

## Thread Gauges

Thread gauges are manufactured by CNPC more than forty years including special thread gauges, taper gauges, comb gauges and mono-tooth gauges for tool joint, casing, tubing, line pipes and sucker rods. The size and accuracy of thread gauges are in conformity with API specifications. The thread gauges are made of alloy steel with high abrasion resistance by means of special process to ensure the size unchanging for a long time and long service life.

CNPC is only one to get licensed to use API monogram in thread gauges. Certificate for tool joint thread gauges: API Spec.7-0141 Certificate for tubing, casing and line pipe thread gauges API Spec.5B-0021.

Four type thread gauges for tool joint :regular( REG), full hole(FH),internal flush(IF),numerical connection(NC).  
Tubing thread gauges: non-upset tubing thread gauges (TBG), upset tubing thread gauges (UP TBG).Casing thread gauges: round thread casing(CSG) and buttress thread casing (BCSG).

### 1. Line Pipe Thread Gauges

Casing thread gages are the comprehensive measuring tools for checking threads of casings.

#### Technical parameter

Size in	Pitch, T/in (mm)	Taper (in/ft)	Size in	Pitch, T/in (mm)	Taper (in/ft)
1 LP	11 1/2(2.210)	1:16 (3/4)	6 LP	8(3.175)	1:16 (3/4)
1 1/4LP	11 1/2(2.210)	1:16 (3/4)	8 LP	8(3.175)	1:16 (3/4)
1 1/2LP	11 1/2(2.210)	1:16 (3/4)	10 LP	8(3.175)	1:16 (3/4)
2 LP	11 1/2(2.210)	1:16 (3/4)	12 LP	8(3.175)	1:16 (3/4)
2 1/2LP	8(3.175)	1:16 (3/4)	14 DLP	8(3.175)	1:16 (3/4)
3 LP	8(3.175)	1:16 (3/4)	16 DLP	8(3.175)	1:16 (3/4)
3 1/2LP	8(3.175)	1:16 (3/4)	18DLP	8(3.175)	1:16 (3/4)
4 LP	8(3.175)	1:16 (3/4)	20 DLP	8(3.175)	1:16 (3/4)
5 LP	8(3.175)	1:16 (3/4)			

### 2. Tool Joint Thread Gauges

Tool joint thread gauges are comprehensive measuring instruments for drill pipe joint, swivel, kelly and drill collar. Four type thread gauges for tool joint: regular (REG), full hole (FH), internal flush (IF), numerical connection (NC).



### Technical parameter

NC			REG			FH			IF		
Size in	Pitch T/in (mm)	Taper (in/ft)	Size in	Pitch T/in (mm)	Taper (in/ft)	Size in	Pitch T/in (mm)	Taper (in/ft)	Size in	Pitch T/in (mm)	Taper (in/ft)
NC23	4(6.35)	1:6(2)	2 3/8REG	5(5.08)	1:4(3)	3 1/2FH	5(5.08)	1:4(3)	5 1/2IF	4(6.35)	1:6(2)
NC26	4(6.35)	1:6(2)	2 7/8REG	5(5.08)	1:4(3)	4 1/2FH	5(5.08)	1:4(3)	4 1/2IF	4(6.35)	1:6(2)
NC31	4(6.35)	1:6(2)	3 1/2REG	5(5.08)	1:4(3)	5 1/2FH	4(6.35)	1:6(2)	4 IF	4(6.35)	1:6(2)
NC35	4(6.35)	1:6(2)	4 1/2REG	5(5.08)	1:4(3)	6 5/8FH	4(6.35)	1:6(2)	3 1/2IF	4(6.35)	1:6(2)
NC38	4(6.35)	1:6(2)	5 1/2REG	4(6.35)	1:4(3)	2 7/8FH	5(5.08)	1:4(3)	2 7/8IF	4(6.35)	1:6(2)
NC40	4(6.35)	1:6(2)	6 5/8REG	4(6.35)	1:4(3)				2 3/8IF	4(6.35)	1:6(2)
NC44	4(6.35)	1:6(2)	7 5/8REG	4(6.35)	1:4(3)						
NC46	4(6.35)	1:6(2)	8 5/8REG	4(6.35)	1:4(3)						
NC50	4(6.35)	1:4(3)									
NC56	4(6.35)	1:4(3)									
NC61	4(6.35)	1:4(3)									
NC70	4(6.35)	1:4(3)									
NC77	4(6.35)	1:4(3)									

### 3. Tubing Thread Dauges

Tubing thread gages are the comprehensive measuring tools for checking threads of tubing. Two types: non-upset tubing thread gauges (TBG) upset thread gauges (UP TBG).

#### Technical parameter

Non-upset tubing thread gauges			upset thread gauges		
Size, in	Pitch, T/in (mm)	Taper (in/ft)	Size, in	Pitch, T/in (mm)	Taper (in/ft)
1.050(26.7)	10(2.54)	1:16(3/4)	1.050(33.4)	10(2.54)	1:16(3/4)
1.315(33.4)	10(2.54)	1:16(3/4)	1.315(37.3)	10(2.54)	1:16(3/4)
1.660(42.2)	10(2.54)	1:16(3/4)	1.660(46.0)	10(2.54)	1:16(3/4)
1.900(48.3)	10(2.54)	1:16(3/4)	1.900(53.2)	10(2.54)	1:16(3/4)
2 3/8(60.3)	10(2.54)	1:16(3/4)	2 3/8(65.9)	8(3.175)	1:16(3/4)
2 7/8(73)	10(2.54)	1:16(3/4)	2 7/8(78.6)	8(3.175)	1:16(3/4)
3 1/2(88.9)	10(2.54)	1:16(3/4)	3 1/2(95.3)	8(3.175)	1:16(3/4)
4(101.6)	8(3.175)	1:16(3/4)	4(107.9)	8(3.175)	1:16(3/4)
4 1/2(114.3)	8(3.175)	1:16(3/4)	4 1/2(120.6)	8(3.175)	1:16(3/4)

