

Metrisches ISO-Gewinde
 Grenzmaße für Feingewinde von 25 bis 52 mm Nenndurchmesser mit gebräuchlichen Toleranzfeldern

DIN
13
 Teil 22

ISO metric fine threads from 25 to 52 mm diameter; limits

Ersatz für Ausgabe 02.73

Filetages métriques ISO à pas fin du diamètre de 25 à 52 mm; dimensions limits

Maße in mm

1 Anwendungsbereich

Diese Norm gilt für Metrisches ISO-Gewinde mit einem Grundprofil nach DIN 13 Teil 19. Die Grenzen für die Kernausrundung des Bolzensgewindes sind nach DIN 13 Teil 14 mit $R = 0,144 P = H/6$ für das Größtmaß und mit $R_{\min} = 0,125 P \approx H/7$ für das Kleinstmaß des Kerndurchmessers d_3 festgelegt.

Sie enthält Grenzmaße für Feingewinde von 25 bis 52 mm Gewinde-Nenndurchmesser mit gebräuchlichen Toleranzfeldern.

2 Grenzmaße

Die Grenzmaße der Feingewinde mit den gebräuchlichen Toleranzfeldern (siehe DIN 13 Teil 14) sind aus den Gewinde-Nennmaßen nach DIN 13 Teil 2 bis Teil 9 und den Abmaßen und Toleranzen nach DIN 13 Teil 15 errechnet worden. Grenzmaße für Gewinde nach Toleranzfeldern, die in dieser Norm nicht enthalten sind, können aus den Abmaßen nach DIN 13 Teil 27 errechnet werden.

