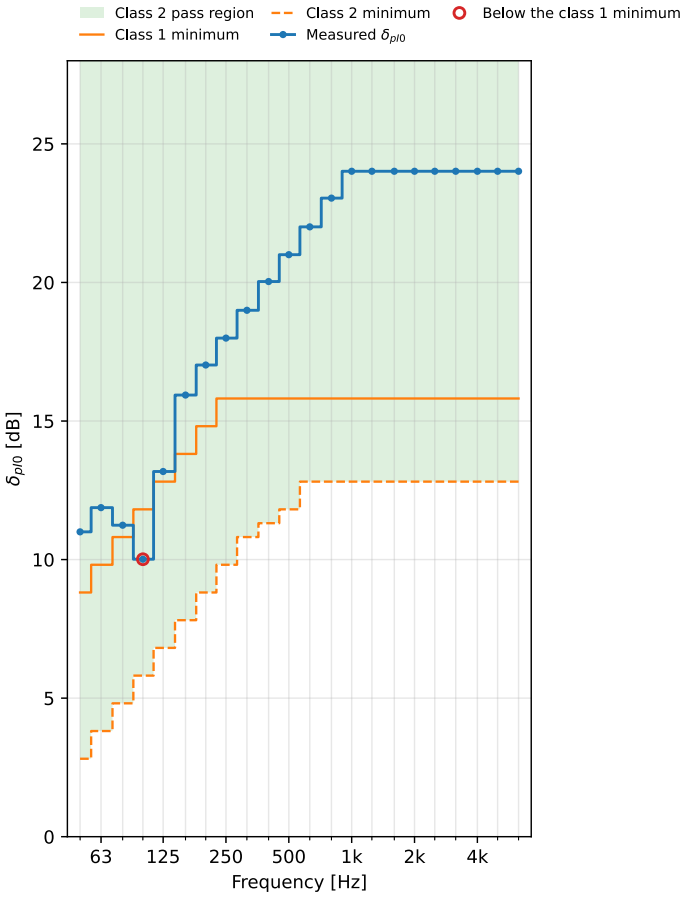
Sound intensity instrument class verification

IEC 61043:1993 type test. Conformance to IEC 61043:1993, Table 2.

Client:	Example client	Probe / instrument:	p-p sound intensity probe and analyser, 12 mm spacer
Manufacturer:	Example instruments	Test facility:	Electroacoustics laboratory (example)
Date of test:	2026-07-20		

Pressure-residual intensity index $\delta_{pI0} = L_p - L_{I,res}$ with identical pink-noise signals on both channels, for an air density of 1.2048 kg/m^3 (IEC 61043:1993, 3.11). Judged against the Table 2 minima for a complete instrument, rescaled to the microphone separation in use by the Note 1 term +10 lg(x/25). It is one IEC 61043 requirement among others; full conformance to the standard does not follow from it alone.

f [Hz]	Cl. 1 [dB]	Cl. 2 [dB]	Meas. [dB]	Margin [dB]	Class
50	8.8	2.8	11.0	+8.2	1
63	9.8	3.8	11.9	+8.1	1
80	10.8	4.8	11.2	+6.4	1
100	11.8	5.8	10.0	+4.2	2
125	12.8	6.8	13.2	+6.4	1
160	13.8	7.8	15.9	+8.1	1
200	14.8	8.8	17.0	+8.2	1
250	15.8	9.8	18.0	+8.2	1
315	15.8	10.8	19.0	+8.2	1
400	15.8	11.3	20.0	+8.7	1
500	15.8	11.8	21.0	+9.2	1
630	15.8	12.8	22.0	+9.2	1
800	15.8	12.8	23.0	+10.2	1
1k	15.8	12.8	24.0	+11.2	1
1.25k	15.8	12.8	24.0	+11.2	1
1.6k	15.8	12.8	24.0	+11.2	1
2k	15.8	12.8	24.0	+11.2	1
2.5k	15.8	12.8	24.0	+11.2	1
3.15k	15.8	12.8	24.0	+11.2	1
4k	15.8	12.8	24.0	+11.2	1
5k	15.8	12.8	24.0	+11.2	1
6.3k	15.8	12.8	24.0	+11.2	1



Class **2** - COMPLIES (binding margin +4.20 dB)

Verified as: complete instrument
Microphone separation d = 12 mm (-3.2 dB on Table 2)
Equivalent phase mismatch 0.050 to 0.315 degrees

Result vs requirement: Achieved class 2, required class 1 → **FAIL**

Laboratory: Phonometry reference example
Report no.: EXAMPLE-61043
Date: 2026-07-20
Operator: phonometry Signature: _____

■ The results relate only to the tested specimen.

Generated by phonometry.