

DIN EN 22 857, ČSN EN 22 857
ISO 2857, ČSN 22 3006

METRICKÝ ZÁVIT ISO
Metric ISO thread
Metrisches ISO-Gewinde

TŘÍDY POUŽITÍ ZÁVITNÍKŮ PRO METRICKÉ ZÁVITY

Tolerance classes of the taps

Anwendungsklassen von Gewindebohrern

ZÁVITNÍKY BROUŠENÉ
Ground thread taps ISO 1, ISO 2, ISO 3
Gesliffene Gewindebohrer

ZÁVITNÍKY NEBROUŠENÉ
Non-ground thread taps 2N, 3N
Ungeschliffene Gewindebohrer

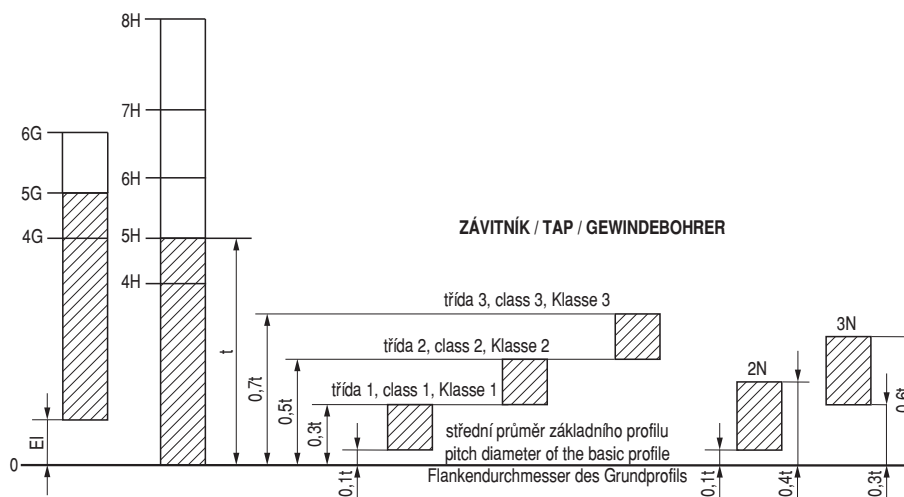
TOLERANČNÍ TŘÍDA ZÁVITNÍKU Tolerance class of the tap Toleranzklasse des Gewindebohrers		POUŽITÍ PRO MATICE TOLERANČNÍCH POLÍ Tolerance zone of the nut thread Toleranz-Feld des zu schneidenden Muttergewindes					
třída 1, class 1, Klasse 1	ISO 1	4H	5H				
třída 2, class 2, Klasse 2	ISO 2	4G	5G	6H			
třída 3, class 3, Klasse 3	ISO 3			6G	7H	8H	
----	2N				6H		
----	3N			6G	6H	7H	

TOLERANCE STŘEDNÍHO PRŮMĚRU ZÁVITNÍKU

Tolerance of pitch diameter

Toleranz des Flankendurchmessers

ZÁVIT MATICE
NUT THREAD
MUTTERGEWINDE



$t = T_{D_2}$ toleranční třída závitu matice 5
tolerance class 5 of the nut thread
Toleranzklasse 5 des Muttergewindes

EI = základní úchylka
fundamental deviation
Grundabweichung

M

ČSN 01 4090, DIN 13, BS 1157:1975

METRICKÝ ZÁVIT ISO

Metric ISO thread

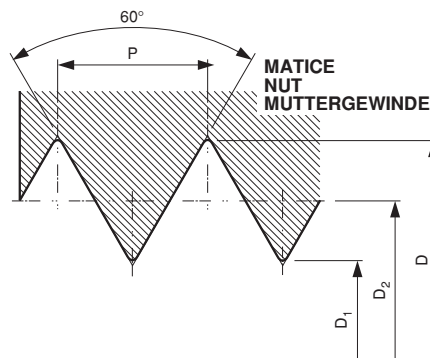
Metrisches ISO Gewinde

D = velký Ø závitů matice
D₂ = střední Ø závitů matice
D₁ = malý Ø závitů matice
P = stoupání

D = major diameter of nut thread
D₂ = pitch diameter of nut thread
D₁ = minor diameter of nut thread
P = pitch

D = Mutteraussen - Ø des Gewindes
D₂ = Mutterflanken - Ø des Gewindes
D₁ = Mutterkern - Ø des Gewindes
P = Teilung

