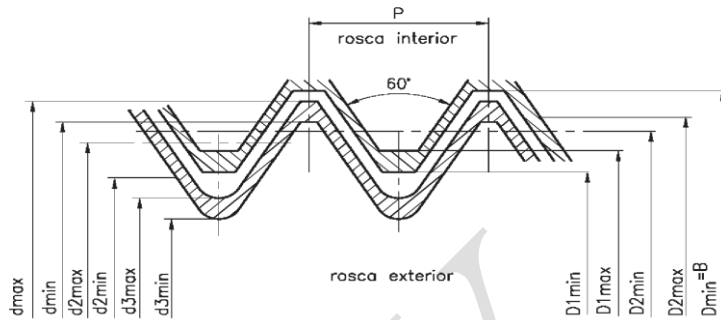

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ROSCA METRICA - TOLERANCIAS

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ISO: 965 Parte 2



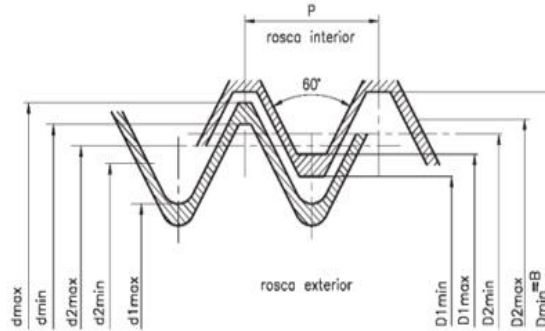
		PERNO (AJUSTE 6g)						TUERCA (AJUSTE 6H)				
Ø NOMINAL	PASO	DIAMETRO MAYOR d		DIAMETRO MEDIO d2		DIAMETRO MENOR d3		AREA RESISTENTE	DIAMETRO MEDIO D2		DIAMETRO MENOR D1	
		d max	d min	d2 max	d2 min	d3 max	d3 min	mm²	D2 min	D2 max	D1 min	D1 max
6	1	5,974	5,794	5,324	5,212	4,747	4,596	20,1	5,350	5,500	4,917	5,153
7	1	6,974	6,794	6,324	6,212	5,747	5,596	28,9	6,350	6,500	5,917	6,153
8	1,25	7,972	7,760	7,160	7,042	6,438	6,272	36,6	7,188	7,348	6,647	6,912
9	1,25	8,972	8,760	8,160	8,042	7,438	7,272	48,1	8,188	8,348	7,647	7,912
10	1,5	9,968	9,732	8,994	8,862	8,128	7,938	58,0	9,026	9,206	8,376	8,676
11	1,5	10,968	10,732	9,994	9,862	9,128	8,938	72,3	10,026	10,206	9,376	9,676
12	1,75	11,966	11,701	10,829	10,679	9,819	9,602	84,3	10,863	11,063	10,106	10,441
14	2	13,962	13,682	12,663	12,503	11,508	11,271	115	12,701	12,913	11,835	12,210
16	2	15,962	15,682	14,663	14,503	13,508	13,271	157	14,701	14,913	13,835	14,210
18	2,5	17,958	17,623	16,334	16,164	14,891	14,625	193	16,376	16,600	15,294	15,744
20	2,5	19,958	19,623	18,334	18,164	16,891	16,625	245	18,376	18,600	17,294	17,744
22	2,5	21,958	21,623	20,334	20,164	18,891	18,625	303	20,376	20,600	19,294	19,744
24	3	23,952	23,577	22,003	21,803	20,271	19,955	353	22,051	22,316	20,752	21,252
27	3	26,952	26,577	25,003	24,803	23,271	22,955	459	25,051	25,316	23,752	24,252
30	3,5	29,947	29,522	27,674	27,462	25,653	25,306	561	27,727	28,007	26,211	26,771
33	3,5	32,947	32,522	30,674	30,462	28,653	28,306	694	30,727	31,007	29,211	29,771
36	4	35,940	35,465	33,342	33,118	31,033	30,655	817	33,402	33,702	31,670	32,270
39	4	38,940	38,465	36,342	36,118	34,033	33,655	976	36,402	36,702	34,670	35,270
42	4,5	41,937	41,437	39,014	38,778	36,416	36,007	1121	39,077	39,392	37,129	37,799
45	4,5	44,937	44,437	42,014	41,778	39,416	39,007	1306	42,077	42,392	40,129	40,799
48	5	47,929	47,399	44,681	44,431	41,795	41,352	1473	44,752	45,087	42,587	43,297
52	5	51,929	51,399	48,681	48,431	45,795	45,352	1758	48,752	49,087	46,587	47,297
56	5,5	55,925	55,365	52,353	52,088	49,177	48,700	2030	52,428	52,783	50,046	50,796
60	5,5	59,925	59,365	56,353	56,088	53,177	52,700	2362	56,428	56,783	54,046	54,796
64	6	63,920	63,320	60,023	59,743	56,559	56,048	2676	60,103	60,478	57,505	58,305
68	6	67,920	67,320	64,023	63,743	60,559	60,048	3055	64,103	64,478	61,505	62,305

