

Vida Ovalama Aparatları

Thread Rolling Heads



Üretimimize özel diş açma çözümleri

Special thread rolling solutions for your production.

Sabit Aparatlar
Stationary Rolling Heads

Döner Sistem Aparatlar
Rotary Rolling Heads

Özel Aparatlar
Special Rolling Heads

Tornalama Aparatları
Turning Heads



Neden VABS? Why VABS?

⬆ **Zaman kazandırır**
Saves time

VABS aparatları talaşlı yöntemle göre çok daha hızlı diş açma imkanı sunar. Bu da üretim süresinde %90'a varan tasarruf sağlar.

VABS devices offering very fast thread rolling process. This method provides time savings up to 90% in production.

⬆ **Kullanım kolaylığı sağlar**
User friendly handling

Her türlü CNC makinelerinde ve döner sistemlerde kullanılabilir. Makinenin kullanım süresini talaş kaldırma işlemiyle çekilen dişlere göre azaltır. Talaş kaldırma işlemine kıyasla saniyeler içinde ovalama işlemini bitirir. The rolling heads can be used on any type of lathe and CNC machine. In comparison to the cutting operation there is a big reduction of machine operating time. The rolling process takes only few seconds.

⬆ **Malzeme kullanımını azaltır**
Decreases material usage

VABS aparatlarının sunduğu ovalama sistemi, talaşlı imalata oranla daha verimlidir ve bu verim hammadde tasarruf etmenizi sağlar.

Thread rolling system provided by VABS devices is more efficient in comparison to the cutting process and allows savings from the raw material.

⬆ **Üretim kalitesini artırır**
Increases production quality

VABS aparatlarının sunduğu ovalama yöntemi sayesinde dişlerin sertliğini ve yüzeyin parlaklığını artırır. Böylece ürün hassasiyetini en yüksek düzeye çıkartmaya olanak sağlar. Thread rolling method that offered by VABS, increases thread hardness and surface radiance. With this way it provides long-lasting and quality screw manufacture.

VABS ile veriminizi %90 arttırın!
Increase your output by 90% with VABS!



VABS ile yüzeylerde mükemmel sonuç Excellent results on surface with VABS.

VABS ovalama aparatları diğer yöntemlerle kıyaslandığında en yüksek diş yüzey kalitesi sunar.

Vabs thread rolling heads offer the highest thread surface quality compared to other methods.



Thread Cutting	25	16	6,3	4	2,5	1,6	1
Thread Milling	25	16	6,3	4	2,5	1,6	1
Ground Thread	25	16	6,3	4	2,5	1,6	1
Rolled Thread	25	16	6,3	4	2,5	1,6	1

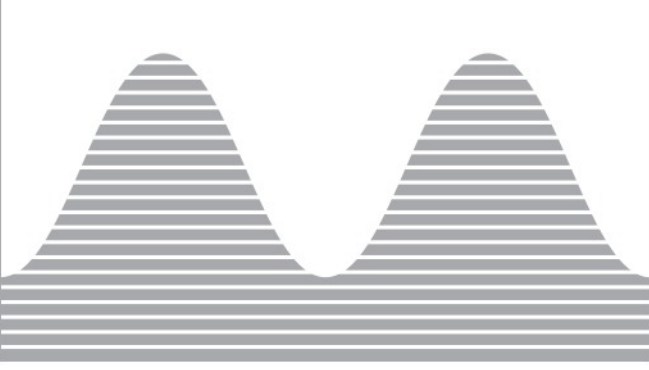
Yüzey Pürüzsüzlüğü
Surface Of Hardness
Rt (μm)

Malzeme sertliğinde %30 artış

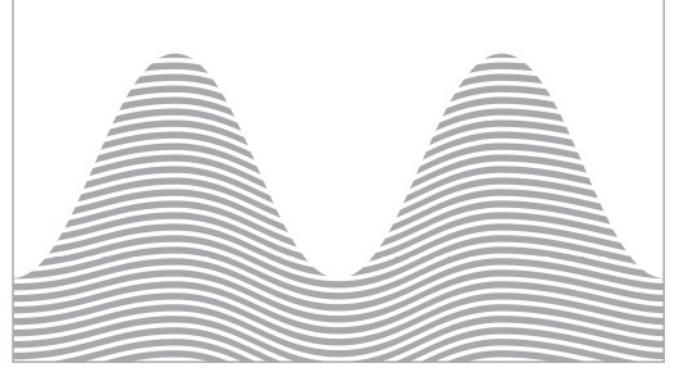
30% increase on hardness of the material

VABS aparatlarının sunduğu ovalama yöntemi, üretilen diş formunun yüzeyini sıkılaştırarak malzemenin sertliğini artırır. Diğer yöntemlerle kıyaslandığında malzeme sertliğinde %30'a varan oranda artış sağlar.

The rolling method offered by VABS increases the hardness of the material by displacing the form of the grain structure. In other words, VABS increase material hardness by 30% when compared to other methods.



Talaş Kaldırılarak Açılan Diş Formu
Cut Thread



Ovalanarak Açılan Diş Formu
Rolled Thread

Diameter		M 2.6mm - 250mm
Pitch		0.45mm - 10mm
A-001	M 2.6	4
A-01	M 3.5	6
A-1	M 5	8
A-2	M 6	10
B-1	M 8	16
B-2	M 12	22
C-2	M 14	30
C-3	M 30	42



Yeni Ürünler New Products



Havşa Açma Aparatı (Saplı)
Chamfering Tools with Shaft



Havşa Açma Aparatı
Chamfering Head



Tornalama Aparatı
Turning Head



Teğetsel Ovalama Aparatı
Tangential Rolling Head

Üstün kaliteli, uzun ömürlü ve çok yönlü diş açma çözümleri.
High quality, durable and versatile thread rolling solutions.

A-001**M. 2,6 - 4****Ultimate precision.****Metric (M) 1k-2k**

Nominal Size x Pitch	
M	2,6 x 0,45
M	3 x 0,5
M 3 ...	3,5 x 0,6
M	4 x 0,7

Whithworth Threads (BSW) 1k-2k

Nominal Size x TPI	
BSW 1/8	- 40
BSW 5/32	- 32

Unified Threads Fine (UNF) 1k-2k

Nominal Size x TPI	
UNF 4	- 48
UNF 5	- 44
UNF 6	- 40

Unified Threads Coarse (UNC) 1k-2k

Nominal Size x TPI	
UNC 4 ... 5	- 40
UNC 6 ... 8	- 32

British Association (BA) 1k-2k

Nominal Size x TPI	
BA 6	- 47.9
BA 5	- 43.1
BA 4	- 38.5

RAA - RGE

Nominal Size x Pitch mm inch	
Ø 3 ... Ø 3,5 x 0,5	Ø 0.118 ... Ø 0.138 x 0.02
Ø 3,5 ... Ø 4 x 0,5	Ø 0.138 ... Ø 0.157 x 0.02
Ø 3 ... Ø 3,5 x 0,6	Ø 0.118 ... Ø 0.138 x 0.024
Ø 3,5 ... Ø 4 x 0,6	Ø 0.138 ... Ø 0.157 x 0.024
Ø 3 ... Ø 3,5 x 0,8	Ø 0.118 ... Ø 0.138 x 0.031
Ø 3,5 ... Ø 4 x 0,8	Ø 0.138 ... Ø 0.157 x 0.031
Ø 3,2 ... Ø 3,5 x 1,0	Ø 0.126 ... Ø 0.138 x 0.039
Ø 3,5 ... Ø 4 x 1,0	Ø 0.138 ... Ø 0.157 x 0.039
Ø 3,2 ... Ø 3,5 x 1,2	Ø 0.126 ... Ø 0.138 x 0.047
Ø 3,5 ... Ø 4 x 1,2	Ø 0.138 ... Ø 0.157 x 0.047

Smoothing

Nominal Size x Pitch mm inch	
Ø 2,2 - Ø 2,5	Ø 0.087 - Ø 0.098
Ø 2,5 - Ø 3	Ø 0.098 - Ø 0.118
Ø 3 - Ø 3,5	Ø 0.118 - Ø 0.138
Ø 3,5 - Ø 4	Ø 0.138 - Ø 0.157



