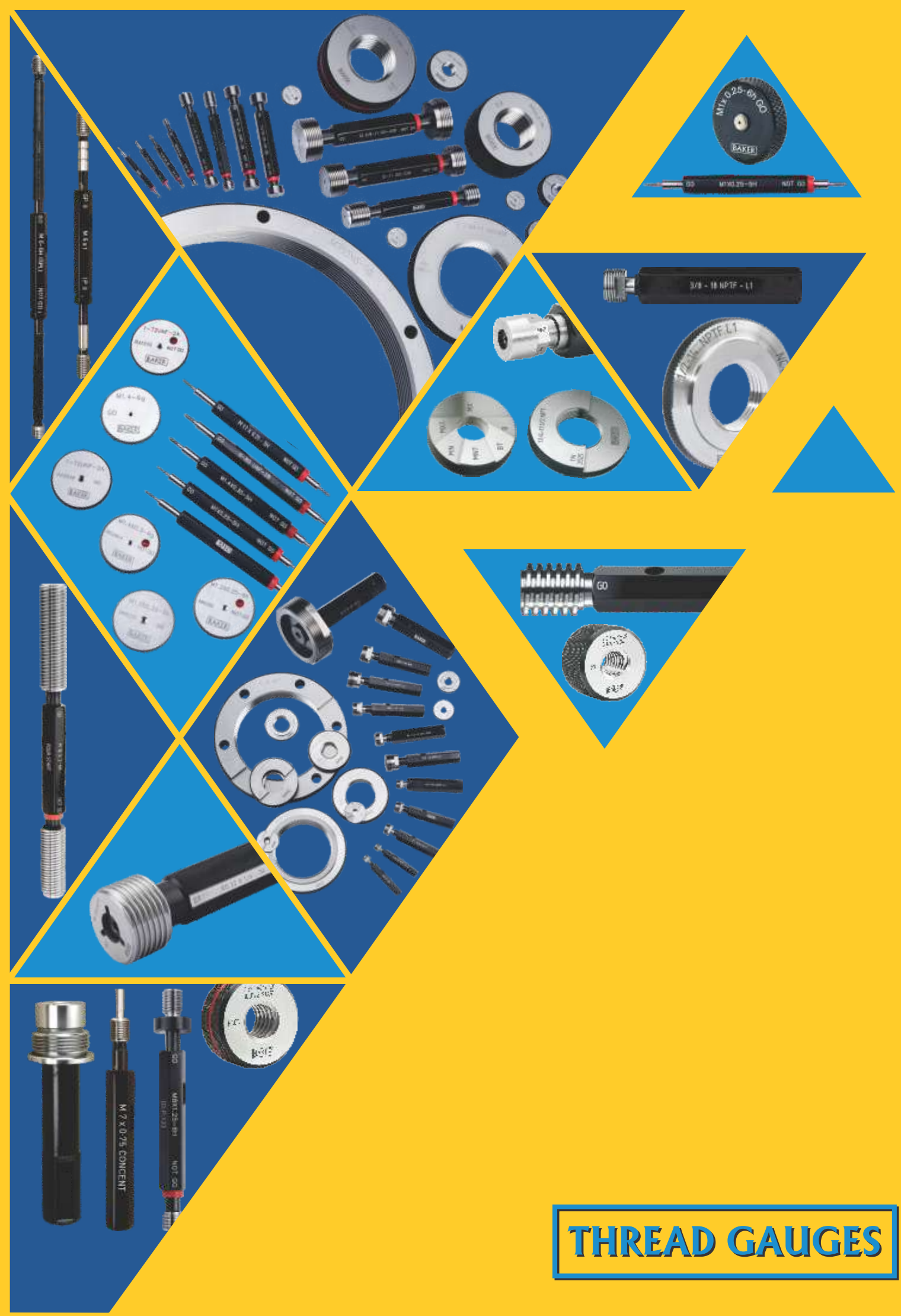
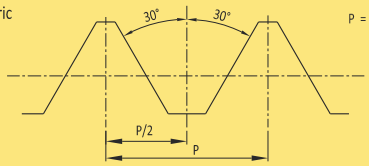


THREAD GAUGES

Thread Gauge profiles

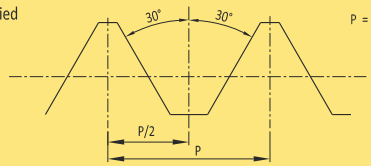
We manufacture the following types of threads:

