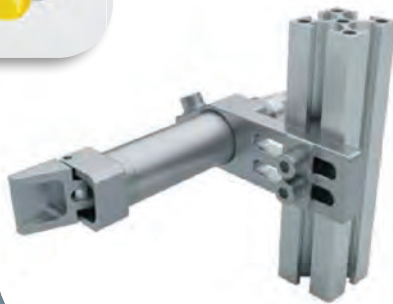




hales[®]



**2025
END OF ARM TOOLING**



QUICK CHANGE

■ Base Plate	196
■ Quick Changer Robot Side	196

PROFILES, CONNECTORS & NUTS

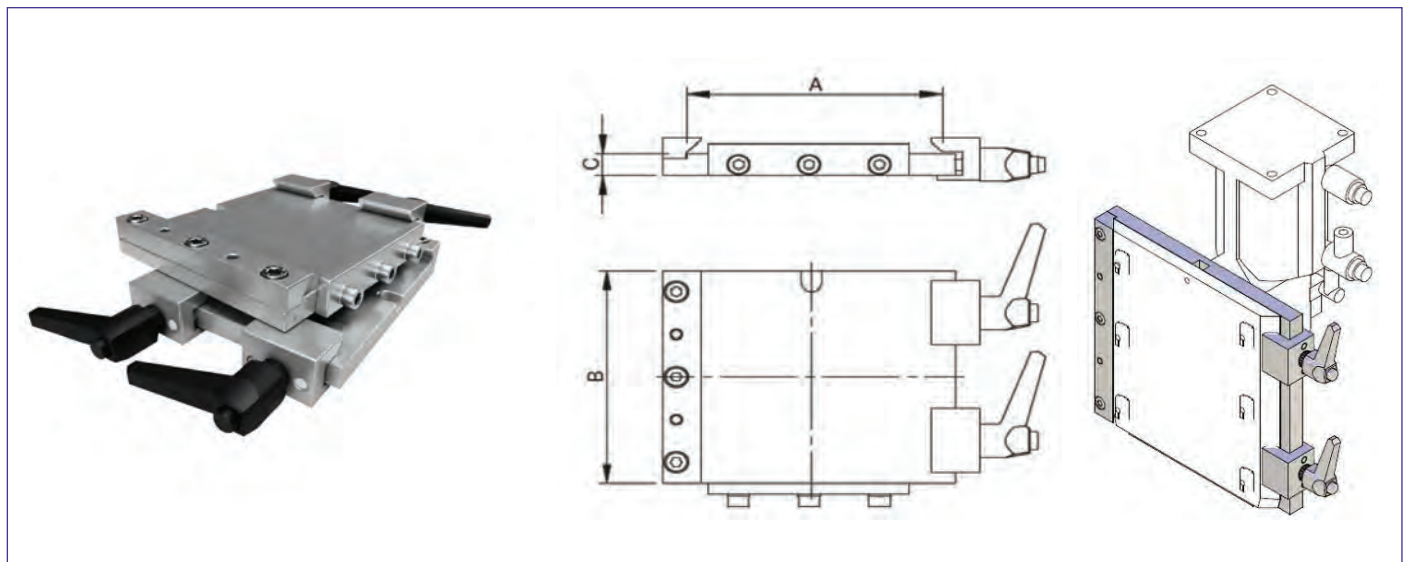
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VACUUM CUPS & MOUNTS

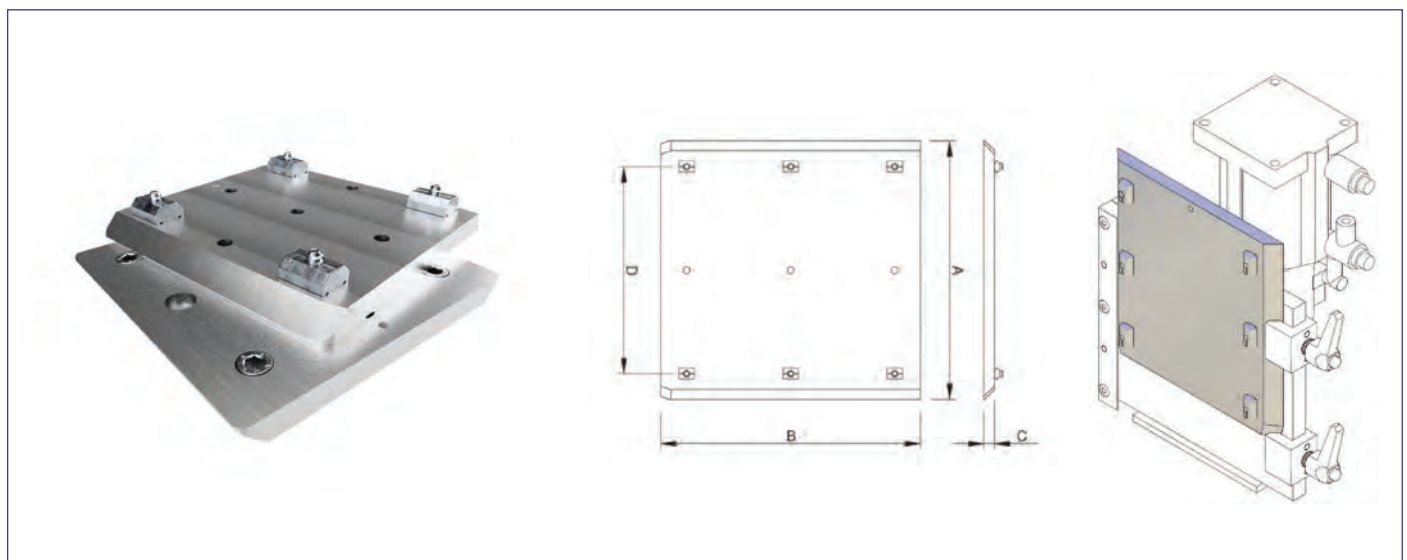
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Manual interface between robot and EOAT.
Works with all profile systems.

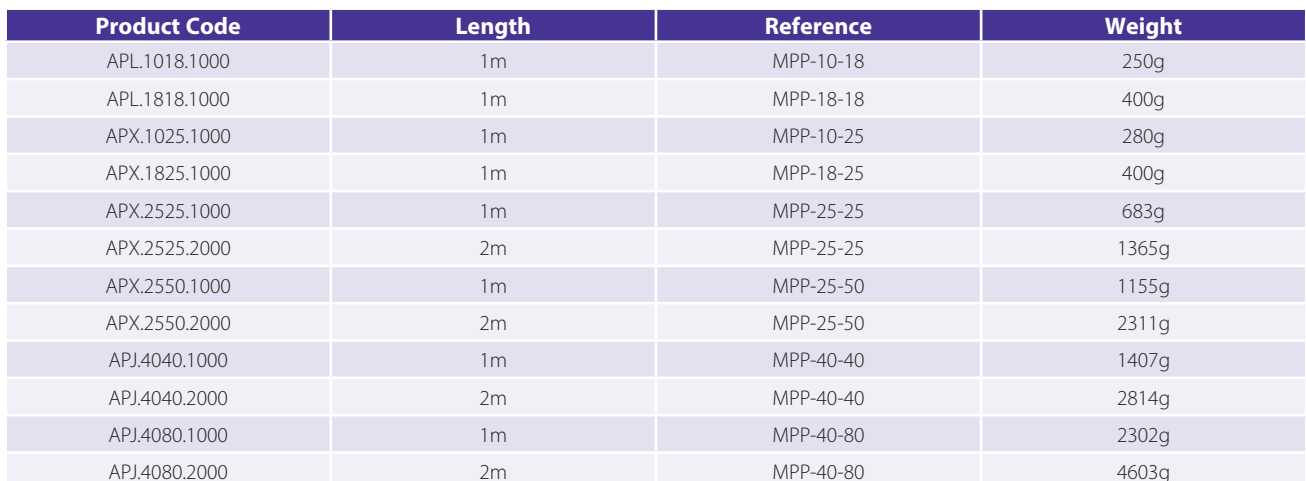
Product Code	A	B	C	Max Load	Reference	Weight
QC-RSW-60-00	60	60	10	5kg	QC-SSW-60	140g
QC-RSW-100-00	100	100	10	10kg	QC-SSW-100	495g
QC-RSW-160-00	160	160	10	20kg	QC-SSW-160	1136 g
QC-RSW-250-00	250	250	10	40kg	QC-SSW-250	3072g

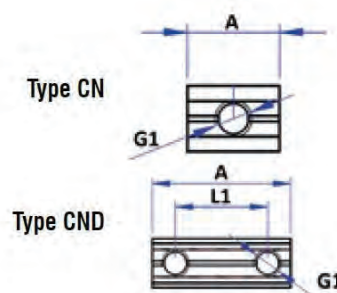
Quick Change Base Plate



Material: Aluminium.
Surface: Silver anodized.

Product Code	A	B	C	D	Reference	Weight
QC-SSW-60	60	60	8	35	QC-RSW-60-00	93g
QC-SSW-100	100	100	8	70	QC-RSW-100-00	242g
QC-SSW-160	160	160	10	120	QC-RSW-160-00	695g
QC-SSW-250	250	250	10	200	QC-RSW-250-00	1641g

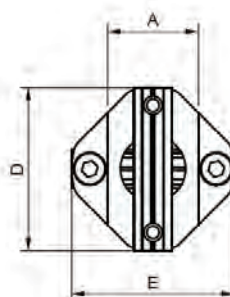




Suitable for L, X and J line of profiles.