Metric (M) 1k-2k

Nominal Size x Pitch	
M	3,5 x 0,6
M	4 x 0,7
M 4 ...	4,5 x 0,75
M	5 x 0,8
M 5 ...	5,5 x 0,9
M	6 x 1

Metric Fine
(MF) 1k-2k

Nominal Size x Pitch	
MF 4 ...	5 x 0,5

Unified Threads
Coarse (UNC) 1k-2k

Nominal Size x TPI	
UNC	8 - 32
UNC	10 ... 12 - 24
UNC	1/4 - 20

Unified Threads
Fine (UNF) 1k-2k

Nominal Size x TPI	
UNF	6 - 40
UNF	8 - 36
UNF	10 - 32
UNF	12 - 28
UNF	1/4 - 28

British Association
(BA) 1k-2k

Nominal Size x TPI	
BA 4 -	38,5
BA 3 -	34,8
BA 2 -	31,3
BA 1 -	28,2
BA 0 -	25,4

Whithworth Threads
(BSW) 1k-2k

Nominal Size x TPI	
BSW	5/32 - 32
BSW 3/16 ...	7/32 - 24

Whithworth Fine
Pitch (BSF) 1k-2k

Nominal Size x TPI	
BSF 3/16 -	32
BSF 7/32 -	28
BSF 1/4 -	26

RAA - RGE

Nominal Size x Pitch mm inch	
Ø 3,5 ... Ø 4	x 0,5 Ø 0.138 ... Ø 0.157 x 0.02
Ø 4 ... Ø 4,5	x 0,5 Ø 0.157 ... Ø 0.177 x 0.02
Ø 4,5 ... Ø 5	x 0,5 Ø 0.177 ... Ø 0.197 x 0.02
Ø 5 ... Ø 5,5	x 0,5 Ø 0.197 ... Ø 0.217 x 0.02
Ø 5,5 ... Ø 6	x 0,5 Ø 0.217 ... Ø 0.236 x 0.02
Ø 3,5 ... Ø 4	x 0,6 Ø 0.138 ... Ø 0.157 x 0.024
Ø 4 ... Ø 4,5	x 0,6 Ø 0.157 ... Ø 0.177 x 0.024
Ø 4,5 ... Ø 5	x 0,6 Ø 0.177 ... Ø 0.197 x 0.024
Ø 5 ... Ø 5,5	x 0,6 Ø 0.197 ... Ø 0.217 x 0.024
Ø 5,5 ... Ø 6	x 0,6 Ø 0.217 ... Ø 0.236 x 0.024
Ø 4 ... Ø 4,5	x 0,8 Ø 0.157 ... Ø 0.177 x 0.031
Ø 4,5 ... Ø 5	x 0,8 Ø 0.177 ... Ø 0.197 x 0.031
Ø 5 ... Ø 5,5	x 0,8 Ø 0.197 ... Ø 0.217 x 0.031
Ø 5,5 ... Ø 6	x 0,8 Ø 0.217 ... Ø 0.236 x 0.031
Ø 4 ... Ø 4,5	x 1,0 Ø 0.157 ... Ø 0.177 x 0.039
Ø 4,5 ... Ø 5	x 1,0 Ø 0.177 ... Ø 0.197 x 0.039
Ø 5 ... Ø 5,5	x 1,0 Ø 0.197 ... Ø 0.217 x 0.039
Ø 5,5 ... Ø 6	x 1,0 Ø 0.217 ... Ø 0.236 x 0.039
Ø 4 ... Ø 4,5	x 1,2 Ø 0.157 ... Ø 0.177 x 0.047
Ø 4,5 ... Ø 5	x 1,2 Ø 0.177 ... Ø 0.197 x 0.047
Ø 5 ... Ø 5,5	x 1,2 Ø 0.197 ... Ø 0.217 x 0.047
Ø 5,5 ... Ø 6	x 1,2 Ø 0.217 ... Ø 0.236 x 0.047

Smoothing

Nominal Size x Pitch	
Ø 3 - Ø 3,5	Ø 0.118 - Ø 0.138
Ø 3,5 - Ø 4	Ø 0.138 - Ø 0.157
Ø 4 - Ø 4,5	Ø 0.157 - Ø 0.177
Ø 4,5 - Ø 5	Ø 0.177 - Ø 0.197
Ø 5 - Ø 5,5	Ø 0.197 - Ø 0.217
Ø 5,5 - Ø 6	Ø 0.217 - Ø 0.236

A-1

M. 5 - 8

Ultimate precision.



Metric (M) 1k-2k

Nominal Size x Pitch
M 5 ... 6 x 0,8
M 6 ... 7 x 1
M 8 ... 8 x 1,25

Metric Fine (MF) 1k-2k

Nominal Size x Pitch
MF 6 ... 7 x 0,75
MF 8 ... 8 x 1

Unified Threads Coarse (UNC) 1k-2k

Nominal Size x TPI
UNC 12 - 24
UNC 1/4 - 20
UNC 5/16 - 18

Unified Threads Fine (UNF) 1k-2k

Nominal Size x TPI
UNF 12 - 28
UNF 1/4 - 28
UNF 5/16 - 24

British Association (BA) 1k-2k

Nominal Size x TPI
BA 0 - 25,4
BA 1 - 28,2

Whithworth Fine Pitch (BSF) 1k-2k

Nominal Size x TPI
BSF 7/32 - 28
BSF 1/4 ... 9/32 - 26
BSF 5/16 - 22

Whithworth Threads (BSW) 1k-2k

Nominal Size x TPI
BSW 7/32 - 24
BSW 1/4 - 20
BSW 5/16 - 18

RAA - RGE

Nominal Size x Pitch mm inch
Ø 5 ... Ø 6 x 0,5 Ø 0.197 ... Ø 0.236 x 0.02
Ø 6 ... Ø 7 x 0,5 Ø 0.236 ... Ø 0.276 x 0.02
Ø 7 ... Ø 8 x 0,5 Ø 0.276 ... Ø 0.315 x 0.02
Ø 5 ... Ø 6 x 0,6 Ø 0.197 ... Ø 0.236 x 0.024
Ø 6 ... Ø 7 x 0,6 Ø 0.236 ... Ø 0.276 x 0.024
Ø 7 ... Ø 8 x 0,6 Ø 0.276 ... Ø 0.315 x 0.024
Ø 5 ... Ø 6 x 0,8 Ø 0.197 ... Ø 0.236 x 0.031
Ø 6 ... Ø 7 x 0,8 Ø 0.236 ... Ø 0.276 x 0.031
Ø 7 ... Ø 8 x 0,8 Ø 0.276 ... Ø 0.315 x 0.031
Ø 5 ... Ø 6 x 1,0 Ø 0.197 ... Ø 0.236 x 0.039
Ø 6 ... Ø 7 x 1,0 Ø 0.236 ... Ø 0.276 x 0.039
Ø 7 ... Ø 8 x 1,0 Ø 0.276 ... Ø 0.315 x 0.039
Ø 6 ... Ø 7 x 1,2 Ø 0.236 ... Ø 0.276 x 0.047
Ø 7 ... Ø 8 x 1,2 Ø 0.276 ... Ø 0.315 x 0.047
Ø 6 ... Ø 7 x 1,5 Ø 0.236 ... Ø 0.276 x 0.059
Ø 7 ... Ø 8 x 1,5 Ø 0.276 ... Ø 0.315 x 0.059

Smoothing

Nominal Size x Pitch mm inch
Ø 5 - Ø 6 Ø 0.197 - Ø 0.236
Ø 6 - Ø 7 Ø 0.236 - Ø 0.276
Ø 7 - Ø 8 Ø 0.276 - Ø 0.315

A-2

M. 6 - 10

Ultimate precision.



