

ISO 13350:2015-10 (E)

Fans - Performance testing of jet fans

Contents		Page
Foreword		v
Introduction		vii
1	Scope	1
2	Normative references	1
3	Terms and definitions	1
4	Symbols and abbreviated terms	4
5	Characteristics to be measured	5
5.1	General	5
5.2	Thrust	6
5.3	Input power	6
5.4	Sound levels	6
5.5	Vibration velocity	6
5.6	Volume flowrate	6
6	Instrumentation and measurements	6
6.1	Dimension and areas	6
6.2	Rotational speed	6
6.3	Thrust	6
6.3.1	Force balance systems	6
6.3.2	Force transducers	6
6.4	Input power	7
6.5	Sound level	7
6.6	Vibration velocity	7
6.7	Volume flowrate	7
6.7.1	Instruments for the measurement of pressure	7
6.7.2	Instruments for the measurement of temperature	7
7	Determination of thrust	7
7.1	General	7
7.2	Suspended configuration	7
7.3	Supported configuration	9
7.4	Test procedures	12
7.5	Test enclosure	13
8	Determination of sound level	13
8.1	General	13
8.2	Test arrangement	14
8.3	Enclosure suitability	15
8.4	Measurement procedure	15
9	Determination of vibration velocity	16
9.1	General	16
9.2	Test arrangement	16
9.3	Test procedure	16
9.4	Acceptance vibration velocity	16

10	Determination of flow rate	17
10.1	General	17
10.2	Upstream chamber method	17
10.3	Upstream Pitot traverse method	18
10.4	Directly connected flow rate-measuring device	18
11	Presentation of results	20
11.1	Product description	20
11.2	Product performance	21
12	Tolerances and conversion rules	21
12.1	Tolerances	21
12.2	Conversion rules	21
Annex A (informative) Illustration of reference sound source		24
Annex B (informative) Correction of sound pressure levels		25
Annex C (informative) Non-dimensional coefficients		26
Annex D (normative) Efficiency based on thrust measurements		28
Bibliography		30