Metric



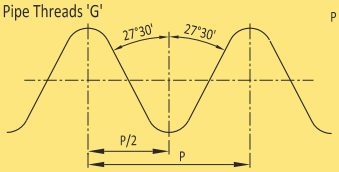
DIN ISO 1502
ANSI/ASME B1.16M

Unified



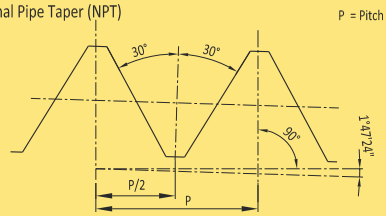
ANSI/ASME B1.2

Parallel Pipe Threads 'G'



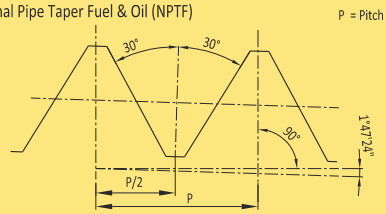
ISO 228-2
DIN EN ISO 228-2

National Pipe Taper (NPT)



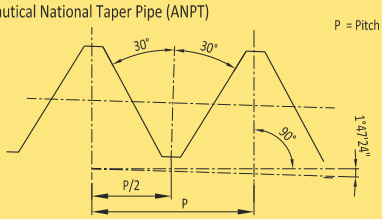
ASME B1.20.1

National Pipe Taper Fuel & Oil (NPTF)



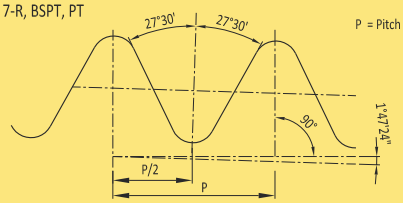
ANSI/ASME B1.20.5

Aeronautical National Taper Pipe (ANPT)



SAE AS71051B

ISO 7-R, BSPT, PT

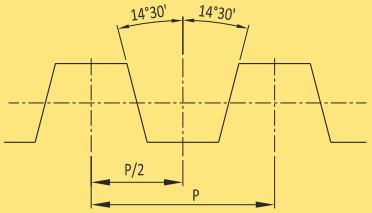


ISO 7-2
BS:21
JIS B0253

Note

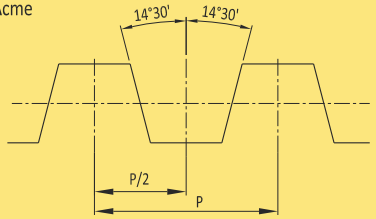
- We also manufacture gauges for PF, STI (wire threads), NPSM, NPSC, NPTR, NPSH, NPSL, NPSF, NPSI, NGT, MJ, UNJF, UNJC, DIN 299, DIN 158 threads

Acme



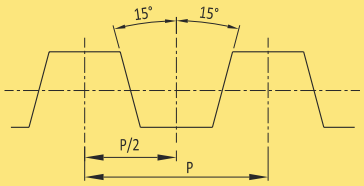
ASME B1.5

Stub Acme



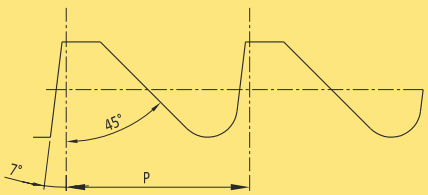
ANSI B1.8

Trapezoidal



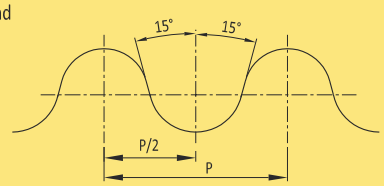
DIN 103-9

Buttress



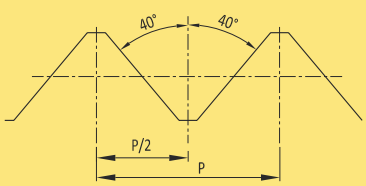
ANSI B1.9
BS 1657

Round



DIN 405-3

Pg



DIN 40431

Please provide the following information to enable us to send a quote

- Type of gauge (Thread plug or Thread ring)
- Thread series (i.e. Metric, Unified, etc.) or thread angle
- Diameter & pitch/TPI of the thread
- Direction of thread (Right hand or Left hand) (Assumed Right hand if not specified)
- Tolerance class
- Lead or number of starts (Assumed single start if not specified)