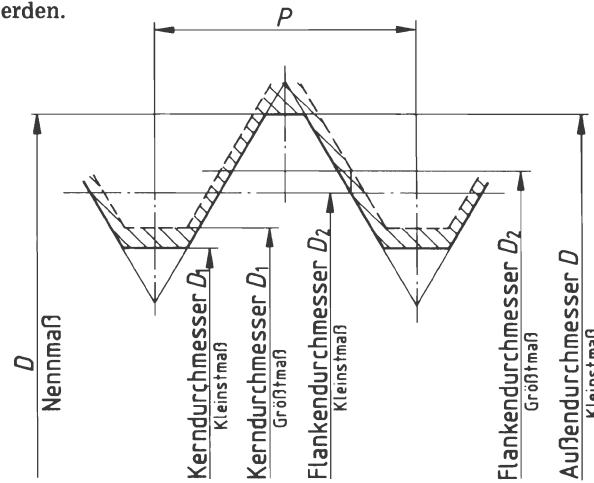


Bild 1. Muttergewinde in Toleranzlage H

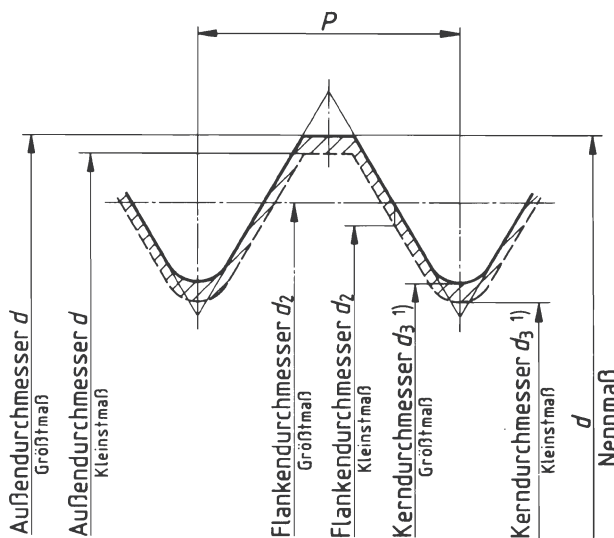


Bild 2. Bolzensgewinde in Toleranzlage h

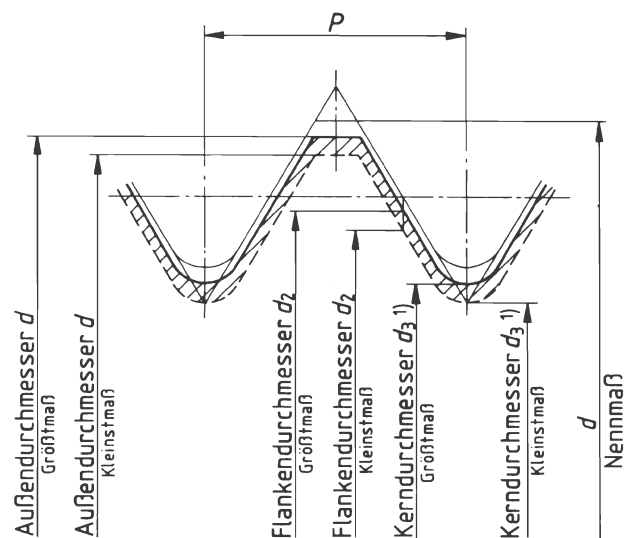


Bild 3. Bolzensgewinde in Toleranzlage g

1) Größtmaß mit $R = 0,144 P = H/6$, Kleinstmaß mit $R_{\min} = 0,125 P \approx H/7$ errechnet (siehe DIN 13 Teil 14)

