

The background of the entire page is a technical drawing in a light brown color on a dark background. It features various geometric shapes, including circles, arcs, and lines, with some elements highlighted by a larger, semi-transparent circle. The drawing appears to be a cross-section or a detailed view of a mechanical part.

# FP3

FP SERVICES AUTOMATION

# EOAT 20

GB·DE

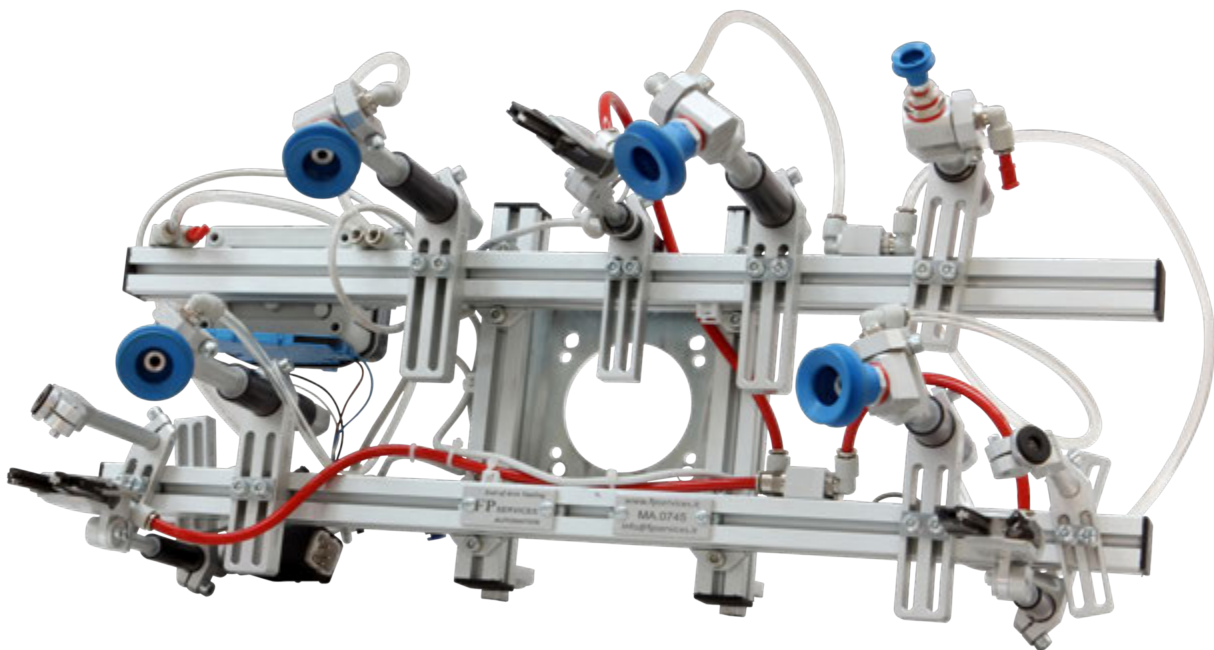


## End Of Arm Tooling

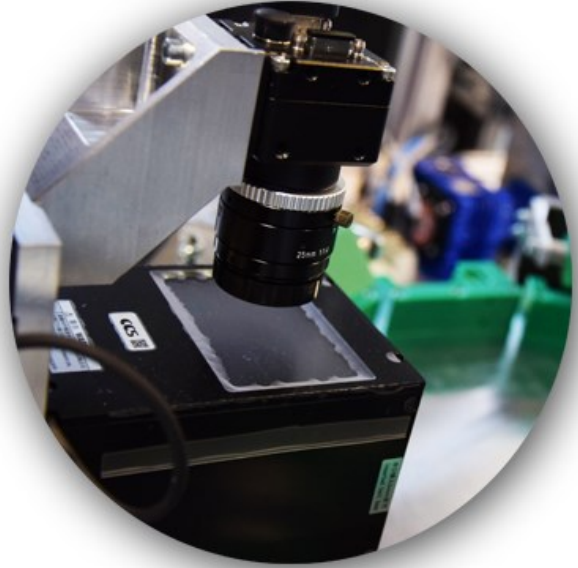
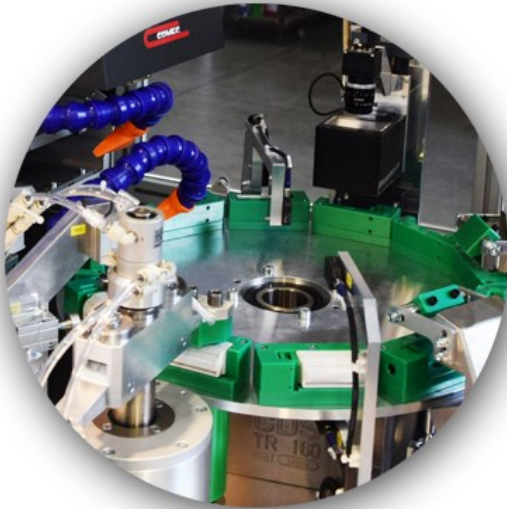
## Greiferbau



**Customized Gripper 96 Cavities - Sondergreifer 96 Kavitäten**

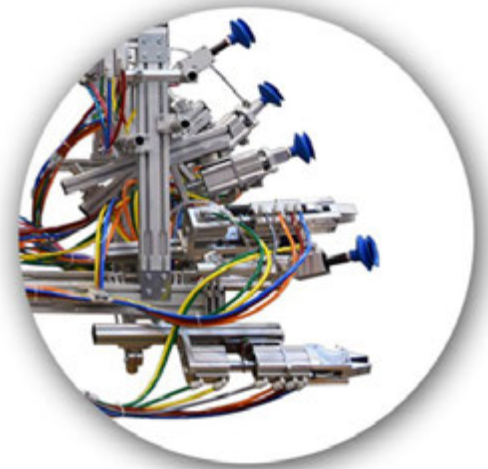
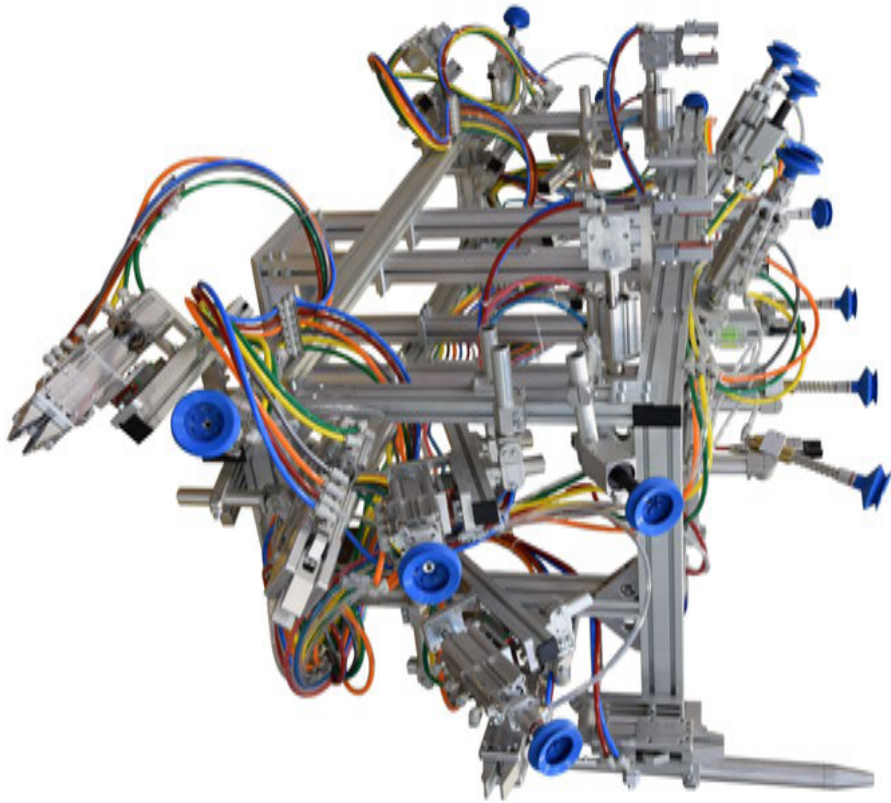


**Standard EOAT - Standard Greifer**



Pad Printing and  
**Vision System**  
Capacity **60/PCS/min**  
*Tampondruckmaschine  
mit Vision Systeme  
Kapazität 60/PCS/min*

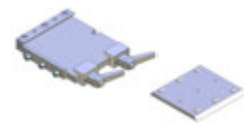




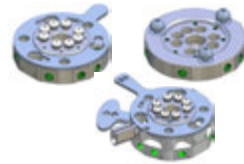
**Car Bumper Gripper**  
*Greifer für Stoßfänger*

## General index

## Allgemeiner Index



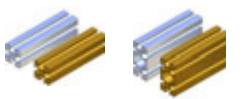
**SWM - LAL - GPM - GPG - GPR - GHV**  
Page / Page 10 - 15  
Quick changer systems  
Schnellwechselsysteme  
**CA.01**



**01.01 - CUDL - CUSL**  
Page / Page 16 - 26  
Quick changer systems  
Schnellwechselsysteme  
**CA.01**



**FP**  
Page / Page 28 - 29  
Quick changer systems  
Schnellwechselsysteme  
**CA.01**



**L - X - JU**  
Page / Page 30 - 33  
Profiles  
Profile und Zubehör  
**CA.02**



**ADK - GWP - EPL - SV - UVV - WIV**  
**GAR - PAT**  
Page / Page 34 - 38  
Profile accessories  
Profile und Zubehör  
**CA.02**



**KPL - KBV - SVB**  
Page / Page 40 - 44  
Profile connectors  
Profilverbinder  
**CA.03**



**VBG - VBL - VBT - VBW - EVB**  
Page / Page 45 - 47  
Profile connectors  
Profilverbinder  
**CA.03**



**KVB - KVB.KG - KKS - KKS.L - PKS.L**  
Page / Page 48 - 52  
Tubular Clamps  
Klemmstücke für Rohre  
**CA.03**



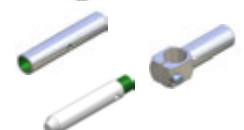
**WST - WSL**  
Page / Page 53 - 60  
Mounting Clamps  
Klemmstücke  
**CA.04**



**04.02 - 04.20 - SCM**  
Page / Page 61 - 62  
Mounting Clamps  
Klemmstücke  
**CA.04**



**KSW - PKS - GVR - GLA**  
Page / Page 63 - 66  
Gripper arms  
Greifarme  
**CA.04**



**VLR - ZTB - WKA - RID**  
Page / Page 67 - 70  
Mounting Clamps  
Klemmstücke  
**CA.04**



**SMN-SSN**  
Page / Page 72 - 75  
Gripper arms for vacuum cups  
Greifarme für Vakuum Sauger  
**CA.05**



**SDN - SDR**  
Page / Page 76 - 79  
Gripper arms for vacuum cups  
Greifarme  
**CA.05**



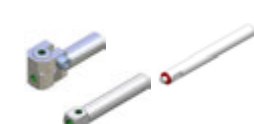
**05.02 - 05.01 - GGS**  
Page / Page 80 - 83  
Gripper arms for vacuum cups  
Greifarme  
**CA.05**



**GGD - GGV**  
Page / Page 84 - 88  
Gripper arms for vacuum cups  
Greifarme  
**CA.05**



**SAR - VSX - 07.01**  
Page / Page 89 - 91  
Gripper arms for vacuum cups  
Greifarme  
**CA.05**



**GGE - GGB - GSE**  
Page / Page 90 - 93  
Gripper arms for vacuum cups  
Greifarme  
**CA.05**



**WSS - WSD - SGB - WLS**  
Page / Page 94 - 98  
Vacuum cup connectors  
Winkelstücke  
**CA.08**



**08.09**  
Page / Page 102 - 104  
Adapters for vacuum cups  
Adapter für Vakuumsauger  
**CA.08**



**08.29 - 08.31 - 08.32**  
Page / Page 106 - 113  
Vacuum cups HT1  
Vakuumsauger HT1  
**CA.08**



**08.26 - 08.27 - 08.28 - 08.30 - 08.30**  
Page / Page 114 - 121  
Vacuum cups SILICONE  
Vakuumsauger SILIKON  
**CA.08**



**08.30 - 08.01 - 08.03**  
Page / Page 122 - 127  
Vacuum cups SILICONE  
Vakuumsauger SILIKON  
**CA.08**




**08.36**  
Page / Page 128 - 129  
Vacuum cups POLYURETHANE  
Vakuumsauger POLYURETHANE  
**CA.08**


## General index



**PAC**  
Page / Pag 130 - 133  
Selfcentering sprue gripper  
Selbstzentrierende Anguss Greifzange  
**CA.09**



**GTS**  
Page / Pag 134 - 137  
Sprue grippers  
Anguss Greifzangen  
**CA.09**



**GZA.10**  
Page / Pag 142 - 150  
Sprue grippers  
Anguss Greifzangen  
**CA.09**



**GRZ.20**  
Page / Pag 152 - 155  
Sprue grippers  
Anguss Greifzangen  
**CA.09**



**GRF - RBL - ANS - ZTS - TIK**  
Page / Pag 156 - 170  
Gripper fingers  
Greiffinger  
**CA.09**



**GZA.AA**  
Page / Pag 171  
Selfcentering sprue gripper  
Selbstzentrierende Anguss Greifzange  
**CA.09**




**09.05 - APGE - KB**  
Page / Pag 172 - 175  
Parallel grippers Easy GS  
Parallelgreifer easy GS  
**CA.09**



**MPG - APG**  
Page / Pag 176 - 178  
Parallel grippers Easy G  
Parallelgreifer easy  
**CA.09**



**FS.DHEB**  
Page / Pag 180 - 181  
Airgrippers  
Pneumatische Außengreifer  
**CA.09**



**09.13 - 09.17 - 09.14 - 09.15 - 09.16**  
**09.18**  
Page / Pag 182 - 186  
Airpickers  
Pneumatische Außengreifer  
**CA.09**



**DB - GZ**  
Page / Pag 188 - 193  
Grippers high grip force  
Greifzange extrem große Schließkraft  
**CA.09**



**HEH - UDHE**  
Page / Pag 194 - 195  
Linear Stroke Units  
Hubeinheiten Linearführung  
**CA.09**


## Allgemeiner Index



**BVAE**  
Page / Pag 196 - 198  
Movable vacuum units  
Bewegliche Vakuumeinheiten  
**CA.09**



**AGP**  
Page / Pag 200 - 201  
Centering locking unit  
Kopplungsgreifer  
**CA.09**



**PAA**  
Page / Pag 202 - 203  
Needle grippers  
Nadelgreifer  
**CA.09**



**ATE - VES**  
Page / Pag 204 - 205  
Mounting Bracket MR  
Klemmstück MR  
**CA.10**




**MR - F**  
Page / Pag 206 - 207  
Mounting Bracket MR  
Klemmstück MR  
**CA.10**



**STF - 04.10 - 04.12 - SAT**  
Page / Pag 208 - 212  
Mounting Bracket MR  
Klemmstück MR  
**CA.10**



**SN**  
Page / Pag 214 - 215  
Slide Air Nippers Horizontal Type SN  
Angusschneider  
**CA.10**



**FN**  
Page / Pag 216 - 217  
Nipper bodies / Nipper Blades  
Angusschneidzangen / Schneideinsätze  
**CA.10**




**11.17 - 11.18**  
Page / Pag 218 - 219  
Compact Cylinder  
Kompaktzylinder  
**CA.11**



**ADZ - GAZ - KBH**  
Page / Pag 220 - 221  
Compact Cylinder  
Kompaktzylinder  
**CA.11**







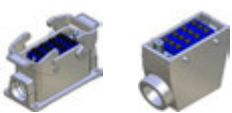








**11.08 - 11.04 - 11.15**  
Page / Pag 222 - 223  
Adapters for Cylinders  
Adapter für Kompaktzylinder  
**CA.11**



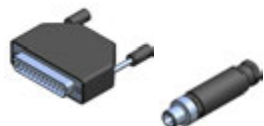




**PMA**  
Page / Pag 224 - 225  
One finger pneumatic grippers, perpendicular acting  
Pneumatische Einfingergriffe, mit senkrechter Bewegung  
**CA.11**

## General index

## Allgemeiner Index

	<b>KHZ</b> Page / Pag 226- 227 Compact Cylinder for vacuum cup <i>Kurzhubzylinder für Saugnapf</i> <b>CA.11</b>
	<b>JDR</b> Page / Pag 228- 229 Compact Cylinder for vacuum cup <i>Kurzhubzylinder für Saugnapf</i> <b>CA.11</b>
	<b>VTB</b> Page / Pag 230- 231 Air vacuum manifolds <i>Verteilerblock</i> <b>CA.12</b>
	<b>12.05</b> Page / Pag 232- 235 Pneumatic <i>Pneumatik</i> <b>CA.12</b>
	<b>08.14</b> Page / Pag 236 Pneumatic <i>Pneumatik</i> <b>CA.12</b>
	<b>15.01</b> Page / Pag 237 Hoses <i>Schläuche</i> <b>CA.12</b>
	<b>SBP - SLP - 11.06</b> Page / Pag 238 Basic Ejector <i>Grundejektor</i> <b>CA.12</b>
	<b>CA.11</b> Page / Pag 239 Pressure regulator <i>Druckregler</i> <b>CA.11</b>
	<b>CA.12</b> Page / Pag 240 Quick coupling socket <i>Schnellschlusskupplung</i> <b>CA.11/12</b>
	<b>ATK</b> Page / Pag 242 Adapters for Part Control <i>Adapter für Teilekontrolle</i> <b>CA.14</b>
	<b>OM.E3Z - XS3F</b> Page / Pag 243 -247 Sensors <i>Sensoren</i> <b>CA.14</b>
	<b>KT - GRZ.20 - MMD.IL5</b> Page / Pag 248 - 251 Sensors <i>Sensoren</i> <b>CA.14</b>
	<b>MMD.UK6</b> Page / Pag 251 Sensors <i>Sensoren</i> <b>CA.14</b>

	<b>SCP</b> Page / Pag 252 Sensors <i>Sensoren</i> <b>CA.14</b>
	<b>SDS</b> Page / Pag 253 Sensors <i>Sensoren</i> <b>CA.14</b>
	<b>19.03 - PAX</b> Page / Pag 254 Sensors <i>Sensoren</i> <b>CA.14</b>
	<b>KIT.MA01</b> Page / Pag 255 Kit End of Arm Tooling <i>Kit Greiferbaukasten</i> <b>CA.15</b>
	<b>CA.KBS</b> Page / Pag 256 Cable Tie <i>Kunststoffband</i> <b>CA.16</b>





## CA.01 SWM

. Quick changer (robot side)

. Schnellwerkzeugwechsler (Roboterseite)

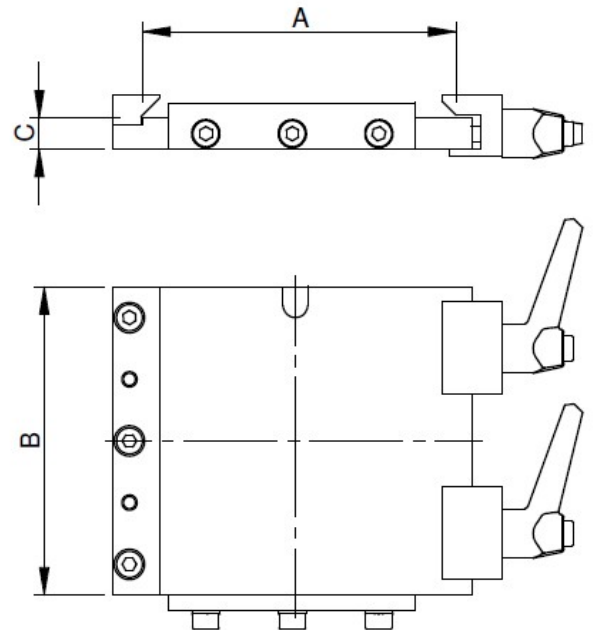
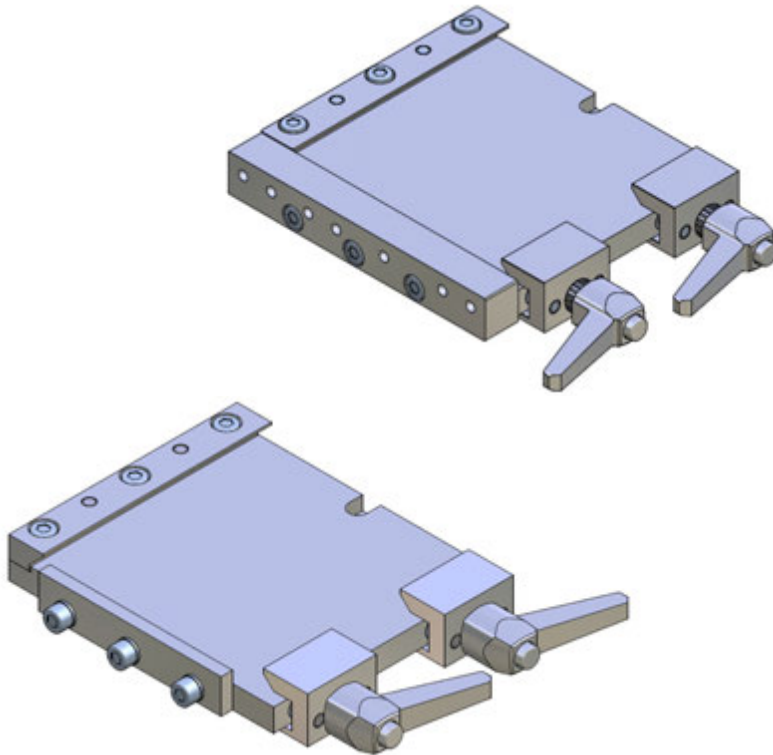


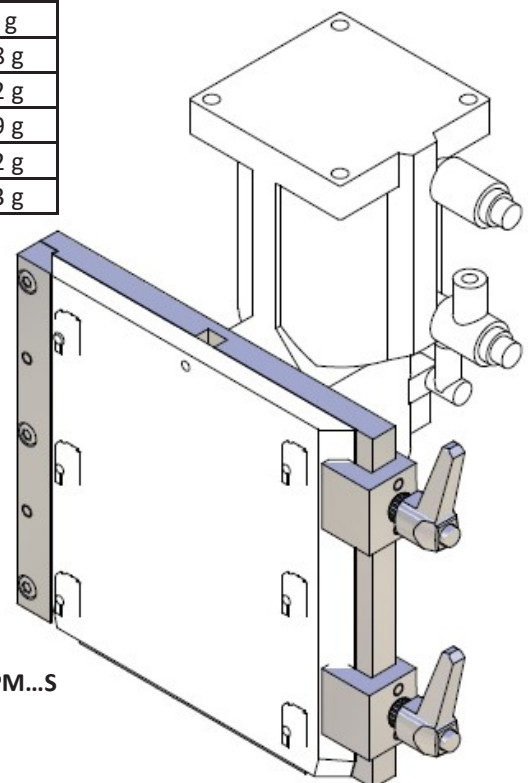
Table / Tabelle

H = Handling weight as approx. value  
Handhabungsgewicht als Richtwert

M = Suitable for EOAT Groundplate GPM...

Article no.	A	B	C	H		M	Weight
CA.SWM0	60	60	10	5 kg	ALUMINIUM	CA.GPM0	140 g
CA.SWM1	100	100		10 kg		CA.GPM1	441 g
CA.SWM1S*				...	STEEL	CA.GPM1S	1138 g
CA.SWM2	160	160	12	20 kg	ALUMINIUM	CA.GPM2	1132 g
CA.SWM2S*				...	STEEL	CA.GPM2S	3099 g
CA.SWM3	250	250		40 kg	ALUMINIUM	CA.GPM3	2962 g
CA.SWM3S*			...	STEEL	CA.GPM3S	8173 g	

Application example / Anwendungsbeispiel



Remarks / Anmerkungen:

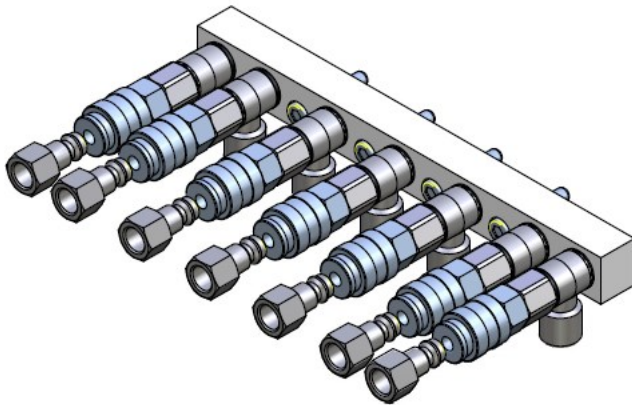
Material / Werkstoff: Aluminium / \*Steel / \*Stahl

Surface: silver anodized / \*galvanized  
Oberfläche: eloxiert / \*verzinkt

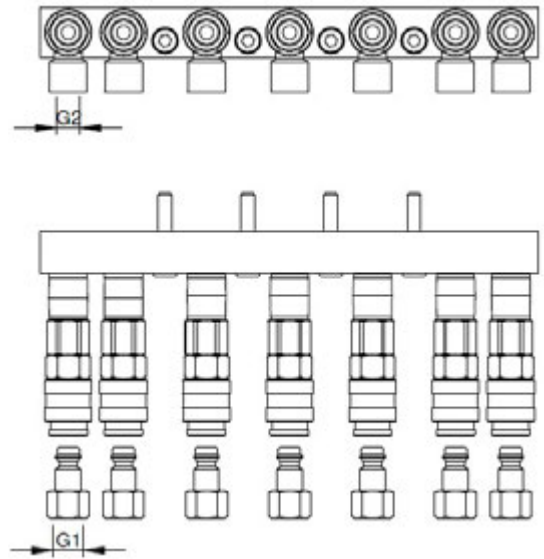
CA.GPM...S

## CA.01 LAL - SWM

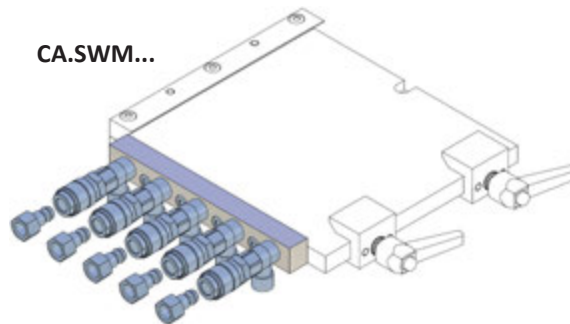
. Pneumatic connection for CA.SWM



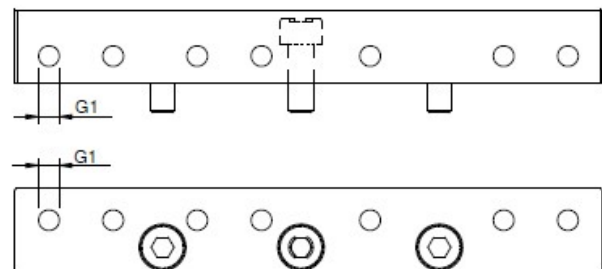
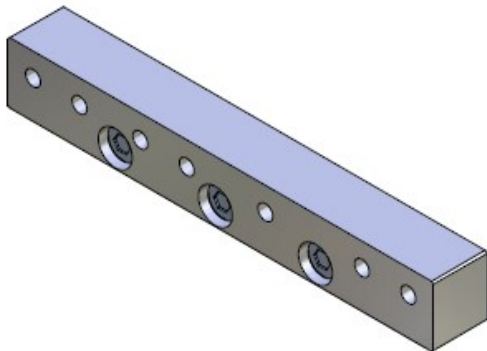
. Luftanschlußleiste Greiferwechselsystem für CA.SWM



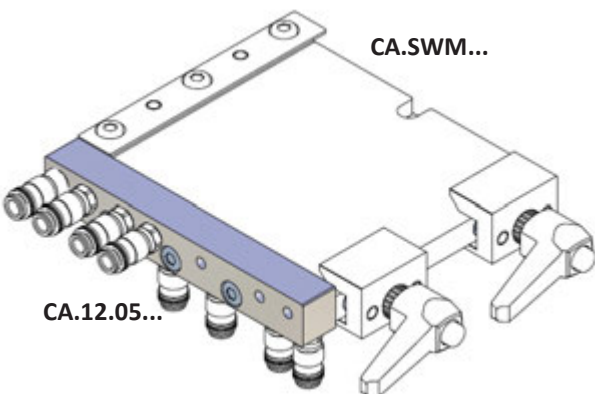
Application example / Anwendungsbeispiel



Article no.	G1	G2	L	M	Weight
CA.LAL.1.5	M5	M5	5	CA.SWM1	154 g
CA.LAL.1.7			7		225 g
CA.LAL.2.5	G 1/8	G1/8	5	CA.SWM2	631 g
CA.LAL.2.7			7		742 g
CA.LAL.3.6	G 1/4	G 1/4	6	CA.SWM3	902 g
CA.LAL.3.8			8		1504 g



Application example / Anwendungsbeispiel



Article no.	G1	L	M	Weight
SWM1.8	M5	7	CA.SWM1	71g
SWM2.8	G 1/8		CA.SWM2	136g
SWM3.8	G 1/4	8	CA.SWM3	325g

Table / Tabelle

L = Pneumatic or vacuum connectors  
Anzahl Druchluft bzw. Vakuumschlüsse

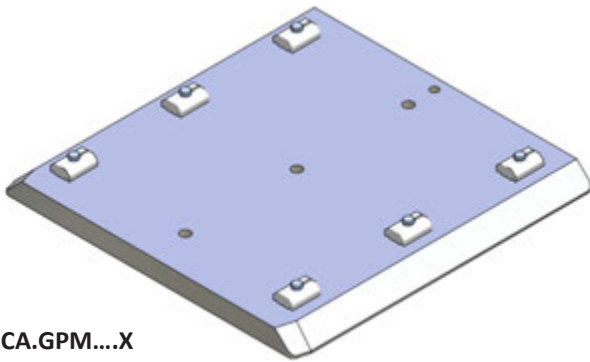
M = Suitable for ...  
Passend für ...

# CA.01 GPM

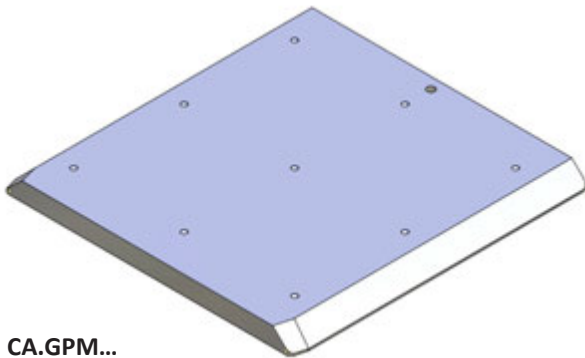
# L/X/JU

. Quick changer (grripper side)

. Greifergrundplatte



CA.GPM...X



CA.GPM...

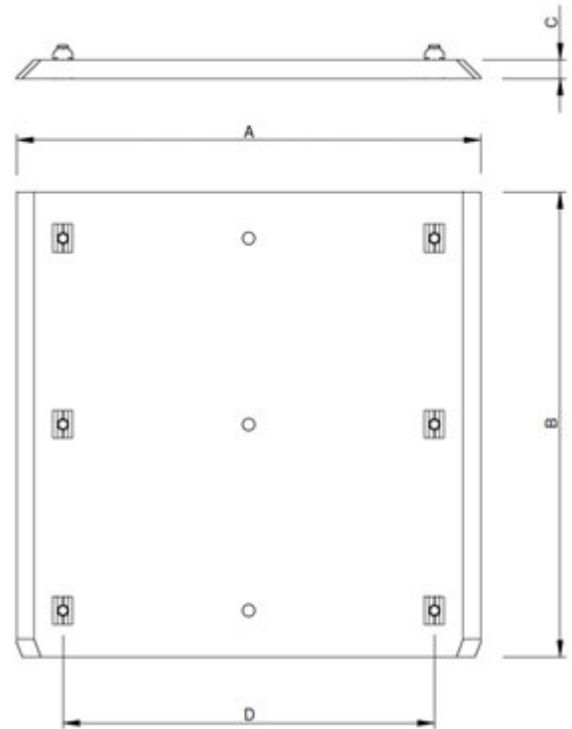


Table / Tabelle

M = Suitable for Profile  
Passend für Profil

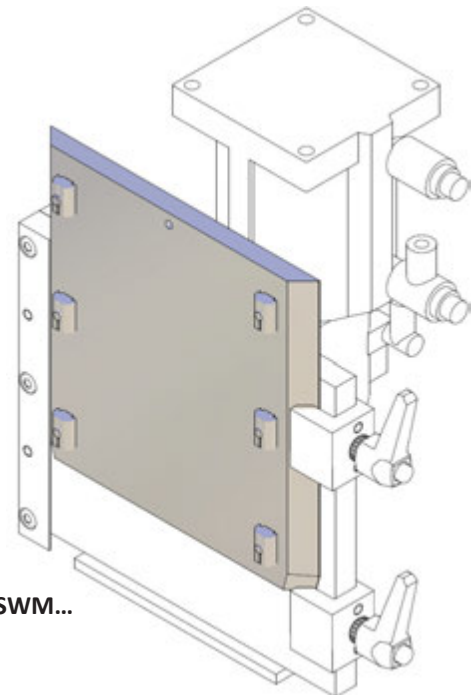
Remarks / Anmerkungen:

Material / Werkstoff: Aluminium / \*Steel / \*Stahl

Surface: silver anodized / \*galvanized  
Oberfläche: eloxiert / \*verzinkt

Application example / Anwendungsbeispiel

Article no.	A	B	C	D		M	Weight
CA.GPM0	60	60	8	...	ALUMINIUM	...	69 g
CA.GPM0.X				35		L	104 g
CA.GPM1	100	100		...		...	201 g
CA.GPM1.X				70		L/X	242 g
CA.GPM1S*			...	...	STEEL	...	583 g
CA.GPM2	160	160	10	...	ALUMINIUM	...	653 g
CA.GPM2.X				120		L/X/JU	695 g
CA.GPM2S*				...	...	1892 g	
CA.GPM3	250	250		...	ALUMINIUM	...	1613 g
CA.GPM3.X				200		L/X/JU	1677 g
CA.GPM3S*				...	...	4673 g	



CA.SWM...

# CA.01 GPG

X/JU

. Ground Plate Spring Loaded

. Greifergrundplatte gefedert

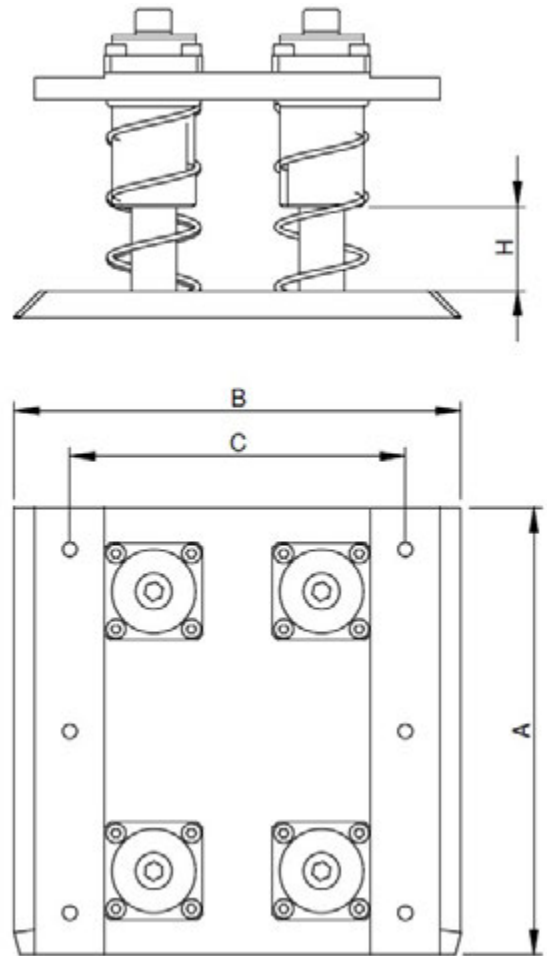
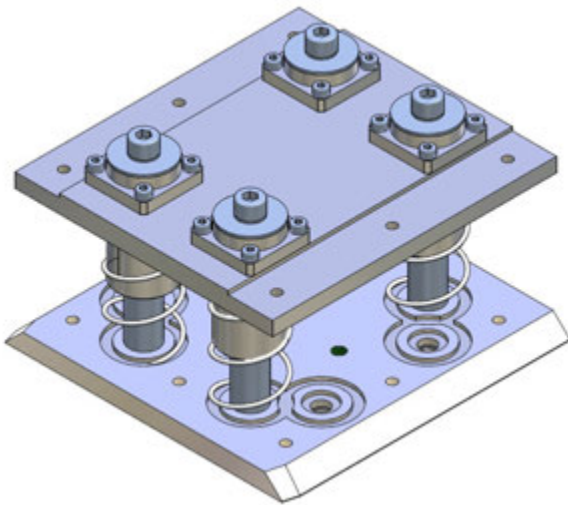


Table / Tabelle

H = Stroke  
Hub

L = Number of guides  
Anzahl Kugelführungen

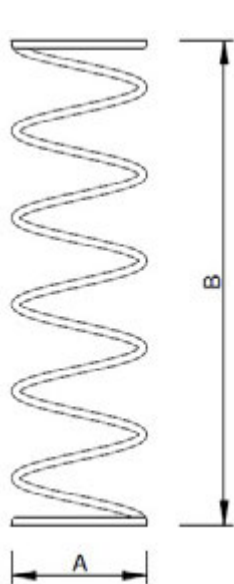
Remarks / Anmerkungen:

Material / Werkstoff: Aluminium

Surface: silver anodized  
Oberfläche: eloxiert

Article no.	A	B	C	H	F(N)	L	Weight
CA.GPG.1	100	100	70	22	36	2	486 g
CA.GPG.2	160	160	120	30	50	4	1345 g
CA.GPG.3	250	250	200				3800 g

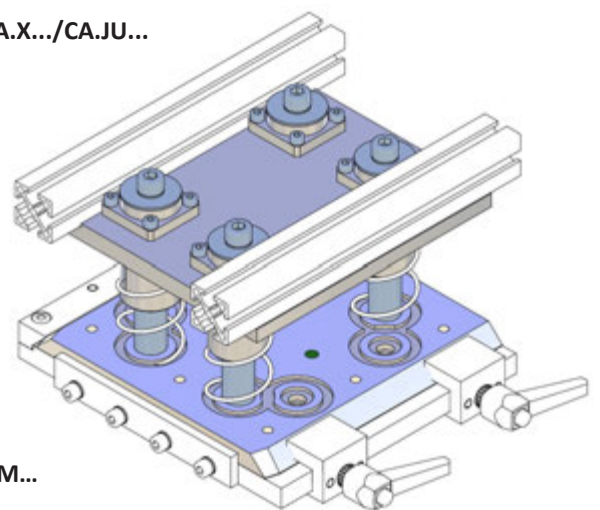
Application example / Anwendungsbeispiel



M = Suitable for ...  
Passend für ...

Article no.	A	B	F(N)	M
M.28X58.24N	28	58	24	CA.GPG.1
M.33X120.35N	33	120	35	CA.GPG.2 CA.GPG.3

CA.X.../CA.JU...



CA.SWM...

## CA.01 GPR

. Ground Plate Reduction

. Greifergrundplatte Reduzierung

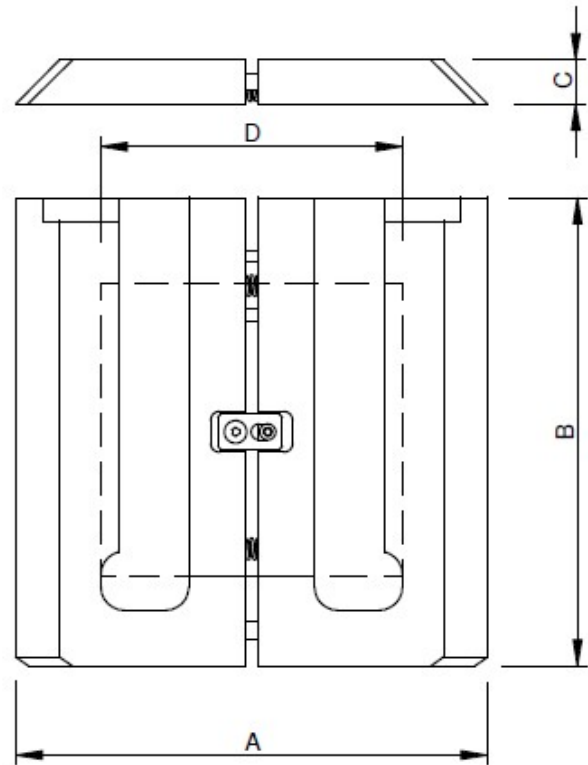
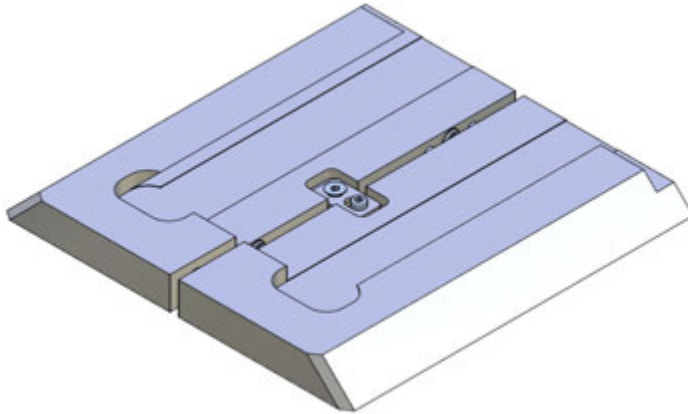


Table / Tabelle

M = Suitable for EOAT Groundplate GPM...  
Passend für Greifergrundplatte GPM...

Article no.	A	B	C	D	M	Weight
CA.GPR1.0	100	100	15	60	CA.GPM0 / CA.SWM1	263 g
CA.GPR2.1	160	160		100	CA.GPM1 / CA.SWM2	703 g
CA.GPR3.2	250	250	20	160	CA.GPM2 / CA.SWM3	2441 g

Remarks / Anmerkungen:

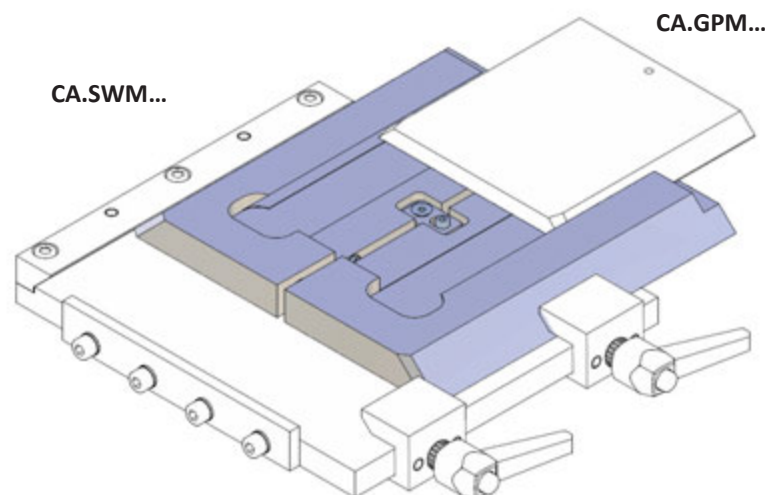
Material / Werkstoff: Aluminium

Surface: silver anodized  
Oberfläche: eloxiert

Adapter plate allows a smaller GPM size in a larger SWM  
Mit dieser Adapterplatte können Greifergrundplatten(GPM) in größere Schnellwechselsystem (SWM) adaptiert werden

No need to convert the robots side  
Umrüsten der Roboterseite ist nicht erforderlich

Application example / Anwendungsbeispiel



## CA.01 GHV

### . Holding Fixture

### . Greiferwandhalterung

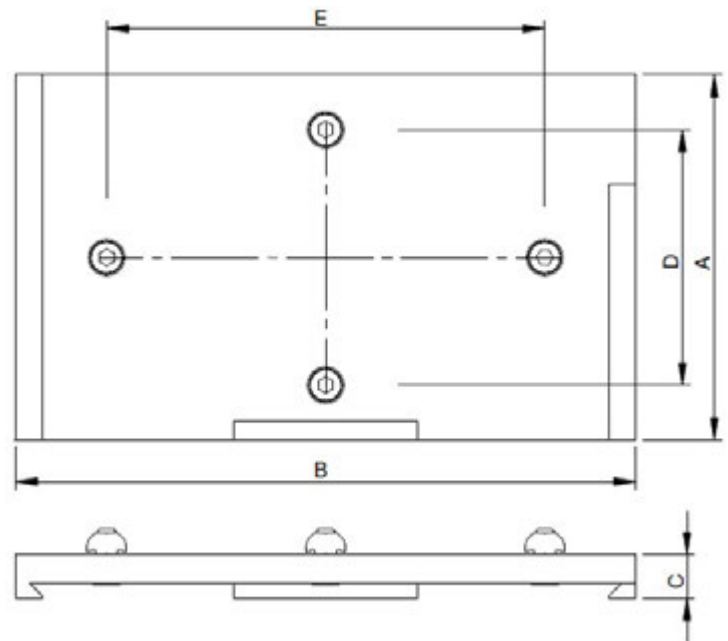
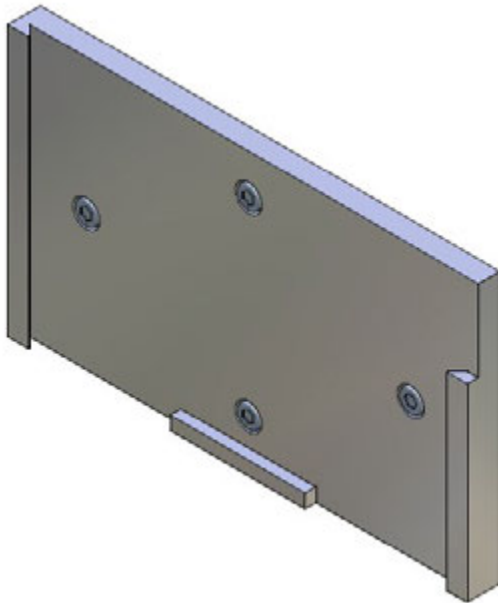


Table / Tabelle

**M** = Suitable for EOAT Groundplate GPM...  
Passend für Greifergrundplatte GPM...

Article no.	A	B	C	D	E	M	Weight
CA.GHV.60	60	70	10	35	30	CA.GPM0	128 g
CA.GHV.100		110			70	CA.GPM1	182 g
CA.GHV.160	100	170	12	70	120	CA.GPM2	412 g
CA.GHV.250	120	270	15	90	220	CA.GPM3	1033 g

The holding fixture, once fixed to the wall or frame, is used to store your EOAT when it is not in function

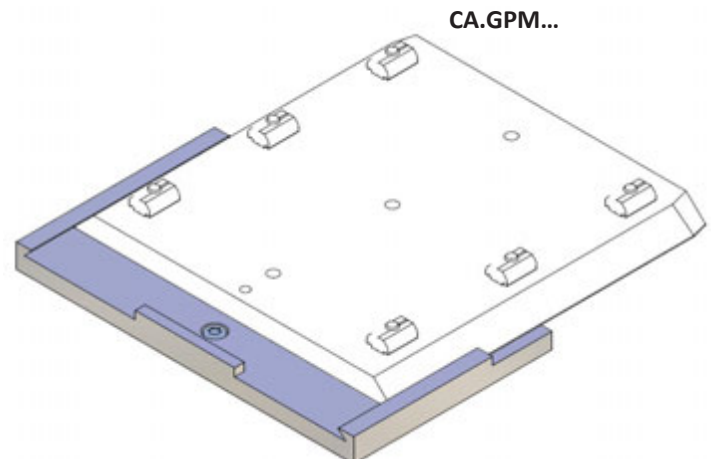
Die Wandhalterung kann, an der Wand oder dem Rahmen befestigt, genutzt werden um Ihre Greifer zu lagern wenn diese nicht in Betrieb sind.

Remarks / Anmerkungen:

Material / Werkstoff: Aluminium

Surface: silver anodized  
Oberfläche: eloxiert

### Application example / Anwendungsbeispiel



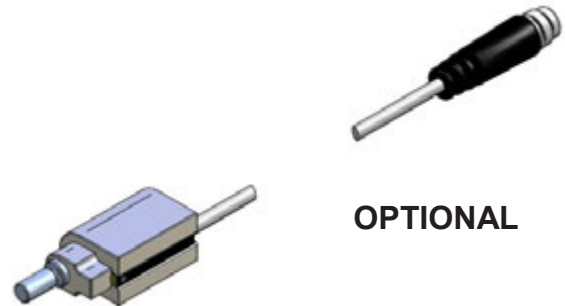
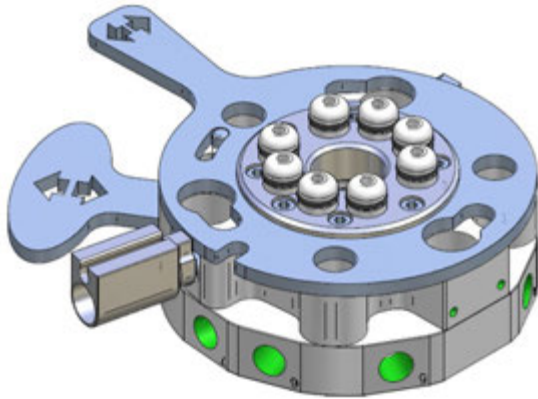
# CA.CUDL.90

. Quick changer

. Schnellwerkzeugwechsler

Robot side RS *Roboterseite*

Security lock *Verriegelungseinheit*



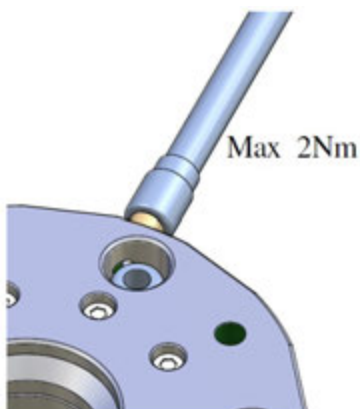
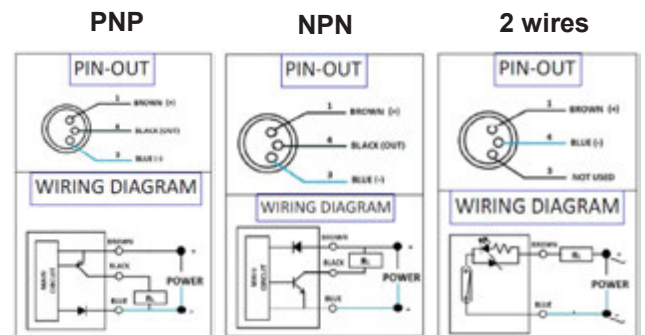
**OPTIONAL**

- Quick changer for easy replacement of EOAT on the robot
- Suitable for vacuum connectors as well
- Avoids mistakes in pneumatic/electrical connections
- Available with 8, 10 or 12 pneumatic interface
- 15 pins D-SUB electrical interface
- Robot side and Gripper side part are supplied separately
- CUDL Robot side can cut the air separately from the release lever

Article no.	Sensor with cable Optional	Weight
CA.CUDL.01	3 wires electronic PNP normally Open M8 plug connector	18 g
CA.CUDL.02	3 wires electronic NPN normally Open M8 plug connector	
CA.CUDL.03	2 wires electronic	

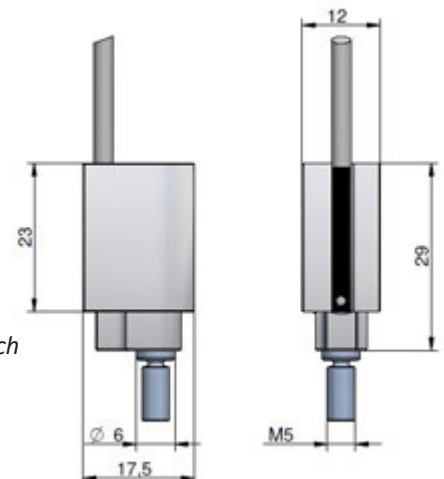
- Schnellwechsel des Greifer auf dem Roboter
- Auch für Vakuumanchlüsse geeignet
- Vermeidet Fehler bei pneumatischen und elektrischen Anschlüssen
- 8, 10 oder 12 pneumatische Schnittstellen
- 15 Polig D-SUB Schnittstelle
- Die Komponenten Roboter- und Greifenseite werden separat geliefert.
- CUDL Roboterseite kann durch die Luft getrennt von dem Entriegelungshebel

Article no.		F	Mt	Mb	Weight
CA.CUDL.90	RS/90	400 N	100 Nm	60 Nm	520 g
CA.CUDL.150	RS/150	1000 N	250 Nm	100 Nm	....
CA.CUDL.160	RS/160				



After assembly it is possible to use the screw set in order to eliminate any play between the two sides with "zero tolerance"

Nach dem Verschließen der Teile ist es möglich mittels einer Fixierschraube ein Nullspiel zwischen beiden Seiten zu erreichen

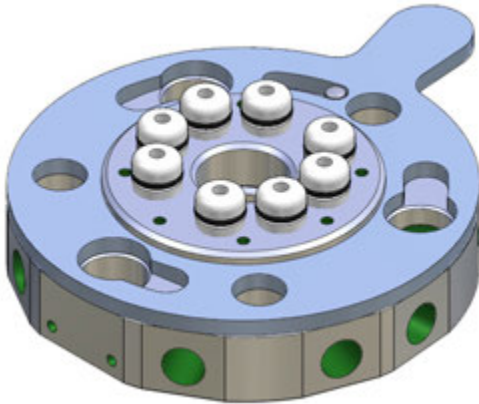




## CA.01.01/CUSL

### . Quick changer

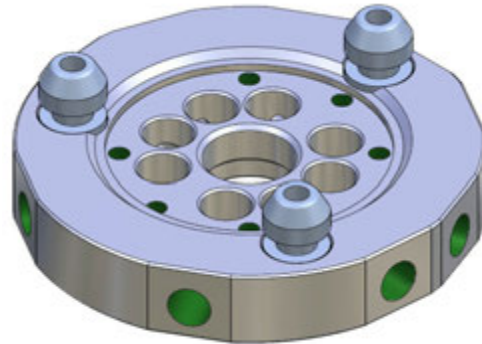
Robot side RS *Roboterseite*



- Quick changer for easy replacement of EOAT on the robot
- Suitable for vacuum connectors as well
- Avoids mistakes in pneumatic/electrical connections
- Available with 8, 10 or 12 pneumatic interface
- 15 pins D-SUB electrical interface
- Robot side and Gripper side part are supplied separately

### . Schnellwerkzeugwechsler

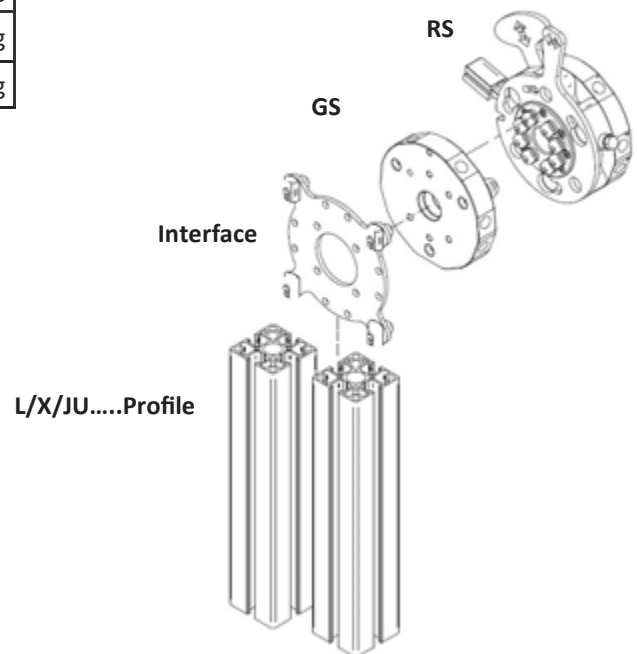
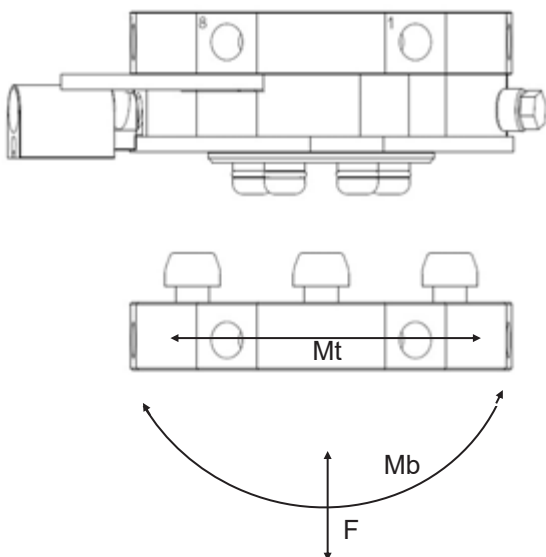
Gripper side GS *Greiferseite*



- Schnellwechsel des Greifer auf dem Roboter
- Auch für Vakuumschlüsse geeignet
- Vermeidet Fehler bei pneumatischen und elektrischen Anschlüssen
- 8, 10 oder 12 pneumatische Schnittstellen
- 15 Polig D-SUB Schnittstelle
- Die Komponenten Roboter- und Greiferseite werden separat geliefert.

Article no.	Model	F	Mt	Mb	Weight
CA.01.01.001	RS/90	400 N	100 N	60 N	317 g
CA.01.01.002	GS/90				225 g
CA.01.01.003	RS/150	1000 N	250 N	100 N	1156 g
CA.01.01.004	GS/150				842 g
CA.01.01.013	RS/160				1218 g
CA.01.01.014	GS/160	922 g			
CA.CUSL.200.R	RS/200	2000 N	600 N	300 N	2409 g
CA.CUSL.200.G	GS/200				1775 g

### Application example / Anwendungsbeispiel

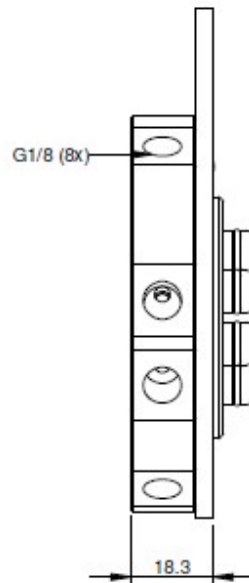
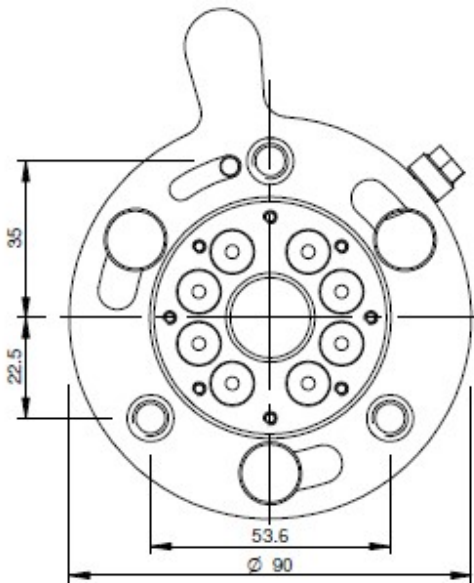
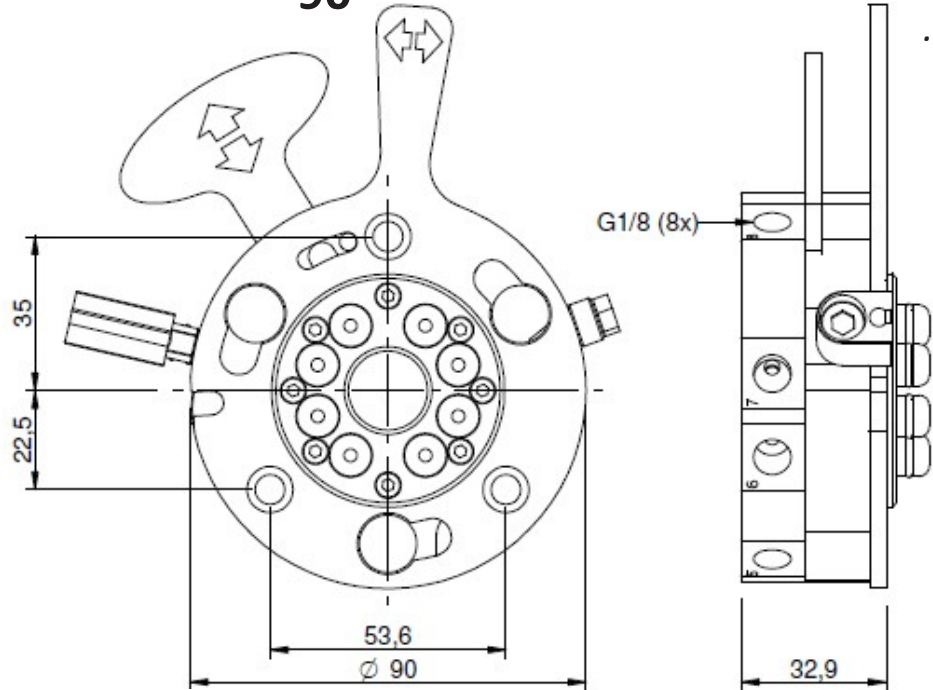


**CA.CUDL.90**

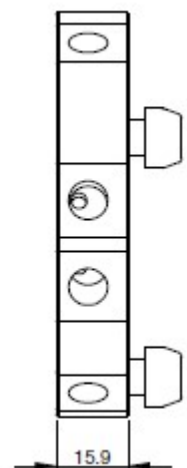
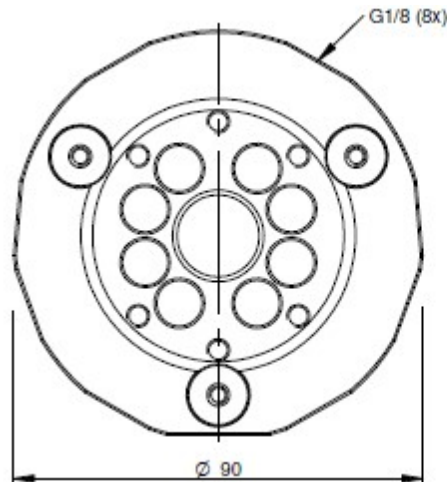
. Dimensions

**90**

. Maße



**CA.01.01**

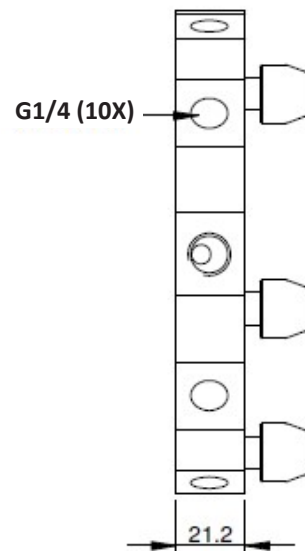
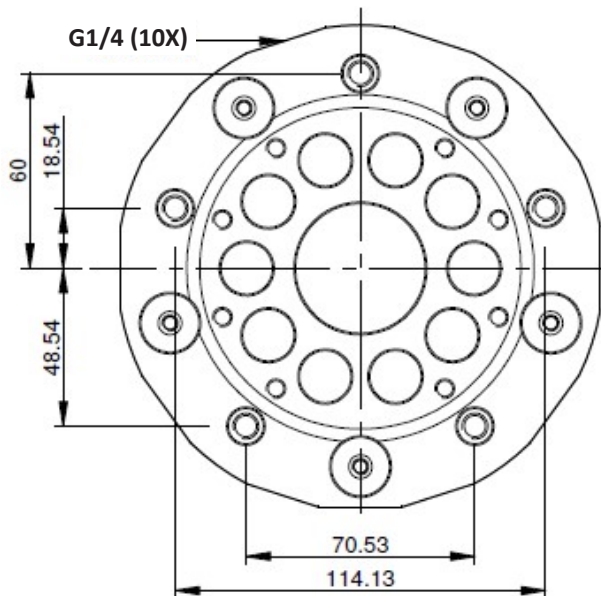
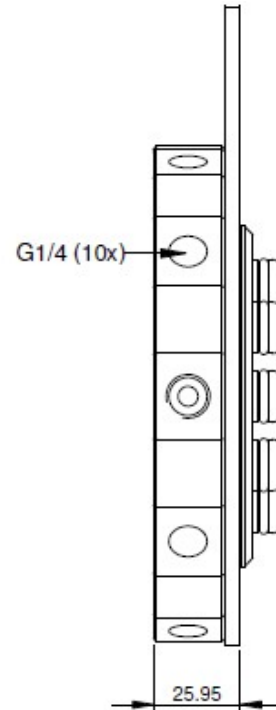
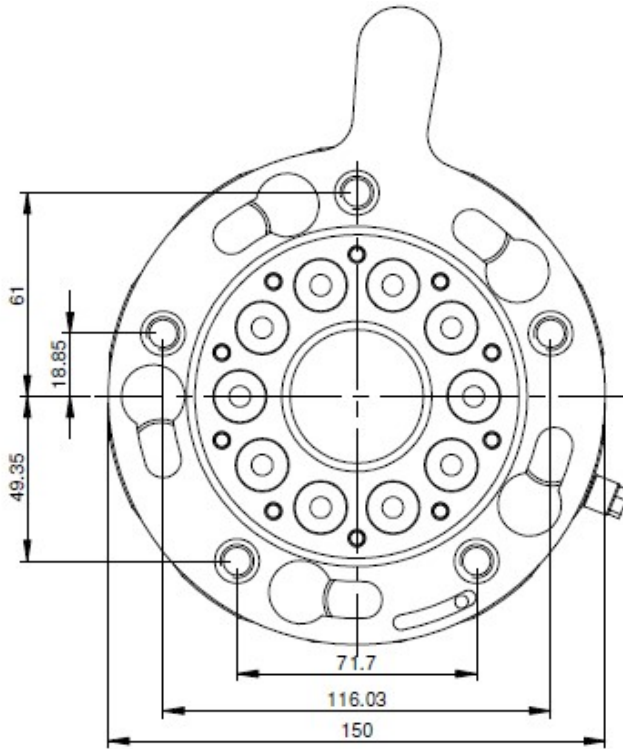


# CA.01.01

. Dimensions

## 150

. Maße

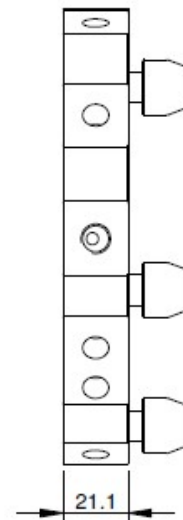
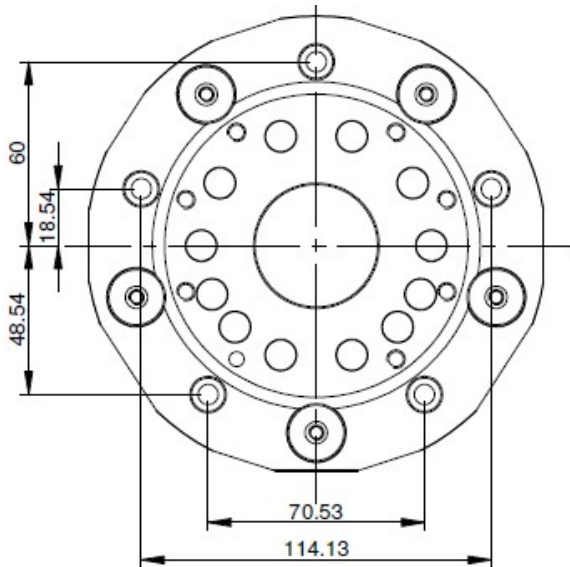
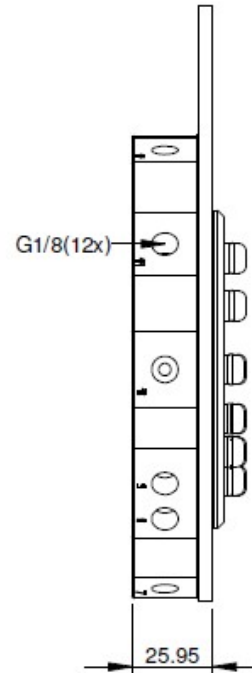
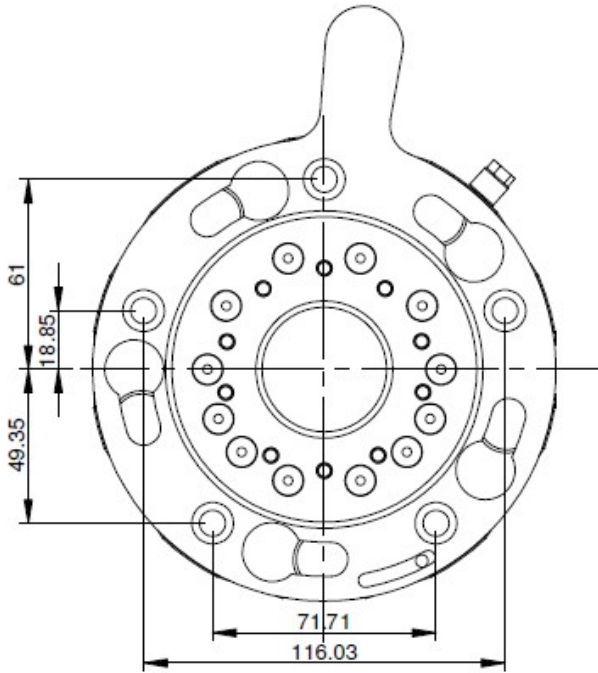


**CA.01.01**

. Dimensions

**160**

. Maße

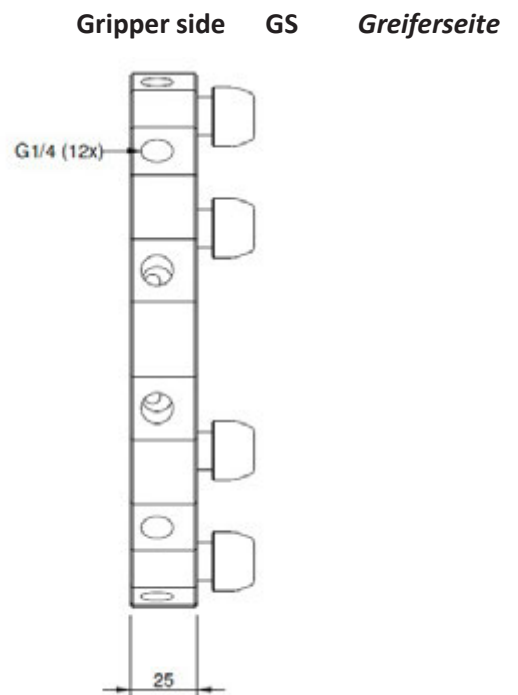
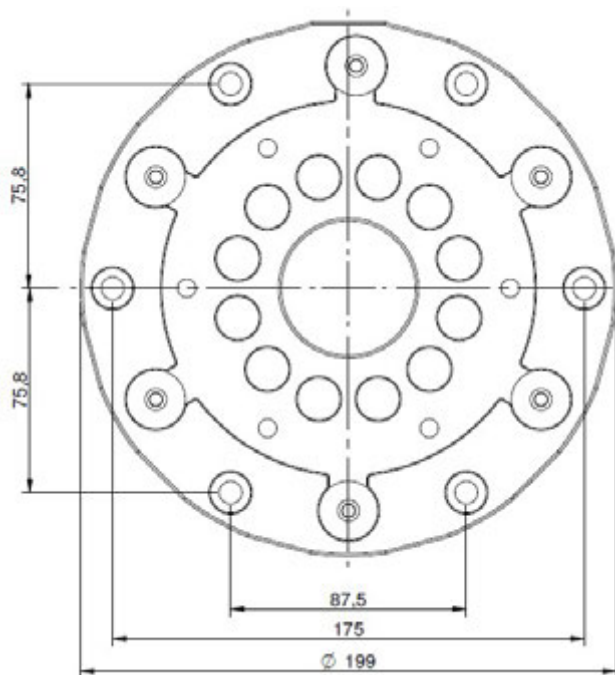
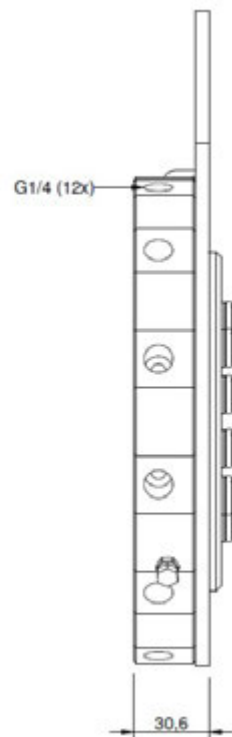
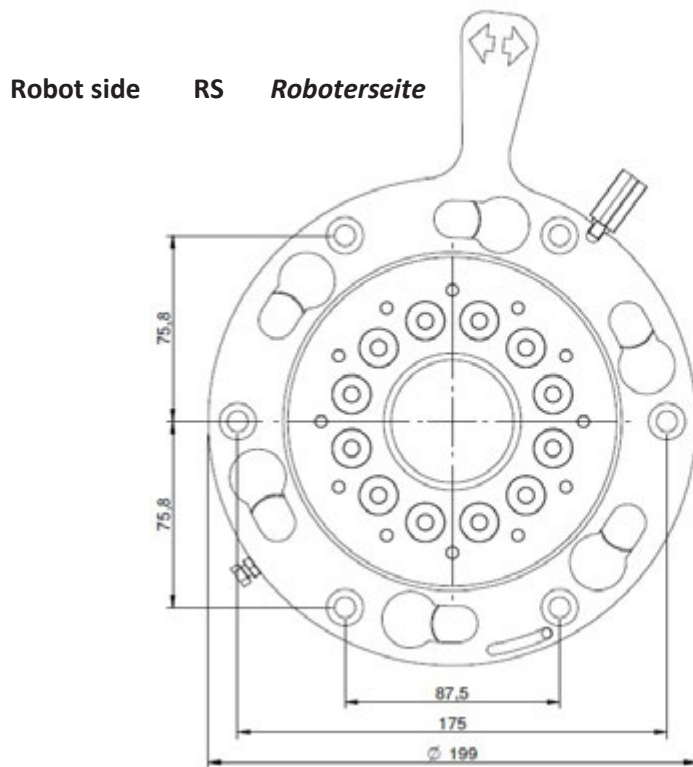


# CA.CUSL.200

. Dimensions

## 200

. Maße

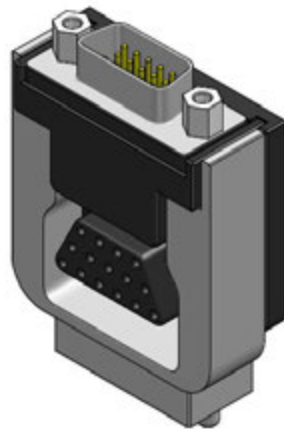


## CA.01.01

### . Electrical connector

### . Elektrische Schnittstel-

Robot side  
Roboterseite



Gripper Side  
Greiferseite



- 15 pins  $\varnothing 1$  mm
- I/O quick change by VGA connector
- Self-cleaning sliding contacts
- The two parts are supplied separately:  
CA.01.01.008 robot side  
CA.01.01.009 gripper side

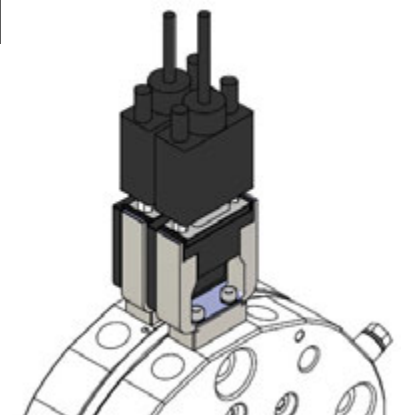
- 15 Polig  $\varnothing 1$  mm.
- E/A-Schnellanschluss durch VGA-Verbinder.
- Selbstreinigende Stecker.
- Komponenten werden separat geliefert:  
CA.01.01.008 Roboterseite  
CA.01.01.009 Greiferseite.

Table / Tabelle

**M** = Suitable for EOAT Groundplate GPM...  
Passend für Greifergrundplatte GPM...

Article no.		
<b>CA.01.01.008</b>	Robot side	CA.01.01.001 CA.01.01.003 CA.01.01.013 CA.CUDL... CA.CUSL.200.R
<b>CA.01.01.009</b>	Gripper side	CA.01.01.002 CA.01.01.004 CA.01.01.014 CA.CUSL.200.G

I/O connection type <i>Anschlusstyp E/A</i>	15 pins D-SUB - High density elbow type - VGA type <i>15 D-SUB-Stifte - Winkelsteckverbinder - Typ VGA</i>
Maximum contact resistance <i>Max. Kontaktwiderstand</i>	30 mW @ 100 mA DC
Minimum insulation resistance <i>Min. Isolationswiderstan</i>	500 MW @ 500 V DC
Working Current <i>Betriebsstrom</i>	3 A
Break down voltage <i>Entladenspannung</i>	1000 V AC (1 minute)
Temperature range <i>Betriebstemperatur</i>	-55°C ÷ +105°C



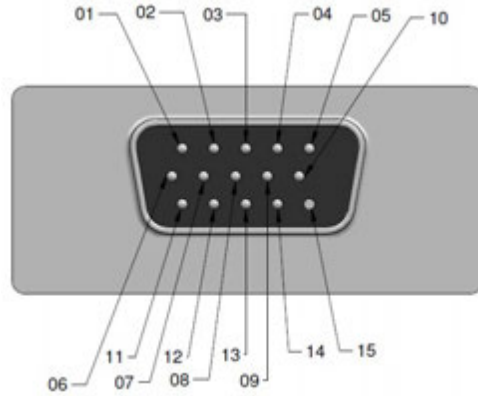
## CA.01.01

. Cable

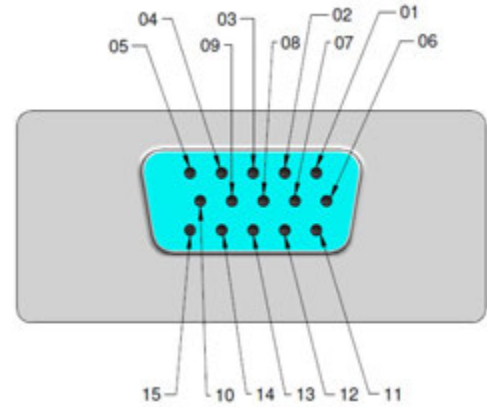
. Kabel



The male and female cables are supplied separately.  
*Die Kabel werden separat geliefert*



Male cable



Female cable

- 15 pins  $\varnothing 1$  mm
- I/O quick change by VGA connector
- Self-cleaning sliding contacts
- The two parts are supplied separately

- 15 Polig  $\varnothing 1$  mm
- E/A-Schnellanschluss durch VGA-Verbinder
- Selbstreinigende Stecker
- Komponenten werden separat geliefert

Article no.		
CA.01.01.011	Female cable	Robot side
CA.01.01.012	Male cable	Gripper side

	Colour
01	BLUE
02	PURPLE
03	ORANGE
04	PINK
05	TURQUOISE
06	GREY
07	YELLOW
08	GREEN
09	RED
10	BROWN
11	BLACK
12	WHITE
13	YELLOW/RED
14	GREEN/ BROWN
15	RED / BLUE

CA.01.01.GS

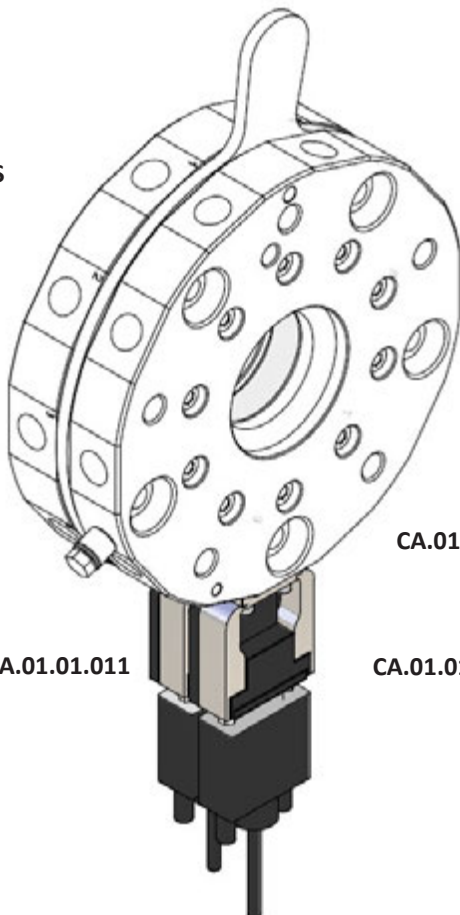
CA.01.01.RS

CA.01

CA.01.01.009

CA.01.01.011

CA.01.01.012



**CA.01.01**

. Holding Fixture

. Greiferwandhalterung

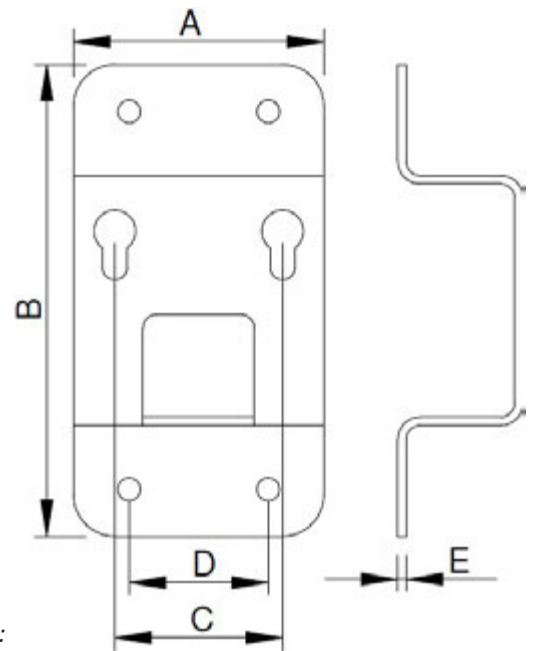
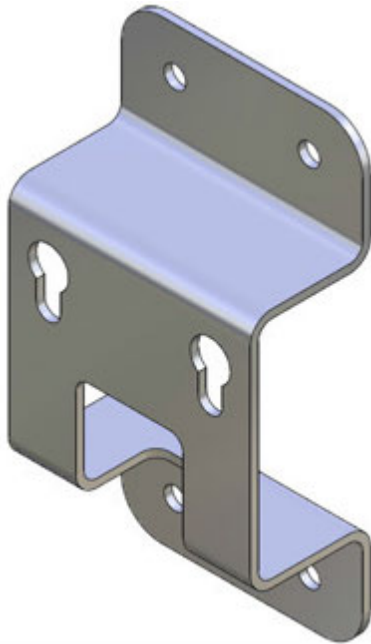


Table / Tabelle

M = Suitable for ...  
Passend für ...

Remarks / Anmerkungen:

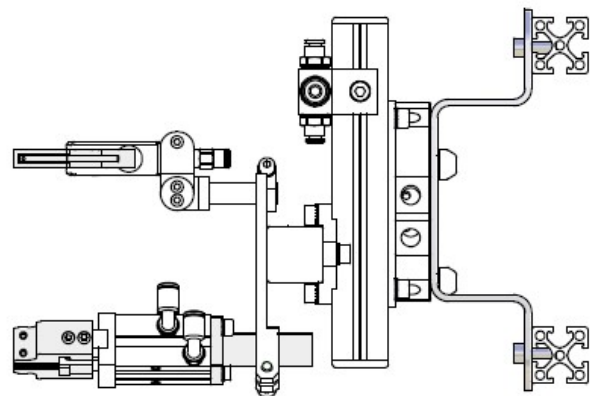
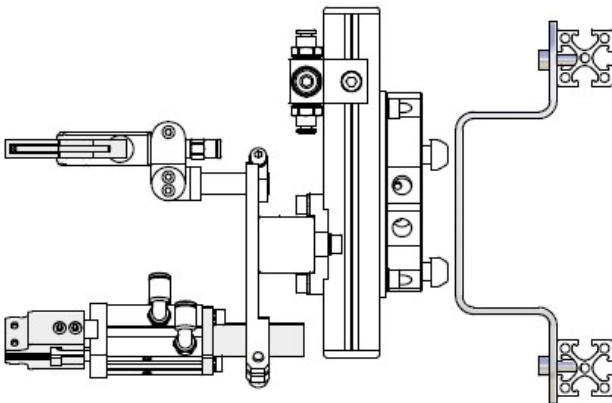
Material: Stainless Steel  
Werkstoff: Edelstahl

Article no.	A	B	C	D	E	M	Weight
CA.01.01.015	90	170	60.3	50	3	CA.01.01.002 CA.CUDL.90	440 g
CA.01.01.016	150	230	71.7	90		CA.01.01.004 CA.01.01.014	926 g
CA.01.01.017	200	270	142,8	160		CA.CUSL.200G	1188 g

The holding fixture, once fixed to the wall or frame, is used to store your EOAT when it is not in function

Die Wandhalterung kann, an der Wand oder dem Rahmen befestigt, genutzt werden um Ihre Greifer zu lagern wenn diese nicht in Betrieb sind.

Application examples / Anwendungsbeispiele





## CA.01.01

. Holding Fixture

. Greiferwandhalterung

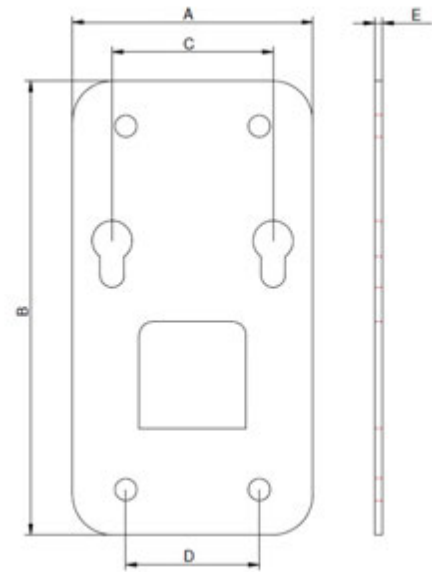
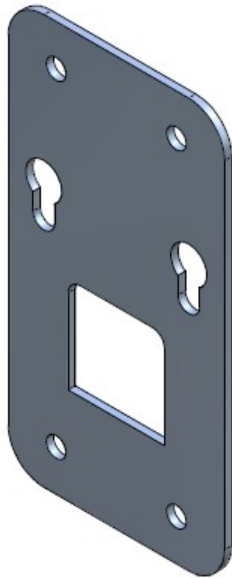


Table / Tabelle

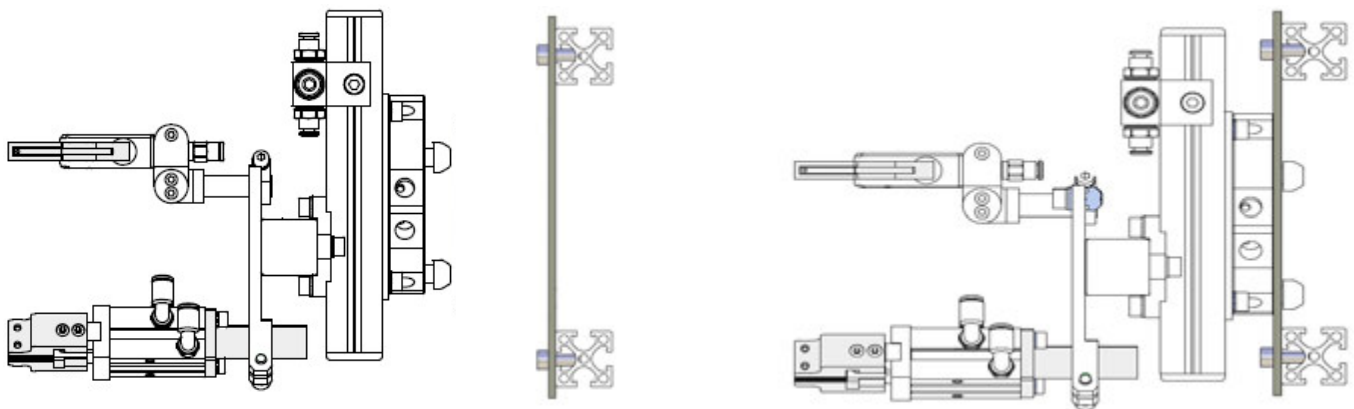
M = Suitable for ...  
Passend für ...

Remarks / Anmerkungen:

Material: Stainless Steel  
Werkstoff: Edelstahl

Article no.	A	M	B	C	D	E	Weight
CA.01.01.015.F	90	CA.01.01.002	170	60	50	3	307 g
CA.01.01.016.F	150	CA.01.01.004 CA.01.01.014	230	71	90		720 g
CA.01.01.017.F	200	CA.CUSL.200G	300	220	142.8		1398 g

Application examples / Anwendungsbeispiele



**CA.01.01**

**L/X/JU**

. Interface for CA.01.01

. Schnittstelle für CA.01.01

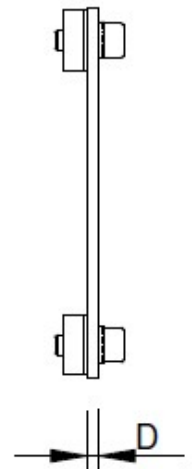
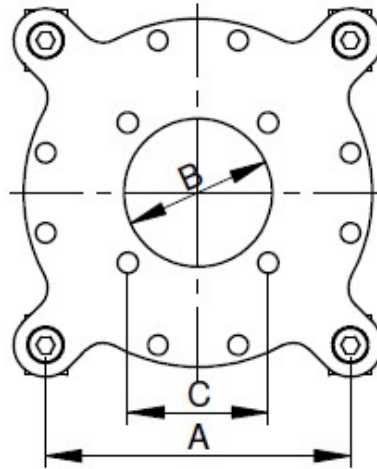
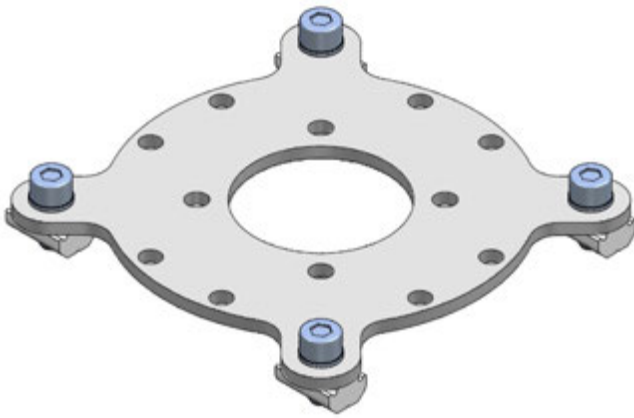


Table / Tabelle

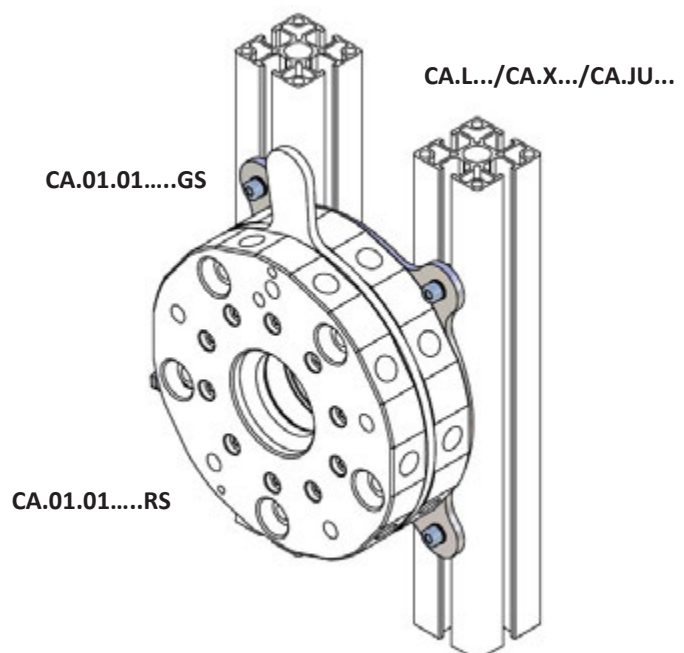
M = Suitable for ...  
Passend für ...

Remarks / Anmerkungen:

Material: Steel galvanized  
Werkstoff: Stahl verzinkt

Article no.	A	B	C	D	M	Weight
CA.01.01.006	76	37	35	3	CA.01.01.002 CA.CUDL.90	170 g
CA.01.01.007	110	70	52	4	CA.01.01.004 CA.01.01.014	497 g
CA.CUSL.200.I	192	140	151.6	8	CA.CUSL.200.G	1440 g

Application example / Anwendungsbeispiel





## CA.01.02 (FP 60-90-120)

RS

. Quick changer (robot side)

. Schnellwerkzeugwechsler (Roboterseite)

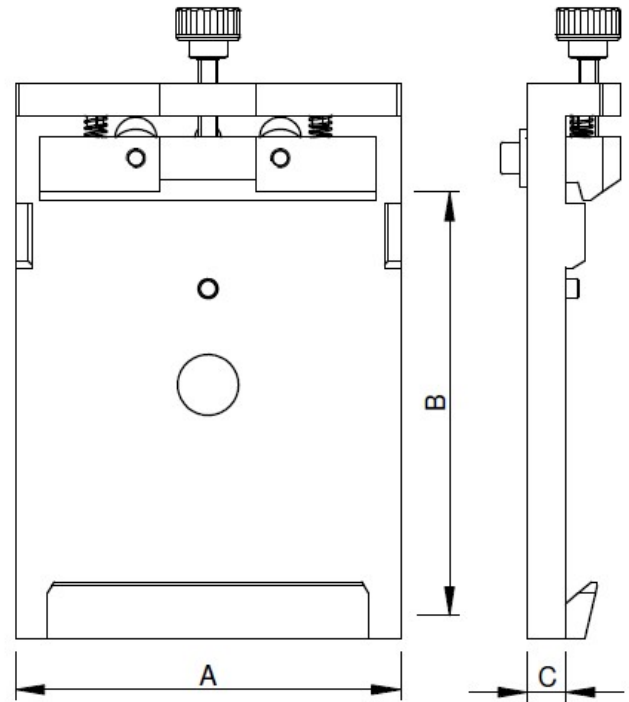
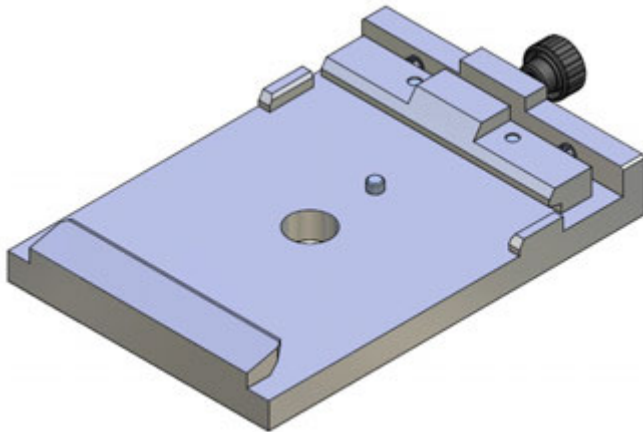


Table / Tabelle

**H** = Handling weight as approx value  
*Handhabungsgewicht als Richtwert*

**M** = Suitable for EOAT Groundplate CA.01.02...  
*Passend für Greifergrundplatte CA.01.02...*

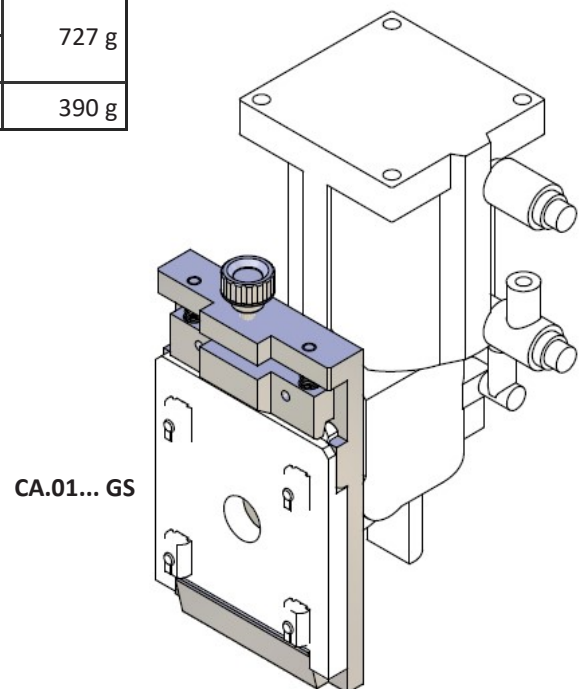
Remarks / Anmerkungen:

Material / Werkstoff: Aluminium

Surface: silver anodized  
*Oberfläche: eloxiert*

Article no.	A	B	C	H	M	Weight
CA.01.02.001	60	72	8	5 kg	CA.01.02.002	237 g
CA.01.02.003	120	130	12	20 kg	CA.01.02.004	727 g
CA.01.02.003B					CA.01.02.004A	
CA.01.02.007	90	108	8	10 kg	CA.01.02.008	390 g

Application example / Anwendungsbeispiel

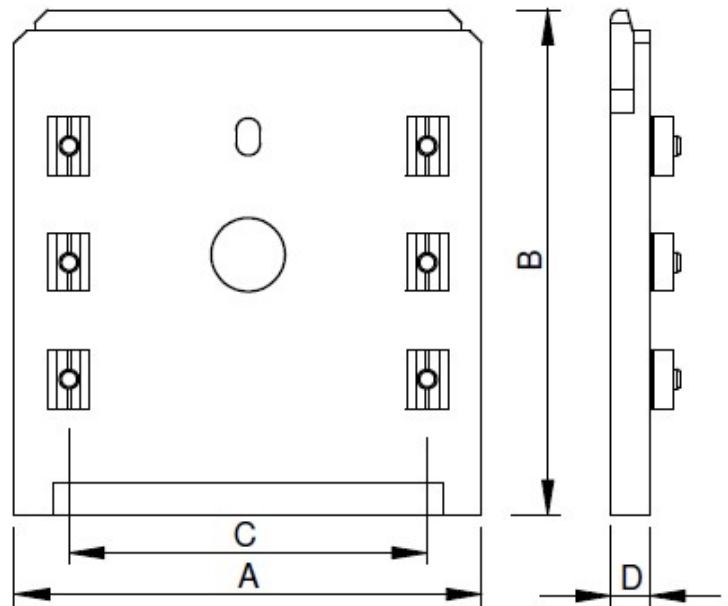
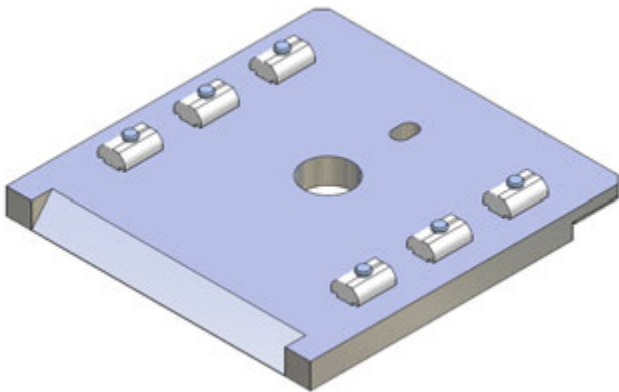


## CA.01.02 (FP 60-90-120)

GS

. Quick changer (gripper side)

. Schnellwerkzeugwechsler (Greiferseite)



### Application example / Anwendungsbeispiel

Table / Tabelle

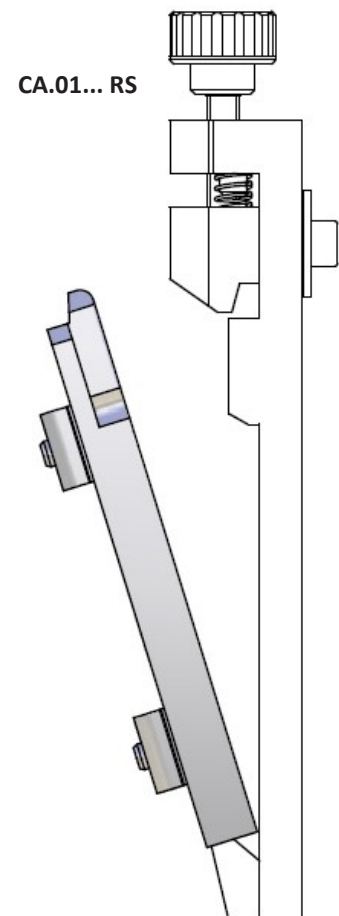
**M** = Suitable for EOAT Groundplate CA.01.02...  
Passend für Greifergrundplatte CA.01.02...

**M1** = Suitable for Profile  
Passend für Profil

Remarks / Anmerkungen:

Material / Werkstoff: Aluminium

Surface: silver anodized  
Oberfläche: eloxiert



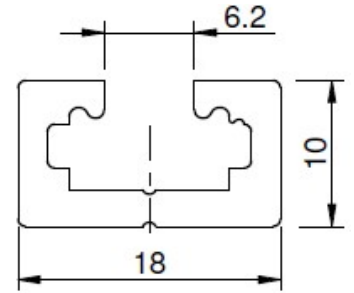
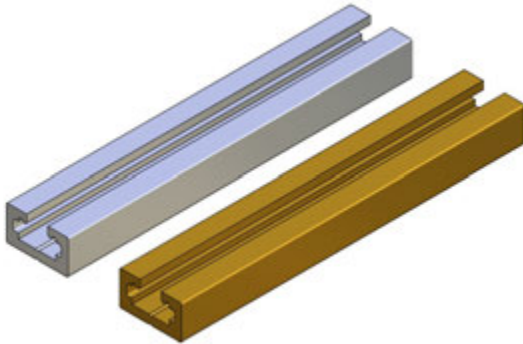
Article no.	A	B	C	D	M	M1	Weight
CA.01.02.002	60	72	20	10	CA.01.02.001	...	93 g
CA.01.02.002.X						L/X	130 g
CA.01.02.004	120	130	92		CA.01.02.003	...	377 g
CA.01.02.004.X						L/X/JU	432 g
CA.01.02.004A					...	371 g	
CA.01.02.004A.X					L/X/JU	426 g	
CA.01.02.008	90	108	62		CA.01.02.007	...	225 g
CA.01.02.008.X						L/X	262 g

**CA.02 L**

**L**

**. Profil L.1810**

**. Profil L.1810**



Surface: Aluminium anodized  
Oberfläche: eloxiert

Table / Tabelle

L = Length  
Länge

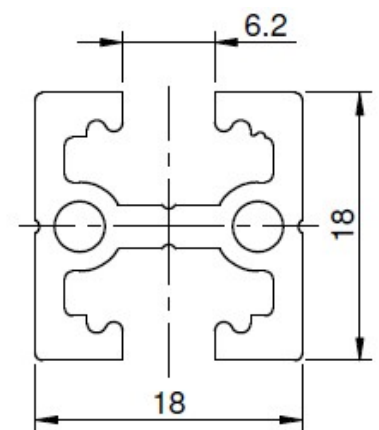
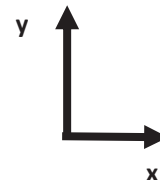
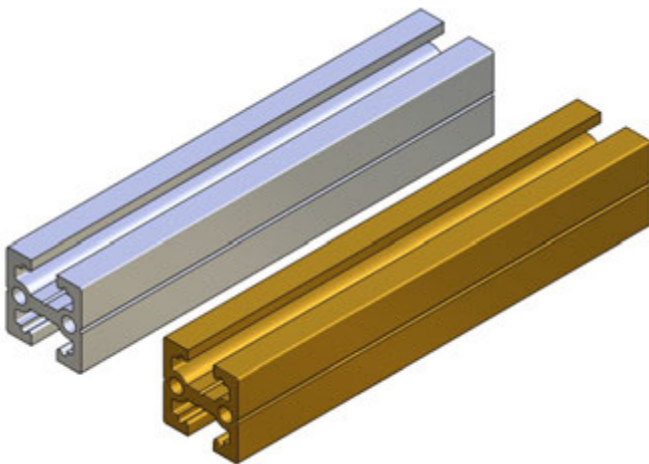
M = T-Nut / Nutenstein

M1 = Caps  
Verschlusskappe

Article no.		lx [mm <sup>4</sup> ]	ly [mm <sup>4</sup> ]	L	M	M1	Weight
CA.L.1810.1000	Silver	1060	3820	1 m	CA.GWP	CA.ADK.L.1810	267 g
CA.L.1810.1000G	Gold			2 m			534 g
CA.L.1810.2000	Silver						2 m
CA.L.1810.2000G	Gold			534 g			

**. Profil L.1818**

**. Profil L.1818**



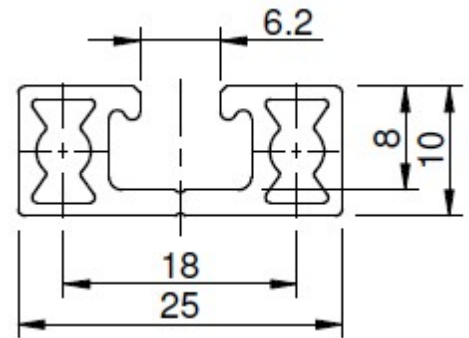
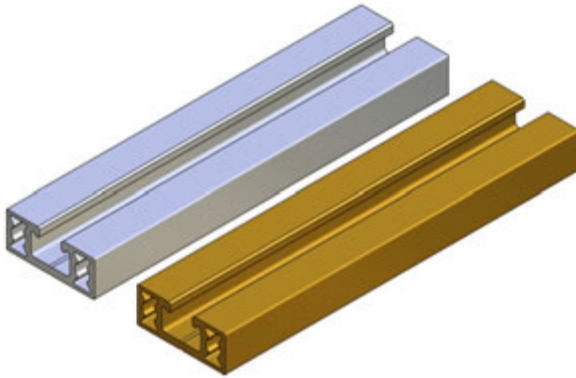
Article no.		lx [mm <sup>4</sup> ]	ly [mm <sup>4</sup> ]	L	M	M1	Weight
CA.L.1818.1000	Silver	4360	6230	1 m	CA.GWP	CA.ADK.L.1818	410 g
CA.L.1818.1000G	Gold			2 m			820 g
CA.L.1818.2000	Silver						2 m
CA.L.1818.2000G	Gold			820 g			

## CA.02 X

X

### . Profile X.2510

### . Profil X.2510



**New**

Table / Tabelle

L = Length  
Länge

M = T-Nut / Nutenstein

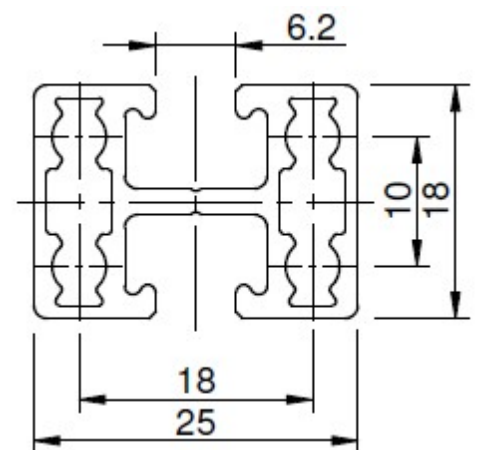
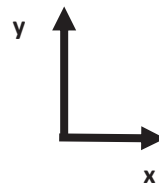
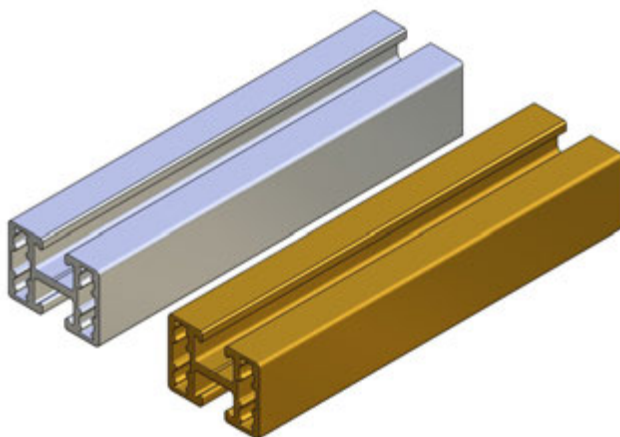
M1 = Caps  
Verschlusskappe

Surface: Aluminium anodized  
Oberfläche: eloxiert

Article no.		lx [mm <sup>4</sup> ]	ly [mm <sup>4</sup> ]	L	M	M1	Weight
CA.X.2510.1000	Silver	1300	7280	1 m	CA.GWP	CA.ADK.X.2510	290 g
CA.X.2510.1000G	Gold						
CA.X.2510.2000	Silver			2 m			580 g
CA.X.2510.2000G	Gold						

### . Profile X.2518

### . Profil X.2518



Article no.		lx [mm <sup>4</sup> ]	ly [mm <sup>4</sup> ]	L	M	M1	Weight
CA.X.2518.1000	Silver	5600	11500	1 m	CA.GWP	CA.ADK.X.2518	400 g
CA.X.2518.1000G	Gold						
CA.X.2518.2000	Silver			2 m			800 g
CA.X.2518.2000G	Gold						

## CA.02 X

X

### . Profile X.2525

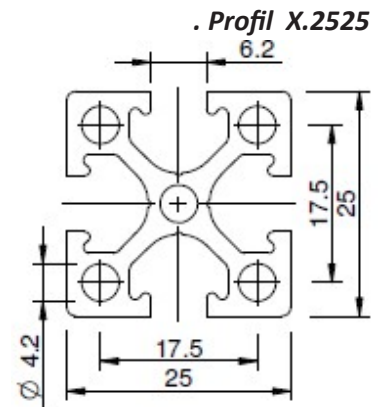
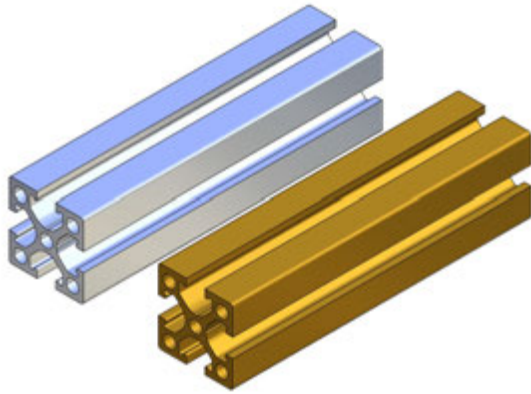


Table / Tabelle

L = Length  
Länge

M = T-Nut  
Nutenstein

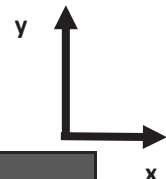
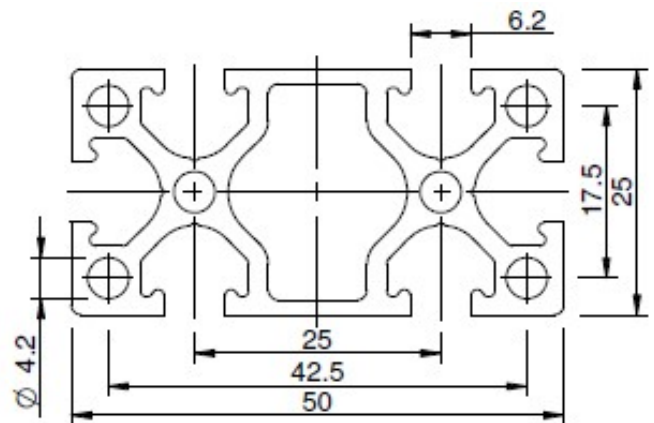
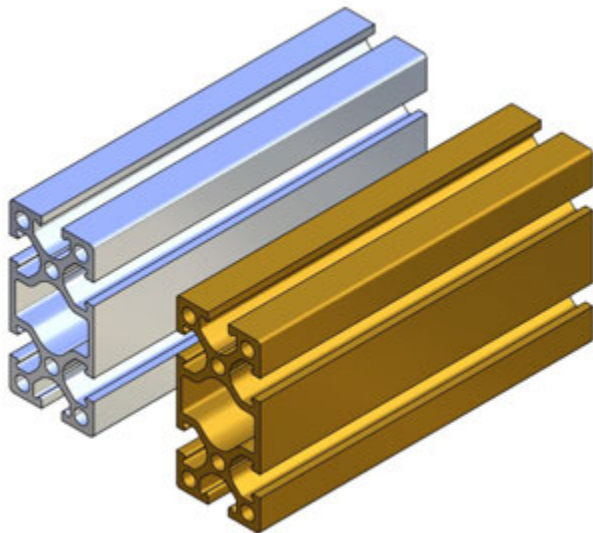
M1 = Caps  
Verschlusskappe

Surface: Aluminium anodized  
Oberfläche: eloxiert

Article no.		lx [mm <sup>4</sup> ]	ly [mm <sup>4</sup> ]	L	M	M1	Weight
CA.X.2525.1000	Silver	16260	16260	1 m	CA.GWP	CA.ADK.X.2525	683 g
CA.X.2525.1000G	Gold						
CA.X.2525.2000	Silver			2 m			
CA.X.2525.2000G	Gold						1366 g

### . Profile X.5025

**. Profil X.5025**



Article no.		lx [mm <sup>4</sup> ]	ly [mm <sup>4</sup> ]	L	M	M1	Weight
CA.X.5025.1000	Silver	28800	111100	1 m	CA.GWP	CA.ADK.X.5025	1050 g
CA.X.5025.1000G	Gold						
CA.X.5025.2000	Silver			2 m			
CA.X.5025.2000G	Gold						2100 g

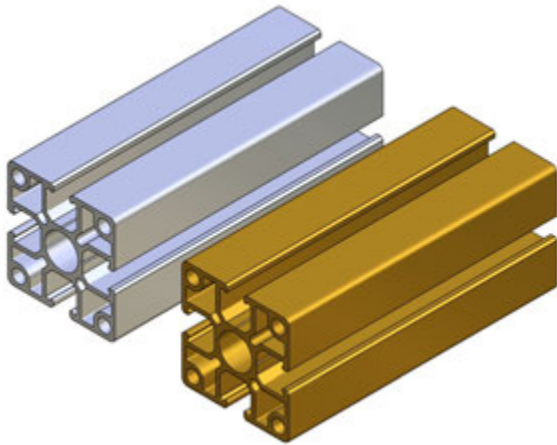


## CA.02 JU

JU

. Profile JU.4040

. Profil JU.4040



**New**

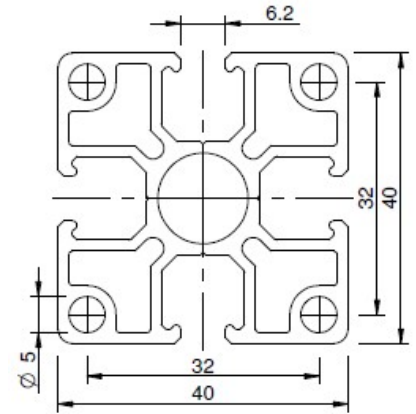


Table / Tabelle

L = Length  
Länge

M = T-Nut  
Nutenstein

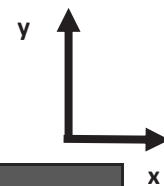
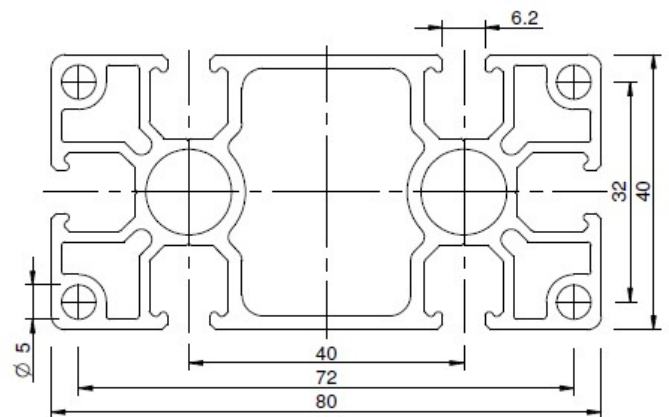
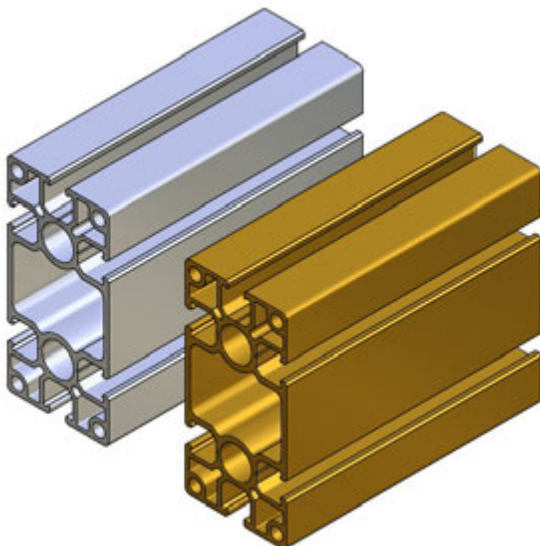
M1 = Caps  
Verschlusskappe

Surface: Aluminium anodized  
Oberfläche: eloxiert

Article no.		lx [mm <sup>4</sup> ]	ly [mm <sup>4</sup> ]	L	M	M1	Weight
CA.JU.4040.1000	Silver	86200	86200	1 m	CA.GWP	CA.ADK.JU.4040	1408 g
CA.JU.4040.1000G	Gold						
CA.JU.4040.2000	Silver			2 m			2816 g
CA.JU.4040.2000G	Gold						

. Profile JU.8040

. Profil JU.8040



Article no.		lx [mm <sup>4</sup> ]	ly [mm <sup>4</sup> ]	L	M	M1	Weight
CA.JU.8040.1000	Silver	155400	587050	1 m	CA.GWP	CA.ADK.JU.8040	2303 g
CA.JU.8040.1000G	Gold						
CA.JU.8040.2000	Silver			2 m			4606 g
CA.JU.8040.2000G	Gold						

## CA.02 ADK

L/X/JU

. Profile end cap

. Verschlusskappen

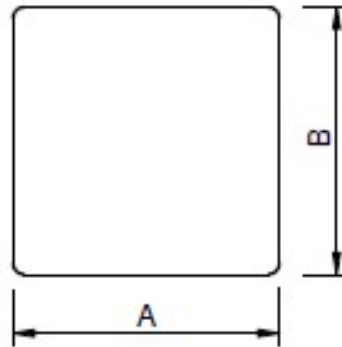
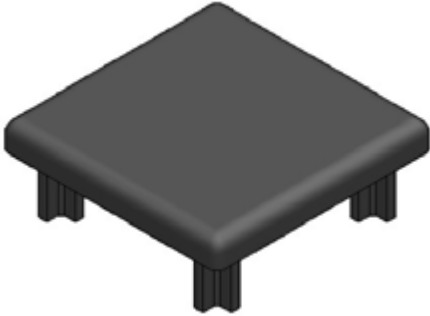


Table / Tabelle

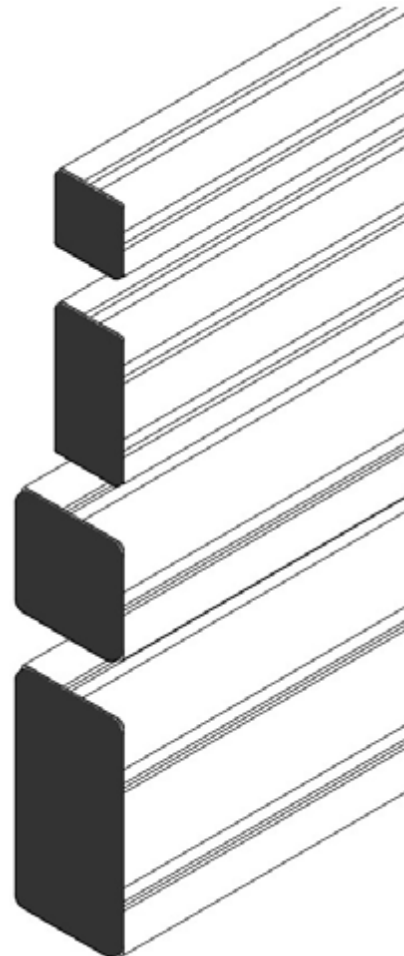
**M** = Suitable for Profiles  
Passend für Profile

Remarks / Anmerkungen:

Shipping unit: VE = 10 pieces  
Versandereinheit: VE = 10 Stück

Material / Werkstoff: PP polypropylene

Article no.	A	B	M	Weight
CA.ADK.L.1810	18	10	CA.L.1810...	2 g x 10
CA.ADK.L.1818		18	CA.L.1818...	
CA.ADK.X.2510	25	10	CA.X.2510...	
CA.ADK.X.2518		18	CA.X.2518...	
CA.ADK.X.2525		25	CA.X.2525...	3 g x 10
CA.ADK.X.5025	50	40	CA.X.5025...	4 g x 10
CA.ADK.JU.4040	40		CA.JU.4040...	7 g x 10
CA.ADK.JU.8040	80		CA.JU.8040...	13 g x 10

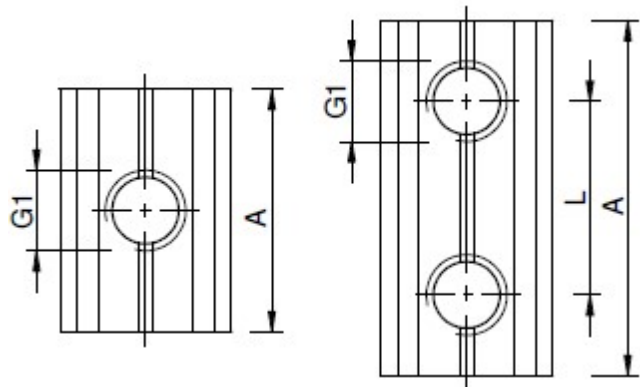
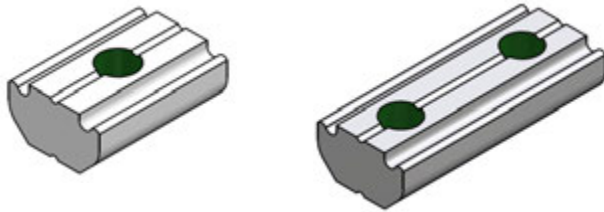


## CA.02 GWP

L/X/JU

. T-Nut

. Nutensteine für Profil



Suitable for Profiles L/X/JU  
Passend für Profile L/X/JU

Article no.	G1	L	A	Weight
CA.GWP.3U	M3	...	15	6 g

Article no.	G1	L	A	Weight
CA.GWP.4U	M4	...	15	6 g
CA.GWP.4.8		8	16	
CA.GWP.4.9		9	19	7 g
CA.GWP.4.16		16	24	9 g
CA.GWP.4.17		17	25	10 g
CA.GWP.4.25		25	32	13 g
CA.GWP.4.LM		...	10	4 g

New

Article no.	G1	L	A	Weight
CA.GWP.5U	M5	...	15	6 g
CA.GWP.5.9		9	18	
CA.GWP.5.10		10	18	
CA.GWP.5.11		11	19	7 g
CA.GWP.5.12		12	22	8 g
CA.GWP.5.15		15	25	9 g
CA.GWP.5.17		17		
CA.GWP.5.20		20	30	11 g
CA.GWP.5.22		22	32	12 g
CA.GWP.5.25		25	33	12 g
CA.GWP.5.25.3		25 x 2	58	22 g
CA.GWP.5.28		28	38	13 g
CA.GWP.5.30		30	40	16 g
CA.GWP.5.35		35	45	18 g
CA.GWP.5.38		38	48	19 g
CA.GWP.5.40		40		
CA.GWP.5.40.3		40	88	35 g
CA.GWP.5.50		50	58	23 g
CA.GWP.5.52		52	64	26 g
CA.GWP.5.60		60	68	27 g
CA.GWP.5.75		75	83	34 g
CA.GWP.5.LM	...	10	3 g	

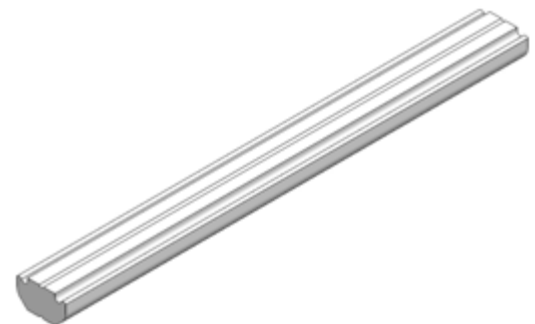
New

Article no.	G1	L	A	Weight
CA.GWP.6U	M6	...	15	4 g
CA.GWP.6.12		12	24	8 g
CA.GWP.6.16		16	26	9 g
CA.GWP.6.20		20	30	11 g
CA.GWP.6.22		22	32	12 g
CA.GWP.6.25		25	35	13 g
CA.GWP.6.25.3			58	22 g
CA.GWP.6.28		28	40	15 g
CA.GWP.6.35		35	45	17 g
CA.GWP.6.40		40	50	19 g
CA.GWP.6.50		50	60	24 g
CA.GWP.6.52		52	64	25 g
CA.GWP.6.90		90	100	40 g
CA.GWP.6.LM		...	10	2 g

New

Material: Steel galvanized  
Werkstoff: Stahl verzinkt

Article no.	L	Weight
CA.GWP.500	500	212g
CA.GWP.1000	1000	420 g

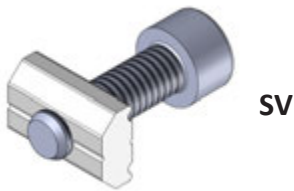


## CA.02 SV - UVV

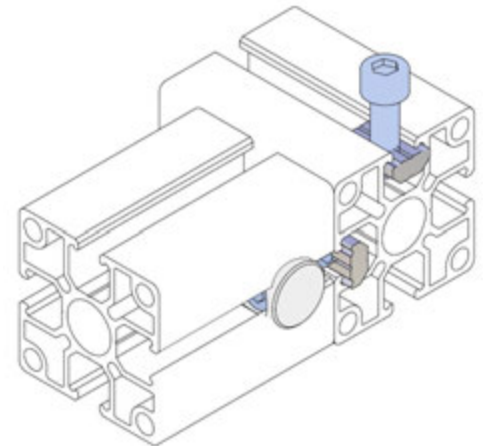
X/JU

. Butt Connector

. Stoßverbinder



SV



Remarks / Anmerkungen:

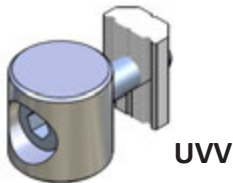
Article no.	D	M	Weight
CA.SV.X.5	M5	X	15 g
CA.SV.JU.6	M6	JU	

Shipping unit: VE = 10 pieces  
Versandereinheit: VE = 10 Stück

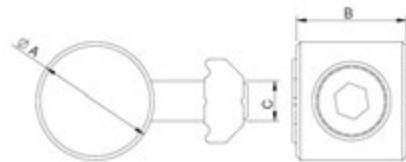
Material: Steel galvanized  
Werkstoff: Stahl verzinkt

Table / Tabelle

M = Suitable for Profiles  
Passend für Profile



UVV



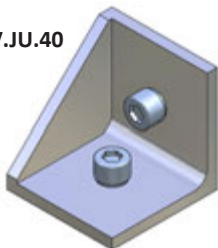
Article no.	A	B	C	M	Weight
CA.UVV.X.25.S	10	10	M4	X	7 g
CA.UVV.JU.40.S	15	14	M5	JU	10 g

## CA.02 WIV

. Corner Connector

. Winkelverbinder

CA.WIV.JU.40



CA.WIV.X.25.0



CA.WIV.X.50.25



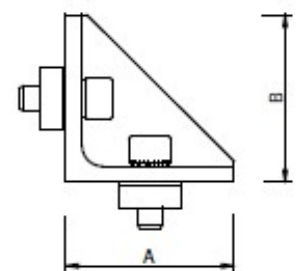
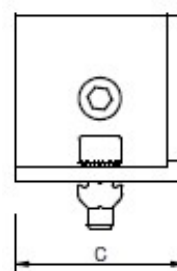
CA.WIV...E or M



Remarks / Anmerkungen:

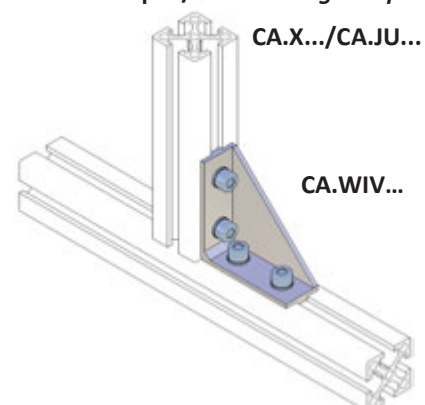
Material / Werkstoff: Aluminium

Surface: silver anodized  
Oberfläche: eloxiert



Article no.	A	B	C	M	Weight
CA.WIV.X.25.0	22	22	16	X	28 g
CA.WIV.X.50.25	50	50			80 g
CA.WIV.X.25.M	18	18	18		21 g
CA.WIV.X.25.E	38	38			51 g
CA.WIV.JU.40	40	40	40	JU	60 g
CA.WIV.JU.40.E	38	38	38		68 g
CA.WIV.JU.80.E	78	78	37		184 g

Application example / Anwendungsbeispiel



CA.X.../CA.JU...

