

Metrisches ISO-Gewinde

Grenzmaße für Feingewinde von 53 bis 110 mm Nenndurchmesser mit gebräuchlichen Toleranzfeldern

DIN
13
 Teil 23

ISO metric fine threads from 53 to 110 mm diameter; limits

Ersatz für Ausgabe 02.73

Filetages métriques ISO à pas fin du diamètre de 53 à 110 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 53 bis 110 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 3 bis Teil 10 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.

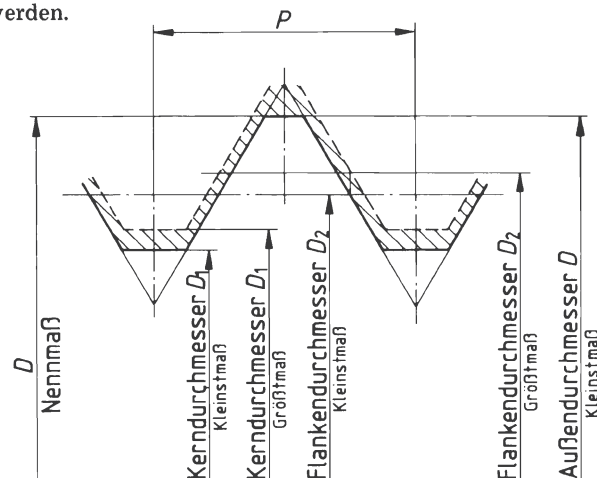


Bild 1. Muttergewinde in Toleranzlage H

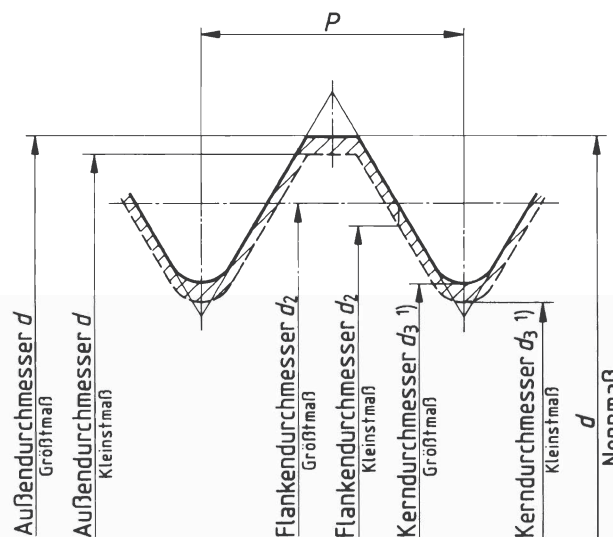


Bild 2. Bolzensgewinde in Toleranzlage h

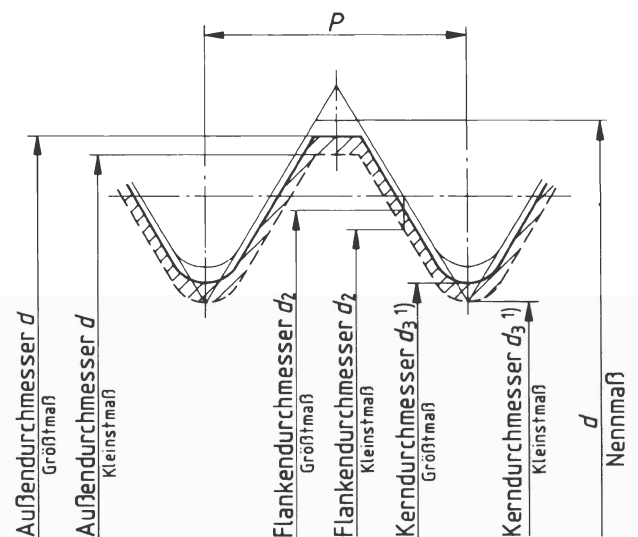


Bild 3. Bolzensgewinde in Toleranzlage g

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 12

Normenausschuß Gewinde (NGew) im DIN Deutsches Institut für Normung e.V.