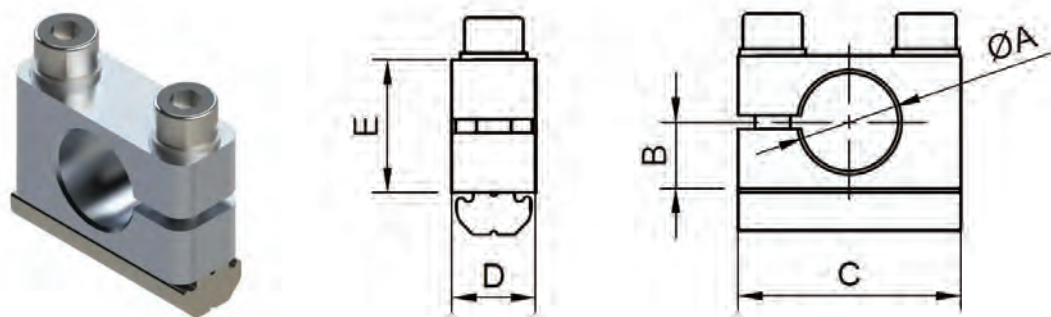
Product Code	G1	A	L1	Weight
CN-M3	M3	15		6g
CN-M4	M4	15		6g
CN-M4-16	M4	24	16	9g
CN-M5	M5	15		5g
CN-M5-20	M5	30	20	11g
CN-M6	M6	15		5g
CN-M6-20	M6	30	20	11g

Profile Cross Joint Connector



Exact 90° connection of two profiles.
Highly rigid, connection.
Allows adjustment of both profiles.

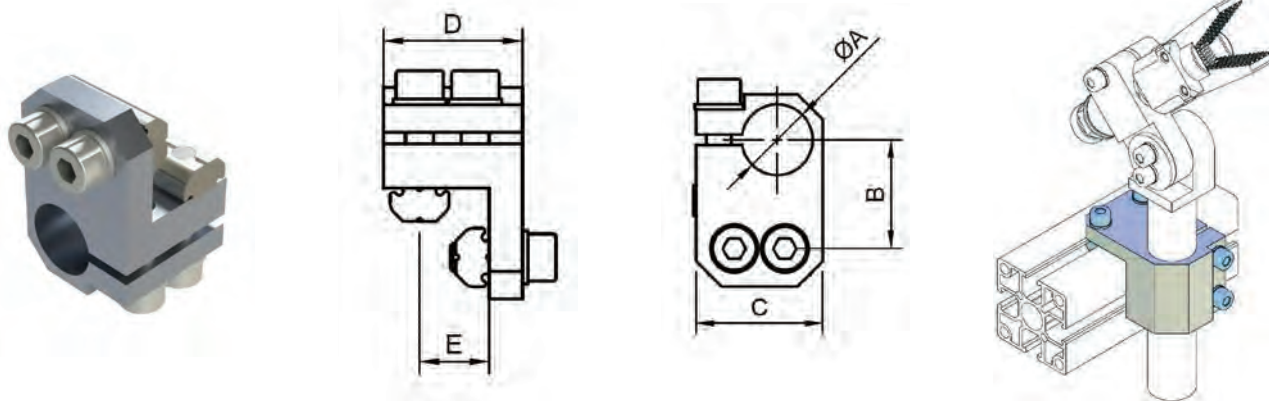
Product Code	A	B	C	D	E	Reference	Weight
CC18-18-L	18	18	38	38	3	L	40g
CC25-18-X	25	18	45	45	4	X	60g
CC25-25-X	25	25	45	45	4	X	67g
CC50-25-X	50	25	45	70	4	X	76g
CC50-50-X	50	50	70	70	4	X	192g
CC40-25-J	40	25	45	60	4	X/J	77g
CC40-40-J	40	40	65	65	4	J	81g
CC80-40-J	80	40	100	60	4	J	156g
CC80-80-J	80	80	100	100	4	J	268g



Connects tubular components to profiles at 90°.
Adjustment of components without loss of clamp position.

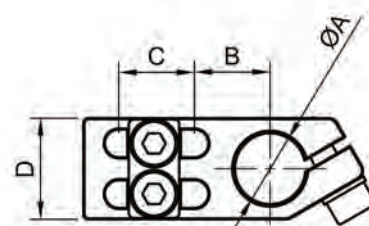
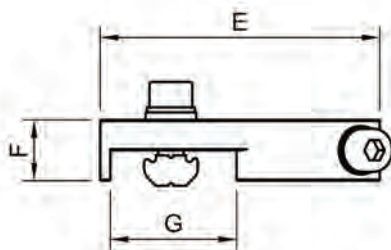
Product Code	A	B	C	D	E	Weight
CCR.10.X	10	7	25	10	14	22g
CCR.14.X	14	9,5	32	12	19	36g
CCR.20.X	20	14	40	15	28	58g
CCR.20.J	20	14	40	20	28	75g
CCR.30.J	30	18	50	20	36	97g

Angle Clamp Heavy Duty



Heavy duty clamp.
Minimises deflection due to wrap around connection.

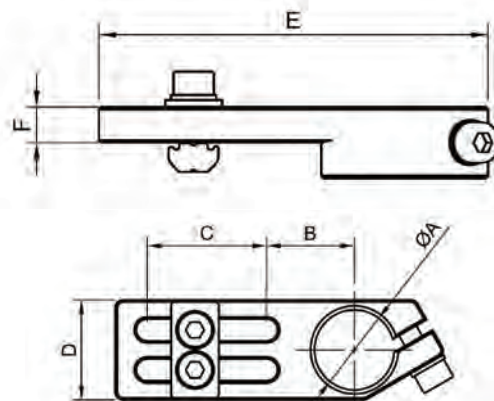
Product Code	A	B	C	D	E	Weight
ACH.10.L	10	16	20	20	18	25g
ACH.10.X	10	19,5	25	25	12,5	50g
ACH.14.X	14	21,5	25	25	12,5	51g
ACH.20.X	20	24,5	32	30	12,5	77g
ACH.20.J	20	33	35	40	20	105g
ACH.30.J	30	39	45	45	20	162g



Material: Aluminium.
ACS clamps allow for mounting flexibility.
Kit with screws.

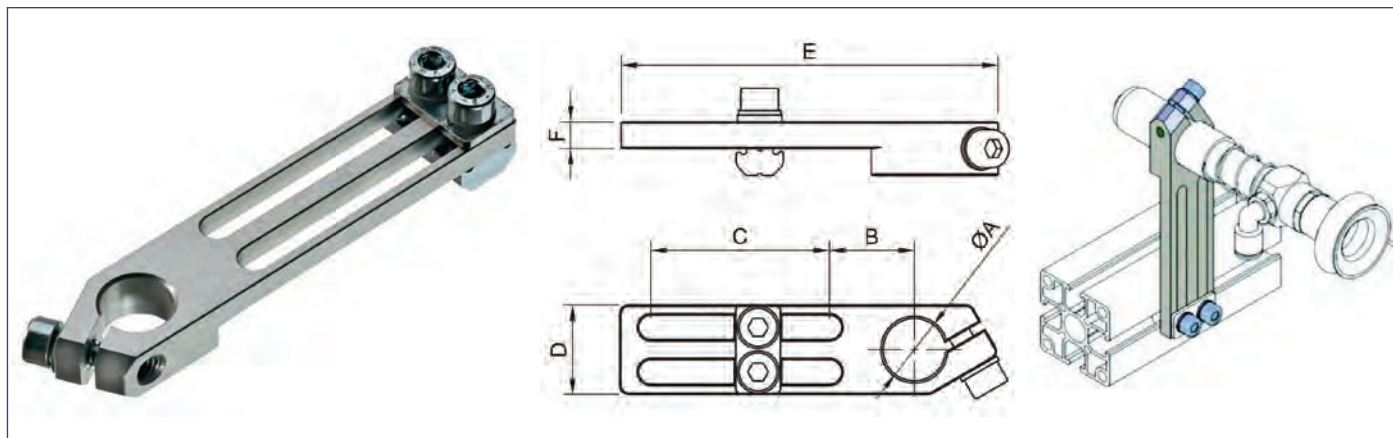
Product Code	A	B	C	D	E	F	G	Weight
ACS.10.L	10	12,2	9	16	42	8	18	21g
ACS.10.X	10	12,2	15	16	49	8	25	22g
ACS.14.X	14	15	15	20	55	12	25	37g
ACS.20.X	20	18	15	25	63	15	25	50g
ACS.20.J	20	18	30	25	78	15	40	54g
ACS.30.X	30	23,5	15	35	75,5	20	25	82g
ACS.30.J	30	23,5	29	35	90,5	20	40	92g

Medium Angle Clamp



Material: Aluminium.
ACM clamps allow for mounting flexibility.
Kit with screws.

Product Code	A	B	C	D	E	F	Weight
ACM.1020.L	10	16,5	20	16	56	4	23g
ACM.1425.X	14	19	25	20	70	6	36g
ACM.2035.X	20	22	35	25	82	7,5	55g
ACM.3035.X	30	28,5	35	35	96	10	94g



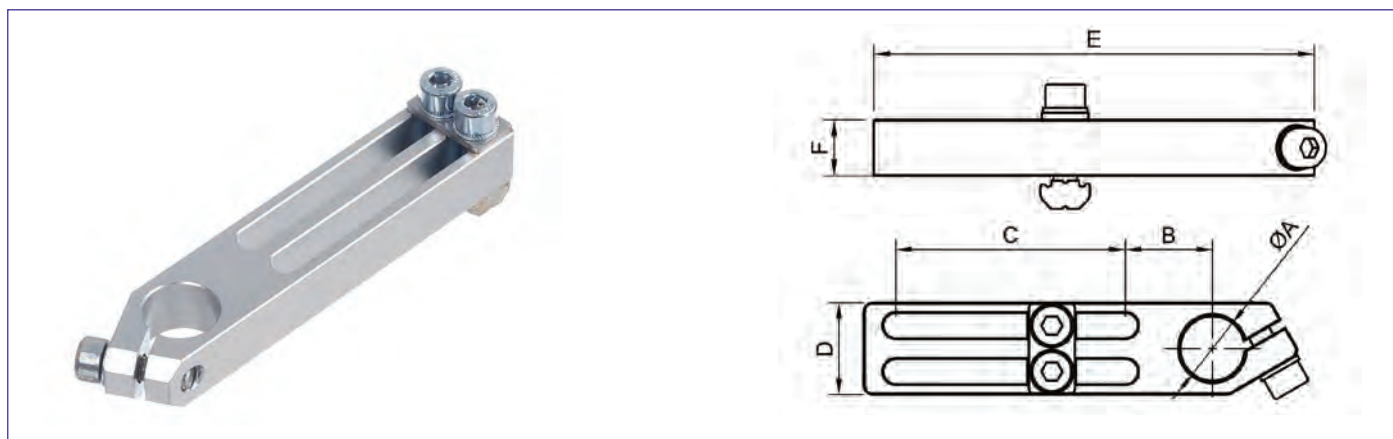
Material: Aluminium.