CA.WIV...

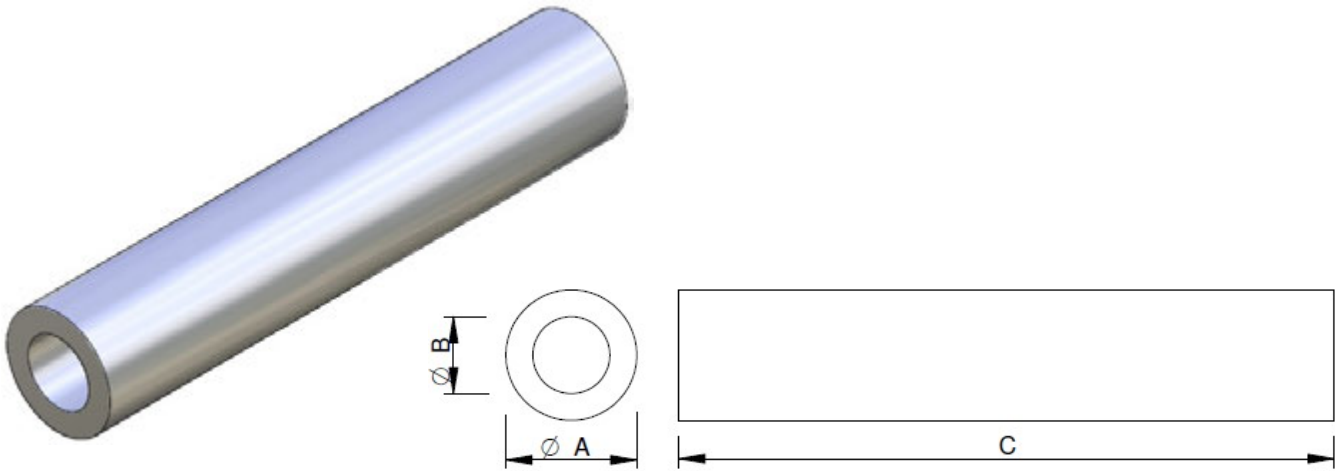


## CA.02 GAR

Ø 10-14-20-30

. Round profile tube

. Rund-Rohr Profile



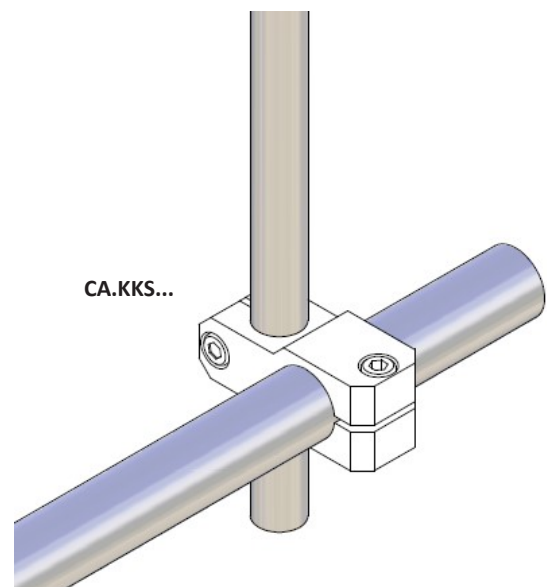
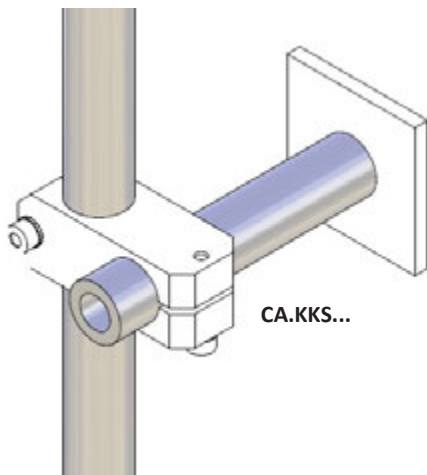
Remarks / Anmerkungen:

Material / Werkstoff: Aluminium

Surface: silver anodized  
Oberfläche: eloxiert

Article no.	A	B	C	Weight
CA.GAR.10.1000	10	5	1000	160 g
CA.GAR.14.1000	14	7		313 g
CA.GAR.20.1000	20	12		545 g
CA.GAR.30.1000	30	26		477 g

Application examples / Anwendungsbeispiele

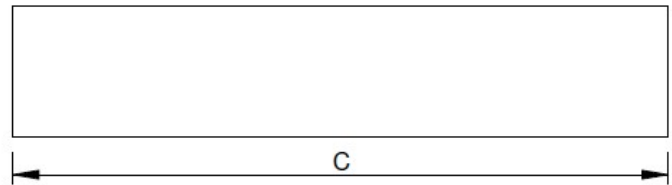
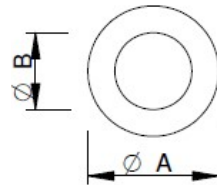
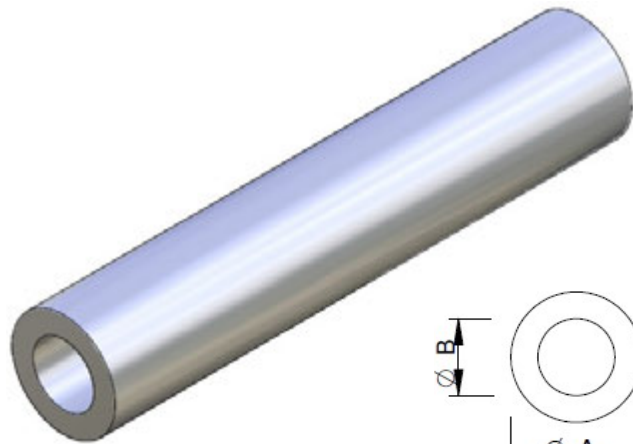


## CA.02 PAT

Ø 25-40

. Round profile tube

. Rund-Rohr Profile



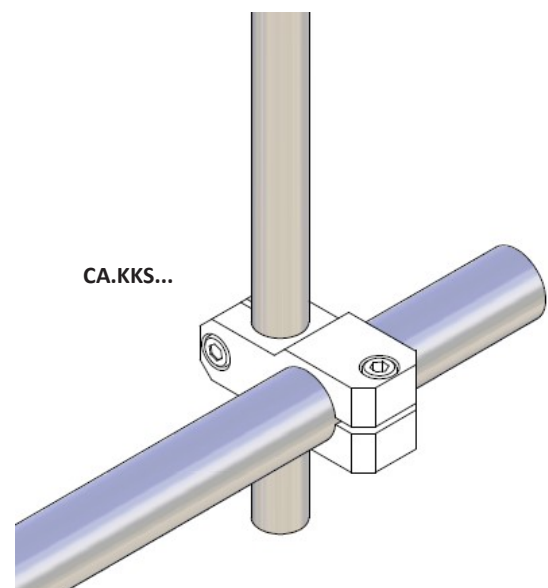
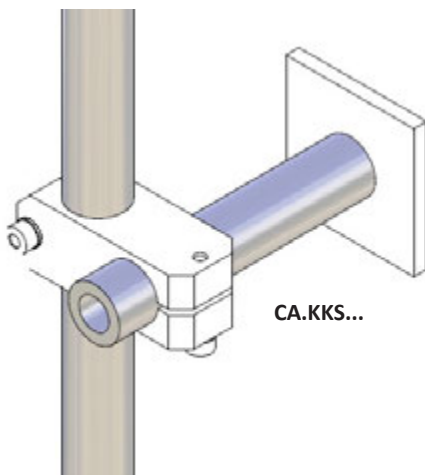
Remarks / Anmerkungen:

Material / Werkstoff: Aluminium

Surface: silver anodized  
Oberfläche: eloxiert

Article no.	A	B	C	Weight
CA.PAT.25X3.2000	25	22	2000	1100 g
CA.PAT.25X5.2000		20		1200 g
CA.PAT.40X3.2000	40	37		800 g
CA.PAT.40X5.2000		35		1000 g

Application examples / Anwendungsbeispiele



**CA.03 KPL**

. Cross Joint Connector

**L/X/JU**

. Profilverbinder

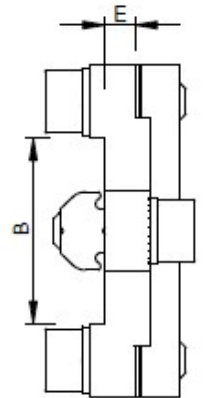
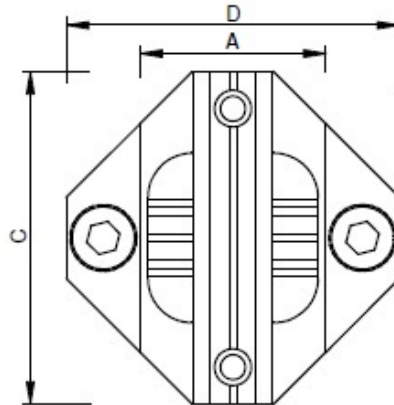
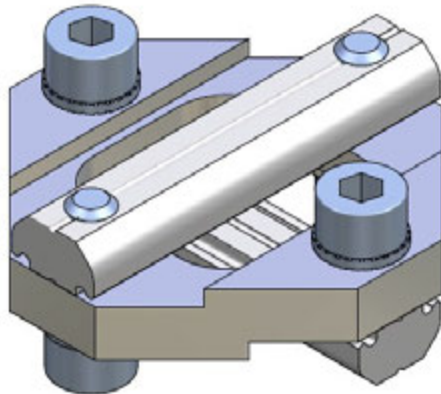


Table / Tabelle

**M** = Suitable for Profiles  
Passend für Profile

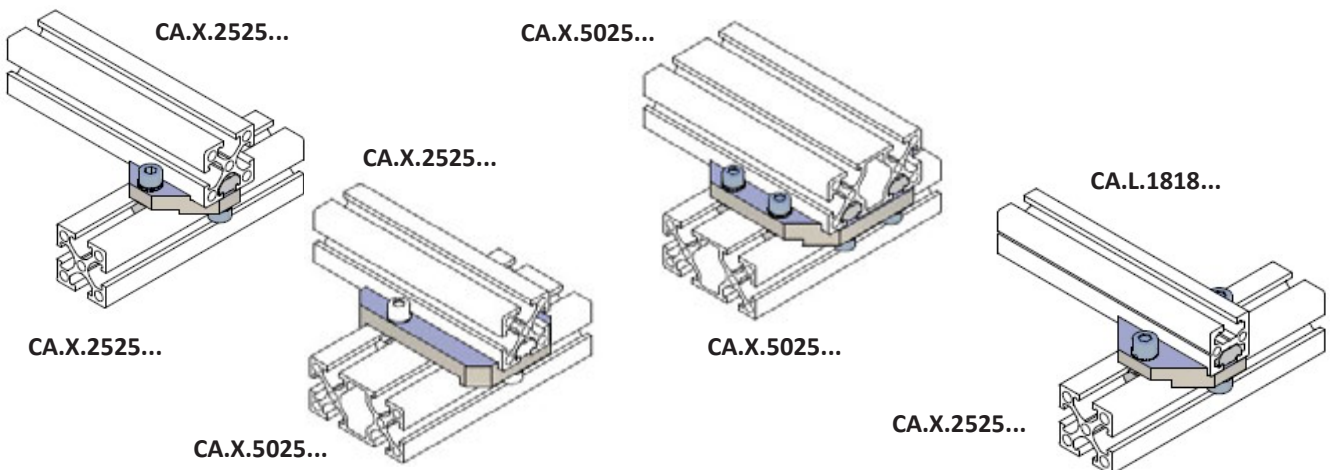
Remarks / Anmerkungen:

Material / Werkstoff: Aluminium

Surface: silver anodized  
Oberfläche: eloxiert

Article no.	A	B	C	D	E	M	Weight
CA.KPLL.1818	18	18	38	38	4	L	55 g
CA.KPLX.2518	25					L/X	72 g
CA.KPLX.2525	25	45	45	X		67 g	
CA.KPLX.5025						76 g	
CA.KPLX.5050	50	50	70	70		192 g	
CA.KPLJU.4040	40	40	65	65		JU	81 g
CA.KPLJU.4025		25	45	60		JU/X	77 g
CA.KPLJU.8040	80	40	100	100		JU	156 g
CA.KPLJU.8080		80			268 g		

Application examples / Anwendungsbeispiele





## CA.03 KBV

L/X/JU

. Square Joint Connector

. Kreuzverbindung vierkant

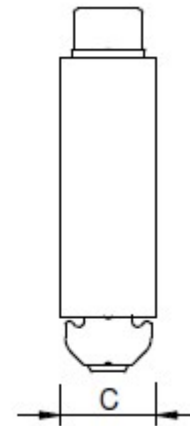
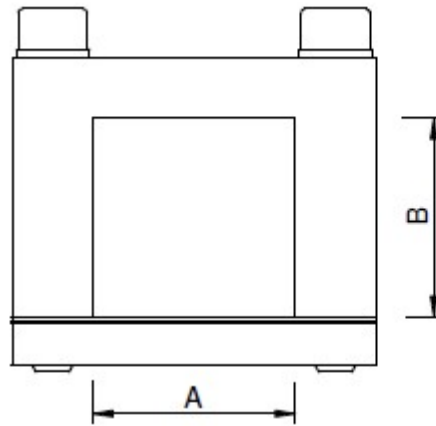
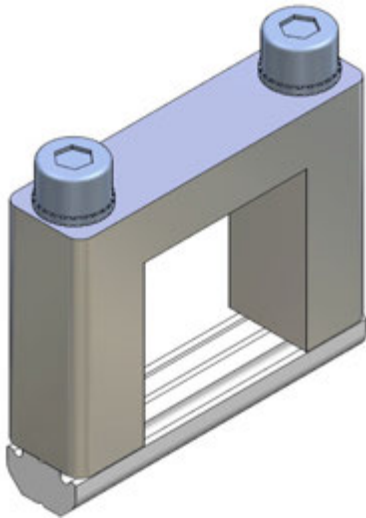


Table / Tabelle

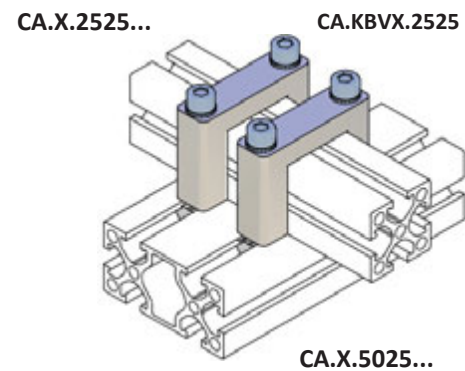
**M** = Suitable for Profiles  
Passend für Profile

Remarks / Anmerkungen:

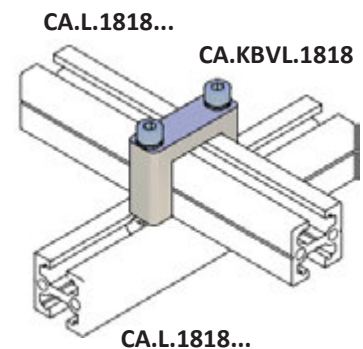
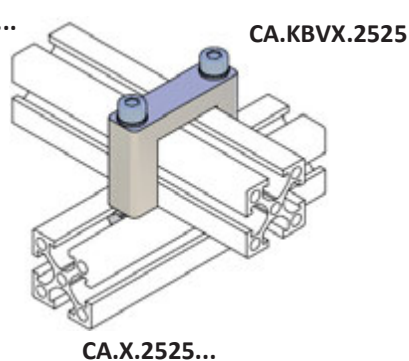
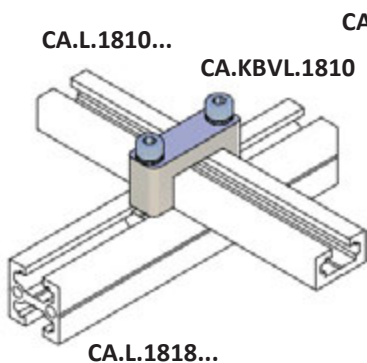
Material / Werkstoff: Aluminium

Surface: silver anodized  
Oberfläche: eloxiert

Article no.	A	B	C	M	Weight
CA.KBVL.1810	18	10	10	L	26 g
CA.KBVL.1818		18			30 g
CA.KBVX.2510	25	10	12	X	42 g
CA.KBVX.2518		18			48 g
CA.KBVX.2525		25			58 g
CA.KBVX.2550		50			79 g
CA.KBVX.5025	50	25			74 g
CA.KBVJU.4040	40	40	15	JU	107 g
CA.KBVJU.4080		80			150 g
CA.KBVJU.8040		80			140 g



Application examples / Anwendungsbeispiele



**CA.03 SVB**

**X**

. Profile End connector 25

. Stoßverbinder 25

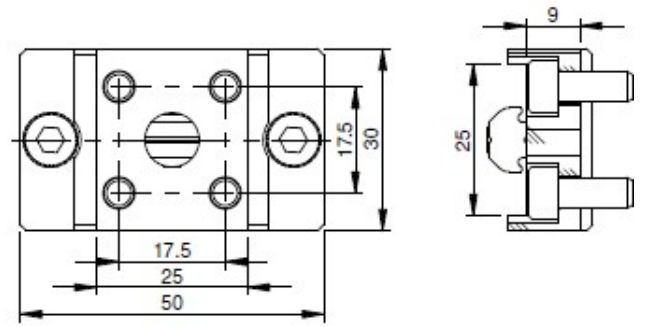
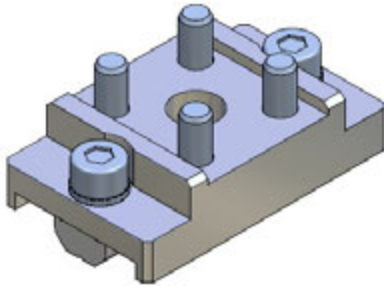


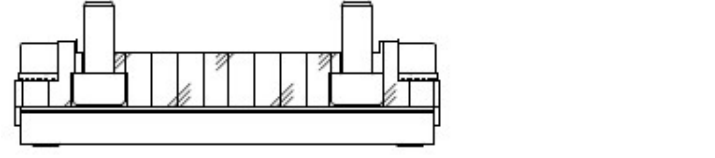
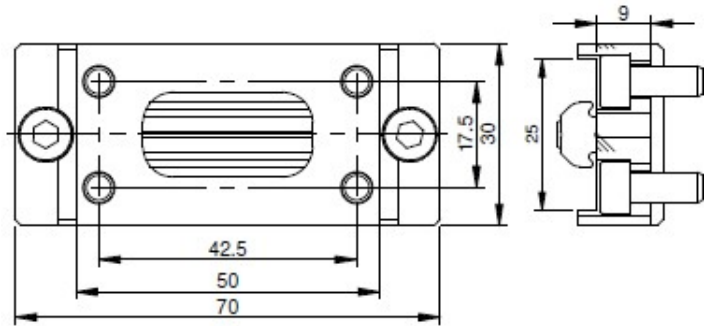
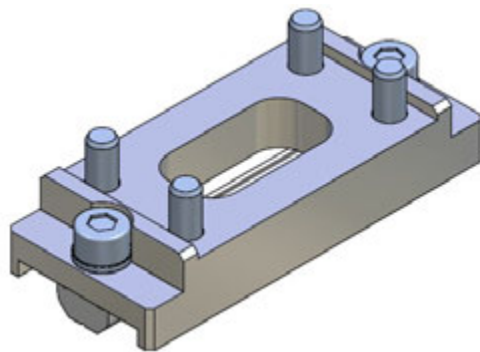
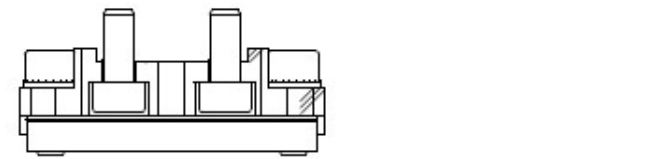
Table:

**M** = Suitable for Profiles  
*Passend für Profile*

Remarks / *Anmerkungen:*

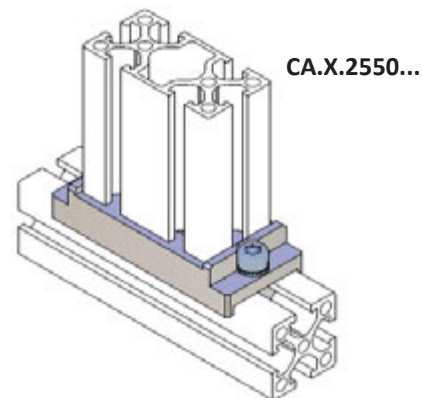
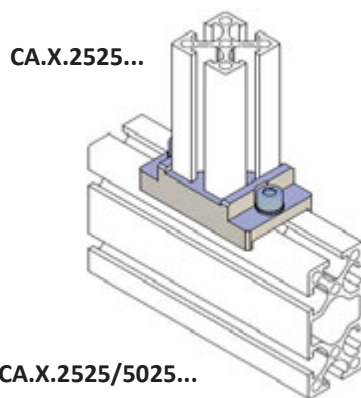
Material / *Werkstoff:* Aluminium

Surface: silver anodized  
*Oberfläche: eloxiert*



Article no.	M	Weight
CA.SVB.X.25.25	X	69 g
CA.SVB.X.25.50		87 g

Application examples / *Anwendungsbeispiele*



## CA.03 SVB

X

. Profile End connector 50

. Stoßverbinder 50

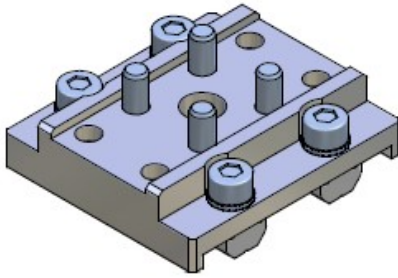


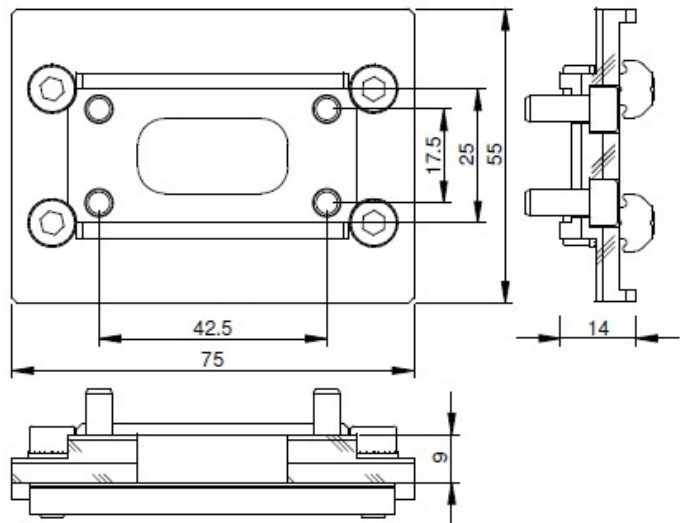
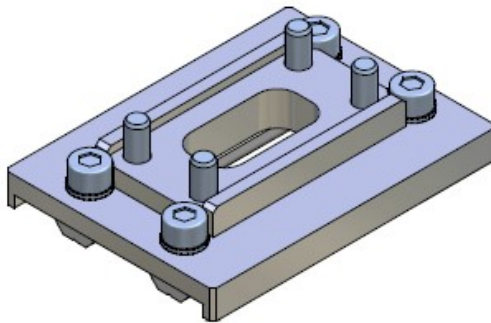
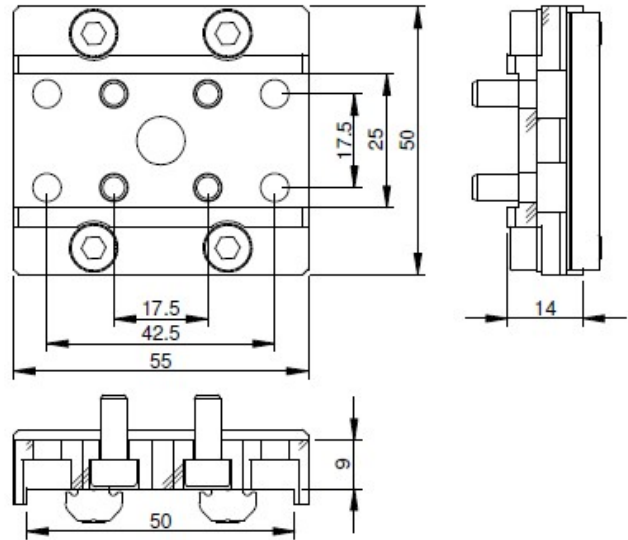
Table / Tabelle

M = Suitable for Profiles  
Passend für Profile

Remarks / Anmerkungen:

Material / Werkstoff: Aluminium

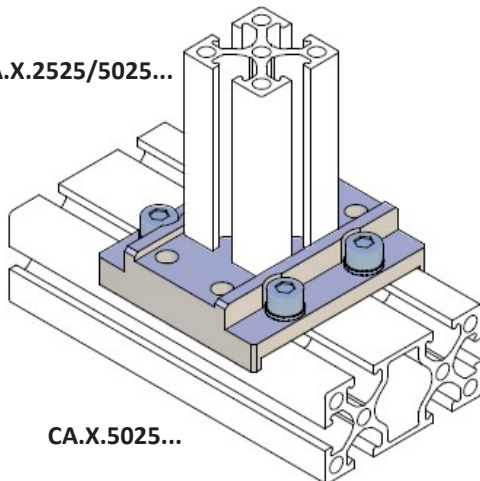
Surface: silver anodized  
Oberfläche: eloxiert



Article no.	M	Weight
CA.SVB.X.50.25	X	114 g
CA.SVB.X.50.50		149 g

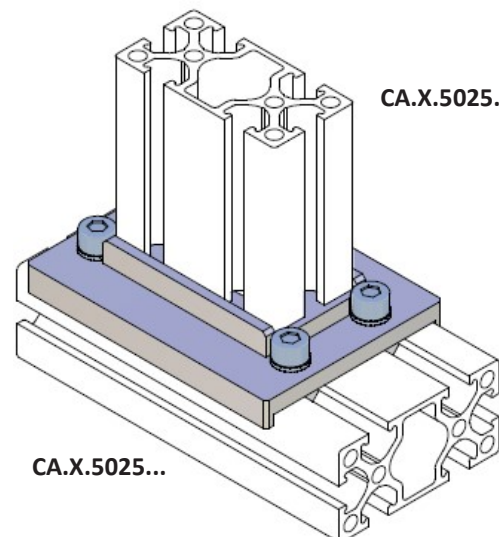
Application examples / Anwendungsbeispiele

CA.X.2525/5025...



CA.X.5025...

CA.X.5025...



CA.X.5025...

**CA.03 SVB**

**JU**

. Profile End connector 40

. Stoßverbinder 40

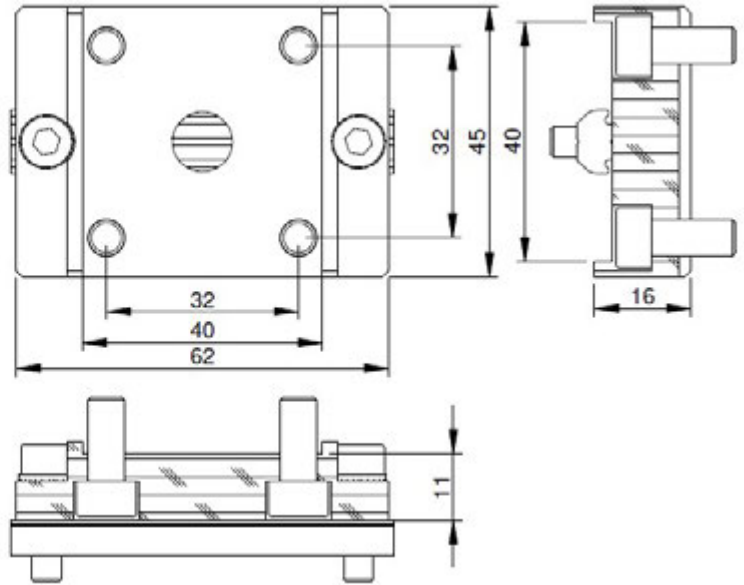
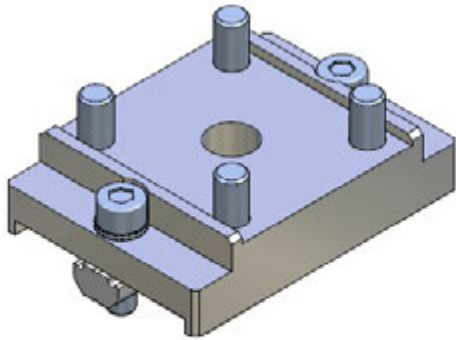


Table / Tabelle

**M** = Suitable for Profiles  
Passend für Profile

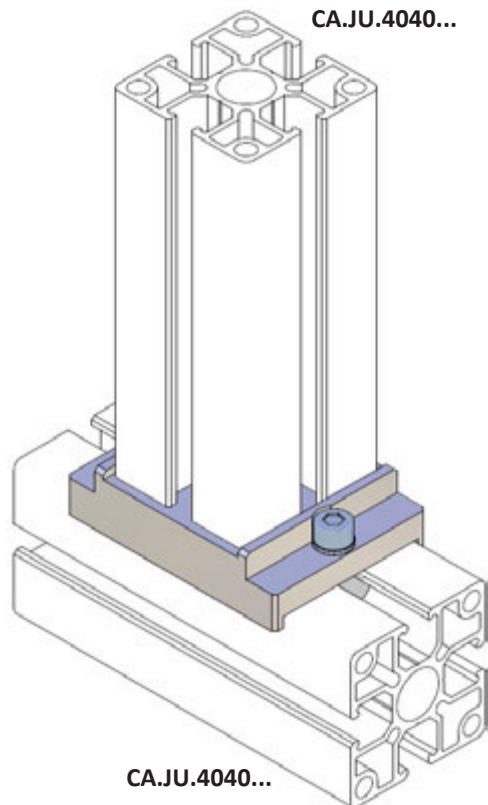
Remarks / Anmerkungen:

Material / Werkstoff: Aluminium

Surface: silver anodized  
Oberfläche: eloxiert

Article no.	M	Weight
CA.SVB.JU.40.40	JU	129 g

Application example / Anwendungsbeispiel



## CA.03 VBG

X/JU

. Straight Connector

. Profilverbinder Gerade-Form

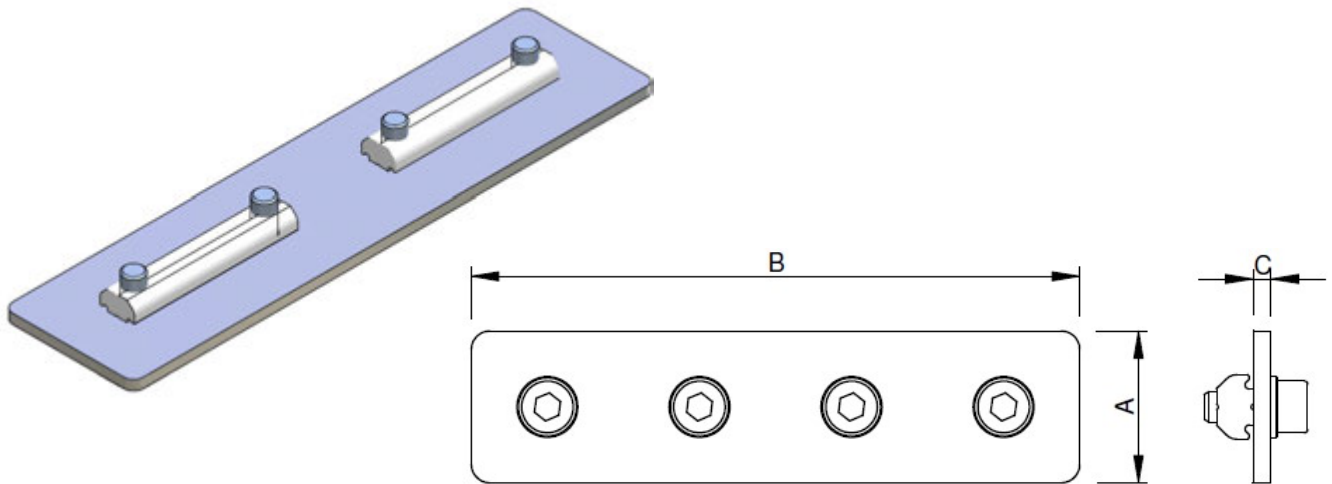


Table / Tabelle

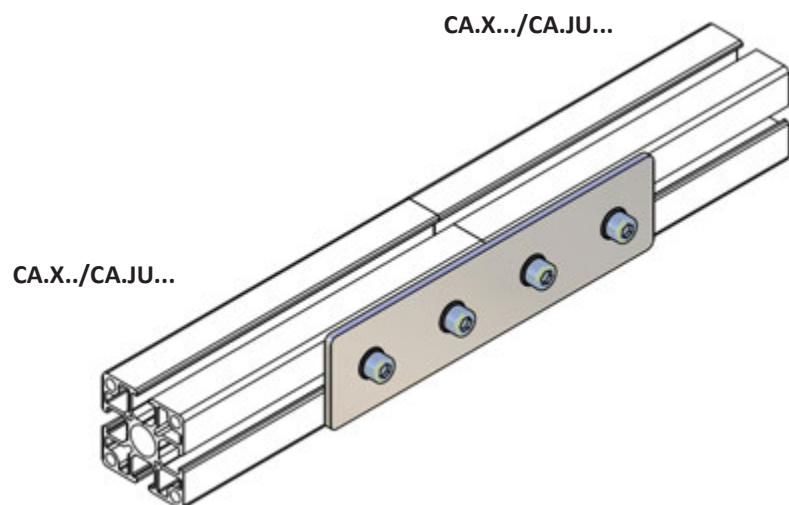
M = Suitable for Profiles  
Passend für Profile

Remarks / Anmerkungen:

Material: Steel galvanized  
Werkstoff: Stahl verzinkt

Article no.	A	B	C	M	Weight
CA.VBG.X.25.50	25	50	3	X	48 g
CA.VBG.X.50.50	50				94 g
CA.VBG.X.25.100	25	100			99 g
CA.VBG.JU.40.80	40	80		JU	97 g
CA.VBG.JU.40.160		160			215 g

Application example / Anwendungsbeispiel



## CA.03 VBL - VBT

X/JU

### . Connector L-Style

. Profilverbinder Winkel

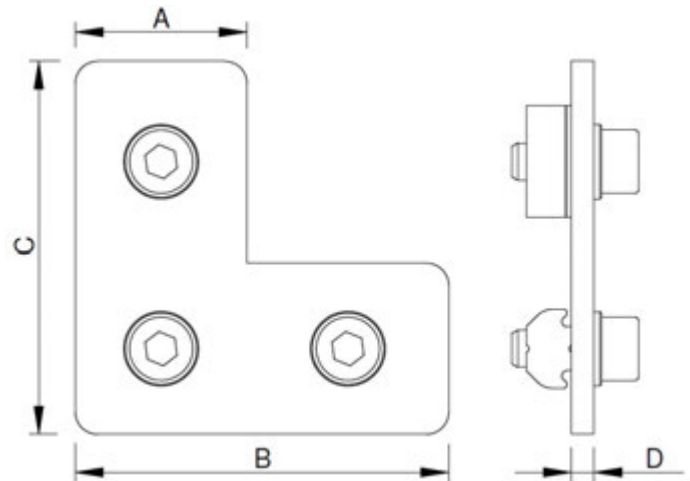
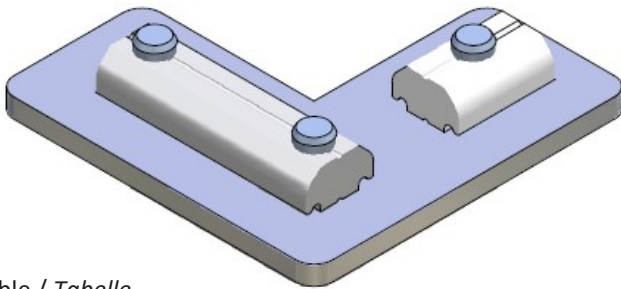


Table / Tabelle

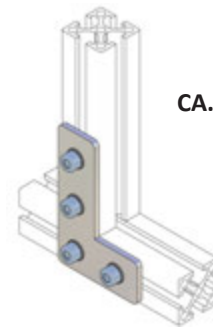
M = Suitable for Profiles  
Passend für Profile

Remarks / Anmerkungen:

Material: Steel galvanized  
Werkstoff: Stahl verzinkt

Application example / Anwendungsbeispiel

Article no.	A	B	C	D	M	Weight
CA.VBL.50.50	23	50	50	3	X	71 g
CA.VBL.50.75			75			96 g
CA.VBL.80.80.JU	40	80	80		JU	145 g
CA.VBL.80.120.JU			120			200 g

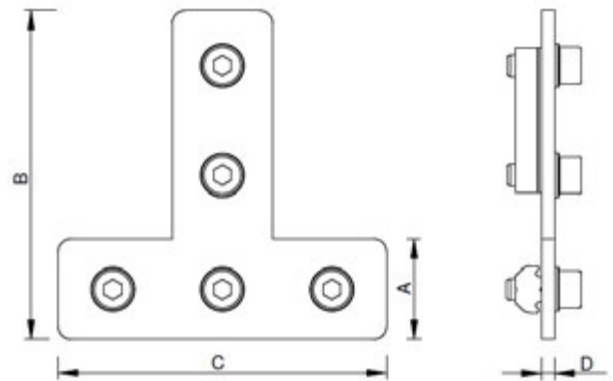
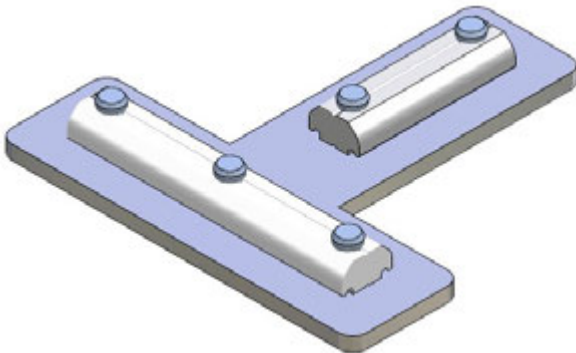


CA.X.../CA.JU...

CA.X.../CA.JU...

### . Connector T-Style

. Profilverbinder T-Form

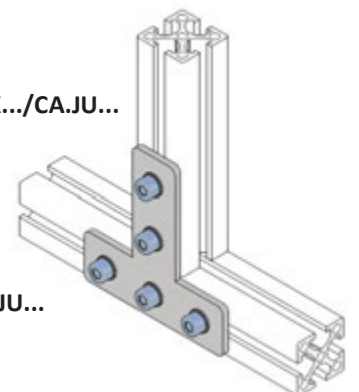


Application example / Anwendungsbeispiel

Article no.	A	B	C	D	M	Weight
CA.VBT.X.50.75	25	75	75	3	X	123 g
CA.VBT.X.75.100			100			149 g
CA.VBT.JU.120	40	120	120		JU	261 g

CA.X.../CA.JU...

CA.X.../CA.JU...



## CA.03 VBW - EVB

X/JU

. Adjustable Connector 0-90°

. Profilverbinder verstellbar 0-90°

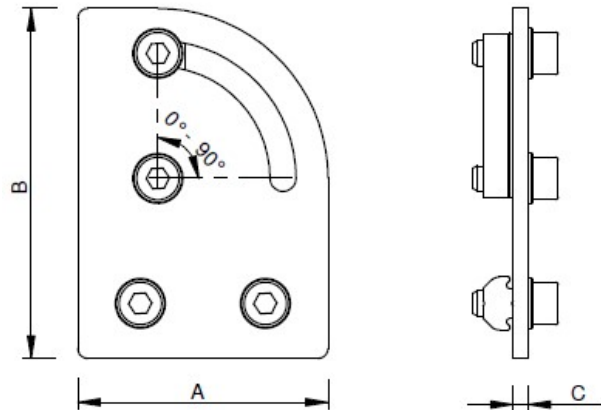
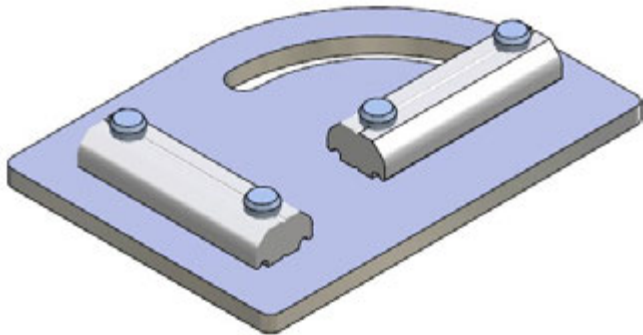


Table / Tabelle

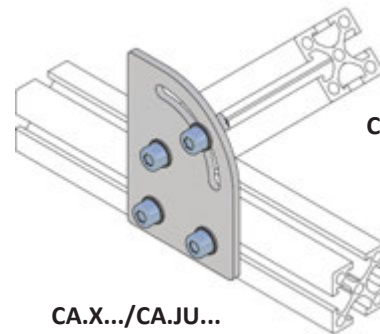
M = Suitable for Profiles  
Passend für Profile

Remarks / Anmerkungen:

Material: Steel galvanized  
Werkstoff: Stahl verzinkt

Application example / Anwendungsbeispiel

Article no.	A	B	C	M	Weight
CA.VBW.X.0.90	50	70	3	X	112 g
CA.VBW.JU.0.90	80	120		JU	249 g

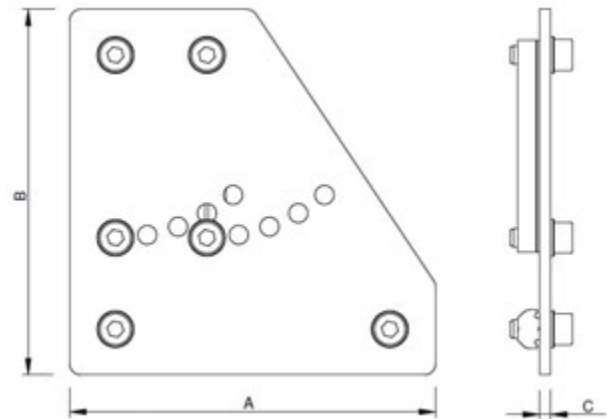
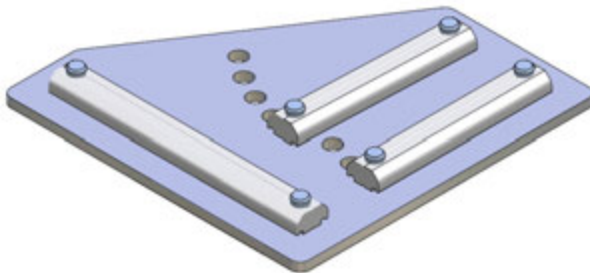


CA.X.../CA.JU...

CA.X.../CA.JU...

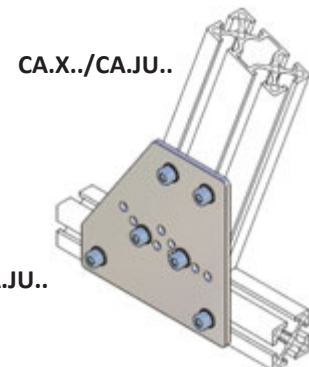
. Corner Joint Plate

. Eckverbinder



Application example / Anwendungsbeispiel

Article no.	A	B	C	M	Weight
CA.EVB.75.X	75	100	3	X	193 g
CA.EVB.100.X	100				292 g
CA.EVB.100.JU	80			JU	206 g



CA.X..//CA.JU..

CA.X..//CA.JU..

# CA.03 KVB

L/X/JU

. Cross Connector Round

. Kreuzklemmstück Rund

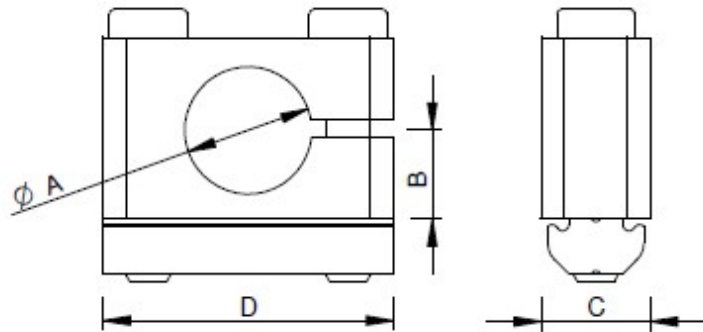
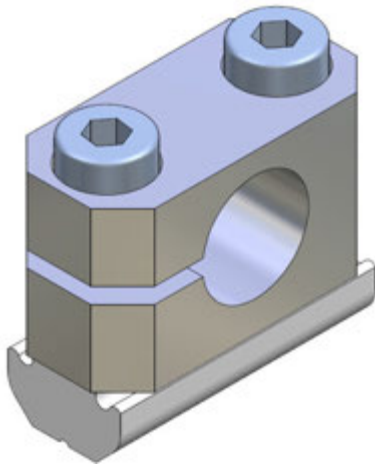


Table / Tabelle

M = Suitable for Profiles  
Passend für Profile

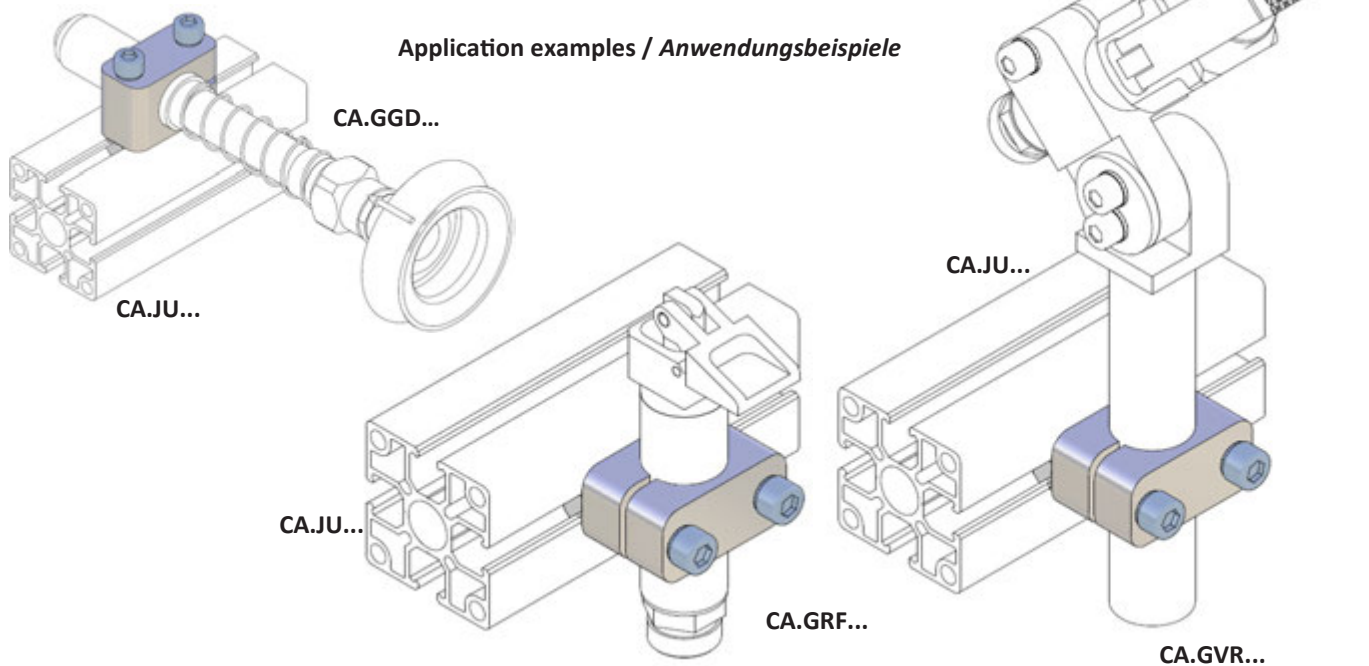
Remarks / Anmerkungen:

Material / Werkstoff: Aluminium

Surface: silver anodized  
Oberfläche: eloxiert

Article no.	A	B	C	D	M	Weight
CA.KVB.L10	10	8	12	25	L	17 g
CA.KVB.X14	14	10		32	X	36 g
CA.KVB.X20	20	13	20	40	JU	45 g
CA.KVB.JU20				68 g		
CA.KVB.JU30	30	18		52		70 g

Application examples / Anwendungsbeispiele





## CA.03 KVB.KG

X/JU

. Cross Connector Round With Ball Joint

. Kreuzklemmstück Rund mit Kugelgelenk

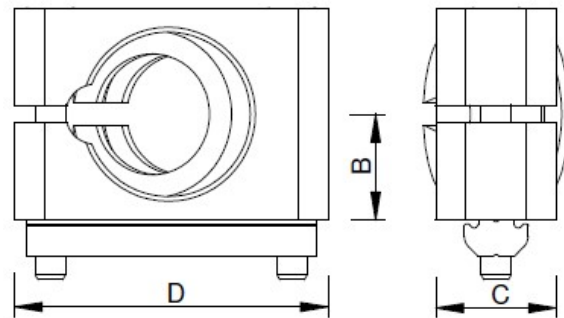
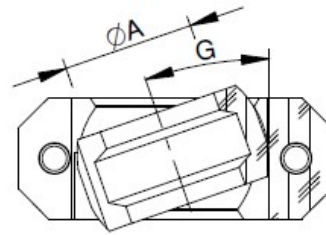
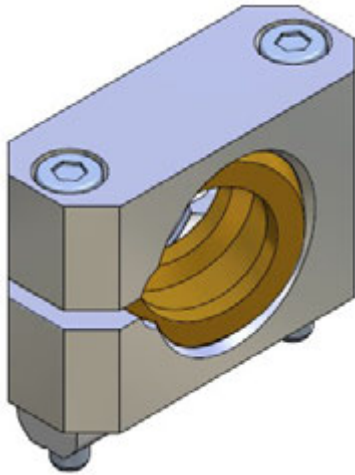
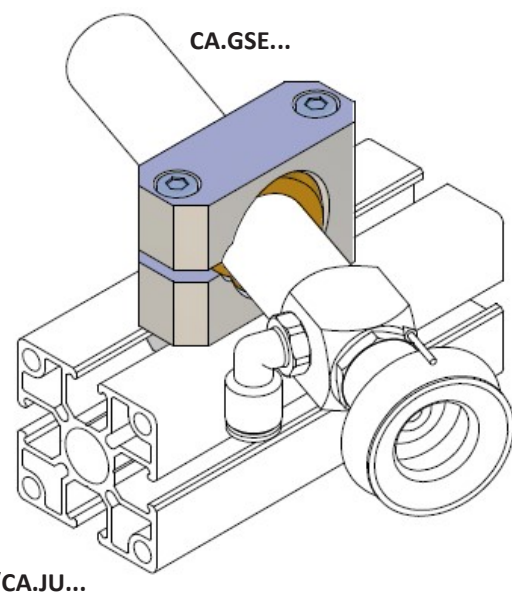
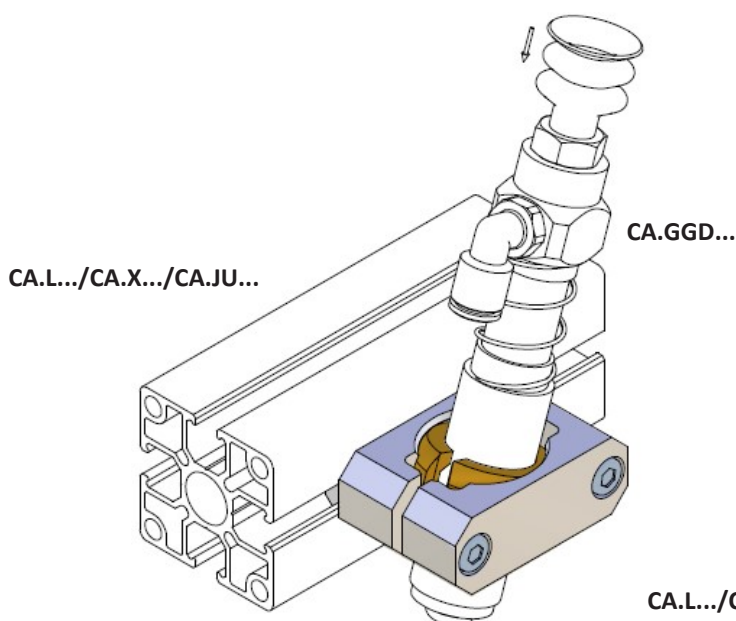


Table / Tabelle

M = = Suitable for Profiles  
Passend für Profile

Article no.	A	B	C	D	G°	M	Weight
CA.KVB.KG.X10	10	10	12	32	0°-13°	X	42 g
CA.KVB.KG.X14	14	12.5	15	40	0°-17°		60 g
CA.KVB.KG.JU20	20	17.5	20	52	0°-19°	JU	113 g

Application examples / Anwendungsbeispiele

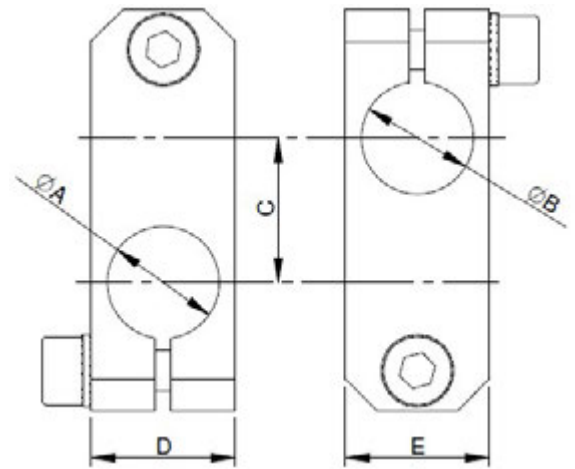
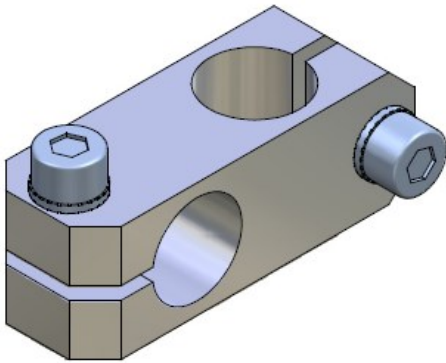


## CA.03 KKS

Ø 10-14-20

. Cross connector Tube

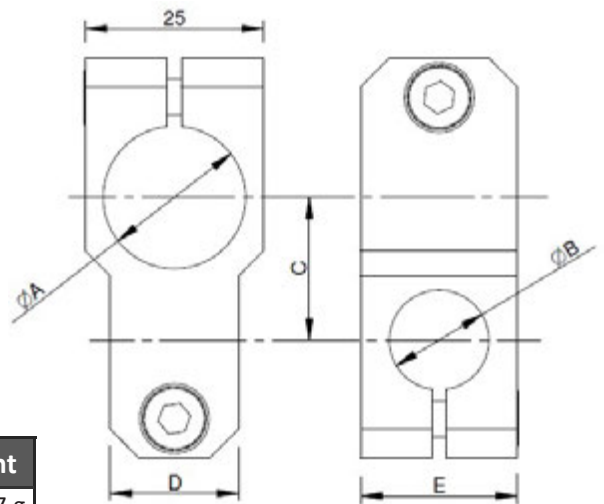
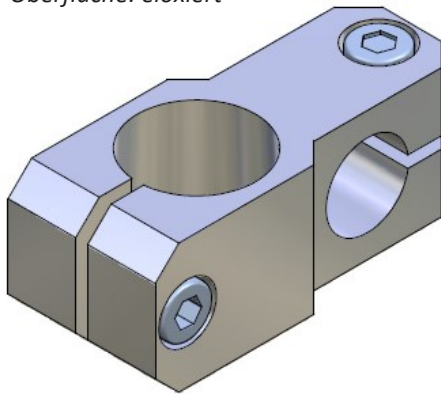
. Kreuzklemmstück Rohr



Remarks / Anmerkungen:

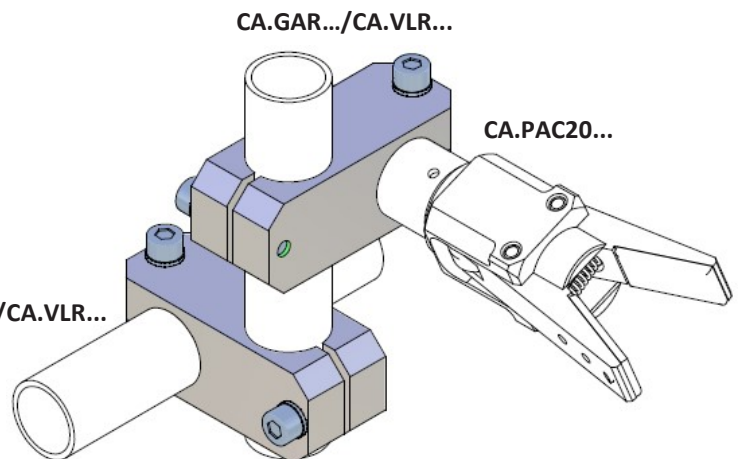
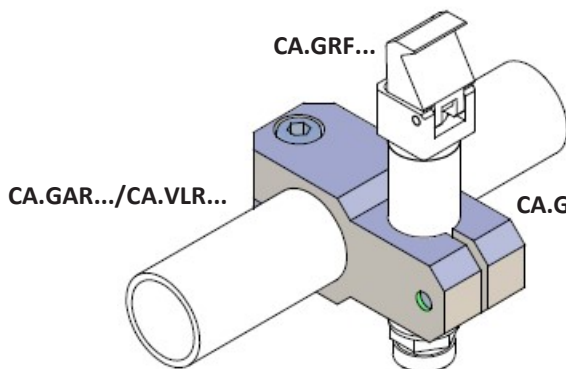
Material / Werkstoff: Aluminium

Surface: silver anodized  
Oberfläche: eloxiert



Article no.	A	B	C	D	E	Weight
CA.KKS.10.10	10	10	16	14	14	17 g
CA.KKS.14.14	14	14	18	18	18	35 g
CA.KKS.20.20	20	20	26	25	25	71 g
CA.KKS.20.10		10	20	14	20	41 g
CA.KKS.20.14		14	20	18	22	48 g

Application examples / Anwendungsbeispiele

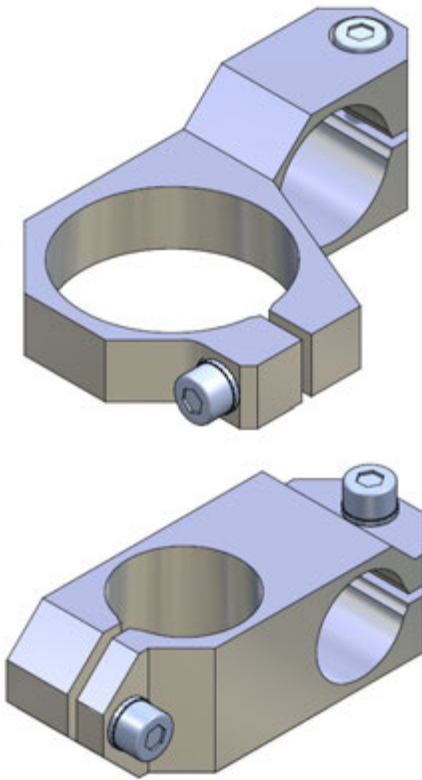


# CA.03 KKS.L

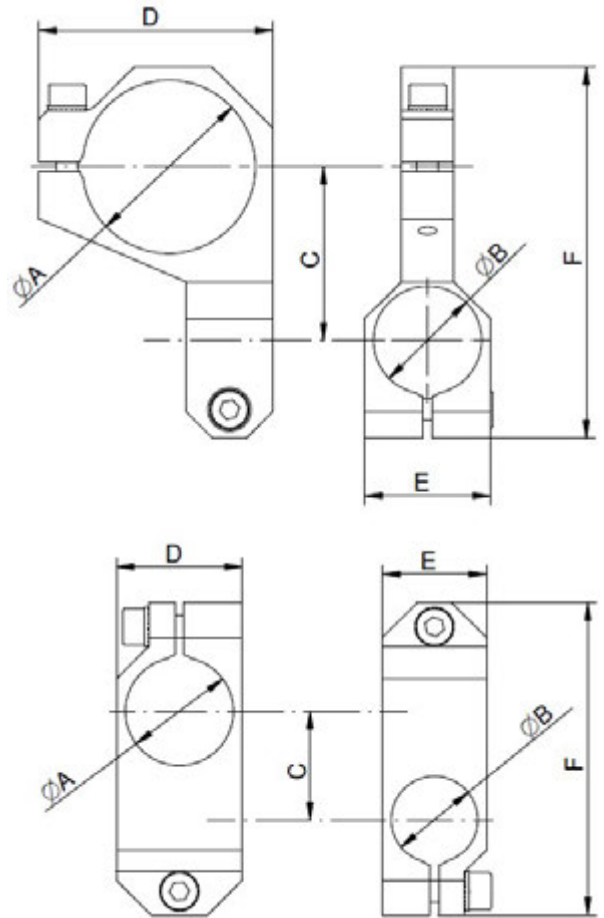
Ø 20-25-40

. Cross connector Tube

. Kreuzklemmstück Rohr



**New**



Remarks / Anmerkungen:

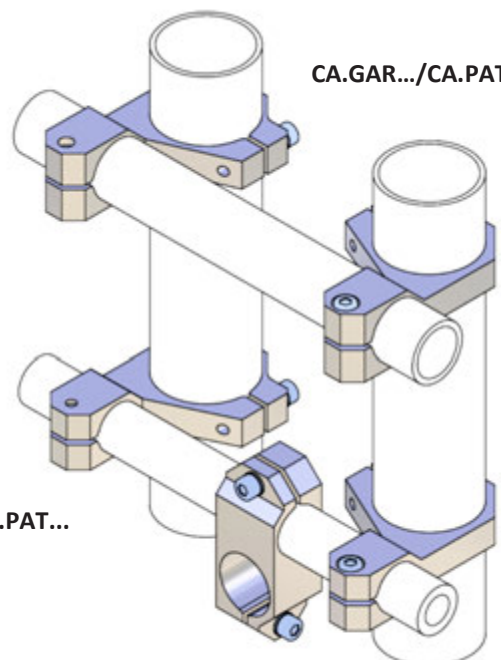
Material / Werkstoff: Aluminium

Surface: silver anodized  
Oberfläche: eloxiert

Article no.	A	B	C	D	E	F	Weight
CA.KKS.L.2020	20	20	25	24	24	65	53 g
CA.KKS.L.2025		25			29		67 g
CA.KKS.L.2525	25	25	30	29	29	80	87 g
CA.KKS.L.4020	40	20	40	54	24	83	57 g
CA.KKS.L.4025		25			29		60 g
CA.KKS.L.4040		40	50		44	103	92 g

CA.GAR.../CA.PAT...

CA.GAR.../CA.PAT...



CA.GAR.../CA.PAT...

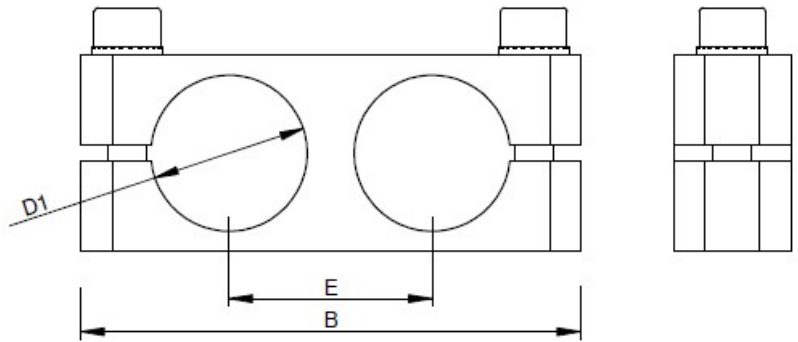
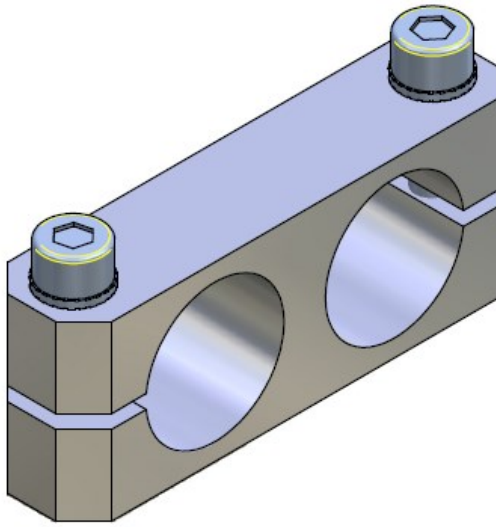
Application examples / Anwendungsbeispiele

## CA.04 PKS

. Parallel Clamp

Ø 10-14-20-30

. Parallelklemmstück



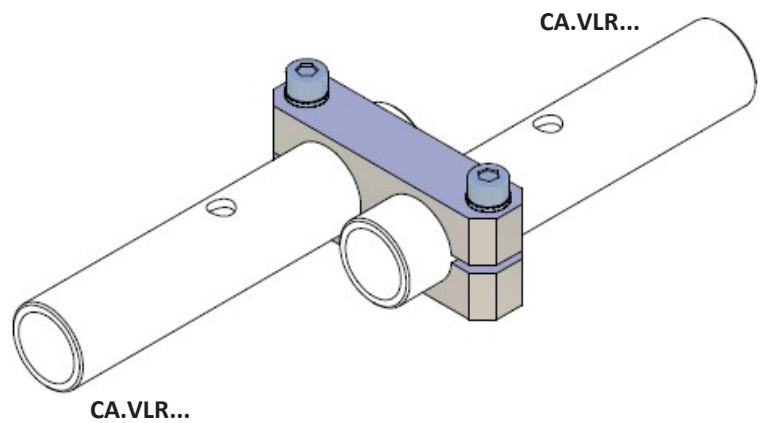
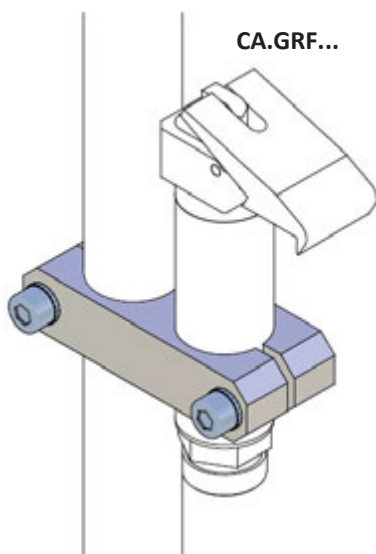
Remarks / Anmerkungen:

Material / Werkstoff: Aluminium

Surface: silver anodized  
Oberfläche: eloxiert

Article no.	D1	B	E	Weight
CA.PKS.1010.15	10	38	15	12 g
CA.PKS.1414.20	14	52	20	27 g
CA.PKS.2020.26	20	64	26	47 g
CA.PKS.3030.38	30	88	38	104 g

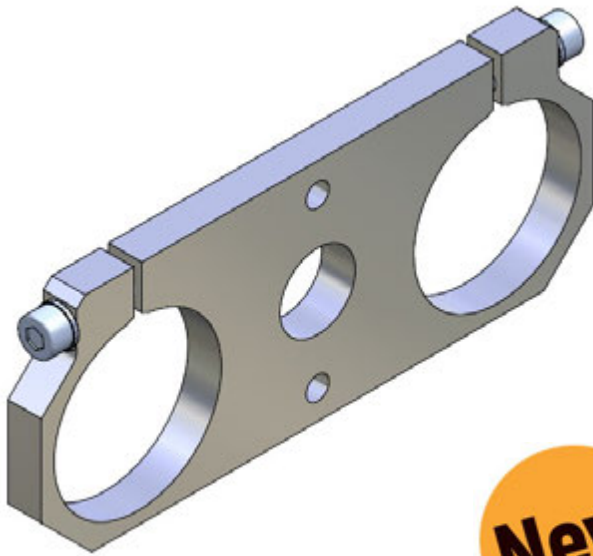
Application examples / Anwendungsbeispiele



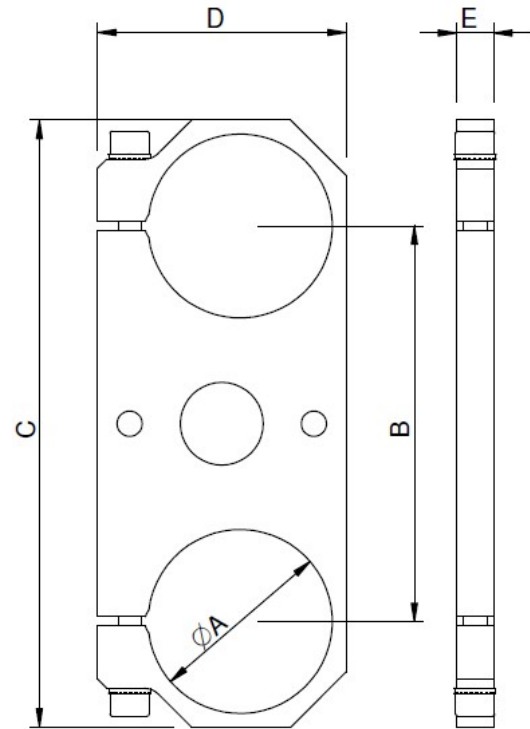
## CA.03 PKS.L

. Parallel Clamp

. Parallelklemmstück



**New**



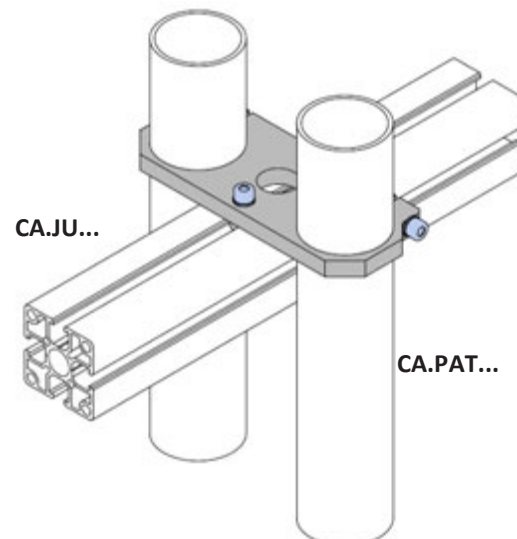
Remarks / Anmerkungen:

Material / Werkstoff: Aluminium

Surface: silver anodized  
Oberfläche: eloxiert

Article no.	A	B	C	D	E	Weight
CA.PKS.L.4040.76	40	76	122	54	8	82 g
CA.PKS.L.4040.86	40	86	132	54	8	93 g

Application example / Anwendungsbeispiel



**CA.04 WST**

**L/X/JU**

. Adjustable Clamp

. Klemmstück Drehbar

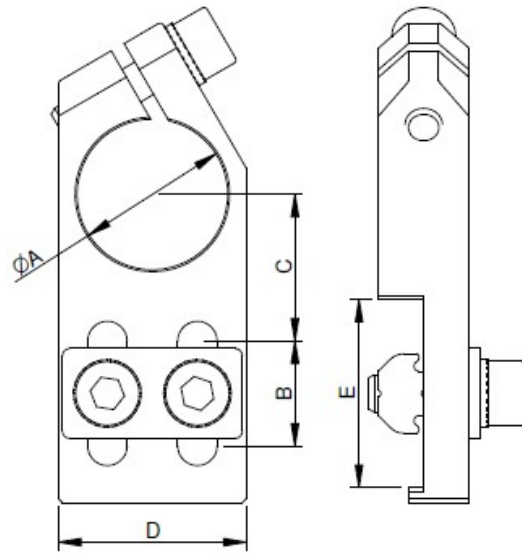
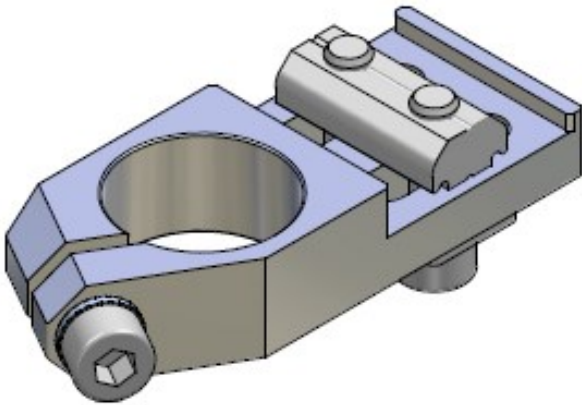


Table / Tabelle

**M** = Suitable for Profiles  
Passend für Profile

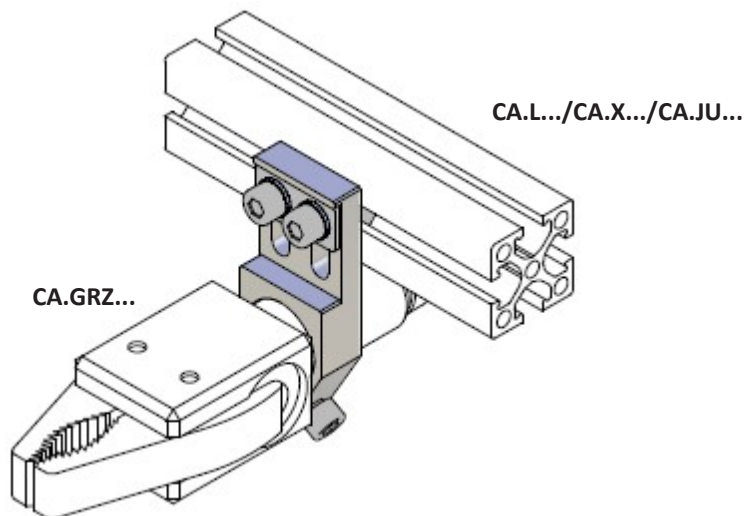
Remarks / Anmerkungen:

Material / Werkstoff: Aluminium

Surface: silver anodized  
Oberfläche: eloxiert

Article no.	A	B	C	D	E	M	Weight
CA.WST.1010.L	10	10	12	16	18	L	20 g
CA.WST.1014.X			13.5				21 g
CA.WST.1414.X	14	14	15.5	20	25	X	33 g
CA.WST.2014.X	20		19.5				46 g
CA.WST.2022.JU			22	23	25	40	JU

Application example / Anwendungsbeispiel



## CA.04 WST

L/X/JU

. Adjustable Clamp

. Klemmstück Drehbar

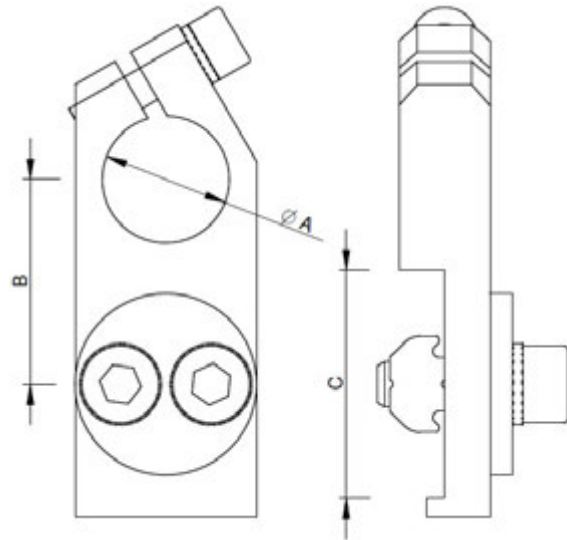
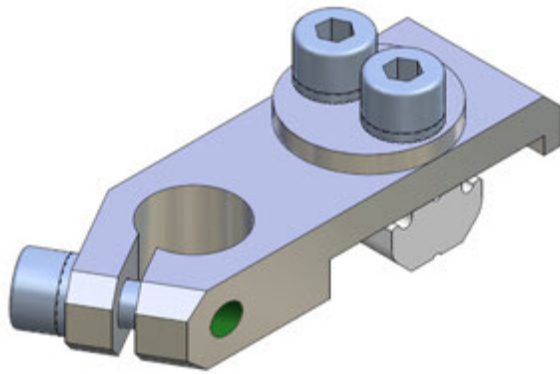
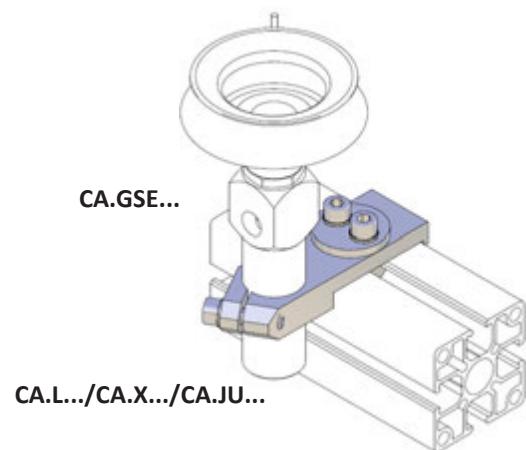


Table / Tabelle

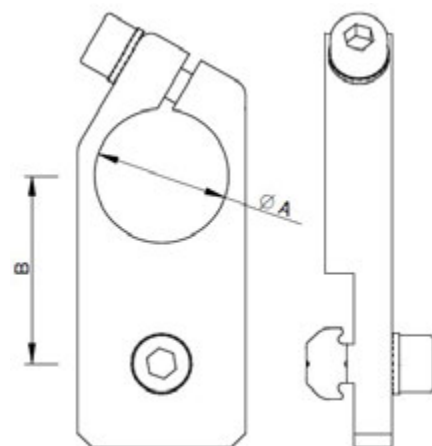
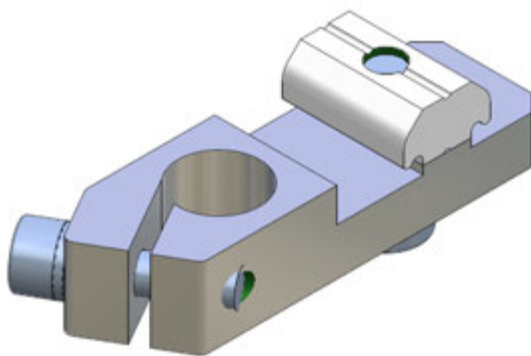
M = Suitable for Profiles  
Passend für Profile

Article no.	A	B	C	M	Weight
CA.WST.10.L	10	17	18	L	20 g
CA.WST.10.X		21	25	X	
CA.WST.14.L	14	19	18	L	31 g
CA.WST.14.X		23	25	X	34 g
CA.WST.20.X	20	27	25	X	42 g
CA.WST.20.JU		34	40	JU	50 g
CA.WST.30.X	30	30	25	X	95 g
CA.WST.30.JU		38	40	JU	105 g

Application example / Anwendungsbeispiel



## CA.04 WST (easy)



Remarks / Anmerkungen:

Material/Werkstoff: Aluminium

Surface: silver anodized  
Oberfläche: eloxiert

Article no.	A	B	M	Weight
CA.WST.10	10	21	X	23 g
CA.WST.14	14	24		31 g
CA.WST.20	20	28		36 g

**CA.04 WSL.U**

**L/X/JU**

. Universal Long Angle Clamp

. Klemmstück verstellbar

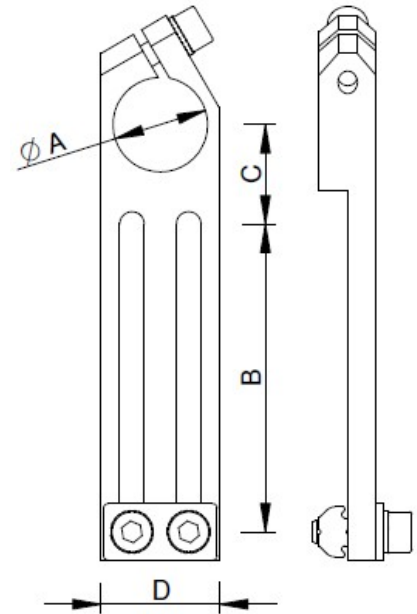
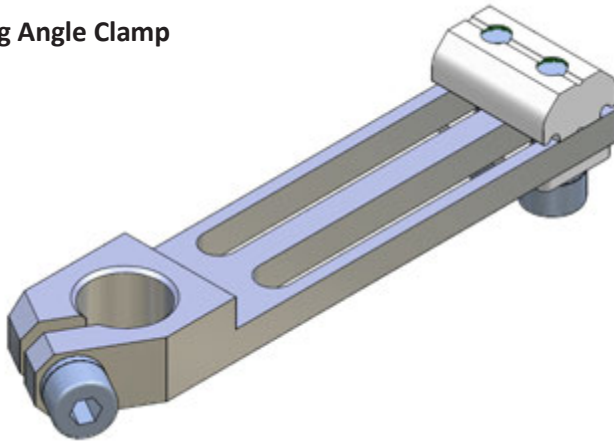


Table / Tabelle

M = Suitable for Profiles  
Passend für Profile

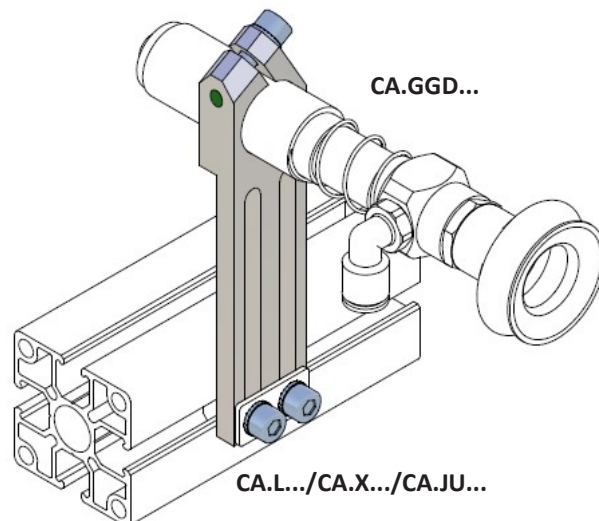
Remarks / Anmerkungen:

Material / Werkstoff: Aluminium

Surface: silver anodized  
Oberfläche: eloxiert

Article no.	A	B	C	D	M	Weight
CA.WSL.1040.U.L	10	40	17.5	16	L	23 g
CA.WSL.1040.U.X					X	
CA.WSL.1440.U.L	14	50	19	20	L	32 g
CA.WSL.1440.U.X					X	33 g
CA.WSL.1450.U.X		50				
CA.WSL.2060.U.X	20	65	21	25	X/JU	58 g
CA.WSL.2070.U.X		70	25.5		25	JU
CA.WSL.2070.U.JU				67 g		
CA.WSL.3070.U.JU				30		

Application example / Anwendungsbeispiel





## CA.04 WSL.G

X/JU

. Long Angle Clamp With Ball joint

. Winkelklemmstück mit Kugelgelenk

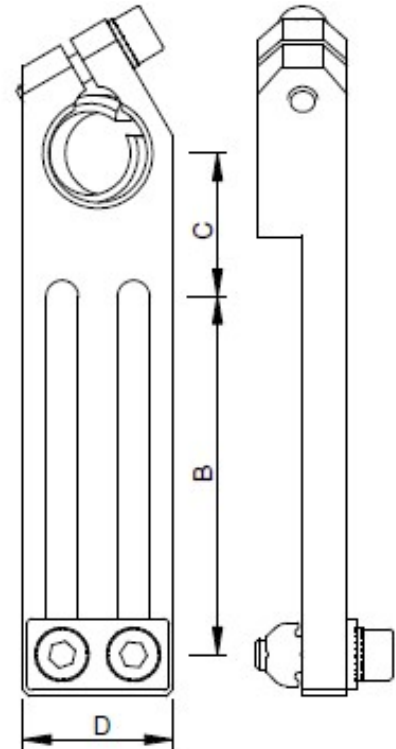
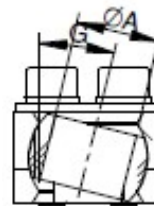
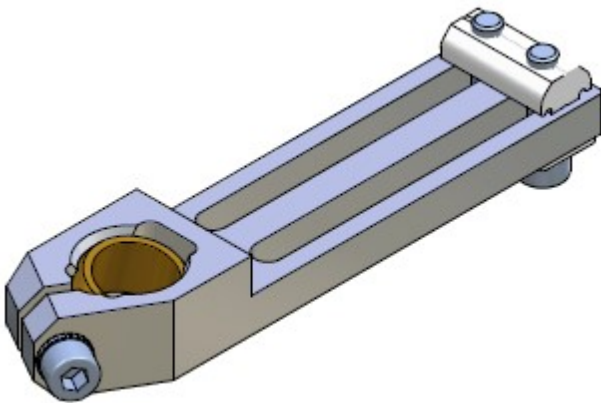


Table / Tabelle

**M** = Suitable for Profiles  
Passend für Profile

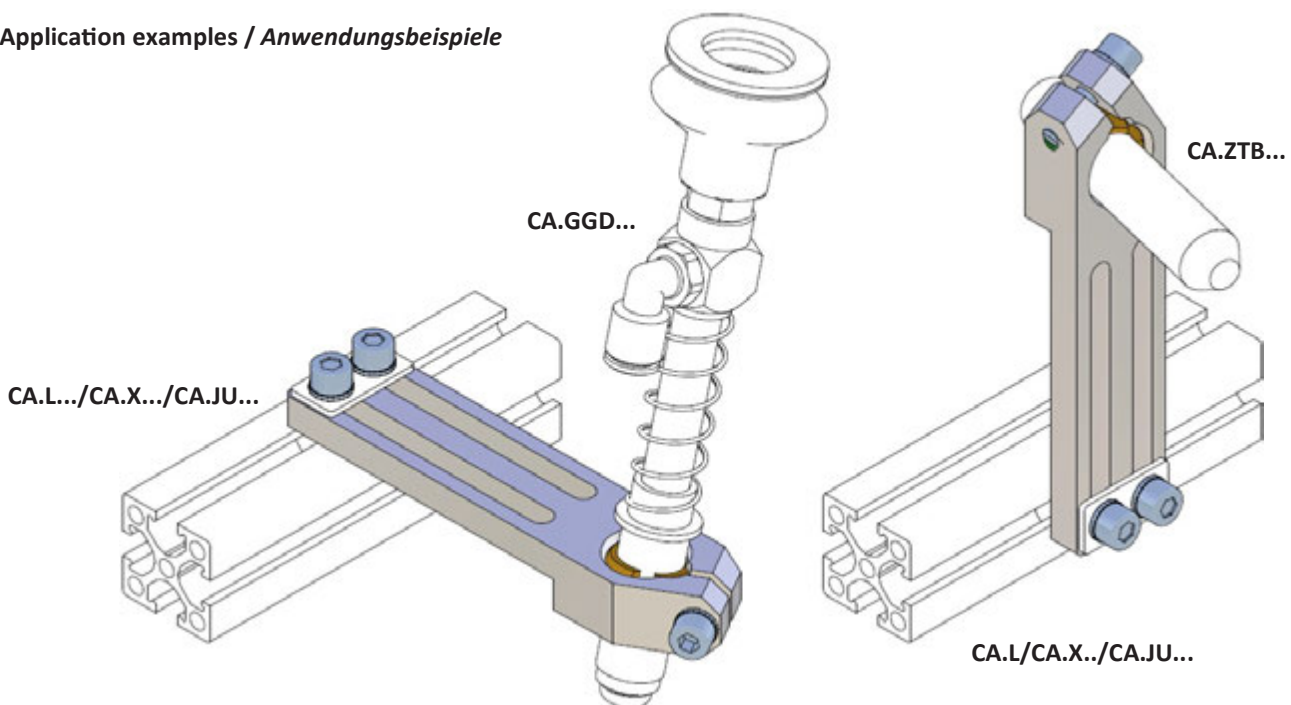
Remarks / Anmerkungen:

Material / Werkstoff: Aluminium

Surface: silver anodized  
Oberfläche: eloxiert

Article no.	A	B	C	D	G°	M	Weight
CA.WSL.1050.G.X	10	50	20	20	0°-13°	X	51 g
CA.WSL.1460.G.X	14	60		25	0°-17°		78 g
CA.WSL.2060.G.X	20		29	35	0°-19°	X/JU	159 g

Application examples / Anwendungsbeispiele



## CA.04 WSL.GA

L/X/JU

. Long Angle Clamp - Swivel Head

. Winkelklemmstück gelenkig

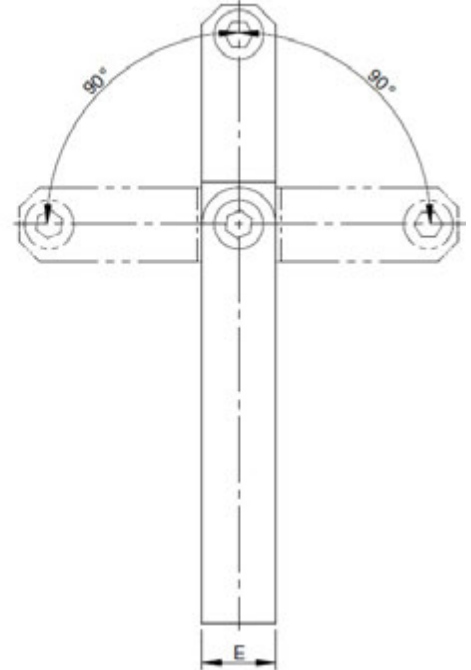
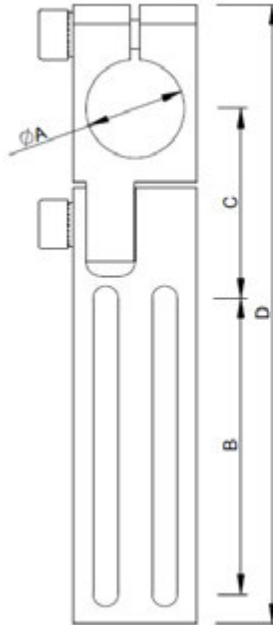
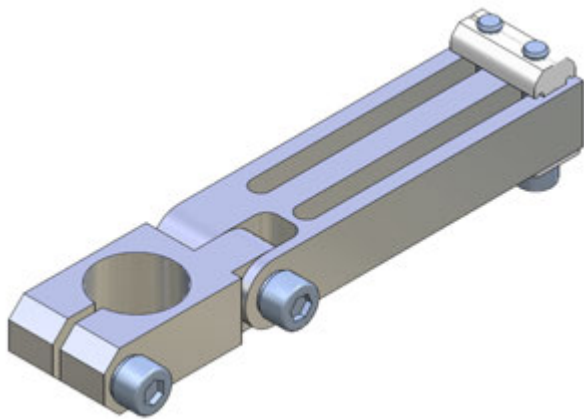


Table / Tabelle

M = Suitable for Profiles  
Passend für Profile

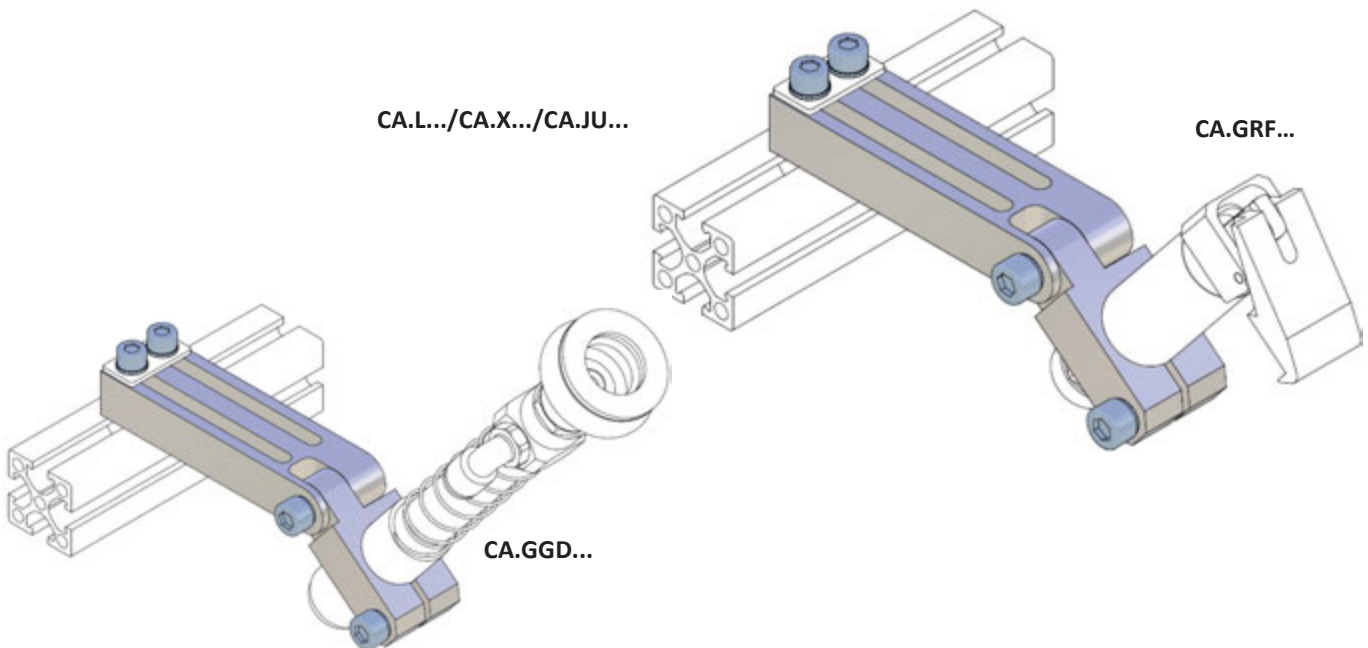
Article no.	A	B	C	D	E	M	Weight
CA.WSL.GA.10.X	10	40	32	93	10	L/X	57 g
CA.WSL.GA.14.X	14		33	96		X	
CA.WSL.GA.20.X	20	60	38.5	125.5	15	X/JU	118 g
CA.WSL.GA.30.X	30	82	53	168.5	20	JU	261 g

Remarks / Anmerkungen:

Material / Werkstoff: Aluminium

Surface: silver anodized  
Oberfläche: eloxiert

Application examples / Anwendungsbeispiele



## CA.04 WSL.KG

X/JU

. Long Angle Clamp Swivel Head and Ball Joint

. Winkelklemmstück gelenkig mit Kugelgelenk

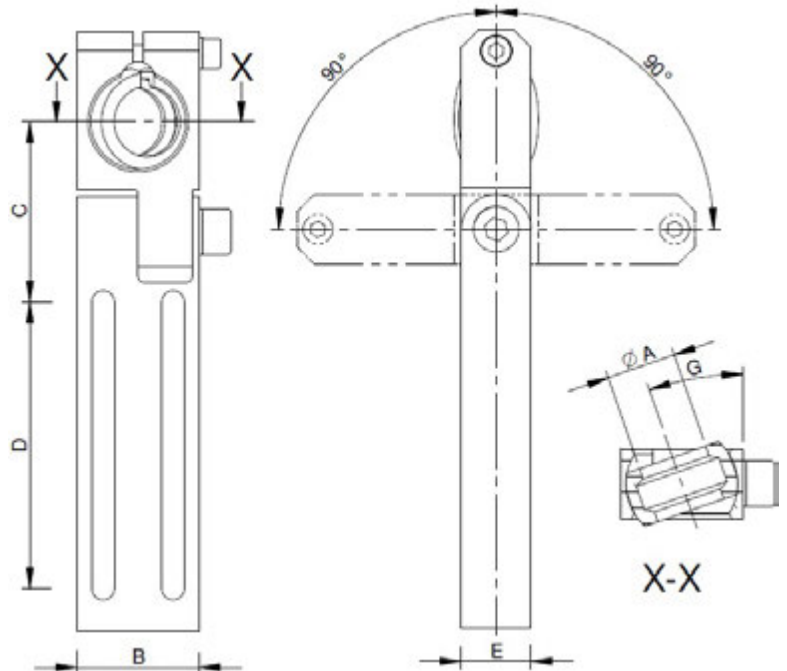
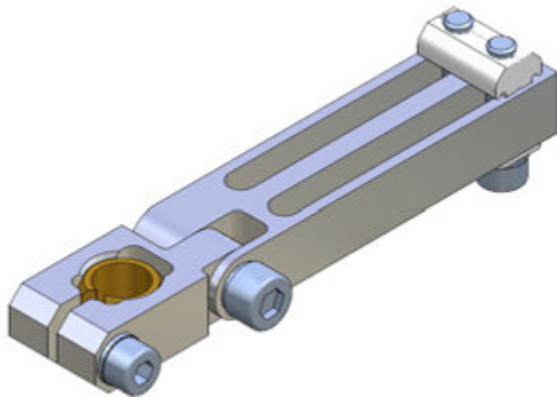


Table / Tabelle

M = Suitable for Profiles  
Passend für Profile

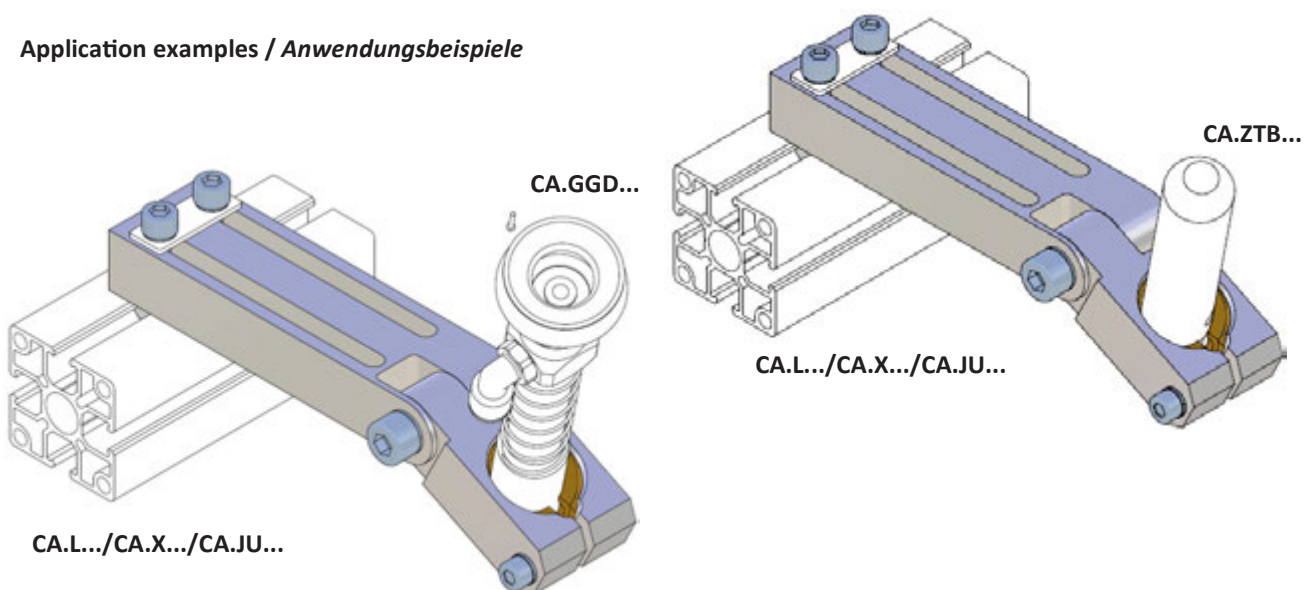
Remarks / Anmerkungen:

Material / Werkstoff: Aluminium

Surface: silver anodized  
Oberfläche: eloxiert

Article no.	A	B	C	D	E	G°	M	Weight
CA.WSL.KG.X.10	10	20	32.5	50	12	0°-13°	X	78 g
CA.WSL.KG.X.14	14	25	39.5	60	15	0°-17°		117 g
CA.WSL.KG.JU.20	20	35	51.5	82	20	0°-19°	X/JU	320 g

Application examples / Anwendungsbeispiele



**CA.04.20**

**X/JU**

. Mounting Bracket

. Klemmstück Verstellbar

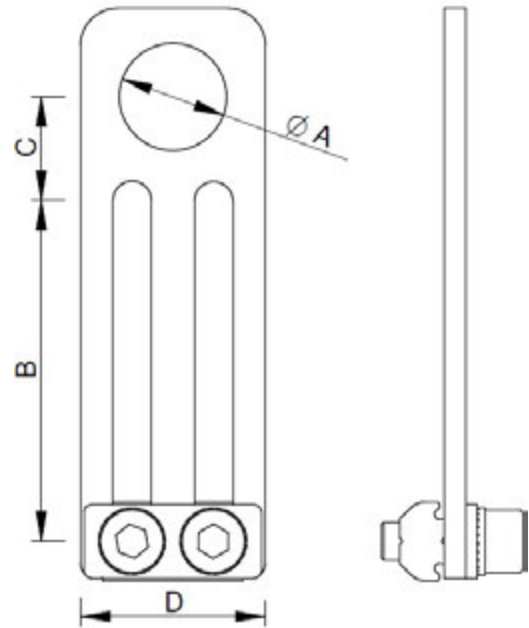
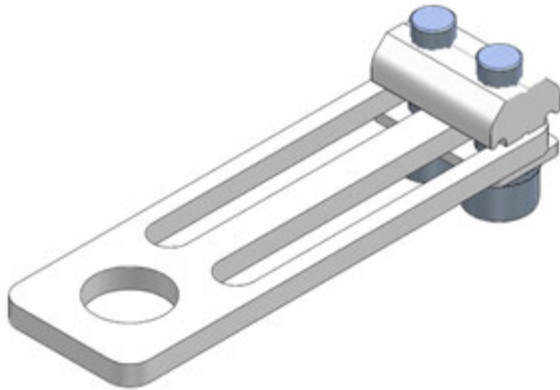


Table / Tabelle

M = Suitable for Profiles  
Passend für Profile

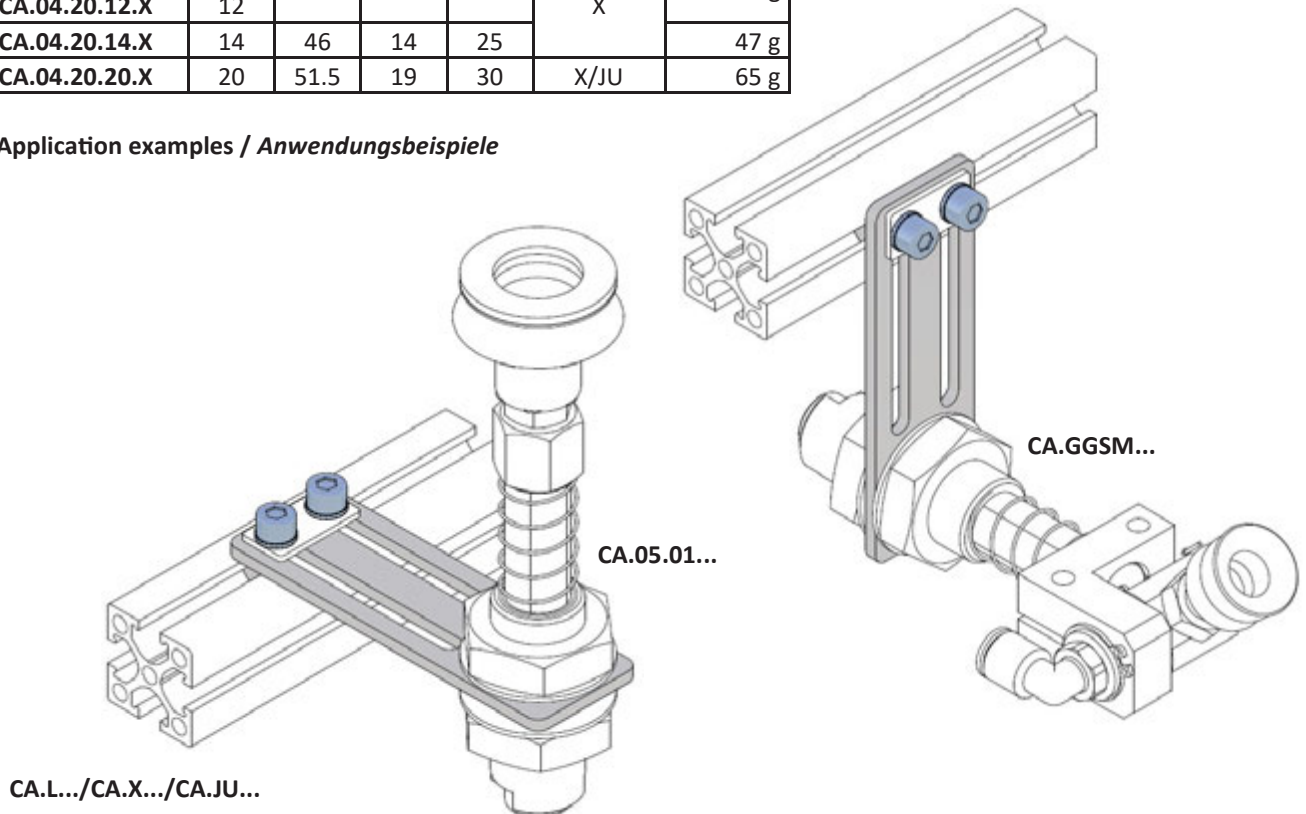
Remarks / Anmerkungen:

Material: Steel galvanized  
Werkstoff: Stahl verzinkt

Article no.	A	B	C	D	M	Weight
CA.04.20.10.X	10	40	11	20	X	35 g
CA.04.20.12.X	12					
CA.04.20.14.X	14	46	14	25		47 g
CA.04.20.20.X	20	51.5	19	30	X/JU	65 g

CA.L.../CA.X.../CA.JU...

Application examples / Anwendungsbeispiele



CA.L.../CA.X.../CA.JU...

CA.05.01...

CA.GGSM...

## CA.04 SCM

X/JU

. Short Mounting bracket

. Kurz Klemmstück Verstellbar

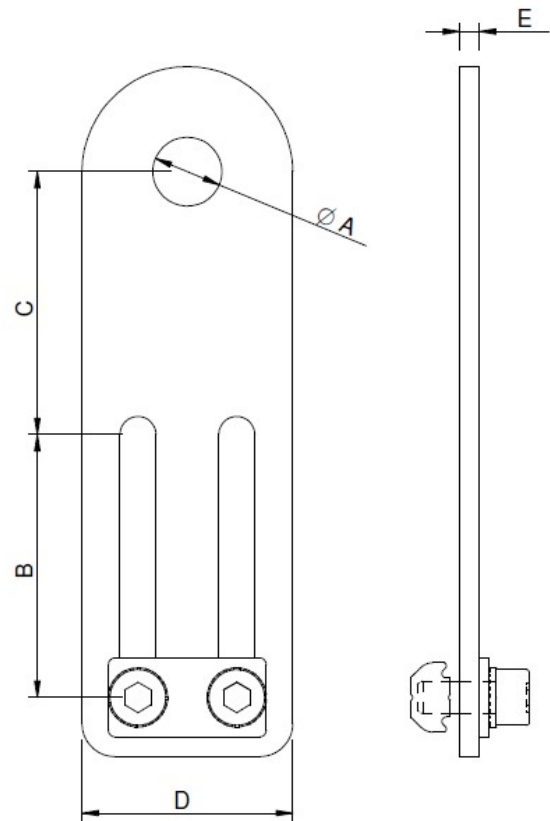
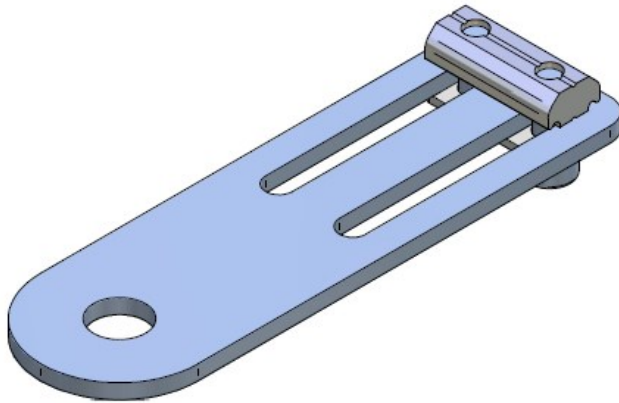


Table / Tabelle

**M** = Suitable for Profiles  
Passend für Profile

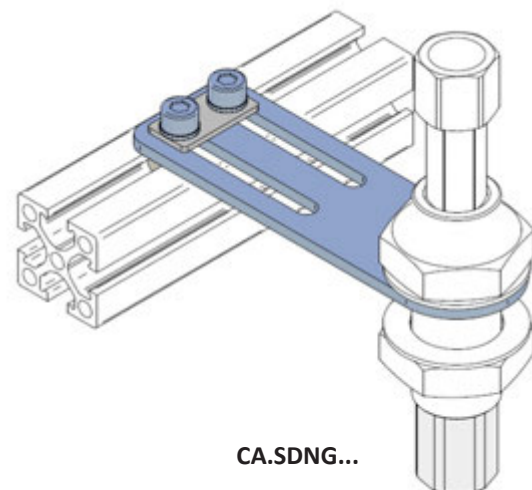
Remarks / Anmerkungen:

Material: Steel galvanized  
Werkstoff: Stahl verzinkt

Article no.	A	B	C	D	E	M	Weight
CA.SCM.10.X	10.5	40	40	32	3	X	84 g
CA.SCM.12.X	12.5						83 g
CA.SCM.14.X	14.5					X/JU	82 g
CA.SCM.20.X	20.5						78 g

Application examples / Anwendungsbeispiele

CA.L.../CA.X.../CA.JU...



CA.SDNG...

**CA.04.02**

**X/JU**

. Long Angle Clamp

. Gewindeklemmstück Verstellbar

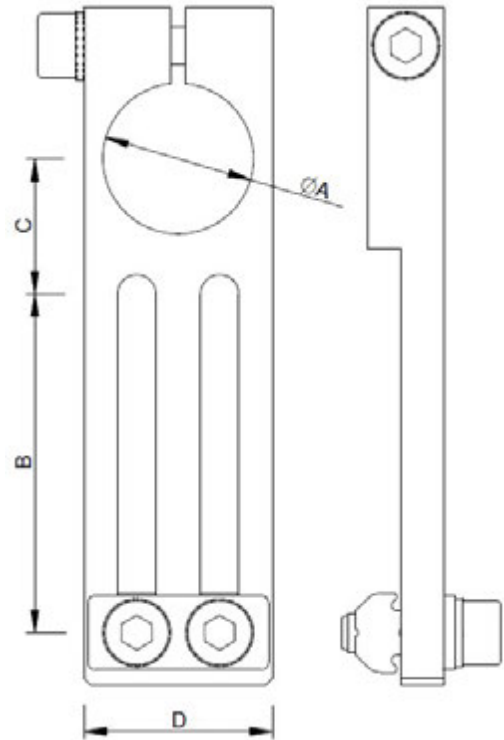
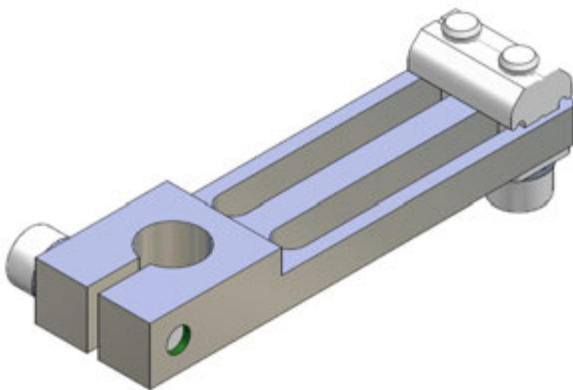


Table / Tabelle

M = Suitable for Profiles  
Passend für Profile

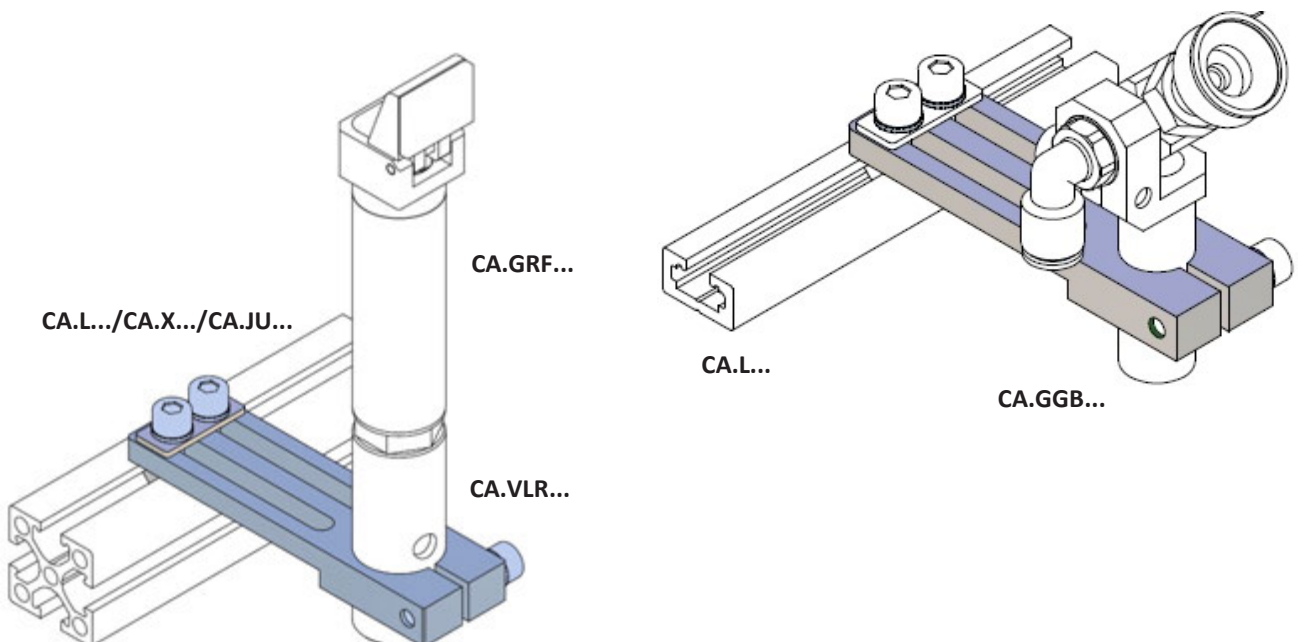
Remarks / Anmerkungen:

Material / Werkstoff: Aluminium

Surface: silver anodized  
Oberfläche: eloxiert

Article no.	A	B	C	D	M	Weight
CA.04.02.10.X	10	40	15.5	20	X	41 g
CA.04.02.14.X	14	45	16.5	25		53 g
CA.04.02.20.X	20		18		X/JU	51 g
CA.04.02.30.X	30	70	34	35	JU	128 g

Application examples / Anwendungsbeispiele



## CA.04 WSL.VU

L/X/JU

. Long Angle Clamp Heavy Duty

. Klemmstück verstellbar und verstärkt

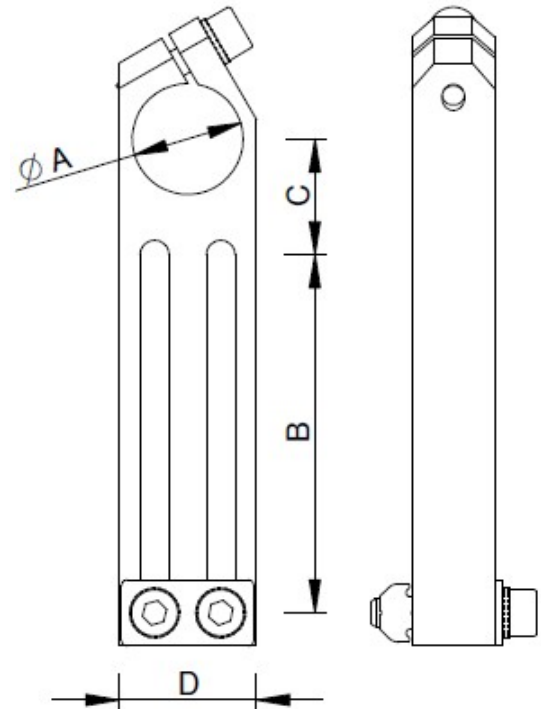
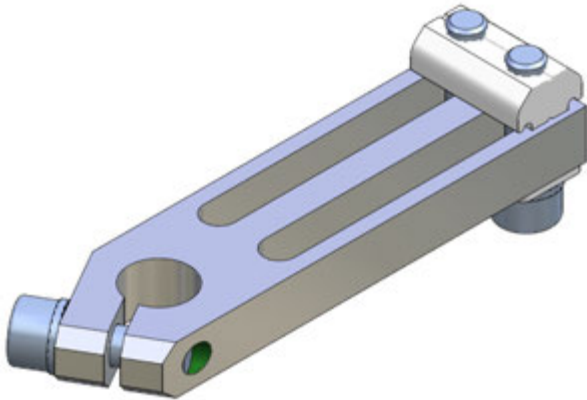


Table / Tabelle

M = Suitable for Profiles  
Passend für Profile

Article no.	A	B	C	D	M	Weight
CA.WSL.1040.VU.X	10	40	15	20	L	41 g
CA.WSL.1060.VU.X		60	16		L/X	48 g
CA.WSL.1080.VU.X		80				53 g
CA.WSL.1440.VU.X	14	40	19	25		X
CA.WSL.1450.VU.X		50	22		59 g	
CA.WSL.2060.VU.X	20	65	21		25	X/JU
CA.WSL.2070.VU.X		70	25.5	JU		106 g
CA.WSL.2080.VU.X		80				111 g
CA.WSL.2570.VU.X	25	70	21		30	JU
CA.WSL.3060.VU.J	30	60	30	188 g		
CA.WSL.3070.VU.J		70		200 g		

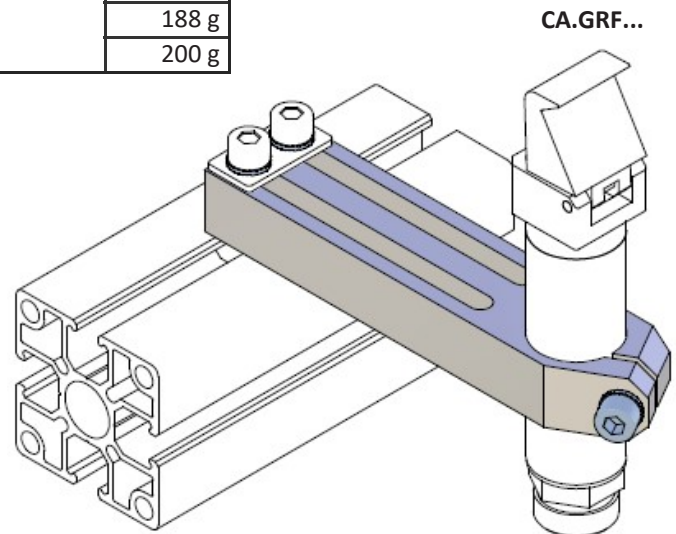
Remarks / Anmerkungen:

Material / Werkstoff: Aluminium

Surface: silver anodized  
Oberfläche: eloxiert

Application example / Anwendungsbeispiel

CA.L/CA.X../CA.JU...

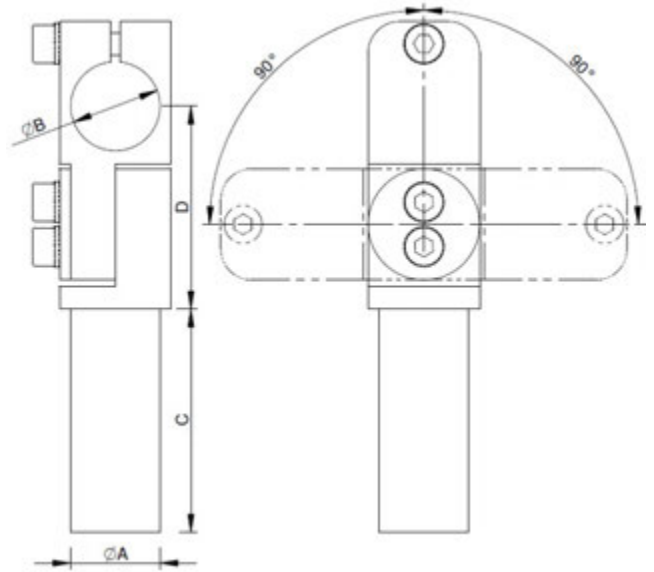
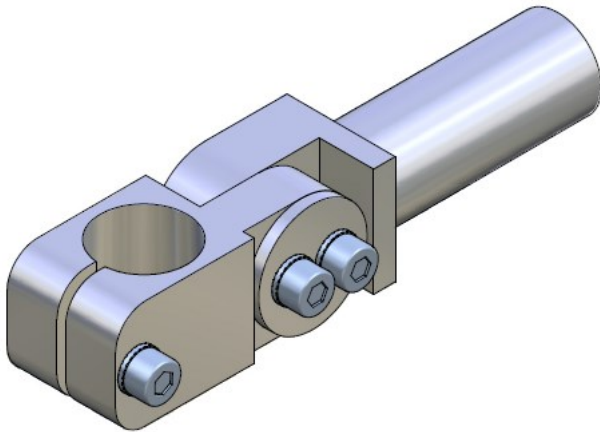


## CA.04 GVR

. Elbow Gripper Arm

Ø 10-14-20-30

. Gelenkgreifarm verstellbar rund



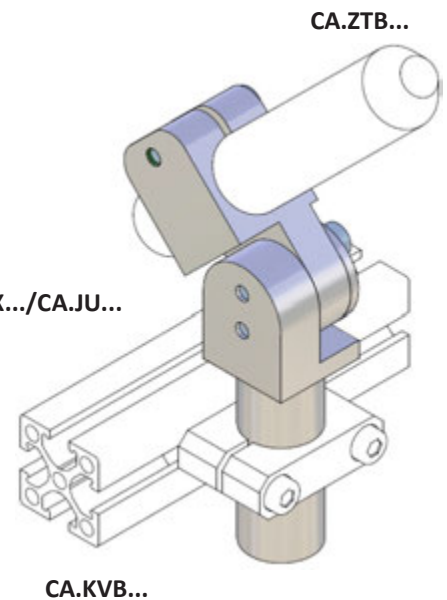
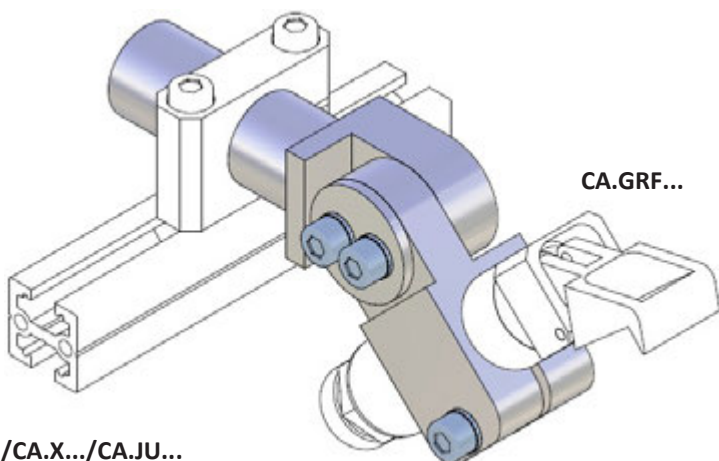
Remarks / Anmerkungen:

Material / Werkstoff: Aluminium

Surface: silver anodized  
Oberfläche: eloxiert

Article no.	A	B	C	D	Weight
CA.GVR.1010.30	10	10	30	30	27 g
CA.GVR.1010.60			60		31 g
CA.GVR.1010.90			90		37 g
CA.GVR.1414.40	14	14	40	36	51 g
CA.GVR.1414.80			80		59 g
CA.GVR.1414.120			120		67 g
CA.GVR.2020.50	20	20	50	45.5	120 g
CA.GVR.2020.100			100		138 g
CA.GVR.2020.150			150		169 g
CA.GVR.3030.80	30	30	80	60	302 g
CA.GVR.3030.140			140		370 g
CA.GVR.3030.200			200		434 g

Application examples / Anwendungsbeispiele



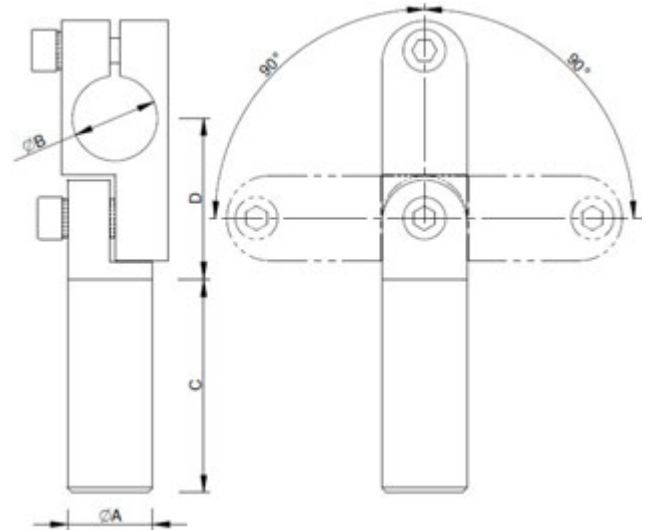
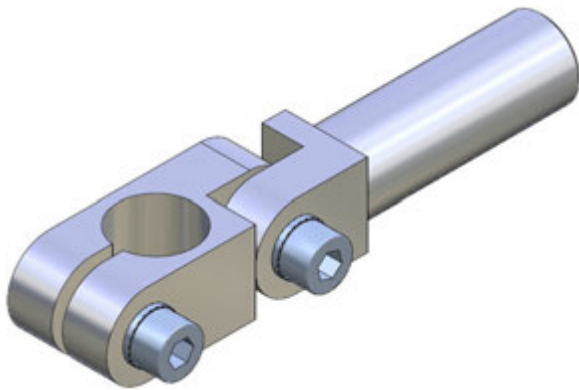


## CA.04 GLA

Ø 10-14-20-30

. Elbow gripper arm

. Gelenkgreifarm



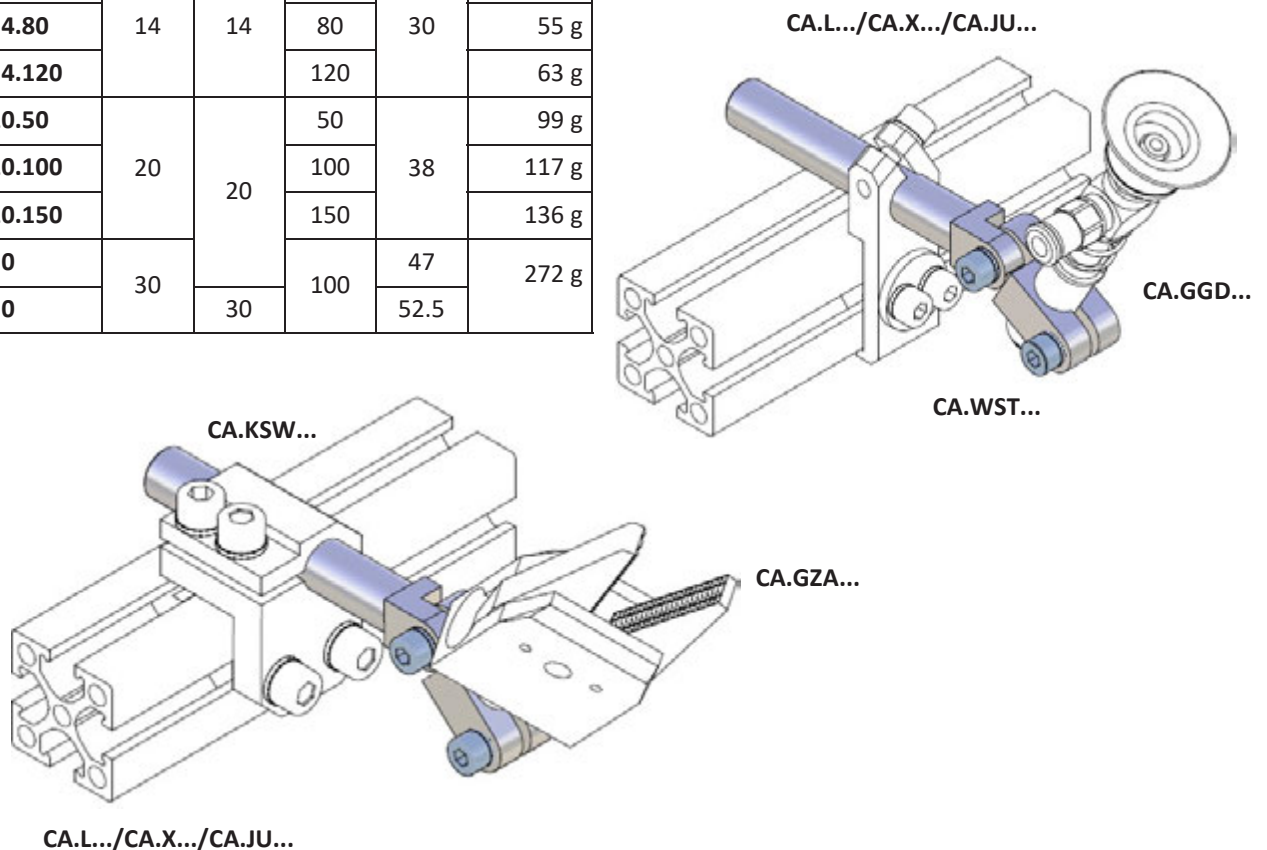
Remarks / Anmerkungen:

Material / Werkstoff: Aluminium

Surface: silver anodized  
Oberfläche: eloxiert

Article no.	A	B	C	D	Weight
CA.GLA.1010.30	10	10	30	22	17 g
CA.GLA.1010.60			60		21 g
CA.GLA.1010.90			90		28 g
CA.GLA.1414.40	14	14	40	30	47 g
CA.GLA.1414.80			80		55 g
CA.GLA.1414.120			120		63 g
CA.GLA.2020.50	20	20	50	38	99 g
CA.GLA.2020.100			100		117 g
CA.GLA.2020.150			150		136 g
CA.GLA.2030	30	30	100	47	272 g
CA.GLA.3030			52.5		

Application examples / Anwendungsbeispiele



## CA.04 KSW

L/X/JU

. Clamp angle

. Winkelklemmstück

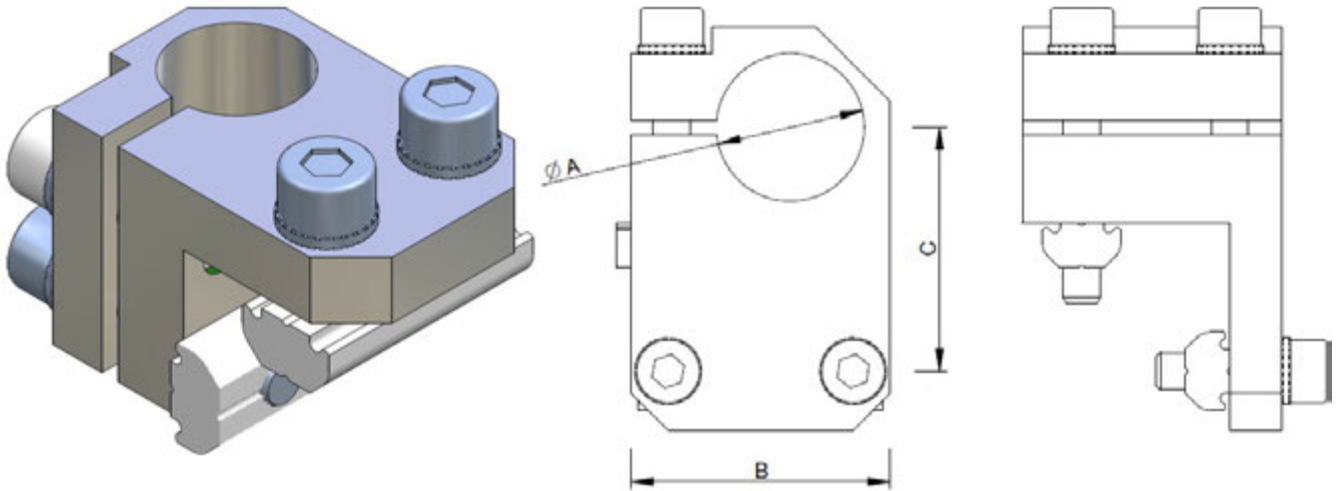


Table / Tabelle

M = Suitable for Profiles  
Passend für Profile

Remarks / Anmerkungen:

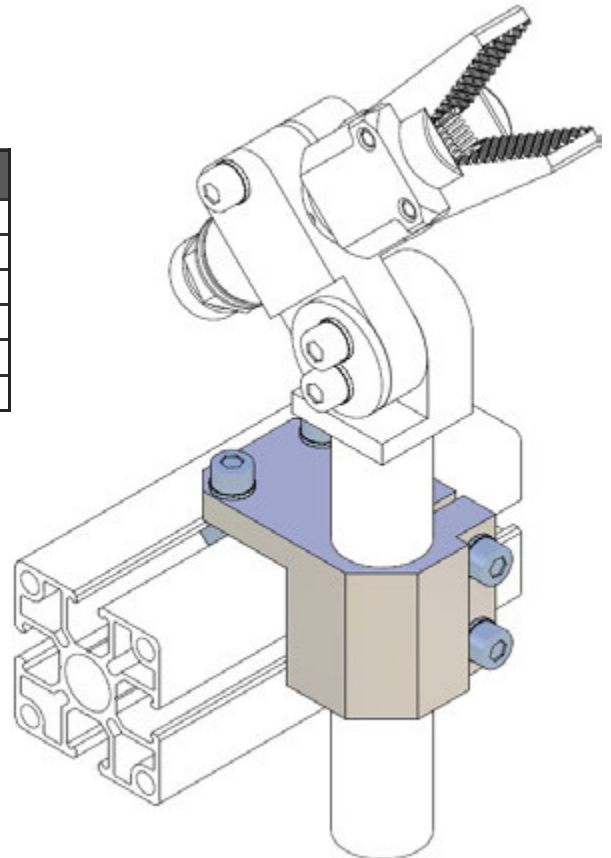
Material / Werkstoff: Aluminium

Surface: silver anodized  
Oberfläche: eloxiert

Article no.	A	B	C	M	Weight
CA.KSW.10.L	10	20	16.5	L	27 g
CA.KSW.10.X		25	19.5	X	56 g
CA.KSW.14.X	14		21.5		59 g
CA.KSW.20.X	20		32		24.5
CA.KSW.20.JU		35	33	JU	103 g
CA.KSW.30.JU	30	45	39	JU	148 g

Application example / Anwendungsbeispiel

CA.L.../CA.X.../CA.JU...

