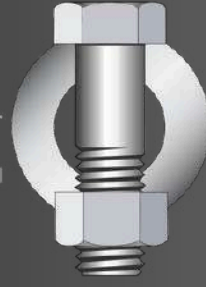


RÜZGAR

BAĞLANTI



CIVATA

ELEMANLARI

2025

# ÜRÜN KATALOĞU

## PRODUCT CATALOGUE

0(212)691 08 00

info@ruzgarbaglanti.com

ruzgarbaglanti.com

# Hakkımızda

## About Us

Rüzgar Cıvata Bağlantı Elemanları olarak 2021 yılında kurulmuş olmamıza rağmen, bağlantı elemanları sektöründeki köklü geçmişimiz 1965 yılına dayanmaktadır. Yılların deneyimi ve uzman kadromuzla; cıvata, somun, pul gibi bağlantı elemanları ve otomotiv pres kaynak yedek parçaları üretiminde sektörün lideri konumundayız.

Ürünlerimiz her kaliteye uygun olarak DIN normlarına ve ISO standartlarına göre üretilmekte, en zorlu endüstriyel ihtiyaçlara cevap verebilmektedir. Yenilikçi yaklaşımımız ve titiz üretim süreçlerimizle, global pazarda güvenilir bir iş ortağı olmaktan gurur duyuyoruz.

**Established in 2021, Rüzgar Cıvata Fastening Elements builds on a rich heritage of expertise in the fastening elements industry dating back to 1965. With a team of seasoned professionals, we are leaders in the production of bolts, nuts, washers, and automotive press-weld spare parts.**

**Our products are manufactured to meet DIN norms and ISO standards, ensuring compatibility with a wide range of quality requirements. With our innovative approach and meticulous production processes, we proudly serve as a trusted partner in the global market.**



Quality  
Management  
System



Environmental  
Management  
System



Occupational  
Health and Safety  
Management  
System



Customer  
Satisfaction  
Management  
System



# İÇİNDEKİLER

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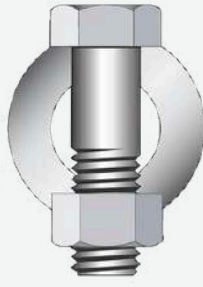
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RÜZGAR  
BAĞLANTI



CIVATA  
ELEMANLARI



# Pullar

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# Washers

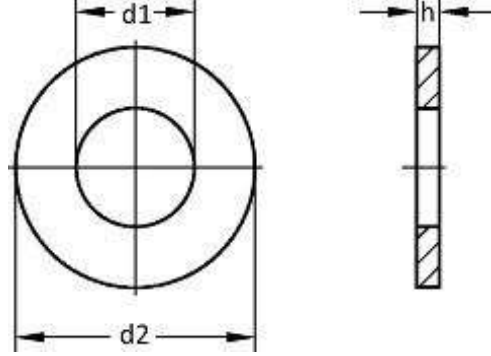
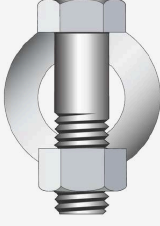
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**TEKNİK BİLGİLER / TECHNICAL INFORMATIONS**

NOMİNAL BOYUT NOMINAL SIZE	d1	d2	KALINLIK THICKNESS	AĞIRLIK WEIGHT
M 13	3,20	7,00	0,50	0,12 gr
M 4	4,30	9,00	0,80	0,30 gr
M 5	5,30	10,00	1,00	0,44 gr
M 6	6,40	12,00	1,60	1,02 gr
M 7	7,40	14,00	1,60	1,39 gr
M 8	8,40	16,00	1,60	1,83 gr
M 10	10,50	20,00	2,00	3,57 gr
M 12	13,00	24,00	2,50	6,27 gr
M 14	15,00	28,00	2,50	8,62 gr
M 16	17,00	30,00	3,00	11,30 gr
M 18	19,00	34,00	3,00	14,70 gr
M 20	21,00	37,00	3,00	17,20 gr
M 22	23,00	39,00	3,00	18,30 gr
M 24	25,00	44,00	4,00	32,30 gr
M 27	28,00	50,00	4,00	42,30 gr
M 30	31,00	56,00	4,00	53,60 gr
M 33	34,00	60,00	5,00	75,30 gr
M 36	37,00	66,00	5,00	92,10 gr
M 39	40,00	72,00	6,00	133,00 gr
M 42	43,00	78,00	7,00	183,00 gr
M 45	46,00	85,00	7,00	220,00 gr
M 48	50,00	92,00	8,00	294,00 gr
M 52	54,00	98,00	8,00	284,00 gr

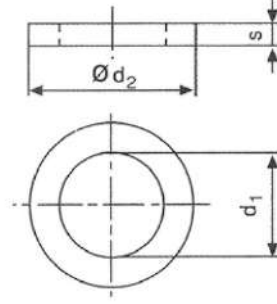
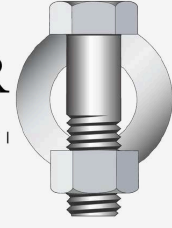
DEĞERLER MİLİMETRE OLARAK VERİLMİŞTİR / VALUES ARE GIVEN AS MILLIMETERS



"INC"

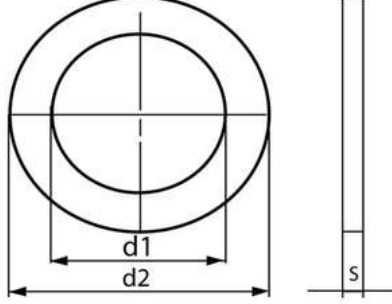
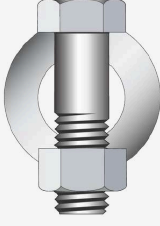
Whitworth Şase Pullar  
32-55 Chassis Washers

RÜZGAR CIVATA  
BAĞLANTI ELEMANLARI



TEKNİK BİLGİLER / TECHNICAL INFORMATION

NOMİNAL BOYUT NOMINAL SIZE		d1	d2	KALINLIK THICKNESS	AĞIRLIK WEIGHT
P 1/8	İNCE/THIN	3,40	9,00	0,80	0,34 gr
P 5/32	İNCE/THIN	4,40	12,00	0,80	0,61 gr
P 3/16	İNCE/THIN	5,40	16,00	1,00	1,39 gr
P 1/4	İNCE/THIN	6,90	18,00	1,00	1,70 gr
P 5/16	İNCE/THIN	8,40	22,00	1,00	2,54 gr
P 3/8	İNCE/THIN	10,50	25,00	1,00	3,17 gr
P 1/4	2 MM	6,90	18,00	2,00	3,40 gr
P 5/16	2 MM	8,40	22,00	2,00	5,09 gr
P 3/8	2 MM	10,50	25,00	2,00	6,34 gr
P 1/2	2 MM	13,30	32,00	2,00	10,44 gr
P 5/16	KALIN/THICK	8,40	22,00	3,00	7,64 gr
P 3/8	KALIN/THICK	10,50	25,00	3,00	9,51 gr
P 7/16	KALIN/THICK	12,00	27,00	3,00	10,81 gr
P 1/2	KALIN/THICK	13,30	32,00	3,00	15,66 gr
P 9/16	KALIN/THICK	15,00	36,00	3,00	19,79 gr
P 5/8	KALIN/THICK	17,00	40,00	3,00	24,23 gr
P 3/4	KALIN/THICK	21,50	45,00	3,00	28,89 gr
P 7/8	KALIN/THICK	23,00	50,00	3,00	36,43 gr
P 1P	KALIN/THICK	26,50	56,00	3,00	44,99 gr
P 1 1/8	KALIN/THICK	30,00	60,00	4,00	66,55 gr
P 1 1/4	KALIN/THICK	32,00	65,00	4,00	78,90 gr
P 1 1/2	KALIN/THICK	39,00	75,00	4,00	101,15 gr
P 1 3/4	KALIN/THICK	45,00	80,00	4,00	107,83 gr
P 2P	KALIN/THICK	50,00	90,00	4,00	138,03 gr



**TEKNİK BİLGİLER / TECHNICAL INFORMATION**

NOMINAL BOYUT NOMINAL SIZE	d1	d2	KALINLIK THICKNESS	AĞIRLIK WEIGHT
M 5	5,50	10,00	1,00	0,43 gr
M 6	6,60	12,00	1,60	0,99 gr
M 7	7,60	14,00	1,60	1,36 gr
M 8	9,00	16,00	1,60	1,72 gr
M 10	11,00	20,00	2,00	3,43 gr
M 12	13,50	24,00	2,50	6,06 gr
M 14	15,50	28,00	2,50	8,37 gr
M 16	17,50	30,00	3,00	10,97 gr
M 18	20,00	34,00	3,00	13,97 gr
M 20	22,00	37,00	3,00	16,36 gr
M 22	24,00	39,00	3,00	17,47 gr
M 24	26,00	44,00	4,00	31,05 gr
M 27	30,00	50,00	4,00	39,43 gr
M 30	33,00	56,00	4,00	50,45 gr
M 33	36,00	60,00	5,00	70,98 gr
M 36	39,00	66,00	5,00	87,35 gr
M 39	42,00	72,00	6,00	126,44 gr
M 42	45,00	78,00	7,00	175,08 gr
M 45	48,00	85,00	7,00	212,27 gr
M 48	52,00	92,00	8,00	283,95 gr
M 52	56,00	98,00	8,00	318,85 gr

DEĞERLER MİLİMETRE OLARAK VERİLMİŞTİR / VALUES ARE GIVEN AS MILLIMETERS

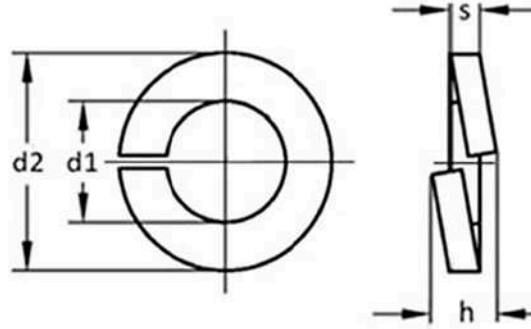
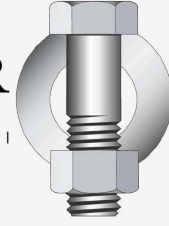
"DIN 127"

