

GRAS 46AD

1/2" CCP Pressure Standard Microphone Set, High Sensitivity



46AD is a 1/2" pressure high sensitivity microphone set with built-in TEDS and BNC connector.

GRAS 46BL

1/4" CCP Pressure Microphone Set, High Sensitivity



46BL is a 1/4" microphone set for high sensitivity and low-noise measurement with built-in TEDS and a Microdot connector.

A high-temperature version is available, 46BL-HT.

GRAS 46BD

1/4" CCP Pressure Standard Microphone Set



46BD is a 1/4" pressure microphone set with low sensitivity for high level and high frequency measurements, with built-in TEDS and Microdot connector.

A front-vented version is available, 46BD-FV.

A version with SMB connector is available, 46BD-S1.

GRAS 46DD

1/8" CCP Pressure Standard Microphone Set



46DD is a low sensitivity microphone set for sound measurements at high frequencies. With built-in TEDS and Microdot connector.

A front-vented version is available, 46DD-FV.

GRAS 46BG

1/4" CCP Pressure Standard Microphone Set, High Pressure



46BG is a 1/4" microphone set for high level measurement with built-in TEDS and a Microdot connector. Its low sensitivity and special-designed diaphragm make it ideal for handling high levels.

A front-vented version is available, 46BG-FV.

GRAS 46DE

1/8" CCP Pressure Standard Microphone Set



46DE is a 1/8" CCP Pressure Microphone Set with Microdot connector. The preamplifier is 1/8", making it the world's smallest microphone set.

	Nominal Sensitivity	Frequency Response	Power Supply	Dynamic Range	Max. Output Peak Voltage	Temperature Range	Length	Diameter without Protection Grid	Diameter with Protection Grid	Weight
46AD	50	3.15 - 10 k	2 - 20	18 dB(A) to 138 dB	8	-30 to +85	94	12.7	13.2	40
46BD	1.45	4 - 70 k	2 - 20	44 dB(A) to 166 dB	8	-30 to +85	53	6.35	6.9	10
46BG	0.25	3.15 - 70 k	2 - 20	60 dB(A) to 184 dB	8	-30 to +85	53	6.35	6.9	8
46BL	18	4 - 20 k	2 - 20	25 dB(A) to 147 dB	8	-30 to +85	53	6.35	6.9	8
46DD	0.8	6.5 - 70 k	2 - 20	52 dB(A) to 174 dB	8	-30 to +85	64	3.2	3.5	8
46DE	0.8	6.5 - 70 k	2 - 20	52 dB(A) to 174 dB	8	-30 to +85	38.2	3.2	3.5	7
Units	mV/Pa	Hz	mA	re. 20 µPa	V	°C	mm	mm	mm	g

EXTERNALLY POLARIZED MEASUREMENT MICROPHONES

FREE-FIELD AND RANDOM INCIDENCE

GRAS 40AF

1/2" Free-field Microphone



General purpose high sensitivity microphone with a frequency range from 3.15 Hz to 20 kHz. Can measure sound pressure levels down to 14 dB(A). For Type 0 and Type 1 measurements.

GRAS 40BF

1/4" Free-field Microphone



Low sensitivity microphone for high level and high frequency measurements. Its low sensitivity makes it ideal for measuring high sound pressure levels of up to 172 dB. Its small size reduces the effects of diffraction and reflections around the microphone, resulting in a frequency range reaching up to 100 kHz.

GRAS 40AC

1/2" Free-field Microphone, Wide Frequency



High precision microphone for laboratory work and as a working standard microphone in calibration laboratories. Wide frequency range from 3.15 Hz to 40 kHz. Its size and low sensitivity make it extremely robust and stable and can measure sound levels up to 164 dB.

GRAS 40AR

1/2" Random Incidence Microphone



High sensitivity microphone with a frequency response optimized to measure sound correctly in random, diffuse and reverberant sound fields. It fulfills the requirements of ANSI standard S1.4.

GRAS 40AN

1/2" Free-field Microphone, Low Frequency



High sensitivity microphone ideal for measuring sound at frequencies down to 0.5 Hz. This microphone is the obvious choice for infra-sound measurement. Use the dedicated 26HG 1/4" preamplifier in order to obtain the low frequency response.

