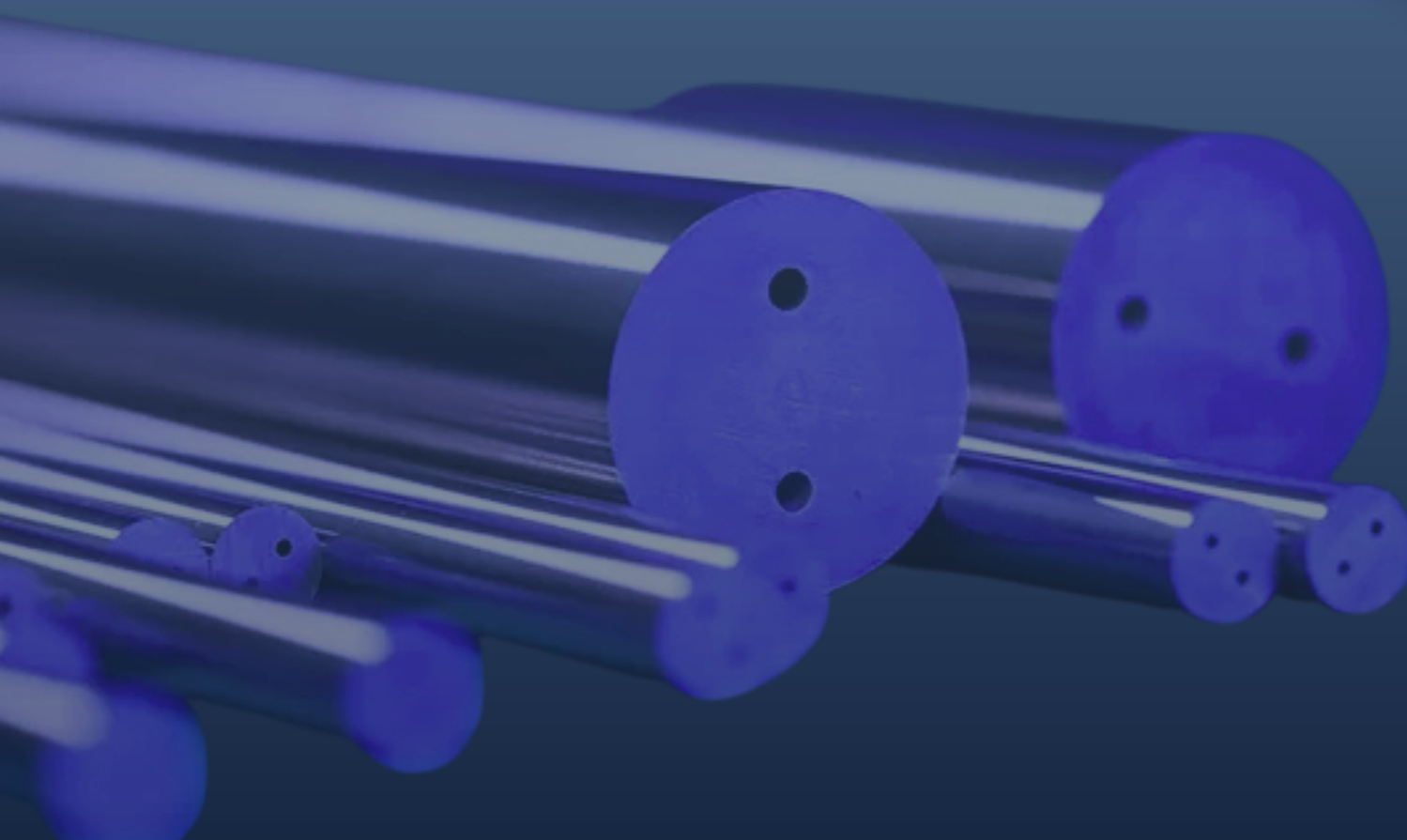
