

Metrisches ISO-Gewinde
 Grenzmaße für Feingewinde von 112 bis 180 mm Nenndurchmesser mit gebräuchlichen Toleranzfeldern

DIN
13
 Teil 24

ISO metric fine threads from 112 to 180 mm diameter; limits
 Filetages métriques ISO à pas fin du diamètre de 112 à 180 mm; dimensions limites

Ersatz für Ausgabe 02.73

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 112 bis 180 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 5 bis Teil 11 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.

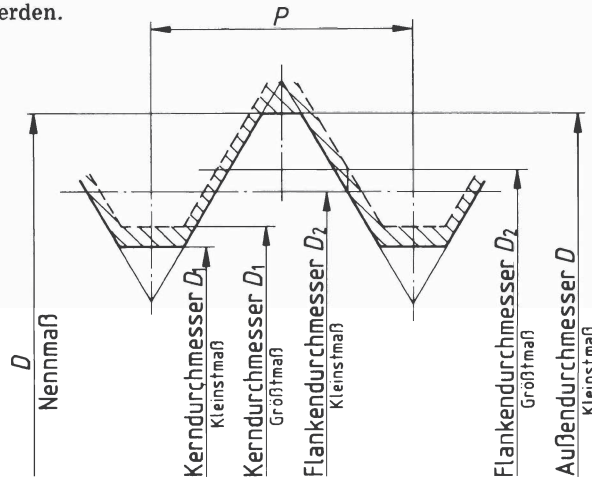


Bild 1. Muttergewinde in Toleranzlage H

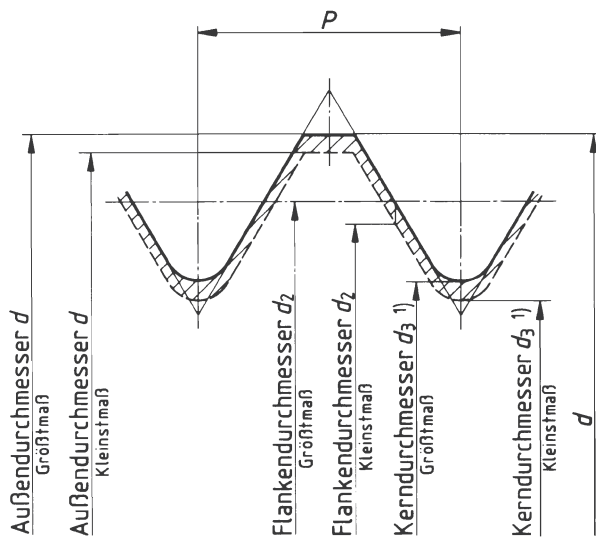


Bild 2. Bolzensgewinde in Toleranzlage h

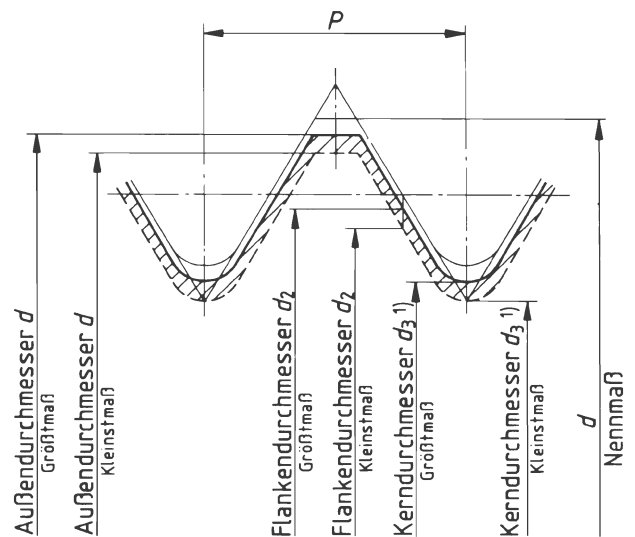


Bild 3. Bolzensgewinde in Toleranzlage g

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 $d=D$	Steigung P	Muttergewinde						Bolzensgewinde						
		Toleranzfeld	Außendurchmesser D	Flankendurchmesser		Kern- durchmesser		Toleranzfeld	Außendurchmesser		Flanken- durchmesser		Kern- durchmesser ¹⁾	
				D_2		D_1			d		d_2		d_3	
				Kleinst- maß	Größt- maß	Kleinst- maß	Größt- maß		Größt- maß	Kleinst- maß	Größt- maß	Kleinst- maß	Größt- maß	Kleinst- maß
112	1	5H	112,000	111,350	111,510	110,917	111,107	4h	112,000	111,888	111,350	111,255	110,773	110,639
	1	6H	112,000	111,350	111,550	110,917	111,153	6g	111,974	111,794	111,324	111,174	110,747	110,558
	1	7H	112,000	111,350	111,600	110,917	111,217							
	1,5	5H	112,000	111,026	111,206	110,376	110,612	4h	112,000	111,850	111,026	110,920	110,160	109,996
	1,5	6H	112,000	111,026	111,250	110,376	110,676	6g	111,968	111,732	110,994	110,824	110,128	109,900
	1,5	7H	112,000	111,026	111,306	110,376	110,751							
	2	5H	112,000	110,701	110,901	109,835	110,135	4h	112,000	111,820	110,701	110,583	109,546	109,351
	2	6H	112,000	110,701	110,951	109,835	110,210	6g	111,962	111,682	110,663	110,473	109,508	109,241
	2	7H	112,000	110,701	111,016	109,835	110,310	8g	111,962	111,512	110,663	110,363	109,508	109,131
	3	5H	112,000	110,051	110,287	108,752	109,152	4h	112,000	111,764	110,051	109,911	108,319	108,063
	3	6H	112,000	110,051	110,351	108,752	109,252	6g	111,952	111,577	110,003	109,779	108,271	107,931