	Size	Application	Sensitivity	Dynamic Range	Frequency Range	Polarization Voltage	IEC 61094 Designation
40AF	12.7 (1/2")	Free-field	50	14 - 149	3.15 - 20 k	200	WS2F
40AC	12.7 (1/2")	Free-field	12.5	20 - 164	3.15 - 40 k	200	WS2F
40AN	12.7 (1/2")	Free-field	50	14 - 149	0.5 - 20 k	200	WS2F
40BF	6.35 (1/4")	Free-field	4	30 - 172	4 - 100 k	200	WS3F
40AR	12.7 (1/2")	Random	50	14 - 149	3.15 - 12.5 k	200	WS2P/D
Units	mm (housing)		mV/Pa	dB re. 20 µPa	Hz	V	

GRAS 40EU

1" Reference Pressure Microphone



High precision, laboratory standard microphone with front cavity as specified in IEC 61094-2. It is supplied with a protective dust cap.

GRAS 40AU-1

1/2" Reference Pressure Microphone



High precision, laboratory-standard microphone with front cavity as specified in IEC 61094-2. It is supplied with a protective dust cap.

GRAS 40EN

1" Pressure Microphone



High precision microphone for laboratory work. Ideal for measurements in couplers, e.g. the RA0075 NBS 9-A 6cc Coupler for testing earphones according to ANSI S3.7 - 1995 and RA0113 which is a 2cc IEC 60318-5 (60126) Coupler. Can also be flush mounted to measure sound pressures on walls and boundaries.

GRAS 40AP

1/2" Pressure Microphone, High Sensitivity



High sensitivity microphone with a frequency range from 3.15 Hz to 10 kHz. Can measure sound pressure levels down to 16 dB(A). May also be used as a random incidence microphone.
A front-vented version is available, 40AP-FV.

GRAS 40AG

1/2" Pressure Microphone



High precision microphone for laboratory work and coupler measurements (e.g. in the RA0039 IEC 60318-1 (60318) Ear Simulator). Has a frequency range from 3.15 Hz to 20 kHz. Its size and low sensitivity makes it extremely robust and stable and it can measure sound pressure levels up to 164 dB.

	Size	Application	Sensitivity	Dynamic Range	Frequency Range	Polarization Voltage	IEC 61094 Designation
40EN	23.77 (1")	Pressure	50	9.6 - 146	2.6 - 8 k	200	WS1P
40EU	23.77 (1")	Pressure	50	9.6 - 146	2.6 - 8 k	200	LS1P
40AG	12.7 (1/2")	Pressure	12.5	25 - 160	3.15 - 20 k	200	WS2P
40AU-1	12.7 (1/2")	Pressure	12.5	20 - 160	3.15 - 20 k	200	LS2P
40AP	12.7 (1/2")	Pressure	50	16 - 149	3.15 - 10 k	200	WS2P
Units	mm (housing)		mV/Pa	dB re. 20 µPa	Hz	V	

PRESSURE

GRAS 40BP

1/4" Pressure Microphone



Low sensitivity microphone for sound measurements at high levels and high frequencies. Its low sensitivity makes it ideal for measuring high sound pressure levels of up to 169 dB. Its small size reduces the effects of diffraction and reflections around the microphone, resulting in a frequency range extending up to 70 kHz.

A front-vented version is available, 40BP-FV.

GRAS 40BH

1/4" Pressure Microphone, High Pressure



Low sensitivity microphone for sound measurements at very high levels. Its very low sensitivity makes it ideal for measuring very high sound pressure levels up to 193 dB. Its small size reduces the effects of diffraction and reflections around the microphone, making it ideal for pulse measurements in frequencies up to 20 kHz.

GRAS 40DP

1/8" Pressure Microphone



Low sensitivity microphone for sound measurements at high frequencies and high levels. Its low sensitivity makes it ideal for measuring high sound pressure levels up to 178 dB. Its very small size reduces the effects of diffraction and reflections around the microphone, resulting in a frequency range extending up to 140 kHz.