Yaylı Kilit Rondela

Spring Lock Washer

RÜZGAR CIVATA

BAĞLANTI ELEMANLARI

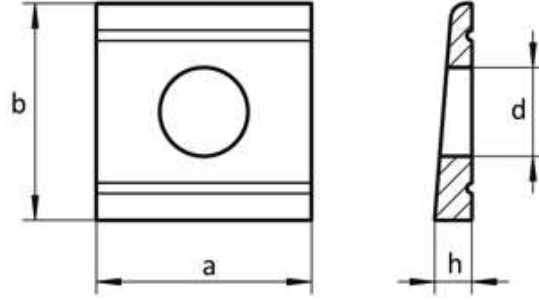
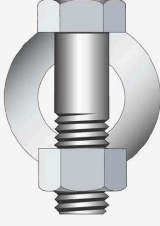


TEKNİK BİLGİLER / TECHNICAL INFORMATION

NOMİNAL BOYUT NOMINAL SIZE	d1	d2	s	GENİŞLİK WIDTH	KALINLIK THICKNESS	AĞIRLIK WEIGHT
M 3	3,10	6,10	0,80	1,30	1,60	0,10 gr
M 4	4,10	7,60	0,90	1,50	1,80	0,18 gr
M 5	5,10	9,20	1,20	1,80	2,40	0,36 gr
M 6	6,10	11,80	1,60	2,50	3,20	0,83 gr
M 7	7,10	12,80	1,60	2,50	3,20	0,93 gr
M 8	8,10	14,80	2,00	3,00	4,00	1,60 gr
M 10	10,20	18,10	2,20	3,50	4,40	2,53 gr
M 12	12,20	21,10	2,50	4,00	5,00	3,82 gr
M 14	14,20	24,10	3,00	4,50	6,00	6,01 gr
M 16	16,20	27,40	3,50	5,00	7,00	8,91 gr
M 18	18,20	29,40	3,50	5,00	7,00	9,73 gr
M 20	20,20	33,60	4,00	6,00	8,00	15,20 gr
M 22	22,50	35,90	4,00	6,00	8,00	16,50 gr
M 24	24,50	40,00	5,00	7,00	10,00	26,20 gr
M 27	27,50	43,00	5,00	7,00	10,00	28,70 gr
M 30	30,50	48,20	6,00	8,00	12,00	44,40 gr
M 33	33,50	55,20	6,00	10,00	12,00	54,23 gr
M 36	36,50	58,20	6,00	10,00	12,00	67,30

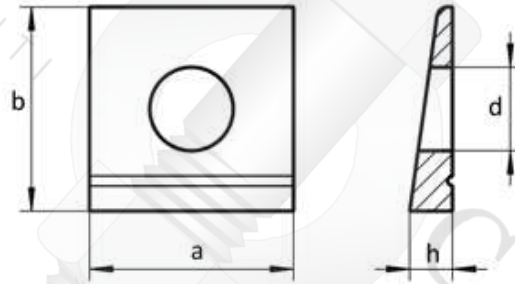
DEĞERLER MİLİMETRE OLARAK VERİLMİŞTİR / VALUES ARE GIVEN AS MILLIMETERS





TEKNİK BİLGİLER / TECHNICAL INFORMATION

NOMİNAL BOYUT NOMINAL SIZE	d	a	b	AĞIRLIK WEIGHT
M 8	9,00	22,00	22,00	9,5 gr
M 10	11,00	22,00	22,00	8,8 gr
M 12	14,00	26,00	30,00	18,3 gr
M 16	18,00	32,00	36,00	31,4 gr
M 20	22,00	40,00	44,00	57 gr
M 22	24,00	44,00	50,00	82,5 gr
M 24	26,00	56,00	56,00	128 gr
M 27	30,00	56,00	56,00	119 gr



DIN 435

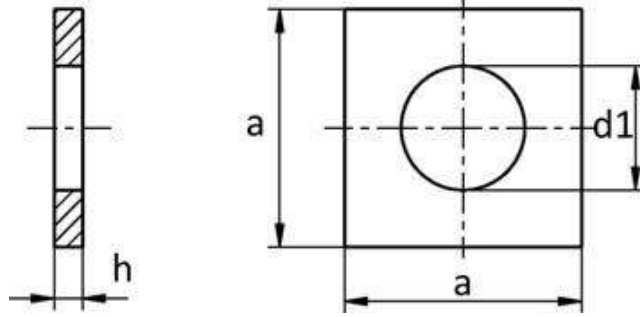
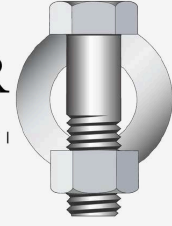
TEKNİK BİLGİLER / TECHNICAL INFORMATION

NOMİNAL BOYUT NOMINAL SIZE	d	a	b	KALINLIK THICKNESS	AĞIRLIK WEIGHT
M 8	9,00	22,00	22,00	4,60	10,10 gr
M 10	11,00	22,00	22,00	4,60	9,40 gr
M 12	14,00	26,00	30,00	6,20	20,10 gr
M 16	18,00	32,00	36,00	7,50	35,60 gr
M 20	22,00	40,00	44,00	9,20	67,00 gr
M 22	24,00	44,00	50,00	10,00	90,00 gr
M 24	26,00	56,00	56,00	10,8	143,00 gr
M 27	30,00	56,00	56,00	10,8	203,00 gr

DEĞERLER MİLİMETRE OLARAK VERİLMİŞTİR / VALUES ARE GIVEN AS MILLIMETERS

"DIN 436"  
Kare Pul  
Square Washer

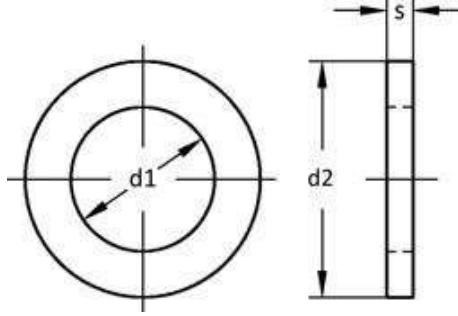
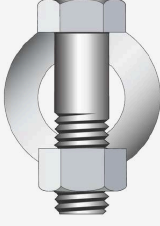
RÜZGAR CIVATA  
BAĞLANTI ELEMANLARI



TEKNİK BİLGİLER / TECHNICAL INFORMATIONS

NOMİNAL BOYUT NOMINAL SIZE	d1	a	KALINLIK THICKNESS	AĞIRLIK WEIGHT
M 10	11,00	30,00	3,00	18,80 gr
M 12	14,00	40,00	4,00	45,40 gr
M 16	18,00	50,00	5,00	88,20 gr
M 20	22,00	60,00	5,00	126,00 gr
M 24	26,00	80,00	6,00	275,00 gr
M 27	30,00	90,00	6,00	348,00 gr
M 30	33,00	95,00	6,00	385,00 gr
M 33	36,00	100,00	6,00	423,00 gr
M 36	39,00	110,00	8,00	685,00 gr
M 39	42,00	125,00	8,00	895,00 gr
M 42	45,00	135,00	8,00	1045,00 gr
M 45	48,00	140,00	8,00	1110,00 gr
M 48	52,00	150,00	10,00	1597,00 gr
M 52	56,00	160,00	10,00	1816,00 gr

DEĞERLER MİLİMETRE OLARAK VERİLMİŞTİR / VALUES ARE GIVEN AS MILLIMETERS



TEKNİK BİLGİLER / TECHNICAL INFORMATION

d1	d2	KALINLIK THICKNESS	AĞIRLIK WEIGHT
M 3	6,00	0,80	0,13 gr
M 4	8,00	0,80	0,23 gr
M 5	10,00	0,80	0,37 gr
M 6	12,00	1,60	1,06 gr
M 7	14,00	1,60	1,44 gr
M 8	16,00	2,00	2,36 gr
M 10	20,00	2,50	4,62 gr
M 12	25,00	3,00	8,89 gr
M 13	25,00	3,00	8,43 gr
M 14	28,00	3,00	10,87 gr
M 16	28,00	3,00	9,76 gr
M 18	30,00	4,00	14,19 gr
M 20	32,00	4,00	15,38 gr
M 22	34,00	4,00	16,56 gr
M 23	36,00	4,00	18,90 gr
M 24	38,00	4,00	21,39 gr
M 25	40,00	4,00	24,03 gr
M 26	40,00	5,00	28,47 gr
M 27	40,00	5,00	26,83 gr
M 28	42,00	5,00	30,19 gr
M 30	45,00	5,00	34,66 gr
M 32	50,00	5,00	45,47 gr
M 33	50,00	5,00	43,47 gr
M 35	52,00	6,00	54,68 gr
M 36	52,00	6,00	52,05 gr

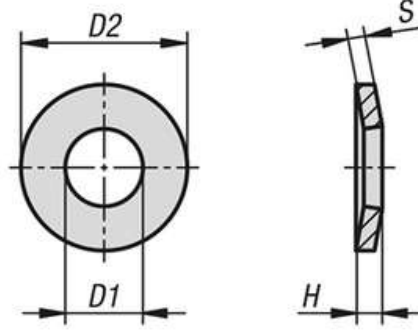
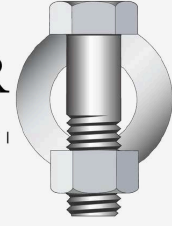
DEĞERLER MİLİMETRE OLARAK VERİLMİŞTİR / VALUES ARE GIVEN AS MILLIMETERS

"DIN 6796"

Konik Yaylı Rondela

Conical Spring Washer

RÜZGAR CIVATA  
BAĞLANTI ELEMANLARI

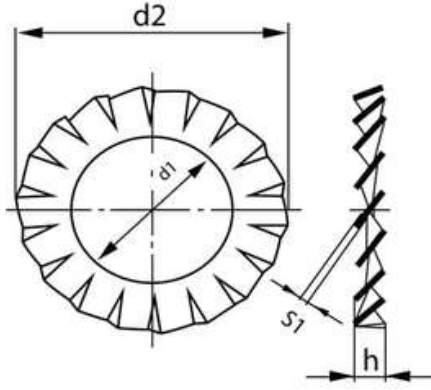
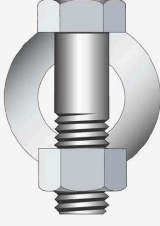