Gewinde- Nenndurchmesser $d = D$	Steigung P	Toleranzfeld	Muttergewinde						Toleranzfeld	Bolzensgewinde							
			Außen- durch- messer D	Flanken- durchmesser D_2		Kern- durchmesser D_1		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	Kleinst- maß				
53	0,5 0,5	5H	53,000	52,675	52,787	52,459	52,571	4h 6g	53,000 52,980	52,933 52,874	52,675 52,655	52,608 52,549	52,387 52,367	52,301 52,242			
	0,75 0,75	5H 6H	53,000 53,000	52,513 52,513	52,638 52,673	52,188 52,188	52,338 52,378	4h 6g	53,000 52,978	52,910 52,838	52,513 52,491	52,438 52,373	52,080 52,058	51,976 51,911			
	54	0,5 0,5	5H	54,000	53,675	53,787	53,459	53,571	4h 6g	54,000 53,980	53,933 53,874	53,675 53,655	53,608 53,549	53,387 53,367	53,301 53,242		
		0,75 0,75	5H 6H	54,000 54,000	53,513 53,513	53,638 53,673	53,188 53,188	53,338 53,378	4h 6g	54,000 53,978	53,910 53,838	53,513 53,491	53,438 53,373	53,080 53,058	52,976 52,911		
55		0,5 0,5	5H	55,000	54,675	54,787	54,459	54,571	4h 6g	55,000 54,980	54,933 54,874	54,675 54,655	54,608 54,549	54,387 54,367	54,301 54,242		
		0,75 0,75	5H 6H	55,000 55,000	54,513 54,513	54,638 54,673	54,188 54,188	54,338 54,378	4h 6g	55,000 54,978	54,910 54,838	54,513 54,491	54,438 54,373	54,080 54,058	53,976 53,911		
	1 1 1	5H 6H 7H	55,000 55,000 55,000	54,350 54,350 54,350	54,500 54,530 54,586	53,917 53,917 53,917	54,107 54,153 54,217	4h 6g 8g	55,000 54,974 54,974	54,888 54,794 54,694	54,350 54,324 54,324	54,260 54,184 54,100	53,773 53,747 53,747	53,644 53,568 53,484			
	1,5 1,5 1,5	5H 6H 7H	55,000 55,000 55,000	54,026 54,026 54,026	54,196 54,238 54,291	53,376 53,376 53,376	53,612 53,676 53,751	4h 6g 8g	55,000 54,968 54,968	54,850 54,732 54,593	54,026 53,994 53,994	53,926 53,834 53,744	53,160 53,128 53,128	53,002 52,910 52,820			
	2 2 2	5H 6H 7H	55,000 55,000 55,000	53,701 53,701 53,701	53,891 53,937 54,001	52,835 52,835 52,835	53,135 53,210 53,310	4h 6g 8g	55,000 54,962 54,962	54,820 54,682 54,512	53,701 53,663 53,663	53,589 53,483 53,383	52,546 52,508 52,508	52,357 52,251 52,151			
	3 3 3	5H 6H 7H	55,000 55,000 55,000	53,051 53,051 53,051	53,275 53,331 53,406	51,752 51,752 51,752	52,152 52,252 52,382	4h 6g 8g	55,000 54,952 54,952	54,764 54,577 54,352	53,051 53,003 53,003	52,919 52,791 52,668	51,319 51,271 51,271	51,071 50,943 50,820			
	4 4 4	5H 6H 7H	55,000 55,000 55,000	52,402 52,402 52,402	52,652 52,717 52,802	50,670 50,670 50,670	51,145 51,270 51,420	4h 6g 8g	55,000 54,940 54,940	54,700 54,465 54,190	52,402 52,342 52,342	52,252 52,106 51,967	50,093 50,033 50,033	49,789 49,643 49,504			