d = D



Závit Thread Gewinde		D ₁ max			D ₁ min
d	P	5H	6H	7H	5H, 6H, 7H
M 3	0,5	2,571	2,599	2,639	2,459
M 3	0,35	2,701	2,721	-	2,621
M 3,5	0,6	2,975	3,010	3,050	2,850
M 3,5	0,35	3,201	3,221	-	3,121
M 4	0,7	3,382	3,422	3,466	3,242
M 4	0,5	3,571	3,599	3,639	3,459
M 4,5	0,5	4,071	4,099	4,139	3,959
M 5	0,8	4,294	4,334	4,384	4,134
M 5	0,5	4,571	4,599	4,639	4,459
M 5,5	0,5	5,071	5,099	5,139	4,959
M 6	1	5,107	5,153	5,217	4,917
M 6	0,75	5,338	5,378	5,424	5,188
M 7	1	6,107	6,153	6,217	5,917
M 7	0,75	6,338	6,378	6,424	6,188
M 8	1,25	6,859	6,912	6,982	6,647
M 8	1	7,107	7,153	7,217	6,917
M 8	0,75	7,338	7,378	7,424	7,188
M 9	1,25	7,859	7,912	7,982	7,647
M 9	1	8,107	8,153	8,217	7,917
M 9	0,75	8,338	8,378	8,424	8,188
M 10	1,5	8,612	8,676	8,751	8,376
M 10	1,25	8,859	8,912	8,982	8,647
M 10	1	9,107	9,153	9,217	8,917
M 10	0,75	9,338	9,378	9,424	9,188
M 11	1,5	9,612	9,676	9,751	9,376
M 11	1	10,107	10,153	10,217	9,917
M 11	0,75	10,338	10,378	10,424	10,188
M 12	1,75	10,371	10,441	10,531	10,106
M 12	1,5	10,612	10,676	10,751	10,376
M 12	1,25	10,859	10,912	10,982	10,647
M 12	1	11,107	11,153	11,217	10,917
M 14	2	12,135	12,210	12,310	11,835
M 14	1,5	12,612	12,676	12,751	12,376
M 14	1,25	12,859	12,912	12,982	12,647
M 14	1	13,107	13,153	13,217	12,917
M 15	1	14,107	14,153	14,217	13,917
M 16	2	14,135	14,210	14,310	13,835
M 16	1,5	14,612	14,676	14,751	14,376
M 16	1	15,107	15,153	15,217	14,917
M 17	1	16,107	16,153	16,217	15,917
M 18	2,5	15,649	15,744	15,854	15,294
M 18	1,5	16,612	16,676	16,751	16,376
M 18	1	17,107	17,153	17,217	16,917
M 20	2,5	17,649	17,744	17,854	17,294
M 20	1,5	18,612	18,676	18,751	18,376
M 20	1	19,107	19,153	19,217	18,917
M 22	2,5	19,649	19,744	19,854	19,294
M 22	1,5	20,612	20,676	20,751	20,376
M 22	1	21,107	21,153	21,217	20,917
M 24	3	21,152	21,252	21,382	20,752
M 24	2	22,135	22,210	22,310	21,835
M 24	1,5	22,612	22,676	22,751	22,376
M 24	1	23,107	23,153	23,217	22,917
M 25	1,5	23,612	23,676	23,751	23,376
M 26	1,5	24,612	24,676	24,751	24,376

Závit Thread Gewinde		D ₁ max			D ₁ min
d	P	5H	6H	7H	5H, 6H, 7H
M 27	3	24,152	24,252	24,382	23,752
M 27	2	25,135	25,210	25,310	24,835
M 27	1,5	25,612	25,676	25,751	52,376
M 27	1	26,107	26,153	26,217	25,917
M 28	2	26,135	26,210	26,310	25,835
M 28	1,5	26,612	26,676	26,751	26,376
M 30	3,5	26,661	26,771	26,921	26,211
M 30	2	28,135	28,210	28,310	27,835
M 30	1,5	28,612	28,676	28,751	28,376
M 30	1	29,107	29,153	29,217	28,917
M 32	1,5	30,612	30,676	30,751	30,376
M 33	3,5	29,661	29,771	29,921	29,211
M 33	2	31,135	31,210	31,310	30,835
M 33	1,5	31,612	31,676	31,751	31,376
M 35	1,5	33,612	33,676	33,751	33,376
M 36	4	32,145	32,270	32,420	31,670
M 36	3	33,152	33,252	33,382	32,752
M 36	2	34,135	34,210	34,310	33,835
M 36	1,5	34,612	34,676	34,751	34,376
M 39	4	35,145	35,270	35,420	34,670
M 39	3	36,152	36,252	36,382	35,752
M 39	2	37,135	37,210	37,310	36,835
M 39	1,5	37,612	37,676	37,751	37,376
M 40	1,5	38,612	38,676	38,751	38,376
M 42	4,5	37,659	37,799	37,979	37,129
M 42	3	39,152	39,252	39,382	38,752
M 42	2	40,135	40,210	40,310	39,835
M 42	1,5	40,612	40,676	40,751	40,376
M 45	4,5	40,659	40,799	40,979	40,129
M 45	3	42,152	42,252	42,382	41,752
M 45	2	43,135	43,210	43,310	42,835
M 45	1,5	43,612	43,676	43,751	43,376
M 48	5	43,147	43,297	43,487	42,587
M 48	3	45,152	45,252	45,382	44,752
M 48	2	46,135	46,210	46,310	45,835
M 48	1,5	46,612	46,676	46,751	46,376
M 50	1,5	48,612	48,676	48,751	48,376
M 52	5	47,147	47,297	47,487	46,587
M 52	3	49,152	49,252	49,382	48,752
M 52	2	50,135	50,210	50,310	49,835
M 52	1,5	50,612	50,676	50,751	50,376
M 55	2	53,135	53,210	53,310	53,835
M 55	1,5	53,612	53,676	53,751	53,376
M 56	5,5	50,646	50,796	50,996	50,046
M 56	4	52,145	52,270	52,420	51,670
M 56	3	53,152	53,252	53,382	52,752
M 56	2	54,135	54,210	54,310	53,835
M 56	1,5	54,612	54,676	54,751	54,376
M 58	2	56,135	56,210	56,310	55,835
M 58	1,5	56,612	56,676	56,751	56,376
M 60	5,5	54,326	54,401	54,496	54,046
M 60	4	56,145	56,270	56,420	55,670
M 60	3	57,152	57,252	57,382	56,752
M 60	2	58,135	58,210	58,310	57,835
M 60	1,5	58,612	58,676	58,751	58,376