ACL clamps allow for mounting flexibility.

Kit with screws.

Product Code	A	B	C	D	E	F	Weight
ACL.1040.L	10	16,5	40	16	76	4	24g
ACL.1040.X	10	16,5	40	16	76	4	24g
ACL.1440.X	14	19	40	20	85	6	39g
ACL.1450.X	14	19	50	20	95	6	42g
ACL.2060.X	20	22	60	25	112	7,5	62g
ACL.2070.J	20	22	70	28	123	7,5	77g
ACL.3060.X	30	28,5	60	35	126	10	113g
ACL.3070.J	30	28,5	70	35	136	10	130g

Long Angle Clamp Heavy Duty

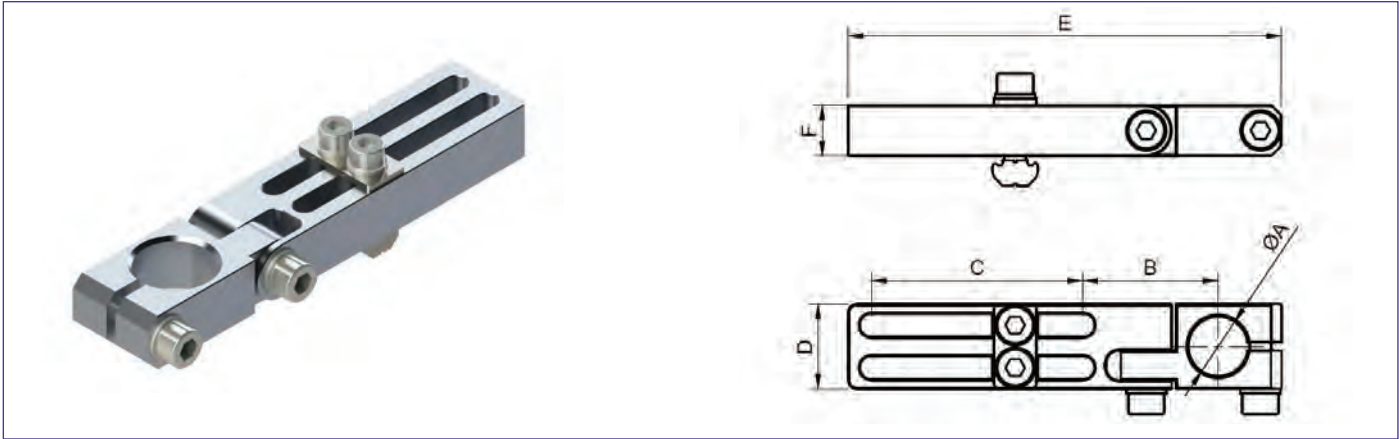


Material: Aluminium.

ACLH Heavy duty clamps allow for mounting flexibility with higher loads.

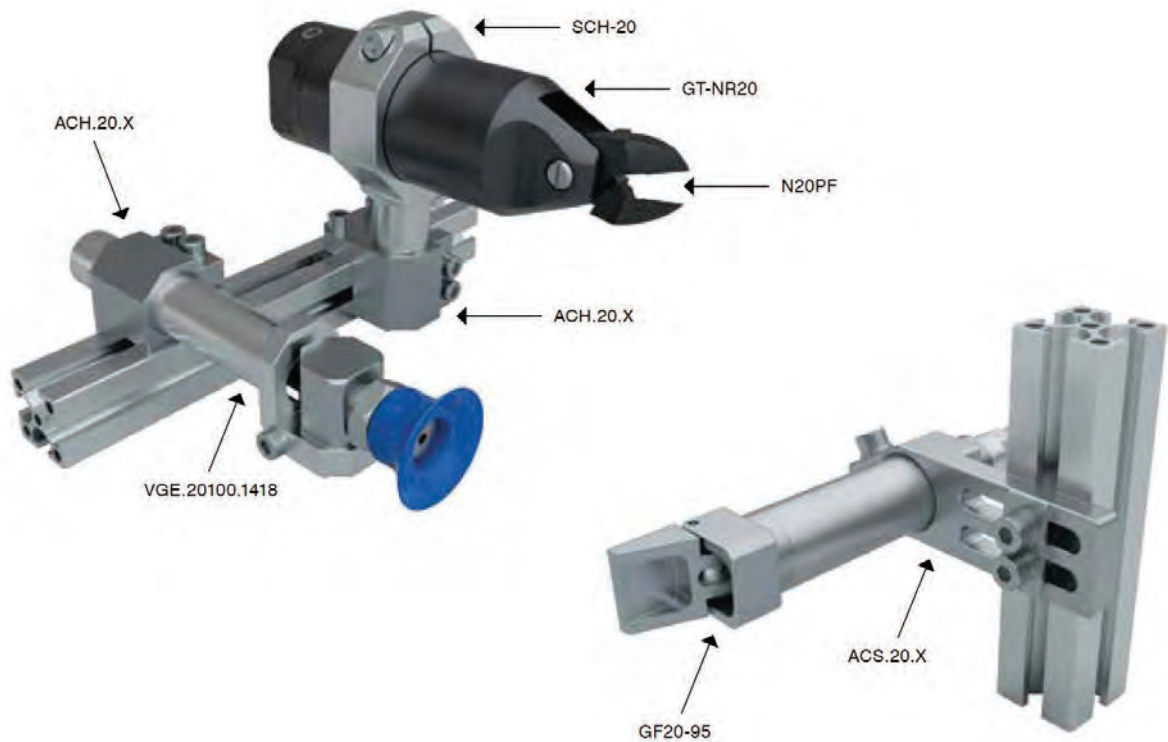
Kit with screws.

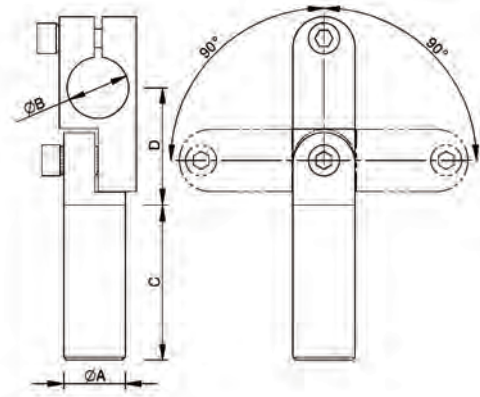
Product Code	A	B	C	D	E	F	Weight
ACLH.1040.X	10	16,5	40	16	76	8	30g
ACLH.1450.X	14	19	50	20	95	12	57g
ACLH.2060.X	20	22	60	25	112	15	90g
ACLH.2070.X	20	22	70	28	123	15	112g
ACLH.3070.J	30	28,5	70	35	136	20	185g



Material: Aluminium.
Increased flexibility in component positioning.
Heavy duty design ensures component stability.

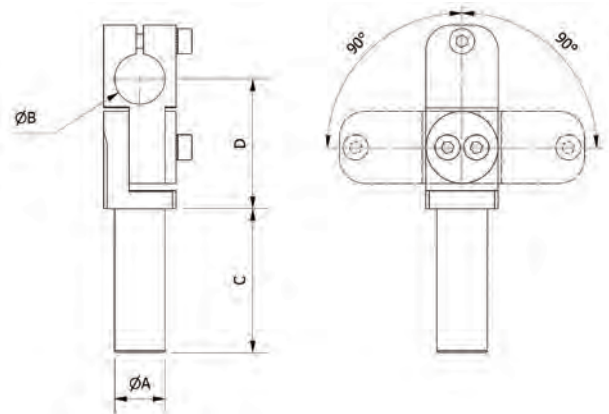
Product Code	A	B	C	D	E	F	Weight
ACLS.1040.X	10	27,5	40	20	86	10	55g
ACLS.1450.X	14	32	50	20	102,5	12	67g
ACLS.2060.X	20	37,5	60	25	124,5	15	115g
ACLS.3080.X	30	50	80	35	166,5	20	254g





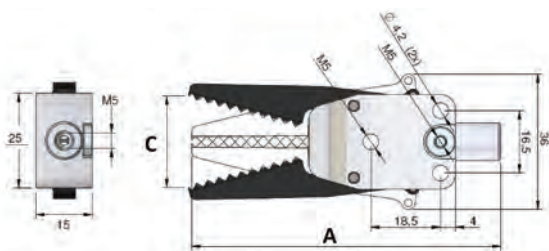
Product Code	A	B	C	D	Weight
MA.GLA.1010.30	10	10	30	22	17g
MA.GLA.1010.60	10	10	60	22	21g
MA.GLA.1010.90	10	10	90	22	28g
MA.GLA.1414.40	14	14	40	30	43g
MA.GLA.1414.80	14	14	80	30	51g
MA.GLA.1414.120	14	14	120	30	70g
MA.GLA.2020.50	20	20	50	38	99g
MA.GLA.2020.100	20	20	100	38	106g
MA.GLA.2020.150	20	20	150	38	165g
MA.GLA.2030.100	20	30	100	47	315g
MA.GLA.3030.100	30	30	100	52,5	315g

Gripper Elbow Arm Heavy Duty



Secure clamping for high loads.