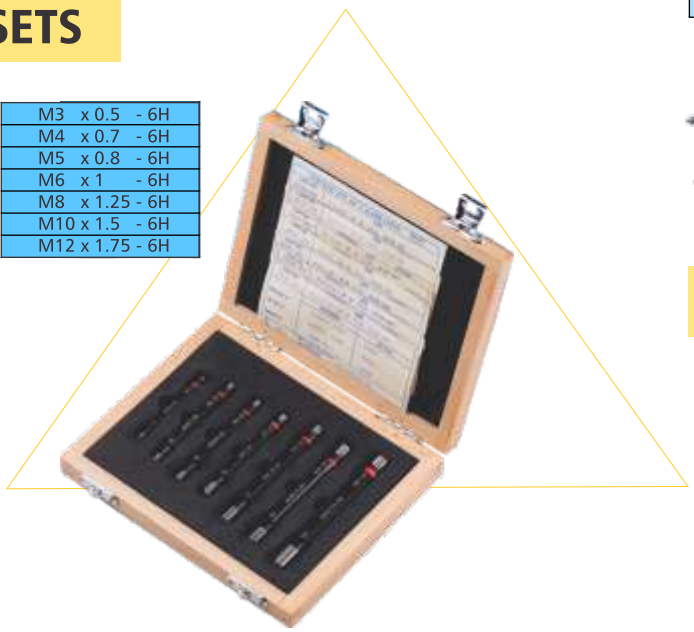
Thread Gauge

RANGE

Thread Plugs	0.8 mm to 450 mm
Thread Rings	1 mm to 500 mm
Taper Thread Plugs	1/16 inch to 16 inch
Taper Thread Rings	1/16 inch to 16 inch

SETS

M3 x 0.5 - 6H
M4 x 0.7 - 6H
M5 x 0.8 - 6H
M6 x 1 - 6H
M8 x 1.25 - 6H
M10 x 1.5 - 6H
M12 x 1.75 - 6H



Set of Double ended Metric Thread Plug gauges in an attractive box

M3 x 0.5 - 6g
M4 x 0.7 - 6g
M5 x 0.8 - 6g
M6 x 1 - 6g
M8 x 1.25 - 6g
M10 x 1.5 - 6g
M12 x 1.75 - 6g

Set of Metric Go Thread Ring Gauges in an attractive box

MINIATURE

Nominal diameter	Pitch	Tolerance class	
		Thread plug	Thread ring
METRIC			
M0.8	0.2	5H	6h
M1	0.25		
M1.1			
M1.2			
M1.4	0.3		
UNIFIED			
No.0 (0.060")UNF	80 TPI	2B	2A

MULTI START

HOLE LOCATION

CUSTOMIZED GAUGES AS PER REQUIREMENTS

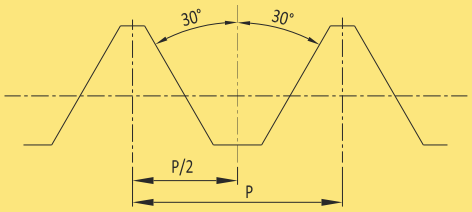
Note

- Odd pitch and diameter combination, extra fine pitch gauges also manufactured.

Thread Gauge

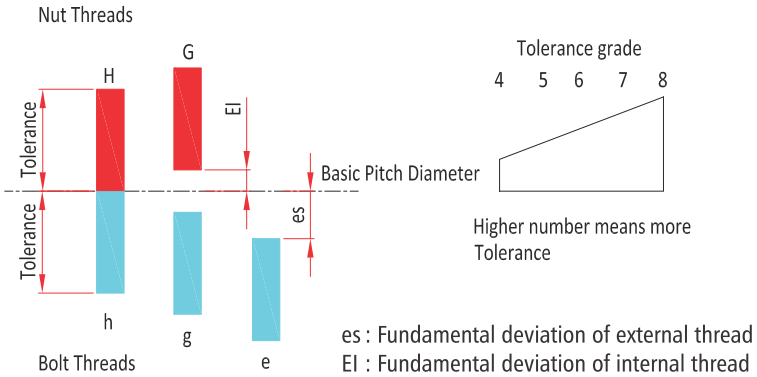
METRIC

Thread dimensions are as per DIN ISO 1502



P = Pitch

TOLERANCE DIAGRAM INTERNAL & EXTERNAL THREADS



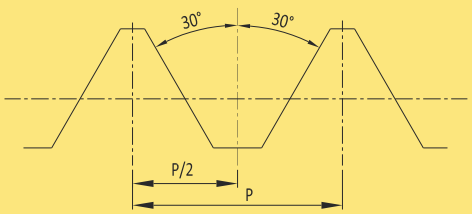
es : Fundamental deviation of external thread
EI : Fundamental deviation of internal thread

Acceptance criteria for components:

The GO gauge when screwed by hand without using excessive force, should enter and pass the whole length of the workpiece thread. The NOT GO gauge when screwed by hand without using excessive force, should not enter the component by more than two turns of the thread from both ends.

