

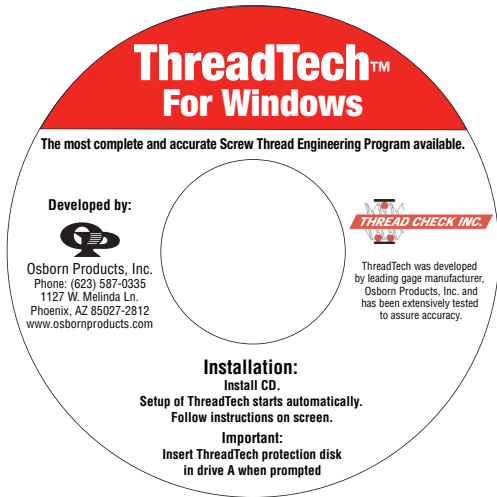
# ThreadTech™

## A Complete and Accurate Screw Thread Program

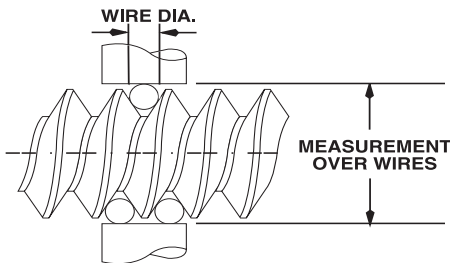
ThreadTech™ is a powerful thread engineering program designed for engineers, quality assurance and machinists to save time and to help eliminate human error. This comprehensive computer program takes the confusion out of thread manufacturing and inspection. ThreadTech™ eliminates time consuming computations and searches for specifications.

ThreadTech™ provides thread data on pitch diameters, major diameters, gage data, part data, tap data, helix angles, product and gage tolerances, crest and root flats, wire sizes, constants and just about anything on threads one needs to know.

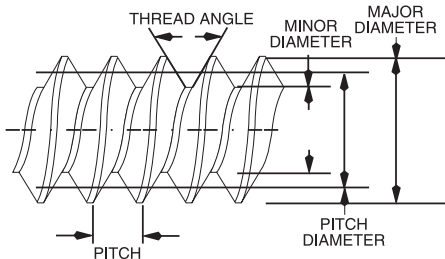
- Uses latest government and industry specifications
- 60 degree English and Metric threads
- Acme, pipe, STI, British buttress threads, and ISO metric trapezoidal threads
- Threads for Thread Plug Gages, Thread Ring Gages and Thread Setting Plugs
- Default sizes to agree with specifications
- All diameters, angles, roots, flats, plated or not
- Pitch Diameter
- Minor Diameter
- Helix Angles
- Asymmetrical Threads
- Worm gearing calculations utilize Buckingham and Vogel formulas (various included angles)
- Gage Data
- Part Data
- Tap Data
- Tolerances
- Crest and Root Flats
- Wire Sizes and Constants
- Measurement Over the Wires
- Standard Plating
- Anodize Plating
- HAE Plating
- Metric and Inch Equivalents
- Table and computer values
- Length of engagement



### SCREW THREAD NOTATION



### THREE-WIRE METHOD



## ThreadTech™ Screw Thread Software

Uses formulas and rounding off techniques consistent with the latest ANSI and governmental specifications available.

ThreadTech™ offers both table values and computed values. The program will alert the user if a dimension is input for plating thicknesses or size combination that is geometrically impossible or impractical. Metric 60 degree thread information is provided in both inches and millimeters to make double dimensioning for manufacturing and inspection easier. A powerful worm gearing program utilizes both Vogel and Buckingham formulas. ThreadTech™ even provides default data in cases where the applicable thread specifications do not agree with the calculated tables.

Easy to use: No computer skills are necessary to operate the ThreadTech™. The program provides step by step on screen explanations. All data can be easily saved and printed. The program is compatible with any Windows based system with 10 megabytes of available space on the hard drive.