Metric (M) 1k-2k

Nominal Size x Pitch
M 6 ... 8 x 1
M 8 ... 9 x 1,25
M 10 x 1,5

Metric Fine (MF) 1k-2k

Nominal Size x Pitch
MF 6 ... 8 x 0,75
MF 8 ... 10 x 1
MF 10 ... 11 x 1,25

Unified Threads Coarse (UNC) 1k-2k

Nominal Size x TPI
UNC 1/4 - 20
UNC 5/16 - 18
UNC 3/8 - 16
UNC 7/16 ¹⁾ - 14

Unified Threads Fine (UNF) 1k-2k

Nominal Size x TPI
UNF 1/4 - 28
UNF 5/16... 3/8 - 24
UNF 7/16 ¹⁾ - 20

Whithworth Threads (BSW) 1k-2k

Nominal Size x TPI
BSW 1/4 - 20
BSW 5/16 - 18
BSW 3/8 - 16

(NPT) 1k-2k

Nominal Size x TPI
NPT 1/16 - 27
NPT 1/8 - 27

(NPTF) 1k-2k

Nominal Size x TPI
NPTF 1/16 - 27
NPTF 1/8 - 27

(BSF) 1k-2k

Nominal Size x TPI
BSF 1/4 - 26
BSF 5/16 - 22
BSF 3/8 - 20
BSF 7/16 ¹⁾ - 20

RAA - RGE

Nominal Size x Pitch mm inch
Ø 6 ... Ø 8 x 0,5 Ø 0.236 ... Ø 0.315 x 0.02
Ø 8 ... Ø 10 x 0,5 Ø 0.315 ... Ø 0.394 x 0.02
Ø 6 ... Ø 8 x 0,6 Ø 0.236 ... Ø 0.315 x 0.024
Ø 8 ... Ø 10 x 0,6 Ø 0.315 ... Ø 0.394 x 0.024
Ø 6 ... Ø 8 x 0,8 Ø 0.236 ... Ø 0.315 x 0.031
Ø 8 ... Ø 10 x 0,8 Ø 0.315 ... Ø 0.394 x 0.031
Ø 6 ... Ø 8 x 1,0 Ø 0.236 ... Ø 0.315 x 0.039
Ø 8 ... Ø 10 x 1,0 Ø 0.315 ... Ø 0.394 x 0.039
Ø 6 ... Ø 8 x 1,2 Ø 0.236 ... Ø 0.315 x 0.047
Ø 8 ... Ø 10 x 1,2 Ø 0.315 ... Ø 0.394 x 0.047
Ø 6 ... Ø 8 x 1,5 Ø 0.236 ... Ø 0.315 x 0.059
Ø 8 ... Ø 10 x 1,5 Ø 0.315 ... Ø 0.394 x 0.059
Ø 7 ... Ø 8 x 1,6 Ø 0.276 ... Ø 0.315 x 0.063
Ø 8 ... Ø 10 x 1,6 Ø 0.315 ... Ø 0.394 x 0.063
Ø 7 ... Ø 8 x 2,0 Ø 0.276 ... Ø 0.315 x 0.079
Ø 8 ... Ø 10 x 2,0 Ø 0.315 ... Ø 0.394 x 0.079

Smoothing

Nominal Size x Pitch mm inch
Ø 6 - Ø 8 Ø 0.236 - Ø 0.315
Ø 7 - Ø 10 Ø 0.276 - Ø 0.394

B-1 N.R.**M. 8 - 16****Ultimate precision.****Smoothing**

Nominal Size x TPI mm inch	
Ø 8 – Ø 10	Ø 0.315 – Ø 0.394
Ø 10 – Ø 12	Ø 0.394 – Ø 0.472
Ø 12 – Ø 14	Ø 0.472 – Ø 0.551
Ø 14 – Ø 16	Ø 0.551 – Ø 0.63

Metric (M) 1k-2k

Nominal Size x Pitch
M 8 ... 10 x 1,25
M 10 ... 12 x 1,5
M 12 ... 14 x 1,75
M 14 ... 16 x 2

**Metric Fine
(MF) 1k-2k**

Nominal Size x TPI
MF 8 ... 10 x 1
MF 10 ... 12 x 1,25
MF 12 ... 14 x 1,5

**Unified Threads
Coarse (UNC) 1k-2k**

Nominal Size x TPI
UNC 3/8 – 16
UNC 7/16 – 14
UNC 1/2 – 13
UNC 9/16 – 12
UNC 5/8 – 11

**Unified Fine Threads
(UNF) 1k-2k**

Nominal Size x TPI
UNF 5/16... 3/8 – 24
UNF 7/16... 1/2 – 20
UNF 9/16... 5/8 – 18

(BSF) 1k-2k

Nominal Size x TPI
BSF 5/16 – 22
BSF 3/8 – 20
BSF 7/16 – 18
BSF 1/2... 9/16 – 16
BSF 5/8... 11/16 – 14

(BSW) 1k-2k

Nominal Size x TPI
BSW 3/8 – 16
BSW 7/16 – 14
BSW 1/2... 9/16 – 12
BSW 5/8 – 11

(G) 1k-2k

Nominal Size x TPI
G 1/4 – 19

(RD) 1k-2k

Nominal Size x TPI
Rd 16 x 1/8

(NPT) 1k-2k

Nominal Size x TPI
NPT 1/4 – 18

(NPTF) 1k-2k

Nominal Size x TPI
NPTF 1/4 – 18

Nominal Size**RAA - RGE**

Nominal Size x TPI mm inch	
Ø 8 ... Ø 10 x 0,5	Ø 0.315 ... Ø 0.394 x 0.02
Ø 10 ... Ø 12 x 0,5	Ø 0.394 ... Ø 0.472 x 0.02
Ø 12 ... Ø 14 x 0,5	Ø 0.472 ... Ø 0.551 x 0.02
Ø 14 ... Ø 16 x 0,5	Ø 0.551 ... Ø 0.63 x 0.02
Ø 8 ... Ø 10 x 0,6	Ø 0.315 ... Ø 0.394 x 0.024
Ø 10 ... Ø 12 x 0,6	Ø 0.394 ... Ø 0.472 x 0.024
Ø 12 ... Ø 14 x 0,6	Ø 0.472 ... Ø 0.551 x 0.024
Ø 14 ... Ø 16 x 0,6	Ø 0.551 ... Ø 0.63 x 0.024
Ø 8 ... Ø 10 x 0,8	Ø 0.315 ... Ø 0.394 x 0.031
Ø 10 ... Ø 12 x 0,8	Ø 0.394 ... Ø 0.472 x 0.031
Ø 12 ... Ø 14 x 0,8	Ø 0.472 ... Ø 0.551 x 0.031
Ø 14 ... Ø 16 x 0,8	Ø 0.551 ... Ø 0.63 x 0.031
Ø 8 ... Ø 10 x 1,0	Ø 0.315 ... Ø 0.394 x 0.039
Ø 10 ... Ø 12 x 1,0	Ø 0.394 ... Ø 0.472 x 0.039
Ø 12 ... Ø 14 x 1,0	Ø 0.472 ... Ø 0.551 x 0.039
Ø 14 ... Ø 16 x 1,0	Ø 0.551 ... Ø 0.63 x 0.039
Ø 8 ... Ø 10 x 1,2	Ø 0.315 ... Ø 0.394 x 0.047
Ø 10 ... Ø 12 x 1,2	Ø 0.394 ... Ø 0.472 x 0.047
Ø 12 ... Ø 14 x 1,2	Ø 0.472 ... Ø 0.551 x 0.047
Ø 14 ... Ø 16 x 1,2	Ø 0.551 ... Ø 0.63 x 0.047
Ø 8 ... Ø 10 x 1,5	Ø 0.315 ... Ø 0.394 x 0.059
Ø 10 ... Ø 12 x 1,5	Ø 0.394 ... Ø 0.472 x 0.059
Ø 12 ... Ø 14 x 1,5	Ø 0.472 ... Ø 0.551 x 0.059
Ø 14 ... Ø 16 x 1,5	Ø 0.551 ... Ø 0.63 x 0.059
Ø 8 ... Ø 10 x 1,6	Ø 0.315 ... Ø 0.394 x 0.063
Ø 10 ... Ø 12 x 1,6	Ø 0.394 ... Ø 0.472 x 0.063
Ø 12 ... Ø 14 x 1,6	Ø 0.472 ... Ø 0.551 x 0.063
Ø 14 ... Ø 16 x 1,6	Ø 0.551 ... Ø 0.63 x 0.063
Ø 9 ... Ø 10 x 2,0	Ø 0.354 ... Ø 0.394 x 0.079
Ø 10 ... Ø 12 x 2,0	Ø 0.394 ... Ø 0.472 x 0.079
Ø 12 ... Ø 14 x 2,0	Ø 0.472 ... Ø 0.551 x 0.079
Ø 14 ... Ø 16 x 2,0	Ø 0.551 ... Ø 0.63 x 0.079

1) For short threads up to 19 mm (0.748") including runout.