Product Code	A	B	C	D	Weight
MA.GLH.1010.030	10	10	30	30	27g
MA.GLH.1010.060	10	10	60	30	31g
MA.GLH.1010.090	10	10	90	30	37g
MA.GLH.1414.040	14	14	40	36	56g
MA.GLH.1414.080	14	14	80	36	66g
MA.GLH.1414.120	14	14	120	36	83g
MA.GLH.2020.050	20	20	50	45,5	111g
MA.GLH.2020.100	20	20	100	45,5	127g
MA.GLH.2020.150	20	20	150	45,5	169g
MA.GLH.3030.080	30	30	80	60	302g
MA.GLH.3030.140	30	30	140	60	394g
MA.GLH.3030.200	30	30	200	60	509g



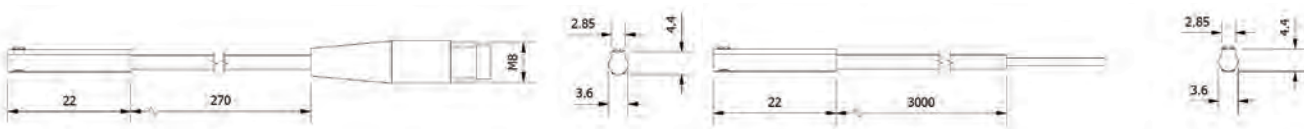
Compressed air in compliance with ISO 8573-1:2010 [7:4:4].
Maximum Operating Pressure 8 bar.

Product Code	C	A	Jaw Type	Sensor	Closing Force (6 bar)	Weight
GZ12-10-10-M	19,5	75	Serrated		30N	40g
GZ12-10-10-C	17,9	75	Curved		30N	36g
GZ12-10-10-CKP	19	76	Curved	PNP	30N	45g
GZ12-10-10-CKN	19	76	Curved	NPN	30N	45g
GZ12-10-10-MC	19	75	1 Serrated/1 Curved		30N	37g
GZ12-10-10-W	20	75,3	Wide		30N	39g
GZ12-10-10-B	13	59,3	Custom		30N	32g
GZ12-10-10-L	20	76,5	Diamond Pattern		30N	36g
GZ12-10-10-L90	19,3	76	Diamond Pattern		30N	43g
GZ12-10-10-LL	19,8	75,3	Smooth		30N	40g
GZ12-10-10-MF	19,6	76,5	Serrated Steel		30N	58g

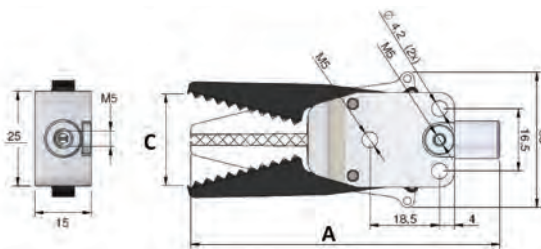
Last Minute Sensor for GZ-12-10

Product Code	Output	Sensor Type	Sensing Distance	Connector	Weight
GZ-SCP-12-10	PNP	Magnetic	0-50mm	M8 4pin	65g

C-Slot Sensor SN



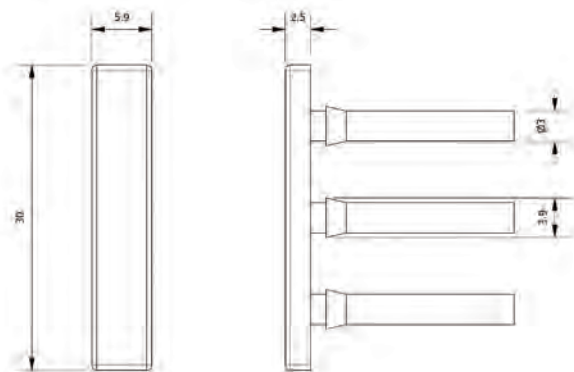
Product Code	Output	Sensor Type	Connector	Lead - m	Weight
SN.K5P.M8	PNP	Electronic	M8 3pin	0,3	4g
SN.K5N.M8	NPN	Electronic	M8 3pin	0,3	4g
SN.K5P.3MW	PNP	Electronic	-	3	4g
SN.K5N.3MW	NPN	Electronic	-	3	4g



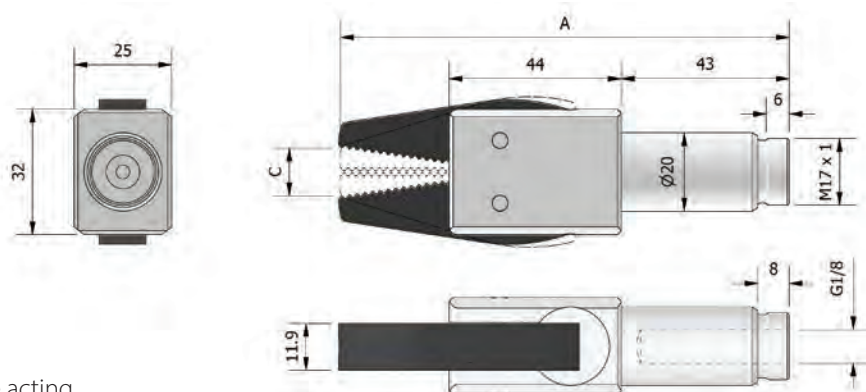
Compressed air in compliance with ISO 8573-1:2010 [7:4:4].
Maximum Operating Pressure 8 bar.

Product Code	C	A	Jaw Type	Sensor	Closing Force (6 bar)	Weight
GZ12-10-10	24	83	Diamond Pattern		30N	40g
GZ12-10-10-KP	23	83	Diamond Pattern	PNP	30N	51g
GZ12-10-10-KN	23	83	Diamond Pattern	NPN	30N	51g
GZ12-10-10-A	21,3	82	Saw Tooth		30N	38g
GZ12-10-10-AKP	23	83	Saw Tooth	PNP	30N	51g
GZ12-10-10-AKN	23	83	Saw Tooth	NPN	30N	51g
GZ12-10-10-G	22,3	82	Viton Rubber Pad		30N	37g
GZ12-10-10-GKP	22	83	Viton Rubber Pad	PNP	30N	48g
GZ12-10-10-GKN	22	83	Viton Rubber Pad	NPN	30N	48g

Jaw Insert Pad - Viton



Product Code	Material	Reference	Weight
GZ-VIT-6	FKM	GZ-12-10-G	4g



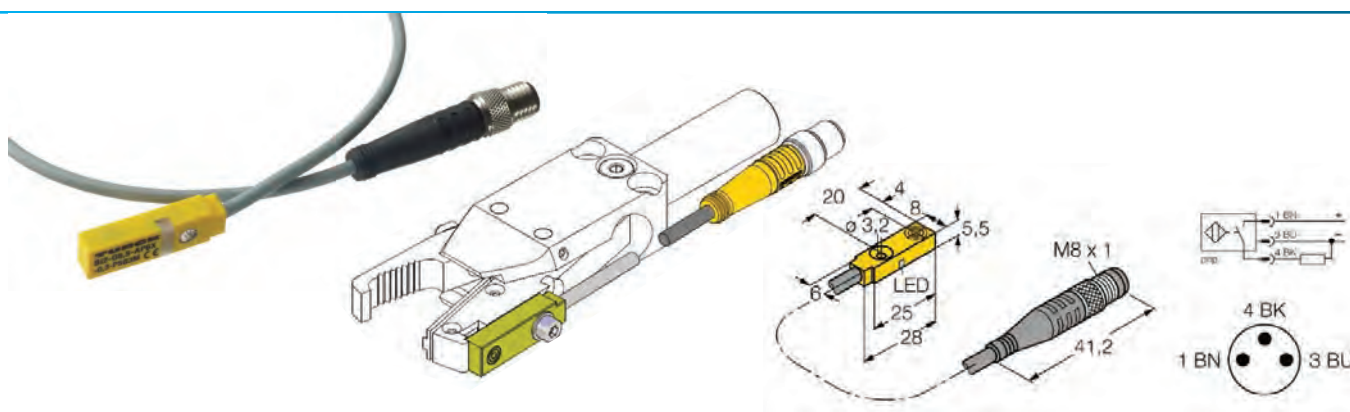
Work principle: Single acting.

Working pressure: 6 bar clean and dry air.

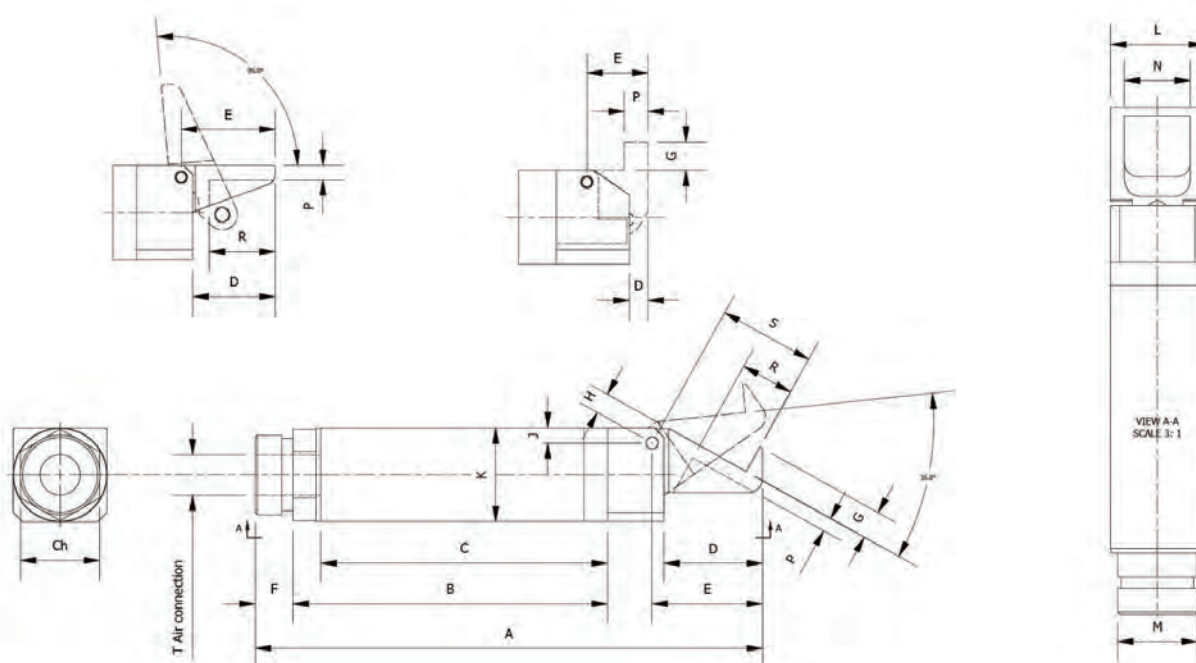
Material: Jaws made of hard-coated Aluminium. Body made of anodized Aluminium.