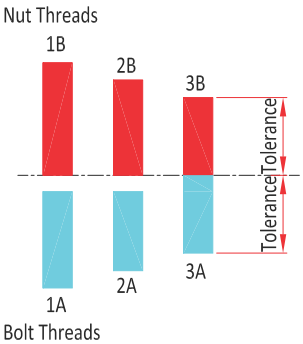
UNIFIED

Thread dimensions are as per ANSI/ASME B1.2



P = Pitch

TOLERANCE DIAGRAM INTERNAL & EXTERNAL THREADS

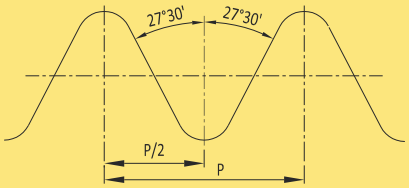


Acceptance criteria for components:

The GO gauge when screwed by hand without using excessive force, should enter and pass the whole length of the workpiece thread.
The NOT GO gauge when screwed by hand without being forced, should not enter the component by more than three complete turns.

Thread Gauge

'G' PIPE



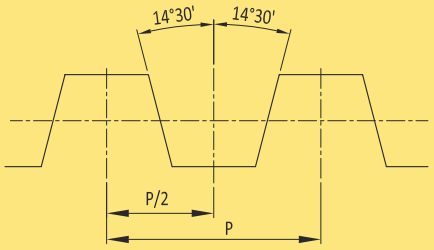
P = Pitch

These are pipe threads where pressure-tight joints are not made on threads. Thread dimensions are as per ISO 228-2.

	Tolerance class
Thread Ring gauge	'A' & 'B'
Thread Plug gauge	NIL

Acceptance criteria for components:
The GO gauge when screwed by hand without using excessive force, should enter and pass the whole length of the workpiece thread. The NOT GO gauge when screwed by hand without using excessive force, should not enter the component by more than two turns of the thread from both ends.

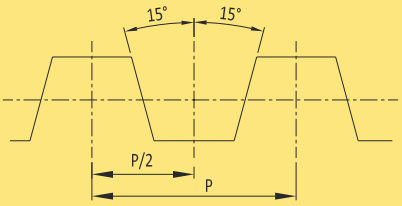
ACME & STUB ACME



P = Pitch

- Gauge dimensions for ACME threads are as per ASME B1.5 and STUB ACME as per ANSI B1.8
- Most commonly used class is 2G. If less backlash desired in ACME threads, 3G & 4G class are used
- The height of ACME threads is 0.5p, whereas the height of STUB ACME threads is 0.3p

TRAPEZOIDAL

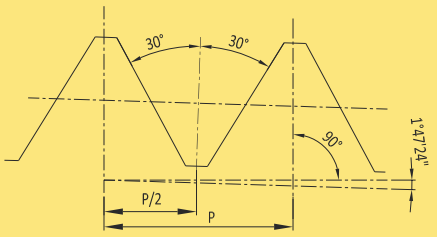


P = Pitch

- Gauge dimensions are as per DIN 103-9
- Recommended Tolerance classes are 7H/7e for medium tolerance quality and 8H/8c for coarse tolerance quality.

Taper Thread Gauge

NPT

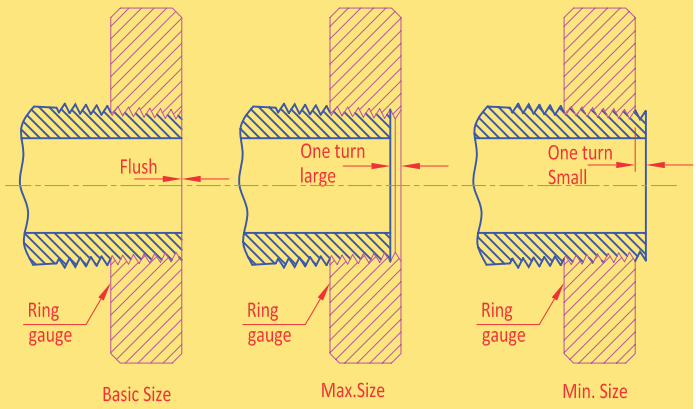


P = Pitch

Thread dimensions are as per ASME B1.20.1.
Gauges are supplied as Basic Step & Min/Max Steps.