W

ČSN 01 4030, DIN 11, BS 84.1956

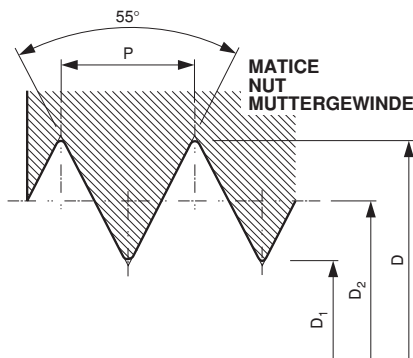
WHITWORTHŮV ZÁVIT

British standard Whitworth thread

Britisches standard Whitworth Gewinde

D	=	velký Ø závitů matice
D ₂	=	střední Ø závitů matice
D ₁	=	malý Ø závitů matice
Z	=	počet závitů/1"
P	=	stoupání
D	=	major diameter of nut thread
D ₂	=	pitch diameter of nut thread
D ₁	=	minor diameter of nut thread
Z	=	threads/1"
P	=	pitch
D	=	Mutteraussen - Ø des Gewindes
D ₂	=	Mutterflanken - Ø des Gewindes
D ₁	=	Mutterkern - Ø des Gewindes
Z	=	Gangzahl/1"
P	=	Teilung

d = D



TOLERANCE STŘEDNÍ
TOLERANCE MEDIUM
TOLERANZ MITTEL

Závit Thread Gewinde			D _{min}	D _{1 min}	D _{1 max}
d	Z	P			
3/32"	48	0,529	2,381	1,704	-
1/8"	40	0,635	3,175	2,362	-
5/32"	32	0,794	3,969	2,952	-
3/16"	24	1,058	4,762	3,407	-
7/32"	24	1,058	5,556	4,201	-
W 1/4"	20	1,270	6,350	4,744	5,224
W 5/16"	18	1,411	7,938	6,151	6,661
W 3/8"	16	1,588	9,525	7,512	8,052
W 7/16"	14	1,814	11,113	8,809	9,379
W 1/2"	12	2,117	12,700	10,015	10,610
W 5/8"	11	2,309	15,876	12,948	13,598
W 3/4"	10	2,540	19,051	15,831	16,538
W 7/8"	9	2,822	22,226	18,647	19,411
W 1"	8	3,175	25,401	21,375	22,185
W 1 1/8"	7	3,629	28,576	23,976	24,879
W 1 1/4"	7	3,629	31,751	27,151	28,054
W 1 3/8"	6	4,233	34,926	29,558	30,555
W 1 1/2"	6	4,233	38,101	32,733	33,730
W 1 5/8"	5	5,080	41,277	34,834	35,921
W 1 3/4"	5	5,080	44,452	38,009	39,096
W 1 7/8"	4 1/2	5,645	47,627	40,468	41,648
W 2"	4 1/2	5,645	50,802	43,643	44,823

G

ČSN 01 4033, DIN-ISO 228, BS 2779:1986

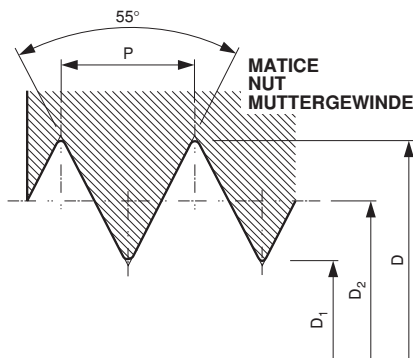
TRUBKOVÝ ZÁVIT VÁLCOVÝ

British standard straight pipe tread

Whitworth-Rohrgewinde

- D = velký Ø závitů matice
 D₂ = střední Ø závitů matice
 D₁ = malý Ø závitů matice
 Z = počet závitů/1"
 P = stoupání
 D = major diameter of nut thread
 D₂ = pitch diameter of nut thread
 D₁ = minor diameter of nut thread
 Z = threads/1"
 P = pitch
 D = Mutteraussen - Ø des Gewindes
 D₂ = Mutterflanken - Ø des Gewindes
 D₁ = Mutterkern - Ø des Gewindes
 Z = Gangzahl/1"
 P = Teilung

d = D



LÍCOVÁNÍ A
TOLERANCE A
TOLERANZ A

Závit Thread Gewinde			D _{min}	D _{1 min}	D _{1 max}
d	Z	P			
G 1/16"	28	0,907	7,723	6,561	6,843
G 1/8"	28	0,907	9,728	8,566	8,848
G 1/4"	19	1,337	13,157	11,445	11,890
G 3/8"	19	1,337	16,662	14,950	15,395
G 1/2"	14	1,814	20,955	18,631	19,172
G 5/8"	14	1,814	22,911	20,587	21,128
G 3/4"	14	1,814	26,441	24,117	24,658
G 7/8"	14	1,814	30,201	27,877	28,418
G 1"	11	2,309	33,249	30,291	30,931
G 1 1/8"	11	2,309	37,897	34,939	35,579
G 1 1/4"	11	2,309	41,910	38,952	39,592
G 1 3/8"	11	2,309	44,323	41,365	42,005
G 1 1/2"	11	2,309	47,803	44,845	45,485
G 1 3/4"	11	2,309	53,746	50,788	51,428
G 2"	11	2,309	59,614	56,656	57,296
G 2 1/4"	11	2,309	65,710	62,752	63,392
G 2 1/2"	11	2,309	75,184	72,226	72,866
G 2 3/4"	11	2,309	81,534	78,576	79,216
G 3"	11	2,309	87,884	84,926	85,566
G 3 1/4"	11	2,309	93,980	91,022	91,662
G 3 1/2"	11	2,309	100,330	97,372	98,012
G 3 3/4"	11	2,309	106,680	103,722	104,362
G 4"	11	2,309	113,030	110,072	110,712

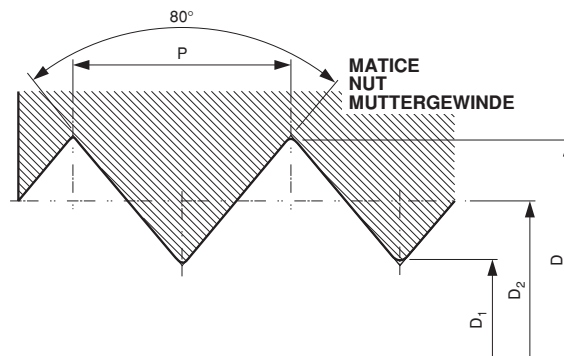
Pg (P)

