

TECHNICAL SECTION

SECTION 7. Equivalent

TABLE 7.1
TABLE OF EQUIVALENT DIAMETER MODULE AND
CIRCULAR PITCHES

Diametral Pitch	Circular Pitch (inches)	Circular Pitch (millimeters)	Module (millimeters)
20*	0.1571	3.990	1.2700
24*	0.1309	3.325	1.0583
25.4000	0.1237	3.142	1.0*
31.4159	0.1000*	2.540	0.8085
31.7500	0.0989	2.513	0.8*
32*	0.0982	2.494	0.7938
36.2857	0.0866	2.199	0.7*
42.3333	0.0742	1.885	0.6*
48*	0.0654	1.662	0.5292
50.8000	0.0618	1.571	0.5*
63.5000	0.0495	1.257	0.4*
64*	0.0491	1.247	0.3969
72*	0.0436	1.108	0.3528
80*	0.0393	0.997	0.3175
84.6667	0.0371	0.942	0.3*
96*	0.0327	0.831	0.2646
101.6000	0.0309	0.785	0.25*
120*	0.0262	0.665	0.2117
127.0000	0.0247	0.628	0.2*
200*	0.0157	0.399	0.1270

*Standard pitches and modules offered by PIC Design.

TABLE 7.2
SPUR GEAR DATA

Standard Stock Pitches	Addendum	Dedendum	Whole Depth	Circular Pitch
20	.0500	.0579	.1079	.1571
24	.0417	.0520	.0937	.1309
1/10	.0318	.0402	.0720	.1000
32	.0313	.0395	.0708	.0982
48	.0208	.0270	.0478	.0654
64	.0156	.0208	.0364	.0491
72	.0139	.0187	.0326	.0436
80	.0125	.0170	.0295	.0393
96	.0104	.0145	.0249	.0327
120	.0083	.0120	.0203	.0262
200	.0050	.0080	.0130	.0157

TABLE 7.3
SPUR GEAR DATA FOR STANDARD MODULES
(All dimensions in millimeters)

Standard Module M	Addendum M	Dedendum* 1.16M	Whole Depth 2.16M	Circular Pitch πM
0.2	0.200	0.234	0.434	0.628
0.25	0.250	0.292	0.541	0.785
0.3	0.300	0.350	0.650	0.943
0.4	0.400	0.467	0.866	1.256
0.5	0.500	0.584	1.085	1.571
0.6	0.600	0.701	1.300	1.885
0.7	0.700	0.818	1.519	2.199
0.8	0.800	0.935	1.735	2.513
1.0	1.000	1.166	2.167	3.142

* Based on clearance equalling one-sixth module.

NOTE:

To determine theoretical center distance of gears, add the total number of teeth in both gears, then determine the pitch diameter and divide by two.

EXAMPLE:

Using a 99 and 18 tooth gears, using 24 D.P. gears = $99 + 18 = 117$
P.D. = teeth/pitch = $117/24 = 4.875$ "
Theoretical Center Distance is $4.875 / 2 = 2.4378$.
To allow for any variations add 0.001"

Set up P.D. = theoretical plus 0.001" = 2.4388"

$$DP = \frac{25.4}{\text{Module}} \quad \text{Module} = \frac{25.4}{\text{D.P.}}$$