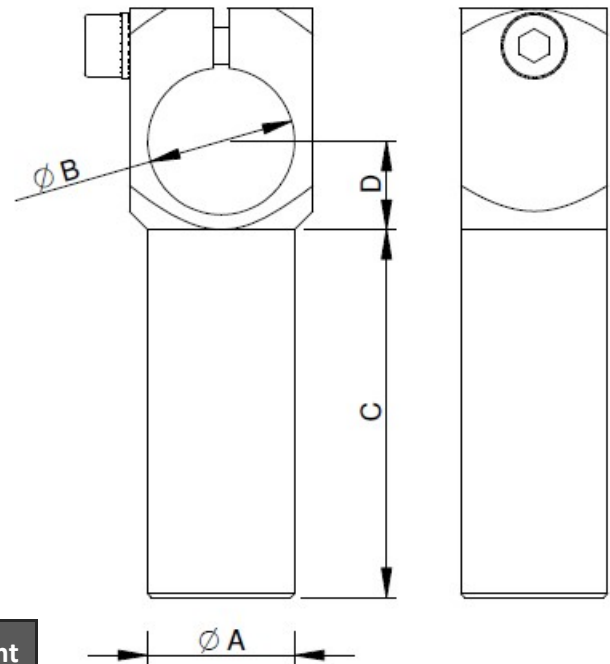
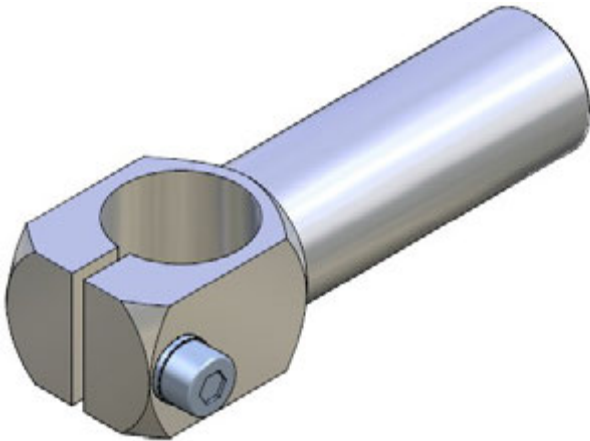


## CA.04 WKA

. Angle gripper arm

Ø 10-14-20-30

. Greifarm winkel rund



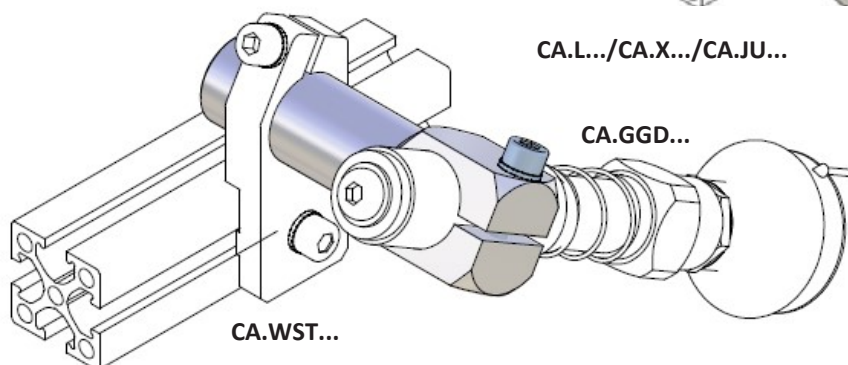
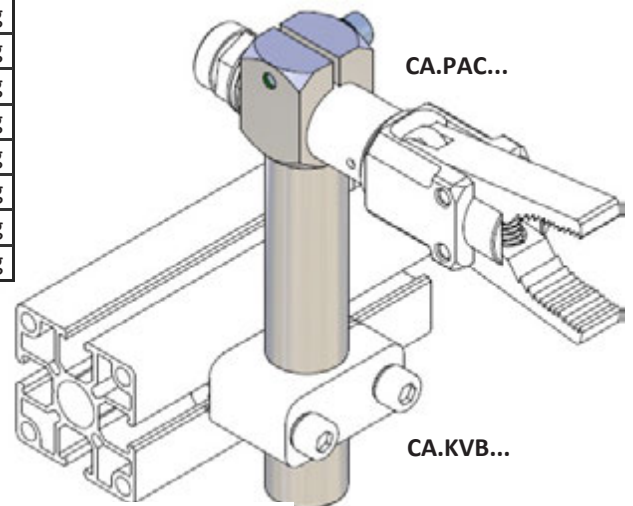
Remarks / Anmerkungen:

Material / Werkstoff: Aluminium

Surface: silver anodized  
Oberfläche: eloxiert

Article no.	A	B	C	D	Weight
CA.WKA.10.10.30	10	10	30	8	13 g
CA.WKA.10.10.60			60		15 g
CA.WKA.10.10.90			90		22 g
CA.WKA.14.14.40	14	14	40	10	25 g
CA.WKA.14.14.80			80		35 g
CA.WKA.14.14.120			120		50 g
CA.WKA.20.20.50	20	20	50	12	56 g
CA.WKA.20.20.100			100		74 g
CA.WKA.20.20.150			150		93 g
CA.WKA.30.30.80	30	30	80	17	176 g
CA.WKA.30.30.140			140		240 g
CA.WKA.30.30.200			200		304 g

Application examples / Anwendungsbeispiele



CA.L.../CA.X.../CA.JU...

## CA.04 ZTB

. Centering pin

Ø 10-14-20-30

. Zentrierbolzen

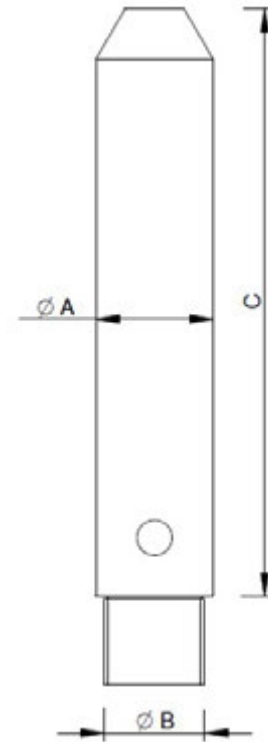
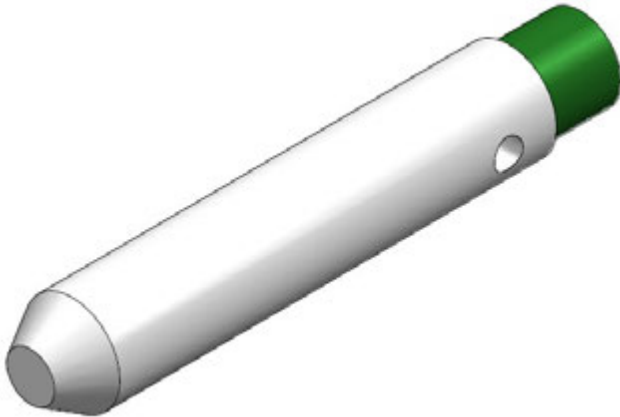


Table / Tabelle

M = Suitable for ...  
Passend für ...

Remarks / Anmerkungen:

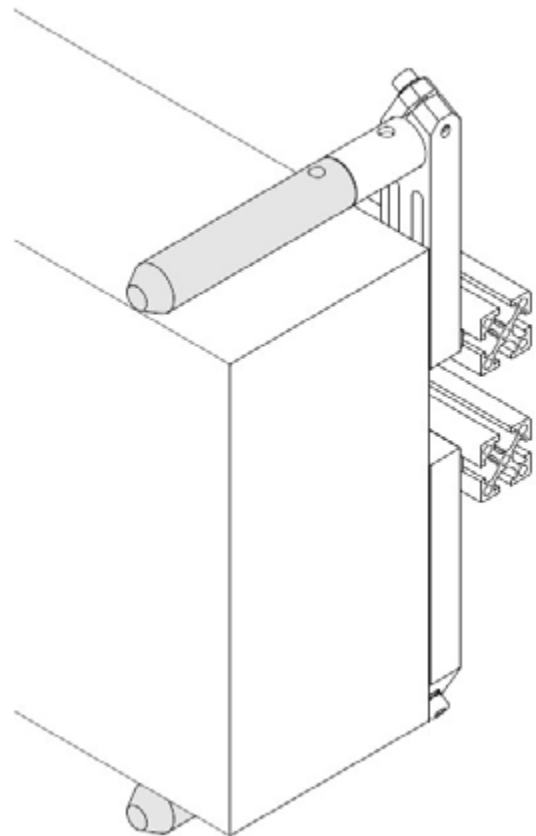
Centering pin made of POM  
Thread B allows the ZTB to connect to a VLR extension tube

Zentrierbolzen aus Pom  
Gewinde B ist die Anbindung zum Verlängerungsrohr VLR

Material / Werkstoff: POM

Application example / Anwendungsbeispiel

Article no.	A	B	C	M	Weight
CA.ZTB.1040	10	M8X1	40	CA.VLR.10	5 g
CA.ZTB.1060			60		7 g
CA.ZTB.1460	14	M12X1	80	CA.VLR.14	13 g
CA.ZTB.1480			80		18 g
CA.ZTB.20100	20	M17X1	100	CA.VLR.20	47 g
CA.ZTB.30100	30	M27X1		CA.VLR.30	104 g

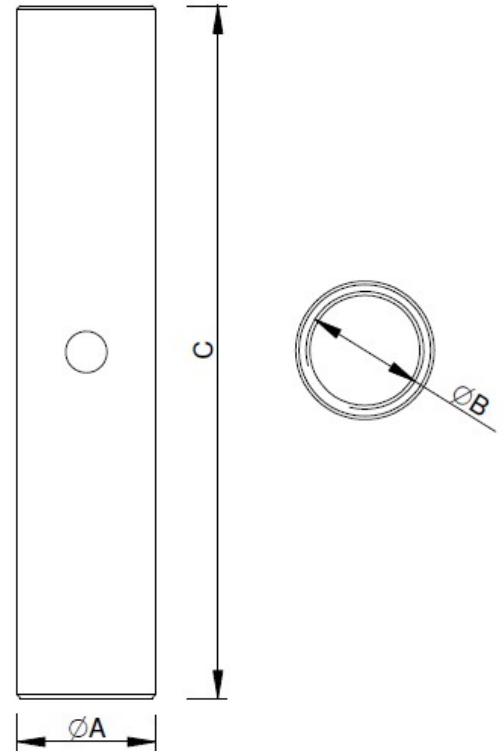
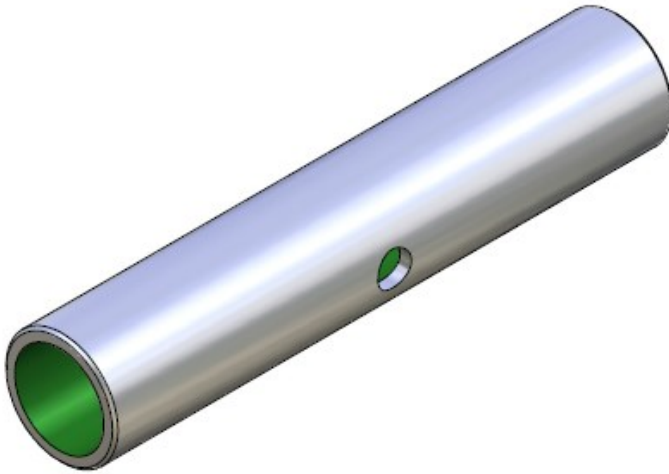


## CA.04 VLR

. Extension tube

Ø 10-14-20-30

. Verlängerungsrohr



Remarks / Anmerkungen:

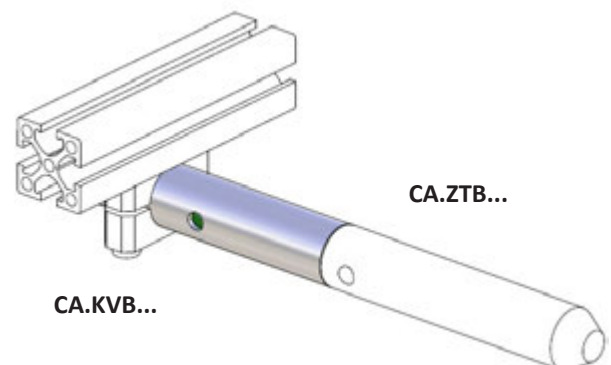
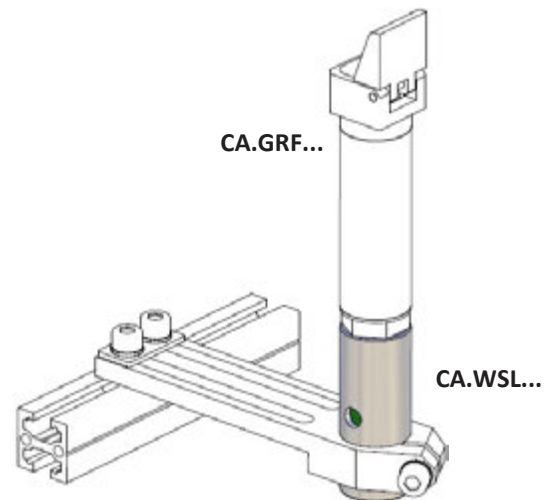
Extension tubes are compatible with:  
CA.ZTB - CA.GRF - CA.AGP - CA.GRZ - CA.PMA

Die Verlängerungsrohre sind kompatibel mit:  
CA.ZTB - CA.GRF - CA.AGP - CA.GRZ - CA.PMA

Material / Werkstoff: Aluminium  
Surface: silver anodized  
Oberfläche: eloxiert

Article no.	A	B	C	Weight
CA.VLR.10.30	10	M8X1	30	3 g
CA.VLR.10.60			60	6 g
CA.VLR.10.90			90	10 g
CA.VLR.14.40	14	M12X1	40	6 g
CA.VLR.14.80			80	13 g
CA.VLR.14.120			120	19 g
CA.VLR.20.50	20	M17X1	50	15 g
CA.VLR.20.100			100	31 g
CA.VLR.20.150			150	46 g
CA.VLR.30.80	30	M27X1	80	44 g
CA.VLR.30.140			140	78 g
CA.VLR.30.200			200	113 g

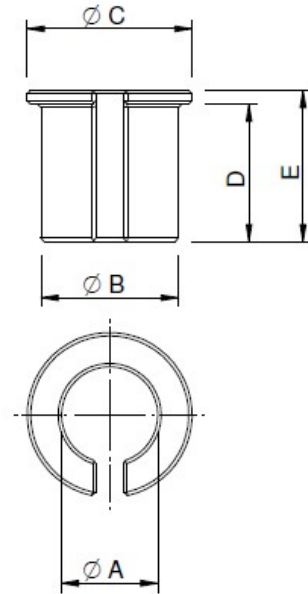
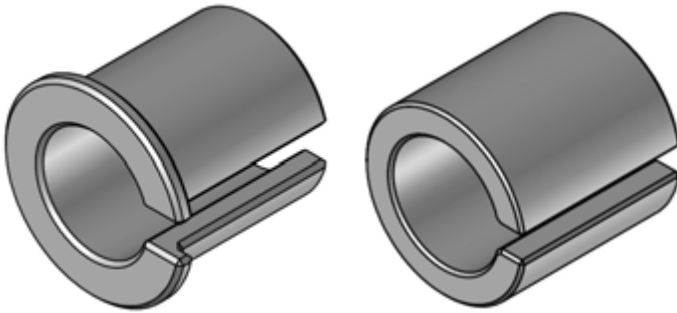
Application examples / Anwendungsbeispiele



**CA.04 RID**

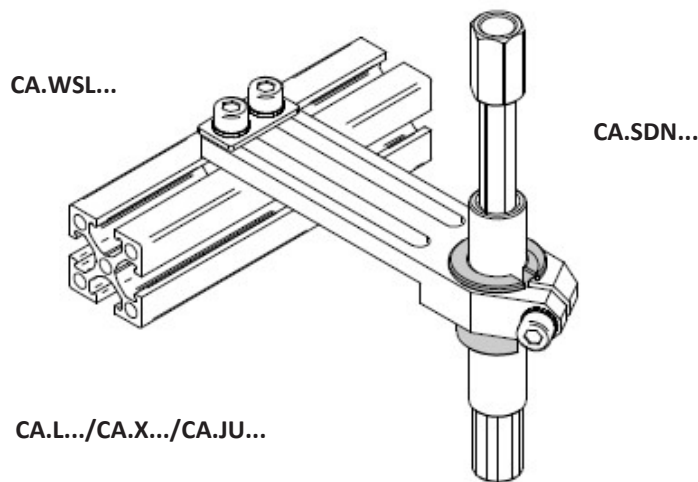
. Reducer

. Reduktionsmittel



Article no.	A	B	C	D	E	Weight
CA.RID.1410	10	14	18	14	16	4 g
CA.RID.2014	14	20	24	20	22	9 g
CA.RID.3020	20	30	30	30	30	30 g

**Application example / Anwendungsbeispiel**





**CA.05 SMN**

**Ø 14 - 20**

. Smooth-body non-rotative suspension

. Verdrehgesicherte Aufhängung mit glattem Körper

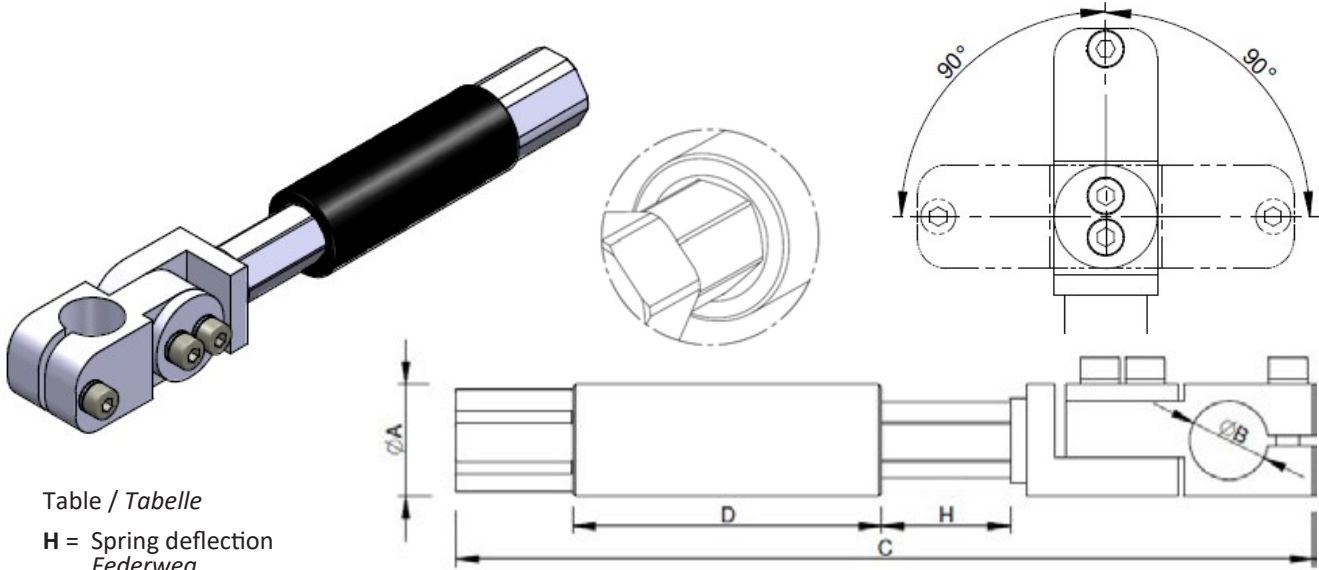


Table / Tabelle

H = Spring deflection  
Federweg

Remarks / Anmerkungen:

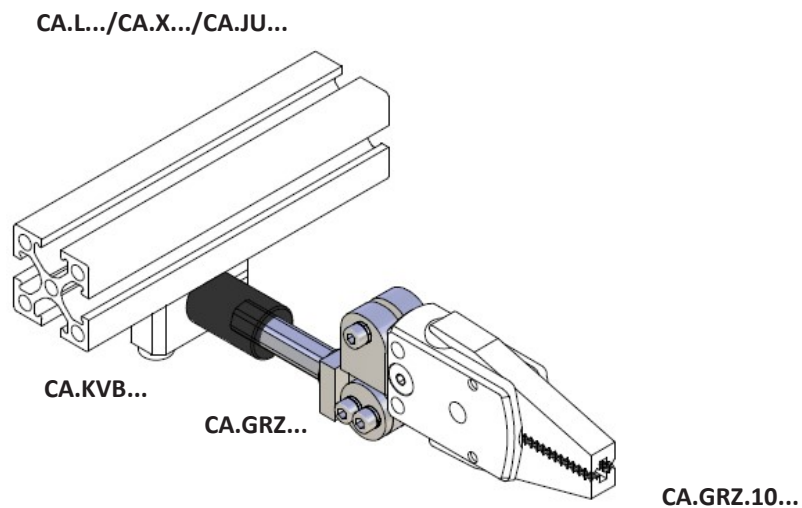
Material / Werkstoff: Aluminium

Guide (Tube) hard coated  
Führung (Rohr) spezialgleitbeschichtet und gehärtet

Non rotational  
Verdrehgesichert

Article no.	A	B	C	D	H	Weight
CA.SMN.142010	14	10	128	42	20	43 g
CA.SMN.143510			160	60	35	50 g
CA.SMN.202514	20	14	153	55	25	95 g
CA.SMN.202520		20	166.5			111 g
CA.SMN.205014		14	208	82.5	50	115 g
CA.SMN.205020		20	219.5			130 g

Application example / Anwendungsbeispiel





## CA.05 SMNG

Ø 14 - 20

. Threaded-body non-rotative suspension

. Verdrehgesicherte Aufhängung mit Gewindekörper

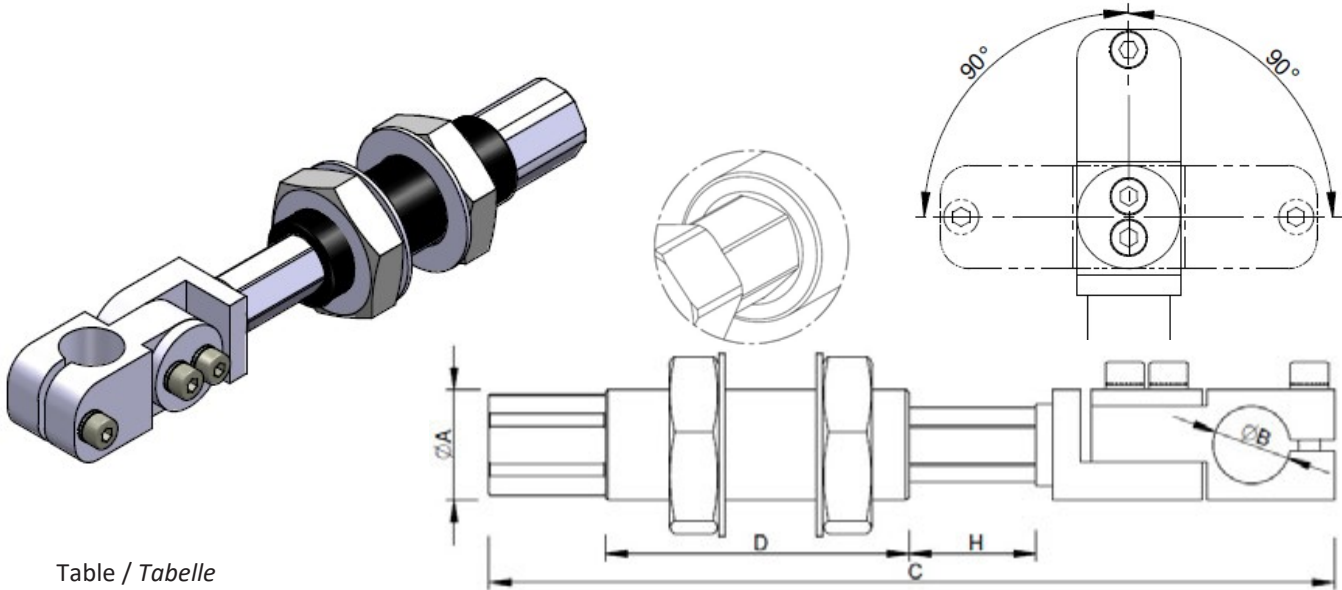


Table / Tabelle

H = Spring deflection  
Federweg

Remarks / Anmerkungen:

Material / Werkstoff: Aluminium

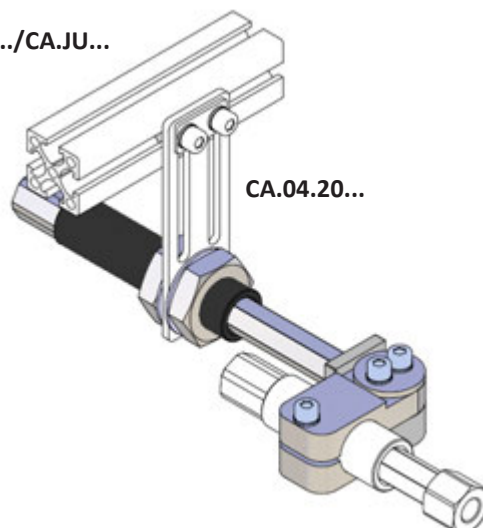
Guide (Tube) hard coated  
Führung (Rohr) spezialgleitbeschichtet und gehärtet

Non rotational  
Verdrehgesichert

Article no.	A	B	C	D	H	Weight
CA.SMNG.142010	M14x1.5	10	128	42	20	55 g
CA.SMNG.143510			160	60	35	61 g
CA.SMNG.202514	M20x1.5	14	151	55	25	129 g
CA.SMNG.205014			206	82.5	50	149 g

Application example / Anwendungsbeispiel

CA.L.../CA.X.../CA.JU...

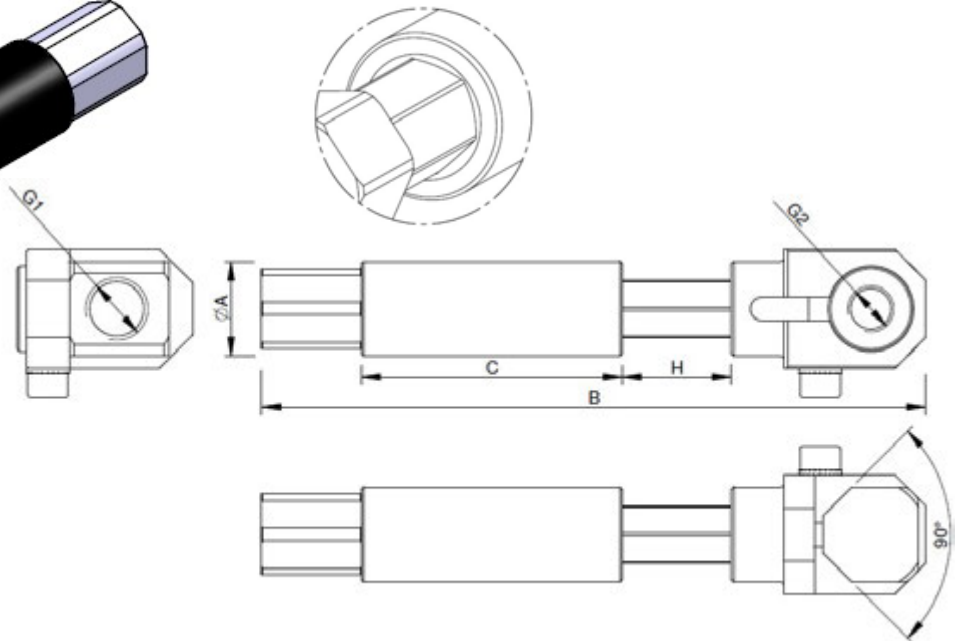
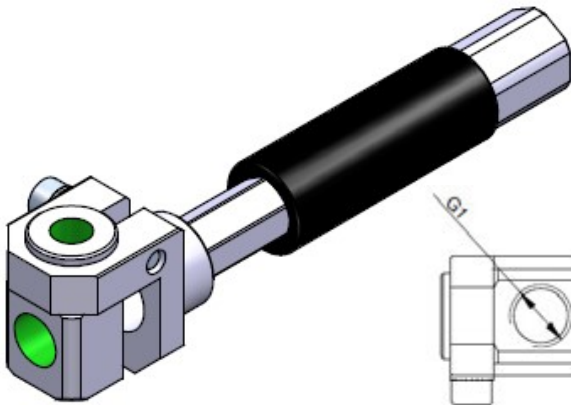


**CA.05 SSN**

**Ø 10 - 14 - 20**

. Smooth-body non-rotative telescopic suspension

. Verdrehgesicherte Aufhängung mit glattem Körper



Remarks / Anmerkungen:

Material / Werkstoff: Aluminium

Guide (Tube) hard coated  
Führung (Rohr) spezialgleitbeschichtet und gehärtet

Non rotational  
Verdrehgesichert

Table / Tabelle

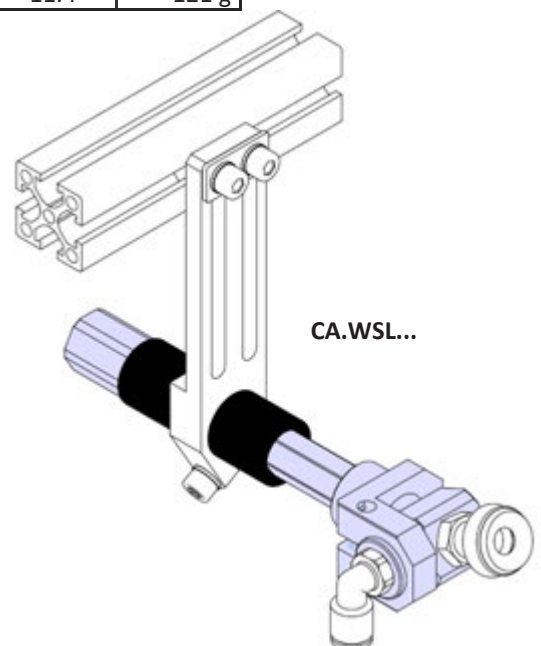
H = Spring deflection  
Federweg

Article no.	A	B	C	G1	G2	H	F(N)	Weight
CA.SSN.10100505	10	78.5	26.5	M5	M5	10	3.6	19 g
CA.SSN.10250505		108.8	41.5			25	3.7	22 g
CA.SSN.14201818	14	116	42	G 1/8	G 1/8	20	8.9	45 g
CA.SSN.14351818		148	60			35	9.5	51 g
CA.SSN.20251418	20	140	55	G 1/4	G 1/4	25	11	102 g
CA.SSN.20501418		193	82.5			50	11.4	121 g

Application example / Anwendungsbeispiel

CA.L.../CA.X.../CA.JU...

CA.WSL...

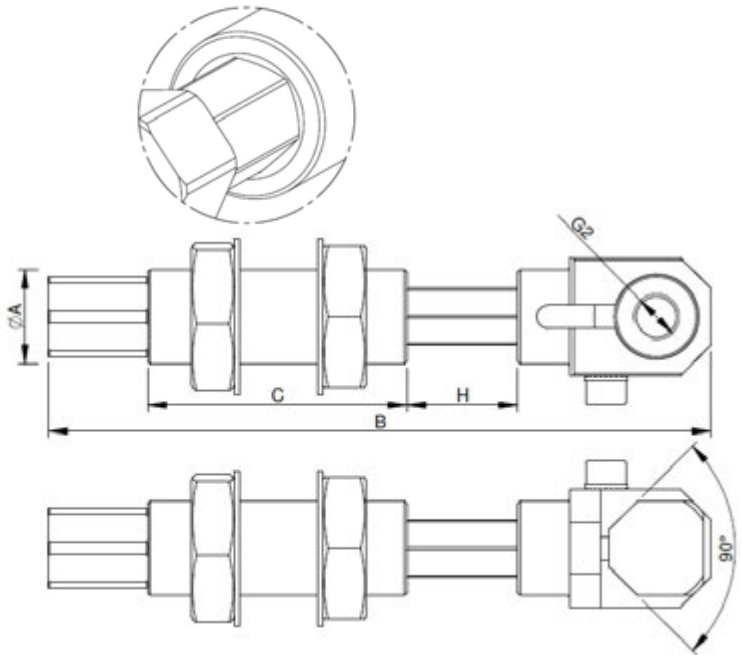
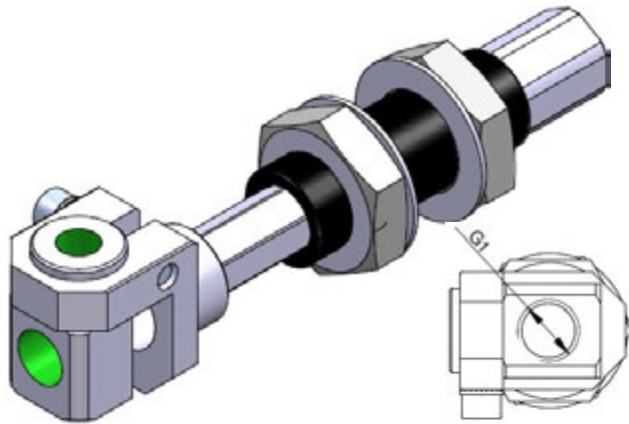


## CA.05 SSNG

Ø 10 - 14 - 20

. Threaded-body non-rotative suspension

. Verdrehgesicherte Aufhängung mit Gewindekörper



Remarks / Anmerkungen:

Material / Werkstoff: Aluminium

Guide (Tube) hard coated  
Führung (Rohr) spezialgleitbeschichtet und gehärtet

Non rotational  
Verdrehgesichert

Table / Tabelle

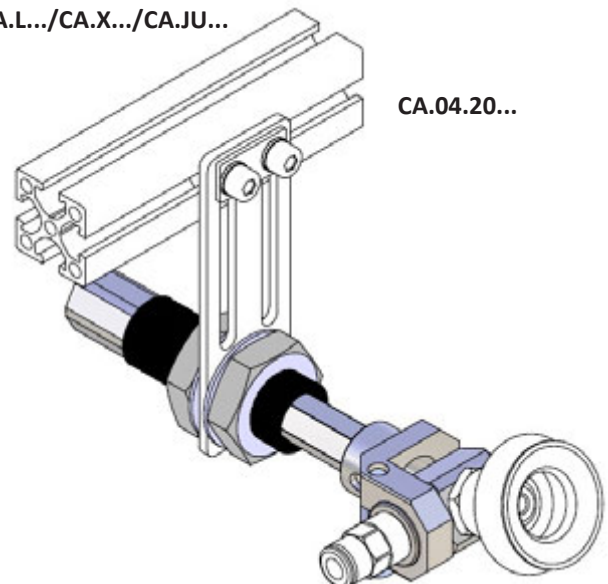
H = Spring deflection  
Federweg

Article no.	A	B	C	G1	G2	H	F(N)	Weight
CA.SSNG.10100505	M10X1	78.5	26.5	M5	M5	10	3.6	25 g
CA.SSNG.10250505		108.5	41.5			25	3.7	28 g
CA.SSNG.14201818	M14X1.5	116	42	G 1/8	G 1/8	20	8.9	57 g
CA.SSNG.14351818		148	60			35	9.5	63 g
CA.SSNG.20251418	M20X1.5	140.5	55	G 1/4		25	11	136 g
CA.SSNG.20501418		193.5	82.5			50	11.4	154 g

Application example / Anwendungsbeispiel

CA.L.../CA.X.../CA.JU...

CA.04.20...



**CA.05 SDN**

**Ø 10 - 14 - 20**

. Smooth-body non-rotative telescopic suspension

. *Verdrehgesicherte Aufhängung mit glattem Körper*

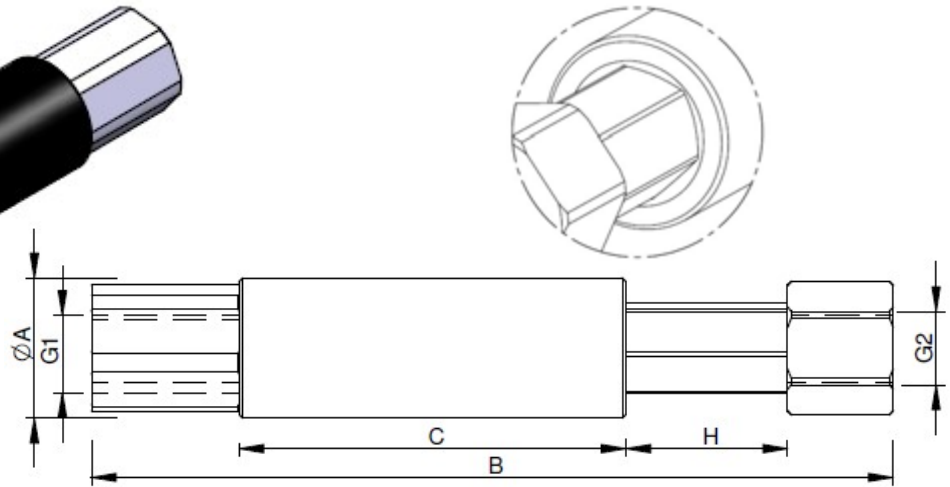
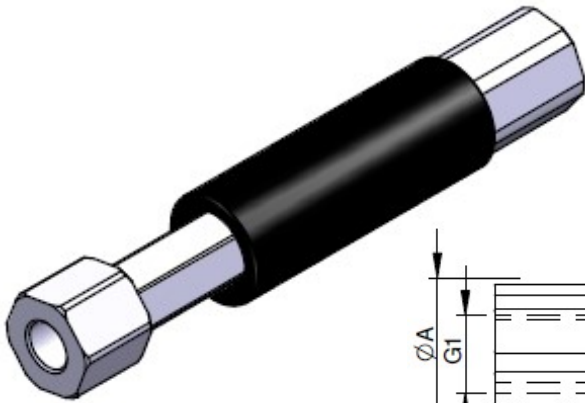


Table / Tabelle

H = Spring deflection  
Federweg

F = Spring force  
Federkraft

Remarks / Anmerkungen:

Material / Werkstoff: Aluminium

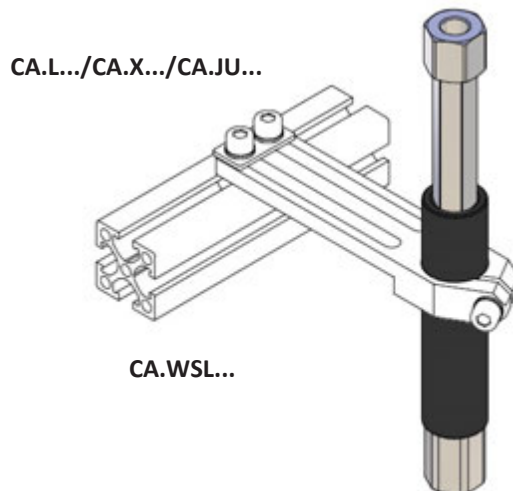
Guide (Tube) hard coated  
Führung (Rohr) spezialgleitbeschichtet und gehärtet

Non rotational

**New**

Article no.	A	B	C	G1	G2	H	F(N)	Weight
CA.SDN.1010	10	60.5	26.5	M5	M5	10	3.6	8 g
CA.SDN.1025		89.5	41.5			25	3.7	11 g
CA.SDN.1420	14	102.5	42	G 1/8	G 1/8	20	8.9	25 g
CA.SDN.1435		135	60			35	9.5	31 g
CA.SDN.2025	20	114	55			25	11	65 g
CA.SDN.2050		169	82.5			50	11.4	71 g
CA.SDN.2025.14		114	55	G 1/4	G1/4	25		62 g
CA.SDN.2050.14		167	82.5			50		67 g

Application example / Anwendungsbeispiel



## CA.05 SDNG

Ø 10 - 14 - 20

. Threaded-body non-rotative telescopic suspension

. Verdrehgesicherte Aufhängung mit Gewindekörper

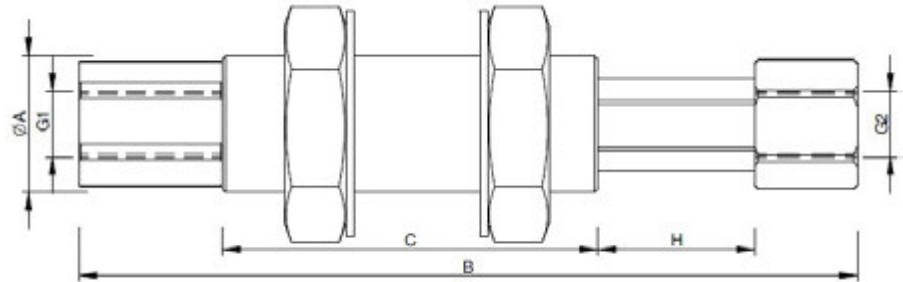
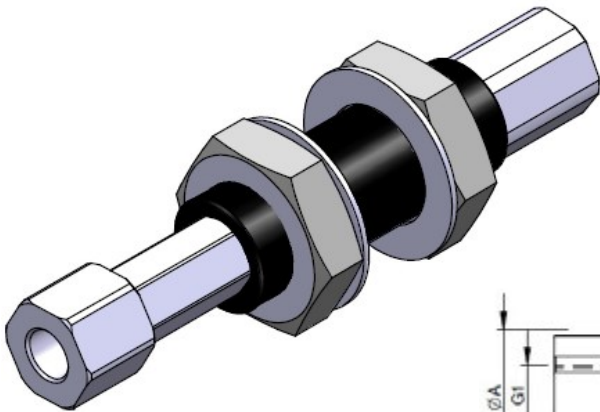


Table / Tabelle

**H** = Spring deflection  
Federweg

Remarks / Anmerkungen:

Material / Werkstoff: Aluminium

Guide (Tube) hard coated  
Führung (Rohr) spezialgleitbeschichtet und gehärtet

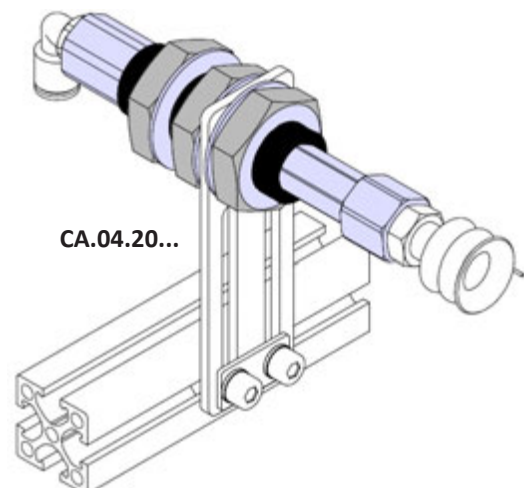
Non rotational  
Verdrehgesichert

Article no.	A	B	C	G1	G2	H	F(N)	Weight
CA.SDNG.1010	M10X1	61.5	26.5	M5	M5	10	3.6	13 g
CA.SDNG.1025		91.5	41.5			25	3.7	16 g
CA.SDNG.1420	M14X1.5	105	42	G 1/8	G 1/8	20	8.9	37 g
CA.SDNG.1435		135	60			35	9.5	43 g
CA.SDNG.2025	M20X1.5	114	55			25	11	94 g
CA.SDNG.2050		174	82.5			50	11.4	115 g
CA.SDNG.2025.14		114	55	G 1/4	G1/4		96 g	
CA.SDNG.2050.14	174	82.5					101 g	

New

Application example / Anwendungsbeispiel

CA.L.../CA.X.../CA.JU...



**CA.05 SDR**
**Ø 10 - 14 - 20**

. Smooth-body rotative telescopic suspension

. Drehbare Aufhängungen mit glattem Körper

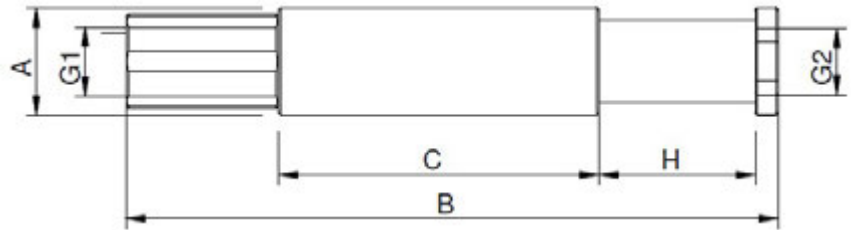
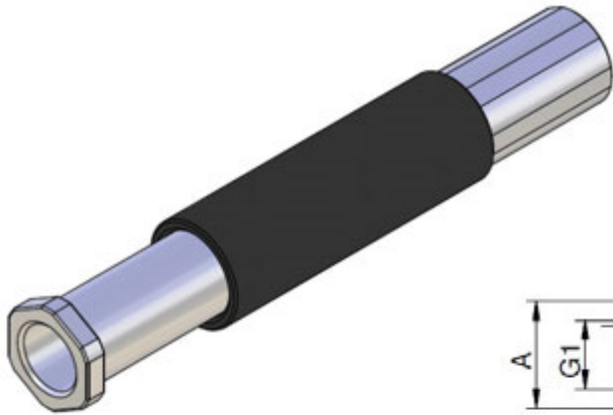


Table / Tabelle

**H** = Spring deflection  
 Federweg

**F** = Spring force  
 Federkraft

Remarks / Anmerkungen:

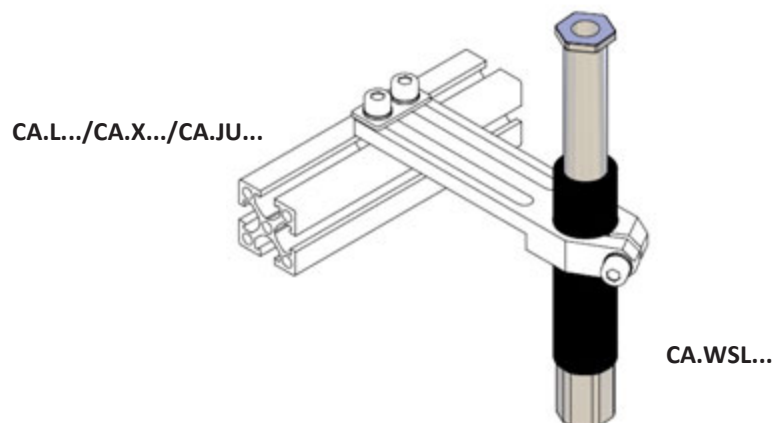
Material / Werkstoff: Aluminium

 Guide (Tube) hard coated  
 Führung (Rohr) spezialgleitbeschichtet und gehärtet

Rotational

Article no.	A	B	C	G1	G2	H	F(N)	Weight
CA.SDR.1010	10	51	20.5	M5	M5	10	3.6	7 g
CA.SDR.1025		86	40.5			25	3.7	11 g
CA.SDR.1420	14	85.5	42	G 1/8	G 1/8	20	8.9	19 g
CA.SDR.1435		120.5	62			35	9.5	25 g
CA.SDR.2025	20	97	47.5			25	11	55 g
CA.SDR.2050		147	72.5		M10	50	11.4	73 g
CA.SDR.2025.14		107	47.5	G1/4	G1/4	25		56 g
CA.SDR.2050.14		157	72.5			50		76 g

Application example / Anwendungsbeispiel

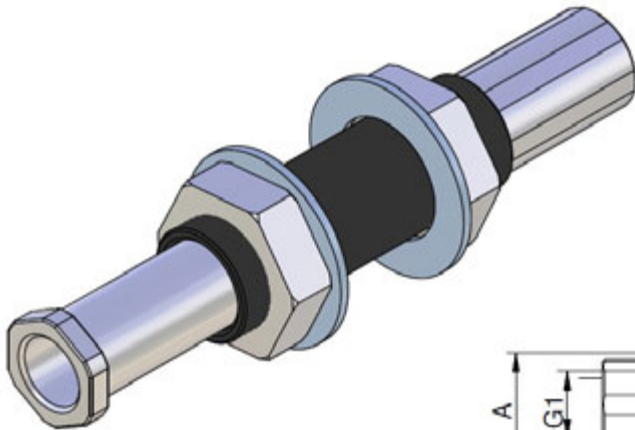


# CA.05 SDRG

Ø 10 - 14 - 20

. Threaded-body rotative telescopic suspension

. Drehbare Aufhängungen mit gewinde Körper



Threaded tube  
Gewindeschaft

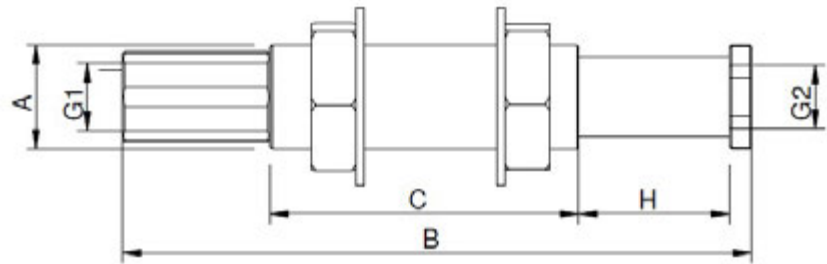


Table / Tabelle

H = Spring deflection  
Federweg

F = Spring force  
Federkraft

Remarks / Anmerkungen:

Material / Werkstoff: Aluminium

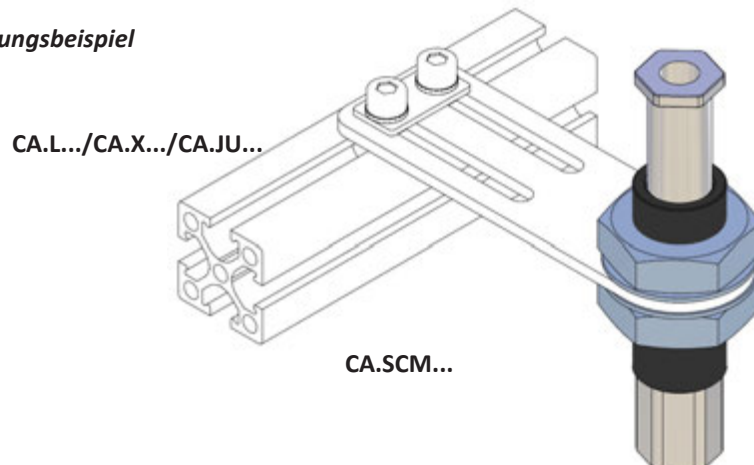
Guide (Tube) hard coated  
Führung (Rohr) spezialgleitbeschichtet und gehärtet

Rotational  
Verdrehgesichert

Article no.	A	B	C	G1	G2	H	F(N)	Weight
CA.SDRG.1010	M10X1	51	20.5	M5	M5	10	3.6	12 g
CA.SDRG.1025		86	40.5			25	3.7	16 g
CA.SDRG.1420	M14X1.5	85.5	42	G 1/8	G 1/8	20	8.9	27 g
CA.SDRG.1435		120.5	62			35	9.5	33 g
CA.SDRG.2025	M20X1.5	97	47.5		25	11	81 g	
CA.SDRG.2050		147	72.5		M10	50	11.4	94 g
CA.SDRG.2025.14		107	47.5	G1/4	G1/4	25	90 g	
CA.SDRG.2050.14		157	72.5			50	110 g	

New

Application example / Anwendungsbeispiel



## CA.05.02

Ø 10-14-20

. Spring loaded vacuum cup arm (Non-rotational shaft)

. Greifarm gefedert verdrehgesichert

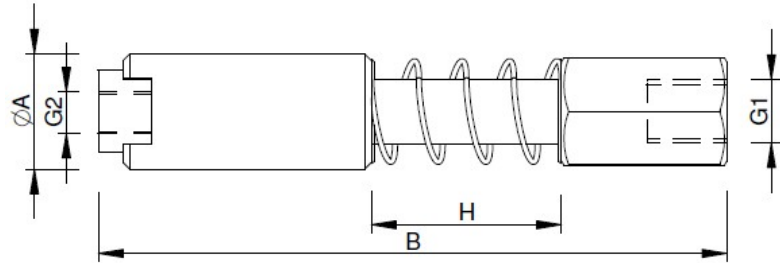
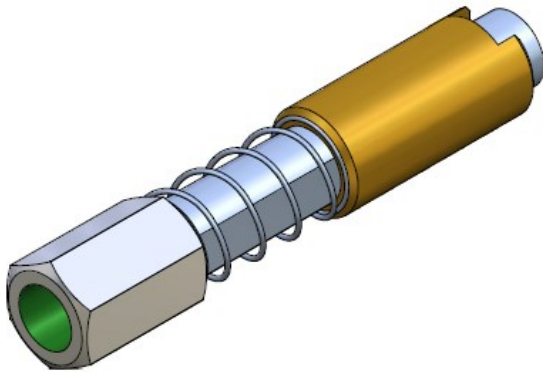


Table / Tabelle

H = Spring deflection  
Federweg

F = Spring force  
Federkraft

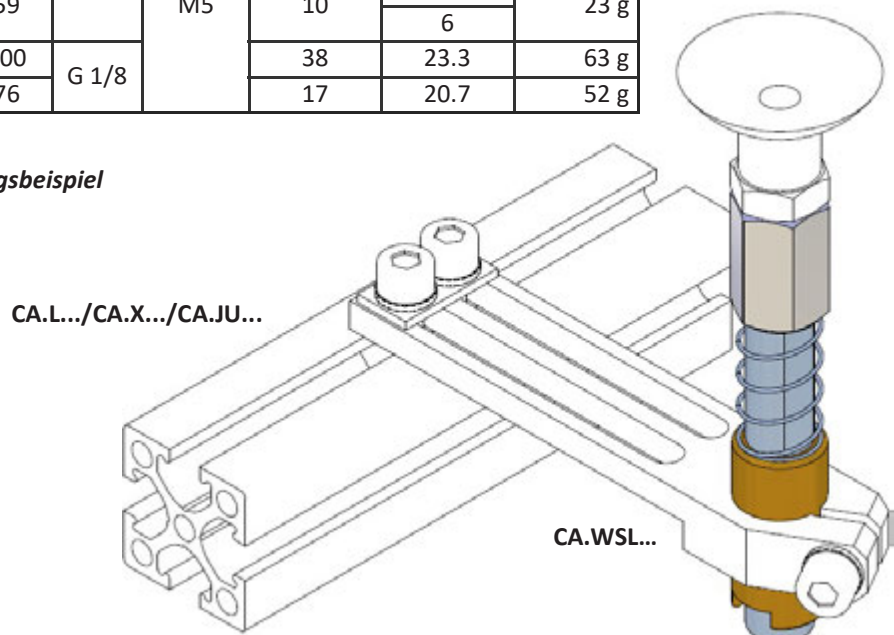
Remarks / Anmerkungen:

Brass material  
Messing

Non rotational  
Verdrehgesichert

Article no.	A	B	G1	G2	H	F(N)	Weight
CA.05.02.002	20	125	G 1/4	G 1/8	48	16.6	73 g
CA.05.02.004		100			25	18.4	135 g
CA.05.02.009	10	69	M5	M5	20	3.4	26 g
CA.05.02.009.6N						6	
CA.05.02.010		59			4.8	23 g	
CA.05.02.010.6N					6		
CA.05.02.011	14	100	G 1/8		38	23.3	63 g
CA.05.02.012		76			17	20.7	52 g

Application example / Anwendungsbeispiel





# CA.05.01

Ø 10-14-20

. Spring loaded vacuum cup arm (Non-rotational shaft)

. Greifarm gefedert verdrehgesichert

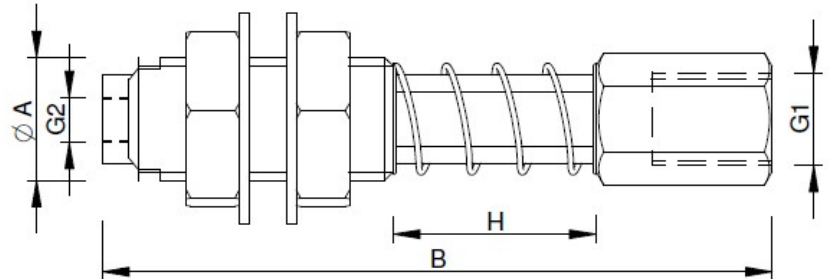
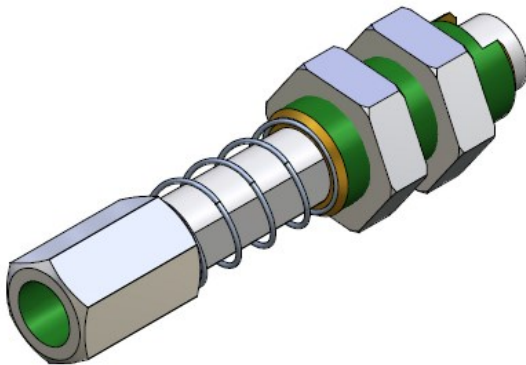


Table / Tabelle

H = Spring deflection  
Federweg

Threaded tube  
Gewindeschaft

F = Spring force  
Federkraft

Remarks / Anmerkungen:

Brass material  
Messing

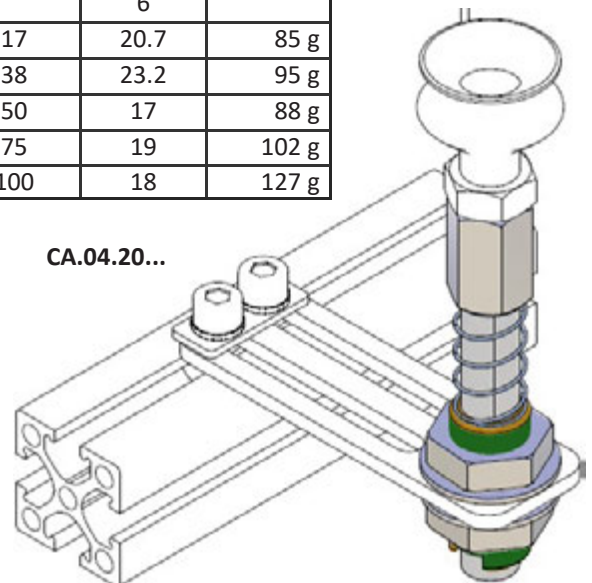
Non rotational  
Verdrehgesichert

Article no.	A	B	G1	G2	H	F(N)	Weight
CA.05.01.001	M14x1.5	100	G 1/8	M5	38	23.2	75 g
CA.05.01.002	M20x1.5	125	G 1/4	G 1/8	48	16.7	97 g
CA.05.01.003	M14x1.5	76	G 1/8	M5	17	20.7	63 g
CA.05.01.004	M20x1.5	100	G 1/4	G 1/8	25	18.4	161 g
CA.05.01.005	M10x1	69	M5	M5	20	3.4	31 g
6							
CA.05.01.006		59			10	4.8	28 g
CA.05.01.006.6N	6						
CA.05.01.010	M16x1.5	76	G 1/8	M5	17	20.7	85 g
CA.05.01.011		100			38	23.2	95 g
CA.05.01.50	M14x1.5	123	G 1/8	M5	50	17	88 g
CA.05.01.75		153			75	19	102 g
CA.05.01.100		193			100	18	127 g

Application example / Anwendungsbeispiel

CA.04.20...

CA.L.../CA.X.../CA.JU...



## CA.05 GGS

Ø 10-14-20

. Spring loaded vacuum cup arm (Non-rotational shaft)

. Greifarm gefedert verdrehgesichert

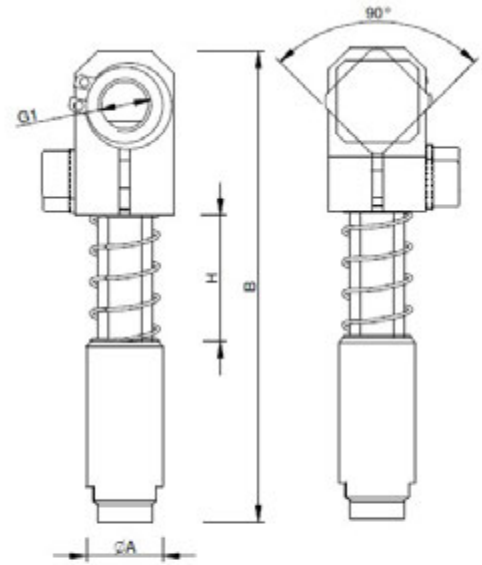
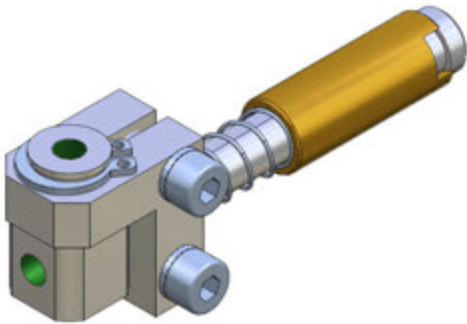


Table / Tabelle

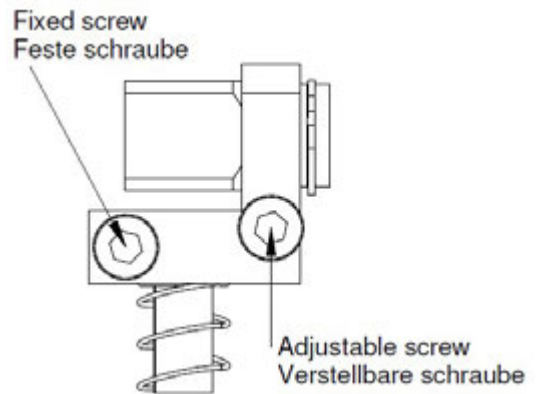
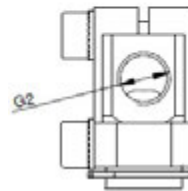
H = Spring deflection  
Federweg

F = Spring force  
Federkraft

Remarks / Anmerkungen:

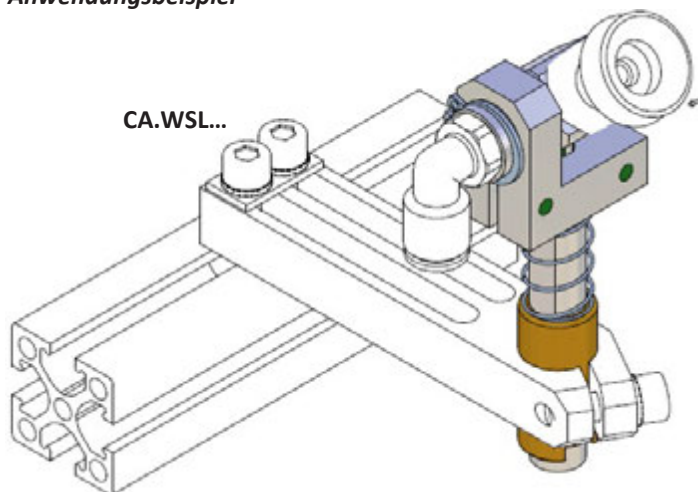
Brass material  
Messing

Non rotational  
Verdrehgesichert



Article no.	A	B	G1	G2	H	F(N)	Weight
CA.GGS100515	10	69	M5	M5	10	3.6	37 g
CA.GGS100520		79			20	6	40 g
CA.GGS100530		98			30	8.6	45 g
CA.GGS141815	14	86	G 1/8	G 1/8	17	20.7	86 g
CA.GGS141840		110			38	23.3	89 g
CA.GGS201425	20	116		G 1/4	25	18.4	196 g
CA.GGS201445		141			45	16.7	206 g

Application example / Anwendungsbeispiel



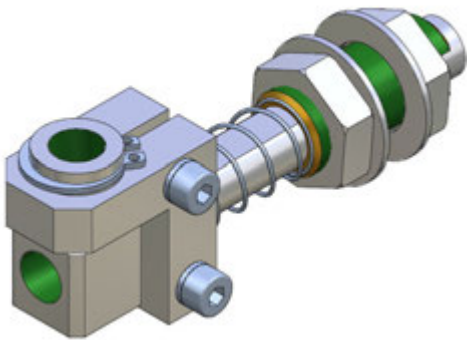
CA.L.../CA.X.../CA.JU...

## CA.05 GGSM

Ø 10-14-20

. Spring loaded vacuum cup arm (Non-rotational shaft)

. Greifarm gefedert verdrehgesichert



Threaded tube  
Gewindeschaft

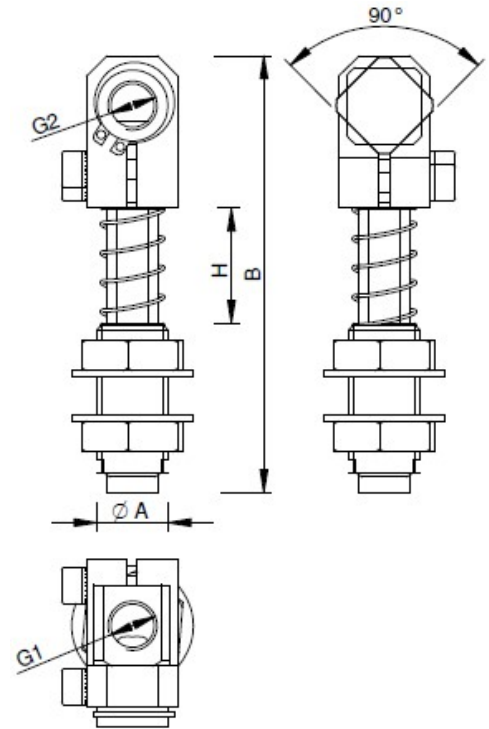


Table / Tabelle

H = Spring deflection  
Federweg

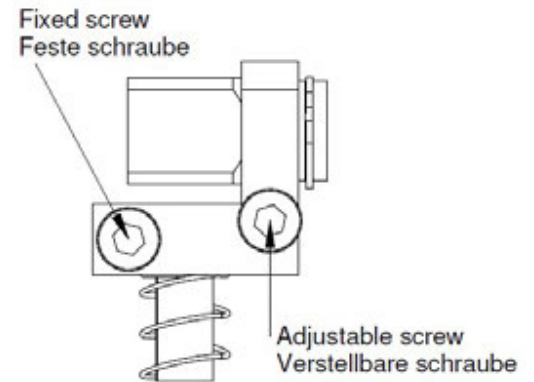
F = Spring force  
Federkraft

Remarks / Anmerkungen:

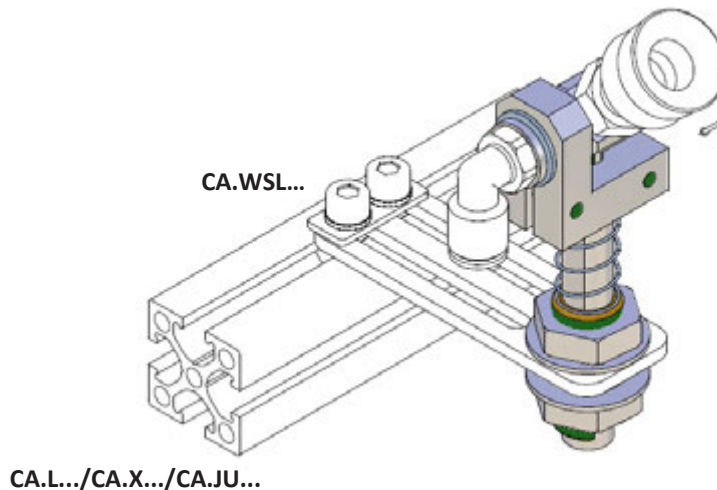
Brass material  
Messing

Non rotational  
Verdrehgesichert

Article no.	A	B	G1	G2	H	F(N)	Weight
CA.GGSM100515	M10X1	69	M5	M5	10	6	42g
CA.GGSM100520		79			20		45g
CA.GGSM100530		98			30		50g
CA.GGSM141815	M14X1.5	86	G 1/8	G 1/8	17	20.7	85 g
CA.GGSM141840		110			38	23.3	96 g
CA.GGSM201425	M20X1.5	116	G 1/4		25	18.4	222 g
CA.GGSM201445		141			48	16.7	242 g



Application example / Anwendungsbeispiel



## CA.05 GGD

Ø 10-14-20

. Spring loaded vacuum cup arm

. Greifarm gefedert drehbar

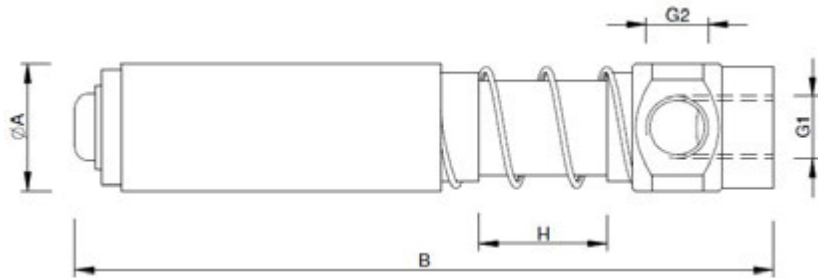
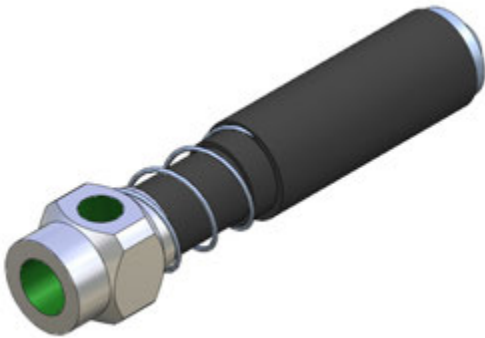


Table / Tabelle

H = Spring deflection  
Federweg

F = Spring force  
Federkraft

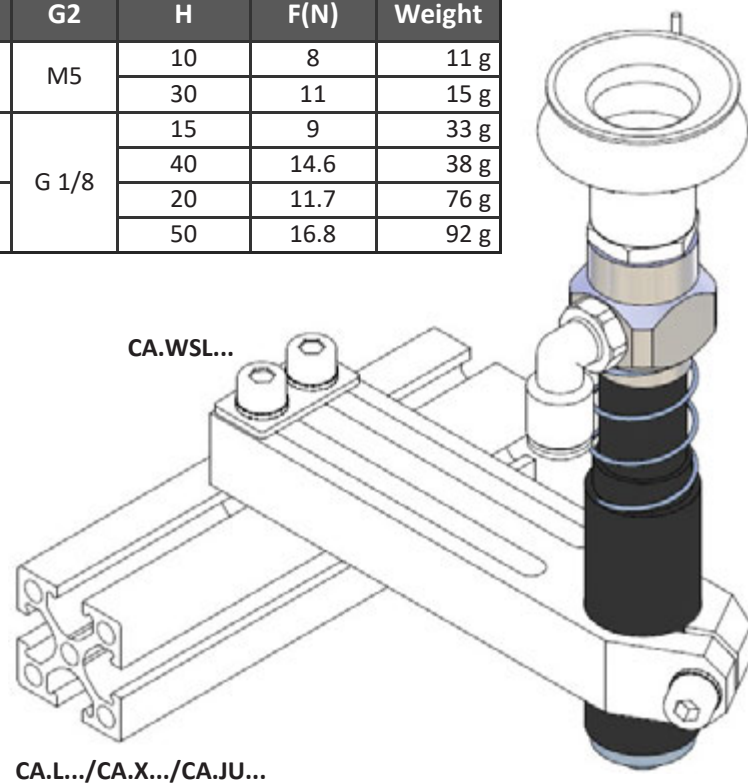
Remarks / Anmerkungen:

Extremely light weight (Material Aluminium)  
Extrem leicht (Material Aluminium)

Guide (Tube and shaft) hard coated  
Führung (Rohr und Welle) spezialgleitbeschichtet und gehärtet

Article no.	A	B	G1	G2	H	F(N)	Weight
CA.GGD.10050510	10	59	M5	M5	10	8	11 g
CA.GGD.10050530		85			30	11	15 g
CA.GGD.14181815	14	84	G 1/8	G 1/8	15	9	33 g
CA.GGD.14181840		109			40	14.6	38 g
CA.GGD.20141820	20	109	G 1/4	G 1/4	20	11.7	76 g
CA.GGD.20141850		147			50	16.8	92 g

Application example / Anwendungsbeispiel



## CA.05 GGDG

Ø 10-14-20

. Spring loaded vacuum cup arm (Threaded tube)

. Greifarm gefedert drehbar (Gewinderohr)

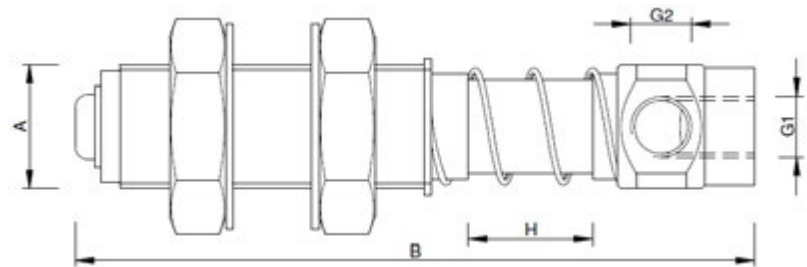
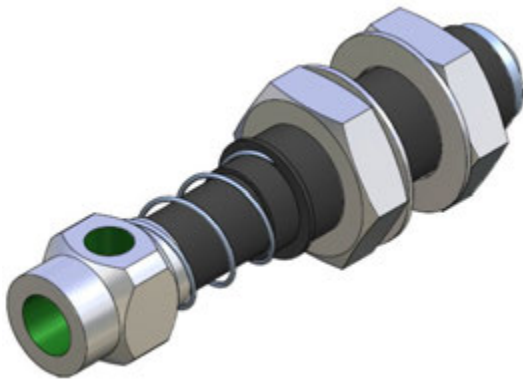


Table / Tabelle

H = Spring deflection  
Federweg

F = Spring force  
Federkraft

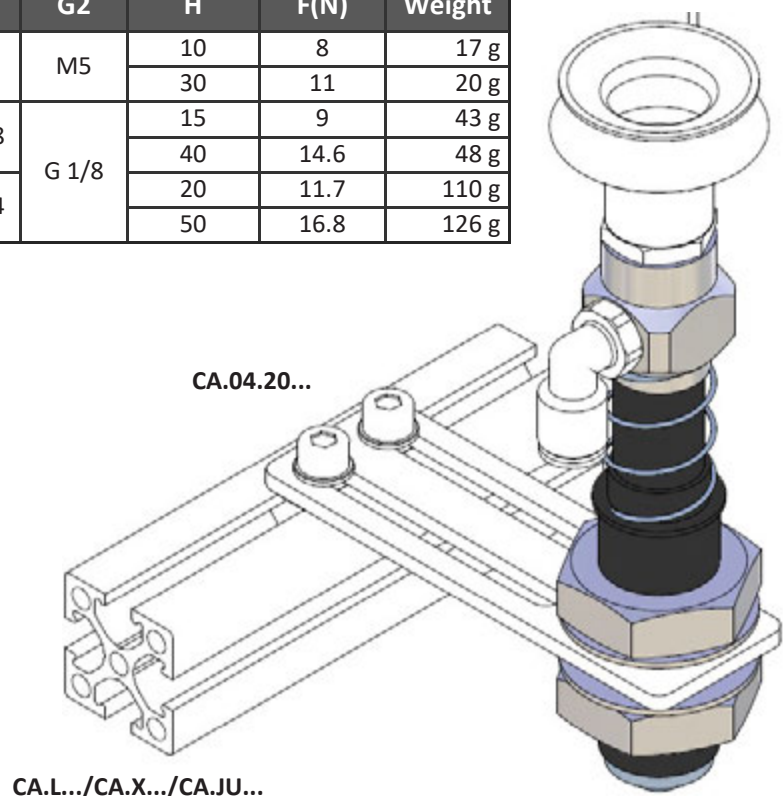
Remarks / Anmerkungen:

Extremely light weight (Material Aluminium)  
Extrem leicht (Material Aluminium)

Guide (Tube and shaft) hard coated  
Führung (Rohr und Welle) spezialgleitbeschichtet und gehärtet

Article no.	A	B	G1	G2	H	F(N)	Weight
CA.GGDG.10050510	M10x1	59	M5	M5	10	8	17 g
CA.GGDG.10050530		85			30	11	20 g
CA.GGDG.14181815	M14x1.5	84	G 1/8	G 1/8	15	9	43 g
CA.GGDG.14181840		109			40	14.6	48 g
CA.GGDG.20141820	M20x1.5	147	G 1/4		20	11.7	110 g
CA.GGDG.20141850					50	16.8	126 g

Application example / Anwendungsbeispiel



## CA.05 GGV

Ø 10-14-20

. Spring loaded vacuum cup arm (Non-rotational shaft)

. Greifarm gefedert verdrehgesichert

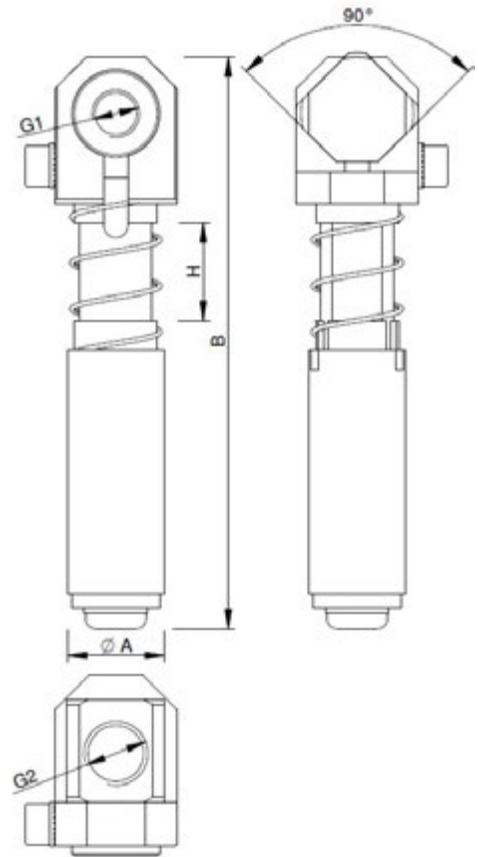
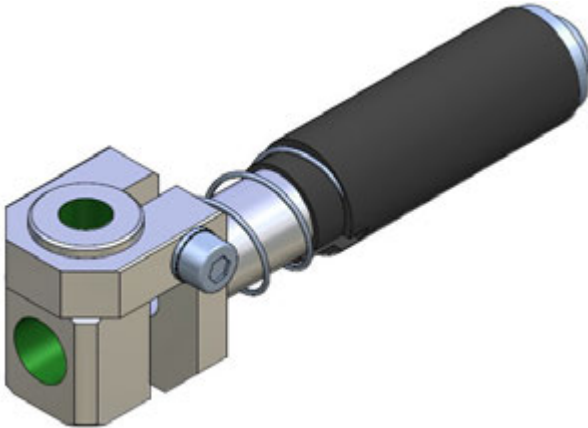


Table / Tabelle

H = Spring deflection  
 Federweg

F = Spring force  
 Federkraft

Remarks / Anmerkungen

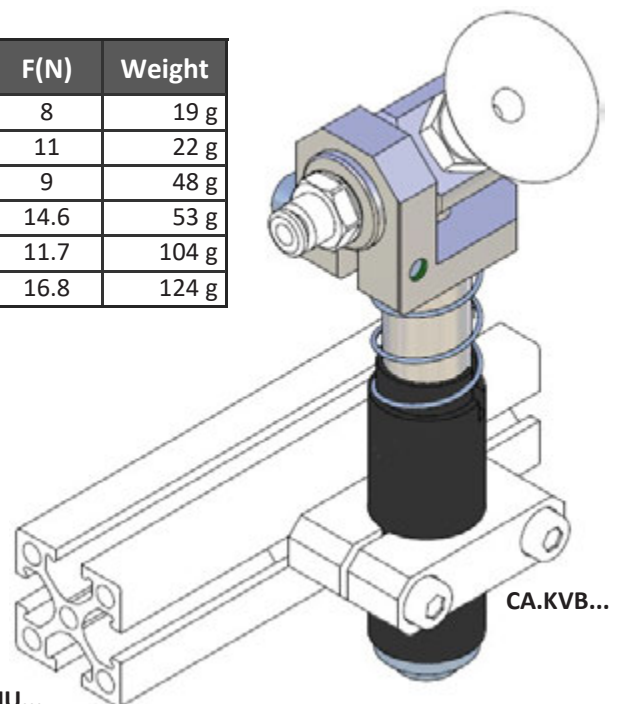
Extremely light weight (Material Aluminium)  
 Extrem leicht (Werkstoff Aluminium)

Guide (Tube and shaft) hard coated  
 Führung (Rohr und Welle) spezialgleitbeschichtet und gehärtet

Non rotational  
 Verdrehgesichert

Article no.	A	B	G1	G2	H	F(N)	Weight
CA.GGV.10050510	10	68	M5	M5	10	8	19 g
CA.GGV.10050530		94			30	11	22 g
CA.GGV.14181815	14	95	G 1/8	G 1/8	15	9	48 g
CA.GGV.14181840		120			40	14.6	53 g
CA.GGV.20141820	20	124		G 1/4	20	11.7	104 g
CA.GGV.20141850		162			50	16.8	124 g

Application example / Anwendungsbeispiel



CA.L.../CA.X.../CA.JU...

CA.KVB...

## CA.05 GGVG

Ø 10-14-20

. Spring loaded vacuum cup arm

. Greifarm gefedert drehbar (Gewinderohr)

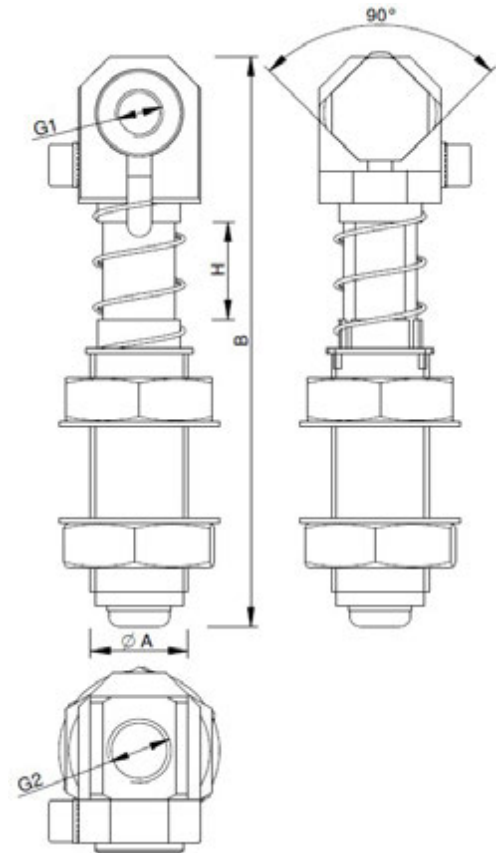
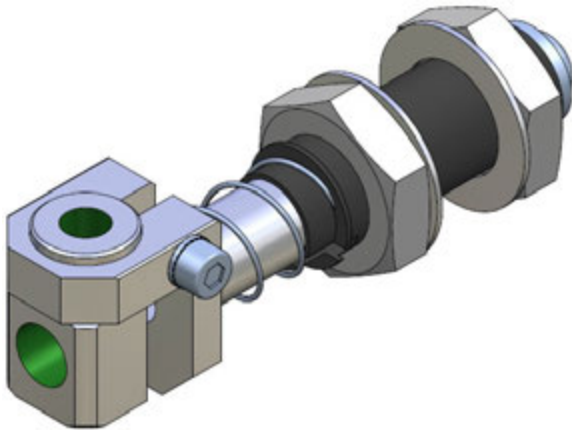


Table / Tabelle

H = Spring deflection  
Federweg

F = Spring force  
Federkraft

Remarks / Anmerkungen:

Extremely light weight (Material Aluminium)  
Extrem leicht (Werkstoff Aluminium)

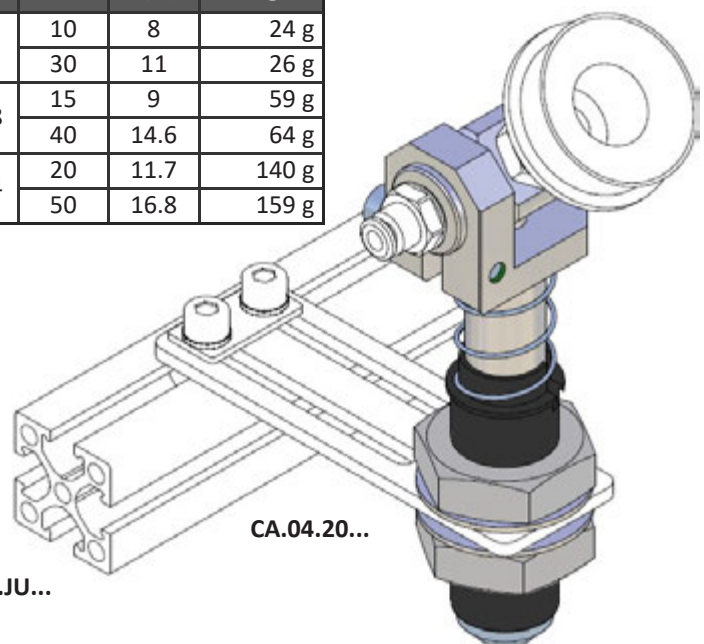
Guide (Tube and shaft) hard coated  
Führung (Rohr und Welle) spezialgleitbeschichtet und gehärtet

Non rotational  
Verdrehgesichert

Article no.	A	B	G1	G2	H	F(N)	Weight
CA.GGVG.10050510	M10x1	68	M5	M5	10	8	24 g
CA.GGVG.10050530		94			30	11	26 g
CA.GGVG.14181815	M14x1.5	95	G 1/8	G 1/8	15	9	59 g
CA.GGVG.14181840		120			40	14.6	64 g
CA.GGVG.20141820	M20x1.5	124		G 1/4	20	11.7	140 g
CA.GGVG.20141850		162			50	16.8	159 g

Application example / Anwendungsbeispiel

CA.L.../CA.X.../CA.JU...



## CA.05 GGVE

Ø 10-14-20

. Spring loaded vacuum cup arm easy (Non-rotational shaft)

. Greifarm gefedert verdrehgesichert einfach

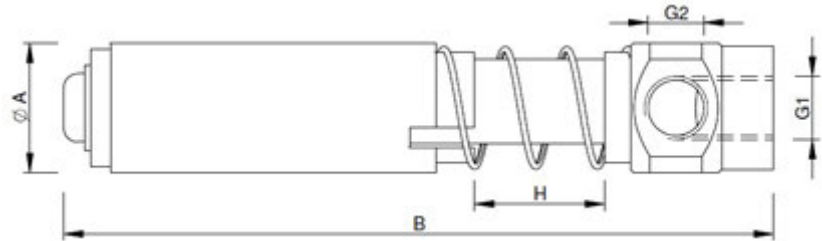
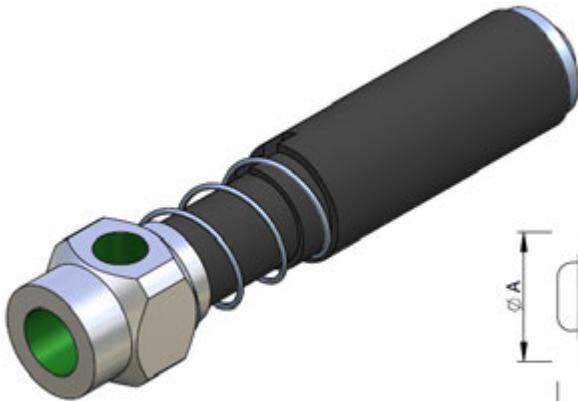


Table / Tabelle

**H** = Spring deflection  
*Federweg*

**F** = Spring force  
*Federkraft*

Remarks / Anmerkungen:

Extremely light weight (Material Aluminium)  
*Extrem leicht (Werkstoff Aluminium)*

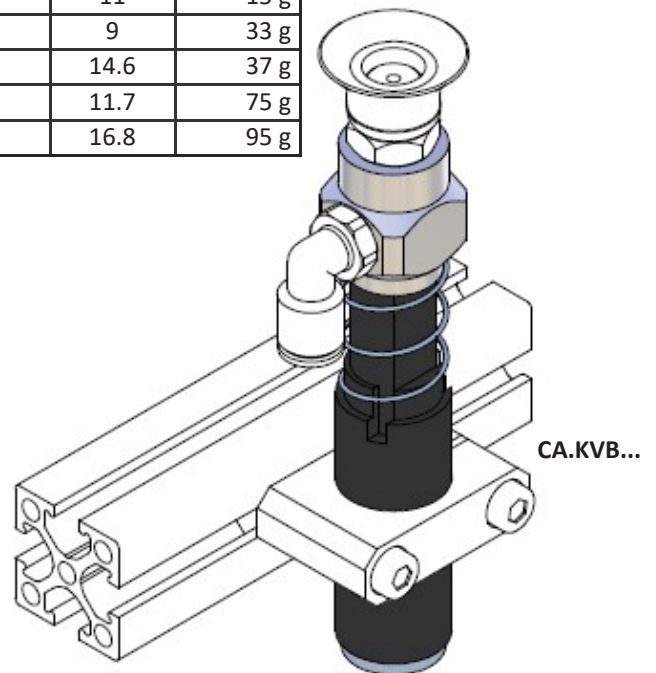
Guide (Tube and shaft) hard coated  
*Führung (Rohr und Welle) spezialgleitbeschichtet und gehärtet*

Non rotational  
*Verdrehgesichert*

Article no.	A	B	G1	G2	H	F(N)	Weight
CA.GGVE.10050510	10	59	M5	M5	10	8	11 g
CA.GGVE.10050530		85			30	11	15 g
CA.GGVE.14181815	14	84	G 1/8	G 1/8	15	9	33 g
CA.GGVE.14181840		109			40	14.6	37 g
CA.GGVE.20141820	20	147	G 1/4		20	11.7	75 g
CA.GGVE.20141850					50	16.8	95 g

Application example / Anwendungsbeispiel

CA.L.../CA.X.../CA.JU...





## CA.05 SAR

Ø 20

. Telescopic self-retracting suspension

. Selbst-einziehende Teleskop-Aufhängung

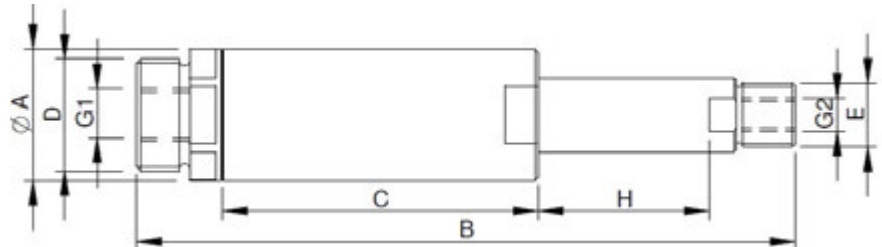
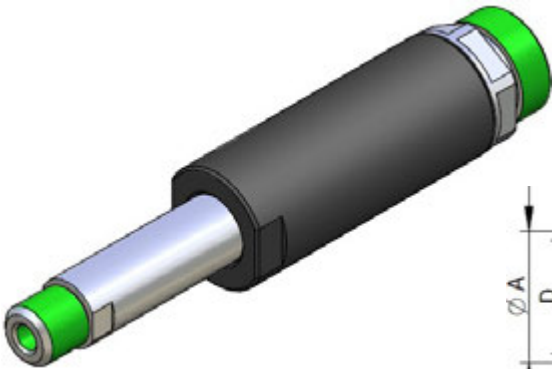


Table / Tabelle

H = Spring deflection  
Federweg

F = Spring force  
Federkraft

Article no.	A	B	C	D	E	G1	G2	H	F(N)	Weight
CA.SAR.2025	20	100	48	M17x1	G 1/8	G 1/8	M5	25	3.6	42 g
CA.SAR.2050		150	73					50		

Remarks / Anmerkungen:

Extremely light weight (Material Aluminium)  
Extrem leicht (Werkstoff Aluminium)

Guide (Tube and shaft) hard coated  
Führung (Rohr und Welle) spezialgleitbeschichtet und gehärtet

Sealing with no seals  
Dichtigkeit ohne Manschetten

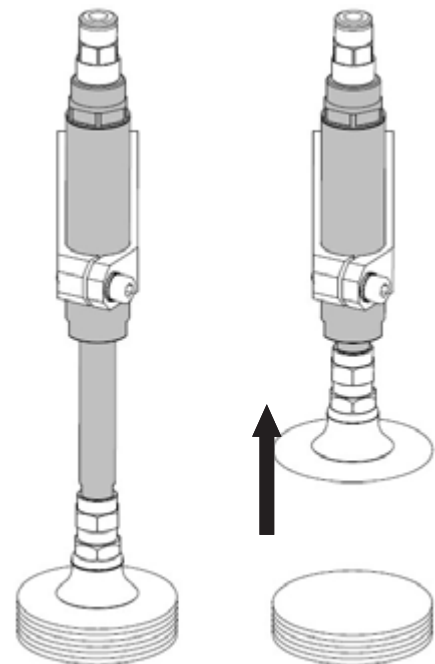
Only for vacuum applications  
Nur für Vakuumanwendungen

When the cup takes a part, the vacuum on the internal piston overtakes the spring force and moves the rod up.  
Wenn der Saugnapf ein Teil aufnimmt, überschreitet das auf den inneren Kolben wirkende Vakuum die Kraft der Feder und bewegt den Schaft

The speed of the retraction movement can be adjusted by a standard throttle valve  
Die Geschwindigkeit des Einziehens kann durch ein Standarddrosselventil kalibriert werden

When the vacuum is removed the part is released and the internal spring resets the rod  
Bei der Entfernung des Vakuums wird das Teil los gelassen und setzt den Schaft zurück

Pressure range: -1 ÷ 0 bar  
Betriebsdruck: -1 ÷ 0 bar



**CA.05 VSX**

**Ø 14**

. Spring rod

. Druckstück gefedert

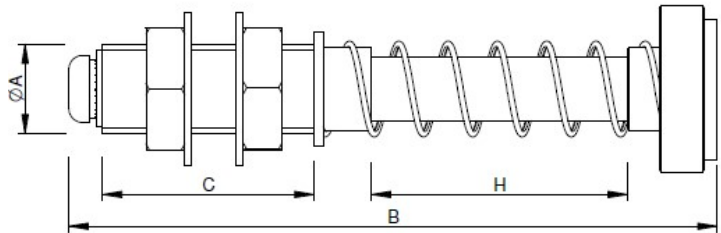
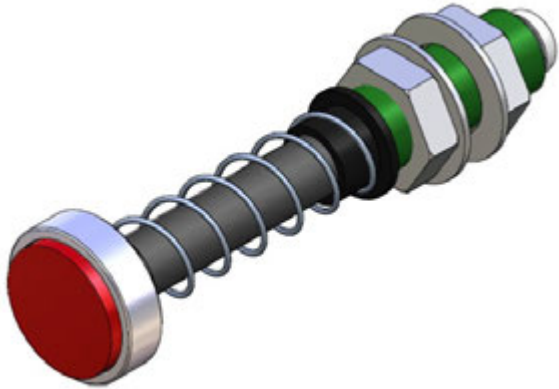


Table / Tabelle

H = Spring deflection  
Federweg

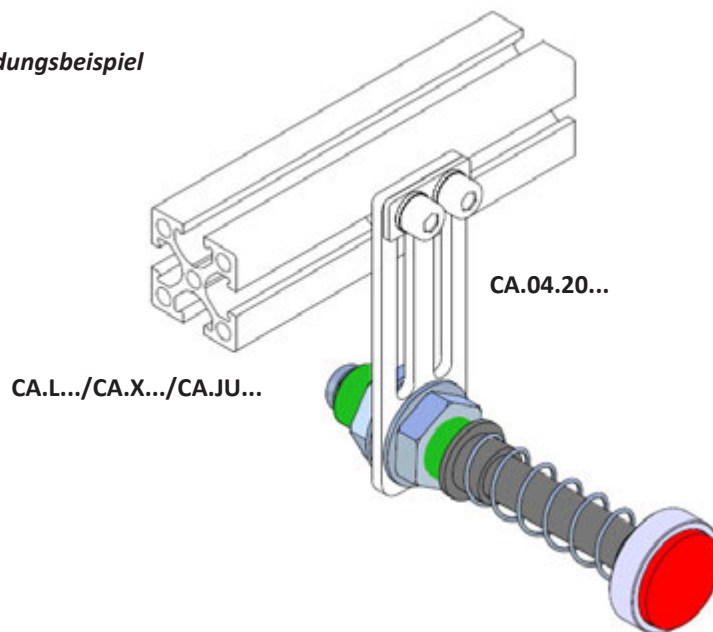
Remarks / Anmerkungen:

Extremely light weight (Material Aluminium)  
Extrem leicht (Werkstoff Aluminium)

Guide (Tube and shaft) hard coated  
Führung (Rohr und Welle) spezialgleitbeschichtet und gehärtet

Article no.	A	B	C	H	Weight
CA.VSX.1440	M14X1.5	101	33	40	47 g

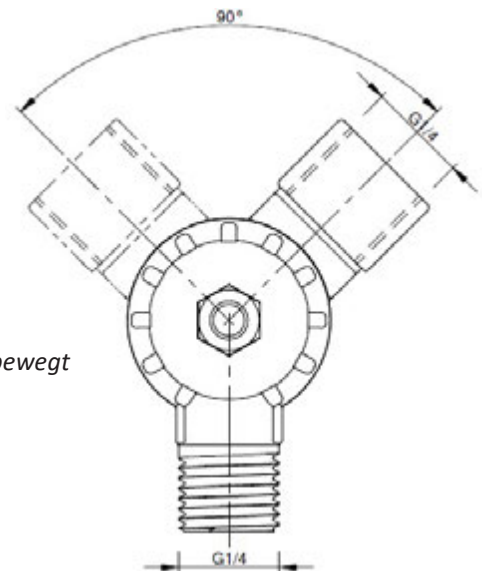
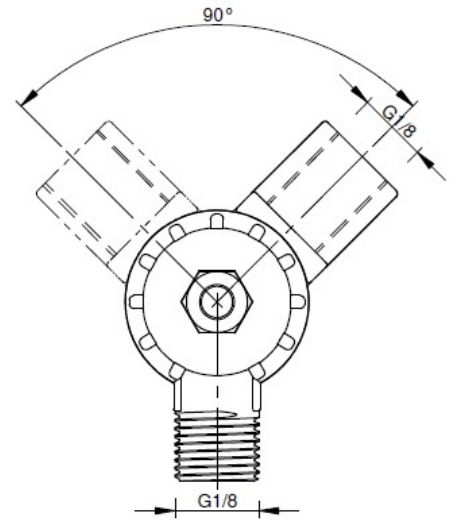
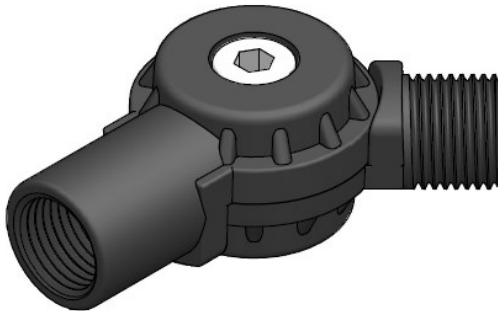
Application example / Anwendungsbeispiel



## CA.07.01

. Elbow arm

. Einstellbarer Winkelhalter



Remarks / Anmerkungen:

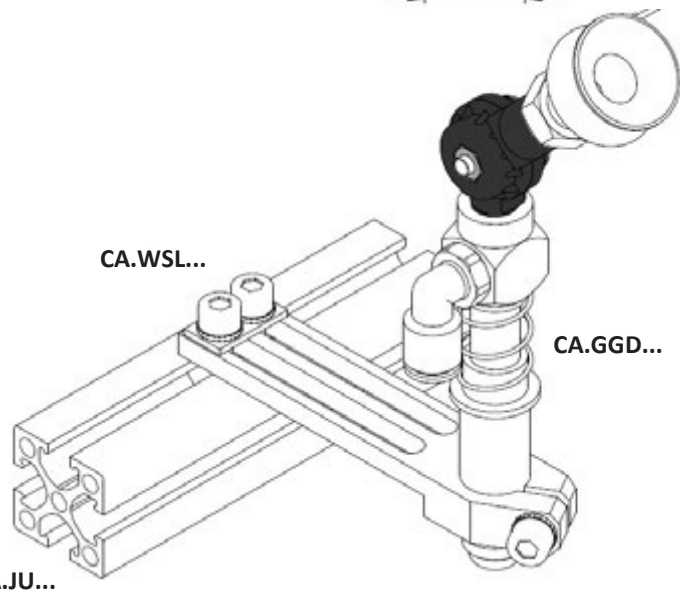
Material / Werkstoff: POM

Not for compressed air (only vacuum).  
Nicht für Druckluft geeignet. Nur für Vakuum.

It is possible to set continuously the angle from 0° to +/- 90°  
Die Verbindung kann kontinuierlich in einem Winkel von 0° und +/- 90° bewegt werden

Article no.	G1	G2	Weight
CA.07.01.001	G 1/8	G 1/8	7 g
CA.07.01.002	G 1/4	G 1/4	15 g

Application example / Anwendungsbeispiel

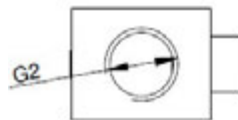
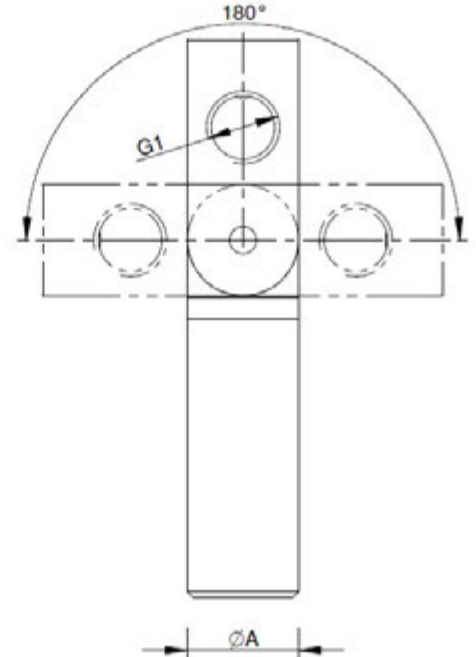
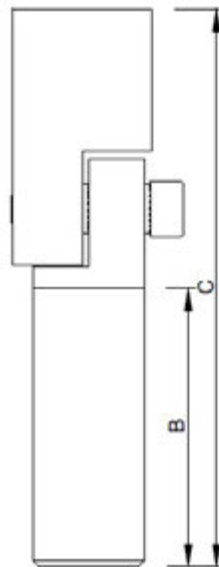
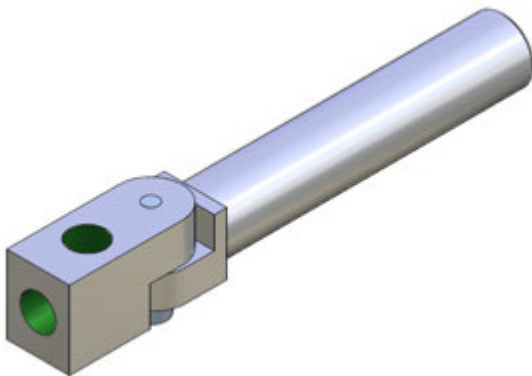


**CA.05 GGE**

**Ø 10-14-20**

. Swivel Gripper Arm for Vacuum Cups

. Greifarm beweglich



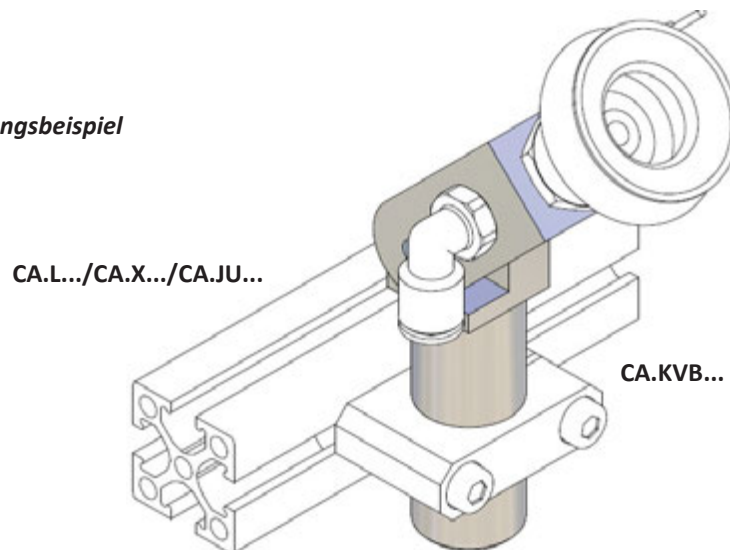
Remarks / Anmerkungen:

Material / Werkstoff: Aluminium

Surface: silver anodized  
Oberfläche: eloxiert

Article no.	A	B	C	G1	G2	Weight
CA.GGE.10.M5.M5	10	60	89.5	M5	M5	22 g
CA.GGE.14.18.18	14	80	120.5	G 1/8	G 1/8	34 g
CA.GGE.20.14.18	20	100	150	G 1/8		G 1/4
CA.GGE.20.14.14		150	196		G 1/8	
CA.GGE.201414150				126 g		
CA.GGE.201818150						126 g

Application example / Anwendungsbeispiel

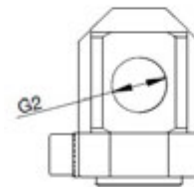
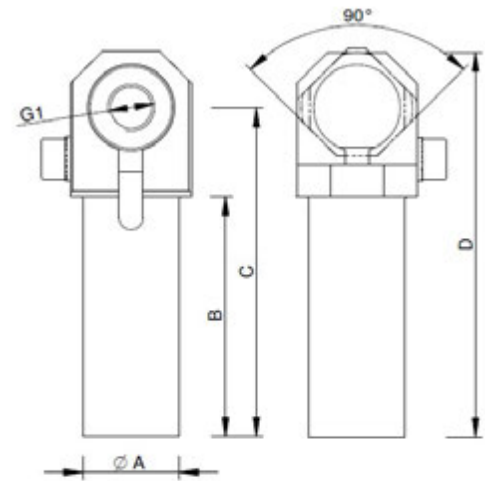
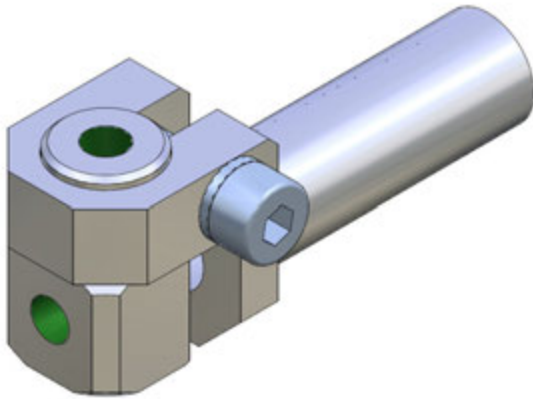


## CA.05 GGB

. Swivel Gripper Arm for Vacuum Cups

Ø 10-14-20

. Greifarm beweglich



Remarks / Anmerkungen:

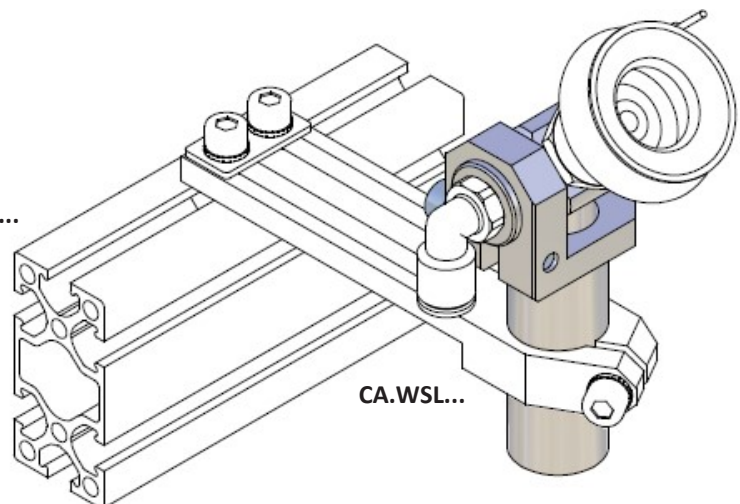
Material / Werkstoff: Aluminium

Surface: silver anodized  
Oberfläche: eloxiert

Article no.	A	B	C	D	G1	G2	Weight
CA.GGB.10050530	10	30	48	55	M5	M5	16g
CA.GGB.10050560		60	78	85			20 g
CA.GGB.10050590		90	108	115			25 g
CA.GGB.14181840	14	40	64	73	G 1/8	G 1/8	35 g
CA.GGB.14181880		80	104	113			43 g
CA.GGB.141818120		120	144	153			51 g
CA.GGB.20141850	20	50	79.5	91	G 1/8	G 1/4	56 g
CA.GGB.201418100		100	129.5	141			85 g
CA.GGB.201418150		150	179.5	191	101 g		
CA.GGB.20141450		50	79	91	G 1/4		67 g
CA.GGB.201414100		100	129	141			83 g
CA.GGB.201414150	150	179	191	98 g			

Application example / Anwendungsbeispiel

CA.L.../CA.X.../CA.JU...



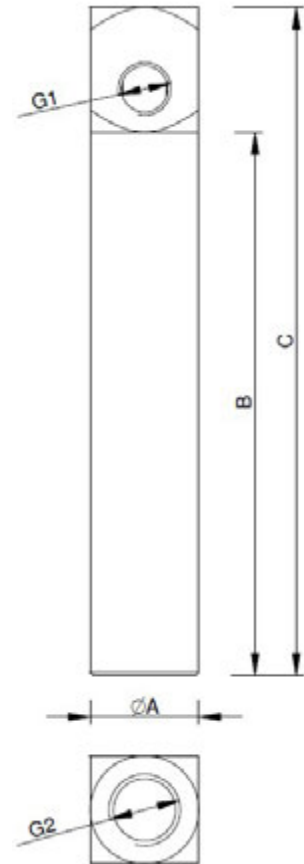
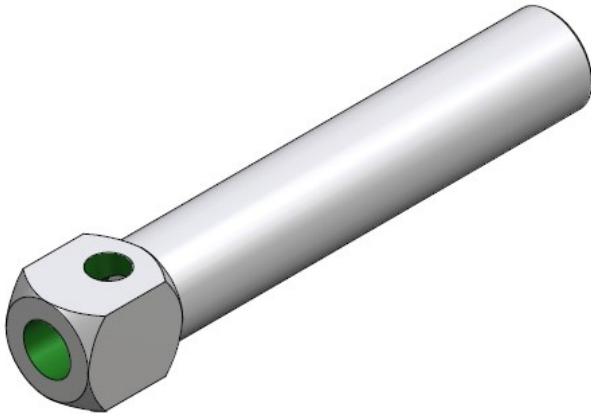
CA.WSL...

## CA.05 GSE

Ø 10-14-20-30

. Gripper Arm for Vacuum Cups

. Greifarm für Vakuumsauger

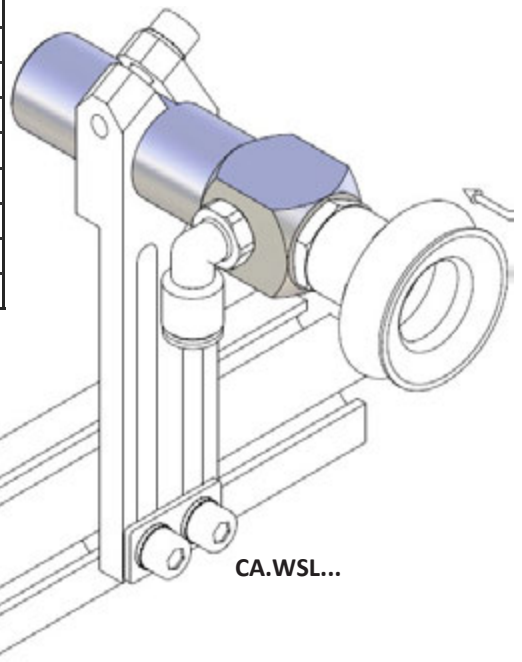


Remarks / Anmerkungen:

Material / Werkstoff: Aluminium

Surface: silver anodized  
Oberfläche: eloxiert

Article no.	A	B	C	G1	G2	Weight	
CA.GSE.1018M530	10	30	52	M5	G 1/8	15 g	
CA.GSE.1018M560		60	82			18 g	
CA.GSE.1018M590		90	112			25 g	
CA.GSE.10M5M530		30	46		M5	G 1/4	9 g
CA.GSE.10M5M560		60	76				15 g
CA.GSE.10M5M590		90	106				20 g
CA.GSE.14181840	14	40	62	G 1/8	G 1/8	30 g	
CA.GSE.14181880		80	102			43 g	
CA.GSE.141818120		120	142			47 g	
CA.GSE.20141850	20	50	73	G 1/8	G 1/4	66 g	
CA.GSE.201418100		100	123			84 g	
CA.GSE.201418150		150	173			155 g	
CA.GSE.30141480	30	80	108	G 1/4	G 1/4	219 g	
CA.GSE.301414140		140	168			283 g	
CA.GSE.301414200		200	228				



Application example / Anwendungsbeispiel

CA.L.../CA.X.../CA.JU...

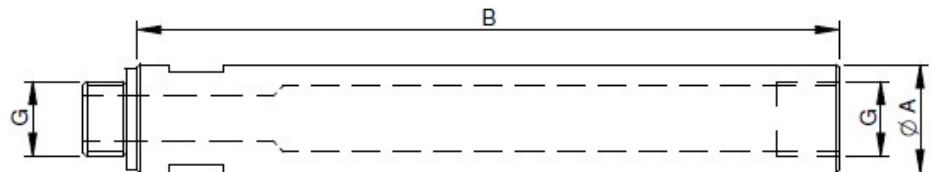
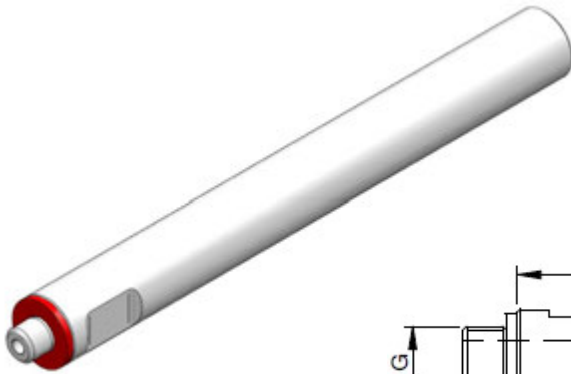
CA.WSL...

## CA.05 GSEG

Ø 10-12-14-20

. Extension tube with air lead

. Verlängerungsröhre mit Luftkanal



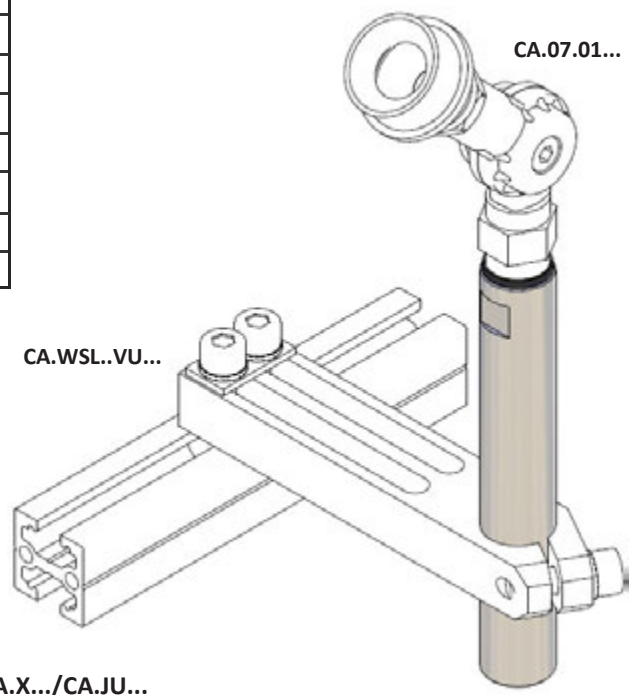
Remarks / Anmerkungen:

Material / Werkstoff: Aluminium

Surface: silver anodized  
Oberfläche: eloxiert

Article no.	A	B	G	Weight
CA.GSEG.100515	10	15	M5	3 g
CA.GSEG.100530		30		6 g
CA.GSEG.100545		45		9 g
CA.GSEG.100590		90		16 g
CA.GSEG.120545	12	45		12 g
CA.GSEG.120590		90	24 g	
CA.GSEG.141815	14	15	G 1/8	5 g
CA.GSEG.141830		30		10 g
CA.GSEG.141845		45		14 g
CA.GSEG.141890		90		26 g
CA.GSEG.201445	20	45	G 1/4	30 g
CA.GSEG.201490		90		58 g

Application example / Anwendungsbeispiel



## CA.05 WSS

**L/X/JU**

. Threadclamp fixed

. Winkelstück Gewinde Fest

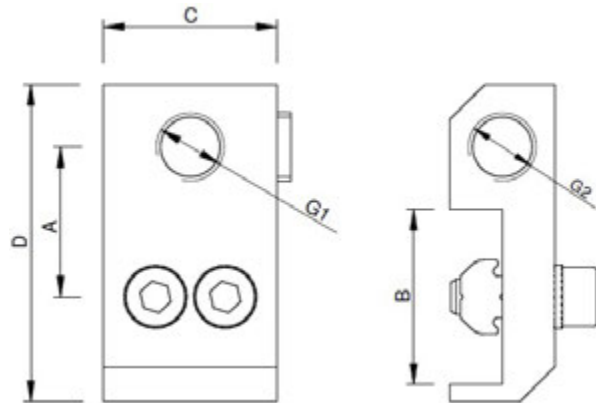
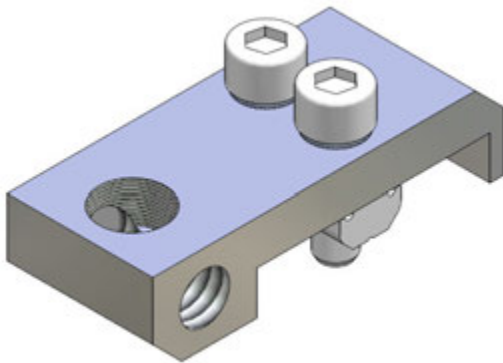


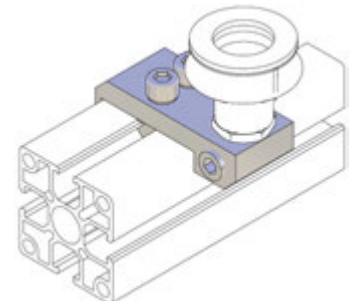
Table / Tabelle

**M** = Suitable for Profiles  
 Passend für Profile

Application example / Anwendungsbeispiel

Article no.	A	B	C	D	G1	G2	M	Weight
CA.WSS.L.M5.M5	17	18	16	32	M5	M5	L	18 g
CA.WSS.X.18.18	21.5	25	25	4.5	G 1/8	G 1/8	X	48 g
CA.WSS.X.14.18					G 1/4			
CA.WSS.JU.14.18	29	40		60.5			JU	49 g

Vacuum cup

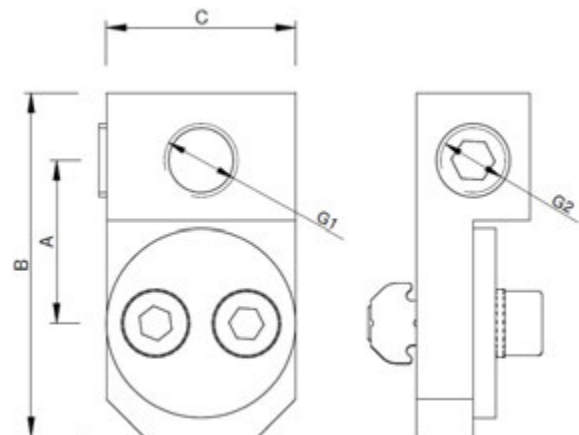
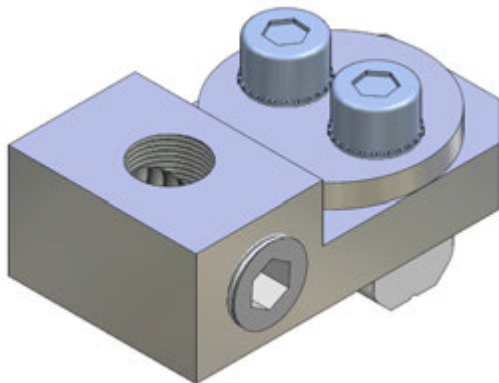


CA.L.../CA.X.../CA.JU...

## CA.05 WSD

. Adjustable connector for vacuum cups

. Winkelstück 360°, drehbar



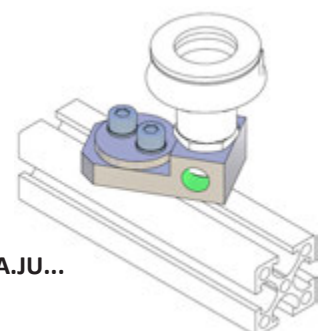
Remarks / Anmerkungen:

Material / Werkstoff: Aluminium

 Surface: silver anodized  
 Oberfläche: eloxiert

Article no.	A	B	C	G1	G2	M	Weight
CA.WSD.L.M5.M5	14	28	16	M5	M5	L	19 g
CA.WSD.X.18.18	21	46	25	G 1/8	G 1/8	X	44 g
CA.WSD.X.14.18				G 1/4			

Vacuum cup



CA.L.../CA.X.../CA.JU...