Product Code	Jaw Type	A	C	Sensor Type	Closing Force (6 bar)	Weight
GZ20-10-A	Custom	100	15		90N	114
GZ20-10-E	Curved	115	21		90N	117
GZ20-10-L	Curved-Smooth	115	23		90N	120
GZ20-10-10	Serrated	115	21		90N	121
GZ20-10-10-S	Serrated	115	21	PNP	90N	127
GZ20-10-10-SN	Serrated	115	21	NPN	90N	127
GZ20-10-W-S	Curved	115	21	PNP	90N	123
GZ20-10-W-SN	Curved	115	21	NPN	90N	123

Sensor for GZ-20

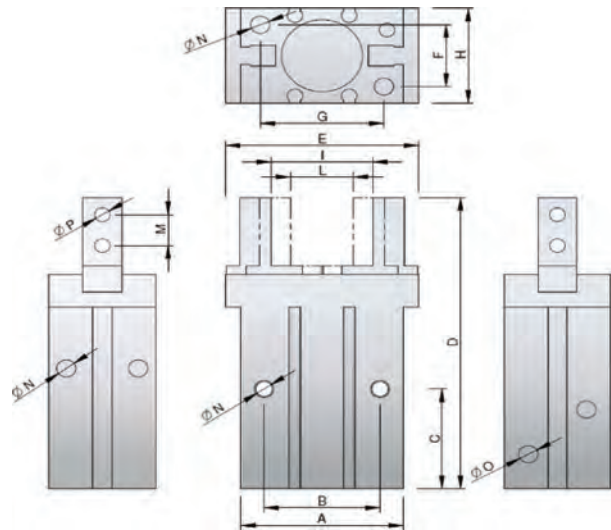


Product Code	Type	Cable Length	Connection
GZ20.SM8.PNP	PNP	300	M8
GZ20.SM8.NPN	NPN	300	M8



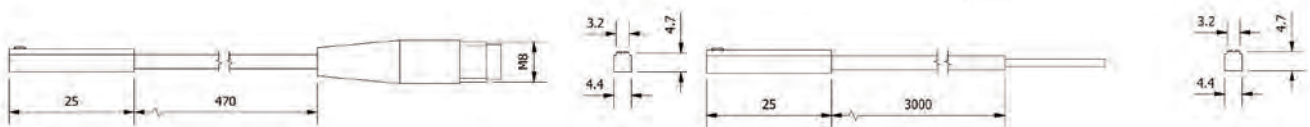
Working Principle: Single acting.
 Working pressure: 6 bar clean, dry air.
 Material: Silver anodised Aluminium.

Product Code	Stroke	Grip Force (6 bar)	A	B	C	D	E	F	G	H	J	K	L	M	N	P	R	S	T	CH
GF14-35	35°	26N	77	47,5	43,5	14	16	5,5	4,5	3,4	2	Ø14	14	M1xX1	10	2	6	13,5	M5	12
GF20-35	35°	100N	107	66	60	21	23,5	8	6	3,8	2,5	Ø20	20	M17x1	14	3	11,5	20,7	G1/8	17
GF30-35	35°	430N	156	100	92	30	34	11	8	6	4	Ø30	30	M27x1	22	5	17	30,8	G1/8	27
GF14-90	90°	19N	69	45,5	41,5	2	8	5,5			2	Ø14	14	M1xX1	10	4			M5	12
GF20-90	90°	70N	92,5	61	55	2	13	8			2,5	Ø20	20	M17x1	14	5			G1/8	17
GF30-90	90°	300N	135	91	83	2	20	11			4	Ø30	30	M27x1	22	6			G1/8	27
GF14-95	95°	19N	75,5	47,5	43,5	12	14	5,5			2	Ø14	14	M1xX1	10	2	9		M5	12
GF20-95	95°	70N	103,5	66	60	17,5	20	8			2,5	Ø20	20	M17x1	14	3	14		G1/8	17
GF30-95	95°	300N	148	100	90	25	29	11			4	Ø30	30	M27x1	22	5	21		G1/8	27
GF14-95V	95°	19N	75,5	47,5	43,5	12	14	5,5			2	Ø14	14	M1xX1	10	2	9		M5	12
GF20-95V	95°	70N	103,5	66	60	17,5	20	8			2,5	Ø20	20	M17x1	14	3	14		G1/8	17
GF30-95V	95°	300N	148	100	90	25	29	11			4	Ø30	30	M27x1	22	5	21		G1/8	27



Product Code	Bore Size	A	B	C	D	E	F	G	H	I Open	L Closed	Stroke	M	N	O	P	Force (N) Open/Close	Weight
PG-10	10	23	16	23	57	30	12	18	16,5	15,5	11,5	4	5,7	M3	M3	M2.5	22/34	56g
PG-10NO	10	23	16	23	57	30	12	18	16,5	15,5	11,5	4	5,7	M3	M3	M2.5	14/	57g
PG-10L	10	23	16	25	57	35	12	18	16,5	20,3	11	8	5,7	M3	M3	M2.5	22/34	64g
PG-16	16	30,5	24	24,5	67,3	39	15	22	23,5	21	15	6	7	M4	M5	M3	68/90	124g
PG-16NO	16	30,5	24	24,5	67,3	39	15	22	23,5	21	15	6	7	M4	M5	M3	54/	125g
PG-16L	16	30,5	24	31	70	47	15	22	23,5	28	14,7	12	7	M4	M5	M3	68/90	146g
PG-20	20	42	30	29	85	53	18	32	27,5	26,5	16,5	10	9	M5	M5	M4	90/132	236g
PG-20NO	20	42	30	29	85	53	18	32	27,5	26,5	16,5	10	9	M5	M5	M4	70/	238g
PG-20L	20	42	30	36	90	62	18	32	27,5	33,5	16,1	18	9	M5	M5	M4	84/132	273g
PG-25	25	52	36	30	103	71	22	40	33,5	33,5	19,5	14	12	M6	M5	M5	138/204	428g
PG-25NO	25	52	36	30	103	71	22	40	33,5	33,5	19,5	14	12	M6	M5	M5	110/	430g
PG-25L	25	52	36	40	106	75	22	40	33,5	42,6	19,3	22	12	M6	M5	M5	130/208	489g
PG-32	32	60	46	49	113	106	26	46	40	48	26	22	14	M6	M5	M6	320/390	729g

T-Slot Sensor SN.DMSG

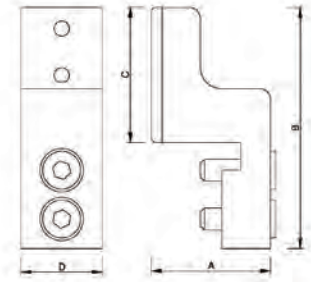


Product Code	Output	Sensor Type	Connector	Lead - m	Ref.	Weight
SN.DMSGP.M8	PNP	Magnetic	M8 3 pin	0.5	PG/AG/CCTQ/CCAQ	4g
SN.DMSGN.M8	NPN	Magnetic	M8 3 pin	0.5	PG/AG/CCTQ/CCAQ	4g
SN.DMSGP.3M	PNP	Magnetic		3	PG/AG/CCTQ/CCAQ	4g
SN.DMSGN.3M	NPN	Magnetic		3	PG/AG/CCTQ/CCAQ	4g

C-Slot Sensor SN.DMSH



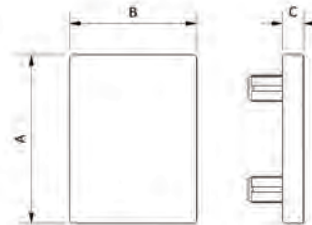
Product Code	Output	Sensor Type	Connector	Lead - m	Ref.	Weight
SN.DMSHPM8	PNP	Electronic	M8 3 pin	0.5	PG	4g
SN.DMSHNM8	NPN	Electronic	M8 3 pin	0.5	PG	4g
SN.DMSHP3M	PNP	Electronic		3	PG	4g
SN.DMSHN3M	NPN	Electronic		3	PG	4g



Extremely light weight (Material Aluminium).

Product Code	A	B	C	D	E	F	Weight
MA.KB.10	FKM-10	15,5	27	14	10	PG-10	14
MA.KB.16	FKM-16	18,5	35	20	15	PG-16	28
MA.KB.20	FKM-20	22	44,5	25	15	PG-20	41
MA.KB.25	FKM-25	29	55	25	20	PG-25	73
MA.KB.32	FKM-32	36	65,5	36,5	25	PG-32	166

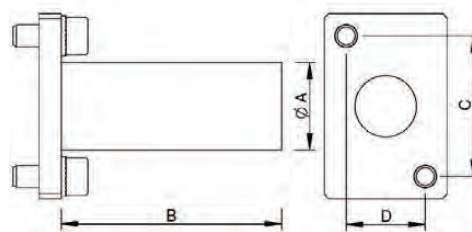
Insert Pad Viton



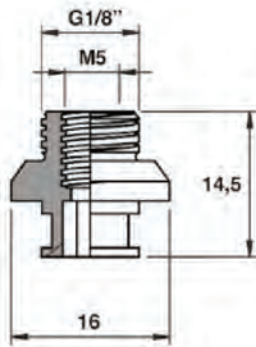
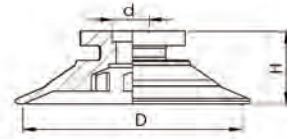
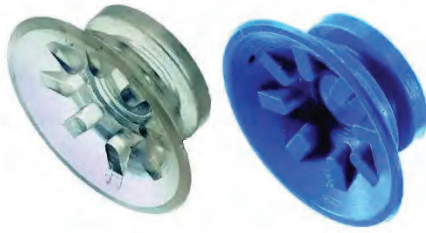
FKM = Viton (fluoroelastomer).

