

DIN EN ISO 9295:2015-09 (E)

Acoustics - Determination of high-frequency sound power levels emitted by machinery and equipment (ISO 9295:2015)

Contents		Page
Foreword		4
Introduction		5
1	Scope	6
2	Normative references	6
3	Terms and definitions	6
4	Conformity requirements	6
5	Requirements for measurements in a reverberation test room	6
5.1	General	6
5.2	Meteorological conditions	7
5.3	Instrumentation	7
5.4	Installation and orientation of microphone	7
5.5	Installation and orientation of equipment	8
5.6	Calibration of measurement system	8
5.7	Measurement of sound pressure level	8
6	Method using measured reverberation time	9
6.1	General	9
6.2	Measurement of reverberation time	10
6.3	Calculation of room absorption	10
6.4	Installation of microphone and equipment	10
6.5	Measurement of sound pressure level	10
6.6	Calculation of sound power level	11
7	Method using calculated air absorption	11
7.1	General	11
7.2	Calculation of room constant	11
7.3	Installation of microphone and equipment	11
7.4	Measurement of sound pressure level	11
7.5	Calculation of sound power level	12
8	Method using a reference sound source	13
8.1	Reference sound source	13
8.2	Installation of microphone and equipment	13
8.3	Installation of reference sound source	14
8.4	Measurement of sound pressure level	14
8.5	Calculation of sound power level	14
8.5.1	Equipment emitting broad-band noise	14
8.5.2	Equipment emitting discrete tone(s)	15
9	Method using a free field over a reflecting plane	15
9.1	General	15
9.2	Meteorological conditions	15
9.3	Instrumentation	16
9.4	Installation and orientation of microphone	16
9.5	Installation of equipment	16

9.6	Calibration of measurement system	16
9.7	Measurement of sound pressure level	17
9.8	Calculation of surface sound pressure level and sound power level	17
10	Calculation of sound power level under reference meteorological conditions	18
10.1	Reverberation rooms	18
10.2	Hemi-anechoic rooms	18
11	Measurement uncertainty	18
12	Information to be recorded	18
12.1	General	18
12.2	Equipment under test	18
12.3	Acoustic environment	19
12.4	Instrumentation	19
12.5	Acoustical data	19
13	Information to be reported	19
	Annex A (normative) Calculation of air absorption coefficient	21
	Bibliography	23