## CA.05 SGB

L/X/JU

. Clamp for Vacuum Cups

. Sauggreifer Befestigungsstück

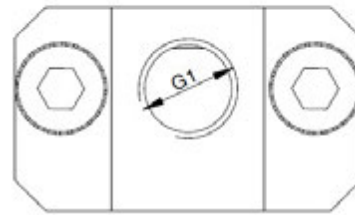
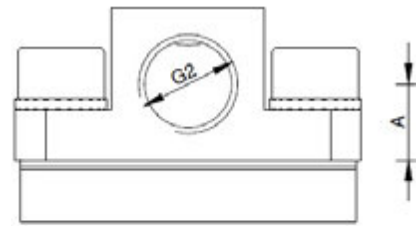
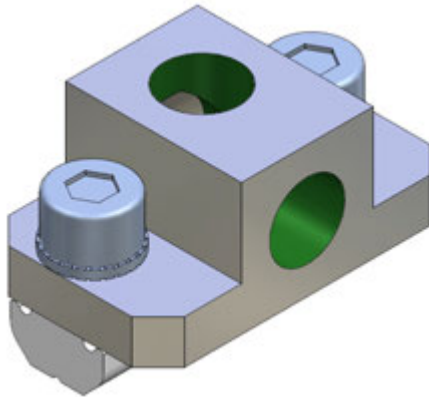


Table / Tabelle

**M** = Suitable for Profiles  
Passend für Profile

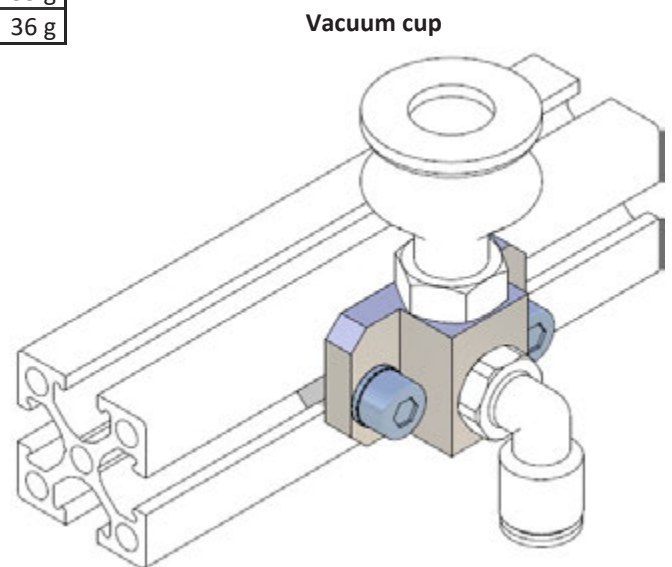
Remarks / Anmerkungen:

Material / Werkstoff: Aluminium

Surface: silver anodized  
Oberfläche: eloxiert

Article no.	A	G1	G2	M	Weight
CA.SGB.5.5.X	4	M5	M5	L	27 g
CA.SGB.18.18.X	7.5	G 1/8	G 1/8	X/JU	35 g
CA.SGB.14.14.X	10	G 1/4	G 1/4		36 g

Application example / Anwendungsbeispiel



CA.L.../CA.X.../CA.JU...

**CA.05 WLS**

**L/X/JU**

. Thread Clamp Adjustable

. Winkelstück gewinde verstellbar

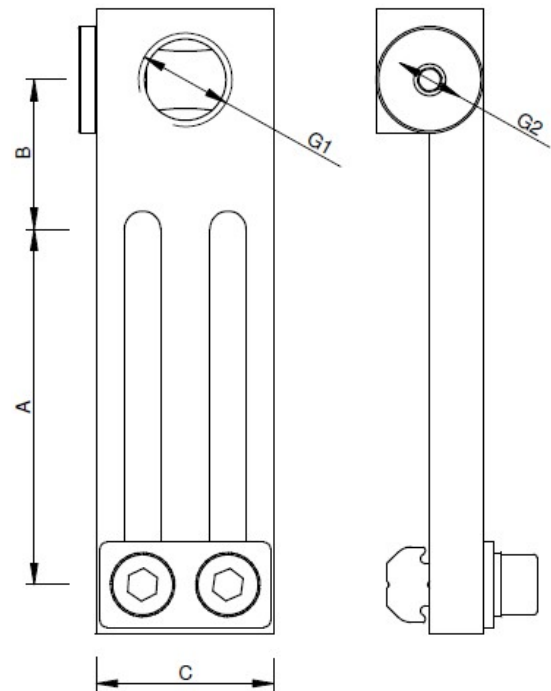
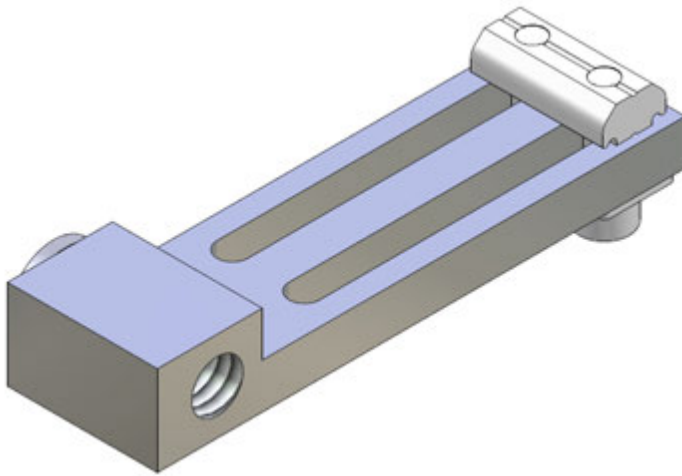


Table / Tabelle

M = Suitable for Profiles  
Passend für Profile

Remarks / Anmerkungen:

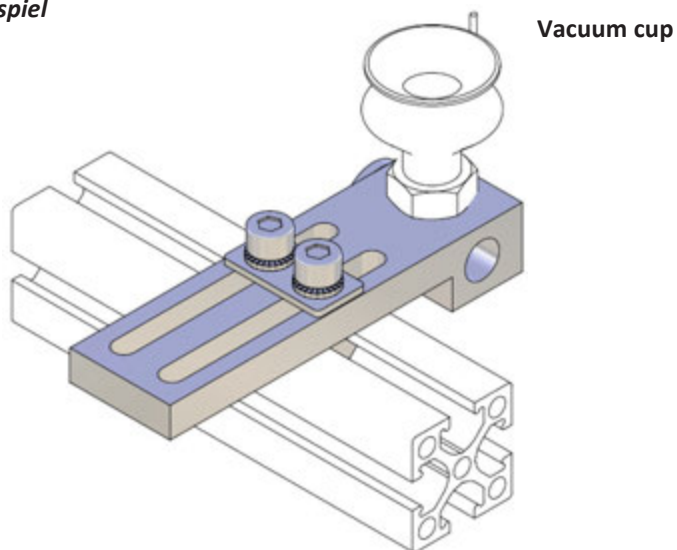
Material / Werkstoff: Aluminium

Surface: silver anodized  
Oberfläche: eloxiert

Article no.	A	B	C	G1	G2	M	Weight
CA.WLS.M5.M5.X	40	14	16	M5	M5	L/X	24 g
CA.WLS.18.18.X	50	21	25	G 1/8	G 1/8	X/JU	65 g
CA.WLS.14.18.X				G 1/4			
CA.WLS.14.14.JU		23		G 1/4	JU		

Application example / Anwendungsbeispiel

CA.L.../CA.X.../CA.JU...



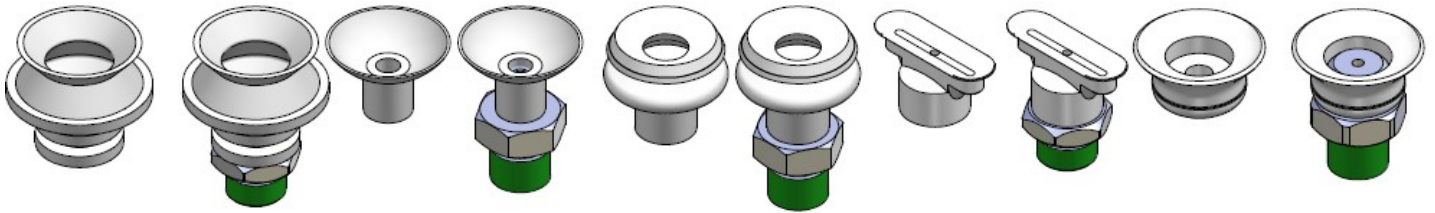
Vacuum cup



## CA.08

. Vacuum Cup properties

. *Eigenschaften Standard-Vakuumsauger*

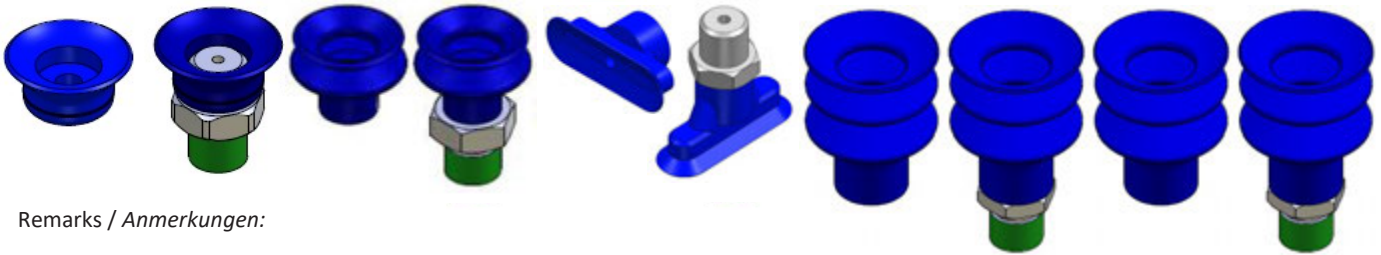


Styles	Series	Applications
<b>Oval vacuum cup</b> <i>Oval Vakuumsauger</i>	CA.08.27..	The oval series of suction cups is used for handling oblong products, such as pens, tubes and bottles, and flat or cylindrical objects.  <i>Die ovalen Sauggreifer werden für die Handhabung flacher oder zylindrischen länglichen Objekten (Stifte, Tuben, Flaschen, Glühbirnen usw.) verwendet .</i>
<b>With 1 bellow</b> <i>Mit einer Kanter</i>	CA.08.03.. CA.08.28.. CA.08.29..	The suction cups with 1 bellow provide accuracy in load gripping and speeds up throughput rates. These suction cups are used for flat surfaces only.  <i>Die flachen Sauggreifer ermöglichen ein präzises Handhaben der Last und eine Beschleunigung des Arbeitstakts. Diese Sauggreifer werden ausschließlich für ebene Flächen eingesetzt.</i>
<b>With 2 bellows</b> <i>Mit 2 Kanten</i>	CA.08.01.. CA.08.30.. CA.08.31..	The suction cups with 2 bellows combine the advantages of flat suction cups (precision and positioning) with the freedom of bellows (angle and flexibility). They provide flexibility, precision and low internal volume suitable for high-speed applications.  <i>Die Sauggreifer mit 2 Kanten vereinen die Vorteile flacher Sauggreifer mit einem besseren Hub, größerer Biegsamkeit und höherer Genauigkeit. Sie ermöglichen das Greifen leicht konkaver oder konvexer Teile.</i>
<b>With 3 bellows</b> <i>Mit 3 Kanten</i>	CA.08.32.. CA.08.33.. CA.08.36..	The suction cups with 3 bellows are recommended for gripping products on different planes (large deflection) - thus replacing spring systems - and for gripping spherical or cylindrical objects at an angle (ball-joint effect).  <i>Die Sauggreifer mit 3 Kanten sind für Greifen von Produkten auf verschiedenen Niveaus (großer Hub) geeignet und können so Federsysteme ersetzen. Sie eignen sich auch für das greifen runder und zylindrischer Teile unter einem Winkel (Gelenk-Effekt).</i>
<b>With 2 bellows and foam strip</b> <i>Mit 2 Kanten und Schaumstoffband</i>	CA.08.26..	The suction cups with foam ring is designed for gripping products with an uneven or ridged surface, Ex. Sawn wood, sheet metal, flat surfaces with bumps or hollows. All granular surfaces to which suction cups cannot adhere correctly and therefore cannot be airtight.  <i>Die Sauggreifer der 2 Kanten und Schaumstoffbänder sind für das Greifen von Produkten mit unregelmäßiger oder gerillter Oberfläche geeignet. Gesägte Bretter, Bleche, ebene Oberflächen mit vorstehender oder vertiefter Reliefstruktur. Alle körnigen Oberflächen, auf denen die Lippen eines Sauggreifers nicht richtig haften und somit nicht abdichten können.</i>

## CA.08

### . Vacuum Cup properties

### . Eigenschaften Standard-Vakuumsauger



Remarks / Anmerkungen:

The holding force of the suction pads increases proportionally with the difference between the ambient pressure and the pressure inside the pad.

The holding force of a suction pad is calculated with the formula:

$$F = \Delta p \times A$$

F = Holding force

$\Delta p$  = Difference between ambient pressure and pressure of the system

A = Effective suction area (the effective area of a suction pad under vacuum)

This means the holding force is proportional to the pressure difference and the suction area. The greater the difference between ambient pressure and pressure in the suction pad or the larger the effective suction area, the greater the holding force. The force can vary depending on a change of the pressure difference and area parameters.

*Die Haltekraft eines Sauggreifers ergibt sich, indem man die Druckdifferenz mit der effektiven Saugfläche des Sauggreifers multipliziert.*

*Die Haltekraft F lässt sich also mit folgender Formel berechnen:*

$$F = \Delta p \times A$$

F = Haltekraft

$\Delta p$  = Differenz zwischen Umgebungsdruck und Systemdruck

A = Effektive Saugfläche (die mit Vakuum beaufschlagte, wirksame Fläche eines Sauggreifers)

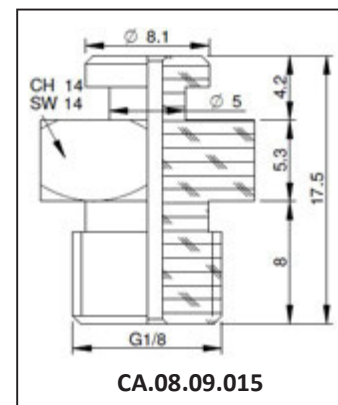
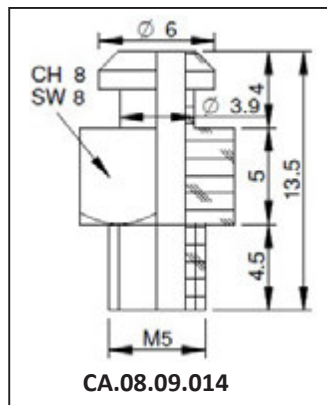
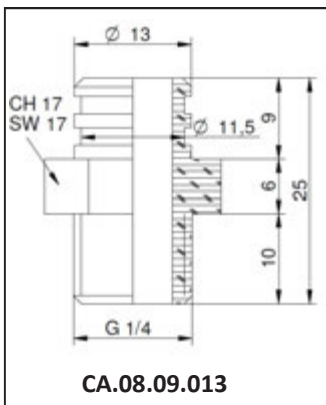
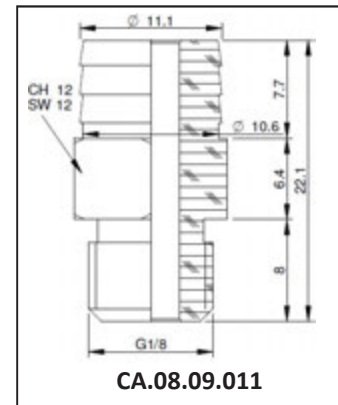
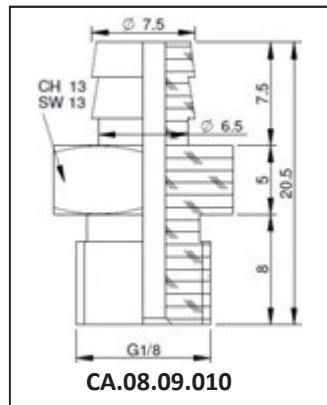
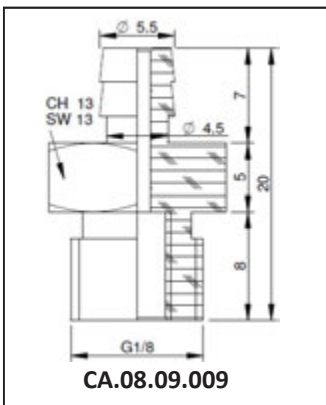
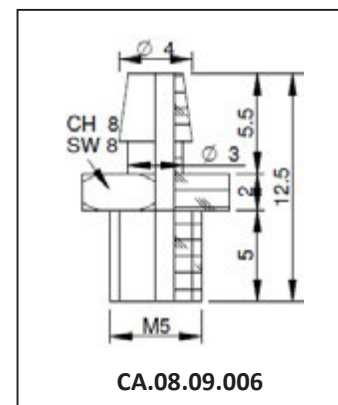
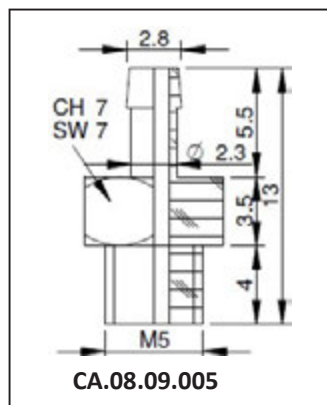
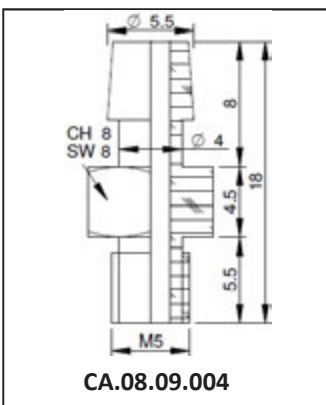
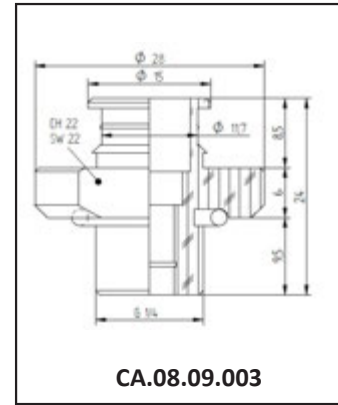
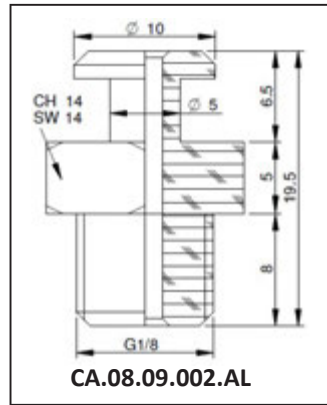
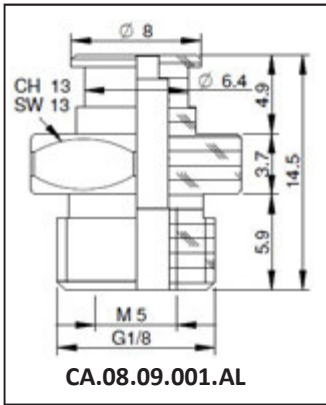
*Die Haltekraft ist somit proportional zur Druckdifferenz und zur Fläche. Die Haltekraft ist umso größer, je höher die Differenz zwischen Umgebungsdruck und Druck im Sauggreifer ist oder je größer die effektive Saugfläche ist. Damit kann die Kraft mit einer Veränderung der Parameter Druckdifferenz und Fläche variiert werden.*

	HT1	SILICONE (translucid)	POLYURETHANE
Ozone resistance Ozonbeständigkeit	☺ ☺ ☺	☺	☹
Oil resistance Ölbeständigkeit	☺ ☺ ☺	☹	☺
Wear resistance Verschleißfestigkeit / Abriebwiderstand	☺ ☺	☹	☺ ☺ ☺
Tensile strength Reißfestigkeit	☺	☹	☹
Temperature resistance / Temperaturbeständigkeit			
Short-term in °C (< 30 sec.) Kurzzeitig in °C (< 30 sec.)	-25° to +170°	-50° to +220°	+10° to +50°
Longer-term in °C Längerfristig in °C	-10° to +140°	-30° to +180°	
Leaving few marks Abdruckarm	☺	☹	☺
Absence of PWIS (paint-wetting impairment substances) LABS-Freiheit	☺	☹	☺

**CA.08.09**

. Adapters for vacuum cups

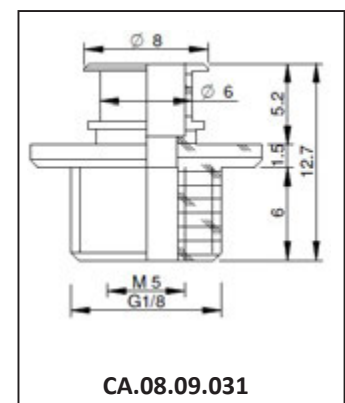
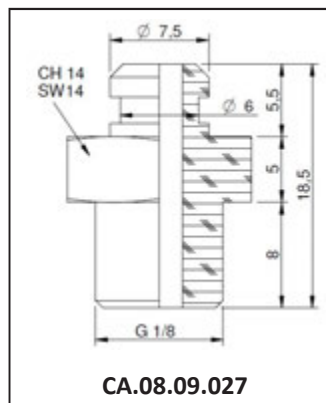
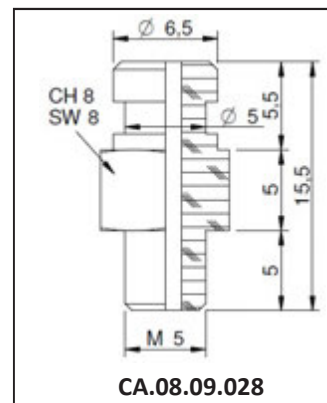
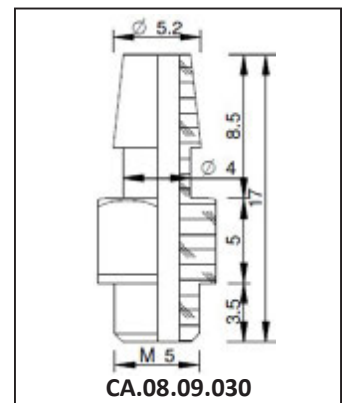
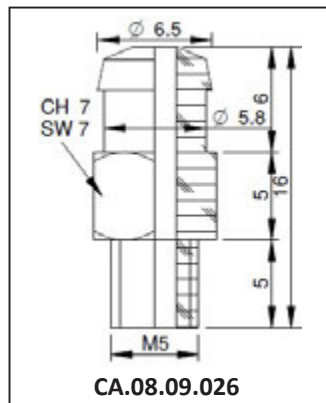
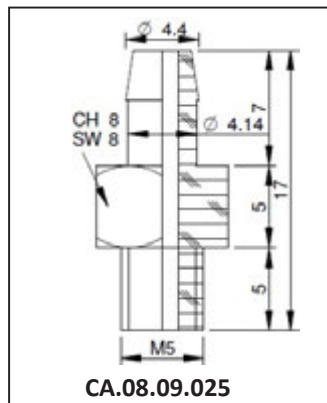
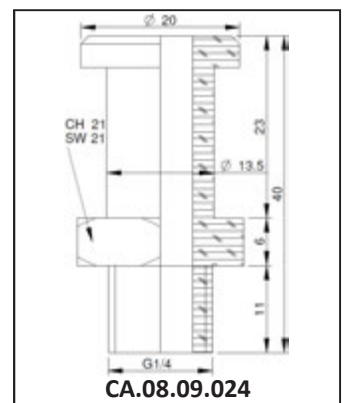
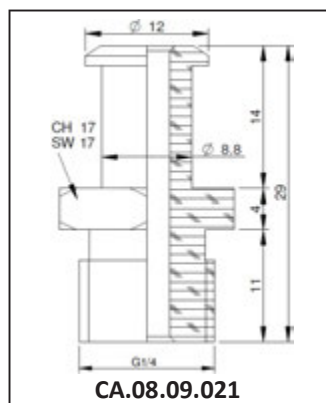
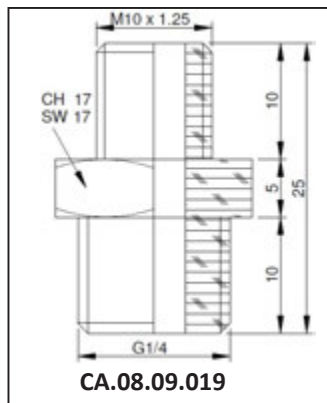
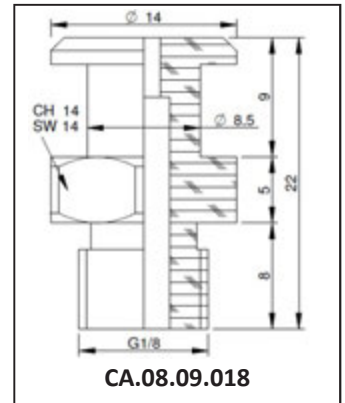
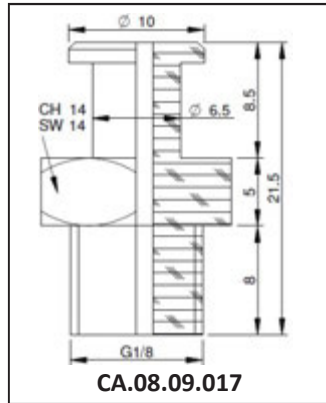
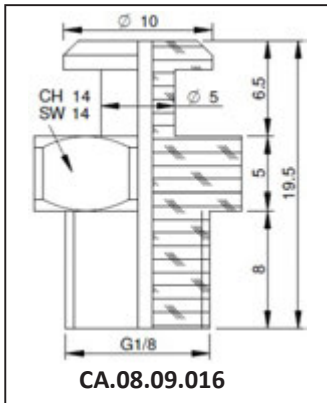
. Adapter für Vakuumsauger



## CA.08.09

. Adapters for vacuum cups

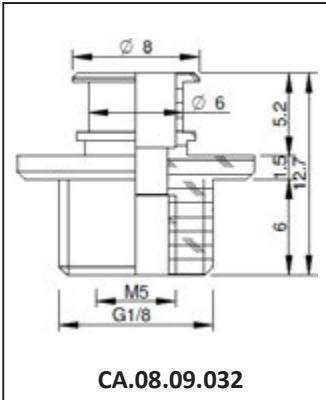
. Adapter für Vakuumsauger



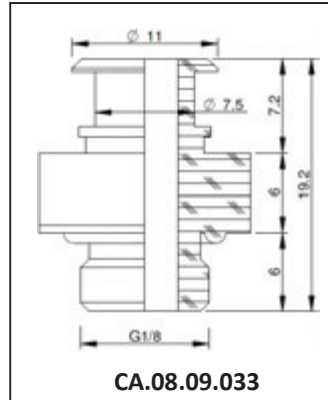
**CA.08.09**

. Adapters for vacuum cups

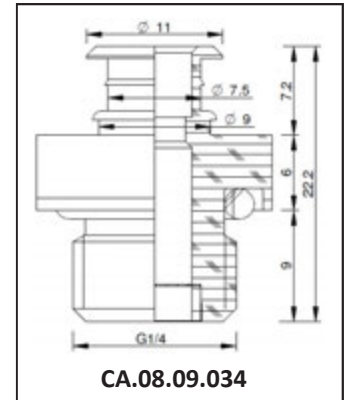
. Adapter für Vakuumsauger



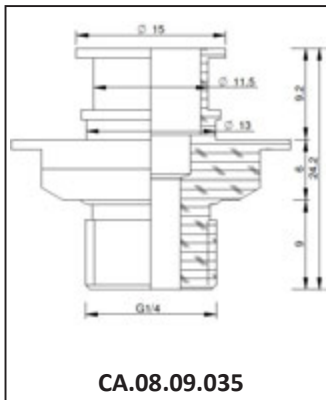
CA.08.09.032



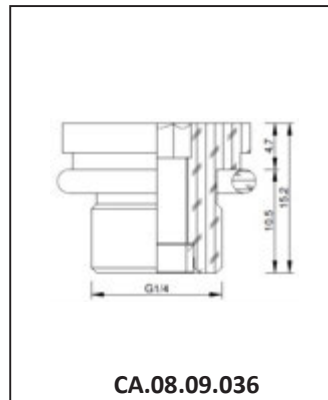
CA.08.09.033



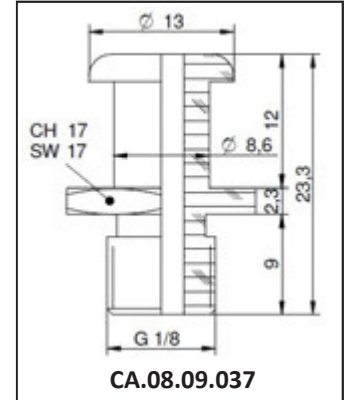
CA.08.09.034



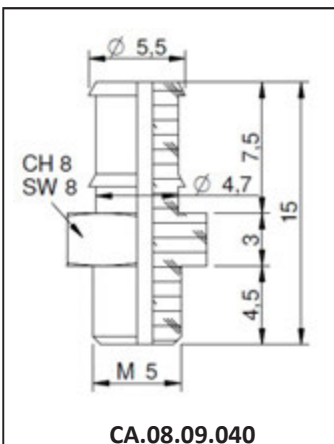
CA.08.09.035



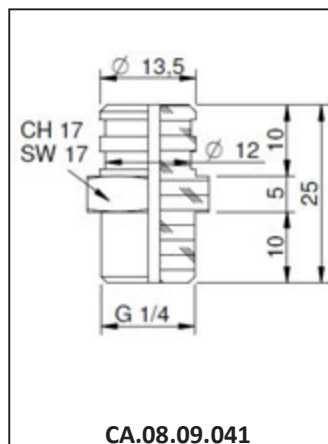
CA.08.09.036



CA.08.09.037



CA.08.09.040



CA.08.09.041



## CA.08.09

### . Adapters for vacuum cups

### . Adapter für Vakuumsauger

Article no.	Vacuum cups	Weight
CA.08.09.001.AL	CA.08.01.003 CA.08.27.001 CA.08.27.002 CA.08.27.003	3 g
CA.08.09.002.AL	CA.08.01.004 CA.08.01.005	12 g
CA.08.09.003	CA.08.01.006	3 g
CA.08.09.004	CA.08.01.001 CA.08.01.002 CA.08.03.003 CA.08.03.004 CA.08.03.005 CA.08.03.006 CA.08.26.D20.AS CA.08.26.D25.AS CA.08.30.001 CA.08.30.002 CA.08.30.003 CA.08.30.004 CA.08.30.005 CA.08.31.001 CA.08.31.002 CA.08.31.003 CA.08.31.004 CA.08.31.005 CA.08.32.D12 CA.08.32.D14 CA.08.32.D20 CA.08.32.D25 CA.08.33.D12 CA.08.33.D14 CA.08.33.D20 CA.08.33.D25	1 g
CA.08.09.005	CA.08.03.001	2 g
CA.08.09.006	CA.08.03.002	1 g

Article no.	Vacuum cups	Weight
CA.08.09.009	CA.08.01.001 CA.08.01.002 CA.08.03.003 CA.08.03.004 CA.08.03.005 CA.08.09.006 CA.08.26.D20.AS CA.08.26.D25.AS CA.08.30.001 CA.08.30.002 CA.08.30.003 CA.08.30.004 CA.08.30.005 CA.08.31.001 CA.08.31.002 CA.08.31.003 CA.08.31.004 CA.08.31.005 CA.08.32.D12 CA.08.32.D14 CA.08.32.D20 CA.08.32.D25 CA.08.33.D12 CA.08.33.D14 CA.08.33.D20 CA.08.33.D25	3 g
CA.08.09.010	CA.08.03.007 CA.08.03.008	4 g

Article no.	Vacuum cups	Weight
CA.08.09.016	CA.08.28.006 CA.08.29.006	4 g
CA.08.09.017	CA.08.28.007 CA.08.28.008 CA.08.28.009 CA.08.28.010 CA.08.29.007 CA.08.29.008 CA.08.29.009 CA.08.29.010	5 g
CA.08.09.018	CA.08.29.011 CA.08.28.011	5 g
CA.08.09.019	CA.08.28.012 CA.08.28.013 CA.08.29.012 CA.08.29.013	8 g
CA.08.09.021	CA.08.26.D33.AS CA.08.26.D43.AS CA.08.26.D53.AS CA.08.26.D63.AS CA.08.30.006 CA.08.30.007 CA.08.30.008 CA.08.30.009 CA.08.31.006 CA.08.31.007 CA.08.31.008 CA.08.31.009 CA.08.32.D32 CA.08.32.D42 CA.08.33.D32 CA.08.33.D42 CA.08.33.D52	8 g
CA.08.09.024	CA.08.26.D78.AS CA.08.30.010 CA.08.31.011	15 g
CA.08.09.025	CA.08.33.D5 CA.08.33.D9	1 g
CA.08.09.026	CA.08.32.D09 CA.08.33.D07	

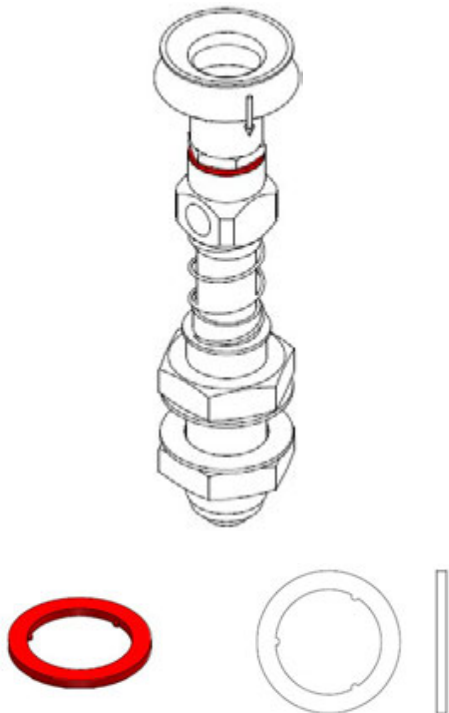
Article no.	Vacuum cups	Weight
CA.08.09.011	CA.08.03.009 CA.08.03.010 CA.08.03.011 CA.08.26.D33.AS CA.08.26.D43.AS CA.08.26.D53.AS CA.08.26.D63.AS CA.08.30.006 CA.08.30.007 CA.08.30.008 CA.08.30.009 CA.08.31.006 CA.08.31.007 CA.08.31.008 CA.08.32.D32 CA.08.32.D42 CA.08.33.D32 CA.08.33.D42 CA.08.33.D52	4 g
CA.08.09.013	CA.08.27.004 CA.08.27.005 CA.08.27.006	19 g
CA.08.09.014	CA.08.28.001 CA.08.28.002 CA.08.28.003 CA.08.28.004 CA.08.29.001 CA.08.29.002 CA.08.29.003 CA.08.29.004	1 g
CA.08.09.015	CA.08.28.005 CA.08.29.005	4 g

Article no.	Vacuum cups	Weight
CA.08.09.030	CA.08.36.D10 CA.08.36.D10.60 CA.08.36.D15 CA.08.36.D15.60	1 g
CA.08.09.031	CA.08.36.D20 CA.08.36.D20.60	2 g
CA.08.09.032	CA.08.36.D25 CA.08.36.D25.60	
CA.08.09.033	CA.08.36.D35	5 g
CA.08.09.034	CA.08.36.D35 CA.08.36.D35.60	8 g
CA.08.09.035	CA.08.36.D52 CA.08.36.D52.60	11 g
CA.08.09.036	CA.08.36.D75 CA.08.36.D75.60	18 g
CA.08.09.037	CA.08.01.005	19 g

#### Table / Tabelle

M = Suitable for...  
Passend für...

Article no.	M
CA.08.09.05	M5
CA.08.09.18	G 1/8
CA.08.09.14	G 1/4



**CA.08.29**
**HT1**

. Vacuum Cup with 1 bellow only

. Saugnapf mit 1 Kante

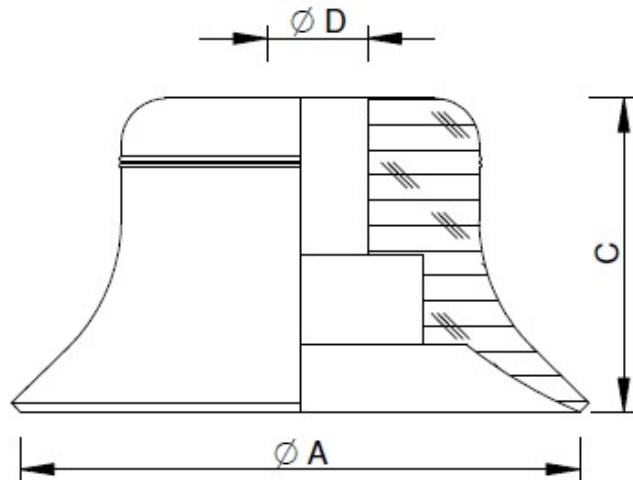
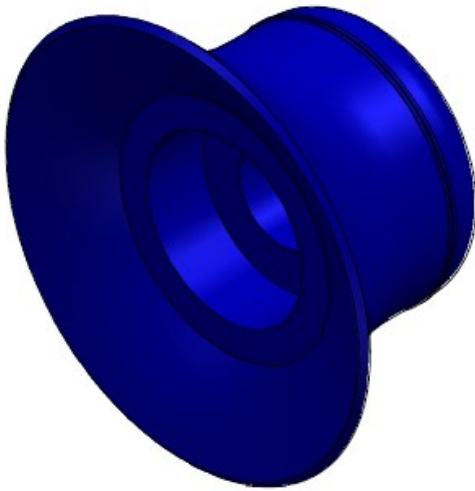


Table / Tabelle

 F = Holding force  
 Haltekraft

Article no.	A	C	D	F(N)	Weight
CA.08.29.001	Ø5	6.5	Ø4	0.75	1 g
CA.08.29.002	Ø6			1.2	
CA.08.29.003	Ø8			2.3	
CA.08.29.004	Ø10	4			
CA.08.29.005	Ø15	8	Ø4.5	9	
CA.08.29.006	Ø20	10	15.5		
CA.08.29.007	Ø25	14	Ø6	26.5	2 g
CA.08.29.008	Ø30	12		34	3 g
CA.08.29.009	Ø35	14		44	5 g
CA.08.29.010	Ø40			57.7	7 g
CA.08.29.011	Ø50	15	Ø8	91	15 g
CA.08.29.012	Ø60	18	M10x1.25	125	19 g
CA.08.29.013	Ø80	20		260	38 g

Remarks / Anmerkungen:

 Temperature resistance / Temperaturbeständigkeit  
 Short-term in °C (< 30 sec.)  
 Kurzzeitig in °C (< 30 sec.)  
**-25° to +170°**  
 Longer-term in °C  
 Längerfristig in °C  
**-10° to +140°**

 Leaving few marks ☺  
 Abdruckarm

 Absence of PWIS (paint-wetting impairment substances) ☺  
 LABS-Freiheit

The suction cups with 1 bellow provide accuracy in load gripping and speeds up throughput rates. These suction cups are used for flat surfaces only.

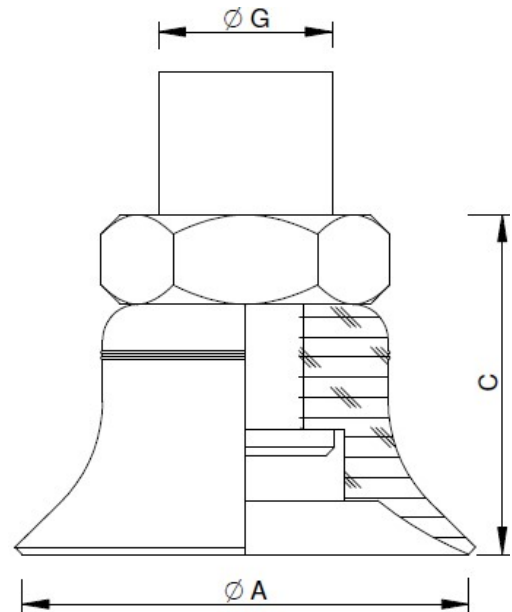
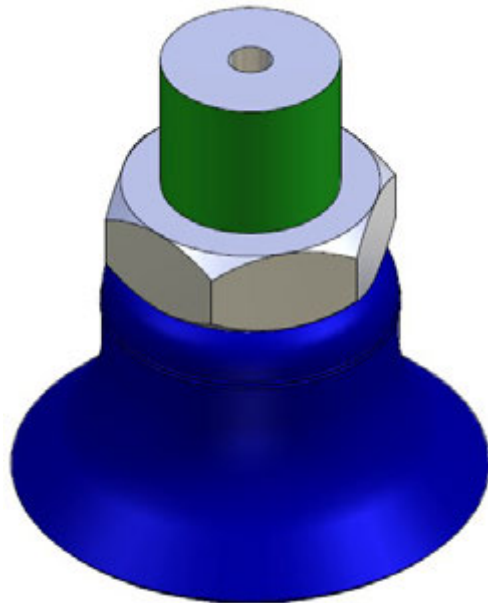
Die flachen Sauggreifer der ermöglichen dank ihres Profils ein präzises Handhaben der Last und eine Beschleunigung des Arbeitstakts. Diese Sauggreifer werden ausschließlich für ebene Flächen eingesetzt.

**CA.08.29**

**HT1**

. Vacuum Cup with 1 bellow (complete)

. Vakuumsauger mit 1 Kante, komplett



Article no.	VACUUM CUP	NIPPLE	A	C	G	Weight
KIT.08.29.D05	CA.08.29.001	CA.08.09.014	Ø5	9.5	M5	5 g
KIT.08.29.D06	CA.08.29.002		Ø6			
KIT.08.29.D08	CA.08.29.003		Ø8	12		
KIT.08.29.D10	CA.08.29.004		Ø10	12.5		
KIT.08.29.D15	CA.08.29.005	CA.08.09.015	Ø15	13.3	G 1/8	6 g
KIT.08.29.D20	CA.08.29.006	CA.08.09.016	Ø20	15		
KIT.08.29.D25	CA.08.29.007	CA.08.09.017	Ø25	19	G 1/8	7 g
KIT.08.29.D30	CA.08.29.008		Ø30	17		8 g
KIT.08.29.D35	CA.08.29.009		Ø35	19		10 g
KIT.08.29.D40	CA.08.29.010		Ø40			12 g
KIT.08.29.D50	CA.08.29.011	CA.08.09.018	Ø50	20	G 1/4	20 g
KIT.08.29.D60	CA.08.29.012	CA.08.09.019	Ø60	23		24 g
KIT.08.29.D80	CA.08.29.013		Ø80	25		43 g

**CA.08.31**
**HT1**

. Vacuum Cup with 2 bellows only

. Saugnapf mit 2 Kanten

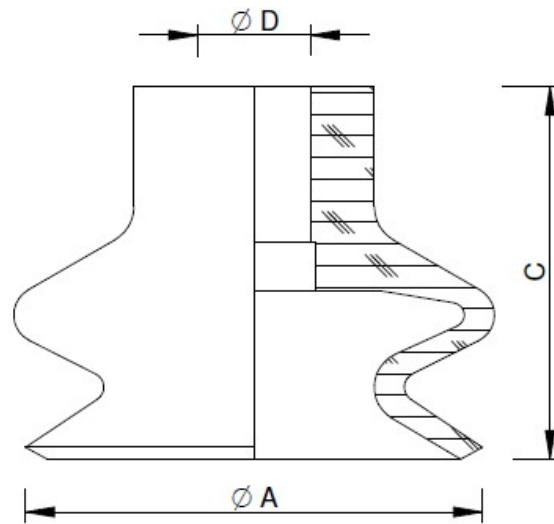
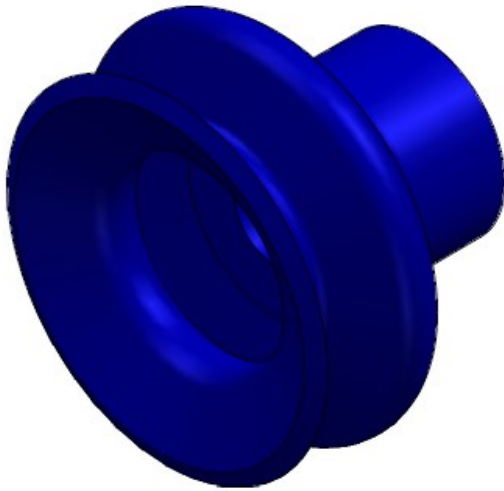


Table / Tabelle

 F = Holding force  
 Haltekraft

Article no.	A	C	D	F(N)	Weight
CA.08.31.012	Ø 6	9	Ø 3.7	1.5	1 g
CA.08.31.001	Ø 11	16	Ø 5	2.4	
CA.08.31.002	Ø 14			3.5	
CA.08.31.003	Ø 16	19	Ø 4.7	3.7	3 g
CA.08.31.004	Ø 20	16		7.7	4 g
CA.08.31.005	Ø 22	20	Ø 8	9	5 g
CA.08.31.006	Ø 25	23		11	
CA.08.31.007	Ø 33	27.5	Ø 8	19.2	7 g
CA.08.31.008	Ø 43	28		28	12 g
CA.08.31.009	Ø 53	34		59	18 g
CA.08.31.010	Ø 63		82	23 g	
CA.08.31.011	Ø 78	46.8	Ø 12	152	32 g

Remarks / Anmerkungen:

 Temperature resistance / Temperaturbeständigkeit  
 Short-term in °C (< 30 sec.)

Kurzzeitig in °C (&lt; 30 sec.)

-25° to +170°

Longer-term in °C

Längerfristig in °C

-10° to +140°

Leaving few marks ☺

Abdruckarm

Absence of PWIS (paint-wetting impairment substances) ☺

LABS-Freiheit

The suction cups with 2 bellows combine the advantages of flat suction cups (precision and positioning) with the freedom of bellows (angle and flexibility). They provide flexibility, precision and low internal volume suitable for high-speed applications.

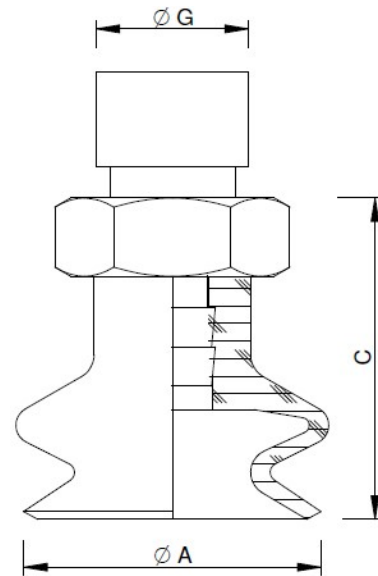
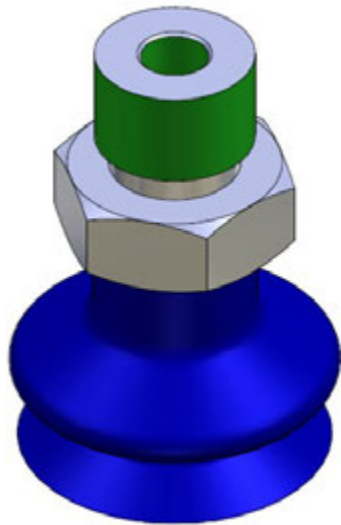
Die Sauggreifer der mit 2 Kanten vereinen die Vorteile flacher Sauggreifer mit einem besseren Hub, größerer Biegsamkeit und höherer Genauigkeit. Sie ermöglichen das Greifen leicht konkaver oder konvexer Teile.

CA.08.31

HT1

. Vacuum Cup with 2 bellows (complete)

. Vakuumsauger mit 2 Kanten, komplett



Article no.	VACUUM CUP	NIPPLE	A	C	G	Weight
KIT.08.31.D06.14	CA.08.31.012	CA.08.09.014	Ø 6	14	M5	2 g
KIT.08.31.D11.4 KIT.08.31.D11.9	CA.08.31.001	CA.08.09.004 CA.08.09.009	Ø 11	20.5 21	M5 G 1/8	2 g 4 g
KIT.08.31.D14.4 KIT.08.31.D14.9	CA.08.31.002	CA.08.09.004 CA.08.09.009	Ø 14	20.5 21	M5 G 1/8	2 g 4 g
KIT.08.31.D16.4 KIT.08.31.D16.9	CA.08.31.003	CA.08.09.004 CA.08.09.009	Ø 16	23.5 24	M5 G 1/8	4 g 6 g
KIT.08.31.D20.4 KIT.08.31.D20.9	CA.08.31.004	CA.08.09.004 CA.08.09.009	Ø 20	20.5 21	M5 G 1/8	5 g 7 g
KIT.08.31.D22.4 KIT.08.31.D22.9	CA.08.31.005	CA.08.09.004 CA.08.09.009	Ø 22	20.5 21	M5 G 1/8	6 g 8 g
KIT.08.31.D25.4 KIT.08.31.D25.9	CA.08.31.006	CA.08.09.004 CA.08.09.009	Ø 25	27.5 28	M5 G 1/8	6 g 8 g
KIT.08.31.D33.11 KIT.08.31.D33.21	CA.08.31.007	CA.08.09.011 CA.08.09.021	Ø 33	33.5 31.5	G 1/8 G 1/4	11 g 15 g
KIT.08.31.D43.11 KIT.08.31.D43.21	CA.08.31.008	CA.08.09.011 CA.08.09.021	Ø 43	34 32	G 1/8 G 1/4	16 g 20 g
KIT.08.31.D53.11 KIT.08.31.D53.21	CA.08.31.009	CA.08.09.011 CA.08.09.021	Ø 53	40.5 38	G 1/8 G 1/4	22 g 26 g
KIT.08.31.D63.21	CA.08.31.010	CA.08.09.021	Ø 63	38	G 1/4	31 g
KIT.08.31.D78.24	CA.08.31.011	CA.08.09.024	Ø 78	52.8		47 g

**CA.08.32**
**HT1**

. Vacuum Cup with 3 bellows only

. Saugnapf mit 3 Kanten

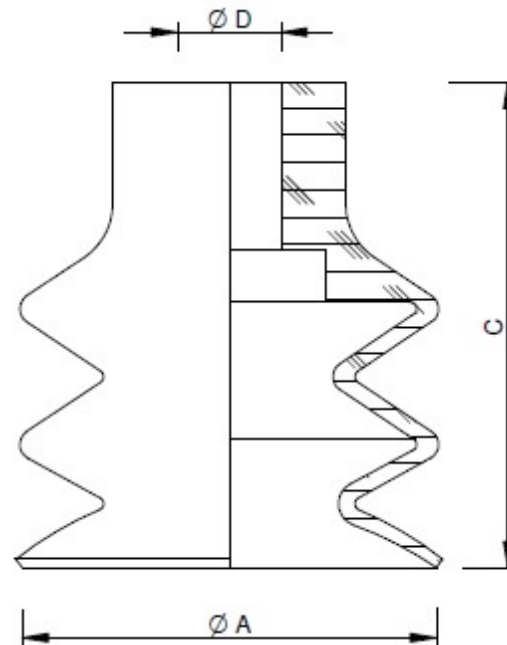
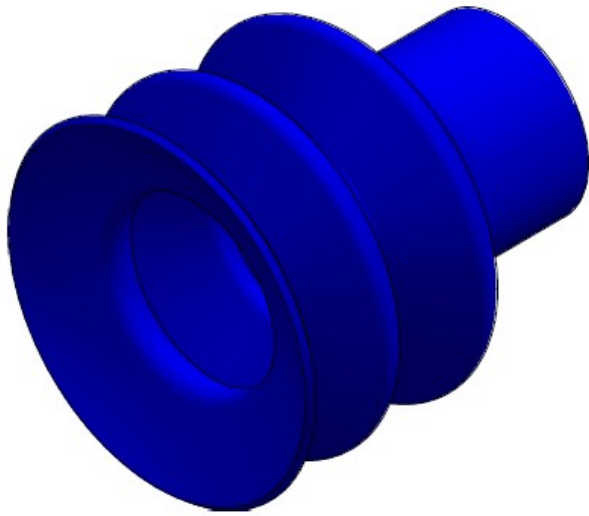


Table / Tabelle

 F = Holding force  
 Haltekraft

Article no.	A	C	D	F(N)	Weight
CA.08.32.D09	Ø 9	15	Ø4	0.7	2 g
CA.08.32.D12	Ø 12	21		0.9	3 g
CA.08.32.D14	Ø 14	23		1.2	4 g
CA.08.32.D20	Ø 20	22		3.8	6 g
CA.08.32.D25	Ø 25	34		4.5	7 g
CA.08.32.D32	Ø 32	37	Ø8	12	8 g
CA.08.32.D42	Ø 42	46		13.6	10 g
CA.08.32.D52	Ø 52	49		28.5	25 g
CA.08.32.D62	Ø 62	54		41	39 g

Remarks / Anmerkungen:

Temperature resistance / Temperaturbeständigkeit

Short-term in °C (&lt; 30 sec.)

Kurzzeitig in °C (&lt; 30 sec.)

**-25° to +170°**

Longer-term in °C

Längerfristig in °C

**-10° to +140°**

Leaving few marks ☺

Abdruckarm

Absence of PWIS (paint-wetting impairment substances) ☺

LABS-Frei

The suction cups with 3 bellows are recommended for gripping products on different planes (large deflection) - thus replacing spring systems - and for gripping spherical or cylindrical objects at an angle (ball-joint effect).

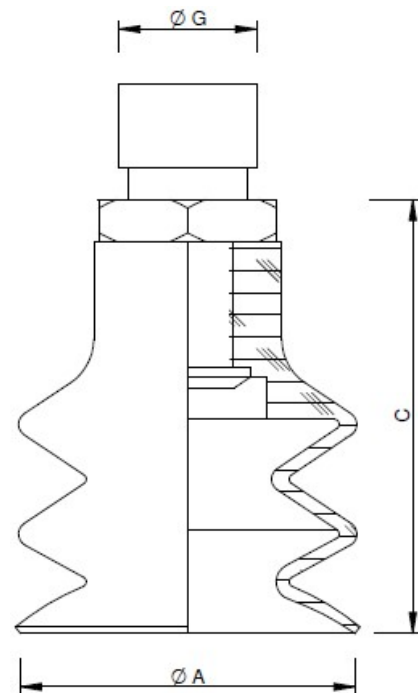
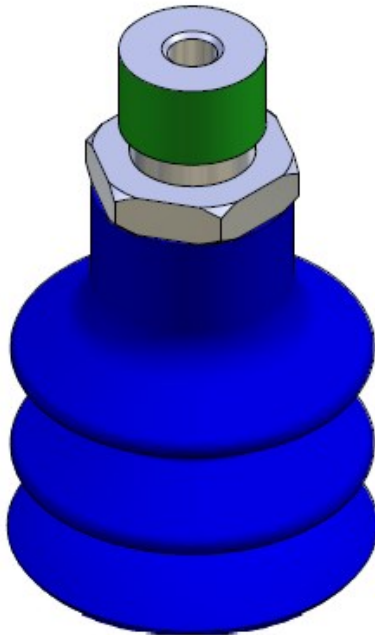
Die Sauggreifer der mit 3 Kanten sind für Greifen von Produkten auf verschiedenen Niveaus (großer Hub) geeignet und können so Federsystemeersetzen. Sie eignen sich auch für das Ergreifen runder und zylindrischer Teile unter einem Winkel (Gelenk-Effekt).

**CA.08.32**

**HT1**

. Vacuum Cup with 3 bellows (complete)

. Vakuumsauger mit 3 Kanten, komplett



Article no.	VACUUM CUP	NIPPLE	A	C	G	Weight
KIT.08.32.D09.26	CA.08.32.D09	CA.08.09.026	Ø 9	20	M5	3 g
KIT.08.32.D12.4 KIT.08.32.D12.9	CA.08.32.D12	CA.08.09.004 CA.08.09.009	Ø 12	25.5 26	M5 G 1/8	4 g 6 g
KIT.08.32.D14.4 KIT.08.32.D14.9	CA.08.32.D14	CA.08.09.004 CA.08.09.009	Ø 14	27.5 28	M5 G 1/8	5 g 7 g
KIT.08.32.D20.4 KIT.08.32.D20.9	CA.08.32.D20	CA.08.09.004 CA.08.09.009	Ø 20	26.5 27	M5 G 1/8	10 g 12 g
KIT.08.32.D25.4 KIT.08.32.D25.9	CA.08.32.D25	CA.08.09.004 CA.08.09.009	Ø 25	38.5 39	M5 G 1/8	11 g 13 g
KIT.08.32.D32.11 KIT.08.32.D32.21	CA.08.32.D32	CA.08.09.011 CA.08.09.021	Ø 32	43.3 41	G 1/8 G 1/4	12 g 16 g
KIT.08.32.D42.11 KIT.08.32.D42.21	CA.08.32.D42	CA.08.09.011 CA.08.09.021	Ø 42	52.3 50	G 1/8 G 1/4	14 g 18 g
KIT.08.32.D52.21	CA.08.32.D52	CA.08.09.021	Ø 52	64	G1/4	33 g
KIT.08.32.D62.21	CA.08.32.D62		Ø 62	59		50 g

**CA.08.39**

**HT1**

. Vacuum Cup oval only

. Saugnapf, oval

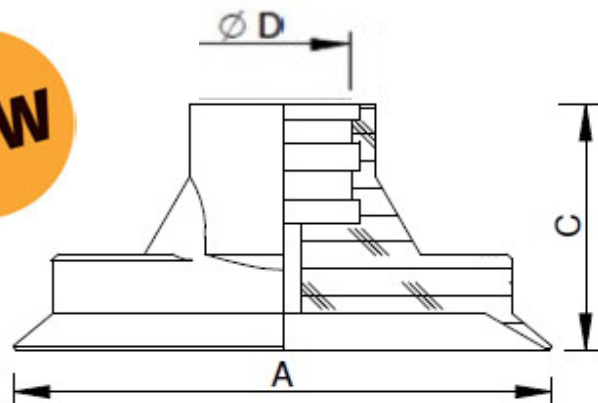
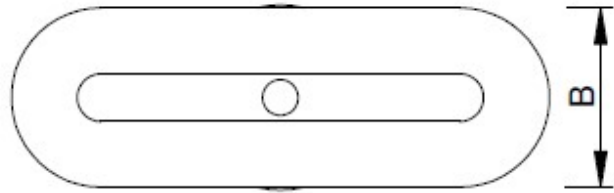
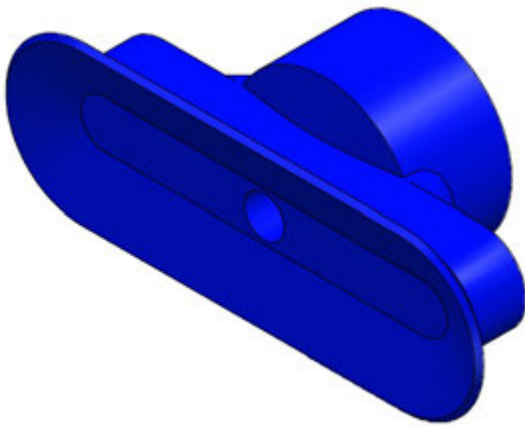


Table / Tabelle

F = Holding force  
Haltekraft

Remarks / Anmerkungen:

Article no.	A	B	C	D	F(N)	Weight
CA.08.39.001	12	4	15	4	1.8 N	0.5 g
CA.08.39.002	14		12	4.5	3.1 N	
CA.08.39.003	17	5			4.5 N	
CA.08.39.004	23	7	7	7	8.0 N	1.0 g
CA.08.39.005	29	9			12.2 N	1.1 g
CA.08.39.006	44	14	21	13	28.2 N	3.4 g
CA.08.39.007	59	19			50.1 N	6.4 g
CA.08.39.008	74	24			73.3 N	17.9 g

Temperature resistance / Temperaturbeständigkeit

Short-term in °C (< 30 sec.)

Kurzzeitig in °C (< 30 sec.)

**-25° to +170°**

Longer-term in °C

Längerfristig in °C

**-10° to +140°**

Leaving few marks ☺

Abdruckarm

Absence of PWIS (paint-wetting impairment substances) ☺

LABS-Frei

The oval series of suction cups is used for handling oblong products, such as pens, tubes and bottles, and flat or cylindrical objects.

Die ovalen Sauggreifer werden für die Handhabung flacher oder zylindrischer länglicher Objekte (Stifte, Tuben, Flaschen, Glühbirnen usw.) verwendet .

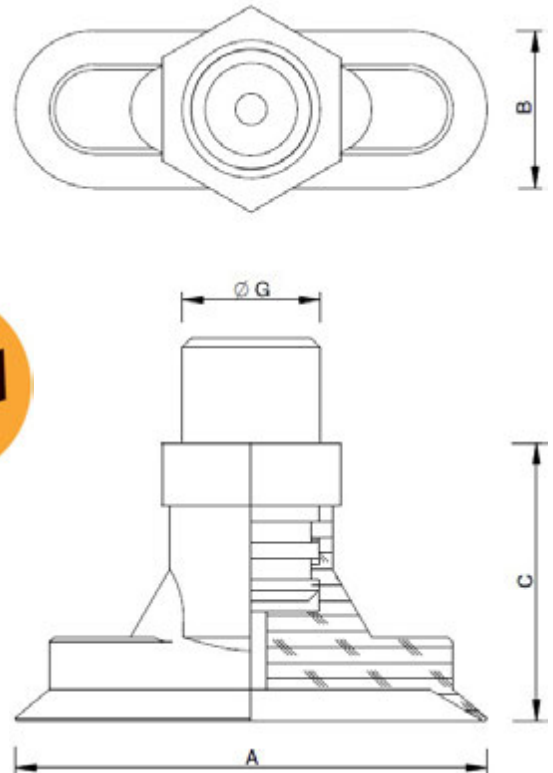
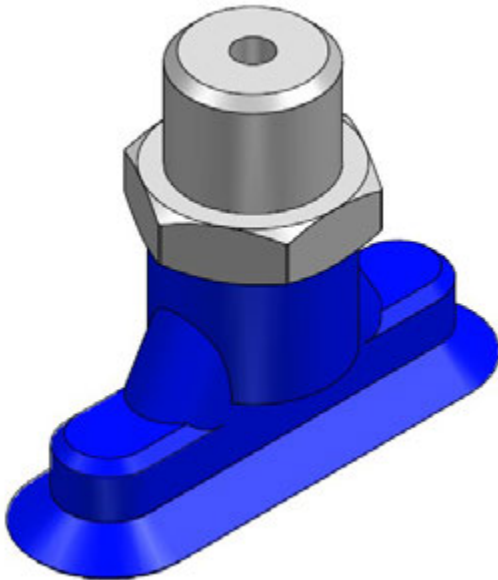


**CA.08.39**

**HT1**

. Vacuum Cup Oval (complete)

. Vakuumsauger oval, komplett



Article no.	VACUUM CUP	NIPPLE	A	B	C	G	Weight
KIT.08.39.L12.40	CA.08.39.001	CA.08.09.040	12	5	18	M5	2.9 g
KIT.08.39.L15.28	CA.08.39.002	CA.08.09.028	14	4	17		3.4 g
KIT.08.39.L18.28	CA.08.39.003	CA.08.09.028	17	5			3.7 g
KIT.08.39.L24.27	CA.08.39.004	CA.08.09.027	23	7	26	G1/8	6.7 g
KIT.08.39.L30.27	CA.08.39.005	CA.08.09.027	29	9		6.8 g	
KIT.08.39.L45.41	CA.08.39.006	CA.08.09.041	44	14	26	G1/4	14.8 g
KIT.08.39.L60.41	CA.08.39.007	CA.08.09.041	59	19			19.0 g
KIT.08.39.L75.41	CA.08.39.008	CA.08.09.041	74	24			26.9 g

**CA.08.26**
**SILICONE**

. Vacuum Cup with 2 bellows and foam strip

. Saugnapf mit 2 Kanten und Schaumstoffband

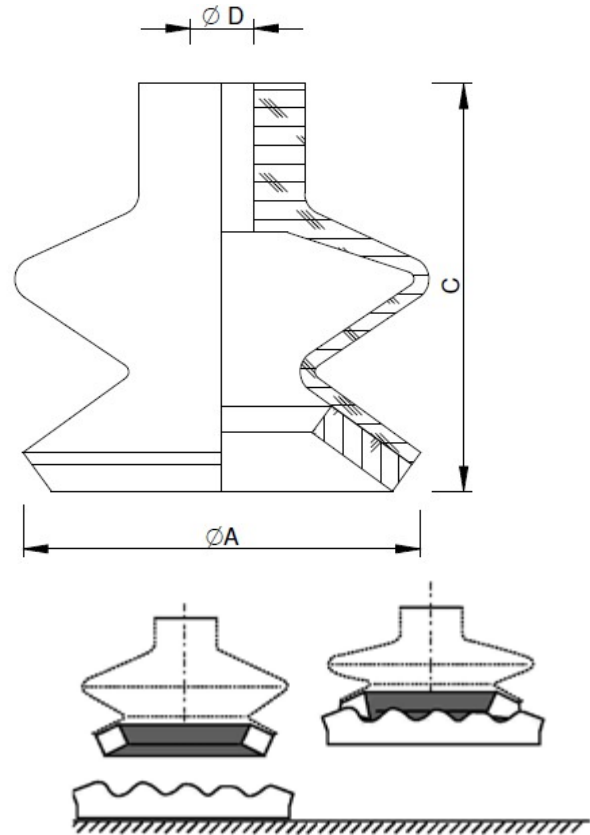
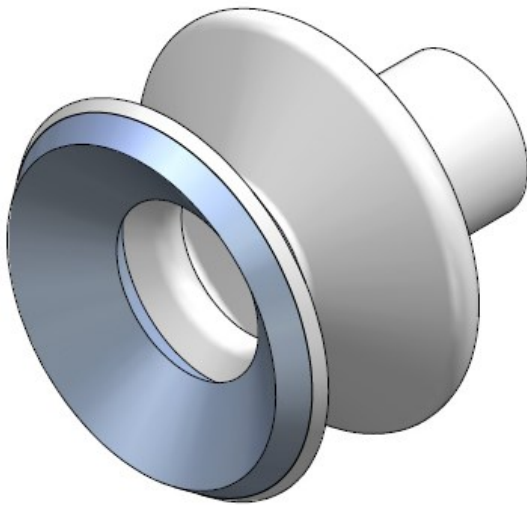


Table / Tabelle

 F = Holding force  
 Haltekraft

Remarks / Anmerkungen:

Article no.	A	C	D	F(N)	Weight
CA.08.26.D16.AS	∅ 16	21	∅3.8	7	2 g
CA.08.26.D20.AS	∅ 20	18		9	
CA.08.26.D25.AS	∅ 25	25		11	3 g
CA.08.26.D33.AS	∅ 33	29	∅8	19.2	7 g
CA.08.26.D43.AS	∅ 43	32		28	13 g
CA.08.26.D53.AS	∅ 53	38		59	22 g
CA.08.26.D63.AS	∅ 63	37		82	26 g
CA.08.26.D78.AS	∅ 78	51		∅12	152

 Temperature resistance /  
 Temperaturbeständigkeit:

Short-term in °C (&lt; 30 sec.)

Kurzzeitig in °C (&lt; 30 sec.)

-50° to +220°

Longer-term in °C

Längerfristig in °C

-30° to +180°

Leaving few marks / Abdruckarm ☉

 Absence of PWIS (paint-wetting impairment  
 substances) ☉

LABS-Frei

The suction cups with foam ring are designed for gripping products with an uneven or ridged surface, Ex. Sawn wood, sheet metal, flat surfaces with bumps or hollows. Those suction cups cannot adhere correctly to any granular surface and therefore cannot be airtight.

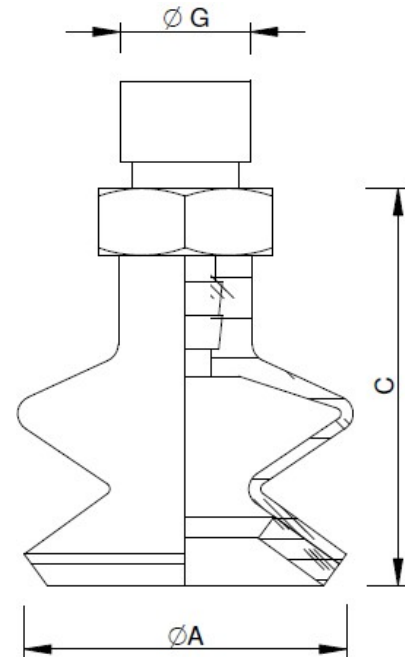
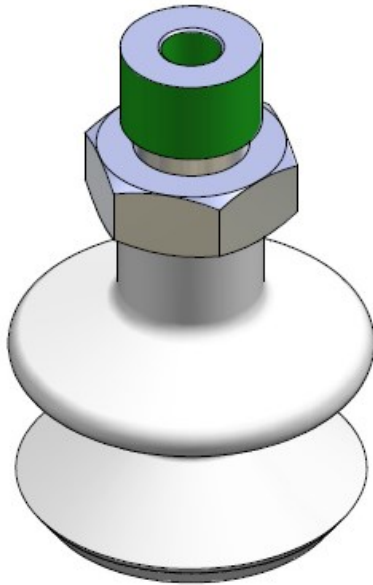
Die Sauggreifer der mit 2 Kanten und Schaumstoffbänder sind für das Greifen von Produkten mit unregelmäßiger oder gerillter Oberfläche geeignet. Gesägte Bretter, Bleche, ebene Oberflächen mit vorstehender oder vertiefter Reliefstruktur. Die Lippen der Sauggreifer haften nicht richtig auf körnigen Oberflächen und deswegen abdichten sie nicht darauf.

**CA.08.26**

**SILICONE**

. Vacuum Cup with 2 bellows and foam strip (complete)

. Vakuumsauger mit 2 Kanten und Schaumstoffband, komplett



Article no.	VACUUM CUP	NIPPLE	A	C	G	Weight
KIT.08.26.D16.4 KIT.08.26.D16.9	CA.08.26.D16.AS	CA.08.09.004 CA.08.09.009	Ø 16	25.5 26	M5 G 1/8	3 g 6 g
KIT.08.26.D20.4 KIT.08.26.D20.9	CA.08.26.D20.AS	CA.08.09.004 CA.08.09.009	Ø 20	22.5 23	M5 1/8	3 g 6 g
KIT.08.26.D25.4 KIT.08.26.D25.9	CA.08.26.D25.AS	CA.08.09.004 CA.08.09.009	Ø 25	29.5 30	M5 1/8"	4 g 6 g
KIT.08.26.D33.11 KIT.08.26.D33.21	CA.08.26.D33.AS	CA.08.09.011 CA.08.09.021	Ø 33	35.3 33	1/8" 1/4"	11 g 15 g
KIT.08.26.D43.11 KIT.08.26.D43.21	CA.08.26.D43.AS	CA.08.09.011 CA.08.09.021	Ø 43	38.3 36	1/8" 1/4"	17 g 21 g
KIT.08.26.D53.11 KIT.08.26.D53.21	CA.08.26.D53.AS	CA.08.09.011 CA.08.09.021	Ø 53	44.3 42	1/8" 1/4"	26 g 30 g
KIT.08.26.D63.11 KIT.08.26.D63.21	CA.08.26.D63.AS	CA.08.09.011 CA.08.09.021	Ø 63	43.3 41	1/8" 1/4"	30 g 34 g
KIT.08.26.D78.24	CA.08.26.D78.AS	CA.08.09.024	Ø 78	57	1/4"	57 g

# CA.08.40

. Vacuum Cup oval only

# SILICONE

. Saugnapf, oval

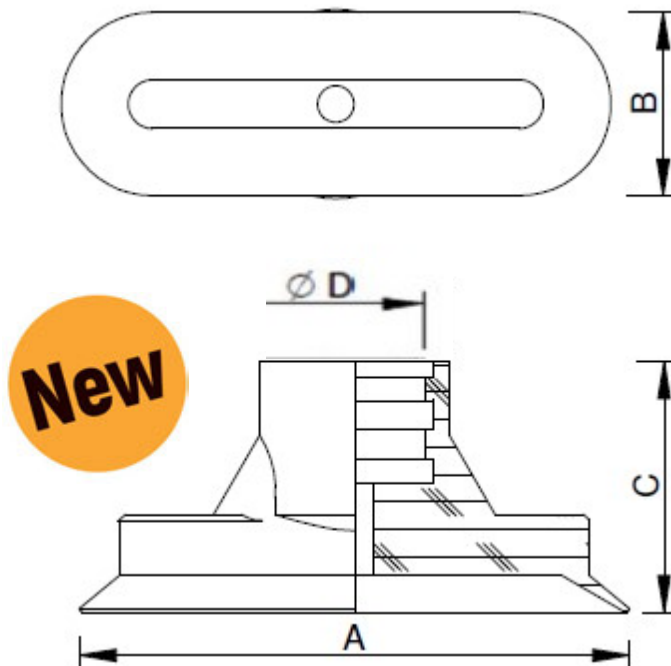
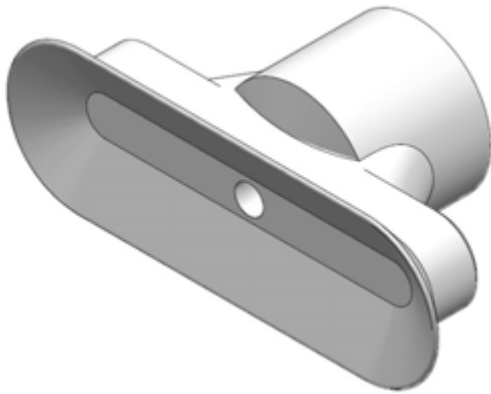


Table / Tabelle

F = Holding force  
Haltekraft

Article no.	A	B	C	D	F(N)	Weight
CA.08.40.001	12	4	15	Ø4	1.8	0.5 g
CA.08.40.002	15	5	12	Ø4.5	3.1	
CA.08.40.003	18	6			4.5	
CA.08.40.004	24	8		Ø7	8	1.0 g
CA.08.40.005	30	10	12.2		1.1 g	
CA.08.40.006	45	15	21	Ø13	28.2	3.4 g
CA.08.40.007	60	20			50.1	6.4 g
CA.08.40.008	75	25			78.3	17.9 g

Remarks / Anmerkungen:

Temperature resistance /  
Temperaturbeständigkeit

Short-term in °C (< 30 sec.)  
Kurzzeitig in °C (< 30 sec.)

**-50° to +220°**

Longer-term in °C  
Längerfristig in °C

**-30° to +180°**

Leaving few marks / Abdruckarm ☹

The oval series of suction cups is used for handling oblong products, such as pens, tubes and bottles, and flat or cylindrical objects.

Die ovalen Sauggreifer werden für die Handhabung flacher oder zylindrischer länglicher Objekte (Stifte, Tuben, Flaschen, Glühbirnen usw.) verwendet.

Absence of PWIS (paint-wetting impairment substances) ☹

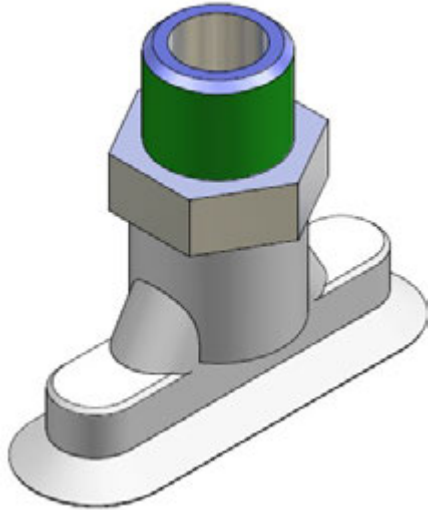
LABS-Freiheit

## CA.08.40

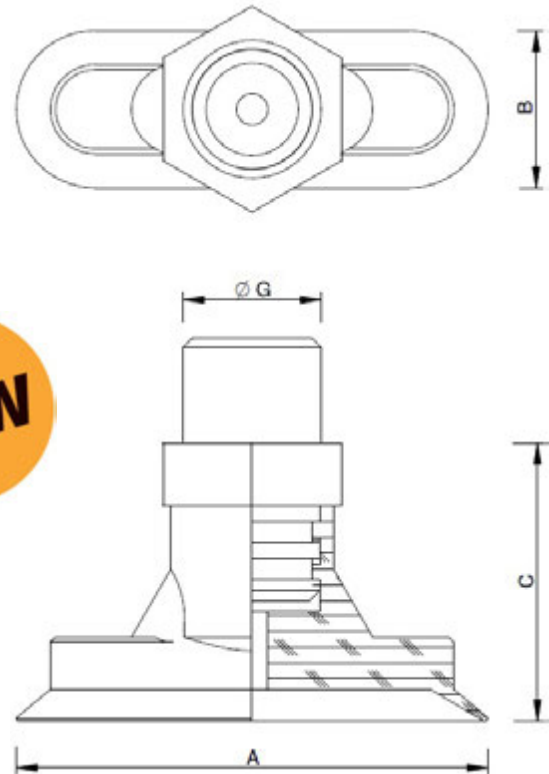
## SILICONE

. Vacuum Cup Oval (complete)

. Vakuumsauger oval, komplett



**New**



Article no.	VACUUM CUP	NIPPLE	A	B	C	G	Weight
KIT.08.40.L12.40	CA.08.40.001	CA.08.09.040	12	4	18	M5	2.9 g
KIT.08.40.L15.28	CA.08.40.002	CA.08.09.028	15	5	17		3.4 g
KIT.08.40.L18.28	CA.08.40.003		18	6			3.7 g
KIT.08.40.L24.27	CA.08.40.004	CA.08.09.027	24	8		G 1/8	6.7 g
KIT.08.40.L30.27	CA.08.40.005		30	10			6.8 g
KIT.08.40.L45.41	CA.08.40.006	CA.08.09.041	45	15	26	G 1/4	14.8 g
KIT.08.40.L60.41	CA.08.40.007		60	20			19 g
KIT.08.40.L75.41	CA.08.40.008		75	25			26.9 g

## CA.08.28

## SILICONE

. Vacuum Cup with 1 bellow only

. Saugnapf mit 1 Kante

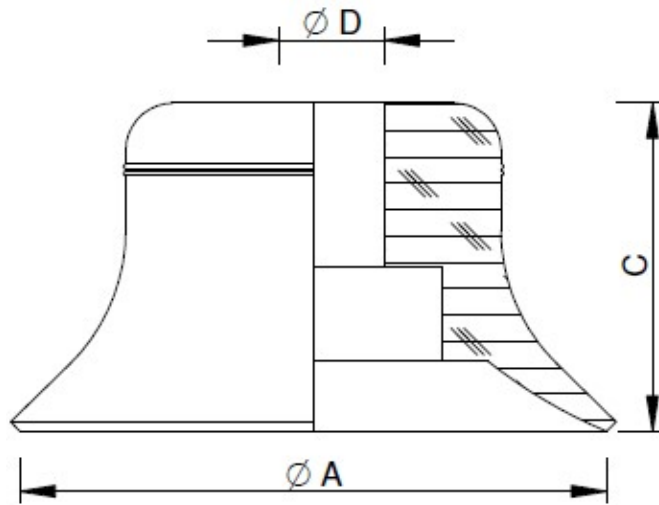
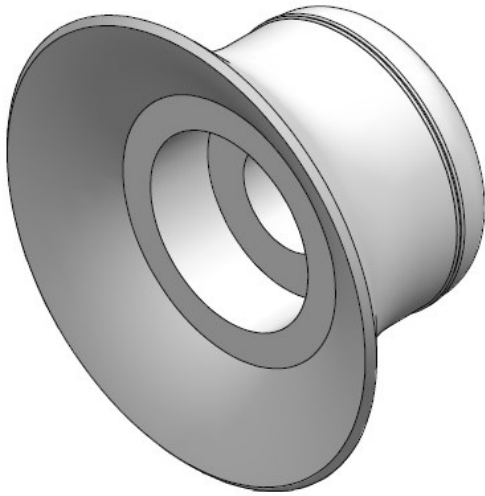


Table / Tabelle

F = Holding force  
Haltekraft

Article no.	A	C	D	F(N)	Weight	
CA.08.28.001	∅ 5	6.5	∅4	0.75	1 g	
CA.08.28.002	∅ 6			1.2		
CA.08.28.003	∅ 8			2.3		
CA.08.28.004	∅ 10	7.5	4			
CA.08.28.005	∅ 15	8	∅4.5	9		
CA.08.28.006	∅ 20	10		15.5		
CA.08.28.007	∅ 25	14	∅6	26.5		2 g
CA.08.28.008	∅ 30	12		34		3 g
CA.08.28.009	∅ 35	14		44		5 g
CA.08.28.010	∅ 40		57.7	7 g		
CA.08.28.011	∅ 50	15	∅8	91		15 g
CA.08.28.012	∅ 60	18	M10x1.25	125		19 g
CA.08.28.013	∅ 80	20		260		38 g

Remarks / Anmerkungen:

Temperature resistance /  
Temperaturbeständigkeit

Short-term in °C (< 30 sec.)

Kurzzeitig in °C (< 30 sec.)

**-50° to +220°**

Longer-term in °C

Längerfristig in °C

**-30° to +180°**

Leaving few marks / Abdruckarm ☉

Absence of PWIS (paint-wetting impairment substances) ☉

LABS-Frei

The suction cups with 1 bellow provide accuracy in load gripping and speed up throughput rates. These suction cups are used for flat surfaces only.

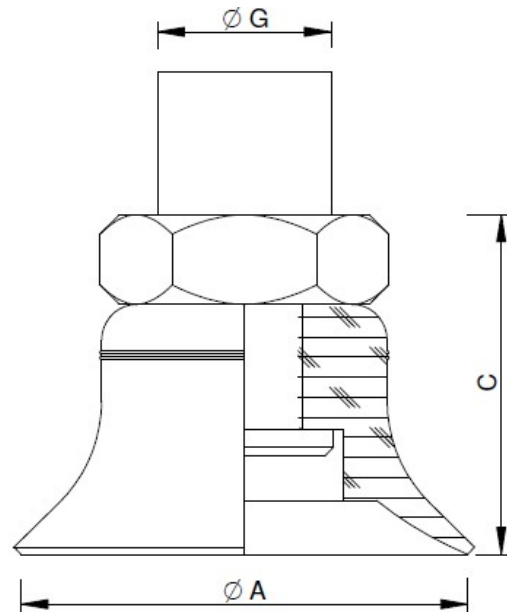
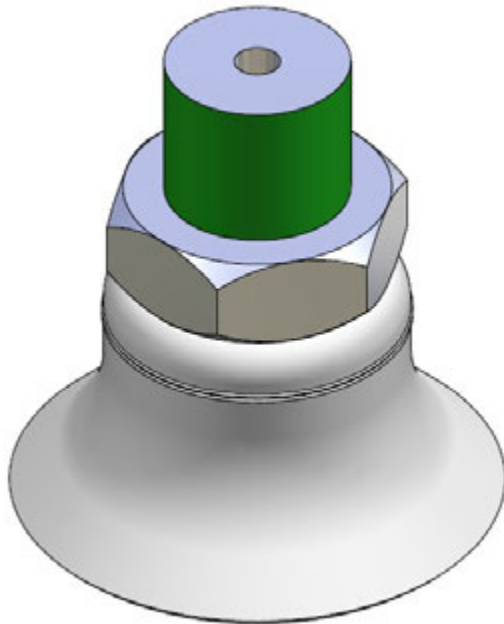
Die flachen Sauggreifer ermöglichen dank ihres Profils ein präzises Handhaben der Last und eine Beschleunigung des Arbeitstakts. Diese Sauggreifer werden ausschließlich für ebene Flächen eingesetzt.

**CA.08.28**

**SILICONE**

. Vacuum Cup with 1 bellow (complete)

. Vakuumsauger mit 1 Kante, komplett



Article no.	VACUUM CUP	NIPPLE	A	C	G	Weight	
KIT.08.28.D05	CA.08.28.001	CA.08.09.014	Ø 5	9.5	M5	6 g	
KIT.08.28.D06	CA.08.28.002		Ø 6				
KIT.08.28.D08	CA.08.28.003		Ø 8	12			
KIT.08.28.D10	CA.08.28.004		Ø 10	12.5			
KIT.08.28.D15	CA.08.28.005	CA.08.09.015	Ø 15	13.3	G 1/8	7 g	
KIT.08.28.D20	CA.08.28.006	CA.08.09.016	Ø 20	15			
KIT.08.28.D25	CA.08.28.007	CA.08.09.017	Ø 25	19			
KIT.08.28.D30	CA.08.28.008		Ø 30	17			8 g
KIT.08.28.D35	CA.08.28.009		Ø 35		19	10 g	
KIT.08.28.D40	CA.08.28.010		Ø 40	12 g			
KIT.08.28.D50	CA.08.28.011	CA.08.09.019	Ø 50	20	G 1/4	20 g	
KIT.08.28.D60	CA.08.28.012		Ø 60	23			24 g
KIT.08.28.D80	CA.08.28.013		Ø 60	25			24 g
			Ø 80				

**CA.08.30**
**SILICONE**

. Vacuum Cup with 2 bellows only

. Saugnapf mit 2 Kanten

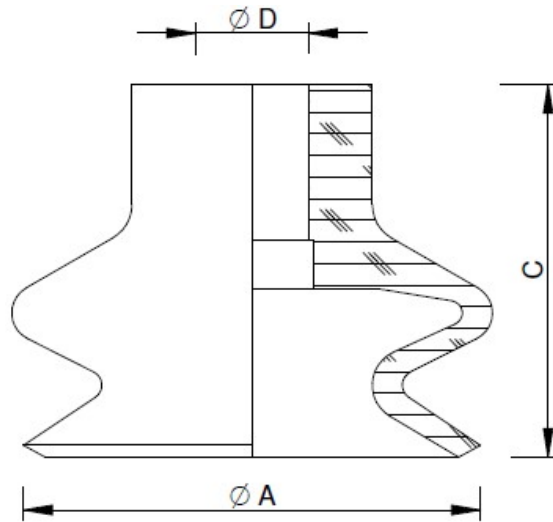
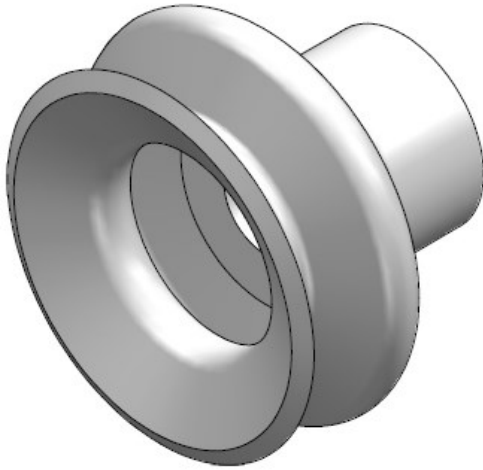


Table / Tabelle

 F = Holding force  
 Haltekraft

Article no.	A	C	D	F(N)	Weight
CA.08.30.012	∅ 6	9	∅3.7	1.5	1 g
CA.08.30.001	∅ 11	16	∅5	2.4	
CA.08.30.002	∅ 14			3.5	
CA.08.30.003	∅ 16	19	∅4.7	3.7	3 g
CA.08.30.004	∅ 20	16		7.7	4 g
CA.08.30.005	∅ 25	23	∅8	11	5 g
CA.08.30.006	∅ 33	27.5		19.2	7 g
CA.08.30.007	∅ 43	28	∅8	28	12 g
CA.08.30.008	∅ 53	34		59	18 g
CA.08.30.009	∅ 63		82	23 g	
CA.08.30.010	∅ 78	46.8	∅12	152	32 g

Remarks / Anmerkungen:

 Temperature resistance /  
 Temperaturbeständigkeit

 Short-term in °C (< 30 sec.)  
 Kurzzeitig in °C (< 30 sec.)

-50° to +220°

Longer-term in °C

Längerfristig in °C

-30° to +180°

Leaving few marks / Abdruckarm ☒

Absence of PWIS (paint-wetting impairment substances)

☒

LABS-Frei

The suction cups with 2 bellows combine the advantages of flat suction cups (precision and positioning) with the freedom of bellows (angle and flexibility). They provide flexibility, precision and low internal volume suitable for high-speed applications.

Die Sauggreifer mit 2 Kanten vereinen die Vorteile flacher Sauggreifer mit einem besseren Hub, größerer Biegsamkeit und höherer Genauigkeit. Sie ermöglichen das Greifen konkaver oder konvexer Teile.

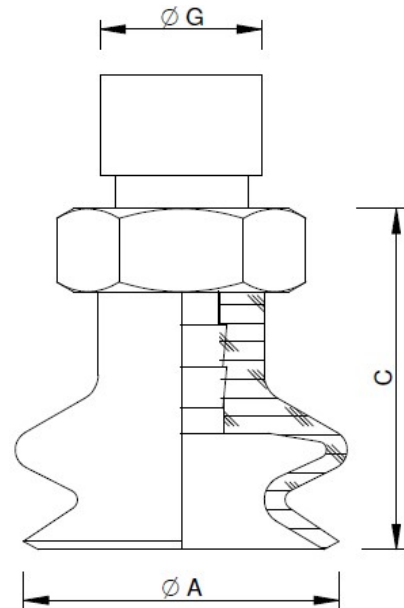
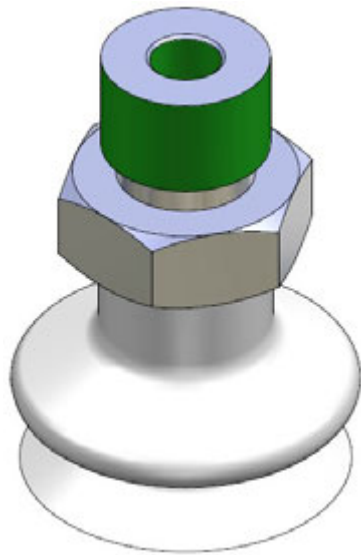


**CA.08.30**

**SILICONE**

. Vacuum Cup with 2 bellows (complete)

. Vakuumsauger mit 2 Kanten, komplett



Article no.	VACUUM CUP	NIPPLE	A	C	G	Weight
KIT.08.30.D06.14	CA.08.30.012	CA.08.09.014	Ø6	14	M5	2 g
KIT.08.30.D11.4 KIT.08.30.D11.9	CA.08.30.001	CA.08.09.004 CA.08.09.009	Ø11	20.5 21	M5 G 1/8	2 g 4 g
KIT.08.30.D14.4 KIT.08.30.D14.9	CA.08.30.002	CA.08.09.004 CA.08.09.009	Ø14	20.5 21	M5 G 1/8	2 g 4 g
KIT.08.30.D16.4 KIT.08.30.D16.9	CA.08.30.003	CA.08.09.004 CA.08.09.009	Ø16	23.5 24	M5 G 1/8	4 g 6 g
KIT.08.30.D20.4 KIT.08.30.D20.9	CA.08.30.004	CA.08.09.004 CA.08.09.009	Ø20	20.5 21	M5 G 1/8	5 g 7 g
KIT.08.30.D25.4 KIT.08.30.D25.9	CA.08.30.005	CA.08.09.004 CA.08.09.009	Ø25	27.5 28	M5 G 1/8	6 g 8 g
KIT.08.30.D33.11 KIT.08.30.D33.21	CA.08.30.006	CA.08.09.011 CA.08.09.021	Ø33	33.5 31.5	G 1/8 G 1/4	11 g 15 g
KIT.08.30.D43.11 KIT.08.30.D43.21	CA.08.30.007	CA.08.09.011 CA.08.09.021	Ø43	34 32	G 1/8 G 1/4	16 g 20 g
KIT.08.30.D53.11 KIT.08.30.D53.21	CA.08.30.008	CA.08.09.011 CA.08.09.021	Ø53	40.5 38	G 1/8 G 1/4	22 g 26 g
KIT.08.30.D63.11 KIT.08.30.D63.21	CA.08.30.009	CA.08.09.011 CA.08.09.021	Ø63	40.5 38	G 1/8 G 1/4	27 g 31 g
KIT.08.30.D78.24	CA.08.30.010	CA.08.09.024	Ø78	52.8	G 1/4	47 g

**CA.08.33**
**SILICONE**

. Vacuum Cup with 3 bellows only

. Saugnapf mit 3 Kanten

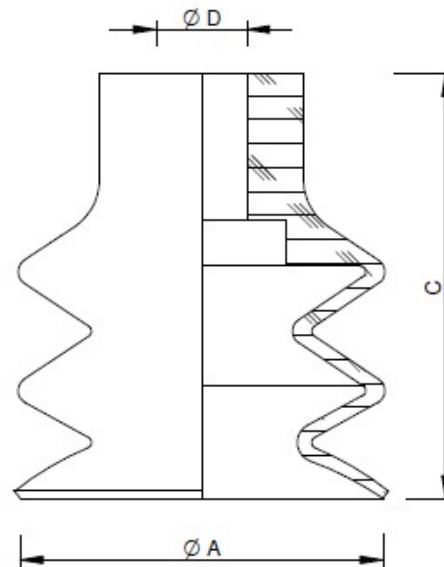
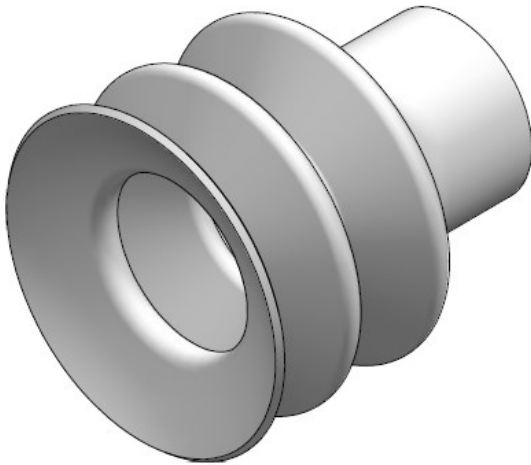


Table / Tabelle

 F = Holding force  
 Haltekraft

Article no.	A	C	D	F(N)	Weight
CA.08.33.D5	Ø 5	14	Ø 3.5	0.15	1 g
CA.08.33.D7	Ø 7			0.1	
CA.08.33.D9	Ø 9	15	Ø 4	0.68	2 g
CA.08.33.D12	Ø 12	21		0.9	3 g
CA.08.33.D14	Ø 14	23		1.2	4 g
CA.08.33.D20	Ø 20	22		3.8	6 g
CA.08.33.D25	Ø 25	34		4.5	7 g
CA.08.33.D32	Ø 32	37	Ø 8	12.0	8 g
CA.08.33.D42	Ø 42	46		13.6	10 g
CA.08.33.D52	Ø 52	49		27	20 g
CA.08.33.D60	Ø 60	55		32	60 g

Remarks / Anmerkungen:

 Temperature resistance /  
 Temperaturbeständigkeit

 Short-term in °C (< 30 sec.)  
 Kurzzeitig in °C (< 30 sec.)

**-50° to +220°**

 Longer-term in °C  
 Längerfristig in °C

**-30° to +180°**

Leaving few marks / Abdruckarm ☒

 Absence of PWIS (paint-wetting impairment  
 substances) ☒

LABS-Frei

The suction cups with 3 bellows are recommended for gripping products on different planes (large deflection) - thus replacing spring systems - and for gripping spherical or cylindrical objects at an angle (ball-joint effect).

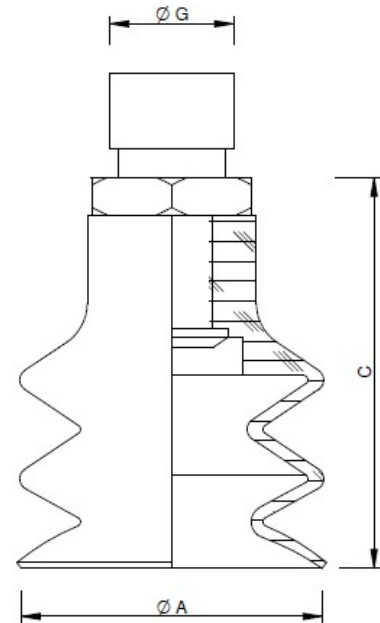
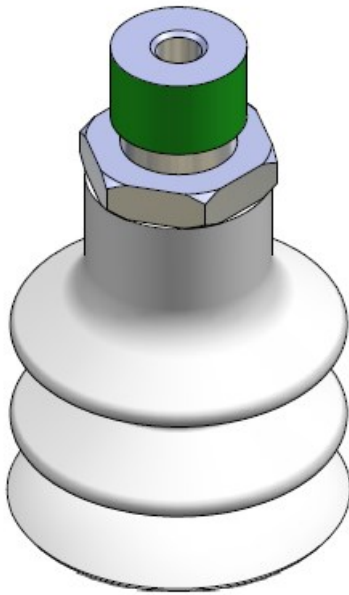
Die Sauggreifer mit 3 Kanten sind für Greifen von Produkten auf verschiedenen Niveaus (großer Hub) geeignet und können so Federsysteme ersetzen. Sie eignen sich auch für das Ergreifen runder und zylindrischer Teile unter einem Winkel (Gelenk-Effekt).

## CA.08.33

## SILICONE

. Vacuum Cup with 3 bellows (complete)

. Vakuumsauger mit 3 Kanten, komplett



Article no.	VACUUM CUP	NIPPLE	A	C	B	Weight
KIT.08.33.D5.25	CA.08.33.D5	CA.08.09.025	Ø 5	8.5	M5	2 g
KIT.08.33.D7.26	CA.08.33.D7	CA.08.09.026	Ø 7	9		3 g
KIT.08.33.D9.26	CA.08.33.D9	CA.08.09.026	Ø 9	20		
KIT.08.33.D12.4 KIT.08.33.D12.9	CA.08.33.D12	CA.08.09.004 CA.08.09.009	Ø 12	25.5 26	M5 G 1/8	4 g 6 g
KIT.08.33.D14.4 KIT.08.33.D14.9	CA.08.33.D14	CA.08.09.004 CA.08.09.009	Ø 14	27.5 28	M5 G 1/8	5 g 7 g
KIT.08.33.D20.4 KIT.08.33.D20.9	CA.08.33.D20	CA.08.09.004 CA.08.09.009	Ø 20	26.5 27	M5 G 1/8	10 g 12 g
KIT.08.33.D25.4 KIT.08.33.D25.9	CA.08.33.D25	CA.08.09.004 CA.08.09.009	Ø 25	38.5 39	M5 G 1/8	11 g 13 g
KIT.08.33.D32.11 KIT.08.33.D32.21	CA.08.33.D32	CA.08.09.011 CA.08.09.021	Ø 32	43.3 41	G1/8 G1/4	12 g 16 g
KIT.08.33.D42.11 KIT.08.33.D42.21	CA.08.33.D42	CA.08.09.011 CA.08.09.021	Ø 42	52.3 50	G1/8 G1/4	14 g 18 g
KIT.08.33.D52.11 KIT.08.33.D52.21	CA.08.33.D52	CA.08.09.011 CA.08.09.021	Ø 52	55.3 53	G1/8 G1/4	24 g 28 g
KIT.08.33.D60.21	CA.08.33.D60	CA.08.09.021	Ø 60	59	G 1/4	68 g

**CA.08.01**
**SILICONE**

. Vacuum Cup with 2 bellows only

. Saugnapf mit zwei Kanten

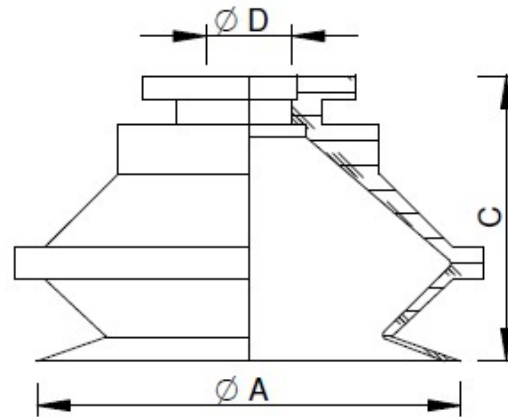
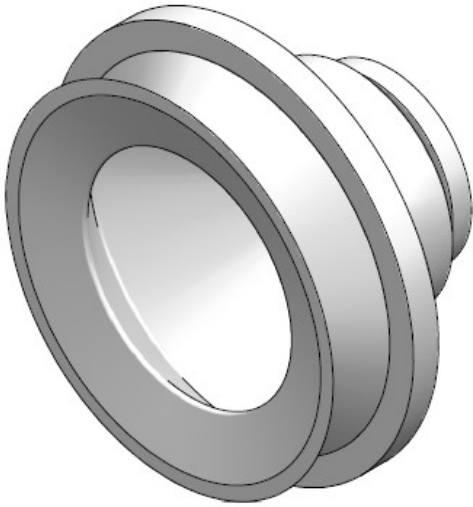


Table / Tabelle

 F = Holding force  
 Haltekraft

Article no	A	C	D	F(N)	Weight
CA.08.01.001	∅ 11	16	∅ 4	4.6	1 g
CA.08.01.002	∅ 16	19		7.5	2 g
CA.08.01.003	∅ 20	19.5	∅ 4.8	14.7	3 g
CA.08.01.004	∅ 30	27	∅ 6	25.5	6 g
CA.08.01.005	∅ 40	28	∅ 8	48.1	7 g
CA.08.01.006	∅ 50	35	∅ 10.5	83.3	15 g

Remarks / Anmerkungen:

 Temperature resistance /  
 Temperaturbeständigkeit

 Short-term in °C (< 30 sec.)  
 Kurzzeitig in °C (< 30 sec.)

**-50° to +220°**

 Longer-term in °C  
 Längerfristig in °C

**-30° to +180°**

Leaving few marks / Abdruckarm ☹

 Absence of PWIS (paint-wetting impairment substances) ☹  
 LABS-Frei

The suction cups with 2 bellows combine the advantages of flat suction cups (precision and positioning) with the freedom of bellows (angle and flexibility). They provide flexibility, precision and low internal volume suitable for high-speed applications.

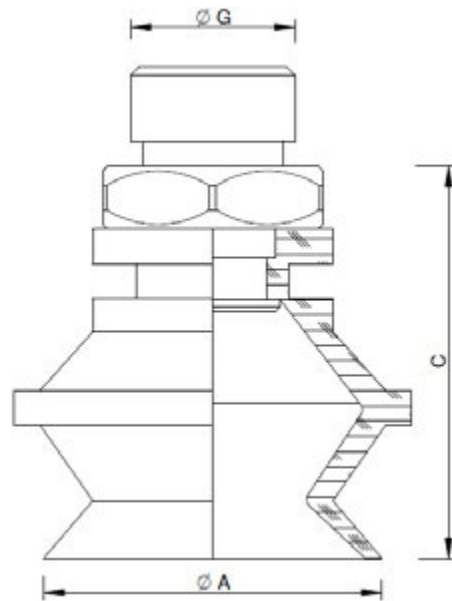
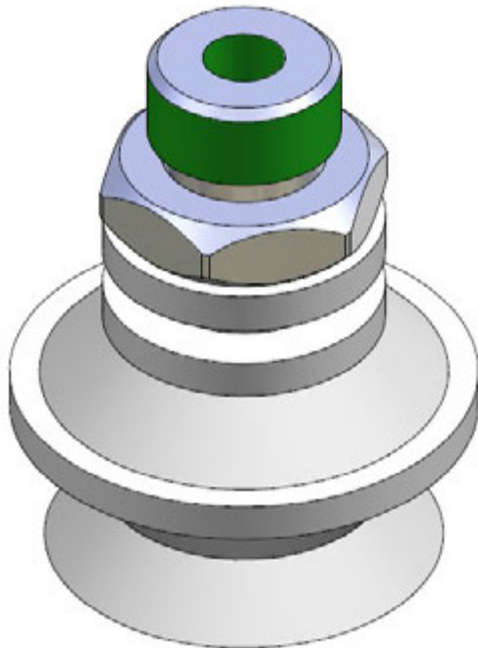
Die Sauggreifer mit 2 Kanten vereinen die Vorteile flacher Sauggreifer mit einem besseren Hub, größerer Biegsamkeit und höherer Genauigkeit. Sie ermöglichen das Greifen konkaver oder konvexer Teile.

**CA.08.01**

**SILICONE**

. Vacuum Cup with 2 bellows (complete)

. Vakuumsauger mit 2 Kanten, komplett



Article no.	VACUUM CUP	NIPPLE	A	C	G	Weight
<b>KIT.08.01.D11.4</b> <b>KIT.08.01.D11.9</b>	CA.08.01.001	CA.08.09.004 CA.08.09.009	Ø 11	20.5 21	M5 G 1/8	2 g 4 g
<b>KIT.08.01.D16.4</b> <b>KIT.08.01.D16.9</b>	CA.08.01.002	CA.08.09.004 CA.08.09.009	Ø 16	23.5 24	M5 G 1/8	3 g 4 g
<b>KIT.08.01.D20.1</b>	CA.08.01.003	CA.08.09.001.AL	Ø 20	23	G 1/8	5.5 g
<b>KIT.08.01.D30.2</b>	CA.08.01.004	CA.08.09.002.AL	Ø 30	32		18 g
<b>KIT.08.01.D40.2</b>	CA.08.01.005		Ø 40	33		19 g
<b>KIT.08.01.D50.3</b>	CA.08.01.006	CA.08.09.003	Ø 50	39	G 1/4	18 g

## CA.08.03

## SILICONE

. Vacuum Cup with 1 bellow only

. Saugnapf mit 1 Kante

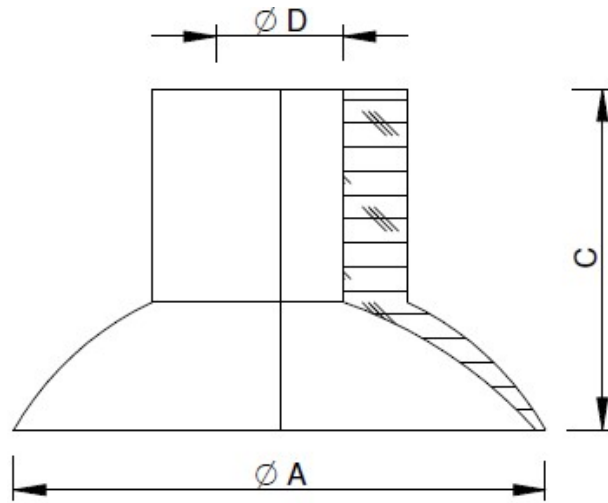


Table / Tabelle

F = Holding force  
Haltekraft

Remarks / Anmerkungen:

Article no.	A	C	D	F(N)	Weight	
CA.08.03.001	Ø 6	8	Ø1.5	0.7	1 g	Temperature resistance / Temperaturbeständigkeit
CA.08.03.002	Ø 8		Ø3	1.0		
CA.08.03.003	Ø 10	11	Ø4	1.7		
CA.08.03.004	Ø 12			2.4		
CA.08.03.005	Ø 15	12	Ø6	3.9	2 g	Short-term in °C (< 30 sec.) Kurzezeitig in °C (< 30 sec.) -50° to +220°
CA.08.03.006	Ø 20	13		7.25		
CA.08.03.007	Ø 25	16	Ø6	12.2	3 g	Longer-term in °C Längerfristig in °C -30° to +180°
CA.08.03.008	Ø 30			16.7		
CA.08.03.009	Ø 35	17	Ø10	23.0		
CA.08.03.010	Ø 45	20		39.0	5 g	Leaving few marks / Abdruckarm ☹ Absence of PWIS (paint-wetting impairment substances) ☹
CA.08.03.011	Ø 60	22		67.1	8 g	

The suction cups with 1 bellow provide accuracy in load gripping and speed up throughput rates. These suction cups are used for flat surfaces only.

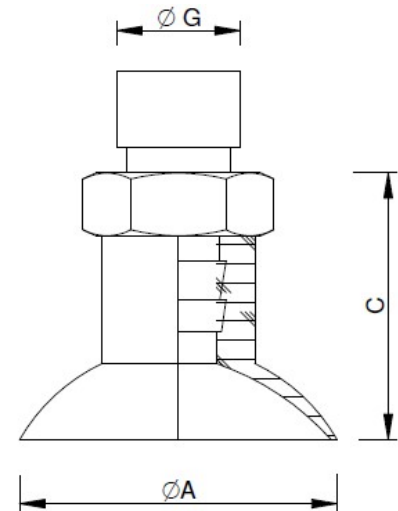
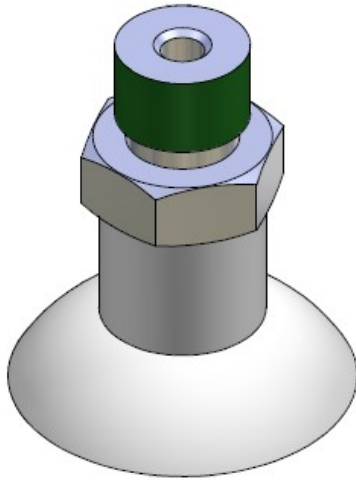
Die flachen Sauggreifer ermöglichen dank ihres Profils ein präzises Handhaben der Last und eine Beschleunigung des Arbeitstakts. Diese Sauggreifer werden ausschließlich für ebene Flächen eingesetzt.

