

DIN ISO 19499:2008-03 (E)

Mechanical vibration - Balancing - Guidance on the use and application of balancing standards (ISO 19499:2007)

Contents	Page
Introduction	5
1 Scope	6
2 Normative references	6
3 Terms and definitions	6
4 Fundamentals of balancing	6
4.1 General	6
4.2 Unbalance distribution	7
4.3 Unbalance representation	7
5 Balancing considerations	8
5.1 General	8
5.2 Rotors with rigid behaviour	8
5.3 Rotors with flexible behaviour	9
5.4 Rotors with special behaviour	10
5.5 Examples of rotor behaviours	10
5.6 Influencing factors	11
6 Balance tolerances	12
6.1 General	12
6.2 Permissible residual unbalances	12
6.3 Vibration limits	12
7 Selection of a balancing procedure	12
7.1 General	12
7.2 Selection of a balancing procedure when none is specified	13
8 International Standards on balancing	18
8.1 General	18
8.2 Vocabulary	18
8.3 Balancing procedures and tolerances	19
8.4 Balancing machines	20
8.5 Machine design for balancing	20
8.6 Machine vibration	21
Annex A (informative) Mathematical and graphical representation of unbalance	22
Annex B (informative) Examples of different rotor behaviours	33
Annex C (informative) How to determine rotor flexibility based on an estimation from its geometric design	38
Bibliography	41