Fortsetzung Seite 2 bis 11

Gewinde- Nenndurchmesser <i>d = D</i>	Steigung <i>P</i>	Muttergewinde						Bolzensgewinde						
		Toleranzfeld	Außen- durch- messer <i>D</i>	Flanken- durchmesser <i>D₂</i>		Kern- durchmesser <i>D₁</i>		Toleranzfeld	Außen- durchmesser <i>d</i>		Flanken- durchmesser <i>d₂</i>		Kern- durchmesser ¹⁾ <i>d₃</i>	
				Kleinst- maß	Größt- maß	Kleinst- maß	Größt- maß		Größt- maß	Kleinst- maß	Größt- maß	Kleinst- maß	Größt- maß	Kleinst- maß
25	0,35	4H	25,000	24,773	24,844	24,621	24,684	4h	25,000	24,947	24,773	24,720	24,571	24,505
	6g							24,981	24,896	24,754	24,669	24,552	24,454	
	0,5	5H	25,000	24,675	24,755	24,459	24,571	4h	25,000	24,933	24,675	24,615	24,387	24,308
	6H							25,000	24,675	24,800	24,459	24,599	24,980	24,874
	0,75	5H	25,000	24,513	24,631	24,188	24,338	4h	25,000	24,910	24,513	24,442	24,080	23,980
	6H							25,000	24,513	24,663	24,188	24,378	24,978	24,838
	0,75	7H	25,000	24,513	24,703	24,188	24,424							
	1	5H	25,000	24,350	24,482	23,917	24,107	4h	25,000	24,888	24,350	24,270	23,773	23,654
	1							6H	25,000	24,350	24,520	23,917	24,153	24,974
	1	7H	25,000	24,350	24,562	23,917	24,217	8g	24,974	24,694	24,324	24,124	23,747	23,508
	1,5	5H	25,000	24,026	24,186	23,376	23,612	4h	25,000	24,850	24,026	23,931	23,160	23,007
	1,5							6H	25,000	24,026	24,226	23,376	23,676	24,968
	1,5	7H	25,000	24,026	24,276	23,376	23,751	8g	24,968	24,593	23,994	23,758	23,128	22,834
	2	5H	25,000	23,701	23,881	22,835	23,135	4h	25,000	24,820	23,701	23,595	22,546	22,363
	2							6H	25,000	23,701	23,925	22,835	23,210	24,962
2	7H	25,000	23,701	23,981	22,835	23,310	8g	24,962	24,512	23,663	23,398	22,508	22,166	
25,5	0,5	5H	25,500	25,175	25,255	24,959	25,071	4h	25,500	25,433	25,175	25,115	24,887	24,808
	0,5	6H	25,500	25,175	25,300	24,959	25,099	6g	25,480	25,374	25,155	25,060	24,867	24,753
26	0,35	4H	26,000	25,773	25,844	25,621	25,684	4h	26,000	25,947	25,773	25,720	25,571	25,505
	6g							25,981	25,896	25,754	25,669	25,552	25,454	
	0,5	5H	26,000	25,675	25,755	25,459	25,571	4h	26,000	25,933	25,675	25,615	25,387	25,308
	0,5							6H	26,000	25,675	25,800	25,459	25,599	25,980
	0,75	5H	26,000	25,513	25,631	25,188	25,338	4h	26,000	25,910	25,513	25,442	25,080	24,980
	0,75							6H	26,000	25,513	25,663	25,188	25,378	25,978
	0,75	7H	26,000	25,513	25,703	25,188	25,424							
	1	5H	26,000	25,350	25,482	24,917	25,107	4h	26,000	25,888	25,350	25,270	24,773	24,654
	1							6H	26,000	25,350	25,520	24,917	25,153	25,974
	1	7H	26,000	25,350	25,562	24,917	25,217	8g	25,974	25,694	25,324	25,124	24,747	24,508
	1,5	5H	26,000	25,026	25,186	24,376	24,612	4h	26,000	25,850	25,026	24,931	24,160	24,007
	1,5							6H	26,000	25,026	25,226	24,376	24,676	25,968
	1,5	7H	26,000	25,026	25,276	24,376	24,751	8g	25,968	25,593	24,994	24,758	24,128	23,834
	2	5H	26,000	24,701	24,881	23,835	24,135	4h	26,000	25,820	24,701	24,595	23,546	23,363
	2							6H	26,000	24,701	24,925	23,835	24,210	25,962
2	7H	26,000	24,701	24,981	23,835	24,310	8g	25,962	25,512	24,663	24,398	23,508	23,166	
26,5	0,5	5H	26,500	26,175	26,255	25,959	26,071	4h	26,500	26,433	26,175	26,115	25,887	25,808
	0,5	6H	26,500	26,175	26,300	25,959	26,099	6g	26,480	26,374	26,155	26,060	25,867	25,753
27	0,35	4H	27,000	26,773	26,844	26,621	26,684	4h	27,000	26,947	26,773	26,720	26,571	26,505
	6g							26,981	26,896	26,754	26,669	26,552	26,454	
	0,5	5H	27,000	26,675	26,755	26,459	26,571	4h	27,000	26,933	26,675	26,615	26,387	26,308
	0,5							6H	27,000	26,675	26,800	26,459	26,599	26,980
	0,75	5H	27,000	26,513	26,631	26,188	26,338	4h	27,000	26,910	26,513	26,442	26,080	25,980
	0,75							6H	27,000	26,513	26,663	26,188	26,378	26,978
	0,75	7H	27,000	26,513	26,703	26,188	26,424							
	1	5H	27,000	26,350	26,482	25,917	26,107	4h	27,000	26,888	26,350	26,270	25,773	25,654
	1							6H	27,000	26,350	26,520	25,917	26,153	26,974
	1	7H	27,000	26,350	26,562	25,917	26,217	8g	26,974	26,694	26,324	26,124	25,747	25,508
	1,5	5H	27,000	26,026	26,186	25,376	25,612	4h	27,000	26,850	26,026	25,931	25,160	25,007
	1,5							6H	27,000	26,026	26,226	25,376	25,676	26,968
	1,5	7H	27,000	26,026	26,276	25,376	25,751	8g	26,968	26,593	25,994	25,758	25,128	24,834
	2	5H	27,000	25,701	25,881	24,835	25,135	4h	27,000	26,820	25,701	25,595	24,546	24,363
	2							6H	27,000	25,701	25,925	24,835	25,210	26,962
2	7H	27,000	25,701	25,981	24,835	25,310	8g	26,962	26,512	25,663	25,398	24,508	24,166	
27,5	0,5	5H	27,500	27,175	27,275	26,959	27,071	4h	27,500	27,433	27,175	27,115	26,887	26,808
	0,5	6H	27,500	27,175	27,300	26,959	27,099	6g	27,480	27,374	27,155	27,060	26,867	26,753