TEKNİK BİLGİLER / TECHNICAL INFORMATIONS

NOMİNAL BOYUT NOMINAL SIZE	D1	D2	S	KALINLIK THICKNESS	AĞIRLIK WEIGHT
M 3	3,20	7,00	0,60	0,85	0,14 gr
M 4	4,30	9,00	1,00	1,30	0,38 gr
M 5	5,30	11,00	1,20	1,55	0,69 gr
M 6	6,40	14,00	1,50	2,00	1,43 gr
M 7	7,40	17,00	1,75	2,30	2,53 gr
M 8	8,40	18,00	2,00	2,60	3,13 gr
M 10	10,50	23,00	2,50	3,20	6,45 gr
M 12	13,00	29,00	3,00	3,95	12,40 gr
M 14	15,00	35,00	3,50	4,65	21,60 gr
M 16	17,00	39,00	4,00	5,25	30,40 gr
M 18	19,00	42,00	4,50	5,80	38,90 gr
M 20	21,00	45,00	5,00	6,40	48,80 gr
M 22	23,00	49,00	5,50	7,05	63,50 gr
M 24	25,00	56,00	6,00	7,75	92,90 gr
M 27	28,00	60,00	6,50	8,35	113,00 gr
M 30	31,00	70,00	7,00	9,20	170,00 gr

DEĞERLER MİLİMETRE OLARAK VERİLMİŞTİR / VALUES ARE GIVEN AS MILLIMETERS





TEKNİK BİLGİLER / TECHNICAL INFORMATIONS

NOMİNAL BOYUT NOMINAL SIZE	d1	d2	KALINLIK THICKNESS	AĞIRLIK WEIGHT
M 3	3,20	6,00	0,40	0,03 gr
M 4	4,30	8,00	0,50	0,14 gr
M 5	5,30	10,00	0,60	0,28 gr
M 6	6,40	11,00	0,70	0,36 gr
M 7	7,40	12,5	0,80	0,50 gr
M 8	8,40	15,00	0,80	0,80 gr
M 10	10,50	18,00	0,90	1,25 gr
M 12	13,00	20,50	1,00	1,60 gr
M 14	15,00	24,00	1,00	2,30 gr
M 16	17,00	26,00	1,20	2,90 gr
M 18	19,00	30,00	1,40	5,00 gr
M 20	21,00	33,00	1,40	6,00 gr
M 22	23,00	36,00	1,50	7,50 gr
M 24	25,00	38,00	1,50	8,00 gr
M 27	28,00	44,00	1,60	12,00 gr
M 30	31,00	48,00	1,60	14,00 gr

DEĞERLER MİLİMETRE OLARAK VERİLMİŞTİR / VALUES ARE GIVEN AS MILLIMETERS

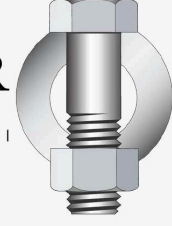
"DIN 6916" - "DIN 7989"

Yüksek Mukavemetli Rondela

High Strength Structural Washer

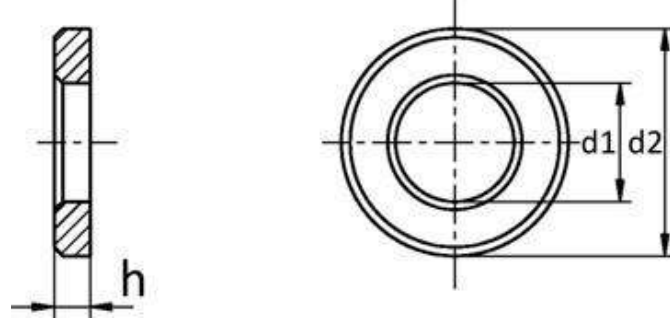
RÜZGAR

BAĞLANTI



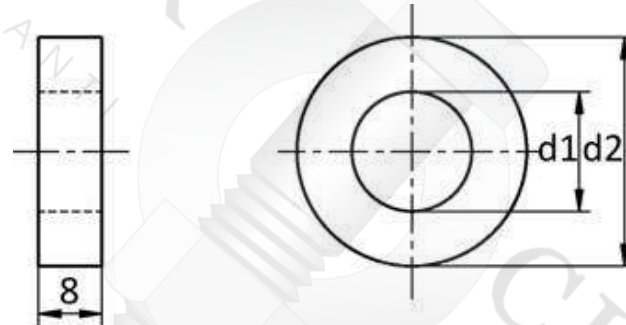
CIVATA

ELEMANLARI



TEKNİK BİLGİLER / TECHNICAL INFORMATION

NOMİNAL BOYUT NOMINAL SIZE	d1	d2	KALINLIK THICKNESS	AĞIRLIK WEIGHT
M 12	13,00	24,00	3,00	7,03 gr
M 16	17,00	30,00	4,00	14,60 gr
M 20	21,00	37,00	4,00	19,60 gr
M 22	23,00	39,00	4,00	24,30 gr
M 24	25,00	44,00	4,00	30,60 gr
M 27	28,00	50,00	5,00	50,20 gr
M 30	31,00	56,00	5,00	63,20 gr
M 36	37,00	66,00	6,00	115,00 gr

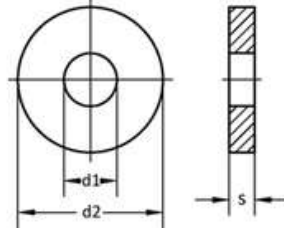


DIN 7989

TEKNİK BİLGİLER / TECHNICAL INFORMATION

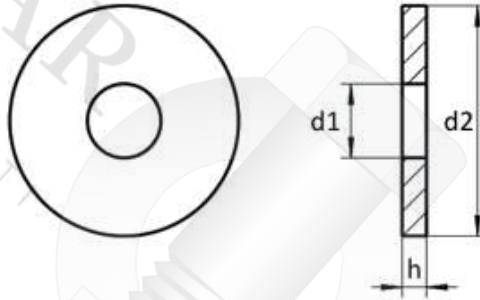
NOMİNAL BOYUT NOMINAL SIZE	d1	d2	KALINLIK THICKNESS	AĞIRLIK WEIGHT
M 10	11,00	21,00	8,00	15,70 gr
M 12	14,00	24,00	8,00	18,80 gr
M 16	18,00	30,00	8,00	28,30 gr
M 20	22,00	37,00	8,00	43,60 gr
M 22	24,00	39,00	8,00	46,20 gr
M 24	26,00	44,00	8,00	61,50 gr
M 27	30,00	50,00	8,00	79,00 gr
M 30	33,00	56,00	8,00	101,00 gr
M 33	36,00	60,00	8,00	114,00gr
M 36	39,00	66,00	8,00	140,00 gr

DEĞERLER MİLİMETRE OLARAK VERİLMİŞTİR / VALUES ARE GIVEN AS MILLIMETERS



TEKNİK BİLGİLER / TECHNICAL INFORMATIONS

NOMİNAL BOYUT NOMINAL SIZE	d1	d2	s	AĞIRLIK WEIGHT
M 6	6,40	17,00	3,00	4,59 gr
M 8	8,40	23,00	4,00	11,31 gr
M 10	10,50	28,00	4,00	16,62 gr
M 12	13,00	35,00	5,00	32,55 gr
M 16	17,00	45,00	6,00	64,22 gr
M 20	21,00	50,00	6,00	76,17 gr
M 24	25,00	60,00	8,00	146,74 gr
M 30	31,00	68,00	10,00	225,84 gr



DIN 9021

TEKNİK BİLGİLER / TECHNICAL INFORMATIONS

NOMİNAL BOYUT NOMINAL SIZE	d1	d2	h	AĞIRLIK WEIGHT
M 3	3,20	9,00	0,80	0,34 gr
M4	4,30	12,00	1,00	0,77 gr
M5	5,30	15,00	1,00	1,21 gr
M6	6,40	18,00	1,60	2,79 gr
M7	7,40	22,00	2,00	5,29 gr
M 8	8,40	24,00	2,00	6,22 gr
M 10	10,50	30,00	2,50	12,16 gr
M 12	13,00	37,00	3,00	22,18 gr
M 14	15,00	44,00	3,00	31,63 gr
M 16	17,00	50,00	3,00	40,87 gr
M 18	19,00	56,00	4,00	68,4 gr
M 20	21,00	60,00	4,00	77,86 gr
M 24	25,00	72,00	5,00	140,46 gr

DEĞERLER MİLİMETRE OLARAK VERİLMİŞTİR / VALUES ARE GIVEN AS MILLIMETERS

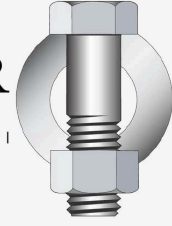
"DIN 2093"