	Size	Application	Sensitivity	Dynamic Range	Frequency Range	Polarization Voltage	IEC 61094 Designation
40BP	6.35 (1/4")	Pressure	1.6	34 - 169	4 - 70 k	200	WS3P
40BH	6.35 (1/4")	Pressure	0.4	54 - 193	10 - 20 k	200	WS3P
40DP	3.16 (1/8")	Pressure	1	49 - 178	6.5 - 140 k	200	-
Units	mm (housing)		mV/Pa	dB re. 20 µPa	Hz	V	

GRAS 40AE

1/2" Free-field Microphone



General purpose high sensitivity microphone with a frequency range from 3.15 Hz to 20 kHz. Requires no external polarization voltage. Ideal with CCP preamplifiers, Type 1 sound level meters and other similar measurement setups.

GRAS 40AZ

1/2" Free-field Microphone, Low Frequency



Low frequency microphone especially designed for infra-sound measurements. Frequency range from 0.5 Hz to 20 kHz. Use the dedicated 26CG 1/4" CCP preamplifier in order to obtain the low frequency response.

GRAS 40AM

1/2" Free-field Microphone, Wide Frequency



High precision microphone for laboratory work. Wide frequency range from 3.15 Hz to 31.5 kHz. Its size and low sensitivity make it extremely robust and stable and it can measure sound levels up to 163 dB.

GRAS 40BE

1/4" Free-field Microphone



Low sensitivity microphone for high level and high frequency measurements. Requires no polarization voltage. Its low sensitivity makes it ideal for measuring high sound-pressure levels up to 168 dB. Ideal with CCP preamplifiers and for sound measurements at very high frequencies and levels.

A front-vented version is available, 40BE-FV.

GRAS 40AQ

1/2" Random Incidence Microphone



High sensitivity microphone with a frequency response optimized to measure sound correctly in random, diffuse and reverberant sound fields. Requires no external polarization voltage. It fulfills the requirements of ANSI standard S1.4.

	Size	Application	Sensitivity	Dynamic Range	Frequency Range	Polarization Voltage	IEC 61094 Designation
40AE	12.7 (1/2")	Free-field	50	15 - 148	3.15 - 20 k	0	WS2F
40AM	12.7 (1/2")	Free-field	14.5	20 - 163	3.15 - 31.5 k	0	WS2F
40AQ	12.7 (1/2")	Random	50	16 - 148	3.15 - 12.5 k	0	WS2P/D
40AZ	12.7 (1/2")	Free-field	50	14 - 148	0.5 - 20 k	0	WS2F
40BE	6.35 (1/4")	Free-field	4	30 - 168	4 - 80 k	0	WS3F
Units	mm (housing)		mV/Pa	dB re. 20 µPa	Hz	V	

GRAS 40AD

1/2" Pressure Microphone, High Sensitivity



A high sensitivity microphone with a frequency range from 3.15 Hz to 10 kHz. Requires no external polarization voltage. Can measure sound pressure levels down to 16 dB(A). May also be used as a random-incidence microphone. *A front-vented version is available, 40AD-FV.*

GRAS 40BD

1/4" Pressure Microphone



Its low sensitivity makes it ideal for measuring high sound pressure levels up to 166 dB. Its small size reduces the effects of diffraction around the microphone, resulting in a frequency range extending up to 70 kHz. *A front-vented version is available, 40BD-FV.*

GRAS 40AO

1/2" Pressure Microphone, Wide Frequency



A high precision microphone for laboratory work. Has a frequency range from 3.15 Hz to 20 kHz. Requires no external polarization voltage. Its size and lower sensitivity make it extremely robust and stable and it can measure sound pressure levels up to 163 dB. *A front-vented version is available, 40AO-FV.*

GRAS 40DD

1/8" Pressure Microphone

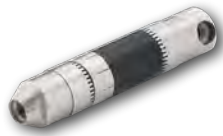


Low sensitivity microphone for sound measurements at high frequencies and high levels. Its low sensitivity makes it ideal for measuring high sound pressure levels of up to 175 dB. Its very small size reduces the effects of diffraction and reflections around the microphone, resulting in a frequency range extending up to 70 kHz.