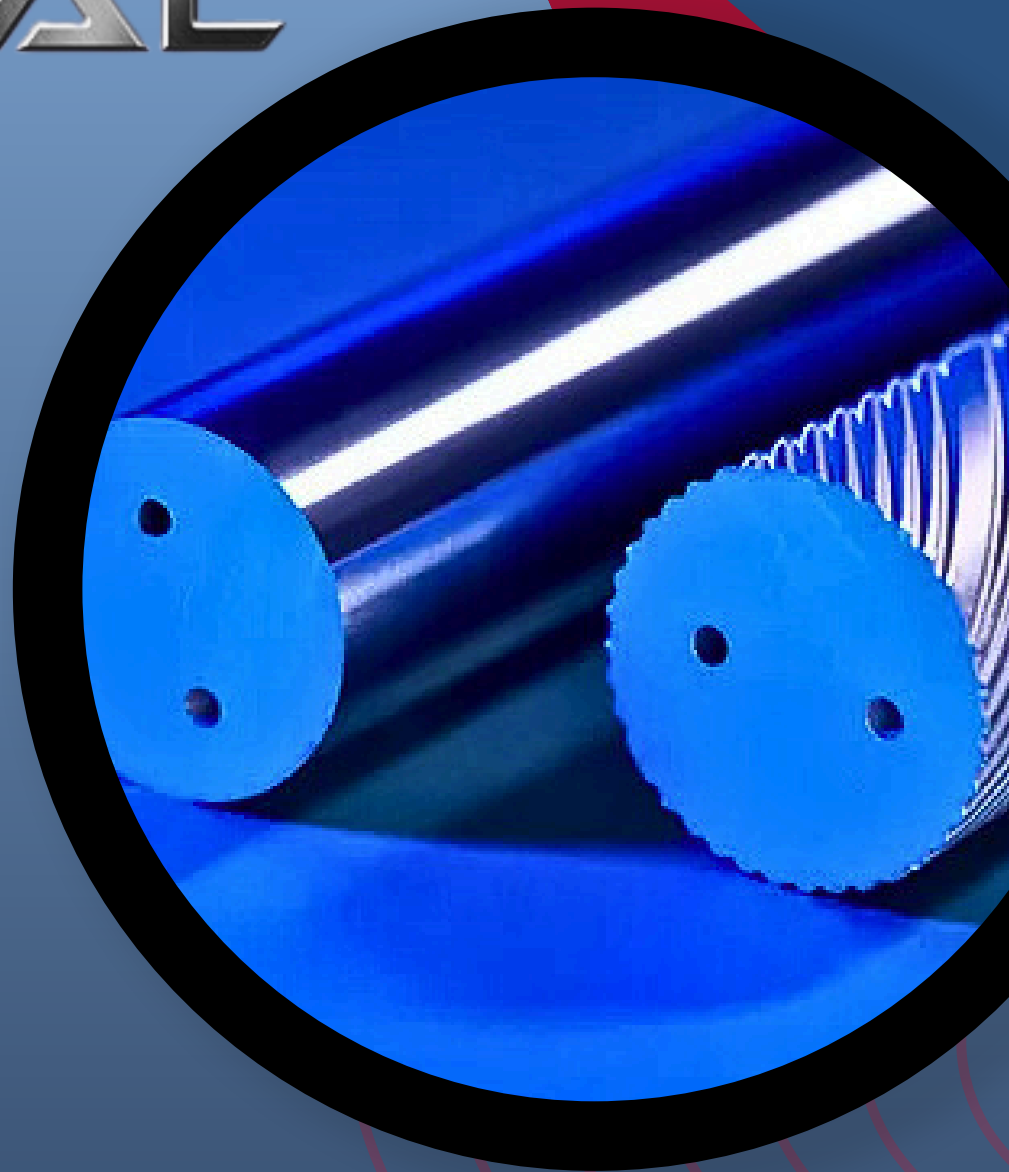