Yaylı Disk Çanak Pul

Conical Spring Disc Washer

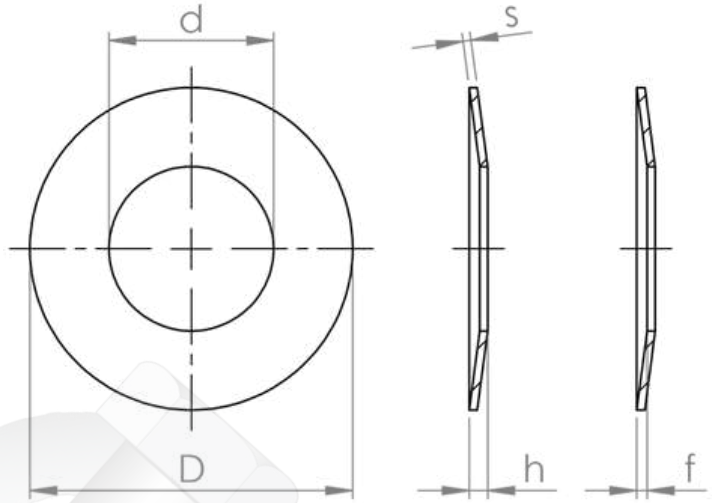
RÜZGAR CIVATA

BAĞLANTI ELEMANLARI



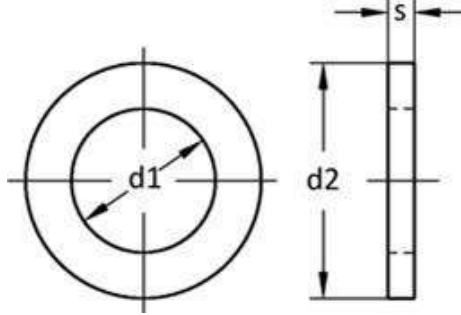
NOMİNAL BOYUT NOMINAL SIZE	d	D	S	AĞIRLIK WEIGHT
M4	4,20	8,00	0,20	0,06 gr
			0,30	0,09 gr
			0,40	0,11 gr
M5	5,20	10,00	0,25	0,11 gr
			0,40	0,18 gr
			0,50	0,22 gr
M5	5,20	15,00	0,40	0,49 gr
M6	6,20	12,50	0,35	0,29 gr
			0,50	0,36 gr
			0,70	0,51 gr
M7	7,20	14,00	0,35	0,62 gr
			0,80	0,71 gr
M8	8,20	16,00	0,60	0,70 gr
			0,90	1,05 gr
M9	9,20	18,00	1,00	1,48 gr
		20,00	0,80	1,56 gr
M10	10,20	20,00	0,50	0,91 gr
			0,80	1,46 gr
			1,10	2,01 gr
			1,25	2,28 gr
M11	11,20	22,50	0,60	1,41 gr
			0,80	1,88 gr
			1,25	1,88 gr
M12	12,20	25,00	0,70	2,05 gr
			0,90	2,64 gr
			1,25	2,64 gr
			1,50	4,40 gr
M14	14,20	28,00	0,80	2,87 gr
			1,50	5,39 gr
			2,00	5,39 gr
M16	16,30	31,50	0,80	3,58 gr
			1,25	3,58 gr
			1,75	3,58 gr
M18	18,30	35,50	0,90	5,13 gr
			1,25	5,13 gr
			2,00	11,41 gr
M20	20,40	40,00	1,00	7,30 gr
			1,50	10,95 gr
			2,25	10,95 gr
M22	22,40	45,00	1,25	14,09 gr
			1,75	14,09 gr
			2,50	23,48 gr
M24	25,40	50,00	1,25	28,59 gr
			2,00	22,87 gr
			3,00	34,31 gr
M27	28,50	56,00	1,50	21,49 gr
			2,00	28,65 gr
			3,00	42,98 gr
M30	31,00	63,00	1,80	33,38 gr
			2,50	46,36 gr
			3,50	64,91 gr
M36	36,00	71,00	2,00	46,18 gr
			2,50	57,72 gr
			4,00	92,36 gr
M39	41,00	80,00	2,25	116,38 gr
			3,00	87,28 gr
			5,00	145,47 gr
M45	46,00	90,00	5,00	184,47 gr

TEKNİK BİLGİLER / TECHNICAL INFORMATIONS



DEĞERLER MİLİMETRE OLARAK VERİLMİŞTİR / VALUES ARE GIVEN AS MILLIMETERS





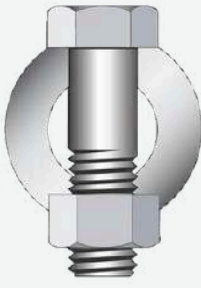
**TEKNİK BİLGİLER / TECHNICAL INFORMATION**

NOMİNAL BOYUT NOMINAL SIZE	d1	d2	s	AĞIRLIK WEIGHT
M 3	3,20	9,00	1,00	0,44 gr
M 4	4,30	12,00	1,60	1,24 gr
M 5	5,30	15,00	2,00	2,43 gr
M 6	6,40	17,00	3,00	4,59 gr
M 8	8,40	21,00	4,00	9,14 gr
M 10	10,50	25,00	4,00	12,69 gr
M 12	13,00	30,00	6,00	27,04 gr
M 14	15,00	36,00	6,00	39,62 gr
M 16	17,00	40,00	6,00	48,50 gr
M 18	19,00	44,00	8,00	77,68 gr
M 20	21,00	44,00	8,00	73,74 gr
M 22	23,00	50,00	8,00	97,22 gr
M 24	25,00	50,00	10,00	115,60 gr
M 27	28,00	60,00	10,00	173,62 gr
M 30	31,00	68,00	10,00	225,84 gr

DEĞERLER MİLİMETRE OLARAK VERİLMİŞTİR / VALUES ARE GIVEN AS MILLIMETERS

RÜZGAR

BAĞLANTI



CIVATA

ELEMANLARI



# SOMUNLAR

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# NUTS

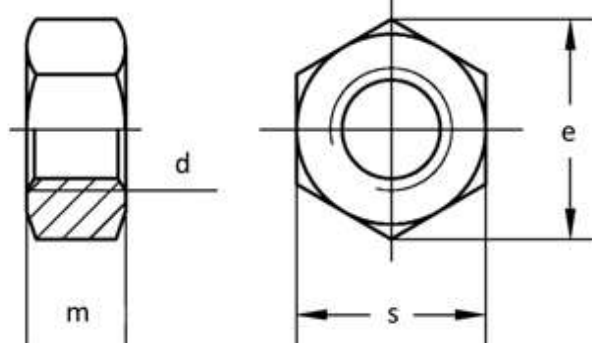
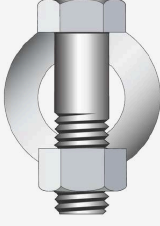
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**TEKNİK BİLGİLER / TECHNICAL INFORMATIONS**

NOMİNAL BOYUT NOMINAL SIZE	DIŞ ADIMI PITCH (P)	ANAHTAR HEAD WIDTH (S)	KÖŞEĞEN DIAGONAL (e)	YÜKSEKLİK HEIGHT (m)	YÜKSEKLİK HEIGHT (min)	AĞIRLIK WEIGHT (GR)
M3	0,50	5,50	6,01	2,40	2,10	0,38
M4	0,70	7,00	7,74	3,20	2,90	0,81
M5	0,80	8,00	8,87	4,00	3,70	1,23
M6	1,00	10,00	11,05	5,00	4,70	2,50
M7	1,00	11,00	12,12	5,50	5,20	3,12
M8	1,25	13,00	14,38	6,50	6,14	5,20
M10	1,50	17,00	18,90	8,00	7,64	11,60
M12	1,75	19,00	21,10	10,00	9,64	17,30
M14	2,00	22,00	24,49	13,00	10,30	25,00
M16	2,00	24,00	26,75	15,00	12,30	33,30
M18	2,50	27,00	30,14	16,00	14,30	49,40
M20	2,50	30,00	33,53	18,00	14,90	64,40
M22	2,50	32,00	35,72	19,00	16,90	79,00
M24	3,00	36,00	39,98	22,00	17,90	110,00
M27	3,00	41,00	45,69	-	20,50	165,00

NOMİNAL BOYUT NOMINAL SIZE	DIŞ ADIMI PITCH (P)	ANAHTAR HEAD WIDTH (S)	KÖŞEĞEN DIAGONAL (e)	YÜKSEKLİK HEIGHT (m)	YÜKSEKLİK HEIGHT (min)	AĞIRLIK WEIGHT (GR)
M30	3,50	46,00	51,29	24,00	22,50	223,00
M33	3,50	50,00	55,80	26,00	24,00	288,00
M36	4,00	55,00	61,31	29,00	27,00	393,00
M39	4,00	60,00	66,96	31,00	28,50	502,00
M42	4,50	65,00	72,61	34,00	32,40	652,00
M45	4,50	70,00	78,26	36,00	34,40	800,00
M48	5,00	75,00	83,91	38,00	36,40	977,00
M52	5,00	80,00	89,56	42,00	40,40	1220,00
M56	5,50	85,00	95,07	45,00	43,40	1420,00
M60	5,50	90,00	99,21	48,00	46,40	1690,00
M64	6,00	95,00	104,86	51,00	49,10	1980,00
M68	6,00	100,00	110,51	54,00	52,10	2300,00
M72	-	105,00	116,16	58,00	56,10	2670,00
M76	-	110,00	121,81	61,00	59,10	3040,00
M80	-	115,00	127,46	64,00	62,10	3440,00

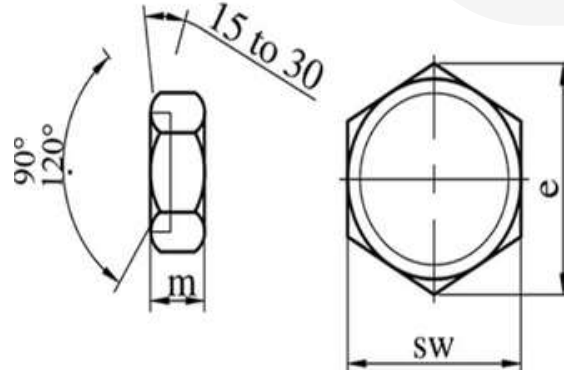
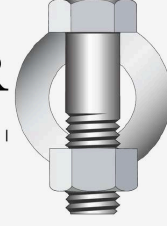
DEĞERLER MİLİMETRE OLARAK VERİLMİŞTİR / VALUES ARE GIVEN AS MILLIMETERS

"DIN 6915" - "DIN 936"

Altı Köşe Ağır Yük Somunu - Altıköşe Kontra Somun

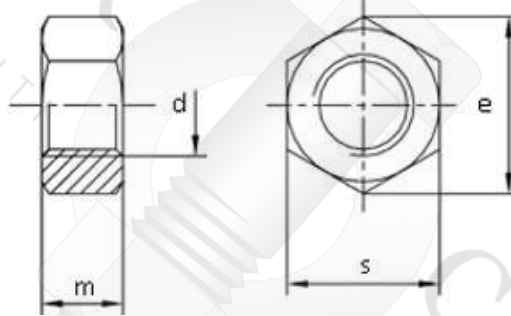
Hexagon Heavy Duty Nut - Hexagon Thin Nut

RÜZGAR BAĞLANTI RÜZGAR CIVATA ELEMANLARI



TEKNİK BİLGİLER / TECHNICAL INFORMATIONS

NOMİNAL BOYUT NOMINAL SIZE	DIŞ ADIMI PITCH (P)	ANAHTAR HEAD WIDTH (SW)	KÖŞEĞEN DIAGONAL (e)	YÜKSEKLİK HEIGHT (m)	YÜKSEKLİK HEIGHT (min)	AĞIRLIK WEIGHT (GR)
M12	1,75	22,00	23,91	10,00	9,64	23,30
M16	2,00	27,00	29,56	13,00	12,30	44,80
M20	2,50	32,00	35,03	16,00	14,90	73,90
M22	2,50	36,00	39,55	18,00	16,90	104,00
M24	3,00	41,00	45,20	19,00	17,70	155,00
M27	3,00	46,00	50,85	22,00	20,70	224,00
M30	3,50	50,00	55,37	24,00	22,70	300,00
M36	4,00	60,00	66,44	29,00	27,70	515,00