	Size	Application	Sensitivity	Dynamic Range	Frequency Range	Polarization Voltage	IEC 61094 Designation
40AD	12.7 (1/2")	Pressure	50	16 - 148	3.15 - 10 k	0	WS2P/D
40AO	12.7 (1/2")	Pressure	12.5	25 - 163	3.15 - 20 k	0	WS2P
40BD	6.35 (1/4")	Pressure	1.6	40 - 174	4 - 70 k	0	WS3P
40DD	3.16 (1/8")	Pressure	0.9	49 - 175	6.5 - 70 k	0	-
Units	mm (housing)		mV/Pa	dB re. 20 µPa	Hz	V	

GRAS 40AK

1/2" Ext. Polarized Intensity Microphone Kit



Complete kit of the 40AI phase-matched 1/2" Intensity Microphone pair, solid spacers and adapters for a pair of 26AA 1/4" Preamplifiers.

The microphones have a free-field response optimized for use in face-to-face configuration and a high sensitivity to enable low level measurements. As a pair, they fulfill the phase requirements for Class 1 intensity microphones in accordance with IEC International Standard 61043.

The solid spacers are for intensity probe configurations using microphone separations of 12 mm, 25 mm, 50 mm and 100 mm to cover a full frequency range from 50 Hz to 10 kHz, and improve microphone protection even under the most adverse of measurement conditions.

Included are two right-angled adapters and one straight adapter for use with the 26AA 1/4" Preamplifier pair.

GRAS 40BI

1/4" Ext. Polarized Intensity Microphone Kit



Complete kit of two phase-matched 1/4" intensity microphones, solid spacers and adapters for a pair of 26AA 1/4" Preamplifiers. Used for measuring very high intensity levels which exceed the dynamic range of 1/2" intensity microphones (i.e. 40AI) or in situations where space is limited. The microphones have a free-field response optimized for use in face-to-face configuration. As a pair, they fulfill the phase requirements for Class 2 intensity microphones in accordance with IEC 61043.

The solid spacers are for configurations using microphone separations of 6 mm, 12 mm and 25 mm. The 6 mm spacer alone will cover a frequency range from 500 Hz to 20 kHz, and improves microphone protection even under the most adverse conditions. Included are two right-angled adapters and one straight adapter for use with the 26AA 1/4" Preamplifier Set.

A prepolarized version is available, 40BI-S1.

GRAS 40AI

1/2" Ext. Polarized Intensity Microphone Pair



A pair of 1/2" phase-matched Intensity Microphones as used in 40AK, but without spacers and adapters.



GRAS 40GI

1/2" Prepolarized Intensity Microphone Pair



A pair of 1/2" prepolarized intensity microphones as used in 40GK, but without spacers and adapters.



GRAS 40GK

1/2" Prepolarized Intensity Microphone Kit



Complete kit of two phase-matched 1/2" prepolarized intensity microphones, solid spacers and adapters for a pair of 26CB 1/4" CCP preamplifiers.

These prepolarized microphones have a free-field response optimized for use in face-to-face optimized intensity probes. As a pair, they fulfill the phase requirements for Class 1 intensity microphones in accordance with IEC 61043.

The solid spacers are for intensity probe configurations covering a full frequency range from 50 Hz to 10 kHz using microphone separations of 12 mm, 25 mm, 50 mm and 100 mm. Two right-angled adapters and one straight adapter for use with the 26CB 1/4" CCP preamplifiers are included.



Specifications	40AI/40AK	40BI/40BI-S1	40GI/GK	Units
Sensitivity	25	4	12.5	mV/Pa
Dynamic Range	20 - 157	35 - 172	27 - 163	dB re. 20 µPa
Frequency Response	IEC 60651 Type 0	IEC 60651 Type 0	IEC 60651 Type 0	
Phase Response	IEC 61043 Class 1	IEC 61043 Class 2	IEC 61043 Class 1	
Polarization Voltage	200	200/0	0	V
Diameter	13.2	6.9	13.2	mm