



KUKAMET

SCHNELLSPANNER / TOGGLE CLAMPS

www.kukamet.com.tr



**PRODUKTAKTALOG
PRODUCT CATALOGUE**

PNEUMATIC COMPONENTS FOR PRODUCTION ENGINEERING



KURUCUMUZUN MESAJI

33 yıllık tecrübemizle, bugün tüm dünyada otomotiv, savunma sanayii, beyaz eşya, gıda ve tarım ana sanayileri tarafından kullanılan hızlı bağlantı elemanlarında tercih edilen markayız. Yenilikçi anlayışla üretimin GİZLİ KAHRAMANLARINI sizlere sunuyoruz.

FOUNDER'S MESSAGE

With our 33 years of experience, today we are the preferred Toggle Clamp brand for many companies in the automotive, white goods, defense, food and agricultural industries all over the world. We will keep innovating to present you with the best secret heroes of manufacturing.

TANIM

Eşasında bir bağlantı elemanı olan toggle clamp birçok sanayi kolunda geniş bir uygulama çeşitliliğine sahiptir. Minimum güç ile maksimum sıkıştırma, itme, çekme gücü sağlar. "KUKAMET" i ayrıcalıklı kılan, ani darbe, titreşim ve sarsıntılarla karşı açılmasını engelleyecek kilit sistemine sahip olmasıdır. Ayrıca geliştirilen sıkma uçları sayesinde her şekilde parça kullanımına imkan sağlanmıştır.

KULLANIM ALANLARI

- * Otomotiv kaynak, kontrol ve montaj aparatlarında
- * Talaşlı üretimde parça sabitlemede
- * Sac sabitlemede
- * İmalat aparatlarında
- * Metal işleme alanlarında
- * Profil sıkımda
- * Kapak sıkımda
- * Seri üretim apartlarında
- * Demir plastik ve ahşap doğramada

KULLANILDIĞI SANAYİLER

- * Otomotiv
- * Beyaz eşya
- * Makine
- * Gıda
- * Plastik
- * Ahşap
- * Seramik

GENEL ÖZELLİKLER

- * Galvaniz kaplı, yüksek kaliteli, çelik sac aksamı
- * Isıt işlem görmüş ve yağlı yataklama burçları
- * 304 kalite paslanmaz krom perçinler
- * Kolay tutulabilen yağa ve kırılmaya dayanıklı insan sağlığına ve gıda uygun plastik sap
- * Farklı bağlantı tabanları ile çeşitli pozisyonlarda montaj
- * Yağa ve yanmaya dayanıklı baskı civatası iki eksenli hareket imkanı sunar böylece sabitleme mesafesi ayarlanabilir



DEFINITION

Toggle clamp that is basically a fastening element has various ranges of application in several branches of industry. It provides maximum holding, pushing pulling and squeezing forces with minimum power. Having a lock system that will prevent from being opened due to sudden impacts, vibrations or shocks grants privileges to the "KUKAMET". It also offers opportunity to use parts in any way through its compression ends.

USAGE AREAS

- * At automotive welding, control and assembly apparatus
- * For fixing parts at production
- * For fixing steel sheet
- * For production apparatus
- * At areas of metal processing
- * For profile squeeze
- * For cover squeeze
- * At apparatus of serial production
- * For chopping of wood plastics and iron

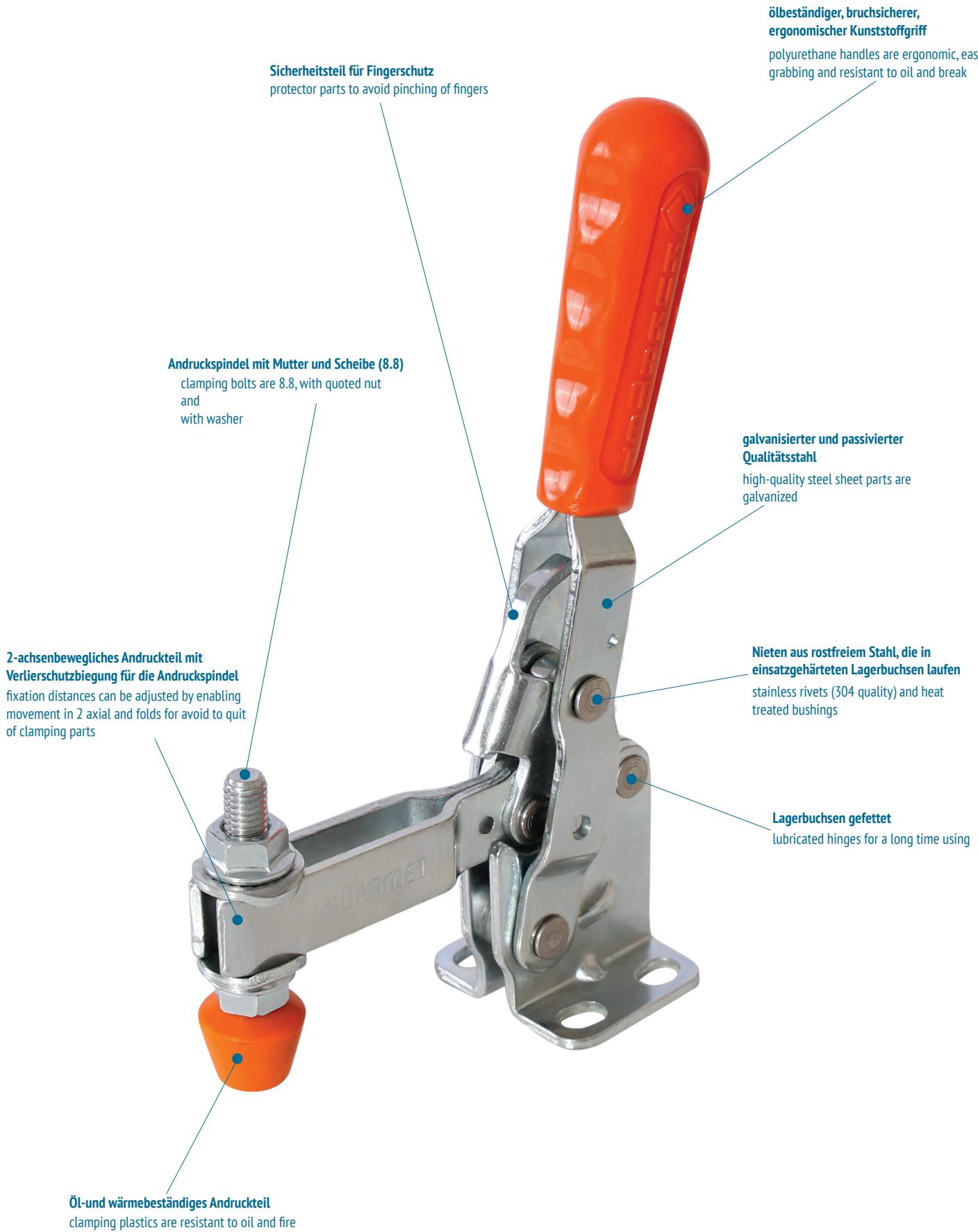
INDUSTRIAL USAGES

- * Automotive Industries
- * White goods Industries
- * Machine Manufacturers
- * Food Sector
- * Plastics Sector
- * Wood Sector
- * Ceramics Sektor

GENERAL FEATURES

- * High-quality steel sheet parts are galvanized
- * Heat treated and lubricated bushings
- * Stainless rivets (304 quality)
- * Plastic handles are easy grabbing, resistant to oil and break, suitable for human health and food
- * Assembly with different connection bases at various positions
- * Compression bolts are resistant to oil and fire, fixation distances can be adjusted by enabling movement in 2 axial

Produkt Product	Beschreibung Description	Seitennummer Page No
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- Tüm standart bağlantı elemanlarımız üstün kaliteli çelikten üretilip satışa sunulmaktadır.
- R304 kalite paslanmaz çelik perçinler üzerine yaplılığımız özel uygulamalar sayesinde aşınmayı aşağıya indirerek daha uzun kullanım ömrü sağlar.
- Isı işlem yöntemiyle sertleştirilmiş burçlar aşınmayı önler.
- Yağlanmış mafşalar kolay kullanım ve aşınmaya karşı koruma sağlar.
- Poliüretan yağı dayanıklı ergonomik sap ; rahat kullanımlı, kırılmaz ve esnekdir. 80 °C sıcaklıkta yumuşar , 180 °C sıcaklıkta erir. Bu durumda metal saplarımız önerilir.
- Lastik silikon uç ; -60 °C ile 200 °C sıcaklıklarda kullanılır. Aralıklı olarak 250 °C ye kadar dayanıklıdır. Esneklik özelliği , hava direnci ve ozon dayanımı yüksektir. Yüksek mekanik özellikler gerektiren uygulamalarda önerilmez. Bu durumda metal uçlarımız önerilir.
- Modüler Seri Bağlantı Elemanlarımızda; sıcak dövme çelikten üretilmiş kollar , sertleştirilmiş burç ve laşlanmış pimler sayesinde mukavemet bekiminden hiç problem yaşamadan ağır iş uygulamalarda uzun çalışma adetlerine ulaşmaları sağlanmıştır.
- Pnömatik Swing Bağlantı Elemanlarımızda ; çalışma ömrünü uzatan toz kapaklı koymulmuştur. Özel bir tasarım ile tekrarlama hassasiyeti sağlanmıştır.

- All our standard model toggle clamps are manufactured from high grade steel
- Special designed of our R304 quality stainless steel rivets minimize wear and ensure long endurance.
- Bushings hardened by heat treatment reduce wear
- Lubricated hinges ensure easy operation and wear resistance
- Polyurethane oil resistant ergonomic handle; for easy operation, is impact resistant and flexible. Softens at 80 °C, melts at 180 °C. For high temperatures we advice metal handles
- The silicon squeeze part can be used in temperatures between -60 °C and 200 °C. It can handle peaks in temperature up to 250 °C. It is flexible and highly resistant to air pressure and ozone. It is not suited for applications needing strong mechanical properties. For these applications we advice metal squeeze parts.
- The modular series is thanks to the forged steel arms, hardened bushings and grinded pins capable of handling the heaviest jobs with long endurance without any problem.
- Our pneumatic swing clamps are equipped with a dust guard to prolong their lifespan. Our special design ensures a high accuracy in repeating cycles.

ÖZEL KULLANIM ALANLARI İÇİN BAĞLANTI ELEMANLARI

Toggle clamps for specialized applications:

Bağlantı elemanı olan ürün gamımızın büyük bölümü , ST52 çelik , paslanmaz çelik ve siyah seri olarak da mevcuttur. Bu ürünler, ürün kodlarının önüne gelen S ve B harflerinden tanınabilir. Satış ekibimiz seçiminizi yapmanızı yardımcı olmakten mutluluk duyar.

A wide range of our toggle clamps is available in ST52 grade steel, stainless steel and in all black. These models can be identified by the letters S and B in front of the product code respectively. Our sales team will be happy to assist you to make the right choice.



PASLANMAZ ÇELİK SERİSİ

Stainless Steel Series

Sıkı hijyen gerekliliklerine tabi veya paslanmaya ve aşide karşı yüksek mukavemet gerektiren uygulamalar için ideal çözümüdür. Örneğin ; gıda , kimya ve ilaç sanayileri için uygundur. Paslanmaz çelik bağlantı elemanlarının ağır çevre şartlarına maruz kalınan uygulamalar için de kullanılması tavsiye edilir.

Paslanmaz Çeliğin En Önemli Fıydaları:

- Asit ve korozyona karşı mukavemetli
- Anti-manyetik
- Boya veya ek kaplama gerekliliğinin olmadığı

The product of choice for applications where stringent hygiene requirements or high corrosion and acid resistance is needed. For example in the Food, Chemical and Pharmaceutical industries. Stainless steel clamps and latches are also ideal for use in outdoor applications where they are subjected to harsh weather conditions. The main benefits of stainless steel are:

- Very high corrosion and acid protection against environmental influences
- Anti-magnetic properties
- No need for extra coating

SİYAH SERİSİ

Black Series

Siyah serisi ; özel olarak optik ölçüm uygulamaları için geliştirilmiştir. Uygulanan mat siyah fosfat kaplama ışık ve lazer ışınlarının yansımasını önerken aynı zamanda paslanmaya karşı da koruma sağlar. Bu bağlantı elemanlarının ışık yansıtma özelliği sayesinde ölçüm verilerinin alınması esnasında kolayca bağlanan iş parçası izole edilir ve daha yüksek kalite ölçüm verisi toplanabilmesini sağlar.

The black series is purpose designed for use with optical measurement applications. The application of a matt black phosphate coating prevents the reflection of light or laser beams, whilst also providing corrosion protection. The non-reflective properties of these clamps enable them to be isolated from the work piece easily while processing the measurement data and drastically improve data quality.

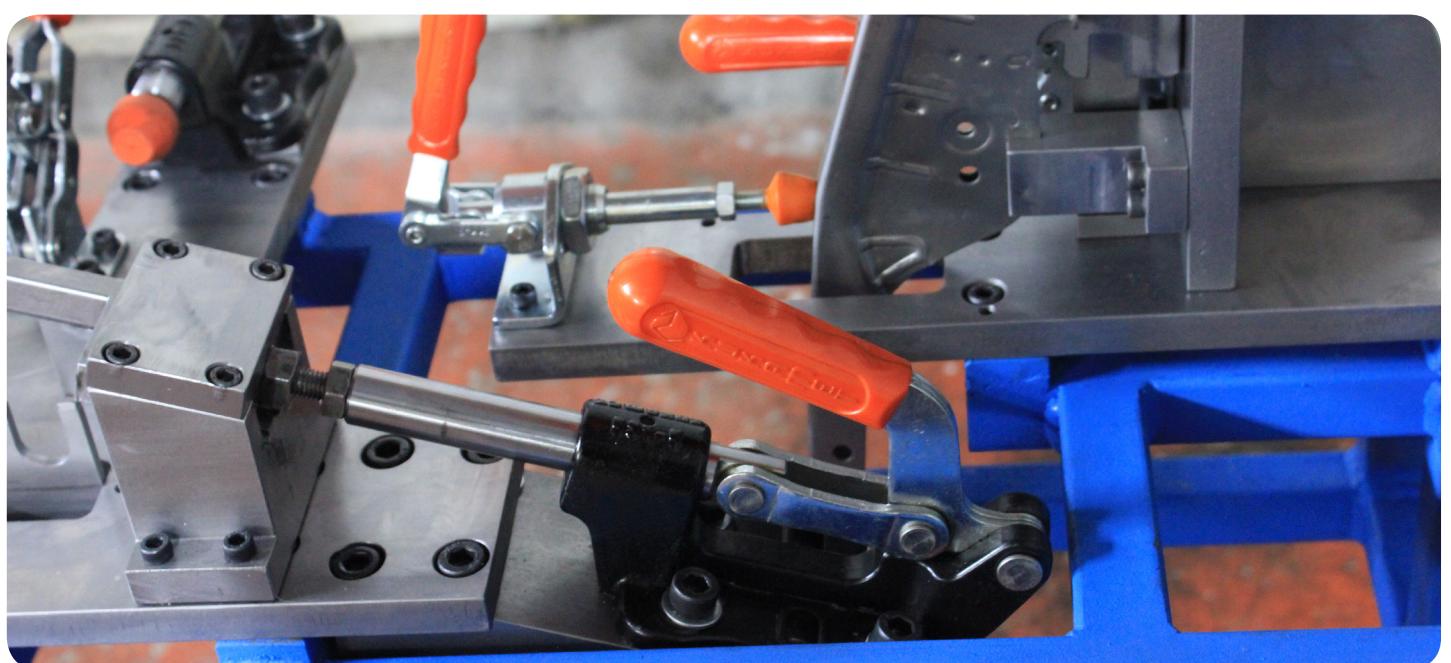
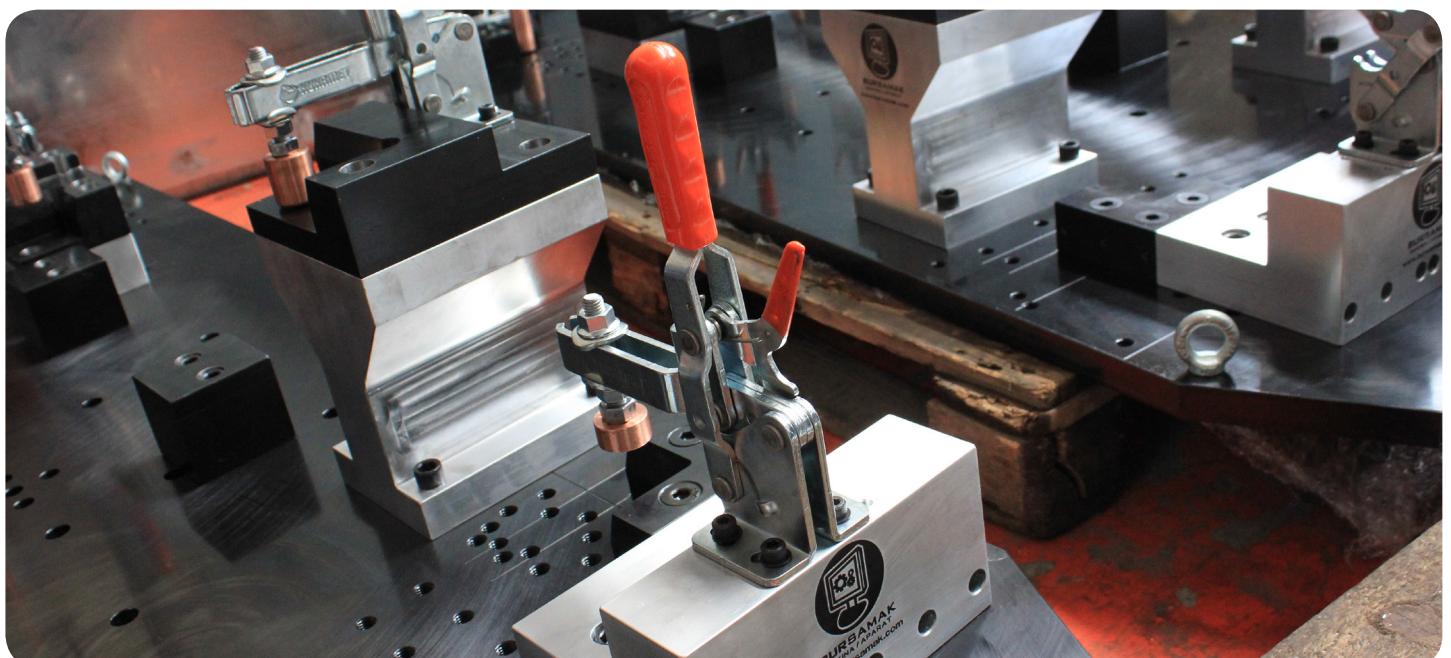
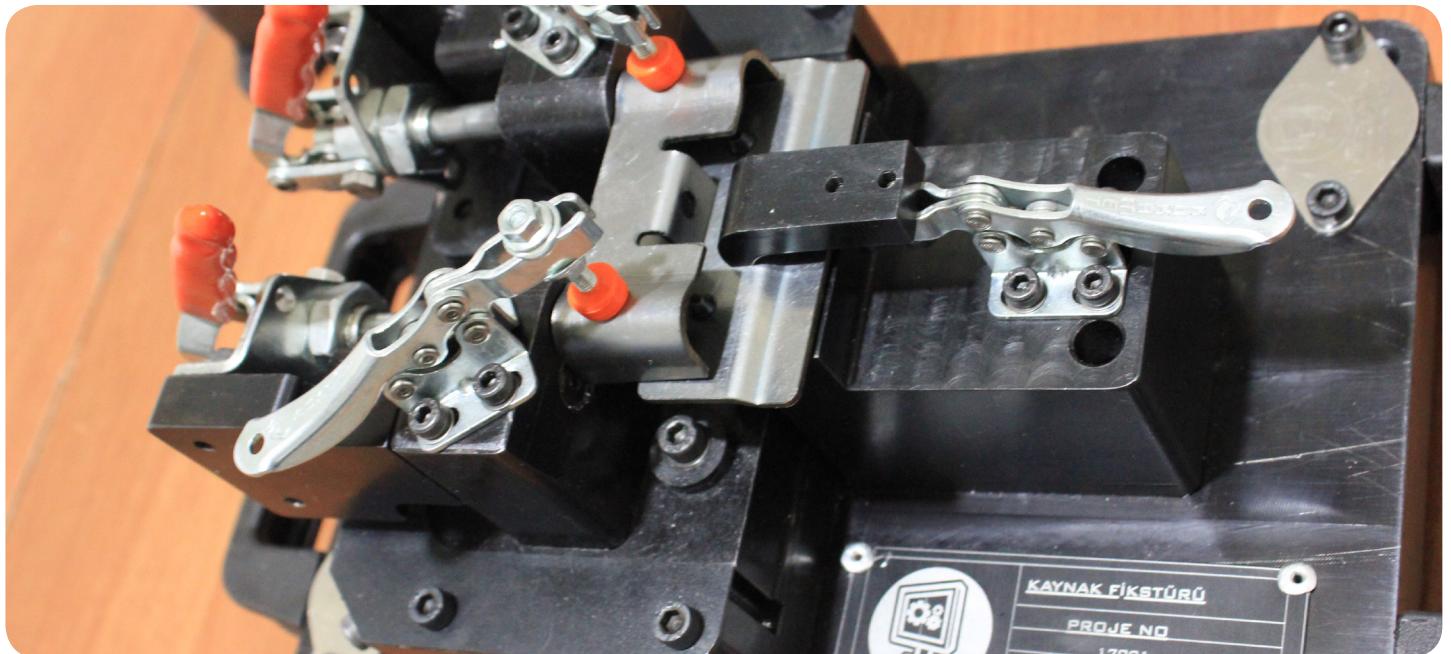


MANUELLE SCHNELLSPANNER

MANUAL TOGGLE CLAMPS



***Die schnellen und starken Helden der Fertigung...
fast and strong heroes of production...***



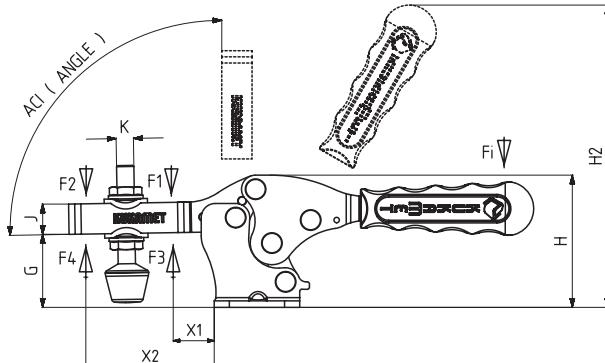
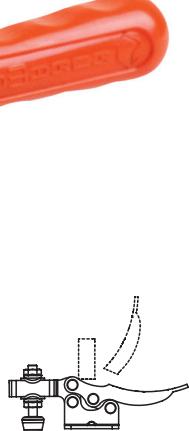
111

new



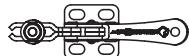
Modell Nr.	Rostfrei (Edelstahl) (STAINLESS)	Schwarz (BLACK)	F1 (N)	F2 (N)	F3 (N)	F4 (N)	Fi		Andrucks- pindel (SQUEEZE SCREW)	Winkel (ANGLE) (± 5 °)	Gewicht (WEIGHT) (gr)
							(X1) Andruckkraft (YIELD) (F1: Fi)	(X2) Andruckkraft (YIELD) (F1: Fi)			
111 - 0 - M	S 111 -	B 111 -	450	300	520	350	5:1	2:1	M4X25	90 °	42
111 - 0	S 111 -	B 111 -	450	300	520	350	5:1	2:1	M4X25	90 °	42
111 - 1	S 111 -	B 111 -	850	650	1000	800	7:1	3:1	M5X35	90 °	125
111 - 2	S 111 -	B 111 -	1000	750	1200	1000	7:1	3:1	M6X40	90 °	225
111 - 3	S 111 -	B 111 -	2300	1250	2500	1350	8:1	4:1	M8X50	90 °	340
111 - 4	S 111 -	B 111 -	3500	1800	3650	2000	9:1	4:1	M10X70	90 °	810
111 - 5	S 111 -	B 111 -	4500	2000	5000	2125	10:1	5:1	M12X80	90 °	1520

F1 - F2 : Druckkraft (EXERTING FORCE), F3 - F4 : Haltekraft (HOLDING CAPACITY), Fi : Anwendungskraft (APPLIED FORCE)

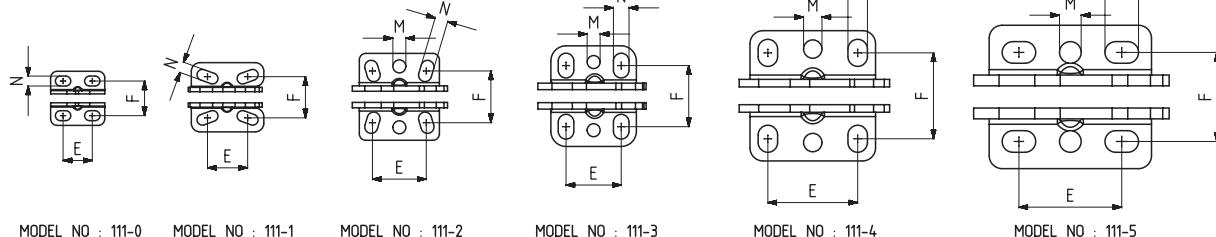
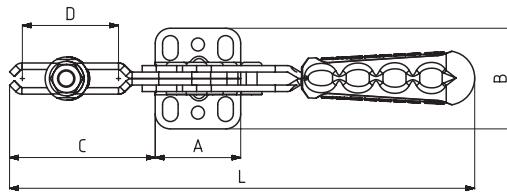


Befestigungsart : mit waagrechtem Fuß
Body Mounting Base: Horizontal

111-0-M



MODEL NO : 111-0-M
(KAPLAMASIZ METAL SAP)
(UNCOATED METAL HANDLE)



MODEL NO : 111-0

MODEL NO : 111-1

MODEL NO : 111-2

MODEL NO : 111-3

MODEL NO : 111-4

MODEL NO : 111-5

Modell Nr.	A	B	C	D	E	F	G	H	H2	J	K	L	M	N	X1	X2
111 - 0 - M	25	25	25,5	13	11 - 16	16	15	24	60	7,5	M4	82,5	4,5 x 7	11	18	
111 - 0	25	25	25,5	13	11 - 16	16	15	24	66	7,5	M4	89	4,5 x 7	11	18	
111 - 1	33,5	32	43	28	14 - 23	17,5 - 20,5	21	40	95	10	M5	148	5 x 10	15	33	
111 - 2	37	40	66	47	23,7 - 26	20 - 27,5	28	51	110	14	M6	184	Ø 6	6 x 10	19	54
111 - 3	39,5	46,5	68	42	25,5	24 - 32,5	34	61	136	14	M 8	215	Ø 6	7 x 11,5	25	53
111 - 4	58	60	100	73	41,5	36 - 43	45	82	175	19	M10	296	Ø 8,5	9 x 12,5	27	83
111 - 5	75	66	129	92	42 - 53	42	55	104	218	25,5	M12	345	Ø 10	10 x 15,5	37	107

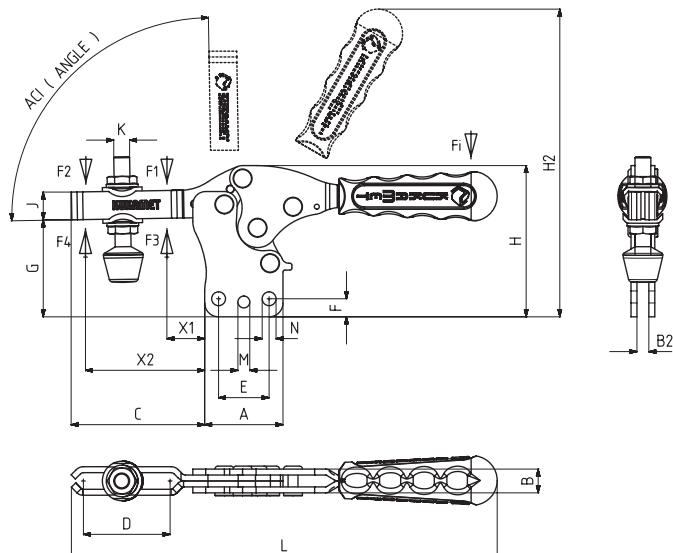
112

new



Modell Nr.	Rostfrei (Edelstahl) (STAINLESS)	Schwarz (BLACK)	F1 (N)	F2 (N)	F3 (N)	F4 (N)	Fi		Andrucks- pindel (SQUEEZE SCREW)	Winkel (ANGLE) (± 5 °)	Gewicht (WEIGHT) (gr)
							(X1) Andruckkraft (YIELD)	(X2) Andruckkraft (YIELD) (F1: Fi)			
112 - 0 - M	S 112 -	B 112 -	450	300	520	350	5:1	2:1	M4X25	90 °	42
112 - 0	S 112 -	B 112 -	450	300	520	350	5:1	2:1	M4X25	90 °	42
112 - 1	S 112 -	B 112 -	850	650	1000	800	7:1	3:1	M5X35	90 °	125
112 - 2	S 112 -	B 112 -	1000	750	1200	1000	7:1	3:1	M6X40	90 °	225
112 - 3	S 112 -	B 112 -	2300	1250	2500	1350	8:1	4:1	M8X50	90 °	340
112 - 4	S 112 -	B 112 -	3500	1800	3650	2000	9:1	4:1	M10X70	90 °	810
112 - 5	S 112 -	B 112 -	4500	2000	5000	2125	10:1	5:1	M12X80	90 °	1520

F1 - F2 : Druckkraft (EXERTING FORCE), F3 - F4 : Haltekraft (HOLDING CAPACITY), Fi : Anwendungskraft (APPLIED FORCE)

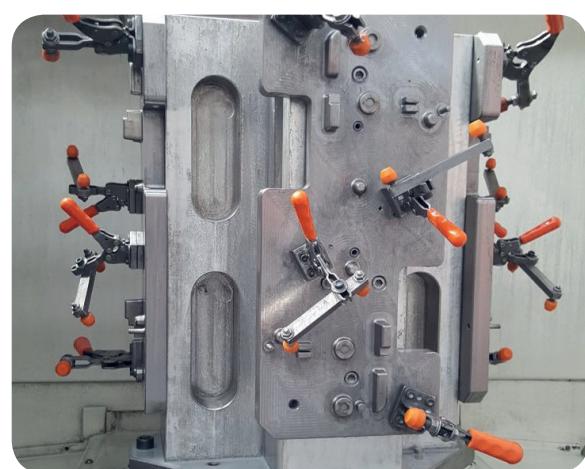
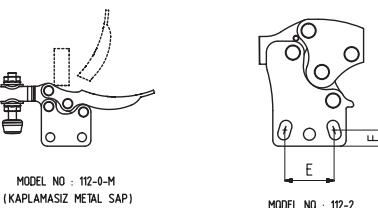


112-0-M



Befestigungsart : mit senkrechtem Fuß

Body Mounting Base: Vertical

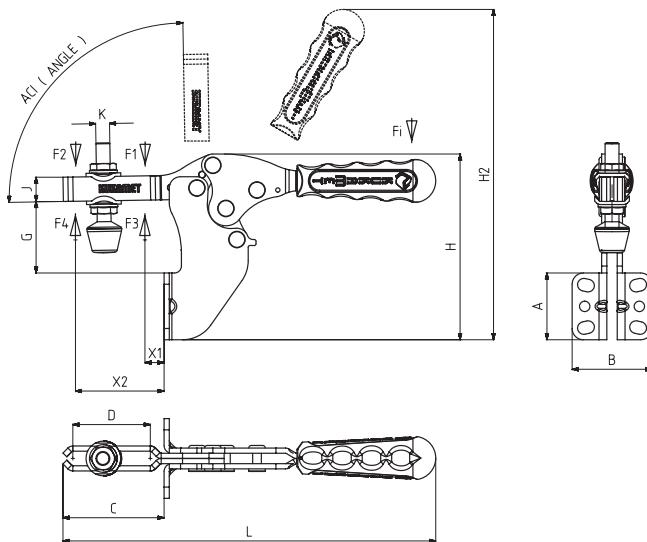


Modell Nr.	A	B	B2	C	D	E	F	G	H	H2	J	K	L	M	N	X1	X2
112 - 0 - M	25	7	4	25,5	13	16	4,5	22,5	32	68	7,5	M4	82,5		Ø 4,5	11	18
112 - 0	25	7	4	25,5	13	16	4,5	22,5	32	74	7,5	M4	89		Ø 4,5	11	18
112 - 1	33,5	9	5	43	28	23	5,5	31	50	105	10	M5	148		Ø 5	15	33
112 - 2	37	10	5	66	47	23,7 - 26	10 - 6,5	41	64	123	14	M6	184	Ø 6	6 x 10	19	54
112 - 3	39,5	12	6	68	42	25,5	9	49	76	151	14	M 8	215	Ø 6	Ø 7	25	53
112 - 4	58	16	8	100	73	41,5	8,5	65	102	195	19	M10	296	Ø 8,5	Ø 9	27	83
112 - 5	75	20	10	129	92	47,5	12	75	124	238	25,5	M12	345	Ø 10	Ø 10	37	107

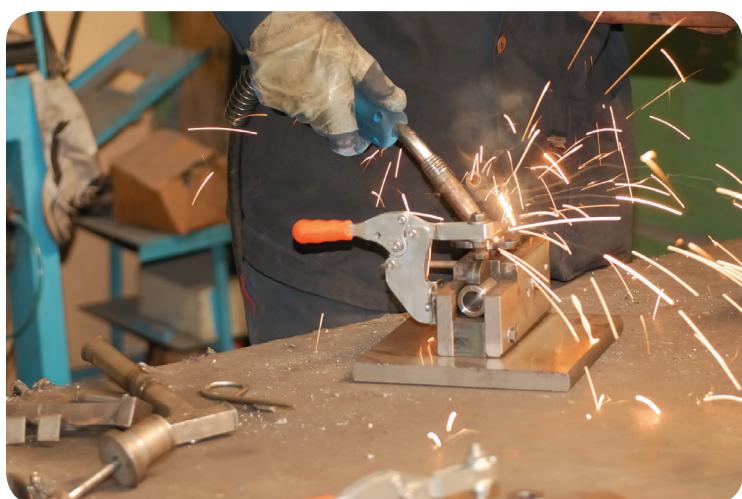
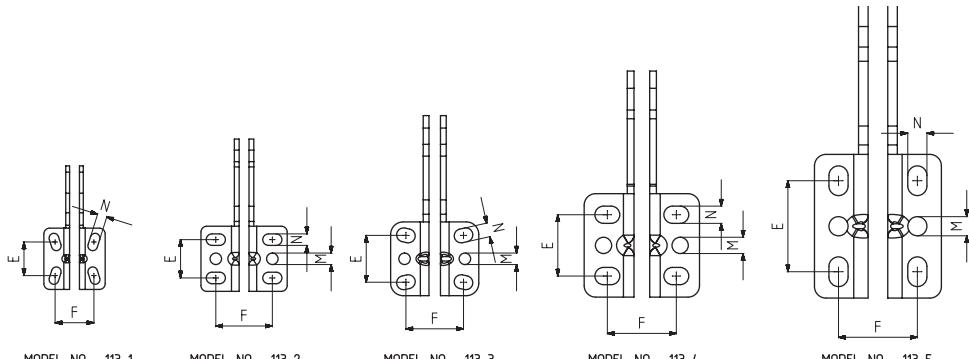
Modell Nr.	Rostfrei (Edelstahl) (STAINLESS)	Schwarz (BLACK)	F1 (N)	F2 (N)	F3 (N)	F4 (N)	Fi		Andruckspindel (SQUEEZE SCREW)	Winkel (ANGLE) (± 5 °)	Gewicht (WEIGHT) (gr)
							(X1) Andruckkraft (YIELD) (F1: Fi)	(X2) Andruckkraft (YIELD) (F1: Fi)			
113 - 1	S 113 -	B 113-	850	650	1000	800	7:1	3:1	M5X35	90 °	155
113 - 2	S 113 -	B 113-	1000	750	1200	1000	7:1	3:1	M6X40	90 °	270
113 - 3	S 113 -	B 113-	2300	1250	2500	1350	8:1	4:1	M8X50	90 °	420
113 - 4	S 113 -	B 113-	3500	1800	3650	2000	9:1	4:1	M10X70	90 °	940
113 - 5	S 113-	B 113-	4500	2000	5000	2125	10:1	5:1	M12X80	90 °	1840

F1 - F2 : Druckkraft (EXERTING FORCE), F3 - F4 : Haltekraft (HOLDING CAPACITY), Fi : Anwendungskraft (APPLIED FORCE)

113



Befestigungsart : mit WinkelFuß
Body Mounting Base: Side Ward

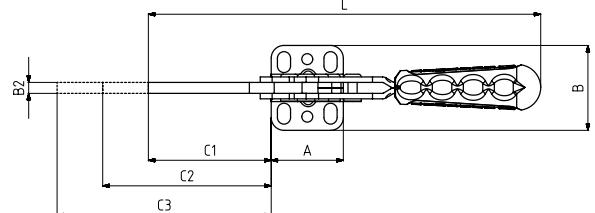
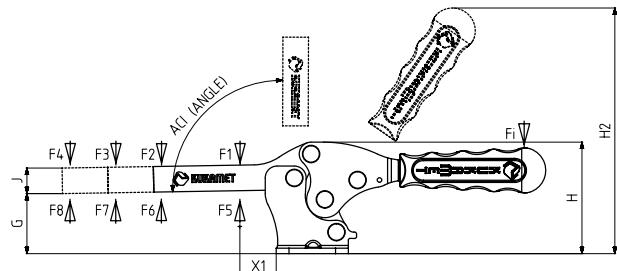


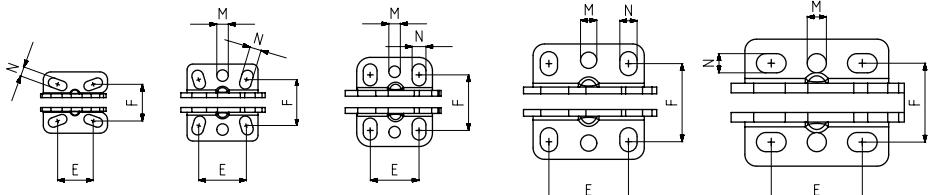
Modell Nr.	A	B	C	D	E	F	G	H	H2	J	K	L	M	N	X1	X2
113 - 1	32	32	40	28	13,5-21,5	19-21,5	22,5	73	128	10	M5	148		5x9	12	30
113 - 2	34	45	60	47	20	25,5-33,5	34	90	149	14	M6	184	Ø 6	6x10	13	48
113 - 3	38,5	46	58	42	24-25	27,5-32,5	41	107	183	14	M 8	215	Ø 6	7x9,5	16	44
113 - 4	54	60	91	73	32	32-40	46,5	135	230	19	M10	296	Ø 8,5	9x13	18	74
113 - 5	75	66	117	92	42-53	42	54	177	291	25,5	M12	345	Ø 10	10x15,5	25	95

Modell Nr.	Schwarz (BLACK)	F1 (N)	F2 (N)	F3 (N)	F4 (N)	F5 (N)	F6 (N)	F7 (N)	F8 (N)	Fi		Winkel (ANGLE) (± 5 °)	Gewicht (WEIGHT) (gr)
										(X1) Andruckkraft (YIELD) (F1:Fi)	(C1) Andruckkraft (YIELD) (F2:Fi)		
111 - 1 - D	B 111 -	850	650	200	100	1000	800	200	125	7:1	3:1	90 °	100
111 - 2 - D	B 111 -	1000	750	300	220	1200	1000	350	250	7:1	3:1	90 °	200
111 - 3 - D	B 111 -	2300	1250	560	400	2500	1350	740	530	8:1	4:1	90 °	300
111 - 4 - D	B 111 -	3500	1800	900	700	3650	2000	1035	800	9:1	4:1	90 °	730
111 - 5 - D	B 111 -	4500	2000	1250	1000	5000	2125	1350	1080	10:1	5:1	90 °	1400

F1 – F2 – F3 – F4 : Druckkraft (EXERTING FORCE), F5 – F6 – F7 – F8 : Haltekraft (HOLDING CAPACITY), Fi : Anwendungskraft (APPLIED FORCE)

111-D

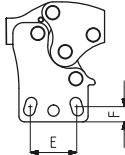
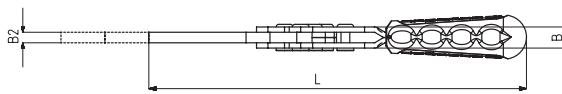
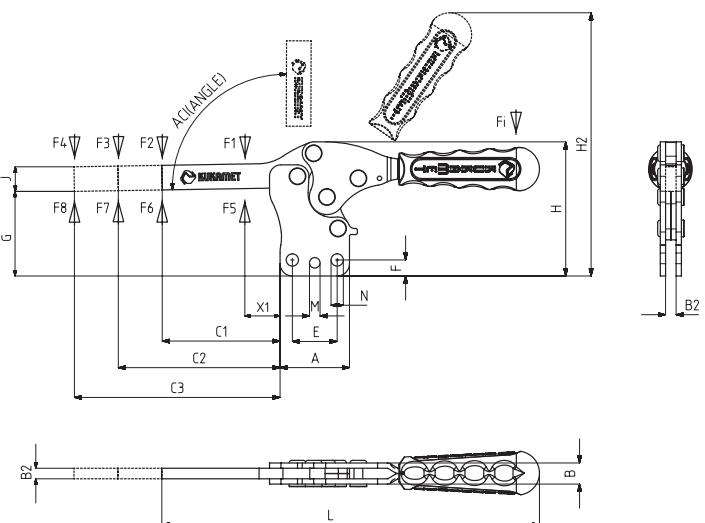

*911-951
Siehe Zubehör-Seite

*911-951
Please See Accessories Page

Befestigungsart : mit waagrechtem Fuß
Body Mounting Base: Horizontal


Modell Nr.	A	B	B2	C1	C2	C3	D	E	F	G	H	H2	J	K	L	M	N	X1
111 - 1 - D	33,5	32	5	43	93	143		14 – 23	17,5 – 20,5	21	40	95	10		148		5 x 10	15
111 - 2 - D	37	40	5	66	116	166		23,7 – 26	20 – 27,5	28	51	110	14		184	Ø 6	6 x 10	19
111 - 3 - D	39,5	46,5	6	68	118	168		25,5	24 – 32,5	34	61	136	14		215	Ø 6	7 x 11,5	25
111 - 4 - D	58	60	8	100	150	200		41,5	36 – 43	45	82	175	19		296	Ø 8,5	9 x 12,5	27
111 - 5 - D	75	66	10	129	179	229		42 – 53	42	55	104	218	25,5		345	Ø 10	10 x 15,5	37

Modell Nr.	Schwarz (BLACK)	F1 (N)	F2 (N)	F3 (N)	F4 (N)	F5 (N)	F6 (N)	F7 (N)	F8 (N)	Fi (X1) Andruckkraft (YIELD) (F1:Fi)	(C1) Andruckkraft (YIELD) (F2:Fi)	Winkel (ANGLE) ($\pm 5^\circ$)	Gewicht (WEIGHT) (gr)
112 - 1 - D	B 112 -	850	650	200	100	1000	800	200	125	7:1	3:1	90°	100
112 - 2 - D	B 112 -	1000	750	300	220	1200	1000	350	250	7:1	3:1	90°	200
112 - 3 - D	B 112 -	2300	1250	560	400	2500	1350	740	530	8:1	4:1	90°	300
112 - 4 - D	B 112 -	3500	1800	900	700	3650	2000	1035	800	9:1	4:1	90°	730
112 - 5 - D	B 112 -	4500	2000	1250	1000	5000	2125	1350	1080	10:1	5:1	90°	1400

F1 - F2 - F3 - F4 : Druckkraft (EXERTING FORCE), F5 - F6 - F7 - F8 : Haltekraft (HOLDING CAPACITY), Fi : Anwendungskraft (APPLIED FORCE)

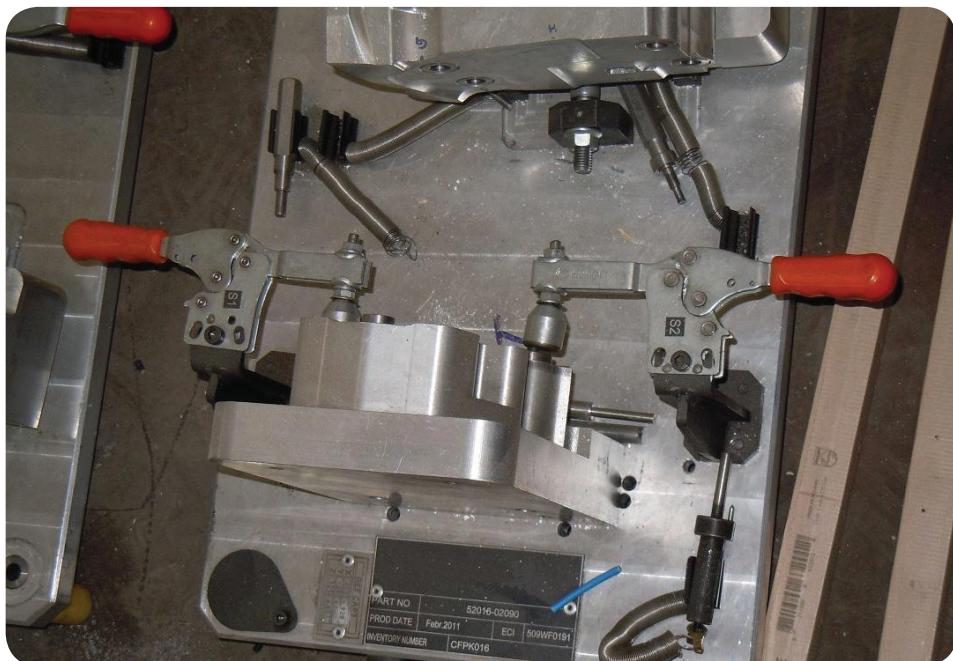
112-D


MODEL NO : 112-2-D

*911-951
Siehe Zubehör-Seite
*911-951
Please See Accessories Page

Befestigungsart : mit senkrechtem Fuß

Body Mounting Base: Vertical



Modell Nr.	A	B	B2	C1	C2	C3	D	E	F	G	H	H2	J	K	L	M	N	X1
112 - 1 - D	33,5	9	5	43	93	143		23	5,5	31	50	105	10		148		Ø 5	15
112 - 2 - D	37	10	5	66	116	166		23,7 - 26	10 - 6,5	41	64	123	14		184	Ø 6	6 x 10	19
112 - 3 - D	39,5	12	6	68	118	168		25,5	9	49	76	151	14		215	Ø 6	Ø 7	25
112 - 4 - D	58	16	8	100	150	200		41,5	8,5	65	102	195	19		296	Ø 8,5	Ø 9	27
112 - 5 - D	75	20	10	129	179	229		47,5	12	75	124	238	25,5		345	Ø 10	Ø 10	37

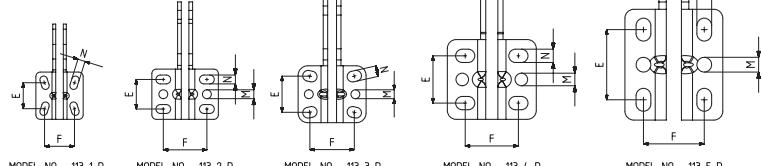
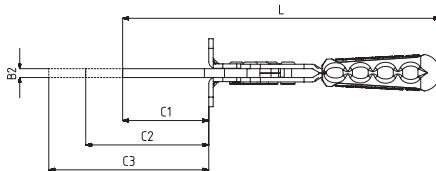
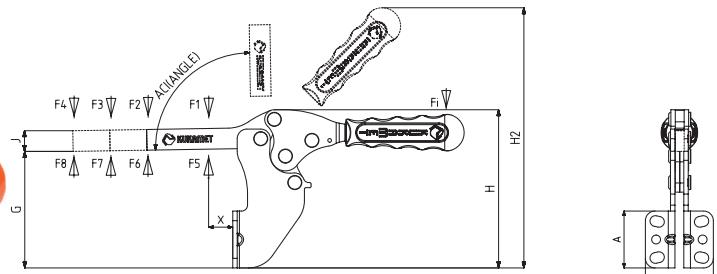
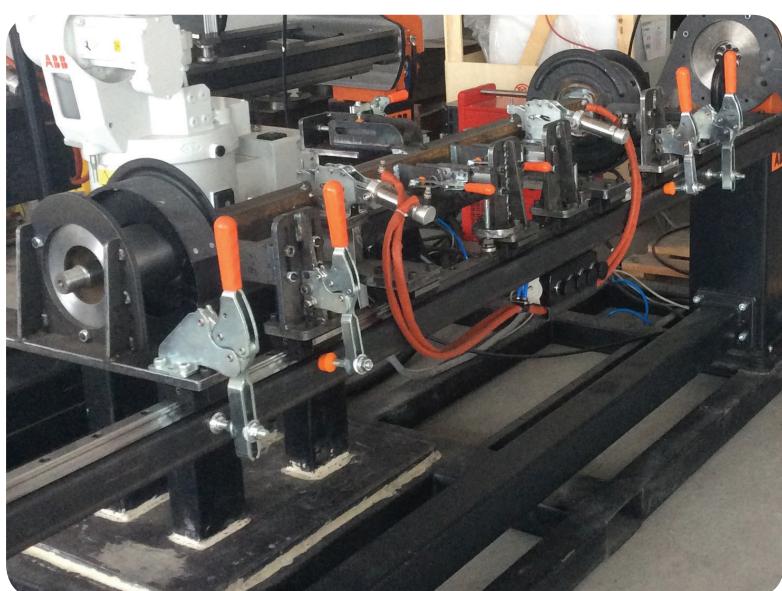
Modell Nr.	Schwarz (BLACK)	F1 (N)	F2 (N)	F3 (N)	F4 (N)	F5 (N)	F6 (N)	F7 (N)	F8 (N)	Fi		Winkel (ANGLE) ($\pm 5^\circ$)	Gewicht (WEIGHT) (gr)
										(X1) Andruckkraft (YIELD) (F1:Fi)	(C1) Andruckkraft (YIELD) (F2:Fi)		
113 - 1 - D	B 113 -	850	650	200	100	1000	800	200	125	7:1	3:1	90 °	140
113 - 2 - D	B 113 -	1000	750	300	220	1200	1000	350	250	7:1	3:1	90 °	250
113 - 3 - D	B 113 -	2300	1250	560	400	2500	1350	740	530	8:1	4:1	90 °	370
113 - 4 - D	B 113 -	3500	1800	900	700	3650	2000	1035	800	9:1	4:1	90 °	870
113 - 5 - D	B 113 -	4500	2000	1250	1000	5000	2125	1350	1080	10:1	5:1	90 °	1720

F1 – F2 – F3 – F4 : Druckkraft (EXERTING FORCE), F5 – F6 – F7 – F8 : Haltekraft (HOLDING CAPACITY), Fi : Anwendungskraft (APPLIED FORCE)


*911-951
Siehe Zubehör-Seite

*911-951

Please See Accessories Page


Befestigungsart : mit Winkelfuß
Body Mounting Base: Side Ward


Modell Nr.	A	B	B2	C1	C2	C3	D	E	F	G	H	H2	J	K	L	M	N	X1
113 - 1 - D	32	32	5	40	90	140		13,5-21,5	19 - 21,5	55	73	128	10		148		5x9	12
113 - 2 - D	34	45	5	60	110	160		20	25,5 - 33,5	34	90	149	14		184	Ø 6	6x10	13
113 - 3 - D	38,5	46	6	58	108	158		24-25	27,5 - 32,5	41	107	183	14		215	Ø 6	7x9,5	16
113 - 4 - D	54	60	8	91	141	191		32	32 - 40	46,5	135	230	19		296	Ø 8,5	9x13	18
113 - 5 - D	75	66	10	117	167	217		42-53	42	54	177	291	25,5		345	Ø 10	10x15,5	25

mit Sicherheitsverriegelung/LOCKED

Bemerkung: Kilitli modellerin teknik detayları 6,7,8,9,10 ve 11 numaralı sayfalarda mevcuttur.

Note : Technical details of locked models are available at pages 6,7,8,9,10 and 11



Modell Nr.
111 - 1 - L
111 - 2 - L
111 - 3 - L
111 - 4 - L
111 - 5 - L



Modell Nr.
112 - 1 - L
112 - 2 - L
112 - 3 - L
112 - 4 - L
112 - 5 - L



Modell Nr.
113 - 1 - L
113 - 2 - L
113 - 3 - L
113 - 4 - L
113 - 5 - L



Befestigungsart : mit waagrechtem Fuß
Body Mounting Base: Horizontal



Befestigungsart : mit senkrechtem Fuß
Body Mounting Base: Vertical



Befestigungsart : mit Winkelfuß
Body Mounting Base: Side Ward



Modell Nr.
111 - 1 - D - L
111 - 2 - D - L
111 - 3 - D - L
111 - 4 - D - L
111 - 5 - D - L



Modell Nr.
112 - 1 - D - L
112 - 2 - D - L
112 - 3 - D - L
112 - 4 - D - L
112 - 5 - D - L



Modell Nr.
113 - 1 - D - L
113 - 2 - D - L
113 - 3 - D - L
113 - 4 - D - L
113 - 5 - D - L



Befestigungsart : mit waagrechtem Fuß
Body Mounting Base: Horizontal

Befestigungsart : mit senkrechtem Fuß
Body Mounting Base: Vertical

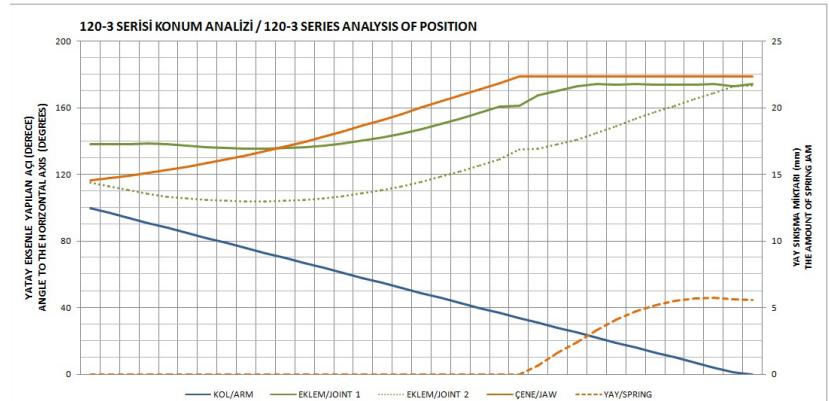
Befestigungsart : mit Winkelfuß
Body Mounting Base: Side Ward

121



Modell Nr.	F1 (N)	F2 (N)	F3 (N)	F4 (N)	Fi		Winkel (ANGLE) (±5 °)	Gewicht (WEIGHT) (gr)
					X1 Andruckkraft (YIELD) (F1:Fi)	X2 Andruckkraft (YIELD) (F2:Fi)		
121 - 3	2500	1250	2800	1400	9:1	4,5:1	71°	460

F1 - F2 : Druckkraft (EXERTING FORCE), F3 - F4 : Haltekraft (HOLDING CAPACITY),
Fi : Anwendungskraft (APPLIED FORCE)



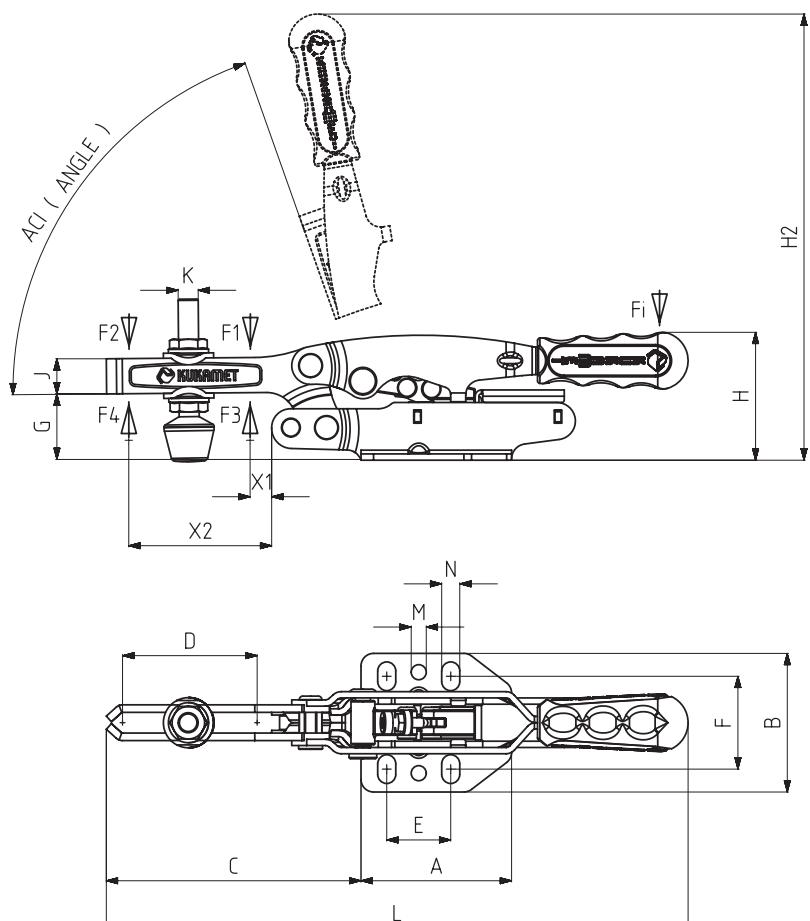
Ağak Tipi: Yataş, Alçak Tabanlı
Body Mounting Base: Horizontal, Low Base

Ürün özellikleri ;

Yüksekliği otomatik ve kademesiz olarak ayarlanabilen çene sayesinde 40 mm kalınlığa kadar olan iş parçalarını baskı kuvveti değişmeden sıkıştırabilir.
Sıkma kuvveti mekanizma üzerinde bulunan ayar vidasından ayarlanabilir.

Product features:

The automatic and continuously adjustable clamp arm enables clamping of work pieces of up to 40 mm without any variation in the exerted force. The clamping force can be adjusted to your particular needs by turning the setscrew on the mechanism.



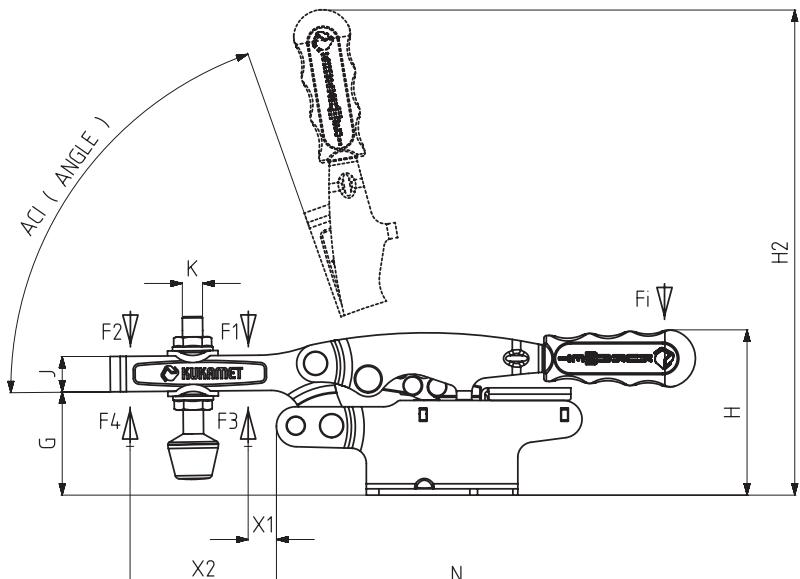
Modell Nr.	A	B	C	D	E	F	G	H	H2	J	K	L	M	N	X1	X2
121 - 3	60	55,5	101,5	50	25,5	32,5 - 41	26,5	51	187	14	M8	232	Ø6	7x11,5	16	50

122



Modell Nr.	F1 (N)	F2 (N)	F3 (N)	F4 (N)	Fi		Winkel (ANGLE) (±5 °)	Gewicht (WEIGHT) (gr)
					X1 Andruckkraft (YIELD) (F1:Fi)	X2 Andruckkraft (YIELD) (F2:Fi)		
122 - 3	2500	1250	2800	1400	9:1	4,5:1	71°	490

F1 - F2 : Druckkraft (EXERTING FORCE), F3 - F4 : Haltekraft (HOLDING CAPACITY), Fi : Anwendungskraft (APPLIED FORCE)



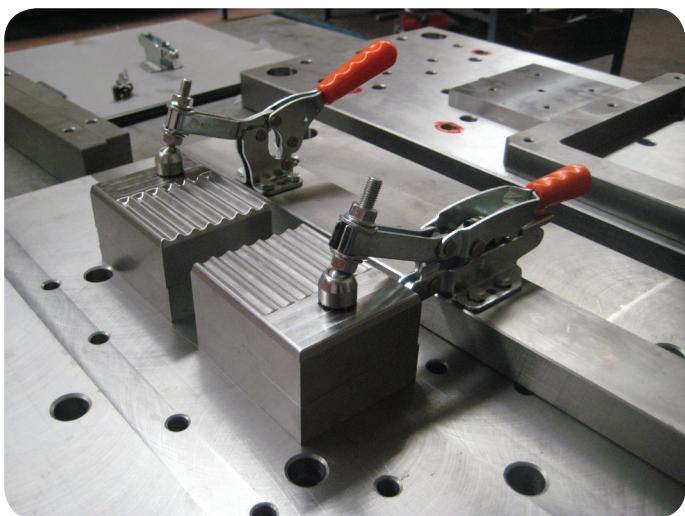
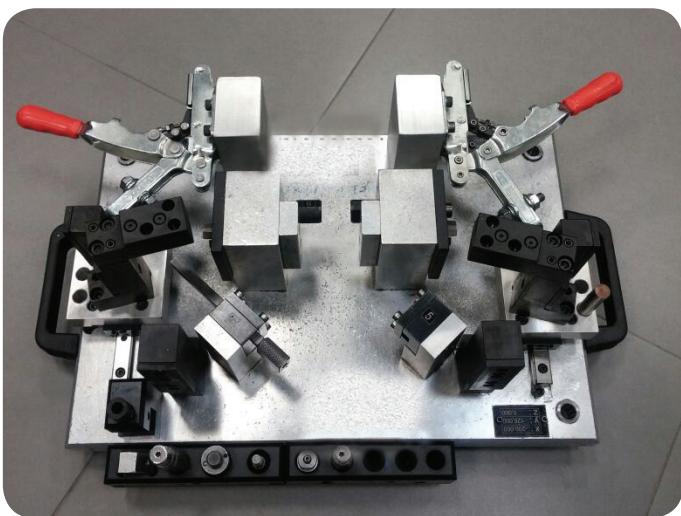
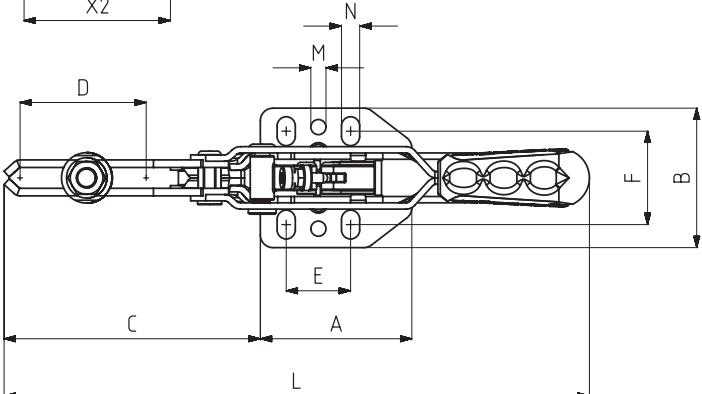
Ağır Tipi: Yataş, Yüksek Tabanlı
Body Mounting Base: Horizontal, High Base

Ürün Özellikleri :

Yüksekliği otomatik ve kademesiz olarak ayarlanabilen çene sayesinde 55 mm kalınlığa kadar olan iş parçalarını baskı kuvveti değişmeden sıkıştırabilir. Sikma kuvveti mekanizma üzerinde bulunan ayar vidasından ayarlanabilir.

