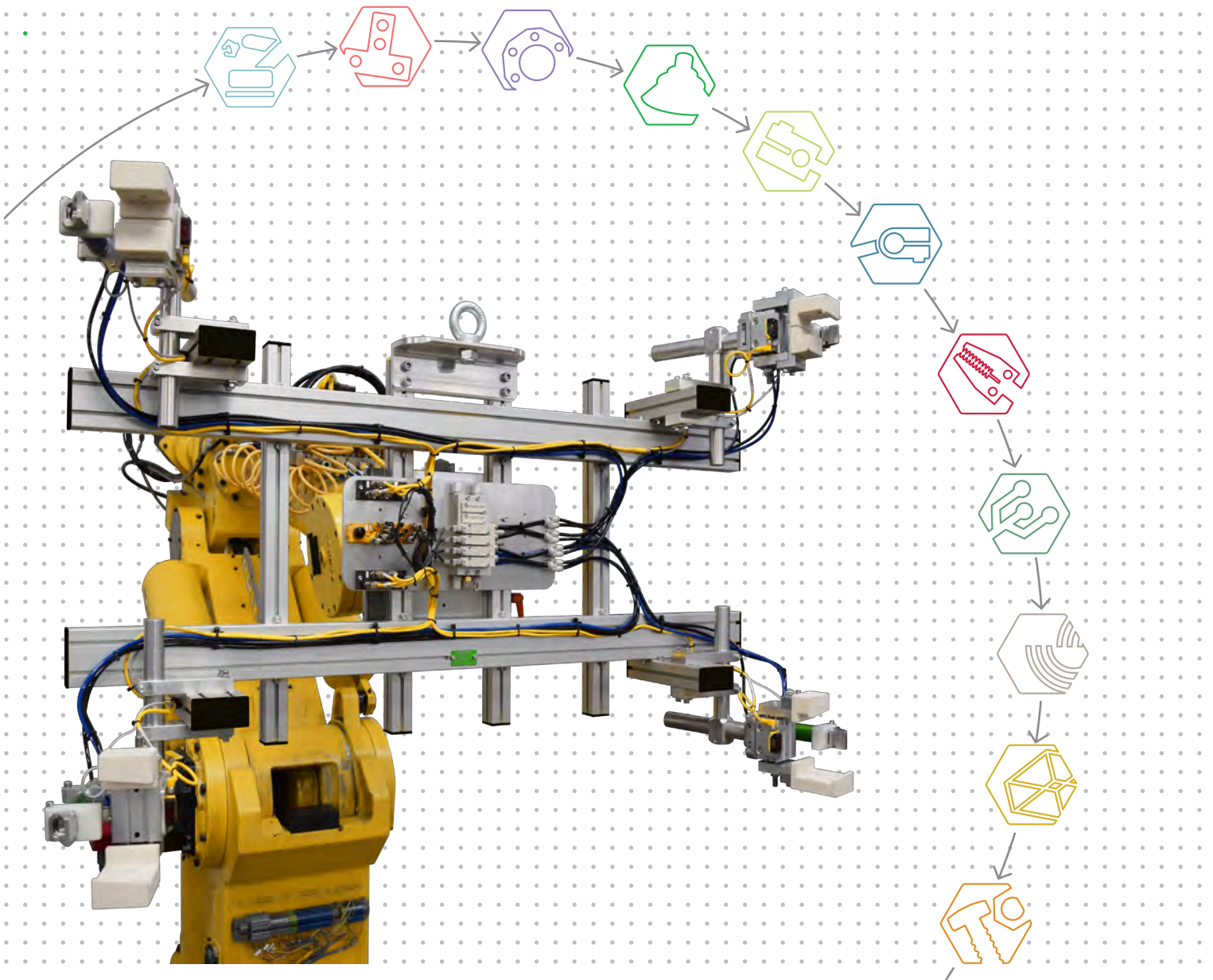


Delivering Excellence In Robotic Gripping Solutions

2020 Product Catalog



Smart solutions for the automated world™



Piab *Leadership in Robotics and Automation*

OUR MISSION: SMART SOLUTIONS FOR THE AUTOMATED WORLD™

Industrial automation is transforming production and logistics processes, driven by the continuous strive for efficient production and improved quality. Piab's smart solutions help thousands of customers all over the world to unlock value through moving things faster, safer and with less energy consumption.

OUR VISION: THE GLOBAL LEADER IN GRIPPING AND MOVING SOLUTIONS

Piab has pioneered vacuum automation since the 1960's and is an innovative partner to end users and machine producers in e-commerce logistics, food, pharma automotive and other manufacturing industries, providing smart solutions for any moving and gripping challenge. By leveraging the ongoing technological development in automation and robotics, broadening the product offering and targeting high-growth industries and geographies, Piab is well positioned to become the global leader in gripping and moving solutions.

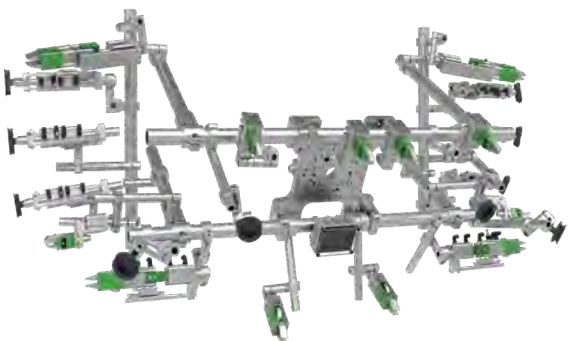
- **Innovation** – We are only as good as our ability to solve our customers' challenges. Piab is dedicated to more than supplying end-of-arm tools and components; we are dedicated to developing new solutions that drive our customers' success.
- **Expertise** – We can only consider ourselves experts if we are first humble learners and explorers. We listen to our customers. We focus on learning more about our craft. We practice and test until we get it right. We set high standards for ourselves.
- **Precision** – Our components and tools work because we pay attention to details. Successful automation requires precision to accommodate the size and weight of the products being moved. We must also be able to handle the right speed, plus a variety of materials and shapes. Successful automation is a complex business that requires a dedication to precise execution.



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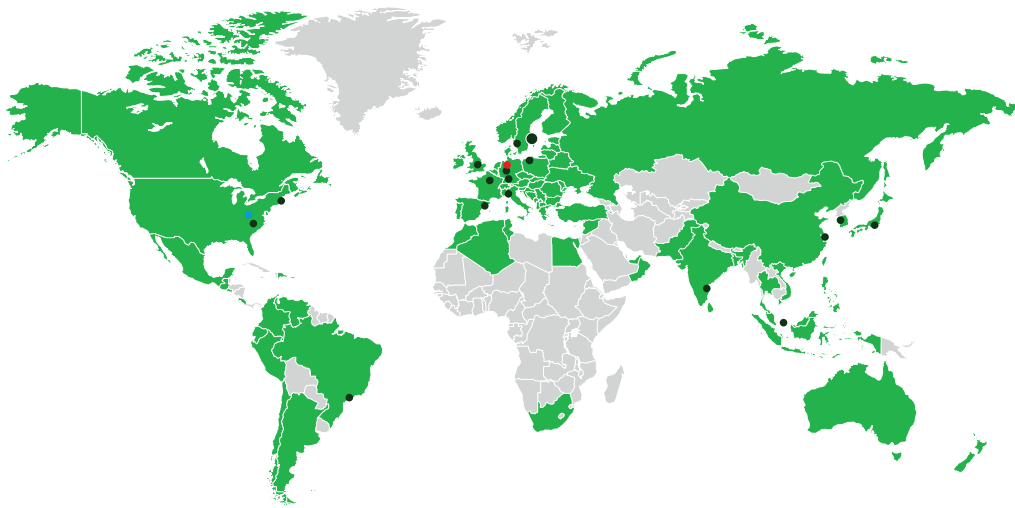
QUALITY PRODUCTS AND SERVICES

We meet or exceed customer expectations by providing superior Robotic End-of-Arm Tooling and Automation Technology. Together with our customers and suppliers, we continuously improve our products and services to assure market leadership.



About Piab

Piab provides smart solutions for the automated world, helping thousands of end users and machine producers in e-commerce logistics, food, pharma, automotive, and other manufacturing industries to improve energy-efficiency, productivity, and working environments. With 470 employees and SEK 1.2bn in sales 2018, Piab is a global organization, serving customers in almost 70 countries from a network of subsidiaries and distributors. By leveraging the ongoing technological development in automation and robotics, and targeting high-growth segments and geographies, Piab's vision is to become the global leader in gripping and moving solutions.



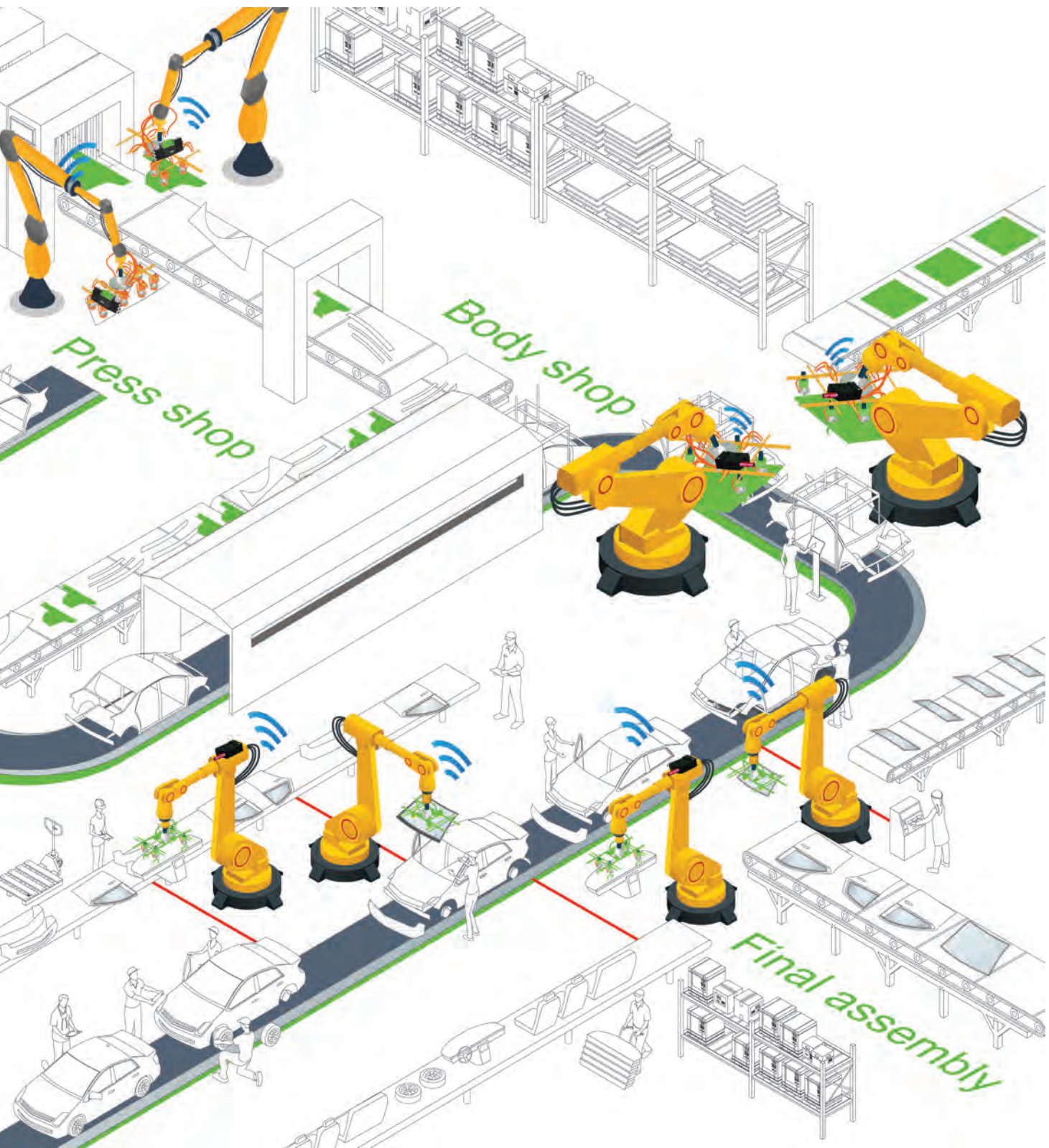
About Piab's Center of Excellence for Robotic Gripping Solutions

Piab's Center of Excellence for Robotic Gripping Division designs and manufactures modular component-based robotic end-of-arm tooling (EOAT) and gripper systems. They are specialists in end-effector gripper systems for all makes of robots.

They also provide fully-integrated robotic EOAT solutions for robotic applications specializing in holistic solutions from design to customized engineering to pre-assembly through final assembly.

Piab, through their Robotic Gripping Division, provides robotic gripper systems used across diverse and demanding manufacturing and distribution applications around the world.





Piab by the numbers

20+ Locations including our corporate headquarters in Sweden

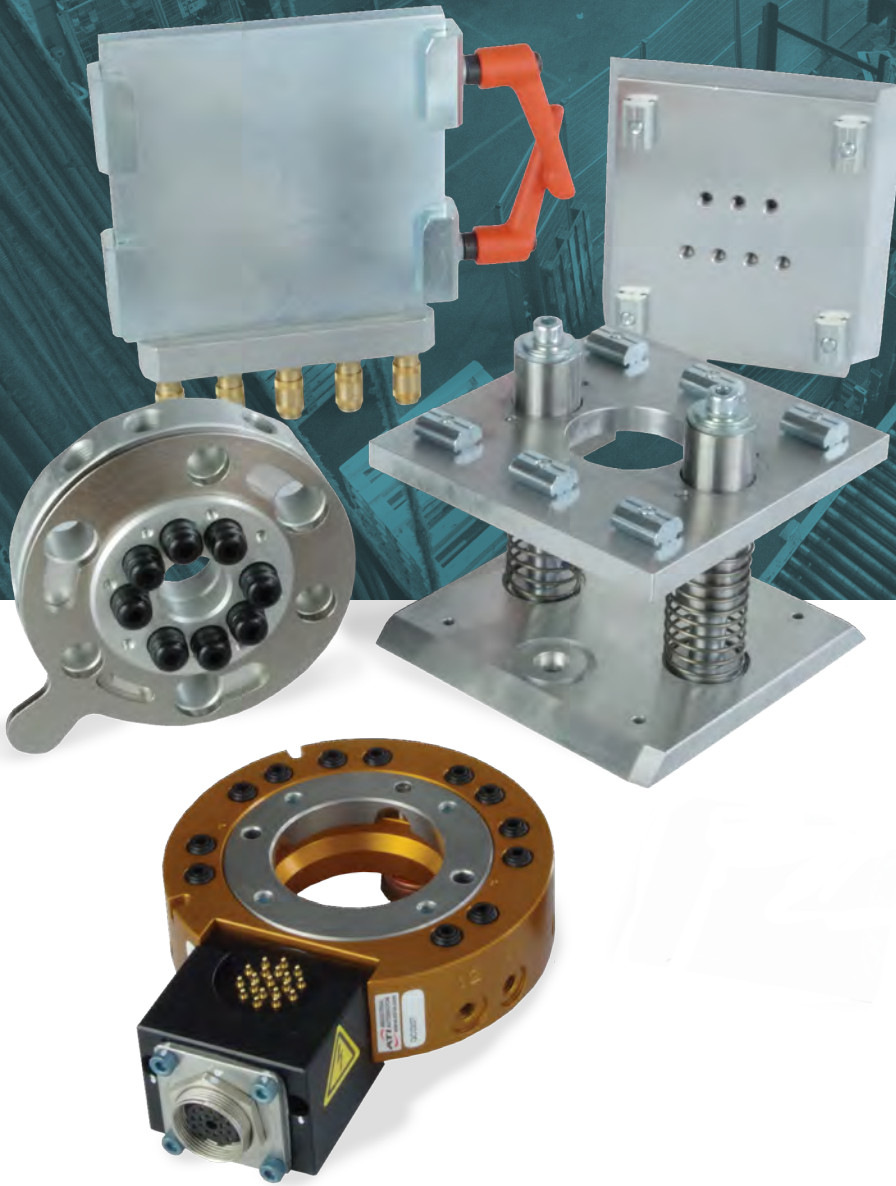
350+ Distributors deliver products into 70+ countries globally

470+ Engineers, researchers, support, leadership, sales, and other professionals

1 All serving YOU, our most important customer



Robotic Interface

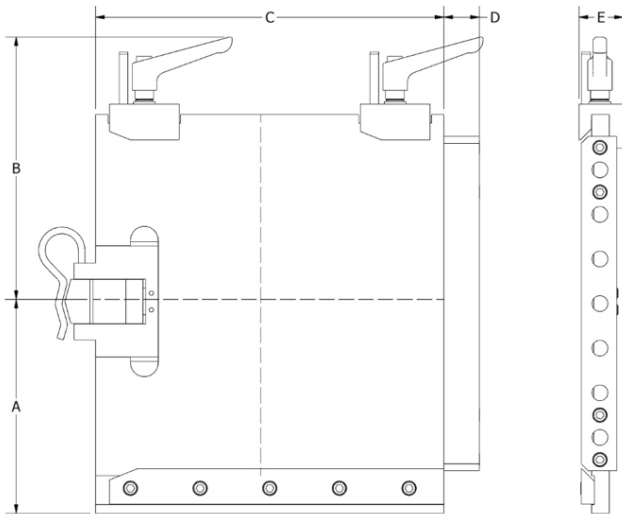


Our standard component modular system offers direct bolt-on options plus full automation for quick change overs, helping to optimize product schedules.

- **Operate on all type robots**, from 6-axis to Cartesian to collaborative
- Featuring **Cartesian-style mounts** and quick-change chucks
- **Durable, rigid** materials such as aluminum, and steel.
- Expansive product and engineering **knowledge**



QUICK CHANGE MOUNTING CHUCKS



- Adaptable to every robot.
- Economical one-time investment per robot.
- Makes EOAT interchangeable between robots.
- Minimizes downtime during setup changes.
- EOAT Gripper stays aligned & secure.
- Integrated pneumatic quick disconnect system.
- Lightweight aluminum base plates for standard applications.
- An auxiliary manifold can be attached to the side of the chuck to provide additional pneumatic quick disconnect ports.

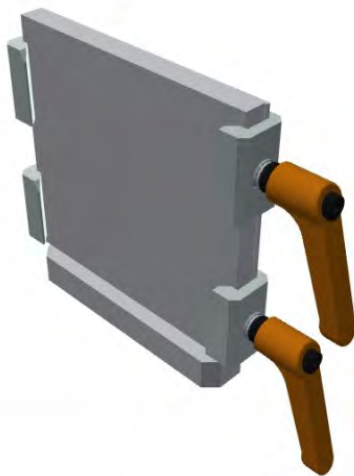
LF-Type (Less Fitting)

- Pneumatic fitting manifold without fittings.

	A	B	C	D	E	GPM Plate	Weight (g)	Piab No.
SWM 1 LF	53	92	100	12.7	19	GPM 1	530	0214632
SWM 2 LF	101	133	160	19	25.4	GPM 2	1720	0214637
SWM 3 LF	150.5	189	250	25.4	31.8	GPM 3	4000	0214643

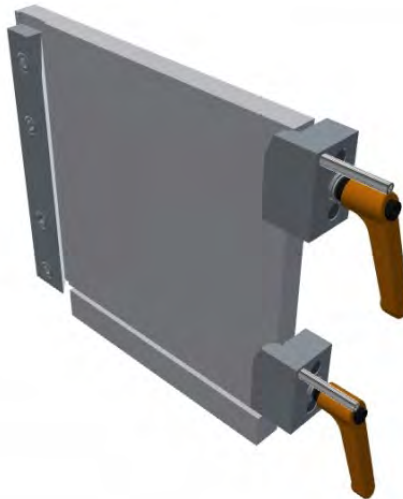
SWM 1 LF

Product Code: SWM 1 LF



SWM 2 LF

Product Code: SWM 2 LF



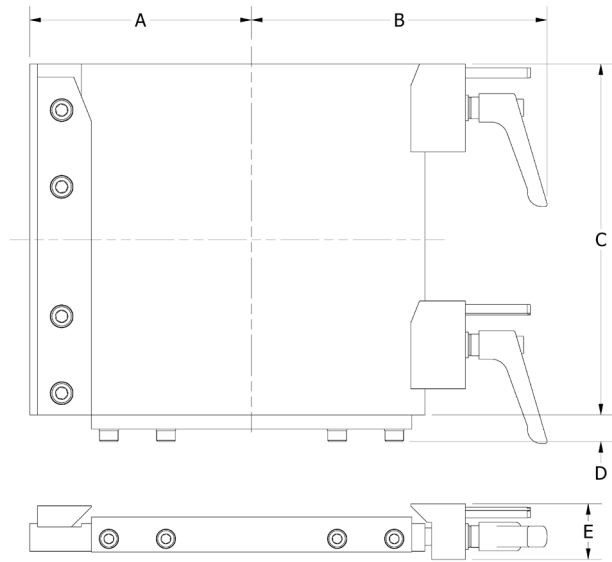
SWM 3 LF

Product Code: SWM 3 LF





QUICK CHANGE MOUNTING CHUCKS



- Adaptable to every robot.
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- Makes EOAT interchangeable between robots.
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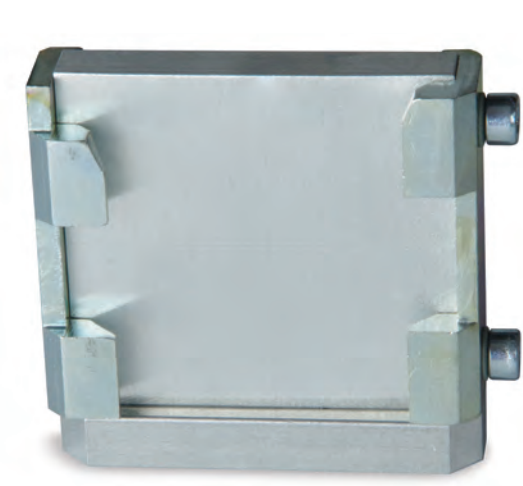
E-Type (Economy)

- Mounting chuck without pneumatic fittings for cost savings and weight reduction.
- Best used when pneumatic connectors from robot are near to the EOAT or when EOAT may be close to the robot payload.

