



### Cylindrical GAS-BSP THREADS DIN 228 (thread limits)

*	Z threads x 1"	Screw with tolerance of Classe B						Nut screw					
		Ø major d		Ø pitch d2		Ø minor d1		Ø major D		Ø pitch D2		Ø minor D1	
		max.	min.	max.	min.	max.	min.	min.	max.	min.	max.	min.	max.
G 1/8"	28	9.728	9.514	9.147	8.933	8.566	8.298	9.728	Not specified	9.147	9.254	8.566	8.848
G 1/4"	19	13.157	12.907	12.301	12.051	11.445	11.133	13.157		12.301	12.426	11.445	11.890
G 3/8"	19	16.662	16.408	15.806	15.552	14.950	14.632	16.662		15.806	15.933	14.950	15.395
G 1/2"	14	20.955	20.671	19.793	19.509	18.631	18.276	20.955		19.793	19.935	18.631	19.172
G 5/8"	14	22.911	22.627	21.749	21.465	20.587	20.232	22.911		21.749	21.891	20.587	21.128
G 3/4"	14	26.441	26.157	25.279	24.995	24.117	23.762	26.441		25.279	25.421	24.117	24.658
G 7/8"	14	30.201	29.917	29.039	28.755	27.877	27.522	30.201		29.039	29.181	27.877	28.418
G 1"	11	33.249	32.889	31.770	31.410	30.291	29.841	33.249		31.770	31.950	30.291	30.931
G 1 1/8"	11	37.897	37.537	36.418	36.058	34.939	34.489	37.897		36.418	36.598	34.939	35.579
G 1 1/4"	11	41.910	41.550	40.431	40.071	38.952	38.502	41.910		40.431	40.611	38.952	39.592
G 1 3/8"	11	44.323	43.963	42.844	42.484	41.365	40.915	44.323		42.844	43.024	41.365	42.005
G 1 1/2"	11	47.803	47.443	46.324	45.964	44.845	44.395	47.803		46.324	46.504	44.845	45.485
G 1 3/4"	11	53.746	53.386	52.267	51.907	50.788	50.338	53.746		52.267	52.447	50.788	51.428
G 2"	11	59.614	59.254	58.135	57.775	56.656	56.206	59.614		58.135	58.315	56.656	57.296

\* G in accordance with UNI-ISO 228

$$P = \frac{25.4}{Z}$$

### STRENGTH VALUES OF BOLTS/NUTS EN ISO 898-1 EN 20 898-2

	Strength classes of bolts						
	4.6	5.6	5.8	6.8	8.8	10.9	12.9
Nominal tensile strength Rm, Nenn N/mm <sup>2</sup>	400	500	500	600	800	1000	1200
Lower yield point ReL N/mm <sup>2</sup>	240	300	400	480	-	-	-
0.2 % yield limit Rp 0.2 N/mm <sup>2</sup>	-	-	-	-	640	900	1080
Tension under test force Sp N/mm <sup>2</sup>	225	280	380	440	580	830	970
Elongation A %	22	20	-	-	12	9	8

The strength class identification marking consists of two numerals:

- the first number corresponds to 1/100 of the nominal tensile strength in N/mm<sup>2</sup> (see table)
- the second number shows ten times the ratio of lower yield point ReL (or 0.2 % yield limit Rp 0.2) and nominal tensile strength Rm, nom (yield point ratio).

Example: Strength class 5.8 means Minimum tensile strength Rm = 500 N/mm<sup>2</sup>  
Minimum yield point ReL = 400 N/mm<sup>2</sup>

Also, multiplying both numerals results in 1/10 of the yield point in N/mm2

	Strength classes of nuts				
Nominal tension Sp N/mm <sup>2</sup> for thread	5	6	8	10	12
below M 4	520	600	800	1040	1150
Above M 4 below M 7	580	670	855	1040	1150
Above M 7 below M 10	590	680	870	1040	1160
Above M 10 below M 16	610	700	880	1050	1190
Above M 16 below M 39	630	720	920	1060	1200

The designation of a strength class consists of a distinctive number which provides information of the test tension of the material used:

- distinctive number x 100 = test tension Sp
- the test tension is equal to the minimum tensile strength in N/mm<sup>2</sup> of a bolt which, if paired with the appropriate nut, can be loaded up to the minimum yield of the bolt.

Example: Bolt 8.8 - nut 8, connection can be loaded up to the minimum yield point of the bolt.