	3	7H	112,000	110,051	110,426	108,752	109,382	8g	111,952	111,352	110,003	109,648	108,271	107,800
4	5H	112,000	109,402	109,667	107,670	108,145	4h	112,000	111,700	109,402	109,242	107,093	106,779	
4	6H	112,000	109,402	109,737	107,670	108,270	6g	111,940	111,465	109,342	109,092	107,033	106,629	
4	7H	112,000	109,402	109,827	107,670	108,420	8g	111,940	111,190	109,342	108,942	107,033	106,479	
115	1	5H	115,000	114,350	114,510	113,917	114,107	4h	115,000	114,888	114,350	114,255	113,773	113,639
	1	6H	115,000	114,350	114,550	113,917	114,153	6g	114,974	114,794	114,324	114,174	113,747	113,558
	1	7H	115,000	114,350	114,600	113,917	114,217							
	1,5	5H	115,000	114,026	114,206	113,376	113,612	4h	115,000	114,850	114,026	113,920	113,160	112,996
	1,5	6H	115,000	114,026	114,250	113,376	113,676	6g	114,968	114,732	113,994	113,824	113,128	112,900
	1,5	7H	115,000	114,026	114,306	113,376	113,751							
	2	5H	115,000	113,701	113,901	112,835	113,135	4h	115,000	114,820	113,701	113,583	112,546	112,351
	2	6H	115,000	113,701	113,951	112,835	113,210	6g	114,962	114,682	113,663	113,473	112,508	112,241
	2	7H	115,000	113,701	114,016	112,835	113,310	8g	114,962	114,512	113,663	113,363	112,508	112,131
	3	5H	115,000	113,051	113,287	111,752	112,152	4h	115,000	114,764	113,051	112,911	111,319	111,063
	3	6H	115,000	113,051	113,351	111,752	112,252	6g	114,952	114,577	113,003	112,779	111,271	110,931
	3	7H	115,000	113,051	113,426	111,752	112,382	8g	114,952	114,352	113,003	112,648	111,271	110,800
	4	5H	115,000	112,402	112,667	110,670	111,145	4h	115,000	114,700	112,402	112,242	110,093	109,779
	4	6H	115,000	112,402	112,737	110,670	111,270	6g	114,940	114,465	112,342	112,092	110,033	109,629
	4	7H	115,000	112,402	112,827	110,670	111,420	8g	114,940	114,190	112,342	111,942	110,033	109,479
	6	5H	115,000	111,103	111,418	108,505	119,135	4h	115,000	114,625	111,103	110,913	107,639	107,218
	6	6H	115,000	111,103	111,503	108,505	109,305	6g	114,920	114,320	111,023	110,723	107,559	107,028
	6	7H	115,000	111,103	111,603	108,505	109,505	8g	114,920	113,970	111,023	110,548	107,559	106,853