ČSN 01 4035, DIN 40430

PANCĚŘOVÝ ZÁVIT

Electric pipe thread

Stahlpanzerrohr-Gewinde



- D = velký Ø závitů matice
 D₂ = střední Ø závitů matice
 D₁ = malý Ø závitů matice
 Z = počet závitů/1"
 P = stoupání
 D = major diameter of nut thread
 D₂ = pitch diameter of nut thread
 D₁ = minor diameter of nut thread
 Z = threads/1"
 P = pitch
 D = Mutteraussen - Ø des Gewindes
 D₂ = Mutterflanken - Ø des Gewindes
 D₁ = Mutterkern - Ø des Gewindes
 Z = Gangzahl/1"
 P = Teilung

d = D

Závit Thread Gewinde			D	D ₁ min	D ₁ max
d	Z	P			
Pg 7	20	1,27	12,5	11,28	11,43
Pg 9	18	1,41	15,2	13,86	14,01
Pg 11	18	1,41	18,6	17,26	17,41
Pg 13,5	18	1,41	20,4	19,06	19,21
Pg 16	18	1,41	22,5	21,16	21,31
Pg 21	16	1,588	28,3	26,78	27,03
Pg 29	16	1,588	37	35,48	35,73
Pg 36	16	1,588	47	45,48	45,73
Pg 42	16	1,588	54	52,48	52,73
Pg 48	16	1,588	59,3	57,78	58,03

UNC

ANSI B 1.1, BS 1580:1962

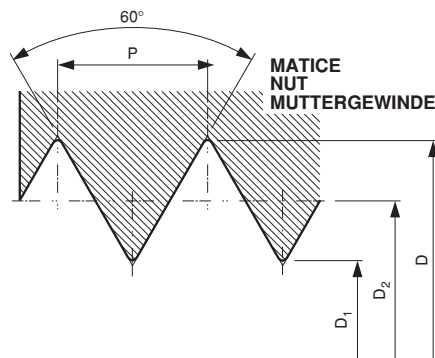
UNIFIKOVANÝ HRUBÝ ZÁVIT

Unified-coarse thread

Unifiziertes Grobgewinde

D	=	velký Ø závitů matice
D ₂	=	střední Ø závitů matice
D ₁	=	malý Ø závitů matice
Z	=	počet závitů/1"
P	=	stoupání
D	=	major diameter of nut thread
D ₂	=	pitch diameter of nut thread
D ₁	=	minor diameter of nut thread
Z	=	threads/1"
P	=	pitch
D	=	Mutteraussen - Ø des Gewindes
D ₂	=	Mutterflanken - Ø des Gewindes
D ₁	=	Mutterkern - Ø des Gewindes
Z	=	Gangzahl/1"
P	=	Teilung

d = D



LÍCOVÁNÍ ZÁVITU MATICE: **3B** = PŘESNÉ, **2B** = STŘEDNÍ, **1B** = HRUBÉ
 TOLERANCE OF NUT THREAD: **3B** = FINE, **2B** = MEDIUM, **1B** = COARSE
 TOLERANZ DES MUTTER GEWINDES: **3B** = FEIN, **2B** = MITTEL, **1B** = GROB

Závit Thread Gewinde			D _{min}	D _{1 min}	D _{1 max}	
d - Z	d (")	P		3B, 2B, 1B	3B	2B, 1B
1 - 64	0,073	0,397	1,854	1,425	1,582	1,582
2 - 56	0,086	0,454	2,184	1,694	4,872	1,872
3 - 48	0,099	0,529	2,515	1,941	2,146	2,146
4 - 40	0,112	0,635	2,845	2,156	2,385	2,385
5 - 40	0,125	0,635	3,175	2,487	2,697	2,697
6 - 32	0,138	0,794	3,505	2,647	2,896	2,896
8 - 32	0,164	0,794	4,166	3,307	3,528	3,531
10 - 24	0,190	1,058	4,826	3,680	3,950	3,962
12 - 24	0,216	1,058	5,486	4,341	4,590	4,597
1/4 - 20	0,250	1,270	6,350	4,976	5,250	5,258
5/16 - 18	0,3125	1,411	7,938	6,411	6,680	6,731
3/8 - 16	0,375	1,588	9,525	7,805	8,082	8,153
7/16 - 14	0,4375	1,814	11,112	9,149	9,441	9,550
1/2 - 13	0,500	1,954	12,700	10,584	10,881	11,024
9/16 - 12	0,5625	2,117	14,288	11,996	12,301	12,446
5/8 - 11	0,625	2,309	15,875	13,376	13,693	13,868
3/4 - 10	0,750	2,540	19,050	16,299	16,624	16,840
7/8 - 9	0,875	2,822	22,225	19,169	19,520	19,761
1 - 8	1,000	3,175	25,400	21,963	22,344	22,606
1 1/8 - 7	1,125	3,629	28,575	24,648	25,082	25,349
1 1/4 - 7	1,250	3,629	31,750	27,823	28,258	28,524
1 3/8 - 6	1,375	4,233	34,925	30,343	30,851	31,115
1 1/2 - 6	1,500	4,233	38,100	33,518	34,026	34,290
1 3/4 - 5	1,750	5,080	44,450	38,951	39,560	39,827
2 - 4 1/2	2,000	5,645	50,800	44,689	45,367	45,593
2 1/4 - 4 1/2	2,250	5,645	57,150	51,039	51,717	51,943
2 1/2 - 4	2,500	6,350	63,500	56,627	57,389	57,582
2 3/4 - 4	2,750	6,350	69,850	62,977	63,739	63,932
3 - 4	3,000	6,350	76,200	69,327	70,089	70,282
3 1/4 - 4	3,250	6,350	82,550	75,677	76,439	76,632
3 1/2 - 4	3,500	6,350	88,900	82,027	82,789	82,982
3 3/4 - 4	3,750	6,350	95,250	88,377	89,139	89,332
4 - 4	4,000	6,350	101,600	94,727	95,489	95,682