	A	B	C	D	E	GPM Plate	Weight (g)	Piab No.
SWM 0 E	38	43	60	8	19	GPM 0	284	0214629
SWM 1 E	58	95	102	12	20	GPM 1	455	0212939

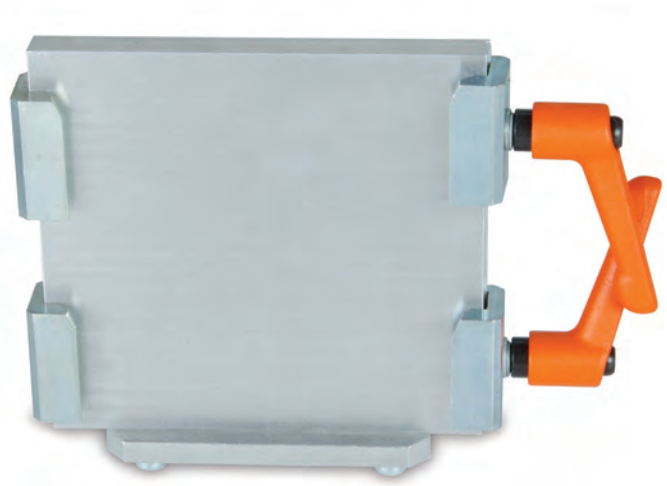
SWM 0 E

Product Code: SWM 0 E



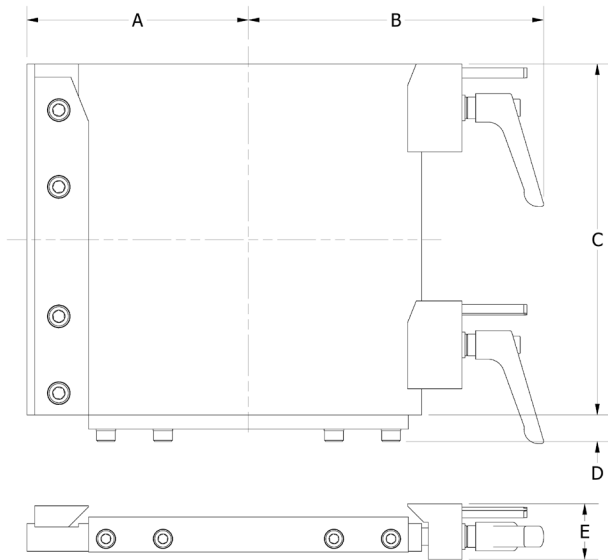
SWM 1 E

Product Code: SWM 1 E





QUICK CHANGE MOUNTING CHUCKS



- Adaptable to every robot.
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- Makes EOAT interchangeable between robots.
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- EOAT Gripper stays aligned & secure.
- Lightweight aluminum base plates for standard applications.
- An auxiliary manifold can be attached to the side of the chuck to provide additional pneumatic quick disconnect ports.

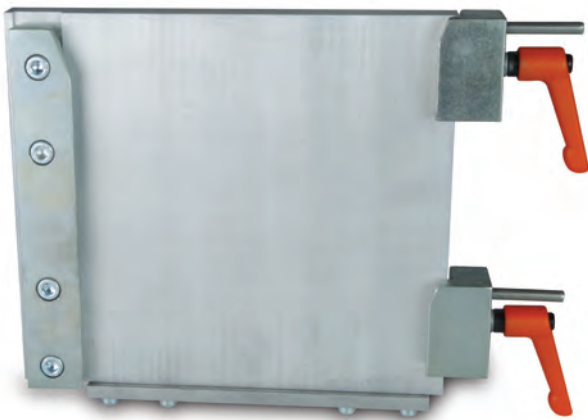
E-Type (Economy)

- Mounting chuck without pneumatic fittings for cost savings and weight reduction.
- Best used when pneumatic connectors from robot are near to the EOAT or when EOAT may be close to the robot payload.

	A	B	C	D	E	GPM Plate	Weight (g)	Piab No.
SWM 2 E	101	132	160	12	25	GPM 2	1639	0212940
SWM 3 E	152	192	250	14	32	GPM 3	3680	0212941

SWM 2 E

Product Code: SWM 2 E



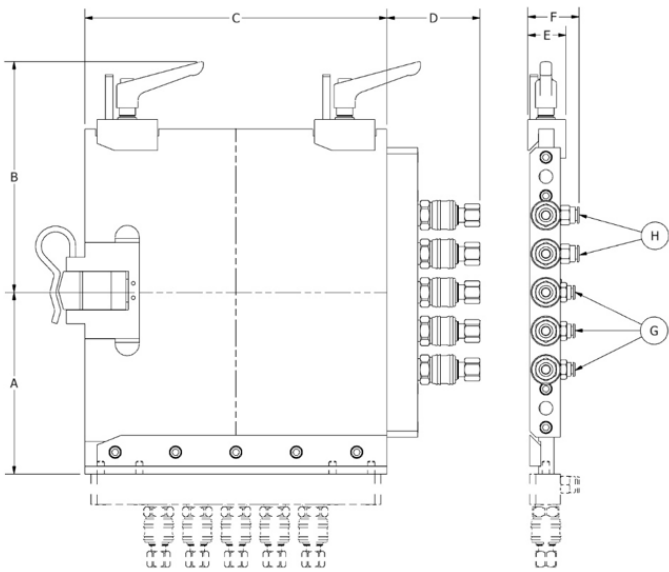
SWM 3 E

Product Code: SWM 3 E





QUICK CHANGE MOUNTING CHUCK



- Adaptable to every robot.
- Economical one-time investment per robot.
- Makes EOAT interchangeable between robots.
- Minimizes downtime during setup changes.
- EOAT Gripper stays aligned & secure.
- Integrated pneumatic quick disconnect system.
- Lightweight aluminum base plates for standard applications.
- An auxiliary manifold can be attached to the side of the chuck to provide additional pneumatic quick disconnect ports.

	A	B	C	D	E	F	G (Tubing Size)	H (Tubing Size)	Air Coupling	Air Plug	GPM Plate	Weight (g)	Piab No.
SWM 0.1	27	35	40	10	19	-	-	-	-	-	GPM 0.1	139	0214630
SWM 0	38	43	60	32	19	32	3 tubes 4mm	2 tubes 4mm	92-5002	94-4902	GPM 0	323	0214628
SWM 1	58	95	102	34	19	32	3 tubes 4mm	2 tubes 6mm	92-5002	94-4902	GPM 1	567	0212936

SWM 0.1

Product Code: SWM 0.1

SWM 0

Product Code: SWM 0

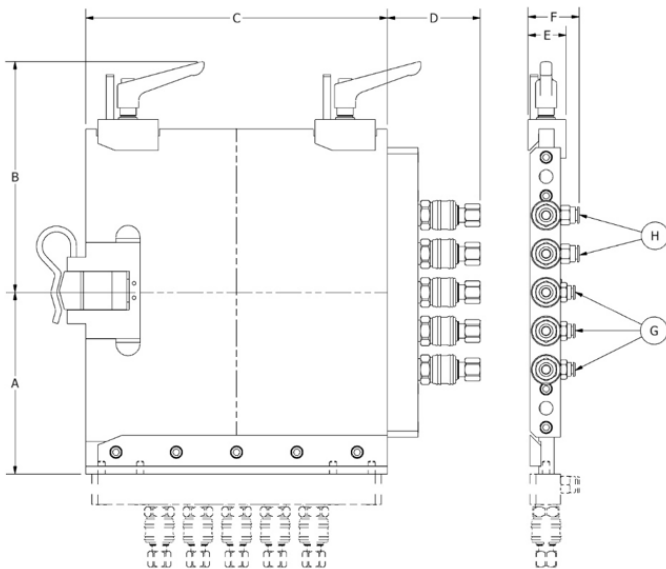
SWM 1

Product Code: SWM 1





QUICK CHANGE MOUNTING CHUCK



- Adaptable to every robot.
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- Integrated pneumatic quick disconnect system.
- Lightweight aluminum base plates for standard applications.
- An auxiliary manifold can be attached to the side of the chuck to provide additional pneumatic quick disconnect ports.

	A	B	C	D	E	F	G (Tubing Size)	H (Tubing Size)	Air Coupling	Air Plug	GPM Plate	Weight (g)	Piab No.
SWM 2	101	132	160	50	25	40	3 tubes 6mm	2 tubes 8mm	92-0204	94-0104	GPM 2	2024	0212937
SWM 3	152	192	250	58	32	40	3 tubes 6mm	2 tubes 8mm	92-0406	94-0306	GPM 3	4559	0212938

SWM 2

Product Code: SWM 2



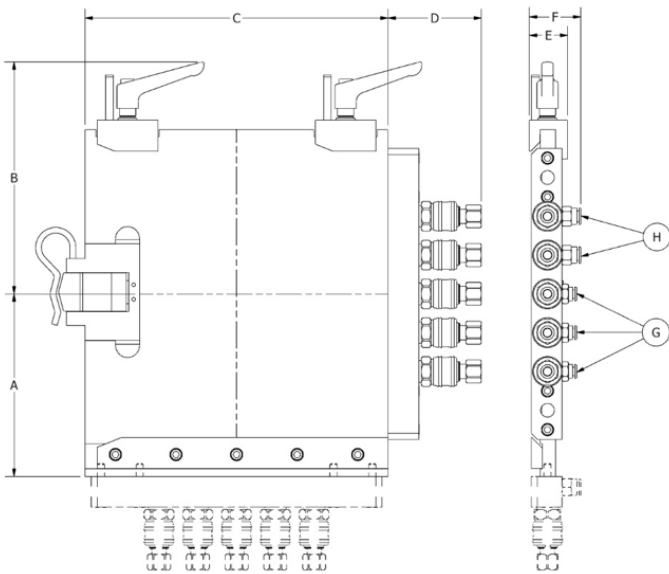
SWM 3

Product Code: SWM 3





QUICK CHANGE MOUNTING CHUCKS



- Adaptable to every robot.
- Economical one-time investment per robot.
- Makes EOAT interchangeable between robots.
- Minimizes downtime during setup changes.
- EOAT Gripper stays aligned & secure.
- Integrated pneumatic quick disconnect system.
- Lightweight aluminum base plates for standard applications.
- An auxiliary manifold can be attached to the side of the chuck to provide additional pneumatic quick disconnect ports.

ST-Type (Steel)

- Steel chuck body with zinc plating for heavy duty applications.
- Steel mounting plates also available.

	A	B	C	D	E	F	G (Tubing Size)	H (Tubing Size)	Air Coupling	Air Plug	GPM Plate	Weight (g)	Piab No.
SWM 1 ST	58	95	102	34	19	32	3 tubes 4mm	2 tubes 6mm	92-5002	94-4902	GPM 1	1049	0214635
SWM 2 ST	101	132	160	50	25	40	3 tubes 6mm	2 tubes 8mm	92-0204	94-0104	GPM 2	3623	0214641
SWM 3 ST	152	192	250	58	32	40	3 tubes 6mm	2 tubes 8mm	92-0406	94-0306	GPM 3	7938	0214647

SWM 1 ST

Product Code: SWM 1 ST



SWM 2 ST

Product Code: SWM 2 ST



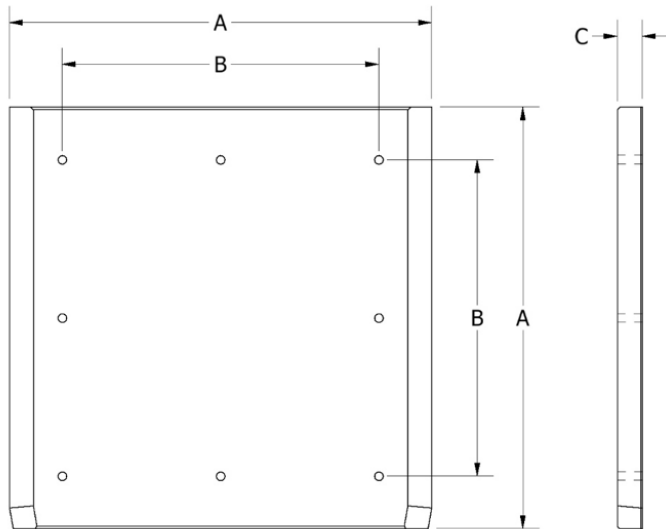
SWM 3 ST

Product Code: SWM 3 ST





QUICK CHANGE MOUNTING PLATES



- Low cost dove-tail mounting plate for grippers.
- Can be used with or without SWM Quick Change Chuck.
- Lightweight aluminum plates for standard applications.

L-Type

- Pre-drilled with M4 threaded holes.
- Usually used with L-18/10 profile.

	A	B	C	SWM Chuck	Weight (g)	Material	Piab No.
GPM 0 L	60	35	8	SWM 0	74	Aluminum	0214329
GPM 1 L	100	70	8	SWM 1	205.5	Aluminum	0214331

GPM 0 L

Product Code: GPM 0 L



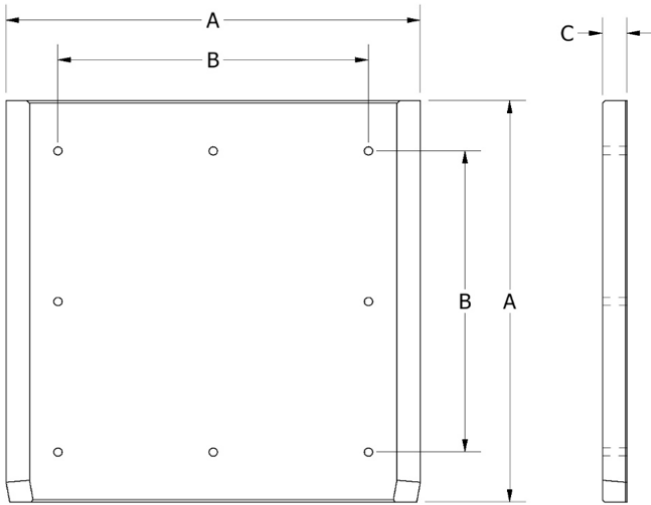
GPM 1 L

Product Code: GPM 1 L





QUICK CHANGE MOUNTING PLATES

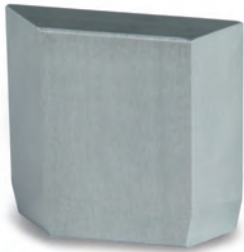


- Low cost dove-tail mounting plate for grippers.
- Can be used with or without SWM Quick Change Chuck.
- Lightweight aluminum plates for standard applications.
- Comes with predrilled pilot holes to assist with drilling custom hole sizes.

	A	B	C	SWM Chuck	Weight (g)	Material	Piab No.
GPM 0.1	40	~	8	SWM 0.1	74	Aluminum	0214330
GPM 0	60	35	8	SWM 0	74	Aluminum	0214328
GPM 1	100	70	8	SWM 1	205.8	Aluminum	0212942
GPM 2	160	120	10	SWM 2	578	Aluminum	0212943
GPM 3	250	200	10	SWM 3	1595	Aluminum	0212944

GPM 0.1

Product Code: GPM 0.1



GPM 0

Product Code: GPM 0



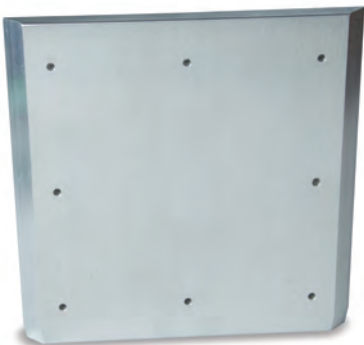
GPM 1

Product Code: GPM 1



GPM 2

Product Code: GPM 2



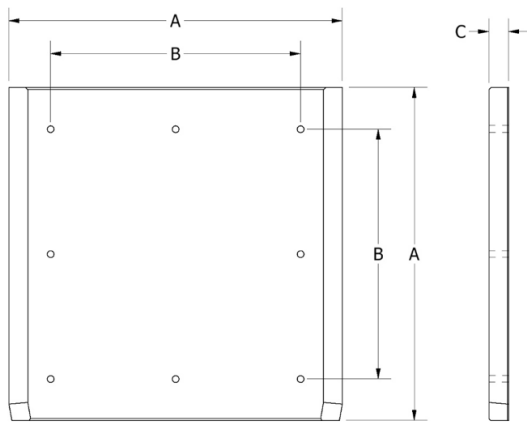
GPM 3

Product Code: GPM 3





QUICK CHANGE MOUNTING PLATES



- Low cost dove-tail mounting plate for grippers.
- Can be used with or without SWM Quick Change Chuck.
- Lightweight aluminum plates for standard applications.

ST-Type (Steel)

- Recommended for use only with steel SWM plates.
- Use with steel SWM plates for heavy duty applications.
- Comes with predrilled pilot holes to assist with drilling custom hole sizes.

X-Type

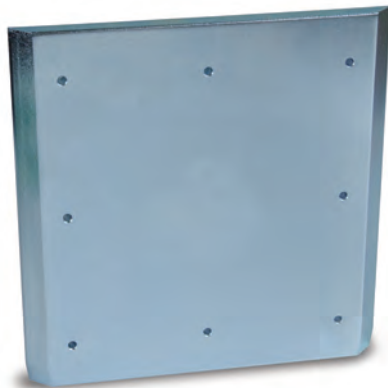
- Pre-set for mounting profile.
- X plates pre-drilled for 5mm cap screws and include 6 screws, lock washers, and GWP 5X channel nuts.

	A	B	C	SWM Chuck	Weight (g)	Material	Piab No.
GPM 2 ST	160	120	10	SWM 2 Steel	1815.2	Steel	0214335
GPM 3 ST	250	200	10	SWM 3 Steel	4627	Steel	0214339

	A	B	C	SWM Chuck	Weight (g)	Material	Piab No.
GPM 1 X	100	70	8	SWM 1	232	Aluminum	0212945
GPM 2 X	160	120	10	SWM 2	669	Aluminum	0212946
GPM 3 X	250	200	10	SWM 3	1642.5	Aluminum	0212947

GPM 2 ST

Product Code: GPM 2 ST



GPM 3 ST

Product Code: GPM 3 ST



GPM 1 X

Product Code: GPM 1 X



GPM 2 X

Product Code: GPM 2 X



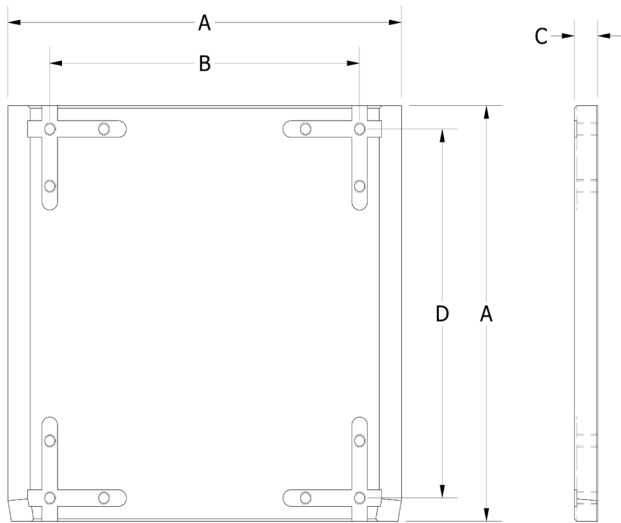
GPM 3 X

Product Code: GPM 3 X





QUICK CHANGE MOUNTING PLATES



- Low cost dove-tail mounting plate for grippers.
- Can be used with or without SWM Quick Change Chuck.
- Lightweight aluminum plates for standard applications.

T-Type (Tubing)

- Used with tube style framework.
- Has tapped holes for KVB clamps.