B-1 N.I.R. M. 8 - 16

Ultimate precision.



Metric Fine (MF) 1k-2k

Nominal Size x Pitch
MF 8 ... 10 x 0,5
MF 8 ... 10 x 0,75
MF 10 ... 12 x 0,75
MF 10 ... 12 x 1
MF 12 ... 14 x 1
MF 14 ... 16 x 1
MF 16 ... 18 ¹⁾ x 1
MF 18 ¹⁾ ... 20 ¹⁾ x 1
MF 14 ... 16 x 1,25
MF 16 ... 18 ¹⁾ x 1,5
MF 18 ¹⁾ ... 20 ¹⁾ x 1,5
MF 20 ¹⁾ ... 22 ¹⁾ x 1,5

Unified Thread Standard (UN) 1k-2k

Nominal Size x TPI
UN 7/16 ... 1/2 - 32
UN 1/2 ... 9/16 - 20
UN 1/2 ... 9/16 - 28
UN 1/2 ... 9/16 - 32
UN 9/16 ... 5/8 - 20
UN 9/16 ... 5/8 - 28
UN 9/16 ... 5/8 - 32
UN 5/8 ... 11/16 ¹⁾ - 16
UN 5/8 ... 11/16 ¹⁾ - 20
UN 5/8 ... 11/16 ¹⁾ - 28
UN 3/4 ¹⁾ ... 13/16 ¹⁾ - 16

Unified Fine Threads (UNF) 1k-2k

Nominal Size x TPI
UNF 9/16 ... 5/8 - 18
UNF 11/16 ¹⁾ ... 3/4 ¹⁾ - 16

UN Extra Fine Threads (UNEF) 1k-2k

Nominal Size x TPI
UNEF 5/16 ... 3/8 - 32
UNEF 3/8 ... 7/16 - 32
UNEF 7/16 ... 1/2 - 28
UNEF 9/16 ... 5/8 - 24
UNEF 5/8 ... 11/16 ¹⁾ - 24
UNEF 11/16 ¹⁾ ... 3/4 ¹⁾ - 20
UNEF 3/4 ¹⁾ ... 13/16 ¹⁾ - 20
UNEF 13/16 ¹⁾ ... 7/8 ¹⁾ - 20

British Standard Fine (BSFS) 1k-2k

Nominal Size x TPI
BSFS 5/16 ... 3/8 - 32
BSFS 7/16 ... 1/2 - 26
BSFS 1/2 ... 9/16 - 20
BSFS 1/2 ... 9/16 - 26
BSFS 9/16 ... 5/8 - 20
BSFS 9/16 ... 5/8 - 26
BSFS 5/8 ... 11/16 ¹⁾ - 20
BSFS 5/8 ... 11/16 ¹⁾ - 26
BSFS 3/4 ¹⁾ ... 13/16 ¹⁾ - 26
BSFS 3/4 ¹⁾ ... 13/16 ¹⁾ - 16
BSFS 3/4 ¹⁾ ... 13/16 ¹⁾ - 20
BSFS 13/16 ¹⁾ ... 7/8 ¹⁾ - 20

(G) 1k

Nominal Size x TPI
G 1/8 - 28
G 1/4 - 19
G 3/8 ¹⁾ - 19
G 1/2 ¹⁾ - 14

National Pipe Thread (NPT) 1k

Nominal Size x TPI
NPT 1/8 - 27
NPT 1/4 - 18
NPT 3/8 - 18

National Pipe Taper Fuel (NPTF) 1k

Nominal Size x TPI
NPTF 1/8 - 27
NPTF 1/4 - 18
NPTF 3/8 - 18

1) For short threads up to 19 mm (0.748") including runout.

B-2 N.R.**M. 12 - 22****Ultimate precision.****Smoothing**

Nominal Size x Pitch mm inch	
Ø 12 – Ø 14	Ø 0.472 – Ø 0.551
Ø 14 – Ø 16	Ø 0.551 – Ø 0.63
Ø 16 – Ø 18	Ø 0.63 – Ø 0.709
Ø 18 – Ø 20	Ø 0.709 – Ø 0.787
Ø 20 – Ø 22	Ø 0.787 – Ø 0.866

**Metric
(M) 1k-2k**

Nominal Size x Pitch
M 12 ... 14 x 1,75
M 14 ... 16 x 2
M 18 ... 20 x 2,5
M 20 ... 22 x 2,5

**Metric Fine
(MF) 1k-2k**

Nominal Size x Pitch
MF 12 ... 14 x 1,5
MF 14 ... 16 x 1,5
MF 18 ... 20 x 2
MF 20 ... 22 x 2

**Unified Threads
Coarse (UNC) 1k-2k**

Nominal Size x Pitch
UNC 7/16 – 14
UNC 1/2 – 13
UNC 9/16 – 12
UNC 5/8 – 11
UNC 3/4 – 10
UNC 7/8 – 9

**Unified Threads
Fine (UNF) 1k-2k**

Nominal Size x Pitch
UNF 7/16 ... 1/2 – 20
UNF 9/16 ... 5/8 – 18
UNF 3/4 – 16
UNF 7/8 – 14

(G) 1k-2k

Nominal Size x Pitch
G 1/4... 3/8 – 19
G 1/2 – 14

**British Standard
Fine (BSF) 1k-2k**

Nominal Size x Pitch
BSF 7/16 – 18
BSF 1/2 ... 9/16 – 16
BSF 5/8 ... 11/16 – 14
BSF 3/4 – 12
BSF 7/8 ... 15/16 ¹⁾ – 11

**Whitworth Threads
(BSW) 1k-2k**

Nominal Size x Pitch
BSW 7/16 – 14
BSW 1/2 ... 9/16 – 12
BSW 5/8 ... 11/16 – 11
BSW 3/4 – 10
BSW 7/8 ... 15/16 – 9