## CA.08.03

## SILICONE

. Vacuum Cup with 1 bellow (complete)

. Vakuumsauger mit 1 Kante, komplett



Article no	VACUUM CUP	NIPPLE	A	C	G	Weight
KIT.08.03.D06.5	CA.08.03.001	CA.08.09.005	Ø 6	11.5	M5	3 g
KIT.08.03.D08.6	CA.08.03.002	CA.08.09.006	Ø 8	10		
KIT.08.03.D10.4	CA.08.03.003	CA.08.09.004	Ø 10	14.51	M5	
KIT.08.03.D10.9		CA.08.09.009		15	G 1/8	
KIT.08.03.D12.4	CA.08.03.004	CA.08.09.004	Ø 12	15.51	M5	
KIT.08.03.D12.9		CA.08.09.009		16	G 1/8	
KIT.08.03.D15.4	CA.08.03.005	CA.08.09.004	Ø 15	16.51	M5	
KIT.08.03.D15.9		CA.08.09.009		17	G 1/8	
KIT.08.03.D20.4	CA.08.03.006	CA.08.09.004	Ø 20	17.51	M5	2 g
KIT.08.03.D20.9		CA.08.09.009		18	G 1/8	4 g
KIT.08.03.D25.10	CA.08.03.007	CA.08.09.010	Ø 25	21	G 1/8	6 g
KIT.08.03.D30.10	CA.08.03.008		Ø 30			7 g
KIT.08.03.D35.11	CA.08.03.009	CA.08.09.011	Ø 35	23		9 g
KIT.08.03.D45.11	CA.08.03.010		Ø 45	26		12 g
KIT.08.03.D60.11	CA.08.03.011		Ø 60	28		

## CA.08.36

## POLYURETHANE

. Vacuum Cup with 3 Bellows only

. Saugnapf mit 3 Kanten

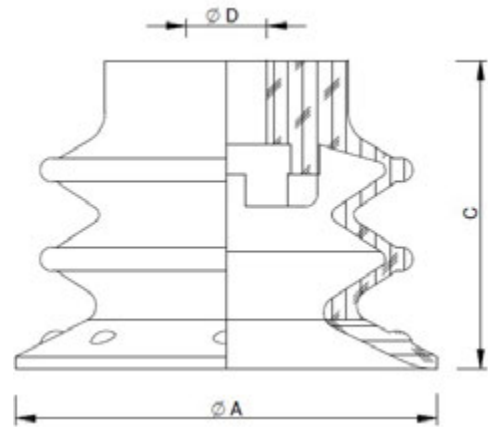
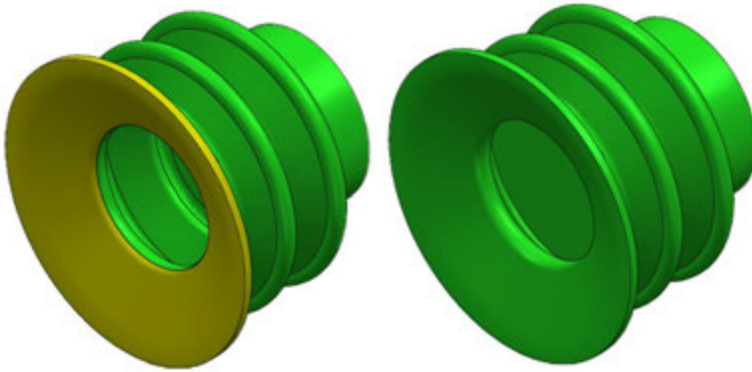


Table / Tabelle

F = Holding force  
Haltekraft

Remarks / Anmerkungen:

Temperature resistance / Temperaturbeständigkeit  
**+10° to +50°**

Leaving few marks / Abdruckarm ☺

Article no.	Sh	A	C	D	Cod. PIAB	F(N)	Weight	
CA.08.36.D10	30/60	∅ 10	16.5	∅ 3.8	0118329	3.7	1 g	
CA.08.36.D10.60	60				0122966			
CA.08.36.D15	30/60	∅ 15	18.5		0118505	4.5		
CA.08.36.D15.60	60				0124237			
CA.08.36.D20	30/60	∅ 20	16.2	∅ 5	0118507	6	3 g	
CA.08.36.D20.60	60				0124249			9.5
CA.08.36.D25	30/60	∅ 25	19		0109006	18		3 g
CA.08.36.D25.60	60				0108240			
CA.08.36.D35	30/60	∅ 35	26.8	∅ 6.5	0106292	28	8 g	
CA.08.36.D35.60	60				0107477	30		
CA.08.36.D52	30/60	∅ 52	39		∅ 12	0104529	75	24 g
CA.08.36.D52.60	60					0107381	80	
CA.08.36.D75	30/60	∅ 75	51.7	/		0107145	141	71 g
CA.08.36.D75.60	60			/		0107150	166	

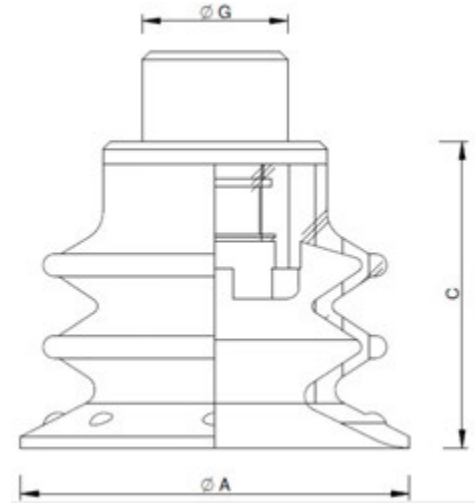
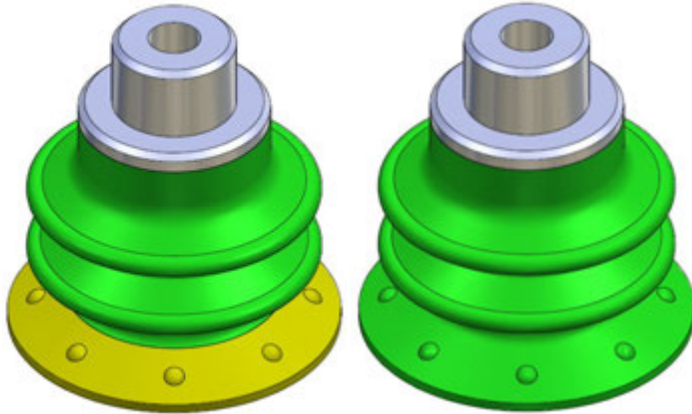


## CA.08.36

## POLYURETHANE

. Vacuum Cup with 3 bellows (complete)

. Vakuumsauger mit 3 Kanten, komplett



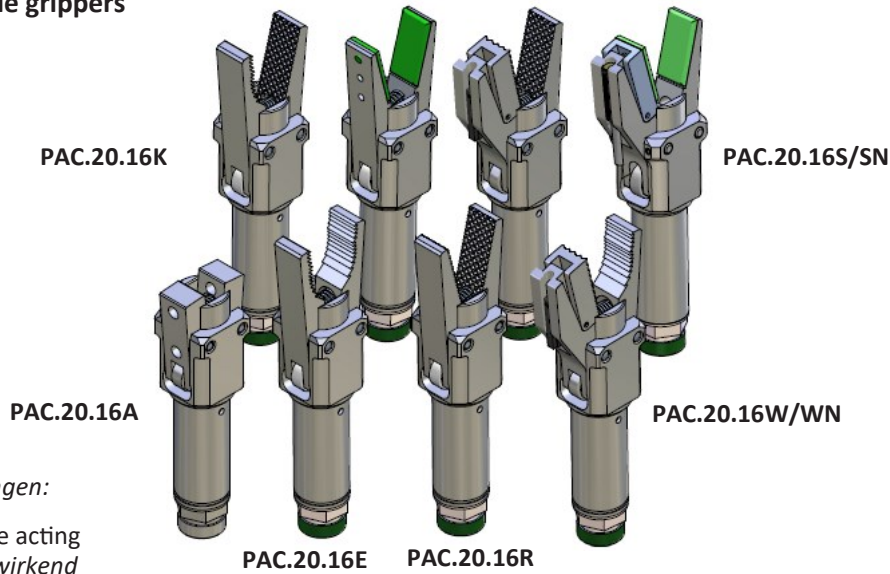
Article no.	VACUUM CUP	NIPPLE	A	C	G	Cod. PIAB	Weight	
KIT.08.36.D10	CA.08.36.D10	CA.08.09.030 3107030	10	21	M5 M	0122869	2 g	
KIT.08.36.D10.60	CA.08.36.D10.60	CA.08.09.030 3107030				0122967		
KIT.08.36.D15	CA.08.36.D15	CA.08.09.030 3107030	15	23		0124344	3 g	
KIT.08.36.D15.60	CA.08.36.D15.60	CA.08.09.030 3107030				0124345		
KIT.08.36.D20	CA.08.36.D20	CA.08.09.031 0101152	20	20.2	G 1/8 M - M5 F	0125105		10 g 13 g
KIT.08.36.D20.60	CA.08.36.D20.60	CA.08.09.031 0101152				0125110		
KIT.08.36.D25	CA.08.36.D25	CA.08.09.032 3250004	25	25		0109402	5 g	
KIT.08.36.D25.60	CA.08.36.D25.60	CA.08.09.032 3250004				0109398	65 g	
KIT.08.36.D35.1 KIT.08.36.D35.2	CA.08.36.D35	CA.08.09.033 0200714 CA.08.09.034 3250091	35	32.8	G 1/8 M G 1/4 M	9912151	10 g 13 g	
KIT.08.36.D35.60	CA.08.36.D35.60	CA.08.09.034 3250091				9912152		13 g
KIT.08.36.D52	CA.08.36.D52	CA.08.09.035 3250092	52	45		G 1/4 M	0106045	35 g
KIT.08.36.D52.60	CA.08.36.D52.60	CA.08.09.035 3250092					0107385	
KIT.08.36.D75	CA.08.36.D75	CA.08.09.036 0201077	75	60.4	0201073		90 g	
KIT.08.36.D75.60	CA.08.36.D75.60	CA.08.09.036 0201077			0101074			

## CA.09 PAC

. Selfcentering sprue grippers

PAC.20.16P/PN PAC.20.16SP/SPN

. Selbstzentrierende Anguss-Greifzangen



Remarks / Anmerkungen:

Work principle: single acting  
Wirkprinzip: Einfachwirkend

Extension thread for Extension Tube VLR  
Verlängerungsgewinde für Verlängerungsrohr VLR

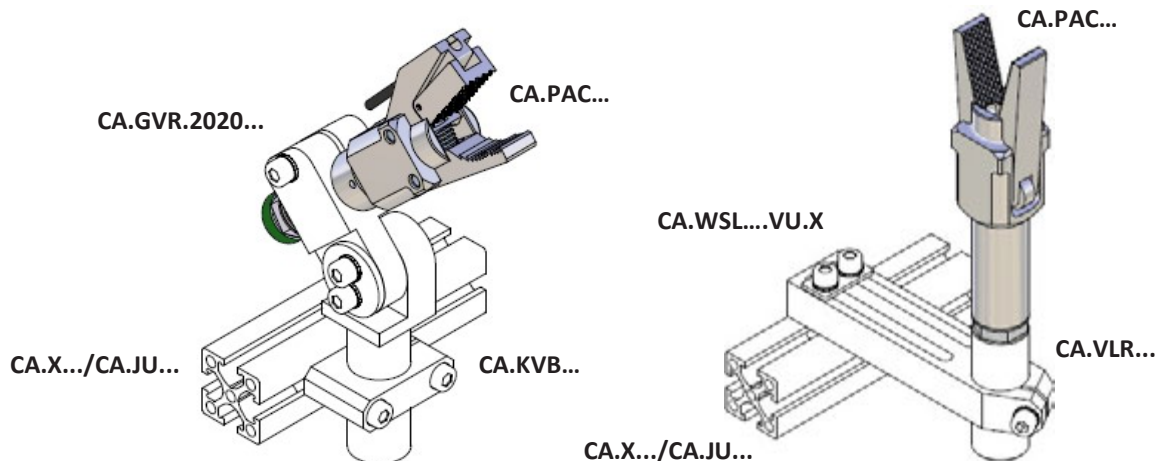
Working pressure: 6 bar clean and dry air  
Betriebsdruck: 6 bar gefilterte und getrocknete Luft verwenden

Jaws in zinc-plated Steel  
Backen aus Stahl, galvanisch verzinkt

Article no.	Sensor	Weight
CA.PAC20.169		157 g
CA.PAC20.16A		99 g
CA.PAC20.16E		161 g
CA.PAC20.16K		161 g
CA.PAC20.16P		107 g
CA.PAC20.16R		165 g
CA.PAC20.16S	KT58PM8	159 g
CA.PAC20.16S9		154 g
CA.PAC20.16SN	KT58NM8	161 g
CA.PAC20.16S9N		154 g
CA.PAC20.16SP	KT58PM8	117 g
CA.PAC20.16SPN	KT58NM8	
CA.PAC20.16W	KT58PM8	154 g
CA.PAC20.16WN	KT58NM8	157 g

Stroke Hub	2 x 15°
Closing force (at 6 bar) Schließkraft (bei 6bar)	65 N
Maximum working frequency Max. Frequenz im Dauerbetrieb	2 Hz
Cycle air consumption Luftverbrauch pro Zyklus	3.6 cm <sup>3</sup>
Closing time without load Schließzeit ohne Last	0.01 s

Application examples / Anwendungsbeispiele

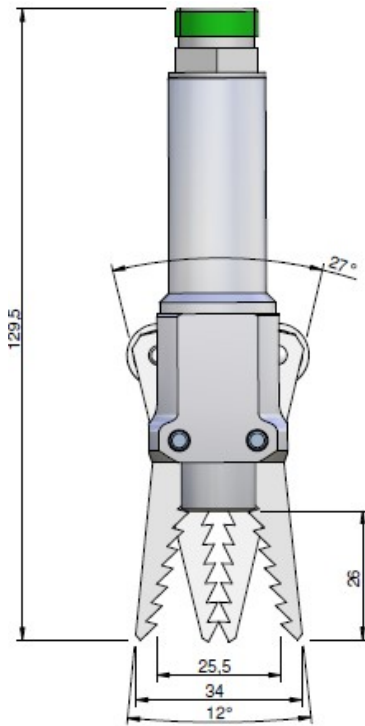


## CA.09 PAC

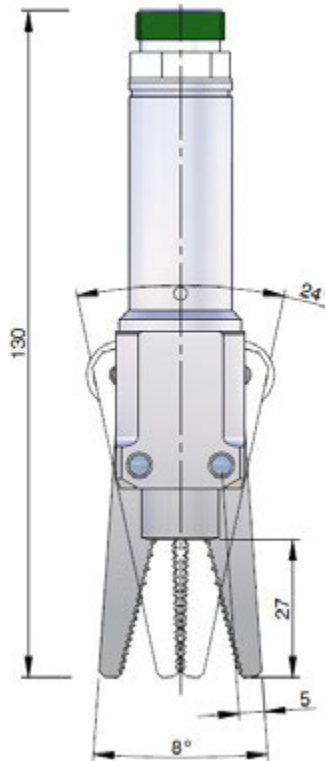
. Dimensions

. Maße

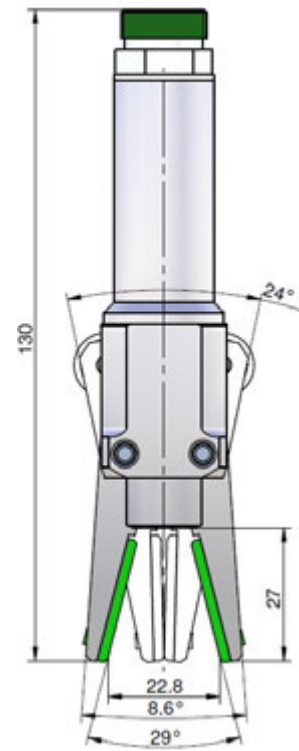
CA.PAC20.169



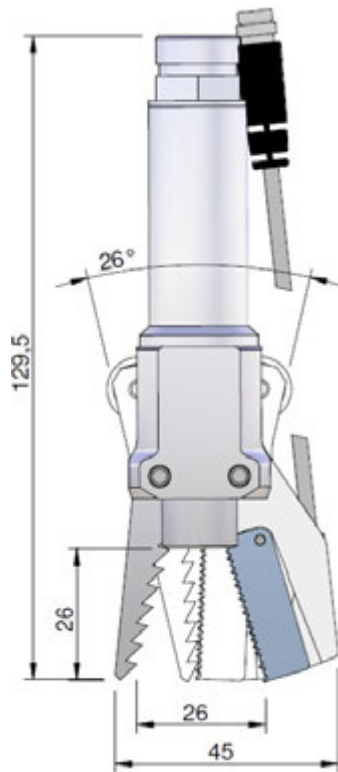
CA.PAC20.16R



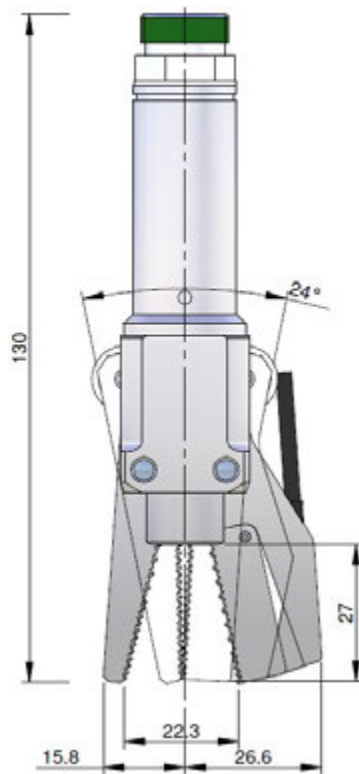
CA.PAC20.16P



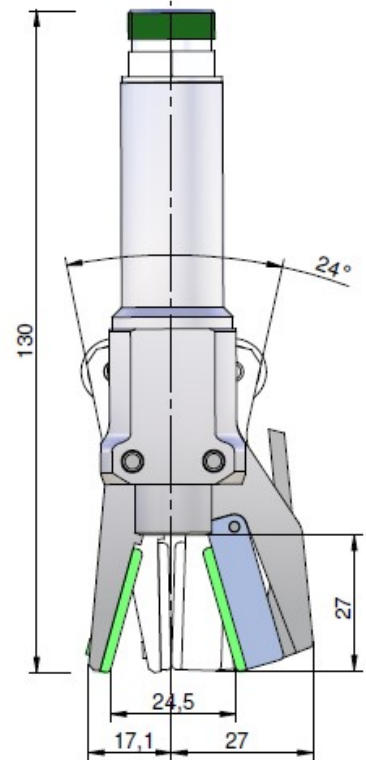
CA.PAC20.16S9/S9N



CA.PAC20.16S/SN



CA.PAC20.16SP/SPN

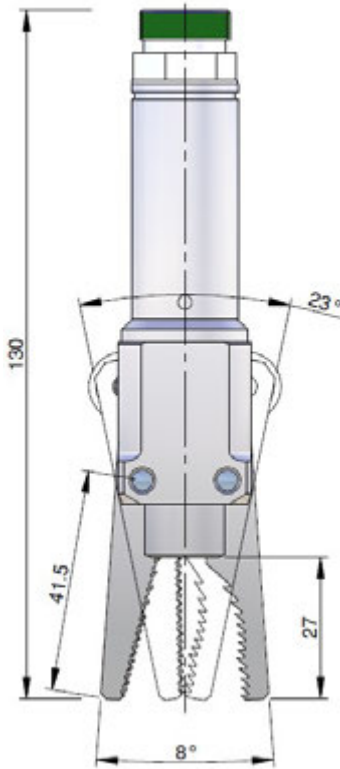


**CA.09 PAC**

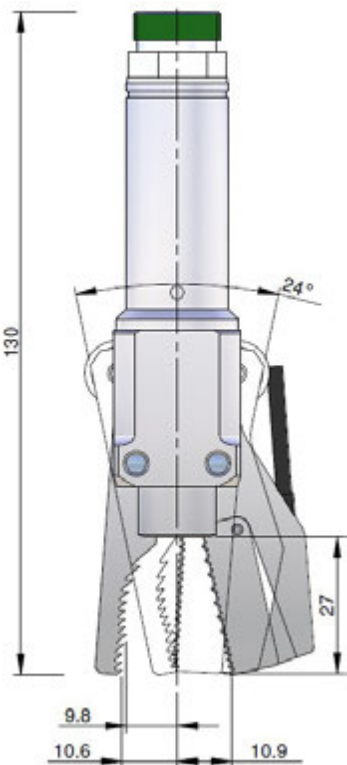
. Dimensions

. Maße

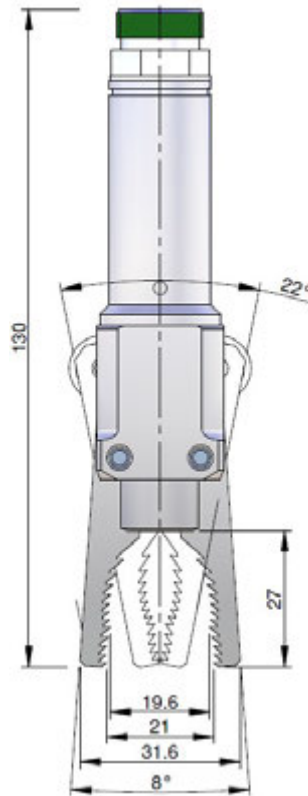
**CA.PAC20.16K**



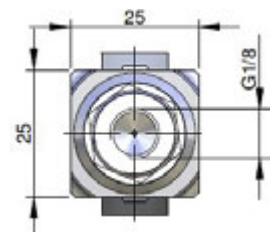
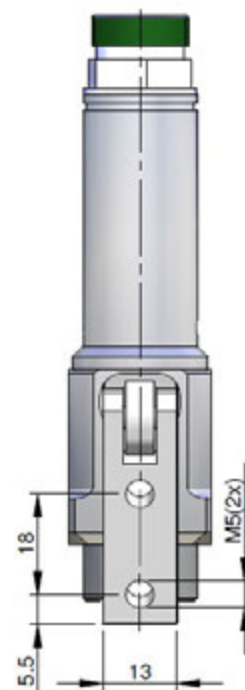
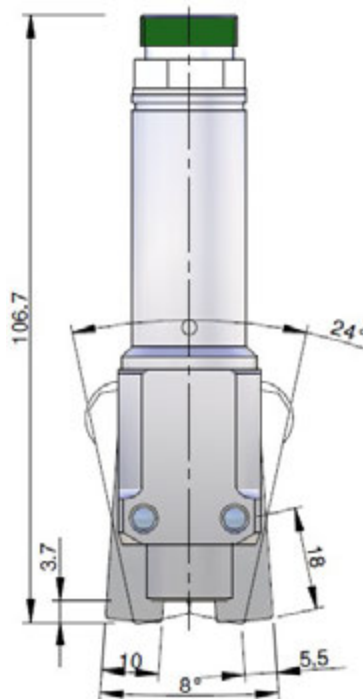
**CA.PAC20.16W/WN**



**CA.PAC20.16E**

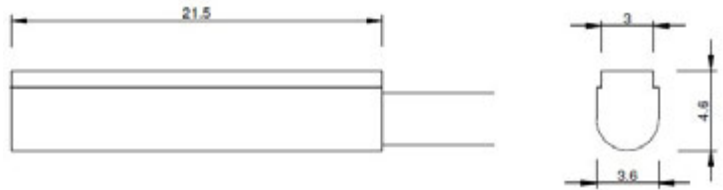
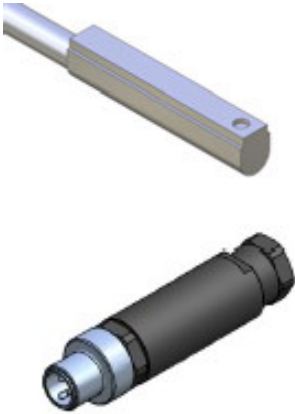


**CA.PAC20.16A**

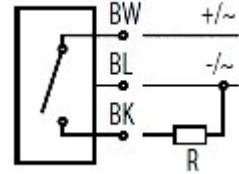


## CA.09 PAC

. Sensor



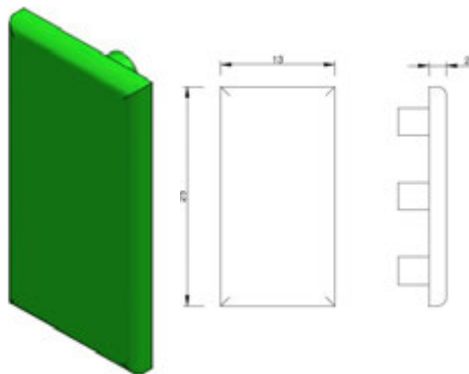
. Sensor



Article no.	Sensor	Weight
KT58PM8	3 wires REED PNP normally Open M8 plug connector	4g
KT58NM8	3 wires REED NPN normally Open M8 plug connector	

Power supply	3÷30 Vac/dc
Switching current	0.2 A
Power rating (ohmic load)	6 W
Standard cable length	0.3 m

. Insert



. Einlage

Article no.		Colour	Weight
PAC.20.16P.03.V	VITON	Green	4g

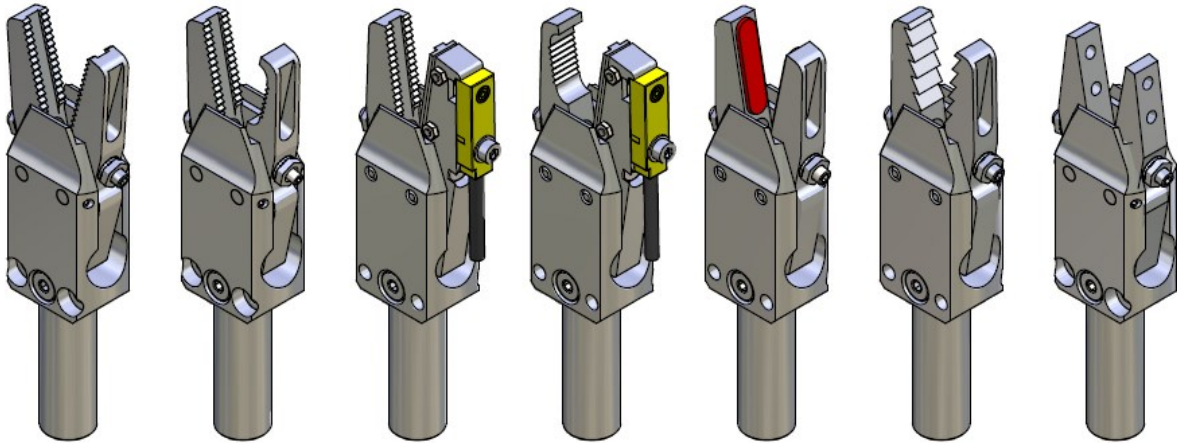
	VITON
UV ageing, weather -resistance <i>UV-halterung, Witterungsbeständigkeit</i>	☺
Low temperature limit <i>Niedrige Temperaturgrenze</i>	-10°C
High temperature limit (continuous) <i>Hohe Temperaturgrenze (kontinuierlich)</i>	180°C
High temperature limit (< 30 sec.) <i>Hohe Temperaturgrenze (&lt; 30 sec.)</i>	210°C
Leaving few marks <i>Einige Spuren bleiben</i>	☺

**CA.09 GTS**

. Sprue grippers

**14**

. Greifzangen



Remarks / Anmerkungen:

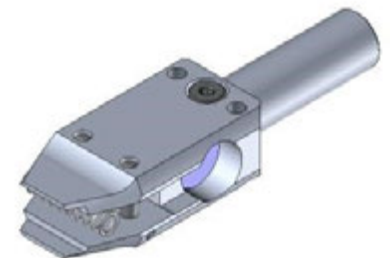
Active principle: single active  
Wirkprinzip: Einfachwirkend

Working pressure: 6 bar clean and dry air  
Betriebsdruck: 6 bar gefilterte und getrocknete luft verwenden

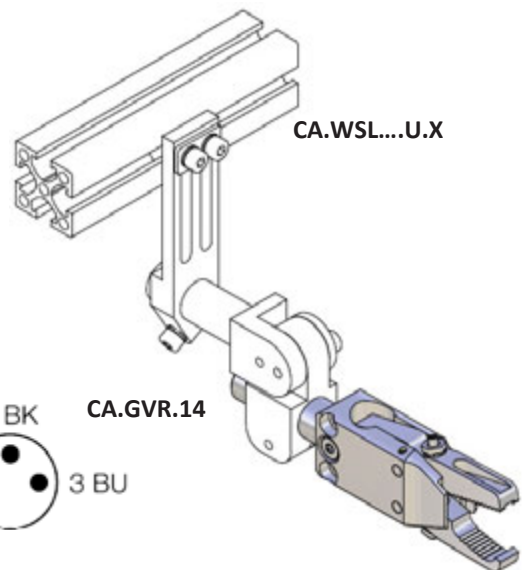
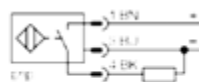
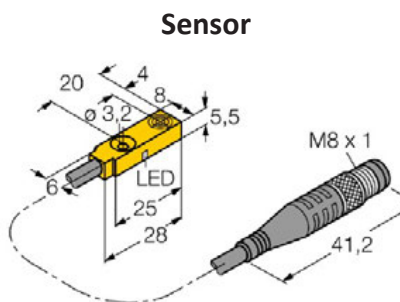
Jaws in zinc-plated Steel  
Backen aus Stahl, galvanisch verzinkt

Article no.	Sensor	Closing force (at 6 bar)	Weight
CA.GTS.1003.1212		45 N	115 g
CA.GTS.1003.1214			110 g
CA.GTS.1003.1717			115 g
CA.GTS.1003.1919			112 g
CA.GTS.1003.2929			110 g
CA.GTS.1003.1215	GRZ.20.SC.PNP		120 g
CA.GTS.1003.125N	GRZ.20.SC.NPN		
CA.GTS.1003.1415	GRZ.20.SC.PNP		116 g
CA.GTS.1003.145N	GRZ.20.SC.NPN		
CA.GTS.1003.1915	GRZ.20.SC.PNP		96 g
CA.GTS.1003.195N	GRZ.20.SC.NPN		

Article no.	Weight
GTS.03.G18	52 g
GTS.04.G18	95 g



Application example / Anwendungsbeispiel



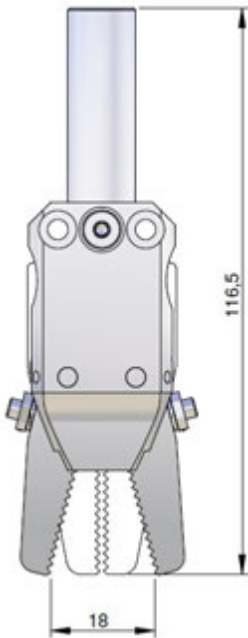
## CA.09 GTS

# 14

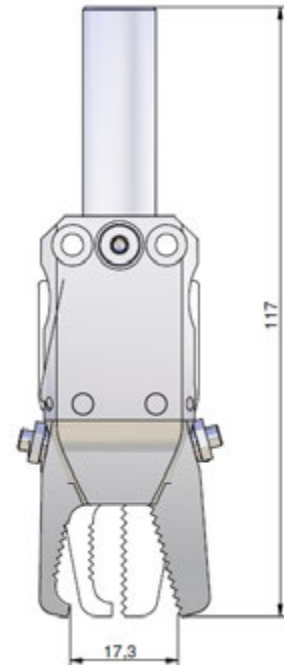
. Dimensions

. Maße

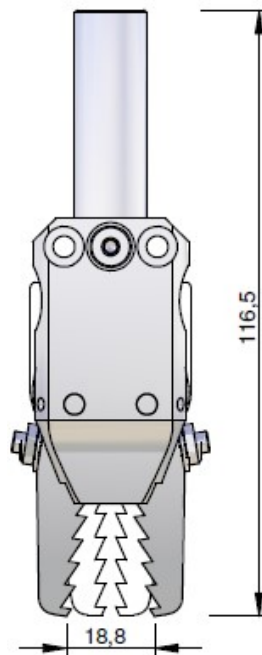
CA.GTS.1003.1212



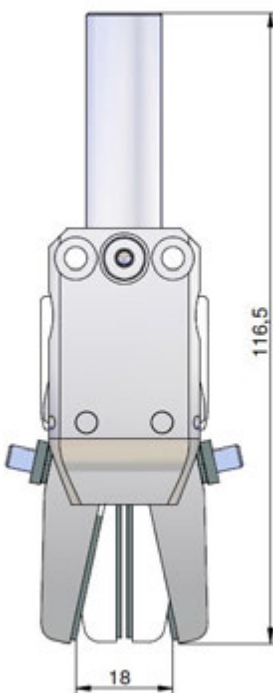
CA.GTS.1003.1214



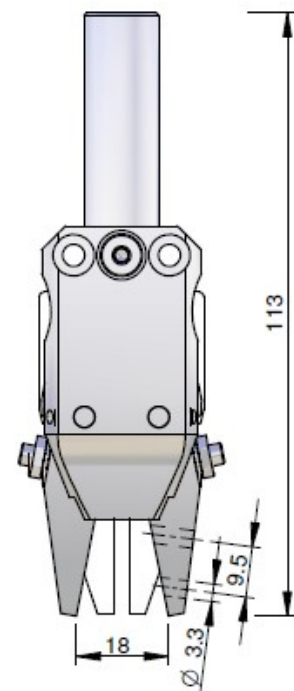
CA.GTS.1003.1919



CA.GTS.1003.1717



CA.GTS.1003.2929



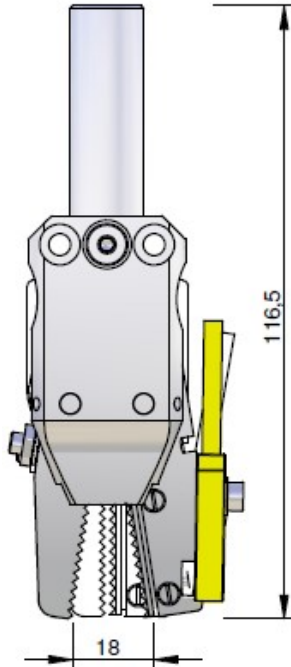
**CA.09 GTS**

. Dimensions

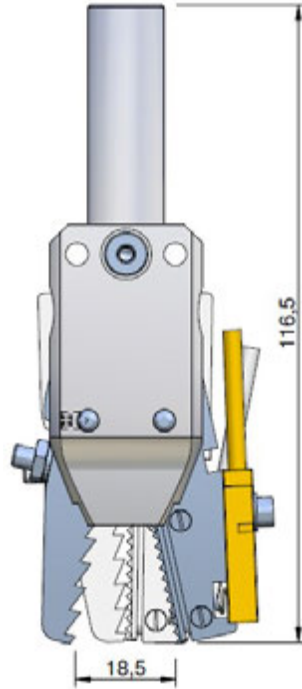
**14**

. Maße

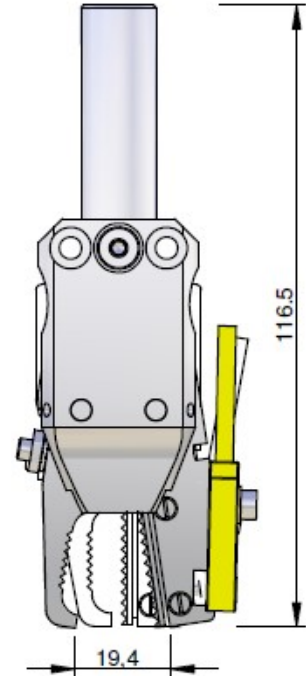
CA.GTS.1003.1215/125N



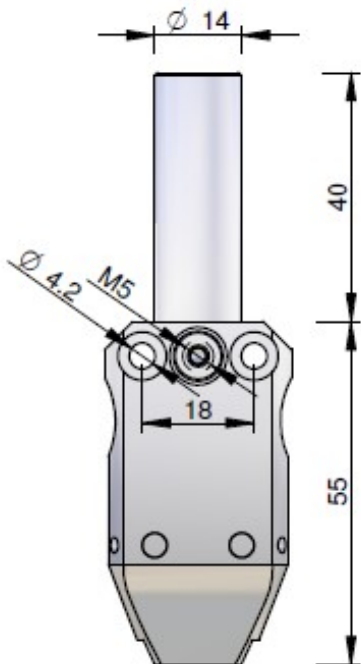
CA.GTS.1003.1915/195N



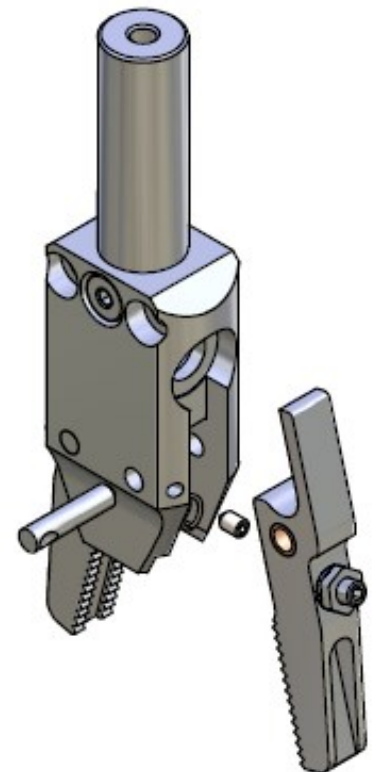
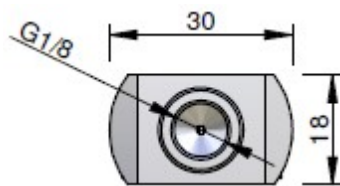
CA.GTS.1003.1415/145N



GTS.03.G18



Application example / Anwendungsbeispiel





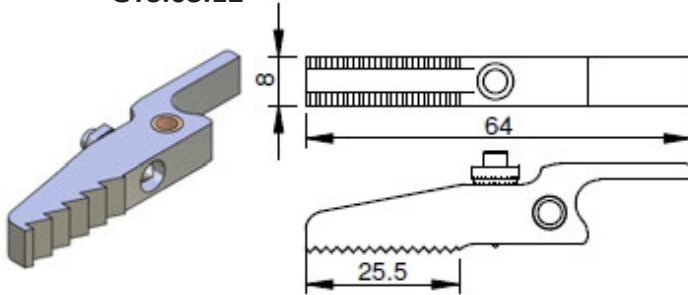
## CA.09 GTS

# 14

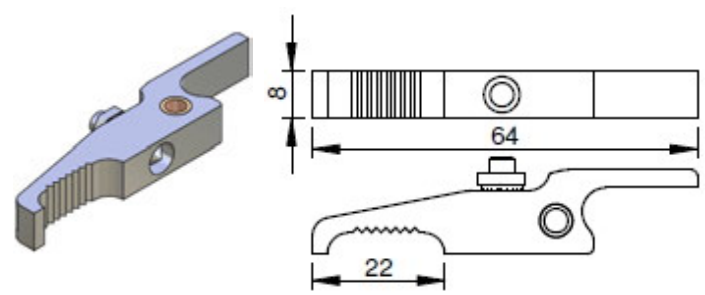
. Jaws for Gripper GTS

. Grundbacken für Greifer GTS

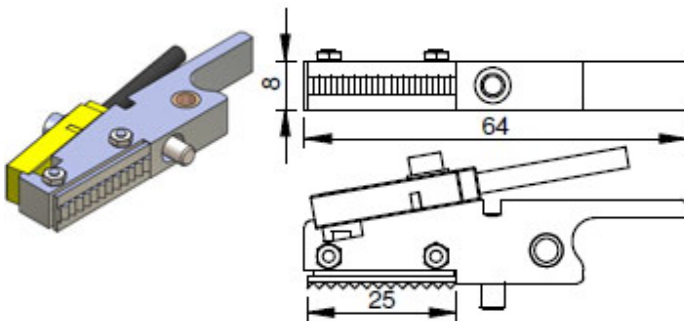
GTS.03.12



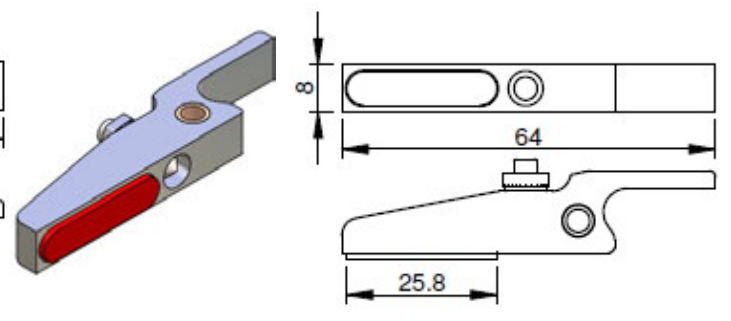
GTS.03.14



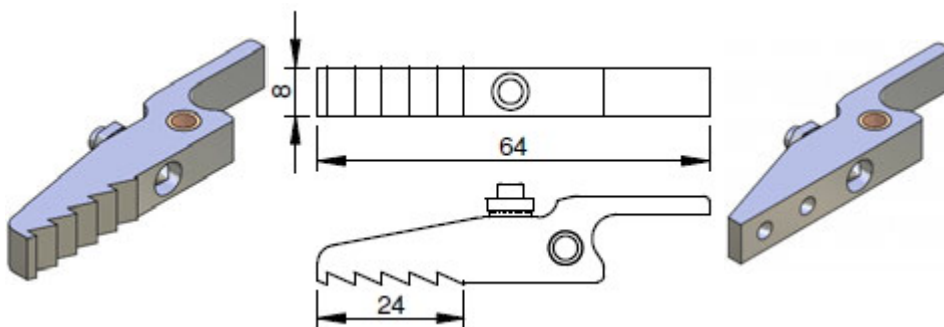
GTS.03.15/15.N



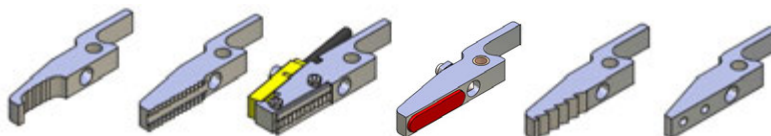
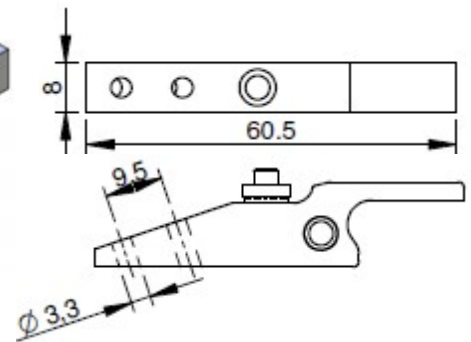
GTS.03.17



GTS.03.19



GTS.03.29



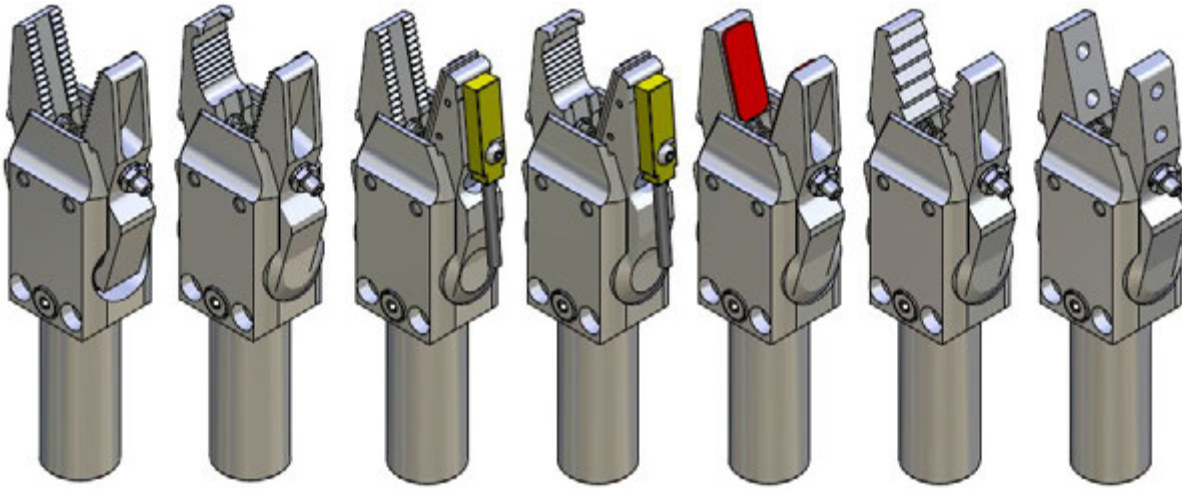
Article no.	Weight
GTS.03.12	27 g
GTS.03.14	22 g
GTS.03.15	35 g
GTS.03.15.N	
GTS.03.17	27 g
GTS.03.19	26 g
GTS.03.29	25 g

**CA.09 GTS**

**20**

. Sprue grippers

. Greifzange



Working pressure: 6 bar clean and dry air  
Betriebsdruck: 6 bar gefilterte und getrocknete luft verwenden

Remarks / Anmerkungen:

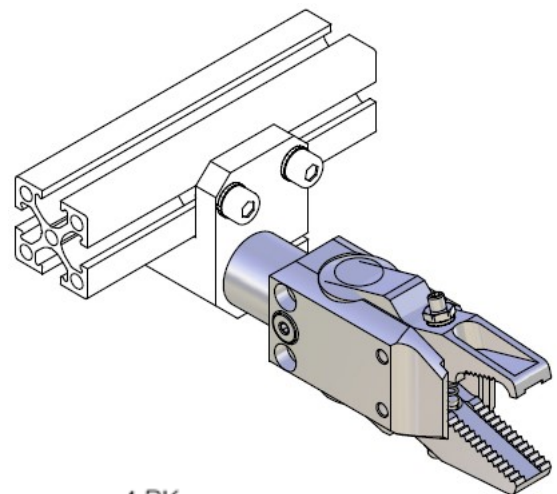
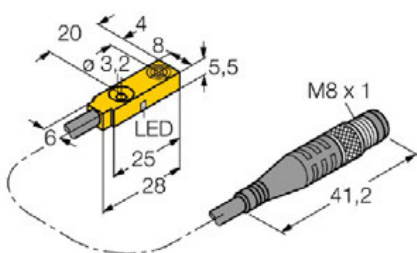
Jaws in zinc-plated Steel  
Backen aus Stahl, galvanisch verzinkt

Work principle: single acting  
Wirkprinzip: Einfachwirkend

Article no.	Sensor	Closing force (at 6 bar)	Weight
CA.GTS.1004.1212		90 N	151 g
CA.GTS.1004.1214			144 g
CA.GTS.1004.1717			151 g
CA.GTS.1004.1919			146 g
CA.GTS.1004.2929			144 g
CA.GTS.1004.1215	GRZ.20.SC.PNP		160 g
CA.GTS.1004.125N	GRZ.20.SC.NPN		120 g
CA.GTS.1004.1415	GRZ.20.SC.PNP		
CA.GTS.1004.145N	GRZ.20.SC.NPN		

Application example / Anwendungsbeispiel

Sensor



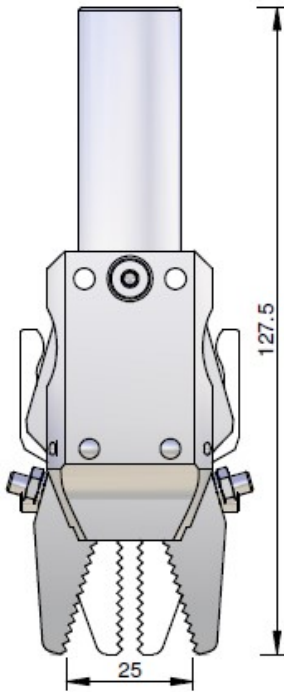
## CA.09 GTS

# 20

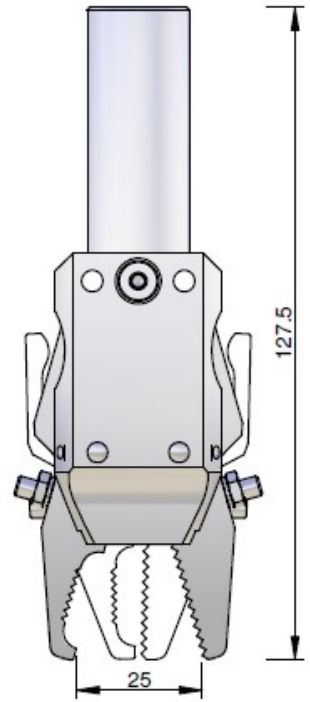
. Dimensions

. Maße

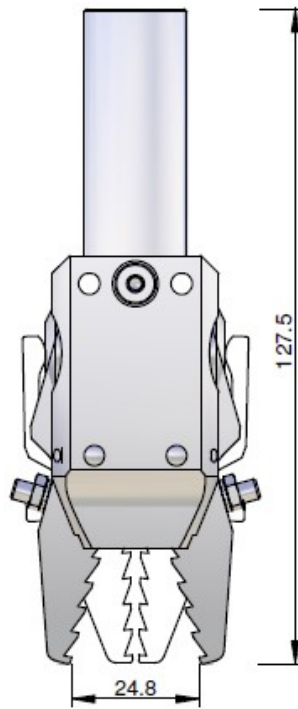
CA.GTS.1004.1212



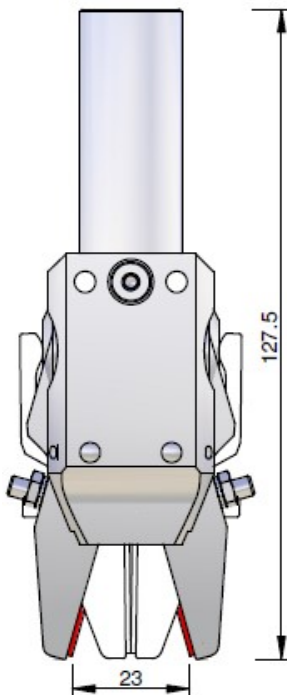
CA.GTS.1004.1214



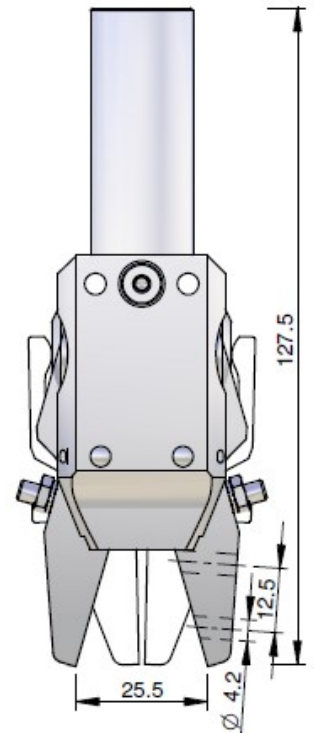
CA.GTS.1004.1919



CA.GTS.1004.1717



CA.GTS.1004.2929



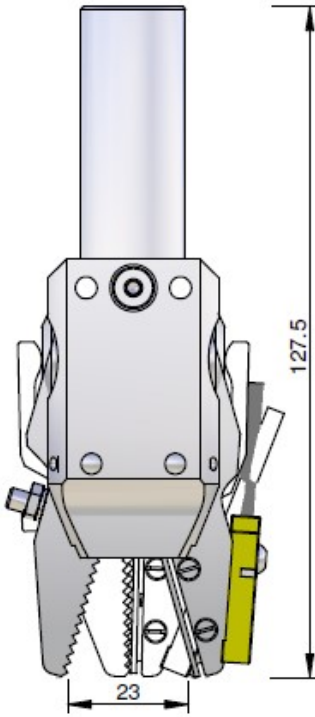
**CA.09 GTS**

**20**

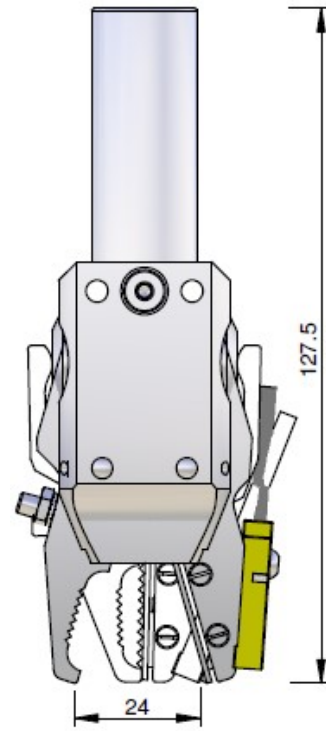
. Dimensions

. Maße

**CA.GTS.1004.1215/125N**

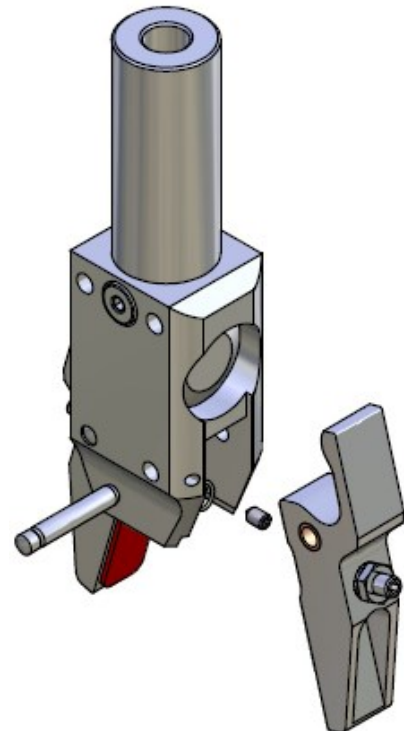
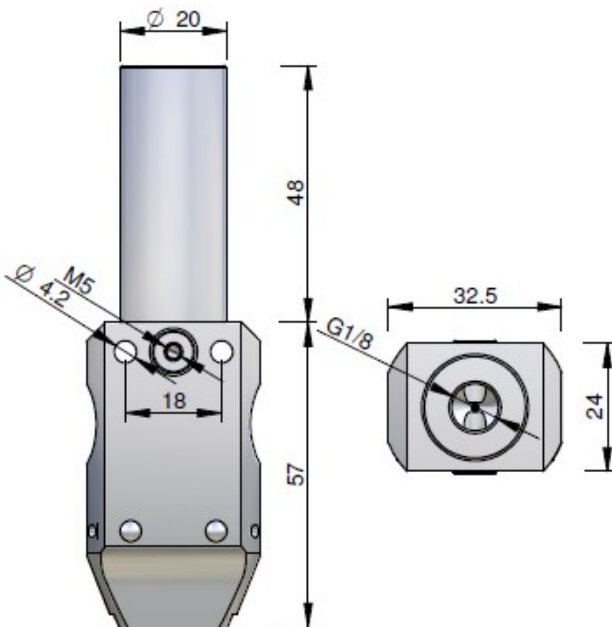


**CA.GTS.1004.1415/145N**



Application examples / Anwendungsbeispiele

**GTS.04.G18**



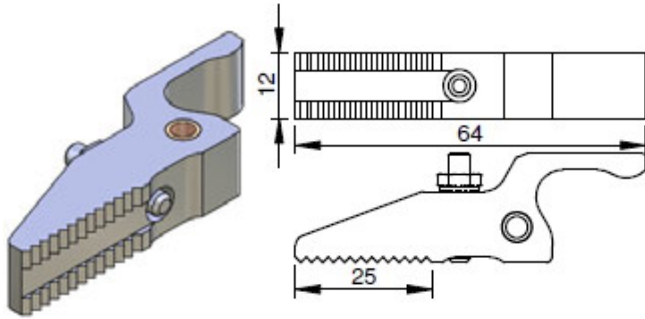
# CA.09 GTS

# 20

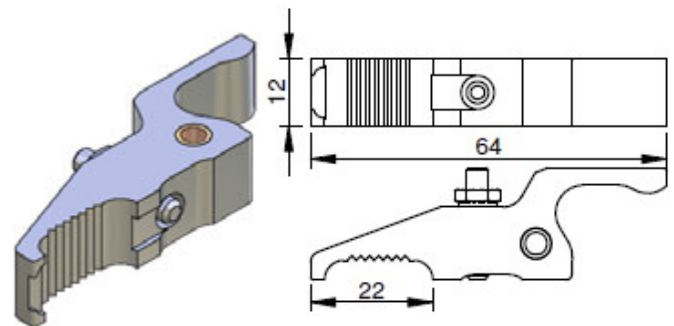
. Jaws for Gripper GTS

. Grundbacken für Greifer GTS

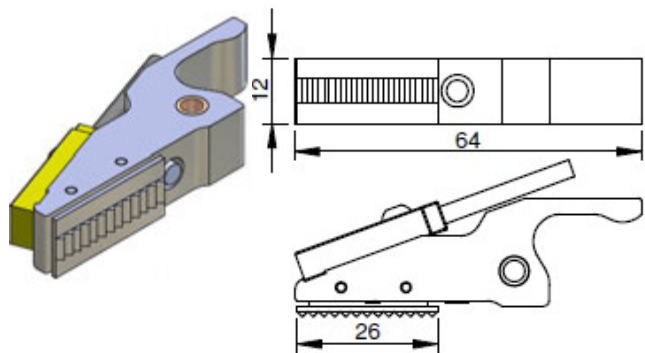
GTS.04.12



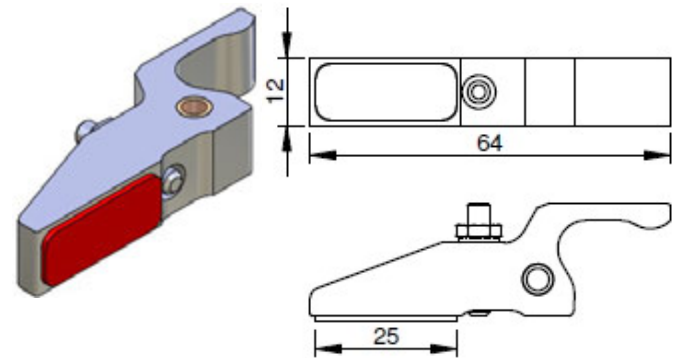
GTS.04.14



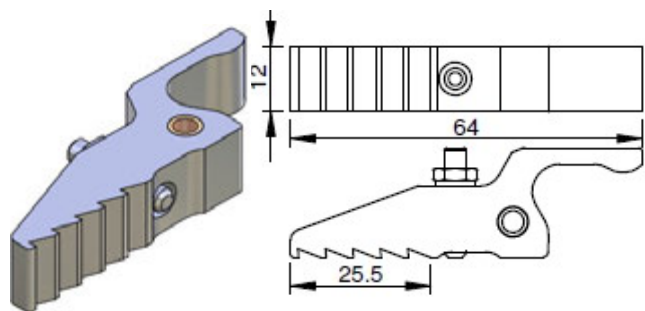
GTS.04.15/15.N



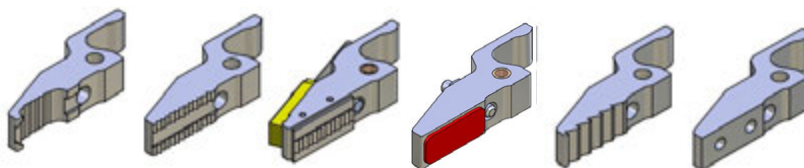
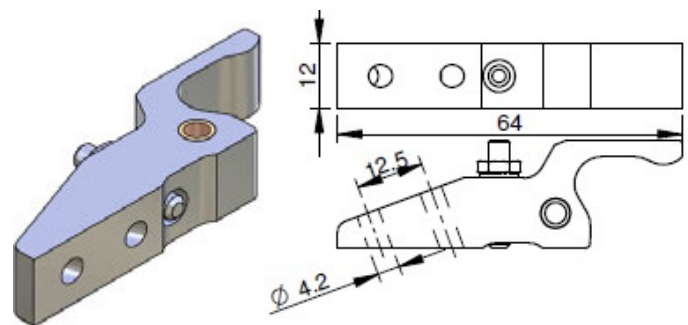
GTS.04.17



GTS.04.19



GTS.04.29

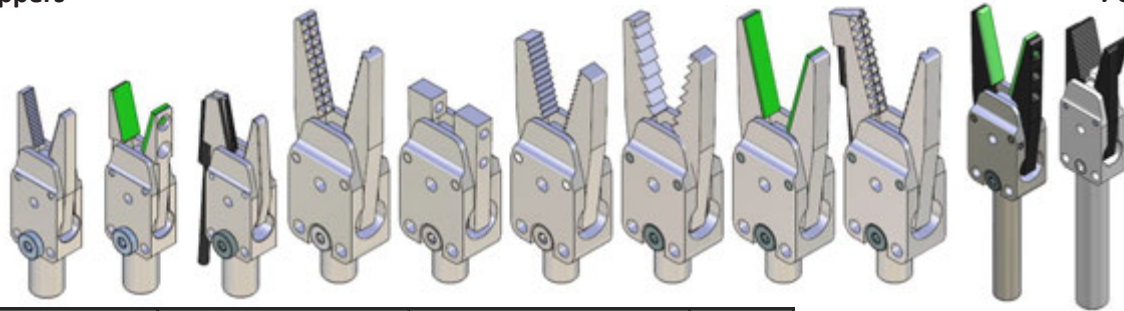


Article no.	Weight
GTS.04.12	31 g
GTS.04.14	26 g
GTS.04.15	39 g
GTS.04.15.N	
GTS.04.17	31 g
GTS.04.19	30 g
GTS.04.29	29 g

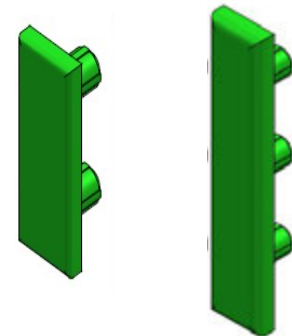
## CA.09 GZA.10

. Sprue grippers

. Greifzange



Article no.	Sensor	Closing force (at 6 bar)	Weight	
CA.GZA.10.08		19 N	16 g	
CA.GZA.10.08.18				
CA.GZA.10.08.19				
New CA.GZA.10.08.AH				
New CA.GZA.10.08.AHG				
New CA.GZA.10.08.AHL				
New CA.GZA.10.08.AHT				
New CA.GZA.10.08.ATG				
CA.GZA.10.08.G				
CA.GZA.10.08.LL				
CA.GZA.10.08.M50				22 g
CA.GZA.10.12				36 g
CA.GZA.10.12.14				34 g
CA.GZA.10.12.18		50 g		
CA.GZA.10.12.19		37 g		
CA.GZA.10.12.AH				
New CA.GZA.10.12.AHV				
New CA.GZA.10.12.AHG				
New CA.GZA.10.12.AHL				
New CA.GZA.10.12.AHT				
New CA.GZA.10.12.ATG				
CA.GZA.10.12.C			40 g	
CA.GZA.10.12.G			34 g	
CA.GZA.10.12.G50				
CA.GZA.10.12.L		36 g		
CA.GZA.10.12.LL		34 g		
CA.GZA.10.12.M		35 g		
CA.GZA.10.12.M50		43 g		
CA.GZA.10.12.MC		44 g		
New CA.GZA.10.12.MF				
CA.GZA.10.12.MS	MMD.IL5AP3AVF80			
CA.GZA.10.12.MSN	MMD.IL5AN3AVF80			
CA.GZA.10.12.S	MMD.IL5AP3AVF80			
CA.GZA.10.12.SN	MMD.IL5AN3AVF80			
CA.GZA.10.12.S4	MMD.IL5AP3AVF80			
CA.GZA.10.12.S4N	MMD.IL5AN3AVF80			
CA.GZA.10.12.S9	MMD.IL5AP3AVF80			
CA.GZA.10.12.S9N	MMD.IL5AN3AVF80			
CA.GZA.10.12.SG	MMD.IL5AP3AVF80			
CA.GZA.10.12.SGN	MMD.IL5AN3AVF80			
		50 g		
		59 g		
		65 g		
		62 g		



Material / Werkstoff:

Jaws in hardcoated Aluminium  
Backen aus hartcoatiertem Aluminium

Body in anodized Aluminium  
Körper aus eloxiertem Aluminium

Remarks :

Work principle: single acting  
2 different fastening possibilities:  
Clamp- Ø 10 mm on shaft  
Through-Thread in the gripper body  
Working pressure: 6 bar clean and dry air

Anmerkungen:

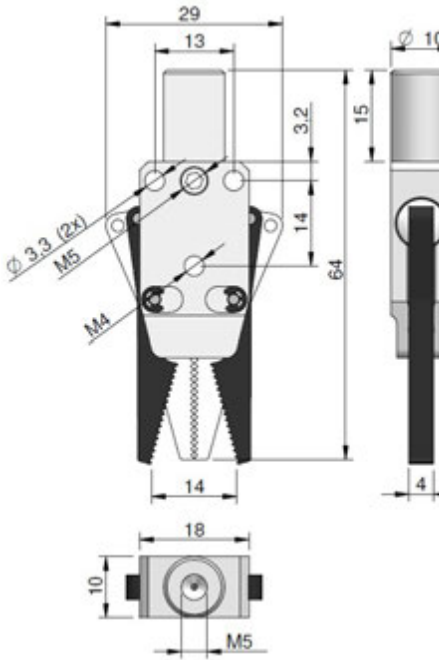
Wirkprinzip: Einfachwirkend  
2 verschiedene Befestigungsmöglichkeiten:  
Klemm-Ø 10 mm am Schaft  
Durchgangsgewinde im Zangenkörper  
Betriebsdruck: 6 bar gefilterte  
und getrocknete Luft verwenden

# CA.09 GZA.10

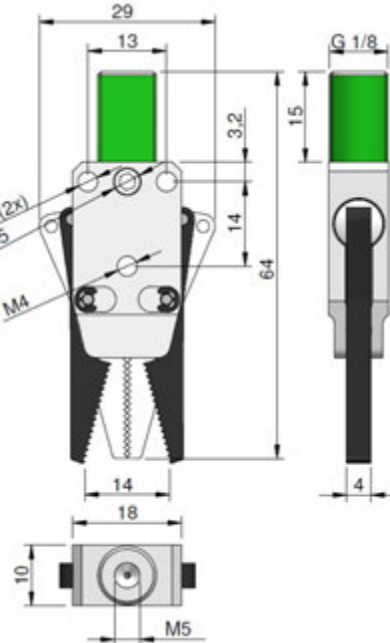
. Dimensions

. Maße

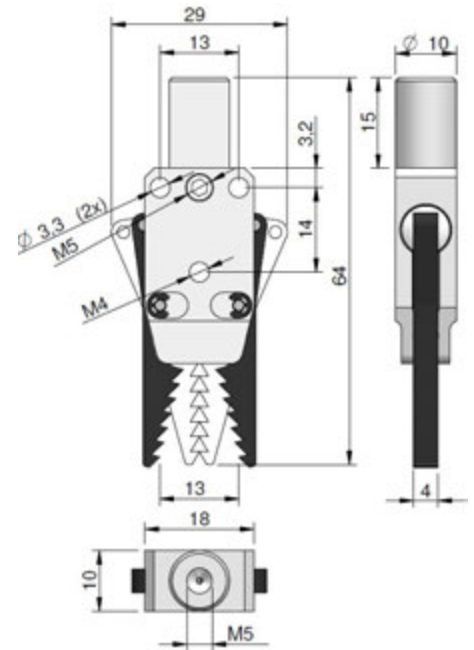
CA.GZA.10.08



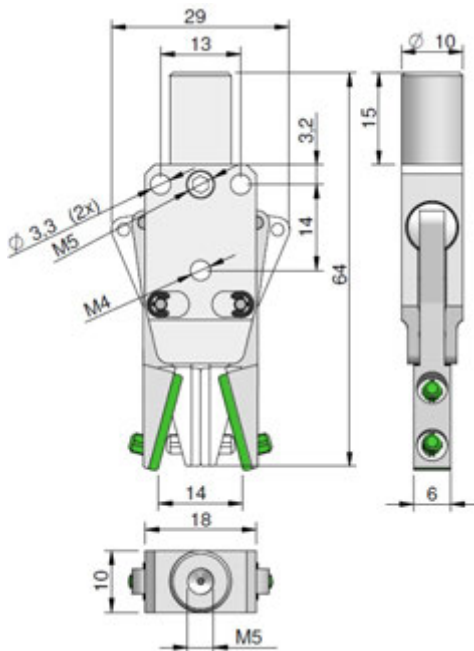
CA.GZA.10.08.18



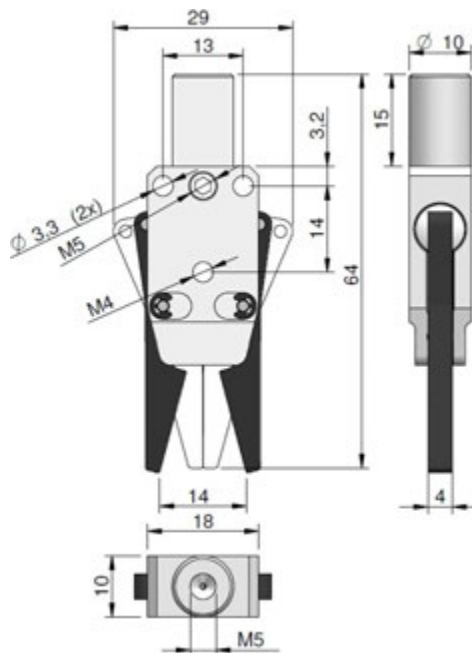
CA.GZA.10.08.19



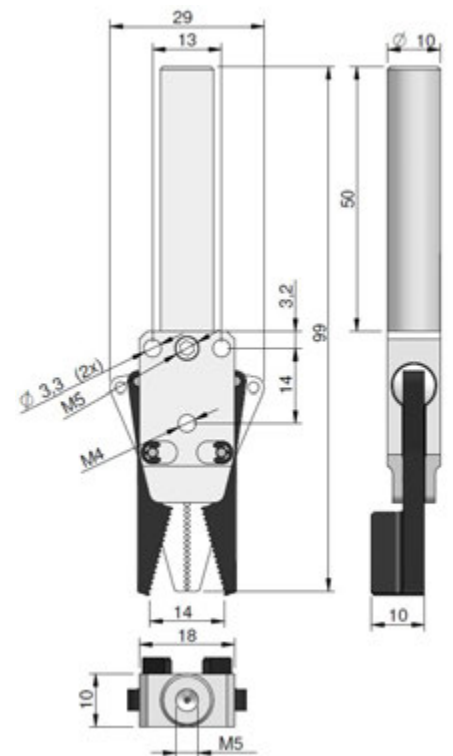
CA.GZA.10.08.G



CA.GZA.10.08.LL



CA.GZA.10.08.M50

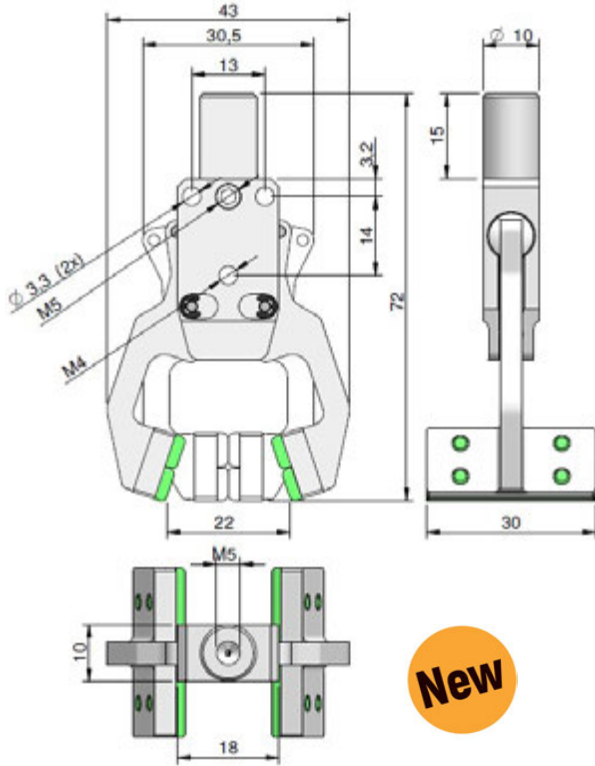


**CA.09 GZA.10**

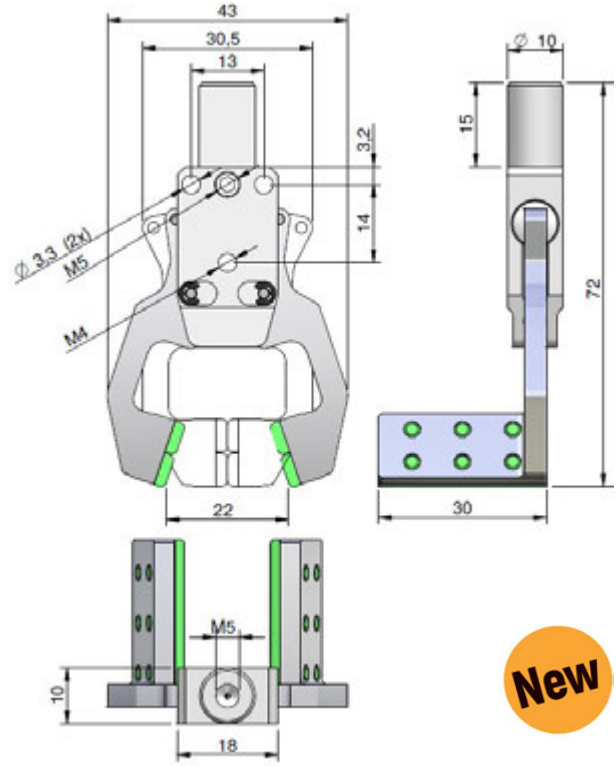
. Dimensions

. Maße

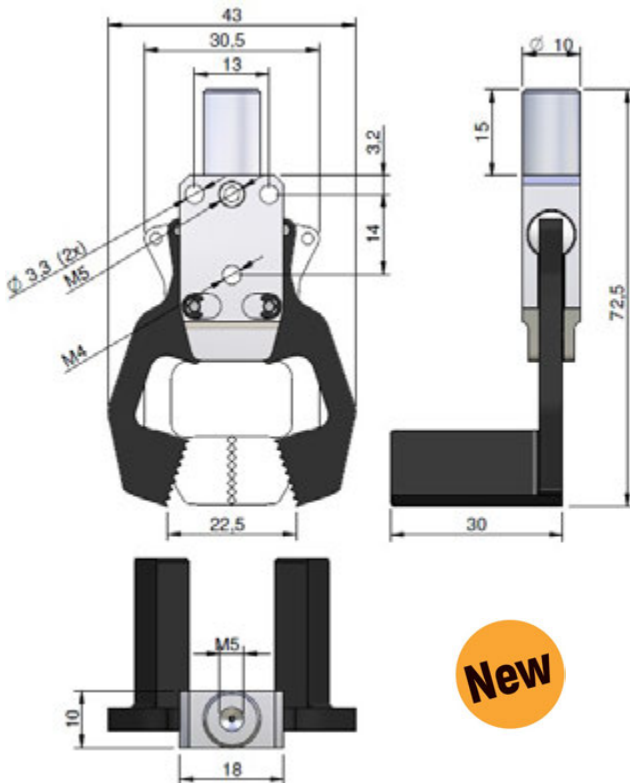
**CA.GZA.10.08.ATG**



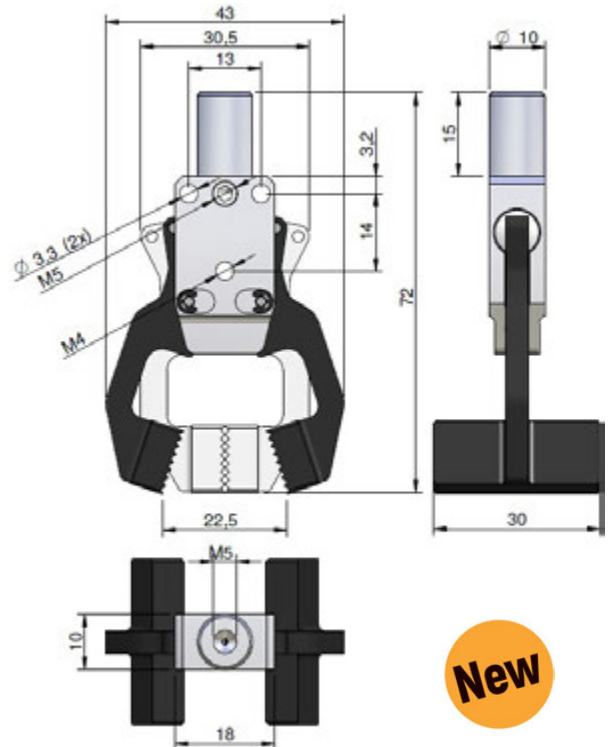
**CA.GZA.10.08.AHG**



**CA.GZA.10.08.AHL**



**CA.GZA.10.08.AHT**

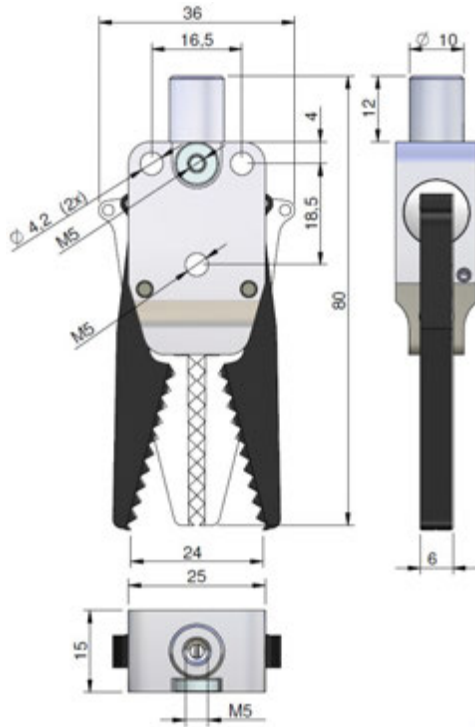




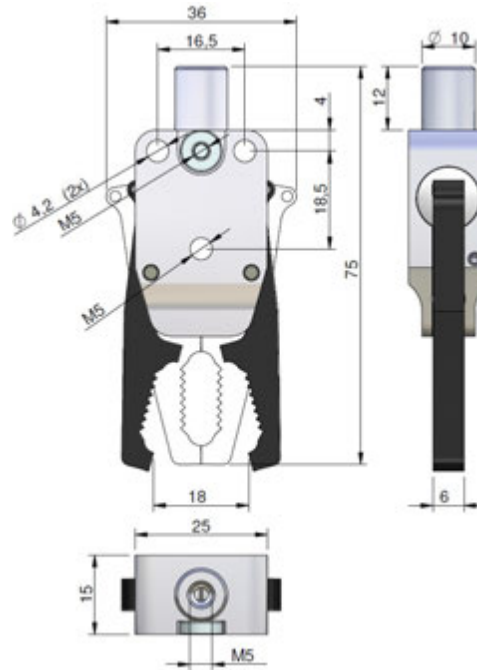
. Dimensions

. Maße

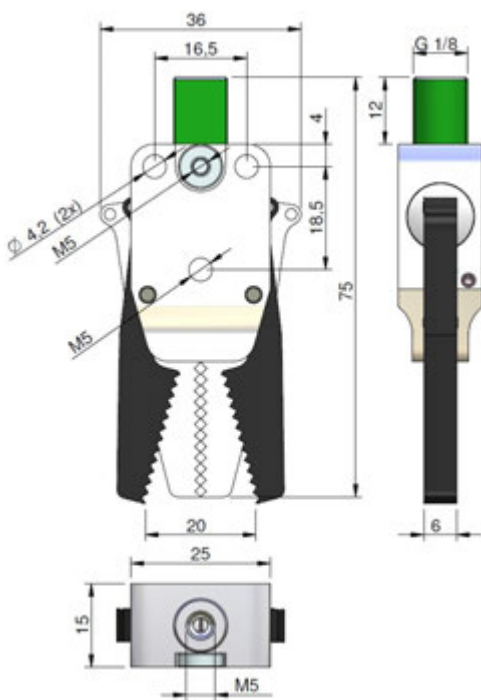
CA.GZA.10.12



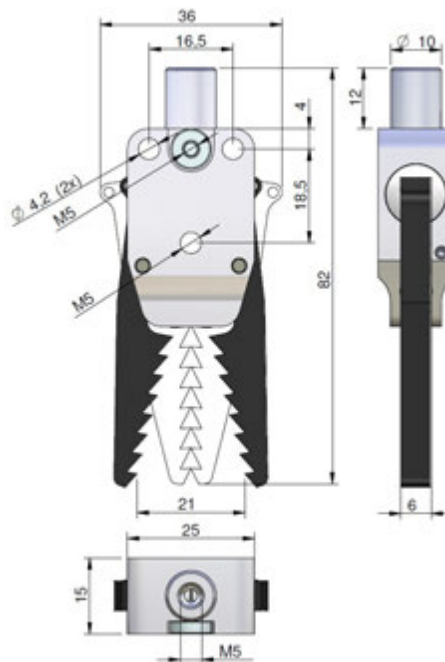
CA.GZA.10.12.14



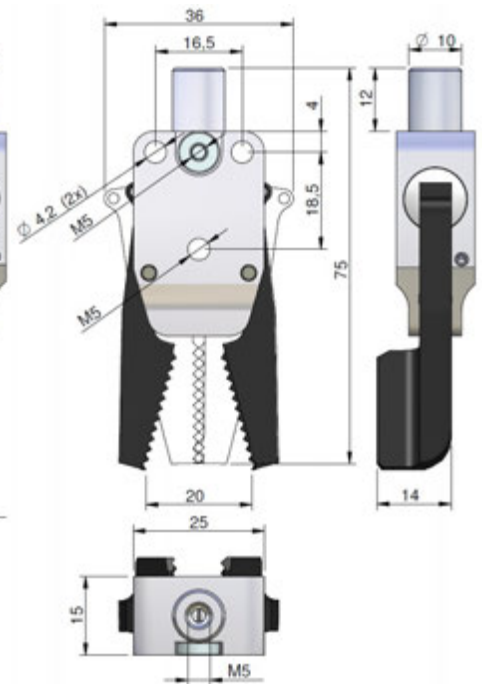
CA.GZA.10.12.18



CA.GZA.10.12.19



CA.GZA.10.12.AH



**CA.09 GZA.10**

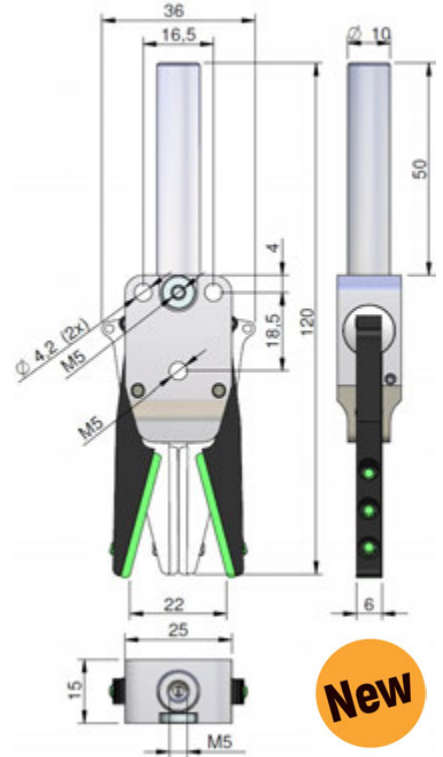
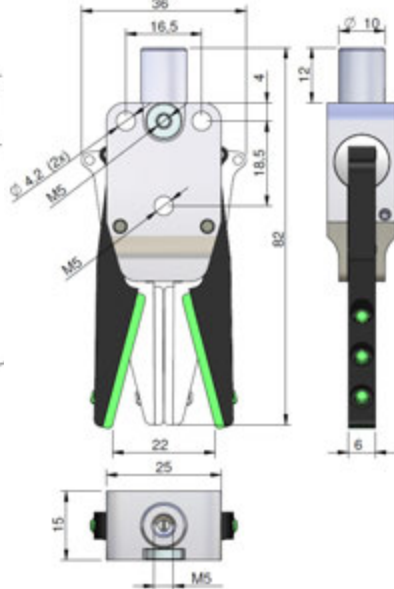
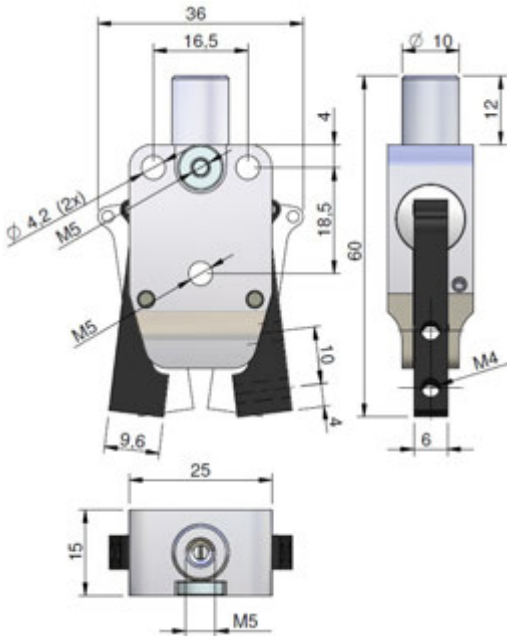
. Dimensions

. Maße

**CA.GZA.10.12.C**

**CA.GZA.10.12.G**

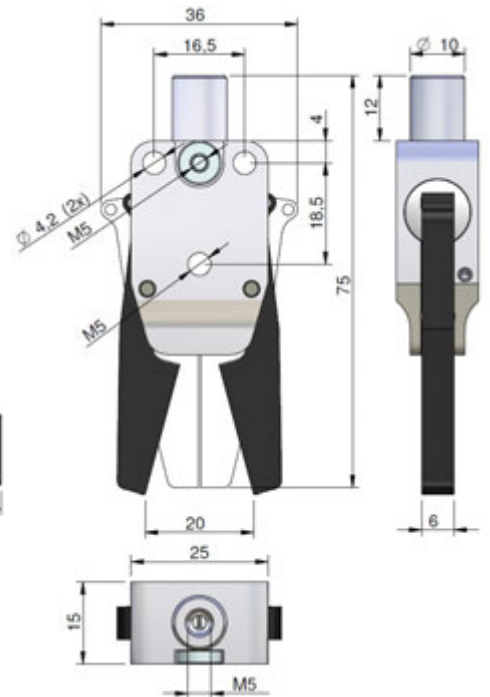
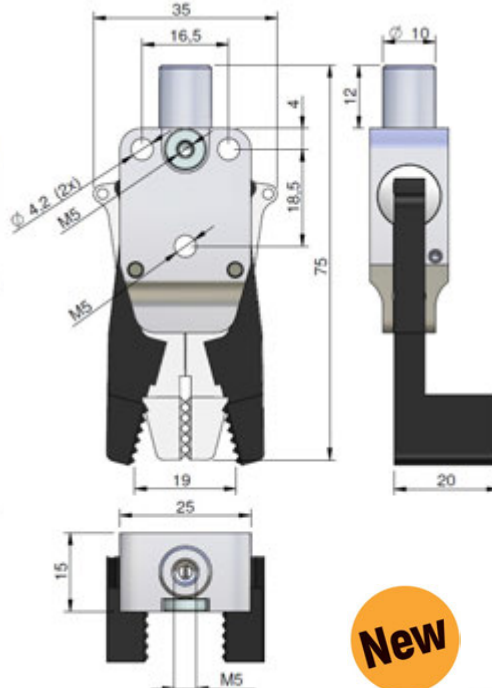
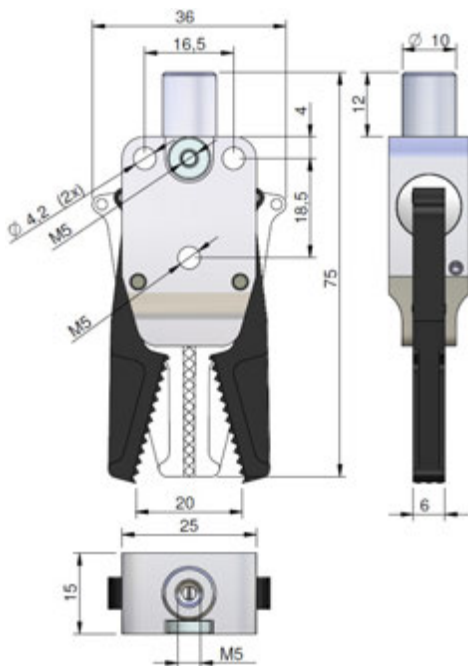
**CA.GZA.10.12.G50**



**CA.GZA.10.12.L**

**CA.GZA.10.12.L90**

**CA.GZA.10.12.LL**

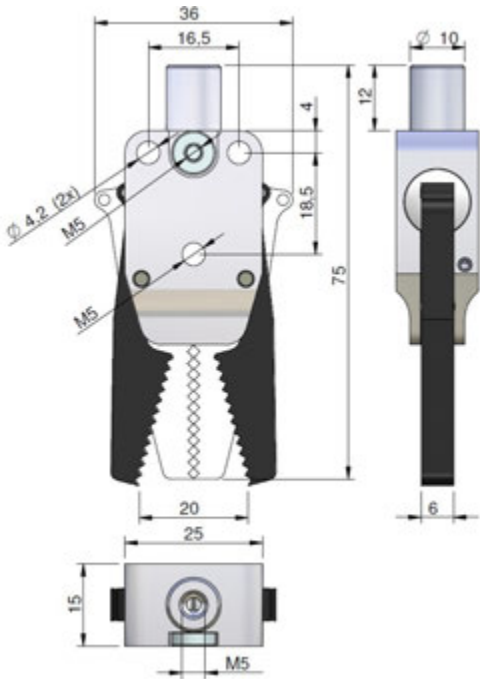


# CA.09 GZA.10

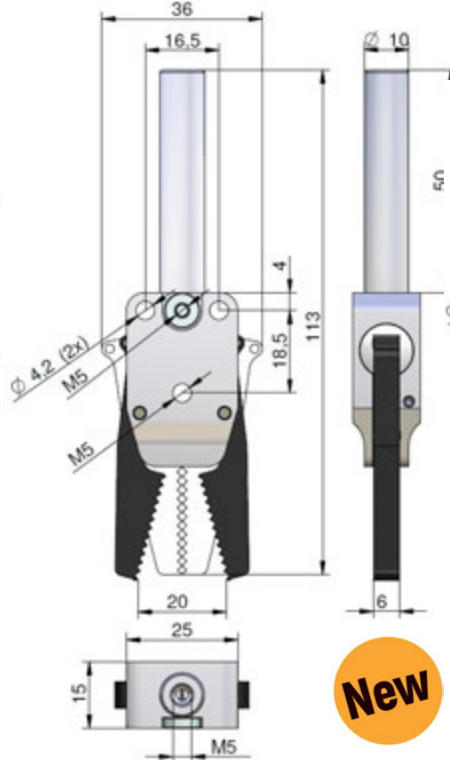
. Dimensions

. Maße

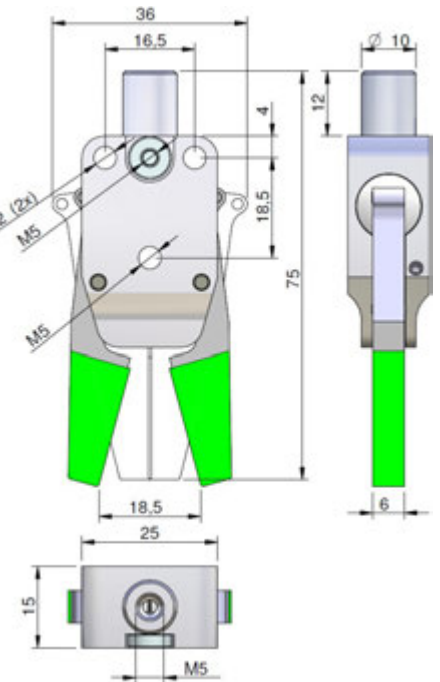
CA.GZA.10.12.M



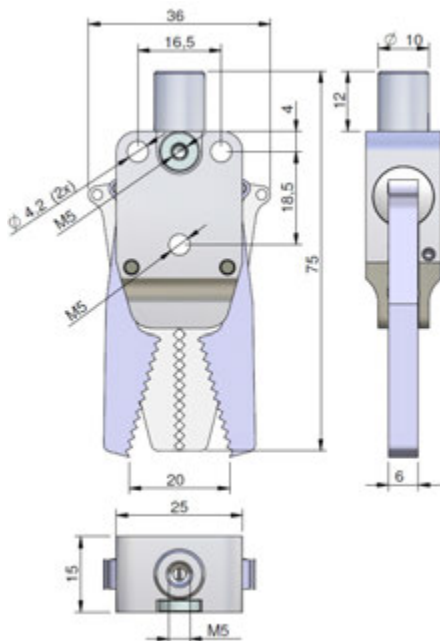
CA.GZA.10.12.M50



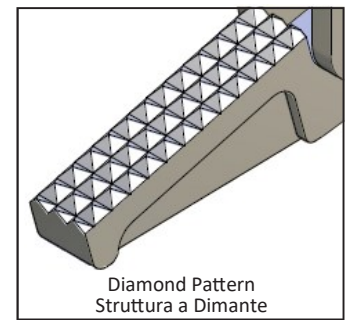
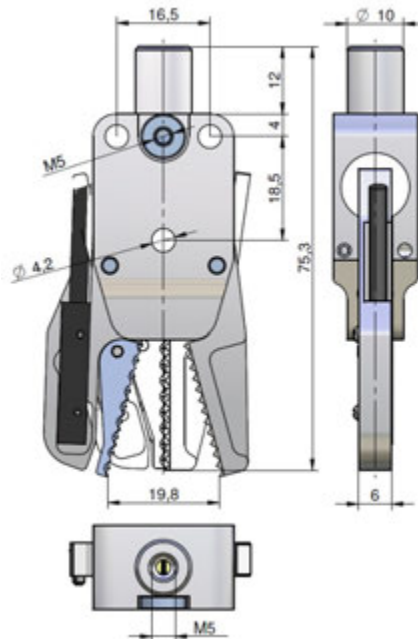
CA.GZA.10.12.MC



CA.GZA.10.12.MF



CA.GZA.10.12.MS/MSN

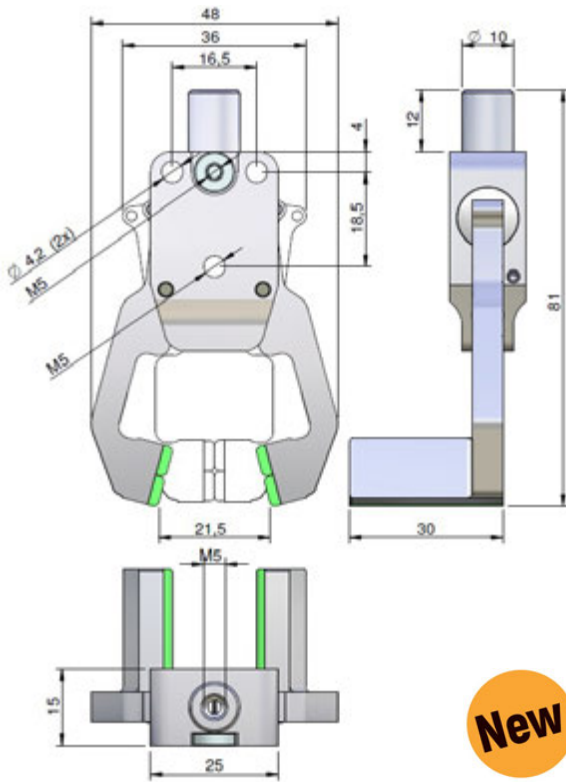


**CA.09 GZA.10**

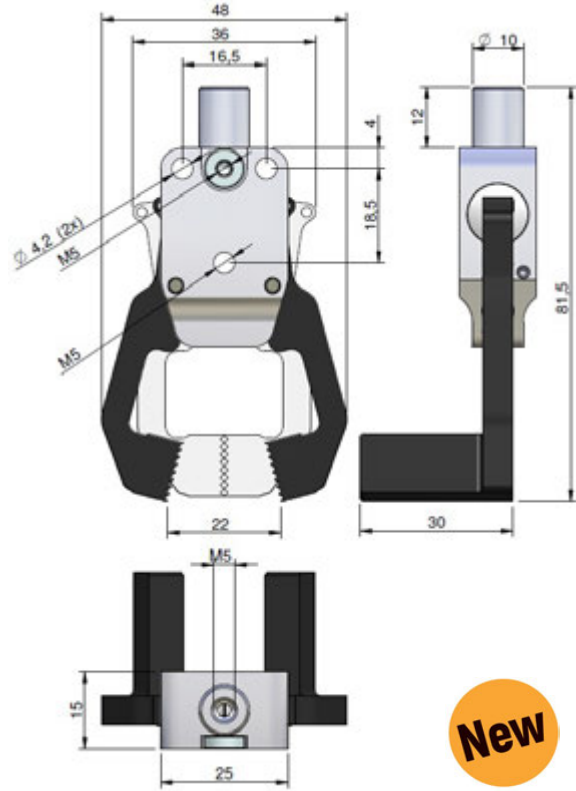
. Dimensions

. Maße

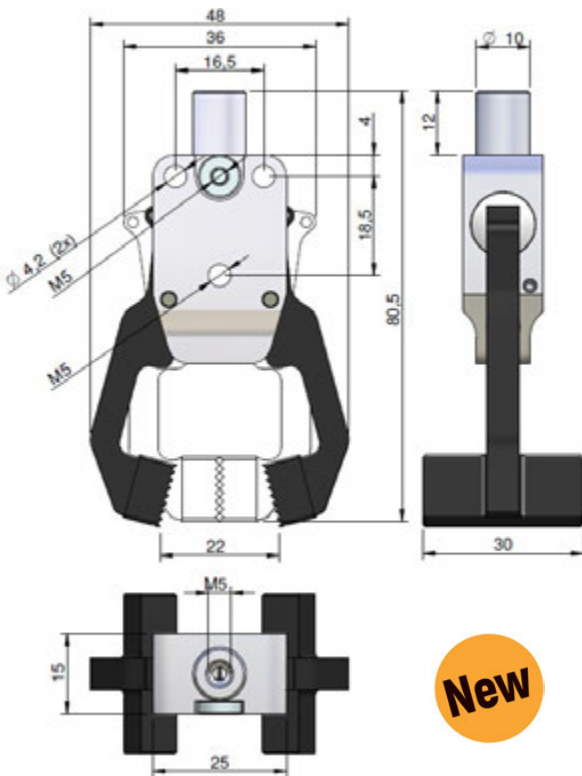
**CA.GZA.10.12.AHG**



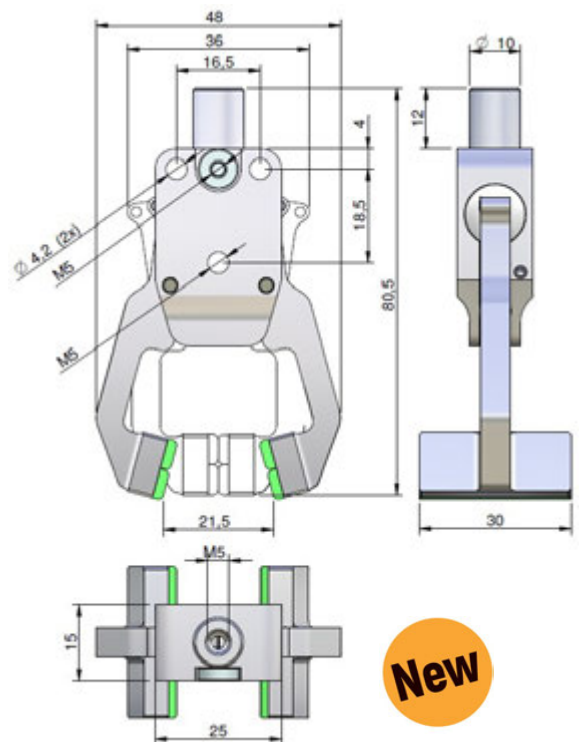
**CA.GZA.10.12.AHL**



**CA.GZA.10.12.AHT**



**CA.GZA.10.12.ATG**

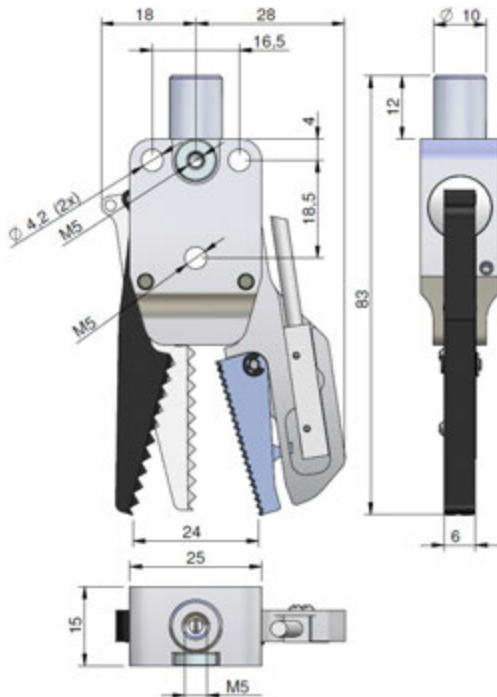


## CA.09 GZA.10

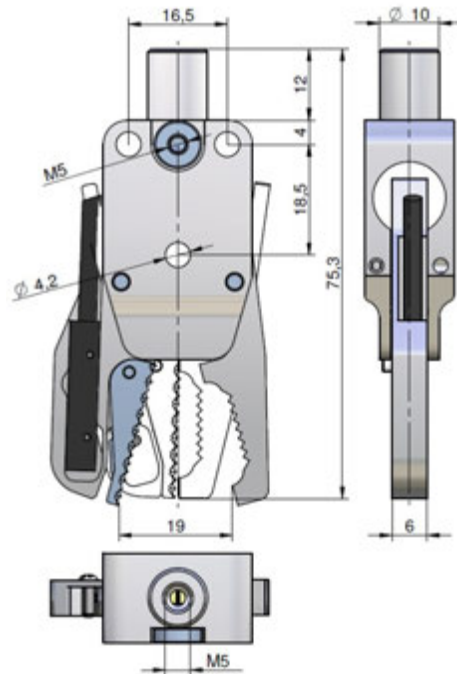
. Dimensions

. Maße

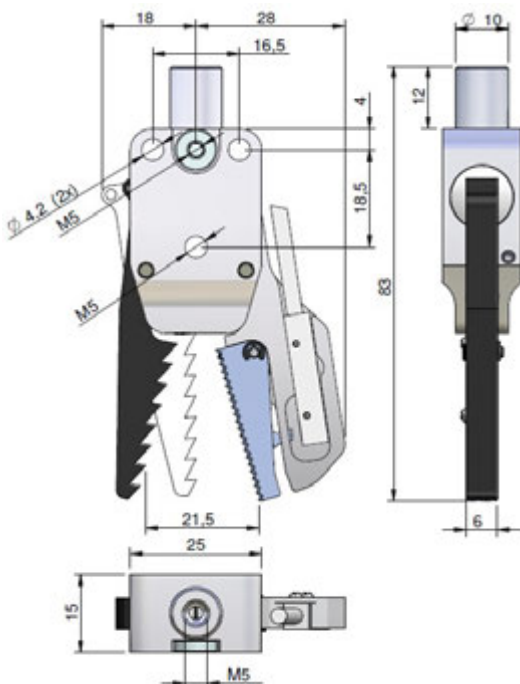
CA.GZA.10.12.S/SN



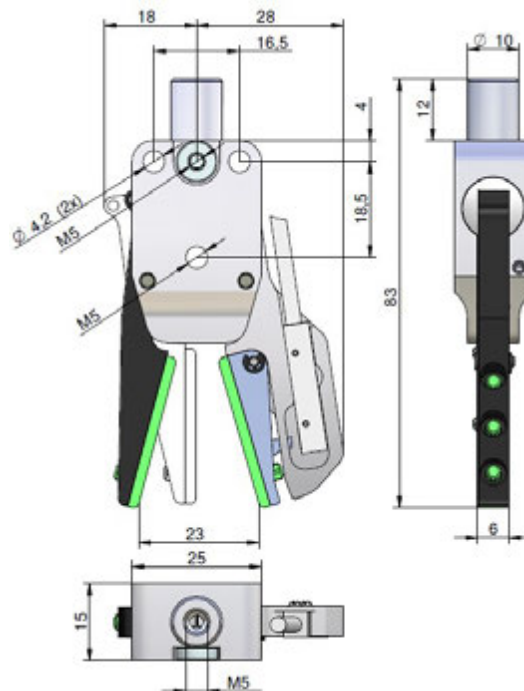
CA.GZA.10.12.S4/S4N



CA.GZA.10.12.S9/S9N



CA.GZA.10.12.SG/SGN



## CA.09 GZA.10

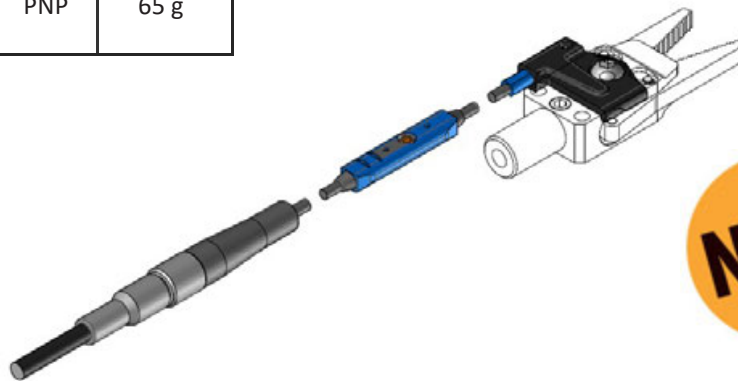
. Dimensions

. Maße



Article no.	Output	
CA.SCP.1008	PNP	65 g
CA.SCP.1012		

Application example / Anwendungsbeispiel



## CA.09 GRZ.10.08

Remarks / Anmerkungen:

Work principle: single acting

Wirkprinzip: Einfachwirkend

2 different fastening possibilities / 2 verschiedene Befestigungsmöglichkeiten:

Clamp-  $\varnothing$  10 mm on shaft / Klemm- $\varnothing$  10 mm am Schaft

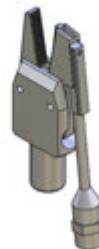
Through-Thread in the gripper body / Durchgangsgewinde im Zangenkörper

Working pressure: 6 bar clean and dry air

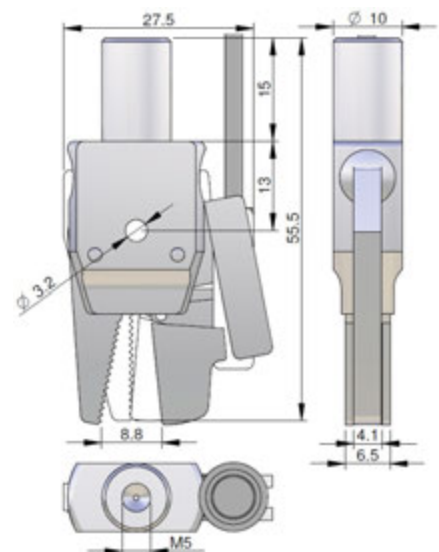
Betriebsdruck: 6 bar gefilterte und getrocknete luft verwenden

Working pressure: 6 bar clean and dry air

Betriebsdruck: 6 bar gefilterte und getrocknete luft verwenden



CA.GRZ.10.08.S/SN



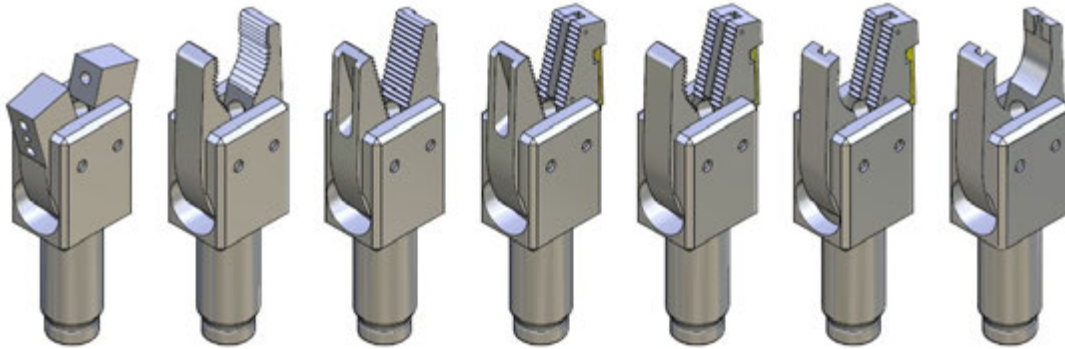
Article no.	Sensor	Closing force (at 6 bar)	Weight
CA.GRZ.10.08.S	KT58PM8	19 N	25 g
CA.GRZ.10.08.S2F	KT58REQD		
CA.GRZ.10.08.SN	KT58NM8		



**CA.09 GRZ.20**

. Sprue gripper

. Greifzange



Remarks / Anmerkungen:

Work principle: single acting  
Wirkprinzip: Einfachwirkend

Working pressure: 6 bar clean and dry air  
Betriebsdruck: 6 bar gefilterte und getrocknete luft verwenden

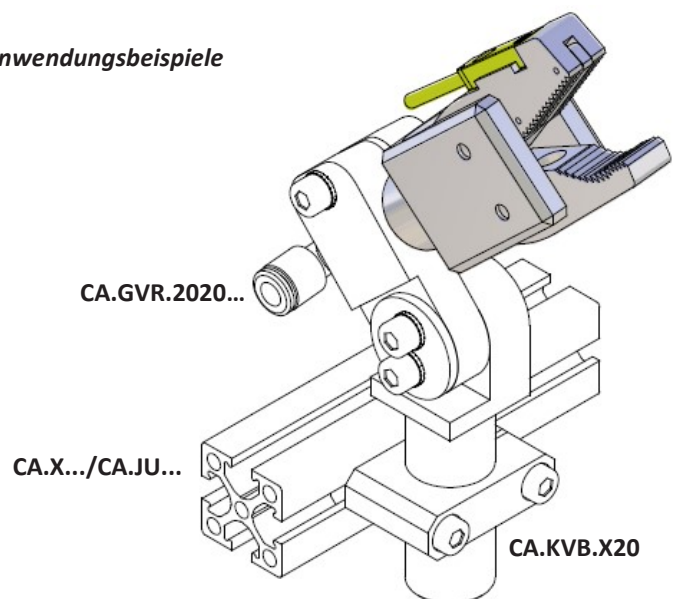
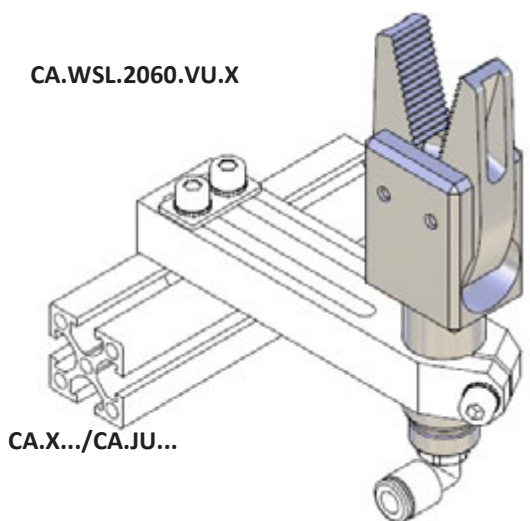
Material / Werkstoff:

Jaws in hardcoated Aluminium  
Backen aus hartcoatiertem Aluminium

Body made of anodized Aluminium  
Körper aus eloxiertem Aluminium

Article no.	Sensor	Closing force (at 6 bar)	Weight
CA.GRZ.20.A		90 N	114 g
CA.GRZ.20.E			85 g
CA.GRZ.20.LL			85 g
CA.GRZ.20.R			121 g
CA.GRZ.20.S	GRZ.20.SC.PNP		127 g
CA.GRZ.20.SN	GRZ.20.SC.NPN		107 g
CA.GRZ.20.W	GRZ.20.SC.PNP		110 g
CA.GRZ.20.WN	GRZ.20.SC.NPN		114 g
CA.GRZ.20.WL	GRZ.20.SC.PNP		110 g
CA.GRZ.20.WLN	GRZ.20.SC.NPN		

Application examples / Anwendungsbeispiele



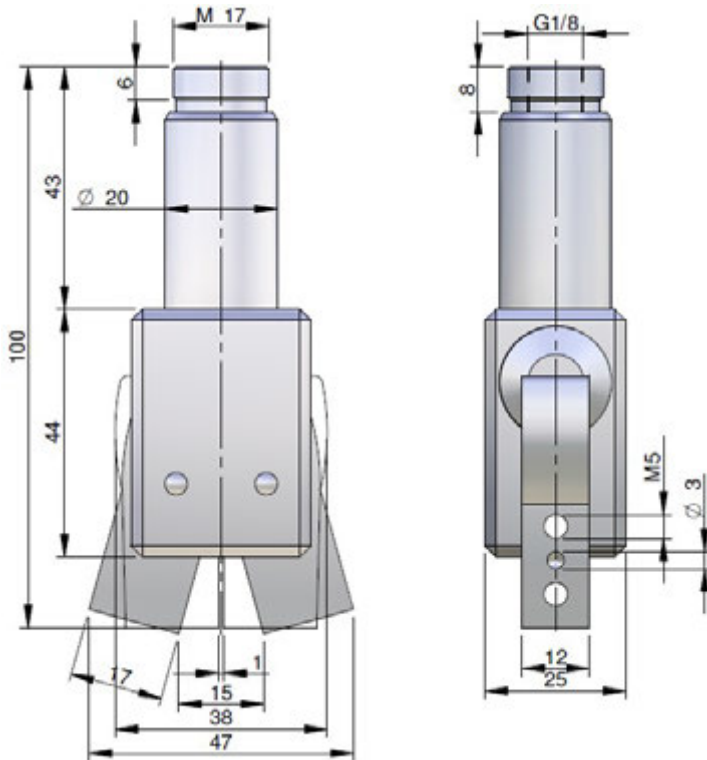


## CA.09 GRZ.20

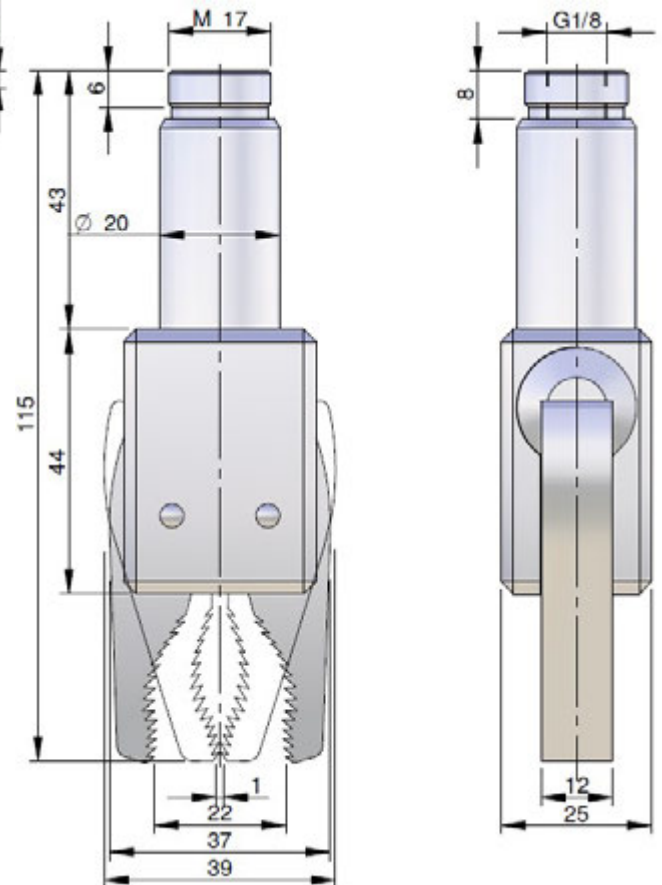
. Dimensions

. Maße

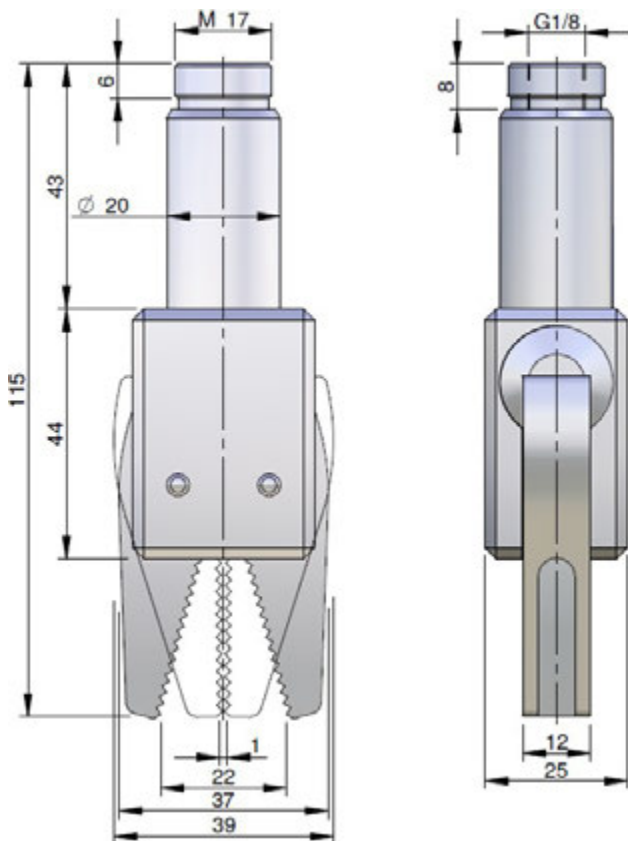
CA.GRZ.20.A



CA.GRZ.20.E



CA.GRZ.20.R

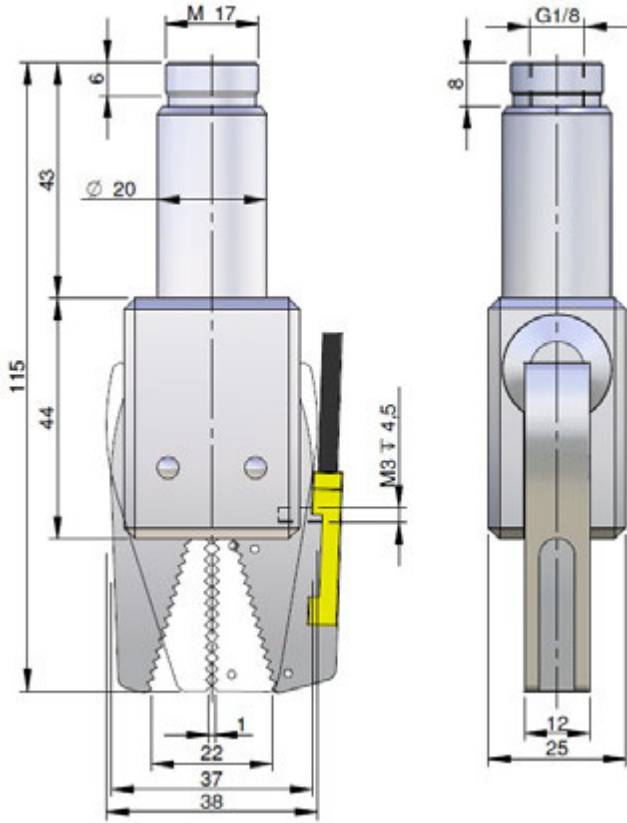


**CA.09 GRZ.20**

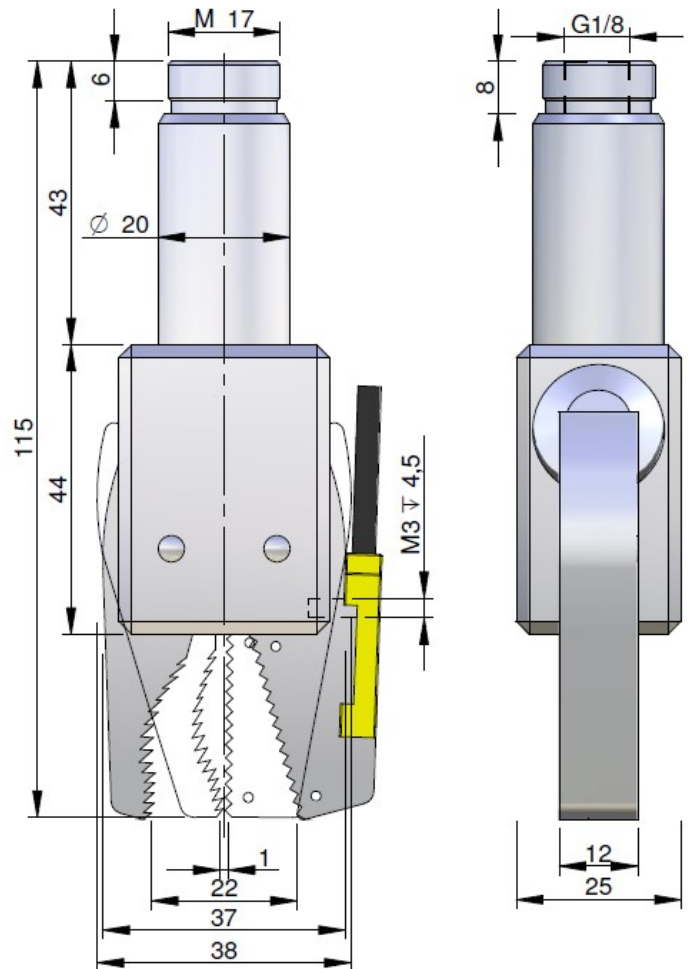
. Dimensions

. Maße

**CA.GRZ.20.S/SN**



**CA.GRZ.20.W/WN**

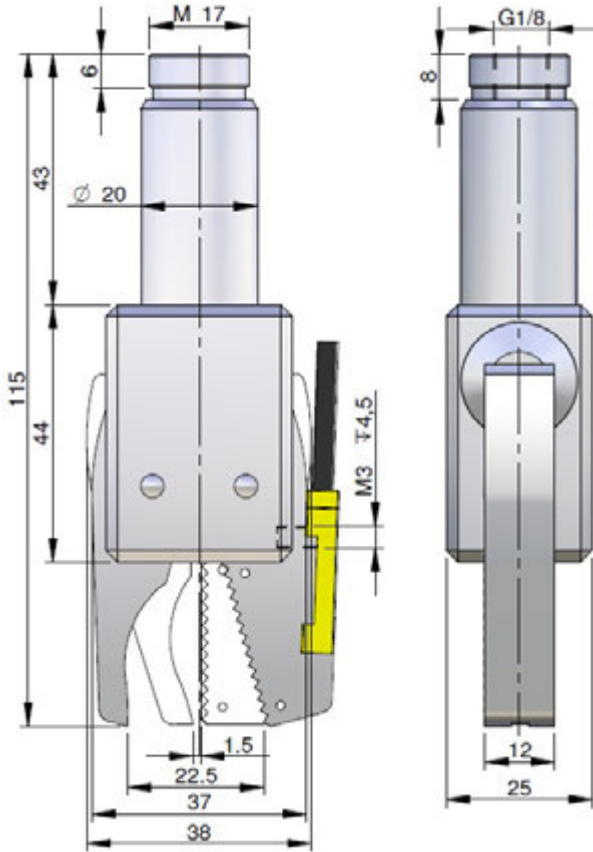


## CA.09 GRZ.20

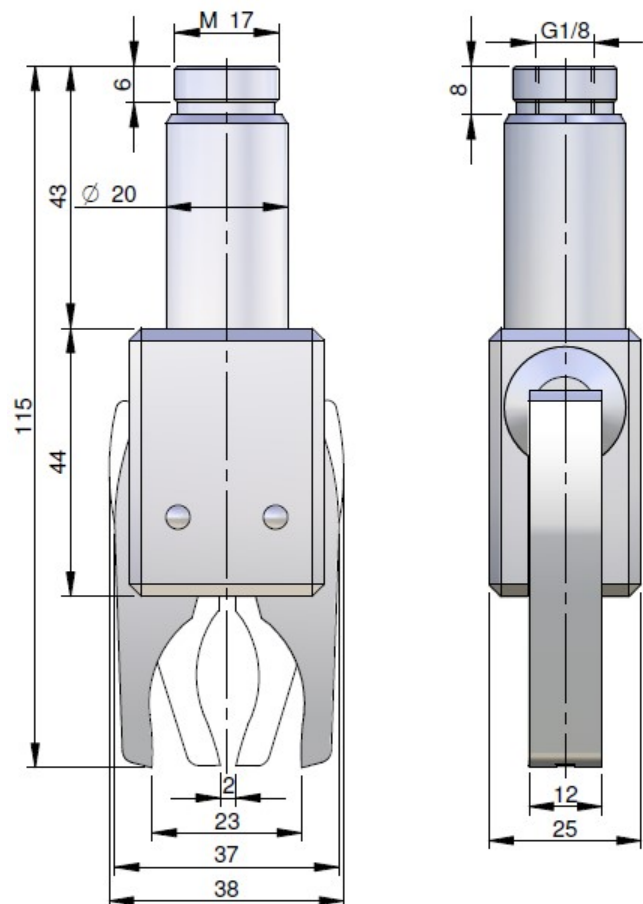
. Dimensions

. Maße

CA.GRZ.20.WL/WLN



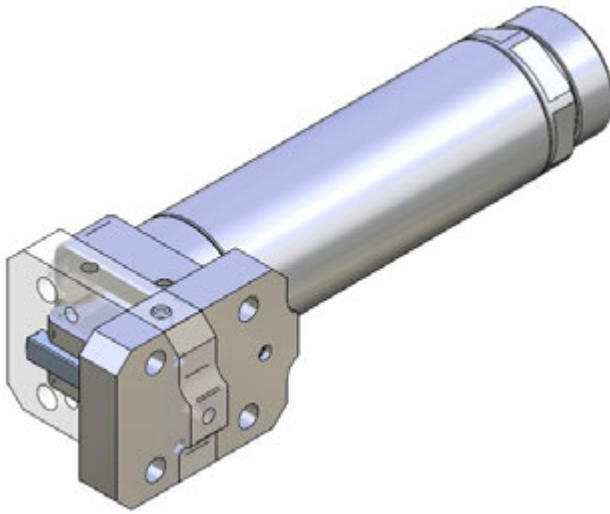
CA.GRZ.20.LL



## CA.09 RBL 90°

. Pneumatic tilt

. *Pneumatische Kippeinheit*



Remarks / Anmerkungen:

Work principle: single acting  
*Wirkprinzip: Einfachwirkend*

Extension thread for Extension Tube VLR  
*Verlängerungsgewinde für Verlängerungsrohr VLR*

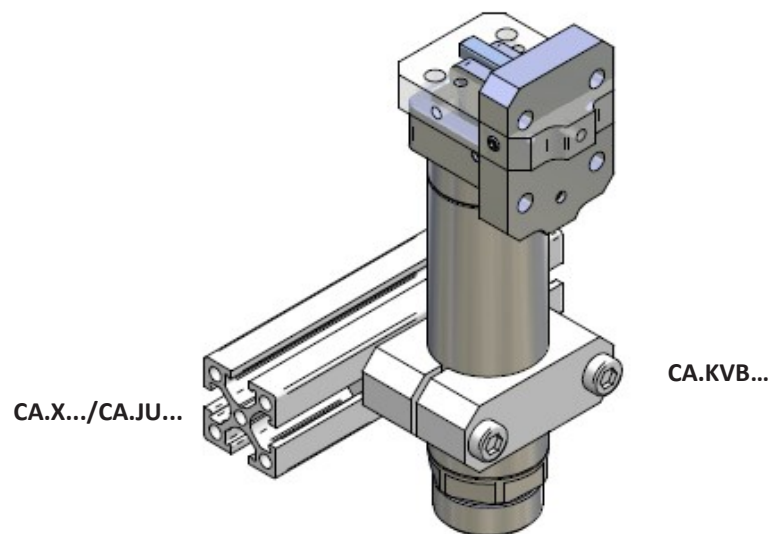
Working pressure: 6 bar clean and dry air  
*Betriebsdruck: 6 bar gefilterte und getrocknete Luft verwenden*

Material / Werkstoff: Aluminium

Surface: silver anodized  
*Oberfläche: eloxiert*

Article no.	Stroke	External Diameter	Grip force (at 6 bar)	Cycle air consumption	Weight
CA.RBL.30	90°	Ø 30 mm	300 N	12.9 cm <sup>3</sup>	270 g

Application example / Anwendungsbeispiel

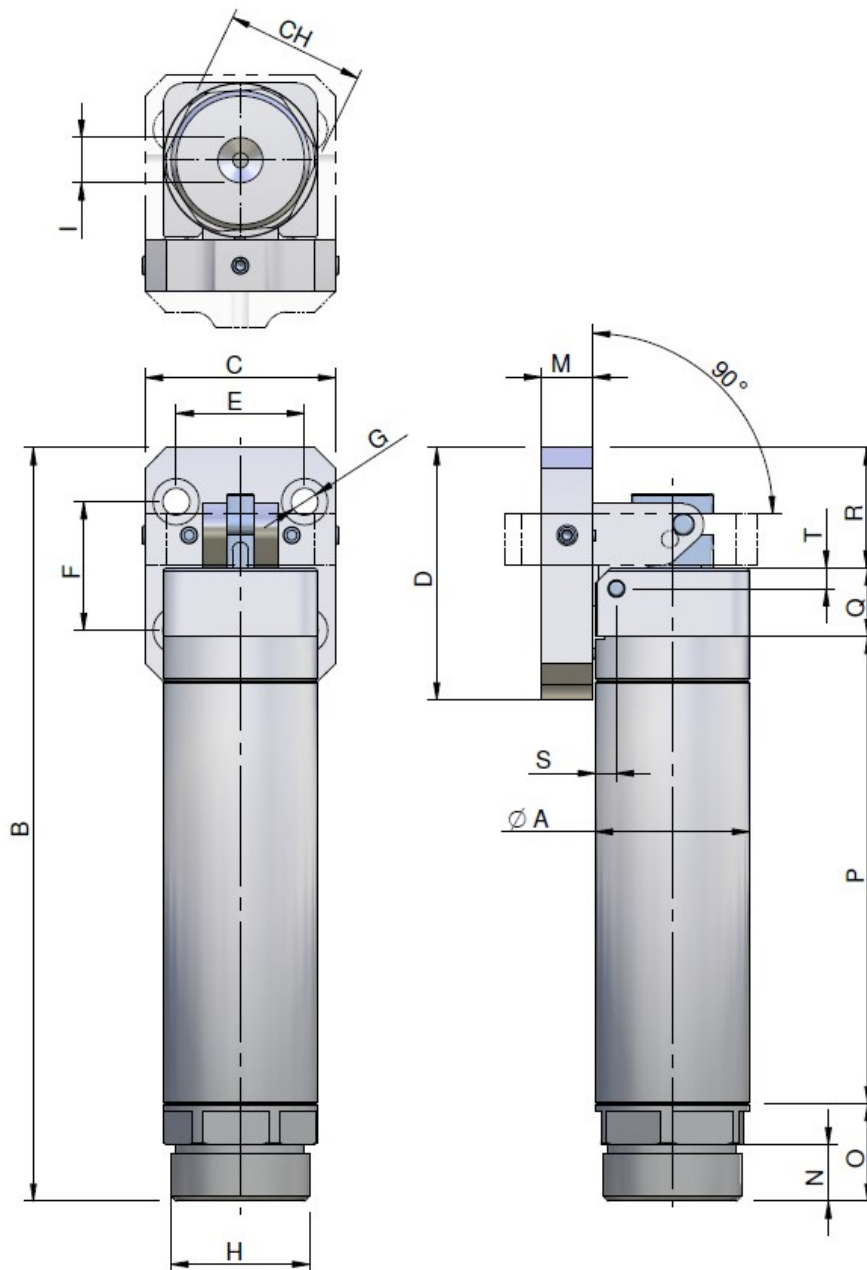


# CA.09 RBL 90°

. Dimensions

. Maße

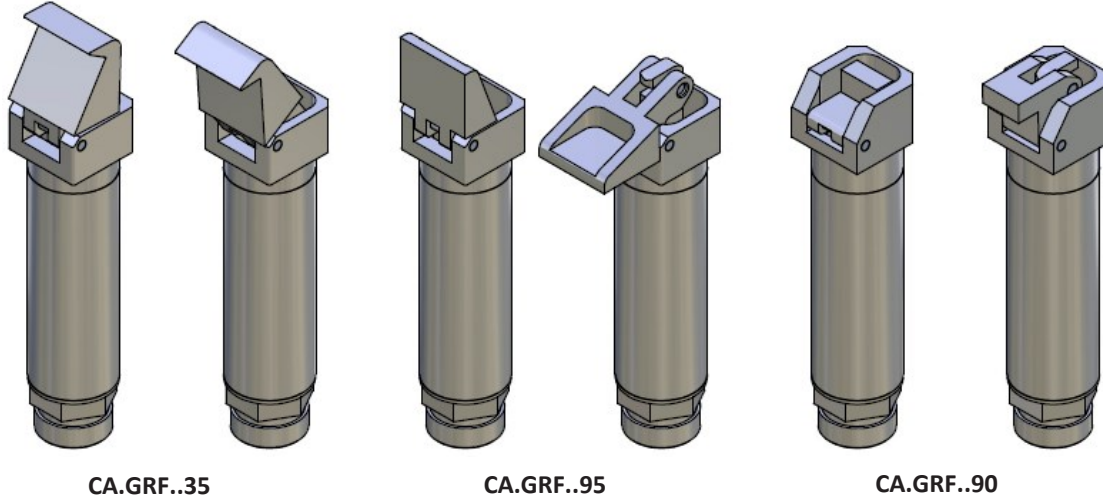
Article no.	A	B	C	D	E	F	G	H	I	M	N	O	P	Q	R	S	T	CH
CA.RBL.30	∅ 30	146.5	37	49	25	25	5.3	M27x1	1/8	10	11	19	90.8	13.3	23.4	4.1	4	27



## CA.09 GRF

. Gripper finger

. Greiffinger



Remarks / Anmerkungen:

Work principle: single acting  
 Wirkprinzip: Einfachwirkend

Extension thread for Extension Tube VLR  
 Verlängerungsgewinde für Verlängerungsrohr VLR

Working pressure: 6 bar clean and dry air  
 Betriebsdruck: 6 bar gefilterte und getrocknete Luft verwenden

Material / Werkstoff: Aluminium

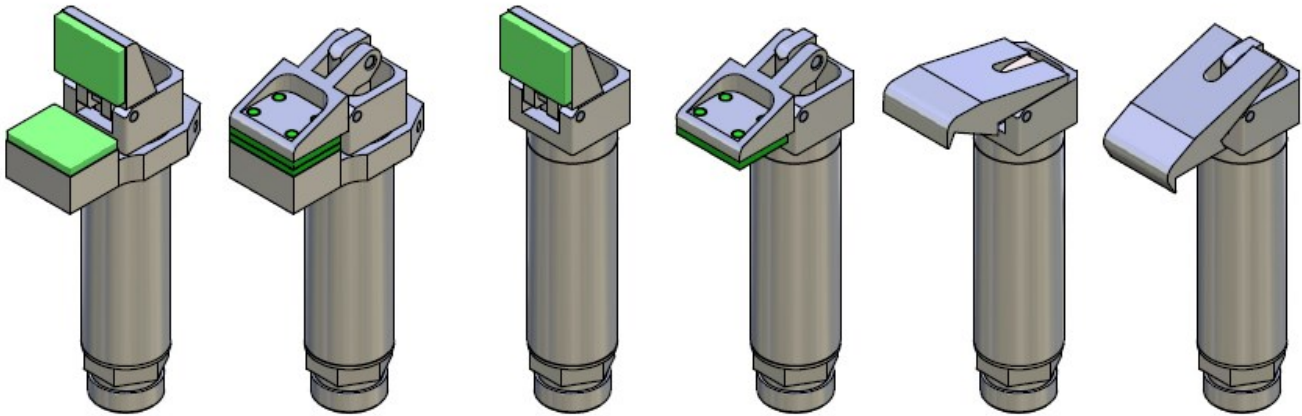
Surface: silver anodized  
 Oberfläche: eloxiert

Article no.	Stroke	External Diameter	Grip force (at 6 bar)	Cycle air consumption	Weight
CA.GRF.1435	35°	Ø 14	26 N	0.40 cm <sup>3</sup>	25 g
CA.GRF.2035		Ø 20	100 N	1.24 cm <sup>3</sup>	65 g
CA.GRF.3035		Ø 30	430 N	4.56 cm <sup>3</sup>	206 g
CA.GRF.1495	95°	Ø 14	19 N	1.00 cm <sup>3</sup>	25 g
CA.GRF.2095		Ø 20	70 N	3.52 cm <sup>3</sup>	60 g
CA.GRF.3095		Ø 30	300 N	12.90 cm <sup>3</sup>	193 g
CA.GRF.1490	90°	Ø 14	19 N	1.00 cm <sup>3</sup>	25 g
CA.GRF.2090		Ø 20	70 N	3.52 cm <sup>3</sup>	65 g
CA.GRF.3090		Ø 30	300 N	12.90 cm <sup>3</sup>	185 g
CA.GRF.1495.G	95°	Ø 14	19 N	1.00 cm <sup>3</sup>	28 g
CA.GRF.2095.G		Ø 20	70 N	3.52 cm <sup>3</sup>	75 g
CA.GRF.3095.G		Ø 30	300 N	12.90 cm <sup>3</sup>	235 g
CA.GRF.1495.GW		Ø 14	19 N	1.00 cm <sup>3</sup>	25 g
CA.GRF.2095.GW		Ø 20	70 N	3.52 cm <sup>3</sup>	60 g
CA.GRF.3095.GW		Ø 30	300 N	12.90 cm <sup>3</sup>	193 g
CA.GRF.2035.WE	35°	Ø 20	100 N	1.24 cm <sup>3</sup>	76 g
CA.GRF.3035.WE		Ø 30	430 N	12.90 cm <sup>3</sup>	259 g

## CA.09 GRF

. Gripper finger

. Greiffinger

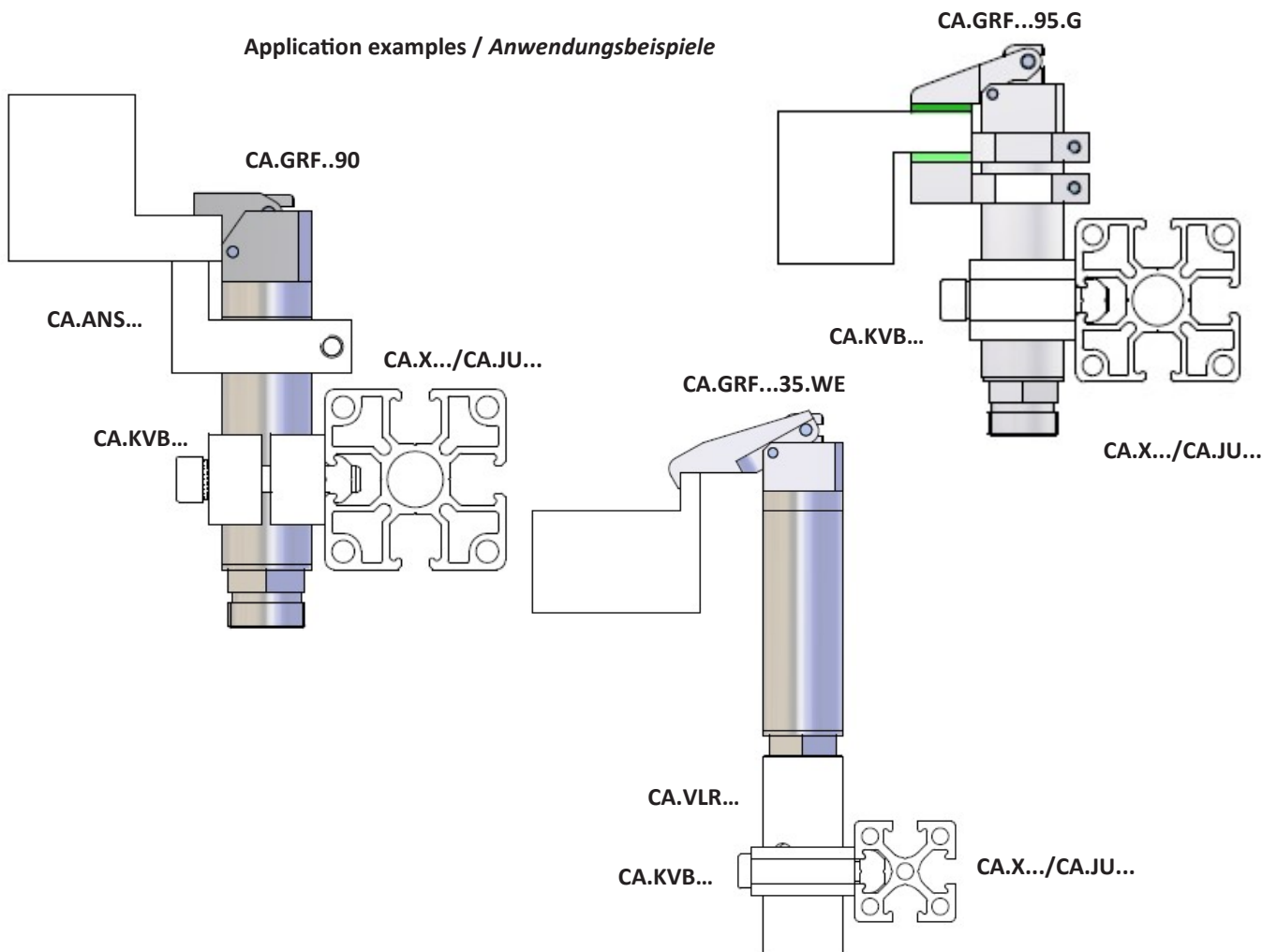


CA.GRF..95.G

CA.GRF..95.GW

CA.GRF..35.WE

### Application examples / Anwendungsbeispiele

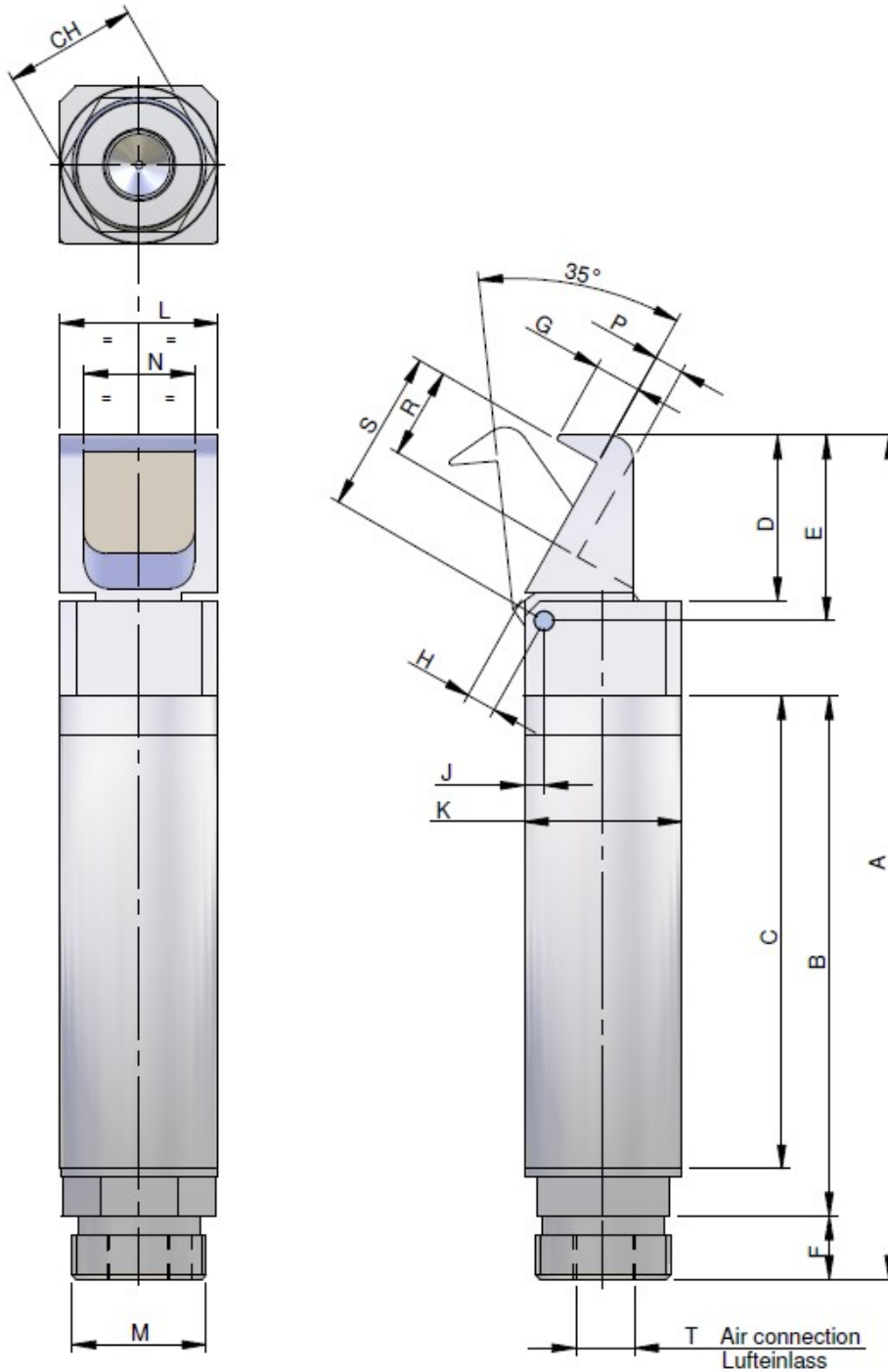


## CA.09 GRF 35°

. Dimensions

. Maße

Article no.	A	B	C	D	E	F	G	H	J	K	L	M	N	P	R	S	T	CH
CA.GRF.1435	77	47.5	43.5	14	16	5.5	4.5	3.4	2	∅ 14	14	M12X1	10	2	6	13.5	M5	12
CA.GRF.2035	107	66	60	21	23.5	8	6	3.8	2.5	∅ 20	20	M17X1	14	3	11.5	20.7	G 1/8	17
CA.GRF.3035	156	100	92	30	34	11	8	6	4	∅ 30	30	M27X1	22	5	17	30.8		27