	56	0,5 0,5	5H	56,000	55,675	55,787	55,459	55,571	4h 6g	56,000 55,980	55,933 55,874	55,675 55,655	55,608 55,549	55,387 55,367	55,301 55,242		
		0,75 0,75	5H 6H	56,000 56,000	55,513 55,513	55,638 55,673	55,188 55,188	55,338 55,378	4h 6g	56,000 55,978	55,910 55,838	55,513 55,491	55,438 55,373	55,080 55,058	54,976 54,911		
		1 1 1	5H 6H 7H	56,000 56,000 56,000	55,350 55,350 55,350	55,500 55,530 55,586	54,917 54,917 54,917	55,107 55,153 55,217	4h 6g 8g	56,000 55,974 55,974	55,888 55,794 55,694	55,350 55,324 55,324	55,260 55,184 55,100	54,773 54,747 54,747	54,644 54,568 54,484		
		1,5 1,5 1,5	5H 6H 7H	56,000 56,000 56,000	55,026 55,026 55,026	54,196 55,238 54,376	54,376 54,376 54,751	54,612 54,676 54,751	4h 6g 8g	56,000 55,968 55,968	55,850 55,732 55,593	55,026 54,994 54,994	54,926 54,834 54,744	54,160 54,128 54,128	54,002 53,910 53,820		
		2 2 2	5H 6H 7H	56,000 56,000 56,000	54,701 54,701 54,701	54,891 54,937 55,001	53,835 53,835 53,835	54,135 54,210 54,310	4h 6g 8g	56,000 55,962 55,962	55,820 55,682 55,512	54,701 54,663 54,663	54,589 54,483 54,383	53,546 53,508 53,508	53,357 53,251 53,151		
		3 3 3	5H 6H 7H	56,000 56,000 56,000	54,051 54,051 54,051	54,275 54,331 54,406	52,752 52,752 52,752	53,152 53,252 53,382	4h 6g 8g	56,000 55,952 55,952	55,764 55,577 55,352	54,051 54,003 54,003	53,919 53,791 53,668	52,319 52,271 52,271	52,071 51,943 51,820		
		4 4 4	5H 6H 7H	56,000 56,000 56,000	53,402 53,402 53,402	53,652 53,717 53,802	51,670 51,670 51,670	52,145 52,270 52,420	4h 6g 8g	56,000 55,940 55,940	55,700 55,465 55,190	53,402 53,342 53,342	53,252 53,106 52,967	51,093 51,033 51,033	50,789 50,643 50,504		
		57	0,5 0,5	5H	57,000	56,675	56,787	56,459	56,571	4h 6g	57,000 56,980	56,933 56,874	56,675 56,655	56,608 56,549	56,387 56,367	56,301 56,242	
			0,75 0,75	5H 6H	57,000 57,000	56,513 56,513	56,638 56,673	56,188 56,188	56,338 56,378	4h 6g	57,000 56,978	56,910 56,838	56,513 56,491	56,438 56,373	56,080 56,058	55,976 55,911	
			58	0,5 0,5	5H	58,000	57,675	57,787	57,459	57,571	4h 6g	58,000 57,980	57,933 57,874	57,675 57,655	57,608 57,549	57,387 57,367	57,301 57,242
				0,75 0,75	5H 6H	58,000 58,000	57,513 57,513	57,638 57,673	57,188 57,188	57,338 57,378	4h 6g	58,000 57,978	57,910 57,838	57,513 57,491	57,438 57,373	57,080 57,058	56,976 56,911
		1) Siehe Seite 1															