UNF

ANSI B 1.1, BS 1580:1962

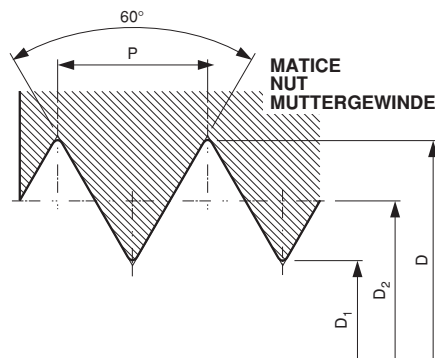
UNIFIKOVANÝ JEMNÝ ZÁVIT

Unified-fine thread

Unifiziertes Feingewinde

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 D = major diameter of nut thread
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 D = Mutteraussen - Ø des Gewindes
 D₂ = Mutterflanken - Ø des Gewindes
 D₁ = Mutterkern - Ø des Gewindes
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 P = Teilung

d = D



LÍCOVÁNÍ ZÁVITU MATICE: **3B** = PŘESNÉ, **2B** = STŘEDNÍ, **1B** = HRUBÉ
 TOLERANCE OF NUT THREAD: **3B** = FINE, **2B** = MEDIUM, **1B** = COARSE
 TOLERANZ DES MUTTER GEWINDES: **3B** = FEIN, **2B** = MITTEL, **1B** = GROB

Závit Thread Gewinde			D _{min}	D _{1 min}	D _{1 max}	
d - Z	d (")	P		3B, 2B, 1B	3B	2B, 1B
0 - 80	0,060	0,318	1,524	1,181	1,306	1,306
1 - 72	0,073	0,353	1,854	1,473	1,613	1,613
2 - 64	0,086	0,397	2,184	1,755	1,913	1,913
3 - 56	0,099	0,454	2,515	2,024	2,197	2,197
4 - 48	0,112	0,529	2,845	2,271	2,459	2,459
5 - 44	0,125	0,577	3,175	2,550	2,741	2,741
6 - 40	0,138	0,635	3,505	2,817	3,012	3,023
8 - 36	0,164	0,706	4,166	3,401	3,597	3,607
10 - 32	0,190	0,794	4,826	3,967	4,168	4,168
12 - 28	0,216	0,907	5,486	4,503	4,717	4,724
1/4 - 28	0,250	0,907	6,350	5,367	5,563	5,588
5/16 - 24	0,3125	1,058	7,938	6,792	6,995	7,036
3/8 - 24	0,375	1,058	9,525	8,379	8,565	8,636
7/16 - 20	0,4375	1,270	11,112	9,738	9,947	10,033
1/2 - 20	0,500	1,270	12,700	11,326	11,524	11,608
9/16 - 18	0,5625	1,411	14,288	12,761	12,969	13,081
5/8 - 18	0,625	1,411	15,875	14,348	14,554	14,681
3/4 - 16	0,750	1,588	19,050	17,330	17,546	17,678
7/8 - 14	0,875	1,814	22,225	20,262	20,493	20,676
1 - 12	1,000	2,117	25,400	23,109	23,363	23,571
1 1/8 - 12	1,125	2,117	28,575	26,284	26,538	26,746
1 1/4 - 12	1,250	2,117	31,750	29,459	29,713	29,921
1 3/8 - 12	1,375	2,117	34,925	32,634	32,888	33,096
1 1/2 - 12	1,500	2,117	38,100	35,809	36,063	36,271

UNEF

ANSI B 1.1, BS 1580:1962

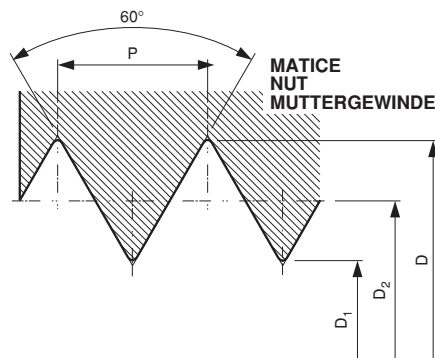
UNIFIKOVANÝ EXTRA JEMNÝ ZÁVIT

Unified-extra fine thread

Unifiziertes extra Feingewinde

- D = velký Ø závitů matice
D₂ = střední Ø závitů matice
D₁ = malý Ø závitů matice
Z = počet závitů/1"
P = stoupání
D = major diameter of nut thread
D₂ = pitch diameter of nut thread
D₁ = minor diameter of nut thread
Z = threads/1"
P = pitch
D = Mutteraussen - Ø des Gewindes
D₂ = Mutterflanken - Ø des Gewindes
D₁ = Mutterkern - Ø des Gewindes
Z = Gangzahl/1"
P = Teilung

d = D



LÍCOVÁNÍ ZÁVITU MATICE: **3B** = PŘESNÉ, **2B** = STŘEDNÍ, **1B** = HRUBÉ
TOLERANCE OF NUT THREAD: **3B** = FINE, **2B** = MEDIUM, **1B** = COARSE
TOLERANZ DES MUTTER GEWINDES: **3B** = FEIN, **2B** = MITTEL, **1B** = GROB