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Gewinde- Nenndurchmesser $d=D$	Steigung P	Muttergewinde						Bolzensgewinde							
		Toleranzfeld	Außen- durch- messer D	Flanken- durchmesser D_2		Kern- durchmesser D_1		Toleranzfeld	Außen- durchmesser d		Flanken- durchmesser d_2		Kern- durchmesser ¹⁾ d_3		
				Kleinst- maß	Größt- maß	Kleinst- maß	Größt- maß		Größt- maß	Kleinst- maß	Größt- maß	Größt- maß	Kleinst- maß	Größt- maß	Kleinst- maß
28	0,35	4H	28,000	27,773	27,844	27,621	27,684	4h	28,000	27,947	27,773	27,720	27,571	27,505	
	0,35							6g	27,981	27,896	27,754	27,669	27,552	27,454	
	0,5	5H	28,000	27,675	27,775	27,459	27,571	4h	28,000	27,933	27,675	27,615	27,387	27,308	
		6H	28,000	27,675	27,800	27,459	27,599	6g	27,980	27,874	27,655	27,560	27,367	27,253	
	0,75	5H	28,000	27,513	27,631	27,188	27,338	4h	28,000	27,910	27,513	27,442	27,080	26,980	
		6H	28,000	27,513	27,663	27,188	27,378	6g	27,978	27,838	27,491	27,379	27,058	26,917	
	1	5H	28,000	27,350	27,482	26,917	27,107	4h	28,000	27,888	27,350	27,270	26,773	26,654	
		6H	28,000	27,350	27,520	26,917	27,153	6g	27,974	27,794	27,324	27,199	26,747	26,583	
		7H	28,000	27,350	27,562	26,917	27,217	8g	27,974	27,694	27,324	27,124	26,747	26,508	
	1,5	5H	28,000	27,026	27,186	26,376	26,612	4h	28,000	27,850	27,026	26,931	26,160	26,007	
		6H	28,000	27,026	27,226	26,376	26,676	6g	27,968	27,732	26,994	26,844	26,128	25,920	
		7H	28,000	27,026	27,276	26,376	26,751	8g	27,968	27,593	26,994	26,758	26,128	25,834	
	2	5H	28,000	26,701	26,881	25,835	26,135	4h	28,000	27,820	26,701	26,595	25,546	25,363	
		6H	28,000	26,701	26,925	25,835	26,210	6g	27,962	27,682	26,663	26,493	25,508	25,261	
		7H	28,000	26,701	26,981	25,835	26,310	8g	27,962	27,512	26,663	26,398	25,508	25,166	
	3	5H	28,000	26,051	26,263	24,752	25,152	4h	28,000	27,764	26,051	25,926	24,319	24,078	
		6H	28,000	26,051	26,316	24,752	25,252	6g	27,952	27,577	26,003	25,803	24,271	23,955	
		7H	28,000	26,051	26,386	24,752	25,382	8g	27,952	27,352	26,003	25,688	24,271	23,840	
28,5	0,5	5H	28,500	28,175	28,275	27,959	28,071	4h	28,500	28,433	28,175	28,115	27,887	27,808	
	0,5	6H	28,500	28,175	28,300	27,959	28,099	6g	28,480	28,374	28,155	28,060	27,867	27,753	
29	0,35	4H	29,000	28,773	28,844	28,621	28,684	4h	29,000	28,947	28,773	28,720	28,571	28,505	
	0,35							6g	28,981	28,896	28,754	28,669	28,552	28,454	
	0,5	5H	29,000	28,675	28,775	28,459	28,571	4h	29,000	28,933	28,675	28,615	28,387	28,308	
		6H	29,000	28,675	28,800	28,459	28,599	6g	28,980	28,874	28,655	28,560	28,367	28,253	