1) Siehe Seite 1

Gewinde- Nenndurchmesser <i>d = D</i>	Steigung <i>P</i>	Toleranzfeld	Muttergewinde						Toleranzfeld	Bolzensgewinde					
			Außen- durch- messer <i>D</i>	Flanken- durchmesser <i>D</i> ₂		Kern- durchmesser <i>D</i> ₁		Außen- durchmesser <i>d</i>		Flanken- durchmesser <i>d</i> ₂		Kern- durchmesser ¹⁾ <i>d</i> ₃			
				Kleinst- maß	Größt- maß	Kleinst- maß	Größt- maß			Größt- maß	Kleinst- maß	Größt- maß	Kleinst- maß		
58	1	5H	58,000	57,350	57,500	56,917	57,107	4h	58,000	57,888	57,350	57,260	56,773	56,644	
	1	6H	58,000	57,350	57,530	56,917	57,153	6g	57,974	57,794	57,324	57,184	56,747	56,568	
	1	7H	58,000	57,350	57,586	56,917	57,217	8g	57,974	57,694	57,324	57,100	56,747	56,484	
	1,5	5H	58,000	57,026	57,196	56,376	56,612	4h	58,000	57,850	57,026	56,926	56,160	56,002	
	1,5	6H	58,000	57,026	57,238	56,376	56,676	6g	57,968	57,732	56,994	56,834	56,128	55,910	
	1,5	7H	58,000	57,026	57,291	56,376	56,751	8g	57,968	57,593	56,994	56,744	56,128	55,820	
	2	5H	58,000	56,701	56,891	55,835	56,135	4h	58,000	57,820	56,701	56,589	55,546	55,357	
	2	6H	58,000	56,701	56,937	55,835	56,210	6g	57,962	57,682	56,663	56,483	55,508	55,251	
	2	7H	58,000	56,701	57,001	55,835	56,310	8g	57,962	57,512	56,663	56,383	55,508	55,151	
	3	5H	58,000	56,051	56,275	54,752	55,152	4h	58,000	57,764	56,051	55,919	54,319	54,071	
	3	6H	58,000	56,051	56,331	54,752	55,252	6g	57,952	57,577	56,003	55,791	54,271	53,943	
	3	7H	58,000	56,051	56,406	54,752	55,382	8g	57,952	57,352	56,003	55,668	54,271	53,820	
	4	5H	58,000	55,402	55,652	53,670	54,145	4h	58,000	57,700	55,402	55,252	53,093	52,789	
	4	6H	58,000	55,402	55,717	53,670	54,270	6g	57,940	57,465	55,342	55,106	53,033	52,643	
	4	7H	58,000	55,402	55,802	53,670	54,420	8g	57,940	57,190	55,342	54,967	53,033	52,504	
59	0,5	5H	59,000	58,675	58,787	58,459	58,571	4h	59,000	58,933	58,675	58,608	58,387	58,301	
	0,5							6g	58,980	58,874	58,655	58,549	58,367	58,242	
	0,75	5H	59,000	58,513	58,638	58,188	58,338	4h	59,000	58,910	58,513	58,438	58,080	57,976	
	0,75	6H	59,000	58,513	58,673	58,188	58,378	6g	58,978	58,838	58,491	58,373	58,058	57,911	
60	0,5	5H	60,000	59,675	59,787	59,459	59,571	4h	60,000	59,933	59,675	59,608	59,387	59,301	
	0,5							6g	59,980	59,874	59,655	59,549	59,367	59,242	
	0,75	5H	60,000	59,513	59,638	59,188	59,338	4h	60,000	59,910	59,513	59,438	59,080	58,976	
	0,75	6H	60,000	59,513	59,673	59,188	59,378	6g	59,978	59,838	59,491	59,373	59,058	58,911	
	1	5H	60,000	59,350	59,500	58,917	59,107	4h	60,000	59,888	59,350	59,260	58,773	58,644	
	1	6H	60,000	59,350	59,530	58,917	59,153	6g	59,974	59,794	59,324	59,184	58,747	58,568	