	A	B	C	SWM Chuck	Weight (g)	Material	Piab No.
GPM 1-14 T	100	22	8	SWM 1	198.3	Aluminum	0214333
GPM 2-14 T	160	22	10	SWM 2	560	Aluminum	0214336
GPM 2-20 T	160	28	10	SWM 2	555	Aluminum	0214337
GPM 3-20 T	250	28	10	SWM 3	1560	Aluminum	0214340
GPM 3-30 T	250	38	10	SWM 3	1588	Aluminum	0214341

GPM 1-14 T

Product Code: GPM 1-14 T



GPM 2-14 T

Product Code: GPM 2-14 T



GPM 2-20 T

Product Code: GPM 2-20 T



GPM 3-20 T

Product Code: GPM 3-20 T



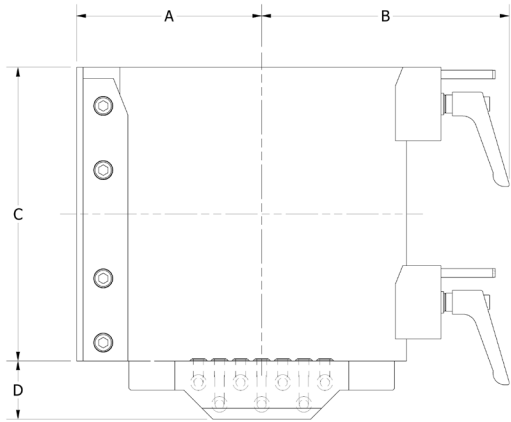
GPM 3-30 T

Product Code: GPM 3-30 T





SEMI-AUTOMATIC QUICK CHANGE MOUNTING CHUCKS



- No need for hose clearance below the chuck.
- Automatically couples air and vacuum lines.
- Must be used with GPM SA mounting plates.
- Uses “S” style fittings (not included).
- Adaptable to every robot.
- Economical one-time investment per robot.
- Makes EOAT interchangeable between robots.
- Minimizes downtime during setup changes.
- EOAT Gripper stays aligned & secure.
- Lightweight aluminum base plates for standard applications.



	A	B	C	D	E	F	G (Tubing Size)	# of Ports	GPM Plate	Weight (g)	Piab No.
SWM 1 SA	57	94	102	25	32	45	4/6mm	7	GPM 1 SA	575	0214634
SWM 2 SA	101	130	160	32	25	43	6	7	GPM 2 SA	1786.5	0214640
SWM 3 SA	150	180	250	32	25	43	6	10	GPM 3 SA	4100	0214646

SWM 1 SA

Product Code: SWM 1 SA

SWM 2 SA

Product Code: SWM 2 SA

SWM 3 SA

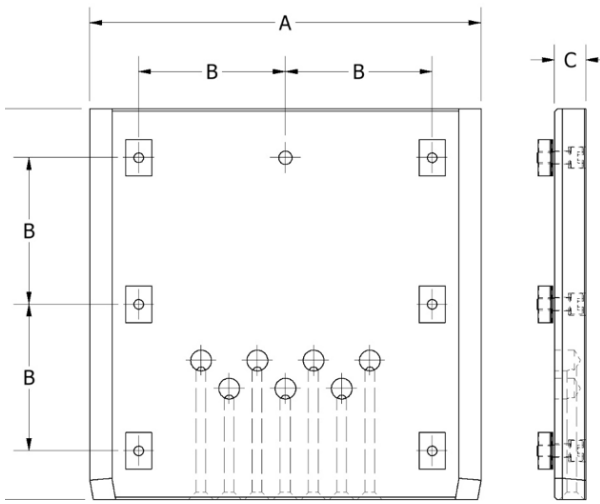
Product Code: SWM 3 SA





Robotic Interface

SEMI-AUTOMATIC QUICK CHANGE MOUNTING PLATES



- Automatically couples air and vacuum lines.
- Prevents mixing up of air and vacuum lines during tool changes.
- Must be used with a SWM SA Quick Change Chuck.

	A	B	C	Port	# of Ports	SWM Chuck	Weight (g)	Piab No.
GPM 1 SA	100	70	19	M5	7	SWM 1 SA	475	0214332
GPM 2 SA	160	60	13	G 1/8"	7	SWM 2 SA	850	0214334
GPM 3 SA	250	100	13	G 1/8"	10	SWM 3 SA	2045.8	0214338

GPM 1 SA

Product Code: GPM 1 SA

GPM 2 SA

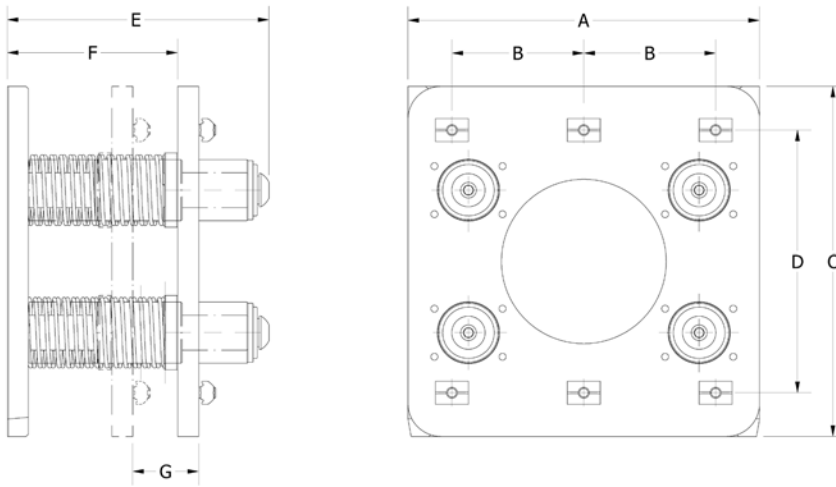
Product Code: GPM 2 SA

GPM 3 SA

Product Code: GPM 3 SA



SPRING LOADED QUICK CHANGE MOUNTING PLATES



- Allows for a spring loaded compliance on our standard GPM mounting plate.
- Especially useful in high speed ejection strokes and safety releases.

	A	B	C	D	E	F	G (Stroke)	SWM Chuck	Profile	Weight (g)	Piab No.
GPG 1	100	35	102	70	91	66	20	SWM 1	L/X	601	0214325
GPG 2	160	60	160	120	115	84	30	SWM 2	X	253	0214326
GPG 3	250	100	254	200	115	84	30	SWM 3	X	2268	0214327

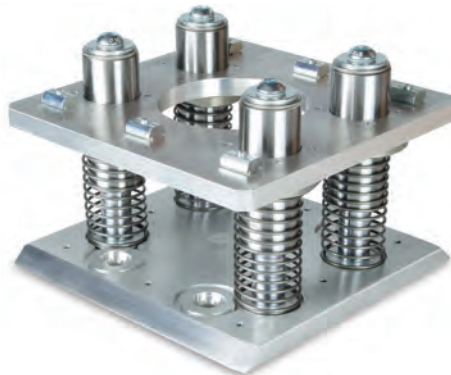
GPG 1

Product Code: GPG 1



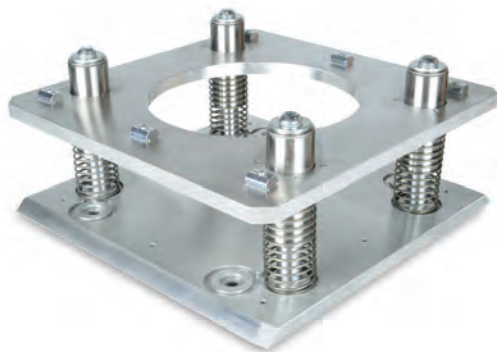
GPG 2

Product Code: GPG 2



GPG 3

Product Code: GPG 3





Robotic Interface

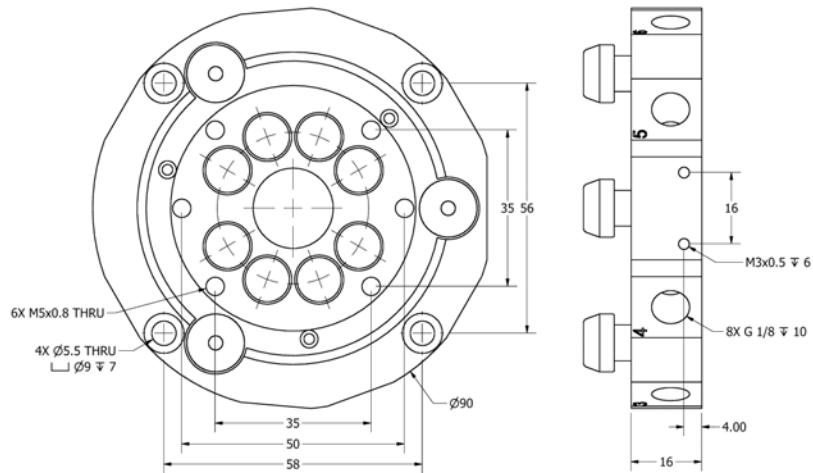
MANUAL QUICK CHANGE CHUCK - TOOL SIDE

- Semi-Automatic Tool Changer for accurate, repeatable mounting of Robotic End-of-Arm Tooling.
- Couples air and vacuum lines automatically.
- Made of lightweight aluminum with durable steel locators.

QST 90-8

Payload: 10 kg

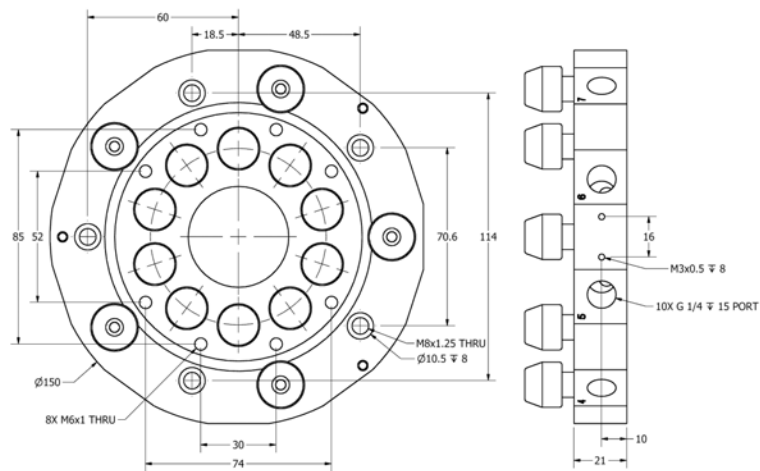
Piab No. 0212960



QST 150-10

Payload: 30 kg

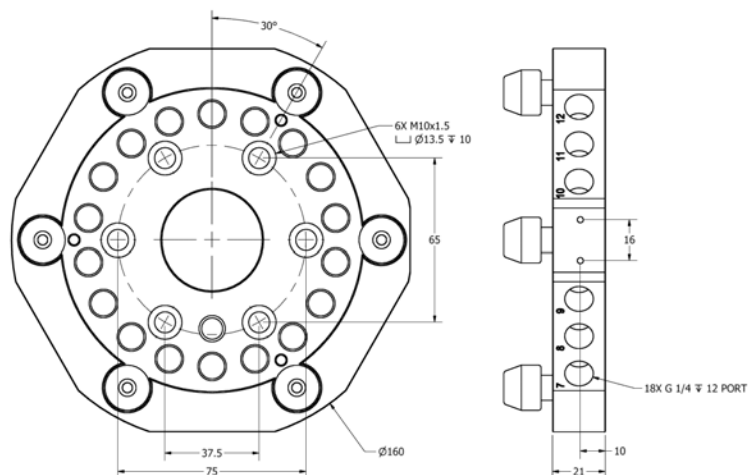
Piab No. 0212961



QST 160-18

Payload: 40 kg

Piab No. 0212962



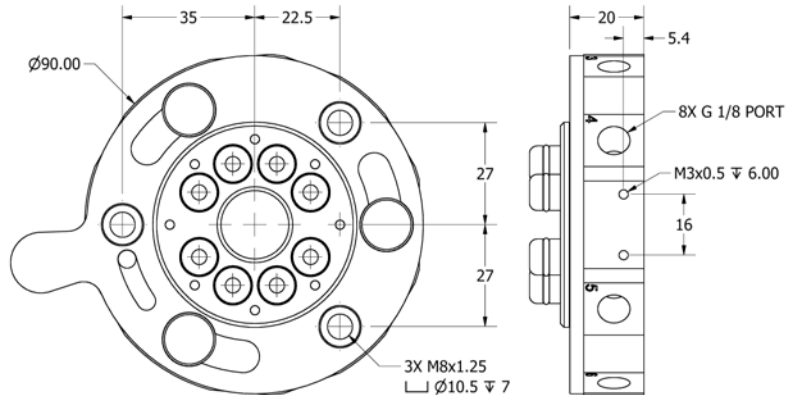


SEMI-AUTOMATIC TOOL CHANGER - ROBOT SIDE

- Semi-Automatic Tool Changer for accurate, repeatable mounting of Robotic End-of-Arm Tooling.
- Couples air and vacuum lines automatically.
- Made of lightweight aluminum with durable steel lock ring.

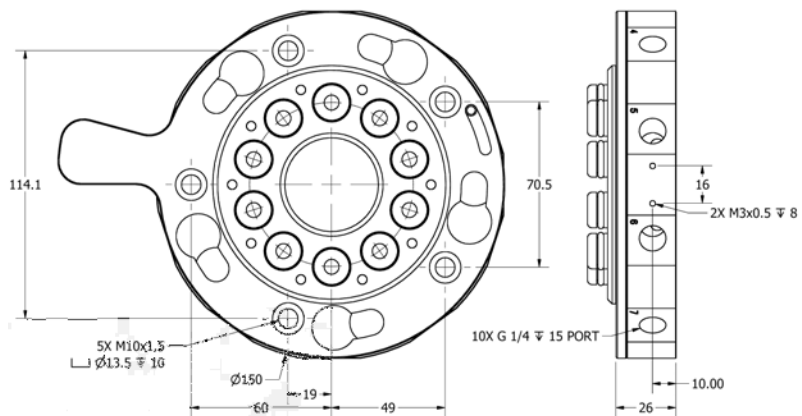
QSR 90-8

Payload: 10 kg
Piab No. 0212957



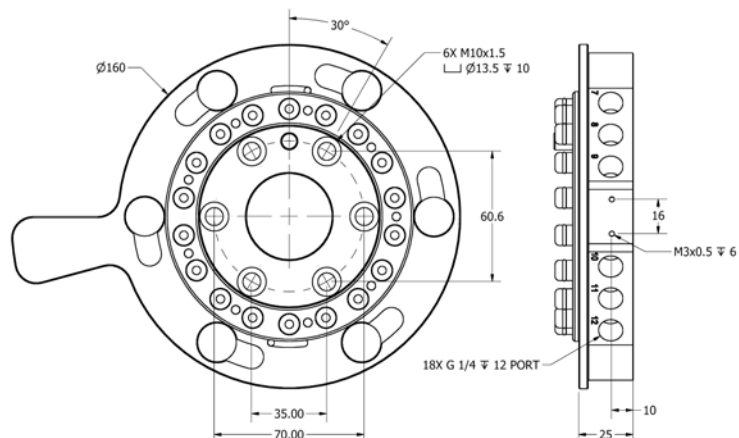
QSR 150-10

Payload: 30 kg
Piab No. 0212958



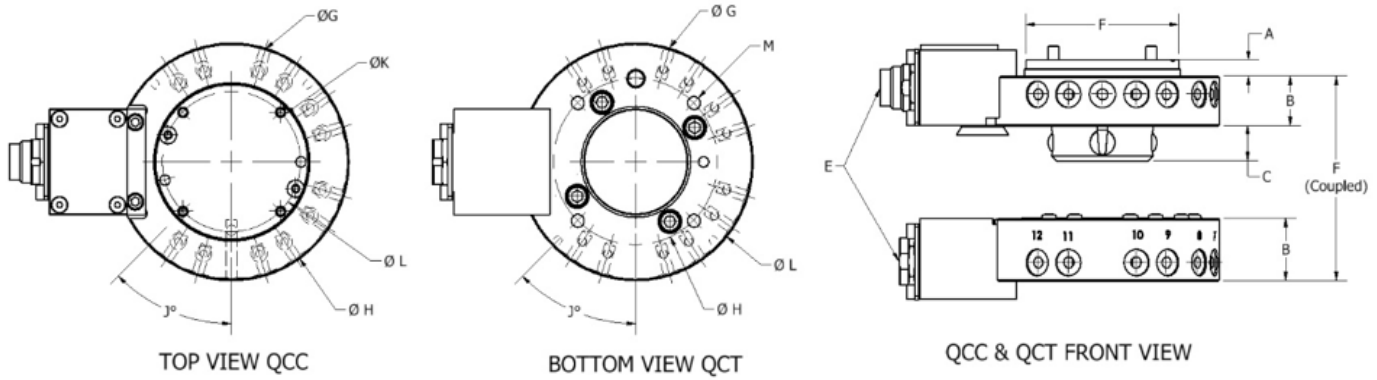
QSR 160-18

Payload: 40 kg
Piab No. 0212959





HANDS FREE QUICK CHANGE CHUCKS - ROBOT SIDE



- Used in automatic robotic tool change application.
- Integrated pneumatic and electrical connections.
- Master plate and tool plate sold separately.
- Size 2 and 3 include electrical connectors.

	A	B	C	D	E (Electrical)	F (Coupled)	G (#)	H (Bolt Circle)	J	K	L	M	Payload	Piab No.
QCC 0	5	18	19	33	10-Pin	49	M5 (6)	40	45	3.5	49	-	8kg	0214574
QCC 1	3	16	13	45	10-Pin	39	M5 (6)	40	45	3.5	50	-	16kg	0214575
QCC 2	3	19	14	60	19-Pin	45	M5 (12)	53	45	4.5	90	-	25kg	0214576
QCC 3	3	27	18	80	19-Pin	57	1/8NPT (8)	65	30	5.5	115	-	50kg	0214577

QCC 0

Payload: 8 kg



QCC 1

Payload: 16 kg



QCC 2

Payload: 25 kg

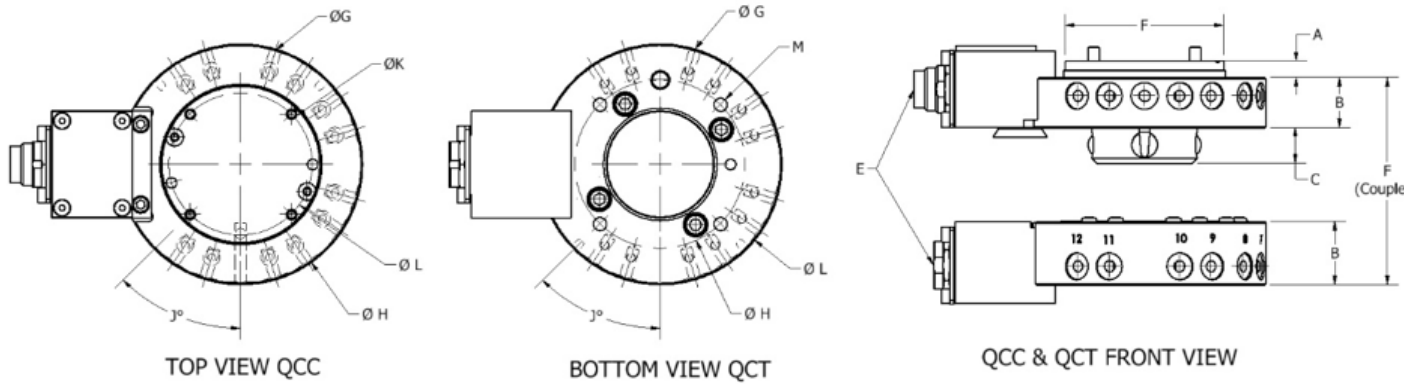


QCC 3

Payload: 50 kg



HANDS FREE QUICK CHANGE CHUCKS - TOOL SIDE



- Used in automatic robotic tool change application.
- Integrated pneumatic and electrical connections.
- Master plate and tool plate sold separately.
- Size 2 and 3 include electrical connectors.

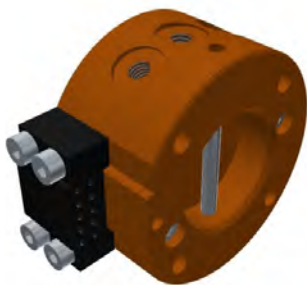
	A	B	C	D	E (Electrical)	F (Coupled)	G (#)	H (Bolt Circle)	J	K	L	M	Payload	Piab No.
QCT 0	-	26	-	-	10-Pin	49	M5 (6)	40	45	-	49	M5 x .8	8kg	0214581
QCT 1	-	21	-	-	10-Pin	39	M5 (6)	40	45	-	50	M5 x .8	16kg	0214582
QCT 2	-	24	-	-	19-Pin	45	M5 (12)	63	45	-	90	M6 x 1	25kg	0214583
QCT 3	-	27	-	-	19-Pin	57	1/8NPT (8)	80	30	-	115	M8 x 1.25	50kg	0214584

QCT 0
Payload: 8 kg

QCT 1
Payload: 16 kg

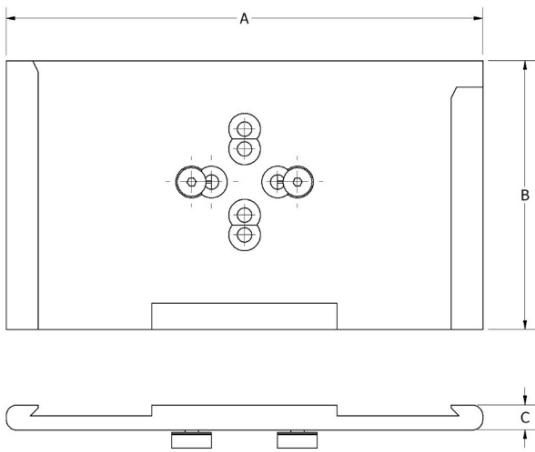
QCT 2
Payload: 25 kg

QCT 3
Payload: 50 kg





WALL MOUNTS

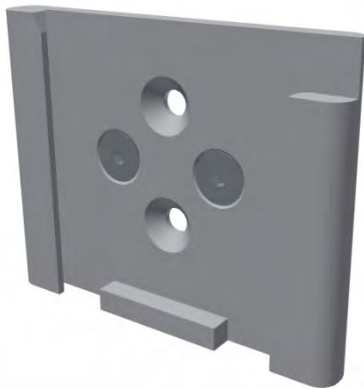


- Economical storage of EOAT when not in production.
- Accepts EOAT built on our standard GPM mounting plates as well as our GPG Spring Loaded and new GPM-SA Semi-Automatic mounting plates.