**National Pipe Thread
(NPT) 1k**

Nominal Size x Pitch
NPT 1/4 – 18

**National Pipe Taper
Fuel (NPTF) 1k**

Nominal Size x Pitch
NPTF 1/4 – 18

RAA - RGE

Nominal Size x Pitch mm inch	
Ø 12 ... Ø 14 x 0,5	Ø 0.472 ... Ø 0.551 x 0.02
Ø 14 ... Ø 16 x 0,5	Ø 0.551 ... Ø 0.63 x 0.02
Ø 16 ... Ø 18 x 0,5	Ø 0.63 ... Ø 0.709 x 0.02
Ø 18 ... Ø 20 x 0,5	Ø 0.709 ... Ø 0.787 x 0.02
Ø 20 ... Ø 22 x 0,5	Ø 0.787 ... Ø 0.866 x 0.02
Ø 12 ... Ø 14 x 0,6	Ø 0.472 ... Ø 0.551 x 0.024
Ø 14 ... Ø 16 x 0,6	Ø 0.551 ... Ø 0.63 x 0.024
Ø 16 ... Ø 18 x 0,6	Ø 0.63 ... Ø 0.709 x 0.024
Ø 18 ... Ø 20 x 0,6	Ø 0.709 ... Ø 0.787 x 0.024
Ø 20 ... Ø 22 x 0,6	Ø 0.787 ... Ø 0.866 x 0.024
Ø 12 ... Ø 14 x 0,8	Ø 0.472 ... Ø 0.551 x 0.031
Ø 14 ... Ø 16 x 0,8	Ø 0.551 ... Ø 0.63 x 0.031
Ø 16 ... Ø 18 x 0,8	Ø 0.63 ... Ø 0.709 x 0.031
Ø 18 ... Ø 20 x 0,8	Ø 0.709 ... Ø 0.787 x 0.031
Ø 20 ... Ø 22 x 0,8	Ø 0.787 ... Ø 0.866 x 0.031
Ø 12 ... Ø 14 x 1,0	Ø 0.472 ... Ø 0.551 x 0.039
Ø 14 ... Ø 16 x 1,0	Ø 0.551 ... Ø 0.63 x 0.039
Ø 16 ... Ø 18 x 1,0	Ø 0.63 ... Ø 0.709 x 0.039
Ø 18 ... Ø 20 x 1,0	Ø 0.709 ... Ø 0.787 x 0.039
Ø 20 ... Ø 22 x 1,0	Ø 0.787 ... Ø 0.866 x 0.039
Ø 12 ... Ø 14 x 1,2	Ø 0.472 ... Ø 0.551 x 0.047
Ø 14 ... Ø 16 x 1,2	Ø 0.551 ... Ø 0.63 x 0.047
Ø 16 ... Ø 18 x 1,2	Ø 0.63 ... Ø 0.709 x 0.047
Ø 18 ... Ø 20 x 1,2	Ø 0.709 ... Ø 0.787 x 0.047
Ø 20 ... Ø 22 x 1,2	Ø 0.787 ... Ø 0.866 x 0.047
Ø 12 ... Ø 14 x 1,5	Ø 0.472 ... Ø 0.551 x 0.059
Ø 14 ... Ø 16 x 1,5	Ø 0.551 ... Ø 0.63 x 0.059
Ø 16 ... Ø 18 x 1,5	Ø 0.63 ... Ø 0.709 x 0.059
Ø 18 ... Ø 20 x 1,5	Ø 0.709 ... Ø 0.787 x 0.059
Ø 20 ... Ø 22 x 1,5	Ø 0.787 ... Ø 0.866 x 0.059
Ø 12 ... Ø 14 x 1,6	Ø 0.472 ... Ø 0.551 x 0.063
Ø 14 ... Ø 16 x 1,6	Ø 0.551 ... Ø 0.63 x 0.063
Ø 16 ... Ø 18 x 1,6	Ø 0.63 ... Ø 0.709 x 0.063
Ø 18 ... Ø 20 x 1,6	Ø 0.709 ... Ø 0.787 x 0.063
Ø 20 ... Ø 22 x 1,6	Ø 0.787 ... Ø 0.866 x 0.063
Ø 12 ... Ø 14 x 2,0	Ø 0.472 ... Ø 0.551 x 0.079
Ø 14 ... Ø 16 x 2,0	Ø 0.551 ... Ø 0.63 x 0.079
Ø 16 ... Ø 18 x 2,0	Ø 0.63 ... Ø 0.709 x 0.079
Ø 18 ... Ø 20 x 2,0	Ø 0.709 ... Ø 0.787 x 0.079
Ø 20 ... Ø 22 x 2,0	Ø 0.787 ... Ø 0.866 x 0.079

1) For short threads up to 24 mm (0.945") including runout.

B-2 N.I.R. M. 12 - 22

Ultimate precision.



Metric Fine (MF) 1k-2k

Nominal Size x Pitch			
MF 12	... 14	x 1	
MF 14	... 16	x 1	
MF 16	... 18	x 1	
MF 18	... 20	x 1	
MF 16	... 18	x 1,5	
MF 18	... 20	x 1,5	
MF 20	... 22	x 1,5	
MF 22	... 24 ¹⁾	x 1,5	
MF 24 ¹⁾	... 27 ¹⁾	x 1,5	
MF 27 ¹⁾	... 30 ¹⁾	x 1,5	

(UN) 1k-2k

Nominal Size x Pitch			
UN 5/8	... 11/16	-28	
UN 11/16	... 3/4	-28	
UN 3/4	... 13/16	-28	
UN 13/16	... 7/8	-28	
UN 5/8	... 11/16	-20	
UN 7/8	... 15/16 ¹⁾	-16	
UN 7/8	... 15/16 ¹⁾	-12	

Unified Threads Fine (UNF) 1k-2k

Nominal Size x Pitch			
UNF	5/8	-18	
UNF 11/16	... 3/4	-16	
UNF 3/4	... 13/16	-16	
UNF	7/8	-14	
UNF	1 ¹⁾	-12	

(UNEF) 1k-2k

Nominal Size x Pitch			
UNEF	1/2	-28	
UNEF 9/16	... 5/8	-24	
UNEF 5/8	... 11/16	-24	
UNEF 3/4	... 13/16	-20	
UNEF 13/16	... 7/8	-20	
UNEF 7/8	... 15/16 ¹⁾	-20	
UNEF 15/16 ¹⁾	... 1 ¹⁾	-20	
UNEF 1 1/16 ¹⁾	... 1 1/8	-18	

(BSFS) 1k-2k

Nominal Size x Pitch			
BSFS 9/16	... 5/8	-26	
BSFS 5/8	... 11/16	-26	
BSFS 11/16	... 3/4	-26	
BSFS 3/4	... 13/16	-26	
BSFS 9/16	... 5/8	-20	
BSFS 5/8	... 11/16	-20	
BSFS 11/16	... 3/4	-20	
BSFS 3/4	... 13/16	-20	
BSFS 13/16	... 7/8 ¹⁾	-20	
BSFS 7/8 ¹⁾	... 15/16 ¹⁾	-20	
BSFS 15/16 ¹⁾	... 1 ¹⁾	-20	
BSFS 1 1/16	... 3/4	-16	
BSFS 3/4	... 13/16	-16	
BSFS	1 1/8 ¹⁾	-12	
BSFS	1 1/16 ¹⁾	-10	

(G) 1k-2k

Nominal Size x Pitch			
G	3/8	-19	
G 1/2...	5/8 ¹⁾	-14	
G	3/4 ¹⁾	-14	
G	7/8 ¹⁾	-14	

National Pipe Taper Fuel (NPT) 1k

Nominal Size x Pitch			
NPT 3/4	-14		
NPT 1/2	-14		
NPT 3/8	-18		

National Pipe Threads (NPTF) 1k

Nominal Size x Pitch			
NPT 3/4	-14		
NPT 1/2	-14		
NPT 3/8	-18		

1) For short threads up to 24 mm (0.945") including runout.

B-3 N.I.R. M. 16 - 36

Ultimate precision.



Metric Fine (MF) 1k-2k

Nominal Size x Pitch
MF 16 ¹ ... 18 ¹ x 1,5
MF 18 ¹ ... 20 ¹ x 1,5
MF 20 ¹ ... 22 ¹ x 1,5
MF 22 ¹ ... 24 ¹ x 1,5
MF 24 ¹ ... 26 ¹ x 1,5
MF 26 ¹ ... 28 ² x 1,5
MF 28 ² ... 30 ² x 1,5
MF 30 ² ... 32 ² x 1,5
MF 32 ² ... 34 ² x 1,5
MF 34 ² ... 36 ² x 1,5
MF 22 ¹ ... 24 ¹ x 2
MF 24 ¹ ... 26 ¹ x 2
MF 26 ¹ ... 28 ² x 2
MF 28 ² ... 30 ² x 2
MF 30 ² ... 32 ² x 2
MF 32 ² ... 34 ² x 2
MF 34 ² ... 36 ² x 2

Unified National (UN) 1k-2k

Nominal Size x Pitch
UN 5/8 ¹ ... 11/16 ¹ -20
UN 11/16 ¹ ... 3/4 ¹ -20
UN 3/4 ¹ ... 13/16 ¹ -24
UN 13/16 ¹ ... 7/8 ¹ -16
UN 7/8 ¹ ... 15/16 ¹ -16
UN 15/16 ¹ ... 1 ¹ -12
UN 1 ¹ ... 11/16 ¹ -16
UN 11/16 ¹ ... 11/8 ² -20
UN 11/8 ² ... 13/16 ² -20
UN 13/16 ² ... 13/16 ² -16
UN 13/16 ² ... 11/4 ² -12
UN 11/4 ² ... 15/16 ² -12
UN 15/16 ² ... 13/8 ² -16
UN 13/8 ² ... 17/16 ² -12
UN 17/16 ² ... 17/16 ² -12