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ROSCAS EN PULGADAS UNC-TOLERANCIAS

ASME: B 1.1

ISO: 5864



Ø NOMINAL	HILOS/PULG (PASO)	PERNO (AJUSTE 2A)						TUERCA (AJUSTE 2B)				
		DIAMETRO EXTERIOR		DIAMETRO MEDIO		DIAMETRO MENOR	AREA DE RESISTENCIA	DIAMETRO MENOR		DIAMETRO MEDIO		DIAMETRO MAYOR
		MAX	MIN	MAX	MIN	MAX	MM2	MIN	MAX	MIN	MAX	MIN
1/4	20	0.249	0.241	0.216	0.213	0.188	20.530	0.196	0.207	0.218	0.222	0.250
5/16	18	0.311	0.303	0.275	0.271	0.243	33.830	0.252	0.265	0.276	0.282	0.313
3/8	16	0.374	0.364	0.333	0.329	0.297	49.990	0.307	0.321	0.334	0.340	0.375
7/16	14	0.436	0.426	0.390	0.385	0.349	68.590	0.360	0.376	0.391	0.397	0.438
1/2	13	0.499	0.488	0.449	0.444	0.404	91.550	0.417	0.434	0.450	0.457	0.500
9/16	12	0.561	0.550	0.507	0.502	0.459	117.390	0.472	0.490	0.508	0.515	0.563
5/8	11	0.623	0.611	0.559	0.559	0.512	145.810	0.527	0.546	0.566	0.573	0.625
3/4	10	0.748	0.735	0.677	0.677	0.626	215.780	0.642	0.663	0.685	0.693	0.750
7/8	9	0.873	0.859	0.795	0.795	0.737	297.890	0.755	0.778	0.803	0.811	0.875
1	8	0.998	0.983	0.910	0.910	0.845	390.800	0.865	0.890	0.919	0.928	1.000
1.125	7	1.123	1.106	1.030	1.023	0.948	492.430	0.970	0.998	1.032	1.042	1.125
1.25	7	1.248	1.231	1.155	1.148	1.073	625.230	1.095	1.123	1.157	1.167	1.250
1.375	6	1.373	1.354	1.264	1.256	1.168	745.080	1.020	1.225	1.267	1.277	1.375
1.5	6	1.498	1.479	1.389	1.381	1.293	906.610	1.320	1.350	1.392	1.402	1.500
1.75	4.5	1.747	1.727	1.618	1.609	1.502	1191.570	1.534	1.568	1.620	1.632	1.750
2	4.5	1.997	1.975	1.853	1.843	1.725	1611.750	1.759	1.795	1.856	1.868	2.000
2.25	4	2.247	2.225	2.103	2.093	1.975	2039.870	2.009	2.045	2.106	2.118	2.250
2.5	4	2.497	2.473	2.335	2.324	2.190	2579.880	2.229	2.267	2.338	2.351	2.500
2.75	4	2.747	2.723	2.584	2.574	0.000	3183.220	2.479	2.517	2.588	2.601	2.750
3	4	2.997	2.973	2.834	2.824	2.690	3849.900	2.729	2.767	2.838	2.852	3.000
3.25	4	3.247	3.223	3.084	3.073	2.940	4579.920	2.979	3.017	3.088	3.102	3.250
3.5	4	3.497	3.473	3.334	3.323	3.190	5373.280	3.229	3.267	3.338	3.352	3.500
3.75	4	3.747	3.723	3.584	3.573	3.440	6229.970	3.479	3.517	3.588	3.602	3.750
4	4	3.997	3.973	3.834	3.823	3.690	7150.010	3.729	3.767	3.838	3.852	4.000


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La rosca métrica se designa por el diámetro nominal precedido del símbolo M y seguido de la tolerancia, por ejemplo "6", y de la clase, por ejemplo "g". **Ejemplo:** M10-6g. Si no se indican las clases de tolerancia, se sobreentenderán las indicadas en la tabla.

