

Tolerances for Cylindrical Gear Teeth

Tolerances for Tooth Trace Deviations

DIN
3962
 Part 2

Toleranzen für Stirnradverzahnungen; Toleranzen für Flankenlinienabweichungen

1 Scope

The tolerances listed in this Standard apply to the amounts of the deviations defined in DIN 3960.

It contains tolerances for:

- tooth trace total deviation F_{β}
- tooth trace angle deviation $f_{H\beta}$
- tooth trace form deviation $f_{\beta f}$

2 Other relevant Standards

DIN 3960 Definitions and parameters for cylindrical gears and cylindrical gear pairs with involute teeth

DIN 3961 Tolerances for cylindrical gear teeth; bases

3 Tolerance data

Tolerances in μm

		F_{β} Deviation $f_{H\beta}$ $f_{\beta f}$											
Gear tooth quality		1	2	3	4	5	6	7	8	9	10	11	12
Facewidth b in mm	up to 20	2,5	3,5	4,5	5,5	7	9	13	18	28	45	71	110
		2	2,5	3	4	6	8	11	16	25	36	56	90
		1,5	2,5	3	3,5	4,5	5,5	7	9	14	25	40	63
	over 20 up to 40	3	4	5	6	8	10	15	20	32	50	80	125
		2	2,5	3,5	4,5	6,5	9	13	18	28	40	63	100
		2	3	4	5	6	7	9	12	18	28	45	71
	over 40 up to 100	4	5	6	8	10	12	18	25	40	63	100	160
		2,5	3	4	5	7	10	14	20	28	45	71	110
		3	4	5	6	7	9	12	18	28	45	63	110
	over 100 up to 160	5	6	8	10	12	16	22	32	50	80	125	200
		3	3,5	4,5	6	8	11	16	22	32	50	80	125
		4	5	7	8	9	12	16	25	40	63	100	160
	over 160 ¹⁾	5	6	8	10	12	16	22	32	50	80	125	200
		3	3,5	4,5	6	8	11	16	22	32	50	80	125
4		5	7	8	9	12	16	25	40	63	100	160	

1) For gears with $b > 160$ mm tooth trace tolerances other than those stated in the Table can also be agreed.
 See also DIN 3961, August 1978 edition, Section 6.2

For Explanations see DIN 3962 Part 1

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Further Standards and codes

DIN 3962 Part 1 Tolerances for cylindrical gear teeth; tolerances for deviations of individual parameters

DIN 3962 Part 3 Tolerances for cylindrical gear teeth; tolerances for pitch-span deviations

DIN 3963 Tolerances for cylindrical gear teeth; tolerances for working deviations

DIN 3964 Centre distance allowances and shaft position tolerances of housings for cylindrical gear transmissions

DIN 3967 System of gear fits; backlash, tooth thickness allowances and tooth thickness tolerances; bases, calculation of tooth thickness allowances conversion of allowances for the different measuring methods

DIN 3999 Symbols for gear teeth

VDI/VDE 2612 Profile and tooth trace test for cylindrical gears with involute profile, Part 1 Profile testing, Part 2 Tooth trace testing