Product features:

The automatic and continuously adjustable clamp arm enables clamping of work pieces of up to 55 mm without any variation in the exerted force. The clamping force can be adjusted to your particular needs by turning the setscrew on the mechanism.

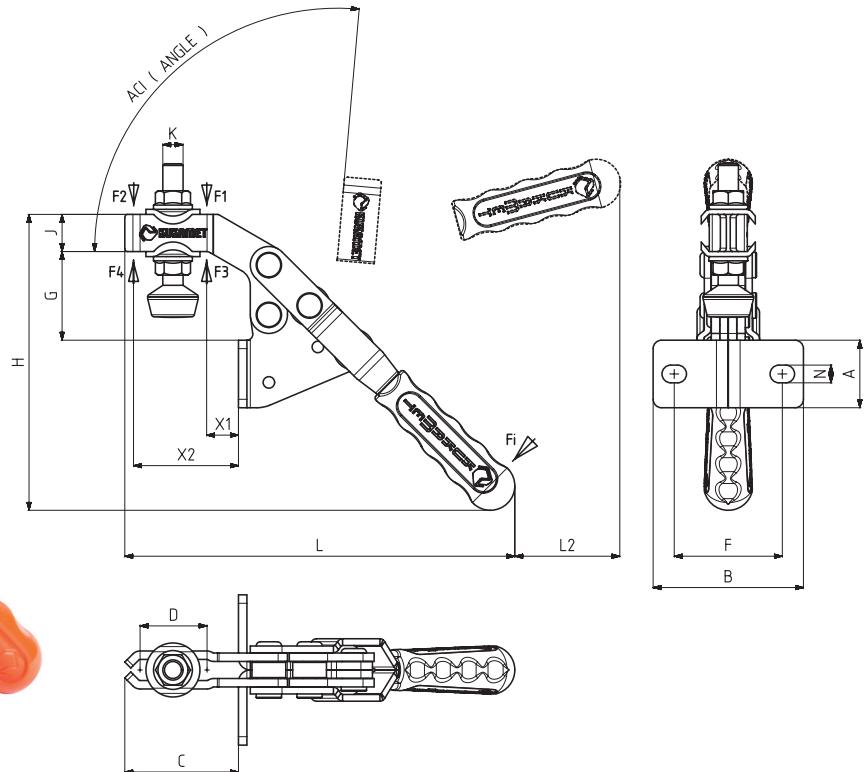


Modell Nr.	A	B	C	D	E	F	G	H	H2	J	K	L	M	N	X1	X2
122 - 3	60	55,5	101,5	50	25,5	32,5 - 41	41	65,5	201,5	14	M8	232	Ø6	7x11,5	16	50

Modell Nr.	Rostfrei (Edelstahl) (STAINLESS)	Schwarz (BLACK)	F1 (N)	F2 (N)	F3 (N)	F4 (N)	Fi		Andruckspindel (SQUEEZE SCREW)	Winkel (ANGLE) (± 5 °)	Gewicht WEIGHT (gr)
							(X1) Andruckkraft (YIELD) (F1 : Fi)	(X2) Andruckkraft (YIELD) (F2 : Fi)			
133 - 5	S 133 -	B 133 -	4500	3250	5000	3500	10:1	5:1	M12X80	90 °	1191

F1 - F2 : Druckkraft (EXERTING FORCE), F3 - F4 : Haltekraft (HOLDING CAPACITY), Fi : Anwendungskraft (APPLIED FORCE)

133


Befestigungsart : mit Winkelfuß
Body Mounting Base: Side Ward


Modell Nr.	A	B	C	D	F	G	H	J	K	L	L2	N	X1	X2
133 - 5	40	89	67.5	20	60-68	52.5	180	22	M12	233	62	10.5 x 14.5	21	56

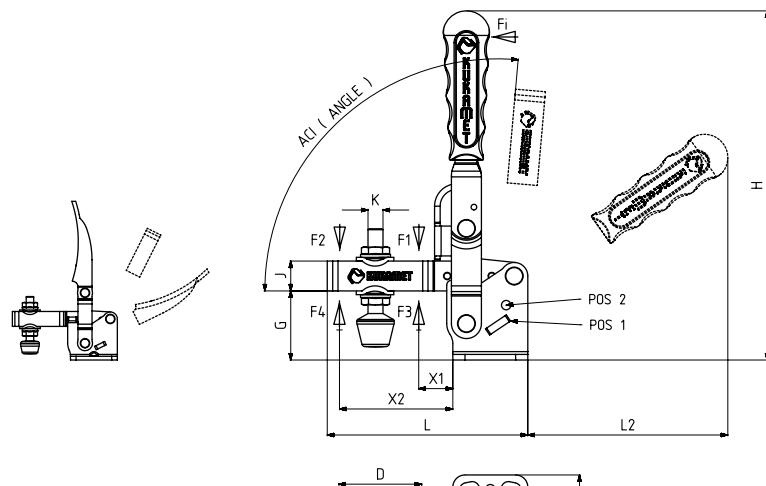
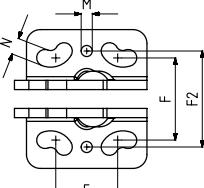
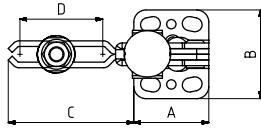
211

new



Modell Nr.	Rostfrei (Edelstahl) (STAINLESS)	Schwarz (BLACK)	F1 (N)	F2 (N)	F3 (N)	F4 (N)	Fi		Andrucks- pindel (SQUEEZE SCREW)	Winkel (ANGLE) ($\pm 5^\circ$)	Gewicht (WEIGHT) (gr)	
							(X1) Andruckkraft (YIELD) (F1:Fi)	(X2) Andruckkraft (YIELD) (F2:Fi)				
211 - 0 - M	S 211 -	B 211 -	550	350	700	455	10:1	5:1	M4X25	115°	80	
211 - 0	S 211 -	B 211 -	550	350	700	455	10:1	5:1	M4X25	115°	72	
211 - 1	S 211 -	B 211 -	750	500	1000	680	12:1	8:1	M5X35	105°	155	
211 - 2	S 211 -	B 211 -	1200	700	1400	925	12:1	7,5:1	M6X40	105°	230	
211 - 3	S 211 -	B 211 -	2000	1400	2500	1560	11:1	8:1	M8X50	105°	415	
211 - 4	S 211 -	B 211 -	3000	2000	3300	2200	11,5:1	8:1	M10X70	135°	105°	900
211 - 5	S 211 -	B 211 -	4500	2500	5000	3000	12:1	7:1	M12X80	135°	105°	1540

F1 - F2 : Druckkraft (EXERTING FORCE), F3 - F4 : Haltekraft (HOLDING CAPACITY), Fi : Anwendungskraft (APPLIED FORCE)

MODEL NO : 211-0-M
(KAPLAMASIZ METAL SAP)
(UNCOATED METAL HANDLE)

Befestigungsart : mit waagrechtem Fuß

Body Mounting Base: Horizontal

MODEL NO : 211-0

MODEL NO : 211-1

MODEL NO : 211-2

MODEL NO : 211-3

MODEL NO : 211-4

MODEL NO : 211-5

211-0-M



Modell Nr.	A	B	C	D	E	F	F2	G	H	J	K	L	L2	M	N	X1	X2
211 - 0 - M	25	34	31	20	9 - 15,5	23,5 - 24		18	85	8	M4	56	50		5 x 8	11	22
211 - 0	25	34	31	20	9 - 15,5	23,5 - 24		18	77	8	M4	56	45		5 x 8	11	22
211 - 1	26	37	44	26	16	24 - 27	25,5	23	125	10	M5	70	75	05	5 x 6,5	18	34
211 - 2	32	40	62	42	13 - 20	27	27	26	141	13	M6	94	85	04	6 x 9,5	20	50
211 - 3	40	47,5	67	42	19 - 25	31,5 - 32,5	32,3	37	187	16	M 8	107	110	05	7,5 x 10,5	25	52
211 - 4	52	67	100	67	28 - 34,5	40 - 48,5	45,2	47	240	20	M10	152	160	05	9 x 14,5	34	82
211 - 5	65	75	130	88	24,5 - 45	44,5 - 52	52	58	263	25	M12	195	165	06	9 x 19,5	42	107

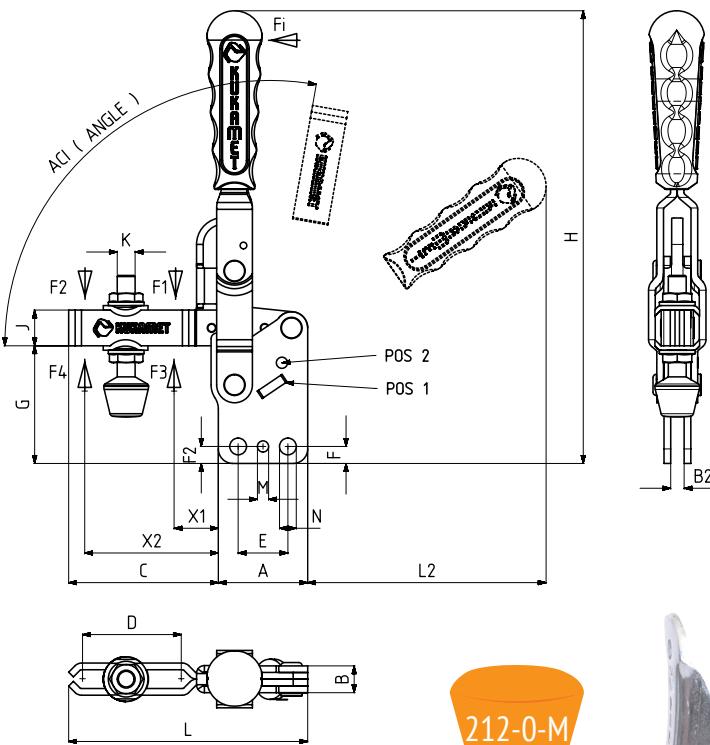
212

new

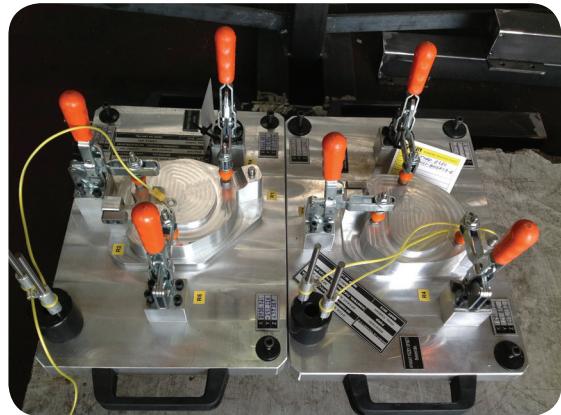


Modell Nr.	Rostfrei (Edelstahl) (STAINLESS)	Schwarz (BLACK)	F1 (N)	F2 (N)	F3 (N)	F4 (N)	Fi		Andrucks- pindel (SQUEEZE SCREW)	Winkel (ANGLE) ($\pm 5^\circ$)		Gewicht (WEIGHT) (gr)
							(X1) Andruckkraft (YIELD) (F1:Fi)	(X2) Andruckkraft (YIELD) (F2:Fi)		POS1	POS2	
212 - 0 - M	S 212 -	B 212 -	550	350	700	455	10:1	5:1	M4X25	115°		80
212 - 0	S 212 -	B 212 -	550	350	700	455	10:1	5:1	M4X25	115°		72
212 - 1	S 212 -	B 212 -	750	500	1000	680	12:1	8:1	M5X35	105°		155
212 - 2	S 212 -	B 212 -	1200	700	1400	925	12:1	7,5:1	M6X40	105°		230
212 - 3	S 212 -	B 212 -	2000	1400	2500	1560	11:1	8:1	M8X50	105°		415
212 - 4	S 212 -	B 212 -	3000	2000	3300	2200	11,5:1	8:1	M10X70	135°	105°	900
212 - 5	S 212 -	B 212 -	4500	2500	5000	3000	12:1	7:1	M12X80	135°	105°	1540

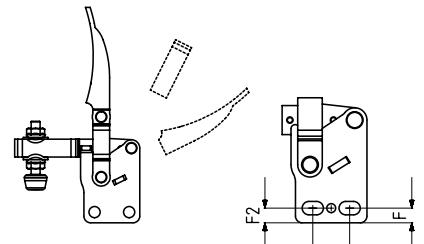
F1 - F2 : Druckkraft (EXERTING FORCE), F3 - F4 : Haltekraft (HOLDING CAPACITY), Fi : Anwendungskraft (APPLIED FORCE)



Befestigungsart : mit senkrechtem Fuß
Body Mounting Base: Vertical



212-0-M

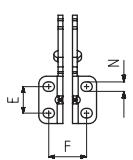
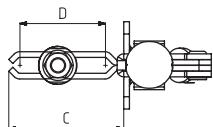
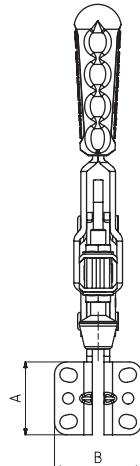
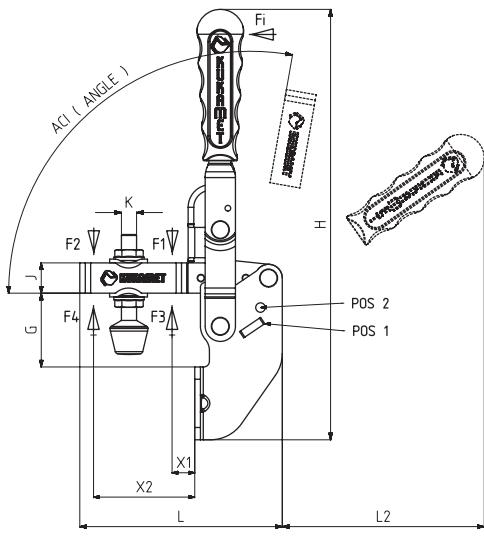
MODEL NO : 212-0-M
(KAPLAMASIZ METAL SAP)
(UNCOATED METAL HANDLE)

MODEL NO : 212-2

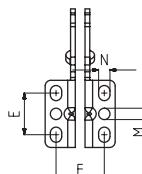
Modell Nr.	A	B	B2	C	D	E	F	F2	G	H	J	K	L	L2	M	N	X1	X2
212 - 0 - M	25	8	4	31	20	15,5	5		29	96	8	M4	56	50		Ø 5	11	22
212 - 0	25	8	4	31	20	15,5	5		29	88	8	M4	56	45		Ø 5	11	22
212 - 1	26	10	5	44	26	16	5	5,75	35	137	10	M5	70	75	Ø 5	Ø 5	18	34
212 - 2	32	10	5	62	42	13 - 20	6,5	6,5	39	154	13	M6	94	85	Ø 4	6 x 9,5	20	50
212 - 3	40	12	6	67	42	22,5	7,5	7,6	52	202	16	M 8	107	110	Ø 5	Ø 7,5	25	52
212 - 4	52	16	8	100	67	32	12	11	70	263	20	M10	152	160	Ø 5	Ø 9	34	82
212 - 5	65	20	10	130	88	42	15,5	11,6	82	287	25	M12	195	165	Ø 6	Ø 9	42	107

Modell Nr.	Rostfrei (Edelstahl) (STAINLESS)	Schwarz (BLACK)	F1 (N)	F2 (N)	F3 (N)	F4 (N)	Fi		Andruckspindel (SQUEEZE SCREW)	Winkel (ANGLE) ($\pm 5^\circ$)		Gewicht (WEIGHT) (gr)
							(X1) Andruckkraft (YIELD) (F1:Fi)	(X2) Andruckkraft (YIELD) (F2:Fi)		POS1	POS2	
213 - 1	S 213 -	B 213 -	750	500	1000	680	12:1	8:1	M5X35	135°	105°	170
213 - 2	S 213 -	B 213 -	1200	700	1400	925	12:1	7,5:1	M6X40	135°	105°	265
213 - 3	S 213 -	B 213 -	2000	1400	2500	1560	11:1	8:1	M8X50	105°		470
213 - 4	S 213 -	B 213 -	3000	2000	3300	2200	11,5:1	8:1	M10X70	135°	105°	1050
213 - 5	S 213 -	B 213 -	4500	2500	5000	3000	12:1	7:1	M12X80	135°	105°	1760

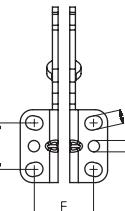
F1 - F2 : Druckkraft (EXERTING FORCE), F3 - F4 : Haltekraft (HOLDING CAPACITY), Fi : Anwendungskraft (APPLIED FORCE)

213


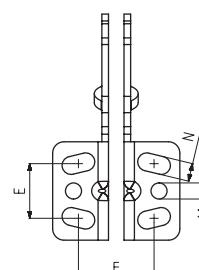
MODEL NO : 213-1



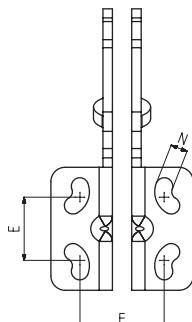
MODEL NO : 213-2



MODEL NO : 213-3



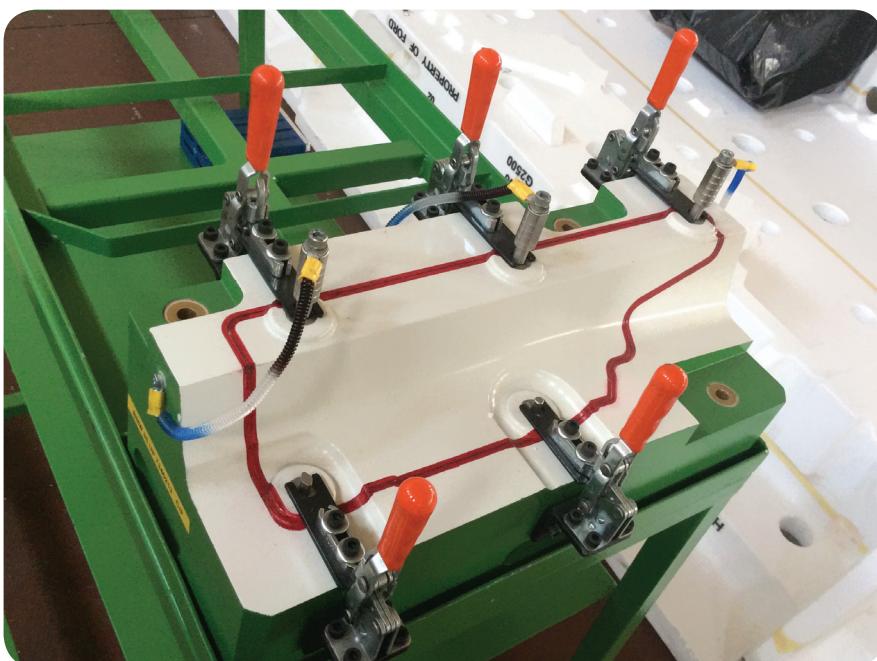
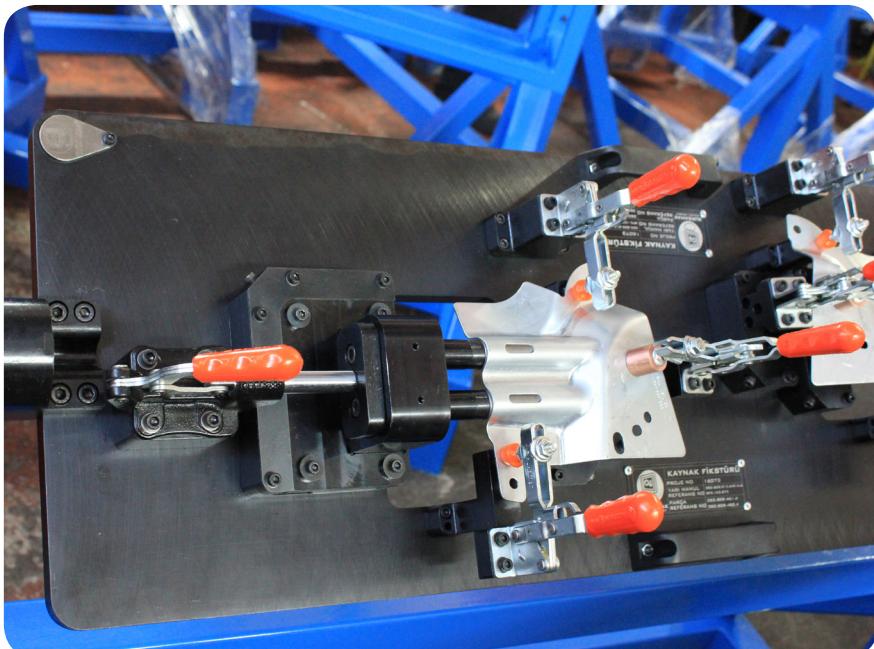
MODEL NO : 213-4



MODEL NO : 213-5

Befestigungsart : mit Winkelfuß
Body Mounting Base: Side Ward

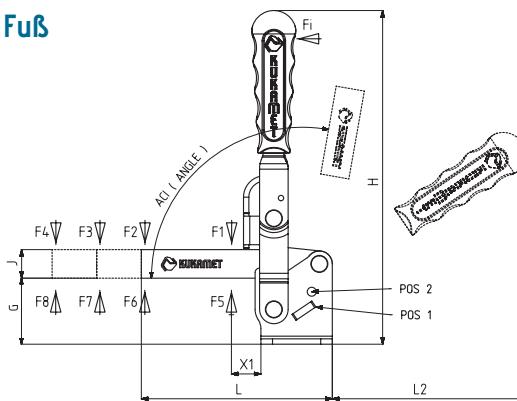

Modell Nr.	A	B	C	D	E	F	G	H	J	K	L	L2	M	N	X1	X2
213 - 1	25	30,5	38	26	14	19 - 21	22,5	150	10	M5	70	75		5 x 6	12	28
213 - 2	35,5	37	58	42	20 - 24	25,5	25,5	175	13	M6	94	85	\varnothing 6	6 x 8	15	45
213 - 3	38,5	46	61	42	24 - 25	29 - 33	39	228	16	M 8	107	110	\varnothing 6	7 x 9	19	46
213 - 4	52	67	91	67	27 - 30,5	32 - 47,5	48	292	20	M10	152	160	\varnothing 8,5	9,5 x 17,5	24	72
213 - 5	65	75,5	118,5	88	24,5 - 45	44,5 - 52	59	328	25	M12	195	165		9 x 19,5	30	95



Modell Nr.	Schwarz (BLACK)	F1 (N)	F2 (N)	F3 (N)	F4 (N)	F5 (N)	F6 (N)	F7 (N)	F8 (N)	Fi		Winkel (ANGLE) ($\pm 5^\circ$)	Gewicht (WEIGHT) (gr)	
										(X1) Andruckkraft (YIELD) (F1:Fi)	(X2) Andruckkraft (YIELD) (F2:Fi)			
211 - 1 - D	B 211 -	750	500	200	100	1000	680	300	200	12:1	8:1	105°	125	
211 - 2 - D	B 211 -	1200	700	350	250	1400	925	510	370	12:1	7,5:1	105°	210	
211 - 3 - D	B 211 -	2000	1400	700	500	2500	1560	910	680	11:1	8:1	105°	370	
211 - 4 - D	B 211 -	3000	2000	1100	850	3300	2200	1350	1080	11,5:1	8:1	135°	105°	785
211 - 5 - D	B 211 -	4500	2500	1300	1000	5000	3000	1445	1190	12:1	7:1	135°	105°	1370

F1 - F2 - F3 - F4 : Druckkraft (EXERTING FORCE), F5 - F6 - F7 - F8 : Haltekraft (HOLDING CAPACITY), Fi : Anwendungskraft (APPLIED FORCE)

211-D

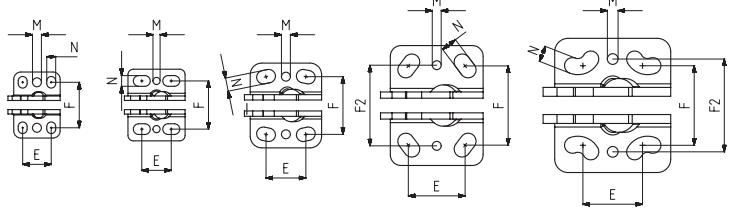
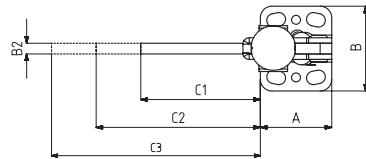

Befestigungsart : mit waagrechtem Fuß
Body Mounting Base: Horizontal


*911-951

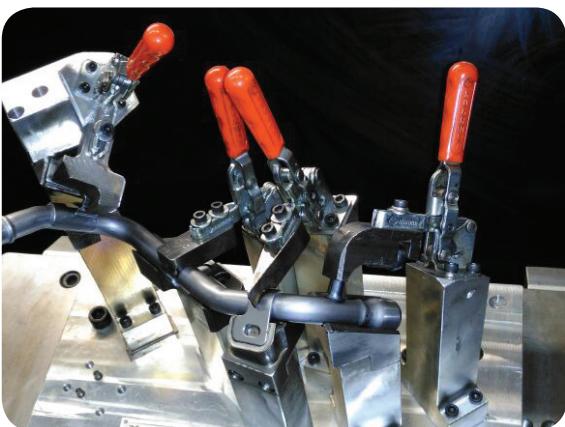
Siehe Zubehör-Seite

*911-951

Please See Accessories Page



MODEL NO : 211-1-D MODEL NO : 211-2-D MODEL NO : 211-3-D MODEL NO : 211-4-D MODEL NO : 211-5-D



Modell Nr.	A	B	B2	C1	C2	C3	D	E	F	F2	G	H	J	L	L2	M	N	X1
211 - 1 - D	26	37	5	44	94	144		16	24 - 27	25,5	23	125	10	70	73	Ø5	5 x 6,5	18
211 - 2 - D	32	40	5	62	112	162		13 - 20	27	27	26	141	13	94	85	Ø4	6 x 9,5	20
211 - 3 - D	40	47,5	6	67	117	167		19 - 25	31,5 - 32,5	32,3	37	187	16	107	110	Ø5	7,5 x 10,5	25
211 - 4 - D	52	67	8	100	150	200		28 - 34,5	40 - 48,5	45,2	47	240	20	152	160	Ø5	9 x 14,5	34
211 - 5 - D	65	75	10	130	180	230		24,5 - 45	44,5 - 52	52	58	263	25	195	165	Ø6	9 x 19,5	42

Modell Nr.	Schwarz (BLACK)	F1 (N)	F2 (N)	F3 (N)	F4 (N)	F5 (N)	F6 (N)	F7 (N)	F8 (N)	Fi		Winkel (ANGLE) ($\pm 5^\circ$)		Gewicht (WEIGHT) (gr)
										(X1) Andruckkraft (YIELD) (F1:Fi)	(X2) Andruckkraft (YIELD) (F2:Fi)	POS1	POS2	
212 - 1 - D	B 212 -	750	500	200	100	1000	680	300	200	12:1	8:1	105°		125
212 - 2 - D	B 212 -	1200	700	350	250	1400	925	510	370	12:1	7,5:1	105°		210
212 - 3 - D	B 212 -	2000	1400	700	500	2500	1560	910	680	11:1	8:1	105°		370
212 - 4 - D	B 212 -	3000	2000	1100	850	3300	2200	1350	1080	11,5:1	8:1	135°	105°	785
212 - 5 - D	B 212 -	4500	2500	1300	1000	5000	3000	1445	1190	12:1	7:1	135°	105°	1370

F1 - F2 - F3 - F4 : Druckkraft (EXERTING FORCE), F5 - F6 - F7 - F8 : Haltekraft (HOLDING CAPACITY), Fi : Anwendungskraft (APPLIED FORCE)


Befestigungsart : mit senkrechtem Fuß

Body Mounting Base: Vertical

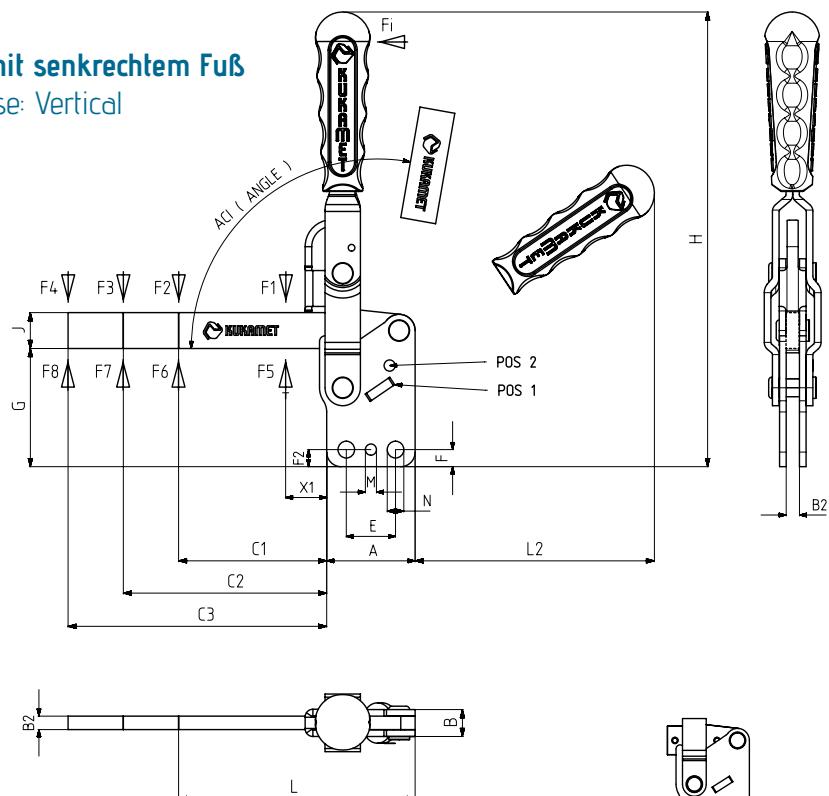


*911-951

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*911-951

Please See Accessories Page



MODEL NO : 212-2-D



Modell Nr.	A	B	B2	C1	C2	C3	D	E	F	F2	G	H	J	L	L2	M	N	X1
212 - 1 - D	26	10	5	44	94	144		16	5	5,75	35	135	10	70	73	Ø5	Ø5	18
212 - 2 - D	32	10	5	62	112	162		13 - 20	6,5	6,5	39	154	13	94	85	Ø4	6 x 9,5	20
212 - 3 - D	40	12	6	67	117	167		22,5	7,5	7,6	52	202	16	107	110	Ø5	Ø7,5	25
212 - 4 - D	52	16	8	100	150	200		32	12	11	70	262	20	152	160	Ø5	Ø9	34
212 - 5 - D	65	20	10	130	180	230		42	15,5	11,6	82	286	25	195	165	Ø6	Ø9	42

Modell Nr.	Schwarz (BLACK)	F1 (N)	F2 (N)	F3 (N)	F4 (N)	F5 (N)	F6 (N)	F7 (N)	F8 (N)	Fi		Winkel (ANGLE) ($\pm 5^\circ$)	Gewicht (WEIGHT) (gr)
										(X1) Andruckkraft (YIELD) (F1:Fi)	(C1) Andruckkraft (YIELD) (F2:Fi)		
213 - 1-D	B 213 -	750	500	250	175	1000	680	340	250	12:1	8:1	135°	150
213 - 2-D	B 213 -	1200	700	350	250	1400	925	510	370	12:1	7,5:1	135°	240
213 - 3-D	B 213 -	2000	1400	700	500	2500	1560	910	680	11:1	8:1	105°	430
213 - 4-D	B 213 -	3000	2000	1100	850	3300	2200	1350	1080	11,5:1	8:1	135°	930
213 - 5-D	B 213 -	4500	2500	1300	1000	5000	3000	1445	1190	12:1	7:1	135°	1640

F1 - F2 - F3 - F4 : Druckkraft (EXERTING FORCE), F5 - F6 - F7 - F8 : Haltekraft (HOLDING CAPACITY), Fi : Anwendungskraft (APPLIED FORCE)

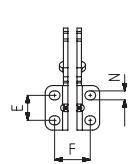
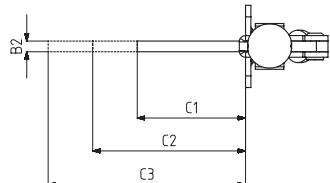
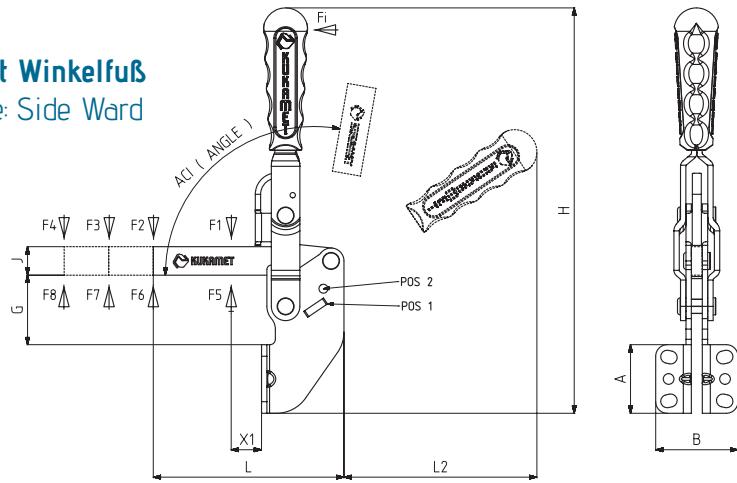
213-D


Befestigungsart : mit Winkelfuß
Body Mounting Base: Side Ward

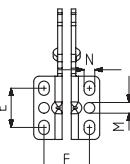
*911-951
Siehe Zubehör-Seite

*911-951

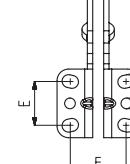
Please See Accessories Page



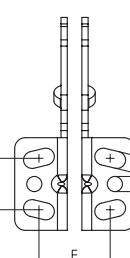
MODEL NO : 213-1-D



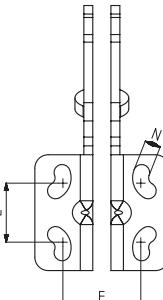
MODEL NO : 213-2-D



MODEL NO : 213-3-D



MODEL NO : 213-4-D



MODEL NO : 213-5-D



Modell Nr.	A	B	B2	C1	C2	C3	D	E	F	G	H	J	L	L2	M	N	X1
213 - 1-D	25	30,5	5	38	88	138		14	19 - 21	22,5	150	10	70	75	5 x 6	12	
213 - 2-D	35,5	37	5	58	108	158		20 - 24	25,5	25,5	175	13	94	85	Ø 6	6 x 8	15
213 - 3-D	38,5	46	6	61	111	161		24 - 25	29 - 33	39	228	16	107	110	Ø 6	7 x 9	19
213 - 4-D	52	67	8	91	141	191		27 - 30,5	32 - 47,5	48	292	20	152	160	Ø 8,5	9,5 x 17,5	24
213 - 5-D	65	75,5	10	118,5	168,5	218,5		24,5 - 45	44,5 - 52	59	328	25	195	165	9 x 19,5		30

mit Sicherheitsverriegelung/Locked

NOT : Kilitli modellerin teknik detayları 16, 17, 18, 20, 21 ve 22 numaralı sayfalarda mevcuttur.

Note: Technical details of locked models are available at pages 16,17,18,20,21 and 22



211-L



Modell Nr.

211 - 1 - L
211 - 2 - L
211 - 3 - L
211 - 4 - L
211 - 5 - L



212-L



Modell Nr.

212 - 1 - L
212 - 2 - L
212 - 3 - L
212 - 4 - L
212 - 5 - L



213-L



Modell Nr.

213 - 1 - L
213 - 2 - L
213 - 3 - L
213 - 4 - L
213 - 5 - L



Befestigungsart : mit waagrechtem Fuß

Body Mounting Base: Horizontal

Befestigungsart : mit senkrechtem Fuß

Body Mounting Base: Vertical

Befestigungsart : mit Winkelfuß

Body Mounting Base: Side Ward



211-D-L



Modell Nr.

211 - 1 - D - L
211 - 2 - D - L
211 - 3 - D - L
211 - 4 - D - L
211 - 5 - D - L



212-D-L



Modell Nr.

212 - 1 - D - L
212 - 2 - D - L
212 - 3 - D - L
212 - 4 - D - L
212 - 5 - D - L



213-D-L



Modell Nr.

213 - 1 - D - L
213 - 2 - D - L
213 - 3 - D - L
213 - 4 - D - L
213 - 5 - D - L



Befestigungsart : mit waagrechtem Fuß

Body Mounting Base: Horizontal

Befestigungsart : mit senkrechtem Fuß

Body Mounting Base: Vertical

Befestigungsart : mit Winkelfuß

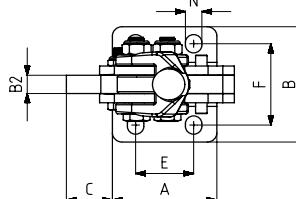
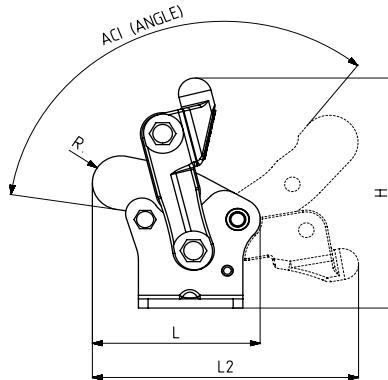
Body Mounting Base: Side Ward

221



Modell Nr.	F1 (N)	Fi	Winkel (ANGLE) (± 5 °)	Gewicht (WEIGHT) (gr)
		Andruckkraft (YIELD) (F1)		
221-2	2500	5:1	120°	240
221-4	7000	5:1	120°	940
221-6	11000	5:1	120°	1820

F1 : Druckkraft (EXERTING FORCE) , Fi : Anwendungskraft (APPLIED FORCE)


Befestigungsart : mit waagrechtem Fuß

Body Mounting Base: Horizontal

Modell Nr.	A	B	B2	C	D	E	F	H	L	L2	N	R
221-2	36	48,5	6	17,5		20	30 - 34	72	56	90	6,5 x 8,5	9,5
221-4	54	63	10	16		30	43 - 46	126	79	138	8,5 x 10	15
221-6	70	74	12	32		45	51 - 53	159	112	188	10,5 x 11,5	18

221-L

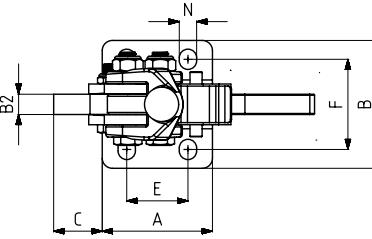
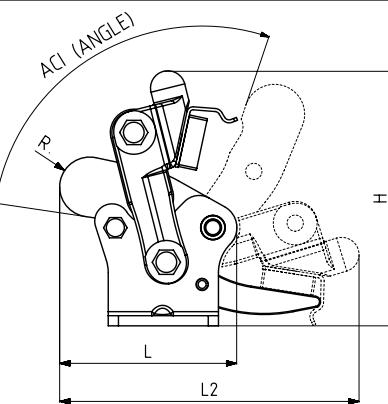


new



Modell Nr.	F1 (N)	Fi	Winkel (ANGLE) (± 5 °)	Gewicht (WEIGHT) (gr)
		Andruckkraft (YIELD) (F1)		
221-4-L	7000	5:1	100°	1070
221-6-L	11000	5:1	100°	2025

F1 : Druckkraft (EXERTING FORCE) , Fi : Anwendungskraft (APPLIED FORCE)


Ağır Tipi: Yataş Tabanlı (Açıkken Kilitli)

Body Mounting Base: Horizontal (Locked when open)

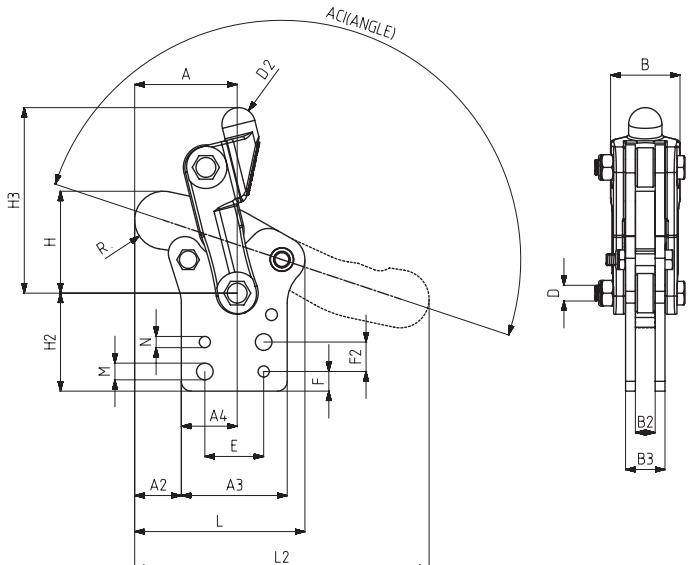
Modell Nr.	A	B	B2	C	D	E	F	H	L	L2	N	R
221-4-L	54	63	10	16		30	43 - 46	126	79	138	8,5 x 10	15
221-6-L	70	74	12	32		45	51 - 53	159	112	188	10,5 x 11,5	18

222



Modell Nr.	F1 (N)	Fi	Winkel (ANGLE) (± 5 °)	Gewicht (WEIGHT) (gr)
		Andruckkraft (YIELD) (F1)		
222-2	2500	5:1	180°	240
222-4	7000	5:1	180°	940
222-6	11000	5:1	180°	1820

F1 : Druckkraft (EXERTING FORCE) , Fi : Anwendungskraft (APPLIED FORCE)


Befestigungsart: vertikal mit fixiertem Fuß
Body Mounting Base: Vertical and Fixed

Modell Nr.	A	A2	A3	A4	B	B2	B3	D	D2	E	F	F2	H	H2	H3	L	L2	M	N	R
222-2	36	17,5	36	18,5	23	6	12	M6	Ø10	20	8		31	34	55	56	98	Ø 6,5		9,5
222-4	44	16	54	28,5	36	10	20	M8	Ø17	30	10	15	50	50	94,5	79	135	Ø 8,5	Ø 5,7	15
222-6	69	32	70	37	46	12	22	M10	Ø22	45	15	20	73	62	120	112	197	Ø 10,5	Ø 7,7	18,5

222-L

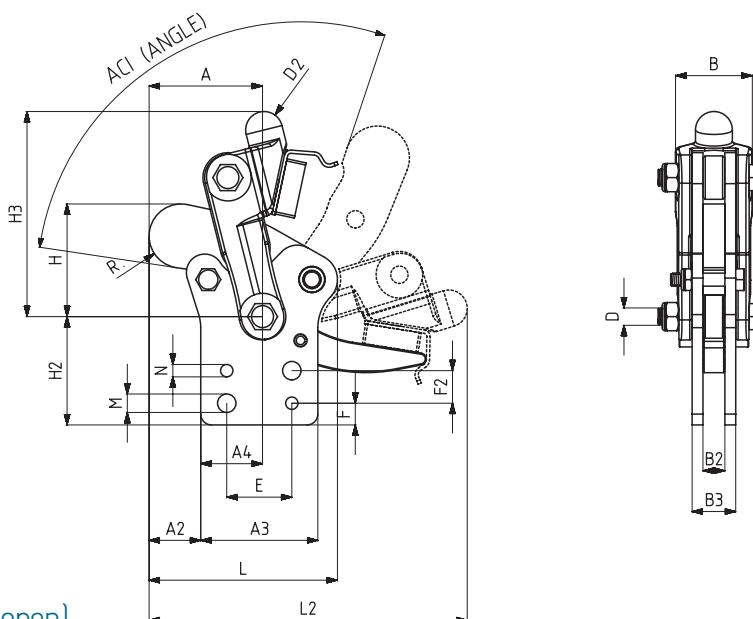


new



Modell Nr.	F1 (N)	Fi	Winkel (ANGLE) (± 5 °)	Gewicht (WEIGHT) (gr)
		Andruckkraft (YIELD) (F1)		
222-4-L	7000	5:1	100°	1070
222-6-L	11000	5:1	100°	2025

F1 : Druckkraft (EXERTING FORCE) , Fi : Anwendungskraft (APPLIED FORCE)


Ayak Tipi: Dikey Sabit Tabanlı (Açıkken Kilitli)
Body Mounting Base: Vertical and Fixed (Locked when open)

Modell Nr.	A	A2	A3	A4	B	B2	B3	D	D2	E	F	F2	H	H2	H3	L	L2	M	N	R
222-4-L	44	16	54	28,5	36	10	20	M8	Ø17	30	10	15	50	50	94,5	79	135	Ø 8,5	Ø 5,7	15
222-6-L	69	32	70	37	46	12	22	M10	Ø22	45	15	20	73	62	120	112	197	Ø 10,5	Ø 7,7	18,5

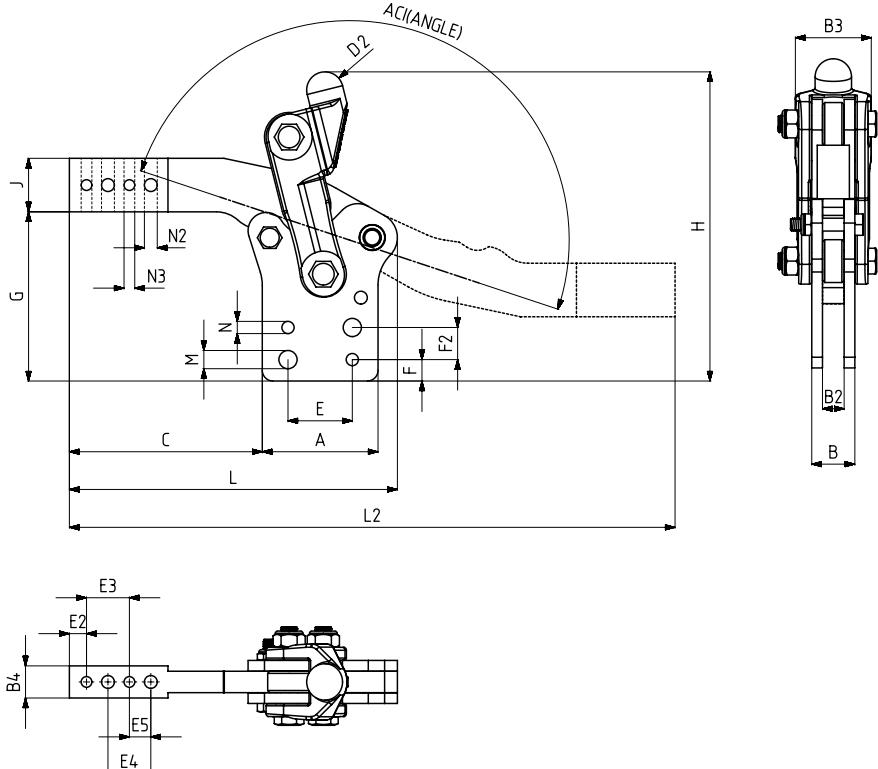
224



new

Modell Nr.	F1 (N)	Fi	Winkel (ANGLE) (± 5 °)	Gewicht (WEIGHT) (gr)
		Andruckkraft (YIELD) (F1)		
224-4	7000	5:1	180°	1120
224-6	11000	5:1	180°	2100

F1 : Druckkraft (EXERTING FORCE) , Fi : Anwendungskraft (APPLIED FORCE)



Body Mounting Base: Vertical and Fixed



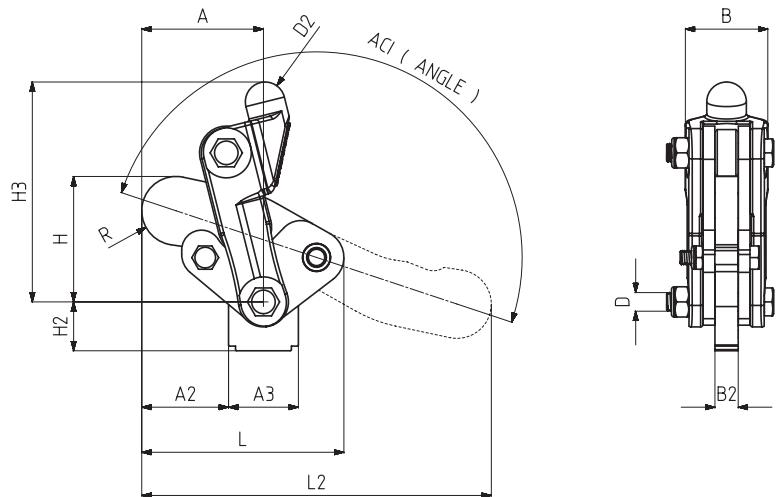
Modell Nr.	A	B	B2	B3	B4	C	D2	E	E2	E3	E4	E5	F	F2	G	H	J	L	L2	M	N	N2	N3
224-4	54	20	10	36	15	90	017	30	8	20	20	10	10	15	79	144,5	25	153	283	Ø 8,5	Ø 5,7	Ø 6	Ø 5
224-6	70	22	12	46	18	106,5	022	45	8	30	30	15	15	20	106,5	182	31	187	346	Ø 10,5	Ø 8	Ø 8	Ø 6

232



Modell Nr.	F1 (N)	Fi	Winkel (ANGLE) ($\pm 5^\circ$)	Gewicht (WEIGHT) (gr)
		Andruckkraft (YIELD) (F1)		
232-2	2500	5:1	180°	200
232-4	7000	5:1	180°	830
232-6	11000	5:1	180°	1600

F1 : Druckkraft (EXERTING FORCE) , Fi : Anwendungskraft (APPLIED FORCE)


Befestigungsart: vertikal mit beweglichem Fuß
Body Mounting Base: Vertical Moving

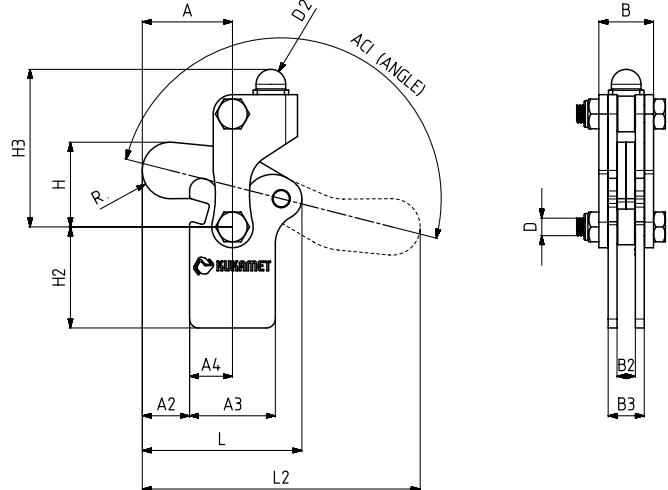

Modell Nr.	A	A2	A3	B	B2	D	D2	H	H2	H3	L	L2	R
232-2	36	26	20	23	6	M6	Ø10	31	17	55	56	98	9,5
232-4	44	29	30	36	10	M8	Ø17	52	23	94,5	79	135	15
232-6	69	51,5	35	46	12	M10	Ø22	73	30	120	112	197	18,5

223



Modell Nr.	F1 (N)	Fi	Winkel (ANGLE) (± 5 °)	Gewicht (WEIGHT) (gr)
		Andruckkraft (YIELD) (F1)		
223-2	2500	5:1	180°	220

F1 : Druckkraft (EXERTING FORCE) , Fi : Anwendungskraft (APPLIED FORCE)



Befestigungsart: vertikal mit fixiertem Fuß

Body Mounting Base: Vertical and Fixed

MODEL NO : 223-2 KOL KAYNAKLI SAC / Welded steel arm

Modell Nr.	A	A2	A3	A4	B	B2	B3	D	D2	E	F	H	H2	H3	L	L2	M	N	R
223-2	30,5	16	29	14,5	18,5	6	12	M6	Ø10			28,5	34	53	54	94			9,5

233



Modell Nr.	F1 (N)	Fi	Winkel (ANGLE) (± 5 °)	Gewicht (WEIGHT) (gr)
		Andruckkraft (YIELD) (F1)		
233-2	2500	5:1	180°	200

F1 : Druckkraft (EXERTING FORCE) , Fi : Anwendungskraft (APPLIED FORCE)

Ağır Tipi: Dikdört Oynar Tabanlı

Body Mounting Base: Vertical and adjustable

MODEL NO : 233-2 KOL KAYNAKLI SAC / Welded steel arm

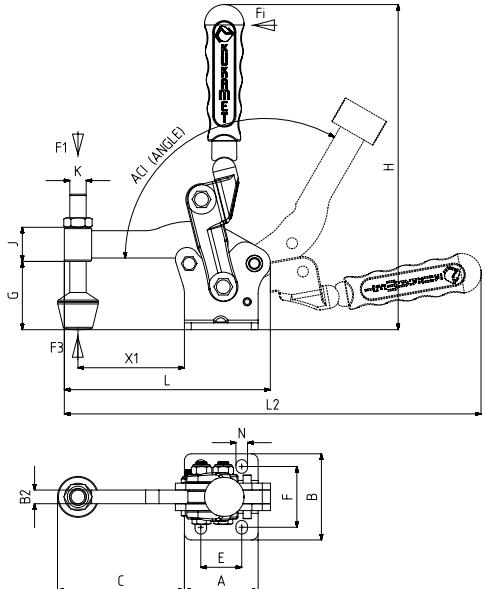
Modell Nr.	A	A2	A3	B	B2	D	D2	H	H2	H3	L	L2	R
233-2	30,5	20,5	20	18,5	6	M6	Ø10	28,5	20	53	54	94	9,5

241



Modell Nr.	F1 (N)	F3 (N)	Fi	Winkel (ANGLE) (± 5 °)	Gewicht (WEIGHT) (gr)
			Andruckkraft (YIELD) (F1)		
241-2	750	2500	5:1	120°	325
241-4	1500	5000	5:1	120°	1340
241-6	2000	6000	5:1	120°	2340

F1 : Druckkraft (EXERTING FORCE), F3 : Haltekraft (HOLDING CAPACITY), Fi : Anwendungskraft (APPLIED FORCE)


Befestigungsart : mit waagrechtem Fuß
Body Mounting Base: Horizontal

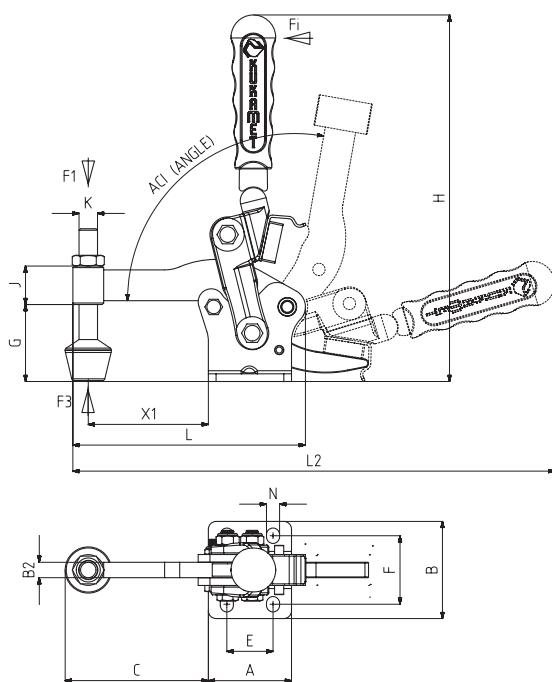
Modell Nr.	A	B	B2	C	D	E	F	G	H	J	K	L	L2	M	N	X1
241-2	36	48,5	6	52,5		20	30 - 34	28,5	143	15	M 6	89	192		6,5 x 8,5	44,5
241-4	54	63	10	88		30	43 - 46	49	238	27	M12	151	323		8,5 x 10	78
241-6	70	74	12	111		45	51 - 53	68	280	32	M12	191	390		10,5 x 11,5	98,5

241-L

**new**

Modell Nr.	F1 (N)	F3 (N)	Fi	Winkel (ANGLE) (± 5 °)	Gewicht (WEIGHT) (gr)
			Andruckkraft (YIELD) (F1)		
241-4-L	1500	5000	5:1	100°	1470
241-6-L	2000	6000	5:1	100°	2545

F1 : Druckkraft (EXERTING FORCE), F3 : Haltekraft (HOLDING CAPACITY), Fi : Anwendungskraft (APPLIED FORCE)


Ağır Tipi: Yataş Tabanlı (Açıkken Kilitli)
Body Mounting Base: Horizontal (Locked when open)

Modell Nr.	A	B	B2	C	D	E	F	G	H	J	K	L	L2	M	N	X1
241-4-L	54	63	10	88		30	43 - 46	49	238	27	M12	151	323		8,5 x 10	78
241-6-L	70	74	12	111		45	51 - 53	68	280	32	M12	191	390		10,5 x 11,5	98,5

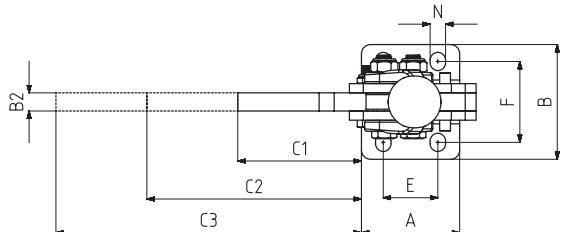
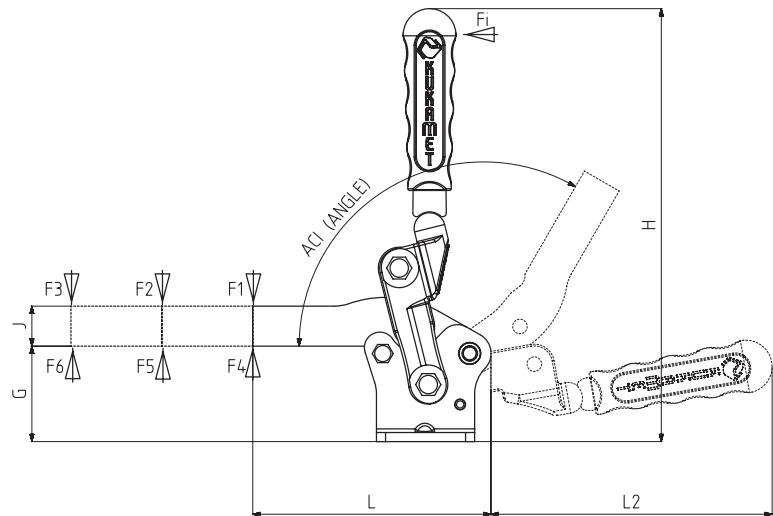
241-D



Modell Nr.	F1 (N)	F2 (N)	F3 (N)	F4 (N)	F5 (N)	F6 (N)	Fi Andruckkraft (YIELD) (F1)	Winkel (ANGLE) (± 5 °)	Gewicht (WEIGHT) (gr)	
	241-2-D	750	550	300	2500	1500	800	5:1	120°	300
241-4-D	1500	1050	600	5000	3000	1500	800	5:1	120°	1200
241-6-D	2000	1400	850	6000	3600	2000	800	5:1	120°	2200

F1-F2-F3 : Druckkraft (EXERTING FORCE) , F4-F5-F6 : Haltekraft (HOLDING CAPACITY) , Fi : Anwendungskraft (APPLIED FORCE)

Ağak Tipi: Yatay Tabanlı
Body Mounting Base: Horizontal

*911-951
Bkz. Aksesuar Sayfası
*911-951
Please See Accessories Page


Modell Nr.	A	B	B2	C1	C2	C3	D	E	F	G	H	J	K	L	L2	M	N
241-2-D	36	48,5	6	38,5	88,5	138,5		20	30 - 34	30	143	14		77	103		6,5 x 8,5
241-4-D	54	63	10	68	118	168		30	43 - 46	52,5	238	22		131	170		8,5 x 10
241-6-D	70	74	12	86	130	180		45	51 - 53	71,5	280	27		166	198		10,5 x 11,5

241-D-L

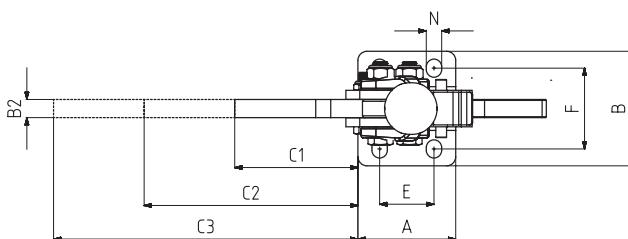
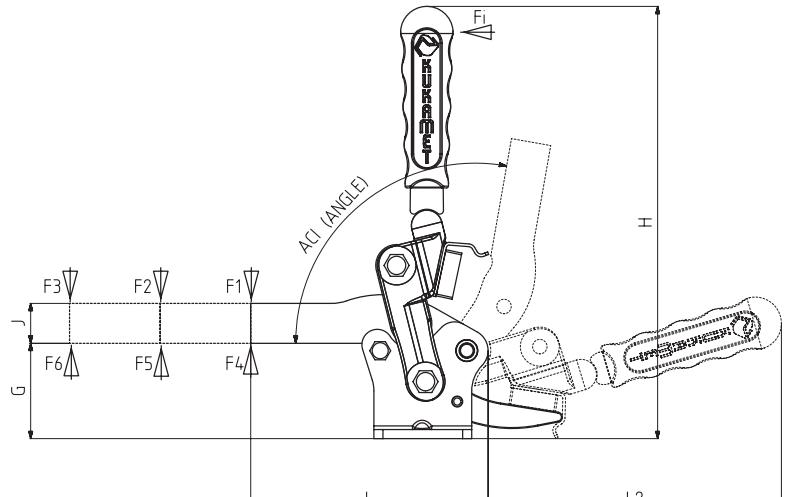


new

Modell Nr.	F1 (N)	F2 (N)	F3 (N)	F4 (N)	F5 (N)	F6 (N)	Fi Andruckkraft (YIELD) (F1)	Winkel (ANGLE) (± 5 °)		Gewicht (WEIGHT) (gr)
								F1-F2-F3 : Druckkraft (EXERTING FORCE), F4-F5-F6 : Haltekraft (HOLDING CAPACITY), Fi : Anwendungskraft (APPLIED FORCE)		
241-4-D-L	1500	1050	600	5000	3000	1500	5:1	100°		1340
241-6-D-L	2000	1400	850	6000	3600	2000	5:1	100°		2410