	1	7H	60,000	59,350	59,586	58,917	59,217	8g	59,974	59,694	59,324	59,100	58,747	58,484	
	1,5	5H	60,000	59,026	59,196	58,376	58,612	4h	60,000	59,850	59,026	58,926	58,160	58,002	
	1,5	6H	60,000	59,026	59,238	58,376	58,676	6g	59,968	59,732	58,994	58,834	58,128	57,910	
	1,5	7H	60,000	59,026	59,291	58,376	58,751	8g	59,968	59,593	58,994	58,744	58,128	57,820	
	2	5H	60,000	58,701	58,891	57,835	58,135	4h	60,000	59,820	58,701	58,589	57,546	57,357	
	2	6H	60,000	58,701	58,937	57,835	58,210	6g	59,962	59,682	58,663	58,483	57,508	57,251	
	2	7H	60,000	58,701	59,001	57,835	58,310	8g	59,962	59,512	58,663	58,383	57,508	57,151	
	3	5H	60,000	58,051	58,275	56,752	57,152	4h	60,000	59,764	58,051	57,919	56,319	56,071	
	3	6H	60,000	58,051	58,331	56,752	57,252	6g	59,952	59,577	58,003	57,791	56,271	55,943	
	3	7H	60,000	58,051	58,406	56,752	57,382	8g	59,952	59,352	58,003	57,668	56,271	55,820	
4	5H	60,000	57,402	57,652	55,670	56,145	4h	60,000	59,700	57,402	57,252	55,093	54,789		
4	6H	60,000	57,402	57,717	55,670	56,270	6g	59,940	59,465	57,342	57,106	55,033	54,643		
4	7H	60,000	57,402	57,802	55,670	56,420	8g	59,940	59,190	57,342	56,967	55,033	54,504		
61	0,5	5H	61,000	60,675	60,787	60,459	60,571	4h	61,000	60,933	60,675	60,608	60,387	60,301	
	0,5							6g	60,980	60,874	60,655	60,549	60,367	60,242	
	0,75	5H	61,000	60,513	60,638	60,188	60,338	4h	61,000	60,910	60,513	60,438	60,080	59,976	
	0,75	6H	61,000	60,513	60,673	60,188	60,378	6g	60,978	60,838	60,491	60,373	60,058	59,911	
62	0,5	5H	62,000	61,675	61,787	61,459	61,571	4h	62,000	61,933	61,675	61,608	61,387	61,301	
	0,5							6g	61,980	61,874	61,655	61,549	61,367	61,242	
	0,75	5H	62,000	61,513	61,638	61,188	61,338	4h	62,000	61,910	61,513	61,438	61,080	60,976	
	0,75	6H	62,000	61,513	61,673	61,188	61,378	6g	61,978	61,838	61,491	61,373	61,058	60,911	
	1	5H	62,000	61,350	61,500	60,917	61,107	4h	62,000	61,888	61,350	61,260	60,773	60,644	
	1	6H	62,000	61,350	61,530	60,917	61,153	6g	61,974	61,794	61,324	61,184	60,747	60,568	
	1	7H	62,000	61,350	61,586	60,917	61,217	8g	61,974	61,694	61,324	61,100	60,747	60,484	
	1,5	5H	62,000	61,026	61,196	60,376	60,612	4h	62,000	61,850	61,026	60,926	60,160	60,002	
	1,5	6H	62,000	61,026	61,238	60,376	60,676	6g	61,968	61,732	60,994	60,834	60,128	59,910	
	1,5	7H	62,000	61,026	61,291	60,376	60,751	8g	61,968	61,593	60,994	60,744	60,128	59,820	
	2	5H	62,000	60,701	60,891	59,835	60,135	4h	62,000	61,820	60,701	60,589	59,546	59,357	
	2	6H	62,000	60,701	60,937	59,835	60,210	6g	61,962	61,682	60,663	60,483	59,508	59,251	
	2	7H	62,000	60,701	61,001	59,835	60,310	8g	61,962	61,512	60,663	60,383	59,508	59,151	
1) Siehe Seite 1															