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TUNGSTEN CARBIDE RODS



Made in Korea

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OPERASYON APPLICATION



MET100-5

Alaşımlı çelikler yüksek aşınma direnci ve mükemmel şok direncine sahip paslanmaz çelik, sertleştirilmiş çelik nikel bazlı alaşım vb. Frezeleme, matkaplar, raybalar ve delme için uygundur.

Alloy steels include stainless steel, hardened steel, nickel-based alloy, etc, which have excellent wear and impact resistance. They are suitable for milling, drilling, reaming and boring



MET120-0

Çelik demir dışı malzeme ve 55HRC'nin üzerindeki ısıya dayanıklı malzemenin bitirilmesi için uygun kalite

Suitable grade for finishing steel non-ferrous material and heat resistant material above 55HRC



MET200-0

Kararlı performanslı ince taneli malzeme, çelik, dökme demir, alüminyum bakır, ısıya dayanıklı alaşım, genel amaçlı parmak frezeler, delme vb. yapmak için uygundur.

Suitable for making stable performance fine grain material, steel, cast iron, aluminum copper, heat-resistant alloy, general-purpose end mills, drilling, etc.



MET300-X

Alaşımlı çelik, demir dışı, matkap, frezeleme ve orta kesme hızı 45HRC için uygundur

Suitable for alloy steel, non-ferrous, drilling, milling and medium cutting speed 45HRC

KALİTE ÖZELLİKLERİ

GRADE CHARACTERISTICS



Grade : MET100-5

MET120-0

MET200-0

MET300-X

Co % : 10.5

12

10

10

HRA : 92.2

92.8

91.8

91.8

g/cm³ : 14.43

14.14

14.45

14.45

TRS : 4000

4200

3800

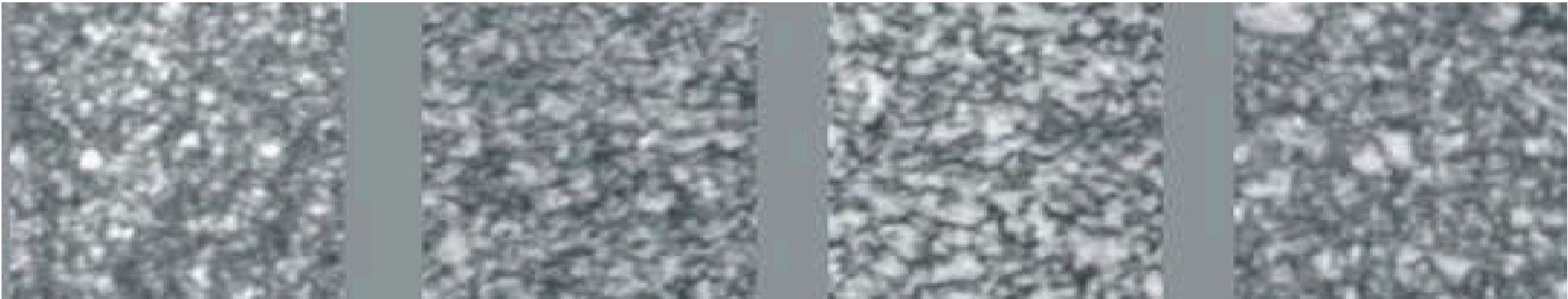
3800

µm : 0.6

0.5

0.7

0.7



0.3-0.5

0.5-0.6

0.5-0.7

0.6-0.7



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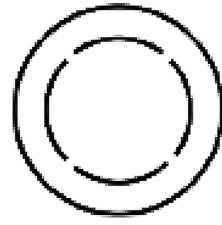
METAL