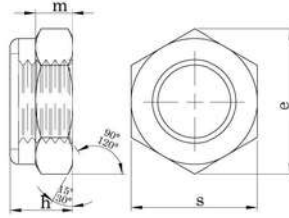
DIN 936

TEKNİK BİLGİLER / TECHNICAL INFORMATIONS

NOMİNAL BOYUT NOMINAL SIZE	DIŞ ADIMI PITCH (P)	ANAHTAR HEAD WIDTH (S)	KÖŞEĞEN DIAGONAL (e)	YÜKSEKLİK HEIGHT (m)	YÜKSEKLİK HEIGHT (min)	AĞIRLIK WEIGHT (GR)
M8	1,25	13,00	14,38	5,00	4,70	4,00
M10	1,50	17,00	18,90	6,00	5,70	8,60
M12	1,75	19,00	21,10	7,00	6,64	12,10
M14	2,00	22,00	24,49	8,00	7,42	18,20
M16	2,00	24,00	26,75	8,00	7,42	20,10
M18	2,50	27,00	29,56	9,00	8,42	29,60
M20	2,50	30,00	32,95	9,00	8,10	36,30

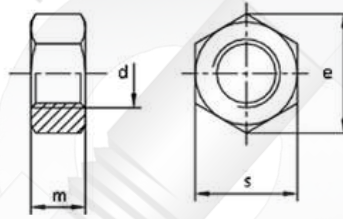
DEĞERLER MİLİMETRE OLARAK VERİLMİŞTİR / VALUES ARE GIVEN AS MILLIMETERS





**TEKNİK BİLGİLER / TECHNICAL INFORMATIONS**

NOMİNAL BOYUT NOMINAL SIZE	DIŞ ADIMI PITCH (P)	ANAHTAR HEAD WIDTH (S)	KÖŞEĞEN DIAGONAL (e)	YÜKSEKLİK HEIGHT (m)	YÜKSEKLİK HEIGHT (min)	AĞIRLIK WEIGHT (GR)
M3	0,50	-	5,50	6,01	4,00	0,50
M4	0,70	-	7,00	7,66	5,00	1,00
M5	0,80	-	8,00	8,79	5,00	1,40
M6	1,00	-	10,00	11,05	6,00	2,40
M7	1,00	-	11,00	12,12	7,50	3,00
M8	1,25	1,00	13,00	14,38	8,00	5,10
M10	1,50	1,25	17,00	18,90	10,00	10,60
M12	1,75	1,50	19,00	21,10	12,00	17,20
M14	2,00	1,50	22,00	24,49	14,00	26,00
M16	2,00	1,50	24,00	26,75	16,00	34,00
M18	2,50	2,00	27,00	29,56	18,50	45,00
M20	2,50	2,00	30,00	32,95	20,00	65,00
M22	2,50	2,00	32,00	35,03	22,00	75,00
M24	3,00	2,00	36,00	39,55	24,00	100,00
M27	3,00	2,00	41,00	45,20	27,00	162,00
M30	3,50	2,00	46,00	55,85	30,00	317,00
M33	3,50	2,00	50,00	55,37	33,00	317,00
M36	4,00	2,00	55,00	60,79	36,00	415,00
M39	4,00	3,00	60,00	66,44	39,00	499,00



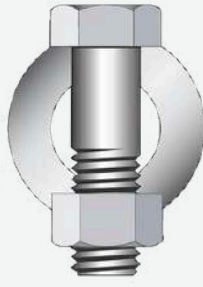
**DIN 555**

**TEKNİK BİLGİLER / TECHNICAL INFORMATIONS**

NOMİNAL BOYUT NOMINAL SIZE	DIŞ ADIMI PITCH (P)	ANAHTAR HEAD WIDTH (S)	KÖŞEĞEN DIAGONAL (e)	YÜKSEKLİK HEIGHT (m)	YÜKSEKLİK HEIGHT (min)	AĞIRLIK WEIGHT (GR)
M5	0,8	8	8,63	4	3,7	1,11
M6	1	10	10,89	5	4,7	2,32
M8	1,25	13	14,2	6,5	6,14	4,62
M10	1,5	17	18,72	8	7,64	10,9
M12	1,75	19	20,88	10	9,64	15,9
M14	2	22	24,97	11	10,3	25
M16	2	24	26,17	13	12,3	30,8
M18	2,5	27	30,05	15	14,3	49,4
M20	2,5	30	32,95	16	14,9	60,3
M22	2,5	32	36,1	18	16,9	80,2
M24	3	36	39,95	19	17,9	103
M27	3	41	45,2	22	20,5	154
M30	3,5	46	50,85	24	22,5	216
M33	3,5	50	55,37	26	24	271
M36	4	55	60,79	29	27	369
M39	4	60	66,44	31	28,5	472

**DEĞERLER MİLİMETRE OLARAK VERİLMİŞTİR / VALUES ARE GIVEN AS MILLIMETERS**

RÜZGAR  
BAĞLANTI



CIVATA  
ELEMENLARI



# CIVATALAR

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# BOLTS

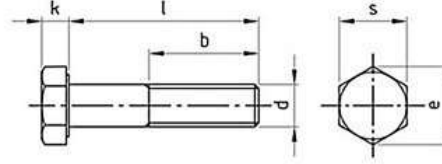
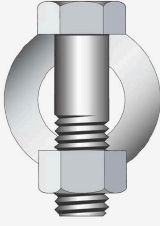
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## TEKNİK BİLGİLER / TECHNICAL INFORMATION

Thread size / Anma çapı		M3	M4	M5	M6	M7	M8	M10	M12	M14	M16	M18	M20	M22	M24	M27	M30	M33	M36	M39
Pitch Diş adımı	P	0,50	0,70	0,80	1,00	1,00	1,25	1,50	1,75	2,00	2,00	2,50	2,50	2,50	3,00	3,00	3,50	3,50	4,00	4,00
Wire dia Tel çapı	min	2,86	3,82	4,82	5,82	6,78	7,78	9,78	11,73	13,73	15,73	17,73	19,67	21,67	23,67	26,48	29,48	32,38	35,38	38,38
Head height Kafa yüksekliği	k	2,00	2,80	3,50	4,80	4,80	5,30	6,40	7,50	8,80	10,00	11,50	12,50	14,00	15,00	17,00	18,70	21,00	22,50	25,00
	+/-	1,12	0,12	0,15	0,15	0,15	0,15	0,18	0,18	0,18	0,18	0,22	0,22	0,22	0,22	0,35	0,42	0,42	0,42	0,42
Head width Anahtar	s	5,50	7,00	8,00	10,00	11,00	13,00	17,00	19,00	22,00	24,00	27,00	30,00	32,00	36,00	41,00	46,00	50,00	55,00	60,00
Diagonal Köşegen	e	6,01	7,66	8,79	11,05	12,12	14,38	18,90	21,10	24,49	26,75	30,14	33,53	35,72	39,98	45,20	50,85	55,37	60,79	66,44
Thread length Diş uzunluğu	b <sup>1</sup>	12,00	14,00	16,00	18,00	20,00	22,00	26,00	30,00	34,00	38,00	42,00	46,00	50,00	54,00	60,00	66,00	72,00	78,00	84,00
	b <sup>2</sup>	-	-	22,00	24,00	26,00	28,00	32,00	36,00	40,00	44,00	48,00	52,00	56,00	60,00	66,00	72,00	78,00	84,00	90,00
	b <sup>3</sup>	-	-	-	-	-	-	45,00	49,00	53,00	57,00	61,00	65,00	69,00	73,00	79,00	85,00	91,00	97,00	103,00

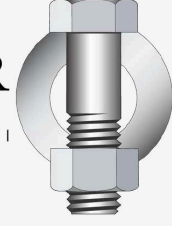
Thread size / Anma çapı		M3	M4	M5	M6	M7	M8	M10	M12	M14	M16	M18	M20	M22	M24	M27	M30	M33	M36	M39
Length / Boy		Mass for 1.000 units in kg. / 1.000 Tanesinin ağırlığı.																		
20	+/-	0,42	1,29																	
22	+/-	0,42	1,43																	
25	+/-	0,42	1,57	3,12	4,86															
28	+/-	0,42	1,71	3,32	5,25															
30	+/-	0,42	1,85	3,61	5,64	8,06	12,70													
35	+/-	0,50		4,04	6,42	9,13	13,60	18,20												
40	+/-	0,50		4,53	7,20	10,20	15,10	20,30	35,00											
45	+/-	0,50			7,98	11,30	16,60	22,20	38,00	53,60										
50	+/-	0,60			8,76	12,30	18,10	24,20	41,10	58,10	82,00									
55	+/-	0,60				13,40	19,50	25,80	43,80	62,60	88,10	115,00								
60	+/-	0,60				14,40	21,00	27,80	46,90	67,00	94,10	123,00								
65	+/-	0,60				15,50	22,50	29,80	50,00	70,30	98,80	131,00	171,00	219,00						
70	+/-	0,60				16,60	24,00	31,80	53,10	74,70	105,00	139,00	181,00	231,00	281,00					
75	+/-	0,60				17,60		33,70	56,20	79,10	111,00	147,00	191,00	243,00	296,00					
80	+/-	0,70				18,70		35,70	59,30	83,60	117,00	155,00	200,00	255,00	311,00	392,00				
85	+/-	0,70				19,80		37,60	62,40	88,10	123,00	163,00	210,00	267,00	326,00	410,00				
90	+/-	0,70				20,90		39,50	65,50	92,40	127,00	171,00	220,00	279,00	341,00	428,00	557,00	712,00		
95	+/-	0,70				21,90		41,40	68,60	96,80	133,00	179,00	230,00	291,00	356,00	446,00	580,00	739,00		
100	+/-	0,70				23,00		43,30	71,70	101,00	139,00	186,00	240,00	303,00	370,00	464,00	603,00	767,00	951,00	
110	+/-	0,70				25,20		47,20	76,60	109,00	151,00	202,00	260,00	327,00	400,00	500,00	650,00	823,00	1020,00	1240,00
120	+/-	0,70				27,30		51,10	82,20	118,00	164,00	218,00	280,00	351,00	430,00	535,00	695,00	880,00	1090,00	1320,00
130	+/-	0,80				29,70		54,10	87,60	126,00	174,00	230,00	296,00	374,00	450,00	560,00	720,00	920,00	1150,00	1390,00
140	+/-	0,80				31,80		57,90	93,60	134,00	185,00	246,00	316,00	398,00	480,00	595,00	765,00	975,00	1220,00	1470,00
150	+/-	0,80				34,00		61,70	99,60	143,00	195,00	262,00	336,00	422,00	510,00	630,00	810,00	1030,00	1290,00	1550,00
160	+/-	0,80										278,00	356,00	446,00	540,00	665,00	855,00	1085,00	1350,00	1630,00
170	+/-	0,80											376,00	470,00	570,00	700,00	900,00	1140,00	1410,00	1710,00
180	+/-	0,80											396,00	494,00	600,00	735,00	945,00	1200,00	1480,00	1790,00
190	+/-	0,92												519,00	630,00	770,00	990,00	1250,00	1540,00	1870,00
200	+/-	0,92												544,00	660,00	805,00	1030,00	1310,00	1610,00	1950,00
220	+/-	2,30													720,00	870,00	1130,00	1420,00	1750,00	2110,00
240	+/-	2,30														935,00	1220,00	1530,00	1880,00	2270,00
260	+/-	2,60															1310,00	1640,00	2020,00	2430,00
280	+/-	2,60																1750,00	2150,00	2590,00
300	+/-	2,60																	1860,00	2290,00