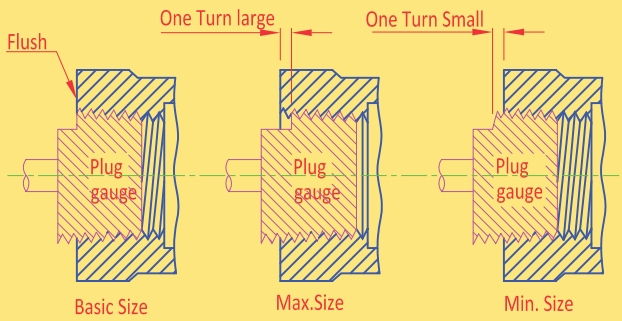
GAUGING EXTERNAL TAPER THREAD

With Basic Step Taper Thread Ring Gauge



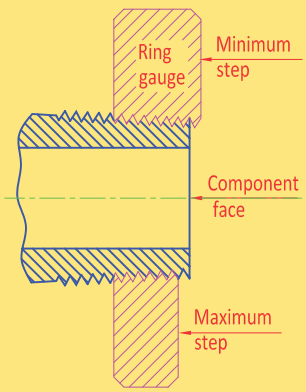
GAUGING INTERNAL TAPER THREAD

With Basic Step Taper Thread Plug Gauge

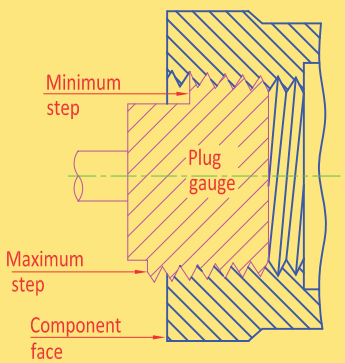


The Basic Step gauge when screwed onto the threads of the component by hand, should be flush with the end of the component face within 1 turn, as shown above

With Min / Max Step Taper Thread Ring Gauge



With Min / Max Step Taper Thread Plug Gauge



When using a Min/Max Step type gauge, the end of the component face should be flush between the Minimum and Maximum steps.

Taper Thread Gauge

NPTF, ANPT

L1 Ring

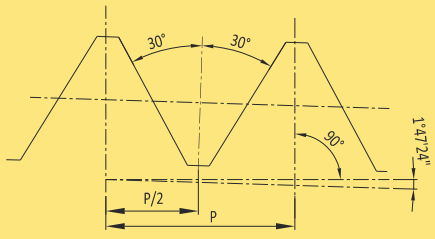
L2 Ring

6 Step Crest Check Ring

L1 Plug

L3 Plug

6 Step Crest Check Plug



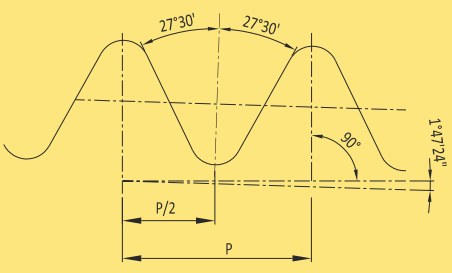
P = Pitch

NPTF threads are also known as Dryseal threads as they do not require a sealant to form a leak-proof joint.

Type	Standard	Plug gauges	Ring gauges
NPTF	ANSI/ASME B 1.20.5	Thread plug gauges L1 & L3 (Basic Step or Min/Max Step)	Thread ring gauges L1 & L2 (Basic Step or Min/Max Step)
ANPT	SAE AS71051B	6 Step Crest Check Plug	6 Step Crest Check Ring

- NPTF & ANPT threads require additional gauging as the truncation of these threads should be maintained within specified limits.
- L1 & L3 plug gauges and L1 & L2 Ring gauges are used in combination to verify the size and taper of the component threads along the thread length.
- 6 Step Crest check plug and ring gauges are used to verify the crest diameter and truncation of the component threads along the thread length.

