

# GRAS 46AE

1/2" CCP



Freq range: 3.15 Hz to 20 kHz  
Dyn range: 17 dB(A) to 138 dB  
Sensitivity: 50 mV/Pa  
IEC 61672 Class 1  
Use: For general acoustic diagnostics

GRAS 46AE 1/2" CCP BNC  
TEDS 200V LEMO [GRAS 46AF.](#)

□□  
46AE 0° GRAS GRAS GRAS  
GRAS GRAS GRAS  
46AE IEC 61094 WS2F IEC 61672 1  
GRAS GRAS DANAK ISO 17025

[GRAS 146AE 1/2" CCP](#)

125 °C  
46AE-FV 1/2 "CCP  
□□  
GRAS 46AE 1/2" GRAS (HALT)  
HALT

[HALT](#)

IEC 61094 WS2F [GRAS 40AE 1/2"](#)  
40AE CCP / IEC  
61672 1 GRAS

[GRAS 26CA 1/2" CCP](#) BNC  
□□  
GRAS

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GRAS 46AE 4 mA 24 V CCP  
BNC  
46AE TEDS IEEE 1451.4 UDID I27-0-0-0U  
TEDS  
TEDS (DS2431)

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TEDS  
[GRAS 42AG](#)

[GRAS 42AP](#)

□□  
GRAS

Polarization/Connection		0 V / CCP
Frequency range ( $\pm 1$ dB)	Hz	5 to 10 k
Frequency range ( $\pm 2$ dB)	Hz	3.15 to 20 k
Dynamic range lower limit with GRAS preamplifier	dB(A)	17
Dynamic range upper limit with GRAS CCP preamplifier	dB	138
Set sensitivity @ 250 Hz ( $\pm 2$ dB)	mV/Pa	50
Set sensitivity @ 250 Hz ( $\pm 2$ dB)	dB re 1V/Pa	-26
Output impedance		< 50
Output Voltage Swing, min. @ 24-28 V CCP voltage supply	Vp	8
Power supply min. to max.	mA	2 to 20
DC bias voltage, typ.	V	12
Microphone venting		Rear
IEC 61094-4 Designation		WS2F
Temperature range, operation	$^{\circ}\text{C} / ^{\circ}\text{F}$	-30 to 85 / -22 to 185*
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	-0.007
Humidity range non condensing	% RH	0 to 90
Humidity coefficient @250 Hz	dB/% RH	-0.001
Influence of axial vibration @1 m/s <sup>2</sup>	dB re 20 $\mu\text{Pa}$	66
TEDS UDID (IEEE 1451.4)		I27-0-0-0U
Connector type		BNC
CE/RoHS compliant/WEEE registered		Yes/Yes/Yes
Weight	g / oz	33 / 1.164

\*If used at temperatures higher than 70  $^{\circ}\text{C}$ , use high temperature cables.

## GRAS HALT Test Parameters†

Humidity 90%	@50 $^{\circ}\text{C}$	48 hours
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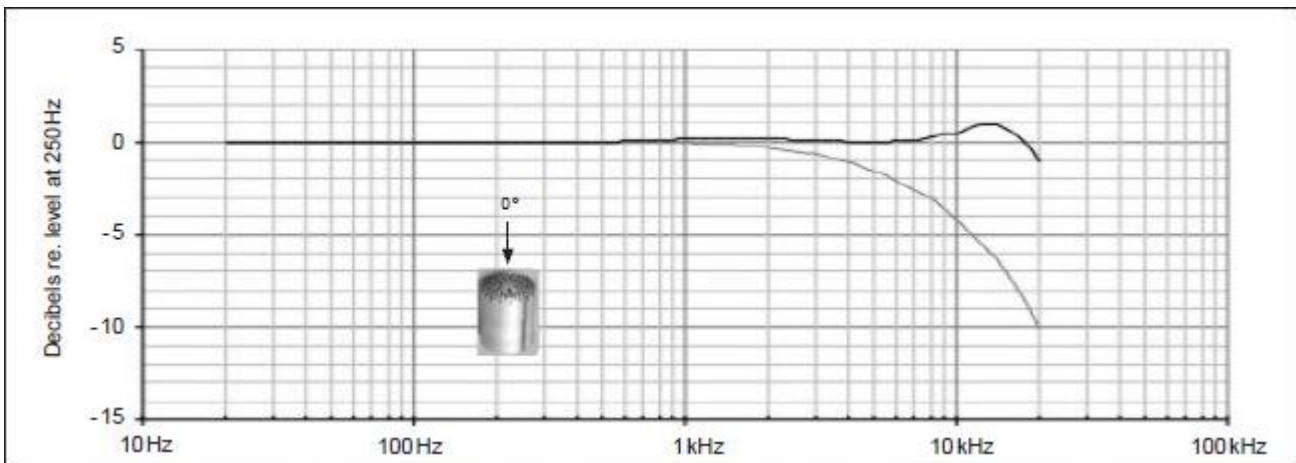
Drop - horizontal orientation of microphone, attached to 2 kg load	m	1
Drop - vertical, grid downwards	m	1
Vibration - horizontal and vertical	@8g	15 hours