Product Code	A	B	C	Jaw Ref.	Weight
FKM-10	14	10	2.5	PG-10	1
FKM-16	20	15	2.5	PG-16	2
FKM-20	25	13	2	PG-20	1
FKM-25	25	13	2	PG-25	1
FKM-32	30	20	3	PG-32	3

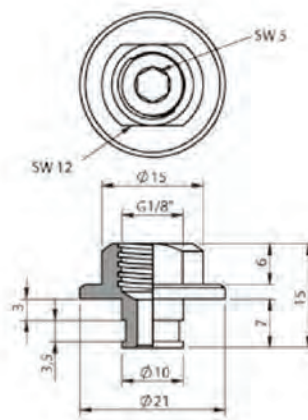
Mounting Bracket for Grippers



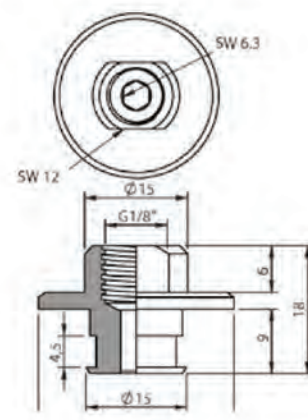
Product Code	A	B	C	D	Ref.	Weight
GA-10	10	30	18	12	PG-10	11
GA-16	14	40	22	15	PG-16	21
GA-20	20	50	32	18	PG-20	38
GA-25	20	50	40	22	PG-25	55
GA-32	20	50	46	26	PG-32	102



F250



F251



F252

Product Code Silicone	Product Code TempFlex HT	D	H	Fitting	Fitting	Fitting
F20S	F20HT	22	8	F250		
F25S	F25HT	28	9	F250		
F30S	F30HT	32	10	F250		
F40S	F40HT	42	13		F251	
F50S	F50HT	53	17,5			F252

Flat Cups

The flat suction cups provide accuracy in load gripping and speeds up the cycle process. Flat cups are used for flat and slightly curved surfaces.



1,5 Bellow Cups

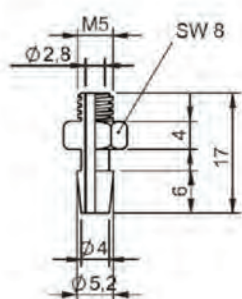
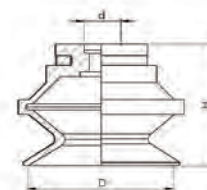
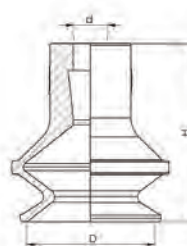
The 1,5 bellow cups combine the advantages of the flat suction cups (precision and positioning) with the freedom of belows (angle and flexibility). They provide flexibility, precision and low internal volume suitable for high-speed applications.



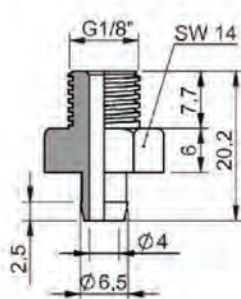
2,5 Bellow Cups

The suction cups with 2,5 bellow are recommended for gripping products with un-even surfaces (large deflection). The 2,5 bellow allow objects to be gripped from an angle (ball-joint effect).

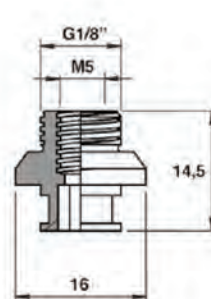




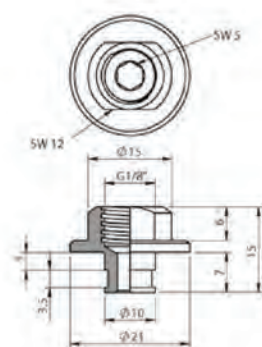
F134



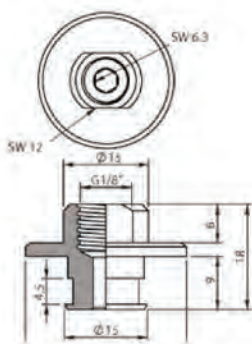
130.003



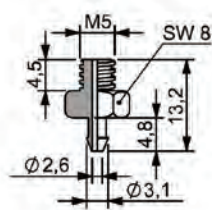
F250



F251

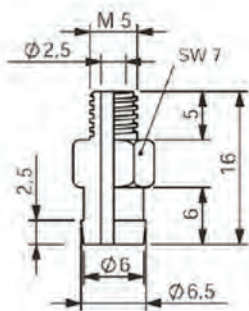
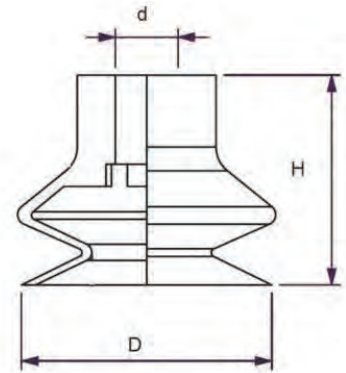
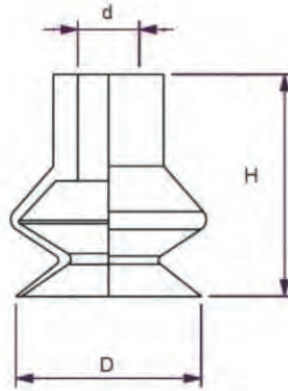


F252

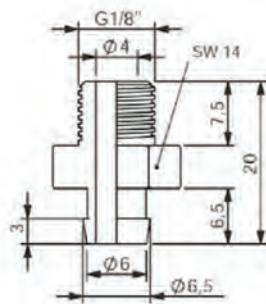


130.591

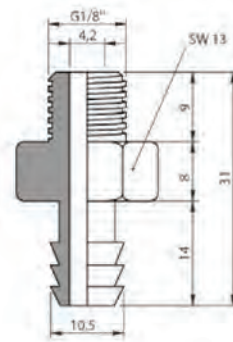
Product Code Silicone	Product Code TempFlex HT	D	D1	d	H	Fitting	Fitting
B05S	B05HT	5		2,6	9,5		130.591
B08S	B08HT	8,8		2	12		130.591
B11S	B11HT	11,0		4	17	F134	130.003
B16S	B16HT	16,0		4	19	F134	130.003
B20S	B20HT	21,5	24,0	4,8	20	F250	
B30S	B30HT	33,0	36,0	6	26	F250	
B40S	B40HT	42,0	46,0	7	28	F251	
B50S	B50HT	52,0	58,0	10,5	35	F252	



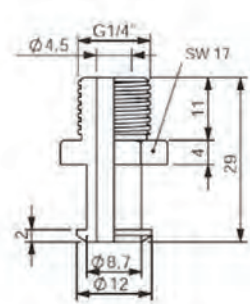
130.013



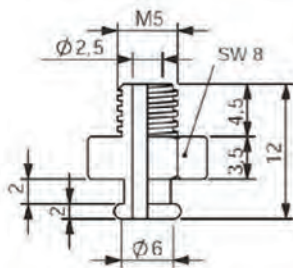
130.003



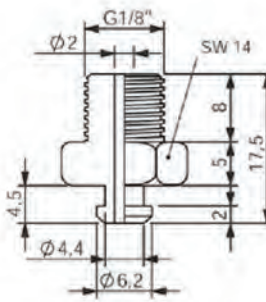
130.132



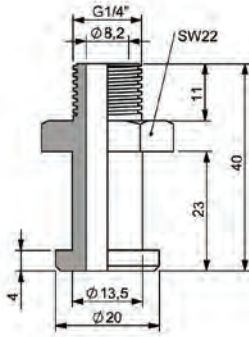
130.190



130.301

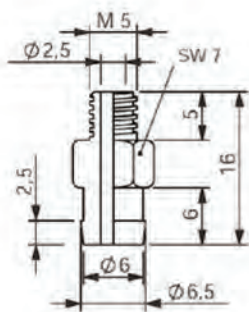
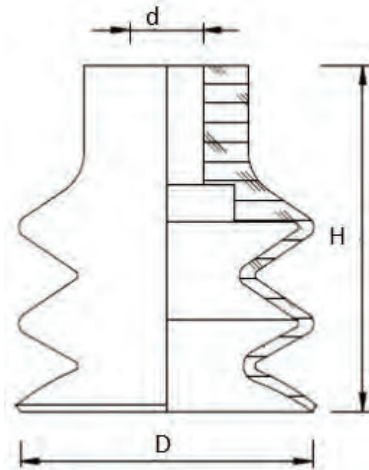