	A	B	C	Storage For	Profile	Weight (g)	Piab No.
GHV 0	80	63	10	All GPM 0 Plates	L/X	94.6	0214324
GHV 1	120	76	10	All GPM 1 Plates	L/X	147.1	0212948
GHV 2	180	102	10	All GPM 2 Plates	X/JX/HX	297.1	0212949
GHV 3	270	152	13	All GPM 3 Plates	X/JX/HX	817.1	0212950

GHV 0

Product Code: GHV 0



GHV 1

Product Code: GHV 1



GHV 2

Product Code: GHV 2



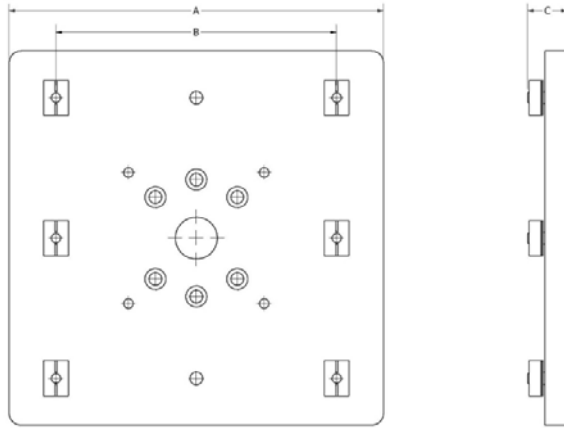
GHV 3

Product Code: GHV 3





MOUNTING PLATES



- Mounts profile straight up to the QST 90.

	A	B	C	Weight (g)	Piab No.
QMP 1-90	100	70	15	240	0212963
QMP 2-90	160	120	17	723.9	0212964

- Mounts profile straight up to the 150 and 160 QST.

	A	B	C	Weight (g)	Piab No.
QMP 2-150-160	160	120	17	668.7	0212965
QMP 3-150-160	250	200	17	1620	0212966

QMP 1-90

Product Code: QMP 1-90



QMP 2-90

Product Code: QMP 2-90



QMP 2-150-160

Product Code: QMP 2-150-160



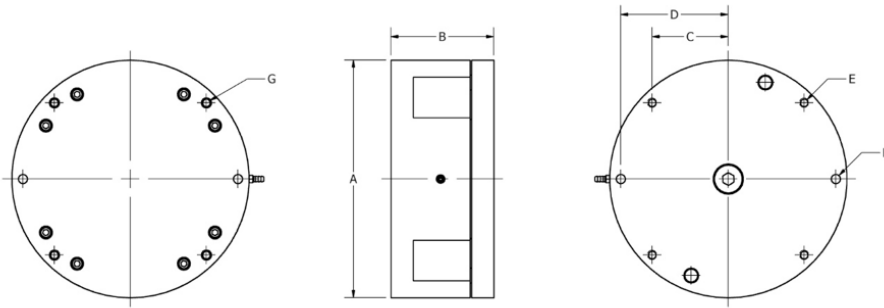
QMP 3-150-160

Product Code: QMP 3-150-160





TOOL ALIGNMENT DEVICE

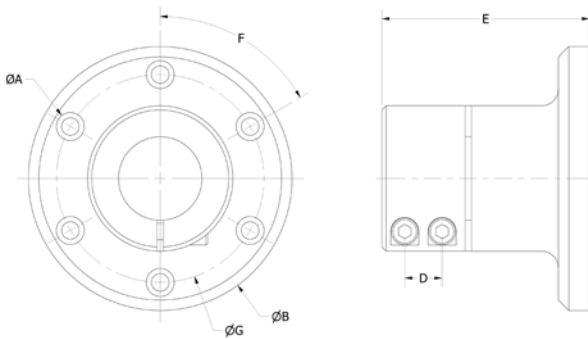


- Allows tools to shift for proper alignment with parts.
- Use with locator pins or bushings to align tools with molds or other machines.
- After aligned the compensator can be locked in place for proper part placement.

	A	B	C	D	E (Tap)	F (Slip Fit)	Lateral Misalignment (mm)	Rotary Misalignment	Max Payload (kg)	Payload @ 4.1 Bar (kg)	Torsion Resistance (N*m)	Piab No.
TAD 0	76	30	23	33	#8-32	3/16"	+/- 2.5	+/- 5	18.6	8.5	11.8	0214704
TAD 1	102	41	31	45	#10-32	1/4"	+/- 2.5	+/- 5	33.6	15.3	30.7	0214705
TAD 2	133	51	42	59	1/4-20	1/4"	+/- 2.5	+/- 5	44.7	20.3	51.7	0214706
TAD 3	203	88	65	92	5/16-18	3/8"	+/- 2.5	+/- 5	99.2	45.1	157.6	0214707



QUICK CHANGE INTERFACE



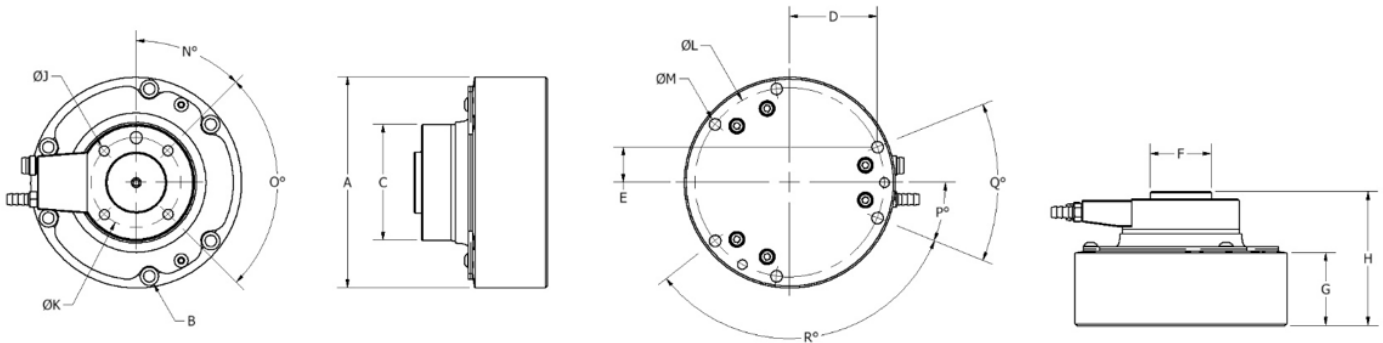
- Quick change interface for boom mounting D-Profile.
- Allows for end or boom mounting commonly utilized with 5 or 6 axis robots.

	A	B	D	E	F	G	Profile	Piab No.
QCI 30 T	14/9	127	-	100	60	100	T-30	0214578
QCI 40 T	14/9	127	18	100	60	100	HX-40	0214579
QCI HX-60	14/9	140	63	100	60	118	HX-60	0214580





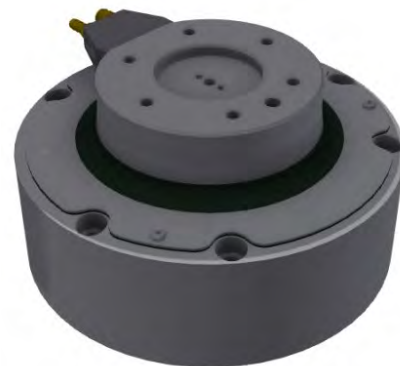
COLLISION SENSORS



- The TCS is a mechanical collision sensor that utilizes pneumatics for dynamic variability.
- Detects when the robot arm has encountered an obstruction.
- Absorbs the crash energy.
- Stops the robot to prevent costly damage to the robot arm and tooling.
- Features a repeatability of 0.0005" and allows the user to adjust the amount of resistance the unit must overcome before stopping the system.

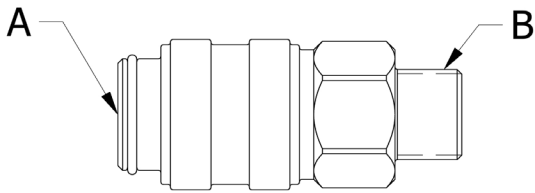
	A	B (C'bore)	C	D	E	F	G	J	K	L	M (Slip Fit)	N	O	P	Q	R	Piab No.
TCS-0	86	M4	48	36	15	31	52	M5	37	77	4	45	4x90	22	44	120	0214710
TCS-1	114	M5	63	48	19	40	64	M6	50	103	6	45	4x90	21	42	120	0214711
TCS-2	150	M6	85	64	25	51	79	M6	63	137	6	60	6x60	21	42	120	0214712
TCS-3	203	M8	117	86	33	71	105	M10	90	184	10	45	4x90	21	42	120	0214713
TCS-4	278	M10	163	120	46	99	143	M10	125	257	10	60	6x60	21	42	120	0214714

Moment Resistance† Variable from 10 to 90 psi (0.68 to 6.2 bar)	29-274 in-lb, 3-31 Nm
Torque Resistance† Variable from 10 to 90 psi (0.68 to 6.2 bar)	56-362 in-lb, 6-41 Nm
Force Resistance† Variable from 10 to 90 psi (0.68 to 6.2 bar)	25-229 lbf, 111-1,019 N
Angular Compliance	±8 deg (0.14 rad)
Rotary Compliance	±24 deg (0.42 rad)
Axial Compliance Compression	0.31 in, 7.9 mm
Repeatability (x, y & z) Measured at center and O.D. of tool plate	±0.0005 in, ±0.0127 mm
Repeatability (about z axis) Measured at center and O.D. of tool plate	±0.017 deg
Mass	1 lb (0.45 kg)
Height	2.03 in (51.6 mm)





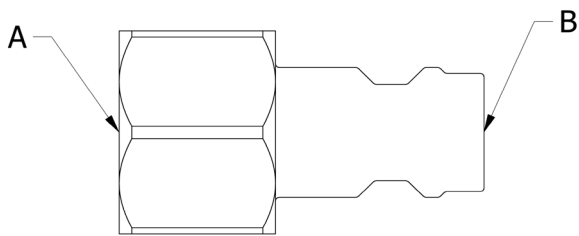
QUICK RELEASE COUPLING



- Quick release couplings for faster tool changes.
 - Replacement couplings for SWM series Quick Change Mounting Chucks.
- * Sold individually.

	A (Female Thread)	B (Series)	Weight (g)	Piab No.
92-5002	M5 x .8	20	8	0212954
92-0204	R 1/8"	21	27	0212955
92-0406	R 1/4"	26	73	0212956

QUICK RELEASE PLUGS



- Quick Release plugs for fast tool changes.
 - EOAT plugs for mating SWM couplings.
- * Sold in Packs of 10

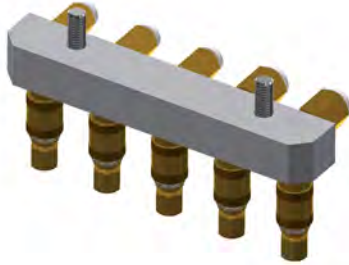
	A (Female Thread)	B (Series)	Weight (g)	Piab No.
94-4902-10	M5 x .8	20	26	0212951
94-0104-10	G 1/8"	21	143	0212952
94-0306-10	G 1/4"	26	246	0212953



HANDLES & LEVERS

SWM 1 MANIFOLD

Product Code: SWM 1 Manifold
Piab No. 0214631



SWM 1 LEVER

Product Code: SWM 1 Lever
Piab No. 0214633



SWM 1 HANDLE

Product Code: SWM 1 Handle
Piab No. 0214631



SWM 2 MANIFOLD

Product Code: SWM 2 Manifold
Piab No. 0214638



SWM 2 LEVER

Product Code: SWM 2 Lever
Piab No. 0214639



SWM 2 HANDLE

Product Code: SWM 2 Handle
Piab No. 0214638



SWM 3 MANIFOLD

Product Code: SWM 3 Manifold
Piab No. 0214644



SWM 3 LEVER

Product Code: SWM 3 Lever
Piab No. 0214645



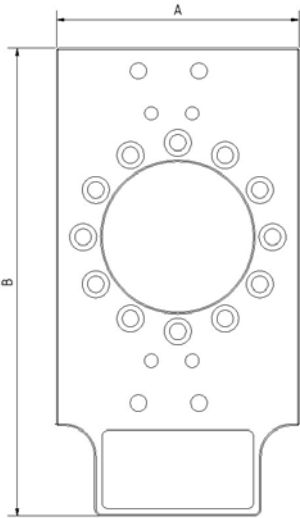
SWM 3 HANDLE

Product Code: SWM 3 Handle
Piab No. 0214642





ADAPTER PLATE

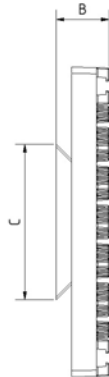
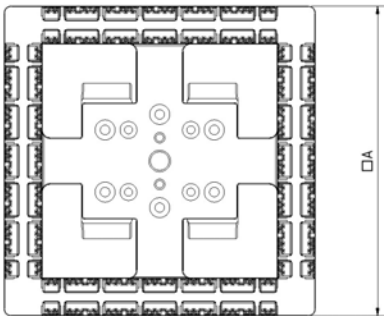


- Drilled holes for quick change system.
- 250mm x 160mm and one bolt circle of 125mm.

	A	B	Depth	Piab No.
AP-250x160LK125SWA	160	305	20	0213367

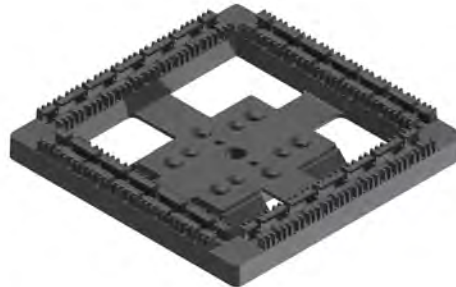


LIGHTWEIGHT FLEXIBLE MOUNTING PLATE

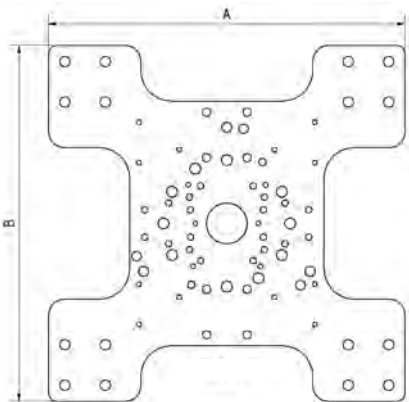


- Series polymer lightline.

	A	B	Depth	Piab No.
HA-SSW100-200	200	200	34	0216332



UNIVERSAL ADAPTER PLATE



- Drilled holes for quick change system.
- 250mm x 160mm and one bolt circle of 125mm.

	A	B	Depth	Piab No.
AP-352x352-UNI	352	352	15	0213264





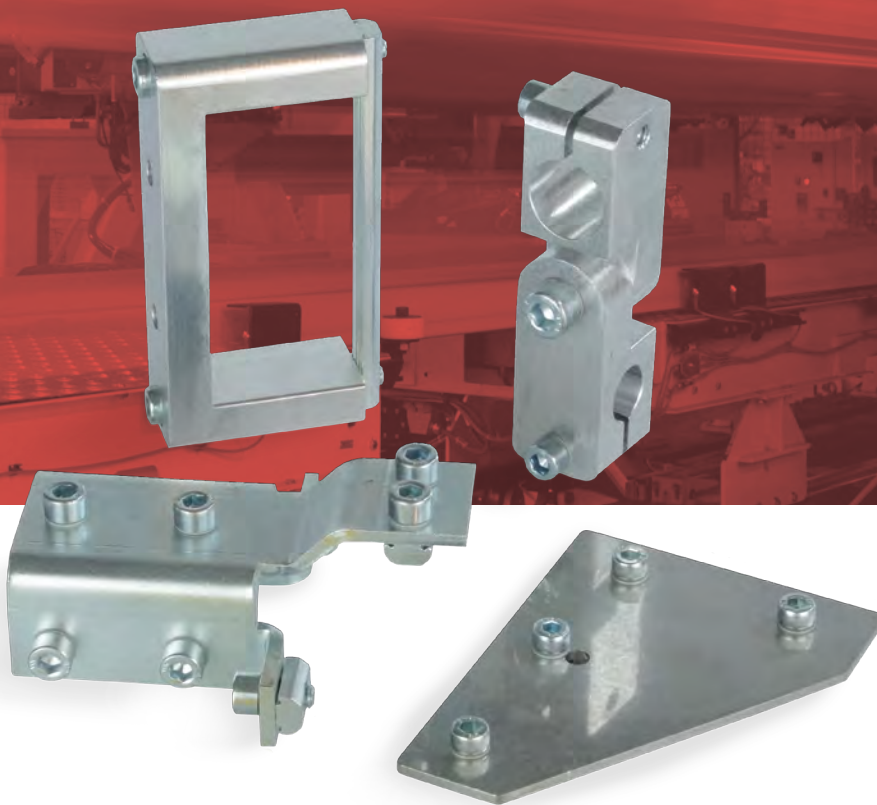
LIGHT WEIGHT MOUNTING PLATE

- Made from high strength light weight polymer
- Dovetail guide 100 mm
- Weight 333 grams
- Compatible with Piab modular gripper system





Framing

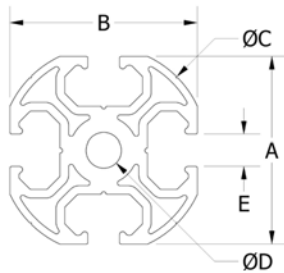
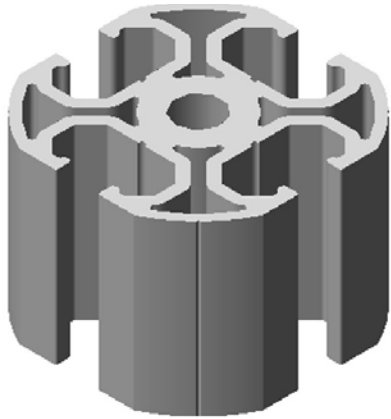


We guarantee quality and rigidity in every profile with our framing solutions. Made from aircraft quality aluminum, we offer “L” (light) to “HX” (heavy) style solutions, with products for a wide and diverse variety of applications.

- **Unique construction** tightens and locks into itself and comes in a variety of gauges
- **Operates on all type robots** from 6-axis to Cartesian to collaborative
- Expansive product and engineering **knowledge**
- Most frame connectors **manufactured from one piece of stock** for strength

HX-40 ALUMINUM PROFILE (2M)

Product Code: HX-40

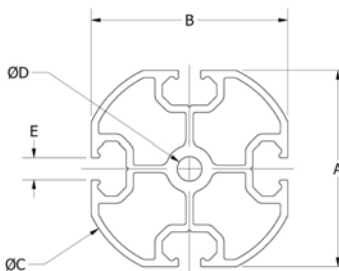
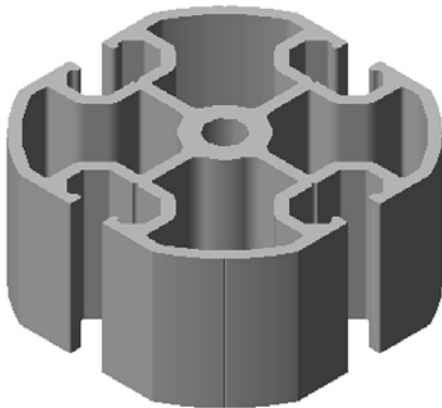


- Use with GWP channel nuts and PL-X channel nut profile.
- 2 Meters.

	A	B	C	D	E	Length (mm)	Channel Nut	Weight (g)	Piab No.
HX-40	36	36	40	6.8	6.1	2000	GWP/PL-X	2395	0214447

HX-60 ALUMINUM PROFILE (2M)

Product Code: HX-60

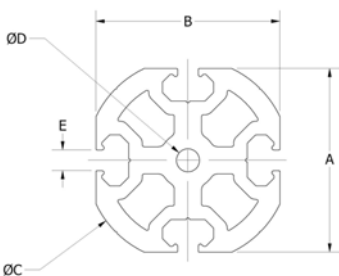
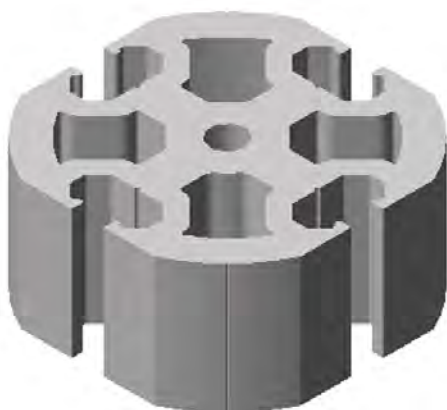


- Use with GWP channel nuts and PL-X channel nut profile.
- 2 Meters.