Ağak Tipi: Yataş Tabanlı (Açıkken Kilitli)

Body Mounting Base: Horizontal (Locked when open)



*911-951

Bkz. Aksesuar Sayfası

*911-951

Please See Accessories Page



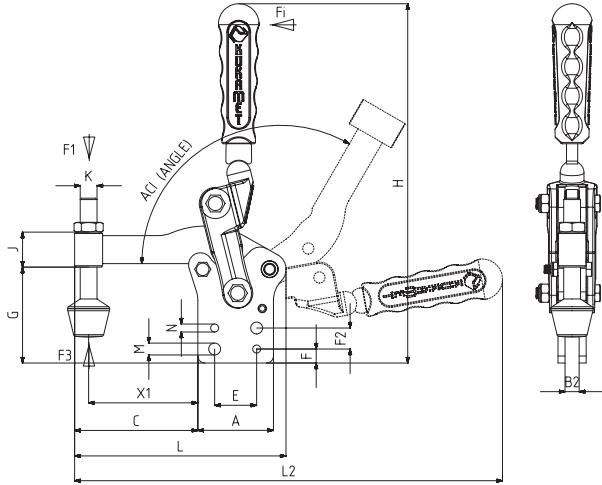
Modell Nr.	A	B	B2	C1	C2	C3	D	E	F	G	H	J	K	L	L2	M	N
241-4-D-L	54	63	10	68	118	168		30	43 - 46	52,5	238	22		131	172		8.5 x 10
241-6-D-L	70	74	12	86	130	180		45	51 - 53	71,5	280	27		166	198		10.5 x 11.5

242



Modell Nr.	F1 (N)	F3 (N)	Fi	Winkel (ANGLE) (± 5 °)	Gewicht (WEIGHT) (gr)
			Andruckkraft (YIELD) (F1)		
242-2	750	2500	5:1	120°	325
242-4	1500	10000	5:1	120°	1340
242-6	2000	12000	5:1	120°	2340

F1 : Druckkraft (EXERTING FORCE), F3 : Haltekraft (HOLDING CAPACITY), Fi : Anwendungskraft (APPLIED FORCE)


Befestigungsart : mit senkrechtem Fuß

Body Mounting Base: Vertical

242-L

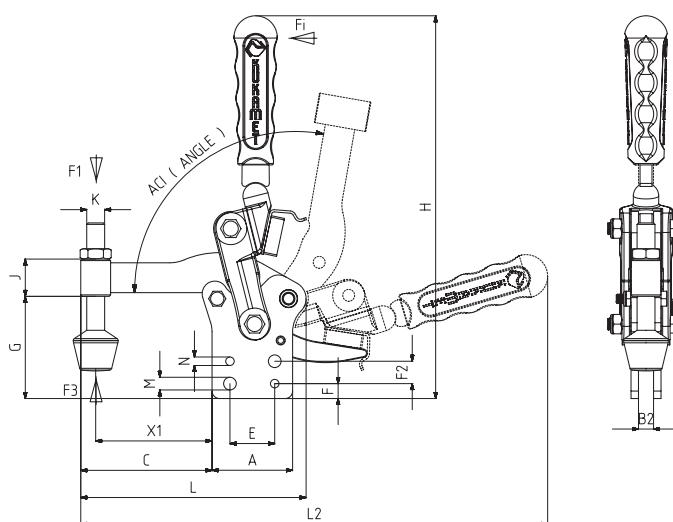


new



Modell Nr.	F1 (N)	F3 (N)	Fi	Winkel (ANGLE) (± 5 °)	Gewicht (WEIGHT) (gr)
			Andruckkraft (YIELD) (F1)		
242-4-L	1500	10000	5:1	100°	1470
242-6-L	2000	12000	5:1	100°	2545

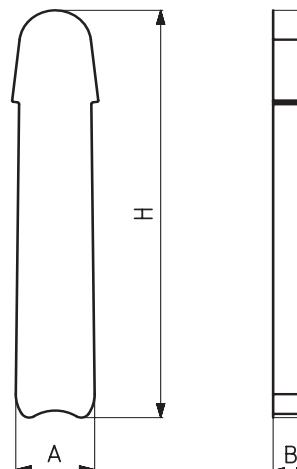
F1 : Druckkraft (EXERTING FORCE), F3 : Haltekraft (HOLDING CAPACITY), Fi : Anwendungskraft (APPLIED FORCE)


Ağak Tipi: Dikey Tabanlı (Açıkken Kilitli)

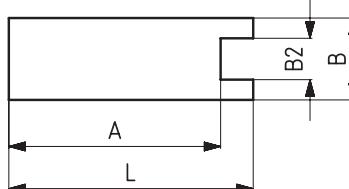
Body Mounting Base: Vertical (Locked when open)

Modell Nr.	A	B	B2	B3	C	D	E	F	F2	G	H	J	K	L	L2	M	N	X1
242-4-L	54	20	10	36	88		30	10	15	67.5	257	27	M12	151	323	Ø 8.5	Ø 5.7	78
242-6-L	70	22	12	46	111		45	15	20	91	303	32	M12	191	390	Ø 10.5	Ø 7.7	98,5

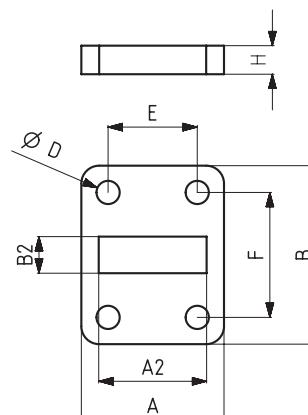
*921 Siehe Zubehör-Seite
*921 Please See Accessories Page


Verlängerungsleiste / EXTENSION BAR

Code	Modell Nr.	A	B	H
220-2-06	222-232-2	11	5	66
220-4-06	222-232-4	18	8	105
220-6-06	222-232-6	18	10	114

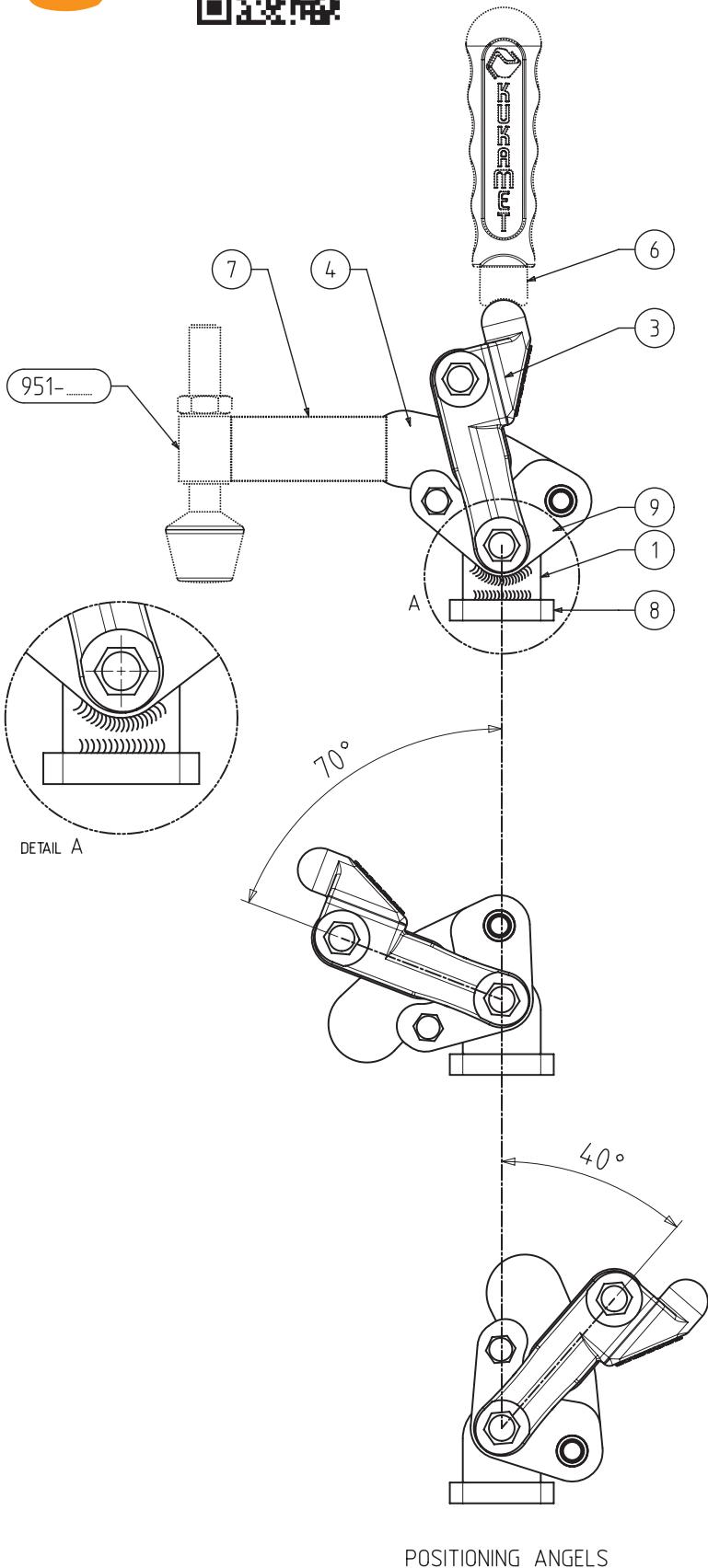

Backenverlängerungsflächen / JAW EXTENSION BAR

Code	Modell Nr.	A	B	B2	L	H
220-2-07	222-232-2	32	12	6,5	40	15
220-4-07	222-232-4	52	20	10,1	60	25
220-6-07	222-232-6	68	25	12,1	80	30


Fußplatte / BASE PLATE

Code	Modell Nr.	A	A2	B	B2	D	E	F	H
232-2-08	222-232-2	40	15.5	50	6,5	Ø6.5	25	35	8
232-4-08	222-232-4	40	24.5	50	10.5	Ø6.5	25	35	8
232-6-08	222-232-6	50	28.5	60	12.5	Ø8.5	30	40	8

232-M



MONTAJ TALİMATI

ÜRÜN KONUMLAMASI YAPILDIKTAN SONRA;
 * ÖNCE '1' NO'LU TABAN' 8' NO'LU TABAN PLAKAYA Veya ZEMİNE
 KAYNATILIR,
 * SONRA '9' NO'LУ DIŞ EKLEM '1' NO'LU TABANA KAYNATILIR.

ÖNEMLİ UYARI !!

- * KAYNAK HER İKİ TARAF DA YAPILMALIDIR !!
- * KAYNAK AYNI NOKTAYA YOĞUN ŞEKİLDE YAPILMAMALIDIR !!
- * OLUŞACAK AŞIRI ISI PARÇANIN DEFORMASYONUNA SEBEP OLABİLİR !!

KULLANIM DURUMUNA YA DA İHTİYACINA GÖRE;
 '6' NOLU UZATMA KOLU '3' NO'LU ÜRÜN KOLUNA;
 '7' NOLU ÇENE UZATMA LAMASI '4' NO'LU ÇENEYE KAYNATILABİLİR.

ASSEMBLY INSTRUCTIONS ;

AFTER POSITIONING THE PARTS OF THE PRODUCT

- * FIRST WELD PART NUMBER 1 TO THE BASE PLATE PART NUMBER 8
- * SECOND WELD PART NUMBER 9 TO PART NUMBER 1

IMPORTANT NOTICE !!

- * THE WELDING PROCESS MUST BE REPEATED ON BOTH SIDES
- * THE WELDS SHOULD NOT BE TO DENSELY CONCENTRATED ON ONE SPOT
- * ULTRA HIGH HEAT EXPOSURE DURING WELDING CAN CAUSE DEFORMATION

OPTIONALLY

- * THE HANDLE EXTENSION PART NUMBER 6 CAN BE WELDED TO THE HANDLE PART NUMBER 3;
- * THE ARM EXTENSION PART NUMBER 7 CAN BE WELDED TO THE ARM PART NUMBER 4

MODÜLER BAĞLANTI ELEMANLARI ÖZELLİKLERİ ;

MODÜLER BAĞLANTI ELEMANLARI , DÖVME ÇELİK'TEN ÜRETİLMİŞ VE KARARTMA YAPILMIŞ KOL, SERTLEŞTİRİLMİŞ VE TAŞLANMIŞ PİMLER, SERTLEŞTİRİLMİŞ VE YAĞLANMIŞ BURÇLAR SAYESİNDE AĞIR YÜKLERE KARŞI DAYANIKLI VE UZUN ÖMÜRLÜ ÜRÜNLERDİR.

GENERAL PROPERTIES

THE MODULAR CLAMPS ARE MADE OF HEAVY DUTY FORGED STEEL AND THANKS TO THEIR BLACKENED HANDLES, HARDENED AND GRINED PINS AND HARDENED AND LUBRICATED BUSHES, THEY ARE VERY DURABLE AND SUITED FOR INTENSIVE USE WITH HEAVY LOADS.

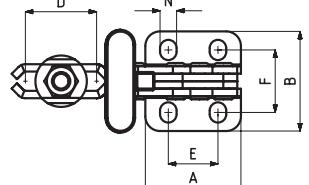
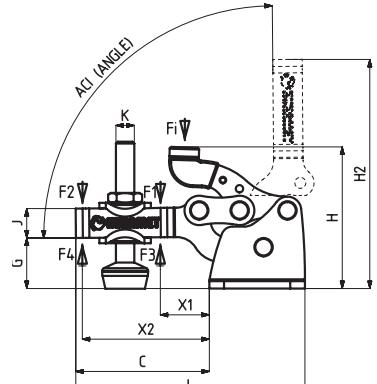
251

Modell Nr.	Schwarz (BLACK)	F1 (N)	F2 (N)	F3 (N)	F4 (N)	Fi		Winkel (ANGLE) (± 5 °)	Gewicht (WEIGHT) (gr)
						(X1) Andruckkraft (YIELD) (F1:Fi)	(X2) Andruckkraft (YIELD) (F2:Fi)		
251-2	B251-.....	470	380	700	560	3:1	2:1	90°	65
251-3	B251-.....	1400	1030	1625	1200	3:1	2:1	90°	270
251-4	B251-.....	2000	1370	3370	2445	4:1	2.5:1	90°	710

F1 - F2 : Druckkraft (EXERTING FORCE), F3 - F4 : Haltekraft (HOLDING CAPACITY), Fi : Anwendungskraft (APPLIED FORCE)



251-L



Befestigungsart : mit waagrechtem Fuß
Body Mounting Base: Horizontal

**mit Sicherheitsverriegelung/
Locked**

Modell Nr.	A	B	C	D	E	F	G	H	H2	J	K	L	M	N	X1	X2
251-2	26	27	36	17	13,5	16 - 18	14	38	62	8	M5	62		4.5x5.5	19	27
251-3	44	47	56	27	23	29 - 31	24	63	100	13	M8	100		7.5x8.5	27	43
251-4	64	63	79	37	35	38 - 41	36	93	143	19	M10	143		9x10.5	39	63

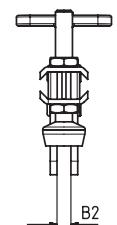
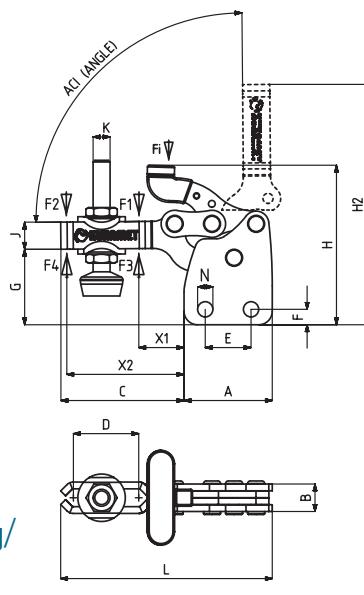
252

Modell Nr.	Schwarz (BLACK)	F1 (N)	F2 (N)	F3 (N)	F4 (N)	Fi		Winkel (ANGLE) (± 5 °)	Gewicht (WEIGHT) (gr)
						(X1) Andruckkraft (YIELD) (F1:Fi)	(X2) Andruckkraft (YIELD) (F2:Fi)		
252-2	B252-.....	470	380	700	560	3:1	2:1	90°	65
252-3	B252-.....	1400	1030	1625	1200	3:1	2:1	90°	270
252-4	B252-.....	2000	1370	3370	2445	4:1	2.5:1	90°	710

F1 - F2 : Druckkraft (EXERTING FORCE), F3 - F4 : Haltekraft (HOLDING CAPACITY), Fi : Anwendungskraft (APPLIED FORCE)



252-L



Befestigungsart : mit senkrechtem Fuß
Body Mounting Base: Vertical

**mit Sicherheitsverriegelung/
Locked**

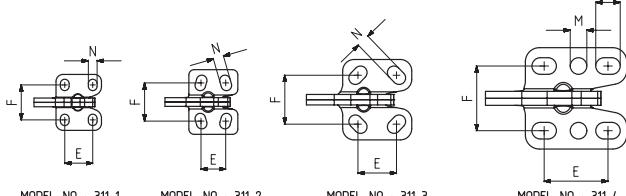
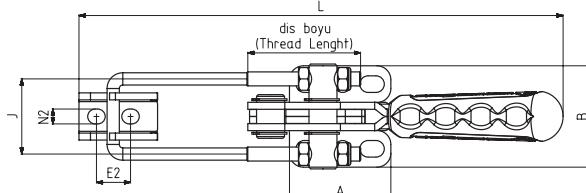
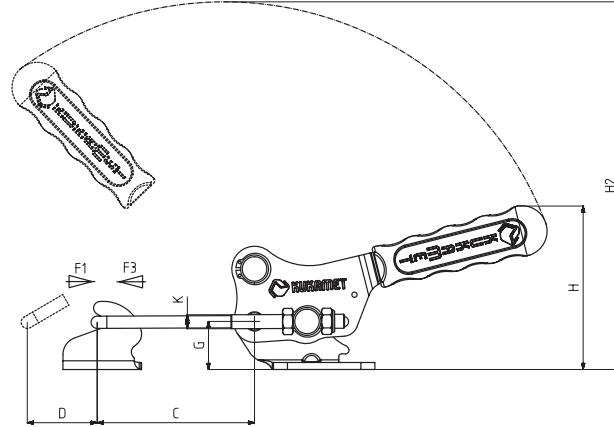
Modell Nr.	A	B	B2	C	D	E	F	G	H	H2	J	K	L	M	N	X1	X2
252-2	26	8	4	36	17	13,5	4,5	22	47	71	8	M5	62		Ø 4,5	19	27
252-3	44	12	6	56	27	23	8	39,5	79	116,5	13	M8	100		Ø 7,5	27	43
252-4	64	16	8	79	37	35	11	56,5	114,5	164	19	M10	143		Ø 9	39	63

311



Modell Nr.	Rostfrei (Edelstahl) (STAINLESS)	Schwarz (BLACK)	F1 (N)	F3 (N)	Hub Zahnlänge (STROKE) (thread length)	Gewicht (WEIGHT) (gr)
311 - 1	S 311 -	B 311 -	1000	1500	45	135
311 - 2	S 311 -	B 311 -	1500	2000	45	175
311 - 3	S 311 -	B 311 -	2200	3200	75	335
311 - 4	S 311 -	B 311 -	7000	8000	95	815
311 - 5	S 311 -	B 311 -	10000	11000	110	1185

F1 : Druckkraft (EXERTING FORCE) , F3 : Haltekraft (HOLDING CAPACITY)
Die Zugkräfte der rostfreien U-Befestigungsprodukten sind 30 % weniger (Stainless steel latch clamp's tensile strength are %30 more less)



MODEL NO : 311-1

MODEL NO : 311-2

MODEL NO : 311-3

MODEL NO : 311-4-5



Befestigungsart : mit waagrechtem Fuß
Body Mounting Base: Horizontal

Das Maß C ist für kurze U-Befestigungen geeignet. Siehe Zubehör-Seite. / C Dimension is for short U Hook. Please See Accessories Page.

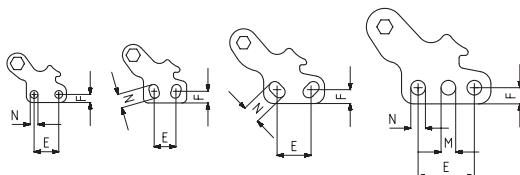
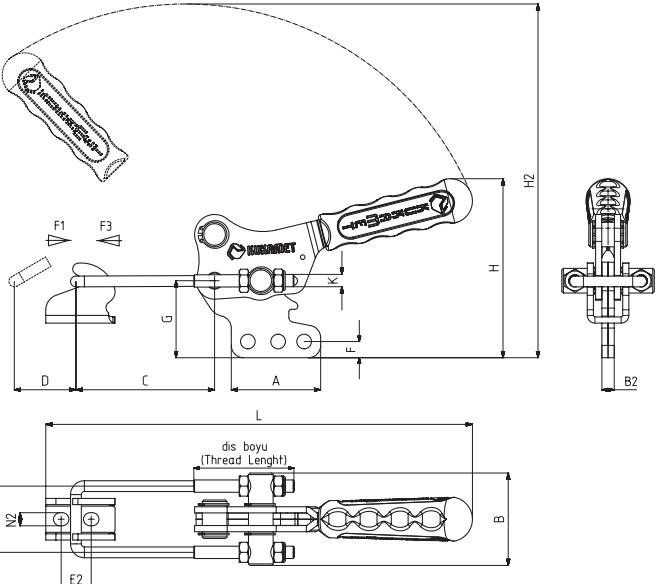
Modell Nr.	A	B	C min.	C max.	D	E	E2	F	G	H	H2	J	K	L min.	L max.	M	N	N2
311 - 1	26	32	35	65	20	16	10	18,5 - 21,5	13	55	110	23	M4	135	165		5x6,5 Ø 5	
311 - 2	28	37	32	62	25	13 - 15	10 - 14	19 - 24,5	17	58	120	23	M4	142	172		6 x 9 5,5 x 7,5	
311 - 3	39,5	46	32	67	35	19 - 25	16	25 - 31	21,5	67	160	30	M 6	177	212		7,5x11,5 Ø 6,5	
311 - 4	58	58	45	95	44	32 - 41	18 - 21	37	27,5	91	200	43	M 8	233	282	Ø 9,5 9,5x14	8,5x10	
311 - 5	58	58	45	127	44	32 - 41	18 - 21	37	27,5	93,5	204,5	45	M 10	233	315	Ø 9,5 9,5x14	8,5x10	

312



Modell Nr.	Rostfrei (Edelstahl) (STAINLESS)	Schwarz (BLACK)	F1 (N)	F3 (N)	Hub Zahnlänge (STROKE) (thread length)	Gewicht (WEIGHT) (gr)
312 - 1	S 312 -	B 312 -	1000	1500	45	135
312 - 2	S 312 -	B 312 -	1500	2000	45	175
312 - 3	S 312 -	B 312 -	2200	3200	75	335
312 - 4	S 312 -	B 312 -	7000	8000	95	815
312 - 5	S 312 -	B 312 -	10000	11000	110	1185

F1 : Druckkraft (EXERTING FORCE), F3 : Haltekraft (HOLDING CAPACITY)
Die Zugkräfte der rostfreien U-Befestigungsprodukten sind 30 % weniger (Stainless steel latch clamp's tensile strength are %30 more less)



Befestigungsart : mit senkrechtem Fuß
Body Mounting Base: Vertical



Modell Nr.	A	B	B2	C Min.	C Max.	D	E	E2	F	G	H	H2	J	K	L Min.	L Max.	M	N	N2
312 - 1	26	33	5	35	65	20	16	10	5	25	67	122	23	M4	135	165		Ø 5	Ø 5
312 - 2	28	33	5	32	62	25	13 - 15	10 - 14	6 - 9	31	72	134	23	M4	142	172		6 x 9	5,5 x 7,5
312 - 3	39,5	42	6	32	67	35	19 - 25	16	7,5 - 10,5	39,5	85	178	30	M 6	177	212		7,5x11,5	Ø 6,5
312 - 4	58	60	8	45	95	44	36,5	18 - 21	10,5	50	114	223	43	M 8	232	282	Ø 9,5	Ø 9,5	8,5x10
312 - 5	58	65	8	45	127	44	36,5	18 - 21	10,5	50	114	223	43	M 10	233	315	Ø 9,5	Ø 9,5	8,5x10

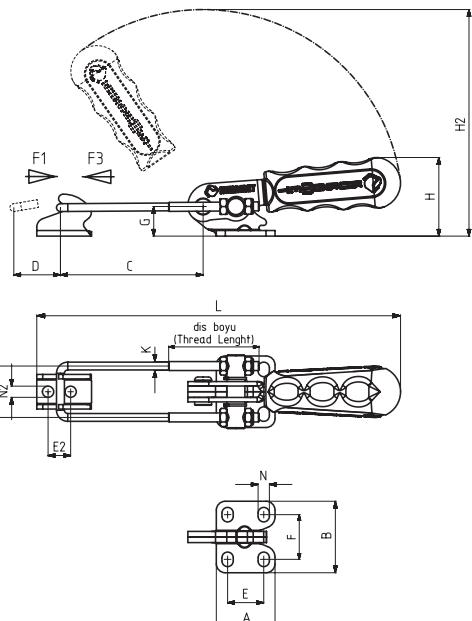
Das Maß C ist für kurze U-Befestigungen geeignet. Siehe Zubehör-Seite. / C Dimension is for short U Hook. Please See Accessories Page.

321



Modell Nr.	Rostfrei (Edelstahl) (STAINLESS)	Schwarz (BLACK)	F1 (N)	F3 (N)	Hub Zahnlänge (STROKE) (thread length)	Gewicht (WEIGHT) (gr)
321 - 1	S 321 -	B 321 -	1000	1500	45	115

F1 : Druckkraft (EXERTING FORCE), F3 : Haltekraft (HOLDING CAPACITY)
Die Zugkräfte der rostfreien U-Befestigungsprodukten sind 30 % weniger (Stainless steel latch clamp's tensile strength are %30 more less)


Befestigungsart : mit waagrechtem Fuß

Body Mounting Base: Horizontal

Modell Nr.	A	B	C min.	C max.	D	E	E2	F	G	H	H2	J	K	L min.	L max.	M	N	N2
321 - 1	26	32	35	65	20	16	10	18,5-21,5	13	33	99	23	M4	135	165	5x6,5	Ø 5	

331

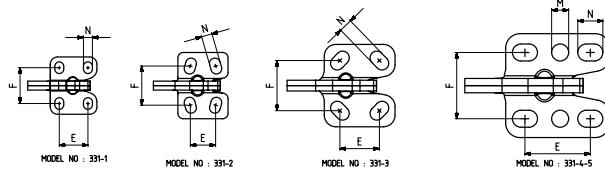
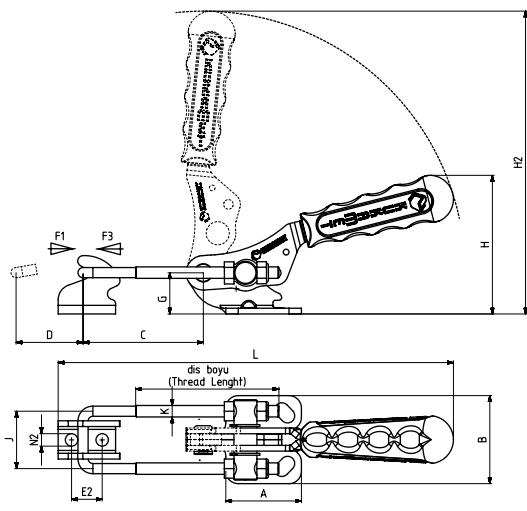

Befestigungsart : mit waagrechtem Fuß

Body Mounting Base: Horizontal



Modell Nr.	Rostfrei (Edelstahl) (STAINLESS)	Schwarz (BLACK)	F1 (N)	F3 (N)	Hub Zahnlänge (STROKE) (thread length)	Gewicht (WEIGHT) (gr)
331 - 1	S 331 -	B 331 -	1000	1500	45	95
331 - 2	S 331 -	B 331 -	1500	2000	45	160
331 - 3	S 331 -	B 331 -	2200	3200	75	310
331 - 4	S 331 -	B 331 -	7000	8000	95	720
331 - 5	S 331 -	B 331 -	10000	11000	110	860

F1 : Druckkraft (EXERTING FORCE), F3 : Haltekraft (HOLDING CAPACITY)
Die Zugkräfte der rostfreien U-Befestigungsprodukten sind 30 % weniger (Stainless steel latch clamp's tensile strength are %30 more less)



Modell Nr.	A	B	C Min.	C Max.	D	E	E2	F	G	H	H2	J	K	L Min.	L Max.	M	N	N2
331 - 1	26	32	35	65	20	16	10	18,5 - 21,5	13	28	80	23	M4	135	165	5 x 6,5	Ø 5	
331 - 2	28	37	32	62	25	13 - 15	10 - 14	19 - 24,5	17	58	120	23	M4	142	172	6 x 9	5,5 x 7,5	
331 - 3	39,5	46	32	67	35	19 - 25	16	25 - 31	21,5	67	160	30	M6	177	212	7,5 x 11,5	Ø 6,5	
331 - 4	58	58	45	95	44	32 - 41	18 - 21	37	27,5	91	200	43	M8	233	282	Ø 9,5	9,5 x 14	
331 - 5	58	58	45	127	44	32 - 41	18 - 21	37	27,5	93,5	204,5	45	M10	233	315	Ø 9,5	9,5 x 14	

Das Maß C ist für kurze U-Befestigungen geeignet. Siehe Zubehör-Seite./ C Dimension is for short U Hook. Please See Accessories Page.

332



new

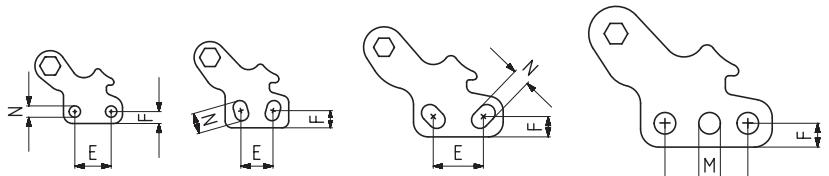
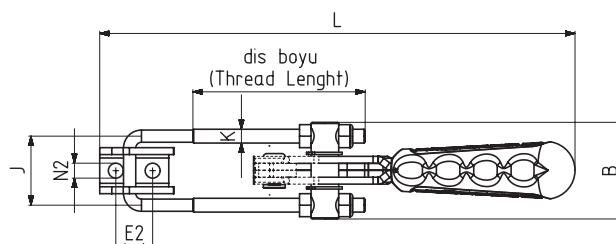
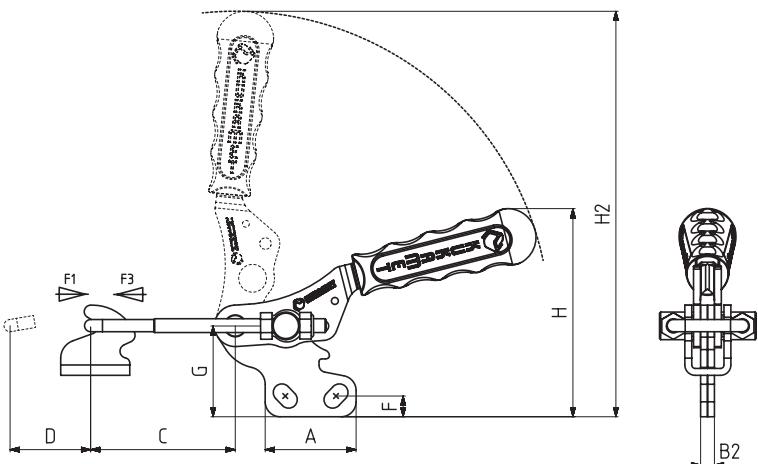

Ağak Tipi: Dikey Tabanlı

Body Mounting Base: Vertical



Modell Nr.	Rostfrei (Edelstahl) (STAINLESS)	Schwarz (BLACK)	F1 (N)	F3 (N)	Hub Zahnlänge (STROKE) (thread length)	Gewicht (WEIGHT) (gr)
332 - 1	S 332 -	B 332 -	1000	1500	45	95
332 - 2	S 332 -	B 332 -	1500	2000	45	160
332 - 3	S 332 -	B 332 -	2200	3200	75	310
332 - 4	S 332 -	B 332 -	7000	8000	95	720
332 - 5	S 332 -	B 332 -	10000	11000	110	860

F1 : Druckkraft (EXERTING FORCE), F3 : Haltekraft (HOLDING CAPACITY)
Die Zugkräfte der rostfreien U-Befestigungsprodukten sind 30 % weniger (Stainless steel latch clamp's tensile strength are %30 more less)



MODEL NO : 332-1

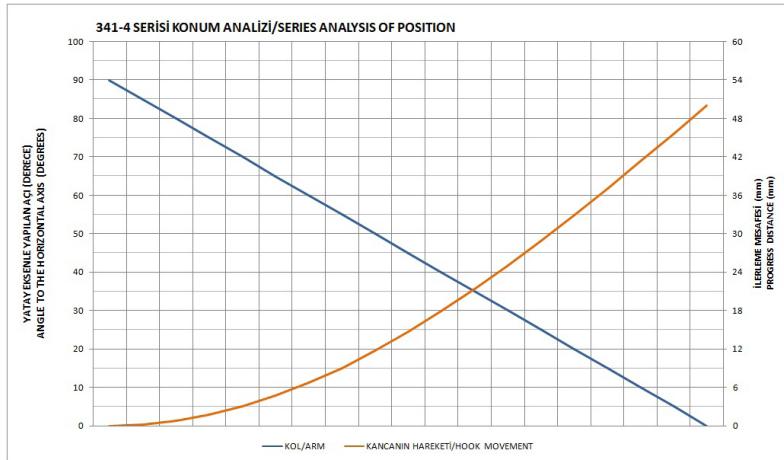
MODEL NO : 332-2

MODEL NO : 332-3

MODEL NO : 332-4-5

Modell Nr.	A	B	B2	C min.	C max.	D	E	E2	F	G	H	H2	J	K	L min.	L max.	M	N	N2
332 - 1	26	33	5	35	65	20	16	10	5	25	40	91,5	23	M4	135	165	Ø 5	Ø 5	
332 - 2	28	33	5	32	62	25	13 - 15	10 - 14	6 - 9	31	72	134	23	M4	142	172	6 x 9	5,5 x 7,5	
332 - 3	39,5	42	6	32	67	35	19 - 25	16	7,5 - 10,5	39,5	85	178	30	M 6	177	212	7,5 x 11,5	Ø 6,5	
332 - 4	58	60	8	45	95	44	36,5	18 - 21	10,5	50	114	223	43	M 8	232	282	Ø 9,5	Ø 9,5	
332 - 5	58	65	8	45	127	44	36,5	18 - 21	10,5	50	114	223	43	M 10	233	315	Ø 9,5	8,5 x 10	

Das Maß C ist für kurze U-Befestigungen geeignet. Siehe Zubehör-Seite./ C Dimension is for short U Hook. Please See Accessories Page.



Modell Nr.	F1 (N)	F3 (N)	Hub Zahnlänge (STROKE) (thread length)	Gewicht (WEIGHT) (gr)
341 - 4	15000	17000	130	1850
341 - 5	20000	25000	65	2235

F1: Druckkraft (EXERTING FORCE) F3: Haltekraft (HOLDING CAPACITY)

341

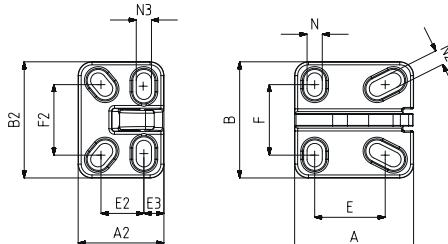
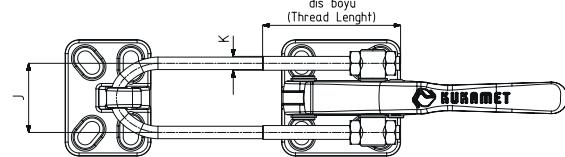
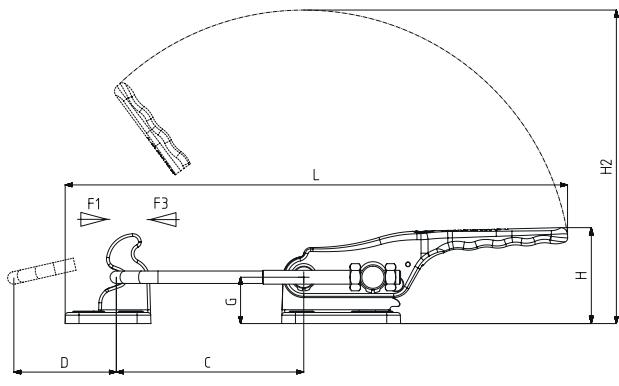

Befestigungsart : mit Gusskörper
Body Mounting Base: Casting

Ürün özellikleri ;

Ağır iş uygulamalarında kullanıma uygun mukavemetli ürünlerdir.
Taban, kol ve gerdirme parçası mukavemetli GGG-60 döküm malzemeden üretilmiş ve siyah elektro statik toz boyası ile boyanmıştır.
Kanca ve pimler çelik malzemeden üretilmiştir. Korozyon direnci için galvaniz kaplama yapılmıştır.

Product Features ;

The products are strong and suited for heavy duty applications.
The base, arm and stretching part are made of strong GGG-60 casting and coated with black electrostatic powder paint.
Hook and pins are made of galvanized steel for corrosion resistance.



Modell Nr.	A	A2	B	B2	C Min.	C Max.	D	E	E2	E3	F	F2	G	H	H2	J	K	L Min.	L Max.	N	N2	N3
341-4	86	62	84	84	50	135	80	45 - 57	28 - 33	15	45 - 57	45 - 57	33,5	69	230	50	M10	280	365	11x17	11x24	11x19
341-5	86	66	84	84	50	70	80	45 - 57	28 - 35	20	45 - 57	45 - 57	33,5	89	230	56	M12	280	298	11x17	11x24	11x19

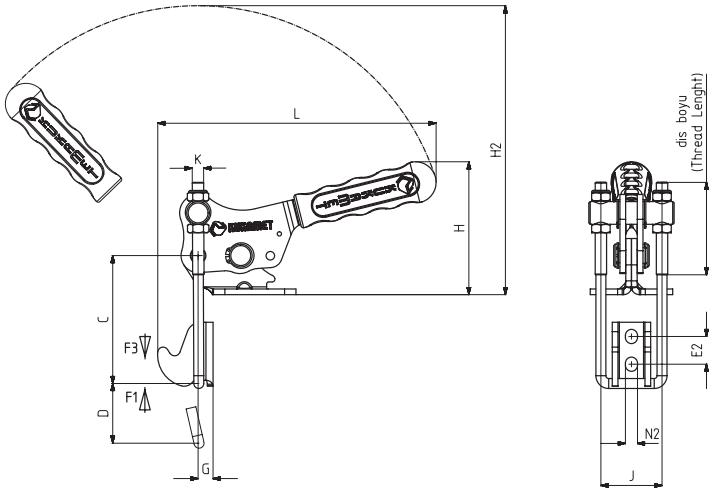
351



Modell Nr.	Rostfrei (Edelstahl) (STAINLESS)	Schwarz (BLACK)	F1 (N)	F3 (N)	Hub Zahnlänge (STROKE) (thread length)	Gewicht (WEIGHT) (gr)
351 - 1	S 351 -	B 351 -	1000	1500	45	135
351 - 2	S 351 -	B 351 -	1500	2000	45	175
351 - 3	S 351 -	B 351 -	2200	3200	75	335
351 - 4	S 351 -	B 351 -	7000	8000	95	815
351 - 5	S 351 -	B 351 -	10000	11000	110	1185

F1 : Druckkraft (EXERTING FORCE), F3 : Haltekraft (HOLDING CAPACITY)

Die Zugkräfte der rostfreien U-Befestigungsprodukten sind 30 % weniger (Stainless steel latch clamp's tensile strength are %30 more less)



Befestigungsart : mit waagrechtem Fuß
Body Mounting Base: Horizontal



MODEL NO : 351-1 MODEL NO : 351-2 MODEL NO : 351-3 MODEL NO : 351-4-5



Modell Nr.	A	B	C (min.)	C (max.)	D	E	E2	F	G	H	H2	J	K	L	M	N	N2
351 - 1	26	32	35	65	20	16	10	18,5 - 21,5	13	55	110	23	M4	104	5x6,5	Ø 5	
351 - 2	28	37	32	62	25	13 - 15	10 - 14	19 - 24,5	17	58	120	23	M4	113	6 x 9	5,5 x 8	
351 - 3	39,5	46	32	67	35	19 - 25	16	25 - 31	21,5	67	160	30	M 6	131	7,5x11,5	Ø 6,5	
351 - 4	58	58	45	95	44	32 - 41	18 - 21	37	27,5	91	200	43	M 8	196	Ø 9,5	9,5x14	
351 - 5	58	58	45	127	44	32 - 41	18 - 21	37	27,5	93,5	204,5	45	M 10	196	Ø 9,5	9,5x14	
																	8,5x10

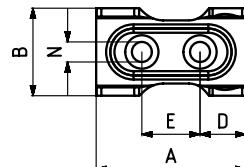
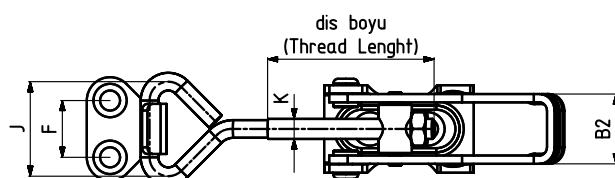
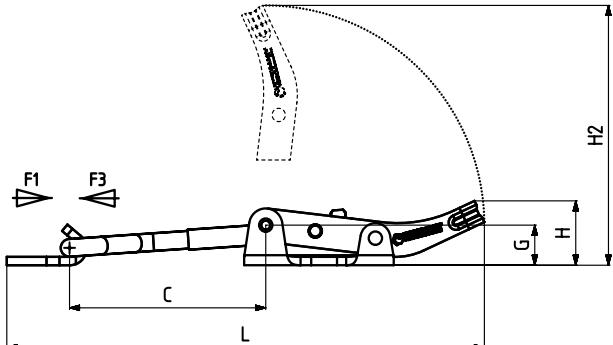
Das Maß C ist für kurze U-Befestigungen geeignet. Siehe Zubehör-Seite./ C Dimension is for short U Hook. Please See Accessories Page.

361



Modell Nr.	Rostfrei (Edelstahl) (STAINLESS)	F1 (N)	F3 (N)	Hub Zahnlänge (STROKE) (thread length)	Gewicht (WEIGHT) (gr)
361-2	S361-....	1500	1725	50	100

F1 : Druckkraft (EXERTING FORCE), F3 : Haltekraft (HOLDING CAPACITY)


Befestigungsart : mit waagrechtem Fuß

Body Mounting Base: Horizontal

Modell Nr.	A	B	B2	C Min	C Max	D	E	F	G	H	H2	J	K	L Min	L Max	M	N
361-2	45	26	21	25	60	13,75	17,5	17	12	19,5	78	28,5	M6	110	145		Ø 6

mit Sicherheitsverriegelung/Locked
NOT : Kilitli modellerin teknik detayları 36, 37, 40 ve 41 numaralı sayfalarında mevcuttur.

Note: Technical details of locked models are available at pages 36, 37, 40 and 41

311-L

Modell Nr.
311 - 1 - L
311 - 2 - L
311 - 3 - L
311 - 4 - L
311 - 5 - L



312-L

Modell Nr.
312 - 1 - L
312 - 2 - L
312 - 3 - L
312 - 4 - L
312 - 5 - L



341-L

Modell Nr.
341 - 4 - L
341 - 5 - L



351-L

Modell Nr.
351 - 1 - L
351 - 2 - L
351 - 3 - L
351 - 4 - L
351 - 5 - L


Befestigungsart :
mit waagrechtem Fuß
Body Mounting Base: Horizontal

Befestigungsart :
mit senkrechtem Fuß
Body Mounting Base: Vertical

Befestigungsart :
mit Gusskörper
Body Mounting Base: Casting

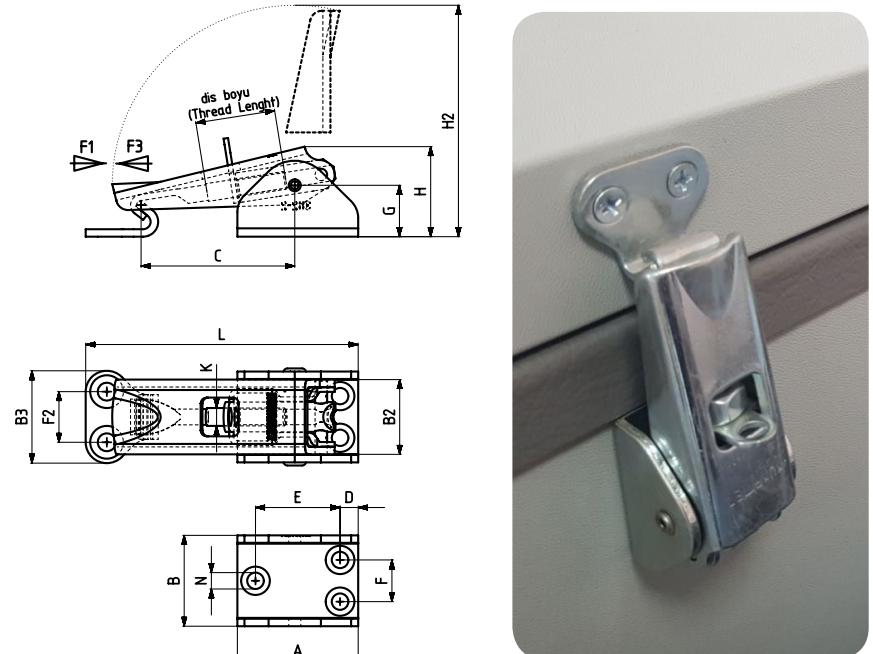
Befestigungsart :
mit waagrechtem Fuß
Body Mounting Base: Horizontal

362


Befestigungsart : mit waagrechtem Fuß
Body Mounting Base: Horizontal

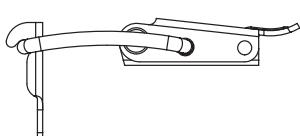
Modell Nr.	Rostfrei (Edelstahl) (STAINLESS)	F1 (N)	F3 (N)	Hub Zahnlänge (STROKE) (thread length)	Gewicht WEIGHT (gr)
362-1	S362 -	1400	1650	25	140
362-2	S362 -	1600	1800	25	160

F1 : Druckkraft (EXERTING FORCE), F3 : Haltekraft (HOLDING CAPACITY)



Modell Nr.	A	B	B2	B3	C Min	C Max	D	E	F	F2	G	H	H2	K	L Min	L Max	N
362-1	40	29,5	24	31	47	62	6	28	14	17	17	30	78	M6	86	101	Ø 5,5
362-2	40	30,5	25	31	47	62	6	28	14	17	17	30	78	M8	86	101	Ø 5,5

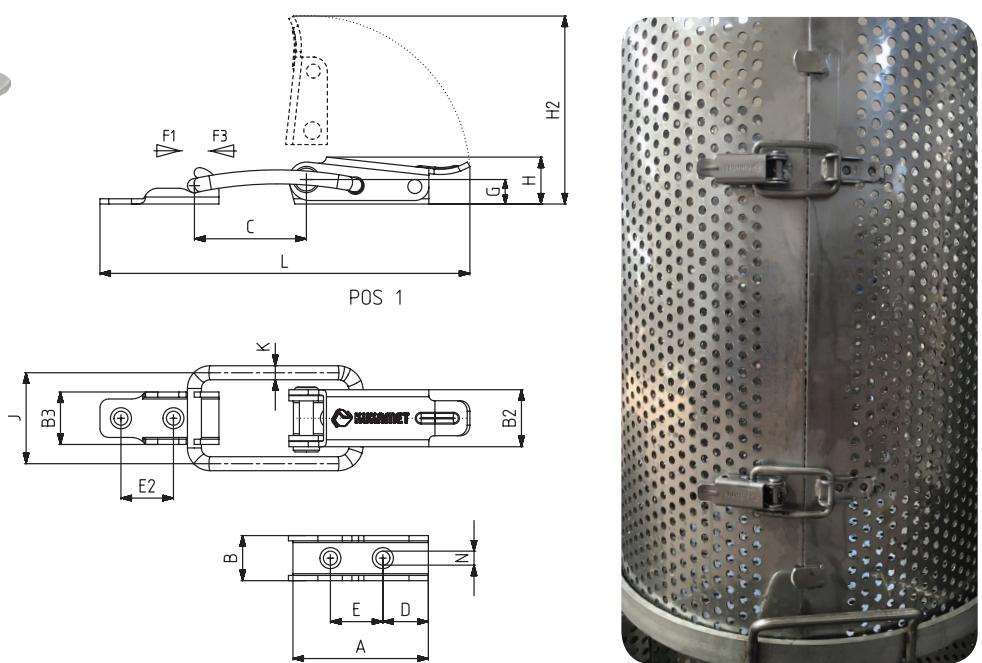
363


Befestigungsart : mit waagrechtem Fuß
Body Mounting Base: Horizontal


POS 2

Modell Nr.	Rostfrei (Edelstahl) (STAINLESS)	F1 (N)	F3 (N)	Gewicht WEIGHT (gr)
363-2	S363-....	1500	1725	50

F1 : Druckkraft (EXERTING FORCE), F3 : Haltekraft (HOLDING CAPACITY)



Modell Nr.	A	B	B2	B3	C	D	E	E2	F	G	H	H2	J	K	L	M	N
363-2	38,5	13	16,3	15	32	13	15	15		7	13,5	54	25	4	106		Ø 4

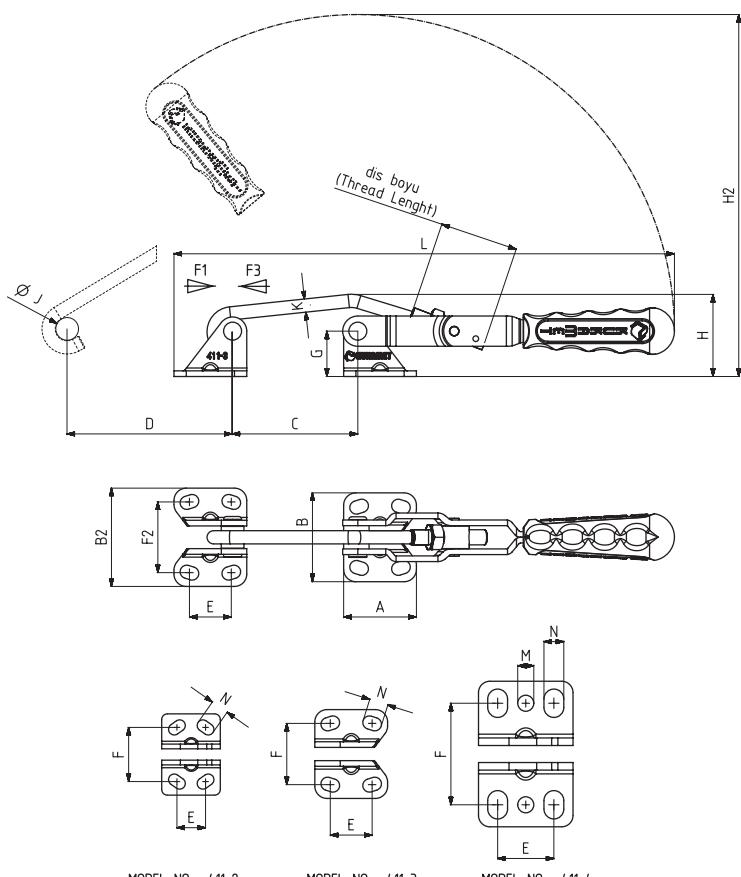
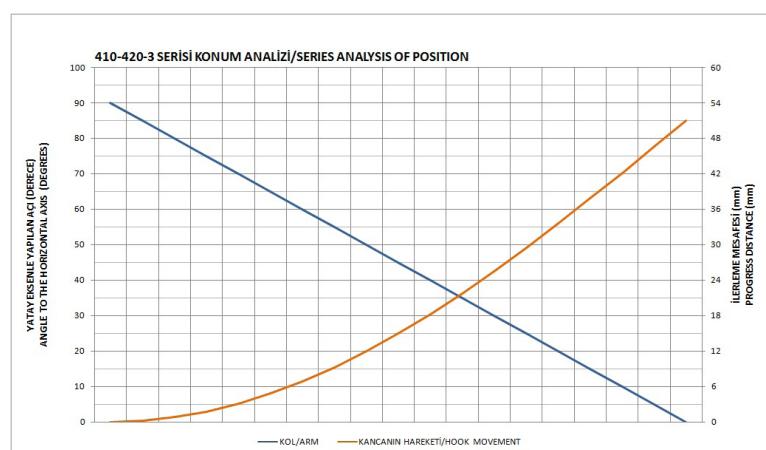
411



Befestigungsart : mit waagrechtem Fuß
Body Mounting Base: Horizontal

Modell Nr.	Rostfrei (Edelstahl) (STAINLESS)	Schwarz (BLACK)	F1 (N)	F3 (N)	Hub Zahnlänge (STROKE) (thread length)	Gewicht (WEIGHT) (gr)
411 - 2	S 411 -	B 411 -	1500	1800	35	210
411 - 3	S 411 -	B 411 -	2000	2500	41	325
411 - 4	S 411 -	B 411 -	3500	4000	55	860

F1 : Druckkraft (EXERTING FORCE), F3 : Haltekraft (HOLDING CAPACITY)
Die Zugkräfte der rostfreien C-Befestigungsprodukten sind 30 % weniger (Stainless steel latch clamp's tensile strength are %30 more less)



Modell Nr.	A	B	B2	C min.	C max.	D	E	F	F2	G	H	H2	J	K	L min.	L max.	M	N
411 - 2	31	43	47	45	60	50	12 - 18	26,5 - 30,5	30,5 - 34,5	26	38	155	9	M6	200	215	6x9,5	
411 - 3	38,5	47	52	60	75	80	19 - 25	31,5 - 33	36,5 - 38	24	42	190	12	M 8	255	270	7x10	
411 - 4	50	77	84	75	100	130	30	49 - 58	56 - 65	40	61	253	16	M10	335	360	Ø 8,5, 10,5x15	

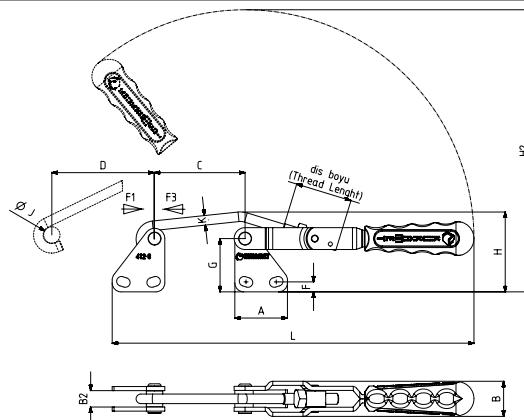
412


Ayak Tipi: Dikey Tabanlı

Body Mounting Base: Vertical

Modell Nr.	Rostfrei (Edelstahl) (STAINLESS)	Schwarz (BLACK)	F1 (N)	F3 (N)	Hub Zahnänge (STROKE) (thread length)	Gewicht (WEIGHT) (gr)
412 - 2	S 412 -	B 412 -	1500	1800	35	210
412 - 3	S 412 -	B 412 -	2000	2500	41	325
412 - 4	S 412 -	B 412 -	3500	4000	55	860

F1: Druckkraft (EXERTING FORCE), F3 : Haltekraft (HOLDING CAPACITY)
Die Zugkräfte der rostfreien C-Befestigungsprodukten sind 30 % weniger (Stainless steel latch clamp's tensile strength are %30 more less)

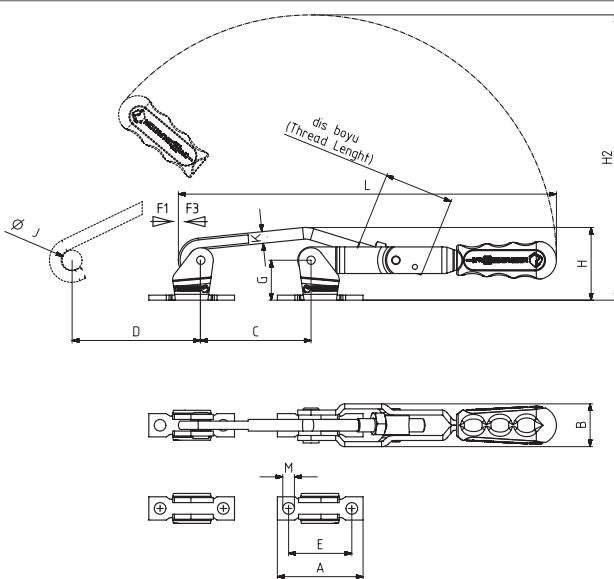


413


Befestigungsart: mit U- Fuß
Body Mounting Base: U Base

Modell Nr.	Rostfrei (Edelstahl) (STAINLESS)	Schwarz (BLACK)	F1 (N)	F3 (N)	Hub Zahnänge (STROKE) (thread length)	Gewicht (WEIGHT) (gr)
413 - 3	S 413 -	B 413 -	2000	2500	41	285

F1: Druckkraft (EXERTING FORCE), F3 : Haltekraft (HOLDING CAPACITY)
Die Zugkräfte der rostfreien C-Befestigungsprodukten sind 30 % weniger (Stainless steel latch clamp's tensile strength are %30 more less)



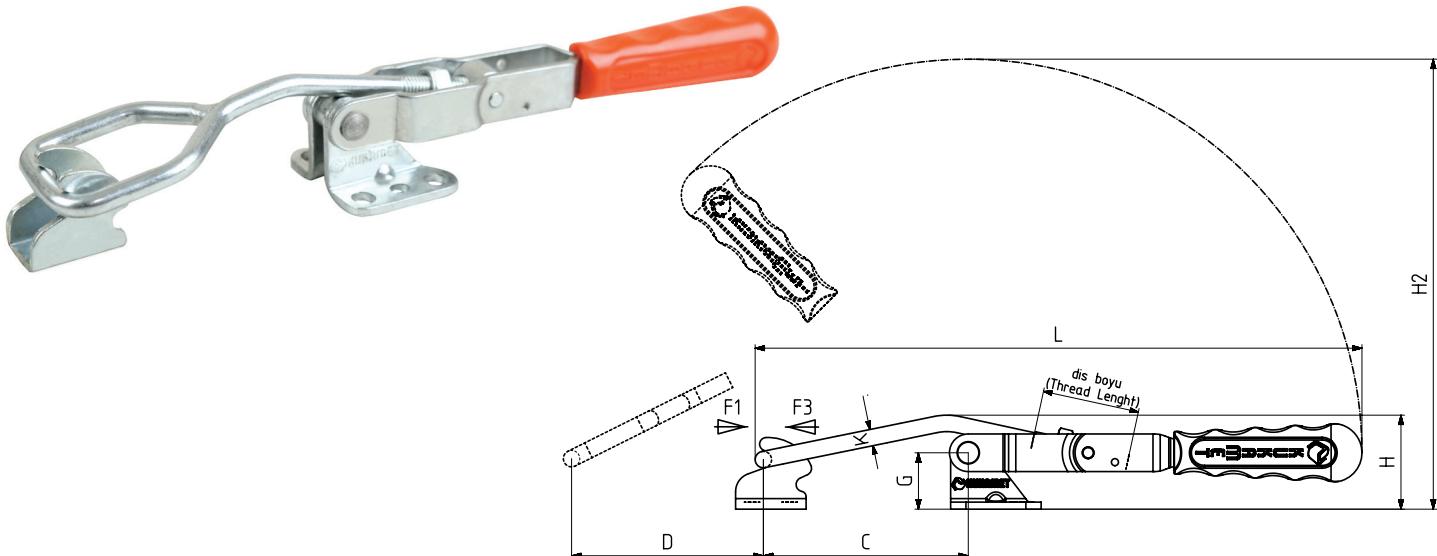
Modell Nr.	A	B	B2	C Min.	C Max.	D	E	F	G	H	H2	J	K	L Min.	L Max.	M	N
413 - 3	51,5	25,5		60	75	80	38		24	42	190	12	M 8	255	270	Ø 7	

421

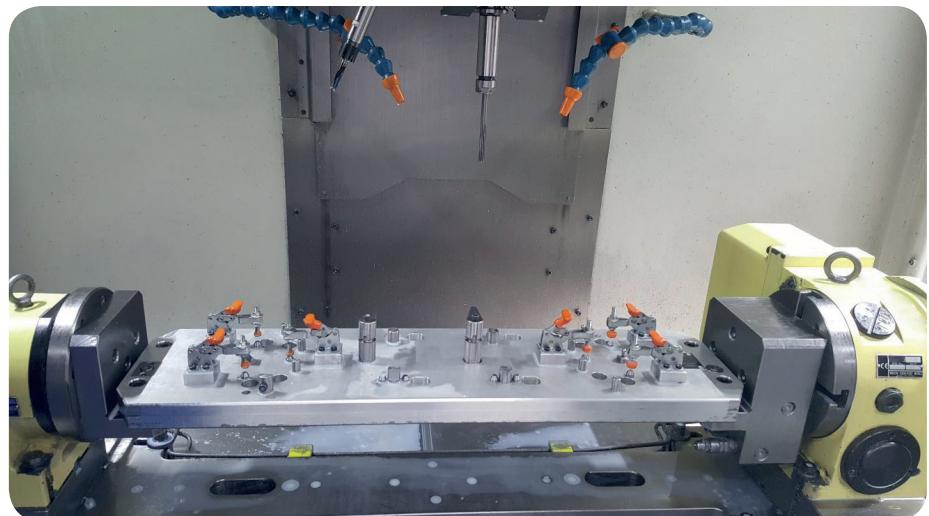
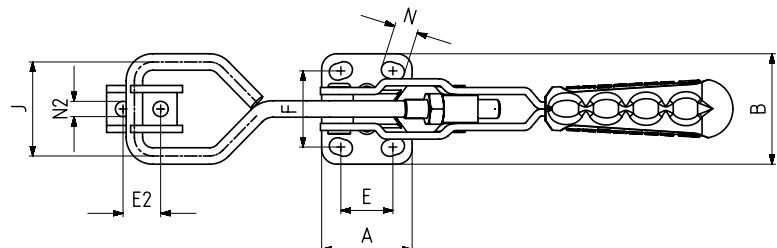