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DOLU ÇUBUKLAR

SOLID RODS

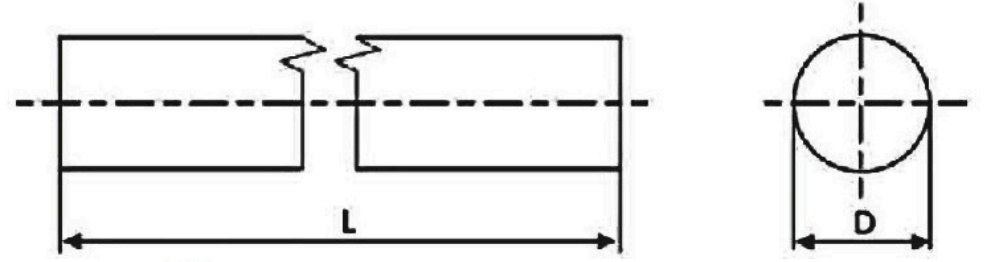


DOLU ÇUBUKLAR

SOLID RODS



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Taşlanmamış Unground	ØD(mm)		L(mm) (0,+5)
	Tolerans Tolerance	Taşlanmış Ground h6/h5	
1,3	+0/+0.15	1.0	310/330
2,3	+0/+0.15	2.0	310/330
3,3	+0/+0.15	3.0	310/330
3,8	+0/+0.20	3.5	310/330
4,3	+0/+0.20	4.0	310/330
4,8	+0/+0.20	4.5	310/330
5,3	+0/+0.20	5.0	310/330
5,8	+0/+0.20	5.5	310/330
6,3	+0/+0.20	6.0	310/330
6,8	+0/+0.30	6.5	310/330
7,3	+0/+0.30	7.0	310/330
7,8	+0/+0.30	7.5	310/330
8,3	+0/+0.30	8.0	310/330
8,8	+0/+0.30	8.5	310/330
9,3	+0/+0.30	9.0	310/330
9,8	+0/+0.30	9.5	310/330
10,3	+0/+0.30	10.0	310/330
10,8	+0/+0.30	10.5	310/330
11,3	+0/+0.30	11.0	310/330
11,8	+0/+0.30	11.5	310/330
12,3	+0/+0.30	12.0	310/330
12,8	+0/+0.40	12.5	310/330
13,3	+0/+0.40	13.0	310/330
13,8	+0/+0.40	13.5	310/330
14,3	+0/+0.40	14.0	310/330
14,8	+0/+0.40	14.5	310/330
15,3	+0/+0.40	15.0	310/330
15,8	+0/+0.40	15.5	310/330
16,3	+0/+0.40	16.0	310/330

Taşlanmamış Unground	ØD(mm)		L(mm) (0,+5)
	Tolerans Tolerance	Taşlanmış Ground h6/h5	
16,8	+0/+0.50	16.5	310/330
17,3	+0/+0.50	17.0	310/330
17,8	+0/+0.50	17.5	310/330
18,3	+0/+0.50	18.0	310/330
18,8	+0/+0.50	18.5	310/330
19,3	+0/+0.50	19.0	310/330
20,3	+0/+0.50	20.0	310/330
21,3	+0/+0.50	21.0	310/330
22,3	+0/+0.50	22.0	310/330
23,3	+0/+0.50	23.0	310/330
24,3	+0/+0.50	24.0	310/330
25,3	+0/+0.50	25.0	310/330
26,3	+0/+0.50	26.0	310/330
27,3	+0/+0.50	27.0	310/330
28,3	+0/+0.50	28.0	310/330
29,3	+0/+0.50	29.0	310/330
30,3	+0/+0.50	30.0	310/330
31,3	+0/+0.50	31.0	310/330
32,3	+0/+0.50	32.0	310/330
33,3	+0/+0.50	33.0	310/330
34,3	+0/+0.50	34.0	310/330
35,3	+0/+0.50	35.0	310/330
36,3	+0/+0.50	36.0	310/330
37,3	+0/+0.50	37.0	310/330
38,3	+0/+0.50	38.0	310/330
39,3	+0/+0.50	39.0	310/330
40,3	+0/+0.50	40.0	310/330
45,3	+0.20/+0.70	45.0	310/330
50,3	+0.20/+0.70	50.0	310/330

ØD(inch)	Taşlanmamış Tolerans Unground Tol.	Taşlanmış Tolerans Ground Tol.	L(inch) (0,+0.197)
1/8	+0.0118/+0.01	h6/h5	13
3/16	+0.0118/+0.01	h6/h5	13
1/4	+0.0118/+0.02	h6/h5	13
5/16	+0.0118/+0.02	h6/h5	13
3/8	+0.0118/+0.02	h6/h5	13
1/2	+0.0118/+0.02	h6/h5	13
5/8	+0.0118/+0.02	h6/h5	13
3/4	+0.0118/+0.03	h6/h5	13
1	+0.0118/+0.03	h6/h5	13
1-1/4	+0.0118/+0.03	h6/h5	13
1-1/2	+0.0118/+0.03	h6/h5	13