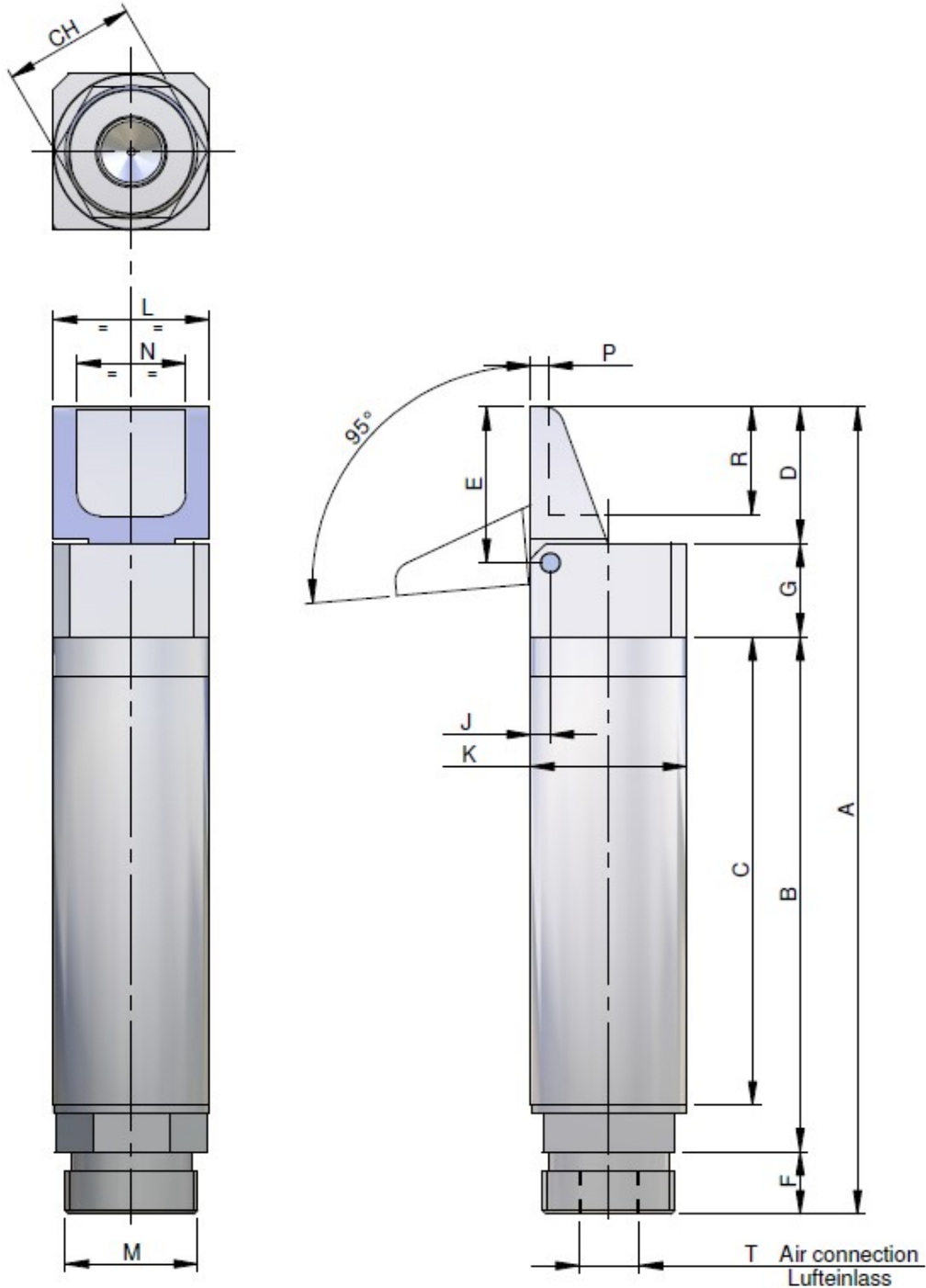


## CA.09 GRF 95°

. Dimensions

. Maße

Article no.	A	B	C	D	E	F	G	J	K	L	M	N	P	R	T	CH
CA.GRF.1495	75.5	47.5	43.5	12	14	5.5	10.5	2	∅ 14	14	M12X1	10	2	9	M5	12
CA.GRF.2095	103.5	66	60	17.5	20	8	12	2.5	∅ 20	20	M17X1	14	3	14	G 1/8	17
CA.GRF.3095	148	100	90	25	29	11	12	4	∅ 30	30	M27X1	22	5	21		27

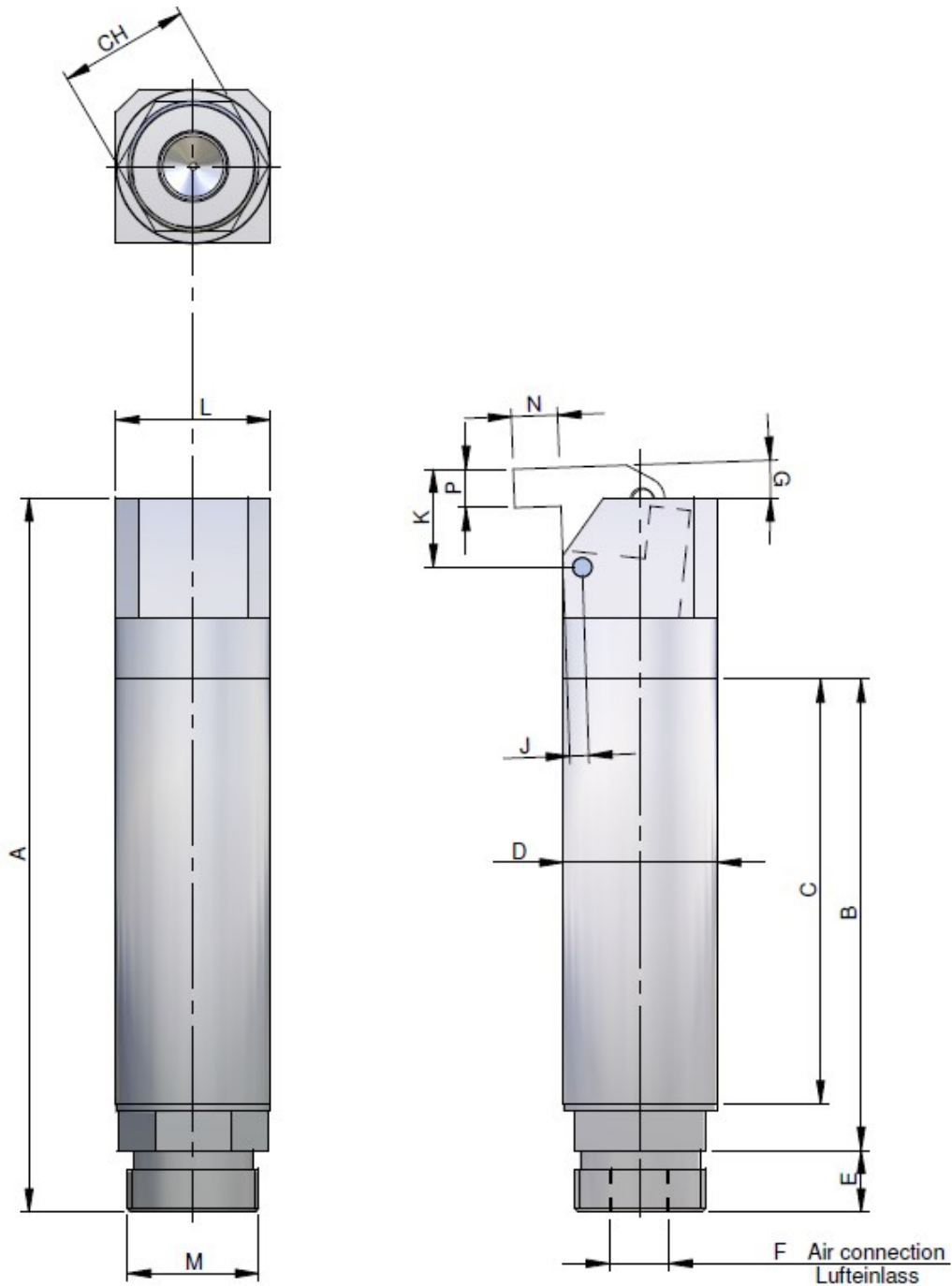


## CA.09 GRF 90°

. Dimensions

. Maße

Article no.	A	B	C	D	E	F	G	J	K	L	M	N	P	CH
CA.GRF.1490	69	45.5	41.5	Ø 14	5.5	M5	2°	3	8	14	M12X1	4.8	4	12
CA.GRF.2090	92.5	61	55	Ø 20	8	G 1/8		2.5	13	20	M17X1	6	5	17
CA.GRF.3090	135	91	83	Ø 30	11			4	20	30	M27X1	11	6	27

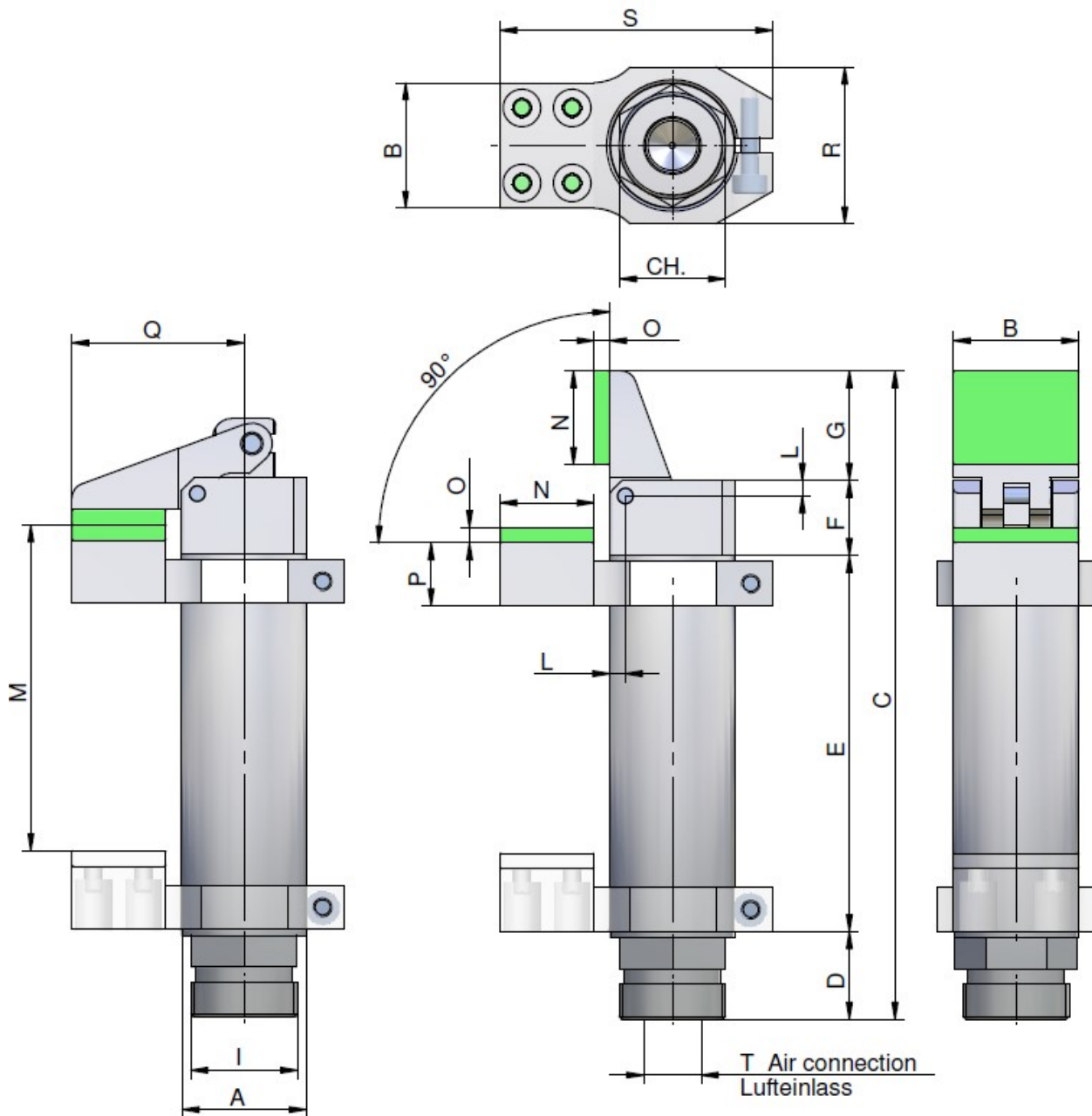


## CA.09 GRF 95° G / GTPE

. Dimensions

. Maße

Article no.	A	B	C	D	E	F	G	H	I	L	M	N	O	P	Q	R	S	T	CH
CA.GRF.1495.G	∅ 14	14	75.5	9.5	43.5	10.5	12	5.5	M12X1	2	38.5	10	2.5	6.5	19	17.5	30	M5	12
CA.GRF.2095.G	∅ 20	20	103.5	14	60	12	17.5	8	M17X1	2.5	52.5	15		10	27.5	25	43.5	G 1/8	
CA.GRF.3095.G	∅ 30	30	148	20	90	15	25	11	M27X1	4	81	20	3	9	40	37	60		

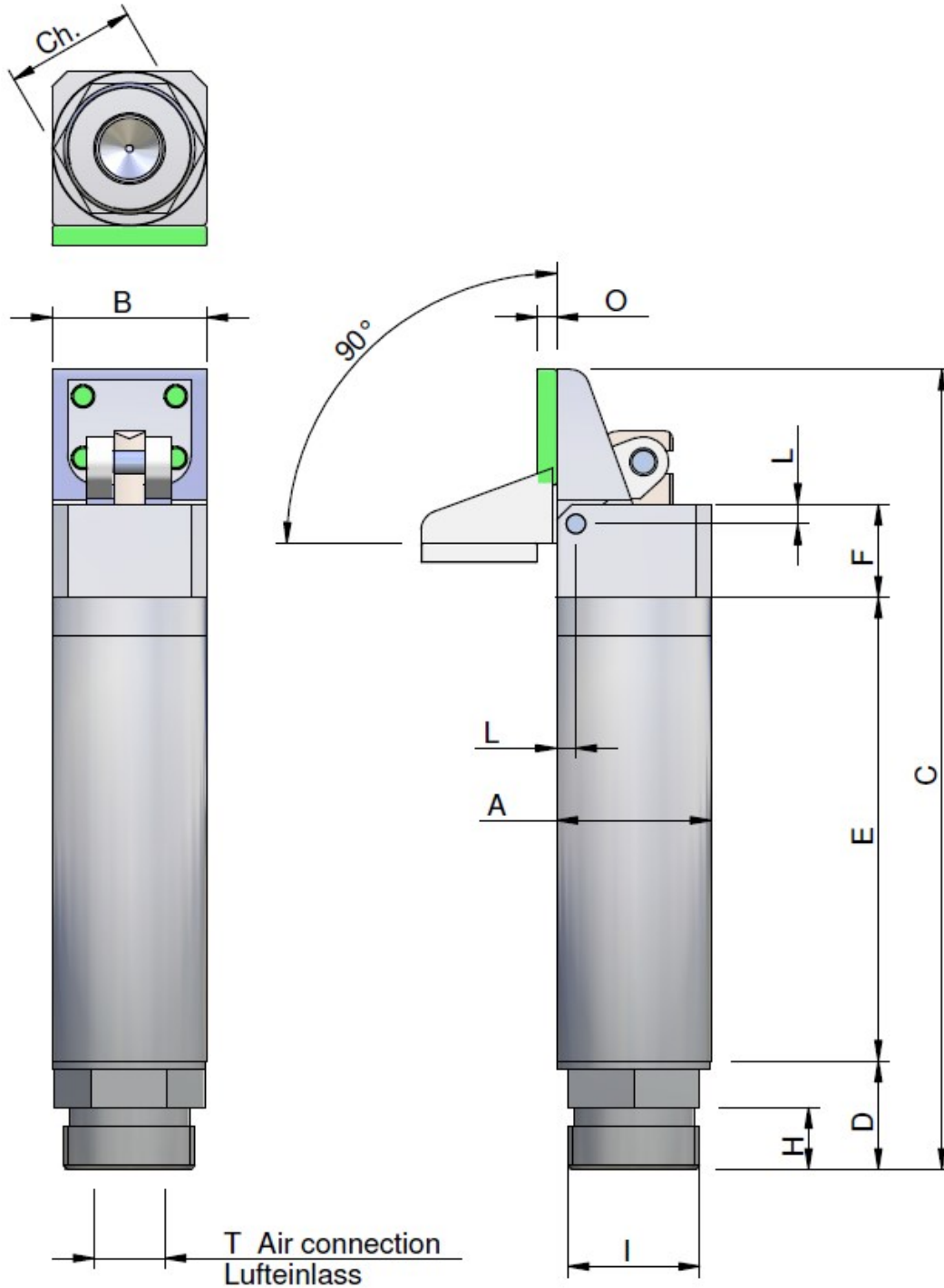


## CA.09 GRF 95° GW

. Dimensions

. Maße

Article no.	A	B	C	D	E	F	H	I	L	O	T	CH
CA.GRF.1495.GW	∅ 14	14	75.5	9.5	43.5	10.5	5.5	M12X1	2	2.5	M5	12
CA.GRF.2095.GW	∅ 20	20	103	14	60	12	8	M17X1	2.5		G 1/8	17
CA.GRF.3095.GW	∅ 30	30	148	20	90	15	11	M27X1	4	3		27

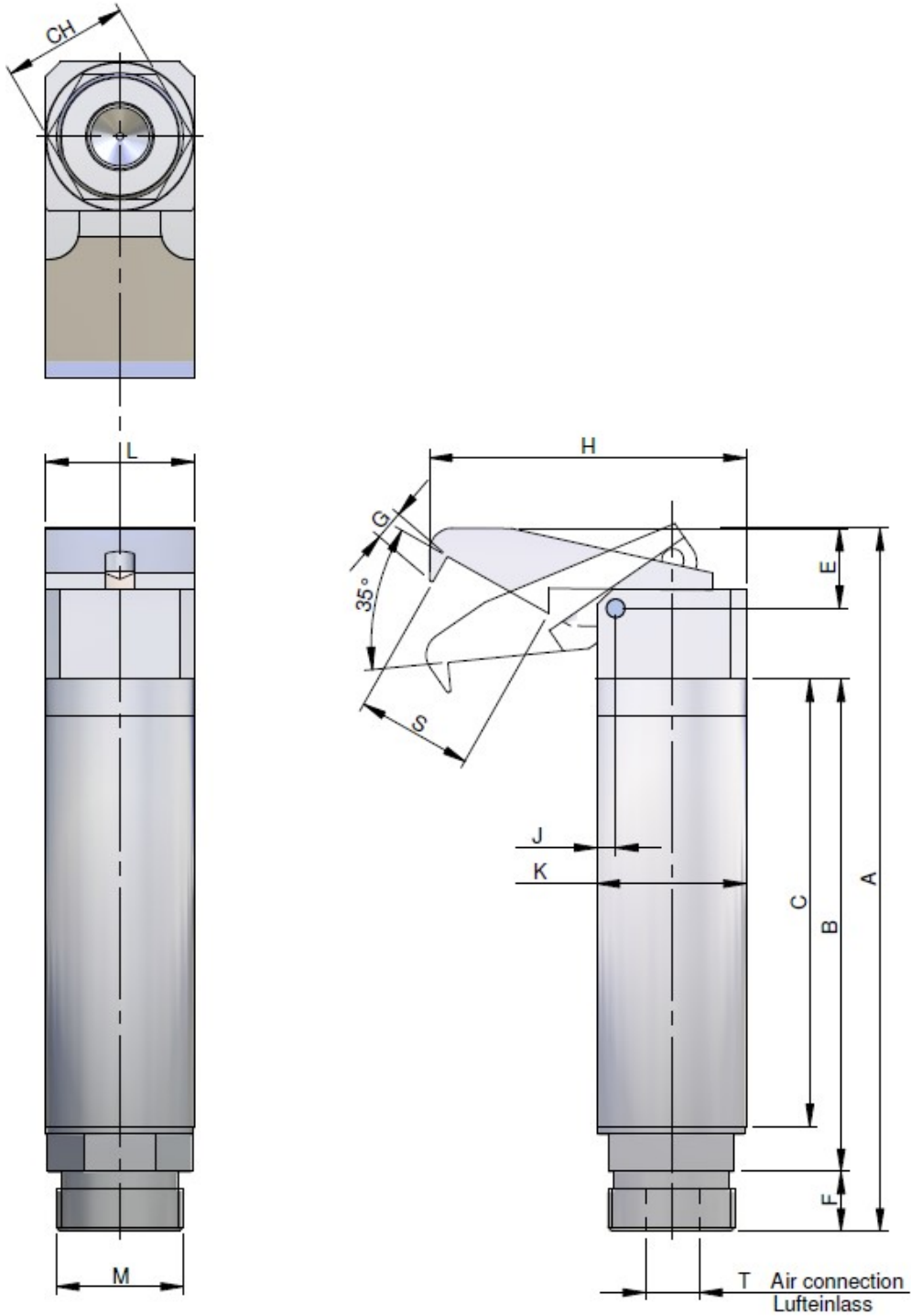


## CA.09 GRF 35° WE

. Dimensions

. Maße

Article no.	A	B	C	E	F	G	H	J	K	L	M	S	T	CH
CA.GRF.2035.WE	94	66	60	11	8	4	42.5	2.5	∅ 20	20	M17X1	15.5	G 1/8	17
CA.GRF.3035.WE	133	98	90	14	11		60.9	4.1	∅ 30	30	M27X1	26		27

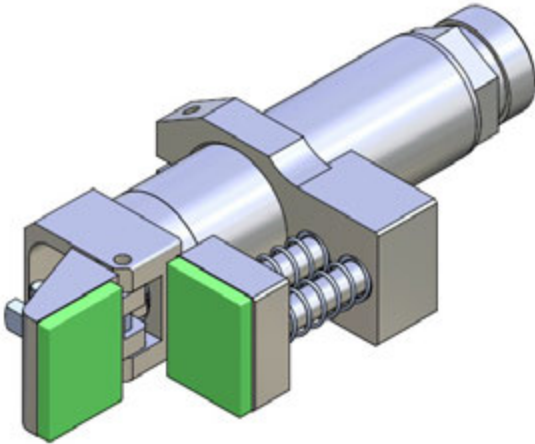


**CA.09 GRF.VSX**

. Gripper finger

**Magnetic**

. Greiffinger



Remarks / Anmerkungen:

Work principle: single acting  
Wirkprinzip: Einfachwirkend

Extension thread for Extension Tube VLR  
Verlängerungsgewinde für Verlängerungsrohr VLR

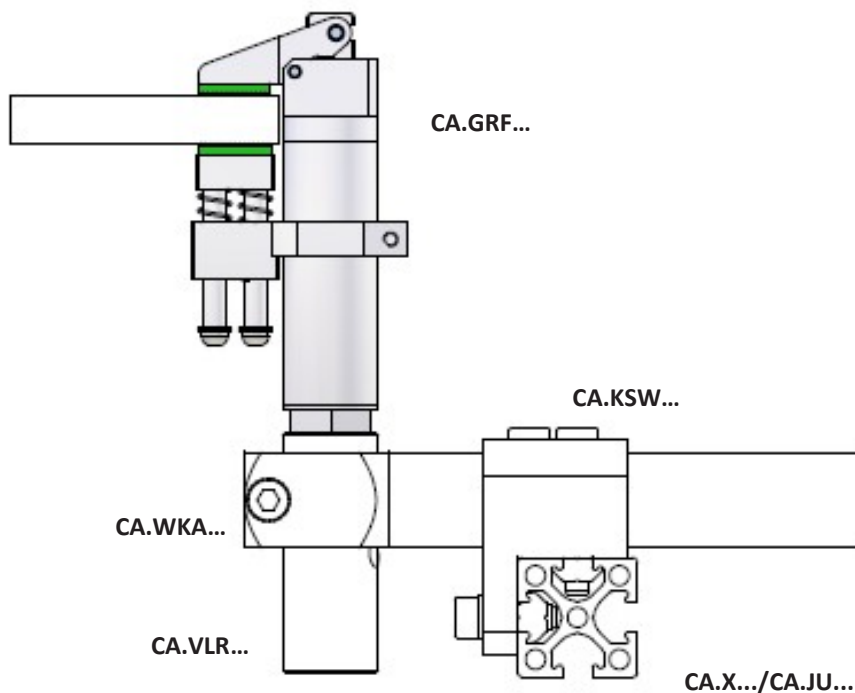
Working pressure: 6 bar clean and dry air  
Betriebsdruck: 6 bar gefilterte und getrocknete luft verwenden

Material / Werkstoff: Aluminium

Surface: silver anodized  
Oberfläche: eloxiert

Article no.	Stroke	Piston bore	Grip force (at 6	Cycle air consumption	Weight
CA.GRF.1495.VSX	95°	∅ 10 mm	19 N	1.00 cm <sup>3</sup>	35 g
CA.GRF.2095.VSX		∅ 16 mm	70 N	3.52 cm <sup>3</sup>	85 g
CA.GRF.3095.VSX		∅ 25 mm	300 N	12.90 cm <sup>3</sup>	280 g

**Application example / Anwendungsbeispiel**

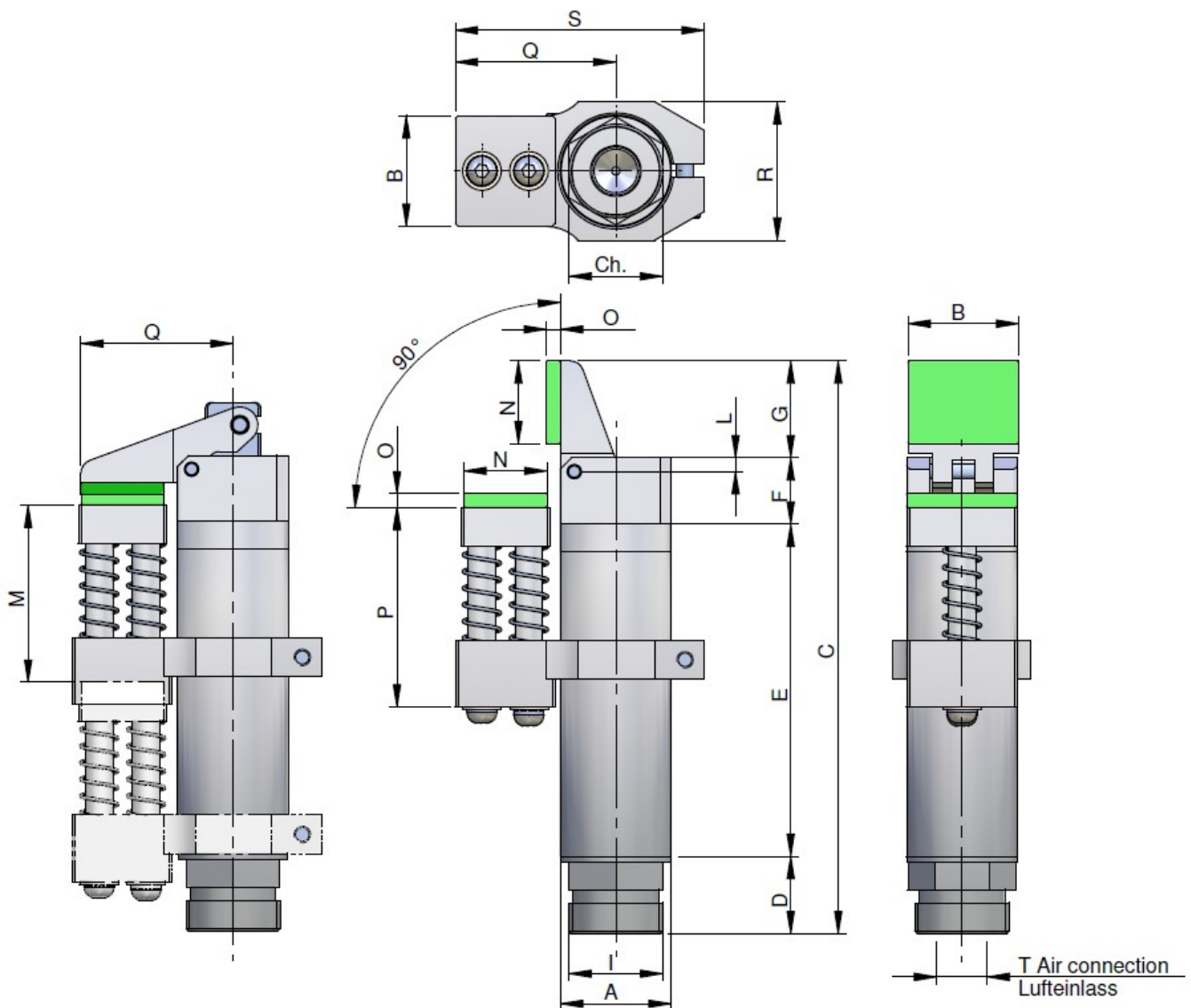


## CA.09 GRF 95° VSX

. Dimensions

. Maße

Article no.	A	B	C	D	E	F	G	H	I	L	M	N	O	P	Q	R	S	T	CH
CA.GRF.1495.VSX	∅ 14	14	75.5	9.5	43.5	10.5	12	5.5	M12X1	2	16.5	10	2.5	6.5	19	17.5	30	M5	12
CA.GRF.2095.VSX	∅ 20	20	103.5	14	60	12	17.5	8	M17X1	2.5	41.5	15		10	27.5	25	43.5	G 1/8	17
CA.GRF.3095.VSX	∅ 30	30	148	20	90	15	25	11	M27X1	4	53	20	3	9	40	37	60		27



## CA.09 ANS / ZTS

## GRF

. Stopper for grippers

. Anschlagstück

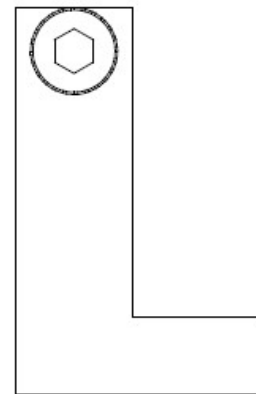
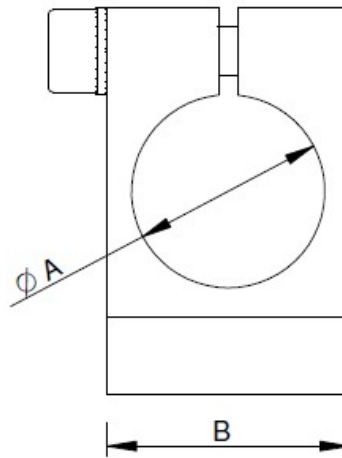
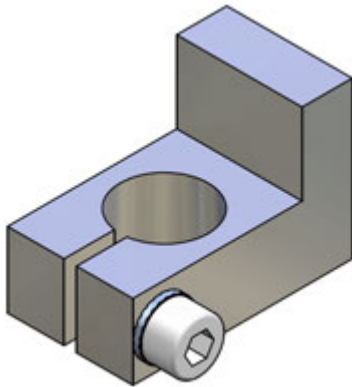


Table / Tabelle

Article no.	A	B	M	Weight
CA.ANS.14	∅ 14	20	CA.GRF.14...	17 g
CA.ANS.20	∅ 20	25	CA.GRF.20...	21 g
CA.ANS.30	∅ 30	35	CA.GRF.30...	30 g

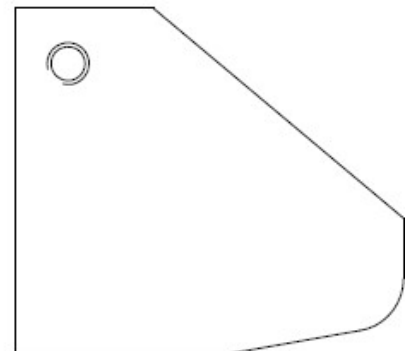
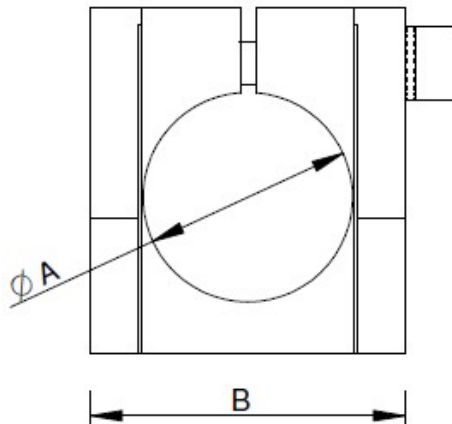
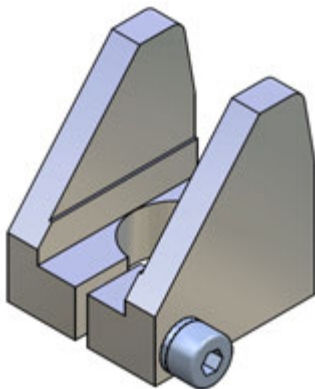
M = Suitable for Gripper finger GRF...  
Passend für Greiffinger GRF...

Remarks / Anmerkungen:

Material / Werkstoff: POM - machined / gefräst

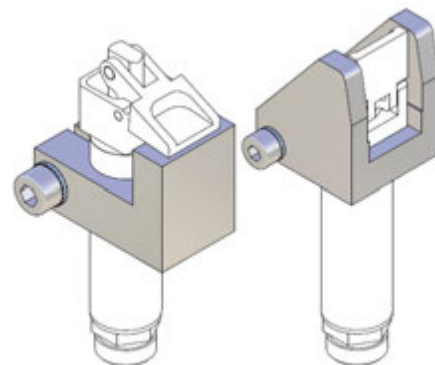
. Gripper guide

. Zentrierstück



Application examples / Anwendungsbeispiele

Article no.	A	B	M	Weight
CA.ZTS.14	∅ 14	24	CA.GRF.14...	15 g
CA.ZTS.20	∅ 20	30	CA.GRF.20...	20 g
CA.ZTS.30	∅ 30	45	CA.GRF.30...	60 g



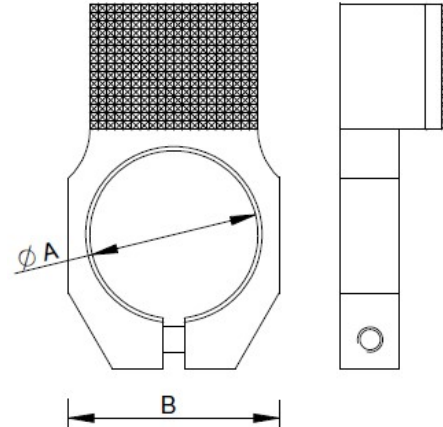
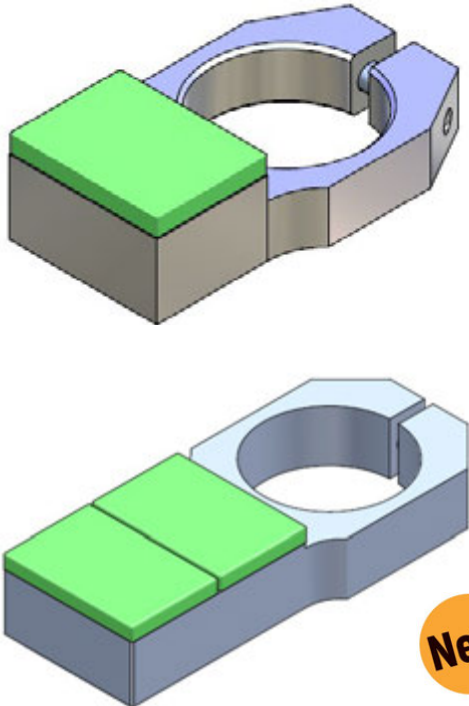


## CA.09 GRF 0708

. Stopper for grippers

GRF

. Anschlagstück



Article no.	A	B	M	Weight
GRF14.95.0708	$\phi$ 14	20	CA.GRF.14...	5 g
GRF20.95.0708	$\phi$ 20	25	CA.GRF.20...	14 g
GRF30.95.0708	$\phi$ 30	37	CA.GRF.30...	33 g
<b>New</b> GRF30.95.0708.40		36		62 g

Table / Tabelle

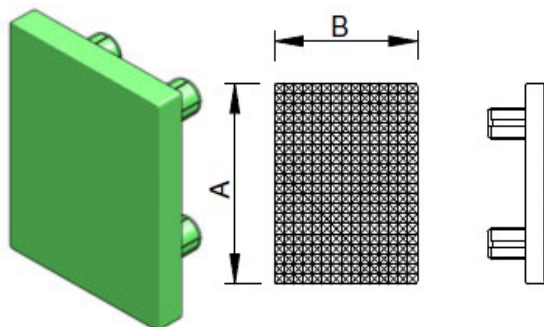
**M** = Suitable for Gripper finger GRF...  
Passend für Greiffinger GRF...

Remarks / Anmerkungen:

Material / Werkstoff: Aluminium / Alluminio

. Insert VITON

. VITON Einlage



Article no.		Colour	A	B	M	Weight
GRF14.95.08.V	VITON	Green	14	10	CA.GRF.14...	1 g
GRF20.95.08.V			20	15	CA.GRF.20...	2 g
GRF30.95.08.V			30	20	CA.GRF.30...	3 g

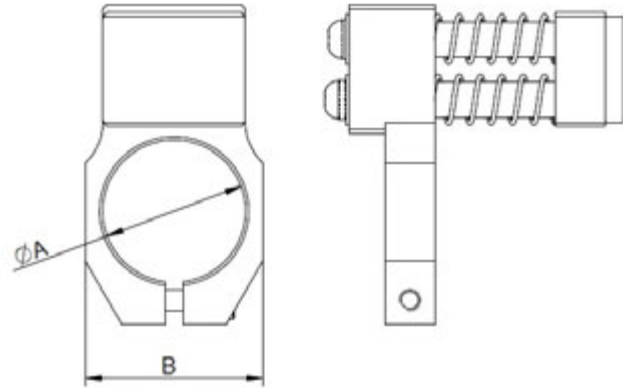
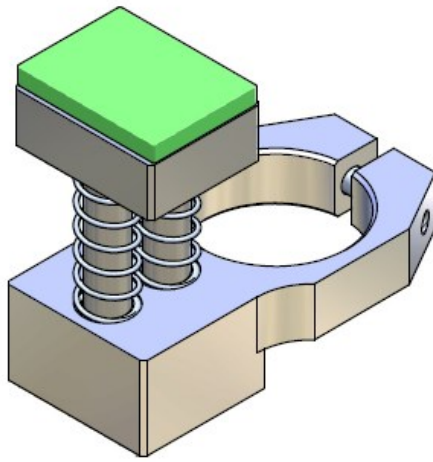
	VITON
UV ageing, weather -resistance UV-Alterung, Witterungsbeständigkeit	☺
Low temperature limit Niedrige Temperaturgrenze	-10°C
High temperature limit (continuous) Hohe Temperaturgrenze (kontinuierlich)	180°C
High temperature limit (< 30 sec.) Hohe Temperaturgrenze (< 30 sec.)	210°C
Leaving few marks Einige Spuren bleiben	☺

**CA.09 GRF VSX**

**GRF**

. Stopper for grippers

. Anschlagstück



Article no.	A	B	M	Insert	Weight
GRF14.VSX	$\phi$ 14	20	CA.GRF.14...	GRF14.95.08.V	15 g
GRF20.VSX	$\phi$ 20	25	CA.GRF.20...	GRF20.95.08.V	20 g
GRF30.VSX	$\phi$ 30	37	CA.GRF.30...	GRF30.95.08.V	50 g

Remarks / Anmerkungen:

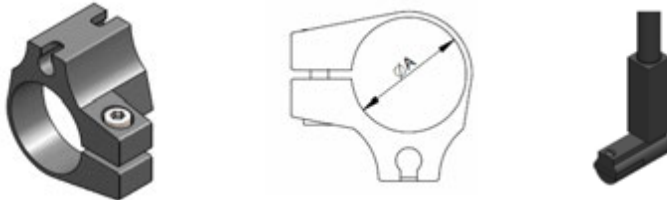
Material / Werkstoff: Aluminium / Alluminio

Table / Tabelle

**M** = Suitable for Gripper finger GRF...  
Passend für Greiffinger GRF...

. Holder for Cylinder sensor

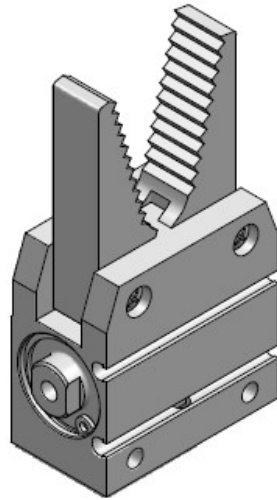
. Halter für Zylindersensor



Article no.	A	M	Sensor
CA.TIK.14007	$\phi$ 14	CA.GRF.14...	KT38...
CA.TIK.20007	$\phi$ 20	CA.GRF.20...	
CA.TIK.30007	$\phi$ 30	CA.GRF.30...	

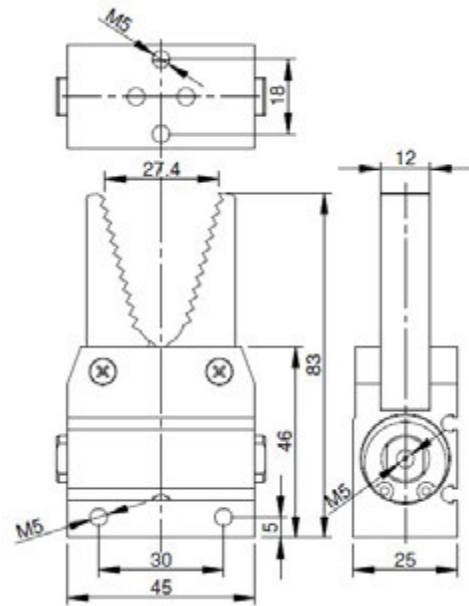
# GZA.AA24 S2

. Selfcentering sprue gripper



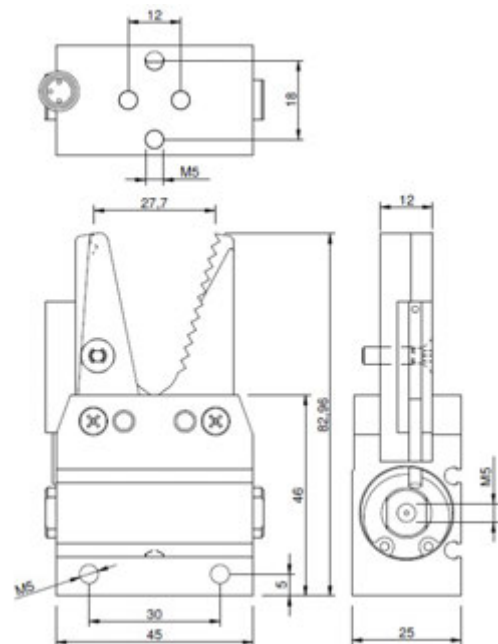
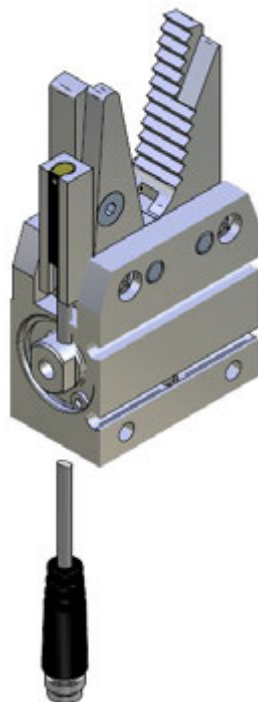
# GZA

. Selbstzentrierende Anguss Greifzange



Article no.	Work principle	Sensor	Weight
CA.GZA.AA24	Double effect		115 g
CA.GZA.AA24.NO	Normally Open		151 g
CA.GZA.AA24.NOS2		KT58REQD	
CA.GZA.AA24.NOSN		KT58NM8	
CA.GZA.AA24.NOSP		KT58PM8	

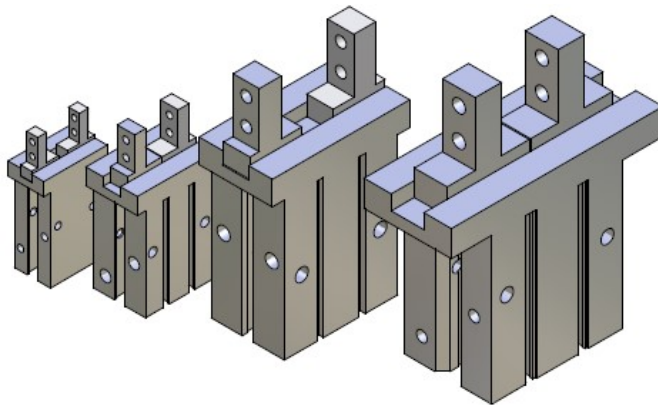
NOS2 / NOSN / NOSP



**CA.09.05 GS**
**GS**

. Parallel gripper Easy GS

. Parallelgreifer easy GS

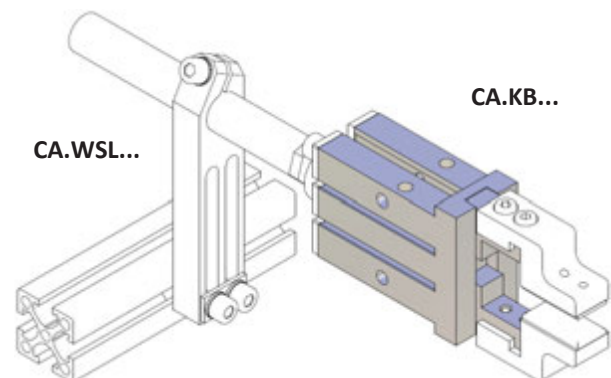
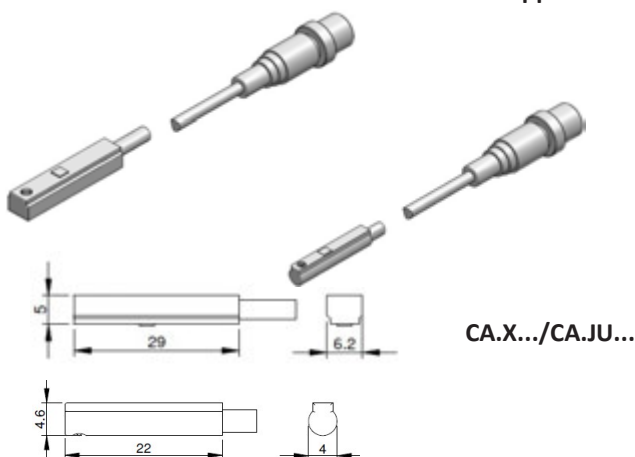


Remarks / Anmerkungen:

 Available also with closing spring (.NC) or  
 with opening spring (.NO)

 Auch erhältlich mit Schließfeder (.NC) oder  
 mit Öffnungsfeder (.NO)

Article no.	Bore size	Stroke	Opening total gripping force	Closing total gripping force	Sensor		Weight
					PNP	NPN	
CA.09.05.009 CA.09.05.009.NC CA.09.05.009.NO	10	4	22 N	34 N	DS1HPC08	DS1HNC08	55 g
CA.09.05.009.L		8					
CA.09.05.010 CA.09.05.010.NC CA.09.05.010.NO	16	6	68 N	90 N			135 g
CA.09.05.010.L		12					
CA.09.05.011 CA.09.05.011.NC CA.09.05.011.NO	20	10	84 N	132 N	KT38PM8 KT38P3M KT58PM8 KT58P3M	KT38NM8 KT38N3M KT58NM8 KT58N3M	235 g
CA.09.05.011.L		18					270 g
CA.09.05.012 CA.09.05.012.NC CA.09.05.012.NO	25	14	130 N	208 N			430 g
CA.09.05.012.L		22					470 g
CA.09.05.013	32	22	316 N	386 N			715 g
CA.09.05.014	40	30	508 N	636 N			1275 g

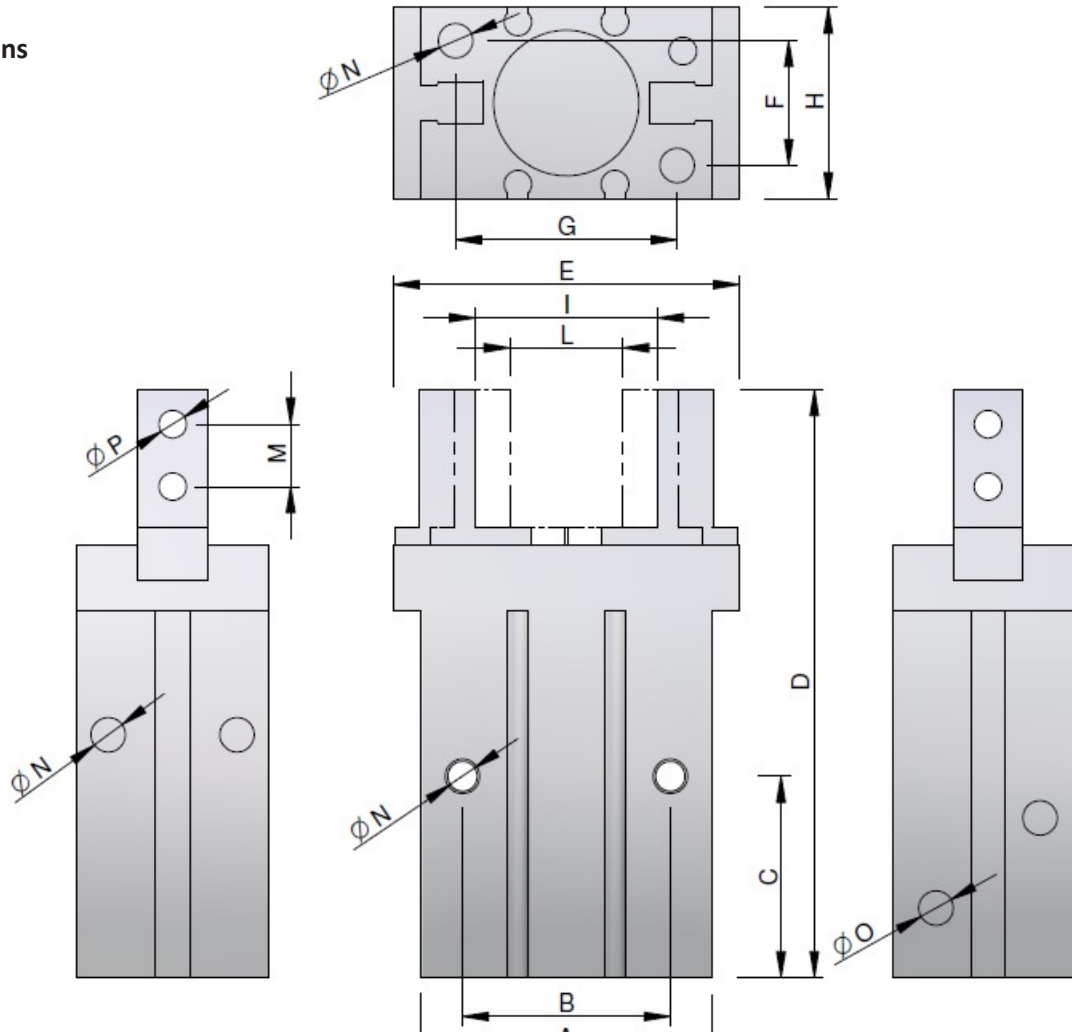
**Application example / Anwendungsbeispiel**


# CA.09.05 GS

GS

. Dimensions

. Maße



Article no.	Bore size	A	B	C	D	E	F	G	H	I open	L closed	Stroke	M	N	O	P
CA.09.05.009 CA.09.05.009.NC CA.09.05.009.NO	10	23	16	23	57	30	12	18	16.4	16	11.5	4	5.7	M3	M3	M2.5
CA.09.05.009.L				25		35				20.5		8				
CA.09.05.010 CA.09.05.010.NC CA.09.05.010.NO	16	30.5	24	24.5	67	39	15	22	23.6	21.5	14.9	6	7	M4		M3
CA.09.05.010.L				31		70				47		28.5				
CA.09.05.011 CA.09.05.011.NC CA.09.05.011.NO	20	42	30	29	85	53	18	32	27.5	27.5	16.5	11	9	M5	M5	M4
CA.09.05.011.L				36		90				62		35.5				
CA.09.05.012 CA.09.05.012.NC CA.09.05.012.NO	25	52	36	30	102	71	22	40	33.5	34	19	14	12	M6		M5
CA.09.05.012.L				40		106				75		42.6				
CA.09.05.013	32	60	46	40	113	97	26	46	40	47	26	22	14	M6		M6
CA.09.05.014	40	72	56	49	139	119	32	56	48	61,35	30	30	17	M8		M8

**CA.09 APGE**

**GS**

. Adapter for parallel gripper GS

. Adapter für Parallelgreifer GS

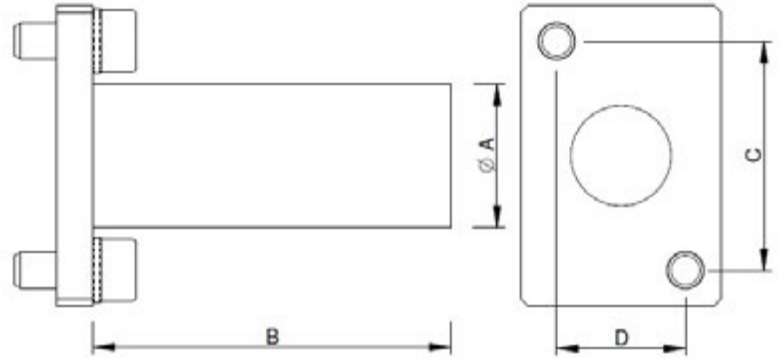
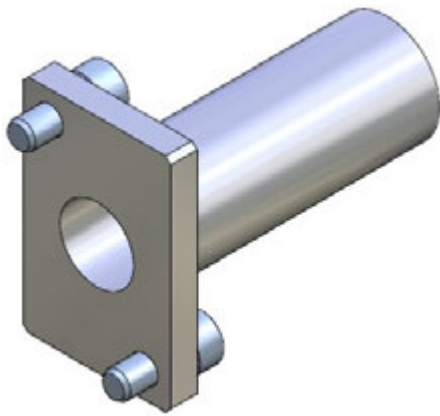


Table / Tabelle

M = Suitable for GS...  
Passend für GS...

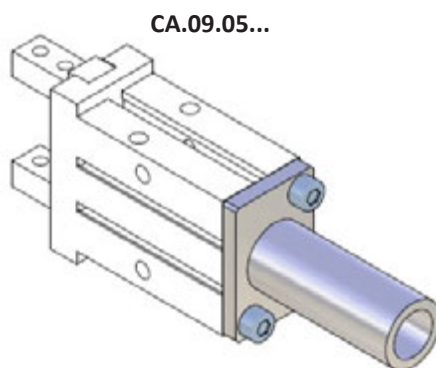
Article no.	A	B	C	D	M	Weight
CA.APGE.10.10.30	10	30	18	12	CA.09.05.009 / L	11 g
CA.APGE.16.14.40	14	40	22	15	CA.09.05.010 / L	21 g
CA.APGE.20.20.50	20	5	32	18	CA.09.05.011 / L	38 g
CA.APGE.25.20.50			40	22	CA.09.05.012 / L	55 g
CA.APGE.32.20.50			46	26	CA.09.05.013	102 g
CA.APGE.40.20.50			56	32	CA.09.05.014	140 g

Remarks / Anmerkungen:

Material / Werkstoff: Aluminium

Surface: silver anodized  
Oberfläche: eloxiert

Application example / Anwendungsbeispiel

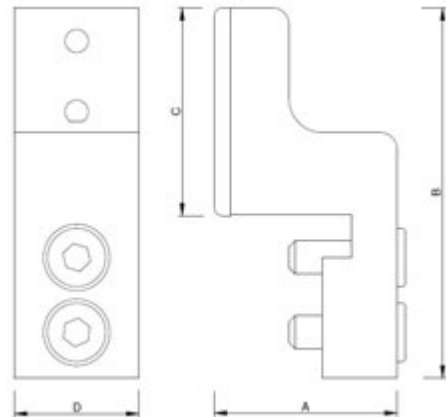
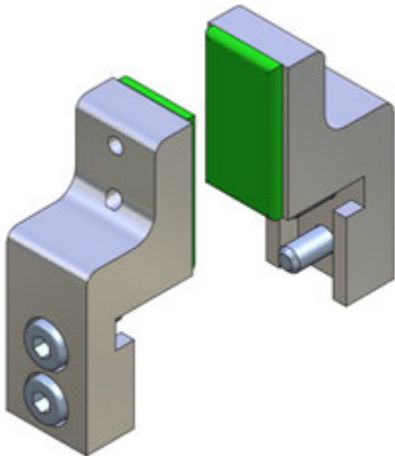


# CA.09 KB

GS

. Jaws for Parallel Gripper GS (complete)

. Grundbacken für Parallelgreifer GS (komplett)



Article no.	Insert	A	B	C	D	M	Weight
CA.KB.10	GRF14.95.08	15.5	27	14	10	CA.09.05.009 / L	14 g
CA.KB.16	GRF20.95.08	18.5	35	20	15	CA.09.05.010 / L	28 g
CA.KB.20	PAC.20.16P.03	22	44.5	25		CA.09.05.011 / L	41 g
CA.KB.25	PAC.20.16P.03	29	55		20	CA.09.05.012 / L	73 g
CA.KB.32	GRF30.95.08.V	36	65.5	30	25	CA.09.05.013	166 g

Table / Tabelle

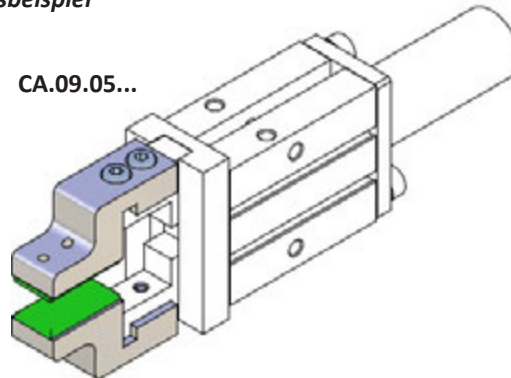
M = Suitable for CA.09.05...  
Passend für CA.09.05...

Remarks / Anmerkungen:

Material / Werkstoff: Aluminium

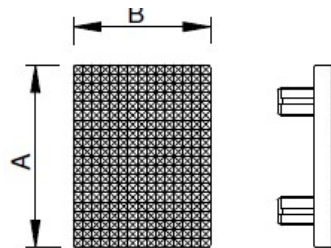
Surface: silver anodized  
Oberfläche: eloxiert

Application example / Anwendungsbeispiel



. Insert

GRF...



. VITON Einlage

PAC...



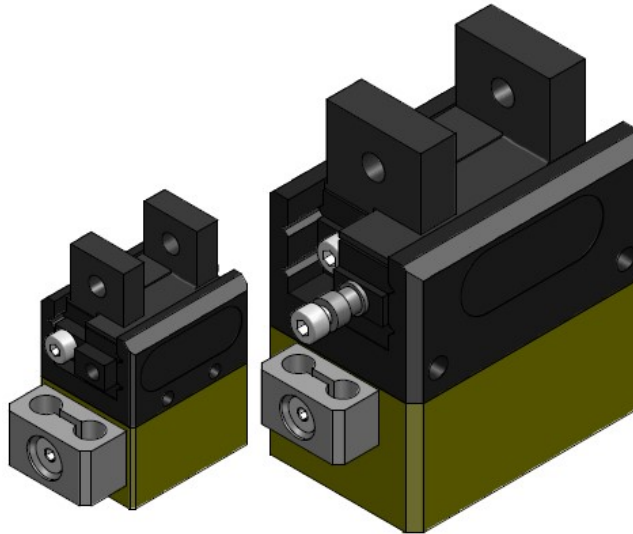
Article no.		Colour	A	B	M	Weight
GRF14.95.08.V	VITON	Green	14	10	CA.KB.10	1 g
GRF20.95.08.V			20	15	CA.KB.16	2 g
PAC.20.16P.03.V			25	13	CA.KB.20 CA.KB.25	3 g

## CA.09 MPG

. Parallel gripper

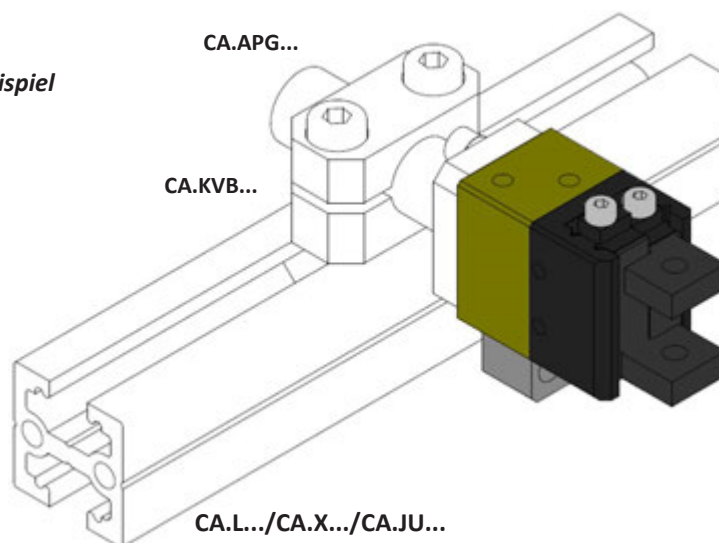
## MPG

. Parallelgreifer



Article no.	Stroke	Opening total gripping force	Closing total gripping force	Weight
CA.MPG.20	4	24 N	28 N	40 g
CA.MPG.25	6	28 N	31 N	60 g
CA.MPG.32	8	55 N	65 N	120 g
CA.MPG.40	12	90 N	110 N	200 g
CA.MPG.50	16	155 N	175 N	350 g
CA.MPG.64	20	190 N	200 N	600 g

Application example / Anwendungsbeispiel



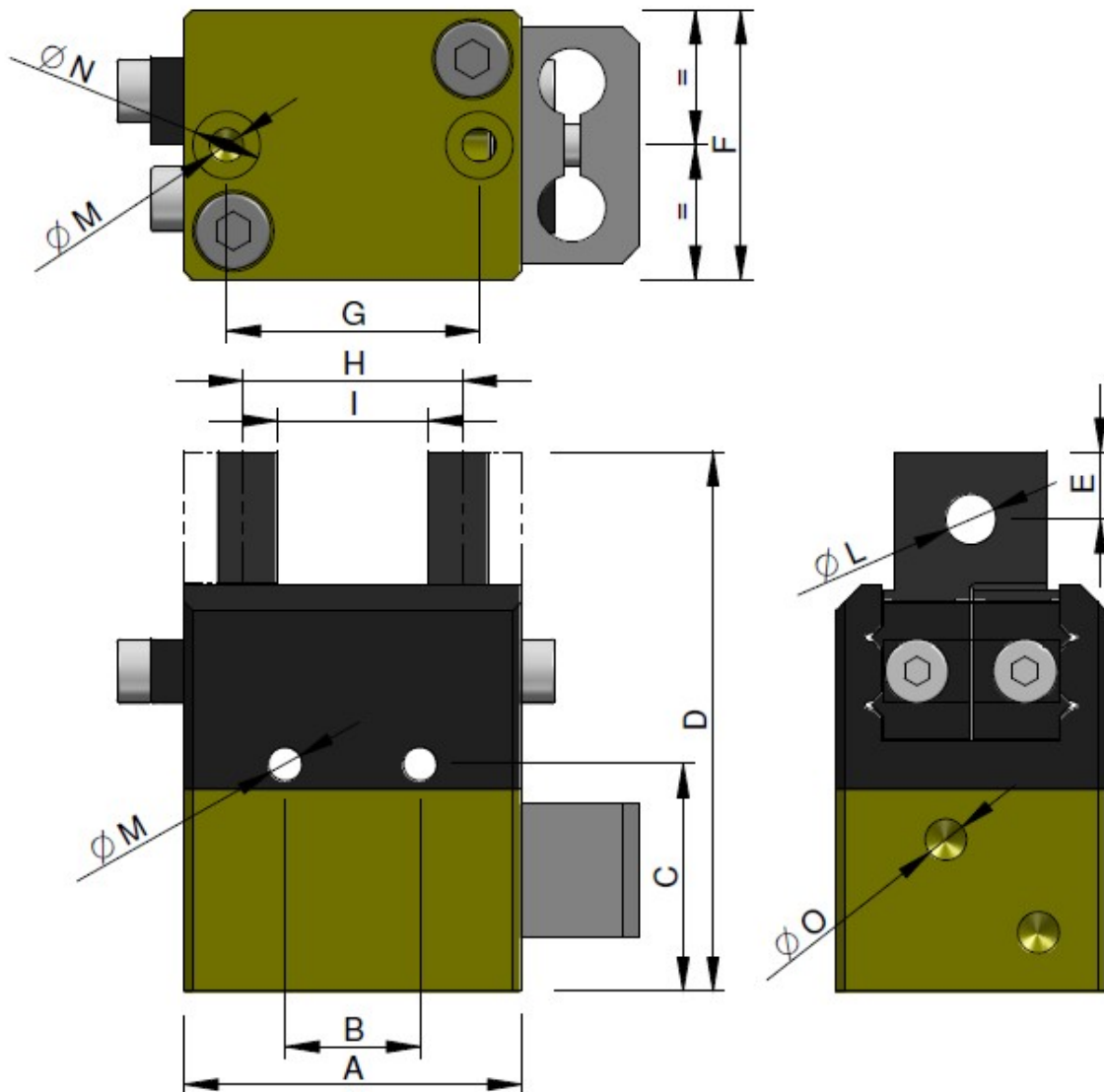


# CA.09 MPG

MPG

. Dimensions

. Maße



Article no.	Bore size	A	B	C	D	E	F	G	H	I	L	M	N	O
CA.MPG.20	20	20	8	13.5	32	4	16	15	13	9	3	M2.5	4	M3
CA.MPG.25	25	26	10	15	34		18	20	17	11		M3	5	
CA.MPG.32	32	32		10	19	43	5	22	25	22	14	4	M4	6
CA.MPG.40	40	40	23.5		51	6	26	32	28	16	M5		8	
CA.MPG.50	50	50	40	26.5	60	7	30	40	35	18	5	M5	8	M5
CA.MPG.64	64	64	52	29	70	8	35	52	44	24	6	M5	8	

**CA.09 APG**

**MPG**

. Adapter for parallel gripper MPG

. Adapter für Parallelgreifer MPG

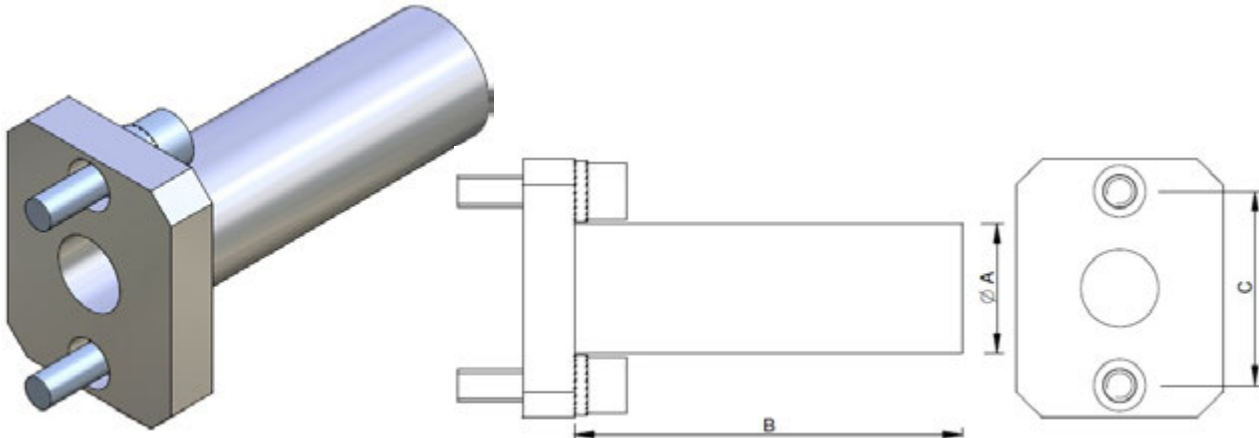


Table / Tabelle

M = Suitable for MPG...  
Passend für MPG...

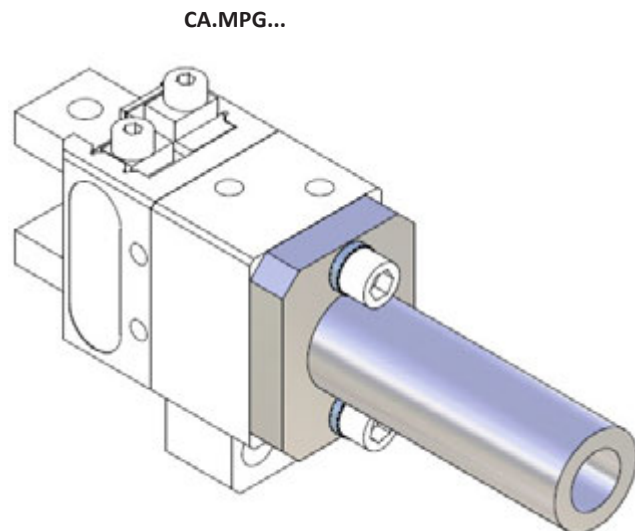
Article no.	A	B	C	M	Weight
CA.APG.20.10.30	10	30	15	CA.MPG.20	8 g
CA.APG.25.14.40	14	40	20	CA.MPG.25	16 g
CA.APG.32.14.40			25	CA.MPG.32	23 g
CA.APG.40.14.50	20	50	30	CA.MPG.40	22 g
CA.APG.40.20.50			32		30 g
CA.APG.50.20.50			40	CA.MPG.50	48 g
CA.APG.65.20.50			52	CA.MPG.64	63 g

Remarks / Anmerkungen:

Material / Werkstoff: Aluminium

Surface: silver anodized  
Oberfläche: eloxiert

Application example / Anwendungsbeispiel







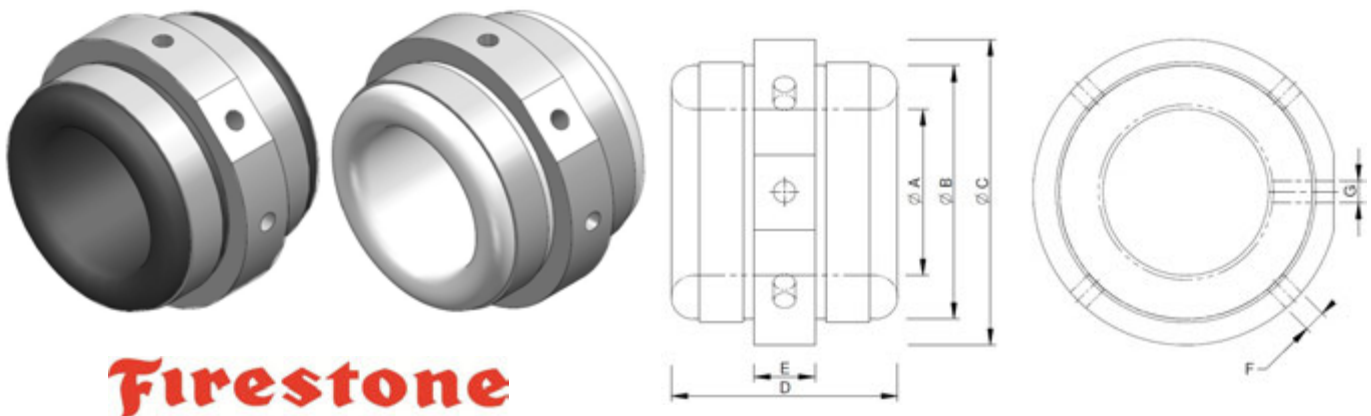


**CA.09.13**

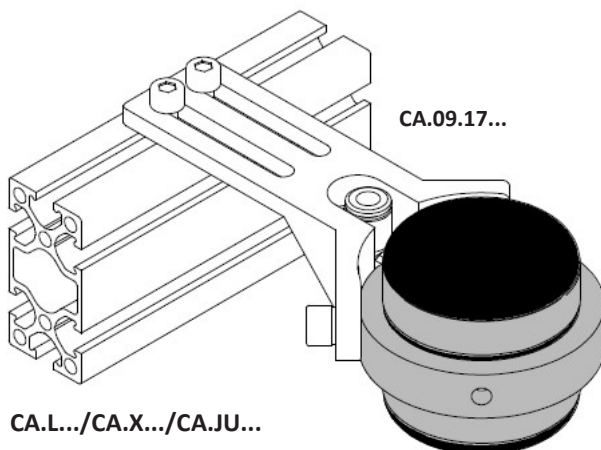
. Airgripper

**FIRESTONE**

. Pneumatische Außengreifer


**Firestone**

Article no.	FIRESTONE Code	Material	Working range	Maximum restricted pressure allowed	A	B	C	D	E	F	G	Weight
CA.09.13.05.15 CA.09.13.05.15.S	WP1-M58-5001 WP1-M58-5005	Neoprene (N) Silicone (S)	5-15 mm	1.5 bar 1.0 bar	19	33	40	36	10	M5	M5	60 g
CA.09.13.10.25 CA.09.13.10.25.S	WP1-M58-5002 WP1-M58-5006	Neoprene (N) Silicone (S)	10-25 mm	1.5 bar 1.0 bar	27	48	60	48	13	M6	M6	145 g
CA.09.13.15.35 CA.09.13.15.35.S	WP1-M58-5003 WP1-M58-5007	Neoprene (N) Silicone (S)	15-35 mm	1.5 bar 1.0 bar	37	58	70	52	14	M5	M6	210 g
CA.09.13.20.45 CA.09.13.20.45.S	WP1-M58-5004 WP1-M58-5008	Neoprene (N) Silicone (S)	20-45 mm	1.5 bar 1.0 bar	48	69	80	56	15	M8	G 1/8	285 g

**Application example / Anwendungsbeispiel**

**Remarks / Anmerkungen:**

 Temperature resistance / *Temperaturbeständigkeit*

Neoprene (N)

-18° to 52° C

 Silicone / *Silikon* (S)

-30° to 160° C

 Leaving few marks / *Abdruckarm*

(N) ☺

(S) ☹

## CA.09.13

**FIRESTONE**

. Airgripper

. Pneumatische Außengreifer

Air Pressure 0 MPa

Air Pressure 0.05 MPa

Air Pressure 0.1 MPa



## CA.09.17

. Mounting Brackets

. Klemmstücke

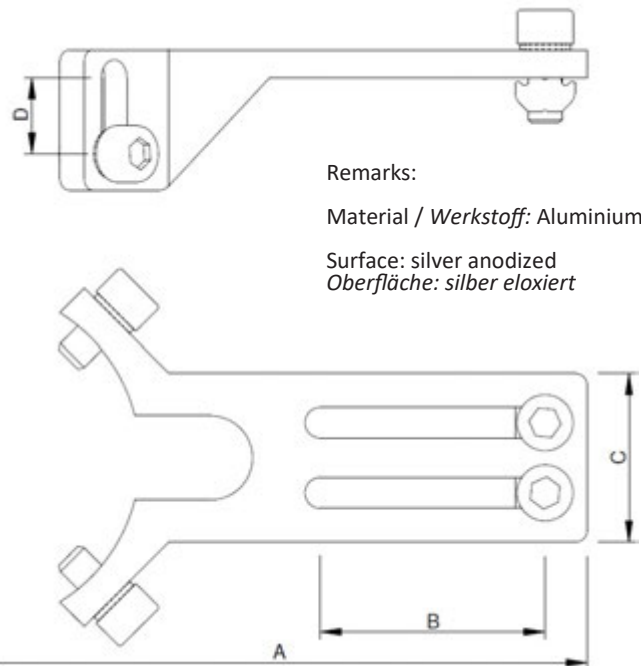
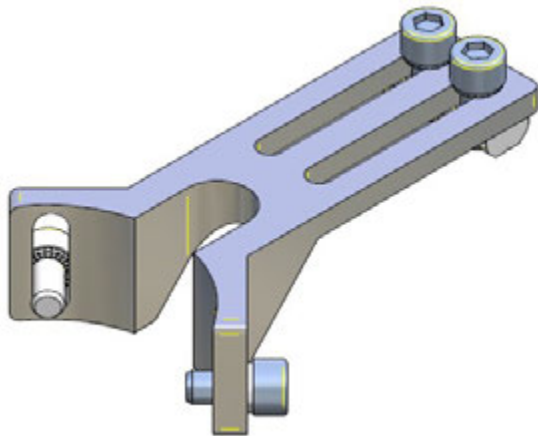


Table / Tabelle

**M** = Suitable for CA.09.13...  
Passend für CA.09.13...

**M1** = Suitable for PROFILE...  
Passend für PROFILE...

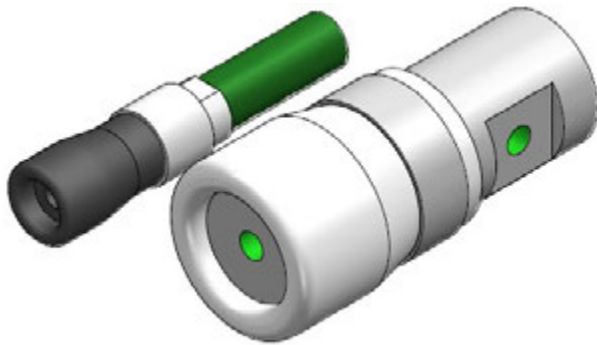
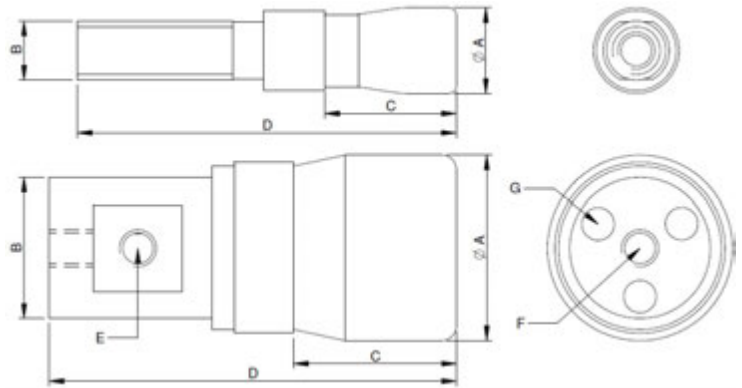
Article no.	M	M1	A	B	C	D	Weight
CA.09.17.0515.X	CA.09.13.05.15	CA.X../ CA.JU..	100	40	25	15	31 g
CA.09.17.1025.X	CA.09.13.10.25		110		30		46 g
CA.09.17.1535.X	CA.09.13.15.35		115		40		57 g
CA.09.17.2045.X	CA.09.13.20.45		120		69 g		

**CA.09.14**

. Airpicker

**FIRESTONE**

. Pneumatische Innengreifer

Article no.	FIRESTONE Code	Material	Working range	Maximum restricted pressure allowe	A	B	C	D	E	F	G	Weight
CA.09.14.06	WP1-M58-0001	Neoprene (N)	8.5-10 mm	4 bar	8	M6	17.5	51	/	M3	/	8 g
CA.09.14.07	WP1-M58-0002		10-12 mm		9.5				/		/	12 g
CA.09.14.09	WP1-M58-0003		12-17 mm		11	M8X1.25	/	17 g				
CA.09.14.10	WP1-M58-0004		16-21 mm		14	Ø10	21	52	/		28 g	
CA.09.14.14	WP1-M58-0005	Neoprene (N)	21-27 mm	5 bar 1.8 bar	19	Ø14	22	56	M5	M5	/	60 g
CA.09.14.14.S	WP1-M58-0024	Silicone (S)										
CA.09.14.17	WP1-M58-0006	Neoprene (N)	24-32 mm	5 bar 1.8 bar	22	Ø17	22	56	M5	M5	/	85 g
CA.09.14.17.S	WP1-M58-0025	Silicone (S)										
CA.09.14.19	WP1-M58-0007	Neoprene (N)	28-36 mm	5 bar 1.8 bar	25	Ø19	22	55	M5	M5	/	105 g
CA.09.14.19.S	WP1-M58-0018	Silicone (S)										
CA.09.14.22	WP1-M58-0008	Neoprene (N)	30-44 mm	5 bar 1.8 bar	27	Ø22	28	64	M5	M5	/	160 g
CA.09.14.22.S	WP1-M58-0026	Silicone (S)										
CA.09.14.25	WP1-M58-0009	Neoprene (N)	32-52 mm	5 bar 1.8 bar	29	Ø25	34	76	M5	M5	/	245 g
CA.09.14.25.S	WP1-M58-0019	Silicone (S)										
CA.09.14.35	WP1-M58-0011	Neoprene (N)	45-65 mm	5 bar 1.8 bar	41	Ø34	42	71	G1/8	M6	/	180 g
CA.09.14.35.S	WP1-M58-0028	Silicone (S)										
CA.09.14.45	WP1-M58-0012	Neoprene (N)	58-85 mm	5 bar	51	Ø44	52	90	M6	M6	3-M6	370 g
CA.09.14.55	WP1-M58-0013		70-105 mm		63							Ø54

Remarks / Anmerkungen:

Temperature resistance / Temperaturbeständigkeit

Neoprene (N)

-18° to 52° C

Silicone / Silikon (S)

-30° to 160° C

Leaving few marks / Abdruckarm

(N) ☺

(S) ☹



## CA.09.14

. Airpicker

**FIRESTONE**

. Pneumatische Innengreifer

Air Pressure 0 MPa



Air Pressure 0.15 MPa

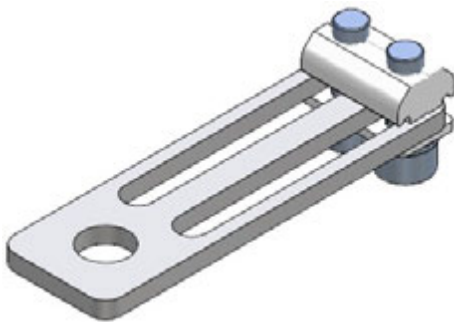


Air Pressure 0.30 MPa



## CA.09.18

. Mounting Brackets



Remarks / Anmerkungen:

Material / Werkstoff: Aluminium

Surface: silver anodized  
Oberfläche: eloxiert

. Klemmstücke

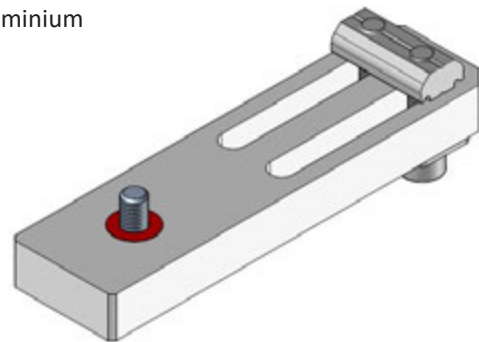


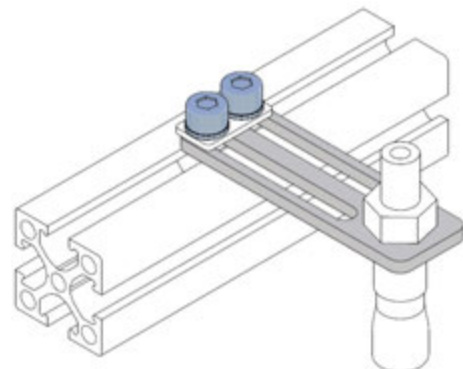
Table / Tabelle

**M** = Suitable for CA.09.14...  
Passend für CA.09.14...

**M1** = Suitable for PROFILE...  
Passend für PROFILE...

Article no.	M	M1	Weight
CA.04.20.06.X	CA.09.14.06 CA.09.14.07	CA.L./ CA.X..	34 g
CA.04.20.08.X	CA.09.14.09		35 g
CA.09.18.1014.X	CA.09.14.10		41 g
CA.09.18.1719.X	CA.09.14.14 CA.09.14.17 CA.09.14.19	CA.X../ CA.JU..	50 g
CA.09.18.2225.X	CA.09.14.22 CA.09.14.25		52 g
CA.09.18.35.JU	CA.09.14.35		78 g
CA.09.18.4555.JU	CA.09.14.45 CA.09.14.55		102 g

Application example / Anwendungsbeispiel

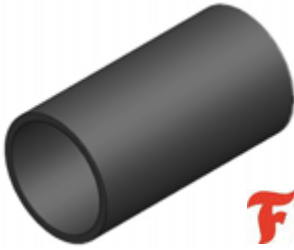


**CA.09.15**

. Protective Sleeve

**FIRESTONE**

. Schutzhülse



**Firestone**

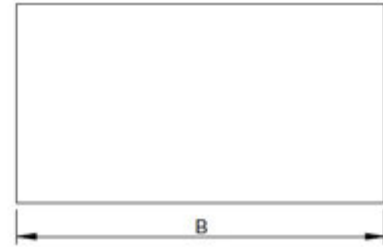
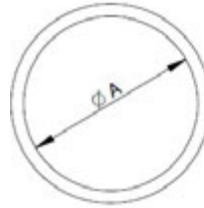
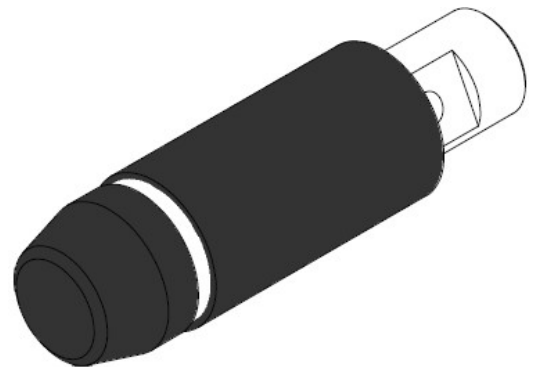


Table / Tabelle

M = Suitable for CA.09.14...  
Passend für CA.09.14...

Article no.	FIRESTONE Code	A	B	M	Weight
CA.09.15.001	WP1-358-1500	18	38	CA.09.14.14	1 g
CA.09.15.002	WP1-358-1501	20		CA.09.14.17	
CA.09.15.003	WP1-358-1502	23		CA.09.14.19	
CA.09.15.004	WP1-358-1503	25	44	CA.09.14.22	
CA.09.15.005	WP1-358-1504	27	54	CA.09.14.25	
CA.09.15.006	WP1-358-1505		64	CA.09.14.35	
CA.09.15.007	WP1-358-1506	37	73	CA.09.14.45	2 g
CA.09.15.008	WP1-358-1507	47	79	CA.09.14.55	

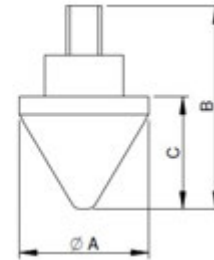
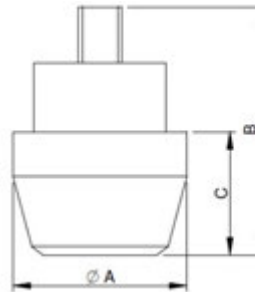
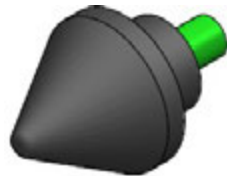
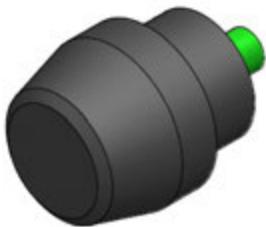


**CA.09.16**

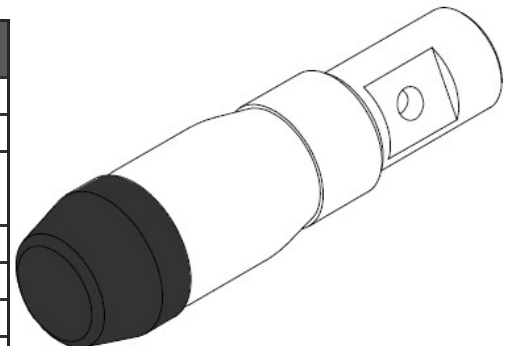
. Nose Cones

**Firestone**

. Nasenkonus



Article no.	FIRESTONE Code	A	B	C	M	Weight
CA.09.16.001	WP1-358-1006	14.7	23.1	12.7	CA.09.14.10	3 g
CA.09.16.002	WP1-358-1016	19.8	28.3	14	CA.09.14.14	5 g
CA.09.16.003	WP1-358-1017	22.9			CA.09.14.17	6 g
CA.09.16.004	WP1-358-1018	27.9			CA.09.14.19	
CA.09.16.005	WP1-358-1019	28.7	29.3		CA.09.14.22	7 g
CA.09.16.006	WP1-358-1020	29.7			CA.09.14.25	8 g
CA.09.16.007	WP1-358-1021	42.7	32.6	17.3	CA.09.14.35	10 g
CA.09.16.008	WP1-358-1022	51.6			CA.09.14.45	12 g
CA.09.16.009	WP1-358-1023	63.8			CA.09.14.55	14 g



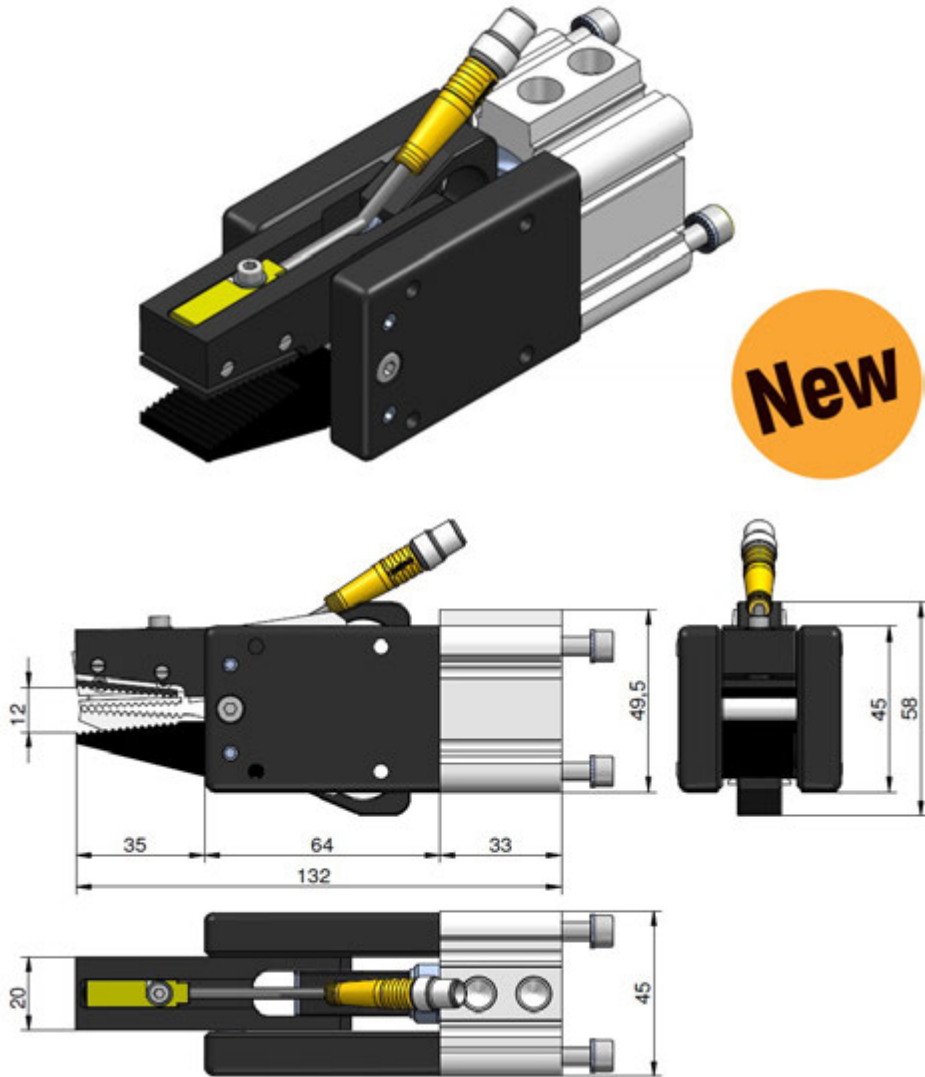


**CA.09 GZ**

**GZ**

. Gripper high grip force

. Greifzange extrem große Schließkraft



Article no.	Closing force (at 6 bar)	Weight
CA.GZ.32.S	350 N	226 g

**New**

Article no.
CA.GZ.32.FING.S

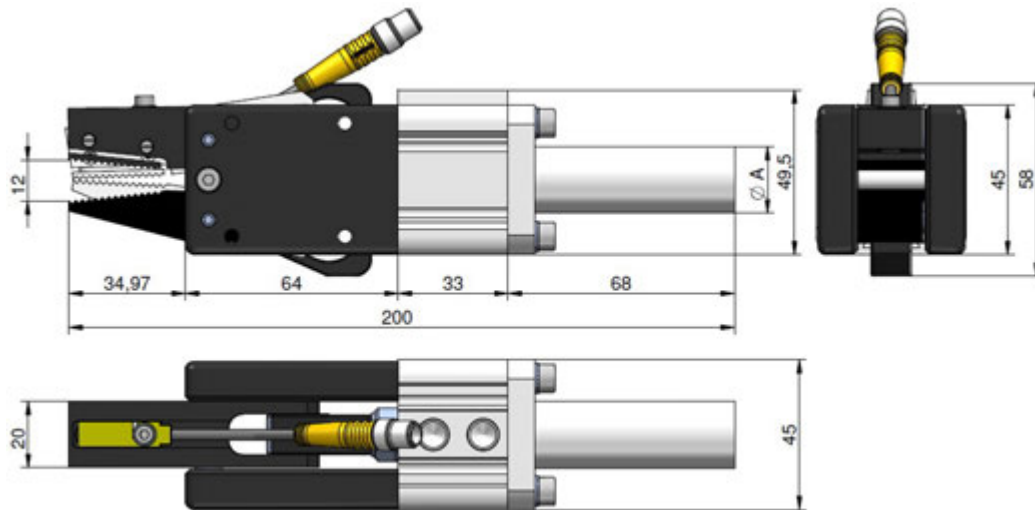
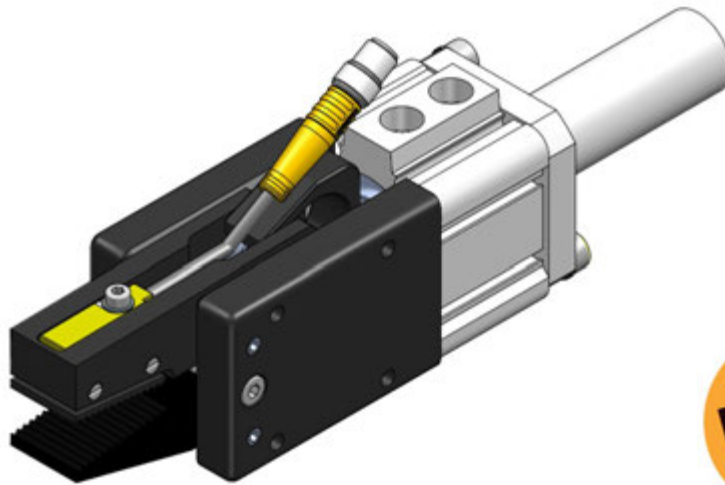


**CA.09 GZ**

**GZ**

. Gripper high grip force

. Greifzange extrem große Schließkraft



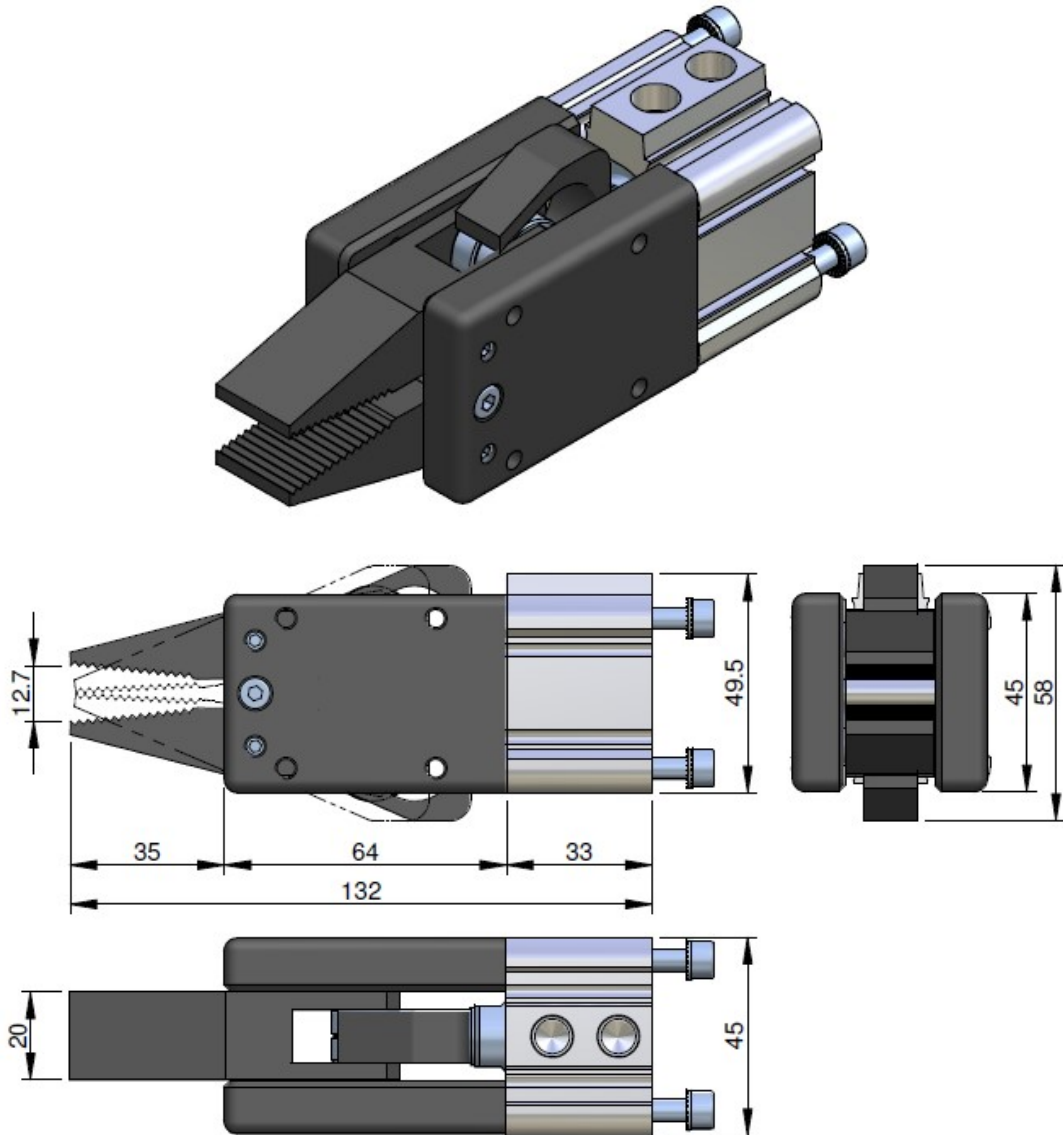
Article no.	Closing force (at 6 bar)	A	Weight
CA.GZ.3220.S	350 N	20	281 g

**CA.09 GZ**

**GZ**

. Gripper high grip force

. Greifzange extrem große Schließkraft



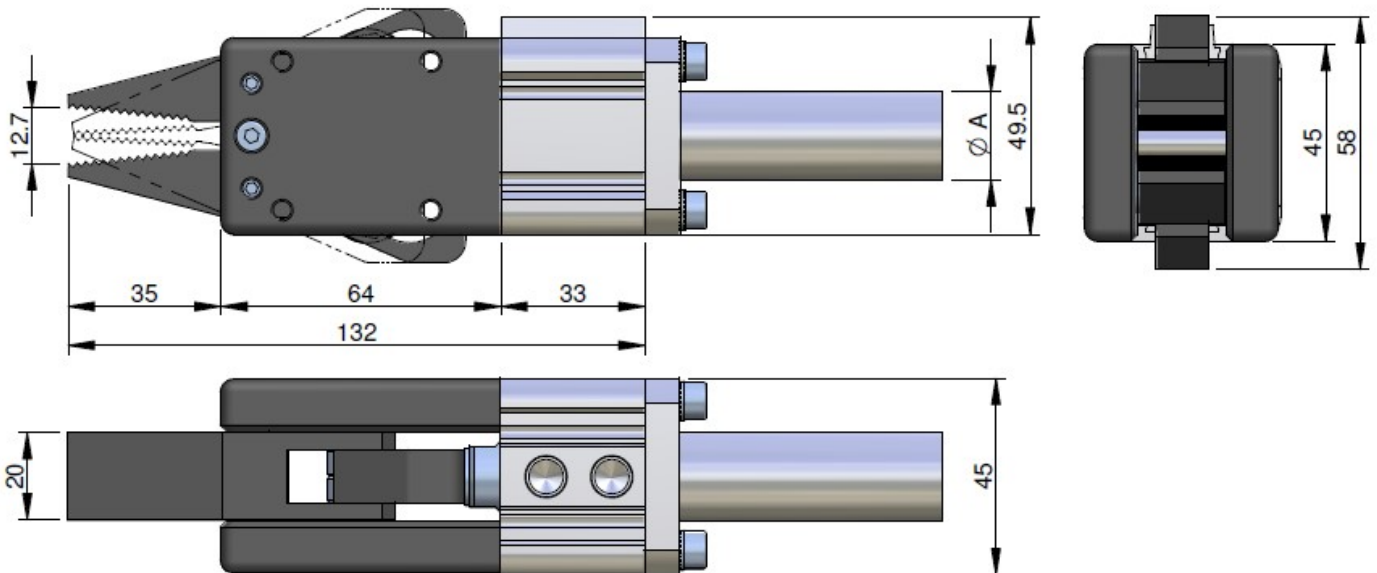
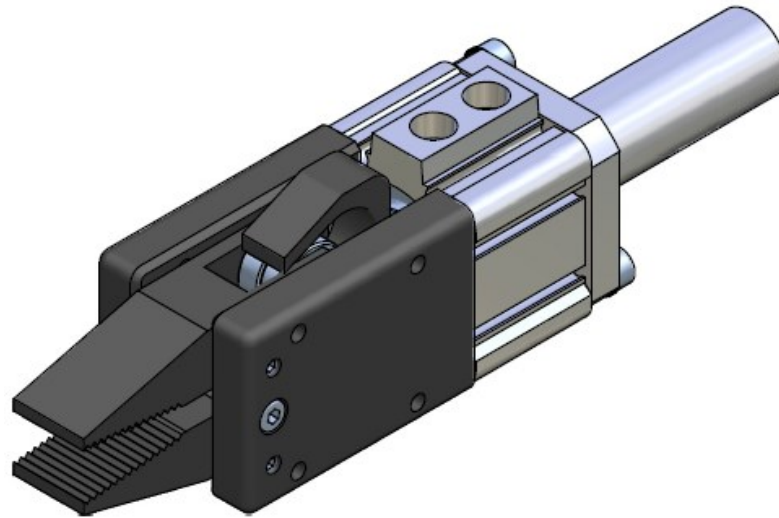
Article no.	Closing force (at 6 bar)	Weight
CA.GZ.32	350 N	509 g

## CA.09 GZ

GZ

. Gripper high grip force

. Greifzange extrem große Schließkraft



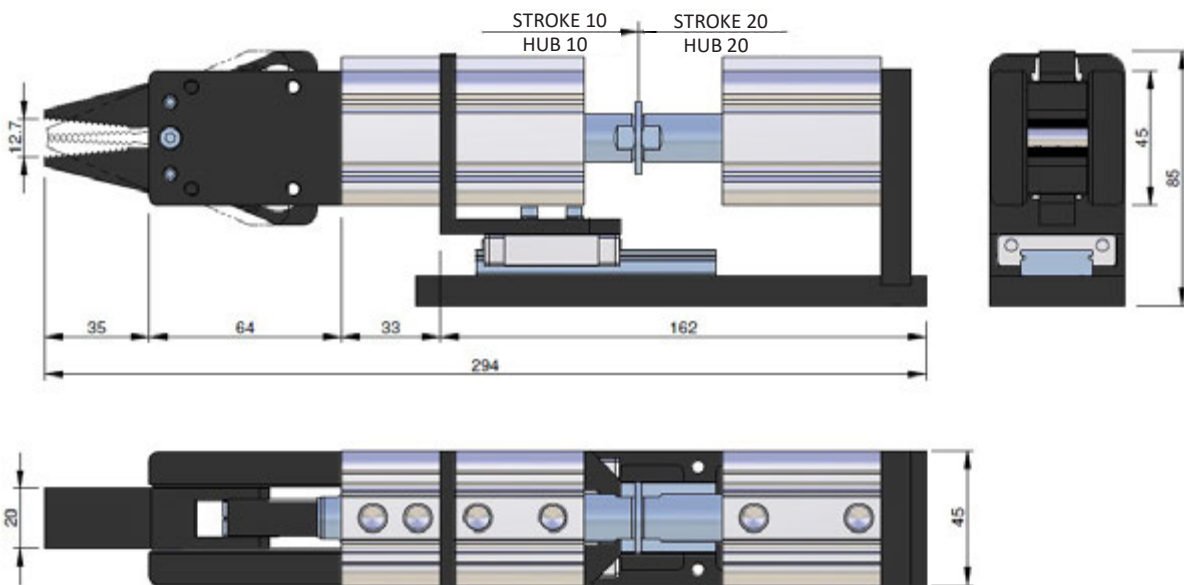
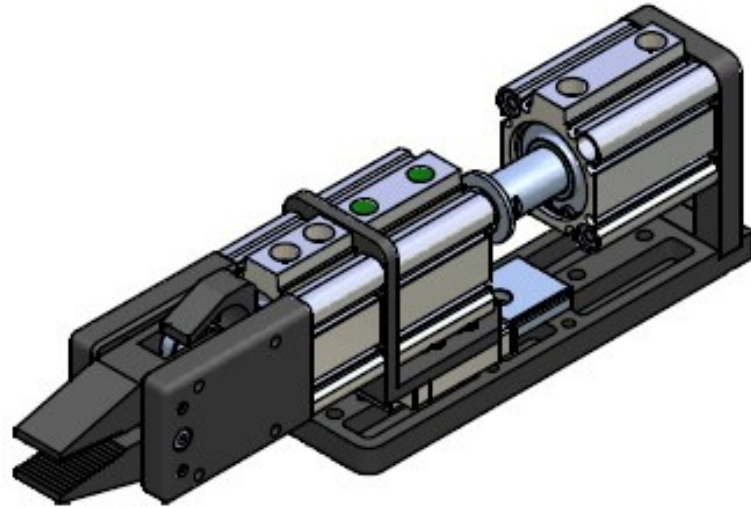
Article no.	Closing force (at 6 bar)	A	Weight
CA.GZ.3220	350 N	20	563 g
CA.GZ.3225		25	591 g

**CA.09 GZ**

**GZ**

. Gripper high grip force with double stroke

. Greifzange extrem große Schließkraft auf Doppel Hub



Article no.	Closing force (at 6 bar)	Weight
CA.GZ.322010	350 N	1400 g

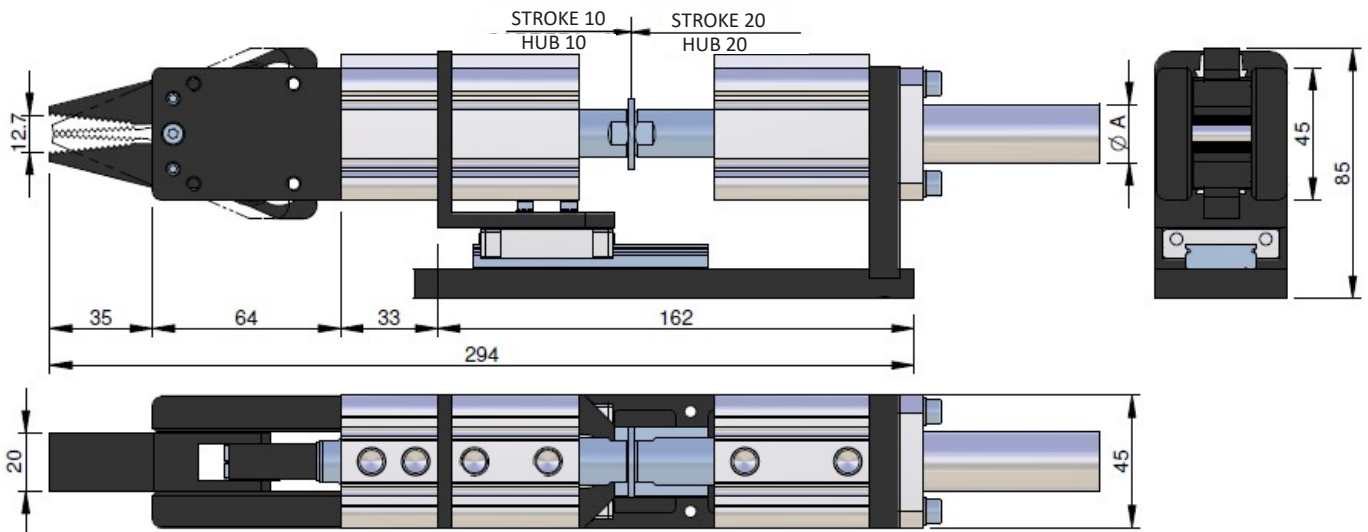
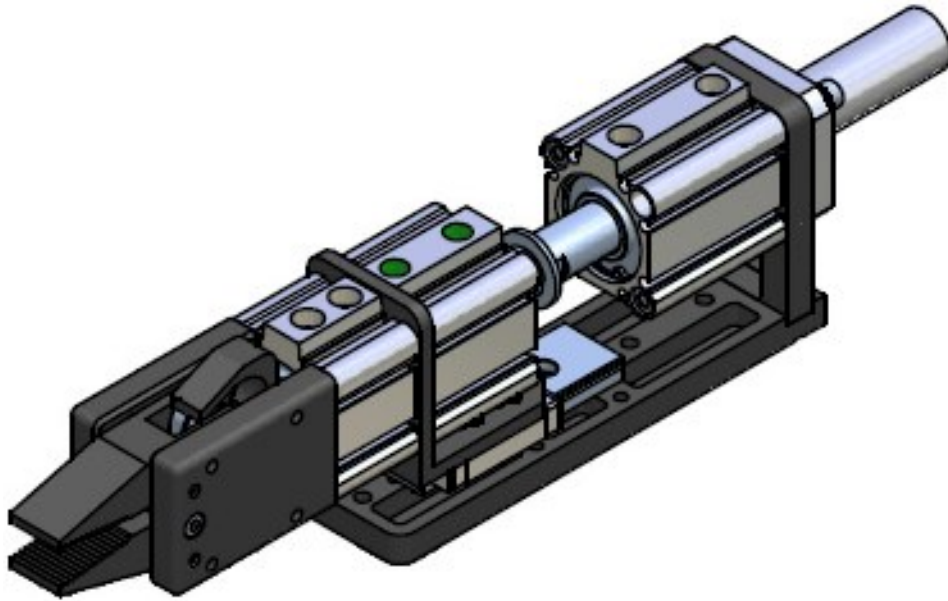


## CA.09 GZ

GZ

. Gripper high grip force with double stroke

. Greifzange extrem große Schließkraft auf Doppel Hub



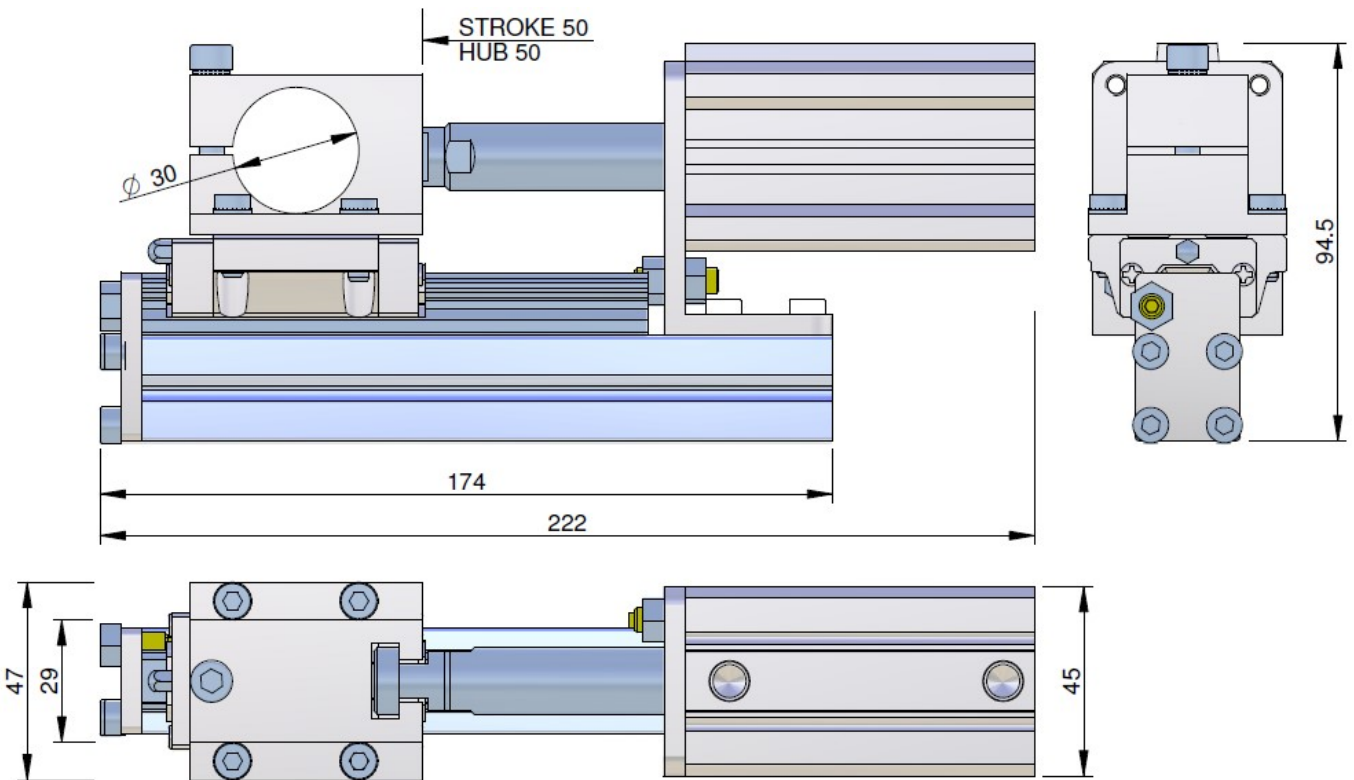
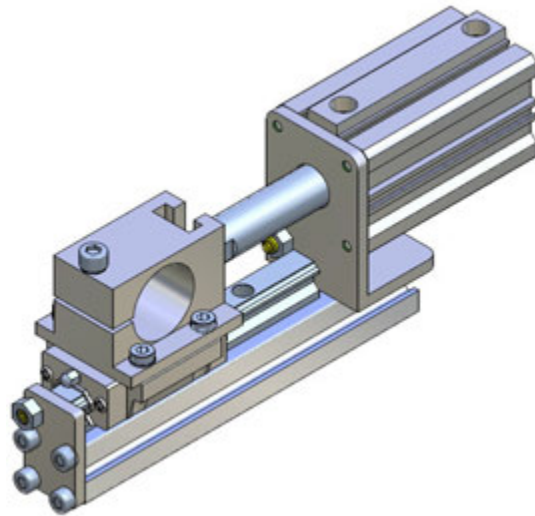
Article no.	Closing force (at 6 bar)	A	Weight
CA.GZ.32201020	350 N	20	1455 g
CA.GZ.32201025		25	1485 g

**CA.09 HEH**

. Linear Stroke Unit

**HEH**

. Hubeinheit Linearführung



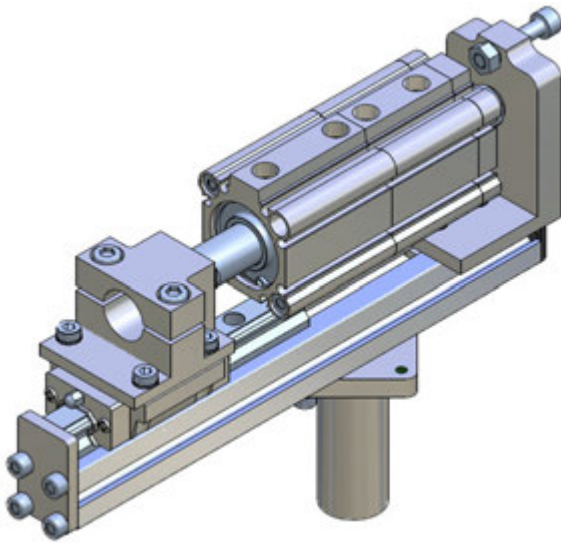
Article no.	Weight
CA.HEH.30.50	1052 g

# CA.09 UDHE

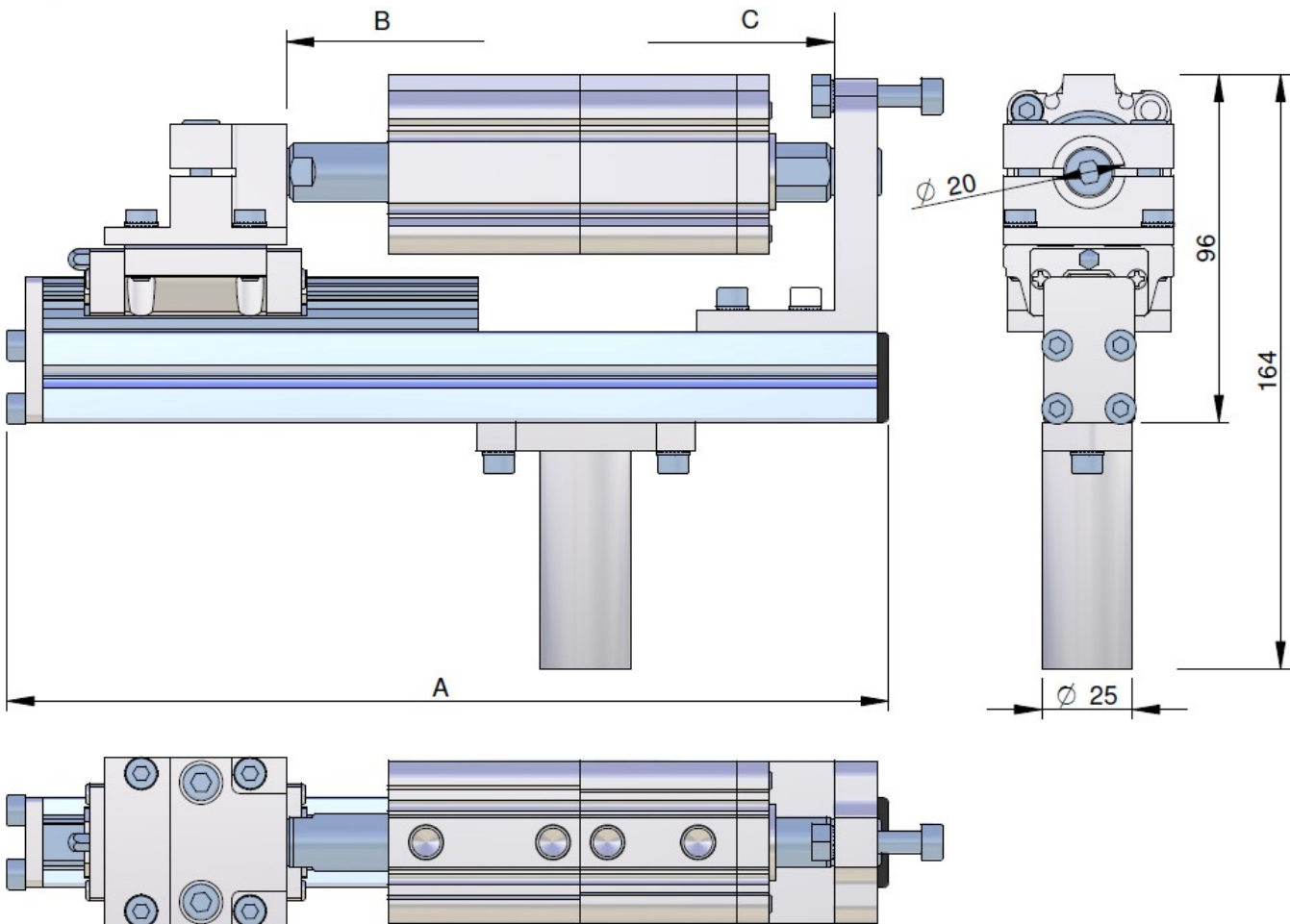
. Double Stroke Unit

# UDHE

. Doppelhubeinheit



Article no.	A	B	C
CA.UDHE.32102020	243	20	10
CA.UDHE.32203020	283	30	20



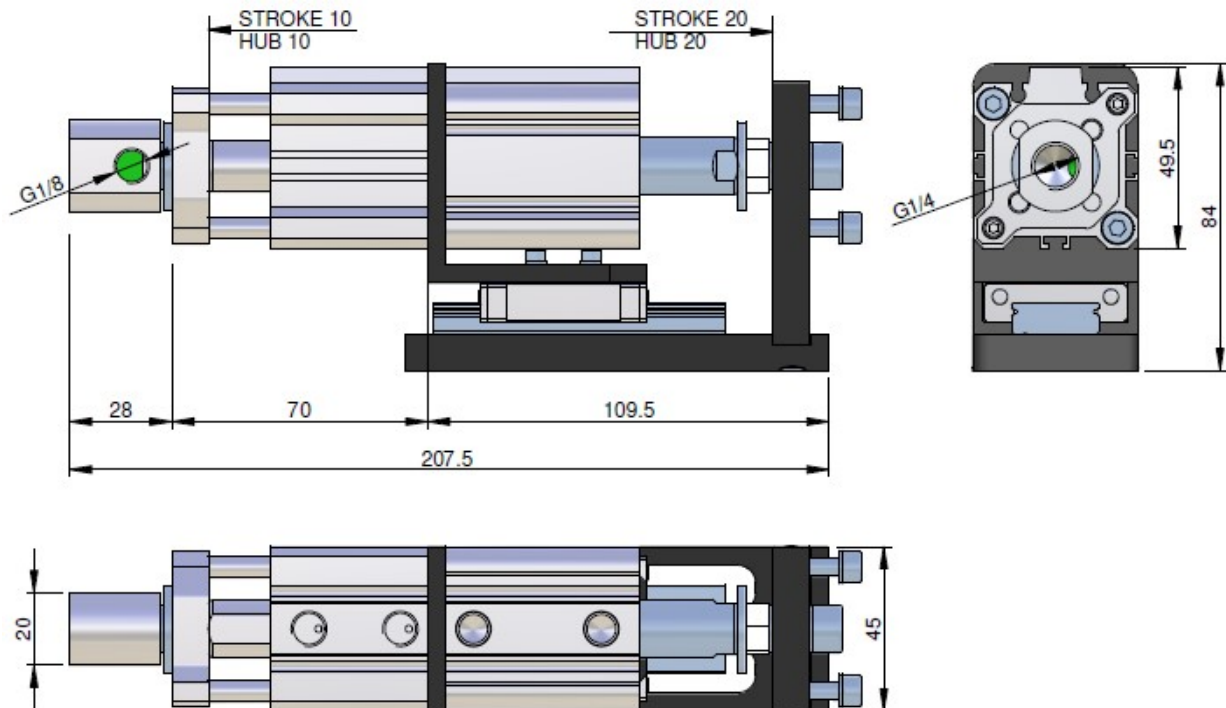
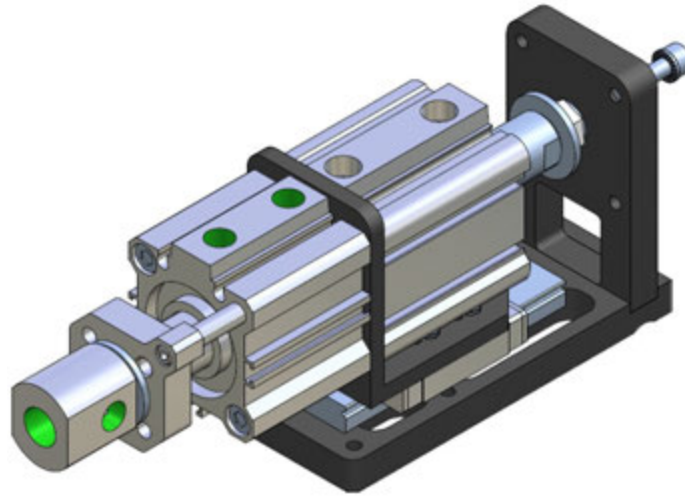
Article no.	Weight
CA.UDHE.32102020	1375 g
CA.UDHE.32203020	1455 g

**CA.09 BVAE**

**BVAE**

. Movable vacuum unit BVAE32  
with guided double stroke

. *Bewegliche Vakuumeinheit BVAE32  
mit Doppelhub geführt*



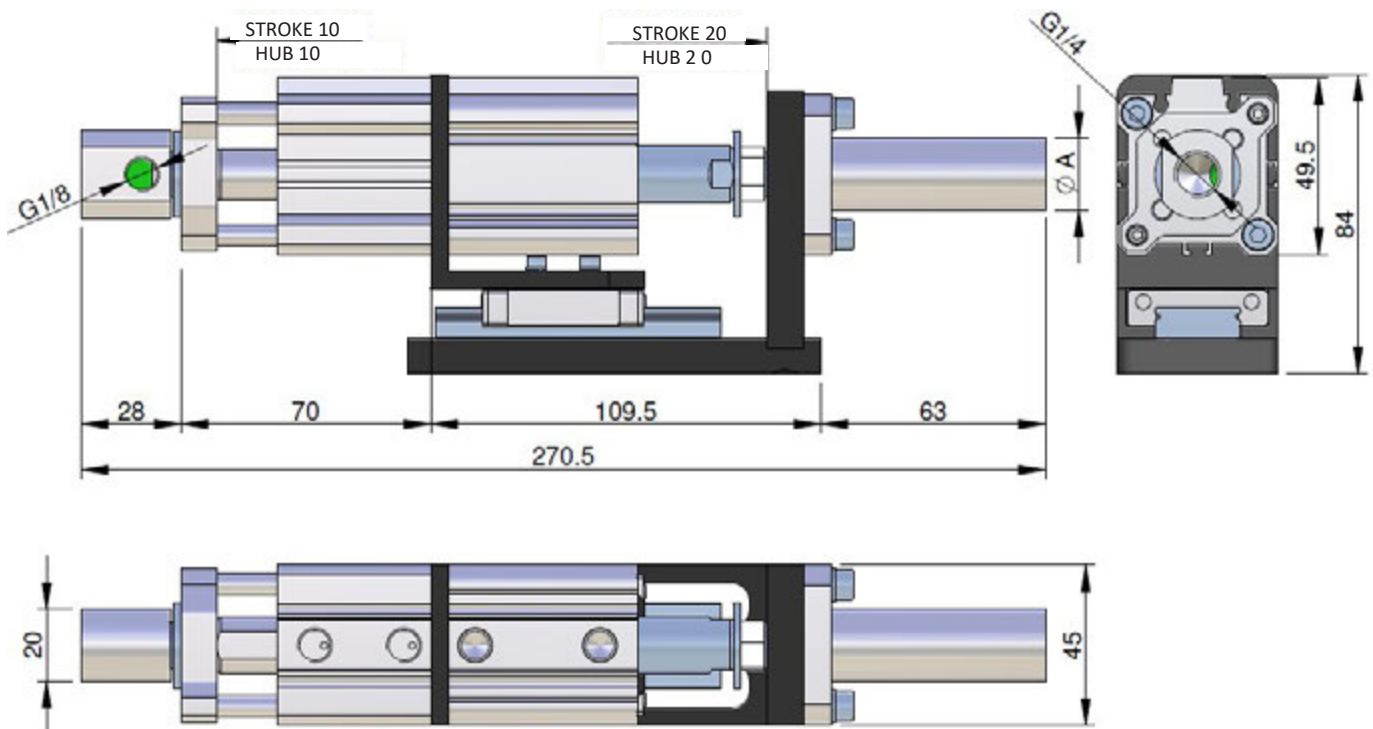
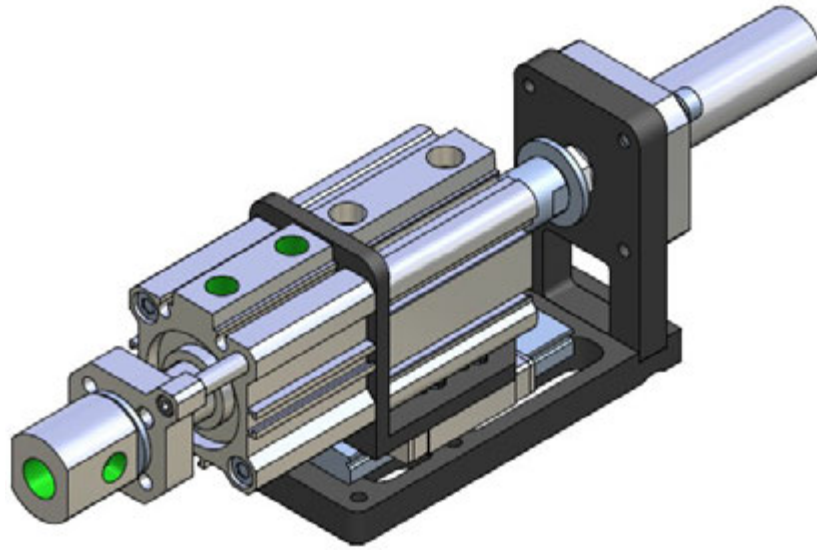
Article no.	Weight
CA.BVAE.322010	988 g

## CA.09 BVAE

. Movable vacuum unit BVAE32  
with guided double stroke

## BVAE

. Bewegliche Vakuumeinheit BVAE32  
mit Doppelhub geführt



Article no.	A	Weight
CA.BVAE.32201020	20	1043 g
CA.BVAE.32201025	25	1073 g

**CA.09 DB**

**GZ**

. Stroke Reducer

. Distanz-Buchse

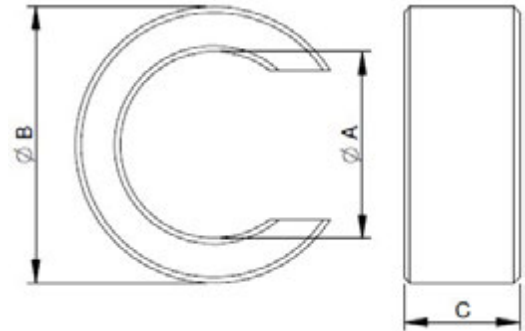
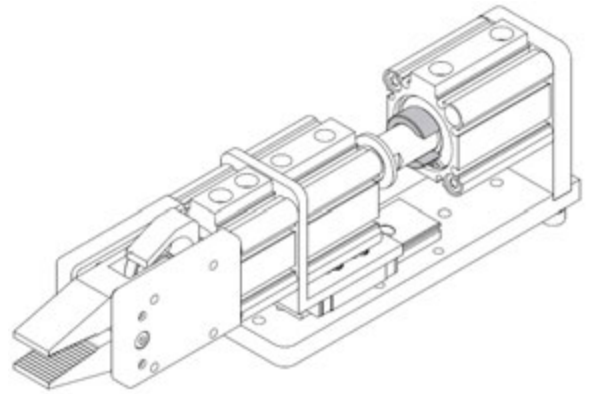
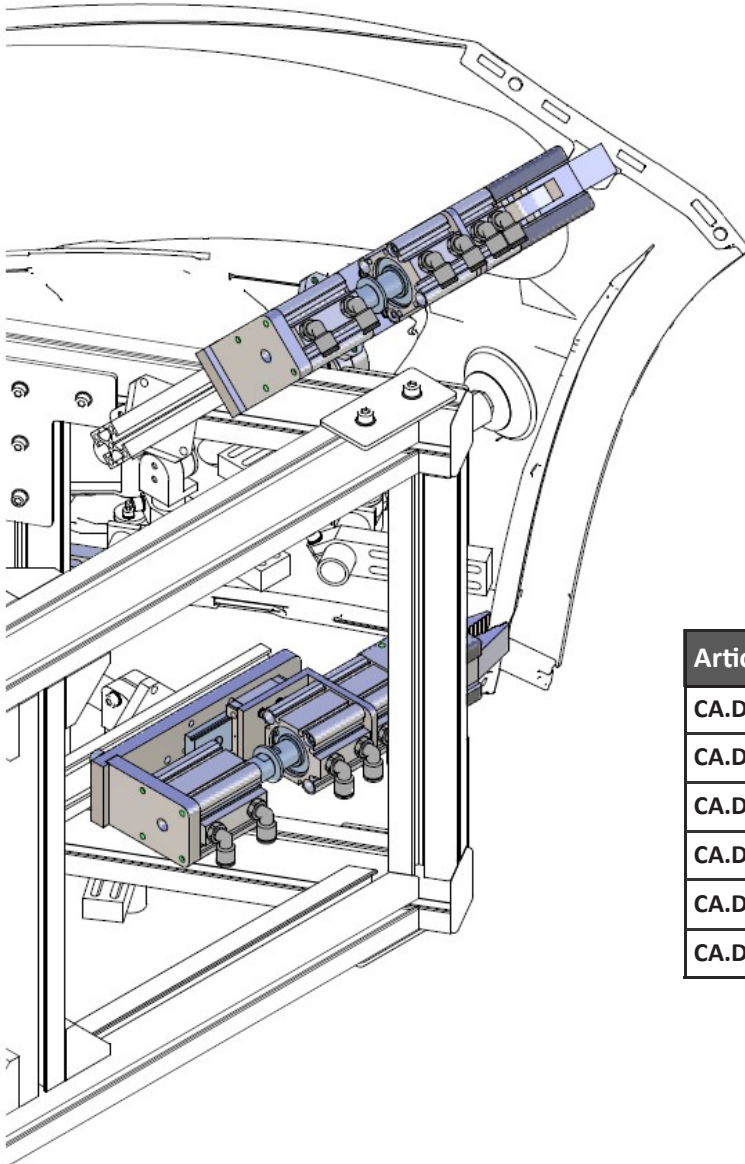


Table / Tabelle

M = Suitable for GZ...  
Passend für GZ...