Modell Nr.	Rostfrei (Edelstahl) (STAINLESS)	Schwarz (BLACK)	F1 (N)	F3 (N)	Hub Zahnlänge (STROKE) (thread length)	Gewicht (WEIGHT) (gr)
421 - 3	S 421 -	B 421 -	2000	2500	41	320

F1 : Druckkraft (EXERTING FORCE), F3 : Haltekraft (HOLDING CAPACITY)
Die Zugkräfte der rostfreien C-Befestigungsprodukten sind 30 % weniger (Stainless steel latch clamp's tensile strength are %30 more less)


Befestigungsart : mit waagrechtem Fuß

Body Mounting Base: Horizontal



Modell Nr.	A	B	C Min.	C Max.	D	E	E2	F	G	H	H2	J	K	L Min.	L Max.	N	N2
421 - 3	38.5	47	77	97	80	19-25	16	31,5-33	24	42	190	40	M 8	255	275	7x10	Ø 6.5

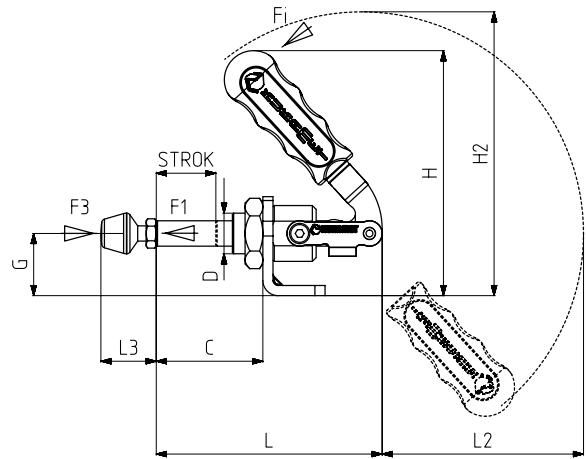
511

new

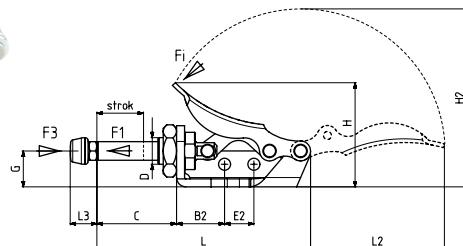


Modell Nr.	Rostfrei (Edelstahl) (STAINLESS)	Schwarz (BLACK)	F1 (N)	F3 (N)	Fi Andruckkraft YIELD (F1:Fi)	Andruckspindel (SQUEEZE SCREW)	Hub (STROKE)	Gewicht (WEIGHT) (gr)
511 - 0 - M	S 511 -	B 511 -	550	700	20:1	M4X25	15	87
511 - 0	S 511 -	B 511 -	550	700	20:1	M4X25	15	92
511 - 1	S 511 -	B 511 -	800	970	24:1	M5X35	22	135
511 - 2	S 511 -	B 511 -	1500	1700	26:1	M6X40	27	280
511 - 3	S 511 -	B 511 -	2500	2640	27:1	M8X50	38	490
511 - 5	S 511 -	B 511 -	3500	3700	38:1	M10X70	53	960
511 - 6	S 511 -	B 511 -	4500	4650	38:1	M10X70	53	1070

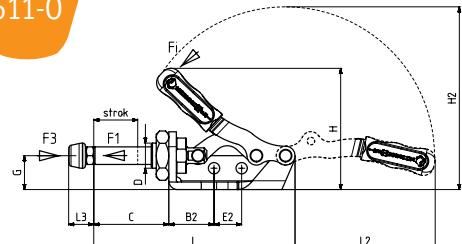
F1 : Druckkraft (EXERTING FORCE), F3 : Haltekraft (HOLDING CAPACITY), Fi : Anwendungskraft (APPLIED FORCE)


Befestigungsart : mit waagrechtem Fuß
Body Mounting Base: Horizontal

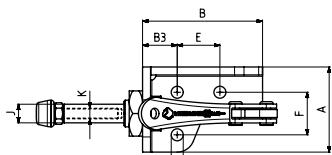
511-0-M



511-0

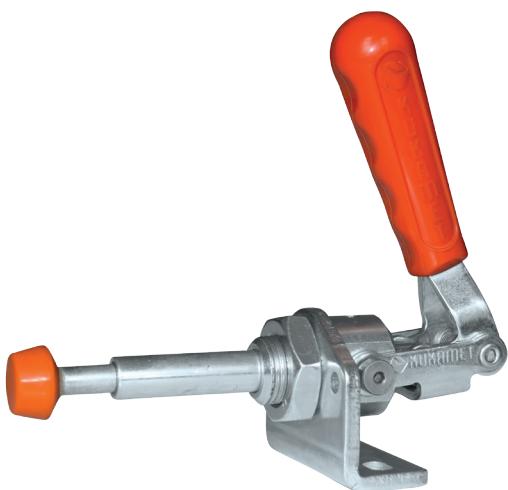

Befestigungsart : mit waagrechtem Fuß
Body Mounting Base: Horizontal

MODEL NO : 511-0-M
(KAPLAMASIZ METAL SAP)
(UNCOATED METAL HANDLE)



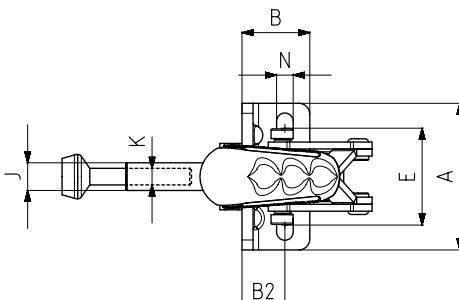
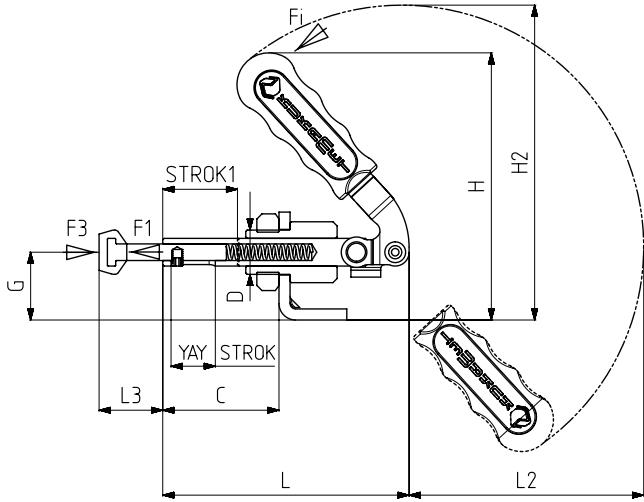
MODEL NO : 511-0

Modell Nr.	A	B	B2	B3	C	D	E	E2	F	G	H	H2	J	K	L	L2	L3 Min	L3 Max	N
511 - 0 - M	32	45	18	13	32	M10 x 1	16	11	16	13,5	39	67	7	M4	82	50,5	10	25	Ø 4,5
511 - 0	32	45	18	13	32	M10 x 1	16	11	16	13,5	48	73	7	M4	82	56	10	25	Ø 4,5
511 - 1	44	20	11,5		34	M12 x 1,5	21,5 - 31,5			19,5	79,5	92	8	M5	73	68,5	15	38	5,5 x 10,5
511 - 2	53	24,5	15,5		42	M16 x 1,5	30 - 40			24,5	96	111	10	M6	89	80	19	46	6 x 11
511 - 3	60	30	17,5		56	M20 x 1,5	33,5 - 42,5			30,5	137	140	12	M8	116	80	24	58	6,5 x 11
511 - 5	78	36	21		75	M24 x 1,5	42 - 57			38	152	179	14	M10	155	135	32	74	8,5 x 16
511 - 6	78	36	21		75	M24 x 1,5	42 - 57			38	152	179	16	M10	155	135	32	74	8,5 x 16

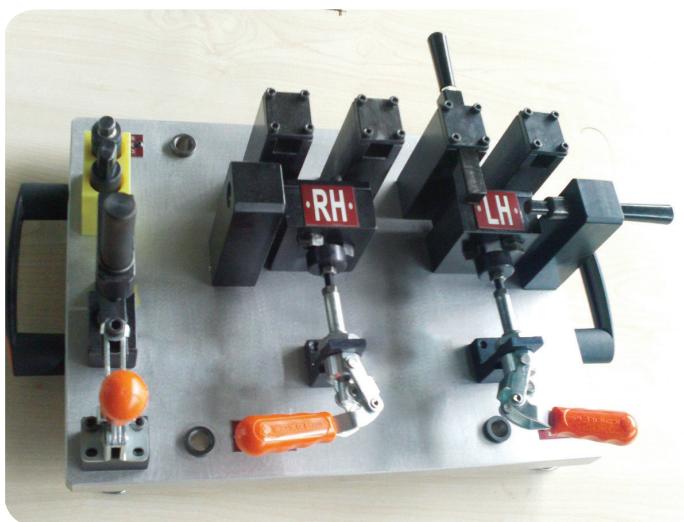
511-Y
new


Modell Nr.	F1 (N)	F3 (N)	Fi Andruckkraft YIELD (F1:Fi)	FEDER HUBWEG (SPRING STROKE)	Hub 1 (STROKE 1)	Gewicht (WEIGHT) (gr)
						F1 : Druckkraft (EXERTING FORCE) , F3 : Haltekraft (HOLDING CAPACITY) , Fi : Anwendungskraft (APPLIED FORCE)
511 - 1 - Y	800	970	24:1	10	22	130
511 - 2 - Y	1500	1700	26:1	12	27	270
511 - 3 - Y	2500	2640	27:1	14	38	475
511 - 5 - Y	3500	3700	38:1	16	53	945
511 - 6 - Y	4500	4650	38:1	16	53	1050

F1 : Druckkraft (EXERTING FORCE) , F3 : Haltekraft (HOLDING CAPACITY) , Fi : Anwendungskraft (APPLIED FORCE)


Ağak Tipi: Yataş Tabanlı (Yaylı)

Body Mounting Base: Horizontal (Spring loaded)



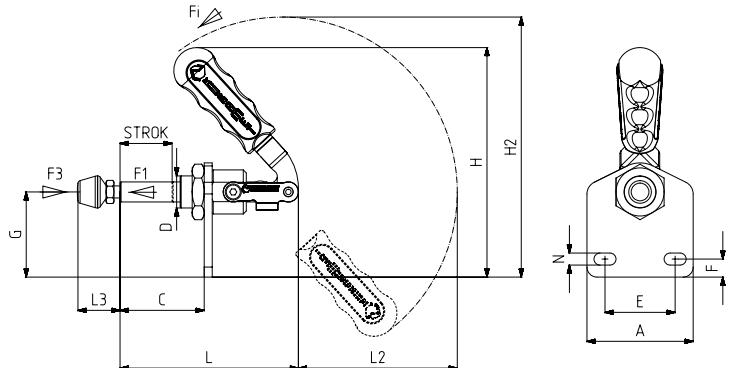
Modell Nr.	A	B	B2	C	D	E	G	H	H2	J	K	L	L2	L3 Min	L3 Max	N
511 - 1 - Y	44	20	11,5	34	M12 x 1,5	21,5 – 31,5	19,5	79,5	92	8	M5	73	68,5	11,5	21,5	5,5 x 10,5
511 - 2 - Y	53	24,5	15,5	42	M16 x 1,5	30 – 40	24,5	96	111	10	M6	89	80	11	23	6 x 11
511 - 3 - Y	60	30	17,5	56	M20 x 1,5	33,5 – 42,5	30,5	137	140	12	M 8	116	80	13	27	6,5 x 11
511 - 5 - Y	78	36	21	75	M24 x 1,5	42 – 57	38	152	179	14	M10	155	135	17	33	8,5 x 16
511 - 6 - Y	78	36	21	75	M24 x 1,5	42 – 57	38	152	179	16	M10	155	135	17	33	8,5 x 16

512

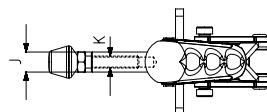


Modell Nr.	Rostfrei (Edelstahl) (STAINLESS)	Schwarz (BLACK)	F1 (N)	F3 (N)	Fi Andruckkraft (YIELD) (F1:Fi)	Andruckspindel (SQUEEZE SCREW)	Hub (STROKE)	Gewicht (WEIGHT) (gr)
512 - 1	S 512 -	B 512 -	800	970	24:1	M5X35	22	135
512 - 2	S 512 -	B 512 -	1500	1700	26:1	M6X40	27	280
512 - 3	S 512 -	B 512 -	2500	2640	27:1	M8X50	38	490
512 - 5	S 512 -	B 512 -	3500	3700	38:1	M10X70	53	960
512 - 6	S 512 -	B 512 -	4500	4650	38:1	M10X70	53	1070

F1 : Druckkraft (EXERTING FORCE), F3 : Haltekraft (HOLDING CAPACITY) Fi : Anwendungskraft (APPLIED FORCE)

**Befestigungsart : mit senkrechtem Fuß**

Body Mounting Base: Vertical



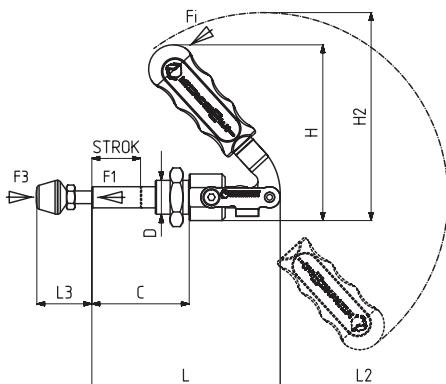
Modell Nr.	A	B	C	D	E	F	G	H	H2	J	K	L	L2	L3 Min	L3 Max	M	N
512 - 1	44		34	M12 x 1,5	21,5 - 31,5	8,5	35	95	108	8	M5	73	68,5	15	38		5,5 x 10,5
512 - 2	53		42	M16 x 1,5	30 - 40	9	42,5	114	129	10	M6	89	80	19	46		6 x 11
512 - 3	60		56	M20 x 1,5	33,5 - 42,5	12,5	52	158	161	12	M 8	116	80	24	58		6,5 x 11
512 - 5	78		75	M24 x 1,5	42 - 57	15	64,5	178	206	14	M10	155	135	32	74		8,5 x 16
512 - 6	78		75	M24 x 1,5	42 - 57	15	64,5	178	206	16	M10	155	135	32	74		8,5 x 16

513

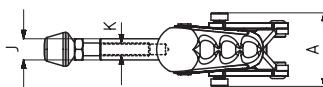


Modell Nr.	Rostfrei (Edelstahl) (STAINLESS)	Schwarz (BLACK)	F1 (N)	F3 (N)	Fi Andruckkraft (YIELD) (F1:Fi)	Andruckspindel (SQUEEZE SCREW)	Hub (STROKE)	Gewicht (WEIGHT) (gr)
513 - 1	S 513 -	B 513 -	800	970	24:1	M5X35	22	95
513 - 2	S 513 -	B 513 -	1500	1700	26:1	M6X40	27	200
513 - 3	S 513 -	B 513 -	2500	2640	27:1	M8X50	38	360
513 - 5	S 513 -	B 513 -	3500	3700	38:1	M10X70	53	710
513 - 6	S 513 -	B 513 -	4500	4650	38:1	M10X70	53	780

F1 : Druckkraft (EXERTING FORCE), F3 : Haltekraft (HOLDING CAPACITY) Fi : Anwendungskraft (APPLIED FORCE)

**Befestigungsart : ohne Fuß**

Body Mounting Base: No Base

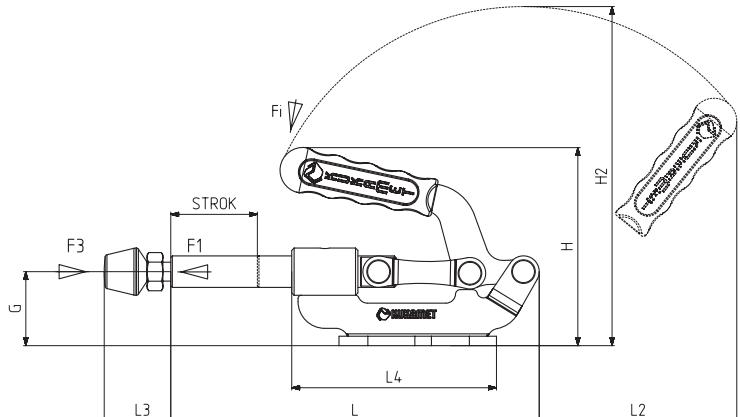
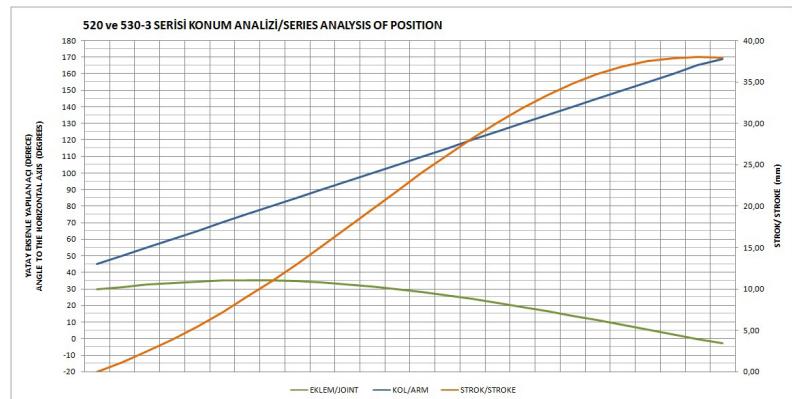


Modell Nr.	A	B	C	D	F	G	H	H2	J	K	L	L2	L3 Min	L3 Max	M	N
513 - 1	28		37	M12 x 1,5			69	82	8	M5	73	68,5	15	38		
513 - 2	32		46	M16 x 1,5			81,5	97	10	M6	89	80	19	46		
513 - 3	39		61	M20 x 1,5			100	103	12	M 8	116	80	24	58		
513 - 5	47		81	M24 x 1,5			131	159	14	M10	155	135	32	74		
513 - 6	51		81	M24 x 1,5			131	159	16	M10	155	135	32	74		

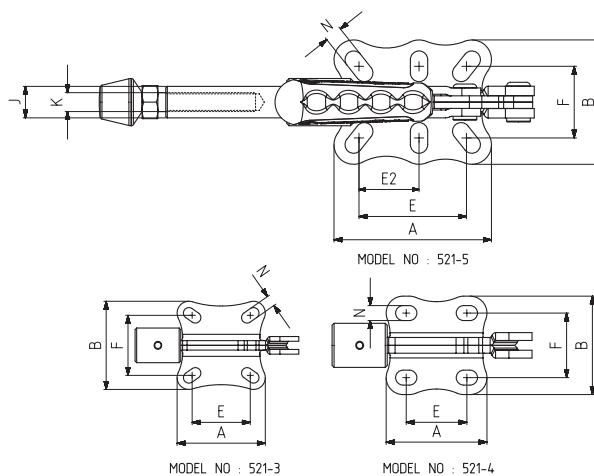
Modell Nr.	F1 (N)	F3 (N)	Fi	Andruckspindel (SQUEEZE SCREW)	Hub (STROKE)	Gewicht (WEIGHT) (gr)
			Andruckkraft (YIELD) (F1:Fi)			
521 - 3 (Ø 12)	2500	2960	16:1	M8X50	38	390
521 - 3 (Ø 14)	2500	3200	16:1	M8X50	38	405
521 - 4 (Ø 16)	4500	6650	23:1	M10X70	47	810
521 - 4 (Ø 18)	4500	7200	23:1	M10X70	47	825
521 - 5 (Ø 20)	7500	15000	30:1	M12X80	55	1425

F1 : Druckkraft (EXERTING FORCE), F3 : Haltekraft (HOLDING CAPACITY), Fi : Anwendungskraft (APPLIED FORCE)

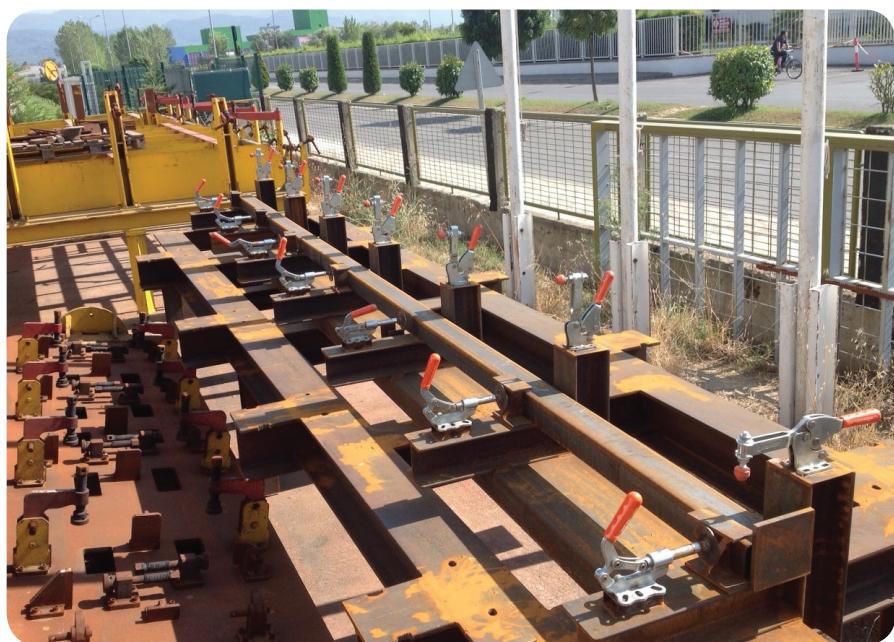
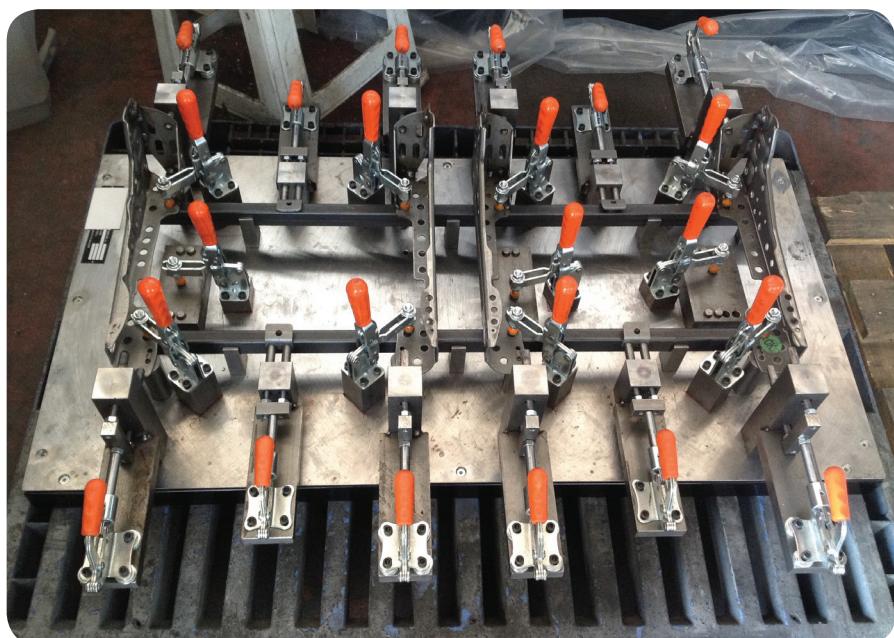
521



Befestigungsart : mit waagrechtem Fuß, verschweißt
Body Mounting Base: Horizontal, With Welding



Modell Nr.	A	B	C	D	E	E2	F	G	H	H2	J	K	L	L2	L3 Min	L3 Max	L4	M	N
521 - 3 (Ø 12)	56	56			32,5 - 41		35 - 41	32	88	142	12	M8	154	85	24	58	83	7 x 12	
521 - 3 (Ø 14)	56	56			32,5 - 41		35 - 41	32	88	142	14	M8	154	85	24	58	83	7 x 12	
521 - 4 (Ø 16)	64	62			34,5 - 42,5		41	40	107	179	16	M10	186	105	32	81	98	9,5 x 13,5	
521 - 4 (Ø 18)	64	62			34,5 - 42,5		41	40	107	179	18	M10	186	105	32	81	98	9,5 x 13,5	
521 - 5 (Ø 20)	100	79			61,5 - 75	34,5 - 41,5	37 - 54	47	125	216	20	M12	234	125	39	94	130	11 x 22	

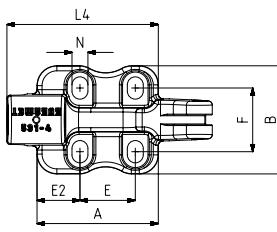
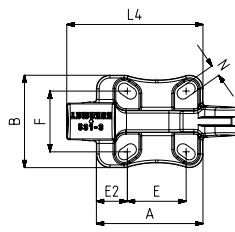
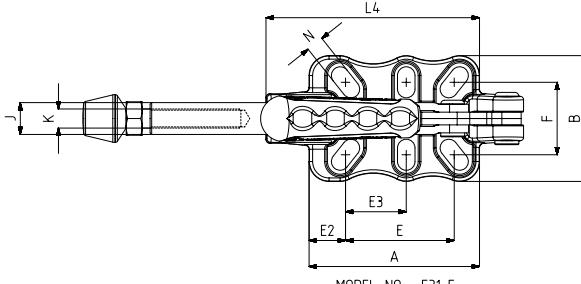
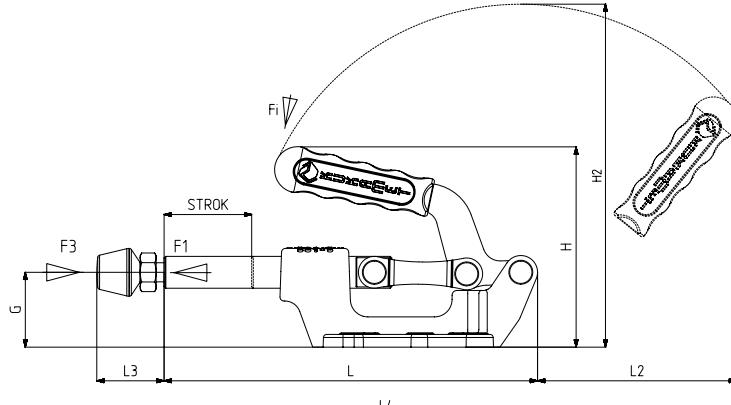


531


Modell Nr.	F1 (N)	F3 (N)	Fi Andruckkraft (YIELD) (F1:Fi)	Andruckspindel (SQUEEZE SCREW)	Hub (STROKE)	Gewicht (WEIGHT) (gr)
						Hub (STROKE)
531 - 3 (Ø 12)	2500	3700	16:1	M8X50	38	635
531 - 3 (Ø 14)	2500	4000	16:1	M8X50	38	645
531 - 4 (Ø 16)	4500	8100	23:1	M10X70	47	1140
531 - 4 (Ø 18)	4500	8800	23:1	M10X70	47	1150
531 - 5 (Ø 20)	7500	18450	30:1	M12X80	55	1835

F1 : Druckkraft (EXERTING FORCE), F3 : Haltekraft (HOLDING CAPACITY)

Fi : Anwendungskraft (APPLIED FORCE)



Ağak Tipi: Yataş Tabanlı, Döküm Gövdeli Body Mounting Base: Horizontal, Casting

Ürün Özellikleri :

Ağır iş uygulamalarında kullanıma uygun mukavemetli ürünlerdir.
Gövde mukavemetli GGG-60 döküm malzemeden üretilmiş ve siyah
elektro statik toz boyası ile boyanmıştır.

Mil, yüksek aşınma direnci ve korozyon direnci için sert krom kaplı malzemeden üretilmiştir.
Mekanizma parçaları çelik malzemeden üretilmiş ve korozyon direnci için galvaniz kaplama
yapılmıştır.

Product Features :

The products are strong and suited for heavy duty applications.
The body is made of strong GGG-60 casting and coated with black electrostatic powder paint.
The rod is made of hard chrome plated steel for high wear and corrosion resistance and the
mechanism parts are made of galvanized steel for corrosion resistance.



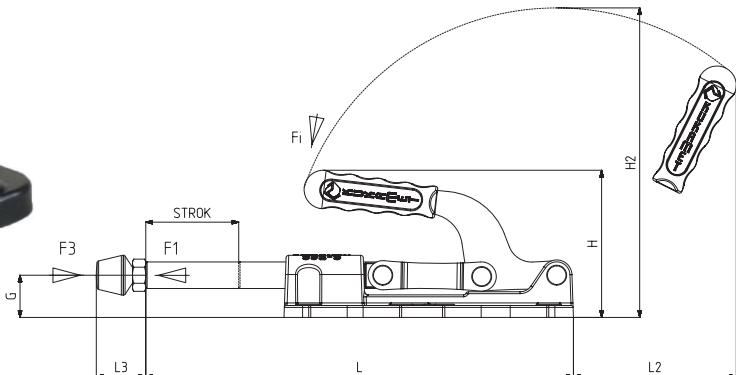
Modell Nr.	A	B	C	D	E	E2	E3	F	G	H	H2	J	K	L	L2	L3 Min	L3 Max	L4	M	N
531 - 3 (Ø 12)	67	58			32,5 - 41	17,5 - 21,5		35 - 41	32	88	142	12	M8	155	85	24	58	85,5	7 x 12	
531 - 3 (Ø 14)	67	58			32,5 - 41	17,5 - 21,5		35 - 41	32	88	142	14	M8	155	85	24	58	85,5	7 x 12	
531 - 4 (Ø 16)	76	68			34,5	27		36 - 44	39	107	179	16	M10	187	105	32	81	95	10 x 14	
531 - 4 (Ø 18)	76	68			34,5	27		36 - 44	39	107	179	18	M10	187	105	32	81	95	10 x 14	
531 - 5 (Ø 20)	107	79			61,5 - 75	19,5 - 26	34,5 - 41,5	37 - 54	47	125	216	20	M12	235	125	39	94	134	11 x 22	

532



Modell Nr.	F1 (N)	F3 (N)	F1	Andruckspindel (SQUEEZE SCREW)	Hub (STROKE)	Gewicht (WEIGHT) (gr)
			Andruckkraft (YIELD) (F1:F1)			
532 - 3 (Ø 12)	2500	3700	16:1	M8X50	38	590
532 - 3 (Ø 14)	2500	4000	16:1	M8X50	38	610
532 - 4 (Ø 16)	4500	8100	23:1	M10X70	47	1030
532 - 4 (Ø 18)	4500	8800	23:1	M10X70	47	1060
532 - 5 (Ø 20)	7500	18450	30:1	M12X80	100	2870

F1 : Druckkraft (EXERTING FORCE), F3 : Haltekraft (HOLDING CAPACITY)
F1 : Anwendungskraft (APPLIED FORCE)



Befestigungsart : mit waagrechtem Fuß, mit Gusskörper

Body Mounting Base: Horizontal, Casting

Ürün özellikleri :

Ağır iş uygulamalarında kullanıma uygun mukavemetli ürünlerdir.

Gövde mukavemetli GGG-60 döküm malzemeden üretilmiş ve siyah elektro statik toz boyası ile boyanmıştır.

Mil, yüksek aşınma direnci ve korozyon direnci için sert krom kaplı malzemeden üretilmiştir.

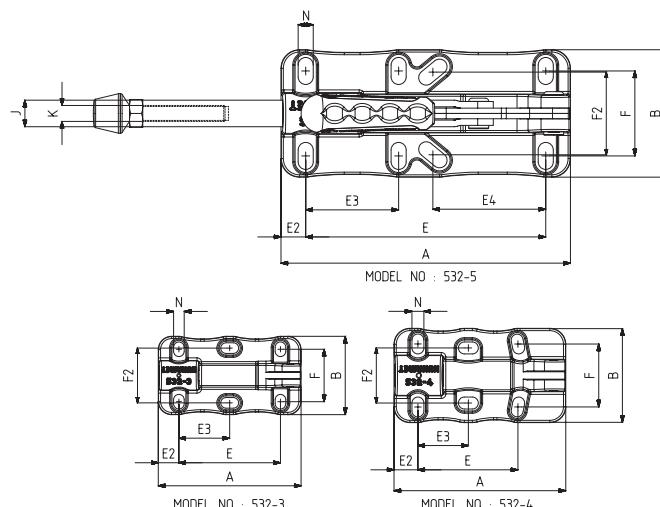
Mekanizma parçaları çelik malzemeden üretilmiş ve korozyon direnci için galvanız kaplama yapılmıştır.

Product Features ;

The products are strong and suited for heavy duty applications.

The body is made of strong GGG-60 casting and coated with black electrostatic powder paint.

The rod is made of hard chrome plated steel for high wear and corrosion resistance and the mechanism parts are made of galvanized steel for corrosion resistance.



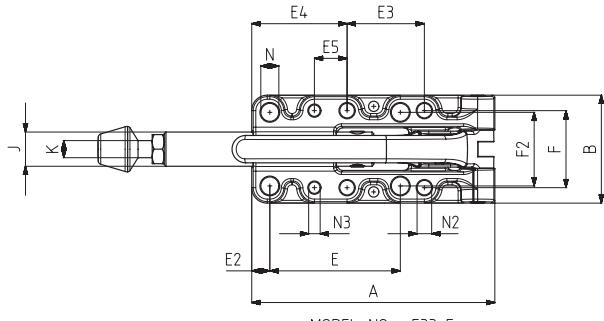
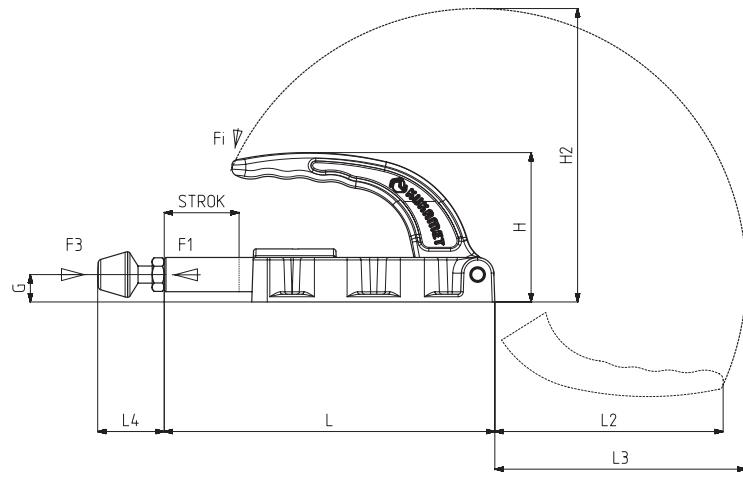
Modell Nr.	A	B	C	D	E	E2	E3	E4	F	F2	G	H	H2	J	K	L	L2	L3 Min	L3 Max	M	N
532 - 3 (Ø 12)	107	59			76,5	15,5	35,5 - 41		36,5 - 42,5	41	17,5	73	127	12	M8	156	81	24	58		8x11
532 - 3 (Ø 14)	107	59			76,5	15,5	35,5 - 41		36,5 - 42,5	41	17,5	73	127	14	M8	156	81	24	58		8x11
532 - 4 (Ø 16)	130	71			74,5 - 75,5	18	35 - 41		41,5 - 53	41,5	20,5	86	159	16	M10	188	94	32	81		9x15
532 - 4 (Ø 18)	130	71			74,5 - 75,5	18	35 - 41		41,5 - 53	41,5	20,5	86	159	18	M10	188	94	32	81		9x15
532 - 5 (Ø 20)	218	96			180,5	18,5	70	80 - 90	55 - 73	54 - 70,5	31,8	111	234	20	M12	322	122	39	94		11x20

533

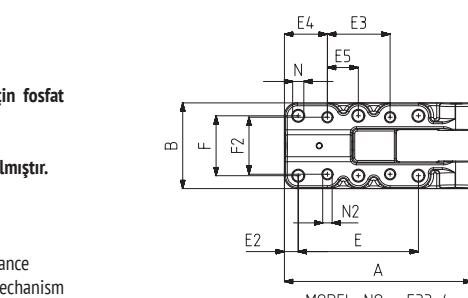


Modell Nr.	F1 (N)	F3 (N)	Fi Andruckkraft (YIELD) (F1:Fi)	Andruckspindel (SQUEEZE SCREW)	Hub (STROKE)	Gewicht (WEIGHT) (gr)
						(YIELD) (F1:Fi)
533 - 4 (Ø 14)	7000	7000	16:1	M8 x 50	38	840
533 - 5 (Ø 20)	12000	12000	30:1	M10 x 70	50	1610

F1 : Druckkraft (EXERTING FORCE), F3 : Haltekraft (HOLDING CAPACITY), Fi : Anwendungskraft (APPLIED FORCE)


Befestigungsart : mit waagrechtem Fuß,
mit Gusskörper

Body Mounting Base: Horizontal, Casting



Ürün özellikleri;

Ağır iş uygulamalarında kullanıma uygun mukavemetli ürünlerdir.

Gövde ve kol mukavemetli GGG-60 döküm malzemeden üretilmiş ve korozyon direnci için fosfat kaplama yapılmıştır.

Mil, yüksek aşınma direnci ve korozyon direnci için sert krom kaplı malzemeden üretilmiştir.

Mekanizma parçaları çelik malzemeden üretilmiş ve korozyon direnci için fosfat kaplama yapılmıştır.

Product Features;

The products are strong and suited for heavy duty applications.

The body and arm are made of strong GGG-60 casting and phosphate coated for corrosion resistance

The rod is made of hard chrome plated steel for high wear and corrosion resistance and the mechanism parts are made of phosphate coated steel for corrosion resistance.

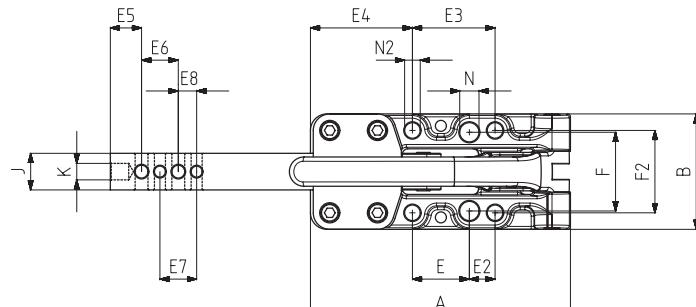
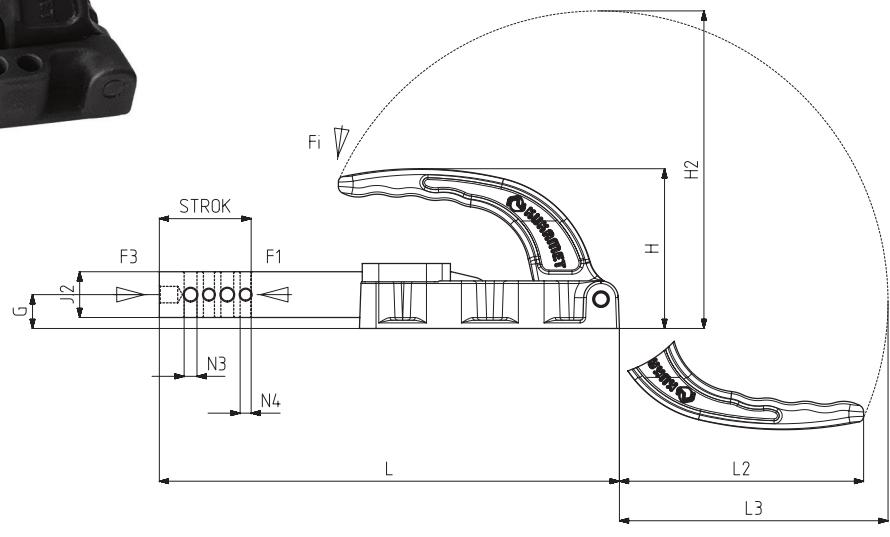
Modell Nr.	A	B	C	D	E	E2	E3	E4	E5	F	F2	G	H	H2	J	K	L	L2	L3	L4 Min	L4 Max	N	N2	N3
533 - 4 (Ø 14)	109	50			70	8	36,5	25	18	35	33,5	12	73	133	14	M8	148	98	112	23	58	Ø 6,5	Ø 5,5	
533 - 5 (Ø 20)	142	63			76	10,5	45	55,5	19	45	43	16	87	173	20	M10	192,5	133	147	29	79	Ø 10,5	Ø 8,5	Ø 6,7

534



Modell Nr.	F1 (N)	F3 (N)	Fi Andruckkraft (YIELD) (F1:Fi)	Hub (STROKE)	Gewicht (WEIGHT) (gr)
534 - 5 (□20x25)	12000	12000	30:1	50	2170

F1 : Druckkraft (EXERTING FORCE), F3 : Haltekraft (HOLDING CAPACITY), Fi : Anwendungskraft (APPLIED FORCE)


**Befestigungsart : mit waagrechtem Fuß,
mit Gusskörper**

Body Mounting Base: Horizontal, Casting

Ürün özellikleri ;

Ağır iş uygulamalarında kullanıma uygun mukavemetli ürünlerdir.

Gövde ve kol mukavemetli GGG-60 döküm malzemeden üretilmiş ve korozyon direnci için fosfat kaplama yapılmıştır.

Mekanizma parçaları çelik malzemeden üretilmiş ve korozyon direnci için fosfat kaplama yapılmıştır.

Product Features;

The products are strong and suited for heavy duty applications.

The body and arm are made of strong GGG-60 casting and phosphate coated for corrosion resistance

The mechanism parts are made of phosphate coated steel for corrosion resistance.



Modell Nr.	A	B	C	D	E	E2	E3	E4	E5	E6	E7	E8	F	F2	G	H	H2	J	J2	K	L	L2	L3	N	N2	N3	N4
534 - 5 (□ 20x25)	141,5	63			31	14	45	55,5	17	20	20	10	43	45	18,5	87	173	20	25	9	250,5	133	147	Ø 10,5	Ø 8,5	Ø 7	Ø 6

535-R-L



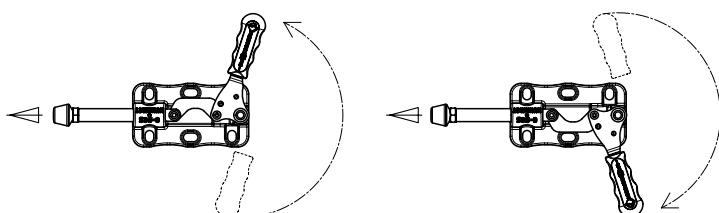
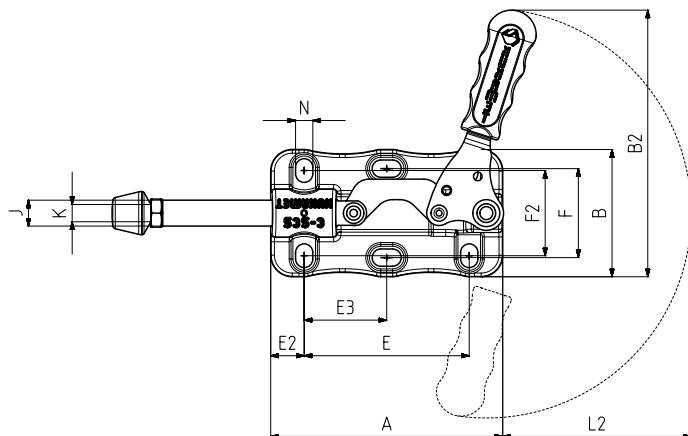
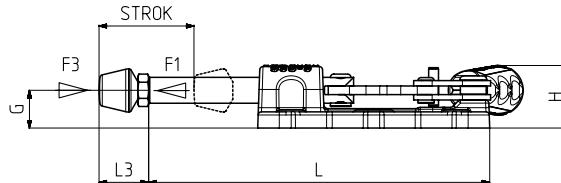
new



Modell Nr.	F1 (N)	F3 (N)	Fi Andruckspindel (SQUEEZE SCREW)	Hub (STROKE)	Gewicht (WEIGHT) (gr)	
					Andruckkraft (YIELD) (F1:Fi)	
535 - 3 (Ø 12) - R	1500	1700	16:1	M8X50	43	630
535 - 3 (Ø 12) - L	1500	1700	16:1	M8X50	43	630
535 - 4 (Ø 16) - R	4500	4700	23:1	M10X70	52	1030
535 - 4 (Ø 16) - L	4500	4700	23:1	M10X70	52	1030

F1 : Druckkraft (EXERTING FORCE), F3 : Haltekraft (HOLDING CAPACITY),

Fi : Anwendungskraft (APPLIED FORCE)



Ağak Tipi: Yataş Tabanlı, Döküm Gövdeli, Yanandan Kollu
Body Mounting Base: Horizontal Base, Casted Body With
Side Mounted Handle

Ürün Özellikleri :

Ağır iş uygulamalarında kullanıma uygun mukavemetli ürünlerdir.

Gövde mukavemetli GGG-60 döküm malzemeden üretilmiş ve siyah elektro statik toz boyası ile boyanmıştır.

Mil, yüksek aşınma direnci ve korozyon direnci için sert krom kaplı malzemeden üretilmiştir.

Mekanizma parçaları çelik malzemeden üretilmiş ve korozyon direnci için galvaniz kaplama yapılmıştır.

Product Features :

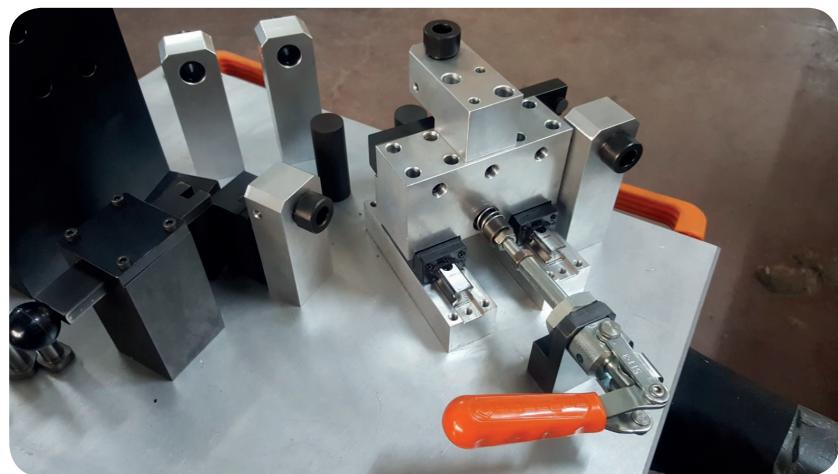
The products are strong and suited for heavy duty applications.

The body is made of strong GGG-60 casting and coated with black electrostatic powder paint.

The rod is made of hard chrome plated steel for high wear and corrosion resistance and the mechanism parts are made of galvanized steel for corrosion resistance.

* SAG KOL
* RIGHT HANDLE (R)

* SOL KOL
* LEFT HANDLE (L)



Modell Nr.	A	B	B2	D	E	E2	E3	E4	F	F2	G	H	H2	J	K	L	L2	L3 Min	L3 Max	M	N
535 - 3 (Ø 12) - R	107	59	124		76,5	15,5	35,5 - 41		36,5 - 42,5	41	17,5	30		12	M8	156	87	24	58		8 x 11
535 - 3 (Ø 12) - L	107	59	124		76,5	15,5	35,5 - 41		36,5 - 42,5	41	17,5	30		12	M8	156	87	24	58		8 x 11
535 - 4 (Ø 16) - R	130	71	157		74,5 - 75,5	18	35 - 41		41,5 - 53	41,5	20,5	35		16	M10	188	113	32	81		9 x 15
535 - 4 (Ø 16) - L	130	71	157		74,5 - 75,5	18	35 - 41		41,5 - 53	41,5	20,5	35		16	M10	188	113	32	81		9 x 15

536



new



Ağak Tipi: Yataş Tabanlı, Döküm Gövdeli (180° Açılan Kol)

Body Mounting Base: Horizontal, Casting
(180° opening handle)

Ürün Özellikleri :

Ağır iş uygulamalarında kullanıma uygun mukavemetli ürünlerdir.
Gövde mukavemetli GGG-60 döküm malzemeden üretilmiş ve siyah
elektro statik toz boyası ile boyanmıştır.

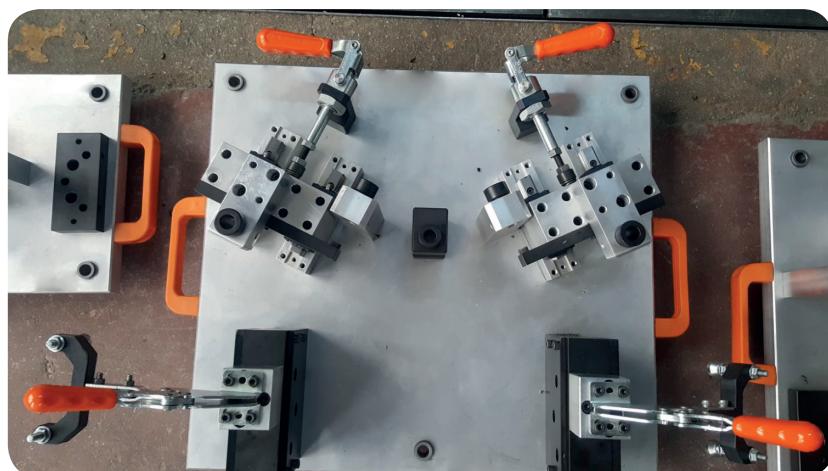
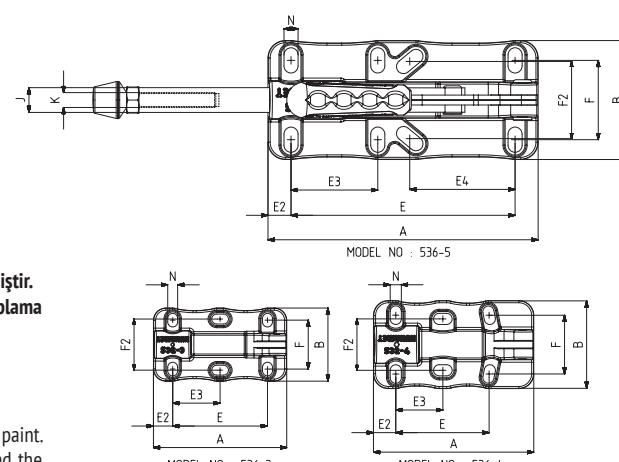
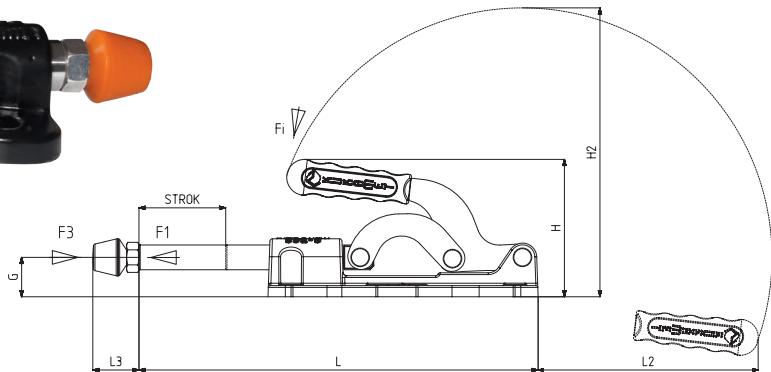
Mil, yüksek aşınma direnci ve korozyon direnci için sert krom kaplı malzemeden üretilmiştir.
Mekanizma parçaları çelik malzemeden üretilmiş ve korozyon direnci için galvaniz kaplama
yapılmıştır.

Product Features ;

The products are strong and suited for heavy duty applications.
The body is made of strong GGG-60 casting and coated with black electrostatic powder paint.
The rod is made of hard chrome plated steel for high wear and corrosion resistance and the
mechanism parts are made of galvanized steel for corrosion resistance.

Modell Nr.	F1 (N)	F3 (N)	Fi Andruckkraft (YIELD) (F1:Fi)	Andruckspindel (SQUEEZE SCREW)	Hub (STROKE)	Gewicht (WEIGHT) (gr)
536 - 3 (Ø 12)	2500	2500	16:1	M8X50	38	590
536 - 3 (Ø 14)	2500	2500	16:1	M8X50	38	610
536 - 4 (Ø 16)	4500	4500	23:1	M10X70	47	1030
536 - 4 (Ø 18)	4500	4500	23:1	M10X70	47	1060
536 - 5 (Ø 20)	7500	7500	30:1	M12X80	92	2870

F1 : Druckkraft (EXERTING FORCE), F3 : Haltekraft (HOLDING CAPACITY),
Fi : Anwendungskraft (APPLIED FORCE)

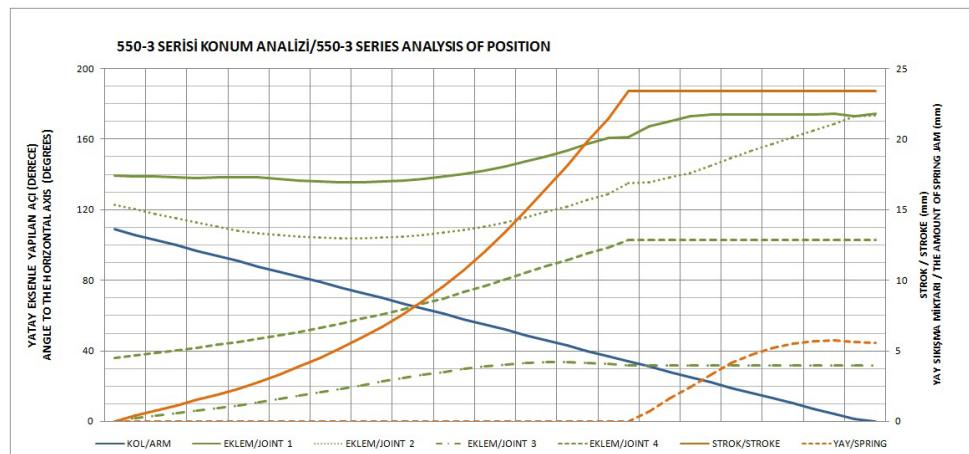


Modell Nr.	A	B	C	D	E	E2	E3	E4	F	F2	G	H	H2	J	K	L	L2	L3 Min	L3 Max	M	N
536 - 3 (Ø 12)	107	59			76,5	15,5	35,5 - 41		36,5 - 42,5	41	17,5	73	127	12	M8	156	91	24	58	8 x 11	
536 - 3 (Ø 14)	107	59			76,5	15,5	35,5 - 41		36,5 - 42,5	41	17,5	73	127	14	M8	156	91	24	58	8 x 11	
536 - 4 (Ø 16)	130	71			74,5 - 75,5	18	35 - 41		41,5 - 53	41,5	20,5	86	159	16	M10	188	117	32	81	9 x 15	
536 - 4 (Ø 18)	130	71			74,5 - 75,5	18	35 - 41		41,5 - 53	41,5	20,5	86	159	18	M10	188	117	32	81	9 x 15	
536 - 5 (Ø 20)	218	96			180,5	18,5	70	80 - 90	55 - 73	54 - 70,5	31,8	131	234	20	M12	322	169	39	94	11 x 20	

551



Modell Nr.	F1 (N)	F3 (N)	Fi Andruckkraft (YIELD) (F1:Fi)	Hub (STROKE)	Gewicht (WEIGHT) (gr)
551 - 3	2500	3200	14:1	23	530
F1 : Druckkraft (EXERTING FORCE), F3 : Haltekraft (HOLDING CAPACITY), Fi : Anwendungskraft (APPLIED FORCE)					

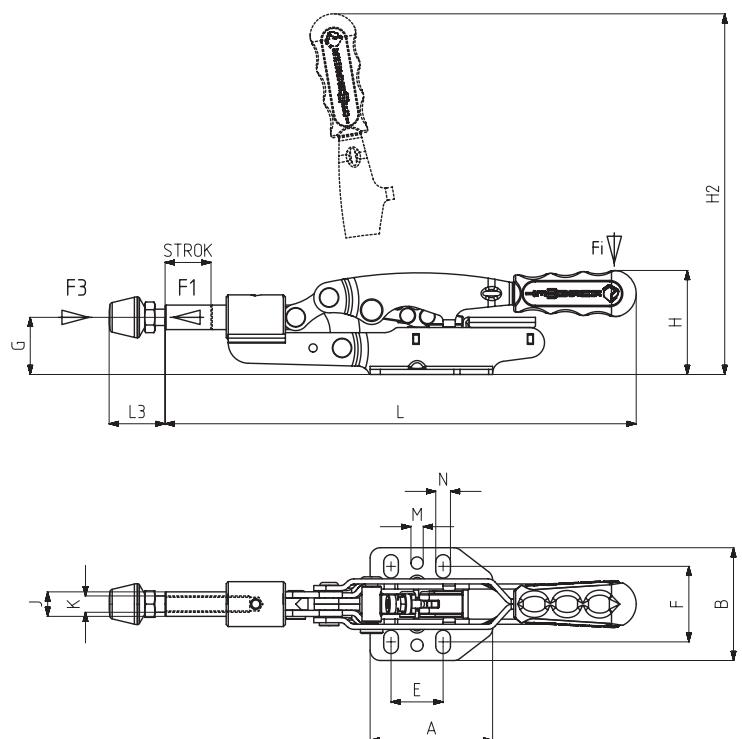

Ürün özellikleri :

Otomatik mesafe ayarı sayesinde 16 mm kalınlığa kadar olan iş parçalarını baskı kuvveti değişmeden sıkıştırabilir.
Sıkma kuvveti mekanizma üzerinde bulunan ayar vidasından ayarlanabilir.

Product features:

The automatic distance adjustment property of this toggle clamp enables clamping of work pieces of up to 16 mm without any variation in the exerted force. The clamping force can be adjusted to your particular needs by turning the setscrew on the mechanism.

Ağak Tipi: Yataş, Alçak Tabanlı
Body Mounting Base: Horizontal, Low Base



Modell Nr.	A	B	C	D	E	F	G	H	H2	J	K	L	L3 Min	L3 Max	M	N
551 - 3	60	55,5			25,5	32,5-41	28	51	187	12	M8	231	24	58	Ø6	7x11,5

552



Modell Nr.	F1 (N)	F3 (N)	Fi Andruckkraft (YIELD) (F1:Fi)	Hub (STROKE)	Gewicht (WEIGHT) (gr)
					Hub (STROKE)
552 - 3	2500	3200	14:1	23	555

F1 : Druckkraft (EXERTING FORCE) , F3 : Haltekraft (HOLDING CAPACITY),
Fi : Anwendungskraft (APPLIED FORCE)



Ağak Tipi: Yataş, Yüksek Tabanlı
Body Mounting Base: Horizontal, High Base

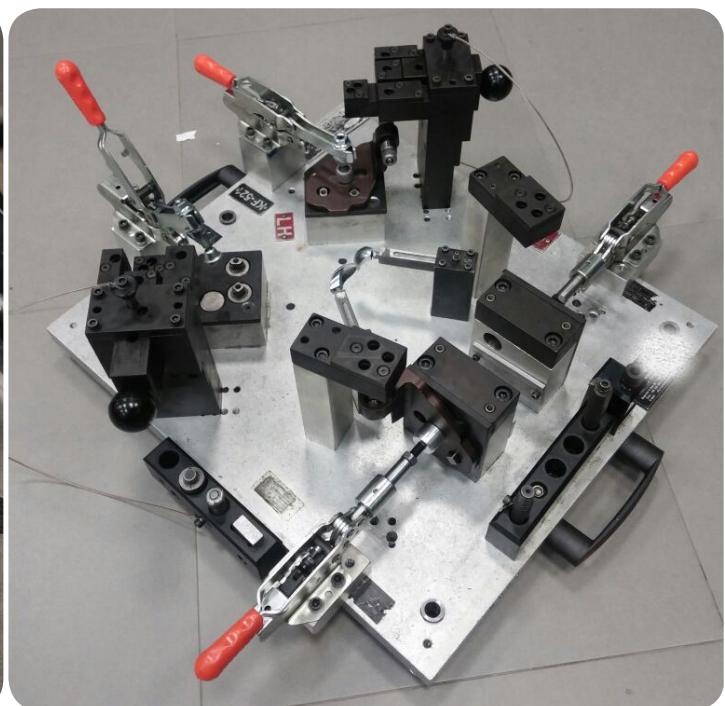
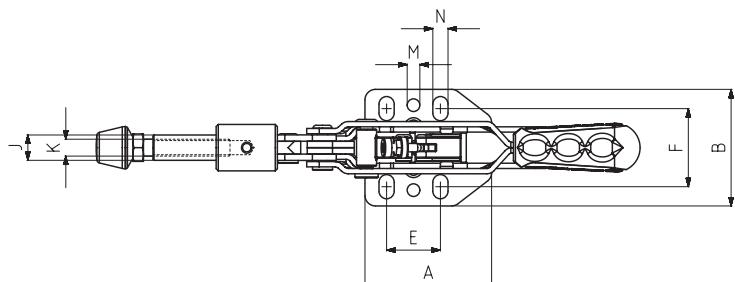
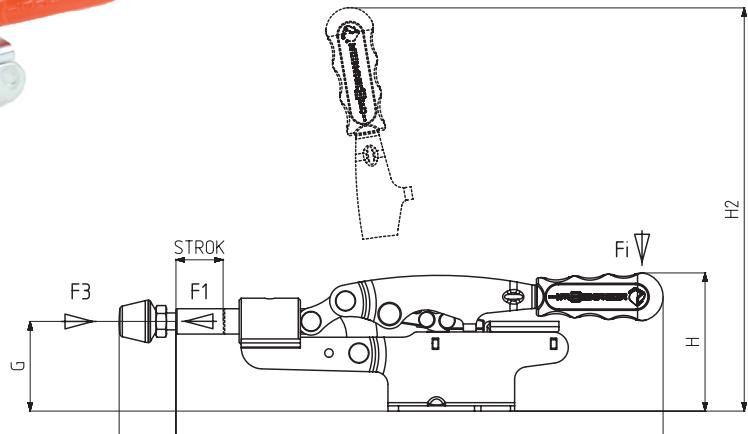
Ürün özellikleri :

Otomatik mesafe ayarı sayesinde 16 mm kalınlığa kadar olan iş parçalarını baskı kuvveti değişmeden sıkıştırabilir.