	A	B	C	D	E	Length (mm)	Channel Nut	Weight (g)	Piab No.
HX-60	54	54	60	6.8	6.1	2000	GWP/PL-X	3685	0214448

HX-60 HD ALUMINUM PROFILE (2M)

Product Code: HX-60 HD

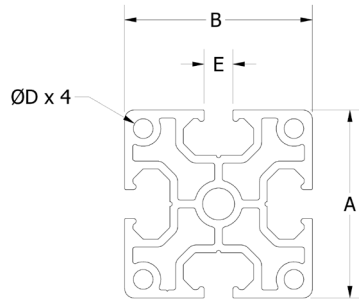


- High Density.
- Use with GWP channel nNuts and PL-X channel nut profile.
- 2 Meters.

	A	B	C	D	E	Length (mm)	Channel Nut	Weight (g)	Piab No.
HX-60 HD	54	54	60	6.8	6.1	2000	GWP/PL-X	7780	0214449

JX-40/40 ALUMINUM PROFILE (2M)

Product Code: JX-40/40

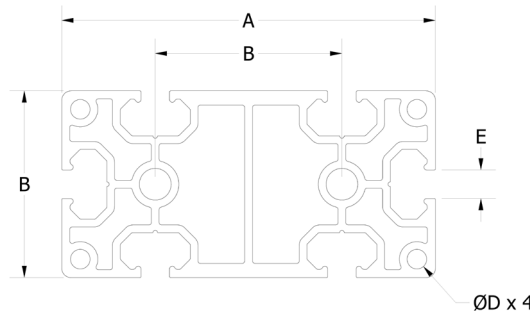


- Use with GWP channel nuts and PL-X channel nut profile.
- 2 Meters.

	A	B	C	D	E	Length (mm)	Channel Nut	Weight (g)	Piab No.
JX-40/40	40	40		4.2	6.1	2000	GWP/PL-X	2959	0214457

JX-80/40 ALUMINUM PROFILE (2M)

Product Code: JX-80/40

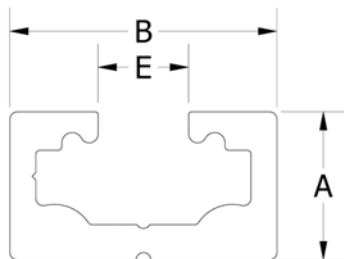


- Use with GWP channel nuts and PL-X channel nut profile.
- 2 Meters.

	A	B	C	D	E	Length (mm)	Channel Nut	Weight (g)	Piab No.
JX-80/40	80	40		4.2	6.1	2000	GWP/PL-X	4710	0214458

L-18/10 ALUMINUM PROFILE (2M)

Product Code: L-18/10

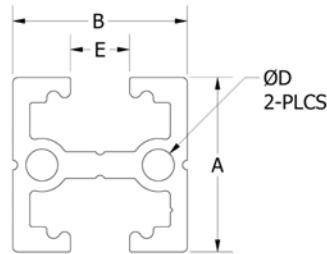


- Use with GWP channel nuts and PL-X channel nut profile.
- Stock length 2 Meters.

	A	B	E	Length (mm)	Channel Nut	Weight (g)	Piab No.
L-18/10	10	18	6.1	2000	GWP/PL-X	480	0212999

L-18/18 ALUMINUM PROFILE (2M)

Product Code: L-18/18

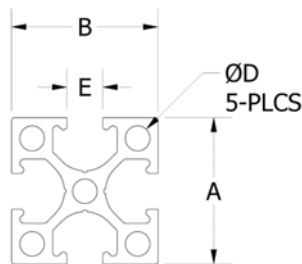


- Use with GWP channel nuts and PL-X channel nut profile.
- Stock length of 2 Meters..

	A	B	D	E	Length (mm)	Channel Nut	Weight (g)	Piab No.
L-18/18	18	18	4.2	6.1	2000	GWP/PL-X	700	0213000

X-25/25 ALUMINUM PROFILE

Product Code: X-25/25

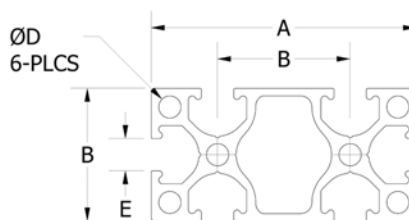


- Use with GWP channel nuts and PL-X channel nut profile.

	A	B	C	D	E	Length (mm)	Channel Nut	Weight (g)	Piab No.
X-25/25	25	25		4.2	6.1	2000	GWP/PL-X	1208	0213001

X-50/25 ALUMINUM PROFILE

Product Code: X-50/25



- Use with GWP channel nuts and PL-X channel nut profile.

	A	B	C	D	E	Length (mm)	Channel Nut	Weight (g)	Piab No.
X-50/25	50	25		4.2	6.1	2000	GWP/PL-X	2060	0213002

ROUND ALUMINUM PROFILE



	A	B	C	Wall Thickness	Piab No.
AR16 x 3	16	10	2000	3 mm	0213268
AR25 x 5	25	15	2000	5 mm	0213269
AR40 x 4	40	32	2000	4 mm	0213270

- The aluminum pipes consist of a special aluminum alloy and are in a position to bear enormous forces.
- Additional lengths available.
- Standard length 2000 mm.
- For suitable sealing caps, see below.
- The surfaces are refined/anodized.



TUBE PROFILES

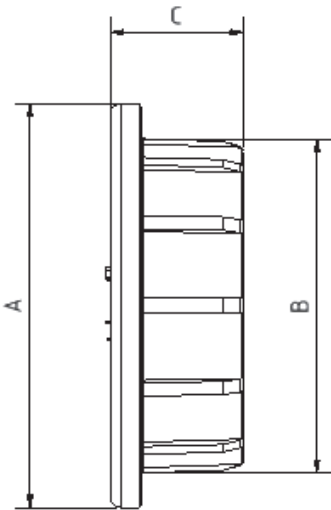
	OD	ID	Length	Weight (g)	Piab No.
T-10/07	10	07	2000	232	0214698
T-14/11	14	11	1000	325	0215626
T-20/16	20	16	1000	625	0214701
T-20/10	20	10	2000	1280	0214700
T-30/25	30	25	2000	1170	0214703
T-30/20	30	20	2000	2120	0214702

- Highly adjustable, lightweight profile.
- For use with Piab's uniquely designed single piece mounting clamps.



PIPE SEALING CAPS

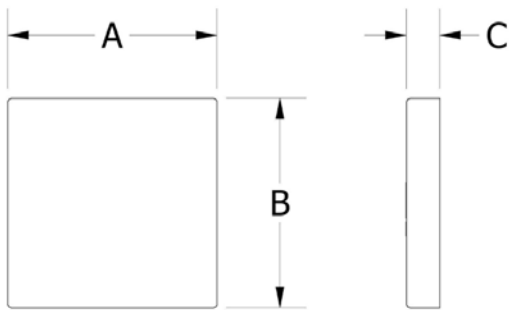
- Used to seal the pipe openings.
- Also protects against impact.



	A	B	C	Piab No.
VSK25	25	15.5	11	0213271
VSK40	40	32.5	13	0213272



END CAPS



- Dresses & protects profile ends.

	A	B	C	Color	Weight (g)	Piab No.
ADK 18/10 L	18	10	4	Black	1	0213003
ADK 18/18 L	18	18	4	Black	2	0213004
ADK 25/25 X	25	25	4	Black	2	0213005
ADK 50/25 X	50	25	4	Black	3	0213006
ADK 40/40 JX	40	40	4	Black	5	0214167
ADK 80/40 JX	80	80	4	Black	9	0214169

ADK 18/10 L

Product Code: ADK 18/10 L



ADK 18/18 L

Product Code: ADK 18/18 L



ADK 25/25 X

Product Code: ADK 25/25 X



ADK 50/25 X

Product Code: ADK 50/25 X



ADK 40/40 JX

Product Code: ADK 40/40 JX



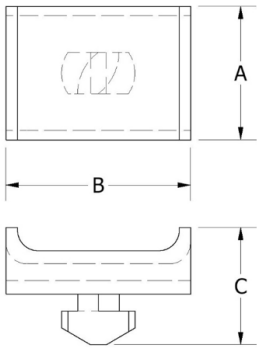
ADK 80/40 JX

Product Code: ADK 80/40 JX



Framing

CABLE AND HOSE

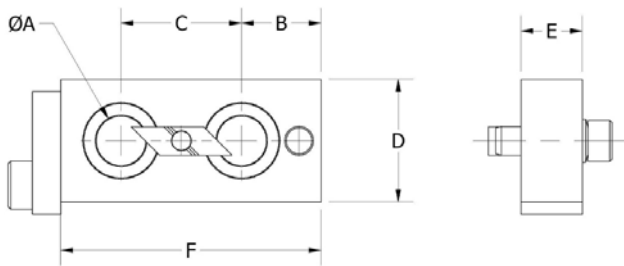


- Convenient wiring and tubing tie-down twists tightly into standard frame profile.
- Easily movable and removable.
- CTM-15 designed to fit into L, X, & D profiles.
- CTM-25 designed to fit into JX & HX profiles.
- Sold in bags of 10.

	A	B	C	Piab No.
CTM-15	12	15	16	0214179
CTM-25	18	25	16	0214180



PROFILE JIG

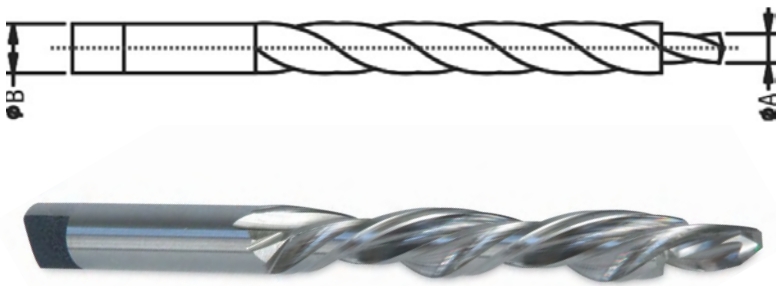


- Easily locate holes for SV & KV profile connectors.
- Eliminates drill "walking" to assure square connections.
- Use X-Type or JX-Type profile.

	A	B	C	D	E	F	Weight (g)	Piab No.
PJ-X	10	12.5	25	25	13	54	75	0214572
PJ-JX	11	20	40	32	13	80	144	0214571



STEPPED DRILL BITS

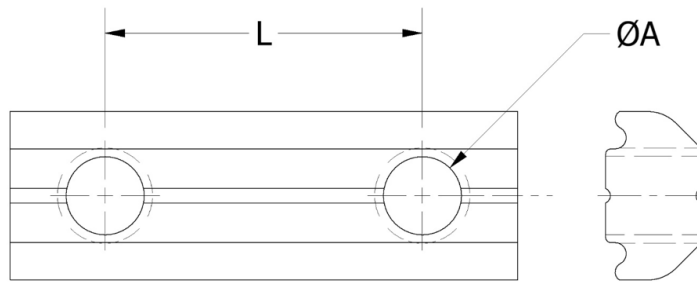


- Used for step drilling of aluminum profiles.
- One drill setup for installing KV or SV connectors.
- Use with X-Type Profile.

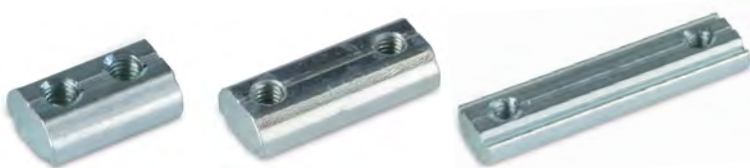
	A (Drill)	B (C'Bore)	Piab No.
STB M4	4.5	9	0214624
STB M5	5.5	10	0214625
STB M6	6.5	11	0214626



CHANNEL NUTS



- Used for replacements or for profile mounting of custom plates or brackets.
- Nuts can be easily dropped in the channel of JX Profile.
- PL-X is a 2 meter length of channel nut profile without holes.



Recommended Torque: (approx.)

	Nm	Ft.-lbs.
M4	3	2
M5	5.5	4
M6	9.5	7
M8	23	17

	A	L	Material	Weight (g)	Piab No.
GWP 4 X	M4	-	Steel	6	0214411
GWP 4-8 X	M4	8	Steel	5	0214414
GWP 4-17 X	M4	17	Steel	9	0214412
GWP 4-31 X	M4	31	Steel	16	0214413
GWP 5 X	M5	-	Steel	5	0214415
GWP 5/45 X	M5	-	Steel	5	0214426
GWP 5-10 X	M5	10	Steel	7	0214416
GWP 5-12 X	M5	12	Steel	9	0214417
GWP 5-14 X	M5	14	Steel	9	0214418
GWP 5-16 X	M5	16	Steel	9	0214419
GWP 5-22 X	M5	22	Steel	12	0214420
GWP 5-25 X	M5	25	Steel	14	0214421
GWP 5-28 X	M5	28	Steel	15	0214422
GWP 5-38 X	M5	38	Steel	19	0214423
GWP 5-41 X	M5	41	Steel	20	0214424
GWP 5-42 X	M5	42	Steel	21	0214425
GWP 5-58 X	M5	58	Steel	27	0214427
GWP 5-63 X	M5	63	Steel	30	0214428
GWP 6 X	M6	6	Steel	5	0214429
GWP 6-12 X	M6	12	Steel	9	0214431
GWP 6-15 X	M6	15	Steel	9	2014431
GWP 6-20 X	M6	20	Steel	11	0214432
GWP 6-25 X	M6	25	Steel	13	0214433
GWP 6-30 X	M6	30	Steel	15	0214434
GWP 6-40 X	M6	40	Steel	19	0214435
GMP 6-50 X	M6	50	Steel	23	0214436
GMP 6-52 X	M6	52	Steel	24	0214437
GWP 6-60 X	M6	60	Steel	28	0214438
GMP 6-92 X	M6	92	Steel	40	0214439
PL-X	-	-	Steel	810	0214573

CHANNEL NUTS

ULP 4 X

Product Code: ULP 4 X

Piab No. 0214725

- 4.5mm thru hole for use with the SV-X Butt Connector.



ULP 5 X

Product Code: ULP 5 X

Piab No. 0214726

- 5.5mm thru hole for use with the SV-X Butt Connector.



ULP 6 X

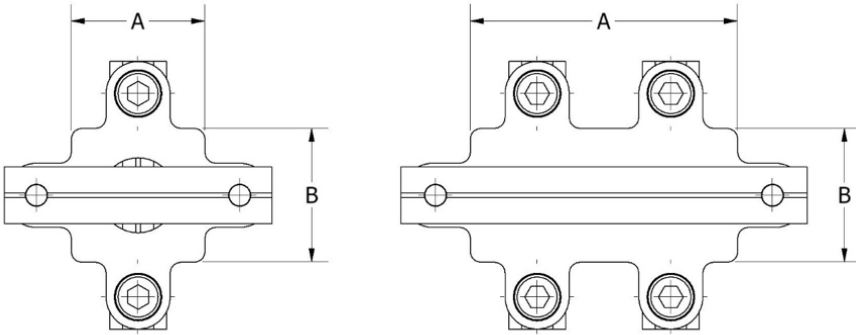
Product Code: ULP 6 X

Piab No. 0214727

- 6.5mm thru hole for use with the SV-X Butt Connector.



CROSS JOINT CONNECTOR



- Sandwich style bracket used for frame profile cross mounting.
- Allows for full adjustability in two dimensions individually simultaneously.

	A	B	Weight (g)	Piab No.
KPL 18-18 L	18	18	52	0213012
KPL 25-25 X	25	25	68	0213013
KPL 25-50 X	50	25	118	0213014
KPL 50-50 X	50	50	189	0213015
KPL 40-40 JX	40	40	143	0214506
KPL 40-80 JX	80	40	190	0214507
KPL 80-80 JX	80	80	281	0214508
KPL 25/25 X - HD	25	25	70	0214503
KPL 25/50 X - HD	50	25	120	0214504
KPL 40/40 X - HD	40	40	150	0214505

KPL 18-18 L

Product Code: KPL 18-18 L



KPL 25-25 X

Product Code: KPL 25-25 X



KPL 25-50 X

Product Code: KPL 25-50 X



KPL 50-50 X

Product Code: KPL 50-50 X



KPL 40-40 JX

Product Code: KPL 40-40 JX



KPL 40-80 JX

Product Code: KPL 40-80 JX



KPL 80-80 JX

Product Code: KPL 80-80 JX



KPL 25/25 X - HD

Product Code: KPL 25/25 X - HD



KPL 25-50 X - HD

Product Code: HD

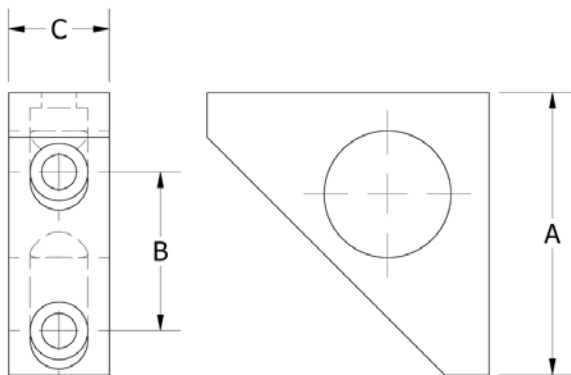


KPL 40/40 JX - HD

Product Code: KPL 40/40 JX - HD



ANGLE JOINT CONNECTOR



- Corner bracket for squareness and stability.
- Connects X or JX style profile.
- Fits in corner of two adjoining frame profiles and does not interfere with parts in other channels.
- Includes M5 socket head screws and channel nut.

	A	B	C	Weight (g)	Piab No.
WIV 25 X	25	-	16	28	0213016
WIV 40 JX	38	-	25	65	0214758
WIV 50 X	51	20	16	72	0213017
WIV 80 JX	76	40	25	213	0214759

WIV 25 X

Product Code: WIV 25 X

WIV 40 JX

Product Code: WIV 40 JX

WIV 50 X

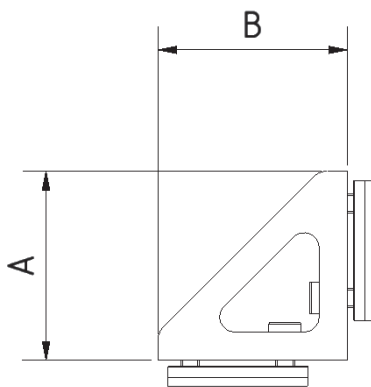
Product Code: WIV 50 X

WIV 80 JX

Product Code: WIV 80 JX



ANGLE JOINT CONNECTOR

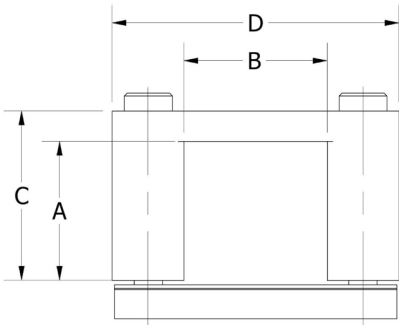


- Angle connector for a strong connection of two profiles under 90°.

	A	B	Width	Piab No.
WV-90-X25	25	25	16	00216428



CROSS JOINT CONNECTOR

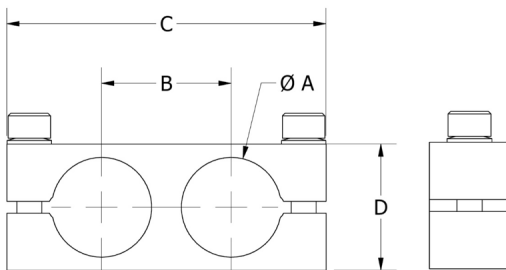


- Bridge style clamp for frame profile cross mounting.
- Allows for full adjustability in two dimensions simultaneously.

	A	B	C	D	Weight (g)	Piab No.
KBV 10-18 L	10	18	16	40	40	0213007
KBV 18-18 L	18	18	25	40	52	0213008
KBV 25-25 X	25	25	30	51	74	0213009
KBV 25-50 X	25	50	30	76	92	0213010
KBV 50-25 X	50	25	60	51	119	0213011
KBV 40-40 JX	40	40	56	66	161	0214463
KBV 40-80 JX	40	80	56	106	209	0214464
KBV 80-40 JX	80	40	97	76	298	0214465



TUBE PARALLEL CLAMPS

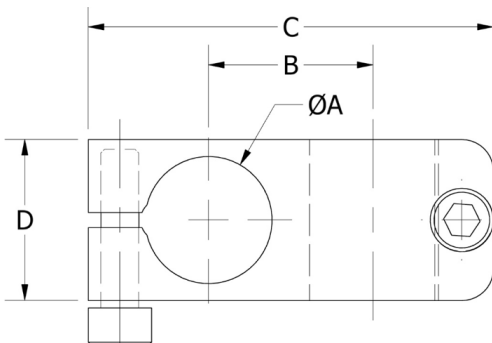


- Parallel profile clamp for Tube (T) profile.
- One piece construction for easy assembly.