Unified Threads Fine (UNF) 1k-2k

Nominal Size x Pitch
UNF 5/8 ¹ -18
UNF 11/16 ¹ ... 3/4 ¹ -16
UNF 13/16 ¹ ... 7/8 ¹ -14
UNF 7/8 ¹ ... 15/16 ¹ -14
UNF 15/16 ¹ ... 1 ¹ -12
UNF 1 ¹ ... 11/16 ¹ -12
UNF 11/16 ¹ ... 11/8 ² -12

UN Extra Fine Threads (UNEF) 1k-2k

Nominal Size x Pitch
UNEF 5/8 ¹ -24
UNEF 11/16 ¹ -24
UNEF 3/4 ¹ ... 13/16 ¹ -20
UNEF 13/16 ¹ ... 7/8 ¹ -20
UNEF 7/8 ¹ ... 15/16 ¹ -20
UNEF 15/16 ¹ ... 1 ¹ -20
UNEF 1 ¹ ... 11/16 ¹ -20
UNEF 11/16 ¹ ... 11/8 ² -18
UNEF 11/8 ² ... 13/16 ² -18
UNEF 13/16 ² ... 11/4 ² -16
UNEF 11/4 ² ... 15/16 ² -16

British Standard Fine (BSFS) 1k-2k

Nominal Size x Pitch
BSFS 5/8 ¹ ... 11/16 ¹ -26
BSFS 11/16 ¹ ... 3/4 ¹ -26
BSFS 13/16 ¹ ... 7/8 ¹ -26
BSFS 7/8 ¹ ... 15/16 ¹ -26
BSFS 15/16 ¹ ... 1 ¹ -26
BSFS 1 ¹ ... 11/16 ¹ -26
BSFS 11/16 ¹ ... 11/8 ² -26
BSFS 11/8 ² ... 13/16 ² -26
BSFS 13/16 ² ... 13/16 ² -20
BSFS 13/16 ² ... 11/4 ² -20
BSFS 11/4 ² ... 15/16 ² -20
BSFS 15/16 ² ... 13/8 ² -20
BSFS 13/8 ² ... 17/16 ² -20
BSFS 17/16 ² ... 17/16 ² -20

National Pipe Thread (NPT) 1k

Nominal Size x Pitch
NPT 3/8 - 18

National Pipe Taper Fuel (NPTF) 1k

Nominal Size x Pitch
NPTF 3/8 - 18

(G) 1k-2k

Nominal Size x Pitch
G 3/8 ¹ - 19
G 1/2 ¹ - 14
G 5/8 ¹ - 14
G 3/4 ¹ - 14
G 7/8 ² - 14
G 1 ² - 11

C-2 N.R.

M. 14 - 30

Ultimate precision.



Smoothing

Nominal Size x Pitch mm inch	
Ø 14 - Ø 17	Ø 0.551 - Ø 0.669
Ø 17 - Ø 20,5	Ø 0.669 - Ø 0.807
Ø 20,5 - Ø 24	Ø 0.807 - Ø 0.945
Ø 24 - Ø 27	Ø 0.945 - Ø 1.063
Ø 27 - Ø 30	Ø 1.063 - Ø 1.181

Metric
(M) 1k-2k

Nominal Size x Pitch
M 14 ... 16 x 2
M 18 ... 20 x 2,5
M 20 ... 22 x 2,5
M 24 ... 27 x 3
M 27 ... 30 x 3,5

Metric Fine
(MF) 1k-2k

Nominal Size x Pitch
MF 14 ... 16 x 1,5
MF 16 ... 18 x 1,5
MF 18 ... 20 x 2
MF 22 ... 24 x 2

(UNC) 1k-2k

Nominal Size x Pitch
UNC 9/16 - 12
UNC 5/8 - 11
UNC 3/4 - 10
UNC 7/8 - 9
UNC 1 - 8
UNC 1 1/8 - 7

(UNF) 1k-2k

Nominal Size x Pitch
UNF 9/16 ... 5/8 - 18
UNF 3/4 - 16
UNF 7/8 - 14
UNF 1 - 12

(G) 1k-2k

Nominal Size x Pitch
G 3/8 - 19
G 1/2 ... 5/8 - 14

(BSF) 1k-2k

Nominal Size x Pitch
BSF 5/8 ... 11/16 - 14
BSF 3/4 ... 13/16 - 12
BSF 7/8 ... 15/16 - 11
BSF 1 - 10
BSF 1 1/8 - 9

(BSW) 1k-2k

Nominal Size x Pitch
BSW 9/16 - 12
BSW 5/8 ... 11/16 - 11
BSW 3/4 ... 13/16 - 10
BSW 7/8 ... 15/16 - 9
BSW 1 - 8
BSW 1 1/8 - 7

(RD) 1k-2k

Nominal Size x Pitch
Rd 20 ... 22 x 1/8
Rd 24 ... 26 x 1/8

(RAA-RGE)

Nominal Size x Pitch mm inch	
Ø 14 ... Ø 17 x 0,5	Ø 0.551 ... Ø 0.669 x 0.02
Ø 17 ... Ø 20,5 x 0,5	Ø 0.669 ... Ø 0.807 x 0.02
Ø 20,5 ... Ø 24 x 0,5	Ø 0.807 ... Ø 0.945 x 0.02
Ø 24 ... Ø 27 x 0,5	Ø 0.945 ... Ø 1.063 x 0.02
Ø 27 ... Ø 30 x 0,5	Ø 1.063 ... Ø 1.181 x 0.02
Ø 14 ... Ø 17 x 0,6	Ø 0.551 ... Ø 0.669 x 0.024
Ø 17 ... Ø 20,5 x 0,6	Ø 0.669 ... Ø 0.807 x 0.024
Ø 20,5 ... Ø 24 x 0,6	Ø 0.807 ... Ø 0.945 x 0.024
Ø 24 ... Ø 27 x 0,6	Ø 0.945 ... Ø 1.063 x 0.024
Ø 27 ... Ø 30 x 0,6	Ø 1.063 ... Ø 1.181 x 0.024
Ø 14 ... Ø 17 x 0,8	Ø 0.551 ... Ø 0.669 x 0.031
Ø 17 ... Ø 20,5 x 0,8	Ø 0.669 ... Ø 0.807 x 0.031
Ø 20,5 ... Ø 24 x 0,8	Ø 0.807 ... Ø 0.945 x 0.031
Ø 24 ... Ø 27 x 0,8	Ø 0.945 ... Ø 1.063 x 0.031
Ø 27 ... Ø 30 x 0,8	Ø 1.063 ... Ø 1.181 x 0.031
Ø 14 ... Ø 17 x 1,0	Ø 0.551 ... Ø 0.669 x 0.039
Ø 17 ... Ø 20,5 x 1,0	Ø 0.669 ... Ø 0.807 x 0.039
Ø 20,5 ... Ø 24 x 1,0	Ø 0.807 ... Ø 0.945 x 0.039
Ø 24 ... Ø 27 x 1,0	Ø 0.945 ... Ø 1.063 x 0.039
Ø 27 ... Ø 30 x 1,0	Ø 1.063 ... Ø 1.181 x 0.039
Ø 14 ... Ø 17 x 1,2	Ø 0.551 ... Ø 0.669 x 0.047
Ø 17 ... Ø 20,5 x 1,2	Ø 0.669 ... Ø 0.807 x 0.047
Ø 20,5 ... Ø 24 x 1,2	Ø 0.807 ... Ø 0.945 x 0.047
Ø 24 ... Ø 27 x 1,2	Ø 0.945 ... Ø 1.063 x 0.047
Ø 27 ... Ø 30 x 1,2	Ø 1.063 ... Ø 1.181 x 0.047
Ø 14 ... Ø 17 x 1,5	Ø 0.551 ... Ø 0.669 x 0.059
Ø 17 ... Ø 20,5 x 1,5	Ø 0.669 ... Ø 0.807 x 0.059
Ø 20,5 ... Ø 24 x 1,5	Ø 0.807 ... Ø 0.945 x 0.059
Ø 24 ... Ø 27 x 1,5	Ø 0.945 ... Ø 1.063 x 0.059
Ø 27 ... Ø 30 x 1,5	Ø 1.063 ... Ø 1.181 x 0.059
Ø 14 ... Ø 17 x 1,6	Ø 0.551 ... Ø 0.669 x 0.063
Ø 17 ... Ø 20,5 x 1,6	Ø 0.669 ... Ø 0.807 x 0.063
Ø 20,5 ... Ø 24 x 1,6	Ø 0.807 ... Ø 0.945 x 0.063
Ø 24 ... Ø 27 x 1,6	Ø 0.945 ... Ø 1.063 x 0.063
Ø 27 ... Ø 30 x 1,6	Ø 1.063 ... Ø 1.181 x 0.063
Ø 14 ... Ø 17 x 2,0	Ø 0.551 ... Ø 0.669 x 0.079
Ø 17 ... Ø 20,5 x 2,0	Ø 0.669 ... Ø 0.807 x 0.079
Ø 20,5 ... Ø 24 x 2,0	Ø 0.807 ... Ø 0.945 x 0.079
Ø 24 ... Ø 27 x 2,0	Ø 0.945 ... Ø 1.063 x 0.079
Ø 27 ... Ø 30 x 2,0	Ø 1.063 ... Ø 1.181 x 0.079

