



G.R.A.S. 40AD 1/2" Prepolarized Pressure Microphone, High Sensitivity

Freq range: 3.15 Hz to 10 kHz
 Dyn range: 16 dB(A) to 148 dB
 Sensitivity: 50 mV/Pa

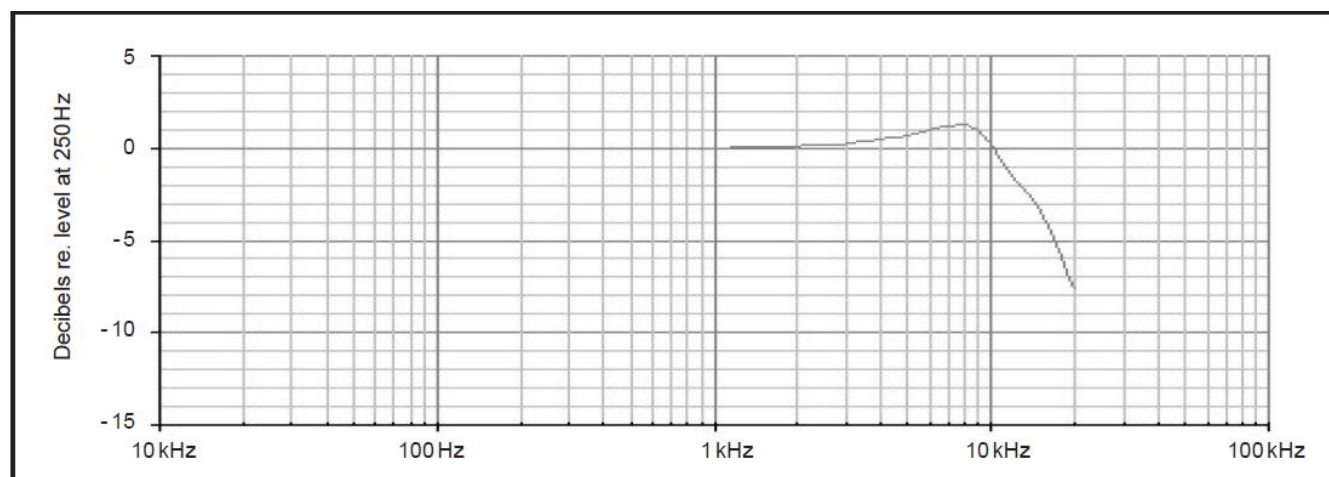
The 40AD is an IEC 61094 WS2P 1/2" prepolarized pressure microphone with rear-venting. The externally polarized equivalent is G.R.A.S. 40AP

Specifications

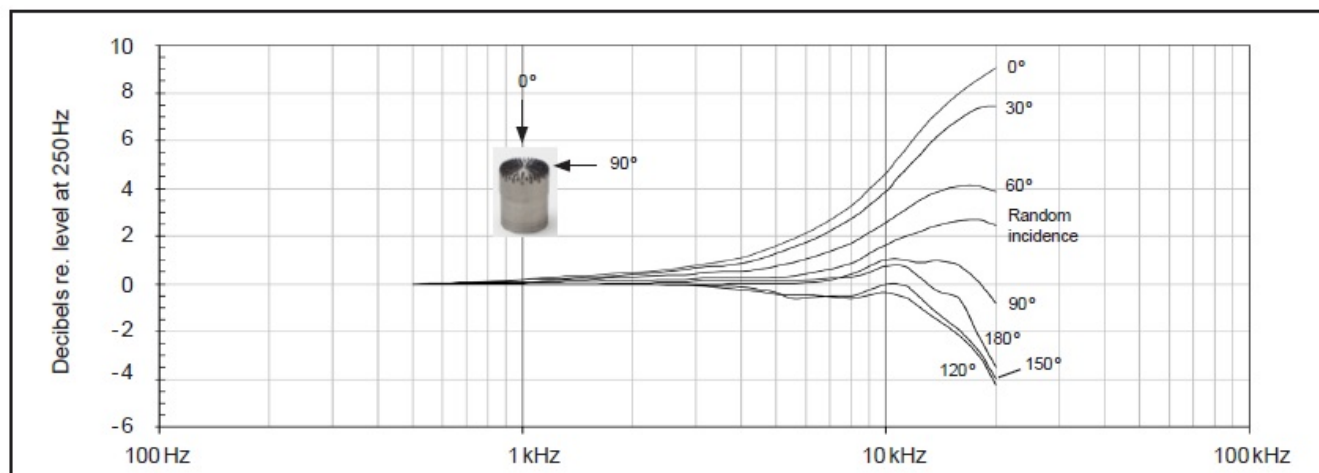
Frequency range (± 1 dB)	Hz	12.5 to 7.5 k
Frequency range (± 2 dB)	Hz	3.15 to 10 k
Dynamic range lower limit (microphone thermal noise)	dB(A)	16
Dynamic range lower limit with G.R.A.S. preamplifier	dB(A)	18
Dynamic range upper limit	dB	148
Dynamic range upper limit with G.R.A.S. preamplifier @ +28 V / ± 14 V power supply	dB	142
Dynamic range upper limit with G.R.A.S. preamplifier @ +120 V / ± 60 V power supply	dB	148
Dynamic range upper limit with G.R.A.S. CCP preamplifier	dB	138
Open-circuit sensitivity @ 250 Hz (± 2 dB)	mV/Pa	50

