

DIN EN ISO 16047:2025-08 (E)

Fasteners - Torque/clamp force testing (ISO 16047:2005 + Amd 1:2012) (includes Amendment :2012)

Contents

Page

Foreword.....	iii
[A1] Foreword to Amendment 1 [A1]	iv
1 Scope.....	1
2 Normative references	1
3 Terms and definitions.....	2
4 Symbols and their designations.....	3
5 Principle of test	4
5.1 General	4
5.2 Determination of coefficients of friction	4
5.3 Determination of torque coefficient K (K -factor).....	5
5.4 Determination of ratio T/F	5
6 Apparatus.....	5
6.1 Testing machine.....	5
6.2 Test fixture.....	5
7 Test parts	6
7.1 General	6
7.2 Test-bearing plates or test washers.....	7
7.3 Test nuts for testing bolts, screws and studs.....	8
7.4 Test bolts or test screws for testing nuts.....	8
8 Testing under standard conditions.....	9
9 Testing under specific conditions.....	9
10 Evaluation of results.....	9
10.1 Determination of torque coefficient K	9
10.2 Determination of coefficient of total friction μ_{tot}	10
10.3 Determination of coefficient of friction between threads μ_{th}	10
10.4 Determination of coefficient of friction between bearing surfaces μ_{b}	11
10.5 Determination of yield clamp force F_{y}	11
10.6 Determination of yield tightening torque T_{y}	11
10.7 Determination of ultimate clamp force F_{u}	11
10.8 Determination of ultimate tightening torque T_{u}	11
11 Test report.....	11
11.1 General	11
11.2 Description of fasteners to be tested.....	12
11.3 Description of test parts.....	13
11.4 Testing machine	13
11.5 Test fixture.....	14
11.6 Environmental conditions	14
11.7 Specific conditions	14
11.8 Test results	14
Bibliography	15