National Pire Thread
(NPTF) 1k-2k

Nominal Size x Pitch
NPTF 1/2 - 14

National Pire Thread
(NPT) 1k-2k

Nominal Size x Pitch
NPT 1/2 - 14

C-2 N.I.R. M. 14 - 30

Ultimate precision.



**Metric Fine
(MF) 1k-2k**

Nominal Size x Pitch
MF 16 ... 18 x 1
MF 18 ... 20 x 1
MF 20 ... 22 x 1
MF 22 ... 24 x 1
MF 18 ... 20 x 1,5
MF 20 ... 22 x 1,5
MF 22 ... 24 x 1,5
MF 24 ... 27 x 1,5
MF 27 ... 30 x 1,5
MF 30 ... 33 x 1,5
MF 33 ... 36 x 1,5
MF 36 ... 39 ¹⁾ x 1,5
MF 38 ¹⁾ ... 40 ¹⁾ x 1,5
MF 24 ... 27 x 2
MF 27 ... 30 x 2
MF 30 ... 33 x 2
MF 33 ... 36 x 2
MF 36 ... 39 ¹⁾ x 2
MF 39 ¹⁾ ... 42 ¹⁾ x 2

**Unified National
(UN) 1k-2k**

Nominal Size x Pitch
UN 3/4 ... 13/16 -32
UN 13/16 ... 7/8 -32
UN 3/4 ... 13/16 -28
UN 13/16 ... 7/8 -28
UN 7/8 ... 15/16 -28
UN 11/16 ... 11/8 -20
UN 11/8 ... 13/16 -20
UN 13/16 ... 11/4 -20
UN 11/4 ... 15/16 -20
UN 13/16 ... 7/8 -16
UN 7/8 ... 15/16 -16
UN 15/16 ... 1 -16
UN 1 ... 11/16 -16
UN 11/16 ... 11/8 -16
UN 11/8 ... 13/16 -16
UN 13/16 ... 11/4 -16
UN 11/4 ... 15/16 -16
UN 15/16 ... 13/8 -16
UN 13/8 ... 17/16 -16
UN 17/16 ... 11/2 ¹⁾ -16
UN 11/2 ¹⁾ ... 19/16 ¹⁾ -16

**Unified Threads
Fine (UNF) 1k-2k**

Nominal Size x Pitch
UNF 7/8 -14
UNF 1 ... 11/16 -12
UNF 11/16 ... 11/8 -12
UNF 11/8 ... 13/16 -12
UNF 13/16 ... 11/4 -12
UNF 11/4 ... 15/16 -12
UNF 15/16 ... 13/8 -12
UNF 13/8 ... 17/16 -12
UNF 17/16 ... 11/2 ¹⁾ -12
UNF 11/2 ¹⁾ ... 19/16 ¹⁾ -12

**UN Extra Fine
Threads (UNEF) 1k-2k**

Nominal Size x Pitch
UNEF 3/4 ... 13/16 -20
UNEF 13/16 ... 7/8 -20
UNEF 7/8 ... 15/16 -20
UNEF 15/16 ... 1 -20
UNEF 1 ... 11/16 -20
UNEF 11/16 ... 11/8 -18
UNEF 11/8 ... 13/16 -18
UNEF 13/16 ... 11/4 -18
UNEF 11/4 ... 15/16 -18
UNEF 15/16 ... 13/8 -18

**British Standard Fine
(BSFS) 1k-2k**

Nominal Size x Pitch
BSFS 11/16 ... 3/4 -26
BSFS 3/4 ... 13/16 -26
BSFS 11/16 ... 3/4 -20
BSFS 3/4 ... 13/16 -20
BSFS 13/16 ... 7/8 -20
BSFS 7/8 ... 15/16 -20
BSFS 15/16 ... -20
BSFS 1 ... 11/16 -20
BSFS 11/16 ... 11/8 -20
BSFS 11/8 ... 13/16 -20
BSFS 13/16 ... 11/4 -20
BSFS 11/4 ... 15/16 -20
BSFS 17/16 ¹⁾ -20
BSFS 3/4 ... 13/16 -16
BSFS 15/8 ¹⁾ -16
BSFS 1 ... 11/16 -12
BSFS 11/16 ... 11/8 -12
BSFS 11/8 ... 13/16 -12
BSFS 13/16 ... 11/4 -12
BSFS 11/4 ... 15/16 -12
BSFS 15/16 ... 13/8 -12
BSFS 13/8 ... 17/16 -12
BSFS 17/16 ... 11/2 ¹⁾ -12
BSFS 11/2 ¹⁾ ... 15/8 ¹⁾ -12

(G) 1k-2k

Nominal Size x Pitch
G 3/8 -19
G 1/2 -14
G 5/8 -14
G 3/4 -14
G 7/8 -14
G 1 -11
G 1 1/8 ¹⁾ -11
G 1 1/4 ¹⁾ -11

**National Pipe Thread
(NPT) 1k**

Nominal Size x Pitch
NPT 1 -11.5
NPT 3/4 -14

**National Pipe Taper
Fuel (NPTF) 1k**

Nominal Size x Pitch
NPTF 1 -11.5
NPTF 3/4 -14

C-2 D.N.R. M. 14 - 30

Ultimate precision.