DEĞERLER MİLİMETRE OLARAK VERİLMİŞTİR / VALUES ARE GIVEN AS MILLIMETERS

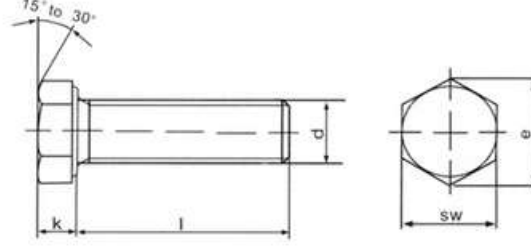
"DIN 933"

Altıköşe Başlı Tam Diş Cıvata  
Hexagon Head Full Thread Bolt

RÜZGAR  
BAĞLANTI



CIVATA  
ELEMENLARI



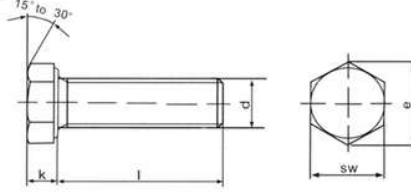
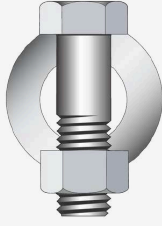
TEKNİK BİLGİLER / TECHNICAL INFORMATION

Thread size / Anma çapı	M3	M4	M5	M6	M7	M8	M10	M12	M14	M16	M18	M20	M22	M24	M27	M30	M33	M36	M39	
Pitch Diş adımı	P	0,50	0,70	0,80	1,00	1,00	1,25	1,50	1,75	2,00	2,00	2,50	2,50	3,00	3,00	3,50	3,50	4,00	4,00	
Head height Kafa yüksekliği	k	2,00	2,80	3,50	4,00	4,80	5,30	6,40	7,50	8,80	10,00	11,50	12,50	14,00	15,00	17,00	18,70	21,00	22,50	25,00
Head width Anahtar	SW	5,50	7,00	8,00	10,00	11,00	13,00	17,00	19,00	22,00	24,00	27,00	30,00	32,00	36,00	41,00	46,00	50,00	55,00	60,00
Diagonal Köşegen	e	6,01	7,66	8,79	11,05	12,12	14,38	18,90	21,10	24,49	26,75	30,14	33,53	35,72	39,98	45,20	50,85	55,37	60,79	66,44

Thread size / Anma çapı	M3	M4	M5	M6	M7	M8	M10	M12	M14	M16	M18	M20	M22	M24	M27	M30	M33	M36	M39		
Length / Boy	Mass for 1.000 units in kg. / 1.000 Tanesinin ağırlığı.																				
10	+/-	0,29	0,75	1,64	2,63	4,08	6,35	9,10	16,20	23,30	38,00										
12	+/-	0,35	0,84	1,80	2,87	4,42	6,85	9,80	17,20	25,00	40,00	52,90									
14	+/-	0,35	0,92	1,95	3,12	4,76	7,35	10,50	18,20	26,40	42,00	55,60									
16	+/-	0,35	1,00	2,10	3,37	5,11	7,85	11,10	19,20	27,70	44,00	58,30	82,00	105,00	133,00	173,00					
18	+/-	0,35	1,09	2,25	3,62	5,45	8,35	11,70	20,20	29,10	46,00	60,90	84,90	110,00	137,00	178,00					
20	+/-	0,42	1,18	2,41	3,87	5,80	8,85	12,30	21,20	31,00	48,00	63,50	87,20	114,00	143,00	184,00					
22	+/-	0,42	1,27	2,56	4,12	6,15	9,35	12,90	22,20	33,00	50,00	66,20	92,20	119,00	148,00	190,00	269,00				
25	+/-	0,42	1,40	2,80	4,49	6,65	10,00	13,90	23,70	34,10	53,00	70,20	95,80	124,00	155,00	199,00	280,00				
28	+/-	0,42	1,52	3,04	4,86	7,15	10,70	14,90	25,20	36,20	55,90	74,20	100,00	129,00	161,00	205,00	292,00				
30	+/-	0,42	1,61	3,19	5,11	7,51	11,30	15,50	26,20	37,70	57,90	76,90	104,00	134,00	168,00	214,00	310,00				
35	+/-	0,50		3,57	5,73	8,37	12,50	17,10	28,70	41,30	62,90	83,50	112,00	145,00	181,00	229,00	319,00	424,00	543,00	670,00	869,00
40	+/-	0,50		3,96	6,35	9,23	13,80	18,70	31,20	44,90	67,90	90,20	120,00	155,00	193,00	244,00	338,00	448,00	572,00	714,00	910,00
45	+/-	0,50		4,34	6,99	10,10	15,00	20,30	33,70	48,50	72,90	97,10	128,00	165,00	206,00	259,00	358,00	472,00	601,00	748,00	951,00
50	+/-	0,50		4,73	7,59	11,00	16,30	21,80	36,20	52,00	77,90	103,00	136,00	176,00	219,00	274,00	377,00	496,00	630,00	783,00	992,00
60	+/-	0,60		5,50	8,83	12,70	18,70	25,00	41,30	58,20	87,80	117,00	153,00	196,00	244,00	304,00	416,00	543,00	688,00	851,00	1070,00

DEĞERLER MİLİMETRE OLARAK VERİLMİŞTİR / VALUES ARE GIVEN AS MILLIMETERS





## TEKNİK BİLGİLER / TECHNICAL INFORMATION

Thread size / Anma çapı		M12	M16	M20	M22	M24	M27	M30	M36
<b>Pitch</b> Diş adımı	P	1,75	2,00	2,50	2,50	3,00	3,00	3,50	4,00
<b>Wire dia</b> Tel çapı	min .	11,30	15,30	19,16	19,16	23,16	26,16	29,16	35,00
<b>Head height</b> Kafa yüksekliği	k	8,00	10,00	13,00	14,00	15,00	17,00	19,00	23,00
	+/-	0,45	0,75	0,90	0,90	0,90	0,90	1,05	1,05
	k'	5,28	6,47	8,47	8,47	9,87	11,27	12,56	15,36
<b>Head width</b> Anahtar	SW	22,00	27,00	32,00	36,00	41,00	46,00	50,00	60,00
<b>Diagonal</b> Köşegen	e	23,91	29,56	35,03	39,55	45,20	50,85	55,37	66,44
<b>Thread length</b> Diş uzunluğu	b <sup>1</sup>	21,00	26,00	31,00	32,00	34,00	37,00	40,00	48,00
	b <sup>2</sup>	23,00	28,00	33,00	34,00	37,00	39,00	42,00	50,00

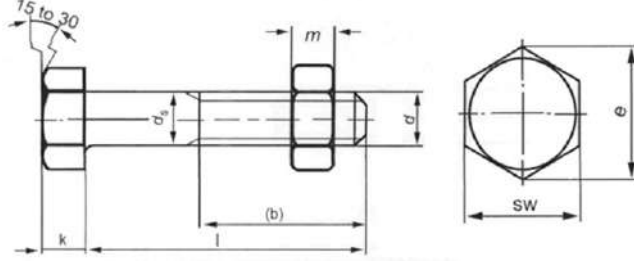
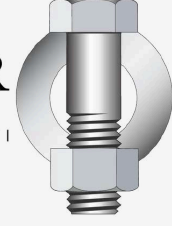
Thread size / Anma çapı			M12	M16	M20	M22	M24	M27	M30	M36
Length / Boy			Mass for 1.000 units in kg. / 1.000 Tanesinin ağırlığı							
30	+/-	1,05	48,00							
35	+/-	1,25	52,00							
40	+/-	1,25	56,00	105,00						
45	+/-	1,25	59,00	113,00	180,00					
50	+/-	1,25	64,00	121,00	194,00	249,00				
55	+/-	1,50	68,00	129,00	207,00	264,00				
60	+/-	1,50	72,00	137,00	219,00	279,00	353,00			
65	+/-	1,50	77,00	145,00	232,00	294,00	371,00			
70	+/-	1,50	81,00	153,00	244,00	309,00	389,00	519,00		
75	+/-	1,50	86,00	157,00	257,00	324,00	407,00	542,00	695,00	
80	+/-	1,50	90,00	165,00	260,00	339,00	425,00	564,00	723,00	
85	+/-	1,75	95,00	173,00	282,00	354,00	443,00	587,00	751,00	1186,00
90	+/-	1,75	99,00	181,00	288,00	363,00	449,00	609,00	779,00	1226,00
95	+/-	1,75	104,00	189,00	301,00	378,00	467,00	632,00	807,00	1266,00
100	+/-	1,75	197,00	313,00	393,00	485,00	645,00	832,00	1303,00	
105	+/-	1,75	205,00	326,00	408,00	503,00	666,00	860,00	1343,00	
110	+/-	1,75	213,00	338,00	423,00	521,00	687,00	888,00	1383,00	
115	+/-	1,75	221,00	351,00	438,00	539,00	708,00	916,00	1423,00	
120	+/-	1,75	229,00	363,00	453,00	557,00	729,00	944,00	1463,00	
125	+/-	2,00	237,00	376,00	468,00	575,00	750,00	972,00	1503,00	
130	+/-	2,00	245,00	388,00	483,00	593,00	771,00	1000,00	1543,00	
135	+/-	2,00	400,00	498,00	611,00	792,00	1028,00	1583,00		
140	+/-	2,00	413,00	513,00	629,00	813,00	1055,00	1623,00		
145	+/-	2,00	425,00	528,00	647,00	834,00	1083,00	1663,00		
150	+/-	2,00	438,00	543,00	665,00	855,00	1110,00	1703,00		
155	+/-	4,00	450,00	558,00	683,00	876,00	1138,00	1743,00		
160	+/-	4,00	573,00	700,00	897,00	1168,00	1783,00			
165	+/-	4,00	588,00	718,00	918,00	1194,00	1823,00			
170	+/-	4,00	736,00	939,00	1222,00	1863,00				
175	+/-	4,00	754,00	960,00	1256,00	1903,00				
180	+/-	4,60	772,00	981,00	1284,00	1943,00				
185	+/-	4,60	790,00	1000,00	1312,00	1983,00				
190	+/-	4,60	808,00	1020,00	1340,00	2023,00				
195	+/-	4,60	826,00	1040,00	1368,00	2063,00				
200	+/-	4,60	1060,00	1396,00	2103,00					