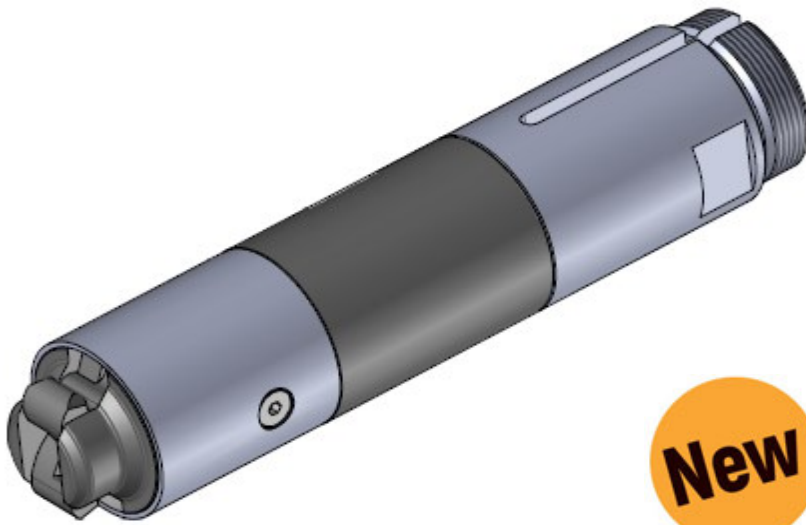
Application example / Anwendungsbeispiel



Article no.	A	B	C	M	Weight
CA.DB.05.25	12	20	5	Ø25	1 g
CA.DB.10.25			10		2 g
CA.DB.15.25			15		4 g
CA.DB.05.32	16	24	5	Ø32	1 g
CA.DB.10.32			10		2 g
CA.DB.15.32			15		3 g

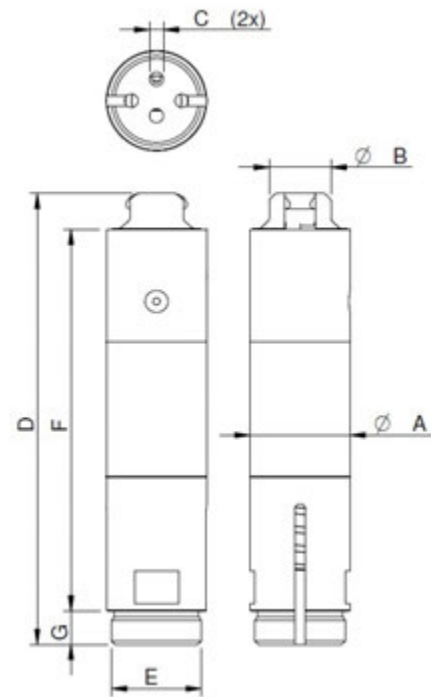
## CA.09 AGP

. Kopplungsgreifer



**New**

**PATENT PENDING\***



Article no.		A	B	C	D	E	F	G	Weight
CA.AGP.20.G.GM	Gripper side	Ø20	Ø11.7	M3	97	M17x1	81.5	7.85	116 g
CA.AGP.30.G.GM	Gripper side	Ø30	Ø18.5	M5	134.7	M27x1	114	10	377 g

Remarks / Anmerkungen:

Single acting / Einfachwirkend  
The central blocking unit has an exact repeatability  
*Die Kopplungsgreifer weist eine exakte Wiederholbarkeit*

High gripping force / Hohe Greifkraft

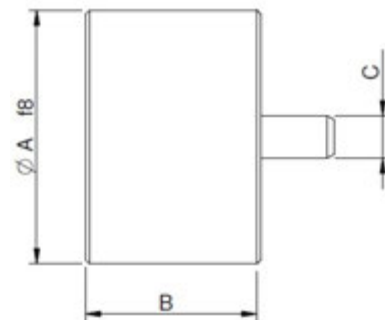
Compact unit / Kompakte Einheit

ISO H7 tolerance is used for positioning  
*ISO H7 Toleranz zur Positionierung*

With a teachable sensor, the locked and unlocked state is sensed  
*Mit einem teachbare Sensor wird der verriegelten und der entriegelten Position abgefragt.*

CLOSING FORCE AT 6 BAR 750 N

SCHLIEßKRAFT BEI 6 BAR 750 N



**New**

Article no.		A	B	C	Weight
CA.AGP.20.M.GM	Mould side	Ø20	15.3	M4	26 g
CA.AGP.30.M.GM	Mould side	Ø30	20	M5	76 g

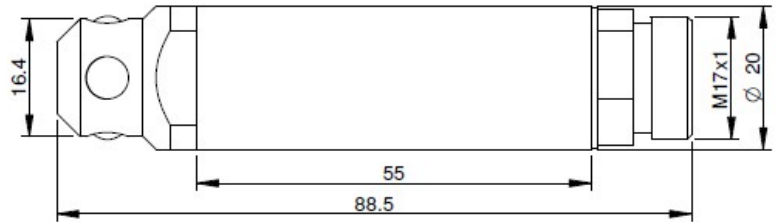
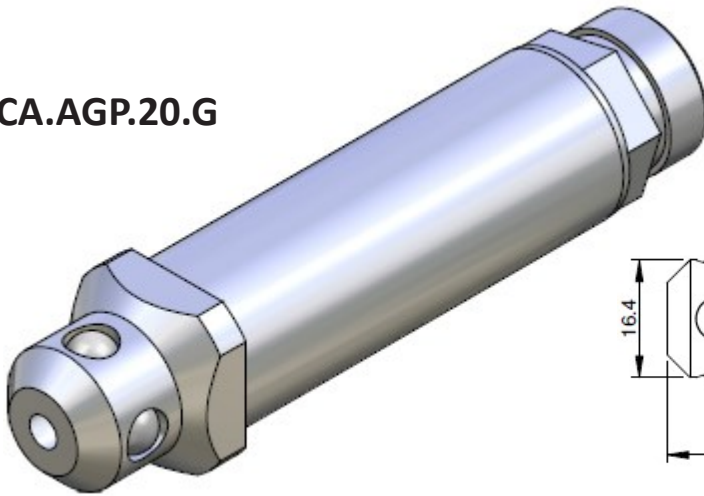
\*102019000010569

## CA.09 AGP

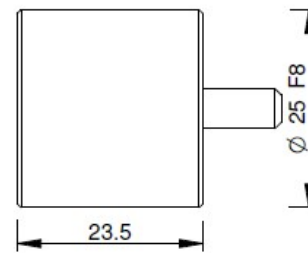
. Centering locking unit

. *Kopplungsgreifer*

### CA.AGP.20.G



### CA.AGP.20.M



#### Application example / Anwendungsbeispiel

Remarks / Anmerkungen:

Single acting / *Einfachwirkend*  
The central blocking unit has an exact repeatability  
*Die Kopplungsgreifer weist eine exakte Wiederholbarkeit*

High gripping force / *Hohe Greifkraft*

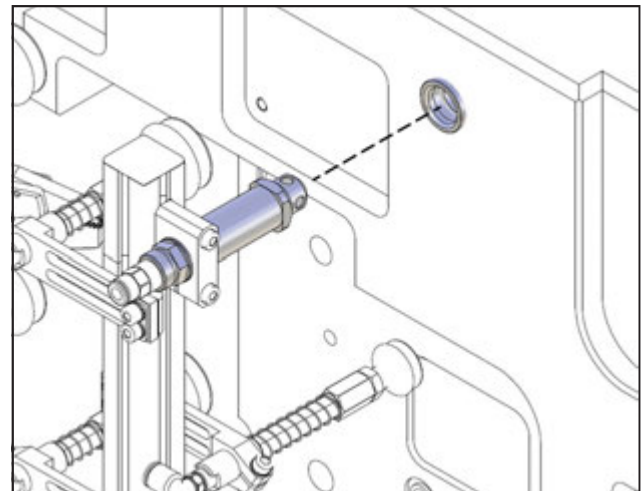
Compact unit / *Kompakte Einheit*

ISO H7 tolerance is used for positioning  
*ISO H7 Toleranz zur Positionierung*

With a teachable sensor, the locked and unlocked state is sensed  
*Mit einem teachbare Sensor wird der verriegelten und der entriegelten Position abgefragt.*

CLOSING FORCE AT 6 BAR 750 N

*SCHLIEßKRAFT BEI 6 BAR 750 N*



Article no.		Weight
CA.AGP.20.G	Gripper side	93 g
CA.AGP.20.M	Mould side	60 g

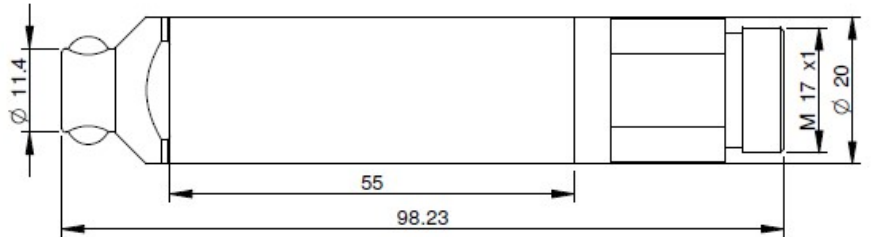
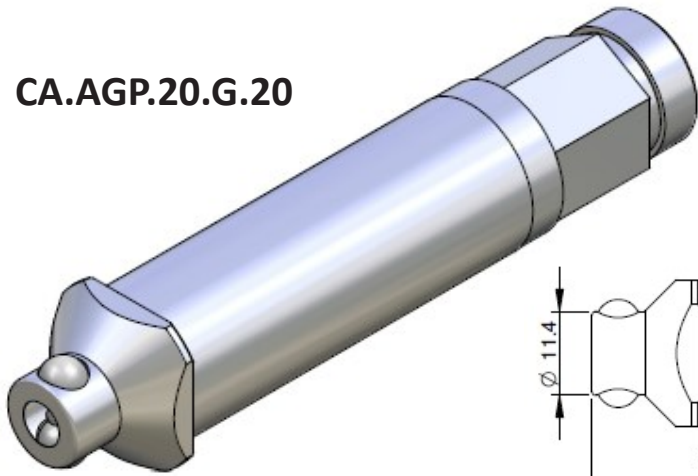


## CA.09 AGP

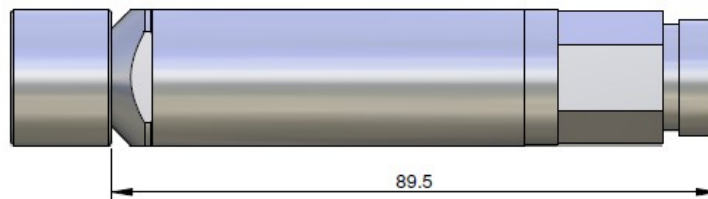
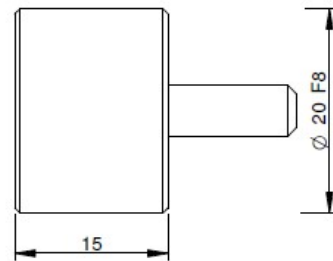
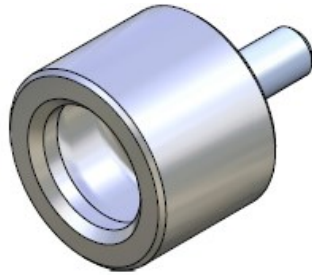
. Centering locking unit

. Kopplungsgreifer

### CA.AGP.20.G.20



### CA.AGP.20.M.20

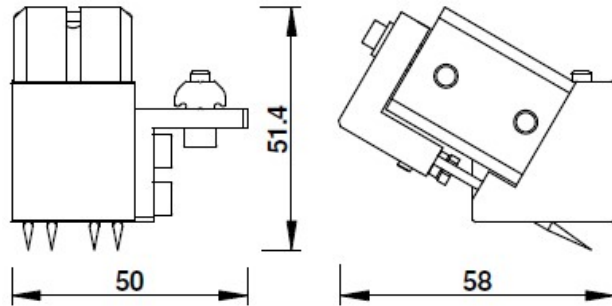
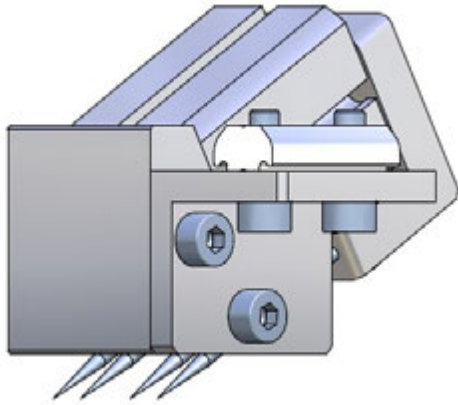


Article no.		Weight
CA.AGP.20.G.20	Gripper side	66 g
CA.AGP.20.M.20	Mould side	30 g

## CA.09 PAA

. Needle gripper

. Nadelgreifer



Article no.	Weight
CA.PAA.AP	135 g
CA.PAA.AP.D	

Remarks / Anmerkungen:

Needle grippers are designed for picking up textile, cloth, carpet, or any other material that can be penetrated

Designed for installation on our X Profile

Mounting bracket are included

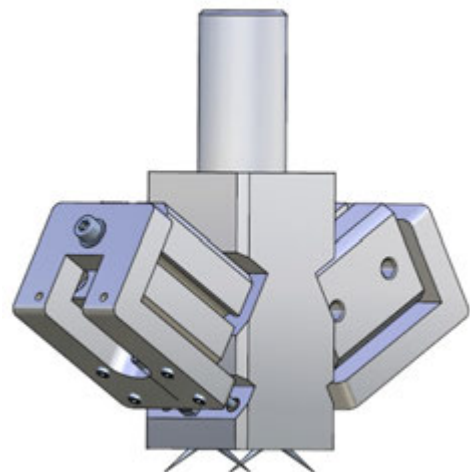
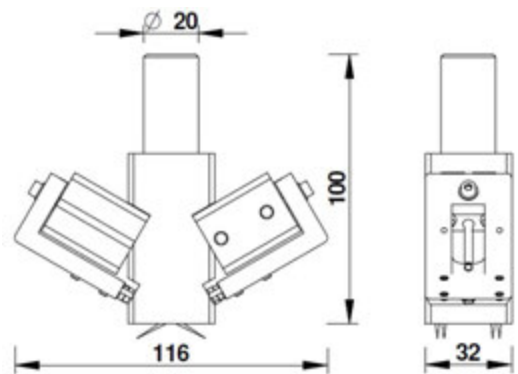
Maximum air pressure is 6 bar

*Nadelgreifer sind ausgelegt zum Aufnehmen von Textil, Tuch, Teppich oder anderen Materialien die durchdrungen werden können*

*Entworfen für die Installation auf X Profilen*

*Montagehalterung ist im Lieferumfang enthalten*

*Der maximale Luftdruck beträgt 6 bar*

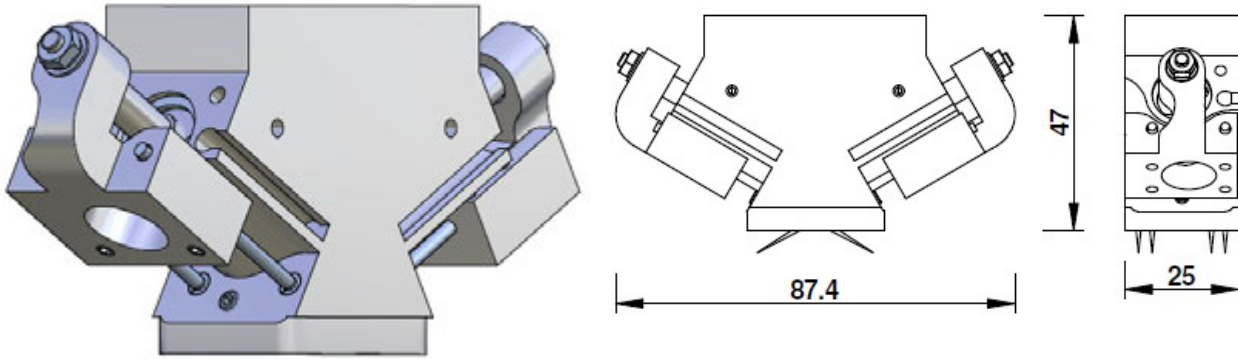


Article no.	Weight
CA.PAA.CF	320 g
CA.PAA.CF.D	

## CA.09 PAA

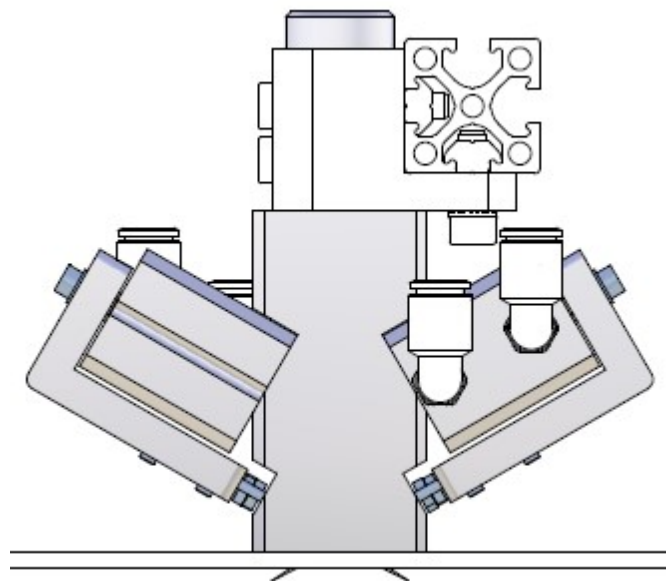
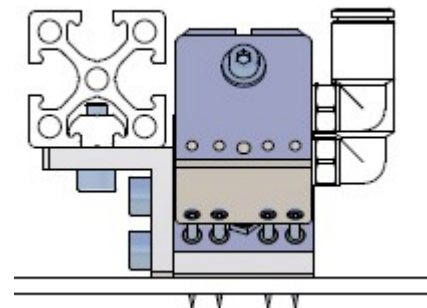
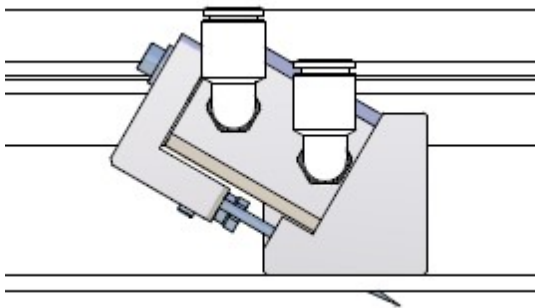
. Needle gripper

. Nadelgreifer



Article no.	Weight
CA.PAA.SP	132 g

Application example / Anwendungsbeispiel

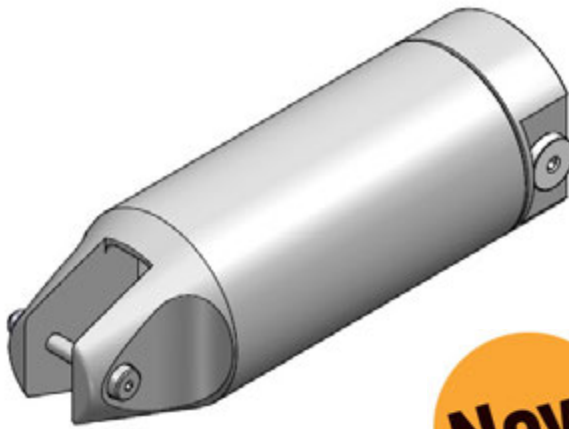


**CA.10.FP**

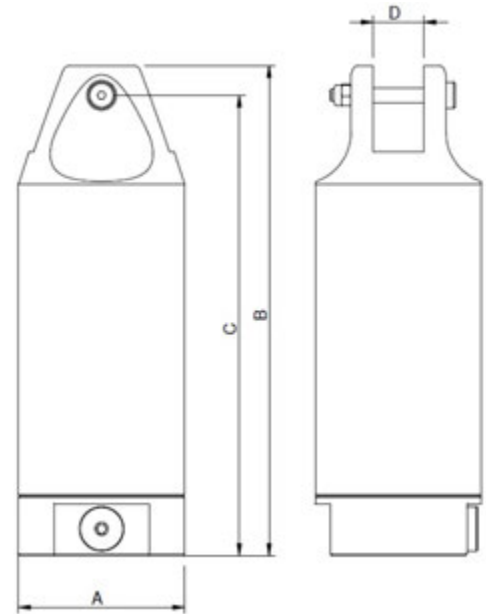
**. ATE**

. Air nipper actuators

. Pneumatische Antriebe für Schneidzangen



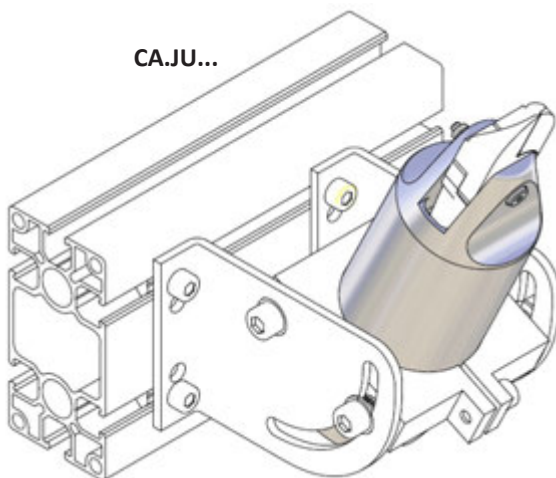
**New**



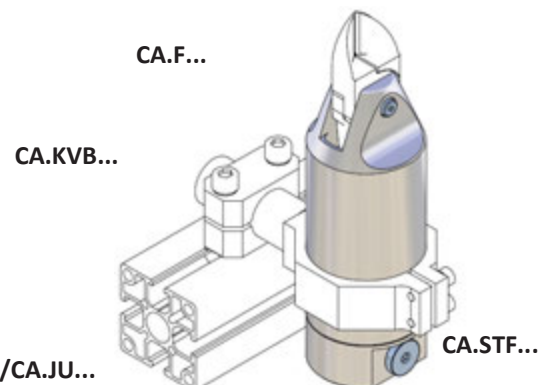
Article no.	Closing force each blade	Cycle air consumption	Weight
CA.ATE.05M	11 Nm	64 cm <sup>3</sup>	97 g
CA.ATE.10M	38 Nm	116 cm <sup>3</sup>	147 g
CA.ATE.20M	67 Nm	230 cm <sup>3</sup>	255 g
CA.ATE.30AM	150 Nm	584 cm <sup>3</sup>	452 g
CA.ATE.50AM	116 Nm	1170 cm <sup>3</sup>	911 g

Application examples / Anwendungsbeispiele

Article no.	A	B	C	D
CA.ATE.05M	30	94.3	87	7.1
CA.ATE.10M	36	114.5	107.8	12
CA.ATE.20M	45	129	119.8	
CA.ATE.30AM	56	165	155	17
CA.ATE.50AM	75	181	172	



CA.04.10...



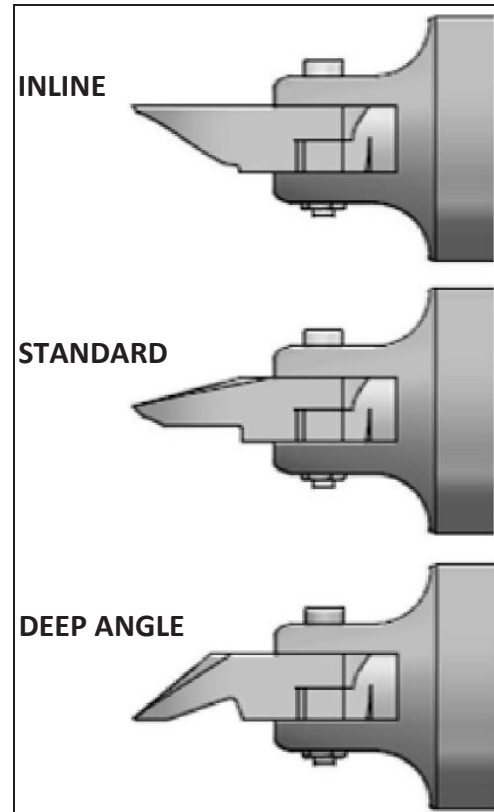
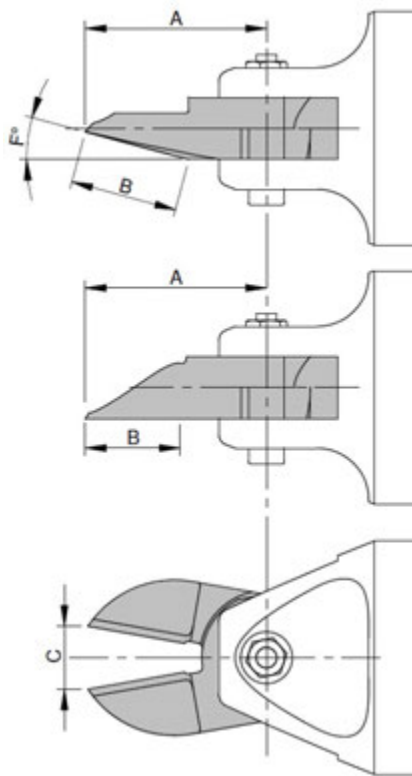
CA.X.../CA.JU...

# CA.10.VES

# . VES

. Blades

. Schneideinsätze



Article no.	Nipper	Style	A	B	C	F°	
VES.N5AP	CA.ATE.05	Standard	24	11.5	4	15	40 g
VES.N10LAP	CA.ATE.10		27		5	30	120 g
VES.N10LPF		Deep angle	35	13.5	11	40	125 g
VES.N20AP	CA.ATE.20	Standard		16		15	
VES.N20AJ		Inline	18	/			
VES.N20AJL			65	20	16	/	230 g
VES.N20PF		Deep angle	35	13.5	11	40	130 g
VES.N30AP	CA.ATE.30 CA.ATE.50	Standard	66	38	16	15	380 g
VES.N30AJ		Inline	52	28	11	/	370 g
VES.N30AJL			75	25	19	/	470 g
VES.N30PF		Deep angle	58		15	30	390 g

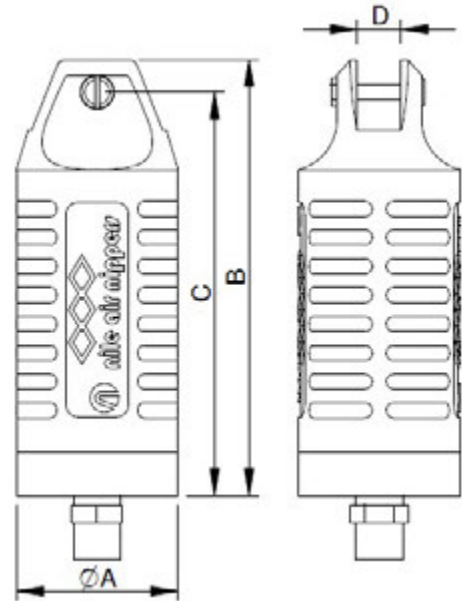
Complete line of Vessel's blade is online in [www.fps-automation.com](http://www.fps-automation.com)

**CA.10.MR**

**. MR**

. Air nipper actuators

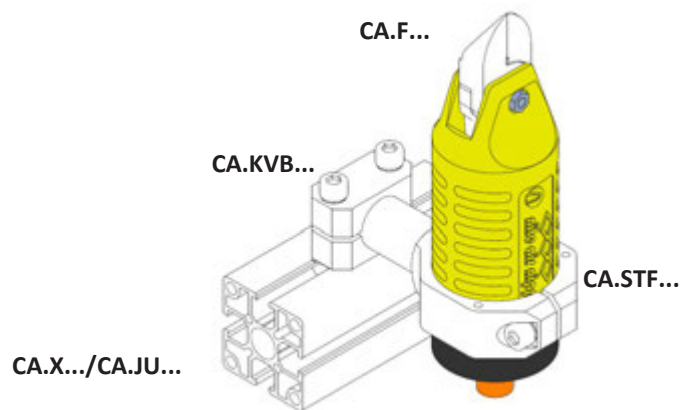
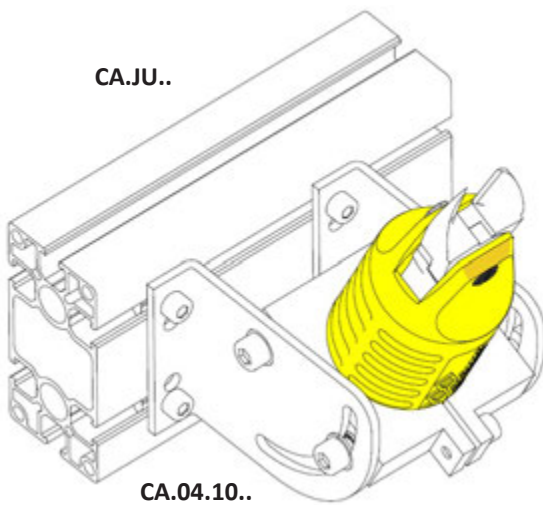
. Pneumatische Antriebe für Schneidzangen



Article no.	Closing force each blade	Cycle air consumption	Weight
CA.MR.05M	11 Nm	41 cm <sup>3</sup>	100 g
CA.MR.10M	38 Nm	105 cm <sup>3</sup>	160 g
CA.MR.20M	67 Nm	268 cm <sup>3</sup>	270 g
CA.MR.30AM	150 Nm	631 cm <sup>3</sup>	470 g
CA.MR.50AM	116 Nm	1285 cm <sup>3</sup>	1040 g

Article no.	A	B	C	D
CA.MR.05M	30	84	75	9.25
CA.MR.10M	36	105	96	9.25
CA.MR.20M	45	121	112	12.15
CA.MR.30AM	56	157	147.75	17.10
CA.MR.50AM	75	173	164.25	25.10

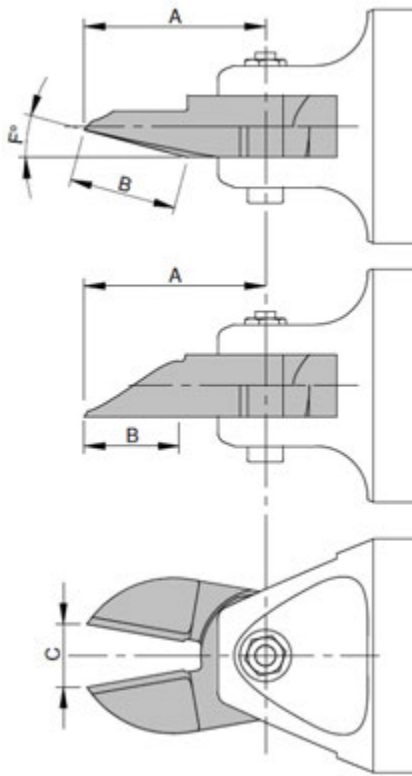
Application examples / Anwendungsbeispiele



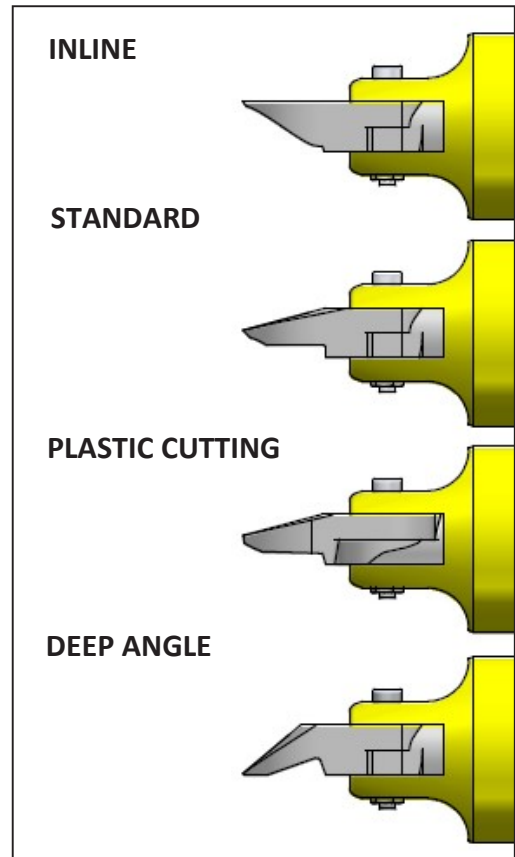
# CA.10.F

. F

. Blades



. Schneideinsätze



Article no.		Nipper	Blade style	A	B	C	F°	Weight
CA.F1S	F..S	CA.MR.05M	Inline	24	12	3	/	33 g
CA.S2	S..		Standard				25	34 g
CA.F1	F..		Platic cutting				15	
CA.FD1	F..D		Deep angle				40	35 g
CA.F3LS	F..S	CA.MR.10M	Long Inline	50	30	8	/	117 g
CA.S4	S..		Standard	27	14	5	25	115 g
CA.F3	F..		Platic cutting		12			
CA.FD3	F..D		Deep angle		10		40	112 g
CA.F5S	F..S	CA.MR.20M	Inline		35		16	10
CA.S5	S..		Standard	17		8	30	120 g
CA.F5	F..		Platic cutting	15		10	15	
CA.FD5	F..D		Deep angle	14		40	124 g	
CA.F5LS	F..S	CA.MR.30AM	Long inline	65	37	15	/	220 g
CA.F9PS	F..S		Inline	66	16	/	365 g	
CA.S7P	S..		Standard	43	8	30		
CA.F9P	F..		Platic cutting	66	38	16	16	380 g
CA.FD9P	F..D	CA.MR.50AM	Deep angle	59	27	15	30	388 g
CA.S120	S..		Standard	45	22	10	30	380 g

**CA.STF**

**. MR**

. Mounting Brackets MR

. Klemmstück MR

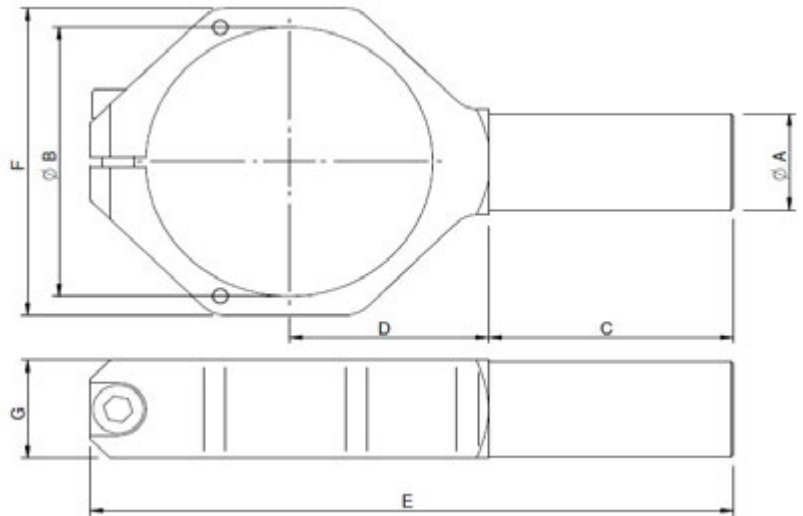
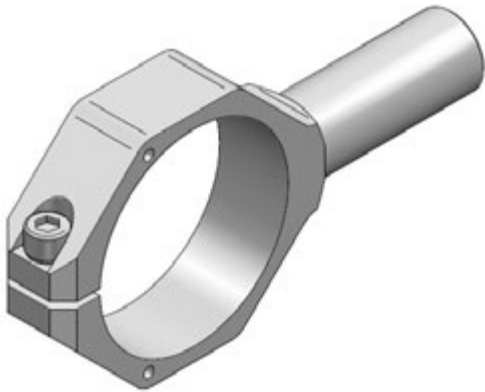


Table / Tabelle

**M** = Suitable for CA.MR.../ CA.ATE...  
Passend für CA.MR.../ CA.ATE...

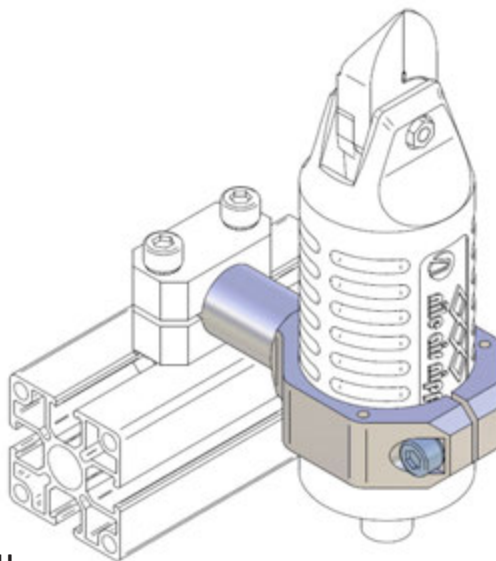
Remarks / Anmerkungen:

Material / Werkstoff: Aluminium

Surface: silver anodized  
Oberfläche: eloxiert

Article no.	Old code	A	B	C	D	E	F	G	M	Weight
CA.STF.30	CA.04.10.30	20	30	48	25	101.5	38	20	MR.05M / ATE.05M	91 g
CA.STF.36	CA.04.10.36		36		28	107.5	43		MR.10M / ATE.10M	95 g
CA.STF.45	CA.04.10.45		45		33	116	52		MR.20M / ATE.20M	102 g
CA.STF.56	CA.04.10.56		56		38	127.5	54		MR.30AM / ATE.30AM	117 g
CA.STF.75	CA.04.10.75	30	75	50	47	146	83	30	MR.50AM / ATE.50AM	275 g

Application example / Anwendungsbeispiel



CA.MR.../CA.ATE...

CA.X.../CA.JU...



## CA.04.10

. MR

. Swivel Bracket MR

. Schwenkbock MR

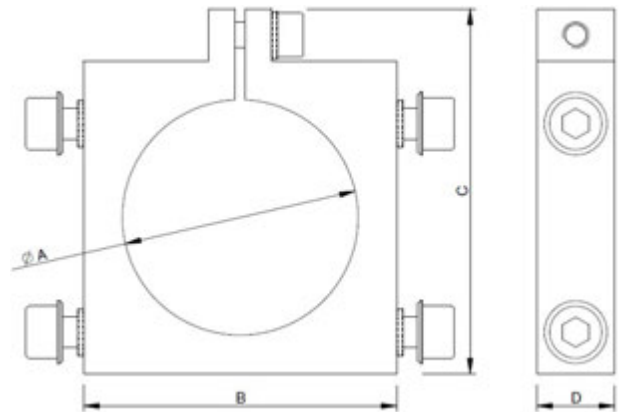
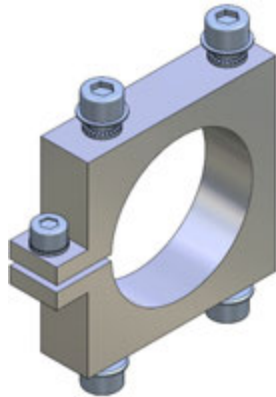


Table / Tabelle

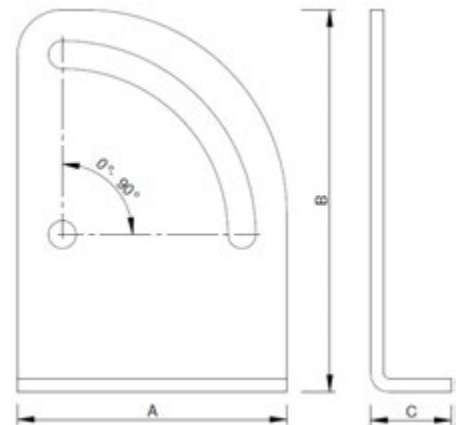
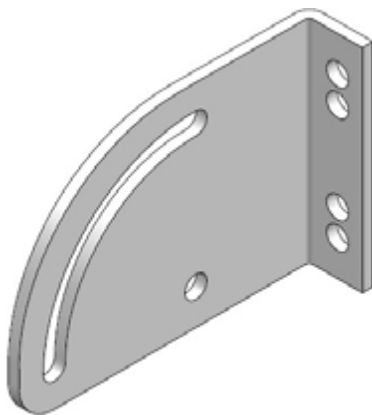
M = Suitable for CA.MR.../ CA.ATE...  
Passend für CA.MR.../ CA.ATE...

Remarks / Anmerkungen:

Material / Werkstoff: Aluminium

Surface: silver anodized  
Oberfläche: eloxiert

Article no.	A	B	C	D	M	Weight
CA.04.10.30.1	30	45	55	15	MR.05M / ATE.05M	87 g
CA.04.10.36.1	36	50	62		MR.10M / ATE.10M	97 g
CA.04.10.45.1	45	60	70		MR.20M / ATE.20M	115 g
CA.04.10.56.1	56	70	85		MR.30AM / ATE.30AM	136 g
CA.04.10.75.1	75	90	105		MR.50AM / ATE.50AM	188 g

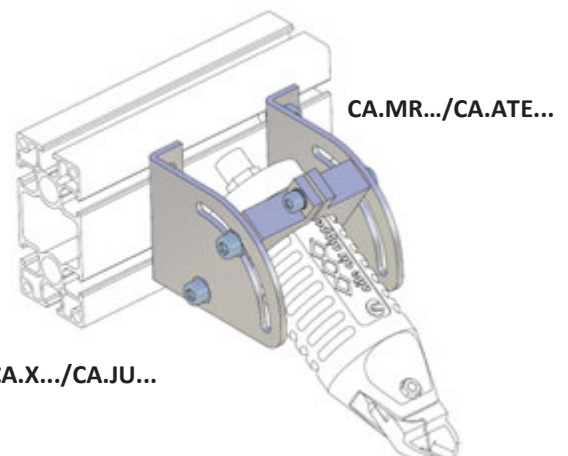


Application example / Anwendungsbeispiel

Article no.	A	B	C	M	Weight
CA.04.10.30.2	50	75	18	MR.05M / ATE.05M	84 g
CA.04.10.36.2	55	80		MR.10M / ATE.10M	100 g
CA.04.10.45.2	60	85		MR.20M / ATE.20M	116 g
CA.04.10.56.2	65	90		MR.30AM / ATE.30AM	134 g
CA.04.10.75.2	85	122		28	MR.50AM / ATE.50AM

Remarks / Anmerkungen:

Material : Zinc plated steel  
Werkstoff: verzinkt Stahl

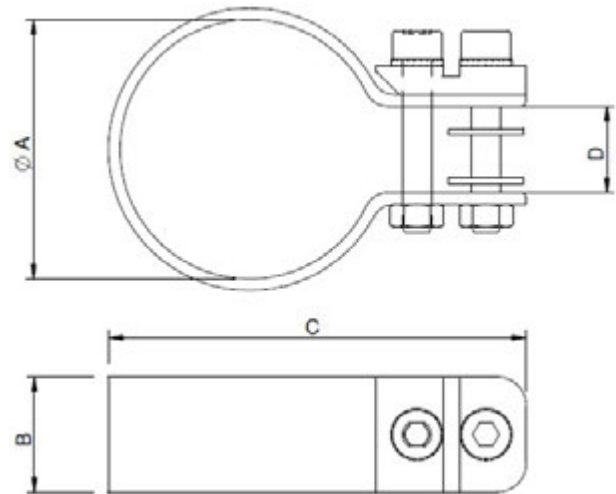
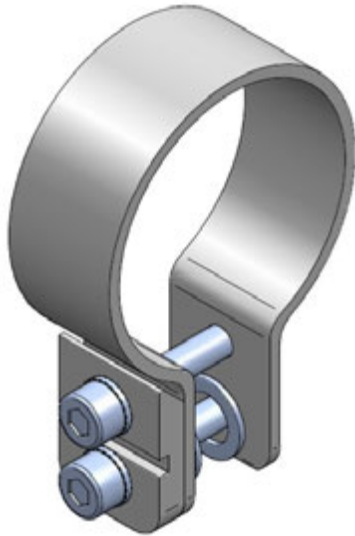


**CA.04.10**

**MR**

. Mounting Brackets MR

. Klemmstück MR



Article no.	A	B	C	D	M	Weight
CA.04.10.004	56	20	83.5	15	MR.30AM / ATE.30AM	98 g
CA.04.10.005	45		72.5		MR.20M / ATE.20M	87 g
CA.04.10.006	36		62		MR.10M / ATE.10M	78 g
CA.04.10.007	30		55.5		MR.05M / ATE.05M	72 g

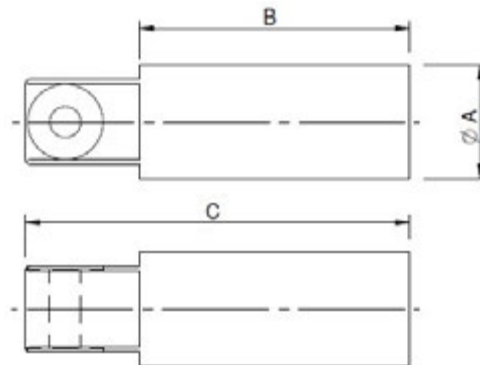
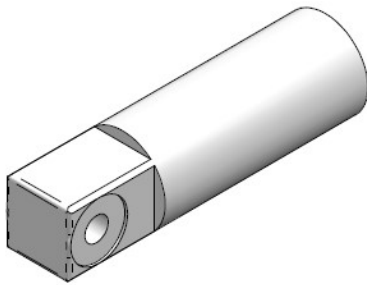
Table / Tabelle

**M** = Suitable for CA.MR.../ CA.ATE...  
Passend für CA.MR.../ CA.ATE...

Remarks / Anmerkungen:

Material / Werkstoff: Aluminium

Surface: silver anodized  
Oberfläche: eloxiert

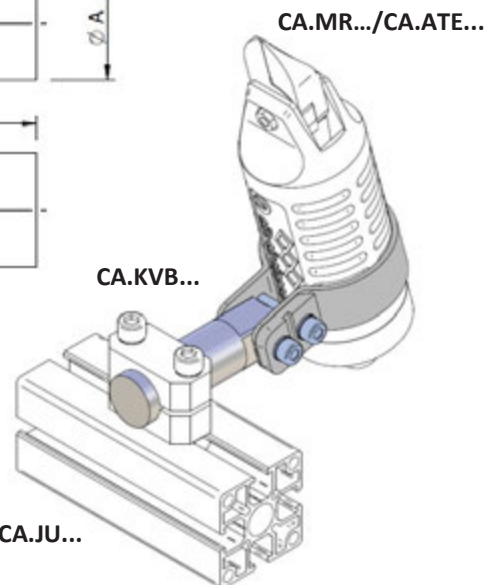


Article no.	A	B	C	Weight
CA.04.12.001	20	47.5	67.5	56 g
CA.04.12.002	30			82 g

Remarks / Anmerkungen:

Material / Werkstoff: Aluminium

Surface: silver anodized  
Oberfläche: eloxiert



Application example / Anwendungsbeispiel

# CA.SAT

# MR

. Swivel Bracket MR

. Schwenkbock MR

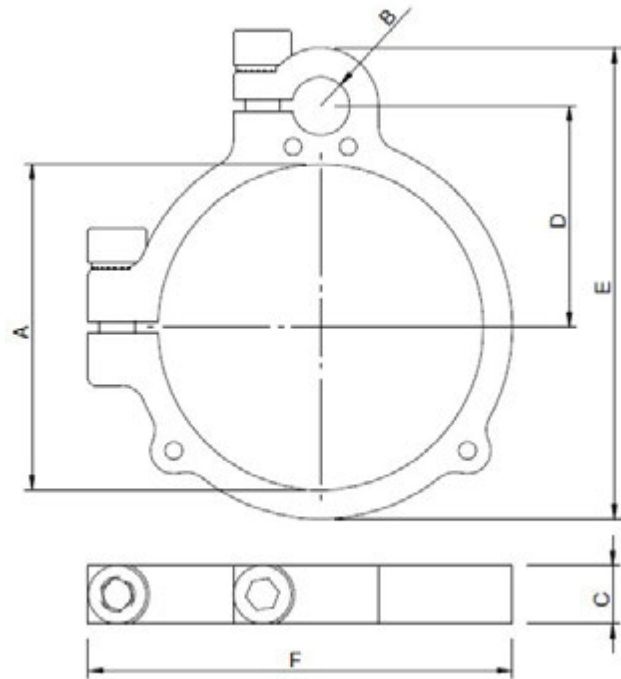
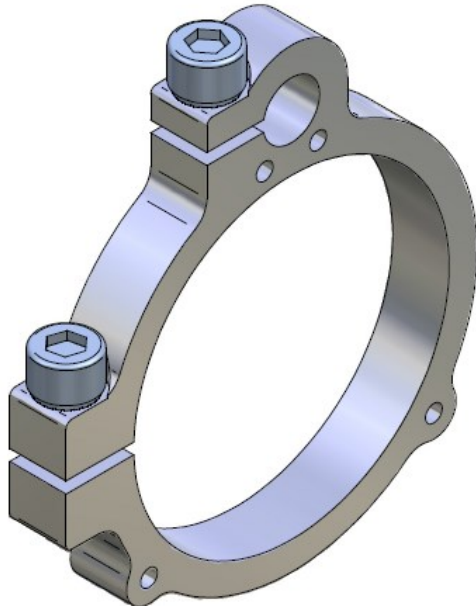


Table / Tabelle

M = Suitable for CA.MR.../ CA.ATE...  
Passend für CA.MR.../ CA.ATE...

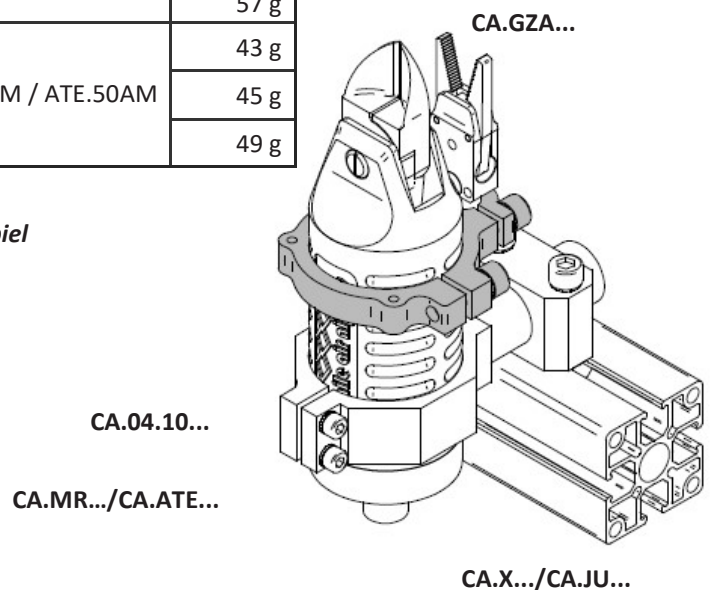
Article no.	A	B	C	D	E	F	M	Weight
CA.SAT.3610	36	10	10	28	62.8	53	MR.10M / ATE.10M	27 g
CA.SAT.4510	45			32.5	70	62	MR.20M / ATE.20M	30 g
CA.SAT.5610	56	14		38	81	73	MR.30AM / ATE.30AM	43 g
CA.SAT.5614				40	85			37 g
CA.SAT.5620		20		43	91			57 g
CA.SAT.7510	75	10		47.5	100	92.5	MR.50AM / ATE.50AM	43 g
CA.SAT.7514		14		49.5	104			45 g
CA.SAT.7520		20		52.5	110			49 g

Remarks / Anmerkungen:

Material / Werkstoff: Aluminium

Surface: silver anodized  
Oberfläche: eloxiert

Application example / Anwendungsbeispiel



**CA.STA**

**MR**

. Spring loaded clamp

. Gefederte Halterung

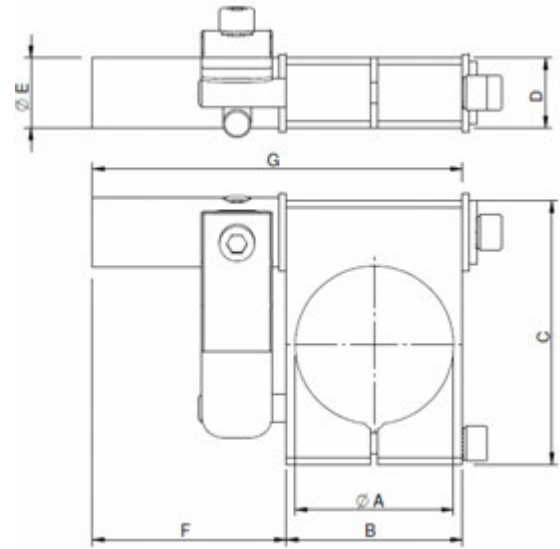
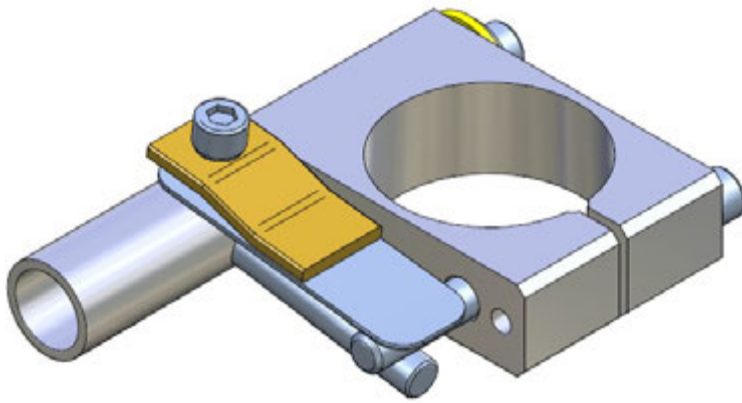


Table / Tabelle

M = Suitable for CA.MR.../ CA.ATE...  
Passend für CA.MR.../ CA.ATE...

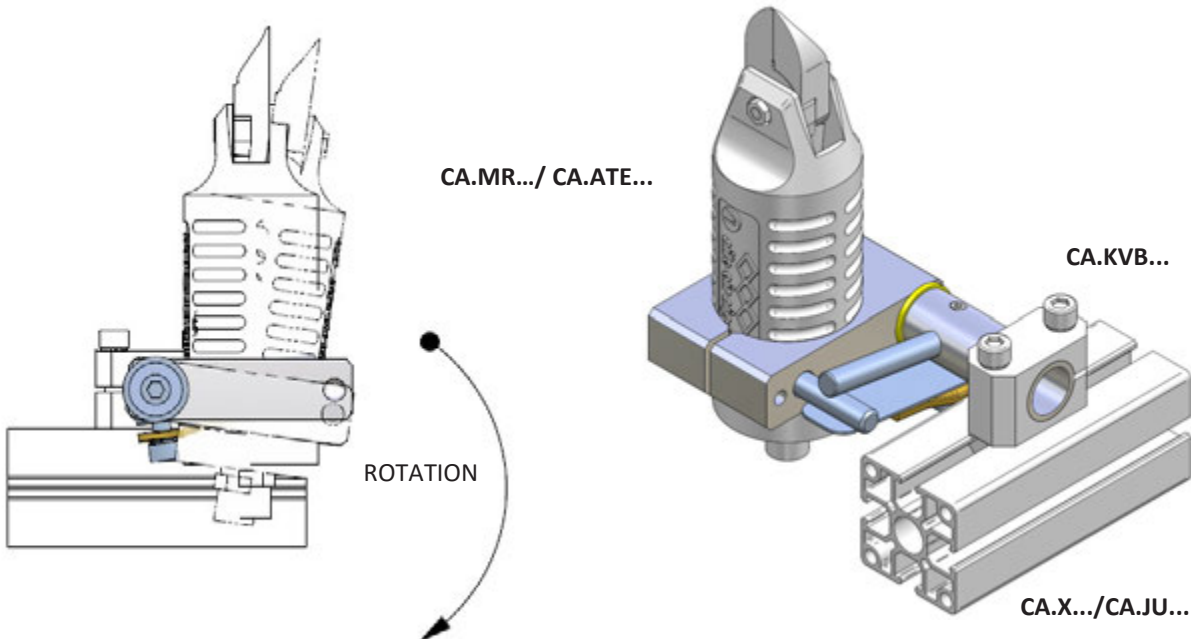
Remarks / Anmerkungen:

Material / Werkstoff: Aluminium

Surface: silver anodized  
Oberfläche: eloxiert

Article no	A	B	C	D	E	F	G	M	Weight
CA.STA.45	45	50	75	20	20	53	105	MR.20M / ATE.20M	275 g
CA.STA.56	56	60	86			63	125	MR.30AM / ATE.30AM	322 g
CA.STA.75	75	85	106			59	146	MR.50AM / ATE.50AM	443 g

Application examples / Anwendungsbeispiele



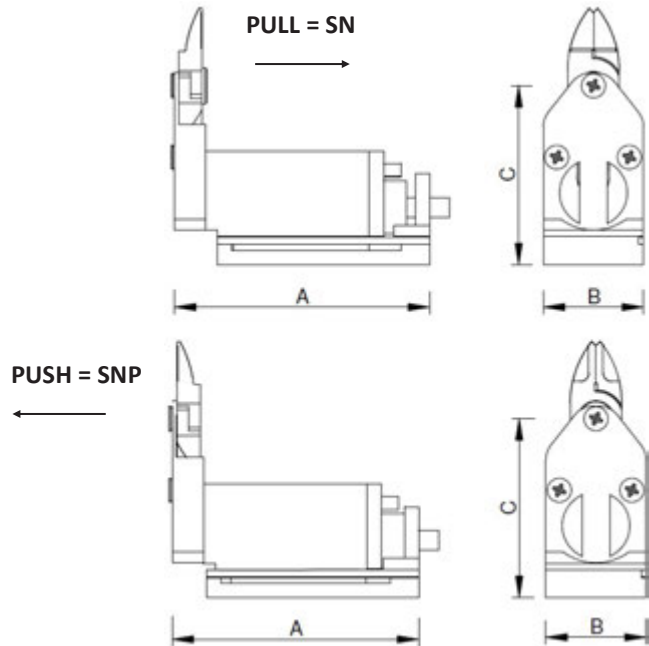
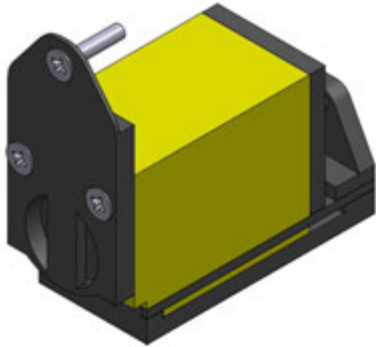


**CA.SN**

**SN**

. Slided Air Nippers Horizontal - Type SN

. Pneumatische Antriebe für Schneideinsätze SN



Remarks:

Two available models:  
Push = SNP  
Pull = SN

Units are not prearranged for using reversible blades.

On this kind of unit it's possible to adjust the blades

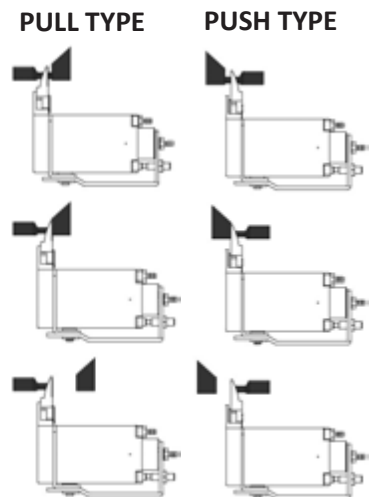
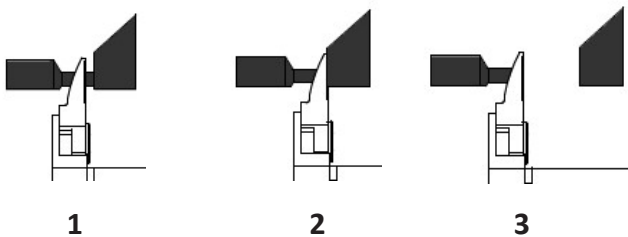
Anmerkungen:

Zwei Modelle lieferbar:  
Drücken = SNP  
Ziehen = SN

Die Einheit passt nicht zu reversibelen Schneideinsätzen

Diese bestimmte Einheit erlaubt die Regelung der Öffnung der Schneideinsätze

**Application examples / Anwendungsbeispiele**

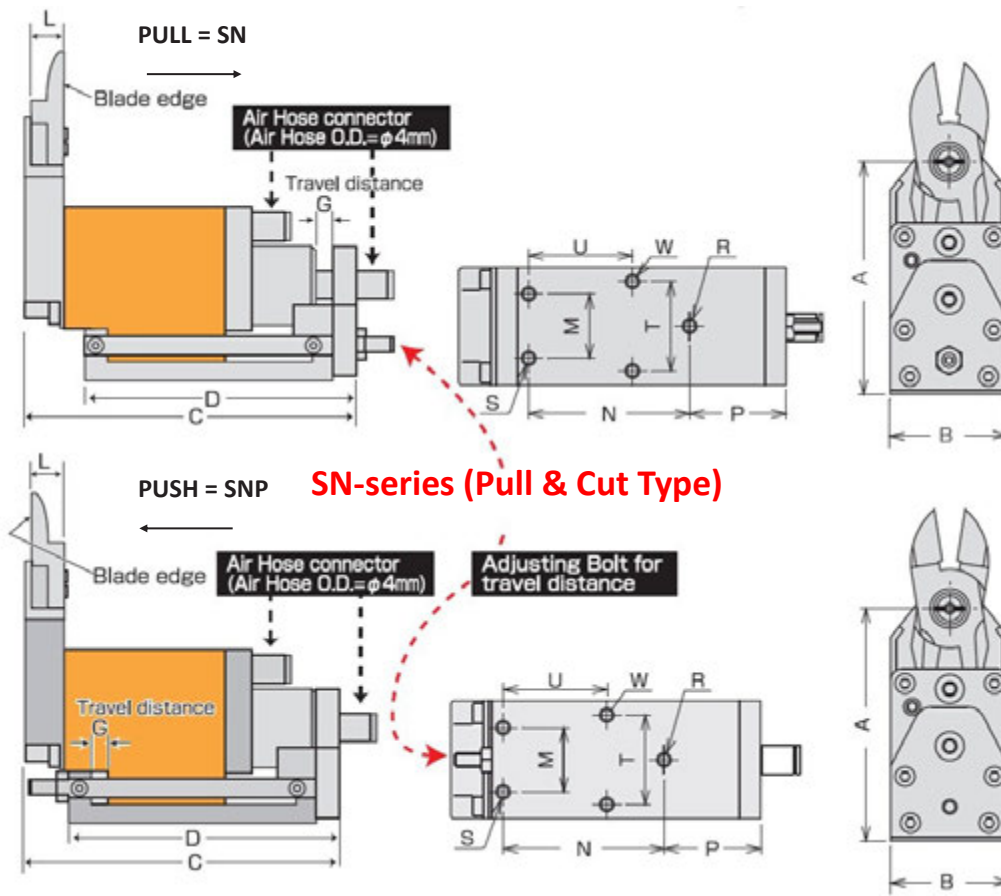


# CA.SN

# SN

. Slided Air Nippers Horizontal - Type SN

. Pneumatische Antriebe für Schneideinsätze SN

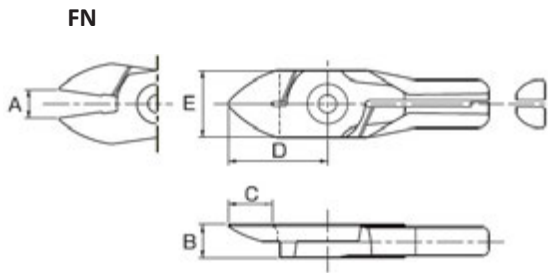


**SN-series (Pull & Cut Type)**

Article no.		Cutting Capacity	A	B	C	D	G	L	M	N	P	R	S	T	U	W	Weight	
CA.SN3	PULL	2 $\phi$ mm	59	28	79.6	65	5	7	12	37	25	M4	M4D5	15	23	M4	170 g	
CA.SNP3	PUSH				74.6													
CA.SN5	PULL	3 $\phi$ mm	63	28	83.6	69	5	7	14	40	26		M4D6	20	24		M4	220 g
CA.SNP5	PUSH				78.6													
CA.SN10	PULL	4 $\phi$ mm	70	33	91.6	75	5	9	18	45	27		M4D6	25	29		M4	300 g
CA.SNP10	PUSH				86.6													
CA.SN20	PULL	5 $\phi$ mm	82	42	110	90	5	12	22	58	28		M4S7	30	32		M5	595 g
CA.SNP20	PUSH				105													

## CA.FN

. Blades FN



Article no.	M	A	B	C	D	E	Cutting capacity	Weight
CA.FN10	CA.SN3	3.5	7	11	24	14	∅ 2	25 g
CA.FN1	CA.SN5	5.5				16	∅ 3	30 g
CA.FN3	CA.SN10	7	9		27	19	∅ 4	60 g
CA.FN5	CA.SN20	8.5	12	16	35	22	∅ 5	100 g

Table / Tabelle

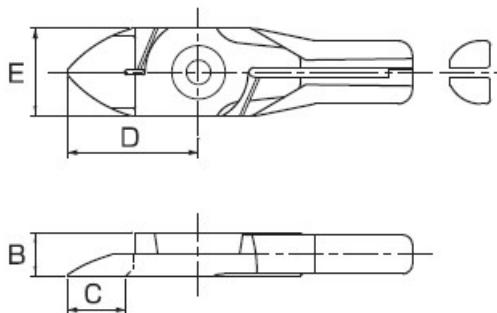
M = Suitable for CA.SN...

Passend für CA.SN...

. Schneideinsätze FN

## FN

**FNP**



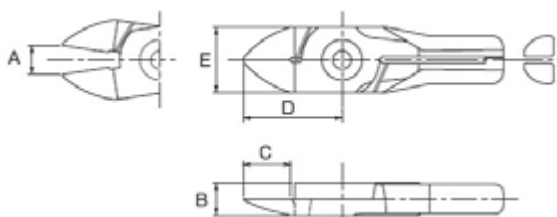
Article no.	M	A	B	C	D	E	Cutting capacity	Weight
CA.FNP10	CA.SNP3	3.5	7	11	24	14	∅ 2	30 g
CA.FNP1	CA.SNP5	5.5				16	∅ 3	35 g
CA.FNP3	CA.SNP10	7	9		27	19	∅ 4	60 g
CA.FNP5	CA.SNP20	8.5	12	16	35	22	∅ 5	110 g

Table / Tabelle

M = Suitable for CA.SN...

Passend für CA.SN...

**FN - K**



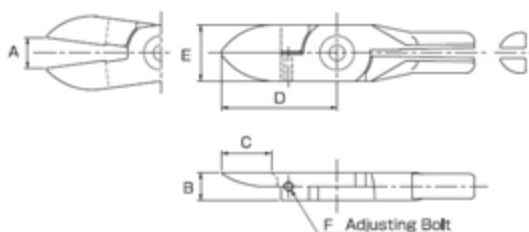
Article no.	M	A	B	C	D	E	Cutting capacity	Weight
CA.FN10K	CA.SN3	3.5	7	11	24	14	∅ 2	30 g
CA.FN1K	CA.SN5	5.5				16	∅ 3	
CA.FN3K	CA.SN10	7.5	9		27	19	∅ 4	60 g
CA.FN5K	CA.SN20	8.5	12	16	35	22	∅ 5	110 g

Table / Tabelle

M = Suitable for CA.SN...

Passend für CA.SN...

**FN - L**



Article no.	M	A	B	C	D	E	F	Cutting capacity	Weight
CA.FN10L	CA.SN3	5.5	7	16	33	14	M3	∅ 2	35 g
CA.FN1L	CA.SN5	8				16		∅ 3	40 g
CA.FN3L	CA.SN10	9.5	9		37	18		∅ 3.5	65 g
CA.FN5L	CA.SN20	10	12	21	45	22		∅ 4.5	115 g

Table / Tabelle

M = Suitable for CA.SN...

Passend für CA.SN...



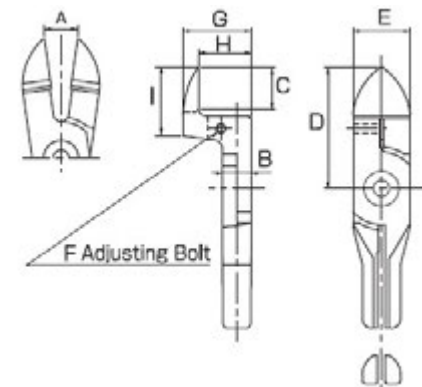
# CA.FN

# FN

## . Blades FN

## . Schneideinsätze FN

FN - C



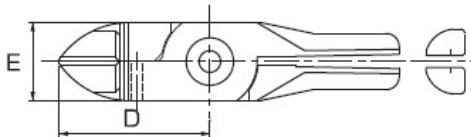
Article no.	M	A	B	C	D	E	F	G	H	I	Cutting capacity	Weight
CA.FN10C	CA.SN3	5.2	7	11	35	14	M3	18	14	19	∅1.5	50 g
CA.FN1C	CA.SN5	9	7	13	38	16	M3	20	15	21	∅2.5	60 g
CA.FN3C	CA.SN10	10	9	13	38	18	M3	21.5	16.5	21	∅3	70 g
CA.FN5C	CA.SN20	10	12	19	46	22	M3	24	19	30	∅4	155 g

Table / Tabelle

M = Suitable for CA.SN...

Passend für CA.SN...

FNP - C

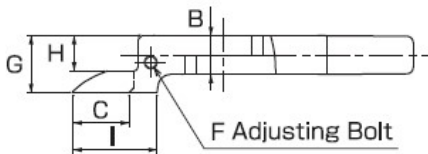


Article no.	M	A	B	C	D	E	F	G	H	I	Cutting capacity	Weight
CA.FNP10C	CA.SNP3	5.2	7	11	35	14	M3	12	8	20	∅ 1.5	50 g
CA.FNP1C	CA.SNP5	8.6		14	37	16		12.2	7.2	22	∅ 2.5	60 g
CA.FNP3C	CA.SNP10	9.8	9	13	35	18		13.2	8.2	20	∅ 3	70 g
CA.FNP5C	CA.SNP20	10	12	18	42	22		16	11	27	∅ 4	155 g

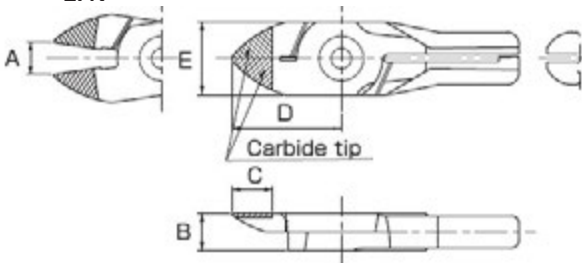
Table / Tabelle

M = Suitable for CA.SN...

Passend für CA.SN...



ZFN



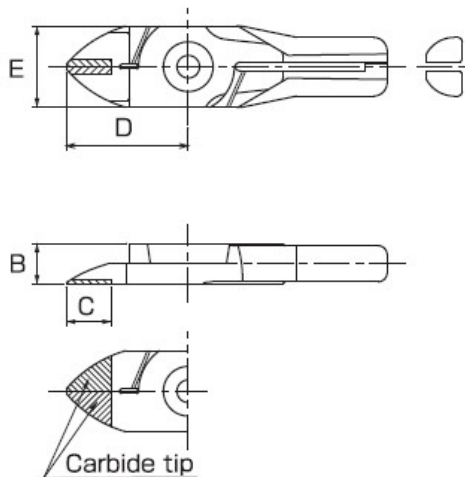
Article no.	M	A	B	C	D	E	Cutting capacity	Weight
CA.ZFN10	CA.SN3	3.5	7	11	24	14	∅ 2	30 g
CA.ZFN1	CA.SN5	5.5				16	∅ 3	35 g
CA.ZFN3	CA.SN10	7	9	10	27	19	∅ 4	60 g
CA.ZFN5	CA.SN20	8.5	12	16	35	22	∅ 5	110 g

Table / Tabelle

M = Suitable for CA.SN...

Passend für CA.SN...

ZFNP



Article no.	M	A	B	C	D	E	Cutting capacity	Weight
CA.ZFNP10	CA.SNP3	3.5	7	11	24	14	∅ 2	30 g
CA.ZFNP1	CA.SNP5	5.5				16	∅ 3	35 g
CA.ZFNP3	CA.SNP10	7	9	10	27	19	∅ 4	60 g
CA.ZFNP5	CA.SNP20	8.5	12	16	35	22	∅ 5	110 g

Table / Tabelle

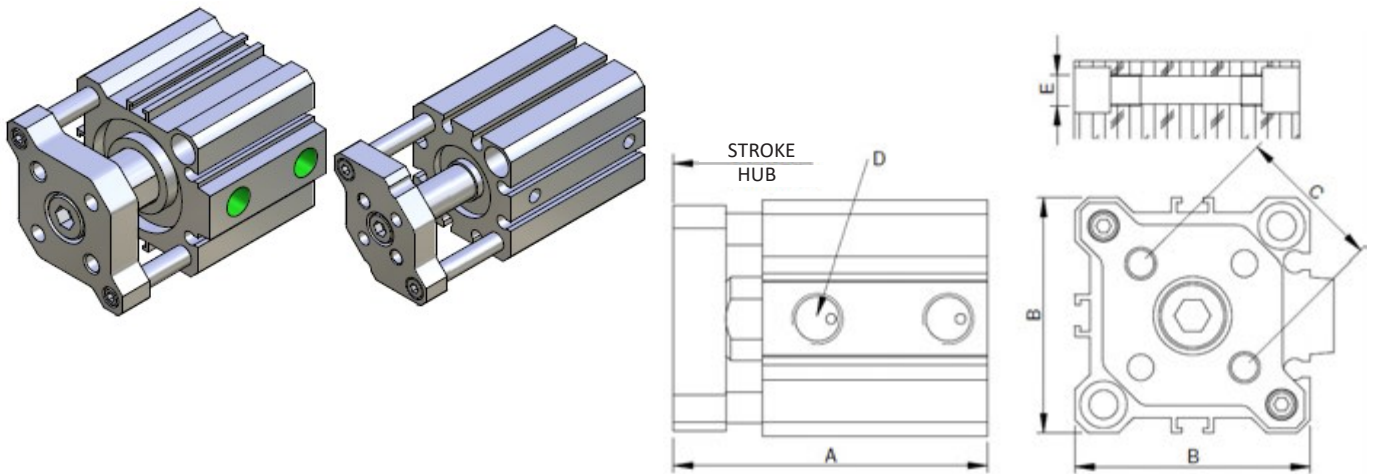
M = Suitable for CA.SN...

Passend für CA.SN...

**CA.11.17**
**CYLINDERS**

. Compact Cylinder, Guide Rod Type

. Kompaktzylinder mit Führungstangen

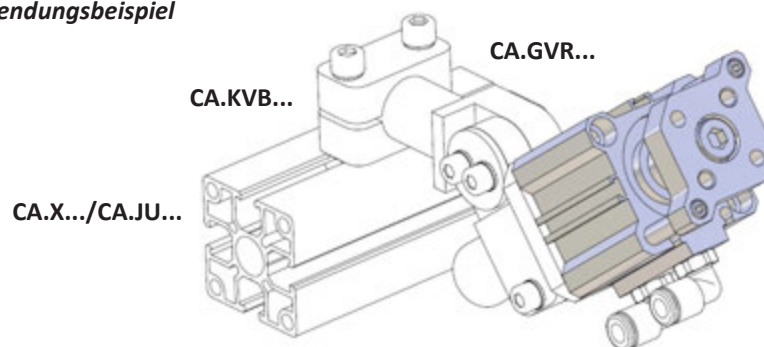


Remarks / Anmerkungen:

 Available with strokes:  
 Lieferbar mit Hüben:  
 5-15-25-30

Article no.	Piston bore	Stroke	Sensor (optional)	A	B	C	D	E	Weight	
CA.11.17.001	12	10	PNP = KT58P3M - KT58PM8 NPN = KT58N3M - KT58NM8	41.5	25	10	M5	M4	59 g	
CA.11.17.002		20		51.5					77 g	
CA.11.17.003	16	10		41.5	29	14			M6	97 g
CA.11.17.004		20		51.5						138 g
CA.11.17.005	20	10		50	36	17		168 g		
CA.11.17.006		20		60				186 g		
CA.11.17.007	25	10		53.5	40	22		223 g		
CA.11.17.008		20		63.5				264 g		
CA.11.17.009	32	10		60	45	28		G 1/8	309 g	
CA.11.17.010		20		70						

Application example / Anwendungsbeispiel

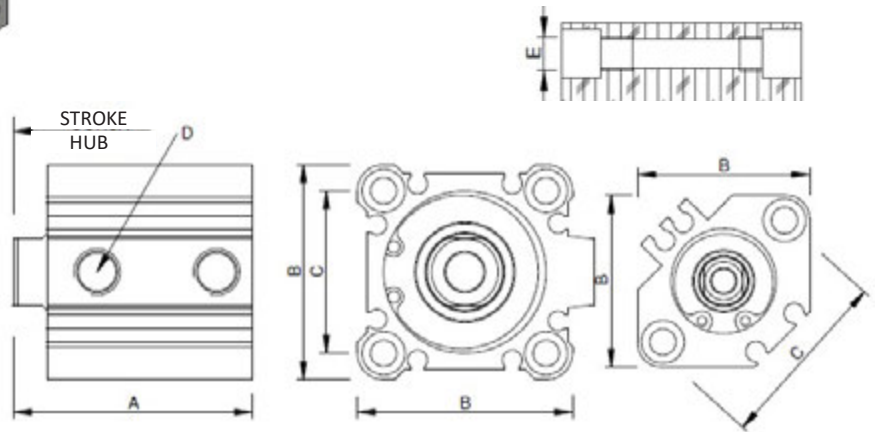
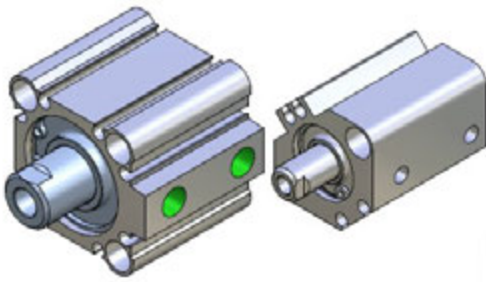


# CA.11.18

# CYLINDERS

. Compact Cylinder

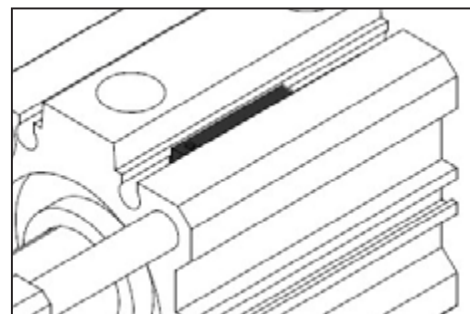
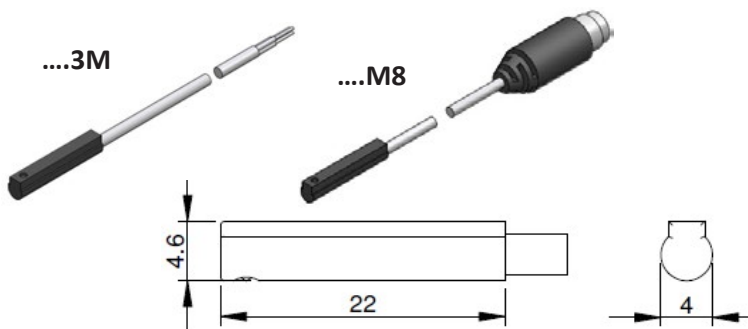
. Kompaktzylinder



Remarks / Anmerkungen:

Available with strokes:  
Lieferbar mit Hüben:  
5-15-25-30

Article no.	Piston bore	Stroke	Sensor (optional)	A	B	C	D	E	Weight				
CA.11.18.001	12	10	PNP = KT58P3M - KT58PM8 NPN = KT58N3M - KT58NM8	42	25	15.5	M5	M4	44 g				
CA.11.18.002		20		51.5					69 g				
CA.11.18.003	16	10		44	29	20			M6	M6	68 g		
CA.11.18.004		20		54							89 g		
CA.11.18.005	20	10		46	36	25.5					M6	M6	106 g
CA.11.18.006		20		56									138 g
CA.11.18.007	25	10		47.5	40	28	G 1/8	M6	148 g				
CA.11.18.008		20		57.5					186 g				
CA.11.18.009	32	10		50	45	34			G 1/8	M6			231 g
CA.11.18.010		20		60									285 g

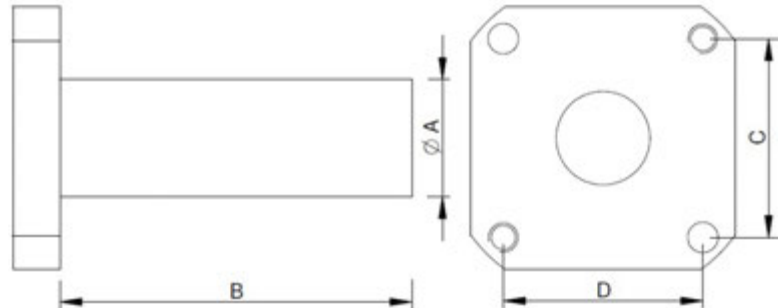
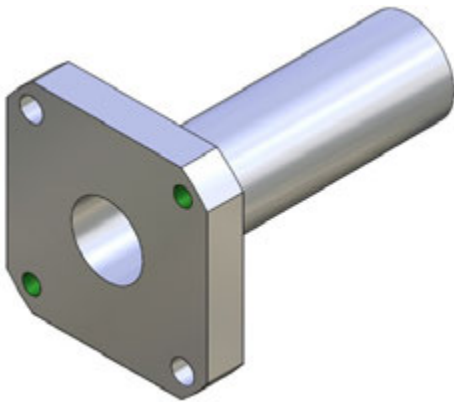


## CA.11 ADZ

## CYLINDERS

. Adapter for Cylinder

. Adapter für Kompaktzylinder



Article no.	A	B	C	D	M	Weight
CA.ADZ.12.14	14	30	15.5	15.5	Ø12	19 g
CA.ADZ.16.14			19.9	19.9	Ø16	25 g
CA.ADZ.20.14		40	25.5	25.5	Ø20	32 g
CA.ADZ.25.20	20	60	28	28	Ø25	55 g
CA.ADZ.32.20			34	34	Ø32	74 g
CA.ADZ.32.20.90		90				74 g
CA.ADZ.32.25	25	60				85 g

Table / Tabelle

M = Suitable for Cylinder CA.11.17/11.18...

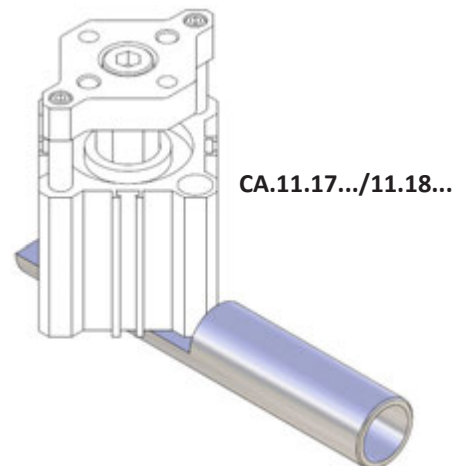
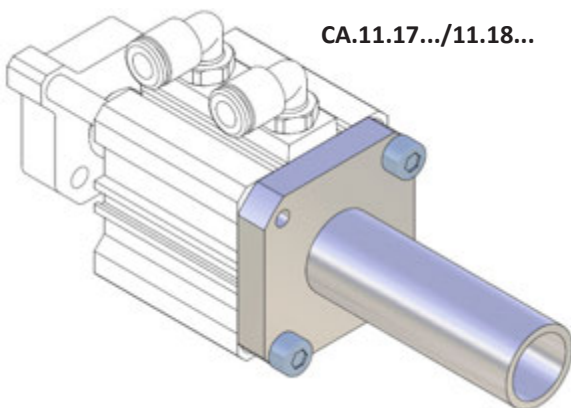
Passend für Zylinder CA.11.17/11.18...

Remarks / Anmerkungen:

Material / Werkstoff: Aluminium

Surface: silver anodized  
Oberfläche: eloxiert

### Application examples / Anwendungsbeispiele

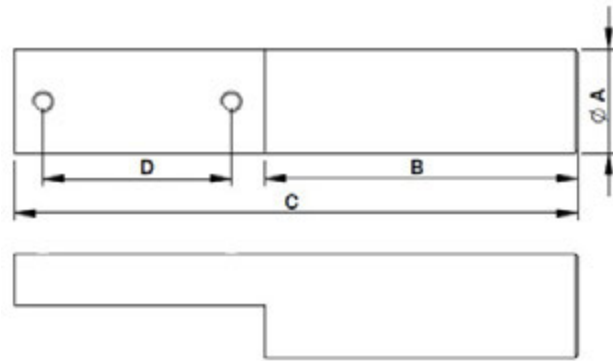
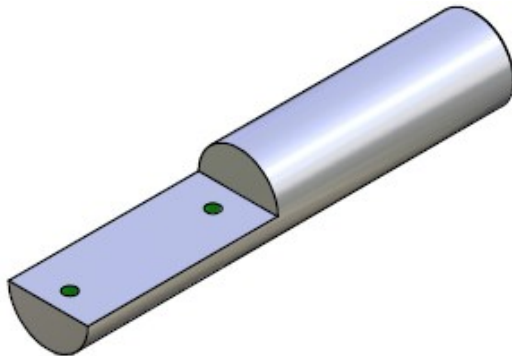


## CA.11 GAZ

## CYLINDERS

. Adapter for Cylinder

. Adapter für Kompaktzylinder



Article no.	A	B	C	D	M	Weight
CA.GAZ.12.10.60	10	60	98	21.9	∅ 12	17 g
CA.GAZ.16.14.60	14		104	28.3	∅ 16	27 g
CA.GAZ.20.20.60	20		125	36.1	∅ 20	56 g
CA.GAZ.25.20.60			130	39.6	∅ 25	59 g
CA.GAZ.32.20.60			140	48.1	∅ 32	62 g

Table / Tabelle

M = Suitable for Cylinder CA.11.17/11.18...

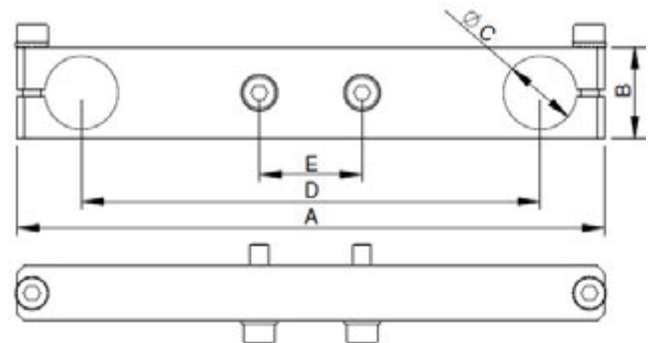
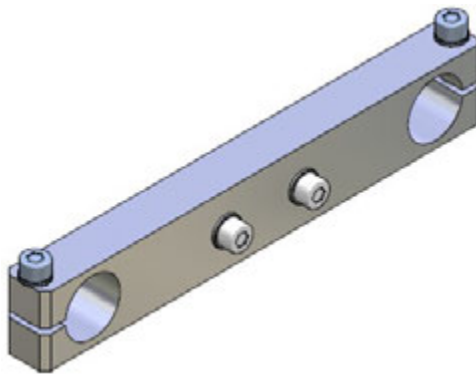
Passend für Zylinder CA.11.17/11.18...

Remarks / Anmerkungen:

Material / Werkstoff: Aluminium

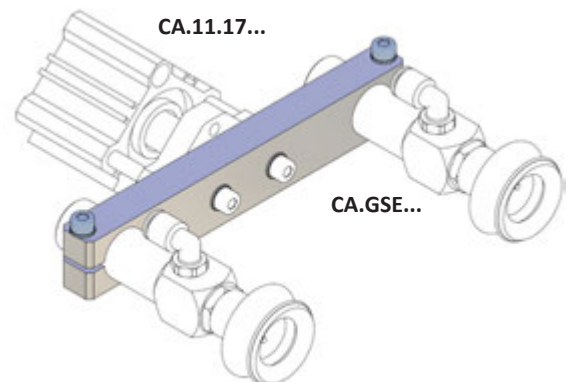
Surface: silver anodized  
Oberfläche: eloxiert

## CA.11 KBH



Application example / Anwendungsbeispiel

Article no.	A	B	C	D	E	M	Weight
CA.KBH.12.10.60	85	15	10	60	10	∅ 12	33 g
CA.KBH.16.14.90	121	20	14	90	14	∅ 16	56 g
CA.KBH.16.16.125	156	25	16	125			88 g
CA.KBH.20.14.90	121	20	14	90	17	∅ 20	58 g
CA.KBH.20.16.125	156	25	16	125			90 g
CA.KBH.25.16.125							22
CA.KBH.32.20.125	160	25	20	125	28	∅ 32	156 g

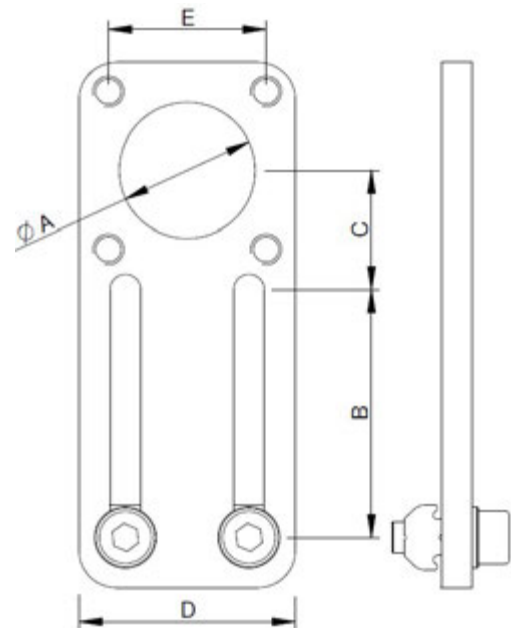
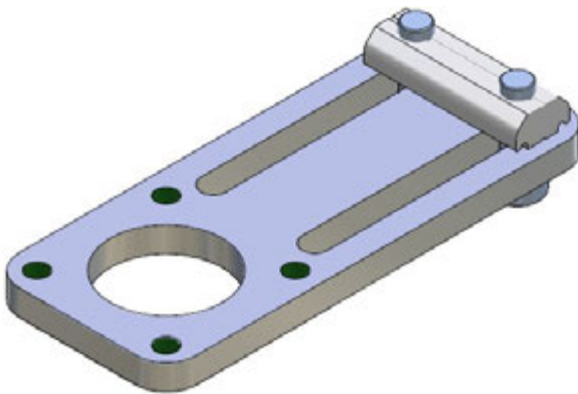


**CA.11.08**

**CYLINDERS**

. Bracket for Cylinder

. Adapter für Kompaktzylinder



Article no.	A	B	C	D	E	M	Weight
CA.11.08.001.X	14	30	19.5	25	15.5	∅ 12	35 g
CA.11.08.002.X	18				20	∅ 16	
CA.11.08.003.X	22	40	19.3	35	25.5	∅ 20	49 g
CA.11.08.004.X	28	35	24	40	28	∅ 25	52 g
CA.11.08.005.X	32		27.5	45	34	∅ 32	60 g

Table / Tabelle

M = Suitable for Cylinder CA.11.17/11.18...  
Passend für Zylinder CA.11.17/11.18...

Remarks / Anmerkungen:

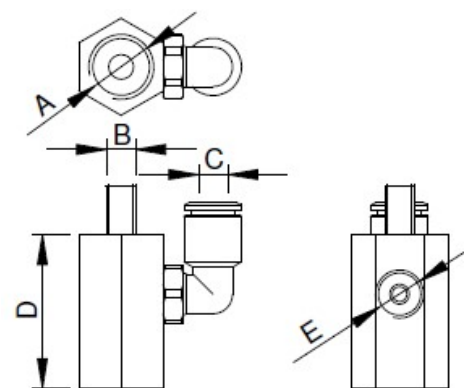
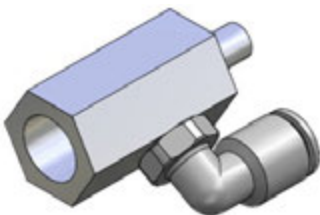
Material / Werkstoff: Aluminium

Surface: silver anodized  
Oberfläche: eloxiert

**CA.11.15**

. Adapters for vacuum cups

. Adapter für Vakuumsauger



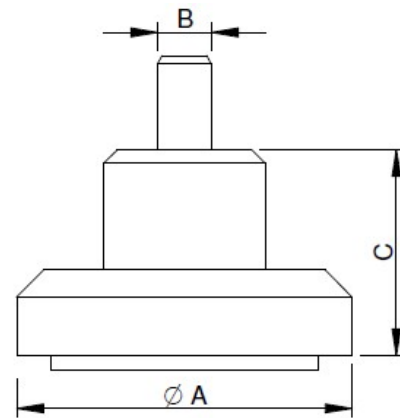
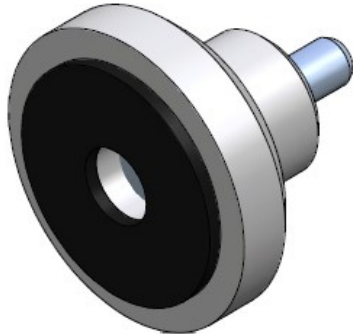
Article no.	A	B	C	D	E	M	Weight
CA.11.15.001	G 1/8	M4	4	24.5	M5	∅ 16	13 g
CA.11.15.002		M6				∅ 25	15 g
CA.11.15.004		M5				∅ 20	21 g
CA.11.15.003	G 1/4	M6	6	31	G 1/8	∅ 25	24 g
CA.11.15.005		M8				∅ 32	22 g

## CA.11.04

## CYLINDERS

. Cylinder Buffer

. Druckplatte



Article no.	A	B	C	M	Weight
CA.11.04.001	20	M3	14	Ø 12	5 g
CA.11.04.002	25	M4	15	Ø 16	10 g
CA.11.04.003	30	M5	18	Ø 20	17 g
CA.11.04.004	35	M6	19	Ø 25	28 g
CA.11.04.005	40	M8	20	Ø 32	46 g
CA.11.04.006	20	M5	14	KHZ/JDR	7 g
CA.11.04.007	40	G 1/8	20		40 g

Table / Tabelle

**M** = Suitable for Cylinder CA.11.17/11.18...

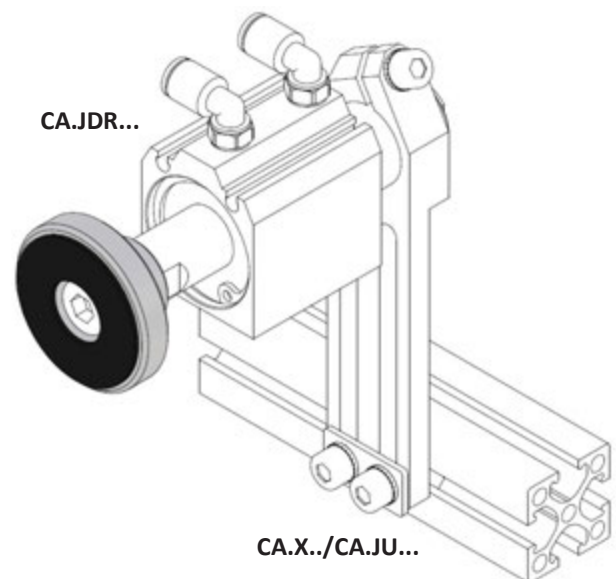
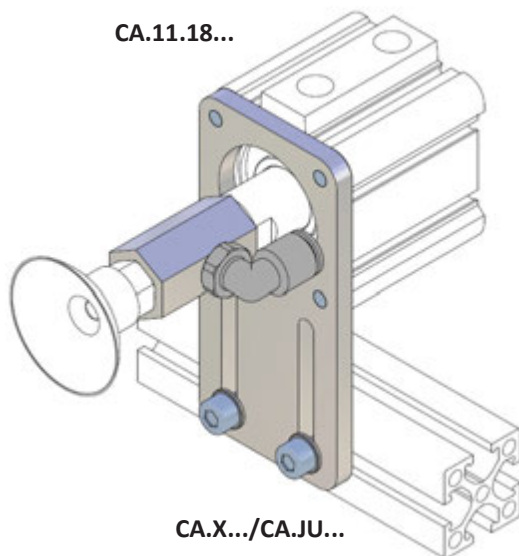
*Passend für Zylinder CA.11.17/11.18...*

Remarks / Anmerkungen:

Material / Werkstoff: Aluminium

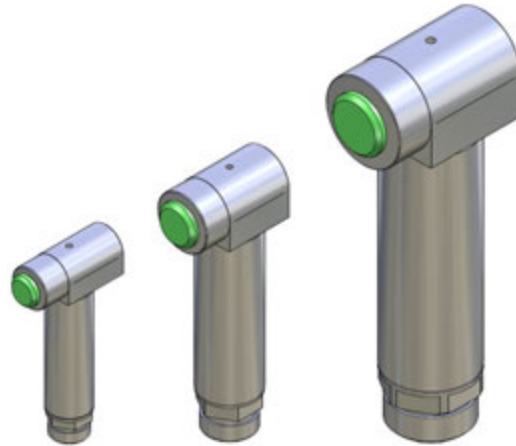
Surface: silver anodized  
*Oberfläche: eloxiert*

### Application examples / Anwendungsbeispiele



## CA.11 PMA

. One finger pneumatic grippers,  
perpendicular acting



## PMA

. Pneumatische Einfingergreifer, mit  
senkrechter Bewegung

Article no.	Stroke	Piston bore	Gripping force (at 6 bar)	Cycle air consumption	Weight
CA.PMA.1406	6 mm	Ø 10 mm	63 N	0.5 cm <sup>3</sup>	47 g
CA.PMA.2010	10 mm	Ø 16 mm	115 N	3.5 cm <sup>3</sup>	115 g
CA.PMA.3015	15 mm	Ø 25 mm	230 N	15 cm <sup>3</sup>	380 g

Remarks / Anmerkungen:

Working pressure: 6 bar clean and dry air

Betriebsdruck: 6 bar gefilterte und getrocknete Luft verwenden

Single-acting pneumatic piston drive

Antrieb durch einfach wirkenden pneumatischen Kolben

Finger linear motion, perpendicular to the piston

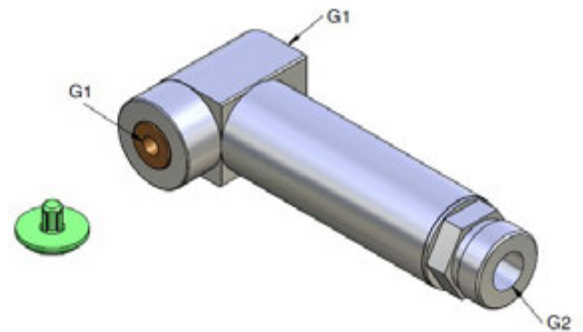
Linearbewegung des Fingers, senkrecht zum Kolben

Finger with through hole, to provide vacuum to a cup

Hubfinger mit Durchgangsbohrung, als Luftanschluß

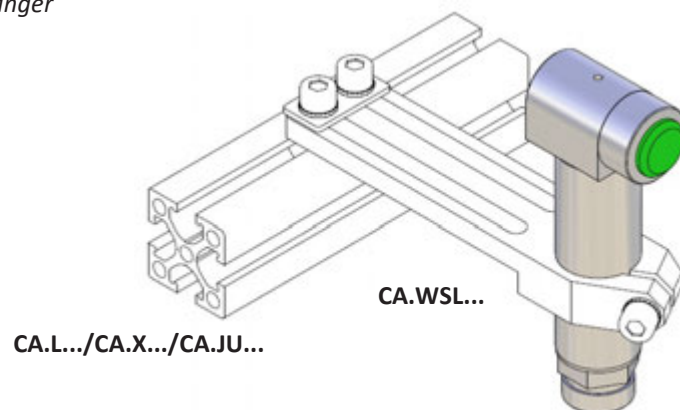
Removable VITON rubber pad on the finger, for a soft touch

Wechselbares Gummitteil (VITON) auf dem Hubfinger



Article no.	G1	G2
CA.PMA.1406	M5	M5
CA.PMA.2010	M5	G 1/8
CA.PMA.3015	G 1/8	G 1/8

### Application example / Anwendungsbeispiel



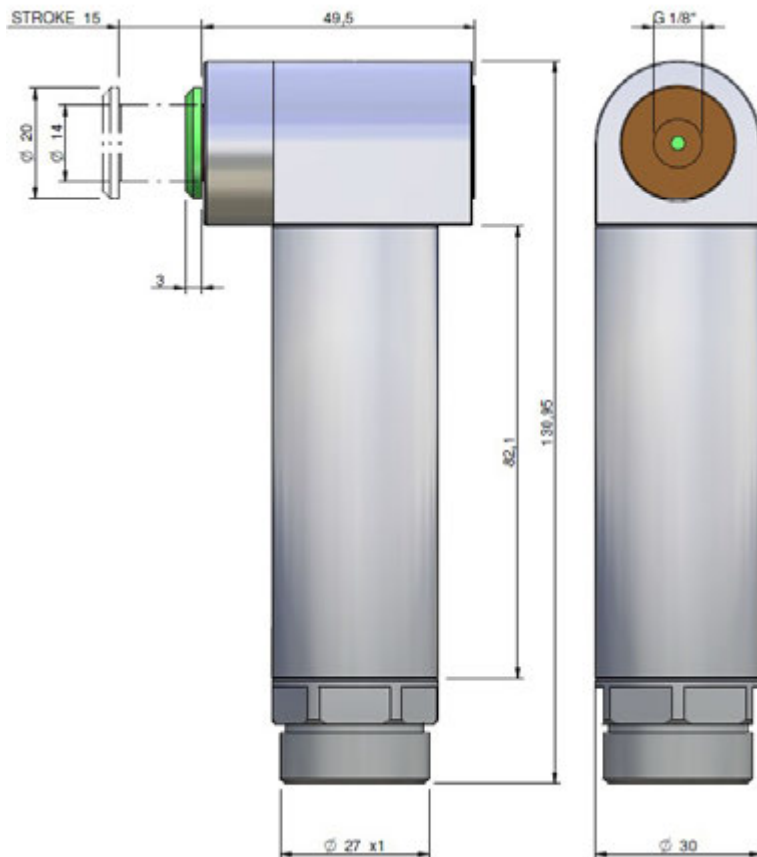
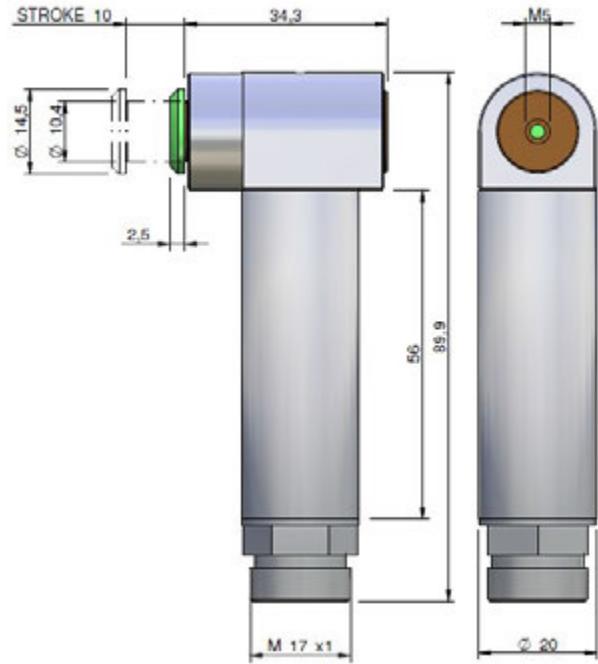
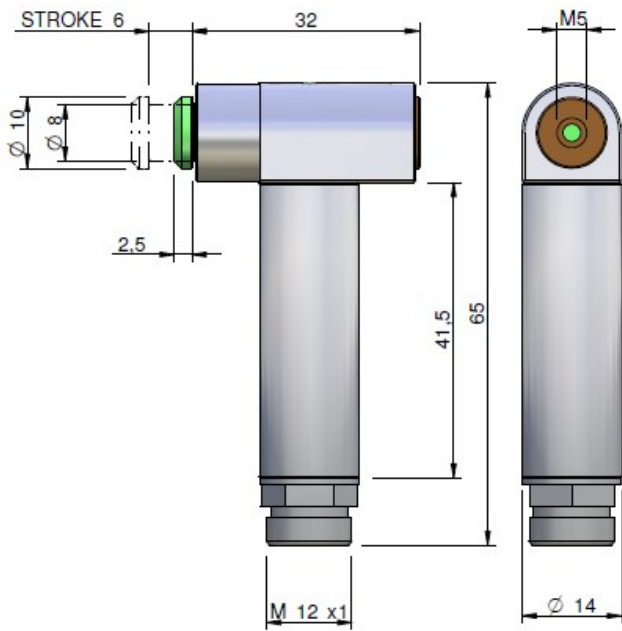


# CA.11 PMA

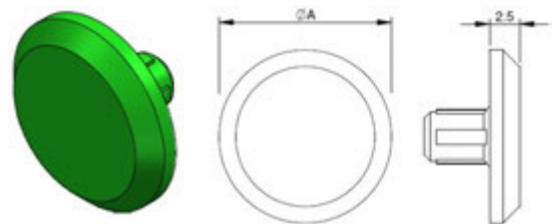
# PMA

. Dimensions

. Maße



Article no.	A	Weight
PPS.1406.07.V	10.5	3 g
PPS.2010.07.V	14.5	4 g
PPS.3015.07.V	20.5	5 g

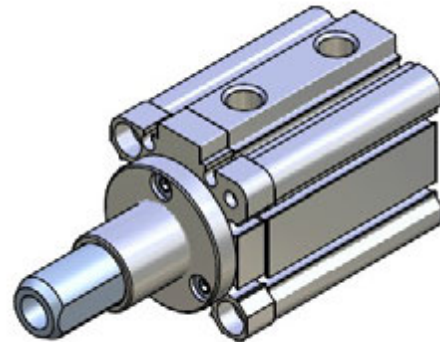
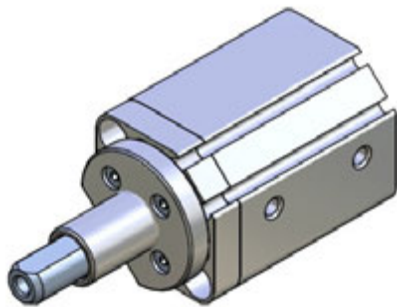


## CA.11 KHZ

## KHZ

. Compact Cylinder for vacuum cup

. Kurzhubzylinder für Saugnapf



Article no.	Piston bore	Stroke	Sensor (optional)	Weight
CA.KHZ.20141005	Ø 20	10	PNP = KT58P3M KT58PM8 NPN = KT58N3M KT58NM8	135 g
CA.KHZ.20143005		30		250 g
CA.KHZ.32201518	Ø 32	15		399 g
CA.KHZ.32203018		30		483 g
CA.KHZ.32205018		50		602 g

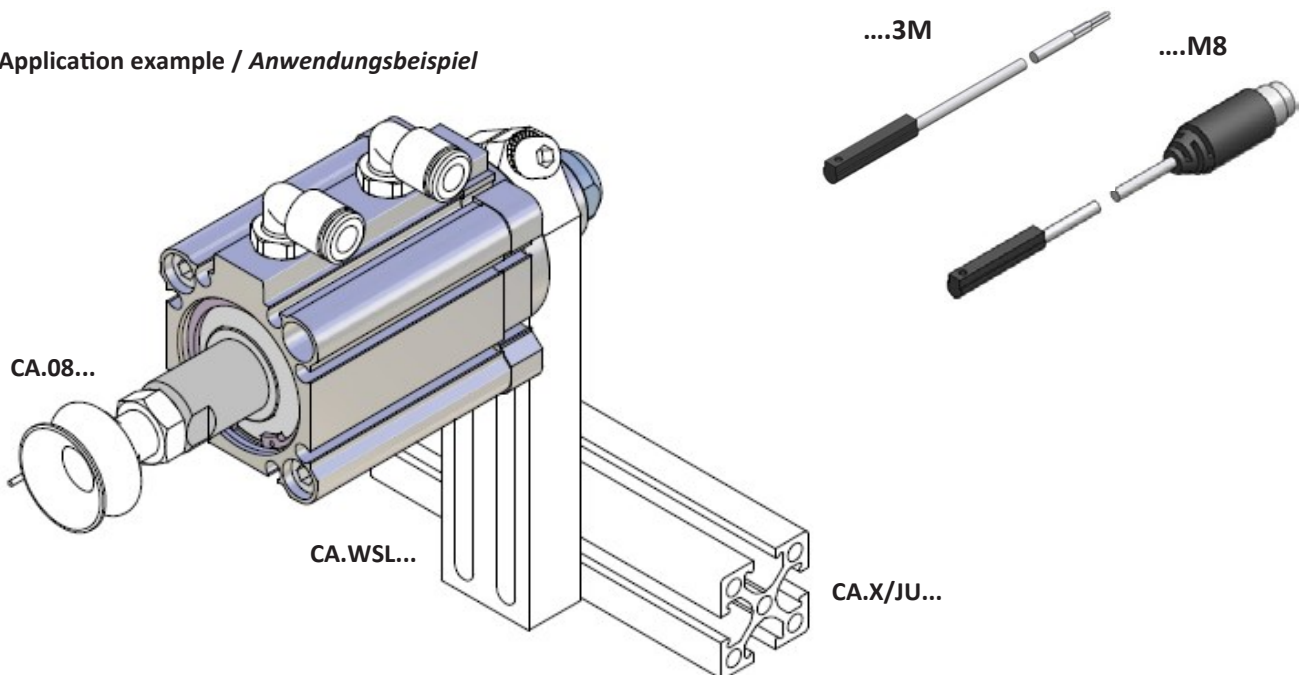
Remarks / Anmerkungen:

Cylinder with through rod, non rotational  
*Verdrehgesicherte Kurzhubzylinder mit Durchgangsbohrung*

Suitable for applications with suction cups  
*Geeignet für Anwendungen mit Vakuumsauger*

Available in 6 sizes and 6 different strokes  
*Verfügbar in 6 Anwendungen Maßen und Hübe*

Application example / Anwendungsbeispiel

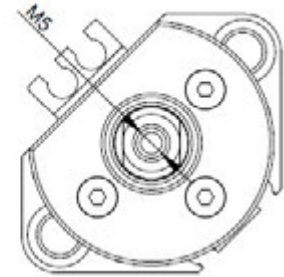
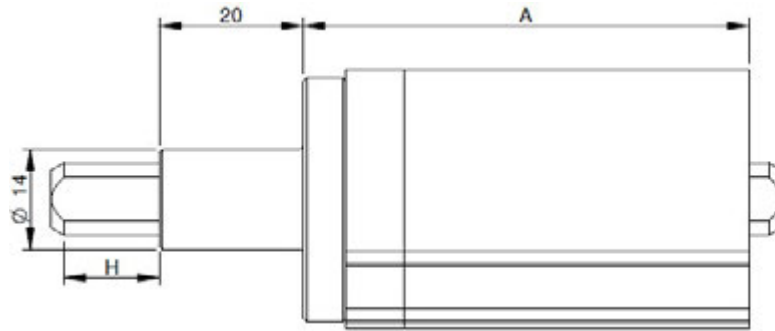


## CA.11 KHZ

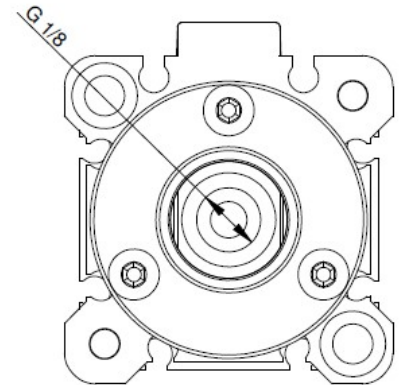
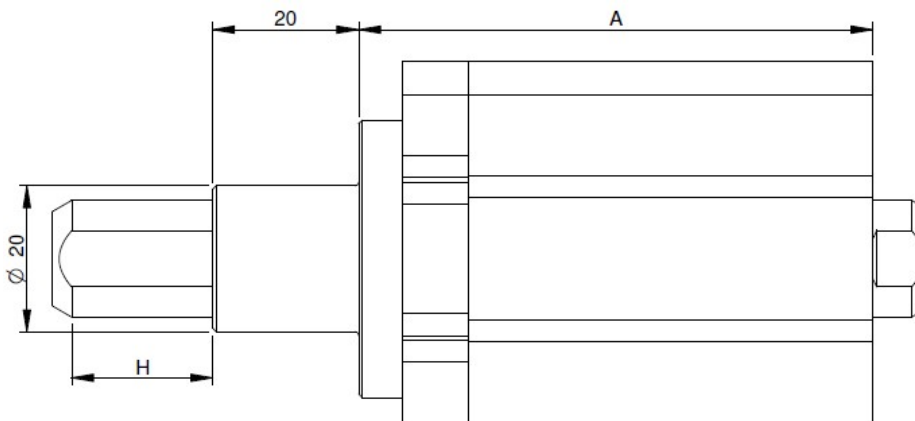
KHZ

. Dimensions

. Maße



Article no.	A	H
CA.KHZ.20141005	62	10
CA.KHZ.20143005	102	30



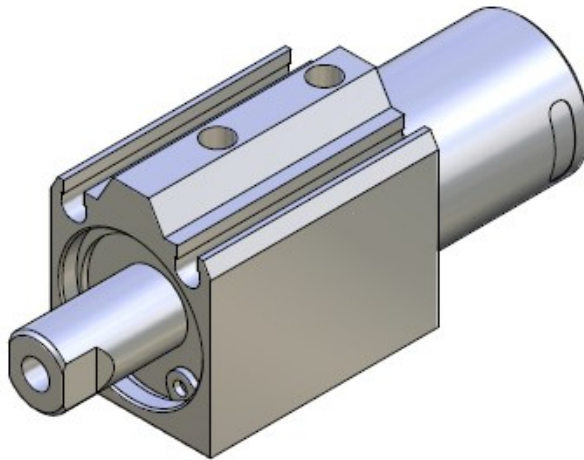
Article no.	A	H
CA.KHZ.32201518	70.5	15
CA.KHZ.32203018	100.5	30
CA.KHZ.32205018	140.5	50

## CA.11 JDR

## JDR

. Compact cylinder for vacuum cup, non rotational

. Verdrehsicherter pneumatischer Kurzhubzylinder



Article no.	Piston bore	Stroke	Sensor(optional)	Weight
CA.JDR.141005	Ø 14	10	PNP =KT58P3M KT58PM8 NPN = KT58N3M KT58NM8	54 g
CA.JDR.142505		25		76 g
CA.JDR.201005	Ø 20	10		63 g
CA.JDR.301518	Ø 30	15		112 g
CA.JDR.303018		30		150 g
CA.JDR.305018		50		200 g

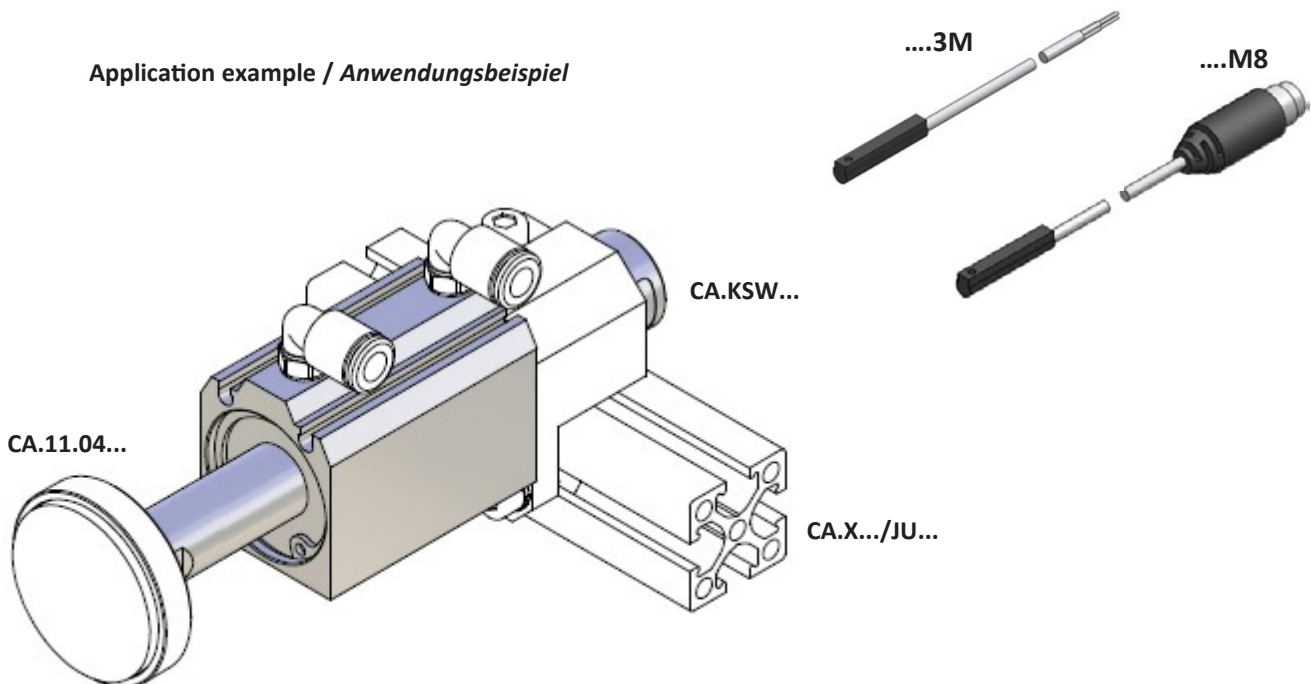
Remarks / Anmerkungen:

Cylinder with through rod, non rotational  
*Verdrehsicherte Kurzhubzylinder mit Durchgangsbohrung*

Suitable for applications with suction cups  
*Geeignet für Anwendungen mit Vakuum sauger*

Available in 6 sizes and 6 different strokes  
*Verfügbar in 6 verschiedenen Maßen und Hube*

Application example / Anwendungsbeispiel

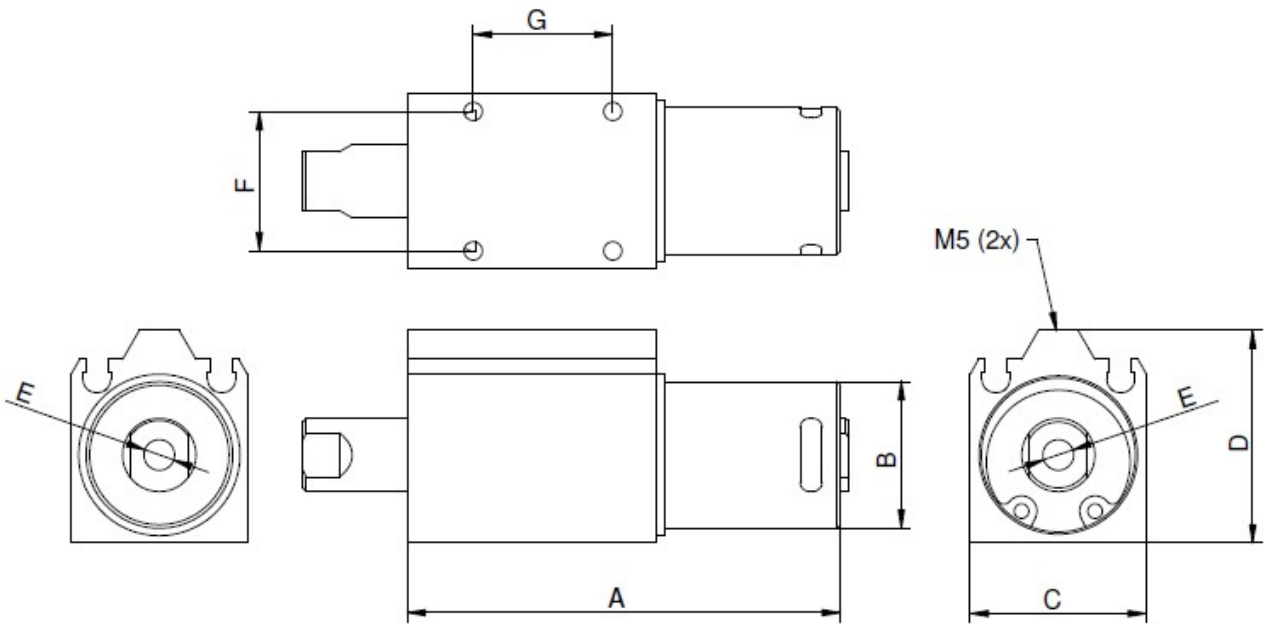


**CA.11 JDR**

**JDR**

. Dimensions

. Maße



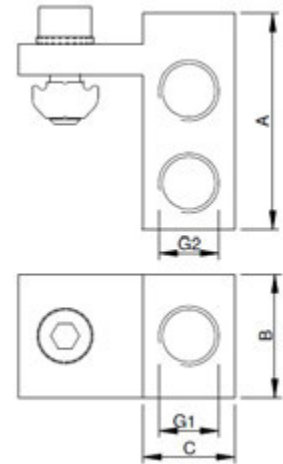
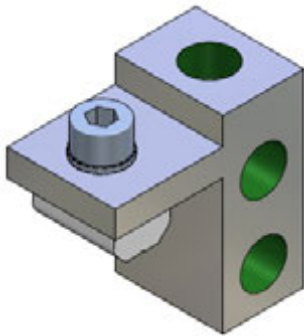
Article no.	A	B	C	D	E	F	G	H
CA.JDR.141005	64	∅ 14	24	29	M5	19	19	10
CA.JDR.142505	94							25
CA.JDR.201005	64	∅ 20	34	39	G 1/8	28	28	10
CA.JDR.301518	72							15
CA.JDR.303018	100							30
CA.JDR.305018	140							50

## CA.12 VTB

## PNEUMATIC

. Air vacuum manifold 1 - 4

. Verteilerblock 1 - 4



1 Main connection - 4 output terminal / 1 Kreis - 4 Ausgänge

Article no.	A	B	C	G1	G2	M	Weight
CA.VTB.X.141818	35	20	15	G 1/8	G 1/8	X	35 g
CA.VTB.JU.141818						JU	37 g

Table / Tabelle

M = Suitable for PROFILE...  
Passend für PROFILE...