Metric (M) 1k-2k

Nominal Size x Pitch
M 14 ... 16 x 2
M 18 ... 20 x 2,5
M 20 ... 22 x 2,5
M 24 ... 27 x 3
M 27 ... 30 x 3,5

Metric Fine (MF) 1k-2k

Nominal Size x Pitch
MF 14 ... 16 x 1,5
MF 16 ... 18 x 1,5
MF 18 ... 20 x 2
MF 22 ... 24 x 2

(UNC) 1k-2k

Nominal Size x Pitch
UNC 9/16 - 12
UNC 5/8 - 11
UNC 3/4 - 10
UNC 7/8 - 9
UNC 1 - 8
UNC 1 1/8 - 7

(UNF) 1k-2k

Nominal Size x Pitch
UNF 9/16 ... 5/8 - 18
UNF 3/4 - 16
UNF 7/8 - 14
UNF 1 - 12

Unified National (UN) 1k-2k

Nominal Size x Pitch
G 3/8 - 19
G 1/2 ... 5/8 - 14

(BSF) 1k-2k

Nominal Size x Pitch
BSF 5/8 ... 11/16 - 14
BSF 3/4 ... 13/16 - 12
BSF 7/8 ... 15/16 - 11
BSF 1 - 10
BSF 1 1/8 - 9

(BSW) 1k-2k

Nominal Size x Pitch
BSW 9/16 - 12
BSW 5/8 ... 11/16 - 11
BSW 3/4 ... 13/16 - 10
BSW 7/8 ... 15/16 - 9
BSW 1 - 8
BSW 1 1/8 - 7

(RD) 1k-2k

Nominal Size x Pitch
Rd 20 ... 22 x 1/8
Rd 24 ... 26 x 1/8

RAA - RGE

Nominal Size x Pitch
Ø 14 ... Ø 17 x 0,5 Ø 0.551 ... Ø 0.669 x 0.02
Ø 17 ... Ø 20,5 x 0,5 Ø 0.669 ... Ø 0.807 x 0.02
Ø 20,5 ... Ø 24 x 0,5 Ø 0.807 ... Ø 0.945 x 0.02
Ø 24 ... Ø 27 x 0,5 Ø 0.945 ... Ø 1.063 x 0.02
Ø 27 ... Ø 30 x 0,5 Ø 1.063 ... Ø 1.181 x 0.02
Ø 14 ... Ø 17 x 0,6 Ø 0.551 ... Ø 0.669 x 0.024
Ø 17 ... Ø 20,5 x 0,6 Ø 0.669 ... Ø 0.807 x 0.024
Ø 20,5 ... Ø 24 x 0,6 Ø 0.807 ... Ø 0.945 x 0.024
Ø 24 ... Ø 27 x 0,6 Ø 0.945 ... Ø 1.063 x 0.024
Ø 27 ... Ø 30 x 0,6 Ø 1.063 ... Ø 1.181 x 0.024
Ø 14 ... Ø 17 x 0,8 Ø 0.551 ... Ø 0.669 x 0.031
Ø 17 ... Ø 20,5 x 0,8 Ø 0.669 ... Ø 0.807 x 0.031
Ø 20,5 ... Ø 24 x 0,8 Ø 0.807 ... Ø 0.945 x 0.031
Ø 24 ... Ø 27 x 0,8 Ø 0.945 ... Ø 1.063 x 0.031
Ø 27 ... Ø 30 x 0,8 Ø 1.063 ... Ø 1.181 x 0.031
Ø 14 ... Ø 17 x 1,0 Ø 0.551 ... Ø 0.669 x 0.039
Ø 17 ... Ø 20,5 x 1,0 Ø 0.669 ... Ø 0.807 x 0.039
Ø 20,5 ... Ø 24 x 1,0 Ø 0.807 ... Ø 0.945 x 0.039
Ø 24 ... Ø 27 x 1,0 Ø 0.945 ... Ø 1.063 x 0.039
Ø 27 ... Ø 30 x 1,0 Ø 1.063 ... Ø 1.181 x 0.039
Ø 14 ... Ø 17 x 1,2 Ø 0.551 ... Ø 0.669 x 0.047
Ø 17 ... Ø 20,5 x 1,2 Ø 0.669 ... Ø 0.807 x 0.047
Ø 20,5 ... Ø 24 x 1,2 Ø 0.807 ... Ø 0.945 x 0.047
Ø 24 ... Ø 27 x 1,2 Ø 0.945 ... Ø 1.063 x 0.047
Ø 27 ... Ø 30 x 1,2 Ø 1.063 ... Ø 1.181 x 0.047
Ø 14 ... Ø 17 x 1,5 Ø 0.551 ... Ø 0.669 x 0.059
Ø 17 ... Ø 20,5 x 1,5 Ø 0.669 ... Ø 0.807 x 0.059
Ø 20,5 ... Ø 24 x 1,5 Ø 0.807 ... Ø 0.945 x 0.059
Ø 24 ... Ø 27 x 1,5 Ø 0.945 ... Ø 1.063 x 0.059
Ø 27 ... Ø 30 x 1,5 Ø 1.063 ... Ø 1.181 x 0.059
Ø 14 ... Ø 17 x 1,6 Ø 0.551 ... Ø 0.669 x 0.063
Ø 17 ... Ø 20,5 x 1,6 Ø 0.669 ... Ø 0.807 x 0.063
Ø 20,5 ... Ø 24 x 1,6 Ø 0.807 ... Ø 0.945 x 0.063
Ø 24 ... Ø 27 x 1,6 Ø 0.945 ... Ø 1.063 x 0.063
Ø 27 ... Ø 30 x 1,6 Ø 1.063 ... Ø 1.181 x 0.063
Ø 14 ... Ø 17 x 2,0 Ø 0.551 ... Ø 0.669 x 0.079
Ø 17 ... Ø 20,5 x 2,0 Ø 0.669 ... Ø 0.807 x 0.079
Ø 20,5 ... Ø 24 x 2,0 Ø 0.807 ... Ø 0.945 x 0.079
Ø 24 ... Ø 27 x 2,0 Ø 0.945 ... Ø 1.063 x 0.079
Ø 27 ... Ø 30 x 2,0 Ø 1.063 ... Ø 1.181 x 0.079

(NPT) 1k-2k

Nominal Size x Pitch
NPT 1/2 - 14

(NPTF) 1k-2k

Nominal Size x Pitch
NPTF 1/2 - 14

C-3 N.R.**M. 30 - 42****Ultimate precision.****Metric****(M) 1k-2k**

Nominal Size x Pitch	
M 30 ... 33 x 3,5	
M 36 ... 39 x 4	
M 42 x 4,5	

Metric Fine**(MF) 1k-2k**

Nominal Size x Pitch	
MF 30 ... 33 x 2	
MF 33 ... 36 x 2	
MF 30 ... 33 x 3	
MF 33 ... 36 x 3	
MF 36 ... 39 x 3	
MF 39 ... 42 x 3	
MF 40 ... 42 x 4	

(UNC) 1k-2k

Nominal Size x Pitch	
UNC 1 1/4 - 7	
UNC 1 3/8 ... 1 1/2 - 6	

(UN) 1k-2k

Nominal Size x Pitch	
UN 1 1/4 ... 1 3/8 x 16	
UN 1 3/8 ... 1 7/16 x 16	
UN 1 1/4 ... 1 3/8 x 12	
UN 1 1/4 ... 1 3/8 x 8	
UN 1 3/8 ... 1 1/2 x 8	
UN 1 1/2 ... 1 5/8 x 8	
UN 1 9/16 ... 1 5/8 x 6	

(UNF) 1k-2k

Nominal Size x Pitch	
UNF 1 3/8 ... 1 1/2 x 12	

(UNEF) 1k-2k

Nominal Size x Pitch	
UNEF 1 1/4 ... 1 3/8 x 18	

(BSF) 1k-2k

Nominal Size x Pitch	
BSF 1 1/4 - 9	
BSF 1 3/8 ... 1 1/2 - 8	
BSF 1 1/2 ... 1 5/8 - 8	

(BSW) 1k-2k

Nominal Size x Pitch	
BSW 1 1/4 - 7	
BSW 1 3/8 ... 1 1/2 - 6	
BSW 1 5/8 - 5	

(G) 1k-2k

Nominal Size x Pitch	
G 7/8 - 14	
G 1 ... 1 1/8 - 11	
G 1 1/4 - 11	

(RD) 1k-2k

Nominal Size x Pitch	
Rd 30 x 1/8	
Rd 32 ... 34 x 1/8	
Rd 36 ... 38 x 1/8	
Rd 40 ... 42 x 1/6	

Ovalama Aparatları Özel Uygulamalar

Thread Rolling Head Special Applications

Ovalama aparatları, altıgen vidalar ve soket başlıklı somunlar gibi dayanıklı vidalar üretir. Otomotiv, havacılık ve inşaat uygulamaları için idealdir; dayanıklılığı artırır ve seri üretim için uygundur.

Thread rolling produces strong bolts like hex bolts and socket head screws. It's ideal for automotive, aerospace, and construction applications, enhancing strength and efficiency for mass production.



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