Sıkma kuvveti mekanizma üzerinde bulunan ayar vidasından ayarlanabilir.

Product features:

The automatic distance adjustment property of this toggle clamp enables clamping of work pieces of up to 16 mm without any variation in the exerted force. The clamping force can be adjusted to your particular needs by turning the setscrew on the mechanism.



Modell Nr.	A	B	C	D	E	F	G	H	H2	J	K	L	L3 Min	L3 Max	M	N
552 - 3	60	55.5			25.5	32,5-41	42.5	65.5	201,5	12	M8	231	24	58	Ø6	7x11,5

Schnellspanner, die gegen äußere Einwirkungen,
Korrosion und Säure resistent sind

Corrosion and acid resistant toggle clamps
due to moisture, water and other external factors



PNEUMATISCHE SPANNER

PNEUMATIC TOGGLE CLAMPS



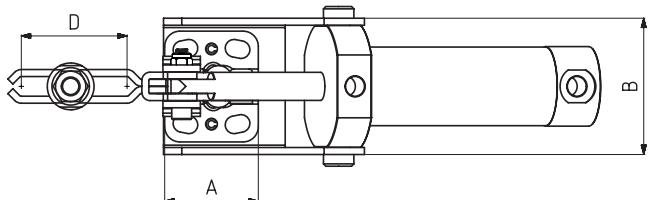
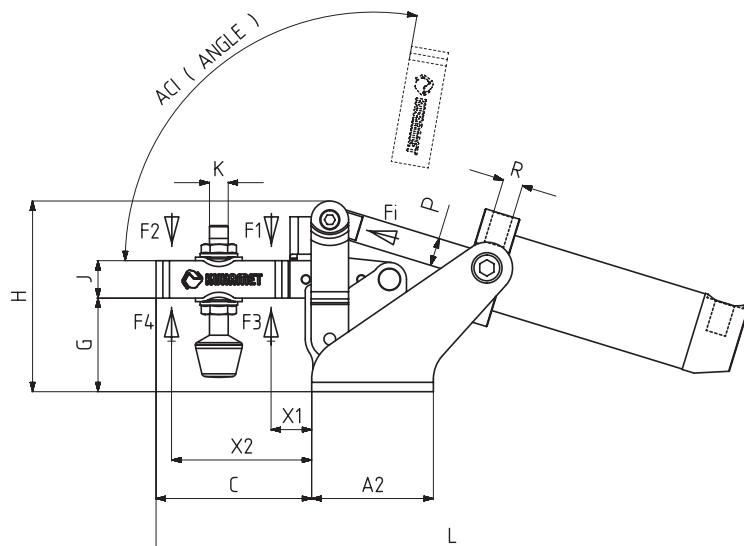
*Die schnellen und starken Helden der Fertigung...
fast and strong heroes of production...*

Modell Nr.	F1 (N)	F2 (N)	F3 (N)	F4 (N)	Fi (N)	Vn (dm³)	Winkel (ANGLE) (± 5 °)	Gewicht (WEIGHT) (gr)	BAR
611 - 1 - Q16	600	400	1000	680	120	0,09	95°	275	6
611 - 1 - Q20	750	500	1000	680	190	0,14	95°	360	6
611 - 2	1200	700	1400	925	300	0,25	95°	535	6
611 - 3	2000	1400	2500	1560	500	0,51	95°	860	6
611 - 4	3000	2000	3300	2200	750	1,04	95°	1690	6
611 - 5	4500	2500	5000	3000	1100	2	95°	3090	6

F1 - F2 : Druckkraft (EXERTING FORCE), F3 - F4 : Haltekraft (HOLDING CAPACITY), Fi : Anwendungskraft (APPLIED FORCE)

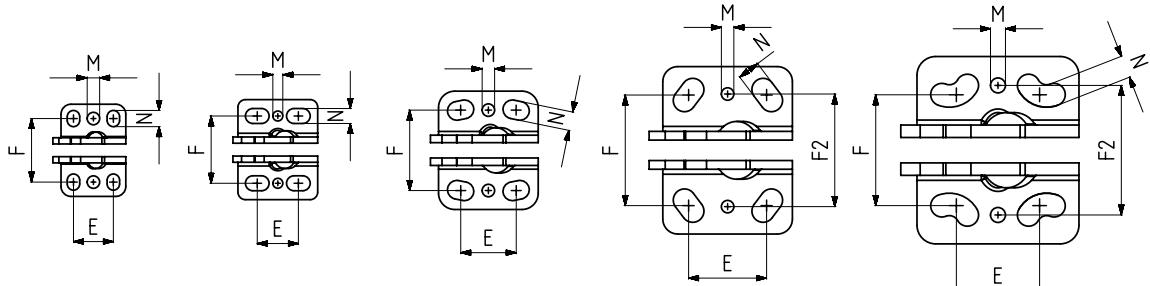
Vn , der Luftverbrauch für eine doppelte Bewegung bei einem Druck von 6 bar (Vn , AIR CONSUMPTION PER DOUBLE STROKE IN dm³ AT 6 BAR)

611



Befestigungsart : mit waagrechtem Fuß, Befestigung vorne
Body Mounting Base: Horizontal, Tied Front

Doppelwirkend, magnetisch und mit Stoßdämpfung
Pneumatic cylinders are double acting, magnetic and cushioning.



MODEL NO : 611-1

MODEL NO : 611-2

MODEL NO : 611-3

MODEL NO : 611-4

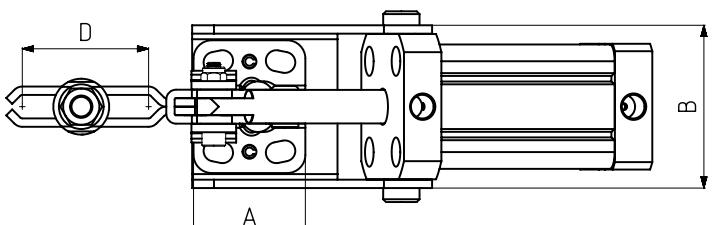
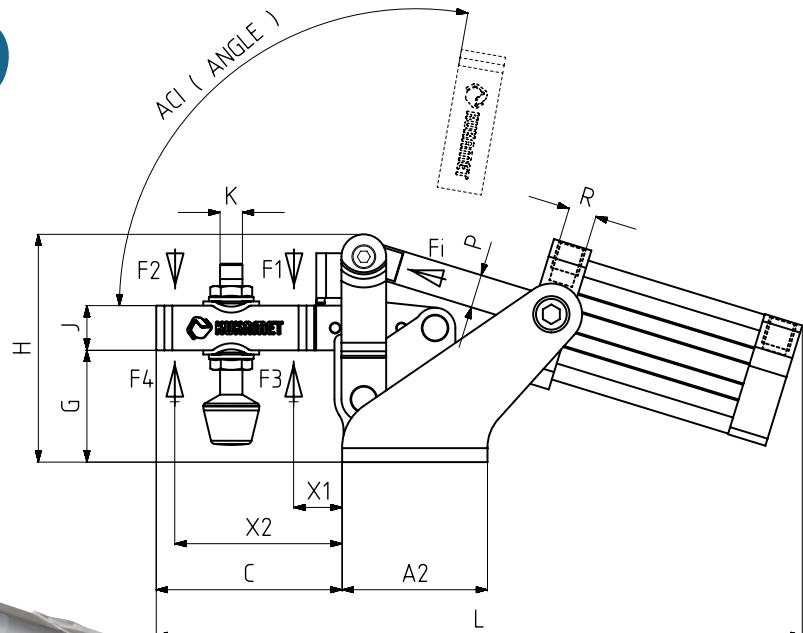
MODEL NO : 611-5

Modell Nr.	A	A2	B	C	D	E	F	F2	G	H	J	K	L	M	N	X1	X2	P	R	Kolben Ø
611 - 1 - Q16	26	34	44	42	26	16	24 - 27	25,5	25	52	10	M5	185	05	5 x 6,5	16	32	Ø 6	M5	16
611 - 1 - Q20	26	34	44	44	26	16	24 - 27	25,5	25	52	10	M5	192	05	5 x 6,5	16	32	Ø 8	G1/8	20
611 - 2	32	42	51	60	42	13 - 20	27	27	29	61	13	M6	225	04	6 x 9,5	18	48	Ø 10	G1/8	25
611 - 3	40	52	58	66,5	42	19 - 25	31,5 - 32,5	32,3	40	81,5	16	M 8	253,5	05	7,5 x 10,5	25	52	Ø 12	G1/8	32
611 - 4	52	95	77	98,5	67	28 - 34,5	40 - 48,5	45,2	50	104	20	M10	323	05	9 x 14,5	32	80	Ø 16	G1/8	40
611 - 5	65	134	92	124	88	24,5 - 45	44,5 - 52	52	62	128	25	M12	399	06	9 x 19,5	36	101	Ø 20	G1/8	50

Modell Nr.	F1 (N)	F2 (N)	F3 (N)	F4 (N)	F _i (N)	V _n (dm ³)	Winkel (ANGLE) (± 5 °)	Gewicht (WEIGHT) (gr)	BAR
612 - 2	1200	700	1400	925	300	0,25	95°	535	6
612 - 3	2000	1400	2500	1560	500	0,51	95°	860	6

F1-F2 : Druckkraft (EXERTING FORCE), F3-F4 : Haltekraft (HOLDING CAPACITY), F_i : Anwendungskraft (APPLIED FORCE)V_n , der Luftverbrauch für eine doppelte Bewegung bei einem Druck von 6 bar (V_n , AIR CONSUMPTION PER DOUBLE STROKE IN dm³ AT 6 BAR)

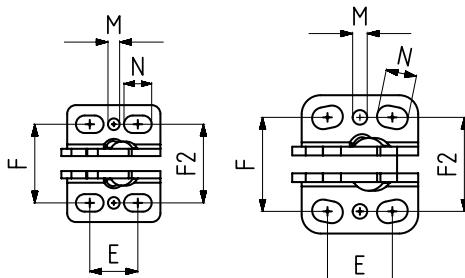
new



Befestigungsart : mit waagrechtem Fuß, Befestigung vorne
 Body Mounting Base: Horizontal, Tied Front

Sensör Kanalli – Kare Pistonlu
 With Square Piston and Sensor Slot

Doppelwirkend, magnetisch und mit Stoßdämpfung
 Pneumatic cylinders are double acting, magnetic and cushioning



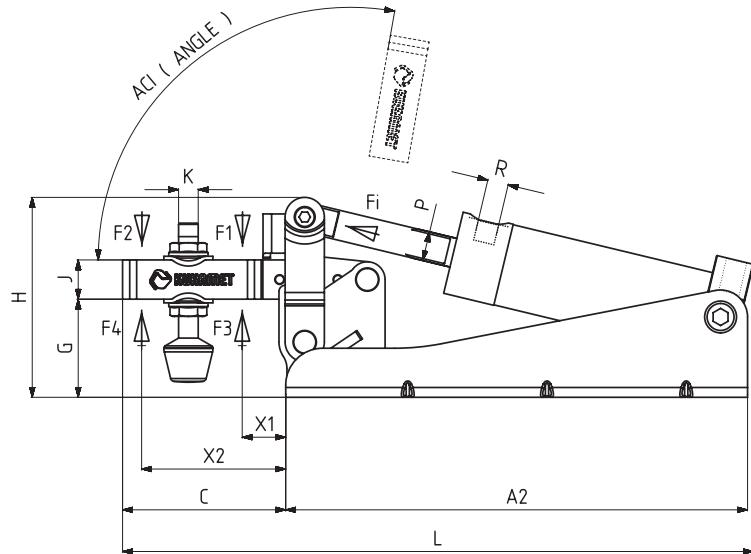
MODEL NO : 612-2

MODEL NO : 612-3

Modell Nr.	A	A2	B	C	D	E	F	F2	G	H	J	K	L	M	N	X1	X2	P	R	Kolben Ø
612 - 2	32	42	51	60	42	13 - 20	27	27	29	61	13	M6	203	04	6 x 9,5	18	48	Ø 10	G1/8	25
612 - 3	40	52	58	66,5	42	19 - 25	31,5 - 32,5	32,3	40	81,5	16	M 8	231	05	7,5 x 10,5	25	52	Ø 12	G1/8	32

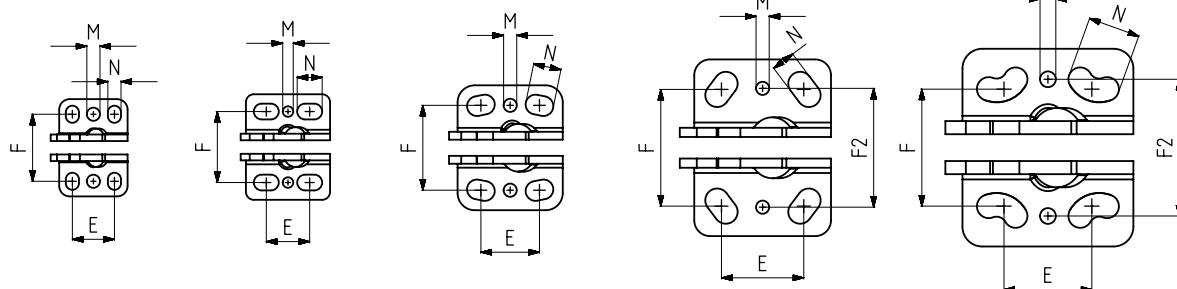
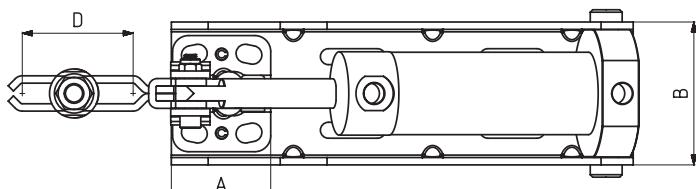
Modell Nr.	F1 (N)	F2 (N)	F3 (N)	F4 (N)	Fi (N)	Vn (dm ³)	Winkel (ANGLE) (± 5 °)	Gewicht (WEIGHT) (gr)	BAR
631 - 1	750	500	1000	680	190	0,14	95°	470	6
631 - 2	1200	700	1400	925	300	0,25	95°	765	6
631 - 3	2000	1400	2500	1560	500	0,51	95°	1100	6
631 - 4	3000	2000	3300	2200	750	1,04	95°	2020	6
631 - 5	4500	2500	5000	3000	1100	2	95°	3610	6

F1 - F2 : Druckkraft (EXERTING FORCE) , F3 - F4 : Haltekraft (HOLDING CAPACITY) , Fi : Anwendungskraft (APPLIED FORCE)

Vn , der Luftverbrauch für eine doppelte Bewegung bei einem Druck von 6 bar (Vn , AIR CONSUMPTION PER DOUBLE STROKE IN dm³ AT 6 BAR)


**Befestigungsart : mit waagrechtem Fuß,
Befestigung hinten**
Body Mounting Base: Horizontal, Tied Behind

Doppelwirkend, magnetisch und mit Stoßdämpfung
Pneumatic cylinders are double acting, magnetic and cushioning.



MODEL NO: 631-1

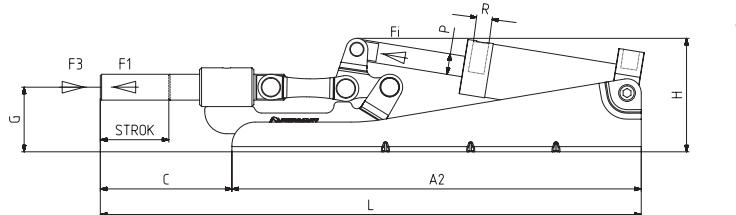
MODEL NO :631-2

MODEL NO :631-3

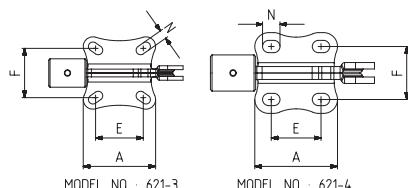
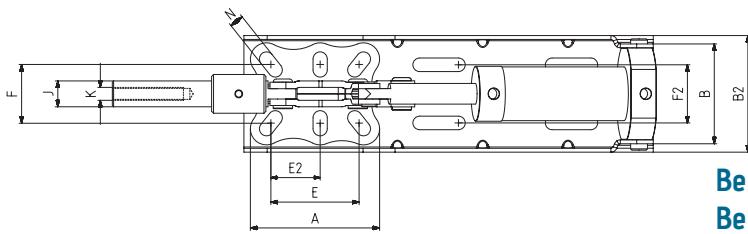
MODEL NO :631-4

MODEL NO :631-5

Modell Nr.	A	A2	B	C	D	E	F	F2	G	H	J	K	L	M	N	X1	X2	P	R	Kolben Ø
631 - 1	26	155	44	42	26	16	24 - 27	25,5	25	52	10	M5	198	Ø5	5 x 6,5	16	32	Ø 8	G1/8	20
631 - 2	32	171	51	60	42	13 - 20	27	27	29	61	13	M6	232	Ø4	6 x 9,5	18	48	Ø 10	G1/8	25
631 - 3	40	188	58	66,5	42	19 - 25	31,5 - 32,5	32,3	40	81	16	M 8	257	Ø5	7,5 x 10,5	25	52	Ø 12	G1/8	32
631 - 4	52	227	77	98,5	67	28 - 34,5	40 - 48,5	45,2	50	104	20	M10	330	Ø5	9 x 14,5	32	80	Ø 16	G1/8	40
631 - 5	65	275	92	125	88	24,5 - 45	44,5 - 52	52	62	128	25	M12	400	Ø6	9 x 19,5	36	101	Ø 20	G1/8	50



621


**Befestigungsart : mit waagrechtem Fuß, verschweißt,
Befestigung hinten**
Body Mounting Base: Horizontal With Welding, Tied Behind

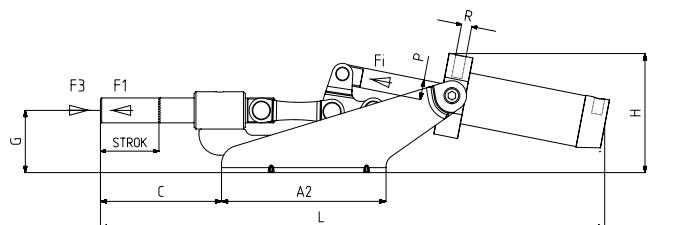
Modell Nr.	F1 (N)	F3 (N)	Fi (N)	Vn (dm ³)	Hub (STROKE)	Gewicht (WEIGHT) (gr)	BAR
621 - 3 (Ø 12)	1500	2960	300	0.25	23	1140	6
621 - 3 (Ø 14)	2500	3200	500	0.51	23	1310	6
621 - 4 (Ø 16)	4500	6650	750	1.04	33	2230	6
621 - 4 (Ø 18)	4500	7200	750	1.04	33	2260	6
621 - 5 (Ø 20)	7500	15000	1100	2	42	3860	6

Doppelwirkend, magnetisch und mit Stoßdämpfung
Pneumatic cylinders are double acting, magnetic and cushioning

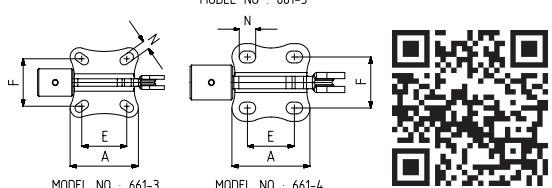
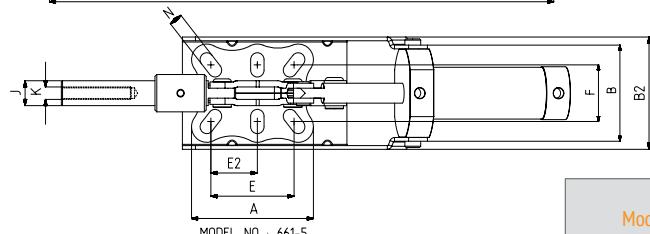
F1 : Druckkraft (EXERTING FORCE), F3 : Haltekraft (HOLDING CAPACITY), Fi : Anwendungskraft (APPLIED FORCE)

Vn , der Luftverbrauch für eine doppelte Bewegung bei einem Druck von 6 bar (Vn , AIR CONSUMPTION PER DOUBLE STROKE IN dm³ AT 6 BAR)

Modell Nr.	A	A2	B	B2	C	D	E	E2	F	F2	G	H	J	K	L	M	N	P	R	Kolben Ø
621 - 3 (Ø 12)	56	226	51	68	70		32,5 - 41		35 - 41	35	35	65	12	M8	296	7 x 12	Ø 10	G1/8	25	
621 - 3 (Ø 14)	56	243	58	68	70		32,5 - 41		35 - 41	35	35	71,5	14	M8	314	7 x 12	Ø 12	G1/8	32	
621 - 4 (Ø 16)	64	289	77	78	84		34,5 - 42,5		41	41	43	89	16	M10	375	9,5x13,5	Ø 16	G1/8	40	
621 - 4 (Ø 18)	64	289	77	78	84		34,5 - 42,5		41	41	43	89	18	M10	375	9,5x13,5	Ø 16	G1/8	40	
621 - 5 (Ø 20)	100	355	79	92	101		61,5 - 75	34,5 - 41,5	37 - 54	45	51	105	20	M12	460	11 x 22	Ø 20	G1/8	50	



661


**Befestigungsart : mit waagrechtem Fuß, verschweißt,
Befestigung vorne**
Body Mounting Base: Horizontal With Welding, Tied Front

Modell Nr.	F1 (N)	F3 (N)	Fi (N)	Vn (dm ³)	Hub (STROKE)	Gewicht (WEIGHT) (gr)	BAR
661 - 3 (Ø 12)	1500	2960	300	0.25	23	860	6
661 - 3 (Ø 14)	2500	3200	500	0.51	23	1010	6
661 - 4 (Ø 16)	4500	6650	750	1.04	33	1800	6
661 - 4 (Ø 18)	4500	7200	750	1.04	33	1830	6
661 - 5 (Ø 20)	7500	15000	1100	2	42	3220	6

F1 : Druckkraft (EXERTING FORCE), F3 : Haltekraft (HOLDING CAPACITY), Fi : Anwendungskraft (APPLIED FORCE)

Vn , der Luftverbrauch für eine doppelte Bewegung bei einem Druck von 6 bar (Vn , AIR CONSUMPTION PER DOUBLE STROKE IN dm³ AT 6 BAR)
Doppelwirkend, magnetisch und mit Stoßdämpfung
Pneumatic cylinders are double acting, magnetic and cushioning

Modell Nr.	A	A2	B	B2	C	D	E	E2	F	G	H	J	K	L	M	N	P	R	Kolben Ø
661 - 3 (Ø 12)	56	90	51	68	70		32,5 - 41		35 - 41	35	72	12	M8	292	7 x 12	Ø 10	G1/8	25	
661 - 3 (Ø 14)	56	100	58	68	70		32,5 - 41		35 - 41	35	79	14	M8	312	7 x 12	Ø 12	G1/8	32	
661 - 4 (Ø 16)	64	115	77	78	84		34,5 - 42,5		41	43	100	16	M10	372	9,5 x 13,5	Ø 16	G1/8	40	
661 - 4 (Ø 18)	64	115	77	78	84		34,5 - 42,5		41	43	100	18	M10	372	9,5 x 13,5	Ø 16	G1/8	40	
661 - 5 (Ø 20)	100	170	79	92	101		61,5 - 75	34,5 - 41,5	37 - 54	51	110	20	M12	456	11 x 22	Ø 20	G1/8	50	

662

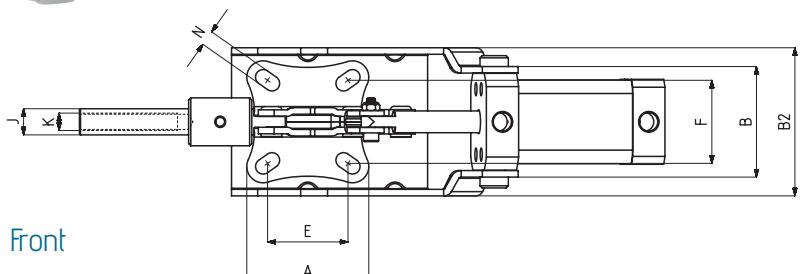
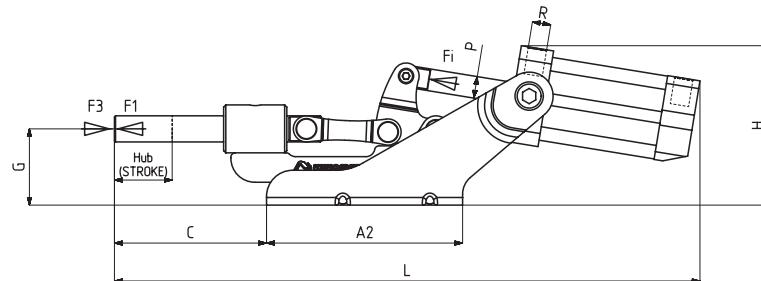
new



Modell Nr.	F1 (N)	F3 (N)	Fi (N)	Vn (dm³)	Hub (STROKE)	Gewicht (WEIGHT) (gr)	BAR
662 - 3 (Ø 12)	1500	2960	300	0,25	23	860	6
662 - 3 (Ø 14)	2500	3200	500	0,51	23	1010	6

F1 : Druckkraft (EXERTING FORCE) , F3 : Haltekraft (HOLDING CAPACITY) , Fi : Anwendungskraft (APPLIED FORCE)

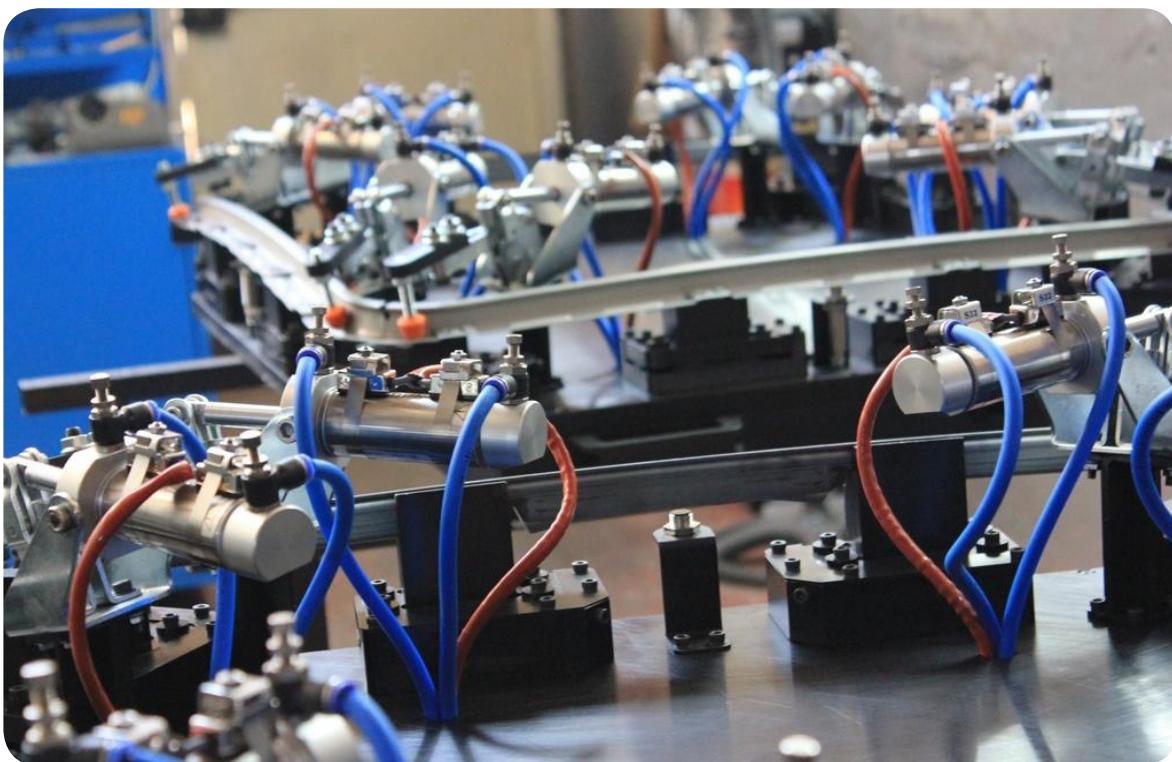
Vn , der Luftverbrauch für eine doppelte Bewegung bei einem Druck von 6 bar (Vn , AIR CONSUMPTION PER DOUBLE STROKE IN dm³ AT 6 BAR)



Ağak Tipi: Yataş Tabanlı, Kaynaklı, Ön Bağlantılı
Body Mounting Base: Horizontal With Welding, Tied Front

Sensör Kanallı - Kare Pistonlu

With Square Piston and Sensor Slot



Doppelwirkend, magnetisch und mit Stoßdämpfung
Pneumatic cylinders are double acting, magnetic and cushioning

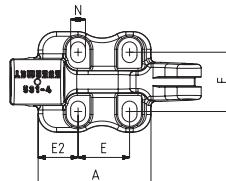
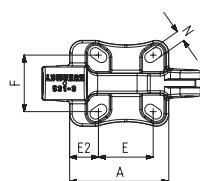
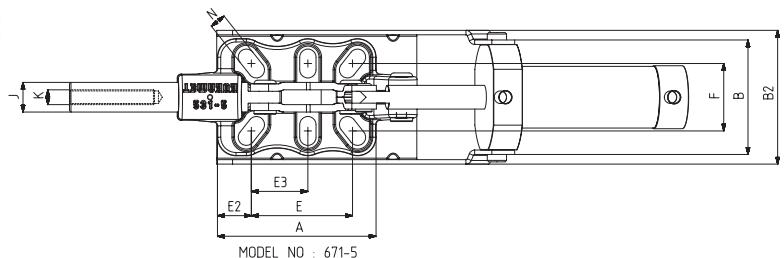
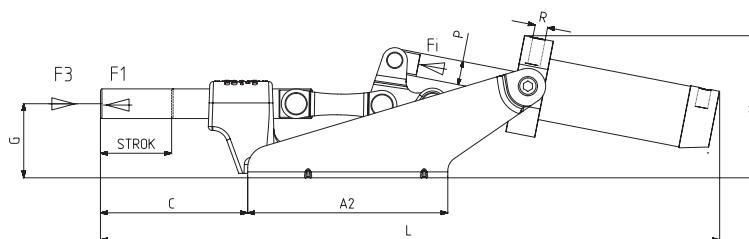
Modell Nr.	A	A2	B	B2	C	D	E	E2	F	G	H	J	K	L	M	N	P	R	Kolben Ø
662 - 3 (Ø 12)	56	90	51	68	70		32,5 - 41		35 - 41	35	73	12	M8	268		7x12	Ø 10	G1/8	25
662 - 3 (Ø 14)	56	100	58	68	70		32,5 - 41		35 - 41	35	80	14	M8	288		7x12	Ø 12	G1/8	32

Modell Nr.	F1 (N)	F3 (N)	Fi (N)	Vn (dm³)	Hub (STROKE)	Gewicht (WEIGHT) (gr)	BAR
671 - 3 (Ø 12)	1500	3700	300	0.25	23	1090	6
671 - 3 (Ø 14)	2500	4000	500	0.51	23	1250	6
671 - 4 (Ø 16)	4500	8100	750	1.04	33	2130	6
671 - 4 (Ø 18)	4500	8800	750	1.04	33	2140	6
671 - 5 (Ø 20)	7500	18450	1100	2	42	3640	6

F1 : Druckkraft (EXERTING FORCE), F3 : Haltekraft (HOLDING CAPACITY), Fi : Anwendungskraft (APPLIED FORCE)

Vn , der Luftverbrauch für eine doppelte Bewegung bei einem Druck von 6 bar (Vn , AIR CONSUMPTION PER DOUBLE STROKE IN dm³ AT 6 BAR)

671



**Befestigungsart : mit waagrechtem Fuß,
mit Gusskörper, Befestigung vorne**
Body Mounting Base: Horizontal, Casting, Tied Front



Doppelwirkend, magnetisch und mit Stoßdämpfung
Pneumatic cylinders are double acting, magnetic and cushioning

Modell Nr.	A	A2	B	B2	C	D	E	E2	E3	F	G	H	J	K	L	M	N	P	R	Kolben Ø
671 - 3 (Ø 12)	67	90	51	68	70		32,5 - 41	17,5 - 21,5		35 - 41	35	72	12	M8	292		7 x 12	Ø 10	G1/8	25
671 - 3 (Ø 14)	67	100	58	68	70		32,5 - 41	17,5 - 21,5		35 - 41	35	79	14	M8	312		7 x 12	Ø 12	G1/8	32
671 - 4 (Ø 16)	76	115	77	78	84		34,5	27		36 - 44	42	100	16	M10	372		10 x 14	Ø 16	G1/8	40
671 - 4 (Ø 18)	76	115	77	78	84		34,5	27		36 - 44	42	100	18	M10	372		10 x 14	Ø 16	G1/8	40
671 - 5 (Ø 20)	107	170	79	92	101		61,5 - 75	19,5 - 26	34,5 - 41,5	37 - 54	51	110	20	M12	456		11 x 22	Ø 20	G1/8	50

673

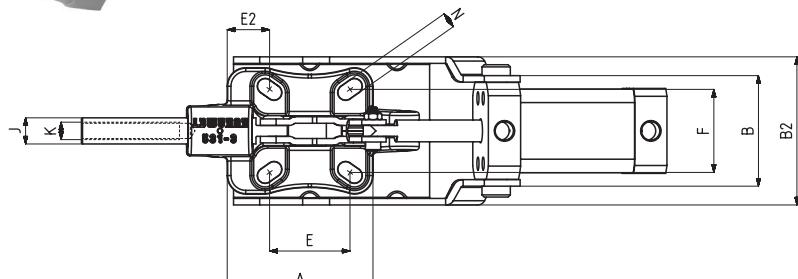
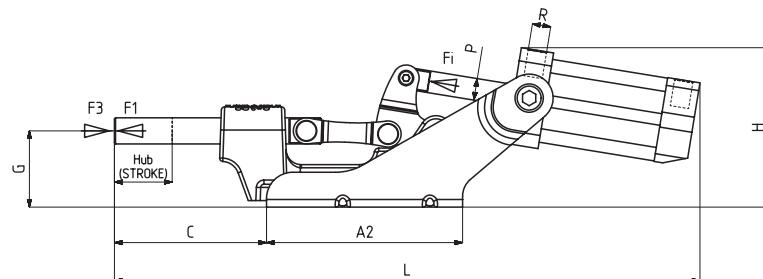
new



Modell Nr.	F1 (N)	F3 (N)	Fi (N)	Vn (dm³)	Hub (STROKE)	Gewicht (WEIGHT) (gr)	BAR
673 - 3 (Ø 12)	1500	3700	300	0,25	23	1090	6
673 - 3 (Ø 14)	2500	4000	500	0,51	23	1250	6

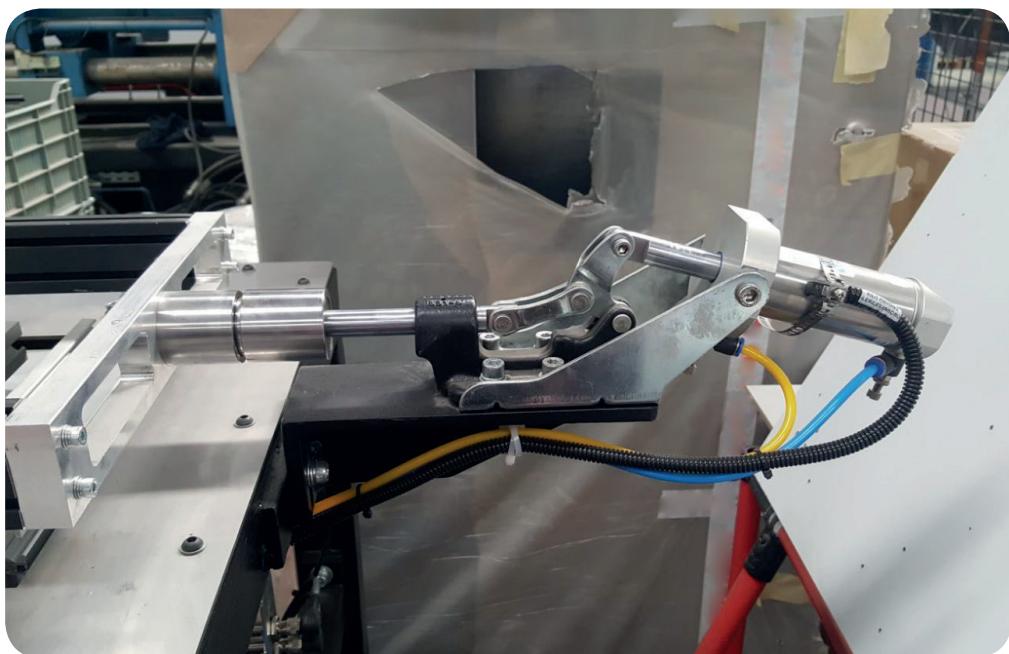
F1 : Druckkraft (EXERTING FORCE) , F3 : Haltekraft (HOLDING CAPACITY), Fi : Anwendungskraft (APPLIED FORCE)

Vn , der Luftverbrauch für eine doppelte Bewegung bei einem Druck von 6 bar (Vn , AIR CONSUMPTION PER DOUBLE STROKE IN dm³ AT 6 BAR)



**Befestigungsart : mit waagrechtem Fuß,
mit Gusskörper, Befestigung vorne**
Body Mounting Base: Horizontal, Casting, Tied Front

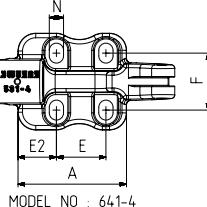
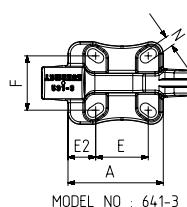
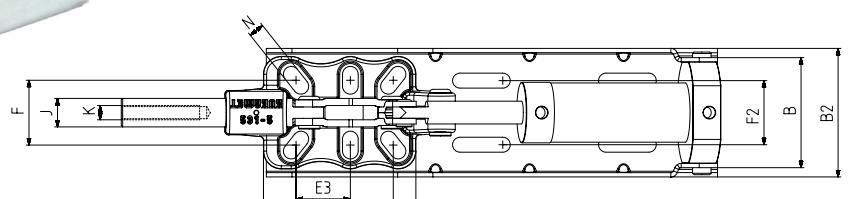
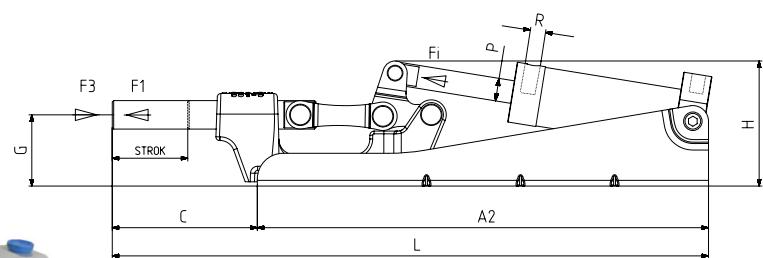
Sensör Kanallı - Kare Pistonlu
With Square Piston and Sensor Slot



Doppelwirkend, magnetisch und mit Stoßdämpfung
Pneumatic cylinders are double acting, magnetic and cushioning

Modell Nr.	A	A2	B	B2	C	D	E	E2	F	G	H	J	K	L	M	N	P	R	Kolben Ø
673 - 3 (Ø 12)	67	90	51	68	70		32,5 - 41	17,5 - 21,5	35 - 41	35	73	12	M8	268		7x12	Ø 10	G1/8	25
673 - 3 (Ø 14)	67	100	58	68	70		32,5 - 41	17,5 - 21,5	35 - 41	35	80	14	M8	288		7x12	Ø 12	G1/8	32

Modell Nr.	F1 (N)	F3 (N)	F _i (N)	Vn (dm ³)	Hub (STROKE)	Gewicht (WEIGHT) (gr)	BAR
641 - 3 (Ø 12)	1500	3700	300	0.25	23	1370	6
641 - 3 (Ø 14)	2500	4000	500	0.51	23	1550	6
641 - 4 (Ø 16)	4500	8100	750	1.04	33	2560	6
641 - 4 (Ø 18)	4500	8800	750	1.04	33	2570	6
641 - 5 (Ø 20)	7500	18450	1100	2	42	4280	6

F1 : Druckkraft (EXERTING FORCE), F3 : Haltekraft (HOLDING CAPACITY), F_i: Anwendungskraft (APPLIED FORCE)Vn , der Luftverbrauch für eine doppelte Bewegung bei einem Druck von 6 bar (Vn , AIR CONSUMPTION PER DOUBLE STROKE IN dm³ AT 6 BAR)

MODEL NO : 641-5

MODEL NO : 641-3

MODEL NO : 641-4

**Befestigungsart : mit waagrechtem Fuß,
mit Gusskörper, Befestigung hinten**
Body Mounting Base: Horizontal, Casting, Tied Behind


Doppelwirkend, magnetisch und mit Stoßdämpfung

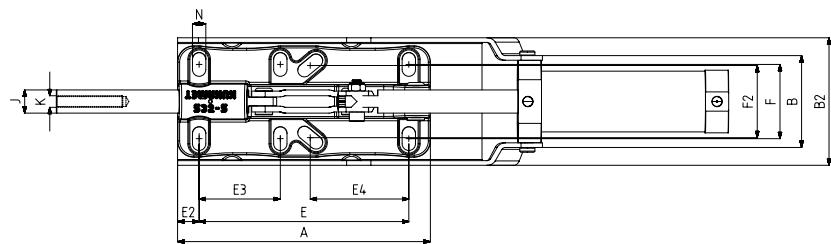
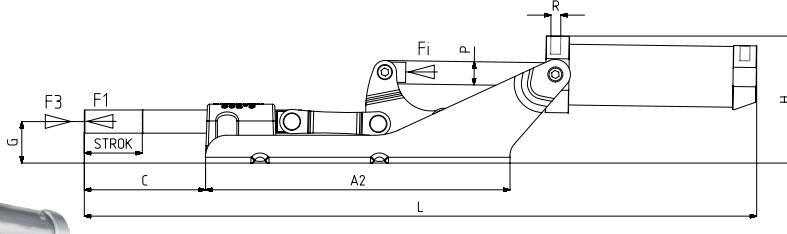
Pneumatic cylinders are double acting, magnetic and cushioning.

Modell Nr.	A	A2	B	B2	C	D	E	E2	E3	F	F2	G	H	J	K	L	M	N	P	R	Kolben Ø
641 - 3 (Ø 12)	67	226	51	68	70		32,5 - 41	17,5 - 21,5		35 - 41	35	35	65	12	M8	296	7 x 12	Ø 10	G1/8	25	
641 - 3 (Ø 14)	67	243	58	68	70		32,5 - 41	17,5 - 21,5		35 - 41	35	35	72	14	M8	314	7 x 12	Ø 12	G1/8	32	
641 - 4 (Ø 16)	76	289	77	78	84		34,5	27		36 - 44	41	42	87	16	M10	375	10x14	Ø 16	G1/8	40	
641 - 4 (Ø 18)	76	289	77	78	84		34,5	27		36 - 44	41	42	87	18	M10	375	10x14	Ø 16	G1/8	40	
641 - 5 (Ø 20)	107	355	79	92	101		61,5 - 75	19,5 - 26	34,5 - 41,5	37 - 54	45	51	105	20	M12	460	11 x 22	Ø 20	G1/8	50	

672



Modell Nr.	F1 (N)	F3 (N)	F _i (N)	V _n (dm ³)	Hub (STROKE)	Gewicht (WEIGHT) (gr)	BAR
672-5 (Ø 20)	7500	18450	1100	2	95	5260	6
F1 : Druckkraft (EXERTING FORCE), F3 : Haltekraft (HOLDING CAPACITY), F _i : Anwendungskraft (APPLIED FORCE)							
V _n , der Luftverbrauch für eine doppelte Bewegung bei einem Druck von 6 bar (V _n , AIR CONSUMPTION PER DOUBLE STROKE IN dm ³ AT 6 BAR.)							



**Befestigungsart : mit waagrechtem Fuß,
mit Gusskörper, Befestigung vorne**
Body Mounting Base: Horizontal, Casting, Tied Front

Modell Nr.	A	A2	B	B2	C	D	E	E2	E3	E4	F	F2	G	H	J	K	L	M	N	P	R	Kolben Ø
672-5 (Ø 20)	218	263	79	110	105		180,5	18,5	70	80 - 90	55-73	54-70,5	36	110	20	M12	578	11,5x20,5	Ø 20	G1/8	50	



Doppelwirkend, magnetisch und mit Stoßdämpfung
Pneumatic cylinders are double acting, magnetic and cushioning.

651

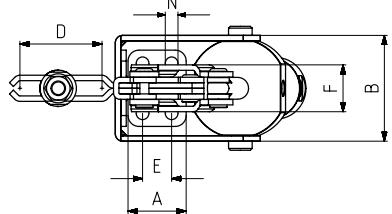
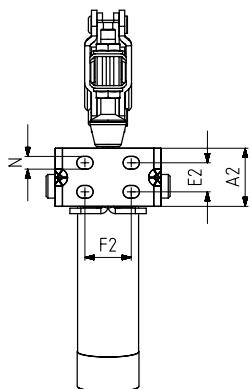
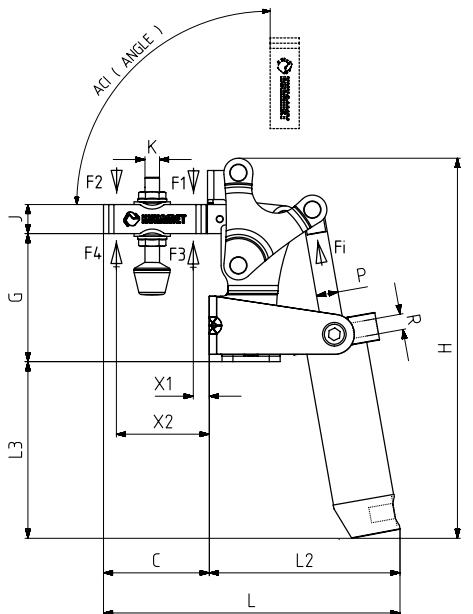


Modell Nr.	F1 (N)	F2 (N)	F3 (N)	F4 (N)	Fi (N)	Vn (dm³)	Winkel (ANGLE) (± 5 °)	Gewicht (WEIGHT) (gr)	BAR
651 - 2	1200	700	1400	925	300	0.25	90 °	570	6
651 - 3	2000	1400	2500	1560	500	0.51	90 °	910	6
651 - 4	3000	2000	3300	2200	750	1.04	90 °	1945	6
651 - 5	4500	2500	5000	3000	1100	2	90 °	3678	6

F1 - F2 : Druckkraft (EXERTING FORCE), F3 - F4 : Haltekraft (HOLDING CAPACITY), Fi : Anwendungskraft (APPLIED FORCE)

Vn , der Luftverbrauch für eine doppelte Bewegung bei einem Druck von 6 bar
(Vn, AIR CONSUMPTION PER DOUBLE STROKE IN dm³ AT 6 BAR)
Befestigungsart : mit senkrechtem Fuß

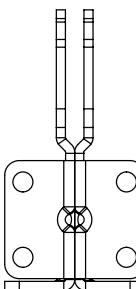
Body Mounting Base: Vertical



MODEL NO : 651-2

MODEL NO : 651-3

MODEL NO : 651-4



MODEL NO : 651-5



Doppelwirkend, magnetisch und mit Stoßdämpfung
Pneumatic cylinders are double acting, magnetic and cushioning

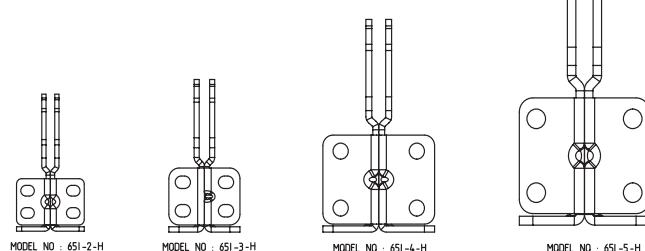
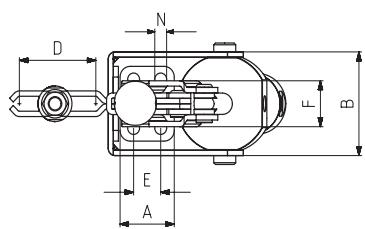
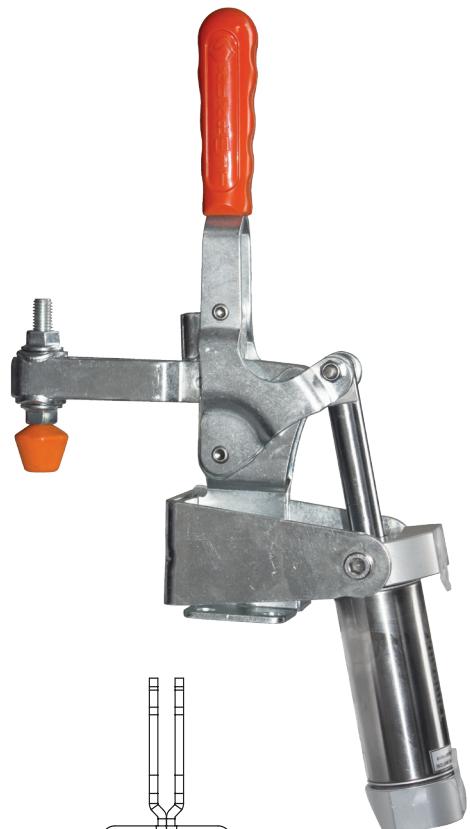
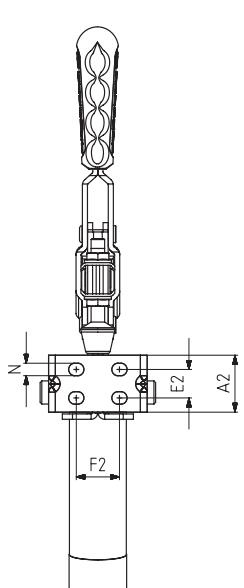
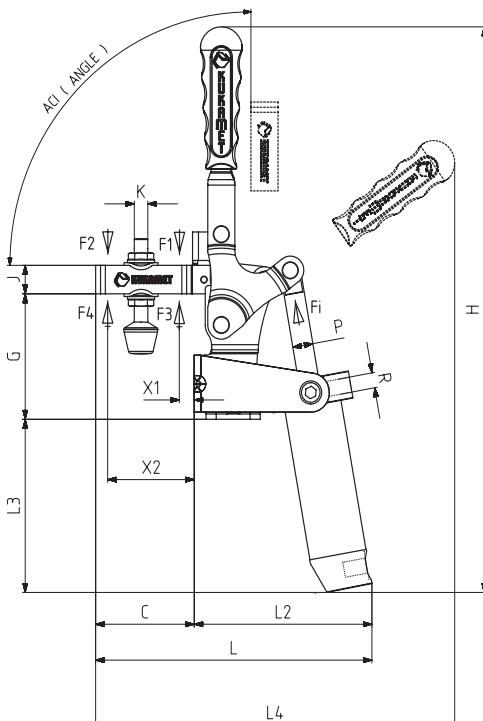
Modell Nr.	A	A2	B	C	D	E	E2	F	F2	G	H	J	K	L	L2	L3	N	X1	X2	P	R	Kolben Ø
651 - 2	26	26	51	54	42	12,5	12,5	25 - 29	25 - 29	65	180	13	M6	146	92	82	6x8	12	42	Ø 10	G1/8	25
651 - 3	32	32	60	57	42	16	16	23,5 - 27,5	23,5 - 27,5	70,5	210	16	M8	164	106	98	7x9	15	42	Ø 12	G1/8	32
651 - 4	50	50	79	89	67	32	32	45	45	100	255	20	M10	230	141	101	9	22	70	Ø 16	G1/8	40
651 - 5	65	65	91	113	94	41,5	41,5	57	57	130	311	25	M12	286	172	114	11	25	91	Ø 20	G1/8	50

651-H



new

Modell Nr.	F1 (N)	F2 (N)	F3 (N)	F4 (N)	F _i (N)	Vn (dm ³)	Winkel (ANGLE) (± 5 °)	Gewicht (WEIGHT) (gr)	BAR
651 - 2 - H	1200	700	1400	925	300	0,25	90 °	620	6
651 - 3 - H	2000	1400	2500	1560	500	0,51	90 °	985	6
651 - 4 - H	3000	2000	3300	2200	750	1,04	90 °	2100	6
651 - 5 - H	4500	2500	5000	3000	1100	2	90 °	3900	6

F1 - F2 :Druckkraft (EXERTING FORCE) , F3 - F4 :Haltekraft (HOLDING CAPACITY), F_i :Anwendungskraft (APPLIED FORCE)Vn , der Luftverbrauch für eine doppelte Bewegung bei einem Druck von 6 bar (Vn , AIR CONSUMPTION PER DOUBLE STROKE IN dm³ AT 6 BAR)
Ayak Tipi: Dik Tabanlı, Kolu
Body Mounting Base: Vertical and with handle

Doppelwirkend, magnetisch und mit Stoßdämpfung

Pneumatic cylinders are double acting, magnetic and cushioning

Modell Nr.	A	A2	B	C	D	E	E2	F	F2	G	H	J	K	L	L2	L3	L4	N	X1	X2	P	R	Kolben Ø
651 - 2 - H	26	26	51	54	42	12,5	12,5	25 - 29	25 - 29	65	261	13	M6	146	92	82	174	6x8	12	42	Ø 10	G1/8	25
651 - 3 - H	32	32	60	57	42	16	16	23,5 - 27,5	23,5 - 27,5	70,5	318	16	M8	164	106	98	212	7x9	15	42	Ø 12	G1/8	32
651 - 4 - H	50	50	79	89	67	32	32	45	45	100	393	20	M10	230	141	101	287	9	22	70	Ø 16	G1/8	40
651 - 5 - H	65	65	91	113	94	41,5	41,5	57	57	130	447	25	M12	286	172	114	333	11	25	91	Ø 20	G1/8	50

652



new

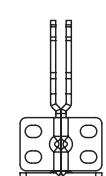
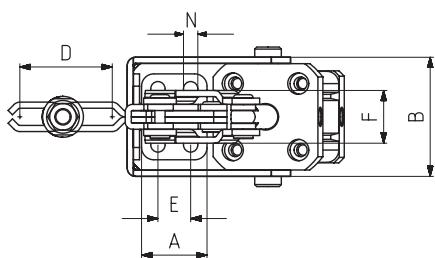
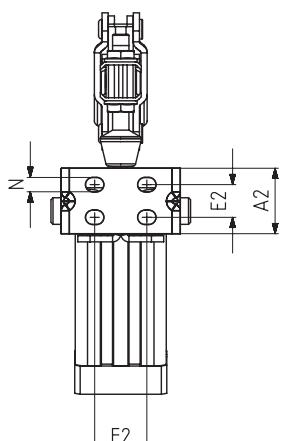
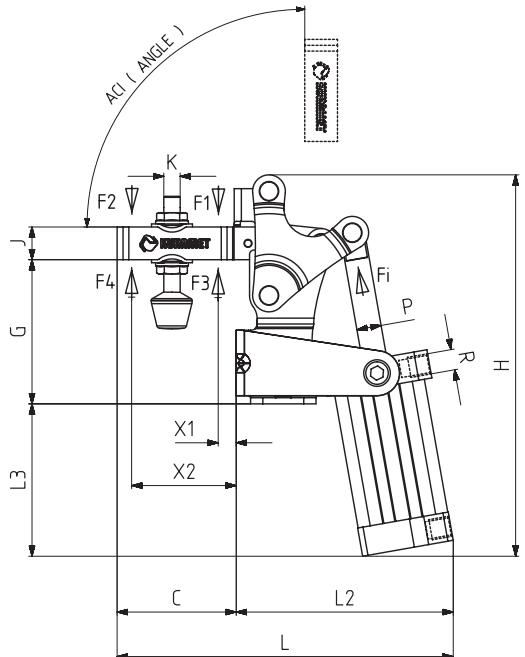
Modell Nr.	F1 (N)	F2 (N)	F3 (N)	F4 (N)	Fi (N)	Vn (dm³)	Winkel (ANGLE) (± 5 °)	Gewicht (WEIGHT) (gr)	BAR
652 - 2	1200	700	1400	925	300	0,25	90 °	570	6
652 - 3	2000	1400	2500	1560	500	0,51	90 °	910	6

F1 - F2 :Druckkraft (EXERTING FORCE) , F3 - F4 :Haltekraft (HOLDING CAPACITY), Fi :Anwendungskraft (APPLIED FORCE)

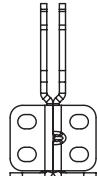
Vn , der Luftverbrauch für eine doppelte Bewegung bei einem Druck von 6 bar (Vn,AIR CONSUMPTION PER DOUBLE STROKE IN dm³ AT 6 BAR)

Befestigungsart : mit senkrechtem Fuß
Body Mounting Base: Vertical

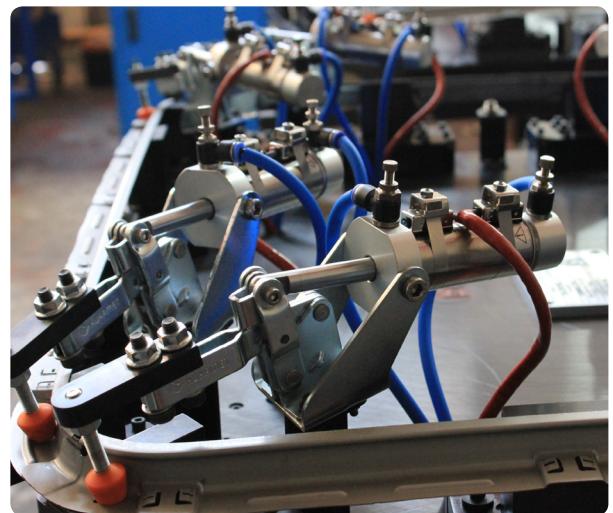
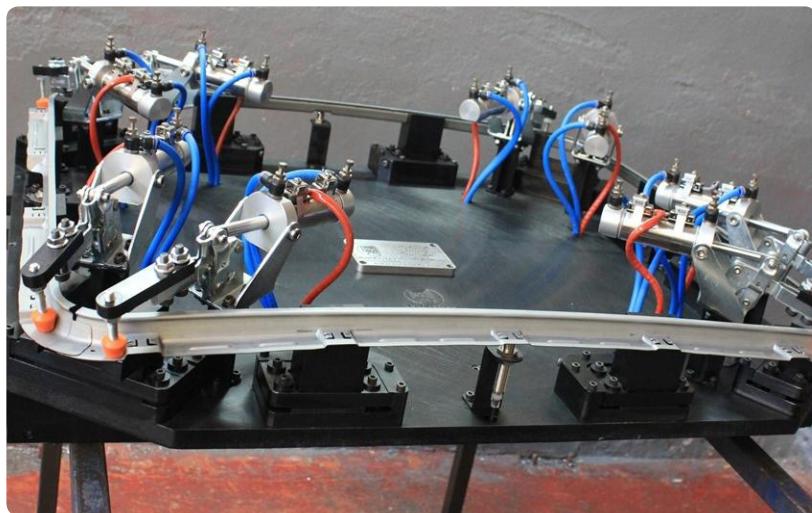
Sensör Kanelli - Kare Pistonlu
With Square Piston and Sensor Slot