	A	B	C	D	Weight (g)	Piab No.
KPC 10	10	14	38	16	14	0214499
KPC 14	14	20	52	19	35	0214500
KPC 20	20	26	64	25	48	0214501
KPC 30	30	39	90	38	100	0214502



TUBE CROSS CLAMPS

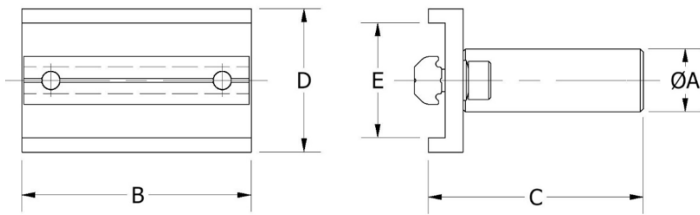


- Adjustable angle cross connection of Tube(T) profile.
- One piece construction for easy assembly.

	A	B	C	D	Weight (g)	Piab No.
KNC 10	10	14	38	16	22	0214495
KNC 14	14	20	52	19	40	0214496
KNC 20	20	26	64	25	70	0214497
KNC 30	30	39	90	38	215	0214498



PROFILE EXTENSION ARM



- Offsets profile connections using clamps.
- Allows for clearance between profile.
- Includes socket head screws and channel nut.

	A	B	C	D	E	Weight (g)	Piab No.
DKA 10 L	10	38	94	22	18	32	0214181
DKA 14 X	14	51	128	32	25	68	0214182
DKA 20 X	20	51	158	32	25	99	0214183

DKA 10 L

Product Code: DKA 10 L
Connects to L-18/10 or L-18/18.

DKA 14 X

Product Code: DKA 14 X
Connects to X-50/25 or X-25/25.

DKA 20 X

Product Code: DKA 20 X
Connects to X-50/25 or X-25/25.



CROSS CONNECTOR HARDWARE

- Low cost stable cross connector for joining two similar profiles.
- Will not interfere with components on either profile.
- Includes cap screw, serrated lock washer, channel nut with through hole.
- Drilling of one profile is required with our STB step drill.

	A	B	C	D	E	Weight (g)	Piab No.
KV-L	M4	ULP 4X	GWP 4	8	M4	16	0214510
KV-X	M5	ULP 5X	GWP 5	ø10 (STB M5)	M5	14	0214511
KV-JX	M6	ULP 6X	GWP 6	15	M6	15	0214509

KV-L

Product Code: KV-L
Use with L-Type profile.

KV-X

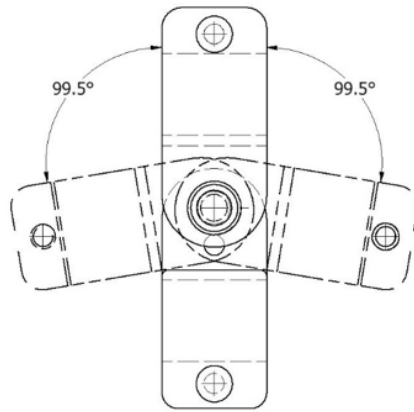
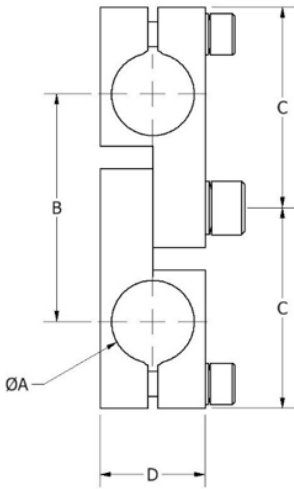
Product Code: KV-X
Use with X-Type profile.

KV-JX

Product Code: KV-JX
Use with JX-Type profile.



TUBE ANGLE SWIVEL CLAMPS

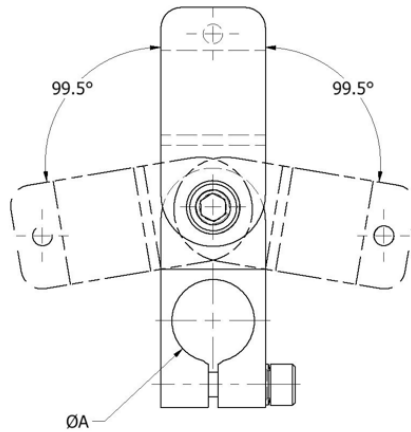
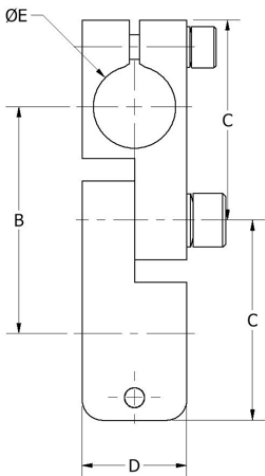


- Adjustable angle cross connection for Tube (T) profile.
- One piece construction for easy assembly.

	A	B	C	D	Weight (g)	Piab No.
KAC 10-10	10	32	29	16	75	0214459
KAC 14-14	14	55	48	25	153	0214460
KAC 20-20	20	55	48	25	131	0214461
KAC 30-30	30	77	64	38	342	0214462



TUBE CROSS SWIVEL CLAMPS

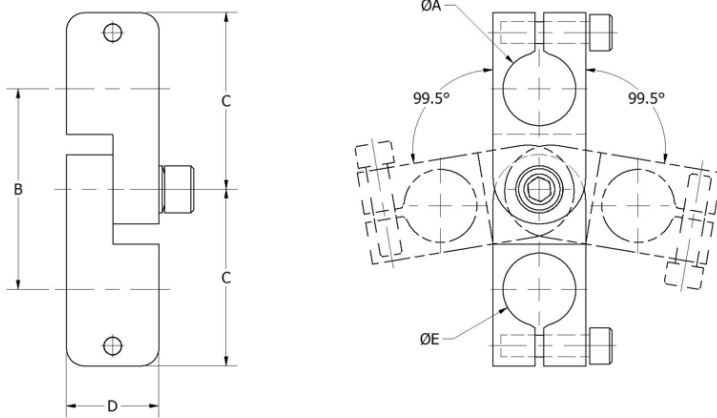


- Swivel cross connection for Tube (T) profile.
- One piece construction for easy assembly.

	A	B	C	D	E	Weight (g)	Piab No.
KEC 14-14	14	55	48	25	14	155	0214466
KEC 14-20	14	55	48	25	20	146	0214467
KEC 20-20	20	55	48	25	20	132	0214468
KEC 20-30	20	77	64	38	30	303	0214469
KEC 30-30	30	77	64	38	30	334	0214470



TUBE PARALLEL SWIVEL CLAMPS



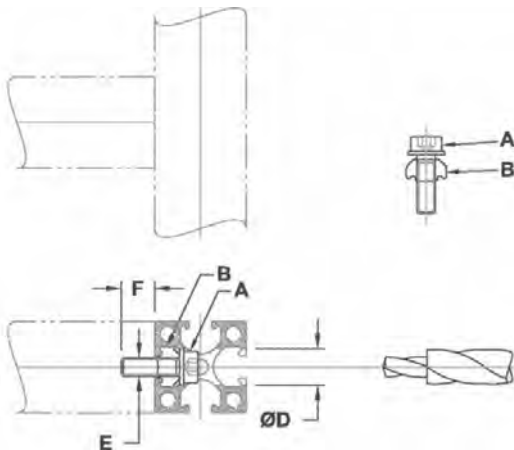
- Parallel connector for Tube (T) profile.
- One piece construction for easy assembly.

	A	B	C	D	E	Weight (g)	Piab No.
KIC 14-14	14	55	48	25	14	155	0214490
KIC 14-20	14	55	48	25	20	144	0214491
KIC 20-20	20	55	48	25	20	131	0214492
KIC 20-30	20	77	64	38	30	370	0214493
KIC 30-30	30	77	64	38	30	327	0214494



SV-X BUTT CONNECTOR HARDWARE

Product Code: SV-X

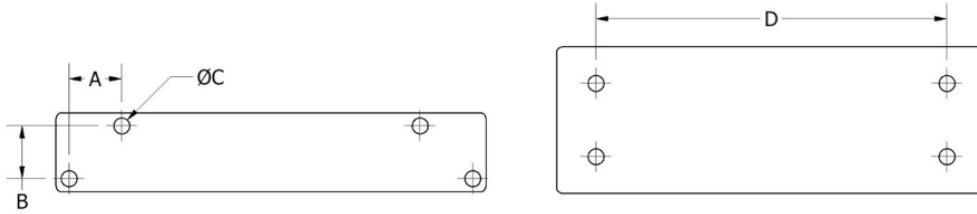


- Low cost stable perpendicular end-butt connector for joining two profiles.
- Will not interfere with components on either profile.
- Includes cap screw, serrated lock washer, and channel nut with through hole.
- Drilling of one profile required using our STB step drill and tapping the end of the profile.

	A	B	D	E	Profile	Weight (g)	Piab No.
SV-X	M5 SHCS	ULP 5X	ø10 (STB M5)	M5	X	9.4	0214027



PROFILE END PLATES



	A	B	C	D	Mounting Plate	Profile	Weight (g)	Piab No.
EPL 2-25 X	18	18	5.5	120	GPM 2 X/ GPM 2 SA /GPG 2	X-25/25	95	0214194
EPL 2-50 X	-	25	5.5	120	GPM 2 X/ GPM 2 SA /GPG 2	X-50/25	156	0214195
EPL 3-25 X	18	18	5.5	200	GPM 3 X/ GPM 3 SA /GPG 3	X-25/25	15	0214196
EPL 3-50 X	-	25	5.5	200	GPM 3 X/ GPM 3 SA /GPG 3	X-50/25	218	0214198
EPL 3-40 JX	-	-	8.5	200	GPM 3 X/ GPM 3 SA /GPG 3	JX-40/40	218	0214197
EPL 3-80 JX	-	40	8.5	200	GPM 3 X/ GPM 3 SA /GPG 3	JX-80/40	445	0214199

- Connects frame profile ends for added stability and strength.
- Note: Includes screws and lock-washers.

EPL 2-25 X

Product Code: EPL 2-25 X



EPL 2-50 X

Product Code: EPL 2-50 X



EPL 3-25 X

Product Code: EPL 3-25 X



EPL 3-40 JX

Product Code: EPL 3-40 JX



EPL 3-50 X

Product Code: EPL 3-50 X

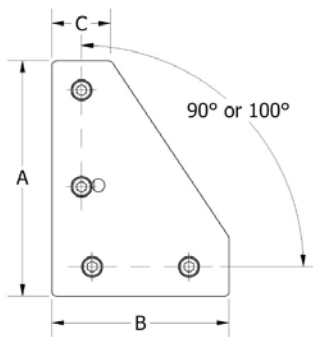


EPL 3-80 JX

Product Code: EPL 3-80 JX



CORNER JOINT PLATES



- Corner plate bracket for squareness and stability.
- Joins two profiles at either a 90° or 100° fixed angle.
- Forms a rigid connection.
- Note: Includes screws and channel nuts.

	A	B	C	D	Weight (g)	Piab No.
EVB 25 X	100	75	25	5.5	147	0213018
EVB 40 JX	100	100	40	6.5	201	0214200
EVB 50 X	100	100	50	5.5	212	0213019

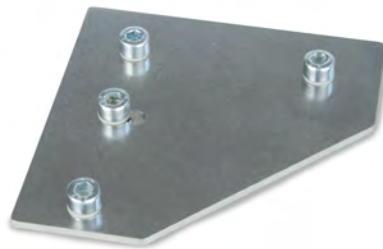
EVB 25 X

Product Code: EVB 25 X



EVB 40 JX

Product Code: EVB 40 JX

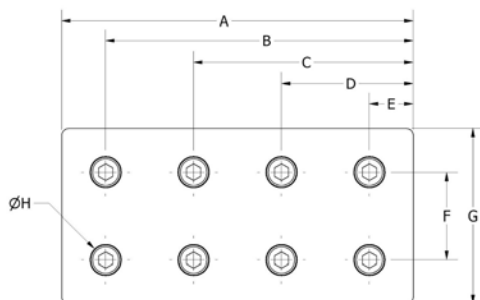


EVB 50 X

Product Code: EVB 50 X



STRAIGHT CONNECTOR PLATES



- Straight plates for side-by-side and end-to-end connections of profile.
- Forms a rigid connection.
- Note: Includes screws and channel nuts.

	A	B	C	D	E	F	G	H	Weight (g)	Piab No.
EVD 50/50 X	50	37.5	12.5	-	-	25	50	5.5	88	0214204
EVD 50/100 X	100	87.5	62.5	37.5	12.5	25	50	5.5	178	0214203

EVD 50/50 X

Product Code: EVD 50/50 X

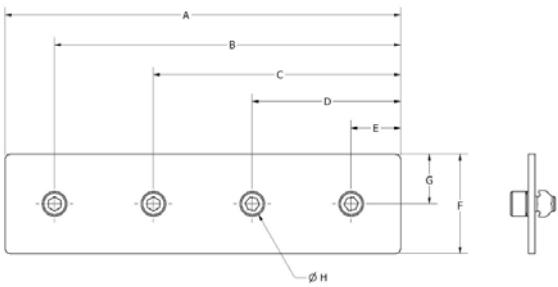


EVD 50/100 X

Product Code: EVD 50/100 X



STRAIGHT CONNECTOR PLATES



- Profile is connected end to end.
- Can be used to brace L connectors on wide profile.
- Forms a rigid connection.
- Note: Includes screws and channel nuts.

	A	B	C	D	E	F	G	H	Weight (g)	Piab No.
EVG 25/50 X	50	-	-	38	13	25	13	5.5	44	0214206
EVG 25/75 X	75	-	63	38	13	25	13	5.5	62	0214207
EVG 25/100 X	100	88	63	38	13	25	13	5.5	88	0214205
EVG 40/160 JX	160	140	100	60	20	40	20	6.5	186	0214208

EVG 25/50 X

Product Code: EVG 25/50 X



EVG 25/75 X

Product Code: EVG 25/75 X



EVG 25/100 X

Product Code: EVG 25/100 X

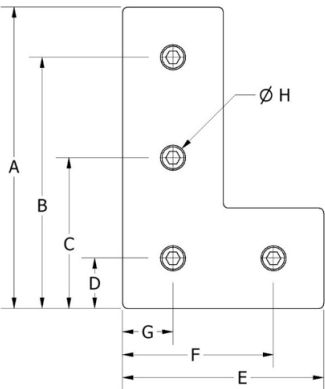


EVG 40/160 JX

Product Code: EVG 40/160 JX



CONNECTOR PLATES



- Profile is connected perpendicular.
- Forms a rigid connection.
- Note: Includes screws and channel nuts.

	A	B	C	D	E	F	G	H	Weight (g)	Piab No.
EVL 50/50 X	50	-	38	13	50	38	13	5.5	90	0214211
EVL 50/75 X	75	63	38	13	50	38	13	5.5	87	0214212
EVL 80/120 JX	120	100	60	20	80	60	20	6.5	182	0214213

EVL 50/50 X

Product Code: EVL 50/50 X



EVL 50/75 X

Product Code: EVL 50/75 X

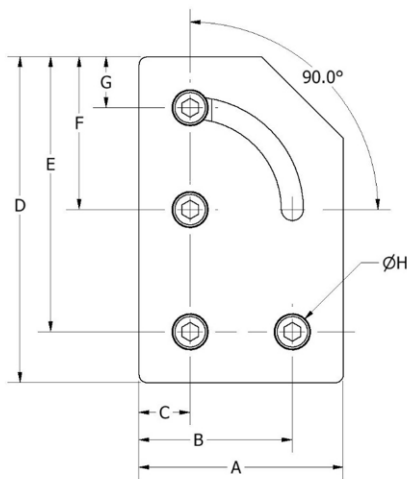


EVL 80/120 JX

Product Code: EVL 80/120 JX



90 DEGREE CONNECTOR PLATES

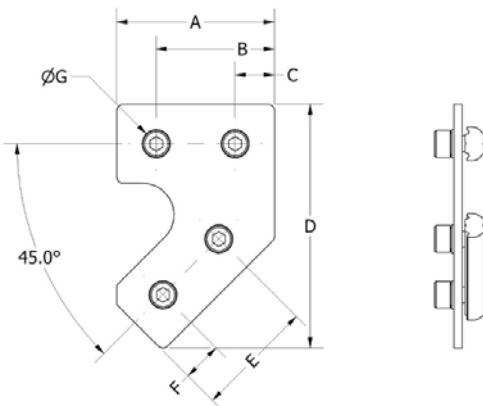


- Joins two profiles at any angle between 0 and 90°.
- Angle of profile intersection can be adjusted at any time.
- Forms a rigid connection.
- Note: Includes screws and channel nuts.

	A	B	C	D	E	F	G	H	Weight (g)	Piab No.
EVW 0-90 X	50	38	13	80	68	38	13	5,5	109	0214220
EVW 0-90 JX	80	60	20	130	110	60	20	6,5	255	0214219



45 DEGREE CONNECTOR PLATES

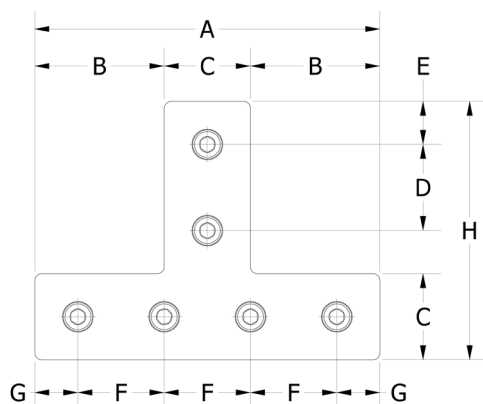


- Joins two profiles at a 45° angle.
- Forms a rigid connection.
- Note: Includes screws and channel nuts.

	A	B	C	D	E	F	G	Weight (g)	Piab No.
EVW 45 X	50	38	13	77	38	13	5,5	95	0214222
EVW 45 JX	80	60	20	118	53	13	6,5	188	0214221



CONNECTOR PLATES

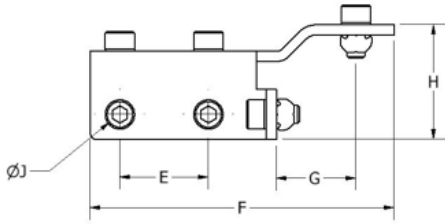


- Profile is connected perpendicular.
- Forms a rigid connection.
- Note: Includes screws and channel nuts.

	A	B	C	D	E	F x (#Holes)	G	H	J	Weight (g)	Piab No.
EVT 50/75 X	50	13	25	25 X 2	13	25 X 2	13	75	5,5	88	0214218
EVT 100/75 X	100	38	25	25 X 2	13	25 X 4	13	75	5,5	135	0214215
EVT 100/80 D	100	38	25	25 X 2	10	25 X 4	13	80	5,5	135	0214216
EVT 100/130 D	100	38	25	25 X 3	10	25 X 4	13	130	5,5	178	0214214
EVT 120/120 JX	120	40	40	40	20	40 X 3	20	120	6,5	219	0214217

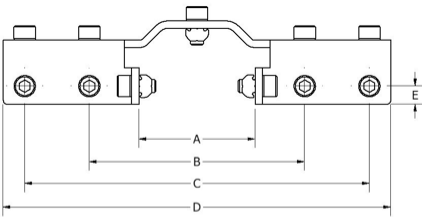
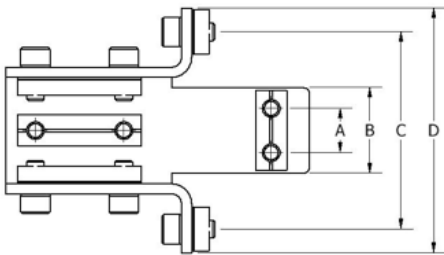


HX CROSS CONNECTORS



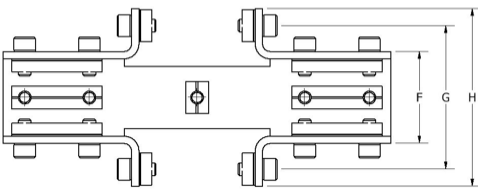
- Profile is connected perpendicular.
- Forms a rigid connection.
- For use with HX profile.
- Note: Includes screws and channel nuts.

	A	B	C	D	E	F	G	H	ØJ	Weight (g)	Piab No.
EVH 60/40-1	15	29	66.8	82.8	30	103	27.2	38.9	6.6	301	0214209

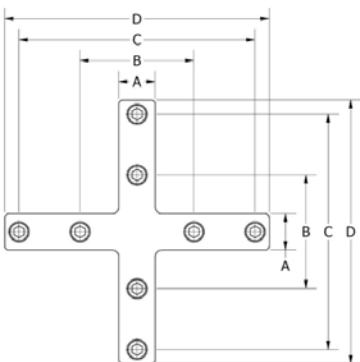


- Profile is connected perpendicular.
- Forms a rigid connection.
- For use with HX profile.
- Note: Includes screws and channel nuts.