DEĞERLER MİLİMETRE OLARAK VERİLMİŞTİR / VALUES ARE GIVEN AS MILLIMETERS

"DIN 7990"

Altıköşe Çelik Konstrüksiyon Cıvata  
Hexagon Steel Construction Bolt

RÜZGAR CİVATA  
BAĞLANTI ELEMANLARI

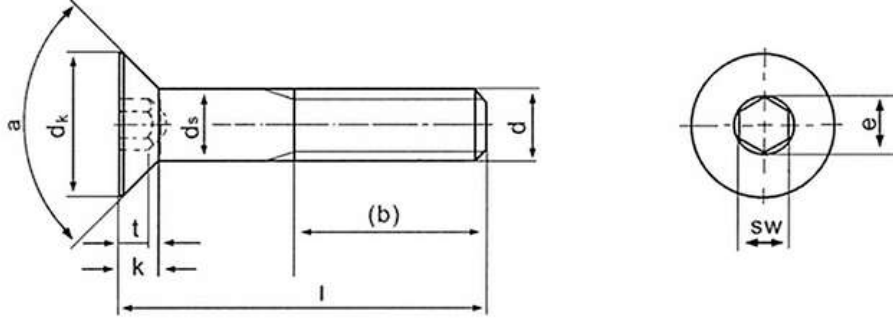
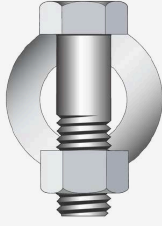


TEKNİK BİLGİLER / TECHNICAL INFORMATION

Thread size / Anma çapı		M12	M16	M20	M24	M27	M30
Pitch Diş adımı	P	1,75	2,00	2,50	3,00	3,00	3,50
Wire dia Tel çapı	min.	11,30	15,30	19,16	23,16	26,16	29,16
Head height Kafa yüksekliği	k	8,00	10,00	13,00	15,00	17,00	19,00
	+/-	0,45	0,75	0,90	0,90	0,90	1,05
Head width Anahtar	SW	18,00	24,00	30,00	36,00	41,00	46,00
Diagonal Köşegen	e	19,85	26,17	32,95	39,55	45,20	50,85
Thread length Diş uzunluğu	b	20,50	24,50	28,50	33,00	35,50	38,50

Thread size / Anma çapı			M12	M16	M20	M24	M27	M30
Length / Boy			Mass for 1.000 units in kg. / 1.000 Tanesinin ağırlığı					
30	+/-	0,42	56,20					
35	+/-	0,50	60,60	125,00				
40	+/-	0,50	65,00	133,00	249,00			
45	+/-	0,50	69,40	141,00	261,00	393,00		
50	+/-	0,50	73,80	149,00	273,00	411,00		
55	+/-	0,60	78,20	157,00	285,00	429,00		
60	+/-	0,60	82,60	165,00	297,00	447,00	611,00	
65	+/-	0,60	87,00	173,00	309,00	465,00	633,00	
70	+/-	0,60	91,40	181,00	321,00	483,00	655,00	
75	+/-	0,60	95,80	189,00	333,00	501,00	677,00	
80	+/-	0,60	100,00	197,00	345,00	519,00	699,00	920,00
85	+/-	0,70	104,00	205,00	357,00	537,00	721,00	948,00
90	+/-	0,70	108,00	213,00	369,00	555,00	743,00	976,00
95	+/-	0,70	112,00	221,00	381,00	573,00	765,00	1004,00
100	+/-	0,70	116,00	229,00	393,00	591,00	787,00	1032,00
105	+/-	0,70	120,00	240,00	405,00	609,00	809,00	1060,00
110	+/-	0,70	124,00	245,00	417,00	627,00	831,00	1088,00
115	+/-	0,70	128,00	253,00	429,00	645,00	853,00	1116,00
120	+/-	0,70	132,00	261,00	441,00	663,00	875,00	1144,00
125	+/-	0,80		269,00	453,00	681,00	897,00	1172,00
130	+/-	0,80		277,00	465,00	699,00	919,00	1200,00
135	+/-	0,80		285,00	477,00	717,00	941,00	1228,00
140	+/-	0,80		293,00	489,00	735,00	963,00	1256,00
145	+/-	0,80		301,00	501,00	753,00	985,00	1284,00
150	+/-	0,80		309,00	513,00	771,00	1007,00	1312,00
155	+/-	0,80			525,00	789,00	1029,00	1340,00
160	+/-	0,80			537,00	807,00	1051,00	1368,00
165	+/-	0,80			549,00	825,00	1073,00	1396,00
170	+/-	0,80			561,00	843,00	1095,00	1424,00
175	+/-	0,80			573,00	861,00	1117,00	1452,00
180	+/-	0,80			585,00	879,00	1139,00	1480,00
185	+/-	0,92				897,00	1161,00	1508,00
190	+/-	0,92				915,00	1183,00	1536,00
195	+/-	0,92				933,00	1205,00	1564,00
200	+/-	0,92				951,00	1227,00	1592,00

DEĞERLER MİLMETRE OLARAK VERİLMİŞTİR / VALUES ARE GIVEN AS MILLIMETERS



**TEKNİK BİLGİLER / TECHNICAL INFORMATION**

Thread size / Anma çapı		M3	M4	M5	M6	M8	M10	M12	M14	M16	M18	M20	M22	M24
Pitch Diş adımı	P	0,50	0,70	0,80	1,00	1,25	1,50	1,75	2,00	2,00	2,50	2,50	2,50	3,00
Wire dia Tel çapı	min	2,86	3,82	4,82	5,82	7,78	9,78	11,73	13,73	15,73	17,73	19,67	21,67	23,67
Head height Kafa yüksekliği	k	1,70	2,30	2,80	3,30	4,40	5,50	6,50	7,00	7,50	8,00	8,50	13,10	14,00
Head dia Kafa çapı	dk	6,00	8,00	10,00	12,00	16,00	20,00	24,00	27,00	30,00	33,00	36,00	36,00	39,00
	min	5,70	7,64	9,64	11,57	15,57	19,48	23,48	26,48	29,48	32,38	35,38	35,38	38,38
Head width Anahtar	sw	2,00	2,50	3,00	4,00	5,00	6,00	8,00	10,00	10,00	12,00	12,00	14,00	14,00
Diagonal Köşegen	e	2,30	2,87	3,44	4,58	5,72	6,86	9,15	11,43	11,43	13,72	13,72	16,00	16,00
Thread length Diş uzunluğu	b <sup>1</sup>	12,00	14,00	16,00	18,00	22,00	26,00	30,00	34,00	38,00	42,00	46,00	50,00	54,00
	b <sup>2</sup>	-	-	-	24,00	28,00	32,00	36,00	40,00	44,00	48,00	52,00	56,00	60,00
	b <sup>3</sup>	-	-	-	-	-	45,00	49,00	53,00	57,00	61,00	65,00	69,00	73,00

Thread size / Anma çapı		M3	M4	M5	M6	M8	M10	M12	M14	M16	M18	M20	M22	M24
Length / Boy		Mass for 1.000 units in kg. / 1.000 tanesinin ağırlığı												
8	+/-	0,29	0,47	0,92	1,60	2,35								
10	+/-	0,29	0,56	1,07	1,85	2,70	5,47							
12	+/-	0,35	0,65	1,23	2,10	3,05	6,10	10,10						
16	+/-	0,35	0,83	1,53	2,59	3,76	7,35	12,10						
20	+/-	0,42	1,00	1,84	3,09	4,46	8,60	14,10	21,20					
25	+/-	0,42	1,35	2,23	3,71	5,34	10,20	16,60	24,80					
30	+/-	0,42	1,63	2,90	4,33	6,22	11,70	19,10	28,50	51,80				
35	+/-	0,50		3,40	5,43	7,10	13,30	21,60	32,10	58,40	91,40			
40	+/-	0,50		3,90	6,20	8,83	14,80	24,10	35,70	65,10	102,00			
50	+/-	0,50			7,74	11,00	19,90	30,10	43,00	78,40	123,00	179,00		
60	+/-	0,60					24,80	35,70	54,00	91,70	143,00	209,00		
70	+/-	0,60						41,20	62,90	111,00	164,00	239,00		
80	+/-	0,60								127,00	200,00	269,00		
90	+/-	0,70								143,00	226,00	299,00		
100	+/-	0,70									253,00	340,00		

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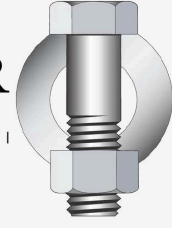
"DIN 912"