MODEL NO : 652-2

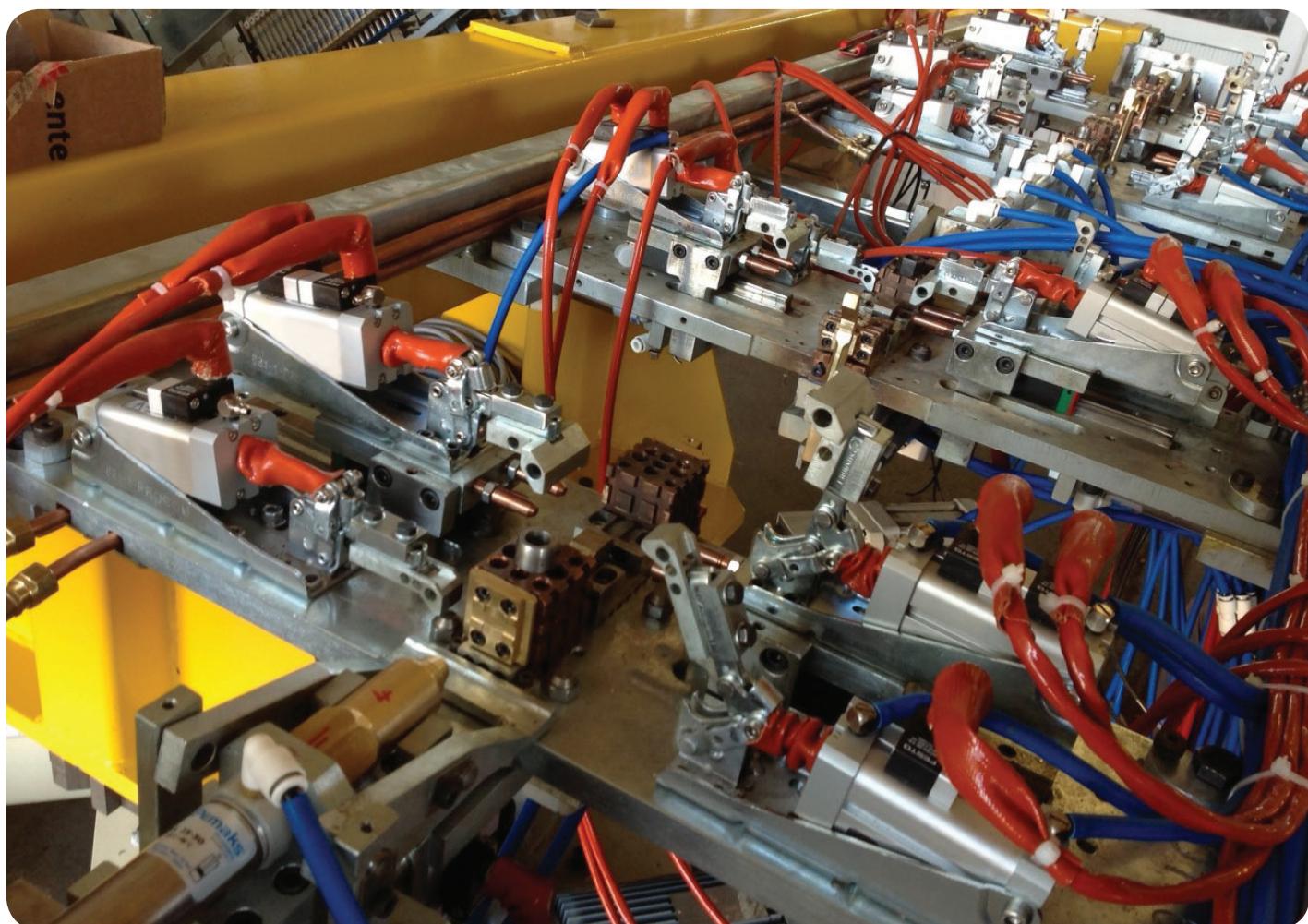
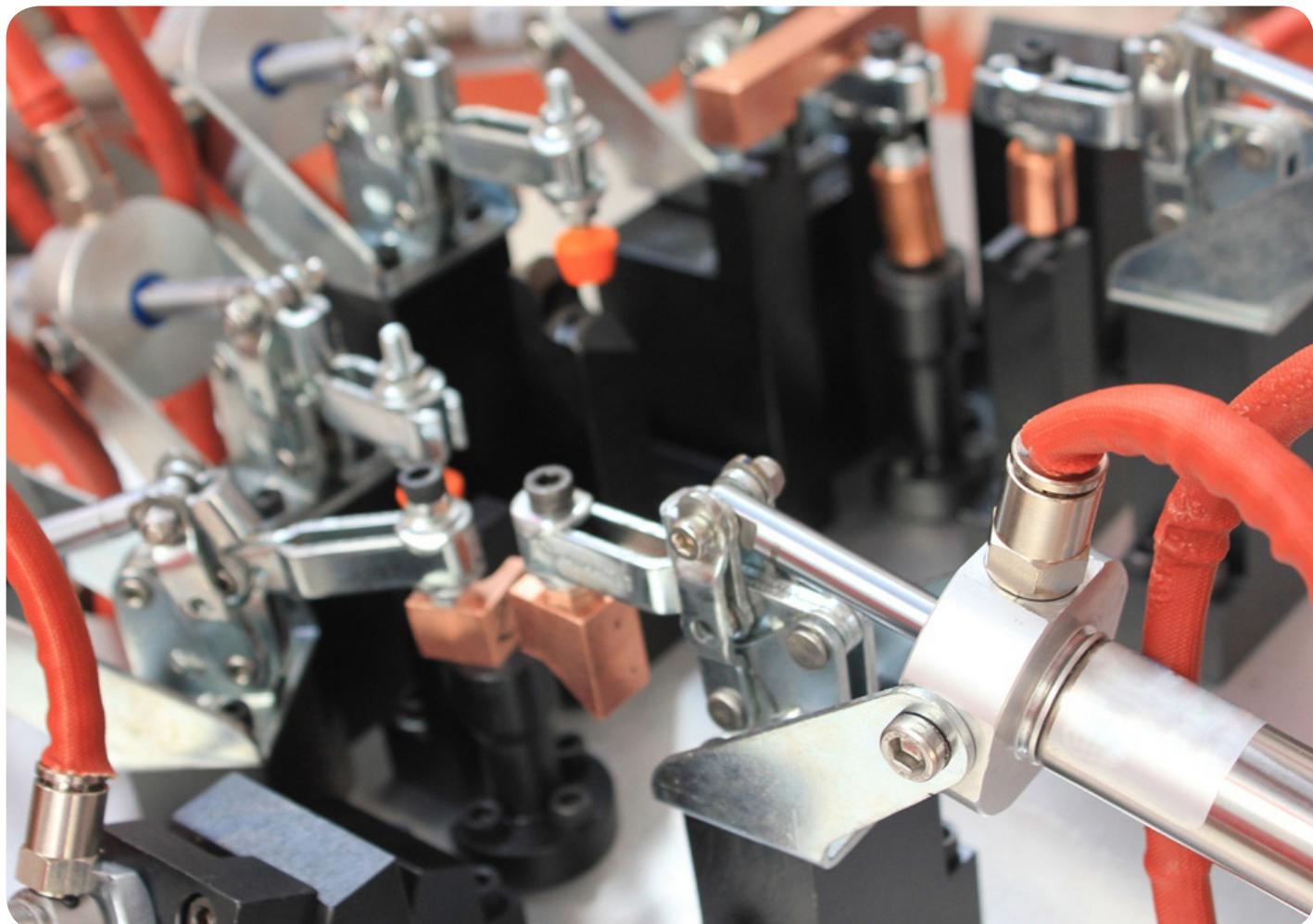


MODEL NO : 652-3



Doppelwirkend, magnetisch und mit Stoßdämpfung
Pneumatic cylinders are double acting, magnetic and cushioning

Modell Nr.	A	A2	B	C	D	E	E2	F	F2	G	H	J	K	L	L2	L3	N	X1	X2	P	R	Kolben Ø
652 - 2	26	26	51	54	42	12,5	12,5	25 - 29	25 - 29	65	156	13	M6	145	91	59	6x8	12	42	Ø 10	G1/8	25
652 - 3	32	32	60	57	42	16	16	23,5 - 27,5	23,5 - 27,5	70,5	188	16	M8	165	108	76	7x9	15	42	Ø 12	G1/8	32



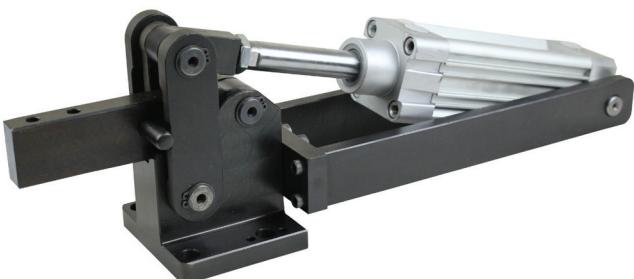
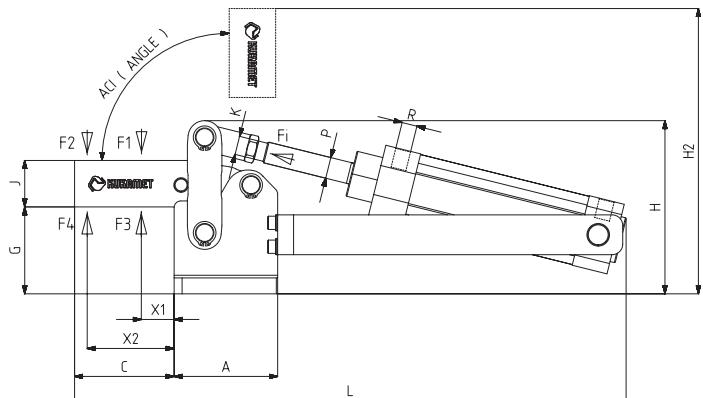
681



Modell Nr.	F1 (N)	F2 (N)	F3 (N)	F4 (N)	F _i (N)	V _n (dm ³)	Winkel (ANGLE) (± 5 °)	Gewicht WEIGHT (gr)	BAR
681 - 4	2500	1800	9000	6000	750	1.28	90°	5565	6
681 - 6	4000	2400	18000	12000	1150	2.5	90°	9660	6
681 - 8	6500	4000	30000	20000	1850	5.13	90°	20475	6

F1 - F2 : Druckkraft (EXERTING FORCE), F3 - F4 : Haltekraft (HOLDING CAPACITY),
 Fi : Anwendungskraft (APPLIED FORCE)

V_n , der Luftverbrauch für eine doppelte Bewegung bei einem Druck von 6 bar
 V_n , AIR CONSUMPTION PER DOUBLE STROKE IN dm³ AT 6 BAR)

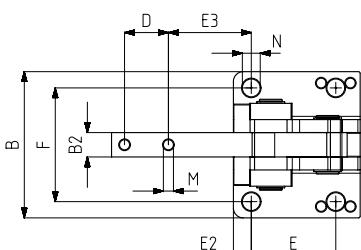
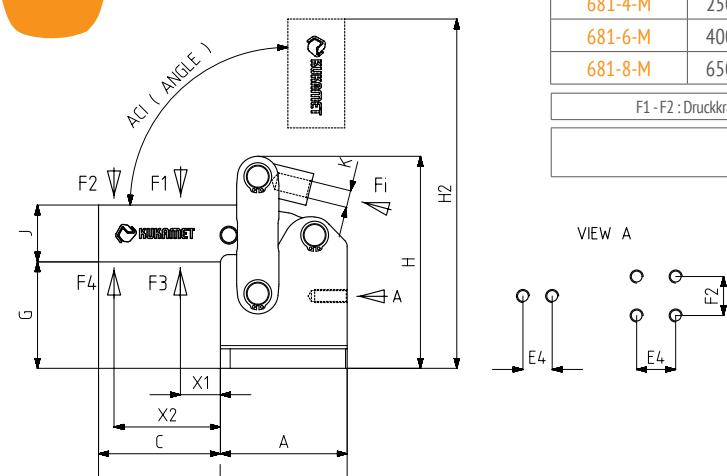


Befestigungsart : mit waagrechtem Fuß
Body Mounting Base: Horizontal

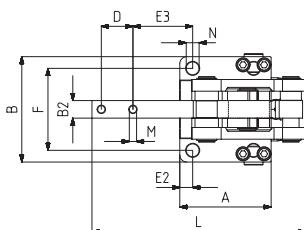
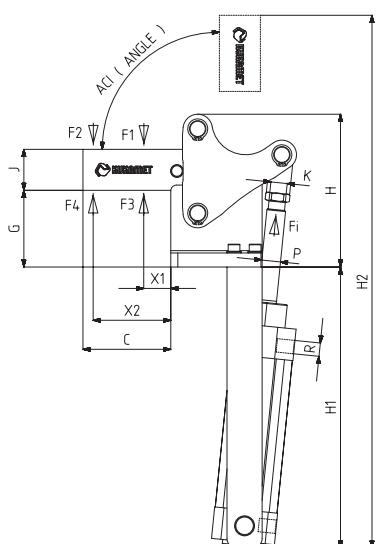
Doppelwirkend, magnetisch und mit Stoßdämpfung
Pneumatic cylinders are double acting, magnetic and cushioning.

Modell Nr.	A	B	B2	C	D	E	E2	E3	F	G	H	H2	J	K	L	M	N	X1	X2	P	R	PİSTON Ø	STROK
681-4	77	90	15	75	27	52	10	47	70	65,5	131	216	35	M12X1,25	416	6,2	11	18	64	Ø 16	G1/4	40	80
681-6	93	105	20	85	26	55	11	54	83	71	158	249	40	M16X1,50	483	8,2	12,5	18	69	Ø 20	G1/4	50	100
681-8	125	145	30	115	40	80	15	67	115	94	212	336	60	M16X1,50	594	12,2	16,5	18	92	Ø 20	G3/8	63	125

681-M



Modell Nr.	A	B	B2	C	D	E	E2	E3	E4	F	F2	G	H	H2	J	K	L	M	N	X1	X2	P	R	Kolben Ø	STROK
681-4-M	77	90	15	75	27	52	10	47	18	70		65,5	131	216	35	M12X1,25	152	6,2	11	18	64	16	G1/4	40	80
681-6-M	93	105	20	85	26	55	11	54	24	83	24	71	158	249	40	M16X1,50	178	8,2	12,5	18	69	20	G1/4	50	100
681-8-M	125	145	30	115	40	80	15	67	34	115	40	94	212	336	60	M16X1,50	240	12,2	16,5	18	97	20	G3/8	63	125



Modell Nr.	F1 (N)	F2 (N)	F3 (N)	F4 (N)	Fi (N)	Vn (dm³)	Winkel (ANGLE) (± 5 °)	Gewicht (WEIGHT) (gr)	BAR
682-4	2500	1800	9000	6000	750	1.28	90°	5590	6
682-6	4000	2400	18000	12000	1150	2.5	90°	9944	6
682-8	6500	4000	30000	20000	1850	5.13	90°	21269	6

F1 - F2 : Druckkraft (EXERTING FORCE), F3 - F4 : Haltekraft (HOLDING CAPACITY), Fi : Anwendungskraft (APPLIED FORCE)

Vn , der Luftverbrauch für eine doppelte Bewegung bei einem Druck von 6 bar (Vn , AIR CONSUMPTION PER DOUBLE STROKE IN dm³ AT 6 BAR)



Befestigungsart : mit waagrechtem Fuß
Body Mounting Base: Horizontal

Doppelwirkend, magnetisch und mit Stoßdämpfung
Pneumatic cylinders are double acting, magnetic and cushioning

Modell Nr.	A	B	B2	C	D	E	E2	E3	F	G	H	H1	H2	J	K	L	M	N	X1	X2	P	R	Kolben Ø	STROK
682-4	77	90	15	75	27		10	47	70	65,5	130,5	240	455	35	M12X1,25	182	6,2	11	18	64	Ø 16	G1/4	40	80
682-6	93	105	20	85	26		11	54	83	71	158	287	535	40	M16X1,50	219	8,2	12,5	18	69	Ø 20	G1/4	50	100
682-8	125	145	30	115	40		15	67	115	94	212	333	669	60	M16X1,50	288	12,2	16,5	18	92	Ø 20	G3/8	63	125

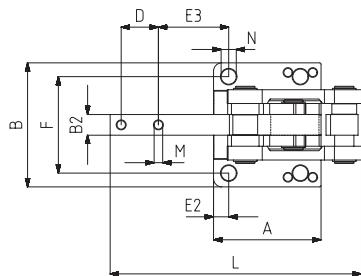
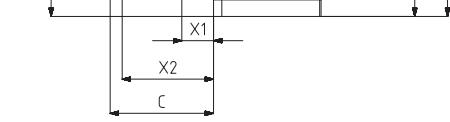
Modell Nr.	F1 (N)	F2 (N)	F3 (N)	F4 (N)	Fi (N)	Vn (dm³)	Winkel (ANGLE) (± 5 °)	Gewicht (WEIGHT) (gr)	BAR
682-4-M	2500	1800	9000	6000	750	1.28	90°	3100	6
682-6-M	4000	2400	18000	12000	1150	2.5	90°	4900	6
682-8-M	6500	4000	30000	20000	1850	5.13	90°	11600	6

F1 - F2 : Druckkraft (EXERTING FORCE), F3 - F4 : Haltekraft (HOLDING CAPACITY), Fi : Anwendungskraft (APPLIED FORCE)

Vn , der Luftverbrauch für eine doppelte Bewegung bei einem Druck von 6 bar (Vn , AIR CONSUMPTION PER DOUBLE STROKE IN dm³ AT 6 BAR)



Befestigungsart : mit waagrechtem Fuß
Body Mounting Base: Horizontal

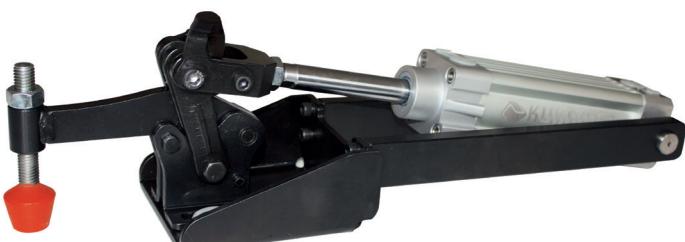


Modell Nr.	A	B	B2	C	D	E	E2	E3	F	G	H	H2	J	K	L	M	N	X1	X2	P	R	Kolben Ø	STROK
682-4-M	77	90	15	75	27		10	47	70	65,5	131	216	35	M12X1,25	182	6,2	11	18	64	Ø 16	G1/4	40	80
682-6-M	93	105	20	85	26		11	54	83	71	158	249	40	M16X1,50	219	8,2	12,5	18	69	Ø 20	G1/4	50	100
682-8-M	125	145	30	115	40		15	67	115	94	212	336	60	M16X1,50	288	12,2	16,5	18	92	Ø 20	G3/8	63	125

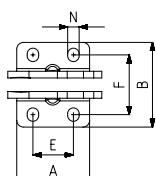
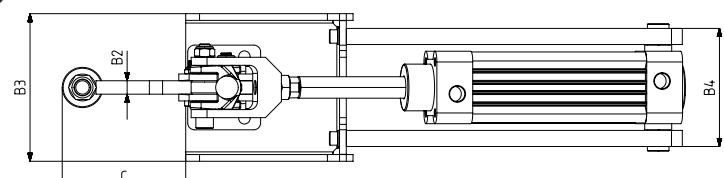
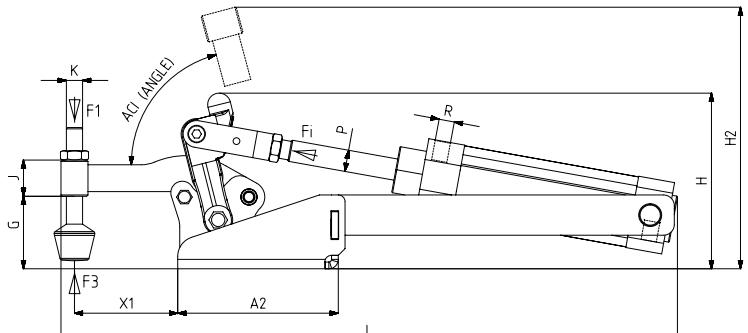
683



new



Modell Nr.	F1 (N)	F3 (N)	F _i (N)	Vn (dm ³)	Winkel (ANGLE) (± 5 °)	Gewicht (WEIGHT) (gr)	BAR
683 - 4	1600	5600	750	1,28	70°	4900	6
683 - 6	2000	11000	1150	2,5	70°	8000	6

F1 : Druckkraft (EXERTING FORCE) , F3 : Haltekraft (HOLDING CAPACITY) , F_i : Anwendungskraft (APPLIED FORCE)Vn , der Luftverbrauch für eine doppelte Bewegung bei einem Druck von 6 bar (Vn, AIR CONSUMPTION PER DOUBLE STROKE IN dm³ AT 6 BAR)

Ayak Tipi: Yataş Tabanlı (Modüler Pistonlu)
Body Mounting Base: Horizontal (Modular with piston)



Doppelwirkend, magnetisch und mit Stoßdämpfung
Pneumatic cylinders are double acting, magnetic and cushioning.

Modell Nr.	A	A2	B	B2	B3	B4	C	D	E	F	G	H	H2	J	K	L	M	N	X1	P	R	Kolben Ø	STROK
683 - 4	54	119	63	10	100	88	91,5		30	43-46	54	131	195	27	M12	457		8,5 x 10	76,5	Ø 16	G1/4	40	80
683 - 6	70	151	74	12	112	100	112		45	51-53	73	164	245	32	M12	549		10,5 x 11,5	97	Ø 20	G1/4	50	100

Dimensions and technical data are subject to change without notice.

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683-H

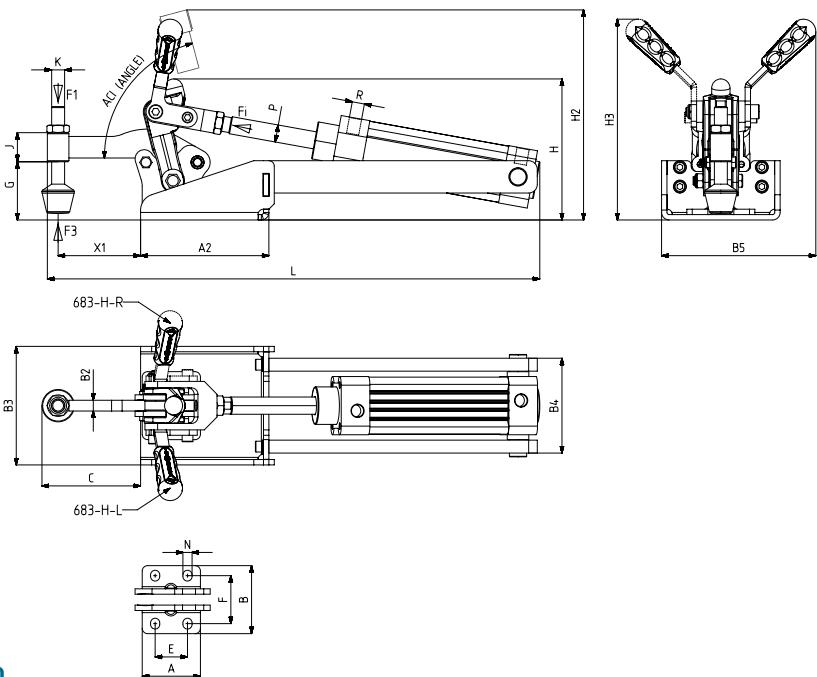


new

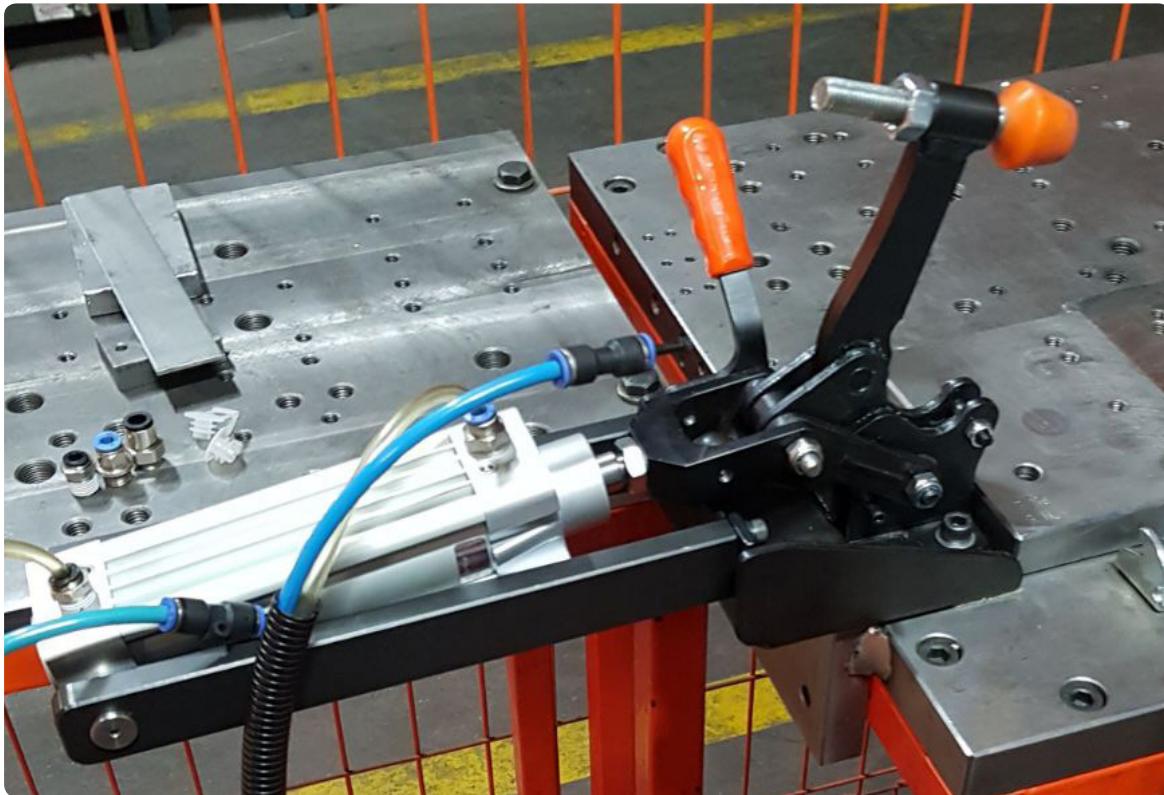
MODEL NO (KOLLU) / WITH HANDLE	F1 (N)	F3 (N)	Fi (N)	Vn (dm³)	AÇI (ANGLE) (± 5 °)	AĞIRLIK (WEIGHT) (gr)	BAR
683 - 4-H-L / ..H-R	1600	5600	750	1,28	70°	4980	6
683 - 6-H-L / ..H-R	2000	11000	1150	2,5	70°	8130	6

F1 : Druckkraft (EXERTING FORCE), F3 : Haltekraft (HOLDING CAPACITY), Fi : Anwendungskraft (APPLIED FORCE)

Vn , der Luftverbrauch für eine doppelte Bewegung bei einem Druck von 6 bar (Vn , AIR CONSUMPTION PER DOUBLE STROKE IN dm³ AT 6 BAR)


Ağak Tipi: Yataş Tabanlı, Kolu (Modüler Pistonlu)

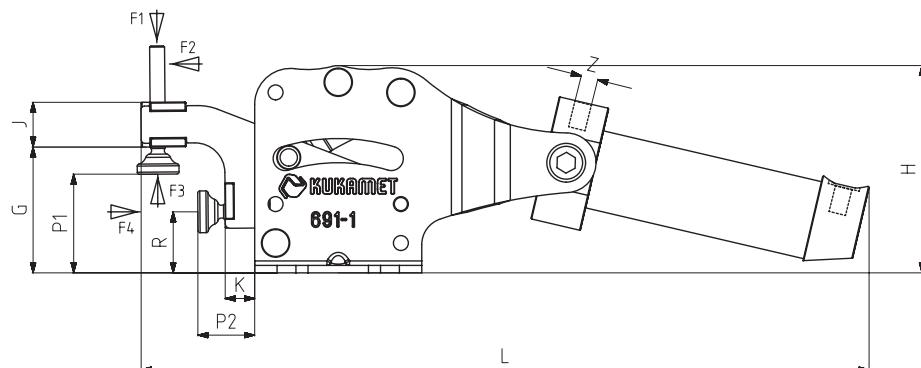
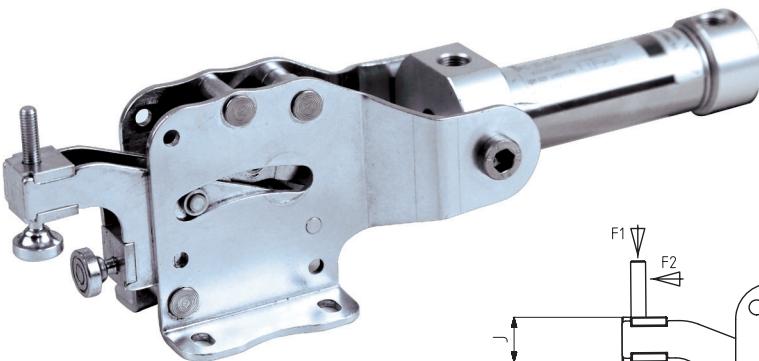
Body Mounting Base: Horizontal and with handle (Modular with piston)


Doppelwirkend, magnetisch und mit Stoßdämpfung

Pneumatic cylinders are double acting, magnetic and cushioning

MODEL NO (KOLLU) / WITH HANDLE	A	A2	B	B2	B3	B4	B5	C	D	E	F	G	H	H2	H3	J	K	L	M	N	X1	P	R	Kolben Ø	STROK
683 - 4-H-L / ..H-R	54	119	63	10	100	88	138	91,5		30	43-46	54	131	195	186	27	M12	457		8,5 x 10	76,5	Ø 16	G1/4	40	80
683 - 6-H-L / ..H-R	70	151	74	12	112	100	188,5	112		45	51-53	73	164	245	256	32	M12	549		10,5 x 11,5	97	Ø 20	G1/4	50	100

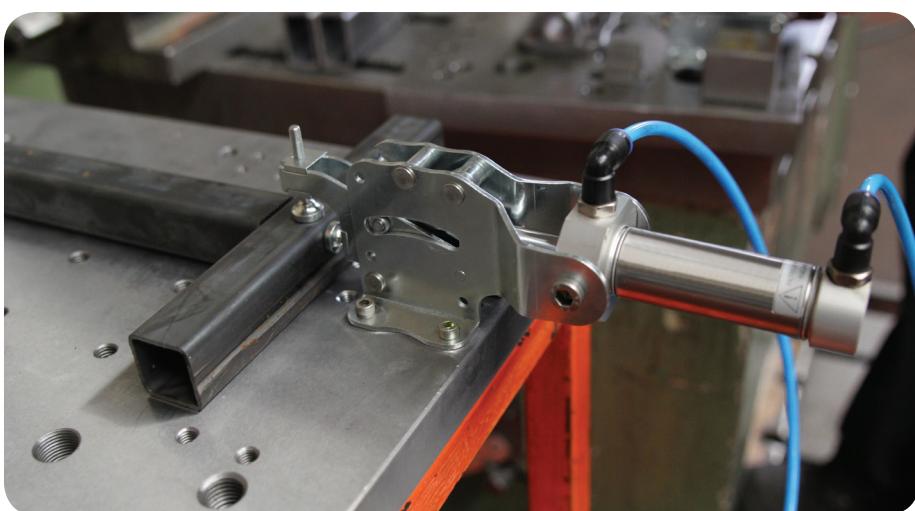
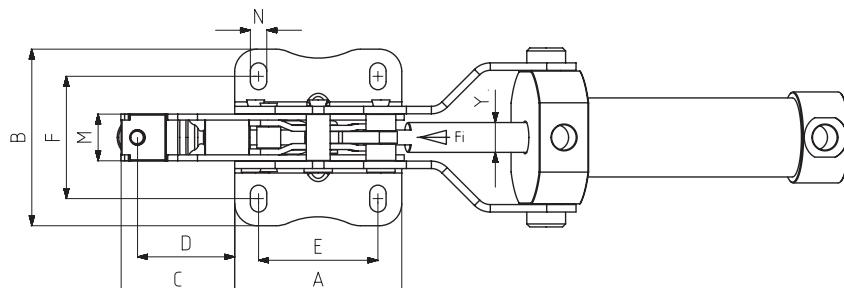
691


Befestigungsart : mit waagrechtem Fuß

Body Mounting Base: Horizontal

Doppelwirkend, magnetisch und mit Stoßdämpfung

Pneumatic cylinders are double acting, magnetic and cushioning

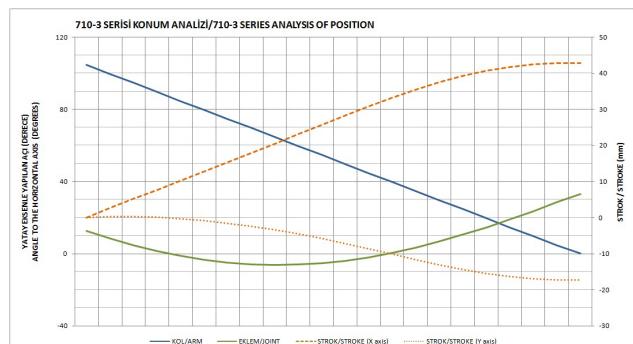


Modell Nr.	A	B	C	D	E	F	G	H	J	K	L	M	N	P1 Min.	P1 Max.	P2 Min.	P2 Max.	R	Y	Z	Kolben Ø
691-1	56	59,5	38	32,5	40	37,5 - 44,5	42	70	15	10	244	16	5,5 x 9	15	33	19	37	20,5	10	G1/8	25
691-2	75	79,5	48	41	50	49,5 - 62,5	52	88	20	12	291	20	6,5 x 13	24	41	22	39	24,5	12	G1/8	32
691-3	90	101,5	58	50	50	61 - 81	62	105	25	15	356,5	30	8,5 x 18,5	23	49	28	54	29	16	G1/8	40

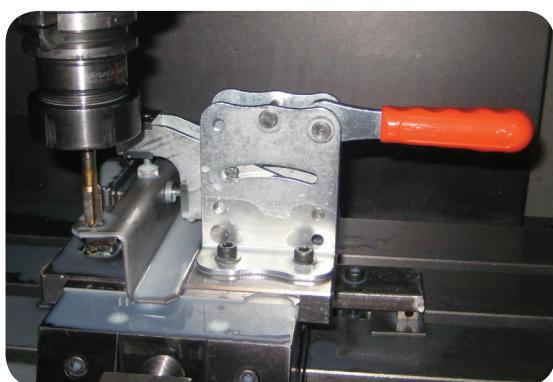
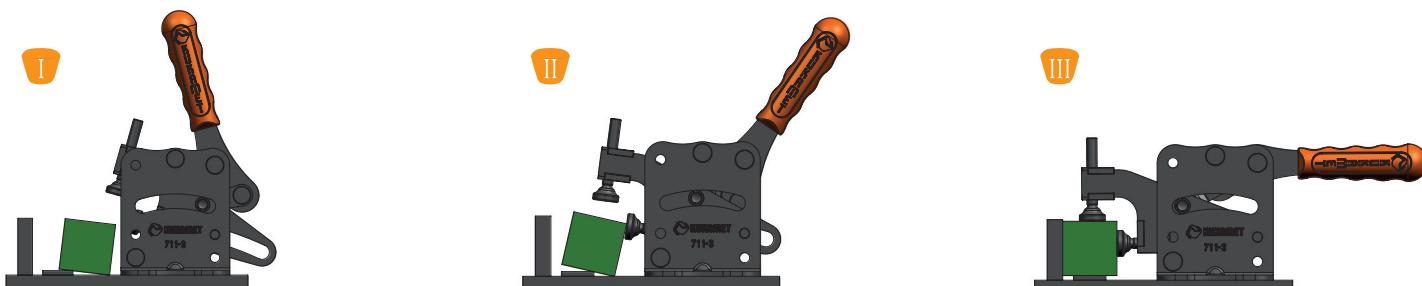
711



Befestigungsart : mit waagrechtem Fuß
Body Mounting Base: Horizontal



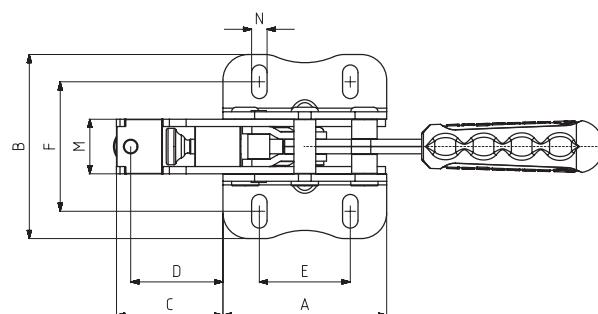
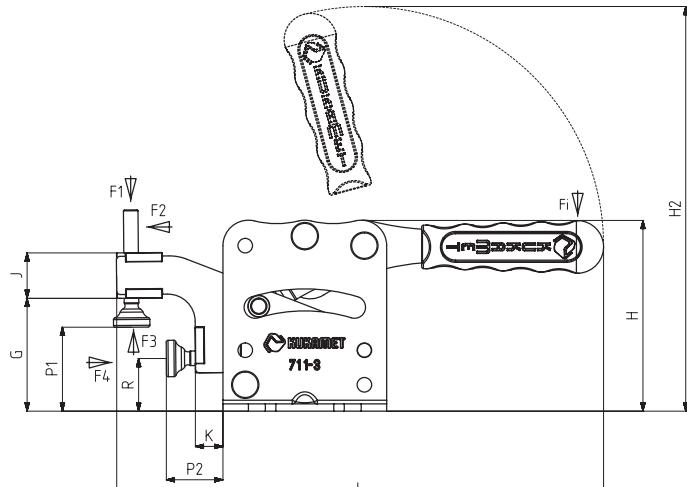
Sıkma Pozisyonları Clamping Positions



Modell Nr.	F1 (N)	F2 (N)	F3 (N)	F4 (N)	Fi		Gewicht (WEIGHT) (gr)
					Andruckkraft (YIELD) (F1:Fi)	Andruckkraft (YIELD) (F2:Fi)	
711-1	1000	1000	1000	1000	14:1	8:1	400
711-2	2000	2000	2000	2000	17:1	9:1	790
711-3	3000	3000	3000	3000	19:1	11:1	1690

F1 - F2 : Druckkraft (EXERTING FORCE), F3 - F4 : Haltekraft (HOLDING CAPACITY),

Fi : Anwendungskraft (APPLIED FORCE)



Modell Nr.	A	B	C	D	E	F	G	H	H2	J	K	L	M	N	P1 Min.	P1 Max.	P2 Min.	P2 Max.	R
711-1	56	59,5	38	32,5	40	37,5 - 44,5	42	70	148	15	10	173	16	5,5 x 9	15	33	19	37	20,5
711-2	75	79,5	48	41	50	49,5 - 62,5	52	88	186	20	12	223	20	6,5 x 13	24	41	22	39	24,5
711-3	90	101,5	58	50	50	61 - 81	62	105	222	25	15	268	30	8,5 x 18,5	23	49	28	54	29

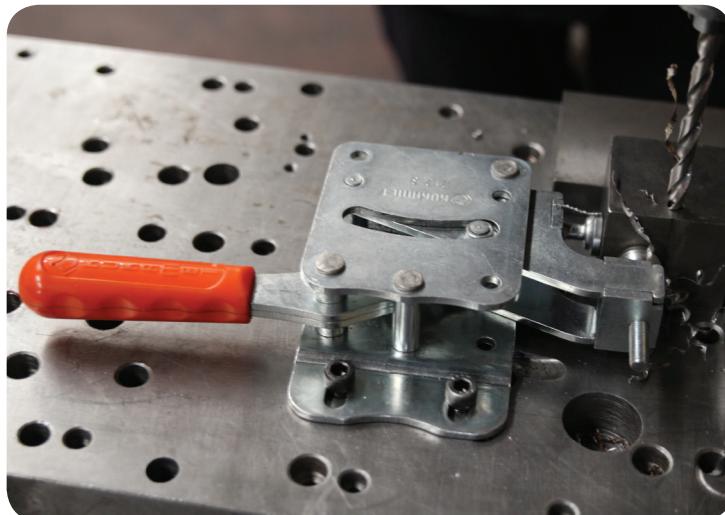
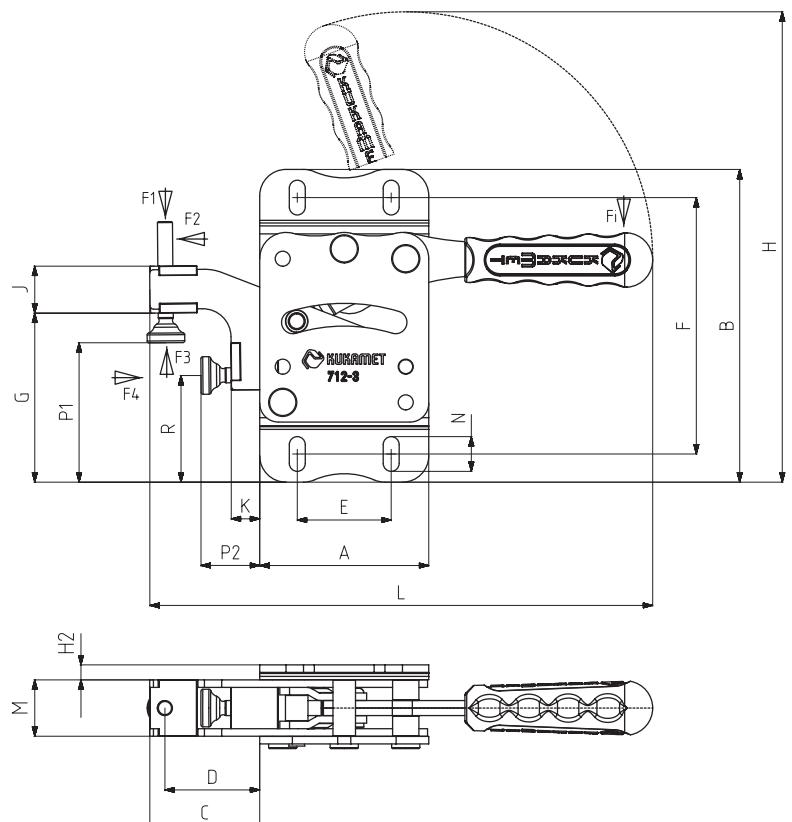
712



Befestigungsart : mit waagrechtem Fuß
Body Mounting Base: Horizontal

Modell Nr.	F1 (N)	F2 (N)	F3 (N)	F4 (N)	Fi		Gewicht (WEIGHT) (gr)
					Andruckkraft (YIELD) (F1:Fi)	Andruckkraft (YIELD) (F2:Fi)	
712-1	1000	1000	1000	1000	14:1	8:1	405
712-2	2000	2000	2000	2000	17:1	9:1	800
712-3	3000	3000	3000	3000	19:1	11:1	1670

F1 - F2 : Druckkraft (EXERTING FORCE), F3 - F4 : Haltekraft (HOLDING CAPACITY),
Fi : Anwendungskraft (APPLIED FORCE)



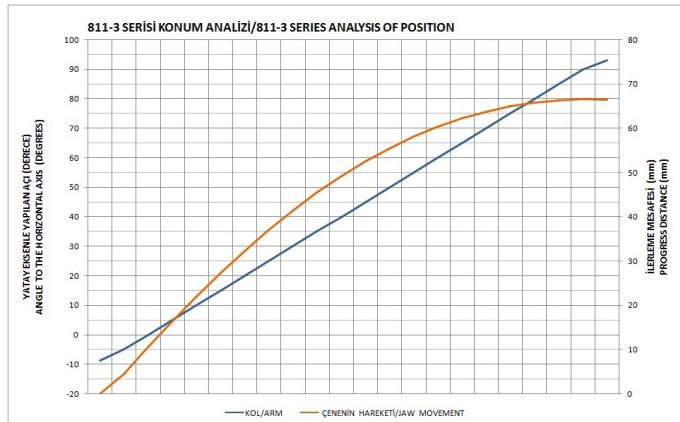
Modell Nr.	A	B	C	D	E	F	G	H	H2	J	K	L	M	N	P1 Min.	P1 Max.	P2 Min.	P2 Max.	R
712-1	56	106,5	38	32,5	40	84,5 - 91,5	58,5	164,5	8	15	10	173	16	5,5 x 9	31,5	49,5	19	37	37
712-2	75	136,5	48	41	50	106,5 - 119,5	75	209	9	20	12	223	20	6,5 x 13	47	64	22	39	47,5
712-3	90	166,5	58	50	50	126,5 - 146,5	90	250	10	25	15	268	30	8,5 x 18,5	51	77	28	54	57

811



Modell Nr.	F1 (N)	F3 (N)	Fi	Gewicht (WEIGHT) (gr)
			Andruckkraft (YIELD) (F1:Fi)	
811-1	1000	2500	27:1	700
811-2	3500	4500	36:1	1060
811-3	4000	6000	38:1	1600

F1 : Druckkraft (EXERTING FORCE) , F3 : Haltekraft (HOLDING CAPACITY),
Fi : Anwendungskraft (APPLIED FORCE)



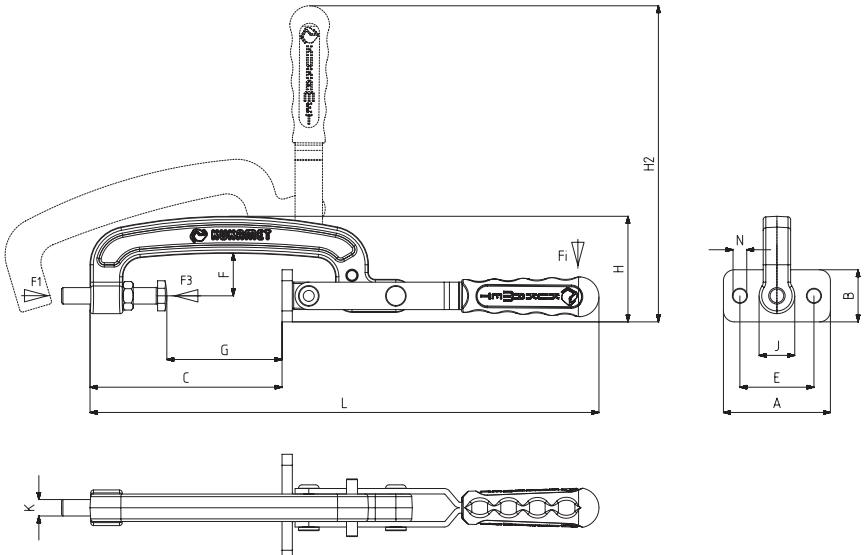
Befestigungsart : mit waagrechtem Fuß Body Mounting Base: Horizontal

Ürün özellikleri;

Ağır iş uygulamalarında kullanıma uygun mukavemetli ürünlerdir.
Clamp çenesi sıcak dövme çelikten yapılmıştır.
Diğer parçaları çelik malzemeden üretilmiş ve korozyon direnci için galvaniz kaplama yapılmıştır.

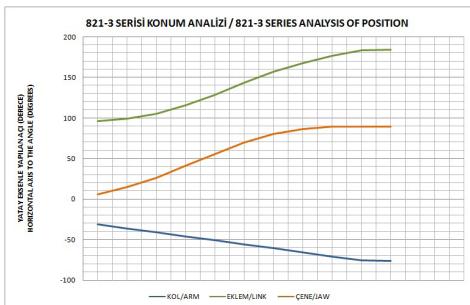
Product Features;

The products are strong and suited for heavy duty applications.
The clamping jaw is made of hot forged steel.
The remaining parts are made of galvanized steel for corrosion resistance.



Modell Nr.	A	B	C	D	E	F	G Min.	G Max.	H	H2	J	K	L	M	N
811-1	58	38	77		40	24	23	50	60	204	16	M8	282		Ø 8
811-2	68	38	110		45	28	46	80	69	217	20	M10	330		Ø 8
811-3	78	38	140		54	31	53	100	77	230	26	M12	372		Ø 10

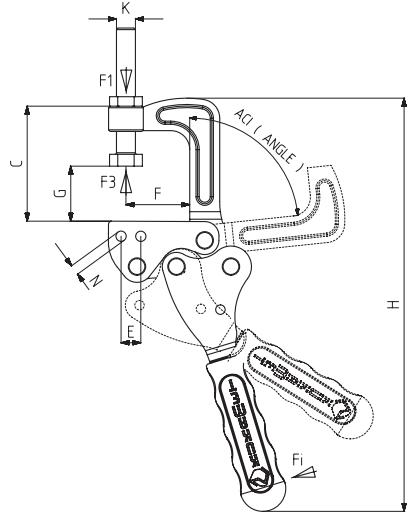
821



Modell Nr.	F1 (N)	F3 (N)	Fi Andruckkraft (YIELD) (F1:Fi)	Winkel (ANGLE) (± 5 °)	Gewicht (WEIGHT) (gr)
				821-2	3500

F1 : Druckkraft (EXERTING FORCE), F3 : Haltekraft (HOLDING CAPACITY),

Fi : Anwendungskraft (APPLIED FORCE)


Ürün özellikleri;

Ağır iş uygulamalarında kullanıma uygun mukavemetli ürünlerdir.

Clamp çenesi sıcak dövmeye çelikten yapılmıştır.

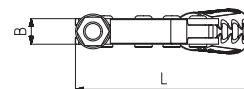
Diğer parçaları çelik malzemeden üretilmiş ve korozyon direnci için galvaniz kaplama yapılmıştır.

Product Features;

The products are strong and suited for heavy duty applications.

The clamping jaw is made of hot forged steel.

The remaining parts are made of galvanized steel for corrosion resistance.


Befestigungsart : mit senkrechtem Fuß
Body Mounting Base: Vertical

Modell Nr.	A	B	C	D	E	F	G min.	G max.	H	J	K	L	M	N
821-2		15	72		12.5	31	0	50	261		M12	107		6.5

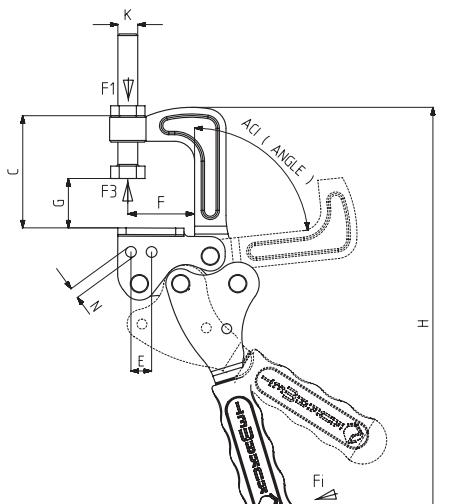
822



Modell Nr.	F1 (N)	F3 (N)	Fi Andruckkraft (YIELD) (F1:Fi)	Winkel (ANGLE) (± 5 °)	Gewicht (WEIGHT) (gr)
				822-2	3500

F1 : Druckkraft (EXERTING FORCE), F3 : Haltekraft (HOLDING CAPACITY),

Fi : Anwendungskraft (APPLIED FORCE)


Ürün özellikleri;

Ağır iş uygulamalarında kullanıma uygun mukavemetli ürünlerdir.

Clamp çenesi sıcak dövmeye çelikten yapılmıştır.

Diğer parçaları çelik malzemeden üretilmiş ve korozyon direnci için galvaniz kaplama yapılmıştır.

Product Features;

The products are strong and suited for heavy duty applications.

The clamping jaw is made of hot forged steel.

The remaining parts are made of galvanized steel for corrosion resistance.

Befestigungsart : mit waagrechtem Fuß
Body Mounting Base: Horizontal

Modell Nr.	A	B	B2	C	D	E	E2	F	F2	G min.	G max.	H	J	K	L	M	N
822-2	40	15	45	68		12.5	25.5	31	30	0	50	261		M12	107		6.5

831



Befestigungsart : mit waagrechtem Fuß Body Mounting Base: Horizontal

Ürün özellikleri :

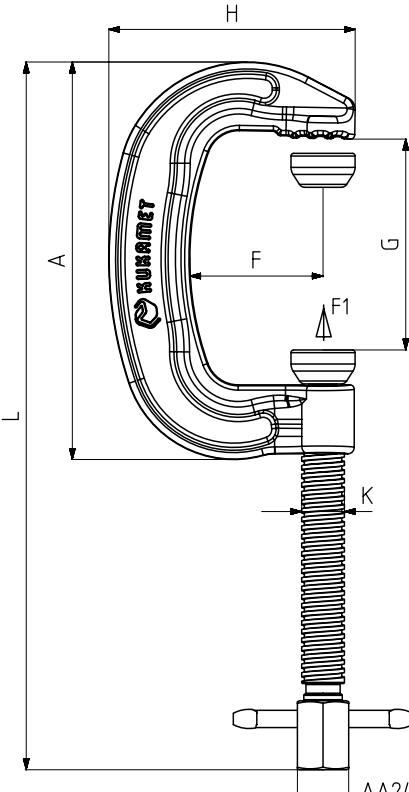
Ağır iş uygulamalarında kullanıma uygun mukavemetli ürünlerdir.
Clamp çenesi sıcak dövme çelikten yapılmıştır ve civata dişleri ovalamadır.
Diğer parçaları çelik malzemeden üretilmiş ve korozyon direnci için galvaniz kaplama yapılmıştır.

Product Features:

The products are strong and suited for heavy duty applications.
The clamping jaw is made of hot forged steel.
The remaining parts are made of galvanized steel for corrosion resistance.



Modell Nr.	F1 (N)	Gewicht (WEIGHT) (gr)
831-2	8000	1610
831-3	8000	2300
F1 : Druckkraft (EXERTING FORCE)		



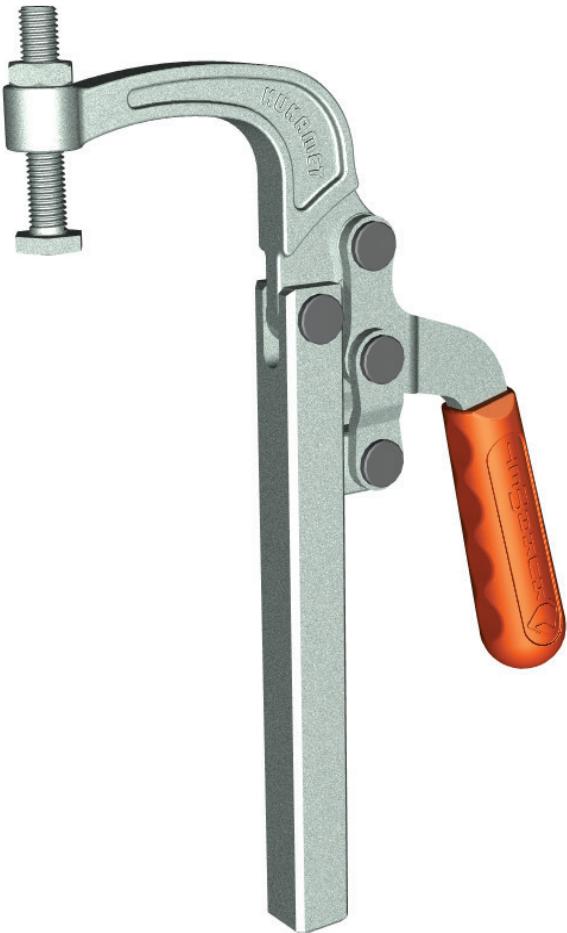
Modell Nr.	A	F	G Min.	G Max.	H	J	K	L Min.	L Max.
831-2	184	62	0	90	115	30	TR20	235	325
831-3	257	73,6	0	140	139	30	TR20	300	440



841

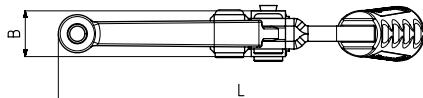
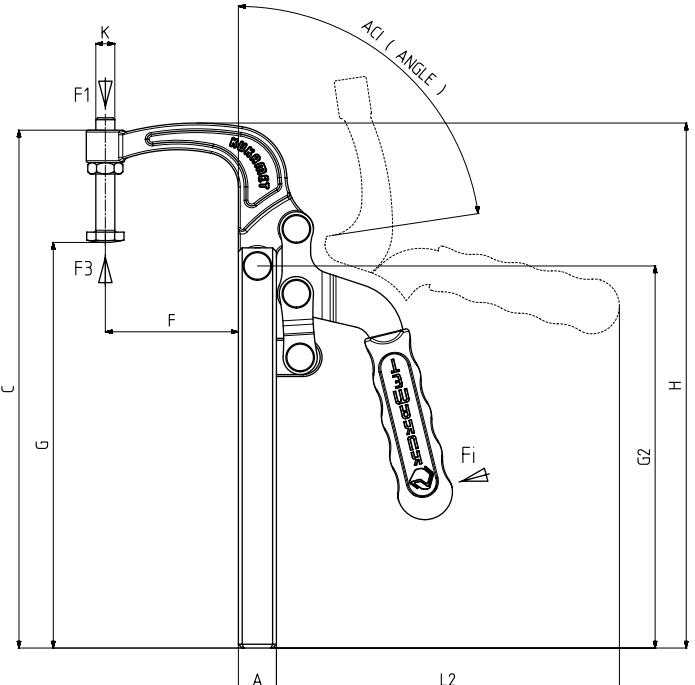


new



Modell Nr.	F1 (N)	F3 (N)	Fi Andruckkraft (YIELD) (F1:F1)	Winkel (ANGLE)	Gewicht (WEIGHT) (gr)
					841-2
					3500
					4000
					9:1
					82°
					1320

F1 : Druckkraft (EXERTING FORCE), F3 : Haltekraft (HOLDING CAPACITY),
Fi : Anwendungskraft (APPLIED FORCE)



Ayak Tipi: Lamalı Taban

Body Mounting Base: With mounting bar

Ürün Özellikleri;

Ağır iş uygulamalarında kullanıma uygun mukavemetli ürünlerdir.

Clamp çenesi sıcak dövme çelikten yapılmıştır.

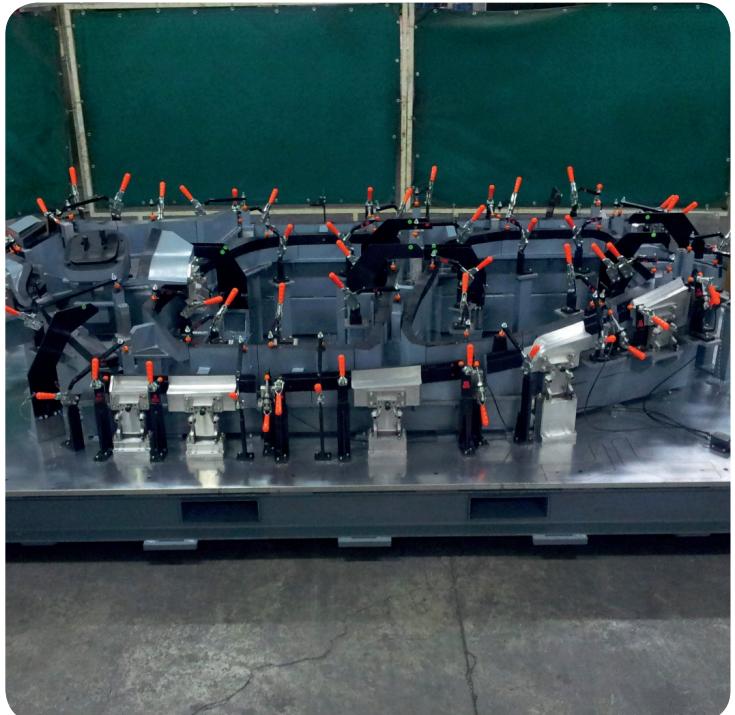
Diğer parçaları çelik malzemeden üretilmiş ve korozyon direnci için galvaniz kaplama yapılmıştır.

Product Features;

The products are strong and suited for heavy duty applications.

The clamping jaw is made of hot forged steel.

The remaining parts are made of galvanized steel for corrosion resistance.

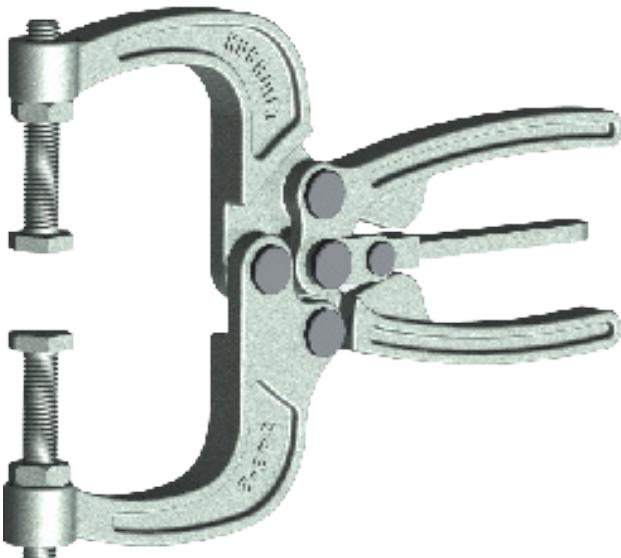


Modell Nr.	A	B	C	D	E	F	G min.	G max.	G2	H	J	K	L	L2	M	N
841-2	20 x 20	24	272			70	205	248	200	275		M10	193	180		

842

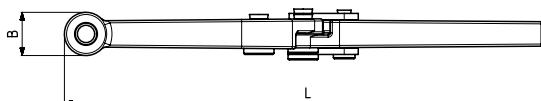
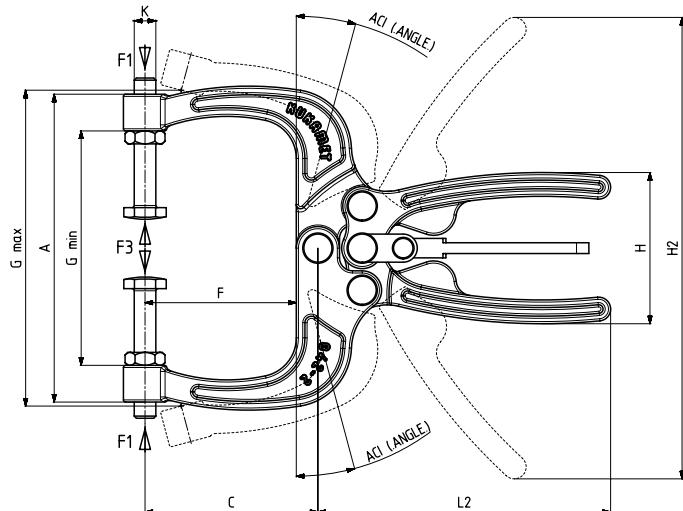


new



Modell Nr.	F1 (N)	F3 (N)	Fi Andruckkraft (YIELD) (F1:Fi)	Winkel (ANGLE)	Gewicht (WEIGHT) (gr)
842-2	3500	4000	9:1	15°	900

F1 : Druckkraft (EXERTING FORCE), F3 : Haltekraft (HOLDING CAPACITY),
Fi : Anwendungskraft (APPLIED FORCE)


Ağak Tipi: Yataş Tabanlı

Body Mounting Base: Horizontal

Ürün Özellikleri;

Ağır iş uygulamalarında kullanıma uygun mukavemetli ürünlerdir.

Clamp çenesi ve kolu sıcak dövme çelikten yapılmıştır.

Diğer parçaları çelik malzemeden üretilmiş ve korozyon direnci için galvaniz kaplama yapılmıştır.

Product Features;

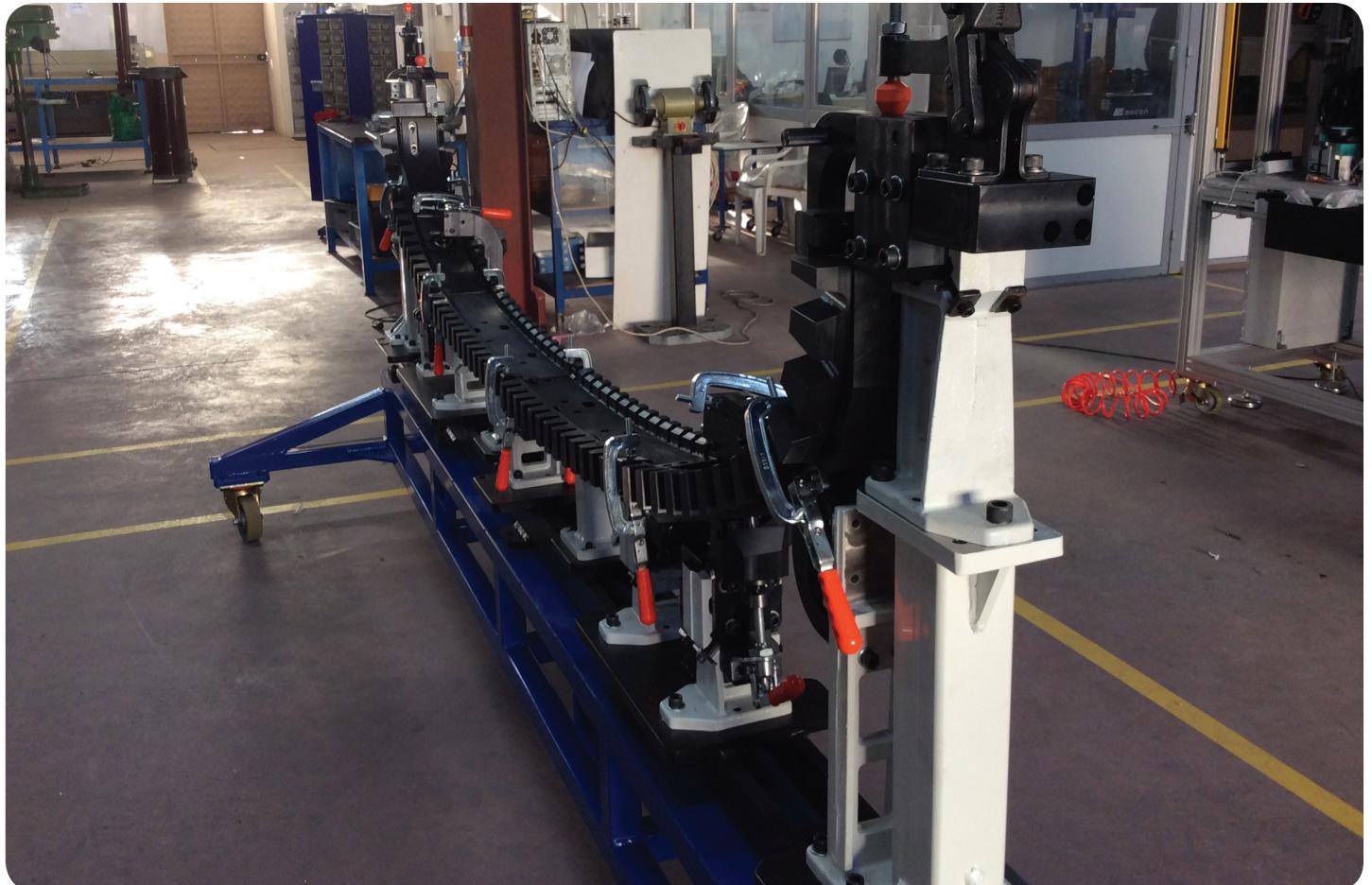
The products are strong and suited for heavy duty applications.