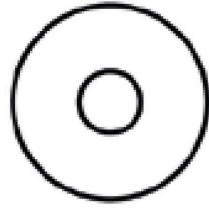




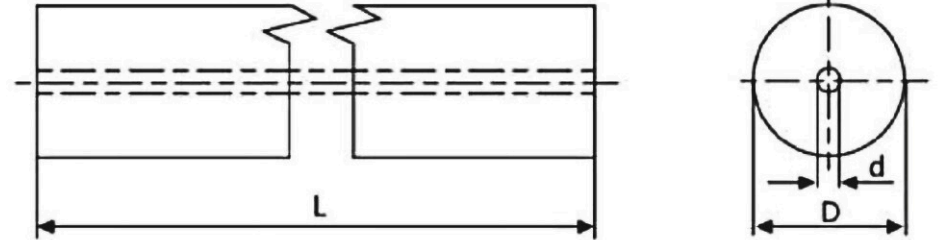
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TEK SOĞUTMA DELİKLİ ÇUBUKLAR

RODS WITH SINGLE COOLING HOLE



TEK SOĞUTMA DELİKLİ ÇUBUKLAR
RODS WITH SINGLE COOLING HOLE



ØD(mm)			Ød(mm)		Delik Sapması Hole Deviation	L(inch) (0,+5)
Taşlanmamış Unground	Tolerans Tolerance	Taşlanmış Ground h6/h5	Çap Diameter	Tolerans Tolerance		
4.3	+0/+0.2	4	0.6	±0.1	0.07	330
5.3	+0/+0.2	5	1.0	±0.1	0.07	330
6.3	+0/+0.2	6	1.0	±0.1	0.07	330
8.3	+0/+0.3	8	1.2	±0.15	0.07	330
10.3	+0/+0.3	10	2.0	±0.2	0.10	330
12.3	+0/+0.3	12	2.0	±0.2	0.10	330
14.3	+0/+0.4	14	2.0	±0.2	0.12	330
16.3	+0/+0.4	16	2.0	±0.2	0.12	330
18.3	+0/+0.5	18	3.0	±0.25	0.15	330
20.3	+0/+0.5	20	3.0	±0.25	0.15	330
22.3	+0/+0.5	22	3.0	±0.25	0.15	330
24.3	+0/+0.5	24	4.0	±0.25	0.15	330
26.3	+0/+0.5	26	4.0	±0.25	0.15	330
28.3	+0/+0.5	28	4.0	±0.25	0.15	330
30.3	+0/+0.5	30	5.0	±0.25	0.15	330
32.3	+0/+0.5	32	5.0	±0.25	0.15	330

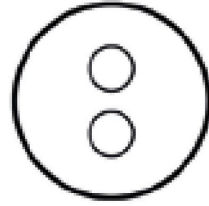
ØD(inch)	Taşlanmamış Tolerans Unground Tol.	Taşlanmış Ground	Ød(inch)		Hole Deviation Delik Sapması	L(inch) (0,+0.197)
			Çap Diameter	Tolerans Tolerance		
1/4	+0.0118/+0.0236	h6/h5	3/77	±0.0039	0.0027	13
9/32	+0.0118/+0.0236	h6/h5	3/77	±0.0039	0.0027	13
5/16	+0.0118/+0.0236	h6/h5	4/85	±0.0059	0.0027	13
25/64	+0.0118/+0.0236	h6/h5	1/16	±0.0059	0.0039	13
13/32	+0.0118/+0.0236	h6/h5	1/16	±0.0059	0.0039	13
277/64	+0.0118/+0.0236	h6/h5	1/16	±0.0059	0.0039	13
31/64	+0.0118/+0.0275	h6/h5	3/38	±0.0098	0.0047	13
1/2	+0.0118/+0.0275	h6/h5	3/38	±0.0098	0.0047	13
9/16	+0.0118/+0.0275	h6/h5	5/51	±0.0098	0.0047	13
5/8	+0.0118/+0.0275	h6/h5	2/17	±0.0098	0.0047	13
3/4	+0.0118/+0.0314	h6/h5	2/17	±0.0098	0.0059	13
13/16	+0.0118/+0.0314	h6/h5	2/17	±0.0098	0.0059	13