#### 4. Drill Pipe Thread Gauges

Technical parameter			EUE drill pipe		
Size, in (mm)	Pitch, T/in (mm)	Taper (in/ft)	Size, in (mm)	Pitch, T/in (mm)	Taper (in/ft)
2 3/8DP	8(3.175)	1:16(3/4)	2 3/8UP DP	8(3.175)	1:16(3/4)
2 7/8DP	8(3.175)	1:16(3/4)	2 7/8UP DP	8(3.175)	1:16(3/4)
3 1/2DP	8(3.175)	1:16(3/4)	3 1/2UP DP	8(3.175)	1:16(3/4)
4DP	8(3.175)	1:16(3/4)	4 UP DP	8(3.175)	1:16(3/4)
4 1/2DP	8(3.175)	1:16(3/4)	4 1/2 UP DP	8(3.175)	1:16(3/4)
5DP	8(3.175)	1:16(3/4)	5 1/2 UP DP	8(3.175)	1:16(3/4)
5 1/2DP	8(3.175)	1:16(3/4)			
6 5/8DP	8(3.175)	1:16(3/4)			

#### 5. Casing thread gauges

Casing thread gages are the comprehensive measuring tools for checking threads of casings. Two types: Round thread casing gauges (CSG) Buttress threads gauges for different casing (BCSG).

##### Technical parameter

Round thread casing			Buttress thread casing		
Size, in (mm)	Pitch, T/in (mm)	Taper (in/ft)	Size, in (mm)	Pitch, T/in (mm)	Taper, (in/ft)
4 1/2(114.3)	8(3.175)	1:16(3/4)	4 1/2(114.7)	5(5.08)	1:16(3/4)
5(127.0)	8(3.175)	1:16(3/4)	5 (127.4)	5(5.08)	1:16(3/4)
5 1/2 ( 139.7)	8(3.175)	1:16(3/4)	5 1/2(140.1)	5(5.08)	1:16(3/4)
6 5/8(168.3)	8(3.175)	1:16(3/4)	6 5/8(168.7)	5(5.08)	1:16(3/4)
7(177.8)	8(3.175)	1:16(3/4)	7(178.2)	5(5.08)	1:16(3/4)
7 5/8(193.7)	8(3.175)	1:16(3/4)	7 5/8(194.1)	5(5.08)	1:16(3/4)
8 5/8(219.1)	8(3.175)	1:16(3/4)	8 5/8(219.5)	5(5.08)	1:16(3/4)
9 5/8(244.5)	8(3.175)	1:16(3/4)	9 5/8(244.9)	5(5.08)	1:16(3/4)
10 3/4(237.1)	8(3.175)	1:16(3/4)	10 3/4(273.5)	5(5.08)	1:16(3/4)
11 3/4(298.5)	8(3.175)	1:16(3/4)	11 3/4(298.9)	5(5.08)	1:16(3/4)
13 3/8(339.7)	8(3.175)	1:16(3/4)	13 3/8(340.1)	5(5.08)	1:16(3/4)
16(406.4)	8(3.175)	1:16(3/4)	16(406.4)	5(5.08)	1:16(3/4)
18 5/8(473.1)	8(3.175)	1:16(3/4)	18 5/8(473.1)	5(5.08)	1:16(3/4)
20(508.0)	8(3.175)	1:16(3/4)	20(508.0)	5(5.08)	1:16(3/4)

## 6. Self-locking type coring gauges

Self-locking type coring gauges are the comprehensive measuring tools for checking threads of coring tools.

### Technical parameter

External barrel coring			Internal barrel coring		
Size, in	Pitch, T/in (mm)	Taper (in/ft )	Size, in	Pitch, T/in (mm)	Taper (in/ft )
OQ × 121	6(4.233)	1:16(3/4)	OQ × 85	8(3.175)	1:16(3/4)
OQ × 133	6(4.233)	1:16(3/4)	OQ × 88.9	8(3.175)	1:16(3/4)
OQ × 146	6(4.233)	1:16(3/4)	OQ × 101.6	8(3.175)	1:16(3/4)
OQ × 172	6(4.233)	1:16(3/4)	OQ × 121	8(3.175)	1:16(3/4)
OQ × 180	6(4.233)	1:16(3/4)	OQ × 127	8(3.175)	1:16(3/4)
OQ × 194	6(4.233)	1:16(3/4)	OQ × 139.7	8(3.175)	1:16(3/4)

## 7. OTHER TYPES OF THREAD GAUGES

Sucker rod thread gauges ( API Spec 11B )

Suck rod male joint: Go male thread ring gauge, not go male thread ring gauge;

Female joint: Go female thread plug gauge, not go female thread plug gauge, Female thread taper plug gauge;

Polish rod male joint: Go male thread ring gauge, not go male thread ring gauge, Male thread taper ring gauge.

### Technical parameter of sucker rod thread gauges

Size, in	Pitch, T/in (mm)
CYG13(1/2 )	10 (2.54)
CYG16(5/8)	10 (2.54)
CYG19(3/4)	10 (2.54)
CYG22(7/8)	10 (2.54)
CYG25(1)	10 (2.54)
CYG29(1 1/8)	10 (2.54)