- ThreadTech™ installs easily in Windows 2000, XP VISTA and 7 operating systems.
- Network capabilities
- Multi-User License Agreements available
- Free unlimited technical support, Toll-Free, 800-767-7633

**DISTRIBUTOR: Thread Check, Inc.**  
To place an order for ThreadTech™ call 800-767-7633

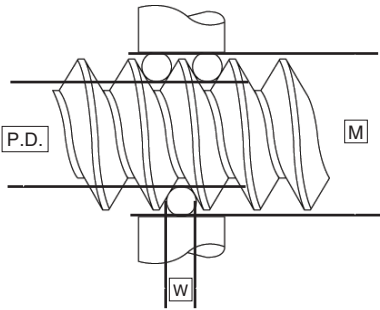


OSBORN PRODUCTS, INC.

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# Thread Measuring Wires



P.D. = Pitch Diameter  
 M = Measurement over wires  
 W = Wire diameter  
 C = Constant

$C = .86603 \times \text{Pitch (inches)} - 3W$   
 $P.D. = M - C$   
 $W = .57735 \times P$

## Thread Measuring Wires Tolerance and specifications:

- within .000020" of best wire diameter for specified tpi.
- within .000005" of the calibrated size provided on label.
- have the same diameter within .000005".
- roundness within .000010".
- taper does not exceed .000010".
- standard 2" lengths.
- minimum hardness of RC 62.5.
- surface finish lapped, 1 MU AA.
- traceable to NIST.
- wires meet or exceed Federal specifications ASME/ANSI B1.2 and B1.6M for Grade A Master Thread Wires

## Use of best size wires

In measuring screw threads it is desirable to use wires which touch the thread at or near the pitch diameter for the reason that with such "Best Size" wires the measurement of pitch diameter is least effected by an error in the included angle of thread.

	Max.	Best	Min.
60°	1.010362p	.57735p	.505182p
55°	.82573p	.563692p	.50568p
53°-8°	.97828p	.55902p	.54076p
47 1/2°	.72889p	.54625p	.49852p
29° Acme	.650013p	.51645p	.487263p

p=Pitch n=TPI P= 1/n

**Notes:** Maximum and minimum wires should be used which are safely within the limiting dimensions given by the above formulas.

Call for information and pricing of special wire diameters including Whitworth, British Association, Buttress and worm threads.

### Root Diameter Wires:

60° and 55° threads from 4 1/2-64 TPI.  
 Price per set of 3 wires.  
 Call for prices.

60° METRIC		
Pitch MM	Nominal Best Wire Diameter MM	Price Set of 3
.2	.1155	\$81.00
.225	.1299	81.00
.25	.1443	81.00
.3	.1732	81.00
.35	.2021	81.00
.4	.2309	81.00
.45	.2598	81.00
.5	.2887	81.00
.6	.3464	81.00
.7	.4041	81.00
.75	.4330	50.00
.8	.4619	50.00
.9	.5196	50.00
1.0	.5774	50.00
1.25	.7217	50.00
1.5	.8660	50.00
1.75	1.0104	50.00
2.0	1.1547	50.00
2.5	1.4434	50.00
3.0	1.7321	50.00
3.5	2.0207	50.00
4.0	2.3094	50.00
4.5	2.5981	50.00
5.0	2.8868	81.00
5.5	3.1754	81.00
6.0	3.4641	81.00
7.0	4.0415	81.00
8.0	4.6188	81.00
9.0	5.1962	81.00
10.0	5.7735	81.00

### LIBRARY SETS

Set No. 23M, 23 sizes (.3m pitch to 6m pitch) with case	\$1487.00
60° Metric Set No. 30M, 30 sizes (.2m pitch to 10m pitch) with case	\$2059.00

### Grand Master Calibration Sets

Supplied in durable corrosion resistant containers in fitted cases, identified by serial numbers with certification of calibration.