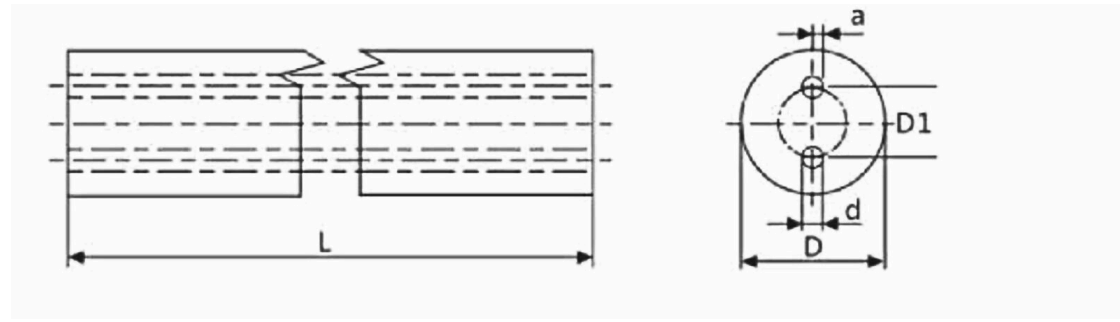
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İKİ DÜZ SOĞUTMA DELİKLİ ÇUBUKLAR

RODS WITH TWO FLAT COOLING HOLES



İKİ DÜZ SOĞUTMA DELİKLİ ÇUBUKLAR RODS WITH TWO FLAT COOLING HOLES



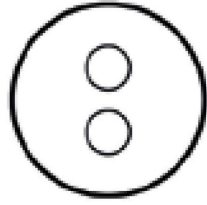
ØD(mm)			TkØ(mm)		Delik Sapması Hole Deviation
Taşlanmamış Unground	Tolerans Tolerance	Taşlanmış Ground h6/h5	İki Delik Merkezinin Uzaklığı Bolt Core	Tolerans Tolerance	
6,3	+0/+0.2	6	1.5	+0/-0.2	0.15
6,3	+0/+0.2	6	3.0	+0/-0.2	0.15
7,3	+0/+0.3	7	3,40	+0/-0.2	0.15
8,3	+0/+0.3	8	2.60	+0/-0.2	0.15
9,3	+0/+0.3	9	2,45	+0/-0.2	0.20
10,3	+0/+0.3	10	2,60	+0/-0.3	0.20
10,3	+0/+0.3	10	5,00	+0/-0.3	0.20
11,3	+0/+0.3	11	4,85	+0/-0.3	0.30
12,3	+0/+0.3	12	3,50	+0/-0.3	0.30
12,3	+0/+0.3	12	3,60	+0/-0.3	0.30
12,3	+0/+0.3	12	6,00	+0/-0.3	0.30
12,3	+0/+0.3	12	3,50	+0/-0.3	0.30
13,3	+0/+0.4	13	5,85	+0/-0.3	0.34
14,3	+0/+0.4	14	5,00	+0/-0.3	0.37
14,3	+0/+0.4	14	7,00	+0/-0.3	0.37
15,3	+0/+0.4	15	6,85	+0/-0.3	0.40
16,3	+0/+0.4	16	5,00	+0/-0.3	0.45
16,3	+0/+0.4	16	8,00	+0/-0.3	0.45
17,3	+0/+0.5	17	7,85	+0/-0.3	0.47
18,3	+0/+0.5	18	6,20	+0/-0.3	0.50
18,3	+0/+0.5	18	9,00	+0/-0.3	0.50
19,3	+0/+0.5	19	8,85	+0/-0.3	0.50
20,3	+0/+0.5	20	6,20	+0/-0.3	0.50
20,3	+0/+0.5	20	10,00	+0/-0.3	0.50
20,3	+0/+0.5	20	10,00	+0/-0.3	0.50
21,3	+0/+0.5	21	9,80	+0/-0.3	0.50
22,3	+0/+0.5	22	10,8	+0/-0.4	0.50
22,3	+0/+0.5	22	11,00	+0/-0.4	0.50
23,3	+0/+0.5	23	10,8	+0/-0.4	0.50
24,3	+0/+0.5	24	11,75	+0/-0.4	0.50
25,3	+0/+0.5	25	11,75	+0/-0.4	0.50
25,3	+0/+0.5	25	11,70	+0/-0.4	0.50
25,3	+0/+0.5	25	12,00	+0/-0.4	0.50
26,3	+0/+0.5	26	13,00	+0/-0.5	0.50
28,3	+0/+0.5	28	9,00	+0/-0.5	0.50
28,3	+0/+0.5	28	14,00	+0/-0.5	0.50
28,3	+0/+0.5	28	13,75	+0/-0.5	0.50
30,3	+0/+0.5	30	14,00	+0/-0.5	0.50
30,3	+0/+0.5	30	13,00	+0/-0.5	0.50
32,3	+0/+0.5	32	14,00	+0/-0.5	0.50
32,3	+0/+0.5	32	13,80	+0/-0.5	0.50
22.0	+0/+0.4	22	11,00	+0/+0.4	0.50
25.0	+0/+0.5	25	12,00	+0/+0.5	0.50
28.0	+0/+0.4	28	6,40	+0/+0.4	0.50
30.0	+0/+0.5	30	13,2	+0/+0.5	0.50
32.0	+0/+0.5	32	14,00	+0/+0.5	0.50