	A	B	C	D	E	F	G	H	ØJ	Weight (g)	Piab No.
EVH 60/40-2	54	100	160	180	8.6	42.8	66.8	82.8	7	561	0214210



CROSS CONNECTOR PLATES

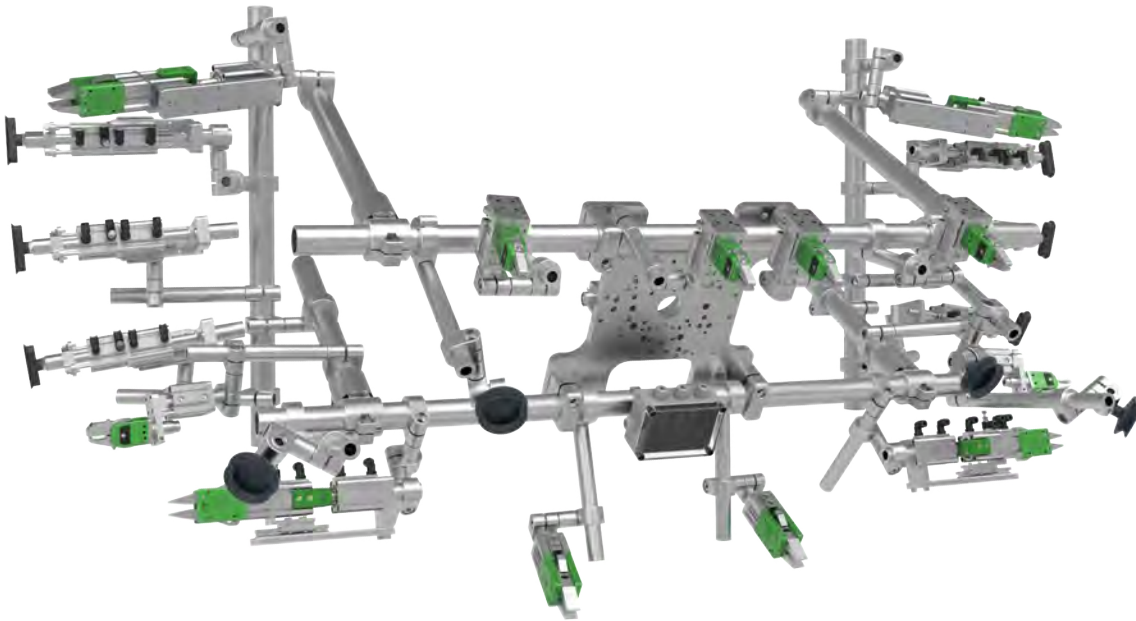


- Profile is connected perpendicular.
- Forms a rigid connection.
- For use with HX profile.
- Note: Includes screws and channel nuts.



	A	B	C	D	ØE	Weight (g)	Piab No.
EVC 40/40	18	56	116	130	6.5	205	0214201
EVC 60/60	26	66	166	190	6.5	365	0214202

PIAB OFFERS FULL RANGE OF FRAMING - TUBULAR, SQUARE AND SPECIALS



- Fully modular tubular framing system compatible with Piab complete EOAT range
- Suitable when you have complex geometries or when adjustability is of high importance



- Fully modular square framing system compatible with Piab complete EOAT range
- Suitable when you have less complex geometries and requires simple assembly



- Special framing systems can be custom made for your specific need
- Piab also offers custom made negative forms when extra stability and sensitive surfaces needs to be handled

Did you know Piab offers full End of arm tool service, from design to commissioning? Reach out to your Piab contact to learn more.



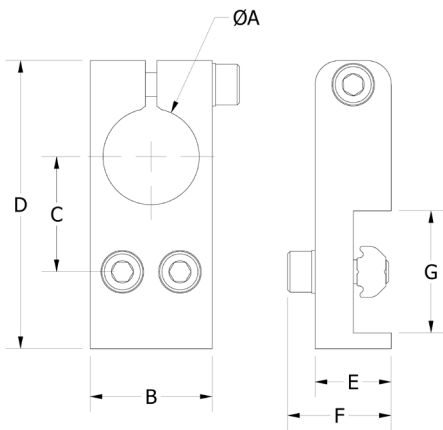
Mounting



We offer a broad range of mounting connectors, plates, clamps, and arms, each highly configurable and made of high-quality materials.

- Ensuring **proper balance** of weight and rigidity
- **Versatile, adjustable, and compliant**, working with grippers, cutters, sensors, and more
- Expansive product and engineering **knowledge**

ANGLE CLAMPS

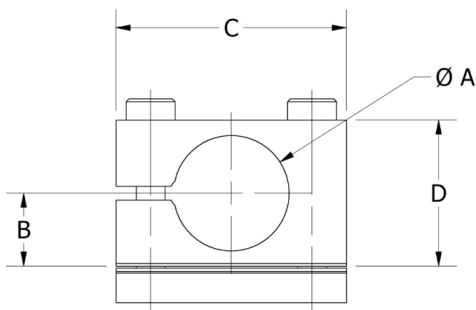


- Allows for top mounting of gripper arms or holders to frame profile.
- Adjustable along the channel of the frame profile.

	A	B	C	D	E	F	G	Weight (g)	Piab No.
WST 10 L	10	16	16	40	10	14	18	23	0213024
WST 10 X	10	16	20	47	10	14	25	24	0213025
WST 14 X	14	25	21	52	13	19	25	44	0213026
WST 20 X	20	25	24	60	16	22	25	59	0213027
WST 30 X	30	38	30	73	19	26	25	113	0213028
WST 20 JX	20	32	34	77	16	23	40	93	0214787
WST 30 JX	30	45	39	92	19	26	40	164	0214788



CROSS CLAMPS

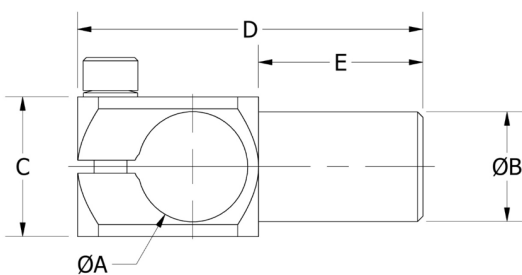


- Allows for side mounting of gripper arms to frame profiles.
- Allows for mounting of Tube (T) profiles to standard frame profiles.
- Use with X-type, HX-type, or JX-type profile.

	A	B	C	D	Weight (g)	Piab No.
KVB 10	10	8	25	16	23	0213020
KVB 14	14	10	34	19	38	0213021
KVB 20	20	18	40	25	51	0213022
KVB 30	30	18	50.8	38	94	0213023



INSERT CLAMPS

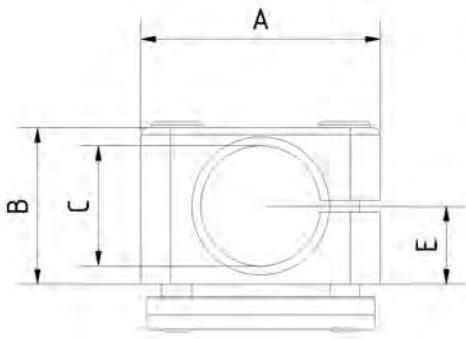


- Supplies 90° mounting with rotation.
- Short shaft clamp.

	A	B	C	D	E	Weight (g)	Piab No.
SKS 20	20	20	25	63	30	54	0214620
SKS 20-30	30	20	38	78	34	81	0214621



CROSS CLAMP

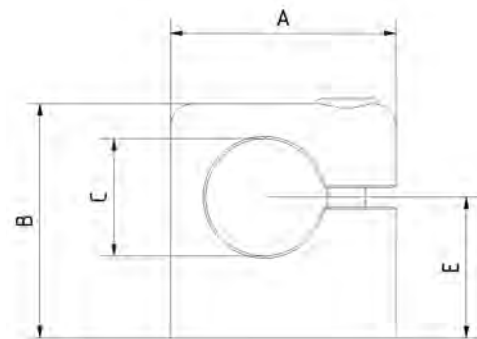


- Robust construction.
- Precise fitting.
- All edges are rounded.
- Suitable for S-, X-, and L-series.



	A	B	C	Depth	E	Piab No.
AN16 - X	38	22	16	12	11	0213276
AN25 - X	45	30	25	18	15	0213277

TUBE CLAMP

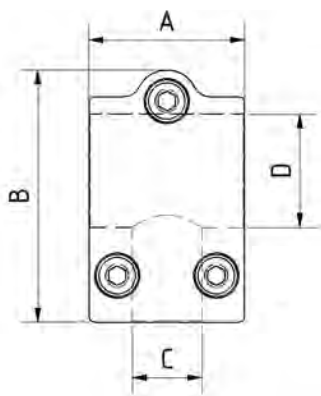


- Additional adapter plates are available as needed.
- Centerings are available for the aluminum profile of the X-series and the FFLS.
- Material: aluminum.

	A	B	C	Depth	E	Piab No.
AN16	31	35	16	15	22	0213273
AN25	48	50	25	20	30	0213274
AN40	72	70	40	30	40	0213275



CROSS CLAMPS

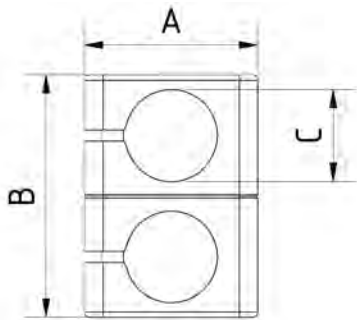


- High-level torques can be absorbed using T version cross clamps. This cross-clamp can be easily adjusted and assembled WITHOUT removing various components of the existing gripper.
- All edges are rounded.
- The threads are formed.
- Low component weight.
- The surfaces are refined / anodized.

	A	B	C	D	Depth	Piab No.
KKTG16 - 16	35	55	16	16	22	0213420
KKTG25 - 25	48	78	25	25	32	0213421
KKTG40 - 25	62	93.5	25	40	52	0213422
KKTG40 - 40	79	141	40	40	59	0216337



CROSS PARALLEL CLAMPS

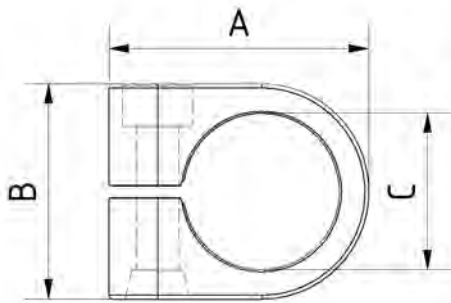


- Cross/parallel clamps, divided in two parts:
 - 1) flat and
 - 2) turning the separate elements you can quickly turn a cross clamp into a parallel clamp.
- All edges are rounded.
- The threads are formed.
- The surfaces are refined/anodized.

	A	B	C	Depth	Piab No.
KKZ25 - 25	47	66	25	47	0213423
PKZ25 - 25	47	66	25	47	0213450

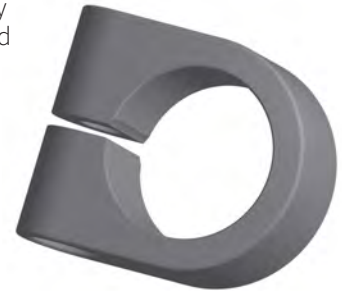


CLAMPS

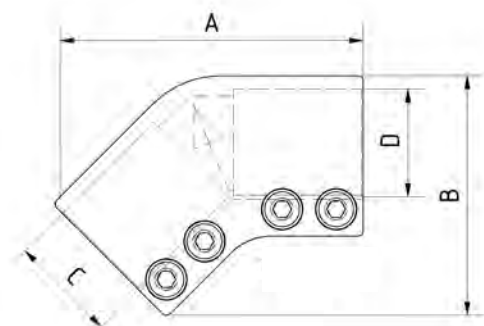


- The clamps consist of a special aluminum alloy and have a through hole for screwing two-sided extensions on both sides.
- The surfaces are refined / anodized.

	A	B	C	Depth	Piab No.
KS16 - 10	31.5	27	10	20	0213424
KS16 - 14	38	31	14	20	0213425
KS16 - 16	38	31	16	20	0213426
KS16 - 20	38	31	20	20	0213427
KS25 - 20	48.5	34	20	25	0213428
KS25 - 25	51	39	25	25	0213429
KS25 - 40	67	55	40	25	0213430

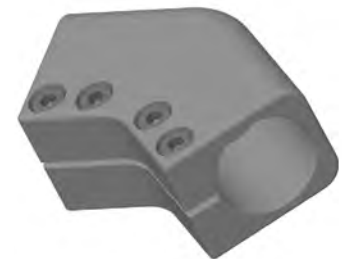


ELBOW CLAMPS

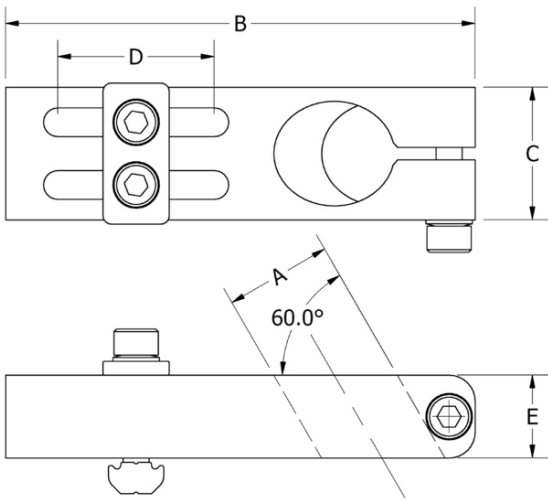


- Cross/parallel clamps, divided in two parts. Extremely flat component. Through turning of the separate elements you can quickly turn a cross clamp into a parallel clamp.
- All edges are rounded.
- The threads are formed.
- The surfaces are refined/anodized.

	A	B	C	D	Depth	Piab No.
WK45 - 16 - 16	65	38	16	16	26	0213470
WK45 - 25 - 25	87	60	25	25	35	0213471
WK45 - 40 - 40	114	89	40	40	50	0213472



LONG ANGLE CLAMPS

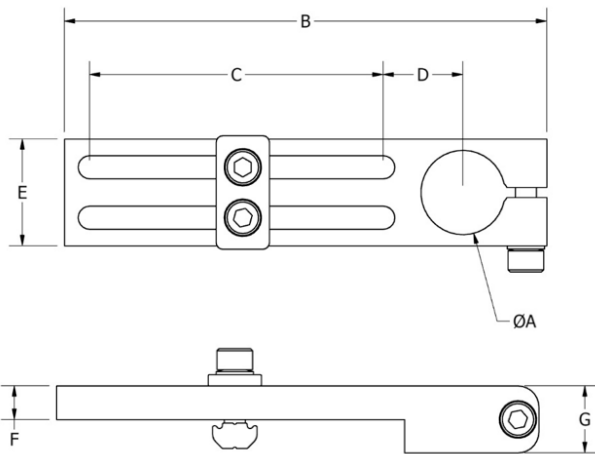


- Mounts components and extension arms at a 30° angle to profile surface.
- Adjustable parallel and perpendicular to frame profile.
- Can mount to all profile with a channel.

	A	B	C	D	E	Weight (g)	Piab No.
WSA 10	10	65	16	20	9.5	34	0214760
WSA 14	14	80	25	25	15.9	94	0214761
WSA 20	20	90	25.4	30	15.9	94	0214762
WSA 30	30	115	38	40	19	198	0214763



LONG ANGLE CLAMPS

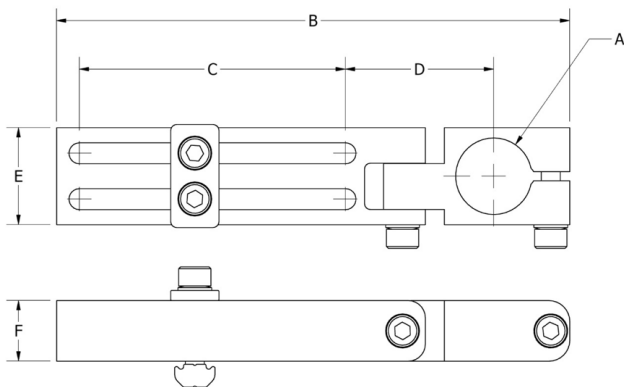


- Allows for top mounting of gripper arms and holders to frame profile.
- Adjustable parallel and perpendicular to the frame.
- Aluminum clamps are more rigid for instances where precise locating is needed such as GRF gripper fingers and MR cutters.
- Can mount to all profile with a channel.

	A	B	C	D	E	F	G	Weight (g)	Piab No.
WSL 10	10	80	47	14	16	6	10	29	0213029
WSL 14	14	100	62	16	22	8	13	55	0213030
WSL 20	20	115	70	19	25	8	16	74	0213031
WSL 20 JX	20	132	74	30	32	16	16	150	0214779
WSL 30 JX	30	137	64	35	45	19	19	281	0214784
WSL 14-100	14	139	100	16	22.2	7.5	12.7	70	0214778
WSL 20-100	20	146	100	19	25.4	8	15.9	90	0214783



ANGLE CLAMPS

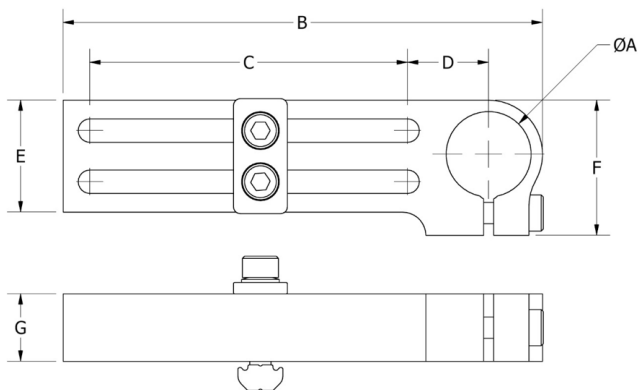


- Allows for top mounting of gripper arms and holders to frame profile.
- Adjustable parallel and perpendicular to the frame.
- Clamps offers a swivel mounting.
- Can mount to all profile with a channel.



	A	B	C	D	E	F	Weight (g)	Piab No.
WSL 10 SH	10	90	45	26	16	10	39	0214772
WSL 14 SH	14	113.5	60	31.5	22.3	13	80	0214775
WSL 20 SH	20	135	70	39	25.4	16	123	0214780
WSL 30 SH	30	153	70	49	38	19	250	0214785

LONG ANGLE CLAMPS



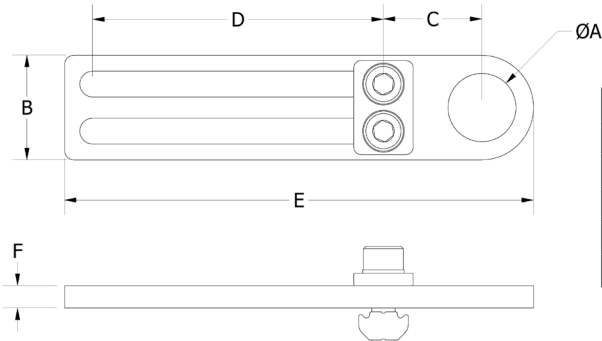
- Allows for top or bottom mounting of gripper arms or holders to frame profile.
- Adjustable parallel and perpendicular to the frame.
- Thick aluminum clamps are more rigid for use with extremely heavy parts.
- Allows for close mounting of clamps.
- Can mount to all profile with a channel.



	A	B	C	D	E	F	G	Weight (g)	Piab No.
WSL 10 TRB	10	80	47	14	17	22	10	35	0213037
WSL 14 TRB	14	100	64	16	20	25	13	59	0213038
WSL 20 TRB	20	115	75	19	26	32	16	110	0213039
WSL 30 TRB	30	130	77	28	37	45	19	205	0213040

Mounting

LONG ANGLE PLATES

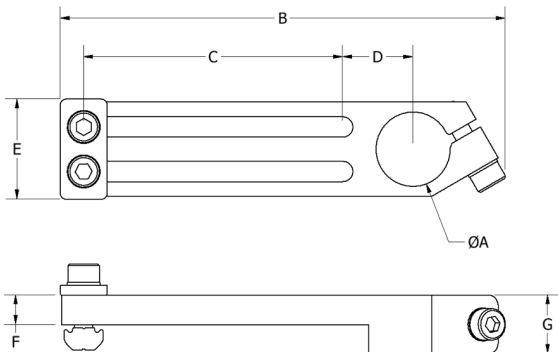


- Mounts lightweight vacuum cup holders to our standard frame profile.

	A	B	C	D	E	F	Weight (g)	Piab No.
WSF 10.5	10.5	15.9	13	47	80	3	21	0214767
WSF 12.5	13	27	21	57	100	3	36.6	0214768
WSF 14.5	14.5	22.3	21	62	100	5	37	0214769
WSF 16.5	17	27	21	57	100	5	34.7	0214770
WSF 20.5	20.5	31.8	24	70	115	5	56	0214771



LONG ANGLE PLATES

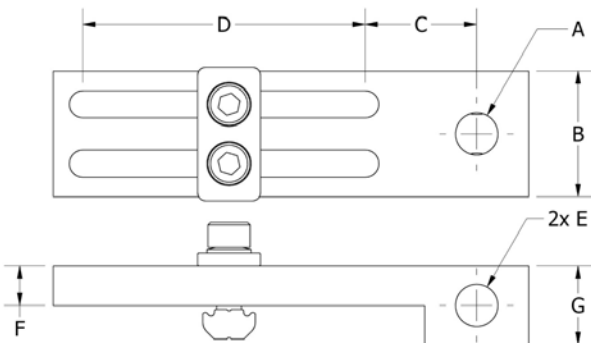


- Allows for top mounting of gripper arms or holders to frame profile.
- Adjustable parallel and perpendicular to the frame.
- Screw head points out at an angle from profile so clamps can be mounted close together.
- Allows for close mounting of clamps.