Závit Thread Gewinde			D _{min}	D _{1 min}	D _{1 max}	
d - Z	d (")	P		3B, 2B, 1B	3B	2B, 1B
12 - 32	0,216	0,794	5,486	4,628	4,813	4,826
1/4 - 32	0,250	0,794	6,350	5,491	5,662	5,690
5/16 - 32	0,3125	0,794	7,938	7,079	7,231	7,264
3/8 - 32	0,375	0,794	9,525	8,666	8,811	8,865
7/16 - 28	0,4375	0,907	11,112	10,130	10,290	10,338
1/2 - 28	0,5000	0,907	12,700	11,717	11,877	11,938
9/16 - 24	0,5625	1,058	14,288	13,142	13,320	13,386
5/8 - 24	0,625	1,058	15,875	14,729	14,907	14,986
11/16 - 24	0,6875	1,058	17,462	16,317	16,495	16,561
3/4 - 20	0,750	1,270	19,050	17,676	17,874	17,958
13/16 - 20	0,8125	1,270	20,638	19,263	19,461	19,558
7/8 - 20	0,875	1,270	22,225	20,851	21,049	21,133
15/16 - 20	0,9375	1,270	23,812	22,438	22,636	22,733
1 - 20	1,000	1,270	25,400	24,026	24,224	24,308
1 1/16 - 18	1,0625	1,411	26,988	25,461	25,667	25,781
1 1/8 - 18	1,125	1,411	28,575	27,048	27,254	27,381
1 3/16 - 18	1,1875	1,411	30,162	28,636	28,842	28,956
1 1/4 - 18	1,250	1,411	31,750	30,223	30,429	30,556
1 5/16 - 18	1,3125	1,411	33,338	31,811	32,017	32,131
1 3/8 - 18	1,375	1,411	34,925	33,398	33,604	33,731
1 7/16 - 18	1,4375	1,411	36,512	34,986	35,192	35,306
1 1/2 - 18	1,500	1,411	38,100	36,573	36,779	36,881
1 9/16 - 18	1,5625	1,411	39,688	38,161	38,367	38,481
1 5/8 - 18	1,625	1,411	41,275	39,748	39,954	40,081
1 11/16 - 18	1,6875	1,411	42,862	41,336	41,542	41,656

Tr

ČSN 01 4050, DIN 103

LICHOBĚŽNÍKOVÝ ZÁVIT ROVNORAMENNÝ

ISO trapezoidal thread

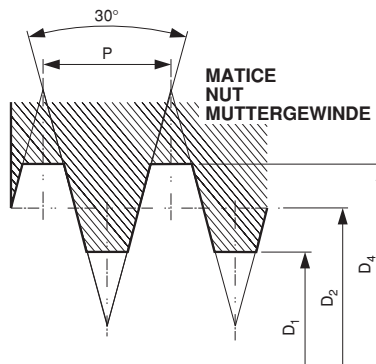
Metrische ISO - Trapezgewinde

D_4 = velký \varnothing závitů matice
 D_2 = střední \varnothing závitů matice
 D_1 = malý \varnothing závitů matice
 P = stoupání

D_4 = major diameter of nut thread
 D_2 = pitch diameter of nut thread
 D_1 = minor diameter of nut thread
 P = pitch

D_4 = Mutteraussen - \varnothing des Gewindes
 D_2 = Mutterflanken - \varnothing des Gewindes
 D_1 = Mutterkern - \varnothing des Gewindes
 P = Teilung

$d = D_4$



7H LÍCOVÁNÍ STŘEDNÍ
 7H TOLERANCE MEDIUM
 7H TOLERANZ MITTEL

Závit Thread Gewinde			D_{4min}	D_{2min}	D_{2max}	D_{1min}	D_{1max}
\varnothing		P		7H	7H		
Tr 8	x	1,5	8,300	7,250	7,474	6,500	6,690
Tr 9	x	1,5	9,300	8,250	8,474	7,500	7,690
Tr 9	x	2	9,500	8,000	8,250	7,000	7,236
Tr 10	x	1,5	10,300	9,250	9,474	8,500	8,690
Tr 10	x	2	10,500	9,000	9,250	8,000	8,236
Tr 11	x	2	11,500	10,000	10,250	9,000	9,236
Tr 11	x	3	11,500	9,500	9,780	8,000	8,315
Tr 12	x	2	12,500	11,000	11,265	10,000	10,236
Tr 12	x	3	12,500	10,500	10,800	9,000	9,315
Tr 14	x	2	14,500	13,000	13,265	12,000	12,236
Tr 14	x	3	14,500	12,500	12,800	11,000	11,315
Tr 16	x	2	16,500	15,000	15,265	14,000	14,236
Tr 16	x	4	16,500	14,000	14,355	12,000	12,375
Tr 18	x	2	18,500	17,000	17,265	16,000	16,236
Tr 18	x	4	18,500	16,000	16,355	14,000	14,375
Tr 20	x	2	20,500	19,000	19,265	18,000	18,236
Tr 20	x	4	20,500	18,000	18,355	16,000	16,375
Tr 22	x	3	22,500	20,500	20,800	19,000	19,315
Tr 22	x	5	22,500	19,500	19,875	17,000	17,450
Tr 24	x	3	24,500	22,500	22,835	21,000	21,315
Tr 24	x	5	24,500	21,500	21,900	19,000	19,450
Tr 26	x	3	26,500	24,500	24,835	23,000	23,315
Tr 26	x	5	26,500	23,500	23,900	21,000	21,450
Tr 28	x	3	28,500	26,500	26,835	25,000	25,315
Tr 28	x	5	28,500	25,500	25,900	23,000	23,450
Tr 30	x	3	30,500	28,500	28,835	27,000	27,315
Tr 30	x	6	31,000	27,000	27,450	24,000	24,500
Tr 32	x	3	32,500	30,500	30,835	29,000	29,315
Tr 32	x	6	33,000	29,000	29,450	26,000	26,500
Tr 34	x	3	34,500	32,500	32,835	31,000	31,315
Tr 34	x	6	35,000	31,000	31,450	28,000	28,500
Tr 36	x	3	36,500	34,500	34,835	33,000	33,315
Tr 36	x	6	37,000	33,000	33,450	30,000	30,500
Tr 38	x	3	38,500	36,500	36,835	35,000	35,315
Tr 38	x	7	39,000	34,500	34,975	31,000	31,560
Tr 40	x	3	40,500	38,500	38,835	37,000	37,315
Tr 40	x	7	41,000	36,500	36,975	33,000	33,560
Tr 42	x	3	42,500	40,500	40,835	39,000	39,315
Tr 42	x	7	43,000	38,500	38,975	35,000	35,560
Tr 44	x	3	44,500	42,500	42,835	41,000	41,315
Tr 44	x	7	45,000	40,500	40,975	37,000	37,560
Tr 46	x	3	46,500	44,500	44,855	43,000	43,315
Tr 46	x	8	47,000	42,000	42,530	38,000	38,630
Tr 48	x	3	48,500	46,500	46,855	45,000	45,315
Tr 48	x	8	49,000	44,000	44,530	40,000	40,630
Tr 50	x	3	50,500	48,500	48,855	47,000	47,315
Tr 50	x	8	51,000	46,000	46,530	42,000	42,630
Tr 52	x	3	52,500	50,500	50,855	49,000	49,315
Tr 52	x	8	53,000	48,000	48,530	44,000	44,630
Tr 55	x	3	55,500	53,500	53,855	52,000	52,315
Tr 55	x	9	56,000	50,500	51,060	46,000	46,670
Tr 60	x	3	60,500	58,500	58,855	57,000	57,315
Tr 60	x	9	61,000	55,500	56,060	51,000	51,670