	0,75	5H	29,000	28,513	28,631	28,188	28,338	4h	29,000	28,910	28,513	28,442	28,080	27,980	
		6H	29,000	28,513	28,663	28,188	28,378	6g	28,978	28,838	28,491	28,379	28,058	27,917	
	1	5H	29,000	28,350	28,482	27,917	28,107	4h	29,000	28,888	28,350	28,270	27,773	27,654	
		6H	29,000	28,350	28,520	27,917	28,153	6g	28,974	28,794	28,324	28,199	27,747	27,583	
		7H	29,000	28,350	28,562	27,917	28,217	8g	28,974	28,694	28,324	28,124	27,747	27,508	
	1,5	5H	29,000	28,026	28,186	27,376	27,612	4h	29,000	28,850	28,026	27,931	27,160	27,007	
		6H	29,000	28,026	28,226	27,376	27,676	6g	28,968	28,732	27,994	27,844	27,128	26,920	
		7H	29,000	28,026	28,276	27,376	27,751	8g	28,968	28,593	27,994	27,758	27,128	26,834	
29,5	0,5	5H	29,500	29,175	29,275	28,959	29,071	4h	29,500	29,433	29,175	29,115	28,887	28,808	
	0,5	6H	29,500	29,175	29,300	28,959	29,099	6g	29,480	29,374	29,155	29,060	28,867	28,753	
30	0,35	4H	30,000	29,773	29,844	29,621	29,684	4h	30,000	29,947	29,773	29,720	29,571	29,505	
	0,35							6g	29,981	29,896	29,754	29,669	29,552	29,454	
	0,5	5H	30,000	29,675	29,775	29,459	29,571	4h	30,000	29,933	29,675	29,615	29,387	29,308	
		6H	30,000	29,675	29,800	29,459	29,599	6g	29,980	29,874	29,655	29,560	29,367	29,253	
	0,75	5H	30,000	29,513	29,631	29,188	29,338	4h	30,000	29,910	29,513	29,442	29,080	28,980	
		6H	30,000	29,513	29,663	29,188	29,378	6g	29,978	29,838	29,491	29,379	29,058	28,917	
	1	5H	30,000	29,350	29,482	28,917	29,107	4h	30,000	29,888	29,350	29,270	28,773	28,654	
		6H	30,000	29,350	29,520	28,917	29,153	6g	29,974	29,794	29,324	29,199	28,747	28,583	
		7H	30,000	29,350	29,562	28,917	29,217	8g	29,974	29,694	29,324	29,124	28,747	28,508	
	1,5	5H	30,000	29,026	29,186	28,376	28,612	4h	30,000	29,850	29,026	28,931	28,160	28,007	
		6H	30,000	29,026	29,226	28,376	28,676	6g	29,968	29,732	28,994	28,844	28,128	27,920	
		7H	30,000	29,026	29,276	28,376	28,751	8g	29,968	29,593	28,994	28,758	28,128	27,834	
	2	5H	30,000	28,701	28,881	27,835	28,135	4h	30,000	29,820	28,701	28,595	27,546	27,363	
		6H	30,000	28,701	28,925	27,835	28,210	6g	29,962	29,682	28,663	28,493	27,508	27,261	
		7H	30,000	28,701	28,981	27,835	28,310	8g	29,962	29,512	28,663	28,398	27,508	27,166	
	3	5H	30,000	28,051	28,263	26,752	27,152	4h	30,000	29,764	28,051	27,926	26,319	26,078	
		6H	30,000	28,051	28,316	26,752	27,252	6g	29,952	29,577	28,003	27,803	26,271	25,955	
		7H	30,000	28,051	28,386	26,752	27,382	8g	29,952	29,352	28,002	27,688	26,271	25,840	

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