工厂由技术熟练的专业操作人员在经过验证的无尘室环境中制造和组装。传声器振膜、主体和独特的保护栅均由高级不锈钢制成，使传声器组能够抵御物理损坏以及侵蚀性空气或气体造成的腐蚀。

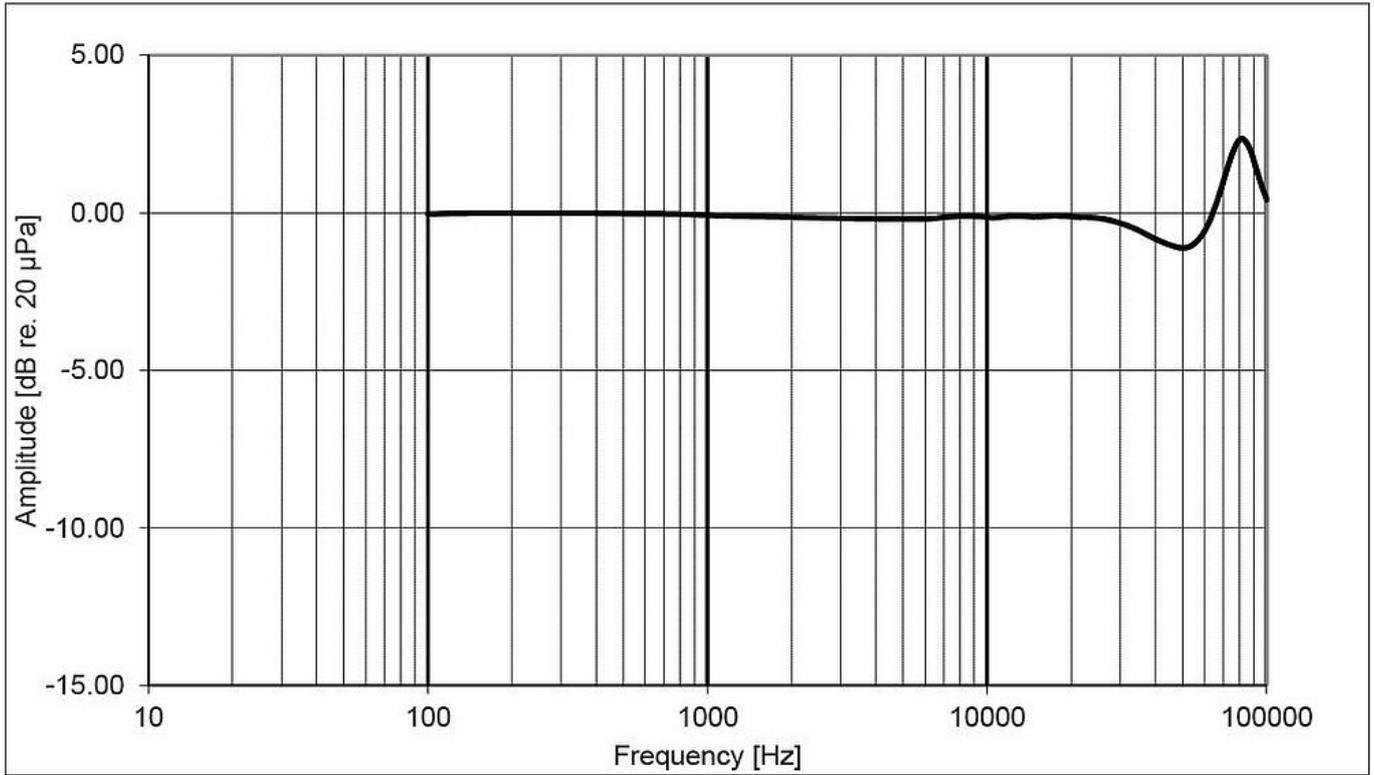
这与强制镀金传声器端一起，保证了连接的高度可靠性。由于质量上乘，我们对材料和工艺缺陷的保修期为 5 年。