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İKİ SOĞUTMA DELİKLİ ÇUBUKLAR 30°

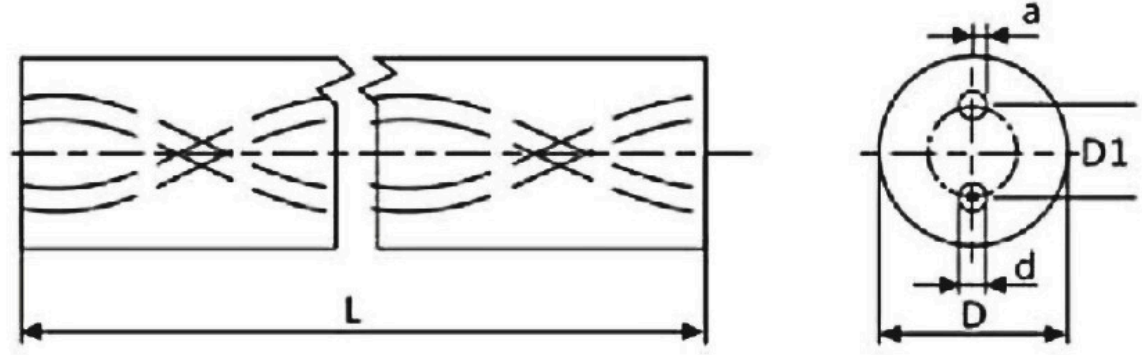
RODS WITH TWO COOLING HOLES 30°



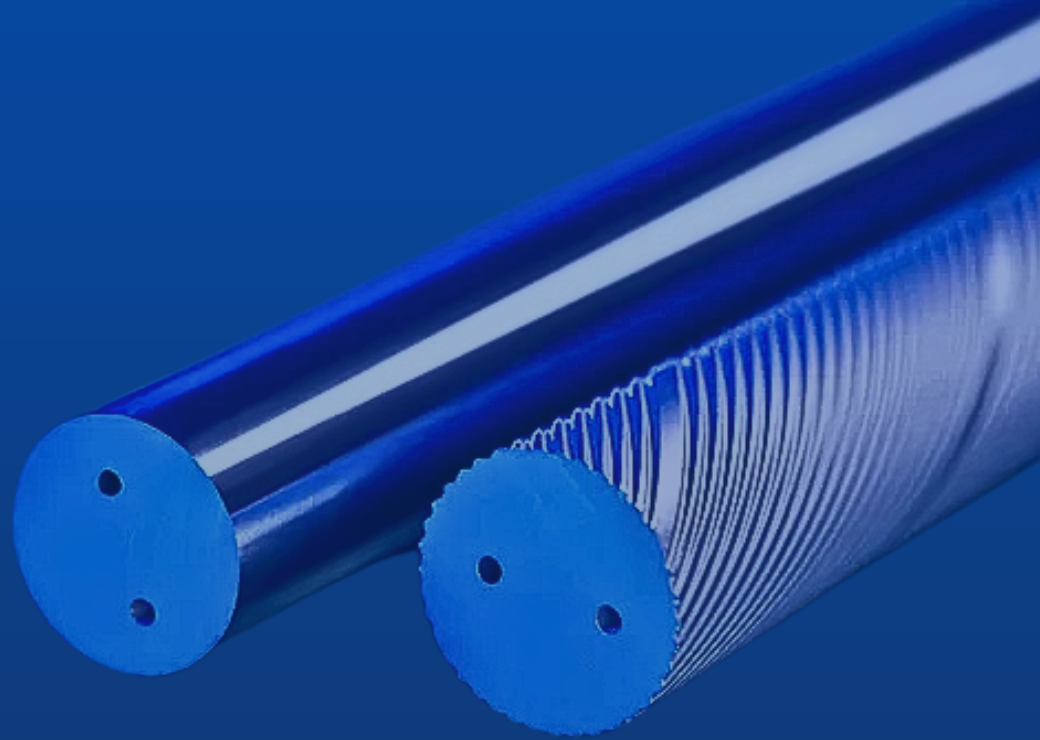
İKİ SOĞUTMA DELİKLİ ÇUBUKLAR 30°
RODS WITH TWO COOLING HOLES 30°



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ØD(mm)			Ød(mm)		TkØ(mm)		Eğim Pitch (±0.5°)	Delik Sapması Hole Deviation	L(mm) (0,+5°)
Taşlanmamış Unground	Tolerans Tolerance	Taşlanmış Ground h6/h5	Çap Diameter	Tolerans Tolerance	İki Delik Merkezinin Uzaklığı Bolt Core	Tolerans Tolerance			
6,0	+0.7/+1.1	6,0	0,70	±0,10	2,40	+0/-0,4	32,65	0,15	330
6,0	+0.7/+1.1	6,0	0,70	±0,10	2,60	+0/-0,4	32,65	0,15	330
8,0	+0.8/+1.2	8,0	1,00	±0,15	3,80	+0/-0,4	43,53	0,15	330
8,0	+0.8/+1.2	8,0	1,00	±0,15	4,00	+0/-0,4	43,53	0,15	330
10,0	+0.8/+1.2	10,0	1,40	±0,15	4,50	+0/-0,6	54,41	0,20	330
10,0	+0.8/+1.2	10,0	1,40	±0,15	4,80	+0/-0,6	54,41	0,20	330