The clamping jaw and handle is made of hot forged steel.

The remaining parts are made of galvanized steel for corrosion resistance.



Modell Nr.	A	B	C	D	E	F	G min.	G max.	H	H2	J	K	L	L2	M	N
842-2	143	20	80			70	108	148	70	215		M10	230	140		



6011

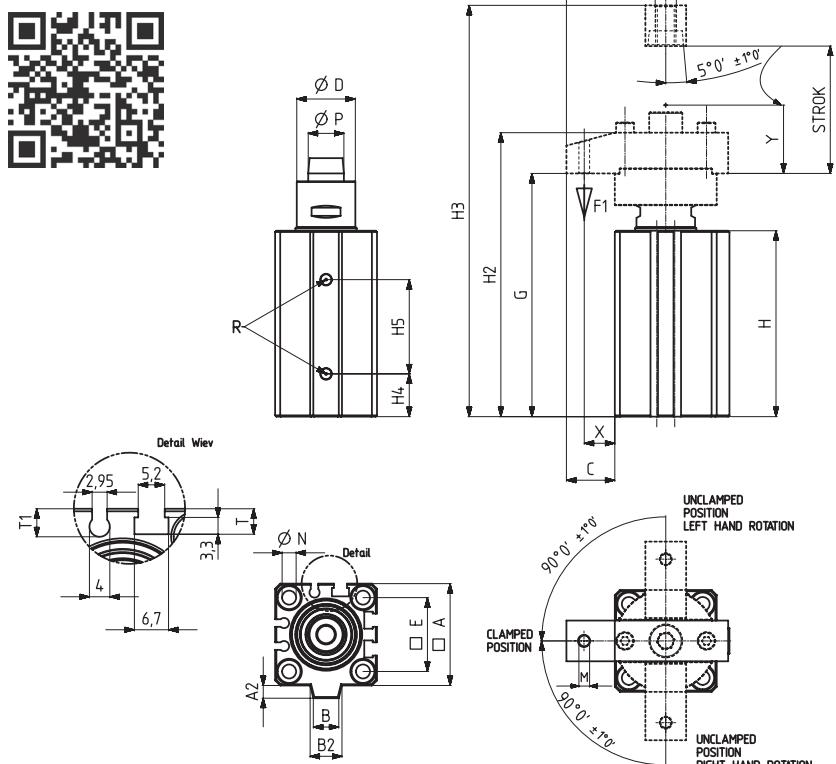
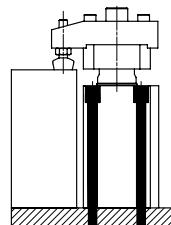

Modell Nr.	F1 (N)	Vn (dm ³)	Hub (STROKE)	Gewicht (WEIGHT) (gr)	BAR
6011 - 25R	200	0,1	28	360	6
6011 - 25L	200	0,1	28	360	6
6011 - 32R	300	0,23	26	600	6
6011 - 32L	300	0,23	26	600	6
6011 - 40R	600	0,4	26	780	6
6011 - 40L	600	0,4	26	780	6
6011 - 50R	900	0,96	38	1430	6
6011 - 50L	900	0,96	38	1430	6

F1 : Druckkraft (EXERTING FORCE)

Vn , der Luftverbrauch für eine doppelte Bewegung bei einem Druck von 6 bar (Vn,AIR CONSUMPTION PER DOUBLE STROKE IN dm³ AT 6 BAR)

Achtung: Verwenden Sie ausschließlich gefilterte und geölte Luft.

Note: Operate only with filtered and lubricated air.


Montagemöglichkeiten
Mounting options

- Montage von oben durch die Bohrungen auf dem Gehäuse mit den Innensechskantschrauben (DIN 912)
- Mounting from above with socket bolt (DIN 912) through to holes on the body.

PNEUMATISCHER SCHWENKSPANNER - QUADRATISCHES GEHÄUSE

Der Zylinder ist doppelt wirkend und magnetisch

- Der Grundkörper wurde aus hochfestem Aluminium hergestellt und gegen Korrosion eloxiert.

- Die Kolbenstange wurde gegen Verschleiß und Korosion hart-verchromt und poliert.

- Der Kolbenstange wird durch den Schutzadapter vor Schweißspritzern und Außenwirkungen geschützt.

- Die Endlagenabfrage der Kolbenposition kann durch Sensoren vom Typ "T" und "C", die an den Nuten des Grundkörpers angebracht werden, erfolgen.

Zubehör: (nicht im Lieferumfang erhalten)

1-) Kolben mit Schutzadapter (6010-5)

2-) Spannarm für den Schutzadapter (6010-6)

3-) Druckteil (911, 912, 913, 914, 915, 916)

PNEUMATIC SWING CLAMP - SQUARE BODY

-Cylinder is double acting and magnetic.

-The body is made of strength aluminum. Anodised for Corrosion resistance.

-The piston rod is hard chrome plated and shapely polished for to high wear resistance and corrosion resistance.

-Piston rod, protected against welding spatter and external factors through the protection adapter.

-There are slots on the body, according to T type and C type sensors, for monitoring the position of piston.

Accessories : (not included in the price)

1-) Piston rod protection adapter. (6010-5)

2-) Squeezing arm for protection adapter (6010-6)

3-) Squeeze part (911,912,913,914,915,916)

MODEL NO	A	A2	B	B2	C	C2	D	E	G	H	H2	H3	H4	H5	K	M	N	P	R	T	T1	X	Y	Kolben Ø
6011 - 25R	40	4	10,5	12,5	19	39	24	29	100	76	116	154	16	47	M8	M6	5,5	14	M5	5	5,5	12	12	25
6011 - 25L	40	4	10,5	12,5	19	39	24	29	100	76	116	154	16	47	M8	M6	5,5	14	M5	5	5,5	12	12	25
6011 - 32R	45	4,5	14,5	16,5	32,5	55	29	34	115	82,5	138	175	21	48	M10	M8	5,5	16	G1/8	4,5	5,5	22,5	10	32
6011 - 32L	45	4,5	14,5	16,5	32,5	55	29	34	115	82,5	138	175	21	48	M10	M8	5,5	16	G1/8	4,5	5,5	22,5	10	32
6011 - 40R	55	5	19,5	24	27,5	55	29	40	115	82,5	137	175	21	48	M10	M8	5,5	16	G1/8	6,5	7	17,5	10	40
6011 - 40L	55	5	19,5	24	27,5	55	29	40	115	82,5	137	175	21	48	M10	M8	5,5	16	G1/8	6,5	7	17,5	10	40
6011 - 50R	64	6	20	23	43	75	37	50	149	105	174	228	20	66	M12	M10	6,5	20	G1/8	6	6,5	33	16	50
6011 - 50L	64	6	20	23	43	75	37	50	149	105	174	228	20	66	M12	M10	6,5	20	G1/8	6	6,5	33	16	50

Hinweis: Schwenkspanner können nur bei dem "Y" Hub spannen.

Note: Swing clamps can squeeze only during the "Y" stroke.

6012


PNEUMATISCHER SCHWENKSPANNER - BLOCK GEHÄUSE

Der Zylinder ist doppelt wirkend und magnetisch

- Der Grundkörper wurde aus hochfestem Aluminium hergestellt und gegen Korrosion eloxiert.
- Die Kolbenstange wurde gegen Verschleiß und Korrosion hart-verchromt und poliert.
- Der Kolbenstange wird durch den Schutzadapter vor Schweißspritzern und Außenwirkungen geschützt.
- Die Endlagenabfrage der Kolbenposition kann durch Sensoren vom Typ "T" und "C", die an den Nuten des Grundkörpers angebracht werden, erfolgen.
- Zubehör: (nicht im Lieferumfang erhalten)

 - 1-) Spannarm (6010-1)
 - 2-) Andrückteil (911, 912, 913, 914, 915, 916)
 - 3-) Baski ucu (911, 912, 913, 914, 915, 916)

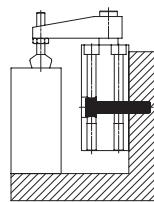
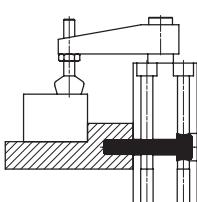
PNEUMATIC SWING CLAMP - BLOCK BODY

-Cylinder is double acting and magnetic.

- The body is made of strength aluminum. Anodised for Corrosion resistance.
- The piston rod is hard chrome plated and shapely polished for to high wear resistance and corrosion resistance.
- There are slots on the body, according to T type sensors, for monitoring the position of piston.

Accessories : (not included in the price)

- 1-) Squeezing arm (6010-1)
- 2-) Squeezing arm (6010-7)
- 3-) Squeeze part (911,912,913,914,915,916)

Montagemöglichkeiten
Mounting options

1- Montage durch die Bohrungen an der Vorder- und Hinterseite des Gehäuses.

1- Mounting through to holes on the front and rear surface of body.

2- Montage von oben durch die Bohrungen auf dem Gehäuse mit den Innensechskantschrauben (DIN 912)
2-Mounting from above with socket bolt (DIN 912) through to holes on the top surface of body

3- Montage durch die Bohrungen an der Unterseite des Gehäuses
3-Mounting through to tapped holes on the lower surface of body.

Modell Nr.	A	B	C	C2	E	F	F2	G	H	H2	H3	H4	H5	H6	H7	K	M	N	N2	N3	P	R	T	X	Y	Kolben Ø
6012 - 25R	35	55	41	56	20	40	17	85	80	101	129	32	16	47	20	M8	M6	6,5	8,5	M8	14	M5	5	35	12	25
6012 - 25L	35	55	41	56	20	40	17	85	80	101	129	32	16	47	20	M8	M6	6,5	8,5	M8	14	M5	5	35	12	25
6012 - 32R	45	60	50	70	30	45	18	100	92	120	150	43	21	52	20	M8	M8	6,5	8,5	M8	16	G1/8	6,5	40	10	32
6012 - 32L	45	60	50	70	30	45	18	100	92	120	150	43	21	52	20	M8	M8	6,5	8,5	M8	16	G1/8	6,5	40	10	32
6012 - 40R	55	70	55	80	37	52	22	100	92	120	150	40	21	52	25	M8	M8	8,5	8,5	M10	16	G1/8	7,5	45	10	40
6012 - 40L	55	70	55	80	37	52	22	100	92	120	150	40	21	52	25	M8	M8	8,5	8,5	M10	16	G1/8	7,5	45	10	40
6012 - 50R	65	85	58,5	90	46	66	25	110	104,5	135	171	45	20	64	30	M10	M12	8,5	10,5	M10	20	G1/8	6	48,5	15	50
6012 - 50L	65	85	58,5	90	46	66	25	110	104,5	135	171	45	20	64	30	M10	M12	8,5	10,5	M10	20	G1/8	6	48,5	15	50

Hinweis: Schwenkspanner können nur bei dem "Y" Hub spannen.

Note: Swing clamps can squeezing only during the "Y" stroke.

6013


PNEUMATISCHER SCHWENKSPANNER - RUNDES GEHÄUSE

Der Zylinder ist doppelt wirkend und magnetisch

- Der Grundkörper wurde aus hochfestem Aluminium hergestellt und gegen Korrosion eloxiert.

- Die Kolbenstange wurde gegen Verschleiß und Korrosion hart-verchromt und poliert.

- Der Kolbenstange wird durch den Schutzadapter vor Schweißspritzern und Außenwirkungen geschützt.

Zubehör: (nicht im Lieferumfang erhalten)

- 1-) Spannarm (6010-1)
- 2-) Verbindungsmutter (6010-3)
- 3-) Verbindungsflansch (6010-4)
- 4-) Andrückteil (911, 912, 913, 914, 915, 916)
- 5-) Baskı ucu (911, 912, 913, 914, 915, 916)

PNEUMATIC SWING CLAMP – ROUND BODY

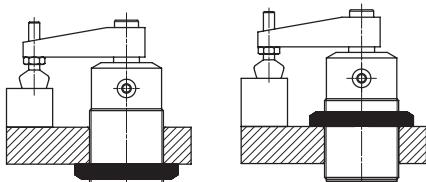
-Cylinder is double actin.

-The body is made of strength aluminum. Anodised for Corrosion resistance.

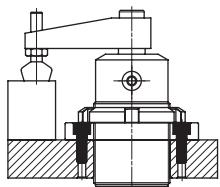
-The piston rod is hard chrome plated and shapely polished for to high wear resistance and corrosion resistance.

Accessories : (not included in the price)

- 1-) Squeezing arm (6010-1)
- 2-) Squeezing arm (6010-7)
- 3-) Connection nut (6010-3)
- 4-) Connection flange (6010-4)
- 5-) Squeeze part (911,912,913,914,915,916)

Montagemöglichkeiten
Mounting options

1- Montage mit Verbindungs mutter (6010-3)

1- Mounting with connection nut


2- Montage mit Verbindungs flansch (6010-4)

2- Mounting with connection flange

Modell Nr.	AA	C	C2	D	G	H	H2	H3	H4	K	M	P	R	X	Y	Kolben Ø
6013 - 25R	36	36	56	M 40 x 1,5	78	74	94	122	50	M8	M6	14	M5	30	12	25
6013 - 25L	36	36	56	M 40 x 1,5	78	74	94	122	50	M8	M6	14	M5	30	12	25
6013 - 32R	46	45	70	M 50 x 1,5	89	84	109	139	58	M8	M8	16	G1/8	35	12	32
6013 - 32L	46	45	70	M 50 x 1,5	89	84	109	139	58	M8	M8	16	G1/8	35	12	32
6013 - 40R	50	52,5	80	M 55 x 1,5	89	84	109	139	58	M8	M8	16	G1/8	42,5	12	40
6013 - 40L	50	52,5	80	M 55 x 1,5	89	84	109	139	58	M8	M8	16	G1/8	42,5	12	40
6013 - 50R	60	57,5	90	M 65 x 1,5	103	97	128	164	70	M10	M12	20	G1/8	47,5	15	50
6013 - 50L	60	57,5	90	M 65 x 1,5	103	97	128	164	70	M10	M12	20	G1/8	47,5	15	50

Hinweis: Schwenkspanner können nur bei dem "Y" Hub spannen.

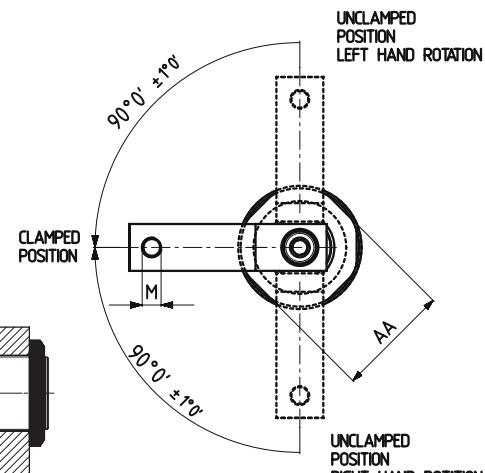
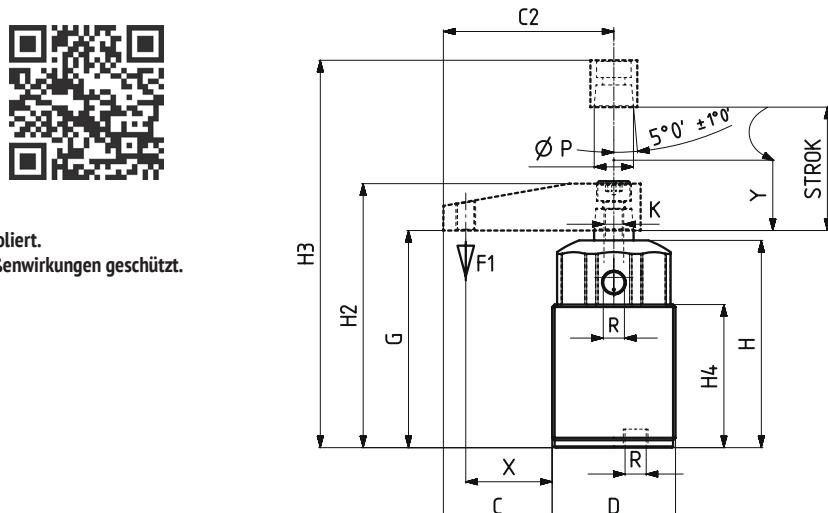
Note: Swing clamps can squeezing only during the "Y" stroke.

Modell Nr.	F1 (N)	Vn (dm ³)	Hub (STROKE)	Gewicht (WEIGHT)(gr)	BAR
6013 - 25R	170	0,14	28	300	6
6013 - 25L	170	0,14	28	300	6
6013 - 32R	270	0,28	30	480	6
6013 - 32L	270	0,28	30	480	6
6013 - 40R	450	0,47	30	560	6
6013 - 40L	450	0,47	30	560	6
6013 - 50R	700	0,74	36	1000	6
6013 - 50L	700	0,74	36	1000	6

F1 : Druckkraft (EXERTING FORCE)

Vn , der Luftverbrauch für eine doppelte Bewegung bei einem Druck von 6 bar (Vn ,AIR CONSUMPTION PER DOUBLE STROKE IN dm³ AT 6 BAR)
Achtung: Verwenden Sie ausschließlich gefilterte und geölte Luft.

Note: Operate only with filtered and lubricated air.



6014


PNEUMATISCHE SCHWENKSPANNER-FLANSCHVERSION
Der Zylinder ist doppelt wirkend und magnetisch

- Der Grundkörper wurde aus hochfestem Aluminium hergestellt und gegen Korrosion eloxiert.
- Die Kolbenstange wurde gegen Verschleiß und Korrosion hart-verchromt und poliert.
- Die mechanischen Teile sind aus Qualitätsstahl gefertigt und brüniert.

Zubehör: (nicht im Lieferumfang erhalten)

- 1-) Spannarm (6010-1)
- 2-) Verbindungsmautter (6010-3)
- 3-) Verbindungsflansch (6010-4)
- 4-) Andrückteil (911, 912, 913, 914, 915, 916)
- 5-) Baskı ucu (911, 912, 913, 914, 915, 916)

PNEUMATIC SWING CLAMP – FLANGE MOUNTING BODY

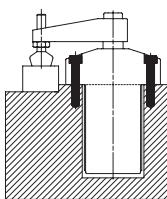
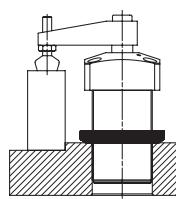
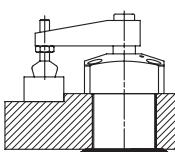
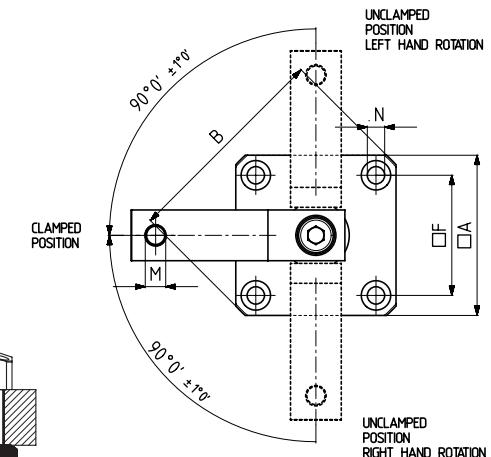
- Cylinder is double acting

- The body is made of strength aluminum. Anodised for Corrosion resistance.

- The piston rod is hard chrome plated and shapely polished for to high wear resistance and corrosion resistance.

Accessories : (not included in the price)

- 1-) Squeezing arm (6010-1)
- 2-) Squeezing arm (6010-7)
- 3-) Connection nut (6010-3)
- 4-) Connection flange (6010-4)
- 5-) Squeeze part (911,912,913,914,915,916)

Montagemöglichkeiten
Mounting options

1- Montage von oben durch die Flansch mit den Innensechskantschrauben (DIN 912)

2- Das Gehäuse in eine Gewindebohrung schrauben und mit der Verbindungsmautter festziehen. (6010-3)

3- Das Gehäuse in eine Bohrung einsetzen und mit Verbindungsmauttern von oben und unten festziehen. (6010-3)


Modell Nr.	F1 (N)	Vn (dm ³)	Hub (STROKE)	Gewicht (WEIGHT) (gr)	BAR
6014 - 25R	170	0,15	28	400	6
6014 - 25L	170	0,15	28	400	6
6014 - 32R	270	0,28	30	710	6
6014 - 32L	270	0,28	30	710	6
6014 - 40R	450	0,47	30	785	6
6014 - 40L	450	0,47	30	785	6
6014 - 50R	700	0,78	36	1160	6
6014 - 50L	700	0,78	36	1160	6

F1 : Druckkraft (EXERTING FORCE)

Vn , der Luftverbrauch für eine doppelte Bewegung bei einem Druck von 6 bar (Vn, AIR CONSUMPTION PER DOUBLE STROKE IN dm³ AT 6 BAR)

Achtung: Verwenden Sie ausschließlich gefilterte und geölte Luft.

Note: Operate only with filtered and lubricated air.

Hinweis: Schwenkspanner können nur bei dem "Y" Hub spannen.

Note: Swing clamps can squeeze only during the "Y" stroke.

6015


Modell Nr.	F1 (N)	Vn (dm³)	Andruckspindel (SQUEEZE SCREW)	Gewicht (WEIGHT) (gr)	BAR
6015 - 25	200	0,13	M6 x 40	600	6
6015 - 32	300	0,25	M8 x 50	950	6
6015 - 40	500	0,46	M8 x 50	1100	6
6015 - 50	700	0,79	M12 x 80	1707	6

F1 : Druckkraft (EXERTING FORCE)

Vn , der Luftverbrauch für eine doppelte Bewegung bei einem Druck von 6 bar (Vn , AIR CONSUMPTION PER DOUBLE STROKE IN dm³ AT 6 BAR)

Achtung: Verwenden Sie ausschließlich gefilterte und geölte Luft.

Note: Operate only with filtered and lubricated air.



PNÖMATİK BAĞLANTI ELEMANI – FLANŞ BAĞLANTILIGI GÖVDE

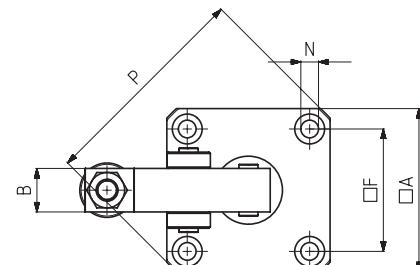
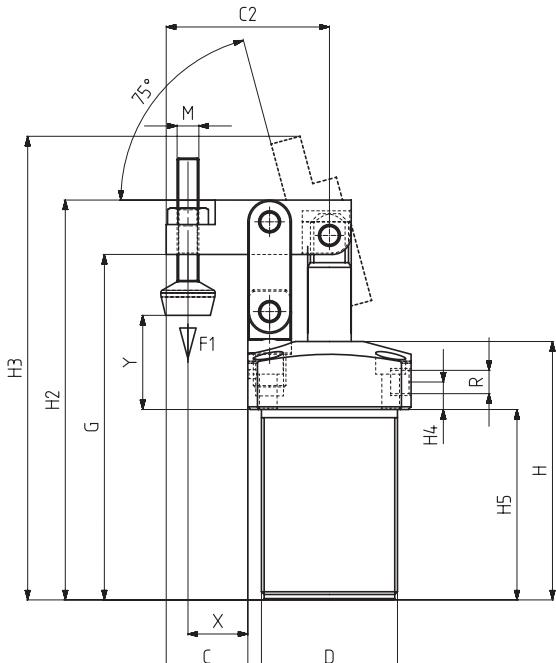
- Silindir çift etkilidir.
- Gövde mukavemetli alüminyumdan üretilmiştir. Korozyon direnci için eloksal kaplama yapılmıştır.
- Piston mili yüksek aşınma ve korozyon direnci için sert krom kaplama yapılmış ve parlatılmıştır.
- Mekanizma parçaları çelik malzemeden üretilmiş ve korozyon direnci için fosfat kaplama yapılmıştır.

Aksesuarlar : (fiyata dahil değildir)

- 1-) Bağlanti somunu (6010-3)
- 2-) Bağlanti flanşı (6010-4)
- 3-) Baskı ucu (911, 912, 913, 914, 915, 916)

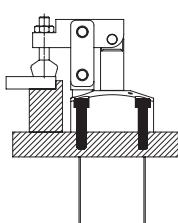
PNEUMATİC TOGGLE CLAMP – FLANGE MOUNTING BODY

- Cylinder is double acting.
 - The body is made of strength aluminum.
 - Anodised for Corrosion resistance.
 - The piston rod is hard chrome plated and shapely polished for to high wear resistance and corrosion resistance.
 - Parts of the mechanism are made of steel and phosphate coated for corrosion resistance.
- Accessories : (not included in the price)
- 1-) Connection nut (6010-3)
 - 2-) Connection flange (6010-4)
 - 3-) Squeeze part (911,912,913,914,915,916)

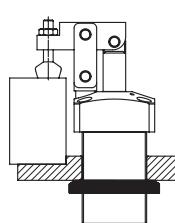


Montagemöglichkeiten

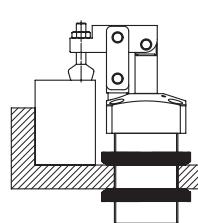
Mounting options



1- Montage von oben durch die Flansch mit den Innensechskantschrauben (DIN 912)
1- Mounting from above with imbus bolt through the flange. (DIN 912)



2- Das Gehäuse in eine Gewindebohrung schrauben und mit der Verbindungsmutter festziehen. (6010-3)
2- By screwing the body into a tapped hole and mounting with connection nut (6010-3)



3- Das Gehäuse in eine Bohrung einsetzen und mit Verbindungsmutter von oben und unten festziehen. (6010-3)
3- By inserting the body into a plain hole and Mounting with connection nuts, from above and from below (6010-3)

Modell Nr.	A	B	C	C2	D	F	G	H	H2	H3	H4	H5	M	ØN	P	R	X	Y Min	Y Max	Kolben Ø
6015 - 25	50	16	25	50	M 40 x 1,5	37	114	87	134	148	12	62	M6	5,5	66	M5	16	20	39	25
6015 - 32	60	16	30	60	M 50 x 1,5	45	132	100	152	172	10	73	M8	6,5	80	G1/8	22	19	46	32
6015 - 40	65	16	35,5	68	M 55 x 1,5	50	132	100	156	181	10	73	M8	6,5	85	G1/8	23,5	22	47	40
6015 - 50	75	20	41,5	79	M 65 x 1,5	58	146	106	176	202	11	79	M12	8,5	100	G1/8	26	2	45	50

6016



new

DÖNER TİP PNÖMATİK BAĞLANTI ELEMANI - FLANŞ BAĞLANTILI GÖVDE

- Silindir çift etkilidir.
- Gövde mukavemetli alüminyumdan üretilmiştir. Korozyon direnci için eloksal kaplama yapılmıştır.
- Piston mili yüksek aşınma ve korozyon direnci için sert krom kaplama yapılmış ve parlatılmıştır.

Aksesuarlar : (fiyatta dahil değildir)

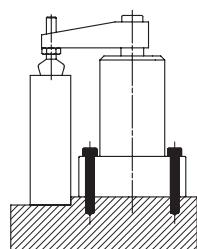
- 1-) Sıkma kolu (6010-1)
- 2-) Sıkma kolu (6010-7)
- 3-) Bağlantı somunu (6010-3)
- 4-) Bağlantı flanşı (6010-4)
- 5-) Baskı ucu (911, 912, 913, 914, 915, 916)

PNEUMATİK SWİNG CLAMP - FLANGE MOUNTING BODY

- Cylinder is double actin.
- The body is made of strength aluminum. Anodised for Corrosion resistance.
- The piston rod is hard chrome plated and shapely polished for to high wear resistance and corrosion resistance.

Accessories : (not included in the price)

- 1-) Squeezing arm (6010-1)
- 2-) Squeezing arm (6010-7)
- 3-) Connection nut (6010-3)
- 4-) Connection flange (6010-4)
- 5-) Squeeze part (911,912,913,914,915,916)

Montagemöglichkeiten
Mounting options


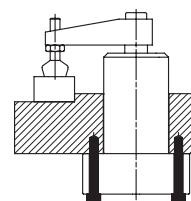
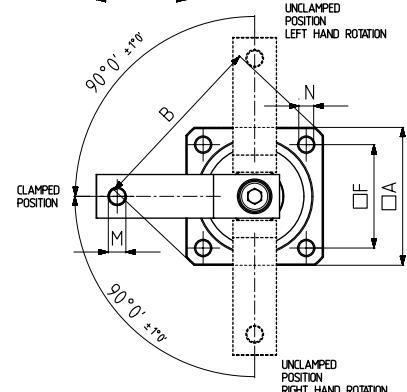
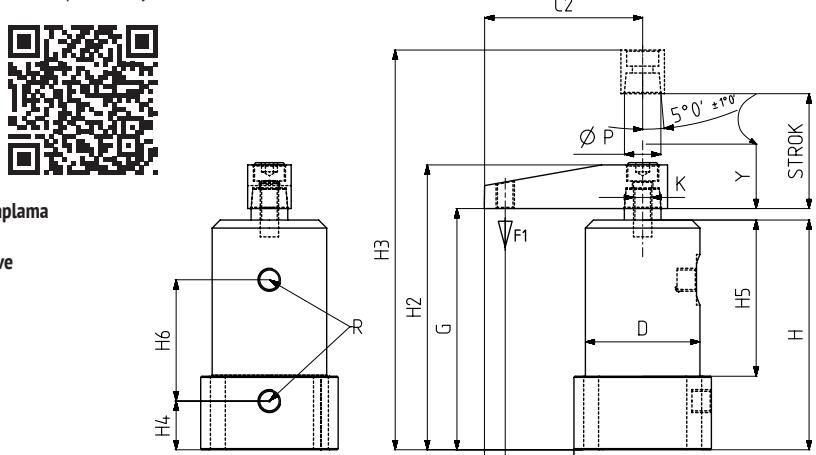
- 1- Montage von oben durch die Flansch mit den Innensechskantschrauben (DIN 912)**
1- Mounting from above with imbus bolt through the flange. (DIN 912)

Modell Nr.	F1 (N)	Vn (dm ³)	Andruckspindel (SQUEEZE SCREW)	Gewicht (WEIGHT) (gr)	BAR
6016 - 25R	170	0,15	28	430	6
6016 - 25L	170	0,15	28	430	6
6016 - 32R	270	0,28	30	750	6
6016 - 32L	270	0,28	30	750	6
6016 - 40R	450	0,47	30	840	6
6016 - 40L	450	0,47	30	840	6
6016 - 50R	700	0,78	36	1270	6
6016 - 50L	700	0,78	36	1270	6

F1 : Druckkraft (EXERTING FORCE)

Vn , der Luftverbrauch für eine doppelte Bewegung bei einem Druck von 6 bar (Vn , AIR CONSUMPTION PER DOUBLE STROKE IN dm³ AT 6 BAR)**Achtung: Verwenden Sie ausschließlich gefilterte und geölte Luft.**

Note: Operate only with filtered and lubricated air.



- 2-Flanş sayesinde imbus civata (DIN 912) ile aşağıdan montaj.**
2- Mounting from below with imbus bolt through the flange. (DIN 912)

MODEL NO	A	B	C	C2	ØD	F	G	H	H2	H3	H4	H5	H6	K	M	ØN	P	R	X	Y	Kolben Ø
6016 - 25R	50	66	31	56	40	37	92	87	108	136	16	62	45	M8	M6	5,5	14	M5	25	12	25
6016 - 25L	50	66	31	56	40	37	92	87	108	136	16	62	45	M8	M6	5,5	14	M5	25	12	25
6016 - 32R	60	80	40	70	50	45	105	100	125	155	21	68	53	M8	M8	6,5	16	G1/8	30	10	32
6016 - 32L	60	80	40	70	50	45	105	100	125	155	21	68	53	M8	M8	6,5	16	G1/8	30	10	32
6016 - 40R	65	85	47,5	80	55	50	105	100	125	155	21	68	53	M8	M8	6,5	16	G1/8	37,5	10	40
6016 - 40L	65	85	47,5	80	55	50	105	100	125	155	21	68	53	M8	M8	6,5	16	G1/8	37,5	10	40
6016 - 50R	75	100	52,5	90	65	58	111	106	136	172	20	74	63	M10	M12	8,5	20	G1/8	42,5	15	50
6016 - 50L	75	100	52,5	90	65	58	111	106	136	172	20	74	63	M10	M12	8,5	20	G1/8	42,5	15	50

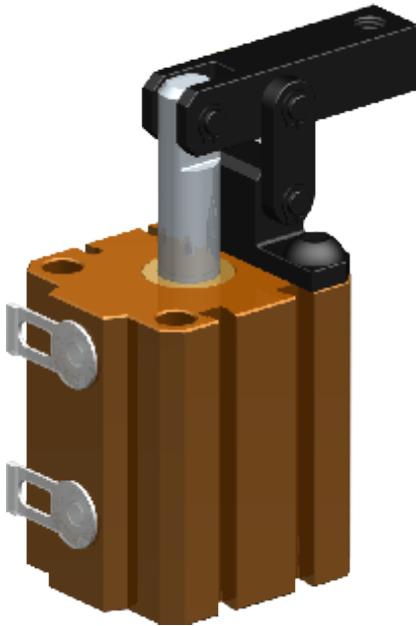
Not: Döner Tip Bağlantı Elemanları, sadece "Y" stroğu sırasında sıkma yapabilir.

Note: Swing clamps can squeeze only during the "Y" stroke.

6017



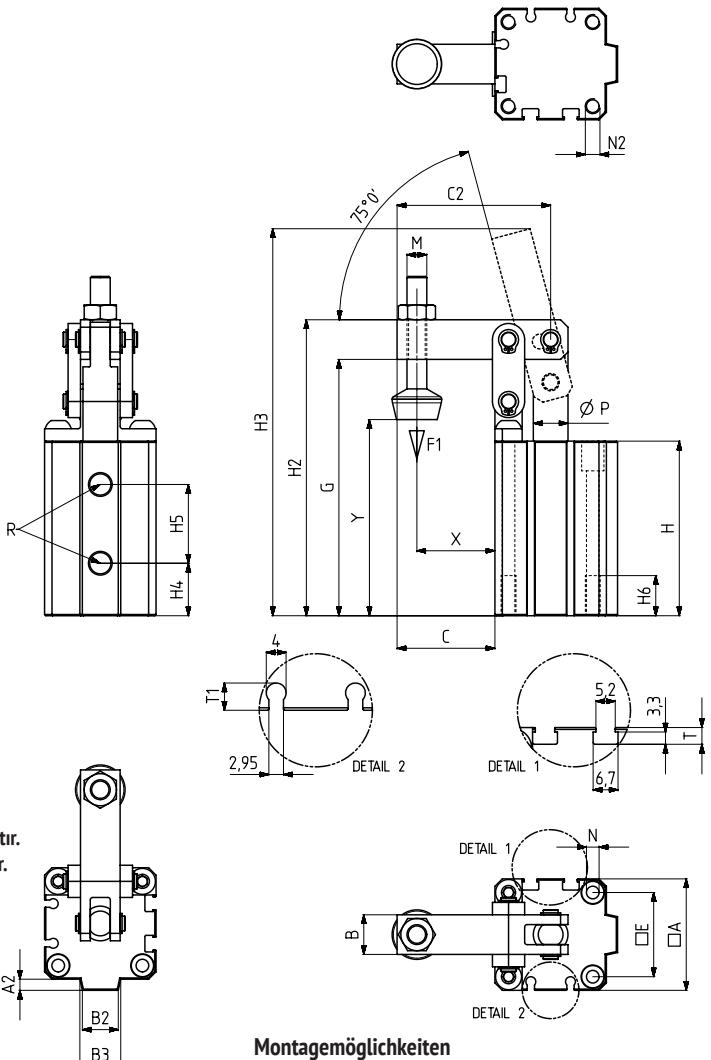
new



Modell Nr.	F1 (N)	Vn (dm³)	Andruckspindel (SQUEEZE SCREW)	Gewicht (WEIGHT) (gr)	BAR
6017 - 25	200	0,13	M6 x 40	360	6
6017 - 32	300	0,25	M8 x 50	530	6
6017 - 40	500	0,46	M8 x 50	720	6
6017 - 50	700	0,79	M10 x 70	1110	6

F1 : Druckkraft (EXERTING FORCE)

Vn , der Luftverbrauch für eine doppelte Bewegung bei einem Druck von 6 bar (Vn , AIR CONSUMPTION PER DOUBLE STROKE IN dm³ AT 6 BAR)



PNÖMATİK BAĞLANTI ELEMANI - KARE GÖVDE

- Silinder çift etkili ve manyetiktir.
- Gövde mukavemetli alüminyumdan üretilmiştir. Korozyon direnci için eloksal kaplama yapılmıştır.
- Piston mili yüksek aşınma ve korozyon direnci için sert krom kaplama yapılmış ve parlatılmıştır.
- Mekanizma parçaları çelik malzemeden üretilmiş ve korozyon direnci için fosfat kaplama yapılmıştır.
- Piston konumunu izlemek için, gövde üzerinde "T" tip ve "C" tip sensörlerle uygun kanallar mevcuttur.

Aksesuarlar : (fiyatta dahil değildir)

1-) Basıka ucu (911, 912, 913, 914, 915, 916)

PNEUMATIC TOGGLE CLAMP - SQUARE BODY

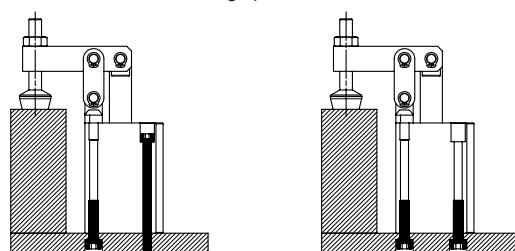
- Cylinder is double acting and magnetic.
- The body is made of strength aluminum. Anodised for Corrosion resistance.
- The piston rod is hard chrome plated and shapely polished for to high wear resistance and corrosion resistance.
- Parts of the mechanism are made of steel and phosphate coated for corrosion resistance.
- There are slots on the body, according to T type and C type sensors, for monitoring the position of piston.

Accessories : (not included in the price)

1-) Squeeze part (911,912,913,914,915,916)

Montagemöglichkeiten

Mounting options



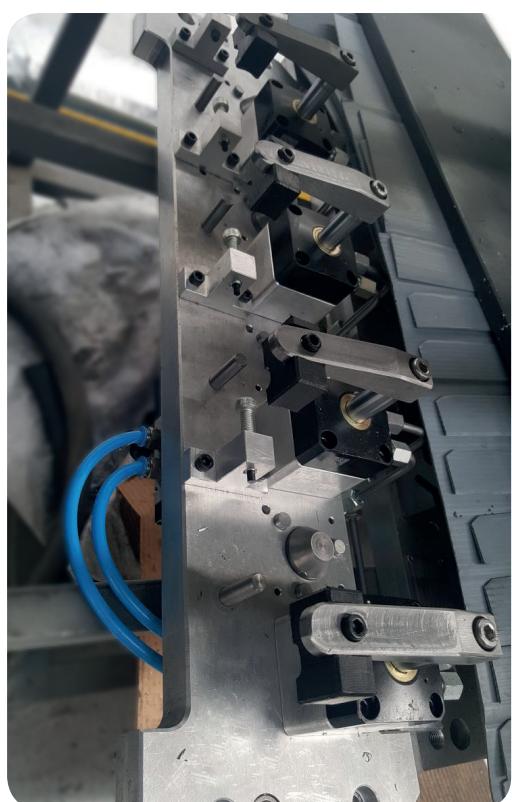
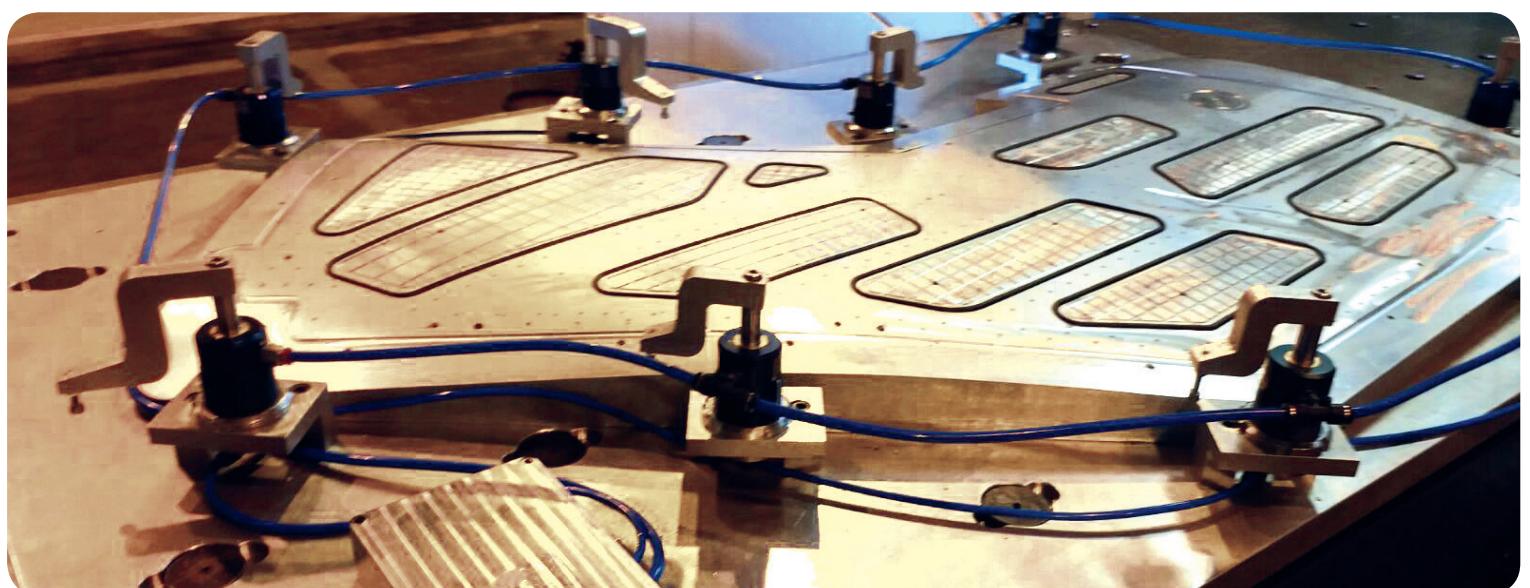
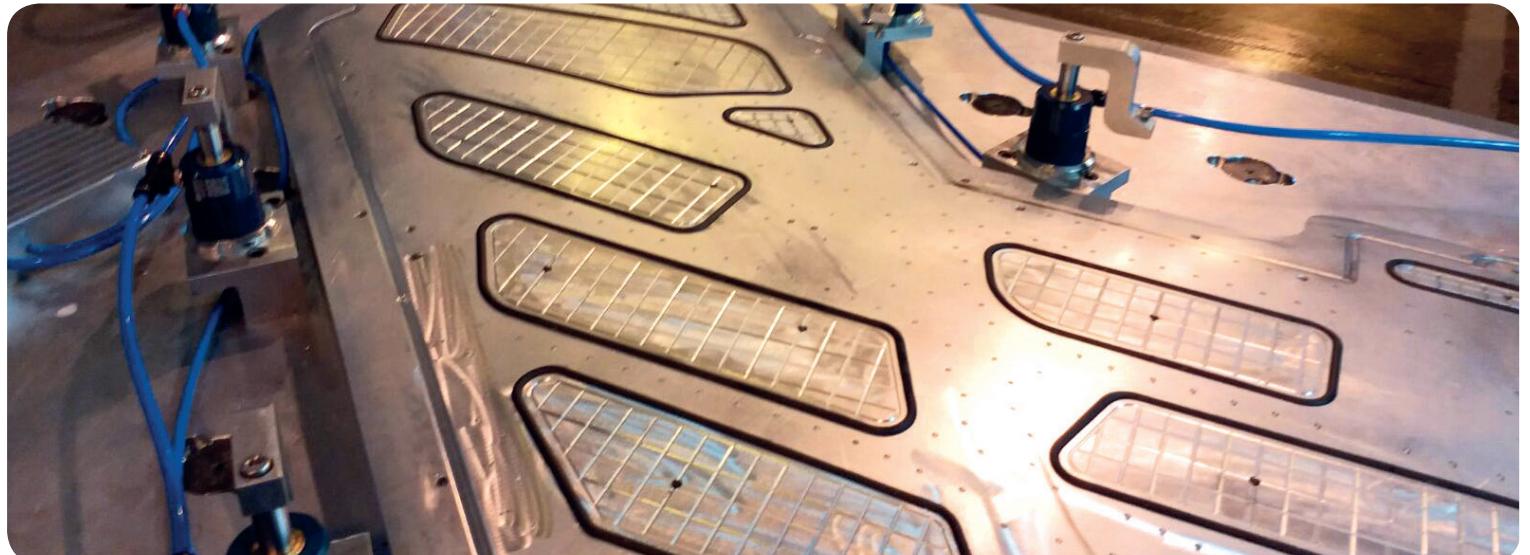
1- Gövde üzerindeki deliklerden imbus civata (DIN 912) ile yukarıdan montaj.

1- Mounting from above with socket bolt (DIN 912) through to holes on the body.

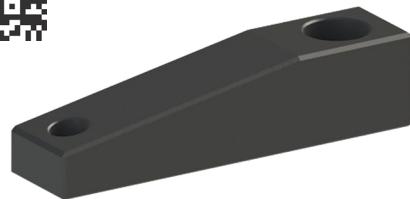
2- Gövde alt yüzeyindeki, klavuz çekilmiş delikler kullanılarak montaj.

2-Mounting through to tapped holes on the lower surface of body.

Modell Nr.	A	A2	B	B2	B3	C	C2	D	E	G	H	H2	H3	H4	H5	H6	M	N	N2	P	R	T	T1	X	Y Min	Y Max	Kolben Ø
6017 - 25	40	4	14	10,5	12,5	34	54		29	80,5	58	94,5	124,5	15,6	30,9	15	M6	Ø5,1	M6	12	M5	5	5,5	27	54	70	25
6017 - 32	45	4,5	16	14,5	16,5	37,5	60		34	96	66,5	112	145	21,2	33,2	17	M8	Ø5,1	M6	14	G1/8	4,5	5,5	29,5	61	83	32
6017 - 40	55	5	16	19,5	24	32,5	60		40	104	72	119	148	21,2	38,8	17	M8	Ø5,5	M8	14	G1/8	6,5	7	24,5	69	91	40
6017 - 50	64	6	20	20	23	38	70		50	115	79	135	165	20,2	46,6	17	M10	Ø6,5	M8	20	G1/8	6	6,5	28	63	98	50

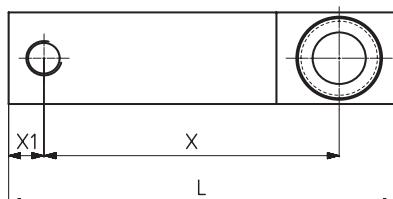
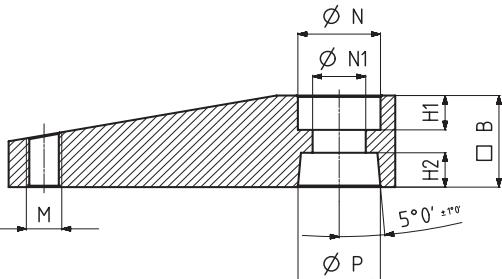
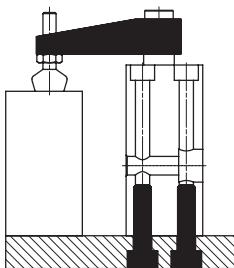


6010-1



Spannarm Squeezing Arm

Montagemöglichkeiten Mounting options


NOT:

- Çelik malzemeden üretilmiş ve korozyon direnci için fosfat kaplama yapılmıştır.

Aksesuarlar : (fiyata dahil değildir)
1-) Baskı ucu (911, 912, 913, 914, 915, 916)

Sıkma kolunun montajı :

- 1-) Sıkma kolunu yaylı rondela ve civata ile piston mili üzerine tutturun.
-
- 2-) Sıkma kolunu çevirerek pozisyonunu ayarlayın.
-
- 3-) Anahtar ile sıkma kolunu tutup, civatayı sabitleyin.

Sıkma kolunun sökülmesi :

- 1-) Anahtar ile sıkma kolunu tutarak civatayı çözün.
-
- 2-) Aşağıdaki resimde görüldüğü şekilde, plastik çekici ile alttan yukarı doğru hafifçe vurarak sıkma kolunu piston milinden ayıran.

Dikkat: Aşağıdaki resimde olduğu gibi, kesinlikle yandan darbe uygulanmamalıdır.

NOTE:

- Made of steel and phosphate coated for corrosion resistance.

Accessories : (not included in the price)
1-) Squeeze part(911,912,913,914,915,916)

Mounting of squeezing arm:

- 1-) Set up squeezing arm with spring washer and bolt on the piston rod.
-
- 2-) Turn squeezing arm into position.
-
- 3-) Hold clamping arm fixed with wrench and tighten bolt.

Squeezing arm removal:

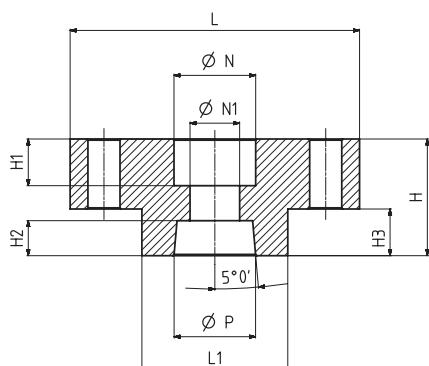
- 1-) Hold clamping arm fixed with wrench and loosen bolt.
-
- 2-) As in the following picture, With light blows from below (plastic hammer), separate squeezing arm from the piston rod.

Caution!: As in the following picture, Definitely, from side blow should not be applied.

Code	Modell Nr.	B	H1	H2	L	M	ØN	ØN1	ØP	X	X1
6010-1-25	6012-6013-6014-6016-25	16	6	6,5	66	M6	14,7	8,5	14	50	6
6010-1-32	6012-6013-6014-6016-32	20	7	9	80	M8	14,7	8,5	16	60	10
6010-1-40	6012-6013-6014-6016-40	20	7	9	90	M8	14,7	8,5	16	70	10
6010-1-50	6012-6013-6014-6016-50	25	9	10	105	M12	18,5	10,5	20	80	10



6010-2



Spannadapter Squeezing Arm Adapter

NOT:

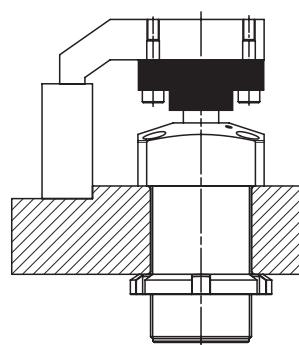
- Çelik malzemeden üretilmiş ve korozyon direnci için fosfat kaplama yapılmıştır.
- Özel yapıdaki sıkma kollarının montajı için kullanılır.

NOTE:

- Made of steel and phosphate coated for corrosion resistance.
-
- Used for mounting of special construction squeezing arm.

Code	Modell Nr.	B	H	H1	H2	H3	L	L1	M	ØN	ØN1	ØP	X
6010-2-25	6012-6013-6014-6016-25	16	20	8	6,5	8	50	25	5,5	14,5	8,5	14	38
6010-2-32-40	6012-6013-6014-6016-32-40	20	25	11	9	10	60	30	7	14,5	8,5	16	45
6010-2-50	6012-6013-6014-6016-50	25	30	14	10	12	65	30	9	18,5	10,5	20	48

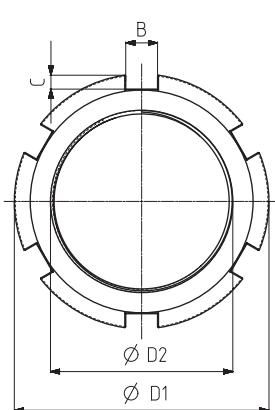
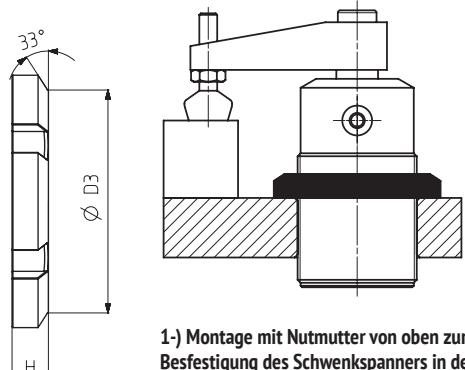
Montagemöglichkeiten Mounting options



1-) Montage: als Verbindungselement zwischen einem Spannarm und einer Kolbenstange.

1-) Mounting as a connection element between an individual squeezing arm and the piston rod.

6010-3

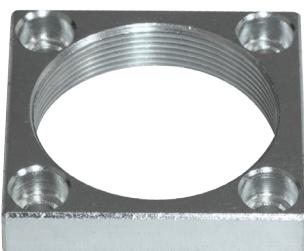
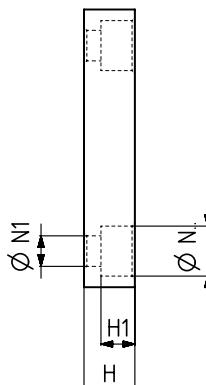
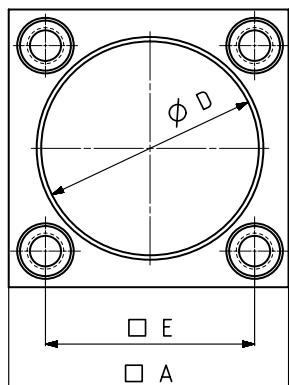
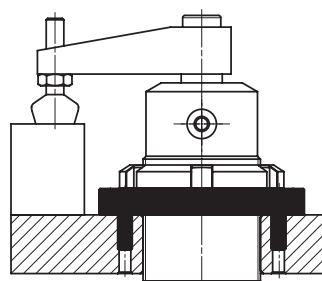

Nutmutter (DIN 70852)
Connection Nut (DIN 70852)

Montagemöglichkeiten
Mounting options


- 1-) Montage mit Nutmutter von oben zur Befestigung des Schwenkspanners in der Vorrichtung.
2-) Schraubwerkzeug DIN 1810 A

- 1-) Mounting with connection nut from above locking swing clamp on fixture.
2-) The key, will be used for squeeze DIN 1810 A

Code	Modell Nr.	B	C	ØD1	ØD2	ØD3	H
6010-3-25	6013-6014-6015-25	7	3,3	56	M 40 x 1,5	49	8
6010-3-32	6013-6014-6015-32	8	3,8	68	M 50 x 1,5	60	8
6010-3-40	6013-6014-6015-40	8	3,8	75	M 55 x 1,5	67	8
6010-3-50	6013-6014-6015-50	11	4,3	85	M 65 x 1,5	76	9

6010-4

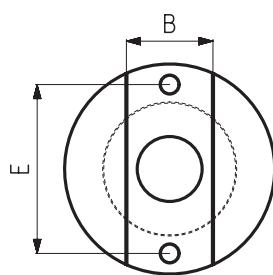

Gewindeflansch
Connection Flange

Montagemöglichkeiten
Mounting options


- 1) Schwenkspannerbefestigung an Flansch.
2) Montage mit Nutmutter zur Befestigung des Schwenkspanners in der Vorrichtung
3) Befestigung durch Verbindungslöcher auf der Flansch.

- 1-) Mounting with swing clamp screwed into flange.
2-) Mounting with connection nut for locking swing clamp on fixture.
3-) Mounting with connection holes on the flange.

Code	Modell Nr.	A	E	ØD	H	H1	ØN	ØN1
6010-4-25	6013-6014-6015-25	50	37	M 40 x 1,5	10	6	9	5,5
6010-4-32	6013-6014-6015-32	60	45	M 50 x 1,5	12	7	11	6,5
6010-4-40	6013-6014-6015-40	70	50	M 55 x 1,5	12	7	11	6,5
6010-4-50	6013-6014-6015-50	80	58	M 65 x 1,5	15	9	13	8,5

6010-5

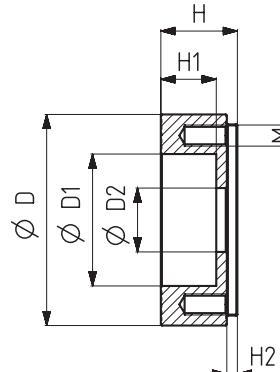
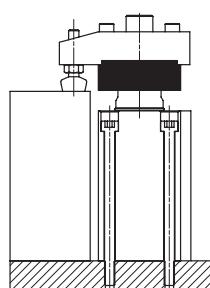

Schutzadapter (für Kolbenstange)
Protection Adapter (For Piston Rod)

Hinweis:

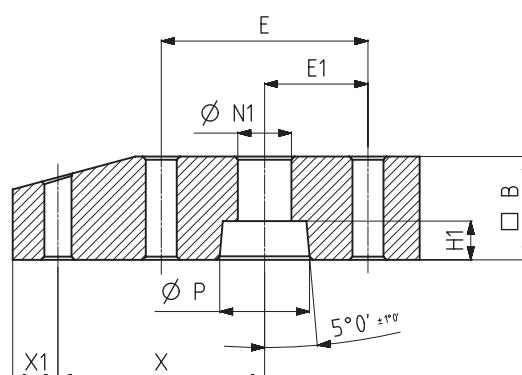
- Aus Stahl gefertigt, gegen Korosion brüniert
- zum Schutz der Kolbenstange vor Schweißspritzern und äußeren Schäden.

NOTE:

- Made of strength aluminum. Anodised for Corrosion resistance.
- Protects the piston rod against welding spatter and external factors


Montagemöglichkeiten
Mounting options

1) Nur für Produkte der Serie 6011 verwendebar.
1-) Can be used for only 6011 series products.

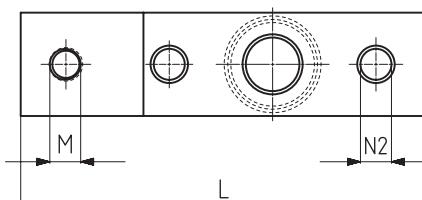
6010-6

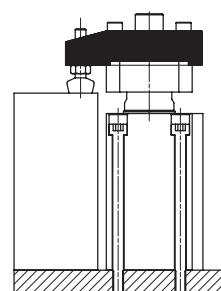

NOT:

- Çelik malzemeden üretilmiştir ve korozyon direnci için fosfat kaplama yapılmıştır.

NOTE:

- Made of steel and phosphate coated for corrosion resistance.


Spannarm (für Schutzadapter)
Squeezing Arm (For Product Adapter)

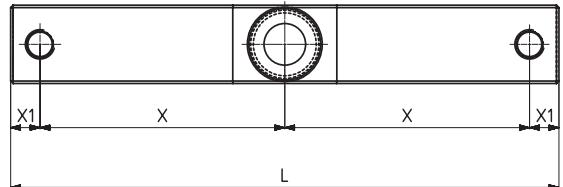
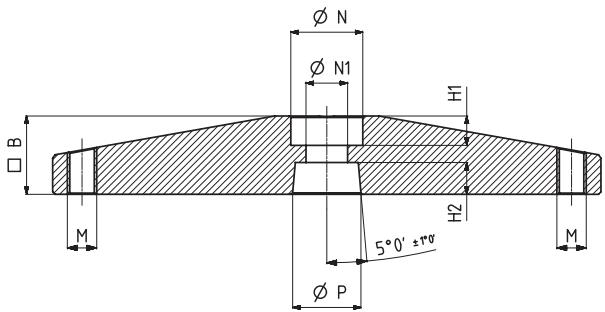
Montagemöglichkeiten
Mounting options


Code	Modell Nr.	B	E	E1	H1	L	M	ØN1	ØN2	ØP	X	X1
6010-6-25	6011-25	16	32	16	6,5	63	M6	8,5	4,5	14	32	7
6010-6-32 - 40	6011-32-40	22	41,4	20,7	9	82	M8	10,5	6,5	16	45	10
6010-6-50	6011-50	25	46,5	23,25	10	105	M10	12,5	6,5	20	65	10

6010-7



new



Spannarm Squeezing Arm

NOT:

- Çelik malzemeden üretilmiştir ve korozyon direnci için fosfat kaplama yapılmıştır.

Aksesuarlar : (fiyatta dahil değildir)

1-) Baskı ucu (911, 912, 913, 914, 915, 916)

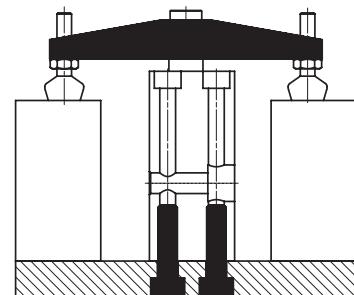
NOTE:

- Made of steel and phosphate coated for corrosion resistance.