服务

如果您不小心损坏了 GRAS 传声器上的隔膜，我们在大多数情况下都能以非常合理的价格和较短的周转时间进行更换。这不仅能保护您的投资，还能满足您的质量保证要求，因为您不必担心新的序列号等问题。



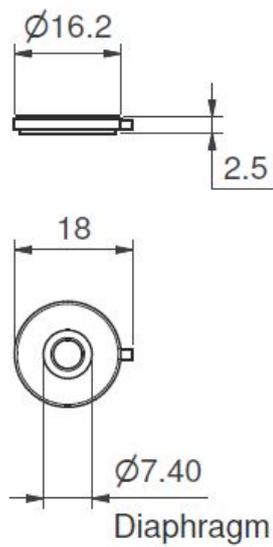
| | | |
|------------------------------------------------------|---------------------------------------|-------------------------|
| Polarization/Connection | | 0 V / CCP |
| Frequency range (± 1 dB) | Hz | 10 to 20 k |
| Frequency range (± 3 dB) | Hz | 5 to 70 k |
| Dynamic range lower limit (microphone thermal noise) | dB(A) | < 56 |
| Dynamic range upper limit with GRAS CCP preamplifier | dB | 178 |
| Set sensitivity @ 250 Hz (± 2 dB) | mV/Pa | 0.5 |
| Power supply (Constant Current Power) | mA | 2 to 20 |
| Microphone venting | | Front |
| IEC 61094-4 Compliance | | WS3P |
| Output impedance | Ω | <50 |
| Temperature range, operation | $^{\circ}\text{C} / ^{\circ}\text{F}$ | -55 to 100 / -67 to 212 |
| Temperature range, storage | $^{\circ}\text{C} / ^{\circ}\text{F}$ | -40 to 85 / -40 to 185 |
| TEDS (IEEE 1451.4) | | 27 v. 1.0 |
| Connector type | | Microdot 10/32 |
| CE/RoHS compliant/WEEE registered | | Yes / Yes / Yes |
| Weight | g / oz | 3 / 0.101 |



典型压力频率响应

GRAS Sound & Vibration 保留更改规格和配件的权利，恕不另行通知

Dimensions in mm



Included items

| | |
|-------------|--------------------------------------|
| GRAS GR0933 | Adhesive tape, pre-cut, single-sided |
| GRAS GR0934 | Adhesive tape, pre-cut, double-sided |
| GRAS MI0031 | Cleaning tissue |
| GRAS AE0046 | Adapter, BNC male to Microdot female |
| GRAS GR1252 | Silicon-rubber fairing |

Optional items

| | |
|-----------------------------|--------------------------------------------------------------------------------------------------------------------|
| GRAS 12AQ | Power Module (2-ch.) |
| GRAS 42AP | Intelligent Pistonphone with built-in precision barometer (250 Hz or 251.2 Hz, 114 dB \pm 0.05 dB) (recommended) |
| GRAS 42AA | Pistonphone (250 Hz, 114 dB \pm 0.08 dB) |
| GRAS GR1297 | Aluminum fairing |
| GRAS OP0025 | Kit for Sensitivity Calibration of Surface Microphone Sets |
| GRAS OP0026 | Kit for Frequency Calibration of 1/4" Surface Microphone Sets |
| GRAS CA0029 | Traceable Calibration of Microphone Set |
| GRAS CA2301 | Accredited Calibration of Microphone Set |

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GRAS Worldwide

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About GRAS Sound & Vibration

GRAS is a worldwide leader in the sound and vibration industry. We develop and manufacture state-of-the-art measurement microphones to industries where acoustic measuring accuracy and repeatability is of utmost importance in R&D, QA and production. This includes applications and solutions for customers within the fields of aerospace, automotive, audiology, and consumer electronics. GRAS microphones are designed to live up to the high quality, durability and accuracy that our customers have come to expect and trust.

GRAS Sound & Vibration is represented through subsidiaries and distributors in more than 40 countries and is part of Axiometrix Solutions, a leading test solutions provider comprised of globally recognized measurement brands. Read more at www.GRASacoustics.com

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