TAPER PIPE THREADS ISO 7-R, BSPT, PT



P = Pitch

- These are taper pipe threads where pressure tight joints are made on threads. The thread angle is 55°
- Threads are manufactured as per ISO 7-2, EN 10226, BS 21, JIS B0253

ADJUSTABLE THREAD RING GAUGES AND SET PLUGS

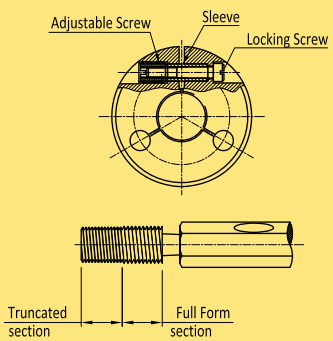
Adjustable Thread Ring Gauge

Set Plug

Adjustable Thread Ring Gauge

Set Plug

CONSTRUCTION



Note

- These gauges are ring shaped, but they have a split and an adjusting and locking screw facility to finely adjust their correct gauging size. For setting these gauges, "Setting plugs" are needed.
- Truncated thread set plugs have threads with both truncated and full form threads for both the Go and the Not Go member.
- The truncated section controls the pitch diameter.
- Use thread setting plug to adjust & set adjustable thread ring gauges.
- A thread ring gauge should be set on the full form portion of the set plug (back portion). The ring is then turned onto the truncated portion and should have the same drag and fit as when turned through the full form.
- The setting of Adjustable Ring using a set plug involves high skill which is done by Adjusting screw followed by locking screw.
- It is strongly recommended that once the thread ring gauge has passed all the above processes, the locking screw and adjustment screw holes are sealed with sealing wax to prevent any tampering.

	From	Up to & including
Metric	M3	M28
Inch	0-80	1

TUNGSTEN CARBIDE THREAD GAUGES

FEATURES

- Tungsten carbide only for frequently used go-side gauges. NOT GO side in the conventional OHNS Steel material.
- Gauge life 5 to 10 times more than that for similar gauges made from steel.
- Life will vary greatly depending upon the work piece material.

Size	Pitch	ISO (Class)
M1.6	0.35	6H
M2	0.4	6H
M2.5	0.45	6H
M3	0.5	6H
M4	0.7	6H
M5	0.8	6H
M6	1.0	6H
M8	1.25	6H
M8	1.0	6H
M10	1.5	6H
M10	1.25	6H
M10	1.0	6H
M12	1.75	6H
M12	1.5	6H
M12	1.25	6H

Thread Depth Gauge & Gauge Handle

ANALOGUE THREAD DEPTH GAUGE

For fast and accurate thread depth and size measurement, thread depth gauges use ISO & ANSI standard taper lock thread plug members.
Thread depth is a manually operated gauge for gauging threads and their depths in one single step, by pushing the spring loaded scale sleeve into the handle, the fully cut thread depth can be read off quickly and precisely from marked sleeve. These gauges are used in components with identical thread dimensions but different thread depths as well as for setting up a thread depth for any kind of internal thread production.

Handle Type	Reading mm	Measuring Depth mm	Metric Threads	Inch Threads
BDG-03	0.5	20	M4,M5,M6	No 8, No 10,No 12,1/4
BDG-04		35	M8,M10	5/16,3/8,7/16
BDG-05		45	M12,M14,M16	1/2,9/16,5/8

FEATURES

- Interchangeable thread plug gauge members permit checking different thread sizes with single gauge handle
- Analogue scale L.C. 0.5 mm
- GO & NOTGO gauging with a single handle
- Scale : Sleeve dull chrome plated
- Delivered : Box, setting master, wrench & certificate of Inspection
- Light weight

HANDLES FOR PLAIN AND THREADED PLUG GAUGES

ISO & ANSI HANDLES

The external surfaces of the gauge handles are matt anodized finish.

DIN HANDLES

Handle No. Based on ISO : 5388	Handle no Based on ANSI/ASME B47.1	Handle no Based on DIN 2240
1	000	1
2	00	2
3	0	3
4	1	4
5	2	5
6	3	6
7	4	7
8 - GO	5	8 - GO
8 - NOT GO		8 - NOT GO
9 - GO		9 - GO
10 - NOT GO		10 - NOT GO

Note

- ISO handle 1 to 7 : Taper lock (1:50) double end
- ANSI handle 1 to 5 : Taper lock (1:48) double end
- DIN handle 1 to 7 : Taper lock(1:50) double end
- ISO handle 8, 9 & 10 : Fastening type single end
- DIN handle 8, 9 & 10 : Fastening type single end