118	1	5H	118,000	117,350	117,510	116,917	117,107	4h	118,000	117,888	117,350	117,255	116,773	116,639
	1	6H	118,000	117,350	117,550	116,917	117,153	6g	117,974	117,794	117,324	117,174	116,747	116,558
	1	7H	118,000	117,350	117,600	116,917	117,217							
	1,5	5H	118,000	117,026	117,206	116,376	116,612	4h	118,000	117,850	117,026	116,920	116,160	115,996
	1,5	6H	118,000	117,026	117,250	116,376	116,676	6g	117,968	117,732	116,994	116,824	116,128	115,900
	1,5	7H	118,000	117,026	117,306	116,376	116,751							
	2	5H	118,000	116,701	116,901	115,835	116,135	4h	118,000	117,820	116,701	116,583	115,546	115,351
	2	6H	118,000	116,701	116,951	115,835	116,210	6g	117,962	117,682	116,663	116,473	115,508	115,241
	2	7H	118,000	116,701	117,016	115,835	116,310	8g	117,962	117,512	116,663	116,363	115,508	115,131
	3	5H	118,000	116,051	116,287	114,752	115,152	4h	118,000	117,764	116,051	115,911	114,319	114,063
	3	6H	118,000	116,051	116,351	114,752	115,252	6g	117,952	117,577	116,003	115,779	114,271	113,931
	3	7H	118,000	116,051	116,426	114,752	115,382	8g	117,952	117,352	116,003	115,648	114,271	113,800
4	5H	118,000	115,402	115,667	113,670	114,145	4h	118,000	117,700	115,402	115,242	113,093	112,779	
4	6H	118,000	115,402	115,737	113,670	114,270	6g	117,940	117,465	115,342	115,092	113,033	112,629	
4	7H	118,000	115,402	115,827	113,670	114,420	8g	117,940	117,190	115,342	114,942	113,033	112,479	
120	1	5H	120,000	119,350	119,510	118,917	119,107	4h	120,000	119,888	119,350	119,255	118,773	118,639
	1	6H	120,000	119,350	119,550	118,917	119,153	6g	119,974	119,794	119,324	119,174	118,747	118,558
	1	7H	120,000	119,350	119,600	118,917	119,217							
	1,5	5H	120,000	119,026	119,206	118,376	118,612	4h	120,000	119,850	119,026	118,920	118,160	117,996
	1,5	6H	120,000	119,026	119,250	118,376	118,676	6g	119,968	119,732	118,994	118,824	118,128	117,900
	1,5	7H	120,000	119,026	119,306	118,376	118,751							
	2	5H	120,000	118,701	118,901	117,835	118,135	4h	120,000	119,820	118,701	118,583	117,546	117,351
	2	6H	120,000	118,701	118,951	117,835	118,210	6g	119,962	119,682	118,663	118,473	117,508	117,241
2	7H	120,000	118,701	119,016	117,835	118,310	8g	119,962	119,512	118,663	118,363	117,508	117,131	