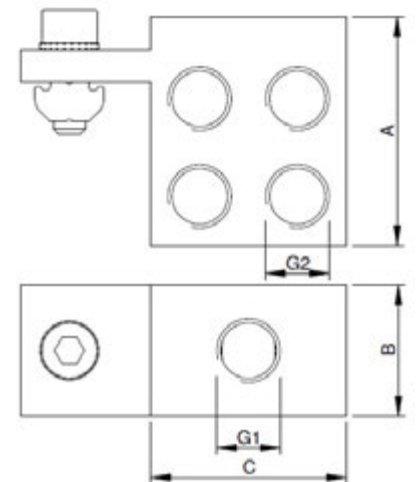
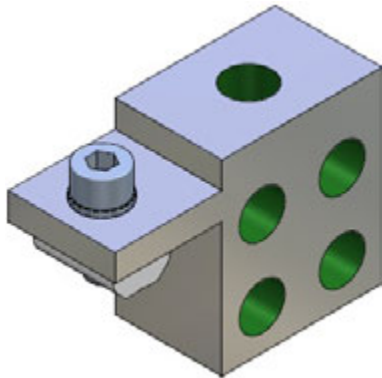
Remarks / Anmerkungen:

Material / Werkstoff: Aluminium

Surface: silver anodized  
Oberfläche: eloxiert

. Air vacuum manifold 1 - 8

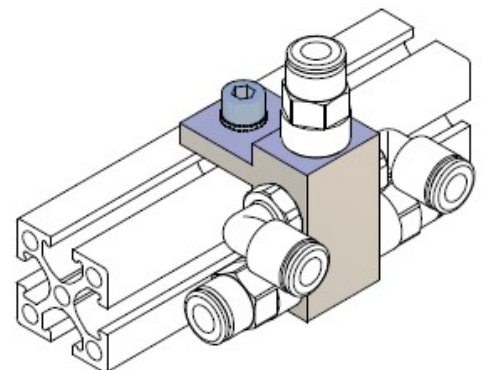
. Verteilerblock 1 - 8



1 Main connection - 8 output terminal / 1 Kreis - 8 Ausgänge

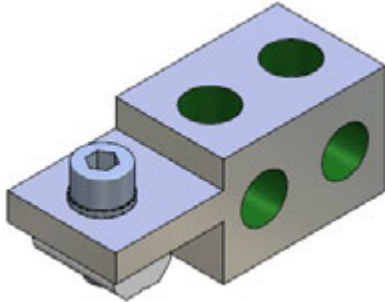
Article no.	A	B	C	G1	G2	M	Weight
CA.VTB.X.181818	35	20	30	G 1/8	G 1/8	X	55 g
CA.VTB.JU.181818						JU	58 g

Application example / Anwendungsbeispiel



## CA.12 VTB

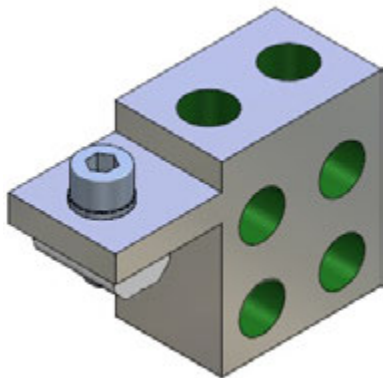
. Air vacuum manifold 2 - 4



2 Main connection - 4 output terminal / 2 Kreise - 4 Ausgänge pro Kreis

Article no.	A	B	C	G1	G2	M	Weight
CA.VTB.X.241818	20	20	30	G 1/8	G 1/8	X	39 g
CA.VTB.JU.241818	40					JU	41 g

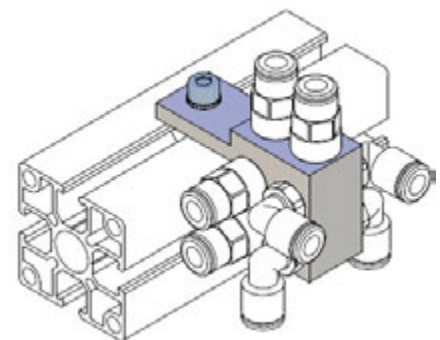
. Air vacuum manifold 2 - 8



2 Main connection - 4 output terminal / 2 Kreise - 4 Ausgänge pro Kreis

Article no.	A	B	C	G1	G2	M	Weight
CA.VTB.X.281818	35	20	30	G 1/8	G 1/8	X	54 g
CA.VTB.JU.281818						JU	57 g

Application example / Anwendungsbeispiel



## PNEUMATIC

. Verteilerblock 2 - 4

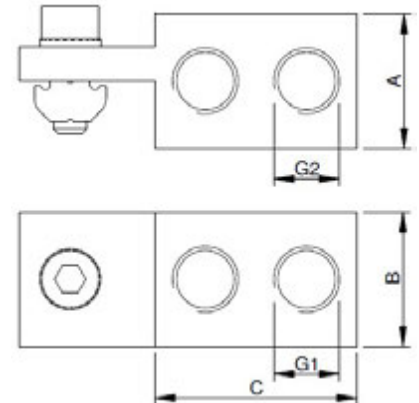


Table / Tabelle

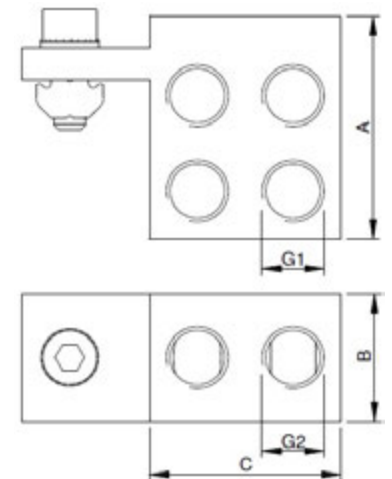
M = Suitable for PROFILE...  
Passend für PROFILE...

Remarks / Anmerkungen:

Material / Werkstoff: Aluminium

Surface: silver anodized  
Oberfläche: eloxiert

. Verteilerblock 2 - 8



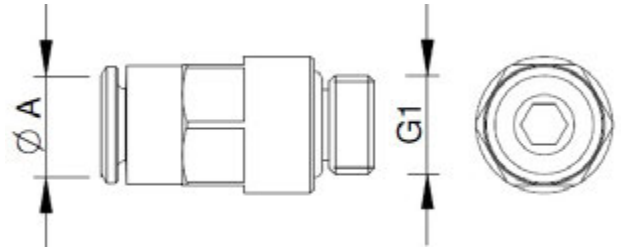
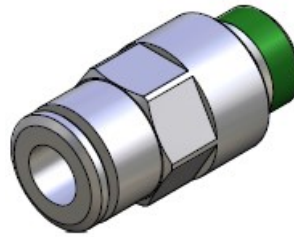
## CA.12.05

## PNEUMATIC

. Straight male adapter (parallel)

. Steckverschraubung

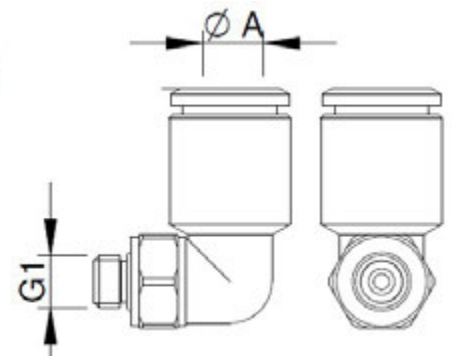
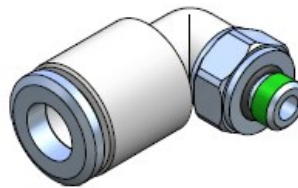
Article no.	A	G1	Weight
CA.12.05.015	∅ 4	M5	4 g
CA.12.05.016	∅ 6		G 1/8
CA.12.05.017			
CA.12.05.023	∅ 3	M3	1 g
CA.12.05.024	∅ 3	M5	
CA.12.05.044	∅ 4	G 1/8	10 g
CA.12.05.047	∅ 6	G 1/4	13 g
CA.12.05.048	∅ 8		
CA.12.05.049	∅ 8	G 3/8	27 g



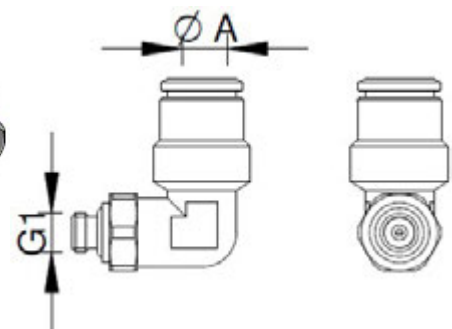
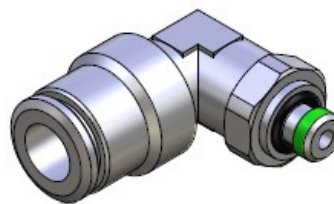
. Orienting elbow male adapter (parallel)

. Steckverschraubung L-Form

Article no.	A	G1	Weight
CA.12.05.001	∅ 4	M5	4 g
CA.12.05.002	∅ 6		G 1/8
CA.12.05.003			
CA.12.05.038	∅ 8	G 1/4	11 g
CA.12.05.039			
CA.12.05.040	∅ 4	G 1/8	7 g



Article no.	A	G1	Weight
CA.12.05.018	∅ 4	M5	12 g
CA.12.05.019	∅ 6	G 1/8	19 g
CA.12.05.020		M5	14 g
CA.12.05.021	∅ 3	M3	5 g
CA.12.05.022		M5	6 g





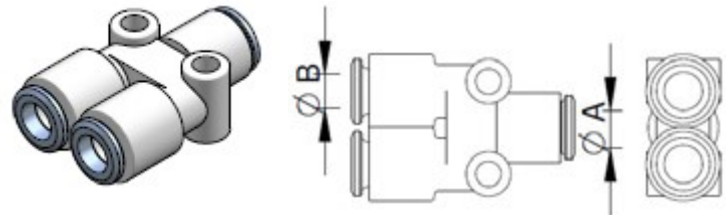
## CA.12.05

## PNEUMATIC

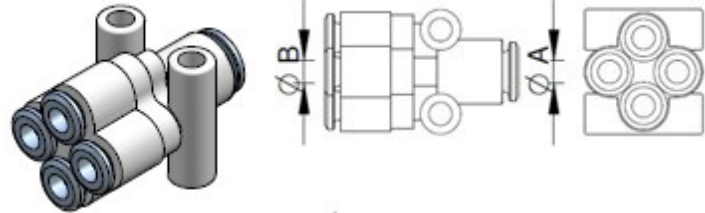
### . Y connector

### . Steckverschraubung Y

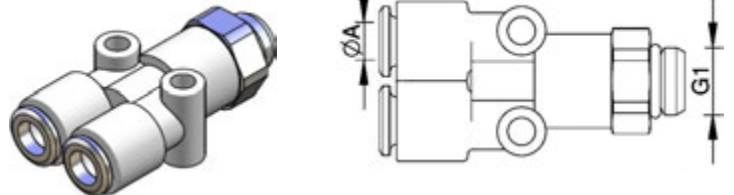
Article no.	A	B	Weight
CA.12.05.004	∅ 4	2 x ∅ 4	6 g
CA.12.05.005	∅ 6	2 x ∅ 6	9 g
CA.12.05.006		2 x ∅ 4	7 g
CA.12.05.007	∅ 8	2 x ∅ 6	11 g
CA.12.05.034	∅ 3	2 x ∅ 3	5 g



Article no.	A	B	Weight
CA.12.05.008	∅ 6	4 x ∅ 4	12 g
CA.12.05.009	∅ 8	4 x ∅ 6	17 g



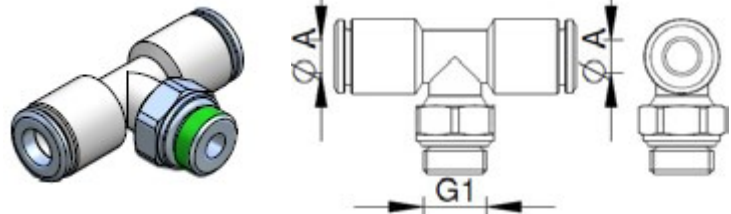
Article no.	A	G1	Weight
CA.12.05.050	∅ 4	G 1/8	13 g
CA.12.05.051	∅ 6		15 g



### . Orienting Tee male adapter (parallel) – centre leg

### . Steckkupplung T

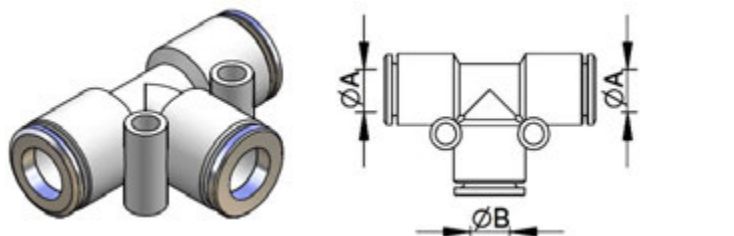
Article no.	A	G1	Weight
CA.12.05.028	∅ 4	M5	7 g
CA.12.05.029		G 1/8	9 g
CA.12.05.030	∅ 6		11 g
CA.12.05.031	M5		9 g



### . Tee Connector

### . Steckkupplung T

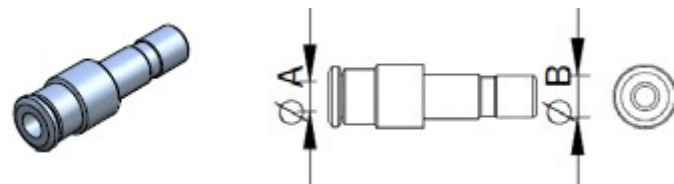
Article no.	A	B	Weight
CA.12.05.012	∅ 4	∅ 4	6 g
CA.12.05.013	∅ 6	∅ 6	9 g
CA.12.05.014	∅ 8	∅ 8	14 g



### . Reducer Junction

### . Reduzierung

Article no.	A	B	Weight
CA.12.05.035	∅ 3	∅ 4	2 g
CA.12.05.042	∅ 4	∅ 6	9 g

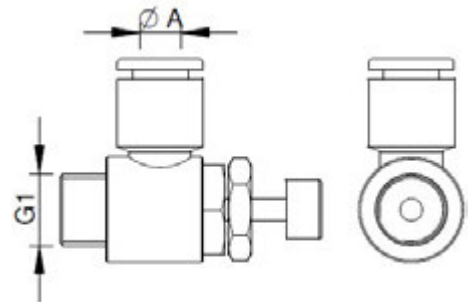
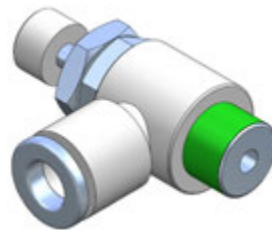


**CA.12.05**
**PNEUMATIC**

. Speed Controller

. Drosselrückschlagventile

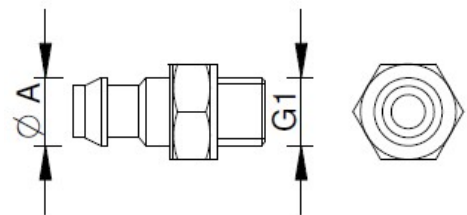
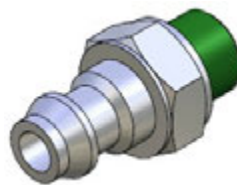
Article no.	A	G1	Weight
CA.12.05.RF1806	∅ 6	G 1/8	17 g
CA.12.05.RF1804	∅ 4		
CA.12.05.RFM504	∅ 4	M5	7 g
CA.12.05.RFM506	∅ 6		



. Straight fitting

. Gerade Verschraubung zum Aufstecken

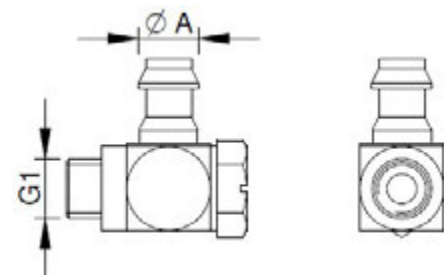
Article no.	A	G1	Weight
CA.12.05.M5AU3	∅ 3	M5	1 g
CA.12.05.M5AU4	∅ 4		
CA.12.05.M5AU6	∅ 6		



. Adjustable-position elbow fitting

. Schwenkbare L-förmige Verschraubung zum Aufstecken

Article no.	A	G1	Weight
CA.12.05.M5ALHU3	∅ 3	M5	3 g
CA.12.05.M5ALHU4	∅ 4		
CA.12.05.M5ALHU6	∅ 6		



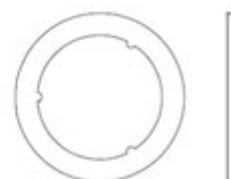
. Plug polyamide

. Verschlusszapfen Polyamid

Article no.	A	Weight
CA.12.05.036	∅ 4	1 g
CA.12.05.037	∅ 6	



Article no.	M
CA.08.09.05	M5
CA.08.09.18	G 1/8
CA.08.09.14	G 1/4



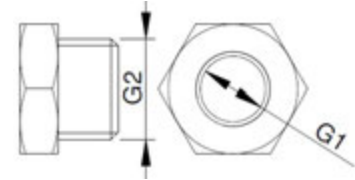
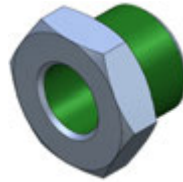
## CA.08.14

## PNEUMATIC

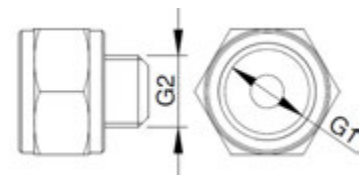
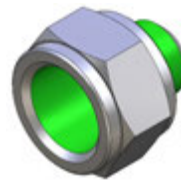
### . Reducer (parallel)

### . Reduzierstück zylindrisch

Article no.	G1	G2	Weight
CA.08.14.001	M5	G 1/8	8 g
CA.08.14.002	M6		
CA.08.14.003	G 1/8	G 1/4	11 g
CA.08.14.004	M6		13 g
CA.08.14.022	G 1/4	G 3/8	12 g



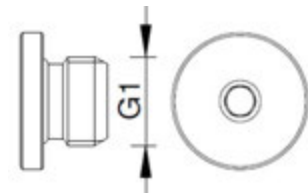
Article no.	G1	G2	Weight
CA.08.14.018	G 1/8	M5	7 g
CA.08.14.019	G 1/4	G 1/8	14 g



### . Male plug (parallel)

### . Gewindestopfen zylindrisch

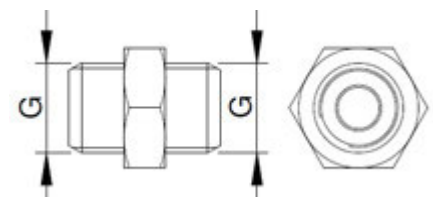
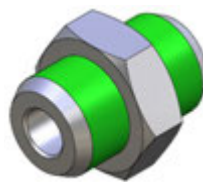
Article no.	G1	Weight
CA.08.14.013	M5	3 g
CA.08.14.014	G 1/8	4 g
CA.08.14.015	G 1/4	7 g



### . Nipple (parallel)

### . Doppelnippel zylindrisch

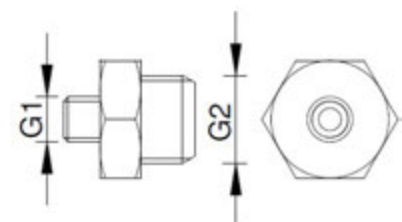
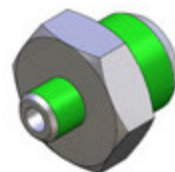
Article no.	G	Weight
CA.08.14.021	M5	2 g
CA.08.14.005	G 1/8	9 g
CA.08.14.006	G 1/4	15 g



### . Nipple (parallel)

### . Doppelnippel reduziert zylindrisch

Article no.	G1	G2	Weight
CA.08.14.011	M5	G 1/8	8 g
CA.08.14.012	G 1/8	G 1/4	15 g



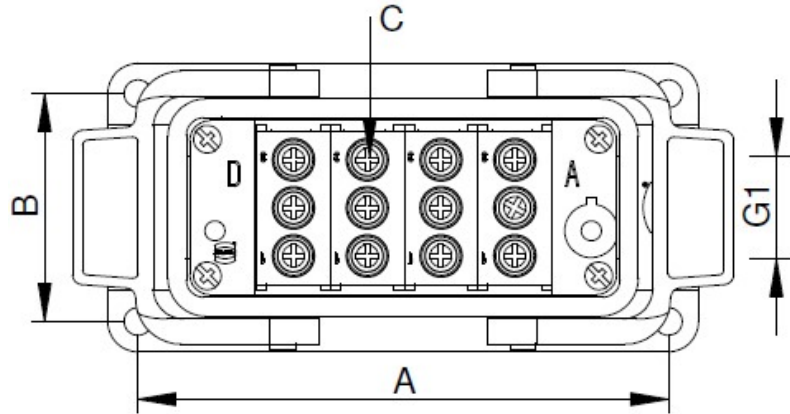
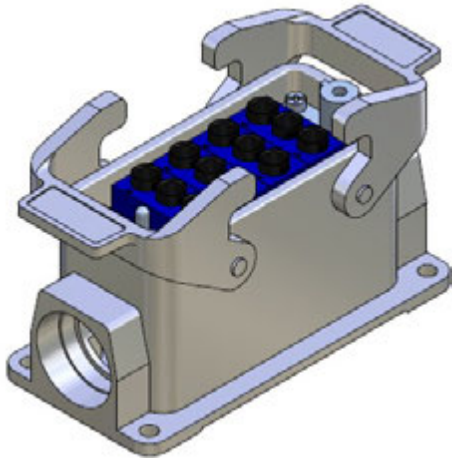
## CA.12 SCAR - SCAG

## PNEUMATIC

. Mounting case

. Anbaugehäuse

Robot side RS *Roboterseite*

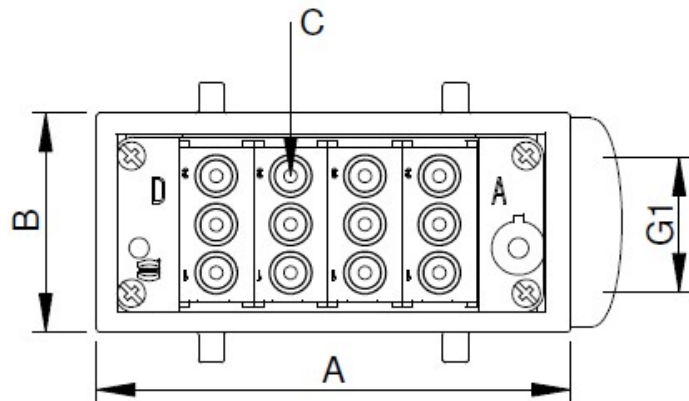
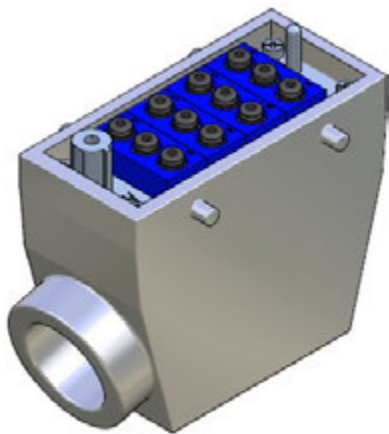


Article no.	A	B	G1	C	Weight
CA.SCAR.12P00E	105	45	PG21	12x Ø 6	405 g

. Grommet case

. Tüllengehäuse

Gripper side GS *Greiferselte*



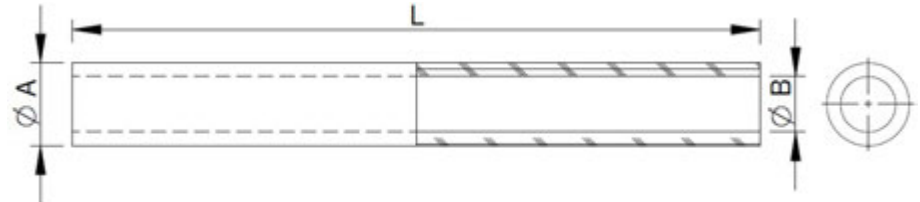
Article no.	A	B	G1	C	Weight
CA.SCAG.12P00E	93	43	PG21	12x Ø 6	361 g

# CA.15.01

# PNEUMATIC

. Hoses

. Schläuche



Article no.	Colour	A	B	L [mt]
CA.15.01.011	Neutral	3	1.5	25 mt
CA.15.01.010				
CA.15.01.001	Blue	4	2.5	
CA.15.01.004	Yellow			
CA.15.01.007	Red			
CA.15.01.019	Black			
CA.15.01.020	Green			
CA.15.01.009	Neutral	6	4	
CA.15.01.002	Blue			
CA.15.01.003	Yellow			
CA.15.01.006	Red			
CA.15.01.015	Black			
CA.15.01.014	Green			
CA.15.01.016	Gray	8	5.5	
CA.15.01.012	Neutral			
CA.15.01.005	Yellow			
CA.15.01.008	Red			

Table / Tabelle

A = Outer diameter  
Außendurchmesser

B = Inner diameter  
Innendurchmesser

L = Length  
Länge

Remarks / Anmerkungen:

Polyurethane hose for compressed air suitable for use with push-in fittings.

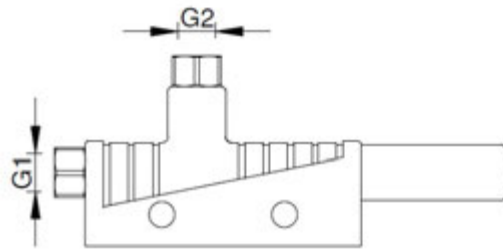
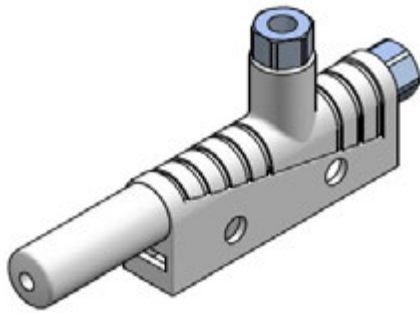
*Polyurethanschlauch für Druckluft, für die Verwendung mit Schnellkupplungen geeignet.*

**CA.12 SBP**

**PNEUMATIC**

. Basic Ejector

. *Grundejektor*



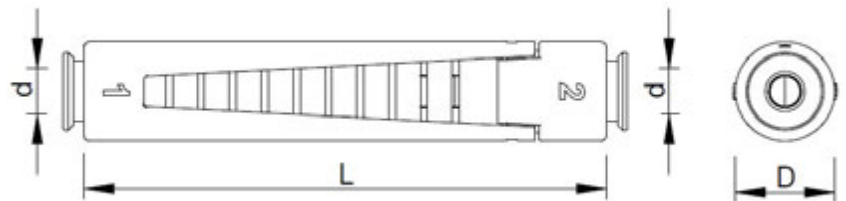
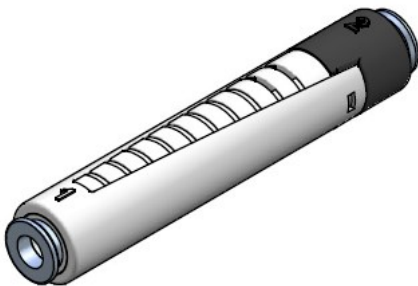
Article no.	G1	G2	B	∅	Weight
CA.SBP.10.G02	G 1/8	G 1/8	10	1	22g
CA.SBP.15.G02			15	1.5	
CA.SBP.20.G03	G 1/4	G 3/8	20	2.0	50g

**CA.12 SLP**

**PNEUMATIC**

. Inline Ejector

. *Inlineejektor*



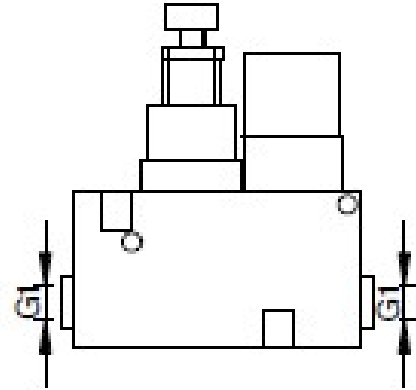
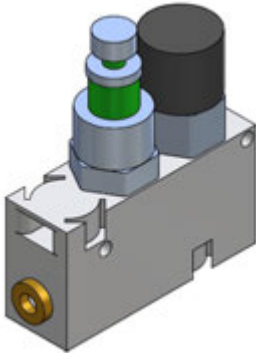
Article no.	d	D	L	∅	Weight
CA.SLP.05.SI	4	10	57	0.5	5g
CA.SLP.07.SI				0.7	

## CA.11

## PNEUMATIC

. Pressure Regulator

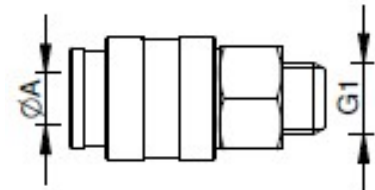
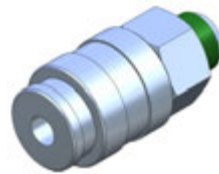
. Druckregler



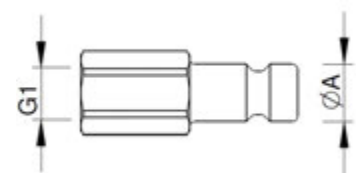
Article no.	G1	Weight
CA.11.06.001	4	30 g

**CA.12**
**PNEUMATIC**
**. Quick coupling socket**
**. Schnellschlusskupplung**

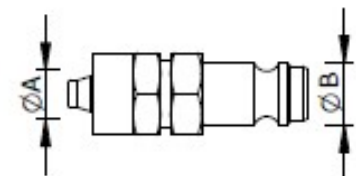
Article no.	A	G1	Weight
CA.12.06.003	2.5	M5	8 g
CA.12.06.001	5.0	G 1/8	27 g
CA.12.06.007	7	G 1/4	70 g


**. Plug-In Nipple**
**. Stecknippel für Schnellschlusskupplung**

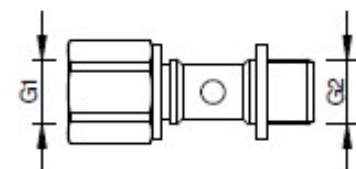
Article no.	A	G1	Weight
CA.12.06.008	2.5	M5	3 g
CA.12.06.005	5.0	G 1/8	14 g
CA.12.06.006	7	G 1/4	23 g



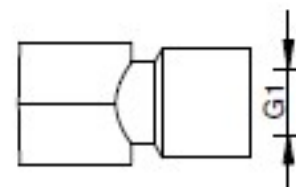
Article no.	A	B	Weight
CA.12.06.004	4	2.5	5 g
CA.12.06.002	6	5.0	18 g


**. Pneumatic Hollow bolt**
**. Pneumatik Hohlschraube**

Article no.	G1	G2	Weight
CA.01.08.005	M5	M5	3 g
CA.01.08.003	G 1/8	G 1/8	17 g
CA.01.08.006	G 1/4	G 1/4	28 g


**. Pneumatic ring connection**
**. Pneumatik Ringanschluss Einfach**

Article no.	G1	M	Weight
CA.01.08.008	M5	CA.01.08.005	6 g
CA.01.08.004	G 1/8	CA.01.08.003	15 g
CA.01.08.007	G 1/4	CA.01.08.006	20 g





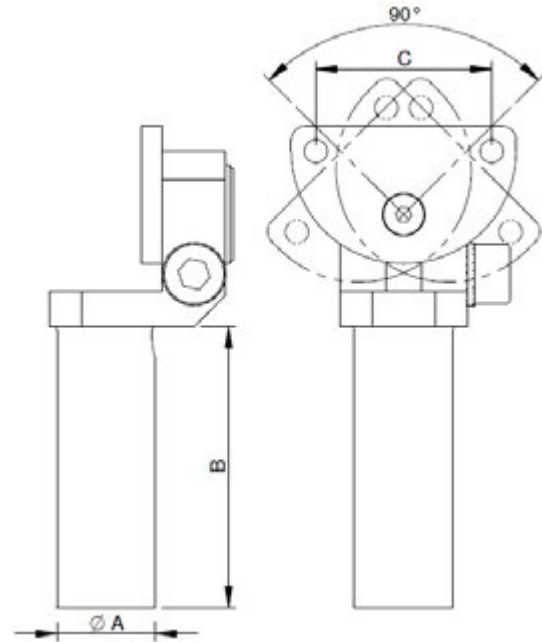
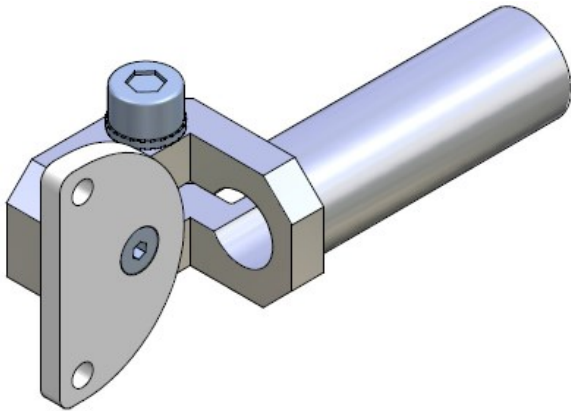


**CA.14 ATK**

**SENSORS**

. Adapter for Part Control

. Adapter für Teilekontrolle



Remarks / Anmerkungen:

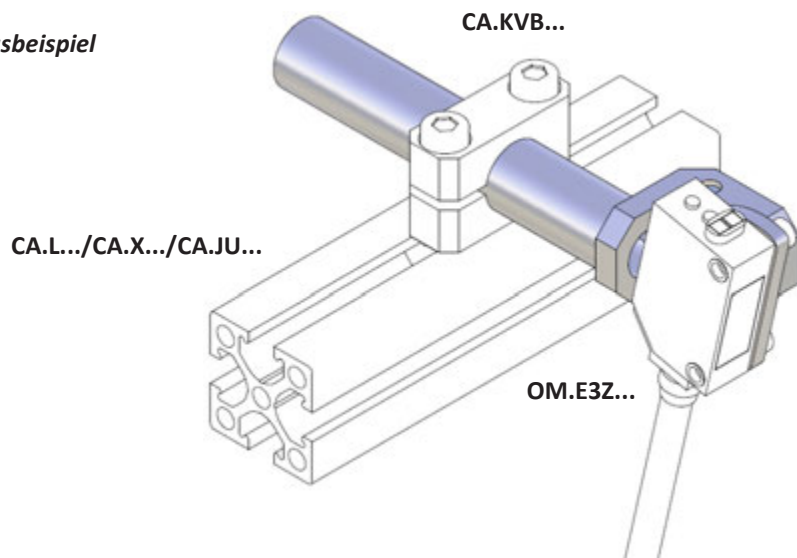
For Part Control OM.E3Z...  
Passend für Teilekontrolle OM.E3Z...

Material / Werkstoff: Aluminium

Surface: silver anodized  
Oberfläche: eloxiert

Article no.	A	B	C	Weight
CA.ATK.10.10.30	10	30	25	23 g
CA.ATK.10.10.60		60		26 g
CA.ATK.10.10.90		90		29 g
CA.ATK.10.14.40	14	40		36 g
CA.ATK.10.14.80		80		44 g
CA.ATK.10.14.120		120		52 g

Application example / Anwendungsbeispiel

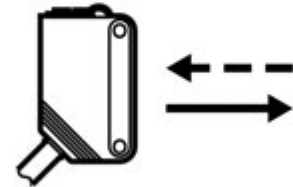
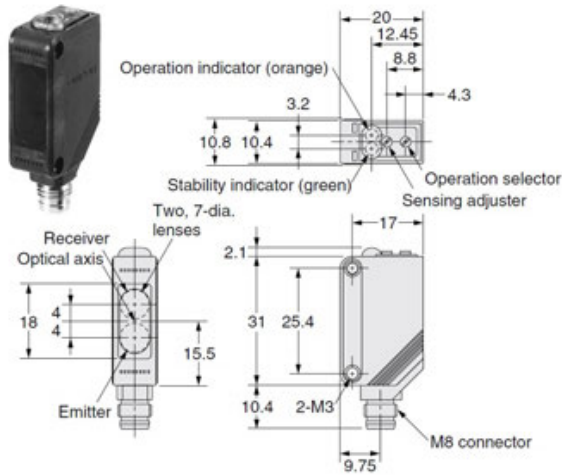


## CA.14 OM.E3Z

## SENSORS

. Diffuse reflective

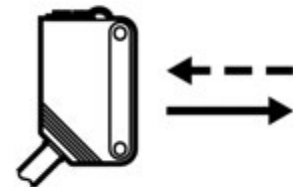
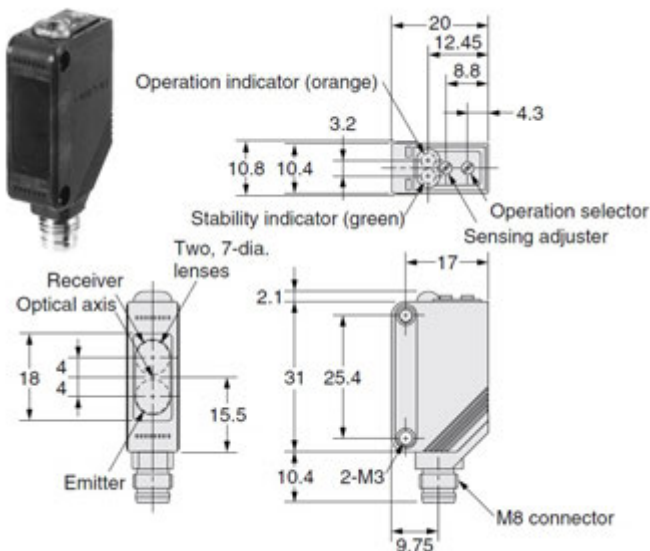
. Energetische Reflexionslichttaster



Article no.	Output	Power supply voltage	Sensor type	Sensing distance	Connector method
OM.E3Z-D86.OMS	PNP	12 to 24 VDC $\pm$ 10%	Diffuse - reflective	5 to 100 mm (wide view)	Connector type M8 4pin
OM.E3Z-D66.OMS	NPN				

. Laser Thin beam type (1 mm)  
reflective model

. Laser Reflexionslichttaster  
mit engem Strahlkegel (1 mm)



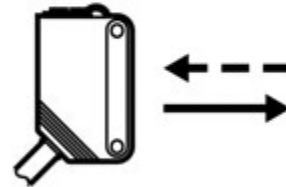
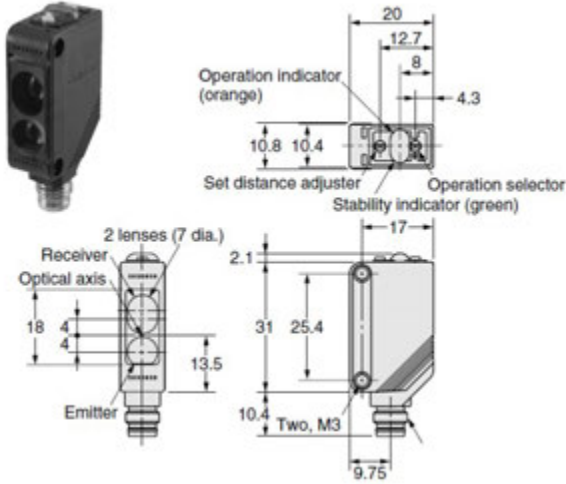
Article no.	Output	Power supply voltage	Sensor type	Sensing distance	Connector method
OM.E3Z-LL86.OMS	PNP	12 to 24 VDC $\pm$ 10%	Laser Thin beam type reflective model	90 $\pm$ 30 mm	Connector type M8 4pin
OM.E3Z-LL66.OMS	NPN				

CA.14 OM.E3Z

SENSORS

. Distance-settable (Laser)

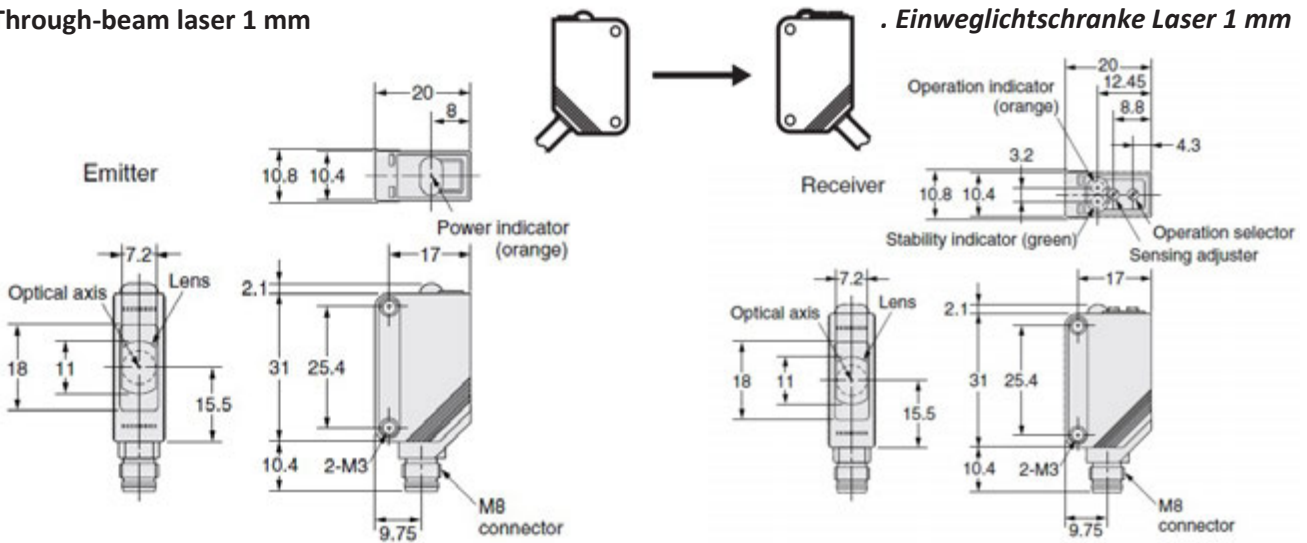
. Hinter-Vordergrundausbldung (Laser)



Article no.	Output	Power supply voltage	Sensor type	Sensing distance	Connector method
OM.E3Z-LS86.OMS	PNP	12 to 24 VDC ±10%	Distance-settable	30 to 200 mm	Connector type M8 7 4pin
OM.E3Z-LS66.OMS	NPN				

. Through-beam laser 1 mm

. Einweglichtschranke Laser 1 mm



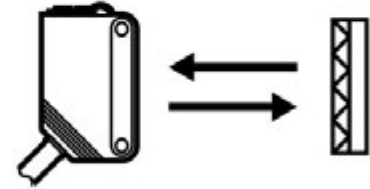
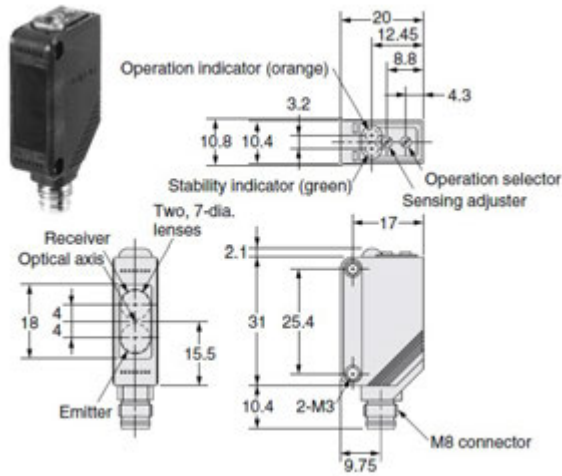
Article no.	Output	Power supply voltage	Sensor type	Sensing distance	Connector method
OM.E3Z-LT86.OMS	PNP	12 to 24 VDC ±10%	Through-beam	15 m	Connector type M8 4pin
OM.E3Z-LT66.OMS	NPN				

## CA.14 OM.E3Z

## SENSORS

### . Retroreflective model

### . Reflexionslichtschranken

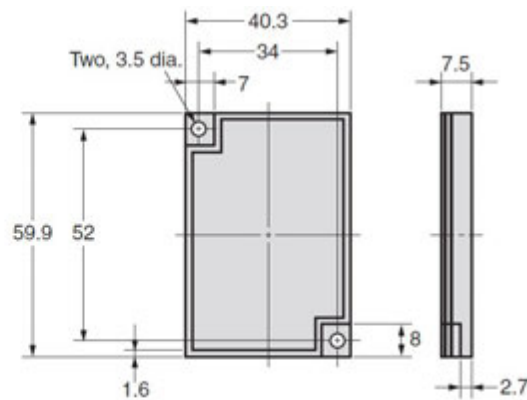


Article no.	Output	Power supply voltage	Sensor type	Sensing distance	Connector method
OM.E3Z-R86.OMS	PNP	12 to 24 VDC $\pm$ 10%	Retroreflective model	4 m	Connector type M8 4pin
OM.E3Z-R66.OMS	NPN				

### . Reflector (order separately)



Material:  
Reflective surface: acrylic  
Rear surface: ABS



Article no.

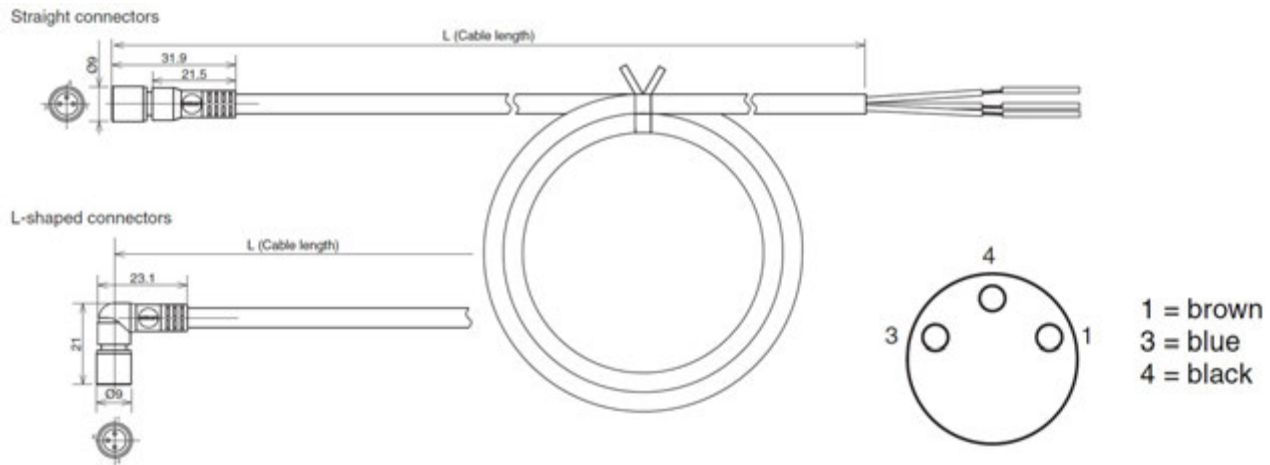
OM.E39-R1S

## CA.14 OM.XS3F

## SENSORS

. M8 Screw-on cable connectors 3 - wires

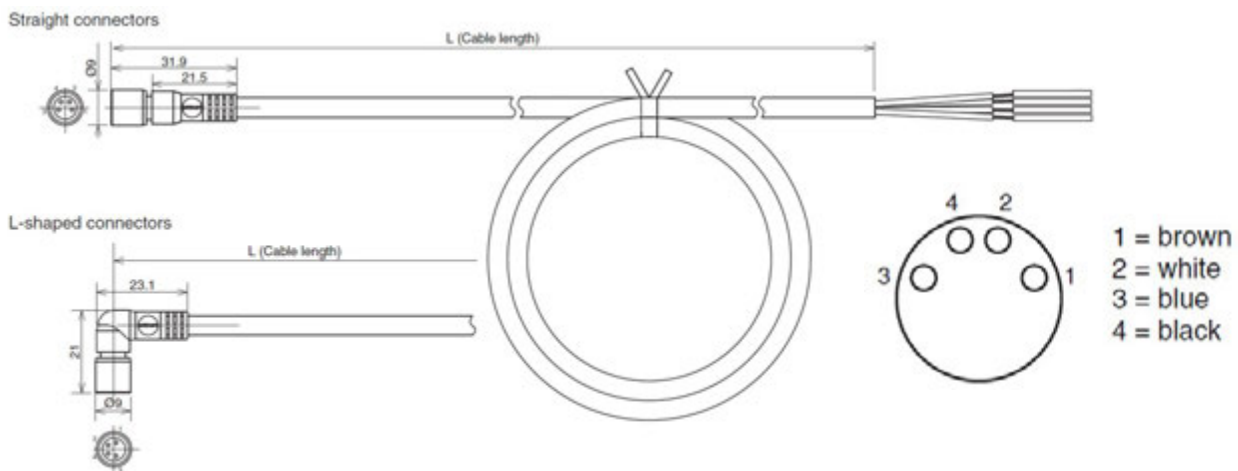
. Kabeldose gerade mit M8 Stecker, 3-polig



Article no.	Type	Size	Features	Cable length
OM.XS3F.M83S5M	Straight connector	M8	3 - wires	5 m
OM.XS3F.M83A5M	L - shaped connectors			

. M8 Screw-on cable connectors 4 - wires

. Kabeldose gerade mit M8 Stecker, 4-polig



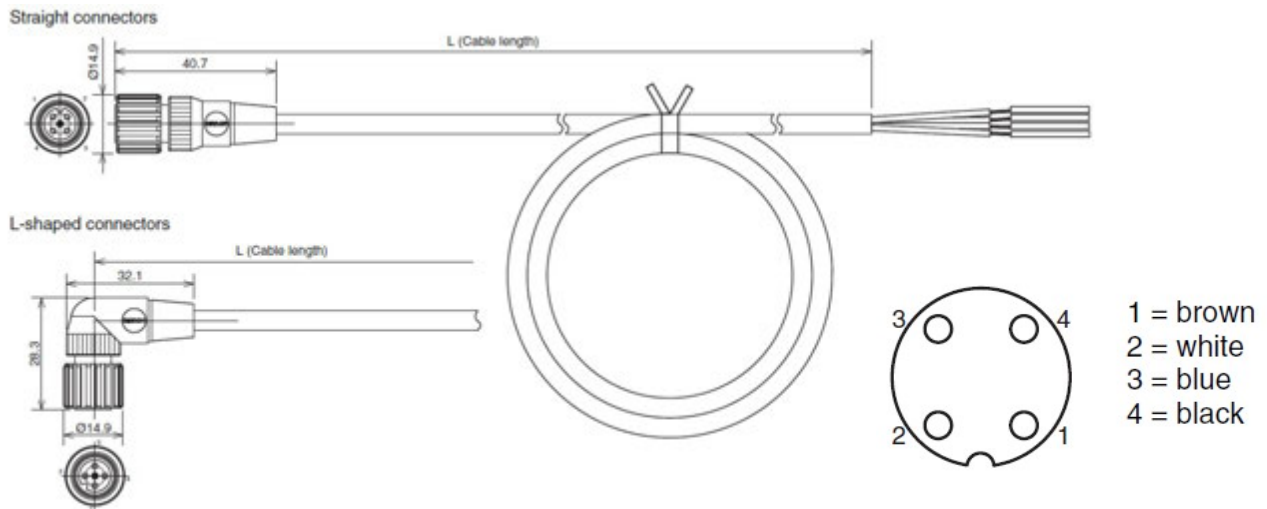
Article no.	Type	Size	Features	Cable length
OM.XS3F.M84S5M	Straight connector	M8	4 - wires	5 m
OM.XS3F.M84A5M	L - shaped connectors			

## CA.14 OM.XS2F

## SENSORS

. M12 Screw-on cable connectors 4 - wires

. Kabeldose gerade mit M12 Stecker, 4-polig



Article no.	Type	Size	Features	Cable length
OM.XS2F.M124S5M	Straight connector	M12	4 - wires	5 m
OM.XS2F.M124A5M	L - shaped connectors			

**CA.14 KT**

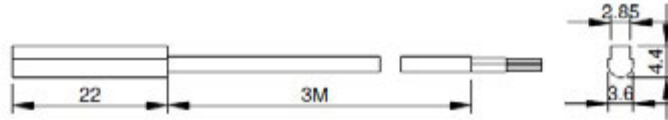
. Sensor

**SENSORS**

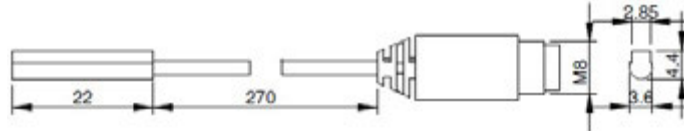
. Sensor



**KT58P3M/KT58N3M**



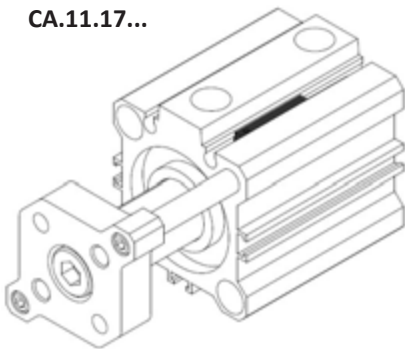
**KT58PM8/KT58NM8/KT58REQD**



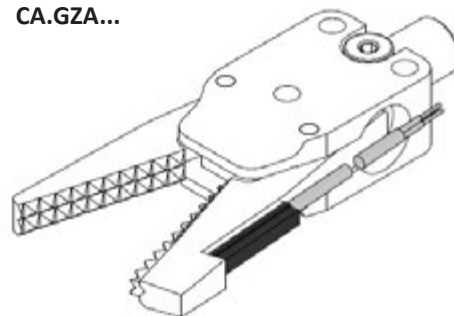
Article no.	Sensor with cable	Weight
KT58PM8	3 wires electronic PNP normally Open M8 plug connector	4 g
KT58P3M	3 wires electronic PNP normally Open mt 3 cable	
KT58NM8	3 wires electroic NPN normally Open M8 plug connector	
KT58N3M	3 wires electronic NPN normally Open mt 3 cable	
KT58REQD	2 wires Reed Switch Normally Open M8 plug connector	

**Application examples / Anwendungsbeispiele**

CA.11.17...



CA.GZA...



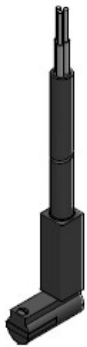


## CA.14 KT

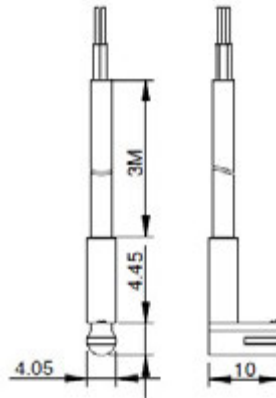
## SENSORS

. Sensor

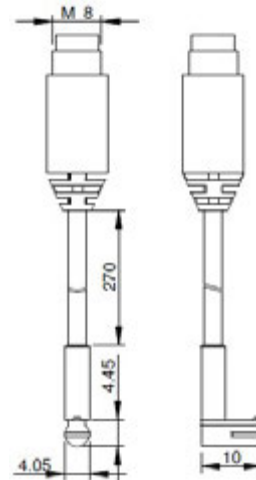
. Sensor



**KT38P3M/KT38N3M**



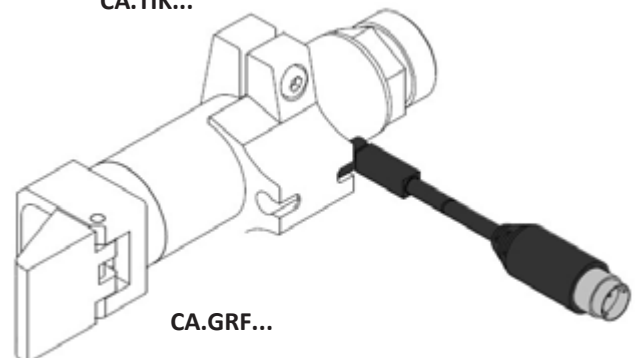
**KT38PM8/KT38NM8**



Article no.	Sensor with cable	Weight
<b>KT38PM8</b>	3 wires electronic PNP normally Open M8 plug connector	4 g
<b>KT38P3M</b>	3 wires electronic PNP normally Open mt 3 cable	
<b>KT38NM8</b>	3 wires electroic NPN normally Open M8 plug connector	
<b>KT38N3M</b>	3 wires electronic NPN normally Open mt 3 cable	

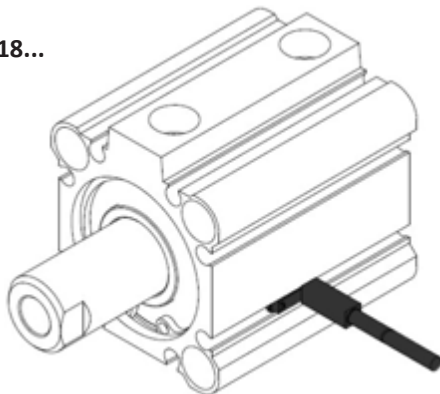
### Application examples / Anwendungsbeispiele

CA.TIK...



CA.GRF...

CA.11.18...

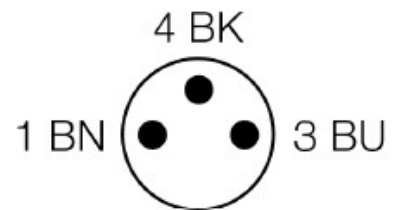
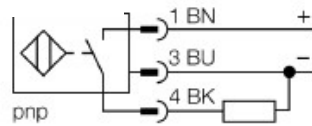
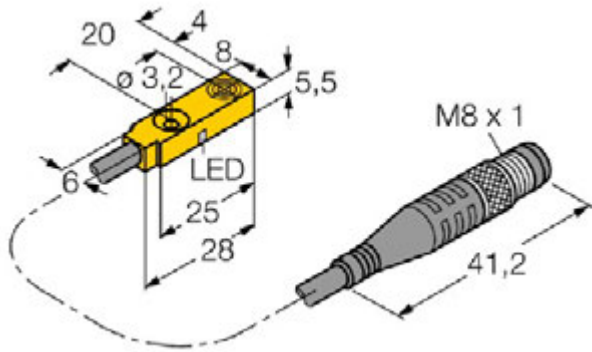


**CA.14 GRZ**

**SENSORS**

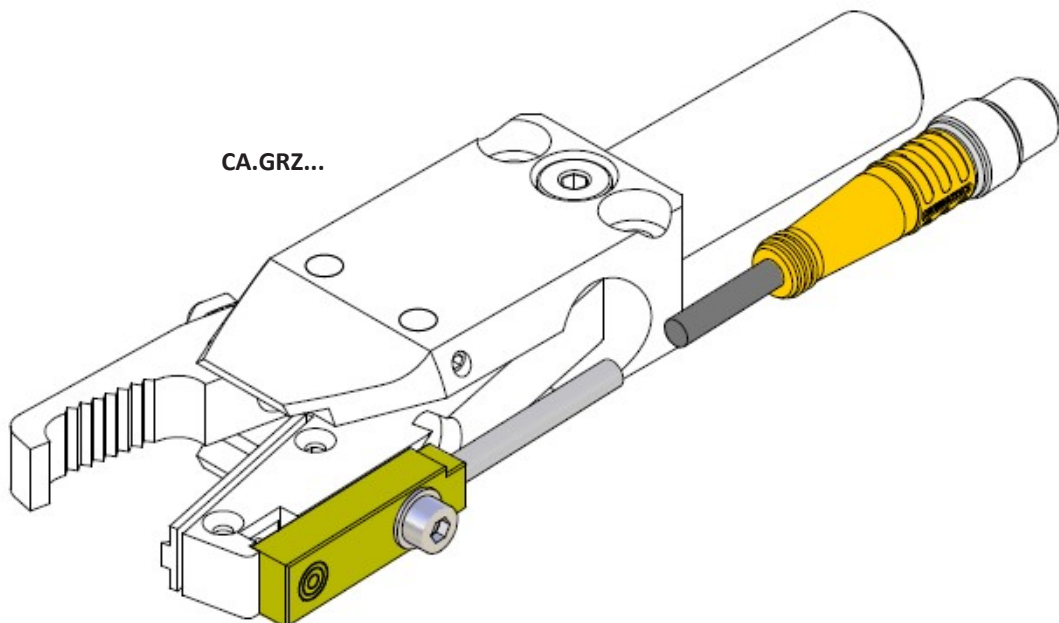
. Sensor

. Sensor



Article no.	Sensor with cable	Weight
GRZ.20.SC.PNP	INDUCTIVE SENSOR PNP normally Open M8 plug connector	4 g
GRZ.20.SC.NPN	INDUCTIVE SENSOR NPN normally Close M8 plug connector	

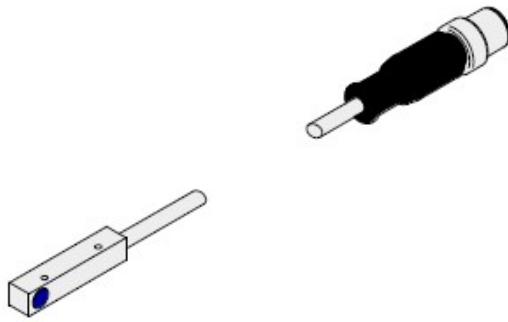
**Application example / Anwendungsbeispiel**



## CA.14 MMD

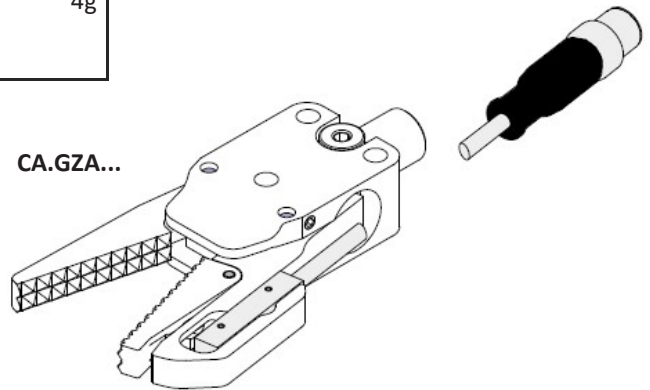
. Sensor

. Sensor



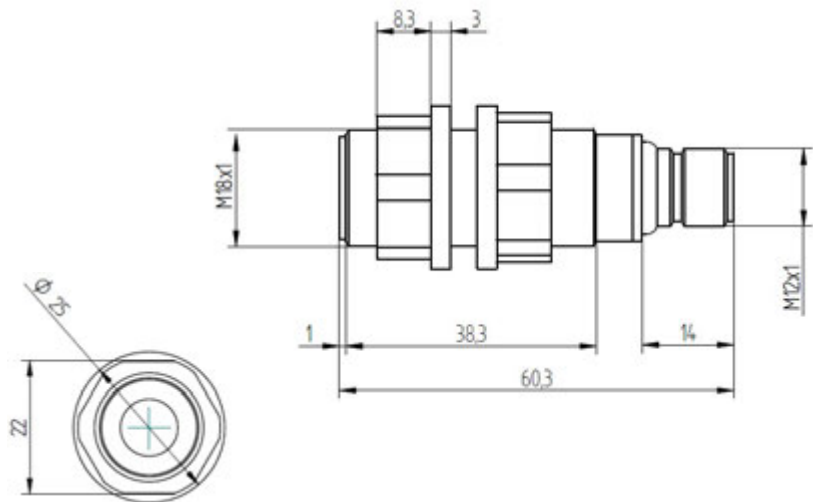
Article no.	Sensor with cable	Weight
MMD.IL5AP3AVF80	INDUCTIVE SENSOR PNP normally Open M8 plug connector	4g
MMD.IL5AN3AVF80		

Application example / Anwendungsbeispiel



. Ultrasonic sensor

. Ultraschallsensoren



Article no.	Output	Sensor Type	Sensing distance	Connector method	
MMD.UK6AHN0EUL	NPN	Ultrasonic sensor	40 mm	Connector type M12 4pin	65 g
MMD.UK6AHP0EUL	PNP				

**CA.SCP**

**SENSORS**

. Sensor

. Sensor



**New**

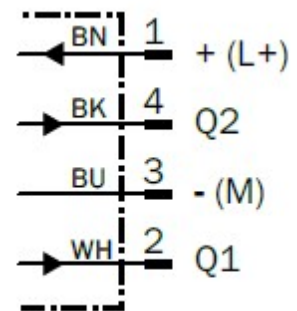
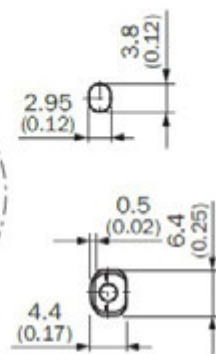
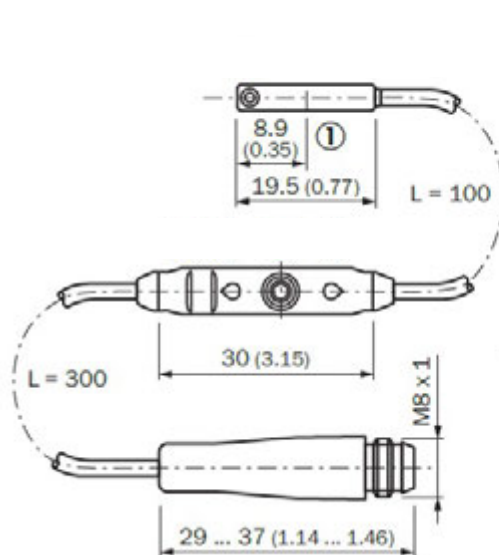


Article no.	A	B	C	D	E	F
CA.SCP.1008	17	12	25	5	M4	18
CA.SCP.1012	20	16	32	6	M5	25

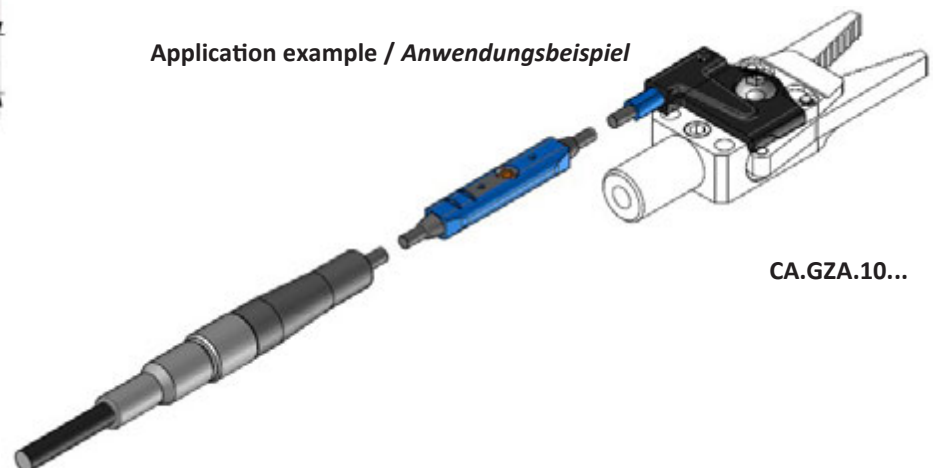
Remarks / Anmerkungen:

Adjustment indicator for positioning the sensor centrally Teaching in switching points 1 and 2  
Einstellhilfe zur mittigen Positionierung des Sensors Schaltpunkte 1 und 2 teachen

Article no.	Output	Sensor Type	Sensing distance	Connector method	Weight
CA.SCP.1008	PNP	Magnetic sensor	0mm - 50mm	Connector type M8 4pin	65 g
CA.SCP.1012					



Application example / Anwendungsbeispiel

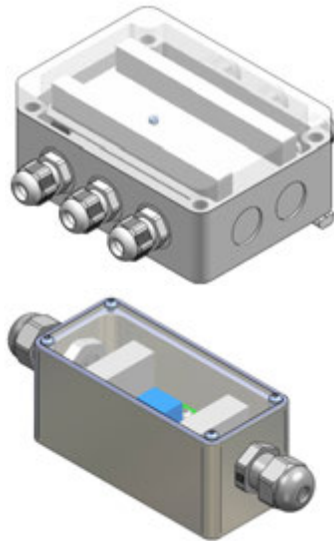


CA.GZA.10...

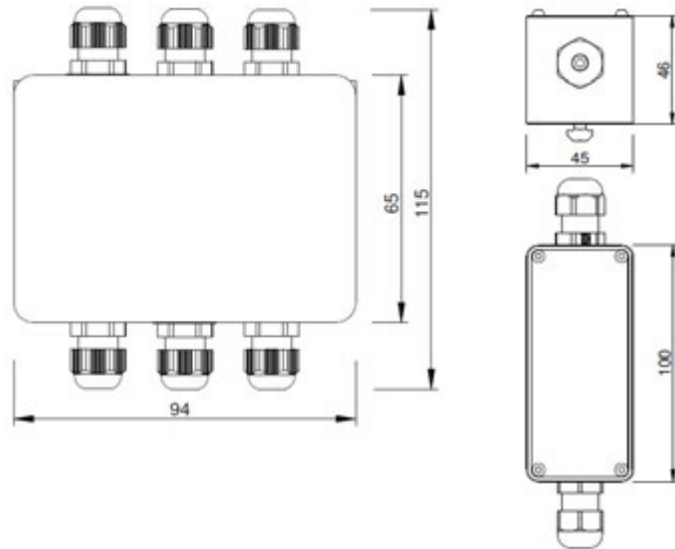
## CA.SDS

## SENSORS

### . Sensor box



### . Klemmkasten für Sensoren



CA.SDS.02

#### Remarks / Anmerkungen:

Used for sensor wiring on the EOAT.  
Zur Verkabelung der Sensoren auf den EOAT.

PNP and NPN signals can be converted.  
Die Signale PNP und NPN können umgewandelt werden.

I/O can be current sourcing (PNP), sinking (NPN) or dry contact.  
Ausgänge und Eingänge können Source (PNP), Sink (NPN) oder spannungsfreier Kontakt sein.

Several boxes can be connected in a series to manage more sensors.  
Mehrere Sensorboxen können serienmäßig verbunden werden, um die Anzahl der zu verwaltenden Sensoren zu erhöhen.

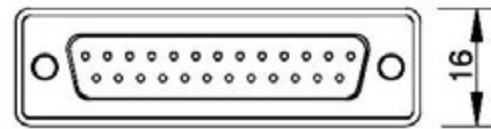
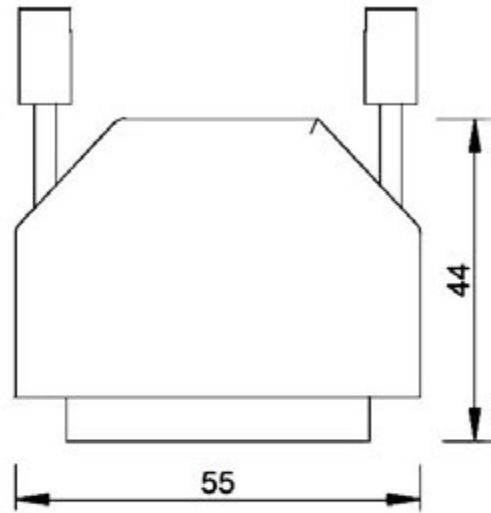
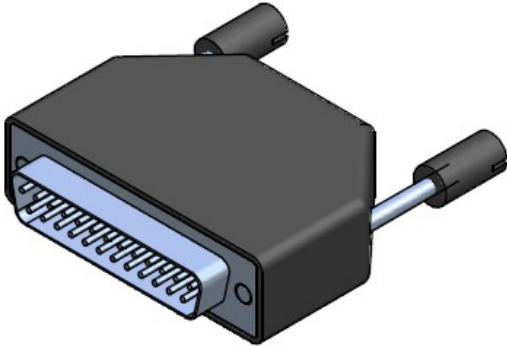
Input LED indications for easy trouble-shooting.  
Mit LED zur Wiederholung des Eingangssignals ausgestattet, um die Fehlersuche zu erleichtern.

Article no.	Power supply	INputs	OUTputs
CA.SDS.02	24 V dc (+/- 10%)	Maximum 2 PNP, NPN or dry contact (NO or NC) sensor switched by jumper Bis zu 2 Eingänge PNP, NPN oder spannungsfreier Kontakt (NO/NC), auszuwählen durch Jumper	1up to 2PNP, NPN or dry contact (NO or NC) outputs switched by jumpers 1 bis 2 Ausgänge PNP, NPN oder spannungsfreier Kontakt (NO/NC) auszuwählen durch Jumper
CA.SDS.04	24 V dc (+/- 10%)	Maximum 4 PNP, NPN or dry contact (NO or NC) sensor switched by jumper Bis zu 4 Eingänge PNP, NPN oder spannungsfreier Kontakt (NO/NC), auszuwählen durch Jumper	1up to 4 PNP, NPN or dry contact (NO or NC) outputs switched by jumpers 1 bis 4 Ausgänge PNP, NPN oder spannungsfreier Kontakt (NO/NC) auszuwählen durch Jumper
CA.SDS.06	24 V dc (+/- 10%)	Maximum 6 PNP, NPN or dry contact (NO or NC) sensor switched by jumper Bis zu 6 Eingänge PNP, NPN oder spannungsfreier Kontakt (NO/NC), auszuwählen durch Jumper	1up to 6 PNP, NPN or dry contact (NO or NC) outputs switched by jumpers 1 bis 6 Ausgänge PNP, NPN oder spannungsfreier Kontakt (NO/NC) auszuwählen durch Jumper
CA.SDS.08	24 V dc (+/- 10%)	Maximum 8 PNP, NPN or dry contact (NO or NC) sensor switched by jumper Bis zu 8 Eingänge PNP, NPN oder spannungsfreier Kontakt (NO/NC), auszuwählen durch Jumper	1up to 8 PNP, NPN or dry contact (NO or NC) outputs switched by jumpers 1 bis 8 Ausgänge PNP, NPN oder spannungsfreier Kontakt (NO/NC) auszuwählen durch Jumper

**CA.19.03**

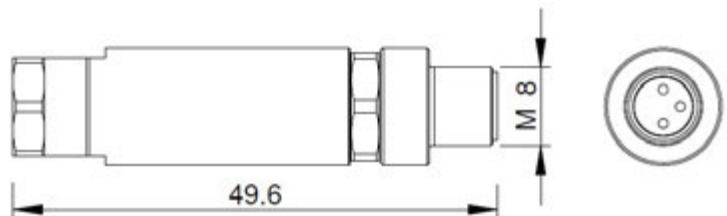
. Connector 25 pin

. Steckverbinder 25 pin



Article no.		Weight
CA.19.03.001	25 pin M	10 g

**PAX**

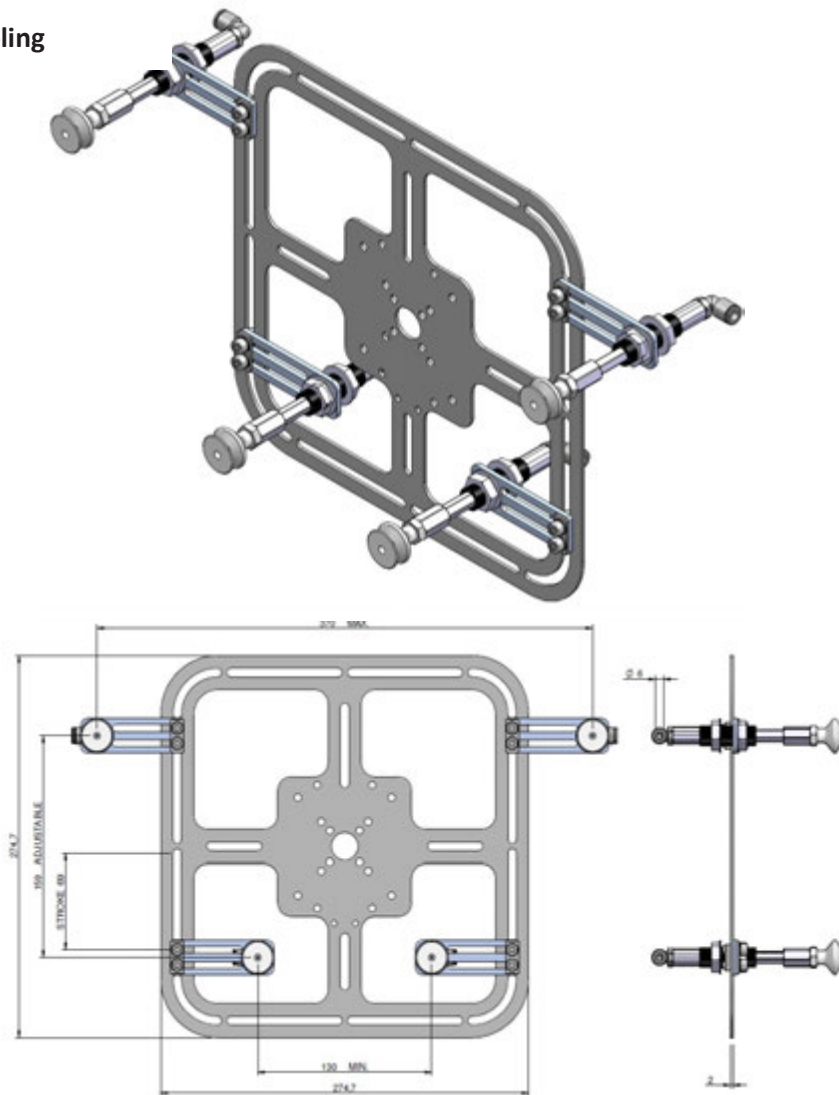


Article no.		Weight
PAX.1501252	M8 3P M	15g

# KIT.MA01

. Kit End of Arm Tooling

. Kit Greiferbaukasten

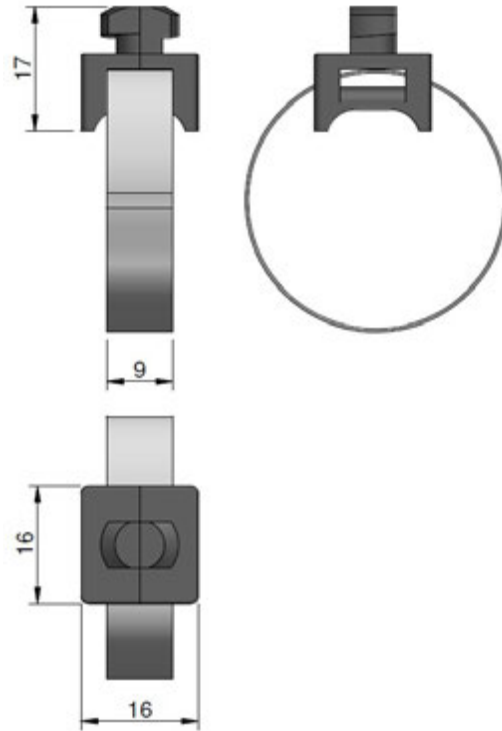


COMPONENTS	DESCRIPTION	QUANTITY
CA.04.20.14.X	Mounting Bracket 14x	4
CA.08.09.009	Adapters for vacuum cups 18 6	
CA.08.30.005	Vacuum Cup with 2 bellows only (silicone) 25	
CA.12.05.003	Orienting elbow male adapter (parallel) 6 18	
CA.SDNG.1420	Threaded-body non-rotative suspension1420	1
PIA.275X275X2	Basic EOAT Plate 275x275x2 inox	

**CA.KBS**

. Cable Tie

. Kabelbinderblock



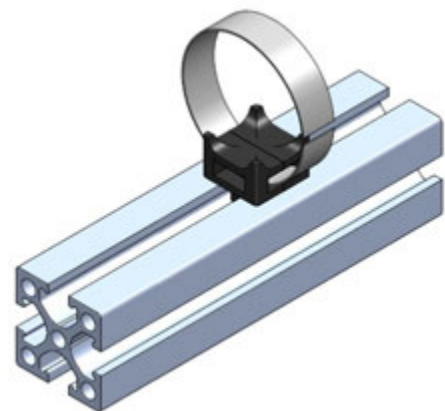
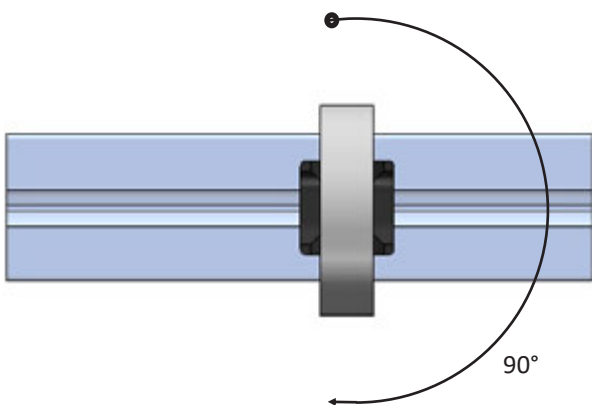
Remarks / Anmerkungen:

Material :Plastic—Velcro

Werkstoff: Plastik - Klettband

Article no.	Weight
CA.KBS	8 g
CA.KBS.X	2 g

Application example / Anwendungsbeispiel





## Table of contents

## Inhaltsverzeichnis

CODE	P	CODE	P	CODE	P	CODE	P	CODE	P
CA.01.01.001	16	CA.04.20.20.X	60	CA.08.26.D25.AS	114	CA.08.32.D42	110	CA.09.05.014	172
CA.01.01.002	16	CA.05.01.001	81	CA.08.26.D33.AS	114	CA.08.32.D52	110	CA.09.13.05.15	182
CA.01.01.003	16	CA.05.01.002	81	CA.08.26.D43.AS	114	CA.08.32.D62	110	CA.09.13.05.15.S	182
CA.01.01.004	16	CA.05.01.003	81	CA.08.26.D53.AS	114	CA.08.33.D12	122	CA.09.13.10.25	182
CA.01.01.006	26	CA.05.01.004	81	CA.08.26.D63.AS	114	CA.08.33.D14	122	CA.09.13.10.25.S	182
CA.01.01.007	26	CA.05.01.005	81	CA.08.26.D78.AS	114	CA.08.33.D20	122	CA.09.13.15.35	182
CA.01.01.008	22	CA.05.01.005.6N	81	CA.08.28.001	118	CA.08.33.D25	122	CA.09.13.15.35.S	182
CA.01.01.009	22	CA.05.01.006	81	CA.08.28.002	118	CA.08.33.D32	122	CA.09.13.20.45	182
CA.01.01.011	23	CA.05.01.006.6N	81	CA.08.28.003	118	CA.08.33.D42	122	CA.09.13.20.45.S	182
CA.01.01.012	23	CA.05.01.010	81	CA.08.28.004	118	CA.08.33.D5	122	CA.09.14.06	184
CA.01.01.013	16	CA.05.01.011	81	CA.08.28.005	118	CA.08.33.D52	122	CA.09.14.07	184
CA.01.01.014	16	CA.05.01.100	81	CA.08.28.006	118	CA.08.33.D60	122	CA.09.14.09	184
CA.01.01.015	24	CA.05.01.50	81	CA.08.28.007	118	CA.08.33.D7	122	CA.09.14.10	184
CA.01.01.015.F	25	CA.05.01.75	81	CA.08.28.008	118	CA.08.33.D9	122	CA.09.14.14	184
CA.01.01.016	24	CA.05.02.002	80	CA.08.28.009	118	CA.08.36.D10	128	CA.09.14.14.S	184
CA.01.01.016.F	25	CA.05.02.004	80	CA.08.28.010	118	CA.08.36.D10.60	128	CA.09.14.17	184
CA.01.01.017	24	CA.05.02.009	80	CA.08.28.011	118	CA.08.36.D15	128	CA.09.14.17.S	184
CA.01.01.017.F	25	CA.05.02.009.6N	80	CA.08.28.012	118	CA.08.36.D15.60	128	CA.09.14.19	184
CA.01.02.001	28	CA.05.02.010	80	CA.08.28.013	118	CA.08.36.D20	128	CA.09.14.19.S	184
CA.01.02.002	29	CA.05.02.010.6N	80	CA.08.29.001	106	CA.08.36.D20.60	128	CA.09.14.22	184
CA.01.02.002.X	29	CA.05.02.011	80	CA.08.29.002	106	CA.08.36.D25	128	CA.09.14.22.S	184
CA.01.02.003	28	CA.05.02.012	80	CA.08.29.003	106	CA.08.36.D25.60	128	CA.09.14.25	184
CA.01.02.003B	28	CA.07.01.001	91	CA.08.29.004	106	CA.08.36.D35	128	CA.09.14.25.S	184
CA.01.02.004	29	CA.07.01.002	91	CA.08.29.005	106	CA.08.36.D35.60	128	CA.09.14.35	184
CA.01.02.004.X	29	CA.08.01.001	124	CA.08.29.006	106	CA.08.36.D52	128	CA.09.14.35.S	184
CA.01.02.004A	29	CA.08.01.002	124	CA.08.29.007	106	CA.08.36.D52.60	128	CA.09.14.45	184
CA.01.02.004A.X	29	CA.08.01.003	124	CA.08.29.008	106	CA.08.36.D75	128	CA.09.14.55	184
CA.01.02.007	28	CA.08.01.004	124	CA.08.29.009	106	CA.08.36.D75.60	128	CA.09.15.001	186
CA.01.02.008	29	CA.08.01.005	124	CA.08.29.010	106	CA.08.39.001	112	CA.09.15.002	186
CA.01.02.008.X	29	CA.08.01.006	124	CA.08.29.011	106	CA.08.39.002	112	CA.09.15.003	186
CA.01.08.003	240	CA.08.03.001	126	CA.08.29.012	106	CA.08.39.003	112	CA.09.15.004	186
CA.01.08.004	240	CA.08.03.002	126	CA.08.29.013	106	CA.08.39.004	112	CA.09.15.005	186
CA.01.08.005	240	CA.08.03.003	126	CA.08.30.001	120	CA.08.39.005	112	CA.09.15.006	186
CA.01.08.006	240	CA.08.03.004	126	CA.08.30.002	120	CA.08.39.006	112	CA.09.15.007	186
CA.01.08.007	240	CA.08.03.005	126	CA.08.30.003	120	CA.08.39.007	112	CA.09.15.008	186
CA.01.08.008	240	CA.08.03.006	126	CA.08.30.004	120	CA.08.39.008	112	CA.09.16.001	186
CA.04.02.10.X	62	CA.08.03.007	126	CA.08.30.005	120	CA.08.40.001	116	CA.09.16.002	186
CA.04.02.14.X	62	CA.08.03.008	126	CA.08.30.006	120	CA.08.40.002	116	CA.09.16.003	186
CA.04.02.20.X	62	CA.08.03.009	126	CA.08.30.007	120	CA.08.40.003	116	CA.09.16.004	186
CA.04.02.30.X	62	CA.08.03.010	126	CA.08.30.008	120	CA.08.40.004	116	CA.09.16.005	186
CA.04.10.004	210	CA.08.03.011	126	CA.08.30.009	120	CA.08.40.005	116	CA.09.16.006	186
CA.04.10.005	210	CA.08.09.05	234	CA.08.30.010	120	CA.08.40.006	116	CA.09.16.007	186
CA.04.10.006	210	CA.08.09.14	234	CA.08.30.012	120	CA.08.40.007	116	CA.09.16.008	186
CA.04.10.007	210	CA.08.09.18	234	CA.08.31.001	108	CA.08.40.008	116	CA.09.16.009	186
CA.04.10.30.1	209	CA.08.14.001	235	CA.08.31.002	108	CA.09.05.009	172	CA.09.18.1014.X	185
CA.04.10.30.2	209	CA.08.14.002	235	CA.08.31.003	108	CA.09.05.009.L	172	CA.09.18.1719.X	185
CA.04.10.36.1	209	CA.08.14.003	235	CA.08.31.004	108	CA.09.05.009.NC	172	CA.09.18.2225.X	185
CA.04.10.36.2	209	CA.08.14.004	235	CA.08.31.005	108	CA.09.05.009.NO	172	CA.09.18.35.JU	185
CA.04.10.45.1	209	CA.08.14.005	235	CA.08.31.006	108	CA.09.05.010	172	CA.09.18.4555.JU	185
CA.04.10.45.2	209	CA.08.14.006	235	CA.08.31.007	108	CA.09.05.010.L	172	CA.11.04.001	223
CA.04.10.56.1	209	CA.08.14.011	235	CA.08.31.008	108	CA.09.05.010.NC	172	CA.11.04.002	223
CA.04.10.56.2	209	CA.08.14.012	235	CA.08.31.009	108	CA.09.05.010.NO	172	CA.11.04.003	223
CA.04.10.75.1	209	CA.08.14.013	235	CA.08.31.010	108	CA.09.05.011	172	CA.11.04.004	223
CA.04.10.75.2	209	CA.08.14.014	235	CA.08.31.011	108	CA.09.05.011.L	172	CA.11.04.005	223
CA.04.12.001	210	CA.08.14.015	235	CA.08.31.012	108	CA.09.05.011.NC	172	CA.11.04.006	223
CA.04.12.002	210	CA.08.14.018	235	CA.08.32.D09	110	CA.09.05.011.NO	172	CA.11.04.007	223
CA.04.20.06.X	185	CA.08.14.019	235	CA.08.32.D12	110	CA.09.05.012	172	CA.11.06.001	239
CA.04.20.08.X	185	CA.08.14.021	235	CA.08.32.D14	110	CA.09.05.012.L	172	CA.11.08.001.X	222
CA.04.20.10.X	60	CA.08.14.022	235	CA.08.32.D20	110	CA.09.05.012.NC	172	CA.11.08.002.X	222
CA.04.20.12.X	60	CA.08.26.D16.AS	114	CA.08.32.D25	110	CA.09.05.012.NO	172	CA.11.08.003.X	222
CA.04.20.14.X	60	CA.08.26.D20.AS	114	CA.08.32.D32	110	CA.09.05.013	172	CA.11.08.004.X	222

## Table of contents

## Inhaltsverzeichnis

CODE	P	CODE	P	CODE	P	CODE	P	CODE	P
CA.11.08.005.X	222	CA.12.05.047	232	CA.ANS.20	168	CA.FN10	216	CA.GGE.201818150	92
CA.11.15.001	222	CA.12.05.048	232	CA.ANS.30	168	CA.FN10C	217	CA.GGS100515	82
CA.11.15.002	222	CA.12.05.049	232	CA.APG.20.10.30	178	CA.FN10K	216	CA.GGS100520	82
CA.11.15.003	222	CA.12.05.050	233	CA.APG.25.14.40	178	CA.FN10L	216	CA.GGS100530	82
CA.11.15.004	222	CA.12.05.051	233	CA.APG.32.14.40	178	CA.FN1C	217	CA.GGS141815	82
CA.11.15.005	222	CA.12.05.M5ALHU3	234	CA.APG.40.14.50	178	CA.FN1K	216	CA.GGS141840	82
CA.11.17.001	218	CA.12.05.M5ALHU4	234	CA.APG.40.20.50	178	CA.FN1L	216	CA.GGS201425	82
CA.11.17.002	218	CA.12.05.M5ALHU6	234	CA.APG.50.20.50	178	CA.FN3	216	CA.GGS201445	82
CA.11.17.003	218	CA.12.05.M5AU3	234	CA.APG.65.20.50	178	CA.FN3C	217	CA.GGS100515	83
CA.11.17.004	218	CA.12.05.M5AU4	234	CA.APGE.10.10.30	174	CA.FN3K	216	CA.GGS100520	83
CA.11.17.005	218	CA.12.05.M5AU6	234	CA.APGE.16.14.40	174	CA.FN3L	216	CA.GGS100530	83
CA.11.17.006	218	CA.12.05.RF1804	234	CA.APGE.20.20.50	174	CA.FN5	216	CA.GGS141815	83
CA.11.17.007	218	CA.12.05.RF1806	234	CA.APGE.25.20.50	174	CA.FN5C	217	CA.GGS141840	83
CA.11.17.008	218	CA.12.05.RFM504	234	CA.APGE.32.20.50	174	CA.FN5K	216	CA.GGS201425	83
CA.11.17.009	218	CA.12.05.RFM506	234	CA.APGE.40.20.50	174	CA.FN5L	216	CA.GGS201445	83
CA.11.17.010	218	CA.12.06.001	240	CA.ATE.05M	204	CA.FNP1	216	CA.GGV.10050510	86
CA.11.18.001	219	CA.12.06.002	240	CA.ATE.10M	204	CA.FNP10	216	CA.GGV.10050530	86
CA.11.18.002	219	CA.12.06.003	240	CA.ATE.20M	204	CA.FNP10C	217	CA.GGV.14181815	86
CA.11.18.003	219	CA.12.06.004	240	CA.ATE.30AM	204	CA.FNP1C	217	CA.GGV.14181840	86
CA.11.18.004	219	CA.12.06.005	240	CA.ATE.50AM	204	CA.FNP3	216	CA.GGV.20141820	86
CA.11.18.005	219	CA.12.06.006	240	CA.ATK.10.10.30	242	CA.FNP3C	217	CA.GGV.20141850	86
CA.11.18.006	219	CA.12.06.007	240	CA.ATK.10.10.60	242	CA.FNP5	216	CA.GGVE.10050510	88
CA.11.18.007	219	CA.12.06.008	240	CA.ATK.10.10.90	242	CA.FNP5C	217	CA.GGVE.10050530	88
CA.11.18.008	219	CA.15.01.001	237	CA.ATK.10.14.120	242	CA.GAR.10.1000	38	CA.GGVE.14181815	88
CA.11.18.009	219	CA.15.01.002	237	CA.ATK.10.14.40	242	CA.GAR.14.1000	38	CA.GGVE.14181840	88
CA.11.18.010	219	CA.15.01.003	237	CA.ATK.10.14.80	242	CA.GAR.20.1000	38	CA.GGVE.20141820	88
CA.12.05.001	232	CA.15.01.004	237	CA.BVAE.322010	196	CA.GAR.30.1000	38	CA.GGVE.20141850	88
CA.12.05.002	232	CA.15.01.005	237	CA.BVAE.32201020	197	CA.GAZ.12.10.60	221	CA.GGVG.10050510	87
CA.12.05.003	232	CA.15.01.006	237	CA.BVAE.32201025	197	CA.GAZ.16.14.60	221	CA.GGVG.10050530	87
CA.12.05.004	233	CA.15.01.007	237	CA.CUDL.01	15	CA.GAZ.20.20.60	221	CA.GGVG.14181815	87
CA.12.05.005	233	CA.15.01.008	237	CA.CUDL.02	15	CA.GAZ.25.20.60	221	CA.GGVG.14181840	87
CA.12.05.006	233	CA.15.01.009	237	CA.CUDL.03	15	CA.GAZ.32.20.60	221	CA.GGVG.20141820	87
CA.12.05.007	233	CA.15.01.010	237	CA.CUDL.150	15	CA.GGB.10050530	93	CA.GGVG.20141850	87
CA.12.05.008	233	CA.15.01.011	237	CA.CUDL.160	15	CA.GGB.10050560	93	CA.GHV.100	14
CA.12.05.009	233	CA.15.01.012	237	CA.CUDL.90	15	CA.GGB.10050590	93	CA.GHV.160	14
CA.12.05.012	233	CA.15.01.014	237	CA.CUSL.200.G	16	CA.GGB.141818120	93	CA.GHV.250	14
CA.12.05.013	233	CA.15.01.015	237	CA.CUSL.200.I	26	CA.GGB.14181840	93	CA.GHV.60	14
CA.12.05.014	233	CA.15.01.016	237	CA.CUSL.200.R	16	CA.GGB.14181880	93	CA.GLA.1010.30	65
CA.12.05.015	232	CA.15.01.019	237	CA.DB.05.25	198	CA.GGB.201414100	93	CA.GLA.1010.60	65
CA.12.05.016	232	CA.15.01.020	237	CA.DB.05.32	198	CA.GGB.201414150	93	CA.GLA.1010.90	65
CA.12.05.017	232	CA.19.03.001	254	CA.DB.10.25	198	CA.GGB.20141450	93	CA.GLA.1414.120	65
CA.12.05.018	232	CA.ADK.JU.4040	34	CA.DB.10.32	198	CA.GGB.201418100	93	CA.GLA.1414.40	65
CA.12.05.019	232	CA.ADK.JU.8040	34	CA.DB.15.25	198	CA.GGB.201418150	93	CA.GLA.1414.80	65
CA.12.05.020	232	CA.ADK.L.1810	34	CA.DB.15.32	198	CA.GGB.20141850	93	CA.GLA.2020.100	65
CA.12.05.021	232	CA.ADK.L.1818	34	CA.EVB.100.JU	47	CA.GGD.10050510	84	CA.GLA.2020.150	65
CA.12.05.022	232	CA.ADK.X.2510	34	CA.EVB.100.X	47	CA.GGD.10050530	84	CA.GLA.2020.50	65
CA.12.05.023	232	CA.ADK.X.2518	34	CA.EVB.75.X	47	CA.GGD.14181815	84	CA.GLA.2030	65
CA.12.05.024	232	CA.ADK.X.2525	34	CA.F1	207	CA.GGD.14181840	84	CA.GLA.3030	65
CA.12.05.028	233	CA.ADK.X.5025	34	CA.F1S	207	CA.GGD.20141820	84	CA.GPG.1	13
CA.12.05.029	233	CA.ADZ.12.14	220	CA.F3	207	CA.GGD.20141850	84	CA.GPG.2	13
CA.12.05.030	233	CA.ADZ.16.14	220	CA.F3LS	207	CA.GGDG.10050510	85	CA.GPG.3	13
CA.12.05.031	233	CA.ADZ.20.14	220	CA.F5	207	CA.GGDG.10050530	85	CA.GPM0	12
CA.12.05.034	233	CA.ADZ.25.20	220	CA.F5LS	207	CA.GGDG.14181815	85	CA.GPM0.X	12
CA.12.05.035	233	CA.ADZ.32.20	220	CA.F5S	207	CA.GGDG.14181840	85	CA.GPM1	12
CA.12.05.036	234	CA.ADZ.32.20.90	220	CA.F9P	207	CA.GGDG.20141820	85	CA.GPM1.X	12
CA.12.05.037	234	CA.ADZ.32.25	220	CA.F9PS	207	CA.GGDG.20141850	85	CA.GPM1S*	12
CA.12.05.038	232	CA.AGP.20.G	200	CA.FD1	207	CA.GGE.10.M5.M5	92	CA.GPM2	12
CA.12.05.039	232	CA.AGP.20.G.20	201	CA.FD3	207	CA.GGE.14.18.18	92	CA.GPM2.X	12
CA.12.05.040	232	CA.AGP.20.M	200	CA.FD5	207	CA.GGE.20.14.14	92	CA.GPM2S*	12
CA.12.05.042	233	CA.AGP.20.M.20	201	CA.FD9P	207	CA.GGE.20.14.18	92	CA.GPM3	12
CA.12.05.044	232	CA.ANS.14	168	CA.FN1	216	CA.GGE.201414150	92	CA.GPM3.X	12

## Table of contents

## Inhaltsverzeichnis

CODE	P	CODE	P	CODE	P	CODE	P	CODE	P
CA.GPM3S*	12	CA.GSEG.141890	95	CA.GWP.5.60	35	CA.GZA.10.12.MSN	142	CA.KHZ.20143005	226
CA.GPR1.0	14	CA.GSEG.201445	95	CA.GWP.5.75	35	CA.GZA.10.12.S	142	CA.KHZ.20143005	227
CA.GPR2.1	14	CA.GSEG.201490	95	CA.GWP.5.9	35	CA.GZA.10.12.S4	142	CA.KHZ.32201518	226
CA.GPR3.2	14	CA.GTS.1003.1212	134	CA.GWP.5.LM	35	CA.GZA.10.12.S4N	142	CA.KHZ.32201518	227
CA.GRF.1435	158	CA.GTS.1003.1214	134	CA.GWP.500	35	CA.GZA.10.12.S9	142	CA.KHZ.32203018	226
CA.GRF.1490	158	CA.GTS.1003.1215	134	CA.GWP.5U	35	CA.GZA.10.12.S9N	142	CA.KHZ.32203018	227
CA.GRF.1495	158	CA.GTS.1003.125N	134	CA.GWP.6.12	35	CA.GZA.10.12.SG	142	CA.KHZ.32205018	226
CA.GRF.1495.G	158	CA.GTS.1003.1415	134	CA.GWP.6.16	35	CA.GZA.10.12.SGN	142	CA.KHZ.32205018	227
CA.GRF.1495.GW	158	CA.GTS.1003.145N	134	CA.GWP.6.20	35	CA.GZA.10.12.SN	142	CA.KKS.10.10	50
CA.GRF.1495.VSX	111	CA.GTS.1003.1717	134	CA.GWP.6.22	35	CA.GZA.AA24	171	CA.KKS.14.14	50
CA.GRF.2035	158	CA.GTS.1003.1915	134	CA.GWP.6.25	35	CA.GZA.AA24.NO	171	CA.KKS.20.10	50
CA.GRF.2035.WE	158	CA.GTS.1003.1919	134	CA.GWP.6.25.3	35	CA.GZA.AA24.NOS2	171	CA.KKS.20.14	50
CA.GRF.2090	158	CA.GTS.1003.195N	134	CA.GWP.6.28	35	CA.GZA.AA24.NOSN	171	CA.KKS.20.20	50
CA.GRF.2095	158	CA.GTS.1003.2929	134	CA.GWP.6.35	35	CA.GZA.AA24.NOSP	171	CA.KKS.L.2020	51
CA.GRF.2095.G	158	CA.GTS.1004.1212	138	CA.GWP.6.40	35	CA.HEH.30.50	194	CA.KKS.L.2025	51
CA.GRF.2095.GW	158	CA.GTS.1004.1214	138	CA.GWP.6.50	35	CA.JDR.141005	228	CA.KKS.L.2525	51
CA.GRF.2095.VSX	166	CA.GTS.1004.1215	138	CA.GWP.6.52	35	CA.JDR.141005	229	CA.KKS.L.4020	51
CA.GRF.3035	158	CA.GTS.1004.125N	138	CA.GWP.6.90	35	CA.JDR.142505	228	CA.KKS.L.4025	51
CA.GRF.3035.WE	158	CA.GTS.1004.1415	138	CA.GWP.6.LM	35	CA.JDR.142505	229	CA.KKS.L.4040	51
CA.GRF.3090	158	CA.GTS.1004.145N	138	CA.GWP.6U	35	CA.JDR.201005	228	CA.KPLJU.4025	40
CA.GRF.3095	158	CA.GTS.1004.1717	138	CA.GZ.32	190	CA.JDR.201005	229	CA.KPLJU.4040	40
CA.GRF.3095.G	158	CA.GTS.1004.1919	138	CA.GZ.32.FING.S	188	CA.JDR.301518	228	CA.KPLJU.8040	40
CA.GRF.3095.GW	158	CA.GTS.1004.2929	138	CA.GZ.32.S	188	CA.JDR.301518	229	CA.KPLL.1818	40
CA.GRF.3095.VSX	166	CA.GVR.1010.30	64	CA.GZ.3220	191	CA.JDR.303018	228	CA.KPLX.2518	40
CA.GRZ.10.08.S	150	CA.GVR.1010.60	64	CA.GZ.3220.S	189	CA.JDR.303018	229	CA.KPLX.2525	40
CA.GRZ.10.08.S2F	150	CA.GVR.1010.90	64	CA.GZ.322010	192	CA.JDR.305018	228	CA.KPLX.5025	40
CA.GRZ.10.08.SN	150	CA.GVR.1414.120	64	CA.GZ.32201020	193	CA.JDR.305018	229	CA.KPLX.5050	40
CA.GRZ.20.A	152	CA.GVR.1414.40	64	CA.GZ.32201025	193	CA.JU.4040.1000	33	CA.KSW.10.L	66
CA.GRZ.20.E	152	CA.GVR.1414.80	64	CA.GZ.3225	191	CA.JU.4040.1000G	33	CA.KSW.10.X	66
CA.GRZ.20.LL	152	CA.GVR.2020.100	64	CA.GZA.10.08	142	CA.JU.4040.2000	33	CA.KSW.14.X	66
CA.GRZ.20.R	152	CA.GVR.2020.150	64	CA.GZA.10.08.18	142	CA.JU.4040.2000G	33	CA.KSW.20.JU	66
CA.GRZ.20.S	152	CA.GVR.2020.50	64	CA.GZA.10.08.19	142	CA.JU.8040.1000	33	CA.KSW.20.X	63
CA.GRZ.20.SN	152	CA.GVR.3030.140	64	CA.GZA.10.08.AH	142	CA.JU.8040.1000G	33	CA.KSW.30.JU	66
CA.GRZ.20.W	152	CA.GVR.3030.200	64	CA.GZA.10.08.AHG	142	CA.JU.8040.2000	33	CA.KVB.JU20	48
CA.GRZ.20.WL	152	CA.GVR.3030.80	64	CA.GZA.10.08.AHL	142	CA.JU.8040.2000G	33	CA.KVB.JU30	48
CA.GRZ.20.WLN	152	CA.GWP.1000	35	CA.GZA.10.08.AHT	142	CA.KB.10	175	CA.KVB.KG.JU20	49
CA.GRZ.20.WN	152	CA.GWP.3U	35	CA.GZA.10.08.ATG	142	CA.KB.16	175	CA.KVB.KG.X10	49
CA.GSE.1018M530	94	CA.GWP.4.16	35	CA.GZA.10.08.BODY	142	CA.KB.20	175	CA.KVB.KG.X14	49
CA.GSE.1018M560	94	CA.GWP.4.17	35	CA.GZA.10.08.G	142	CA.KB.25	175	CA.KVB.L10	48
CA.GSE.1018M590	94	CA.GWP.4.25	35	CA.GZA.10.08.LL	142	CA.KB.32	175	CA.KVB.L14	48
CA.GSE.10M5M530	94	CA.GWP.4.8	35	CA.GZA.10.08.M50	142	CA.KBH.12.10.60	221	CA.KVB.X14	48
CA.GSE.10M5M560	94	CA.GWP.4.9	35	CA.GZA.10.12	142	CA.KBH.16.14.90	221	CA.L.1810.1000	30
CA.GSE.10M5M590	94	CA.GWP.4.LM	35	CA.GZA.10.12.14	142	CA.KBH.16.16.125	221	CA.L.1810.1000G	30
CA.GSE.141818120	94	CA.GWP.4U	35	CA.GZA.10.12.18	142	CA.KBH.20.14.90	221	CA.L.1810.2000	30
CA.GSE.14181840	94	CA.GWP.5.10	35	CA.GZA.10.12.19	142	CA.KBH.20.16.125	221	CA.L.1810.2000G	30
CA.GSE.14181880	94	CA.GWP.5.11	35	CA.GZA.10.12.AH	142	CA.KBH.25.16.125	221	CA.L.1818.1000	30
CA.GSE.201418100	94	CA.GWP.5.12	35	CA.GZA.10.12.AHG	142	CA.KBH.32.20.125	221	CA.L.1818.1000G	30
CA.GSE.201418150	94	CA.GWP.5.15	35	CA.GZA.10.12.AHL	142	CA.KBS	256	CA.L.1818.2000	30
CA.GSE.20141850	94	CA.GWP.5.17	35	CA.GZA.10.12.AHT	142	CA.KBS.X	256	CA.L.1818.2000G	30
CA.GSE.301414140	94	CA.GWP.5.20	35	CA.GZA.10.12.AHT	142	CA.KBVJU.4040	41	CA.L.1818.2000G	30
CA.GSE.301414200	94	CA.GWP.5.22	35	CA.GZA.10.12.AHV	142	CA.KBVJU.4080	41	CA.LAL.1.5	11
CA.GSE.30141480	94	CA.GWP.5.25	35	CA.GZA.10.12.ATG	142	CA.KBVJU.8040	41	CA.LAL.1.7	11
CA.GSEG.100515	95	CA.GWP.5.25.3	35	CA.GZA.10.12.C	142	CA.KBVL.1810	41	CA.LAL.2.5	11
CA.GSEG.100530	95	CA.GWP.5.28	35	CA.GZA.10.12.G	142	CA.KBVL.1818	41	CA.LAL.2.7	11
CA.GSEG.100545	95	CA.GWP.5.30	35	CA.GZA.10.12.G50	142	CA.KBVX.2510	41	CA.LAL.3.6	11
CA.GSEG.100590	95	CA.GWP.5.35	35	CA.GZA.10.12.L	142	CA.KBVX.2518	41	CA.LAL.3.8	11
CA.GSEG.120545	95	CA.GWP.5.38	35	CA.GZA.10.12.LL	142	CA.KBVX.2525	41	CA.MPG.20	176
CA.GSEG.120590	95	CA.GWP.5.40	35	CA.GZA.10.12.LL	142	CA.KBVX.2550	41	CA.MPG.25	176
CA.GSEG.141815	95	CA.GWP.5.40.3	35	CA.GZA.10.12.M	142	CA.KBVX.5025	41	CA.MPG.32	176
CA.GSEG.141830	95	CA.GWP.5.50	35	CA.GZA.10.12.M50	142	CA.KHZ.20141005	226	CA.MPG.40	176
CA.GSEG.141845	95	CA.GWP.5.52	35	CA.GZA.10.12.MC	142	CA.KHZ.20141005	227	CA.MPG.50	176
				CA.GZA.10.12.MF	142				
				CA.GZA.10.12.MS	142				

## Table of contents

## Inhaltsverzeichnis

CODE	P	CODE	P	CODE	P	CODE	P	CODE	P
CA.MPG.64	176	CA.SCAR.12P00E	236	CA.SNS	215	CA.VLR.10.60	69	CA.WSL.2070.UJU	56
CA.MR.05M	206	CA.SCM.10.X	61	CA.SNP10	215	CA.VLR.10.90	69	CA.WSL.2070.U.X	56
CA.MR.10M	206	CA.SCM.12.X	61	CA.SNP20	215	CA.VLR.14.120	69	CA.WSL.2070.VU.X	63
CA.MR.20M	206	CA.SCM.14.X	61	CA.SNP3	215	CA.VLR.14.40	69	CA.WSL.2080.VU.X	63
CA.MR.30AM	206	CA.SCM.20.X	61	CA.SNP5	215	CA.VLR.14.80	69	CA.WSL.2570.VU.X	63
CA.MR.50AM	206	CA.SCP.1008	252	CA.SSN.10100505	74	CA.VLR.20.100	69	CA.WSL.3060.VU.J	63
CA.PAA.AP	202	CA.SCP.1012	252	CA.SSN.10250505	74	CA.VLR.20.150	69	CA.WSL.3070.UJU	56
CA.PAA.AP.D	202	CA.SDN.1010	76	CA.SSN.14201818	74	CA.VLR.20.50	69	CA.WSL.3070.VU.J	63
CA.PAA.CF	202	CA.SDN.1025	76	CA.SSN.14351818	74	CA.VLR.30.140	69	CA.WSL.GA.10.X	58
CA.PAA.CF.D	202	CA.SDN.1420	76	CA.SSN.202501418	74	CA.VLR.30.200	69	CA.WSL.GA.14.X	58
CA.PAA.SP	203	CA.SDN.1435	76	CA.SSN.20501418	74	CA.VLR.30.80	69	CA.WSL.GA.20.X	58
CA.PAC20.169	130	CA.SDN.2025	76	CA.SSNG.10100505	75	CA.VSX.1440	90	CA.WSL.GA.30.X	58
CA.PAC20.16A	130	CA.SDN.2025.14	76	CA.SSNG.10250505	75	CA.VTB.JU.141818	230	CA.WSL.KG.JU.20	59
CA.PAC20.16E	130	CA.SDN.2050	76	CA.SSNG.14201818	75	CA.VTB.JU.181818	230	CA.WSL.KG.X.10	59
CA.PAC20.16K	130	CA.SDN.2050.14	76	CA.SSNG.14351818	75	CA.VTB.JU.241818	231	CA.WSL.KG.X.14	59
CA.PAC20.16P	130	CA.SDNG.1010	77	CA.SSNG.20251418	75	CA.VTB.JU.281818	231	CA.WSS.JU.14.18	96
CA.PAC20.16R	130	CA.SDNG.1025	77	CA.SSNG.20501418	75	CA.VTB.X.141818	230	CA.WSS.L.M5.M5	96
CA.PAC20.16S	130	CA.SDNG.1420	77	CA.STA.45	212	CA.VTB.X.181818	230	CA.WSS.X.14.18	96
CA.PAC20.16S9	130	CA.SDNG.1435	77	CA.STA.56	212	CA.VTB.X.241818	231	CA.WSS.X.18.18	96
CA.PAC20.16S9N	130	CA.SDNG.2025	77	CA.STA.75	212	CA.VTB.X.281818	231	CA.WST.10	55
CA.PAC20.16SN	130	CA.SDNG.2025.14	77	CA.STF.30	208	CA.WIV.JU.40	36	CA.WST.10.L	55
CA.PAC20.16SP	130	CA.SDNG.2050	77	CA.STF.36	208	CA.WIV.JU.40.E	36	CA.WST.10.X	55
CA.PAC20.16SPN	130	CA.SDNG.2050.14	77	CA.STF.45	208	CA.WIV.JU.80.E	36	CA.WST.1010.L	54
CA.PAC20.16W	130	CA.SDR.1010	78	CA.STF.56	208	CA.WIV.X.25.0	36	CA.WST.1014.X	54
CA.PAC20.16WN	130	CA.SDR.1025	78	CA.STF.75	208	CA.WIV.X.25.E	36	CA.WST.14	55
CA.PAT.25X3.2000	39	CA.SDR.1420	78	CA.SV.JU.6	36	CA.WIV.X.25.M	36	CA.WST.14.L	55
CA.PAT.25X5.2000	39	CA.SDR.1435	78	CA.SV.X.5	36	CA.WIV.X.50.25	36	CA.WST.14.X	55
CA.PAT.40X3.2000	39	CA.SDR.2025	78	CA.SVB.JU.40.40	44	CA.WKA.10.10.30	67	CA.WST.1414.X	54
CA.PAT.40X5.2000	39	CA.SDR.2025.14	78	CA.SVB.X.25.25	42	CA.WKA.10.10.60	67	CA.WST.20	55
CA.PKS.1010.15	52	CA.SDR.2050	78	CA.SVB.X.25.50	42	CA.WKA.10.10.90	67	CA.WST.20JU	55
CA.PKS.1414.20	52	CA.SDR.2050.14	78	CA.SVB.X.50.25	43	CA.WKA.14.14.120	67	CA.WST.20.X	55
CA.PKS.2020.26	52	CA.SDRG.1010	79	CA.SVB.X.50.50	43	CA.WKA.14.14.40	67	CA.WST.2014.X	54
CA.PKS.3030.38	52	CA.SDRG.1025	79	CA.SWM0	10	CA.WKA.14.14.80	67	CA.WST.2022JU	54
CA.PKS.L.4040.76	53	CA.SDRG.1420	79	CA.SWM1	10	CA.WKA.20.20.100	67	CA.WST.30JU	55
CA.PKS.L.4040.86	53	CA.SDRG.1435	79	CA.SWM1S*	10	CA.WKA.20.20.150	67	CA.WST.30.X	55
CA.PMA.1406	224	CA.SDRG.2025	79	CA.SWM2	10	CA.WKA.20.20.50	67	CA.X.2510.1000	31
CA.PMA.2010	224	CA.SDRG.2025.14	79	CA.SWM2S*	10	CA.WKA.30.30.140	67	CA.X.2510.1000G	31
CA.PMA.3015	224	CA.SDRG.2050	79	CA.SWM3	10	CA.WKA.30.30.200	67	CA.X.2510.2000	31
CA.RBL.30	156	CA.SDRG.2050.14	79	CA.SWM3S*	10	CA.WKA.30.30.80	67	CA.X.2510.2000G	31
CA.RID.1410	70	CA.SDS.02	253	CA.TIK.14007	170	CA.WLS.14.14JU	98	CA.X.2518.1000	31
CA.RID.2014	70	CA.SDS.04	253	CA.TIK.20007	170	CA.WLS.14.18.X	98	CA.X.2518.1000G	31
CA.RID.3020	70	CA.SDS.06	253	CA.TIK.30007	170	CA.WLS.18.18.X	98	CA.X.2518.2000	31
CA.S120	207	CA.SDS.08	253	CA.UDHE.32102020	195	CA.WLS.M5.M5.X	98	CA.X.2518.2000G	31
CA.S2	207	CA.SGB.14.14.X	97	CA.UDHE.32203020	195	CA.WSD.L.M5.M5	96	CA.X.2525.1000	32
CA.S4	207	CA.SGB.18.18.X	97	CA.UVV.JU.40.S	36	CA.WSD.X.14.18	96	CA.X.2525.1000G	32
CA.S5	207	CA.SGB.5.5.X	97	CA.UVV.X.25.S	36	CA.WSD.X.18.18	96	CA.X.2525.2000	32
CA.S7P	207	CA.SLP.05.SI	238	CA.VBG.JU.40.160	45	CA.WSL.1040.U.L	56	CA.X.2525.2000G	32
CA.SAR.2025	89	CA.SLP.07.SI	238	CA.VBG.JU.40.80	45	CA.WSL.1040.U.X	56	CA.X.5025.1000	32
CA.SAR.2050	89	CA.SMN.142010	72	CA.VBG.X.25.100	45	CA.WSL.1040.VU.X	63	CA.X.5025.1000G	32
CA.SAT.3610	211	CA.SMN.143510	72	CA.VBG.X.25.50	45	CA.WSL.1050.G.X	57	CA.X.5025.2000	32
CA.SAT.4510	211	CA.SMN.202514	72	CA.VBG.X.50.50	45	CA.WSL.1060.VU.X	63	CA.X.5025.2000G	32
CA.SAT.5610	211	CA.SMN.202520	72	CA.VBL.50.50	46	CA.WSL.1080.VU.X	63	CA.ZFN1	217
CA.SAT.5614	211	CA.SMN.205014	72	CA.VBL.50.75	46	CA.WSL.1440.U.L	56	CA.ZFN10	217
CA.SAT.5620	211	CA.SMN.205020	72	CA.VBL.80.120JU	46	CA.WSL.1440.U.X	56	CA.ZFN3	217
CA.SAT.7510	211	CA.SMNG.142010	73	CA.VBL.80.80JU	46	CA.WSL.1440.VU.X	63	CA.ZFN5	217
CA.SAT.7514	211	CA.SMNG.143510	73	CA.VBT.JU.120	46	CA.WSL.1450.U.X	56	CA.ZFNP1	217
CA.SAT.7520	211	CA.SMNG.202514	73	CA.VBT.X.50.75	46	CA.WSL.1450.VU.X	63	CA.ZFNP10	217
CA.SBP.10.G02	238	CA.SMNG.205014	73	CA.VBT.X.75.100	46	CA.WSL.1460.G.X	57	CA.ZFNP3	217
CA.SBP.15.G02	238	CA.SN10	215	CA.VBW.JU.0.90	47	CA.WSL.2060.G.X	57	CA.ZFNP5	217
CA.SBP.20.G03	238	CA.SN20	215	CA.VBW.X.0.90	47	CA.WSL.2060.U.X	56	CA.ZTB.1040	68
CA.SCAG.12P00E	236	CA.SN3	215	CA.VLR.10.30	69	CA.WSL.2060.VU.X	63	CA.ZTB.1060	68

## Table of contents

## Inhaltsverzeichnis

CODE	P	CODE	P	CODE	P	CODE	P	CODE	P
CA.ZTB.1460	68	KIT.08.03.D30.10	127	KIT.08.30.D53.21	121	KIT.08.36.D15.60	129	OM.XS3F.M84A5M	246
CA.ZTB.1480	68	KIT.08.03.D35.11	127	KIT.08.30.D63.11	121	KIT.08.36.D20	129	OM.XS3F.M84S5M	246
CA.ZTB.20100	68	KIT.08.03.D45.11	127	KIT.08.30.D63.21	121	KIT.08.36.D20.60	129	PAC.20.16P.03.V	175
CA.ZTS.14	168	KIT.08.03.D60.11	127	KIT.08.30.D78.24	121	KIT.08.36.D25	129	PAX.1501252	254
CA.ZTS.20	168	KIT.08.26.D16.4	115	KIT.08.31.D06.14	109	KIT.08.36.D25.60	129	PPS.1406.07.V	225
CA.ZTS.30	168	KIT.08.26.D16.9	115	KIT.08.31.D11.4	109	KIT.08.36.D35.1	129	PPS.2010.07.V	225
FS.DHEB10EDEL/DSL	181	KIT.08.26.D20.4	115	KIT.08.31.D11.9	109	KIT.08.36.D35.2	129	PPS.3015.07.V	225
FS.DHEB10EUEL/USL	181	KIT.08.26.D20.9	115	KIT.08.31.D14.4	109	KIT.08.36.D35.60	129	SWM1.8	11
FS.DHEB12EDEL/DSL	181	KIT.08.26.D25.4	115	KIT.08.31.D14.9	109	KIT.08.36.D52	129	SWM2.8	11
FS.DHEB12EUEL/USL	181	KIT.08.26.D25.9	115	KIT.08.31.D16.4	109	KIT.08.36.D52.60	129	SWM3.8	11
FS.DHEB14EDEL/DSL	181	KIT.08.26.D33.11	115	KIT.08.31.D16.9	109	KIT.08.36.D75	129	VES.N10LAP	205
FS.DHEB14EUEL/USL	181	KIT.08.26.D33.21	115	KIT.08.31.D20.4	109	KIT.08.36.D75.60	129	VES.N10LPF	205
FS.DHEB18EDEL/USL	181	KIT.08.26.D43.11	115	KIT.08.31.D20.9	109	KIT.08.39.L12.40	113	VES.N20AJ	205
FS.DHEB18EUEL/USL	181	KIT.08.26.D43.21	115	KIT.08.31.D22.4	109	KIT.08.39.L15.28	113	VES.N20AJL	205
FS.DHEB22EDEL/DSL	181	KIT.08.26.D53.11	115	KIT.08.31.D22.9	109	KIT.08.39.L18.28	113	VES.N20AP	205
FS.DHEB22EUEL/USL	181	KIT.08.26.D53.21	115	KIT.08.31.D25.4	109	KIT.08.39.L24.27	113	VES.N20PF	205
FS.DHEB27EDEL/DSL	181	KIT.08.26.D63.11	115	KIT.08.31.D25.9	109	KIT.08.39.L30.27	113	VES.N30AJ	205
FS.DHEB27EUEL/USL	181	KIT.08.26.D63.21	115	KIT.08.31.D33.11	109	KIT.08.39.L45.41	113	VES.N30AJL	205
FS.DHEB33EDEL/DSL	181	KIT.08.26.D78.24	115	KIT.08.31.D33.21	109	KIT.08.39.L60.41	113	VES.N30AP	205
FS.DHEB33EUEL/USL	181	KIT.08.28.D05	119	KIT.08.31.D43.11	109	KIT.08.39.L75.41	113	VES.N30PF	205
FS.DHEB41EDEL/DSL	181	KIT.08.28.D06	119	KIT.08.31.D43.21	109	KIT.08.40.L12.40	117	VES.N5AP	205
FS.DHEB41EUEL/USL	181	KIT.08.28.D08	119	KIT.08.31.D53.11	109	KIT.08.40.L15.28	117		
FS.DHEB51EDEL/DSL	181	KIT.08.28.D10	119	KIT.08.31.D53.21	109	KIT.08.40.L18.28	117		
FS.DHEB51EUEL/DSL	181	KIT.08.28.D15	119	KIT.08.31.D63.21	109	KIT.08.40.L24.27	117		
FS.DHEB63EDEL/DSL	181	KIT.08.28.D20	119	KIT.08.31.D78.24	109	KIT.08.40.L30.27	117		
FS.DHEB63EUEL/USL	181	KIT.08.28.D25	119	KIT.08.32.D09.26	111	KIT.08.40.L45.41	117		
FS.DHEB8EDEL/DSL	181	KIT.08.28.D30	119	KIT.08.32.D12.4	111	KIT.08.40.L60.41	117		
FS.DHEB8EUEL/USL	181	KIT.08.28.D35	119	KIT.08.32.D12.9	111	KIT.08.40.L75.41	117		
GRF14.95.0708	169	KIT.08.28.D40	119	KIT.08.32.D14.4	111	KIT.MA01	255		
GRF14.95.08.V	169	KIT.08.28.D50	119	KIT.08.32.D14.9	111	KT38N3M	249		
GRF14.95.08.V	175	KIT.08.28.D60	119	KIT.08.32.D20.4	111	KT38NM8	249		
GRF14.VSX	170	KIT.08.28.D80	119	KIT.08.32.D20.9	111	KT38P3M	249		
GRF20.95.0708	169	KIT.08.29.D05	107	KIT.08.32.D25.4	111	KT38PM8	249		
GRF20.95.08.V	169	KIT.08.29.D06	107	KIT.08.32.D25.9	111	KT58N3M	248		
GRF20.95.08.V	175	KIT.08.29.D08	107	KIT.08.32.D32.11	111	KT58NM8	248		
GRF20.VSX	170	KIT.08.29.D10	107	KIT.08.32.D32.21	111	KT58P3M	248		
GRF30.95.0708	169	KIT.08.29.D15	107	KIT.08.32.D42.11	111	KT58PM8	248		
GRF30.95.0708.40	169	KIT.08.29.D20	107	KIT.08.32.D42.21	111	KT58REQD	248		
GRF30.95.08.V	169	KIT.08.29.D25	107	KIT.08.32.D52.21	111	M.28X58.24N	13		
GRF30.VSX	170	KIT.08.29.D30	107	KIT.08.32.D62.21	111	M.33X120.35N	13		
GRZ.20.SC.NPN	250	KIT.08.29.D35	107	KIT.08.33.D12.4	123	MMD.ILSAN3AVF80	249		
GRZ.20.SC.PNP	250	KIT.08.29.D40	107	KIT.08.33.D12.9	123	MMD.ILSAN3AVF80	251		
KIT.08.01.D11.4	125	KIT.08.29.D50	107	KIT.08.33.D14.4	123	MMD.ILSAP3AVF80	49		
KIT.08.01.D11.9	125	KIT.08.29.D60	107	KIT.08.33.D14.9	123	MMD.ILSAP3AVF80	251		
KIT.08.01.D16.4	125	KIT.08.29.D80	107	KIT.08.33.D20.4	123	MMD.UK6AHN0EUL	251		
KIT.08.01.D16.9	125	KIT.08.30.D06.14	121	KIT.08.33.D20.9	123	MMD.UK6AHP0EUL	251		
KIT.08.01.D20.1	125	KIT.08.30.D11.4	121	KIT.08.33.D25.4	123	OM.E39-R1S	245		
KIT.08.01.D30.2	125	KIT.08.30.D11.9	121	KIT.08.33.D25.9	123	OM.E3Z-D66.OMS	243		
KIT.08.01.D40.2	125	KIT.08.30.D14.4	121	KIT.08.33.D32.11	123	OM.E3Z-D86.OMS	243		
KIT.08.01.D50.3	125	KIT.08.30.D14.9	121	KIT.08.33.D32.21	123	OM.E3Z-LL66.OMS	243		
KIT.08.03.D06.5	127	KIT.08.30.D16.4	121	KIT.08.33.D42.11	123	OM.E3Z-LL86.OMS	243		
KIT.08.03.D08.6	127	KIT.08.30.D16.9	121	KIT.08.33.D42.21	123	OM.E3Z-LS66.OMS	244		
KIT.08.03.D10.4	127	KIT.08.30.D20.4	121	KIT.08.33.D5.25	123	OM.E3Z-LS86.OMS	244		
KIT.08.03.D10.9	127	KIT.08.30.D20.9	121	KIT.08.33.D52.11	123	OM.E3Z-LT66.OMS	244		
KIT.08.03.D12.4	127	KIT.08.30.D25.4	121	KIT.08.33.D52.21	123	OM.E3Z-LT86.OMS	244		
KIT.08.03.D12.9	127	KIT.08.30.D25.9	121	KIT.08.33.D60.21	123	OM.E3Z-R66.OMS	245		
KIT.08.03.D15.4	127	KIT.08.30.D33.11	121	KIT.08.33.D7.26	123	OM.E3Z-R86.OMS	245		
KIT.08.03.D15.9	127	KIT.08.30.D33.21	121	KIT.08.33.D9.26	123	OM.XS2F.M124A5M	247		
KIT.08.03.D20.4	127	KIT.08.30.D43.11	121	KIT.08.36.D10	129	OM.XS2F.M124S5M	247		
KIT.08.03.D20.9	127	KIT.08.30.D43.21	121	KIT.08.36.D10.60	129	OM.XS3F.M83A5M	246		
KIT.08.03.D25.10	127	KIT.08.30.D53.11	121	KIT.08.36.D15	129	OM.XS3F.M83S5M	246		
						VES.N30AP	195		





FPS S.r.l.  
Via Morandi, 172  
40060 Toscanella di Dozza  
Bologna - Italy

t. +39 0542 674298  
[fps-automation.com](http://fps-automation.com)

