

# DIN 513-3:2020-12 (E)

## Metric buttress threads - Part 3: Deviations and tolerances

---

Contents	Page
Foreword .....	3
Introduction .....	4
1 Scope .....	5
2 Normative references .....	5
3 Terms and definitions.....	5
4 Designation .....	5
5 Tolerance grades.....	6
6 Tolerance positions.....	6
7 Lengths of thread engagement.....	8
8 Major and minor diameter tolerances .....	10
8.1 Tolerances for the minor diameter of the internal thread $T_{D1}$ .....	10
8.2 Tolerances for the major diameter of the internal thread $T_D$ .....	11
8.3 Tolerances for the major diameter of the external thread $T_d$ .....	11
8.4 Tolerances for the minor diameter of the external thread $T_{d3}$ .....	12
9 Pitch diameter tolerances .....	14
9.1 Tolerances for the pitch diameter of the internal thread $T_{D2}$ .....	14
9.2 Tolerances for the pitch diameter of the external thread $T_{d2}$ .....	16
10 Recommended tolerance classes .....	18
10.1 General .....	18
10.2 Tolerance classes for the pitch diameter of the internal thread .....	18
10.3 Tolerance classes for the pitch diameter of the external thread.....	18
10.4 Tolerance class for the minor diameter of the internal thread.....	18
10.5 Tolerance class for the major diameter of the external thread .....	18
10.6 Tolerance class for the major diameter of the internal thread.....	18
10.7 Tolerance class for the minor diameter of the external thread.....	18
11 Formulae.....	19
11.1 Lengths of thread engagement.....	19
11.2 Tolerances for the pitch diameter of the internal thread $T_{D2}$ .....	19
11.3 Tolerances for the minor diameter of the internal thread $T_{D1}$ .....	19
11.4 Tolerances for the pitch diameter of the external thread $T_{d2}$ .....	19
11.5 Tolerances for the minor diameter of the external thread $T_{d3}$ .....	20
11.6 Fundamental deviation $es$ .....	20
11.7 Rounding rules.....	20
12 Multiple-start buttress threads .....	20
Bibliography .....	21