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Gewinde- Nenndurchmesser <i>d = D</i>	Steigung <i>P</i>	Muttergewinde						Bolzensgewinde							
		Toleranzfeld	Außen- durch- messer <i>D</i>	Flanken- durchmesser		Kern- durchmesser		Toleranzfeld	Außen- durchmesser		Flanken- durchmesser		Kern- durchmesser ¹⁾		
				<i>D</i> ₂		<i>D</i> ₁			<i>d</i>		<i>d</i> ₂		<i>d</i> ₃		
				Kleinst- maß	Größt- maß	Kleinst- maß	Größt- maß		Größt- maß	Kleinst- maß	Größt- maß	Kleinst- maß	Größt- maß	Kleinst- maß	Größt- maß
120	3	5H	120,000	118,051	118,287	116,752	117,152	4h	120,000	119,764	118,051	117,911	116,319	116,063	
	3	6H	120,000	118,051	118,351	116,752	117,252	6g	119,952	119,577	118,003	117,779	116,271	115,931	
	3	7H	120,000	118,051	118,426	116,752	117,382	8g	119,952	119,352	118,003	117,648	116,271	115,800	
	4	5H	120,000	117,402	117,667	115,670	116,145	4h	120,000	119,700	117,402	117,242	115,093	114,779	
	4	6H	120,000	117,402	117,737	115,670	116,270	6g	119,940	119,465	117,342	117,092	115,033	114,629	
	4	7H	120,000	117,402	117,827	115,670	116,420	8g	119,940	119,190	117,342	116,942	115,033	114,479	
	6	5H	120,000	116,103	116,418	113,505	114,135	4h	120,000	119,625	116,103	115,913	112,639	112,218	
	6	6H	120,000	116,103	116,503	113,505	114,305	6g	119,920	119,320	116,023	115,723	112,559	112,028	
	6	7H	120,000	116,103	116,603	113,505	114,505	8g	119,920	118,970	116,023	115,548	112,559	111,853	
	122	1	5H	122,000	121,350	121,510	120,917	121,107	4h	122,000	121,888	121,350	121,255	120,773	120,639
		1	6H	122,000	121,350	121,550	120,917	121,153	6g	121,974	121,794	121,324	121,174	120,747	120,558
		1	7H	122,000	121,350	121,600	120,917	121,217	8g	121,974	121,794	121,324	121,174	120,747	120,558
1,5		5H	122,000	121,026	121,206	120,376	120,612	4h	122,000	121,850	121,026	120,920	120,160	119,996	
1,5		6H	122,000	121,026	121,250	120,376	120,676	6g	121,968	121,732	120,994	120,824	120,128	119,900	
1,5		7H	122,000	121,026	121,306	120,376	120,751	8g	121,968	121,732	120,994	120,824	120,128	119,900	
2		5H	122,000	120,701	120,901	119,835	120,135	4h	122,000	121,820	120,701	120,583	119,546	119,351	
2		6H	122,000	120,701	120,951	119,835	120,210	6g	121,962	121,682	120,663	120,473	119,508	119,241	
2		7H	122,000	120,701	121,016	119,835	120,310	8g	121,962	121,512	120,663	120,363	119,508	119,131	
3		5H	122,000	120,051	120,287	118,752	119,152	4h	122,000	121,764	120,051	119,911	118,319	118,063	
3		6H	122,000	120,051	120,351	118,752	119,252	6g	121,952	121,577	120,003	119,779	118,271	117,931	
3		7H	122,000	120,051	120,426	118,752	119,382	8g	121,952	121,352	120,003	119,648	118,271	117,800	
4		5H	122,000	119,402	119,667	117,670	118,145	4h	122,000	121,700	119,402	119,242	117,093	116,779	
4		6H	122,000	119,402	119,737	117,670	118,270	6g	121,940	121,465	119,342	119,092	117,033	116,629	
4		7H	122,000	119,402	119,827	117,670	117,420	8g	121,940	121,190	119,342	118,942	117,033	116,479	
125		1	5H	125,000	124,350	124,510	123,917	124,107	4h	125,000	124,888	124,350	124,255	123,773	123,639
		1	6H	125,000	124,350	124,550	123,917	124,153	6g	124,974	124,794	124,324	124,174	123,747	123,558