130.009

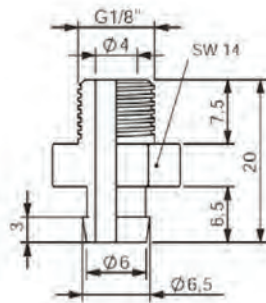


130.622

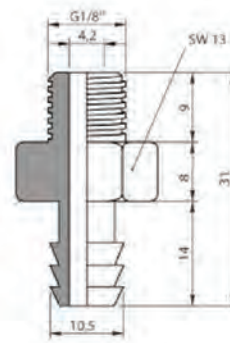
Product Code Silicone	Product Code TempFlex HT	D	d	H	Fitting	Fitting
CL-1.5-06-S	CL-1.5-06-HT	6	4	9	130.301	130.009
CL-1.5-11-S	CL-1.5-11-HT	11	5	16	130.013	130.003
CL-1.5-14-S	CL-1.5-14-HT	14	5	15	130.013	130.003
CL-1.5-16-S	CL-1.5-16-HT	16	5	19	130.013	130.003
CL-1.5-20-S	CL-1.5-20-HT	20	4	16	130.013	130.003
CL-1.5-25-S	CL-1.5-25-HT	25	4	23	130.013	130.003
CL-1.5-30-S	CL-1.5-30-HT	33	8	28	130.132	130.190
CL-1.5-43-S	CL-1.5-43-HT	43	8	28	130.132	130.190
CL-1.5-53-S	CL-1.5-53-HT	53	8	34	130.132	130.190
CL-1.5-63-S	CL-1.5-63-HT	63	8	34	130.132	130.190
CL-1.5-78-S	CL-1.5-78-HT	78	12	47	130.622	



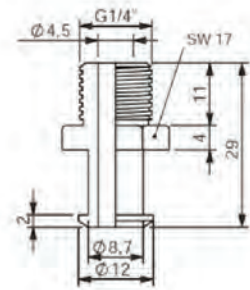
130.013



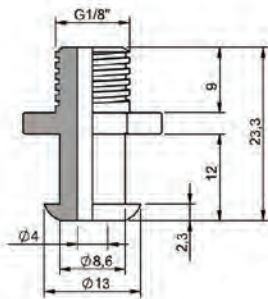
130.003



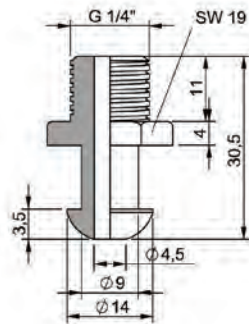
130.132



130.190

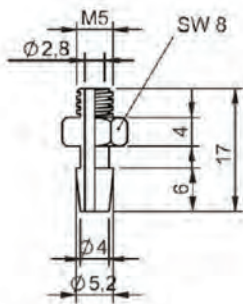
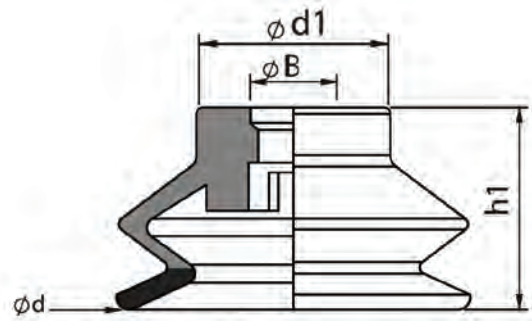


130.093

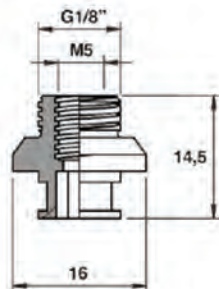


130.281

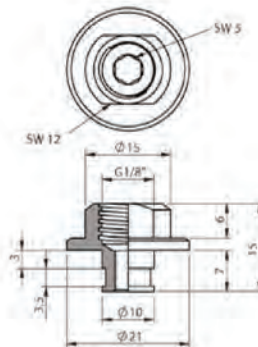
Product Code Silicone	Product Code TempFlex HT	D	d	H	Fitting	Fitting
CL-2.5-5	CL-2.5-5-HT	5	4	14	130.013	130.003
CL-2.5-7	CL-2.5-7-HT	7	3,8	14	130.013	130.003
CL-2.5-9	CL-2.5-9-HT	9	4	15	130.013	130.003
CL-2.5-12	CL-2.5-12-HT	12	5	21	130.013	130.003
CL-2.5-14	CL-2.5-14-HT	14	4	22	130.013	130.003
CL-2.5-20	CL-2.5-20-HT	20	4,5	23	130.013	130.003
CL-2.5-25	CL-2.5-25-HT	25	4	34	130.013	130.003
CL-2.5-32	CL-2.5-32-HT	32	8	37	130.132	130.190
CL-2.5-42	CL-2.5-42-HT	42	8	46	130.132	130.190
CL-2.5-52	CL-2.5-52-HT	52	8	49	130.132	130.190
CL-2.5-62	CL-2.5-62-HT	62	9	53	130.093	130.281



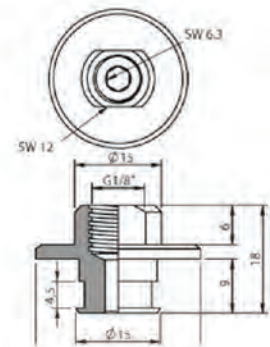
F134



F250



F251

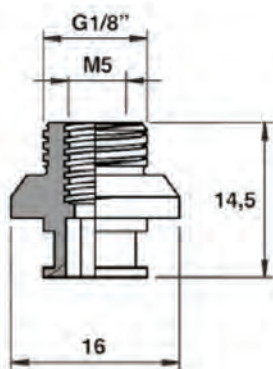
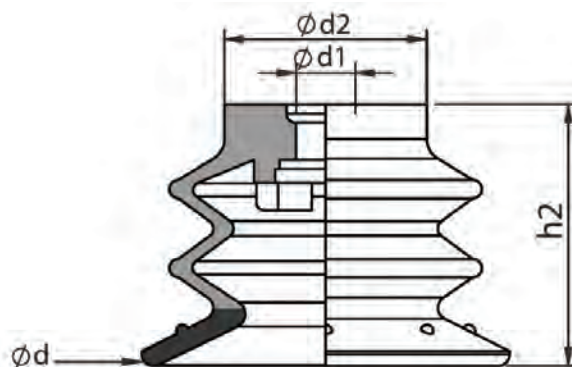


F252

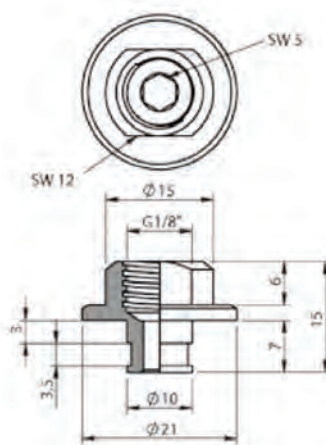
Multiflex vacuum cups offer outstanding advantages

- Extremely high wear resistance
- Very high lifting force
- Best static friction qualities
- No sticking tendency
- Elasticity remains unchanged for minus temperatures
- Working temperatures from -20°C to +80°C
- Anti marking

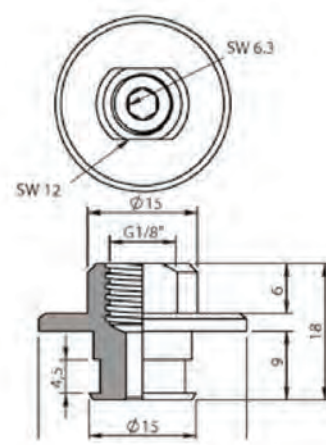
Product Code	d	B	d1	h1	Hardness	Fitting	Fitting	Fitting	Fitting
B15-10MF	10	3,9	9	16,5	40	F134			
B15-16MF	16	3,9	9	19	30/60	F134			
B15-20MF	21	5,2	12	18	30/60		F250		
B15-30MF	31	6,5	16,8	17	30/60			F251	
B15-40MF	41	6,3	22,4	22,4	30/60			F251	
B15-50MF	51	10,5	28	29,2	30/60				F252



F250



F251



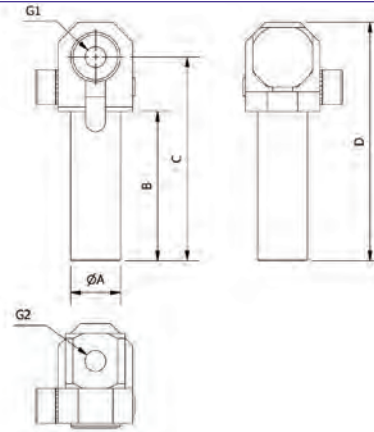
F252

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- Working temperatures from -20°C to + 80°C
- Anti marking

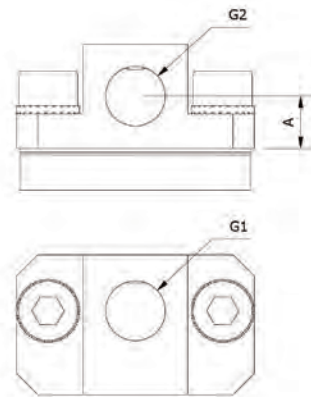
Product Code	d	d1	d2	h2	Hardness	Fitting	Fitting	Fitting
B25-20MF	20,5	5	12	14,8	30/60	F250		
B25-25MF	26	5	15,4	18,9	30/60	F250		
B25-30MF	30	5	16,5	21,3	30/60	F250		
B25-35MF	35	6,5	21	25,63	30/60		F251	
B25-40MF	40	6,5	22	28,4	30/60		F251	
B25-50MF	50	10,5	27,5	35,5	30/60			F252

Allows optimal positioning of vacuum to part contour.
Angle adjustable between 0° and 90°.
Side vacuum port.



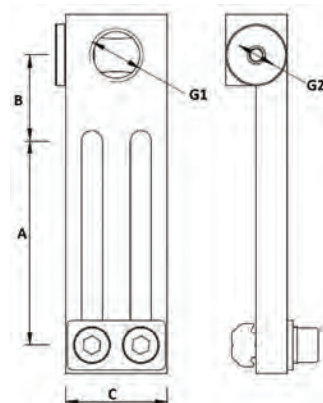
Product Code	A	B	C	D	G1	G2	Weight
VGE.10030.0505	10	30	41	48	M5	M5	14g
VGE.10060.0505	10	60	71	78	M5	M5	17g
VGE.10090.0505	10	90	101	108	M5	M5	20g
VGE.14040.1818	14	40	56	65	G 1/8	G 1/8	29g
VGE.14080.1818	14	80	96	105	G 1/8	G 1/8	38g
VGE.14120.1818	14	120	136	145	G 1/8	G 1/8	45g
VGE.20050.1418	20	50	68	80	G 1/8	G 1/4	56g
VGE.20100.1418	20	100	118	130	G 1/8	G 1/4	70g
VGE.20150.1418	20	150	168	180	G 1/8	G 1/4	87g
VGE.20050.1414	20	50	68	80	G 1/4	G 1/4	55g
VGE.20100.1414	20	100	118	130	G 1/4	G 1/4	69g
VGE.20150.1414	20	150	168	180	G 1/4	G 1/4	86g

Vacuum Cup Mounting Bracket



Vacuum connection for use when space is limited.