#20 HSC, 20 sizes (6-36 TPI)	\$ 886.00
#30 HSC, 30 sizes (5-80 TPI)	\$1518.00
#34 HSC, 34 sizes (4-80 TPI)	\$1709.00
#30 HSC, 30 sizes (.2-10mm)	\$1771.00
#23 HSC, 22 sizes (.3-6mm)	\$1265.00
#22 HSC, 22 sizes (1-20 TPI)	\$1518.00

One master for each pitch. Grand Master Calibration Sets are not returnable for credit or cancellation. Certificate of Calibration traceable to NIST included with all sets.

60° INCH		
Threads per Inch (n)	Nominal Best Wire Diameter G	Price Set of 3
120	.00481	\$81.00
100	.00577	81.00
96	.00601	81.00
90	.00642	81.00
80	.00722	81.00
72	.00802	81.00
64	.00902	81.00
56	.01031	81.00
50	.01155	81.00
48	.01203	50.00
44	.01312	50.00
40	.01443	50.00
36	.01604	50.00
32	.01804	50.00
30	.01925	50.00
28	.02062	50.00
27	.02138	50.00
26	.02221	50.00
24	.02406	50.00
22	.02624	50.00
20	.02887	50.00
18	.03208	50.00
16	.03608	50.00
14	.04124	50.00
13	.04441	50.00
12	.04811	50.00
11 1/2	.05020	50.00
11	.05249	50.00
10	.05774	50.00
9	.06415	50.00
8	.07217	50.00
7 1/2	.07698	50.00
7	.08248	50.00
6	.09623	50.00
5 1/2	.10497	81.00
5	.11547	81.00
4 1/2	.12830	81.00
4	.14434	81.00
3 1/2	.16496	81.00
3 1/4	.17765	81.00
3	.19245	81.00
2 3/4	.20995	81.00
2 1/2	.23094	81.00
2	.28868	81.00

### LIBRARY SETS

60° Inch Set No. 30 HS* 30 sizes (5-80 TPI) with case	\$1736.00
Set No. 34 HS 34 sizes (4-80 TPI) with case	1984.00
Set No. 20 HS* 20 sizes (6-36 TPI) with case	1031.00
Set No. 20 TC 20 sizes (6-36 TPI) with case (tungsten carbide shop set)	Priced on Request

\*7 1/2 & 22 TPI not included in these sets.

29° ACME		
Threads per Inch (n)	Nominal Best Wire Diameter G	Price Set of 3
1	.51645	\$93.00
1 1/3	.38734	93.00
1 1/2	.34430	93.00
1 3/4	.29511	93.00
2	.25823	93.00
2 1/2	.20658	93.00
3	.17215	93.00
3 1/2	.14756	74.00
4	.12911	74.00
4 1/2	.11477	74.00
5	.10329	74.00
5 1/2	.09390	74.00
6	.08608	74.00
7	.07378	74.00
8	.06456	74.00
9	.05738	74.00
10	.05164	74.00
12	.04304	74.00
14	.03689	74.00
16	.03228	74.00
18	.02869	74.00
20	.02582	74.00

### LIBRARY SETS

29° Acme Set No. 22AB, 22 sizes (1 to 20 TPI), with case	\$1839.00
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### SPECIAL THREAD MEASURING WIRES +/- .000020"

Above - including	Set of 3
.004 - .005"	\$149.00
.1016MM-.1270MM	149.00
.005-.007"	149.00
.1270MM-.1778MM	110.00
.007-.010"	110.00
.1778MM-.2540MM	110.00
.010"-.135"	110.00
.2540MM-3.429MM	110.00
.135-.260"	110.00
3.429MM-6.604MM	121.00
.260-.385"	121.00
6.604MM-9.779MM	121.00
.385-.510"	121.00
9.779MM-12.954MM	121.00
.510-.635"	149.00
12.954MM-16.129MM	149.00
.635-.760"	149.00
16.129MM-19.304MM	149.00
.760-1.010"	149.00
19.304MM-25.654MM	

Long form certificates available on request

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