Open-circuit sensitivity @ 250 Hz (± 2 dB)	dB re 1V/Pa	-26
Resonance frequency	kHz	14
Microphone cartridge capacitance, typ.	pF	20
Microphone venting		Rear
Temperature range, operation	$^{\circ}\text{C}$ / $^{\circ}\text{F}$	-40 to 120 / -40 to 248
Temperature range, storage	$^{\circ}\text{C}$ / $^{\circ}\text{F}$	-40 to 85 / -40 to 185
Temperature coefficient @250 Hz	dB/ $^{\circ}\text{C}$ / dB/ $^{\circ}\text{F}$	-0.01 / -0.006
Static pressure coefficient @250 Hz	dB/kPa	-0,014
Humidity range non condensing	% RH	0 to 100
Humidity coefficient @250 Hz	dB/% RH	0,001
Influence of axial vibration @1 m/s ²	dB re 20 μPa	62
CE/RoHS compliant/WEEE registered		Yes / Yes, Yes
Weight	g / oz	9 / 0,317

G.R.A.S. Sound & Vibration reserves the right to change specifications without notice.



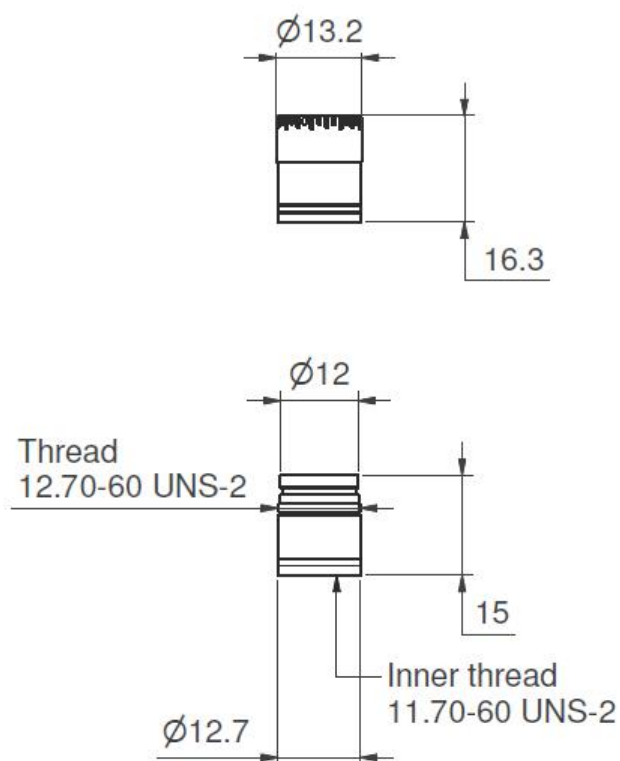
Typical frequency response



Free-field corrections for different angles of incidence

Dimensions

Dimensions in mm





We make Microphones

Tradition

Since the establishment in 1994, G.R.A.S. has been 100% dedicated to developing and manufacturing high-quality measurement microphones and related acoustic equipment. G.R.A.S. was founded by the Danish acoustics pioneer Gunnar Rasmussen who for more than 60 years has contributed to the world of sound and vibration with his unique ideas and designs. From the first reproducible 1" condenser measurement microphone that enabled quality measurements and instrumentation for acoustic calibration, Mr. Rasmussen's ingenuity and foresight led to the world's most popular acoustic sensor: The 1/2" measurement microphone. Then the 1/4" and 1/8" microphones followed with outstanding dynamic and high-frequency capability that brought higher definition and transparency into impulse noise diagnostics. Many variants have been made available over the years; all based on Gunnar Rasmussen's original 1" pressure microphone design.

Innovation

At G.R.A.S., we and our customers benefit daily from Mr. Rasmussen's exceptional understanding of acoustics, physics, electronics and measurement needs. Not only in R&D but throughout the organisation, we are proud to develop, produce and offer the broadest range of high-quality measurement microphones and accessories in the industry. And as a family company, now owned and managed by the two sons, Per Rasmussen and Peter Wulf-Andersen, we safeguard our heritage and knowledge to help create new opportunities with our customers. We work with everybody with an interest in sound or noise within the fields of aerospace, automotive, audiology, consumer electronics, noise monitoring, building acoustics and telecommunications, metrology, education, consultancy, legislation and system integration.

Quality

At G.R.A.S. we know that in order for you to trust your measurement results; signal quality, stability and robustness are essentials. And because we also know how you handle and use the microphones in your daily work, we design and build them to perform under real life conditions – and beyond.

When developing measurement microphones, our R&D team uses a series of highly accelerated life tests (HALT) to ensure that our microphones live up to the high quality and precision our customers have come to expect and trust. Thus to simulate the handling and use a microphone is exposed to when working outside the lab – in real life situations - we bake it, we humidify it, we shake it and we try to break it - all to make sure that you can trust your measurement results - every time.

All our microphones are solely produced in stainless steel and in a quality that allows for a 5 year warranty. Should you by mistake damage the diaphragm on a G.R.A.S. microphone, our special technique enables repair at very reasonable price.

Partners

G.R.A.S. is represented worldwide in more than 40 countries by subsidiaries and distributors. Whether you are searching for a multi-channel solution or just a replacement microphone for your sound level meter G.R.A.S. will help solve your needs. Visit gras.dk for your local G.R.A.S. partner.