Accessories : (not included in the price)

1-) Squeeze part(911,912,913,914,915,916)

Montagemöglichkeiten Mounting options



Code	Modell Nr.	B	H1	H2	L	M	ØN	ØN1	ØP	X	X1
6010-7-25	6012-6013-6014-6016-25	16	6	6,5	112	M6	14,7	8,5	14	50	6
6010-7-32	6012-6013-6014-6016-32	20	7	9	140	M8	14,7	8,5	16	60	10
6010-7-40	6012-6013-6014-6016-40	20	7	9	160	M8	14,7	8,5	16	70	10
6010-7-50	6012-6013-6014-6016-50	25	9	10	180	M12	18,5	10,5	20	80	10

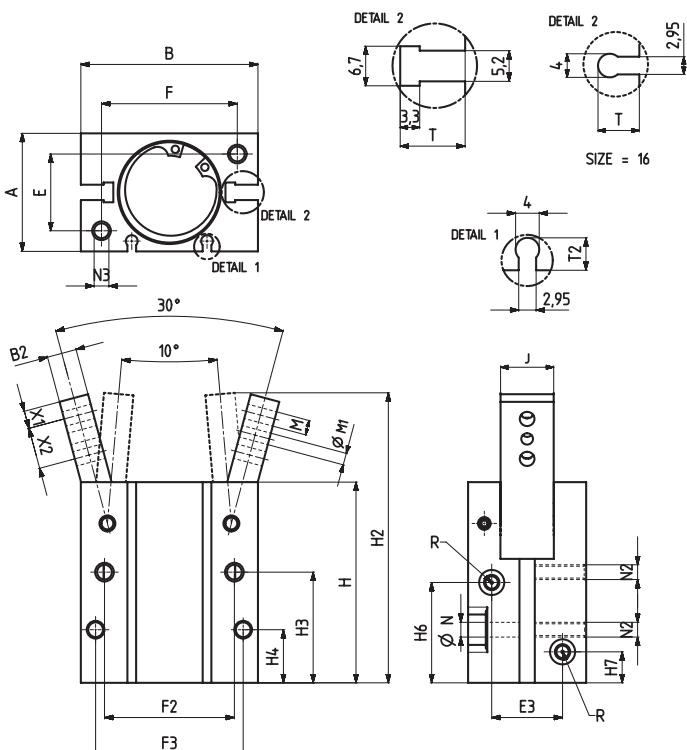
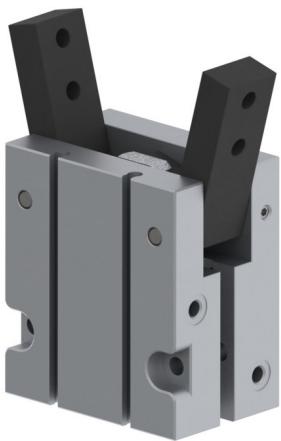
6021

Modell Nr.	Kolben Ø	Strok (mm)	Theoretisches Moment (Theorem Moment) (M)		Max. Spannweite (Max. Length of Gripping) (L)	Spannkraft (Holding Force) (F)	Spannkraft (N) (Clamping Force) (N) 5 bar / for 5 bar		Backenwinkel (Jaw Angle)	Betriebsdruck (Operation Pressure Range)	Max. Frequenz (Max. Frequency)	Gewicht (Weight) (gr)
			Geschlossen (closed)	Offen (open)			Geschlossen (closed)	Offen (open)				
6021 - 16	16	4	9 x P	12 x P	4	$F = M / L \times 0.85$	10	15	-10° ~ 30°	1,5 - 7 bar	180 cycles/min	100
6021 - 20	20	6	17 x P	23 x P	6		20	30				200
6021 - 25	25	7	34 x P	44 x P	7		45	60				330
6021 - 32	32	8,5	61 x P	81 x P	8,5		85	100				520

L : Spannweite / Length of Gripping (cm) M : Theoretisches Moment / Theorem Moment (N.cm)

F : Spannkraft / Holding Force (N) P : Betriebsdruck / Operation Pressure (bar)

Spannkräfte: gültig bei 5 bar Druck und mit 3 cm Spannweite / Clamping forces are valid in case of P = 5 bar pressure with gripping length L = 3 cm


PNEUMATISCHER GREIFER- abgewinkelte Bewegung

- doppelt wirkend und magnetisch.
- Grundkörper ist aus hochfestem Aluminium gefertigt.
- Greifbacken bestehen aus Stahl und sind gehärtet.
- Auf dem Grundkörper sind Schlitzes für Typ T und C Näherungsschalter für Endlagenabfrage.

PNEUMATIC GRIPPER – ANGLED MOTION

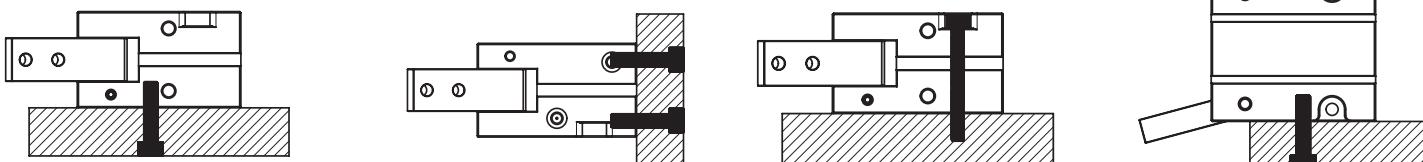
- Cylinder is double acting and magnetic.
- The body is made of strength aluminum.
- The gripper jaws made of steel and hardened.
- There are slots on the body, according to T type and C type sensors, for monitoring the position of piston.

Montagemöglichkeiten

- Ergonomischer Desing ermöglicht 4 verschiedene Montagemöglichkeiten des pneumatischen Greifers

Mounting options

- Pneumatic gripper can be mounted 4 different way through to ergonomic design.



Modell Nr.	A	B	B2	E	E2	E3	F	F2	F3	H	H2	H3	H4	H5	H6	H7	J	M	M1 (H7)	N	N2	N3	R	T	T2	X1	X2
6021 - 16	22	34	6	14	14	10,5	26	24	28	46,5	64	25,5	13	19	24	7	9	M3	2	3,3	M4	M4	M5	6,8	4	3	8
6021 - 20	26	45	7	16	16	15	35	30	36	55	77	28	14,5	22	27,5	8	12	M4	2,5	4,2	M5	M5	M5	10	4,15	4	10
6021 - 25	32	52	9	20	20	18	40	36	36	58,5	84,5	28,5	15	22	29	8	14	M5	3	4,2	M5	M5	M5	10,5	4,5	5	12
6021 - 32	40	60	10	26	26	24	46	44	50	68	98	37,5	18	30	33,5	10	18	M6	4	5	M6	M6	M5	11	5,5	6	14

6022


Modell Nr.	Kolben Ø	Strok (mm)	Max. Spannweite (Max. Length of Gripping) (L)	Spannkraft (N) (Clamp- ing Force) (N) 5 bar / for 5 bar		Betriebsdruck (Operation Pressure Range)	Max. Frequenz (Max. Frequency)	Gewicht (Weight) (gr)
				Geschlossen (closed)	Offen (open)			
6022 - 16	16	4	4	24	18	1,5 - 7 bar	180 cycles/min	140
6022 - 20	20	6	6	47	35			260
6022 - 25	25	7	7	75	60			430
6022 - 32	32	8,5	8,5	100	85			700

L : Spannweite / Length of Gripping (cm) M : Theoretisches Moment / Theorem Moment (N.cm)

F : Spannkraft / Holding Force (N) P : Betriebsdruck / Operation Pressure (bar)

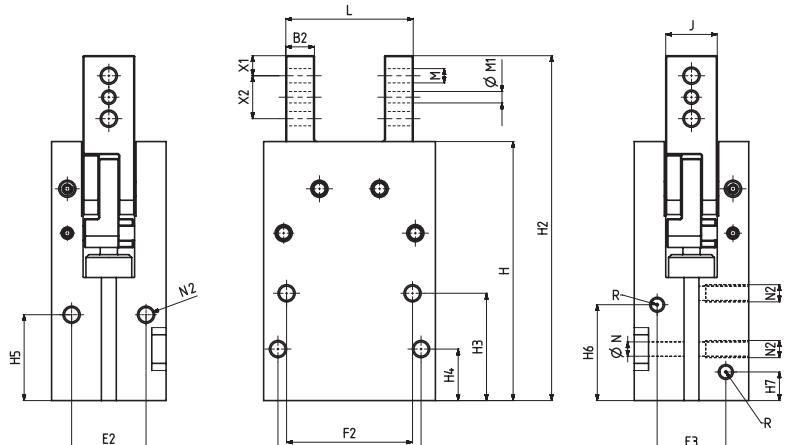
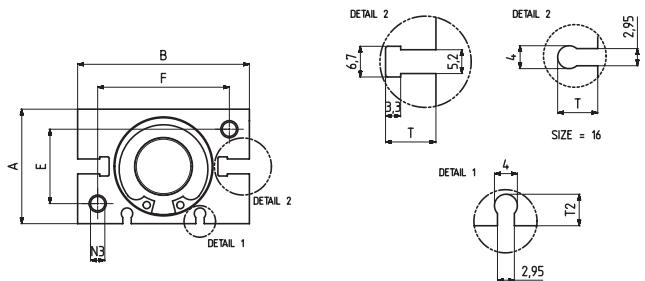
Spannkräfte: gültig bei 5 bar Druck und mit 3 cm Spannweite / Clamping forces are valid in case of P = 5 bar pressure with gripping length L = 3 cm


PARALLELER GREIFER

- doppelt wirkend und magnetisch.
- Grundkörper ist aus hochfestem Aluminium gefertigt
- Griferbacken bestehen aus Stahl und sind gehärtet.
- Auf dem Grundkörper sind Näherungsschalter-Nuten Typ T und C für die Endlagenabfrage vorhanden.

PARALLEL GRIPPER

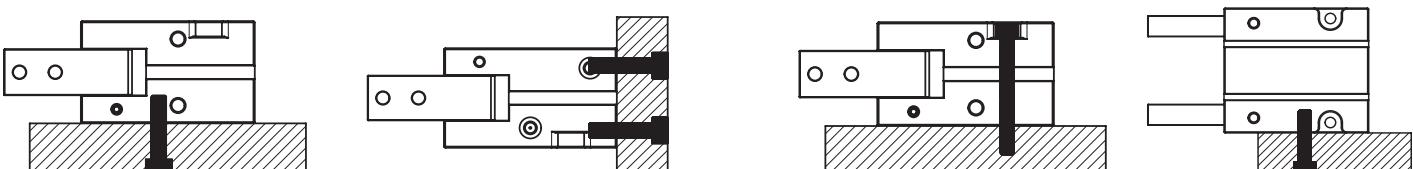
- Cylinder is double acting and magnetic.
- The body is made of strength aluminum.
- The gripper jaws made of steel and hardened.
- There are slots on the body, according to T type and C type sensors, for monitoring the position of piston.
- The closing action of the gripper is generated from the cylinder's thrust side, resulting in a higher gripping force.


Montageoptionen

- Ergonomischer Design ermöglicht 4 verschiedene Montagemöglichkeiten des pneumatischen Greifers

Mounting options

* Pneumatic gripper can be mounted 4 different way through to ergonomic design.



Modell Nr.	A	B	B2	E	E2	F	F2	F3	H	H2	H3	H4	H5	H6	H7	J	L Min	L Max	M	M1 (H7)	N	N2	N3	R	T	T2	X1	X2	
6022 - 16	22	34	5	14	14	10,5	26	24	28	61	76	25,5	13	19	24	7	11	25	33	M3	2	3,3	M4	M4	M5	6,8	4	3	8
6022 - 20	26	45	6	16	16	15	35	30	36	73,5	95,5	28	14,5	22	27,5	8	12	32	44	M4	2,5	4,2	M5	M5	M5	10	4,2	4	10
6022 - 25	32	52	8	20	20	18	40	36	40	80	104	28,5	15	22	29	8	14	37	51	M5	3	4,2	M5	M5	M5	11	4,5	5	12
6022 - 32	40	60	10	26	26	24	46	44	50	90,5	120,5	37,5	18	30	33,5	10	18	43	59	M6	4	5	M6	M6	M5	11	5,5	7	15

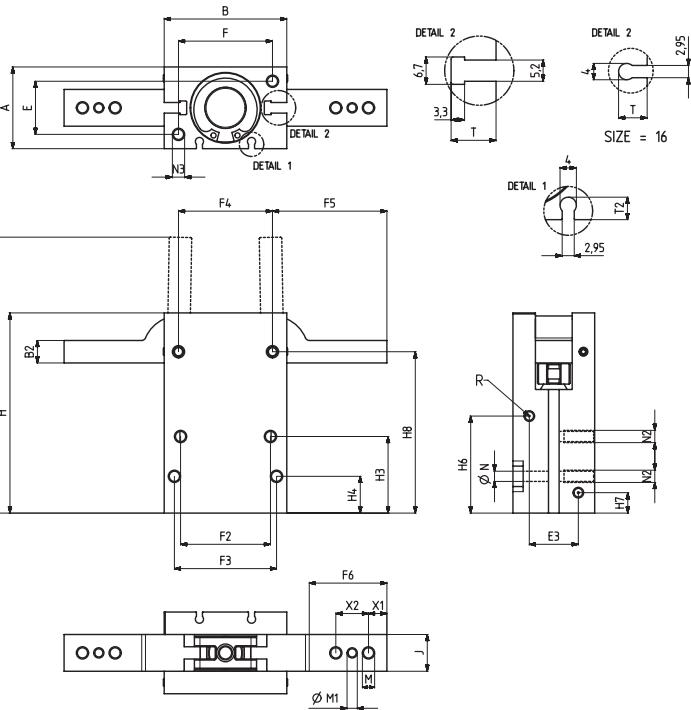
6023



Modell Nr.	Kolben Ø	Strok (mm)	Theoretisches Moment (Theorem Moment) (M)		Max. Spannweite (Max. Length of Gripping) (L)	Spannkraft (Holding Force) (F)	Spannkraft (N) (Clamping Force) (N) 5 bar / for 5 bar		Backenwinkel (Jaw Angle)	Betriebsdruck (Operation Pressure Range)	Max. Frequenz (Max. Frequency)	Gewicht (Weight) (gr)
			Geschlossen (closed)	Offen (open)			Geschlossen (closed)	Offen (open)				
6023 - 16	16	11,5	9 x P	12 x P	4	F = M / L x 0,85	10	15	-2 - 182°	1,5 - 7 bar	180 cycles/min	135
6023 - 20	20	15,5	17 x P	23 x P	6		20	30				260
6023 - 25	25	19	34 x P	44 x P	7		45	60				440
6023 - 32	32	22	61 x P	81 x P	8,5		85	100				770



new



PNÖMATİK TUTUCU – 180° AÇILI HAREKET

- Silindir çift etkili ve manyetiktir.
 - Gövde mukavemetli alüminyumdan üretilmiştir.
 - Tutucu çeneler çelikten üretilmiş ve sertleştirilmiştir.
 - Piston konumunu izlemek için, gövde üzerinde "T" tip ve "C" tip sensörlere uygun kanallar mevcuttur.

PNEUMATIC GRIPPER – 180° ANGLED MOTION

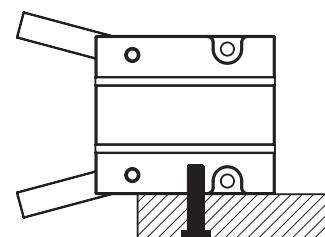
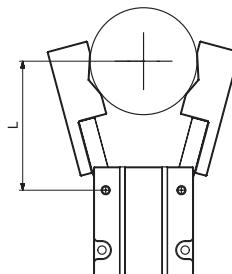
- Cylinder is double acting and magnetic.
 - The body is made of strength aluminum.
 - The gripper jaws made of steel and hardened.
 - There are slots on the body, according to T type and C type sensors, for monitoring the position of piston.

Montaj seçenekleri

* Pnömatik tutucu ergonomik tasarımlı sayesinde 4 farklı şekilde montaj yapılabilir.

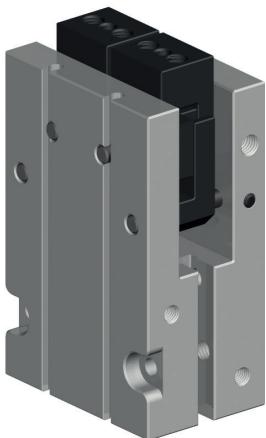
Mounting options

* Pneumatic gripper can be mounted 4 different way through to ergonomic design.



Modell Nr.	A	B	B2	E	E2	E3	F	F2	F3	F4	F5	F6	H	H2	H3	H4	H5	H6	H7	H8	J	M	M1 (H7)	N	N2	N3	R	T	T2	X1	X2
6023 - 16	22	34	6	14	14	10,5	26	24	28	25,5	28	17,5	61,3	79	25,5	13	19	31	7	51,30	9	M3	2	3,3	M4	M4	M5	6,8	4	4	8
6023 - 20	26	45	8	16	16	15	35	30	36	34	35,5	22	73,5	95,5	28	14,5	22	37	8,25	60	12	M4	2,5	4,2	M5	M5	M5	10	4,15	4	10
6023 - 25	32	52	9	20	20	18	40	36	36	40	47	31	83	115	28,5	15	22	40,5	8	67	14	M5	3	4,2	M5	M5	M5	10,5	4,5	7	14
6023 - 32	40	60	11	26	26	24	46	44	50	46	56	38	98	135	32,5	18	30	47,5	10	79	18	M6	4	5	M6	M6	M5	11	5,5	9	16

6024



Modell Nr.

Kolben
ØStrok
(mm)Max. Spannweite
(Max. Length of
Gripping)
(L)Spannkraft (N)
(Clamping Force) (N)
5 bar / for 5 barBetriebsdruck
(Operation
Pressure Range)Max. Frequenz
(Max. Frequency)Gewicht
(Weight)
(gr)

6024 - 16

16

4

4

24

18

6024 - 20

20

6

6

47

35

6024 - 25

25

7

7

75

60

6024 - 32

32

8,5

8,5

100

85

L : Spannweite / Length of Gripping (cm) M : Theoretisches Moment / Theorem Moment (N.cm)

F : Spannkraft / Holding Force (N) P : Betriebsdruck / Operation Pressure (bar)

Spannkräfte: gültig bei 5 bar Druck und mit 3 cm Spannweite / Clamping forces are valid in case of P = 5 bar pressure with gripping length L = 3 cm

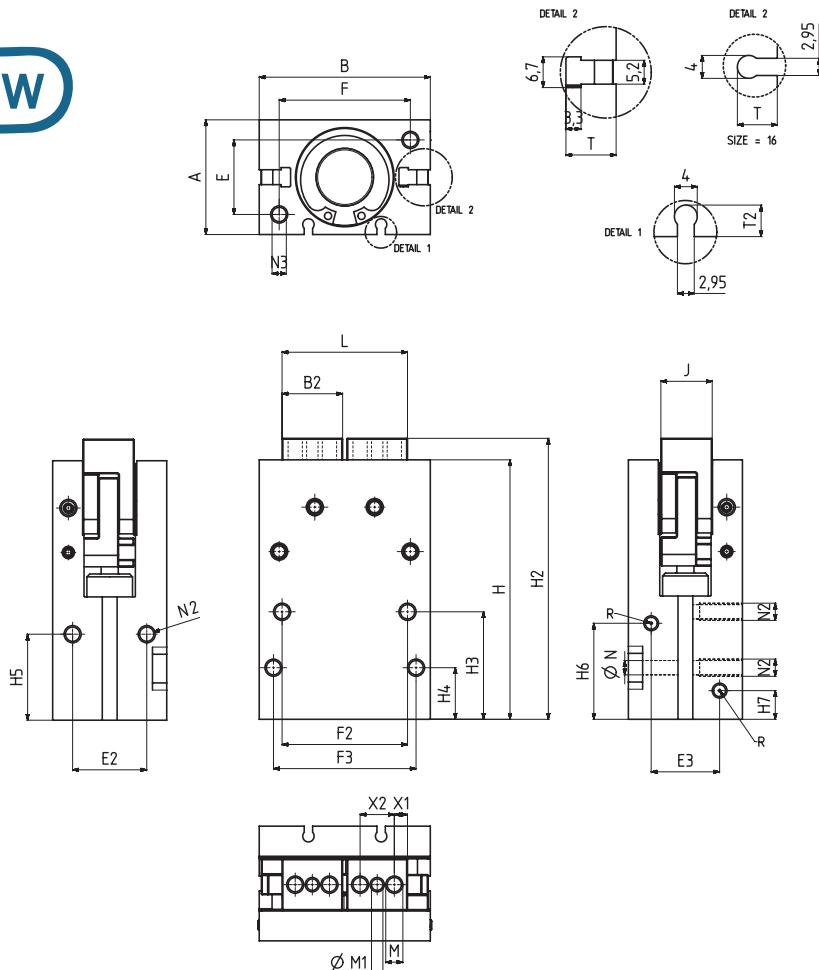
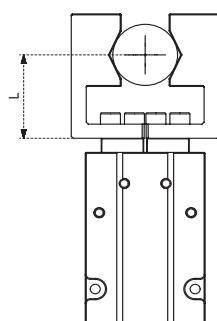
new

PNÖMATİK TUTUCU - YATAY PARALEL HAREKET

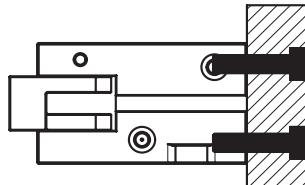
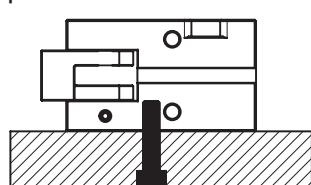
- Silindir çift etkili ve manyetiktir.
- Gövde mukavemetli alüminyumdan üretilmiştir.
- Tutucu geneler çelikten üretilmiş ve sertleştirilmiştir.
- Piston konumunu izlemek için, gövde üzerinde "T" tip ve "C" tip sensörlerle uygun kanallar mevcuttur.
- Tutma eylemi, piston itme konumunda iken gerçekleştiği için daha fazla sıkıştırma kuvveti sağlanır.

PNEUMATIC GRIPPER - HORIZONTAL PARALLEL MOTION

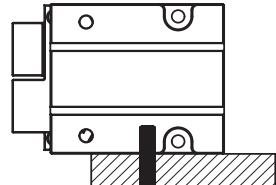
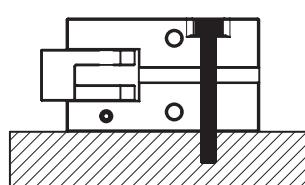
- Cylinder is double acting and magnetic.
- The body is made of strength aluminum.
- The gripper jaws made of steel and hardened.
- There are slots on the body, according to T type and C type sensors, for monitoring the position of piston.
- The closing action of the gripper is generated from the cylinder's thrust side, resulting in a higher gripping force.


Montageoptionen

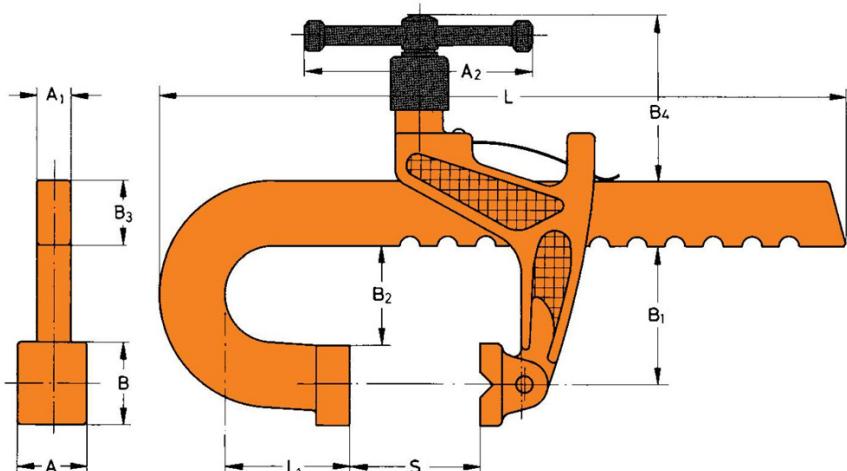
- Ergonomischer Design ermöglicht 4 verschiedene Montagemöglichkeiten des pneumatischen Greifers


Mounting options

* Pneumatic gripper can be mounted 4 different way through to ergonomic design.



Modell Nr.	A	B	B2	E	E2	E3	F	F2	F3	H	H2	H3	H4	H5	H6	H7	J	L Min	L Max	M	M1 (H7)	N	N2	N3	R	T	T2	X1	X2
6024 - 16	22	34	12	14	14	10,5	26	24	28	61	65	25,5	13	19	24	7	11	25	33	M3	2	3,3	M4	M4	M5	6,8	4	3	6
6024 - 20	26	45	16	16	16	15	35	30	36	73,5	78,5	28	14,5	22	27,5	8	12	32	44	M4	2,5	4,2	M5	M5	M5	10	4,2	4	8
6024 - 25	32	52	18	20	20	18	40	36	40	80	86	28,5	15	22	29	8	14	37	51	M5	3	4,2	M5	M5	M5	11	4,5	4	10
6024 - 32	40	60	21	26	26	24	46	44	50	90,5	98	37,5	18	30	33,5	10	18	43	59	M6	4	5	M6	M6	M5	11	5,5	4,5	12


Carver Bağlantı Elemanı – Askı tipi
Ürün Özellikleri :

- a-) Ağır iş uygulamalarında kullanıma uygun mukavemetli ürünlerdir.
b-) Hareketli çene iş parçasına doğru kaydırılır, mandal en yakın çentiğe oturduktan sonra sıkma vidası ile çene sıkıştırılır.

1. Yayılı çene baskı kalktığında bile aynı konumunda kalır.
2. Hareketli çene yapısı sayesinde açılı yüzeylerde güvenli sıkıştırma sağlar.
3. Çalışan parçalar kaynak çapağına karşı korunmalıdır.
4. Minimum vidalama ile maksimum çene hareketi sağlanır.
5. Sıkıştırılan iş parçası sabit kalır, hareket edemez.

Kullanım Alanları :

- Üretim
- Kaynak
- Makine
- Bakım-Onarım
- Takiühane

CARVER CLAMPS – RACK TYPE
FEATURES OF PRODUCTS:

- A-) The products are strong and suitable for heavy duty.
B-) The operator slides the spring loaded moveable jaw toward the workpiece to the nearest notch where it locks into the detent. Hand tightening the screw advances the clamp jaw.

1. Spring-loaded jaw stays in position when pressure removed.
2. Jaw moves to security clamp angled surfaces.
3. Working parts not exposed to weld spatter.
4. No long screws to bend.
5. Tightening action cannot rotate workpiece.

USAGE AREAS

- * Fabrication
- * Welding
- * Machining
- * Maintenance
- * toolroom

Modell Nr.	Spannkraft (Holding Force) (N)	Tutma Kapasitesi Capacity (S) (mm)	Çene Uzunluğlu Reach (B1) (mm)	Gewicht (Weight) (gr)
T186-150	11300	0 -150	60	1400
T186-300		0 - 300	60	1800
T186-500		0 - 500	60	2500
T186-750		0 - 750	60	3200
T321-250	5650	0 - 250	120	2000
T321-600		0 - 600	120	3500
T290-225	18000	0 - 225	90	5500
T290-450		0 - 450	90	7000
T290-750		0 - 750	90	8500
T290-1000		0 - 1000	90	10500
T285-225	9000	0 - 225	200	7100
T285-450		0 - 450	200	8500
T285-750		0 - 750	200	10000
T285-1000		0 - 1000	200	11500
T257-150	27000	0 - 150	115	9800
T257-300		0 - 300	115	10900
T257-450		0 - 450	115	12200
T257-600		0 - 600	115	13100
T257-900		0 - 900	115	15800
T257-1350		0 - 1350	115	19100

Modell Nr.	A	A1	A2	B	B2	B3	B4	L	L1
T186-150	25	13	76	32	43	33	76	245	20
T186-300	25	13	76	32	43	33	76	395	20
T186-500	25	13	76	35	43	30	76	625	30
T186-750	25	13	76	35	43	30	76	875	30
T321-250	25	13	76	35	102	33,5	76	360	25
T321-600	25	13	76	32	98	30	76	715	8
T290-225	40	20	140	60	65	40	105	420	65
T290-450	40	20	140	60	65	40	105	655	65
T290-750	40	20	140	60	65	40	105	955	65
T290-1000	40	20	140	60	65	40	105	1205	65
T285-225	40	20	140	60	180	40	105	420	65
T285-450	40	20	140	60	180	40	105	655	65
T285-750	40	20	140	60	180	40	105	955	65
T285-1000	40	20	140	60	180	40	105	1205	65
T257-150	51	22	187	60	85	51	127	403	100
T257-300	51	22	187	60	85	51	127	555	100
T257-450	51	22	187	60	85	51	127	710	100
T257-600	51	22	187	60	85	51	127	850	100
T257-900	51	22	187	60	85	51	127	1165	100
T257-1350	51	22	187	60	85	51	127	1615	100



Carver Bağlantı Elemanı – Bar tipi

Ürün özellikleri :

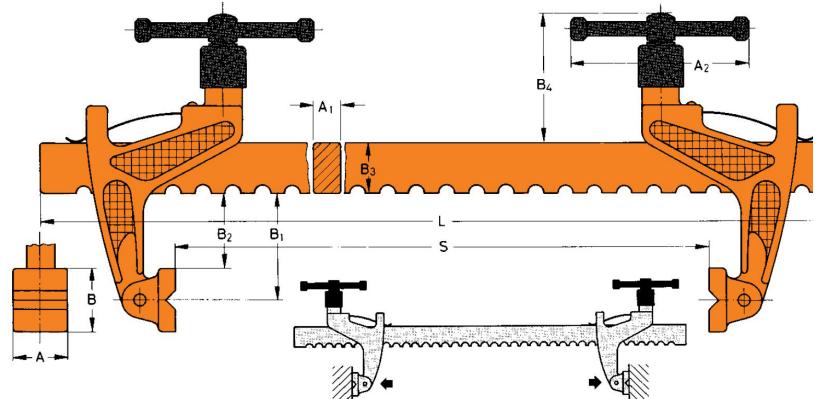
- a-) Aşırı uygulamalarında kullanıma uygun mukavemetli ürünlerdir.
b-) Hareketli çene iş parçasına doğru kaydırılır, mandal en yakın çentiğe oturduktan sonra sıkma vidası ile çene sıkıştırılır.

1. Yayı çene baskı kalktığında bile aynı konumda kalır.
2. Hareketli çene yapısı sayesinde açılı yüzeylerde güvenli sıkıştırma sağlar.
3. Çalışan parçalar kaynak çapağına karşı korumalıdır.
4. Minimum vidalama ile maksimum çene hareketi sağlar.
5. Sıkıştırılan iş parçası sabit kalır, hareket edemez.
6. BAŞITCE TERS DÖNEN ÇENELER sayesinde dışa doğru sıkıştırma sağlanır.

Kullanım Alanları :

- Üretim
- Kaynak
- Makine
- Bakım-Onarım
- Takiimhane

Modell Nr.	Spannkraft (Holding Force) (N)	Tutma Kapasitesi Capacity (S) (mm)		Cene Uzunluğu Reach (B1) (mm)	Gewicht (Weight) (gr)
		Min	Max		
T186-600	11300	600	60	3400	
T186-900		900	60	4400	
T186-1500		1500	60	5800	
T186-2100		2100	60	7600	
T186-2400		2400	60	8800	
T321-600	140	600	120	3500	
T321-900		900	120	4500	
T321-1500		1500	120	5900	
T321-2100		2100	120	7700	
T321-2400		2400	120	8900	
T290-900	18000	900	90	10500	
T290-1200		1200	90	12100	
T290-1500		1500	90	14000	
T290-2100		2100	90	18000	
T285-900	9000	900	200	11500	
T285-1200		1200	200	13000	
T285-1500		1500	200	15000	
T285-2100		2100	200	19000	
T257-2100	27000	2100	115	27200	
T257-2700		2700	115	32000	



CARVER CLAMP – BAR TYPE

FEATURES OF PRODUCTS:

- A-) The products are strong and suitable for heavy duty.
B-) The operator slides the spring loaded moveable jaw toward the workpiece to the nearest notch where it locks into the detent. Hand tightening the screw advances the clamp jaw.
1. Spring-loaded jaw stays in position when pressure removed.
 2. Jaw moves to security clamp angled surfaces.
 3. Working parts not exposed to weld spatter.
 4. No long screws to bend.
 5. Tightening action cannot rotate workpiece.
 6. Simple reverse jaws for a spreading action

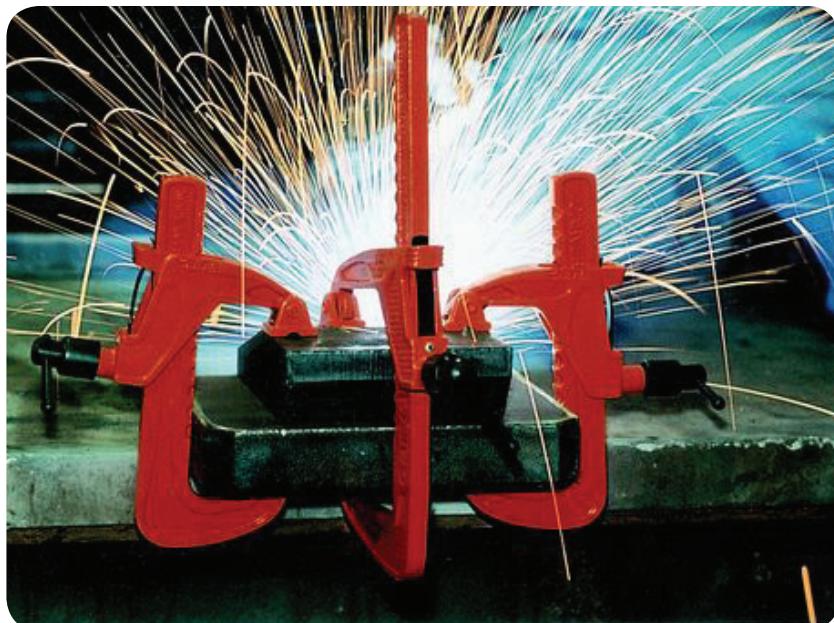
USAGE AREAS

- * Fabrication
- * Welding
- * Machining
- * Maintenance
- * toolroom

Modell Nr.	A	A1	A2	B	B2	B3	B4	L
T186-600	25	12	76	32	44	30	76	710
T186-900	25	12	76	32	44	30	76	1020
T186-1500	25	12	76	32	44	30	76	1625
T186-2100	25	12	76	32	44	30	76	2235
T186-2400	25	12	76	32	44	30	76	2540
T321-600	25	12	76	32	104	30	76	710
T321-900	25	12	76	32	104	30	76	1020
T321-1500	25	12	76	32	104	30	76	1625
T321-2100	25	12	76	32	104	30	76	2235
T321-2400	25	12	76	32	104	30	76	2540
T290-900	38	20	140	51	65	40	105	1070
T290-1200	38	20	140	51	65	40	105	1390
T290-1500	38	20	140	51	65	40	105	1690
T290-2100	38	20	140	51	65	40	105	2290
T285-900	38	20	140	51	180	40	105	1070
T285-1200	38	20	140	51	180	40	105	1390
T285-1500	38	20	140	51	180	40	105	1690
T285-2100	38	20	140	51	180	40	105	2290
T257-2100	51	22	187	63,5	83	52	127	2335
T257-2700	51	22	187	63,5	83	52	127	2945

Zubehör / Accessories
Çubuk Bağlantısı / Bar Connection


Code	Modell Nr.	Gewicht (Weight) (gr)
T186	T186 - T321	700
T285	T290 - T285	1300



Schnellspanner für optische Messgeräte

Toggle Clamps For Optical Measurement Technology

Produkteigenschaften:

Für die Nutzung mit optischen Messgeräten geeignet.
Gegen Licht- und Laser-Reflexionen brüniert.

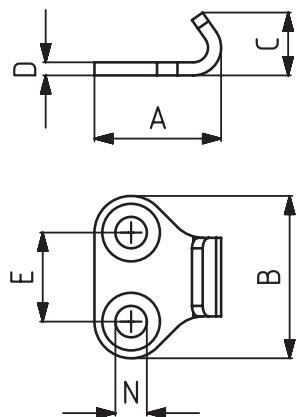
Features of product:

Suitable for usage with optical measurement devices,
phosphate coated against reflexions of light and laser.



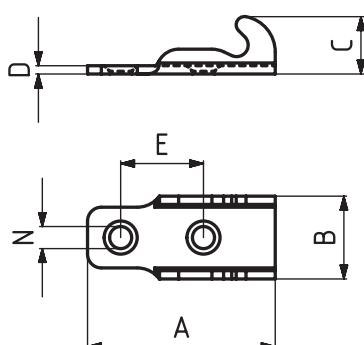


361


Gegenstück
Stretcher Parts


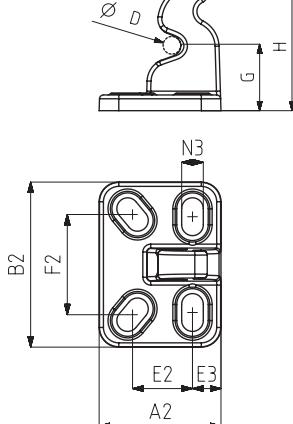
Code	Modell Nr.	Rostfrei (Edelstahl) (STAINLESS)	A	B	C	D	E	N
361-362-2-03	361-362-2	S-361-362-2	24	31	12	2,5	17	Ø 6

363


Gegenstück
Stretcher Parts


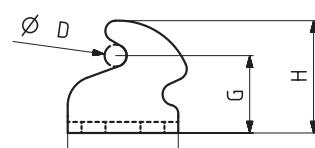
Code	Modell Nr.	Rostfrei (Edelstahl) (STAINLESS)	A	B	C	D	E	N
363-2-03	363-2	S-363-2	34	15	10,5	1,5	15	Ø 4

341


Gegenstück
Stretcher Parts


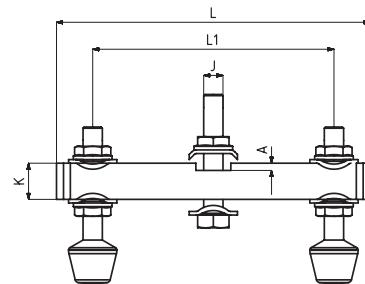
Code	Modell Nr.	A2	B2	D	G	H	E2	F2	N3
340-4-03	341-4	62	84	Ø10	33,5	65	28 - 33	45 - 57	11x19
340-5-03	341-5	66	84	Ø12	33,5	65	28 - 35	45 - 57	11x19

311


Gegenstück
Stretcher Parts


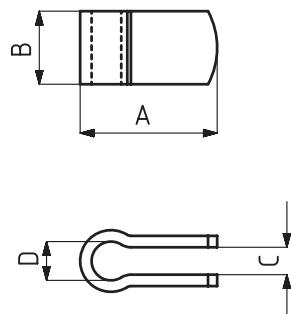
Code	Modell Nr.	Rostfrei (Edelstahl) (STAINLESS)	Schwarz (BLACK)	A2	B	D	G	H	E2	N2
310-1-04	311 - 312 - 321 - 331 - 332 - 351 - 1	S 310-320-330-350-1-04	B 310-320-330-350-1-04	24,5	15,5	Ø 3,5	12,5	19	10	Ø 5
310-2-04	311 - 312 - 331 - 332 - 351 - 2	S 310-330-350-2-04	B 310-330-350-2-04	28,5	15,5	Ø 3,5	16,5	23	10 - 14	5,5x7,5
310-3-04	311 - 312 - 331 - 332 - 351 - 421 - 3	S 310-330-350-420-3-04	B 310-330-350-420-3-04	30	20	Ø 5,5	21	30,5	16	Ø 6,5
310-4-5-04	311 - 312 - 331 - 332 - 351 - 4 - 5	S 310-330-350-4-5-04	B 310-330-350-4-5-04	45	28	Ø 7	27	39	18 - 21	8,5x10

931

Querarm
Squeeze Part With Double Point


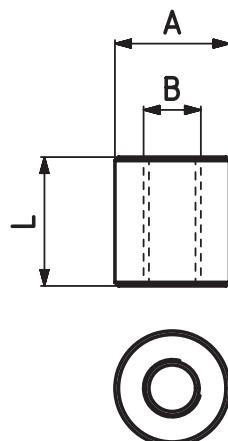
Modell Nr.	Schwarz (BLACK)	A	L	L1	J	K	(GR)
931-1	B 931 -	2,5	90	30-70	M5	10	75
931-2	B 931 -	2,5	110	30-80	M6	16	105
931-3	B 931 -	3	130	40-100	M8	20	210
931-4	B 931 -	4	160	50-120	M10	20	480
931-5	B 931 -	5	180	60-140	M12	25	750

941

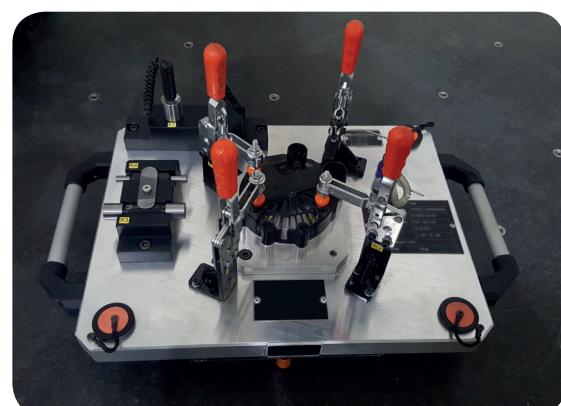
U-Halter zum Anschweißen
Bolt Retainers


Modell Nr.	Schwarz (BLACK)	PLS.UÇ	A	B	C	D
941 - 1	B 941 -	M5x35	25	10	5	Ø6,5
941 - 2	B 941 -	M6x40	25	13	5	Ø6,5
941 - 3	B 941 -	M8x50	30	16	6	Ø8,5
941 - 4	B 941 -	M10x70	37	20	8	Ø10,5
941 - 5	B 941 -	M12x80	40	25	10	Ø12,5

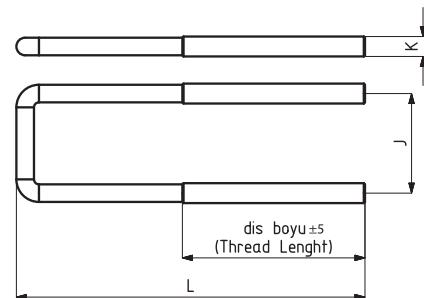
951

Mutter zum Anschweißen
Sleeve


Modell Nr.	Schwarz (BLACK)	A	B	L
951 - 1	B 951 -	Ø10	M5	12
951 - 2	B 951 -	Ø12	M6	15
951 - 3	B 951 -	Ø16	M8	18
951 - 4	B 951 -	Ø18	M10	22
951 - 5	B 951 -	Ø20	M12	27
951 - 6	B 951 -	Ø25	M12	32



311

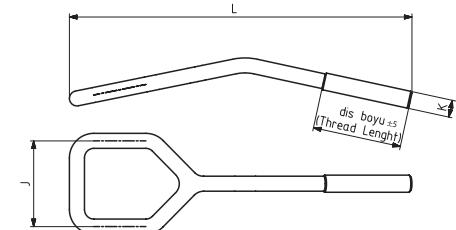
U Kanca
U Hook

Code	Modell Nr.	Rostfrei (Edelstahl) (STAINLESS)	Schwarz (BLACK)	J	K	L	Zahnlänge (Thread lenght)
150 - 63	311-312-321-331-332-351- 1	S 150 - 63	B 150 - 63	23	M4	90	45
150 - 591	311-312-321-331-332-351- 1	S 150 - 591	B 150 - 591	23	M4	75	45
150 - 155	311-312-321-331-332-351- 1	S 150 - 155	B 150 - 155	23	M4	140	45
150 - 08	311-312-331-332-351 - 3	S 150 - 08	B 150 - 08	30	M6	105	75
150 - 156	311-312-331-332-351 - 3	S 150 - 156	B 150 - 156	30	M6	155	75
150 - 34	311-312-331-332-351 - 4	S 150 - 34	B 150 - 34	43	M8	145	95
150 - 198	311-312-331-332-351 - 4	S 150 - 198	B 150 - 198	43	M8	195	65
150 - 35	311-312-331-332-351 - 4	S 150 - 35	B 150 - 35	43	M8	295	85
150 - 148	341 - 4	--	B 150 - 148	50	M10	210	130
150 - 141	311-312-331-332-351 - 5	S 150 - 141	B 150 - 141	45	M10	180	110
150 - 285	341 - 5	--	B 150 - 285	54	M12	146	65
150 - 512	341 - 4	--	B 150 - 512	50	M10	260	130
150 - 516	311-312-331-332-351 - 5	S 150 - 516	B 150 - 516	45	M10	230	130

C- Haken

C Hook

421

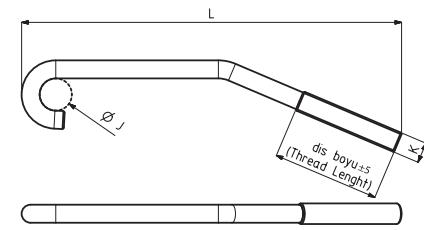


Code	Modell Nr.	Rostfrei (Edelstahl) (STAINLESS)	Schwarz (BLACK)	J	K	L	Zahnlänge (Thread lenght)
150-139	421-3	S 150-139	B 150-139	40	M8	159	40

C- Haken

C Hook

411



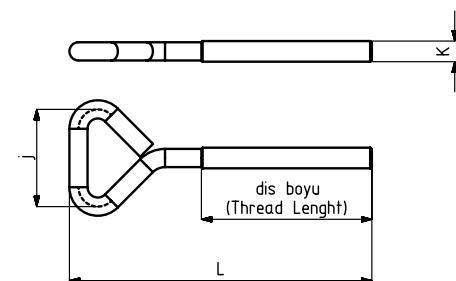
Code	Modell Nr.	Rostfrei (Edelstahl) (STAINLESS)	Schwarz (BLACK)	J	K	L	Zahnlänge (Thread lenght)
150 - 69	411-412 - 2	S 150-69	B 150-69	9	M6	117	35
150 - 13	411-412 - 413 -3	S 150-13	B 150-13	12,5	M8	147	40
150 - 44	411-412 - 4	S 150-44	B 150-44	16	M10	197	55

Haken

Hook

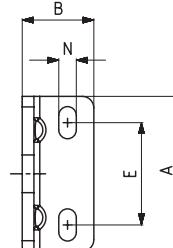
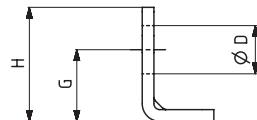
361

new



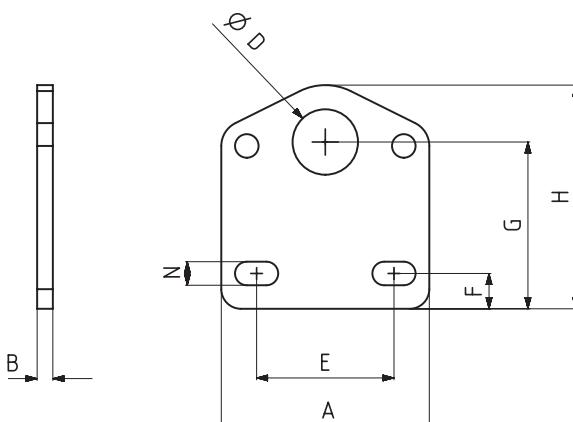
Code	Modell Nr.	Rostfrei (Edelstahl) (STAINLESS)	J	K	L	Zahnlänge (Thread lenght)
150-267	361 - 2	S 150-267	28	M6	88,5	50

511

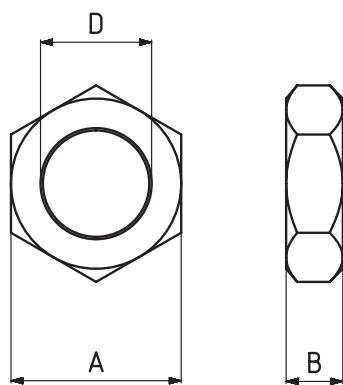
wägerechter Fuß
Horizontal Base


Code	Modell Nr.	Rostfrei (Edelstahl) (STAINLESS)	Schwarz (BLACK)	A	B	Ø D	E	G	H	N
510-1-01	511-1	S 511 -	B 511 -	44	20	12,5	21,5 - 31,5	19,5	30,5	5,5x10,5
510-2-01	511-2	S 511 -	B 511 -	53	24,5	16,5	30 - 40	24,5	39	6x11
510-3-01	511-3	S 511 -	B 511 -	60	30	20,5	33,5 - 42,5	30,5	48	6,5x11
510-5-01	511-5 511-6	S 511 -	B 511 -	78	36	24,5	42 - 57	38	61	8,5x16

512

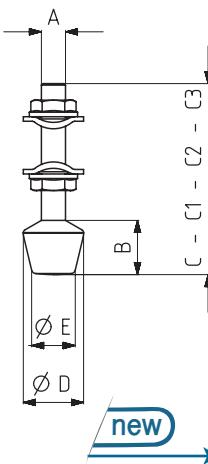
senkrechter Fuß
Vertical Base


Code	Modell Nr.	Rostfrei (Edelstahl) (STAINLESS)	Schwarz (BLACK)	A	B	Ø D	E	F	G	H	N
510-1-02	512-1	S 512 -	B 512 -	44	3	12,5	21,5 - 31,5	8,5	35	46	5,5x10,5
510-2-02	512-2	S 512 -	B 512 -	53	4	16,5	30 - 40	9	42,5	57	6x11
510-3-02	512-3	S 512 -	B 512 -	60	5	20,5	33,5 - 42,5	12,5	52	69	6,5x11
510-5-02	512-5 512-6	S 512 -	B 512 -	78	6	24,5	42 - 57	15	64,5	87,5	8,5x16

511-512
513
Mutter
Nut


Code	Modell Nr.	Rostfrei (Edelstahl) (STAINLESS)	Schwarz (BLACK)	A	B	D
150-327	511-0	S 511 -	B 511 -	17	6	M10X1
150-103	511-512-513-1	S 511 -	B 511 -	19	7	M12X1,5
150-74	511-512-513-2	S 511 -	B 511 -	24	8	M16X1,5
150-21	511-512-513-3	S 511 -	B 511 -	30	9	M20X1,5
150-50	511-512-513-5-6	S 511 -	B 511 -	36	10	M24X1,5

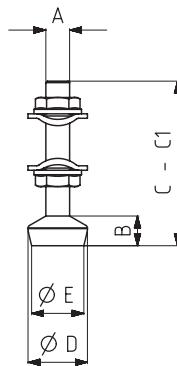
911

Andruckschraube mit Gummifuß
Rubber Silicon Squeeze Part


new

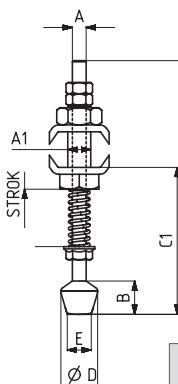
Code	Modell Nr.	Rostfrei (Edelstahl) (STAINLESS)	Schwarz (BLACK)	A	B	C	D	E
150-181	911 - 0	S 911 -	B 911 -	M 4	7	31	10	8
150-547	911 - 0 - C1	S 911 -	B 911 -	M 4	7	65,5	10	8
150-99	911 - 1	S 911 -	B 911 -	M 5	10,5	43,5	12,5	9
150-545	911 - 1 - C1	S 911 -	B 911 -	M 5	10,5	68,5	12,5	9
150-86	911 - 2	S 911 -	B 911 -	M 6	14,5	50,5	16	10,5
150-245	911 - 2 - C1	S 911 -	B 911 -	M 6	14,5	110,5	16	10,5
150-246	911 - 2 - C2	S 911 -	B 911 -	M 6	14,5	130,5	16	10,5
150-546	911 - 2 - C3	S 911 -	B 911 -	M 6	14,5	70,5	16	10,5
150-87	911 - 3	S 911 -	B 911 -	M 8	18	63,5	20	14
150-247	911 - 3 - C1	S 911 -	B 911 -	M 8	18	83,5	20	14
150-283	911 - 3 - C2	S 911 -	B 911 -	M 8	18	143	20	14
150-88	911 - 4	S 911 -	B 911 -	M 10	23,5	87	26,5	17
150-217	911 - 4 - C1	S 911 -	B 911 -	M 10	23,5	125	26,5	17
150-116	911 - 5	S 911 -	B 911 -	M 12	27,25	100	30	21
150-354	911 - 5 - C1	S 911 -	B 911 -	M 12	27,25	130	30	21

916

Andruckschraube mit Gummifuß
Rubber Silicon Squeeze Part


Code	Modell Nr.	Rostfrei (Edelstahl) (STAINLESS)	Schwarz (BLACK)	A	B	C	D	E
150-324	916 - 0	S 916 -	B 916 -	M 4	5	29	10	9
150-526	916 - 0 - C1	S 916 -	B 916 -	M 4	5	64	10	9
150-263	916 - 1	S 916 -	B 916 -	M 5	7	40	12	10
150-588	916-1-C1	S 916 -	B 916 -	M 5	7	65	12	10
150-264	916 - 2	S 916 -	B 916 -	M 6	10	46	16	13
150-265	916 - 3	S 916 -	B 916 -	M 8	12	57	20	16
150-266	916 - 4	S 916 -	B 916 -	M10	16	79	26	20
150-328	916 - 5	S 916 -	B 916 -	M12	19	91	30	24

917

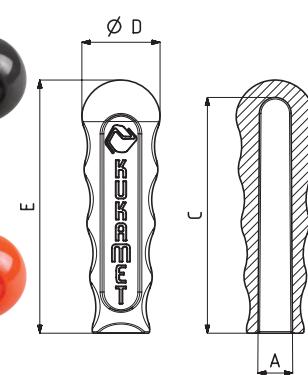
Yaylı Plastik Uç
Silicon Squeeze Part
With Spring


new



Code	Modell Nr.	Rostfrei (Edelstahl) (STAINLESS)	Schwarz (BLACK)	YAY STROK	A	A1	B	C	C1	D	E
150-545	917-3	S 917 -	B 917 -	8	M 5	M 8	10,5	68,5	35,5	12,5	9
150-246	917-4	S 917 -	B 917 -	14	M 6	M 10	14,5	130,5	55-93,5	16	10,5
150-283	917-5	S 917 -	B 917 -	19	M 8	M 12	18	143	69-88	20	14

921

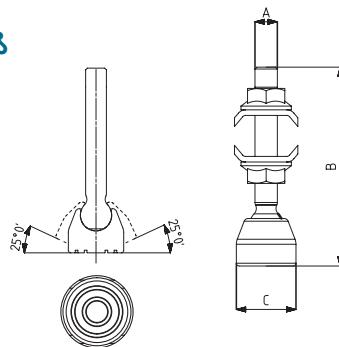
Kunststoffgriff
Polyurethane Handle


new

Modell Nr.	Schwarz (BLACK)	A	B	C	D	E
921 - 0	B 921 -	6,5	3	26,5	10,5	29
921 - 1	B 921 -	11	4	54	17,5	58
921 - 2	B 921 -	11	5	54	23	60
921 - 3	B 921 -	11	6	74	25	80
921 - 4	B 921 -	6	8	94	29	100
		18	10			

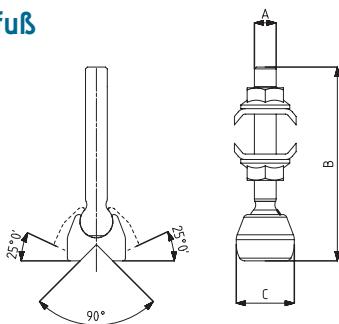


912

Andruckschraube mit Stahl-Gelenkfuß
Swivel Metal Foot Spindle


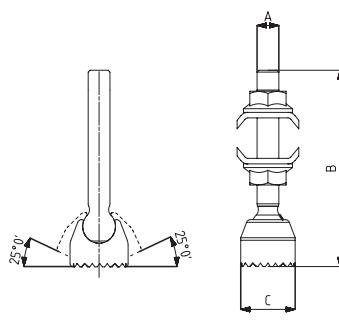
Modell Nr.	Winkel (ANGLE)	A	B	C
912 - 2	25°	M6	53,5	Ø15
912 - 3	25°	M8	64,5	Ø20
912 - 4	25°	M10	90	Ø26,5
912 - 5	25°	M12	104	Ø30

913

Andruckschraube mit Stahl-V-Gelenkfuß
V Grooved Swivel Metal Foot Spindle


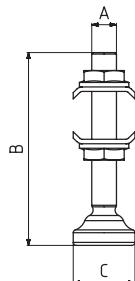
Modell Nr.	Winkel (ANGLE)	A	B	C
913 - 2	25°	M6	53,5	Ø15
913 - 3	25°	M8	64,5	Ø20
913 - 4	25°	M10	90	Ø26,5
913 - 5	25°	M12	104	Ø30

914

Andruckschraube mit gerädeltem Stahl-Gelenkfuß
Knurled Swivel Metal Foot Spindle


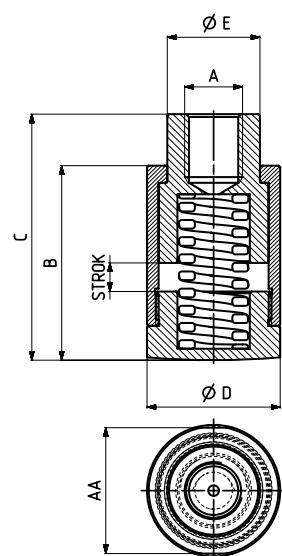
Modell Nr.	Winkel (ANGLE)	A	B	C
914 - 2	25°	M6	53,5	Ø15
914 - 3	25°	M8	64,5	Ø20
914 - 4	25°	M10	90	Ø26,5
914 - 5	25°	M12	104	Ø30

915

Andruckschraube mit Stahlfuß (fest)
Fixed Metal Foot Spindle


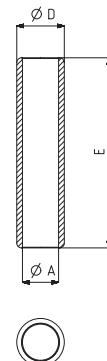
Modell Nvr.	A	B	C
915-1	M5	43	Ø14
915-2	M6	53,5	Ø16
915-3	M8	64,5	Ø20
915-4	M10	86	Ø25
915-5	M12	98	Ø30

918

Yaylı Metal Uç
Metal Squeeze Part With Spring


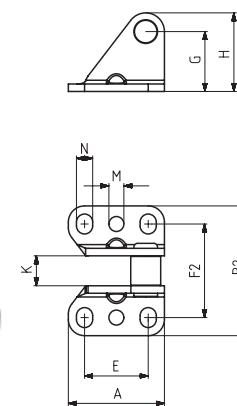
Modell Nr.	F1 (N)	STROK	A	AA	B	C MIN. - MAX.	ØD	ØE
918 - 3	200	5	M8	22	34	38 - 43	23	16
918 - 4	250	5	M10	22	34	38 - 43	23	16
918 - 5	300	5	M12	22	34	38 - 43	23	16

921-M

Handgriff aus Metall
Metal Handle


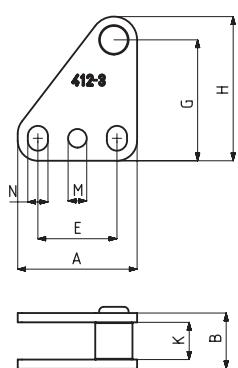
Code	Modell Nr.	A	D	E
921-1-2-M	110-210-310-330-410 510 710-810-1-2	11,5	16	60
921-1-2-M-C1	222-232-820-2	11,5	16	110
921-3-M	110-210-310-330-410 510-710-810-3	12	18	80
921-3-M-C1	222-232-240-4	12	18	130
921-4-M	110-210-310-330-410 510-4	19	25	100
921-4-M-C1	222-232-240-6	19	25	150

961

Gegenstück
Stretcher Parts


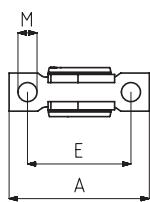
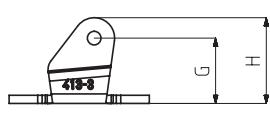
Code	Modell Nr.	Rostfrei (Edelstahl) (STAINLESS)	Schwarz (BLACK)	A	E	G	H	K	M	N	F2	B2
961 - 2	411 - 2	S 961 -	B 961 -	31	12 - 18	26	31,5	10		6x9,5	30,5 - 34,5	47
961 - 3	411 - 3	S 961 -	B 961 -	38,5	19 - 25	24	31,5	12		7x10	36,5 - 38	52
961 - 4	411 - 4	S 961 -	B 961 -	50	30	40	49	16	Ø 8,5	10,5x15	56 - 65	84

962

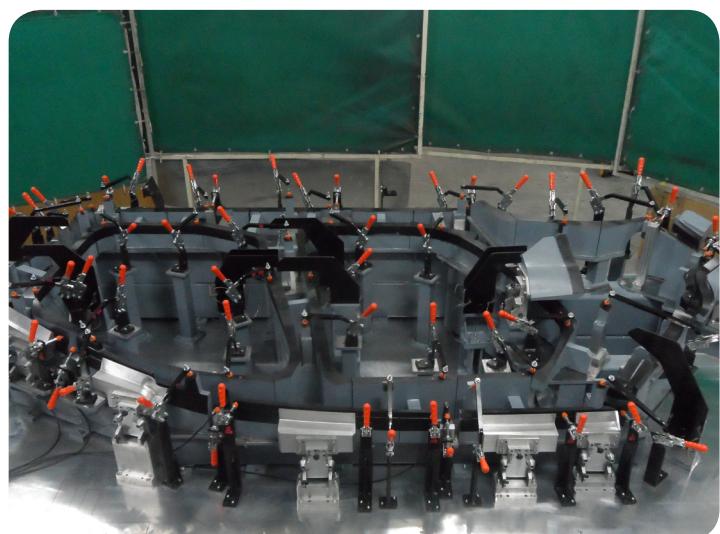
Gegenstück
Stretcher Parts


Code	Modell Nr.	Rostfrei (Edelstahl) (STAINLESS)	Schwarz (BLACK)	A	B	E	G	H	K	M	N
962 - 2	412 - 2	S 962 -	B 962 -	31	15	12 - 18	40	45,5	10		6x9,5
962 - 3	412 - 3	S 962 -	B 962 -	38,5	18	19 - 25	39	46,5	12		7x10
962 - 4	412 - 4	S 962 -	B 962 -	50	24	30	67	76	16	Ø 8,5	10,5x15

963

Gegenstück
Stretcher Parts


Code	Modell Nr.	Rostfrei (Edelstahl) (STAINLESS)	Schwarz (BLACK)	A	E	M	G	H
963-3-03	413-3	S 963-3 -	B 963-3 -	51,5	38	Ø 7	24	31,5




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