İmбус Cıvata İmбус Bolt

Imbus Bolt

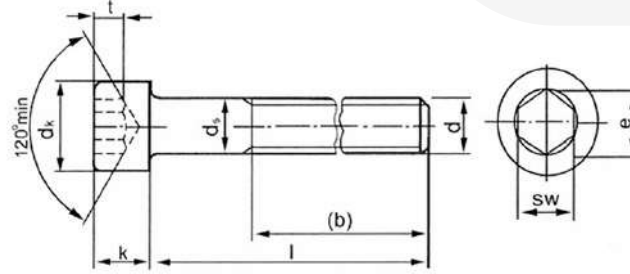
RÜZGAR

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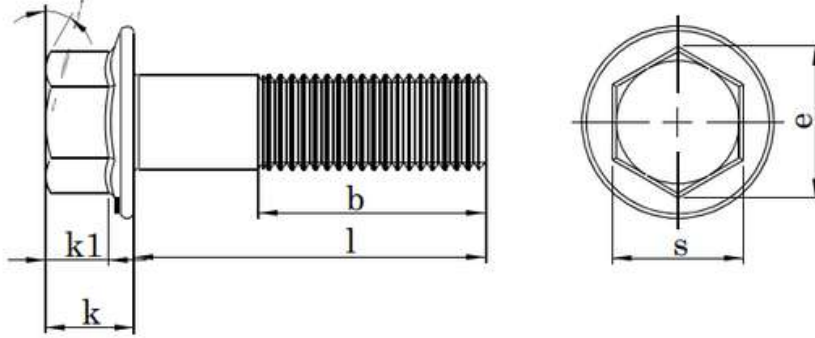
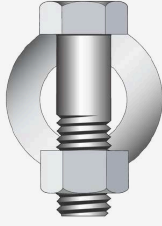


TEKNİK BİLGİLER / TECHNICAL INFORMATION

Thread size / Anma çapı		M3	M4	M5	M6	M8	M10	M12	M14	M16	M18	M20	M22	M24	M27	M30	M33
Pitch Diş adımı	P	0,50	0,70	0,80	1,00	1,25	1,50	1,75	2,00	2,00	2,50	2,50	2,50	3,00	3,00	3,50	3,50
Wire dia Tel çapı	min	2,86	3,82	4,82	5,82	7,78	9,78	11,73	13,73	15,73	17,73	19,67	21,67	23,67	26,67	29,67	32,61
Head height Kafa yüksekliği	k	3,00	4,00	5,00	6,00	8,00	10,00	12,00	14,00	16,00	18,00	20,00	22,00	24,00	27,00	30,00	33,00
	min	2,86	3,82	4,82	5,70	7,64	9,64	11,57	13,57	15,57	17,57	19,48	21,48	23,48	26,48	29,48	32,38
Head dia Kafa çapı	dk	5,50	7,00	8,50	10,00	13,00	16,00	18,00	21,00	24,00	27,00	30,00	33,00	36,00	40,00	45,00	50,00
	min	5,32	6,78	8,28	9,78	12,73	15,73	17,73	20,67	23,67	26,67	29,67	32,61	35,61	39,61	44,61	49,61
Head width Anahtar	sw	2,50	3,00	4,00	5,00	6,00	8,00	10,00	12,00	14,00	14,00	17,00	17,00	19,00	19,00	22,00	24,00
Diagonal Köşegen	e	2,87	3,44	4,58	5,72	6,86	9,15	11,43	13,72	16,00	16,00	19,44	19,44	21,73	21,73	25,15	27,43
Thread length Diş uzunluğu	b <sup>1</sup>	18,00	20,00	22,00	24,00	28,00	32,00	36,00	40,00	44,00	48,00	52,00	56,00	60,00	66,00	72,00	78,00
	b <sup>2</sup>	Fully threaded. / Tam dişli.															

Thread size / Anma çapı		M3	M4	M5	M6	M8	M10	M12	M14	M16	M18	M20	M22	M24	M27	M30	M33
Length / Boy		Mass for 1.000 units in kg. / 1.000 Tanesinin ağırlığı															
5	+/-	0,24	0,67														
6	+/-	0,24	0,71	1,50													
9	+/-	0,29	0,80	1,65	2,45												
10	+/-	0,29	0,88	1,80	2,70	4,70											
12	+/-	0,35	0,96	1,95	2,95	5,07	10,90										
16	+/-	0,35	1,16	2,25	3,45	5,75	12,10	20,90									
20	+/-	0,42	1,36	2,65	4,01	6,53	13,40	22,90	32,10								
25	+/-	0,42	1,61	3,15	4,78	7,59	15,00	25,40	35,70	48,00	71,30						
30	+/-	0,42	1,86	3,65	5,55	8,30	16,90	27,90	39,30	53,00	77,80	111,00	128,00				
35	+/-	0,50			6,32	9,91	18,90	30,40	42,90	58,00	84,40	120,00	139,00	211,00			
40	+/-	0,50			7,09	11,00	20,90	32,90	46,50	63,00	91,00	129,00	150,00	224,00	270,00		
45	+/-	0,50			7,86	12,10	22,90	36,10	50,10	68,00	97,60	138,00	161,00	237,00	285,00	330,00	500,00
50	+/-	0,50			8,63	13,20	24,90	39,30	54,50	73,00	106,00	147,00	172,00	250,00	300,00	352,00	527,00
55	+/-	0,60				14,30	26,90	42,50	58,90	78,00	114,00	156,00	183,00	263,00	316,00	374,00	554,00
60	+/-	0,60				15,40	28,90	45,70	63,40	84,00	122,00	165,00	194,00	276,00	330,00	396,00	581,00
65	+/-	0,60					31,00	48,90	67,80	90,00	130,00	174,00	205,00	291,00	345,00	418,00	608,00
70	+/-	0,60					33,00	52,10	71,30	96,00	138,00	183,00	216,00	306,00	363,00	440,00	635,00
80	+/-	0,60					37,00	58,50	80,20	108,00	154,00	203,00	241,00	336,00	399,00	484,00	690,00
90	+/-	0,70						64,90	89,10	120,00	170,00	223,00	266,00	366,00	435,00	529,00	745,00
100	+/-	0,70						71,20	98,00	132,00	186,00	243,00	291,00	396,00	471,00	574,00	800,00
110	+/-	0,70							107,00	144,00	202,00	263,00	316,00	426,00	507,00	619,00	855,00
120	+/-	0,70							116,00	156,00	218,00	283,00	341,00	456,00	543,00	664,00	910,00
130	+/-	0,80								168,00	234,00	303,00	366,00	486,00	579,00	709,00	965,00
140	+/-	0,80								180,00	250,00	323,00	391,00	516,00	615,00	754,00	1020,00
150	+/-	0,80									266,00	343,00	416,00	546,00	651,00	799,00	1008,00
160	+/-	0,80									282,00	363,00	441,00	576,00	687,00	844,00	1013,00
180	+/-	0,80										403,00	491,00	636,00	759,00	934,00	1024,00
200	+/-	0,90											541,00	696,00	831,00	1020,00	1035,00
220	+/-	0,90												756,00	903,00	1110,00	1046,00
240	+/-	0,90														975,00	1230,00
260	+/-	1,05															1340,00
280	+/-	1,05															1079,00
300	+/-	1,05															1900,00

DEĞERLER MİLİMETRE OLARAK VERİLMİŞTİR / VALUES ARE GIVEN AS MILLIMETERS



## TEKNİK BİLGİLER / TECHNICAL INFORMATION

Thread size / Anma çapı (d)	M5	M6	M8	M10	M12	M14	M16
Pitch / Diş adımı (P)	0,80	1,00	1,25	1,50	1,75	2,00	2,00
Flange dia / Flaş çapı (dc)	11,80	14,20	18,00	22,30	26,60	30,50	35,00
Flange height / Flaş yüksekliği (c)	1,00	1,10	1,20	1,50	1,80	2,10	2,40
Head height / Kafa yüksekliği (k)	5,40	6,00	8,00	10,00	12,00	14,00	14,40
Head height / Kafa yüksekliği (k1)	2,00	2,50	3,20	4,60	5,10	5,60	7,10
Head width / Anahtar ağızı (s) min.	7,78	9,78	12,73	14,73	17,92	19,63	23,15
Head width / Anahtar ağızı (s) max.	8,00	10,00	13,00	16,00	19,00	21,00	24,00
Diagonal / Köşegen (e)	8,71	10,95	15,07	16,57	19,26	23,13	25,63
Thread length / Diş uzunluğu (b1)	16,00	18,00	22,00	26,00	30,00	34,00	38,00
Thread length / Diş uzunluğu (b2)	-	-	28,00	32,00	36,00	40,00	44,00

Length / Boy	Min.	Max.	M5	M6	M8	M10	M12	M14	M16
10,00	9,71	10,29	3,22	6,94	13,76	24,04	27,90	66,13	83,82
12,00	11,65	12,35	3,46	6,94	13,76	24,04	27,90	66,13	83,82
16,00	15,65	16,35	3,94	7,62	15,01	26,01	30,42	71,01	90,37
20,00	19,58	20,42	4,42	8,30	16,25	27,97	32,38	71,01	90,37
25,00	24,58	25,42	4,95	9,16	17,80	30,42	47,90	66,13	83,82
30,00	29,58	30,42	6,00	10,50	19,38	32,38	51,46	71,01	90,37
35,00	34,50	35,50	6,75	11,75	21,60	35,70	58,57	96,98	103,50
40,00	39,50	40,50	7,48	12,65	23,10	38,53	63,18	97,30	103,50
45,00	44,50	45,50	8,50	14,85	25,45	42,15	69,45	103,50	116,60
50,00	49,50	50,50	9,87	16,74	27,25	45,25	74,55	110,40	126,70
55,00	54,40	55,60	9,71	9,67	27,50	45,30	74,65	110,45	126,75
60,00	59,40	60,40	10,46	16,96	31,36	51,24	77,21	111,20	142,30
65,00	64,40	65,60	11,20	18,03	33,27	54,25	81,55	111,20	142,30
70,00	69,40	70,60	11,94		35,19	57,27	85,89	117,10	150,00
80,00	79,40	80,60	13,43	21,26	39,03	63,29	94,56	129,00	166,00
90,00	89,30	90,70	23,41	42,87	69,32	103,20	140,80	181,10	
100,00	99,30	100,70	25,57	46,70	75,35	111,90	152,70	197,00	
110,00	109,30	110,70	81,38		120,60	164,50	212,00		
120,00	119,30	120,70	87,40		129,30	176,40	228,00		
130,00	129,20	130,80	92,76		137,00	187,00	242,00		
140,00	139,20	140,80	145,70						
150,00	149,20	150,80			198,80	257,00			
160,00	159,20	160,80			210,70				
180,00	179,20	180,80							
200,00	199,00	201,00							

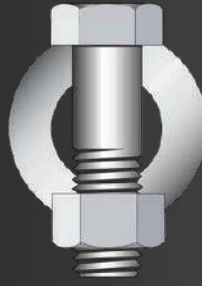
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