1) Siehe Seite 1

Gewinde- Nenndurchmesser $d = D$	Steigung P	Toleranzfeld	Muttergewinde						Toleranzfeld	Bolzensgewinde					
			Außen- durch- messer D	Flanken- durchmesser		Kern- durchmesser		Außen- durchmesser d		Flanken- durchmesser		Kern- durchmesser ¹⁾			
				D_2		D_1				d_2		d_3			
				Kleinst- maß	Größt- maß	Kleinst- maß	Größt- maß			Kleinst- maß	Größt- maß	Kleinst- maß	Größt- maß		
62	3	5H	62,000	60,051	60,275	58,752	59,152	4h	62,000	61,764	60,051	59,919	58,319	58,071	
	3	6H	62,000	60,051	60,331	58,752	59,252	6g	61,952	61,577	60,003	59,791	58,271	57,943	
	3	7H	62,000	60,051	60,406	58,752	59,382	8g	61,952	61,352	60,003	59,668	58,271	57,820	
	4	5H	62,000	59,402	59,652	57,670	58,145	4h	62,000	61,700	59,402	59,252	57,093	56,789	
	4	6H	62,000	59,402	59,717	57,670	58,270	6g	61,940	61,465	59,342	59,106	57,033	56,643	
63	4	7H	62,000	59,402	59,802	57,670	58,420	8g	61,940	61,190	59,342	58,967	57,033	56,504	
	0,5	5H	63,000	62,675	62,787	62,459	62,571	4h	63,000	62,933	62,675	62,608	62,387	62,301	
	0,5							6g	62,980	62,874	62,655	62,549	62,367	62,242	
	0,75	5H	63,000	62,513	62,638	62,188	62,338	4h	63,000	62,910	62,513	62,438	62,080	61,976	
	0,75	6H	63,000	62,513	62,673	62,188	62,378	6g	62,978	62,838	62,491	62,373	62,058	61,911	
64	0,5	5H	64,000	63,675	63,787	63,459	63,571	4h	64,000	63,933	63,675	63,608	63,387	63,301	
	0,5							6g	63,980	63,874	63,655	63,549	63,367	63,242	
	0,75	5H	64,000	63,513	63,638	63,188	63,338	4h	64,000	63,910	63,513	63,438	63,080	62,976	
	0,75	6H	64,000	63,513	63,673	63,188	63,378	6g	63,978	63,838	63,491	63,373	63,058	62,911	
	1	5H	64,000	63,350	63,500	62,917	63,107	4h	64,000	63,888	63,350	63,260	62,773	62,644	
	1	6H	64,000	63,350	63,530	62,917	63,153	6g	63,974	63,794	63,324	63,184	62,747	62,568	
	1	7H	64,000	63,350	63,586	62,917	63,217	8g	63,974	63,694	63,324	63,100	62,747	62,484	
	1,5	5H	64,000	63,026	63,196	62,376	62,612	4h	64,000	63,850	63,026	62,926	62,160	62,002	
	1,5	6H	64,000	63,026	63,238	62,376	62,676	6g	63,968	63,732	62,994	62,834	62,128	61,910	
	1,5	7H	64,000	63,026	63,291	62,376	62,751	8g	63,968	63,593	62,994	62,744	62,128	61,820	
	2	5H	64,000	62,701	62,891	61,835	62,135	4h	64,000	63,820	62,701	62,589	61,546	61,357	
	2	6H	64,000	62,701	62,937	61,835	62,210	6g	63,962	63,682	62,663	62,483	61,508	61,251	
	2	7H	64,000	62,701	63,001	61,835	62,310	8g	63,962	63,512	62,663	62,383	61,508	61,151	
	3	5H	64,000	62,051	62,275	60,752	61,152	4h	64,000	63,764	62,051	61,919	60,319	60,071	
	3	6H	64,000	62,051	62,331	60,752	61,252	6g	63,952	63,577	62,003	61,791	60,271	59,943	