Rd

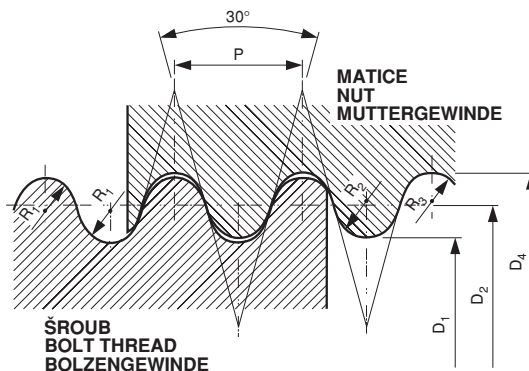
ČSN 01 4037, DIN 405

OBLÝ ZÁVIT

Round thread

Rundgewinde

- D_4 = velký Ø závitů matice
 D_2 = střední Ø závitů matice
 D_1 = malý Ø závitů matice
 Z = počet závitů/1"
 P = stoupání
 D_4 = major diameter of nut thread
 D_2 = pitch diameter of nut thread
 D_1 = minor diameter of nut thread
 Z = threads/1"
 P = pitch
 D_4 = Mutteraussen - Ø des Gewindes
 D_2 = Mutterflanken - Ø des Gewindes
 D_1 = Mutterkern - Ø des Gewindes
 Z = Gangzahl/1"
 P = Teilung
 $d = D_4$



T_{D_1} = TOLERENCE Ø D_1
 T_{D_1} = TOLERANCE Ø D_1
 T_{D_1} = TOLERANZ Ø D_1

Závit Thread Gewinde			D_4	D_1	R_1	R_2	R_3	T_{D_1}	
d	Z	P						6H	7H
8	10	2,540	8,254	5,714	0,606	0,650	0,561	0,450	0,560
9	10	2,540	9,254	6,714	0,606	0,650	0,561	0,450	0,560
10	10	2,540	10,254	7,714	0,606	0,650	0,561	0,450	0,560
11	10	2,540	11,254	8,714	0,606	0,650	0,561	0,450	0,560
12	10	2,540	12,254	9,714	0,606	0,650	0,561	0,450	0,560
14	8	3,175	14,318	11,142	0,757	0,813	0,702	0,530	0,670
16	8	3,175	16,318	13,142	0,757	0,813	0,702	0,530	0,670
18	8	3,175	18,318	15,142	0,757	0,813	0,702	0,530	0,670
20	8	3,175	20,318	17,142	0,757	0,813	0,702	0,530	0,670
22	8	3,175	22,318	19,142	0,757	0,813	0,702	0,530	0,670
24	8	3,175	24,318	21,142	0,757	0,813	0,702	0,530	0,670
26	8	3,175	26,318	23,142	0,757	0,813	0,702	0,530	0,670
28	8	3,175	28,318	25,142	0,757	0,813	0,702	0,530	0,670
30	8	3,175	30,318	27,142	0,757	0,813	0,702	0,530	0,670
32	8	3,175	32,318	29,142	0,757	0,813	0,702	0,530	0,670
	34	8	34,318	31,142	0,757	0,813	0,702	0,530	0,670
36	8	3,175	36,318	33,142	0,757	0,813	0,702	0,530	0,670
	38	8	38,318	35,142	0,757	0,813	0,702	0,530	0,670
40	6	4,233	40,423	36,190	1,010	1,084	0,936	0,630	0,800
	42	6	42,423	38,190	1,010	1,084	0,936	0,630	0,800
44	6	4,233	44,423	40,190	1,010	1,084	0,936	0,630	0,800
	46	6	46,423	42,190	1,010	1,084	0,936	0,630	0,800
48	6	4,233	48,423	44,190	1,010	1,084	0,936	0,630	0,800
	50	6	50,423	46,190	1,010	1,084	0,936	0,630	0,800
52	6	4,233	52,423	48,190	1,010	1,084	0,936	0,630	0,800
55	6	4,233	55,423	51,190	1,010	1,084	0,936	0,630	0,800
	58	6	58,423	54,190	1,010	1,084	0,936	0,630	0,800
60	6	4,233	60,423	56,190	1,010	1,084	0,936	0,630	0,800
	62	6	62,423	58,190	1,010	1,084	0,936	0,630	0,800
65	6	4,233	65,423	61,190	1,010	1,084	0,936	0,630	0,800
	68	6	68,423	64,190	1,010	1,084	0,936	0,630	0,800
70	6	4,233	70,423	66,190	1,010	1,084	0,936	0,630	0,800
	72	6	72,423	68,190	1,010	1,084	0,936	0,630	0,800
75	6	4,233	75,423	71,190	1,010	1,084	0,936	0,630	0,800
	78	6	78,423	74,190	1,010	1,084	0,936	0,630	0,800
80	6	4,233	80,423	76,190	1,010	1,084	0,936	0,630	0,800
	82	6	82,423	78,190	1,010	1,084	0,936	0,630	0,800
85	6	4,233	85,423	81,190	1,010	1,084	0,936	0,630	0,800
	88	6	88,423	84,190	1,010	1,084	0,936	0,630	0,800
90	6	4,233	90,423	86,190	1,010	1,084	0,936	0,630	0,800
	92	6	92,423	88,190	1,010	1,084	0,936	0,630	0,800
95	6	4,233	95,423	91,190	1,010	1,084	0,936	0,630	0,800
	98	6	98,423	94,190	1,010	1,084	0,936	0,630	0,800
100	6	4,233	100,423	96,190	1,010	1,084	0,936	0,630	0,800
	105	4	105,635	99,285	1,515	1,625	1,404	0,850	1,060
110	4	6,350	110,635	104,285	1,515	1,625	1,404	0,850	1,060
	115	4	115,635	109,285	1,515	1,625	1,404	0,850	1,060
120	4	6,350	120,635	114,285	1,515	1,625	1,404	0,850	1,060

