

Commonly used standard tolerance table

GB/T 14976-2002 Standard cold machining size deviation permitted

mm		Allowable deviation		mm		Allowable deviation	
		Ordinary grade	Advanced			Ordinary grade	Advanced
Nominal outer diameter D	6-10	±0.20	±0.15	Nominal wall thickness S	≤3	± 14%S	+12.5%S -10%S
	>10-30	±0.30	±0.20				
	>30-50	±0.40	±0.30		>3	+ 12.5%S -10%S	± 10%S
	>50	± 0.9%D	± 0.8%D				

GB 13296-2007 Standard cold machining size deviation permitted

mm	Nominal size	allowable deviation
Outer diameter (D)	6-30	-0.20 +0.15
	>30-50	±0.30
	>50	±0.75%D
Wall Thickness (S)	D≤38	-0%S +20%S
	D>38	-0%S +22%S

GB 9948-2006 Standard cold machining size deviation permitted

mm	Nominal size	allowable deviation	
		Ordinary grade	Advanced
Outer diameter (D)	14- 30	±0.20	±0.15
	>30-50	±0.30	±0.25
	>50	± 0.75%D	± 0.6%D
Wall Thickness (S)	≤3.0	-10%S +12.5%S	± 10%S
	> 3.0	± 10%S	± 7.5%S

GB 5310-2008 Standard cold machining size deviation permitted

mm	Nominal size	allowable deviation	
		Ordinary grade	Advanced
Outer diameter (D)	≤25.4	±0.15	
	>25.4-40	±0.20	
	>40-50	±0.25	
	>50-60	±0.30	
	>60	± 0.5%D	
Wall Thickness (S)	≤3	±0.3	±0.2
	> 3	± 10%S	± 7.5%S

GB/T 21833-2008 Standard cold machining size deviation permitted

mm	Nominal size	allowable deviation	
		Ordinary grade	Advanced
Outer diameter (D)	12-30	±0.20	±0.15
	>30-50	±0.30	±0.25
	> 50-89	±0.50	±0.40
	>89-114	± 0.8%D	±0.7%D
	> 140	±1%D	±0.9%
Wall Thickness (S)	≤3	± 14%S	-12%S +10%S
	> 3	-12%S +10%S	± 7.5%S