	3	7H	64,000	62,051	62,406	60,752	61,382	8g	63,952	63,352	62,003	61,668	60,271	59,820	
	4	5H	64,000	61,402	61,652	59,670	60,145	4h	64,000	63,700	61,402	61,252	59,093	58,789	
	4	6H	64,000	61,402	61,717	59,670	60,270	6g	63,940	63,465	61,342	61,106	59,033	58,643	
	4	7H	64,000	61,402	61,802	59,670	60,420	8g	63,940	63,190	61,342	60,967	59,033	58,504	
65	0,5	5H	65,000	64,675	64,787	64,459	64,571	4h	65,000	64,933	64,675	64,608	64,387	64,301	
	0,5							6g	64,980	64,874	64,655	64,549	64,367	64,242	
	0,75	5H	65,000	64,513	64,638	64,188	64,338	4h	65,000	64,910	64,513	64,438	64,080	63,976	
	0,75	6H	65,000	64,513	64,673	64,188	64,378	6g	64,978	64,838	64,491	64,373	64,058	63,911	
	1	5H	65,000	64,350	64,500	63,917	64,107	4h	65,000	64,888	64,350	64,260	63,773	63,644	
	1	6H	65,000	64,350	64,530	63,917	64,153	6g	64,974	64,794	64,324	64,184	63,747	63,568	
	1	7H	65,000	64,350	64,586	63,917	64,217	8g	64,974	64,694	64,324	64,100	63,747	63,484	
	1,5	5H	65,000	64,026	64,196	63,376	64,612	4h	65,000	64,850	64,026	63,926	63,160	63,002	
	1,5	6H	65,000	64,026	64,238	63,376	63,676	6g	64,968	64,732	63,994	63,834	63,128	62,910	
	1,5	7H	65,000	64,026	64,291	63,376	63,751	8g	64,968	64,593	63,994	63,744	63,128	62,820	
	2	5H	65,000	63,701	63,891	62,835	63,135	4h	65,000	64,820	63,701	63,589	62,546	62,357	
	2	6H	65,000	63,701	63,937	62,835	63,210	6g	64,962	64,682	63,663	63,483	62,508	62,251	
	2	7H	65,000	63,701	64,001	62,835	63,310	8g	64,962	64,512	63,663	63,383	62,508	62,151	
	3	5H	65,000	63,051	63,275	61,752	62,152	4h	65,000	64,764	63,051	62,919	61,319	61,071	
	3	6H	65,000	63,051	63,331	61,752	62,252	6g	64,952	64,577	63,003	62,791	61,271	60,943	
	3	7H	65,000	63,051	63,406	61,752	62,382	8g	64,952	64,352	63,003	62,668	61,271	60,820	
	4	5H	65,000	62,402	62,652	60,670	61,145	4h	65,000	64,700	62,402	62,252	60,093	59,789	
	4	6H	65,000	62,402	62,717	60,670	61,270	6g	64,940	64,465	62,342	62,106	60,033	59,643	
	4	7H	65,000	62,402	62,802	60,670	61,420	8g	64,940	64,190	62,342	61,967	60,033	59,504	
66	0,75	5H	66,000	65,513	65,638	65,188	65,338	4h	66,000	65,910	65,513	65,438	65,080	64,976	
	0,75	6H	66,000	65,513	65,673	65,188	65,378	6g	65,978	65,838	65,491	65,373	65,058	64,911	
67	0,75	5H	67,000	66,513	66,638	66,188	66,338	4h	67,000	66,910	66,513	66,438	66,080	65,976	
	0,75	6H	67,000	66,513	66,673	66,188	66,378	6g	66,978	66,838	66,491	66,373	66,058	65,911	
68	0,5	5H	68,000	67,675	67,787	67,459	67,571	4h	68,000	67,933	67,675	67,608	67,387	67,301	
	0,5							6g	67,980	67,874	67,655	67,549	67,367	67,242	
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