		1	7H	125,000	124,350	124,600	123,917	124,217	8g	124,974	124,794	124,324	124,174	123,747	123,558
	1,5	5H	125,000	124,026	124,206	123,376	123,612	4h	125,000	124,850	124,026	123,920	123,160	122,996	
	1,5	6H	125,000	124,026	124,250	123,376	123,676	6g	124,968	124,732	123,994	123,824	123,128	122,900	
	1,5	7H	125,000	124,026	124,306	123,376	123,751	8g	124,968	124,732	123,994	123,824	123,128	122,900	
	2	5H	125,000	123,701	123,901	122,835	123,135	4h	125,000	124,820	123,701	124,583	122,546	122,351	
	2	6H	125,000	123,701	123,951	122,835	123,210	6g	124,962	124,682	123,663	123,473	122,508	122,241	
	2	7H	125,000	123,701	124,016	122,835	123,310	8g	124,962	124,512	123,663	123,363	122,508	122,131	
	3	5H	125,000	123,051	123,287	121,752	122,152	4h	125,000	124,764	123,051	122,911	112,319	121,063	
	3	6H	125,000	123,051	123,351	121,752	122,252	6g	124,952	124,577	123,003	122,779	121,271	120,931	
	3	7H	125,000	123,051	123,426	121,752	122,382	8g	124,952	124,352	123,003	122,648	121,271	120,800	
	4	5H	125,000	122,402	122,667	120,670	121,145	4h	125,000	124,700	122,402	122,242	120,093	119,779	
	4	6H	125,000	122,402	122,737	120,670	121,270	6g	124,940	124,465	122,342	122,092	120,033	119,629	
	4	7H	125,000	122,402	122,827	120,670	121,420	8g	124,940	124,190	122,342	121,942	120,033	119,479	
	6	5H	125,000	121,103	121,418	118,505	119,135	4h	125,000	124,625	121,103	120,913	117,639	117,218	
	6	6H	125,000	121,103	121,503	118,505	119,305	6g	124,920	124,320	121,023	120,723	117,559	117,028	
	6	7H	125,000	121,103	121,603	118,505	119,505	8g	124,920	123,970	121,023	120,548	117,559	116,853	
128	1	5H	128,000	127,350	127,510	126,917	127,107	4h	128,000	127,888	127,350	127,255	126,773	126,639	
	1	6H	128,000	127,350	127,550	126,917	127,153	6g	127,974	127,794	127,324	127,174	126,747	126,558	
	1	7H	128,000	127,350	127,600	126,917	127,217	8g	127,974	127,794	127,324	127,174	126,747	126,558	
	1,5	5H	128,000	127,026	127,206	126,376	126,612	4h	128,000	127,850	127,026	126,920	126,160	125,996	
	1,5	6H	128,000	127,026	127,250	126,376	126,676	6g	127,968	127,732	126,994	126,824	126,128	125,900	
	1,5	7H	128,000	127,026	127,306	126,376	126,751	8g	127,968	127,732	126,994	126,824	126,128	125,900	
	2	5H	128,000	126,701	126,901	125,835	126,135	4h	128,000	127,820	126,701	126,583	125,546	125,351	
	2	6H	128,000	126,701	126,951	125,835	126,210	6g	127,962	127,682	126,663	126,473	125,508	125,241	
	2	7H	128,000	126,701	127,016	125,835	126,310	8g	127,962	127,512	126,663	126,363	125,508	125,131	
	3	5H	128,000	126,051	126,287	124,752	125,152	4h	128,000	127,764	126,051	125,911	124,319	124,063	
	3	6H	128,000	126,051	126,351	124,752	125,252	6g	127,952	127,577	126,003	125,779	124,271	123,931	
	3	7H	128,000	126,051	126,426	124,752	125,382	8g	127,952	127,352	126,003	125,648	124,271	123,800	
	4	5H	128,000	125,402	125,667	123,670	124,145	4h	128,000	127,700	125,402	125,242	123,093	122,779	
	4	6H	128,000	125,402	125,737	123,670	124,270	6g	127,940	127,465	125,342	125,092	123,033	122,629	
	4	7H	128,000	125,402	125,827	123,670	124,420	8g	127,940	127,190	125,342	124,942	123,033	122,479	

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