†For a short introduction to HALT, see the section "GRAS HALT" above

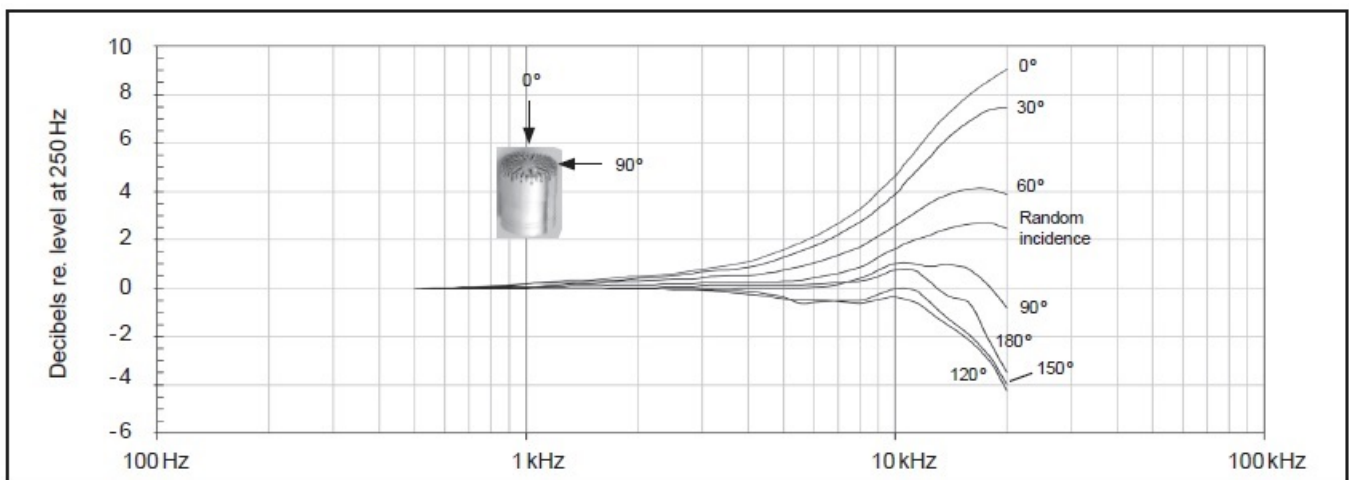
## Test conditions

Temperature: 20 °C

Pressure: 760mm



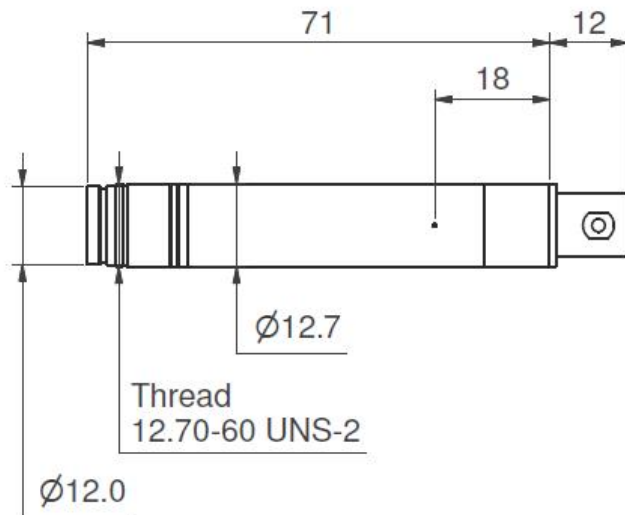
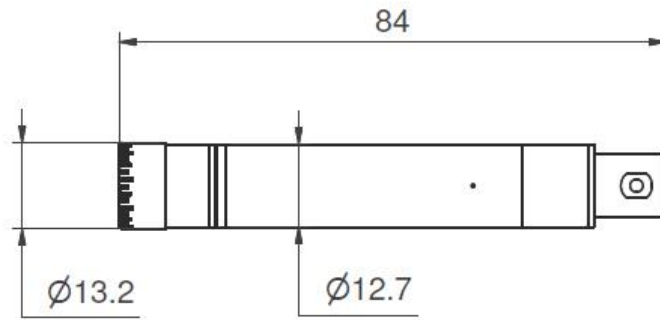
Typical frequency response. Upper curve shows free-field response for 0°, lower curve shows pressure response.



*Free-field corrections for different angles of incidence*

GRAS Sound & Vibration reserves the right to change specifications without notice.

Dimensions in mm



GRAS 46AE	½ CCP Free-field Microphone Set. This is the "standard" rear-vented version.
GRAS 46AE-FV	½ CCP Free-field Microphone Set, Front Vented. Identical to 46AE, but with front venting.

## Optional items

GRAS RA0122	Random Incidence Corrector
<a href="#">GRAS AA0035</a>	3 m BNC - BNC Cable
<a href="#">GRAS AL0008</a>	1/2" Microphone Holder, POM
<a href="#">GRAS AL0012</a>	1/2" Microphone Holder, Stainless Steel
<a href="#">GRAS AL0005</a>	Swivel head
<a href="#">GRAS AL0006</a>	Tripod
<a href="#">GRAS RA0020</a>	1/2" Nosecone
<a href="#">GRAS AM0069</a>	Windscreen for 1/2" Microphones
<a href="#">GRAS RA0131</a>	1/2" Rain protection cap
<a href="#">GRAS 12AL</a>	1-Channel CCP Power Module with A-weighting filter
<a href="#">GRAS 12AQ</a>	2-Channel Universal Power Module with signal conditioning and PC interface
<a href="#">GRAS 42AG</a>	Multifunction Sound Calibrator, Class 1
<a href="#">GRAS 42AP</a>	Intelligent Pistonphone, Class 0
GRAS CA0029	Traceable Calibration of Microphone Set
GRAS CA2301	Accredited Calibration of Microphone Set

GRAS Sound & Vibration reserves the right to change accessories without notice.

# GRAS Worldwide

Subsidiaries and distributors in more than 40 countries

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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 and related equipment for industries where acoustic measuring accuracy and repeatability are of the utmost importance. This includes applications and solutions for customers within the fields of aerospace, automotive, audiology, consumer electronics and other highly demanding industries. GRAS microphones are designed to live up to the high quality, durability and accuracy that our customers have come to expect, trust and require.

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](http://www.grasacoustics.com)

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