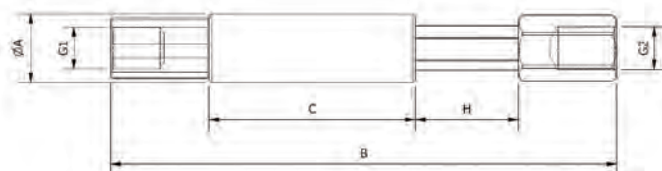
Product Code	A	G1	G2	Weight
VMB.0505.X	4	M5	M5	27g
VMB.1818.X	7,5	G 1/8	G 1/8	35g
VMB.1414.X	10	G 1/4	G 1/4	39g



Allows inline adjustment of vacuum cup position.

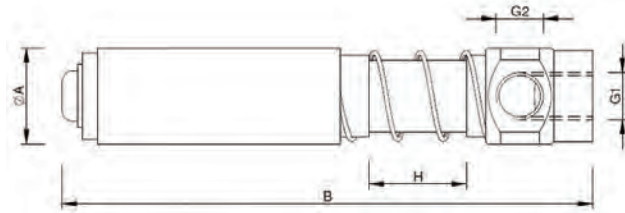
Product Code	A	B	C	G1	G2	Weight
VML0505.40.L	40	14	16	M5	M5	24g
VML1818.50.X	50	21	25	G 1/8	G 1/8	65g
VML1418.50.X	50	21	25	G 1/4	G 1/8	65g
VML1414.50.J	50	23	25	G 1/4	G 1/4	73g

Rod For Vacuum Cups



Body and rod made of aluminium - anodized.
Non Rotative.

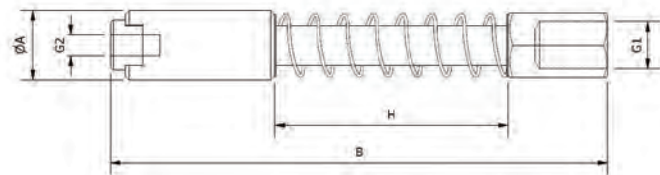
Product Code	A	B	C	G1	G2	H	F(N)	Weight
MPSDN.1010	10	61	26	M5	M5	10	3,6	8g
MPSDN.1025	10	91	41	M5	M5	25	3,7	11g
MPSDN.1420	14	103	42	G 1/8	G 1/8	20	8,9	25g
MPSDN.1435	14	135	60	G 1/8	G 1/8	35	9,5	32g
MPSDN.2025	20	114	55	G 1/8	G 1/8	25	11	63g
MPSDN.2050	20	167	82	G 1/8	G 1/8	50	11,4	81g
MPSDN.2025.14	20	114	55	G 1/4	G 1/4	25	11	59g
MPSDN.2050.14	20	161	82	G 1/4	G 1/4	50	11,4	77g



For use with round vacuum cups only.

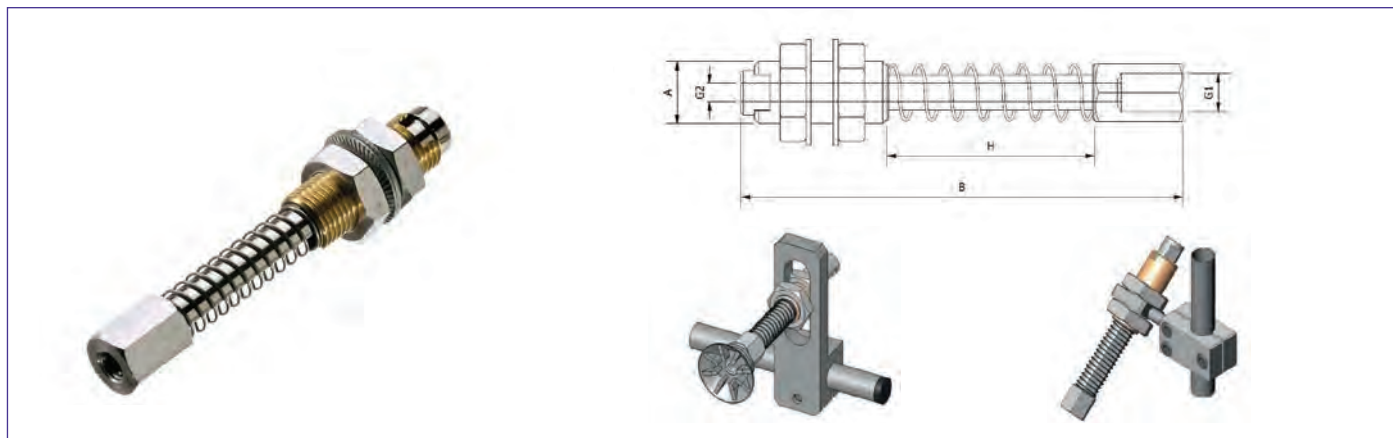
Product Code	A	B	G1	G2	H	F(N)	Weight
MA.GGD.10050510	10	59	M5	M5	10	8	11g
MA.GGD.10050530	10	85	M5	M5	30	11	15g
MA.GGD.14181815	14	84	G 1/8	G 1/8	15	9	33g
MA.GGD.14181840	14	109	G 1/8	G 1/8	40	14,6	38g
MA.GGD.20141820	20	109	G 1/4	G 1/8	20	11,7	76g
MA.GGD.20141850	20	147	G 1/4	G 1/8	50	16,8	92g

Level Compensator Smooth Body (Non-rotative)



Spring: Steel.
Sliding Parts: Chrome-plated Brass.
Terminal Parts: Anodized Aluminium.

Product Code	A	B	G1	G2	H	F(N)	Weight
LC.10.20	10	69	M5	M5	20	3,4	26g
LC.12.20	12	69	M5	M5	20	18,4	33g
LC.14.38	14	100	G 1/8	M5	38	23,3	63g
LC.20.48	20	125	G 1/4	G 1/8	48	16,6	155g

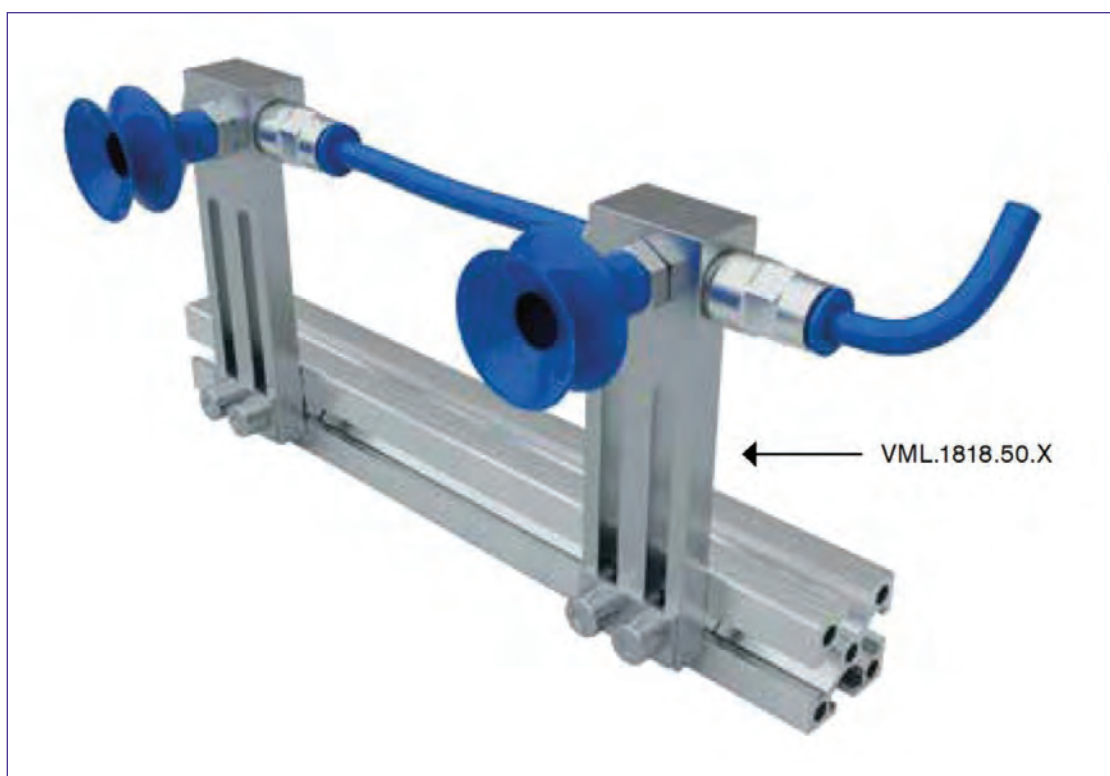


Spring: Steel.

Sliding Parts: Chrome-plated Brass.

Terminal Parts: Anodized Aluminium.

Product Code	A	B	G1	G2	H	F(N)	Weight
LC.M10.20	M10x1	70	M5	M5	20	3,4	36g
LC.M12.20	M12x1.25	77	G 1/8	M5	20	6	40g
LC.M14.38	M14x1.5	100	G 1/8	M5	38	23,2	71g
LC.M20.48	M20x1.5	125	G 1/4	G 1/8	48	16,7	189g





**GLOBAL STRENGTH
LOCAL KNOWLEDGE**



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