ROSCA TUERCA -METRICA -PASO-BROCA

Diámetro nominal	M		MF	
	Paso	Ø broca	Paso	Ø broca
M6	1,00	5,00	0,50	5,50
			0,75	5,20
M7	1,00	6,00	0,75	6,20
M8	1,25	6,80	0,50	7,50
			0,75	7,20
			1,00	7,00
M9	1,25	7,80	1,00	8,00
			0,75	9,20
M10	1,50	8,50	1,00	9,00
			1,25	8,80
M11	1,50	9,50	1,00	10,00
M12	1,75	10,20	1,00	11,00
			1,25	10,80
			1,50	10,50
M14	2,00	12,00	1,00	13,00
			1,25	12,80
			1,50	12,50
M16	2,00	14,00	1,00	15,00
			1,50	14,50
M18	2,50	15,50	1,00	17,00
			1,50	16,50
			2,00	16,00
M20	2,50	17,50	1,00	19,00
			1,50	18,50
			2,00	18,00
M22	2,50	19,50	1,00	21,00
			1,50	20,50
			2,00	20,00
M24	3,00	21,00	1,00	23,00
			1,50	22,50
			2,00	22,00
M27	3,00	24,00	1,00	26,00
			1,50	25,50
			2,00	25,00
M30	3,50	26,50	1,00	29,00
			1,50	28,50
			2,00	28,00
			3,00	27,00
M33	3,50	29,50	1,50	31,50
			2,00	31,00
			3,00	30,00
M36	4,00	32,00	1,50	34,50

Diámetro nominal	M		MF	
	Paso	Ø broca	Paso	Ø broca
M48	5,00	43,00	1,50	46,50
			2,00	46,00
			3,00	45,00
			4,00	44,00
M52	5,00	47,00	1,50	50,50
			2,00	50,00
			3,00	49,00
			4,00	48,00
M56	5,50	50,50	1,50	54,5
			2,00	54
			3,00	53
			4,00	52
M60	5,50	54,50	1,50	58,5
			2,00	58
			3,00	57
			4,00	56
M64	6,00	58,00	1,50	62,5
			2,00	62
			3,00	61
			4,00	60
M68	6,00	62,00	1,50	66,5
			2,00	66
			3,00	65
			4,00	64
M70	6,00	64	2,00	68
			3,00	67
			4,00	66
M72	6,00	66	2,00	70
			3,00	69
			4,00	68
M75	6,00	69	2,00	73
			3,00	72
			4,00	71
M76	6,00	70	2,00	74
			3,00	73
			4,00	72
M80	6,00	74	2,00	78
			3,00	77
			4,00	76
M85	6,00	79	2,00	83
			3,00	82
			4,00	81

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			2,00	34,00
			3,00	33,00
M39	4,00	35,00	1,50	37,50
			2,00	37,00
			3,00	36,00
M42	4,50	37,50	1,50	40,50
			2,00	40,00
			3,00	39,00
M45	4,50	40,50	1,50	43,50
			2,00	43,00
			3,00	42,00
			4,00	41,00

M90	6,00	84	2,00	88
			3,00	87
			4,00	86
M95	6,00	89	2,00	93
			3,00	92
			4,00	91
M100	6,00	94	2,00	98
			3,00	97
			4,00	96

ROSCA TUERCA- PULGADAS -PASO-BROCA

Diámetro nominal	WHITWORTH			UNC			UNF		
	pulgadas	N° de hilos/pulgada	Ø nom. broca	N° de hilos/pulgada	Ø nom. broca	Ø broca	N° de hilos/pulgada	Ø nom. broca	Ø broca
1/4	20.00	6,35	5,20	20.00	6,35	5,10	28.00	6,35	5,50
5/16	18.00	7,94	6,60	18.00	7,94	6,60	24.00	7,94	6,90
3/8	16.00	9,52	8,00	16.00	9,52	8,00	24.00	9,52	8,50
7/16	14.00	11,11	9,40	14.00	11,11	9,40	20.00	11,11	9,90
1/2	12.00	12,70	10,50	13.00	12,70	10,50	20.00	12,70	11,50
9/16	12.00	14,29	12,00	12.00	14,29	12,00	18.00	14,28	13,00
5/8	11.00	15,87	13,50	11.00	15,87	13,50	18.00	15,87	14,50
3/4	10.00	19,05	16,50	10.00	19,05	16,50	16.00	19,05	17,50
7/8	9.00	22,22	19,50	9.00	22,22	19,50	14.00	22,22	20,50
1"	8.00	25,40	22,50	8.00	25,40	22,50	12.00	25,40	23,50
1 1/8"	7.00	28,57	25,00	7.00	28,57	25,00	12.00	28,57	26,50
1 1/4"	7.00	31,75	28,00	7.00	31,75	28,00	12.00	31,75	29,50
1 3/8"	6.00	34,92	30,75	6.00	34,92	30,75	12.00	34,92	33,00
1 1/2"	6.00	38,10	34,00	6.00	38,10	34,00	12.00	38,10	36,00
1 5/8"	5.00	41,27	36,50	-	-	-	-	-	-
1 3/4"	5.00	44,45	39,50	5.00	44,45	39,50	-	-	-
1 7/8"	4,5	47,62	41,50	-	-	-	-	-	-
2"	4,5	50,80	45,00	4,5	50,80	45,00	-	-	-
2 1/4"	4.00	57,15	50,00	4,5	57,15	51,50	-	-	-
2 1/2"	4.00	63,50	56,50	4.00	63,50	57,00	-	-	-