10,0	+0.8/+1.2	10,0	1,40	±0,15	4,00	+0/-0,6	54,41	0,20	330
12,0	+0.9/+1.3	12,0	1,40	±0,15	5,85	+0/-0,8	65,30	0,30	330
12,0	+0.9/+1.3	12,0	1,40	±0,15	6,25	+0/-0,8	65,30	0,30	330
14,0	+0.9/+1.3	14,0	1,75	±0,20	6,70	+0/-0,8	76,18	0,40	330
14,0	+0.9/+1.3	14,0	1,75	±0,20	7,10	+0/-0,8	76,18	0,40	330
15,0	+0.9/+1.3	15,0	1,75	±0,20	7,70	+0/-0,8	81,62	0,40	330
16,0	+1.0/+1.4	16,0	1,75	±0,20	8,30	+0/-0,8	87,06	0,40	330
18,0	+1.0/+1.4	18,0	2,00	±0,25	9,25	+0/-0,8	97,95	0,50	330
18,0	+1.0/+1.4	18,0	2,00	±0,25	9,55	+0/-0,8	97,95	0,50	330
18,0	+1.0/+1.4	18,0	2,0	±0,25	8,50	+0/-0,8	97,95	0,50	330
20,0	+1.0/+1.4	20,0	2,00	±0,25	10,40	+0/-1,0	108,83	0,50	330
22,0	+1.0/+1.5	22,0	2,00	±0,25	11,10	+0/-1,0	119,71	0,50	330
22,0	+1.0/+1.5	22,0	2,00	±0,25	11,60	+0/-1,0	119,71	0,50	330
25,0	+1.1/+1.6	25,0	2,00	±0,25	12,80	+0/-1,0	136,03	0,50	330
25,0	+1.1/+1.6	25,0	2,00	±0,25	13,30	+0/-1,0	136,03	0,50	330



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