DOPORUČENÉ PŘEDVRTÁNÍ OTVORŮ PRO TVÁŘENÍ ZÁVITŮ Recommended hole diameter for forming of the threads Empfohlene Vorbohr für das Gewindefurchen

Metrický závit ISO - hrubý Metric ISO - coarse thread Metrisches ISO - Regelgewinde			
Rozměr závitu Thread size Gewinde Abmessung		Předvrtaný otvor - Ø Hole diameter - Ø Vorbohr - Ø	
Ø mm	P mm	Min mm	Max mm
M 3	0,5	2,77	2,82
M 3,5	0,6	3,23	3,28
M 4	0,7	3,68	3,73
M 4,5	0,75	4,15	4,21
M 5	0,8	4,63	4,68
M 6	1	5,51	5,59
M 7	1	6,51	6,59
M 8	1,25	7,39	7,48
M 9	1,25	8,39	8,48
M 10	1,5	9,25	9,35
M 11	1,5	10,25	10,35
M 12	1,75	11,12	11,25
M 14	2	13,0	13,15
M 16	2	15,0	15,15
M 18	2,5	16,72	16,9
M 20	2,5	18,72	18,9

Trubkový závit Whitworth pipe thread Whitworth-Rohrgewinde			
Rozměr závitu Thread size Gewinde Abmessung		Předvrtaný otvor - Ø Hole diameter - Ø Vorbohr - Ø	
Ø" mm	P/1" mm	Min mm	Max mm
G 1/8"	28	9,25	9,32
G 1/4"	19	12,43	12,53
G 3/8"	19	15,94	16,04
G 1/2"	14	19,96	20,1
G 5/8"	14	21,92	22,08
G 3/4"	14	25,45	25,60
G 7/8"	14	29,2	29,35
G 1"	11	31,97	32,15

Metrický závit ISO - jemný Metric ISO - fine thread Metrisches ISO - Feingewinde		
Rozměr závitu Thread size Gewinde Abmessung		Předvrtaný otvor - Ø Hole diameter - Ø Vorbohr - Ø
ØxP mm	Min mm	Max mm
M 3,5 x 0,5	3,27	3,32
M 4 x 0,5	3,77	3,82
M 4,5 x 0,5	4,27	4,32
M 5 x 0,5	4,77	4,82
M 5,5 x 0,5	5,27	5,32
M 6 x 0,5	5,78	5,83
M 6 x 0,75	5,65	5,71
M 7 x 0,75	6,65	6,71
M 8 x 0,75	7,65	7,71
M 9 x 0,75	8,65	8,71
M 10 x 0,75	9,65	9,71
M 11 x 0,75	10,65	10,71
M 8 x 1	7,51	7,59
M 9 x 1	8,51	8,59
M 10 x 1	9,51	9,59
M 11 x 1	10,51	10,59
M 12 x 1	11,52	11,60
M 14 x 1	13,52	13,60
M 15 x 1	14,52	14,60
M 16 x 1	15,52	15,60
M 18 x 1	17,52	17,60
M 20 x 1	19,52	19,60
M 10 x 1,25	9,39	9,48
M 12 x 1,25	11,40	11,49
M 14 x 1,25	13,40	13,49
M 12 x 1,5	11,26	11,36
M 14 x 1,5	13,26	13,36
M 16 x 1,5	15,26	15,36
M 18 x 1,5	17,26	17,36
M 20 x 1,5	19,26	19,36
M 22 x 1,5	21,26	21,36
M 24 x 1,5	23,26	23,38
M 25 x 1,5	24,26	24,38
M 26 x 1,5	25,26	25,38
M 28 x 1,5	27,26	27,38
M 30 x 1,5	29,26	29,38
M 18 x 2	17,0	17,15
M 20 x 2	19,0	19,15
M 22 x 2	21,0	21,15
M 24 x 2	23,01	23,16
M 27 x 2	26,01	26,16
M 30 x 2	29,01	29,16

Uvedené hodnoty je nutné vždy ověřit s ohledem na tažnost tvářeného materiálu.

Check the value in consideration of roll formed material ductility.

Die Angaben in bezug auf die Dehnfähigkeit des Materials überprüfen.