	A	B	C	D	E	F	G	Weight (g)	Piab No.
WSV 10	10	82	47	14	18	6	10	30	0213033
WSV 14	14	104	62	16	20	8	13	50	0213034
WSV 20	20	120	70	19	27	8	16	75	0213035
WSV 30	30	136	68	28	38	10	19	140	0213036

LONG ANGLE CONNECTORS

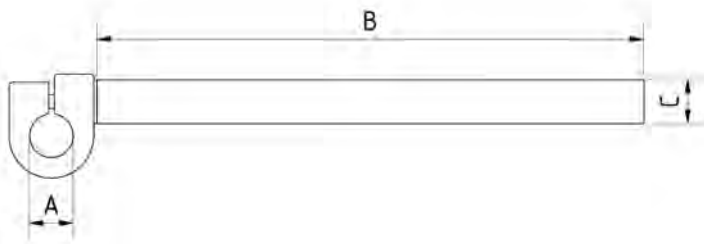


- Allows for low-profile height by mounting vacuum cups directly to the frame.
- Adjusts parallel & perpendicular to the profile.
- Extra port can connect vacuum to another cup.

	A	B	C	D	E	F	G	Weight (g)	Piab No.
WLS M5	M5	16	16	45	M5	6	13	28	0213041
WLS 1/8"	G 1/8"	25	23	57	G 1/8"	8	16	68	0213042
WLS 1/4"	G 1/4"	25	23	57	G 1/8"	8	16	67	0213043



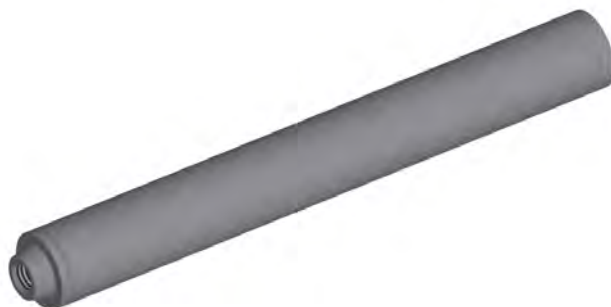
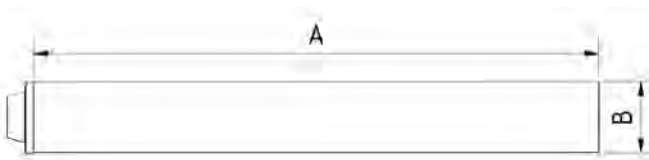
ONE-SIDED EXTENSION WITH CLAMP



- Allows for additional flexibility and settings.
- Optimal load transmission.
- Additional lengths available.
- The surfaces are refined / anodized.

	A	B	C	Piab No.
EV16 - 14 - 100	14	100	16	0213278
EV16 - 16 - 100	16	100	16	0213279
EV16 - 20 - 100	20	100	16	0213280
EV16 - 25 - 100	25	100	16	0213281
EV16 - 14 - 200	14	200	16	0213282
EV16 - 16 - 200	16	200	16	0213283
EV16 - 20 - 200	20	200	16	0213284
EV16 - 25 - 200	25	200	16	0213285
EV16 - 16 - 300	16	300	16	0213286
EV16 - 20 - 300	20	300	16	0213287
EV16 - 25 - 300	25	300	16	0213288
EV25 - 20 - 100	20	100	25	0213289
EV25 - 25 - 100	25	100	25	0213290
EV25 - 40 - 100	40	100	25	0213291
EV25 - 20 - 200	20	100	25	0213292
EV25 - 25 - 200	25	200	25	0213293
EV25 - 40 - 200	40	200	25	0213294
EV25 - 20 - 300	20	300	25	0213295
EV25 - 25 - 300	25	300	25	0213296
EV25 - 40 - 300	40	300	25	0213297
EV25 - 40 - 400	40	400	25	0216024

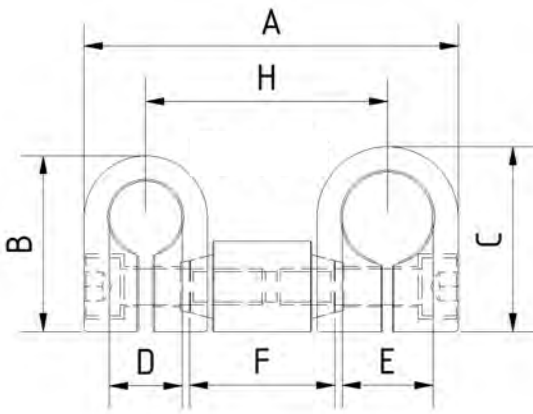
ONE-SIDED EXTENSION



- Seamless mounting of the double-sided extension (ZV). The aluminum pipes consist of a special aluminum alloy.
- Additional lengths available.
- The surfaces are refined / anodized.

	A	B	Piab No.
EV16 - 100	100	16	0213384
EV16 - 200	200	16	0213385
EV16 - 300	300	16	0213386
EV25 - 100	100	25	0213387
EV25 - 200	200	25	0213388
EV25 - 300	300	25	0213389
EV16/25 - 100	100	16	0213381
EV16/25 - 200	200	16	0213382
EV16/25 - 300	300	16	0213383

TWO SIDED EXTENSIONS

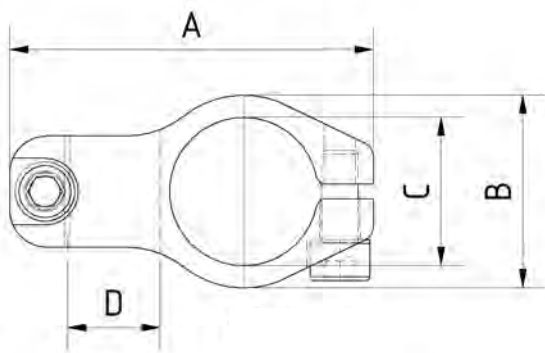


- Allows for additional flexibility and settings.
- Optimal load transmission.
- Long version provides optimum component distribution at the withdrawal gripper.
- The surfaces are refined / anodized.

	A	B	C	D	E	F	Depth	H	Piab No.
ZV16 - 16 - 10 - 30	70	31.5	38	10	16	30	20	41	0213298
ZV16 - 16 - 14 - 30	73	38	38	14	16	30	20	41	0213299
ZV16 - 16 - 16 - 30	73	38	38	16	16	30	20	41	0213300
ZV16 - 16 - 20 - 30	73	38	38	20	16	30	20	41	0213301
ZV16 - 16 - 10 - 50	90	31.5	38	10	16	50	20	61	0213302
ZV16 - 16 - 14 - 50	93	38	38	14	16	50	20	61	0213303
ZV16 - 16 - 16 - 50	93	38	38	16	16	50	20	61	0213304
ZV16 - 16 - 20 - 50	93	38	38	20	16	50	20	61	0213305
ZV25 - 25 - 20 - 40	102	48.5	51	20	25	40	25	67	0213306
ZV25 - 25 - 25 - 40	107	51	51	25	25	40	25	68	0213307
ZV25 - 40 - 20 - 40	118	48.5	66	20	40	40	25	75	0213308
ZV25 - 40 - 25 - 40	123	38	66	26	40	40	25	77	0213309
ZV25 - 40 - 40 - 40	141	66	66	40	40	40	25	85	0213310
ZV25 - 25 - 20 - 66	129	48.5	51	20	25	66	25	92	0213311
ZV25 - 25 - 25 - 66	134	51	51	25	25	66	25	93	0213312
ZV25 - 40 - 20 - 66	145	48.5	66	20	40	66	25	101	0213313
ZV25 - 40 - 25 - 66	150	38	66	25	40	66	25	103	0213314
ZV25 - 40 - 40 - 66	166	66	66	40	40	66	25	111	0213315
ZV25 - 25 - 20 - 125	188	48.5	51	20	25	125	25	152	0213316
ZV25 - 25 - 25 - 125	193	51	51	25	25	125	25	153	0213317
ZV25 - 40 - 20 - 125	204	48.5	66	22	40	125	25	160	0213318
ZV25 - 40 - 25 - 125	209	38	66	25	40	125	25	162	0213319
ZV25 - 40 - 40 - 125	225	66	66	40	40	125	25	170	0213320
ZV25 - 25 - 20G - 40	102	48.5	51	20	25	40	25	67	0216435
ZV25 - 25 - 25G - 40	107	51	51	25	25	40	25	68	0216438
ZV25 - 25 - 20G - 20	83	48.5	51	20	25	20	25	47	0216434
ZV25 - 25 - 25G - 20	88	51	51	25	25	20	25	48	0216437
ZV25 - 25 - 20G - 66	129	48.5	51	20	25	66	25	92	0216436
ZV25 - 25 - 25G - 66	134	51	51	25	25	66	25	93	0216439



TUBE CROSS CLAMPS

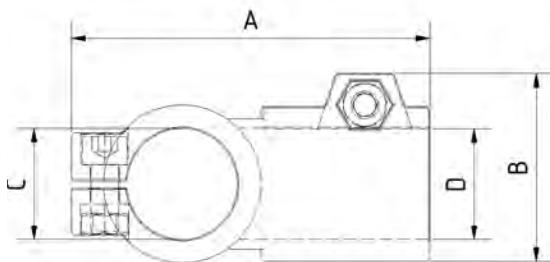


- Tube cross clamps provide safe connections.
- All edges are rounded.
- The threads are formed.
- The surfaces are refined / anodized.

	A	B	C	D	Depth	Piab No.
KK16 - 14	54	25	16	14	25	0213321
KK16 - 16	54	25	16	16	25	0213322
KK16 - 20	54	25	16	20	25	0213323
KK25 - 16	71	33	25	16	22	0213324
KK25 - 25	86	40	25	25	40	0213325
KK40 - 25	98	52	40	25	37	0213326
KK40 - 40	130	60	40	40	60	0213327



TUBE CROSS CLAMPS

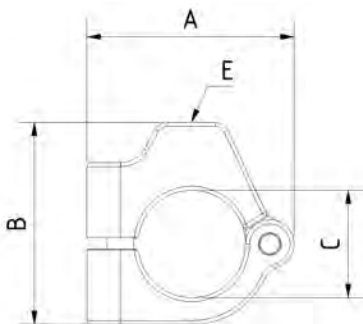


- Tube cross clamps provide safe connections.
- All edges are rounded.

	A	B	C	D	Depth	Piab No.
KKT16 - 16	55	35	16	16	25	0213328
KKT25 - 25	93	53	25	25	40	0213329
KKT40 - 25	92	54	40	25	52	0213330
KKT40 - 40	130	68	40	40	56	0213331



CLAMPS

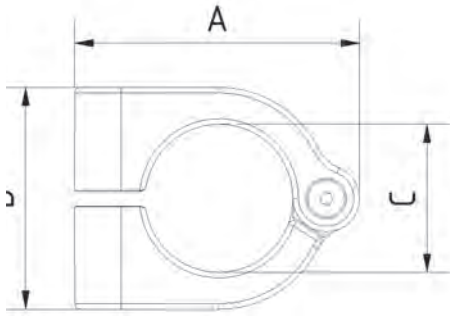


- Clamps foldable with eyelet thread. Suitable for retrofitting. Can be retrofitted to most any location easily.
- Material: high-strength aluminum.
- Add-on mounting possible.
- Very narrow version.
- The surfaces are refined / anodized.

	A	B	C	Depth	E	Piab No.
KSK25 - 25 - Ö - M8	62	60	25	25	M8	0213432
KSK25 - 40 - Ö - M10	77	75	40	25	M10	0213434

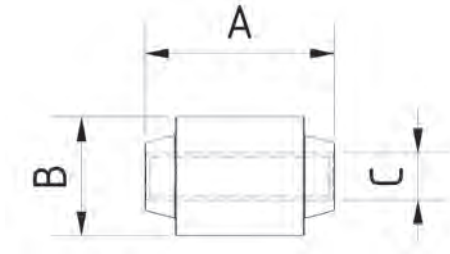


CLAMPS



- Clamps foldable with eyelet thread. Suitable for retrofitting and can be retrofitted to most any location easily.
- Material: high-strength aluminum.
- Add-on mounting possible.
- Very narrow version.
- The surfaces are refined / anodized.

	A	B	C	Depth	Piab No.
KSK25 - 25	77	45	25	25	0213431
KSK25 - 40	77	60	40	25	0213433

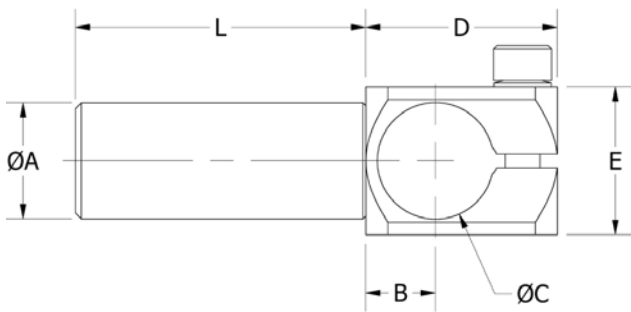


- The clamps consist of a special aluminum alloy and have a threaded hole.
- The threads are cut.

	A	B	C	Piab No.
KSVG16 - 30	77	45	M5	0213435
KSVG16 - 50	77	60	M5	0213436
KSVG25 - 40	77	60	M10	0213438
KSVG25 - 66	77	60	M10	0213439



ANGLE ARMS

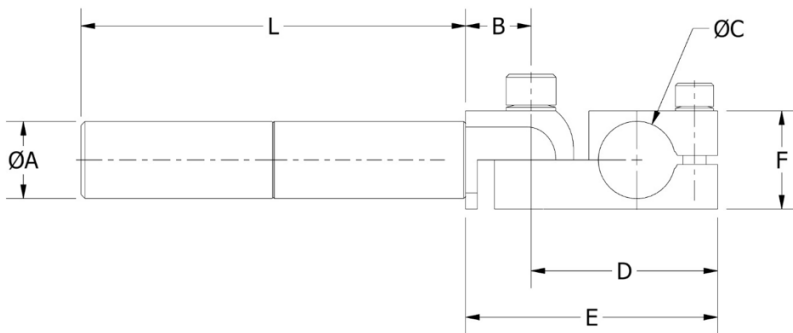


- Extends and mounts components to mounting clamps.
- Supplies 90° mounting with rotation.

	A	B	C	D	E	L	Material	Weight (g)	Piab No.
WKA 10-90	10	7	10	20	16	90	Aluminum	22	0213103
WKA 14-120	14	9	14	25	19	120	Aluminum	40	0213104
WKA 20-150	20	12	20	33	25	150	Aluminum	92	0213105
WKA 30-200	30	19	30	46	38	200	Aluminum	224	0213106



ELBOW ARMS

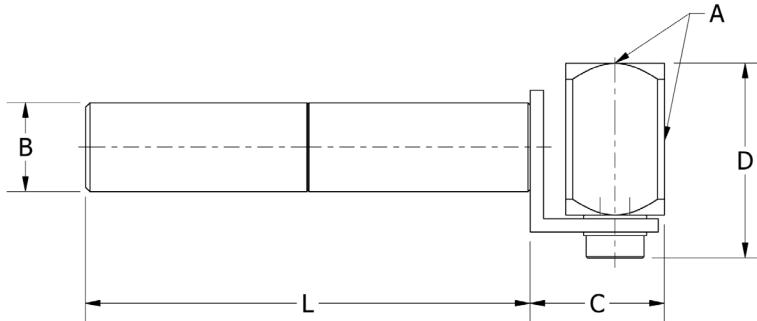


- Angle adjustable elbow.
- Useful for adjustment of GRZ gripper pliers and GRF gripper fingers.



	A	B	C	D	E	F	L	Weight (g)	Material	Piab No.
GLA 10-90	10	11	10	29	40	15.8	90	38	Aluminum	0213089
GLA 14-120	14	15.6	14	40	55.6	19	120	73	Aluminum	0213090
GLA 20-150	20	17	20	48.5	65.5	25.4	150	156	Aluminum	0213092
GLA 20/30-150	20	17	30	63.3	80.3	25.4	150	208	Aluminum	0213091

ELBOW GRIPPER ARMS



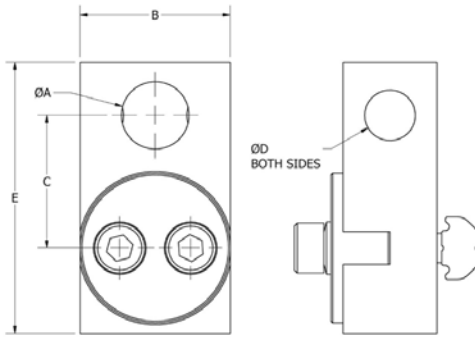
- Extends and mounts vacuum cups to mounting clamps.
- Side ported for quick-touch pneumatic hose connectors.
- Top bracket adjusts angle to match contour of part.
- When clamping shafts, maximum recommended torque on M5 clamping screws is 50 in-lbs (5.6 N-m).

	A	B	C	D	L	Weight (g)	Material	Piab No.
GGE 10-90	M5	10	17	24	90	21	Aluminum	0213107
GGE 14-120	G1/8"	14	24	31	120	45	Aluminum	0213108
GGE 20-150	G1/4"	20	30	40	150	105	Aluminum	0213109
GGE 30-200	G1/4"	30	33	45	200	181	Aluminum	0213110



Mounting

ADJUSTABLE ANGLE CONNECTORS

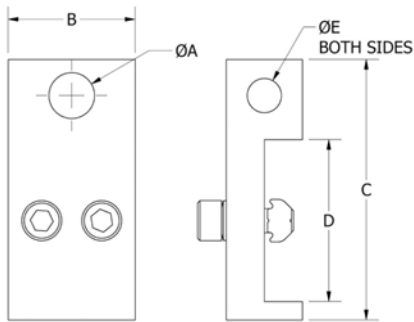


- Allows for low profile height by mounting vacuum cups directly to the frame profile.
- Adjustable along the frame profile and at any rotational angle.

	A	B	C	D	E	Angle	Weight (g)	Piab No.
WSD M5	M5	16	16	M5	32	360	21	0214766
WSD 1/8	G 1/8"	25	23	G 1/8"	46	360	60	0214765
WSD 1/4	G 1/4"	25	23	G 1/8"	46	360	59	0214764



ANGLE CONNECTORS

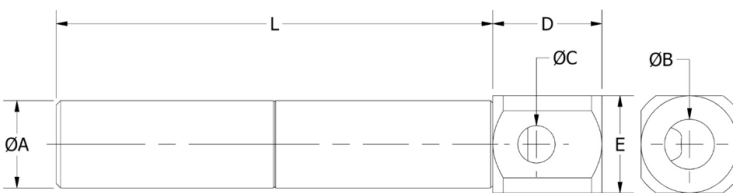


- Allows for low profile height by mounting vacuum cups directly to the frame profile.
- Adjustable along the channel of the frame profile.
- Extra port can connect vacuum to another cup.

	A	B	C	D	E	Weight (g)	Piab No.
WSS M5 L	M5	16	32	18	M5	18	0213041
WSS 1/8 X	G 1/8"	25	46	25	G 1/8"	47	0213042
WSS 1/4 X	G 1/4"	25	46	25	G 1/8"	47	0213043



GRIPPER ARMS

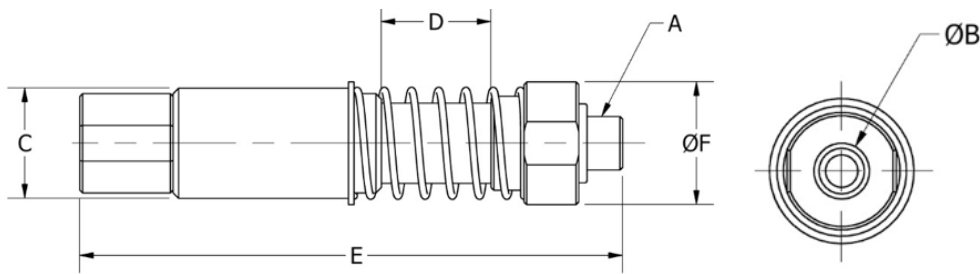


- Extends and mounts vacuum cups to mounting clamps.
- Side ported for quick-touch pneumatic hose connectors.



	A	B	C	D	E	L	Weight (g)	Material	Piab No.
GSE 10-M5-90	10	M5	M5	16	12.7	90	17	Aluminum	0213083
GSE 10-1/8-90	10	G 1/8"	M5	16	16	90	18	Aluminum	0213084
GSE 14-120	14	G 1/8"	G 1/8"	22	16	120	32	Aluminum	0213085
GSE 20-150	20	G 1/4"	G 1/8"	25	22.2	150	77	Aluminum	0213086
GSE 30-200	30	G 1/4"	G 1/4"	31	31.8	200	183	Aluminum	0213087
GSE 30-3/8-200	30	G 3/8"	G 1/4"	31	31.8	200	176	Aluminum	0213088

NON-ROTATIONAL IN-LINE SPRING-LOADED SPRUE PLIER ARMS



Compatible with Sprue/Part Pliers, this spring-loaded arm enables the GRZ to absorb the ejector stroke of the mold. Used when sprues and runner systems do not stay on the ejector pins after ejection from the mold.

- In-line non-rotational spring arm for Part / Sprue Pliers.
- End ported for quick- touch pneumatic hose connectors.

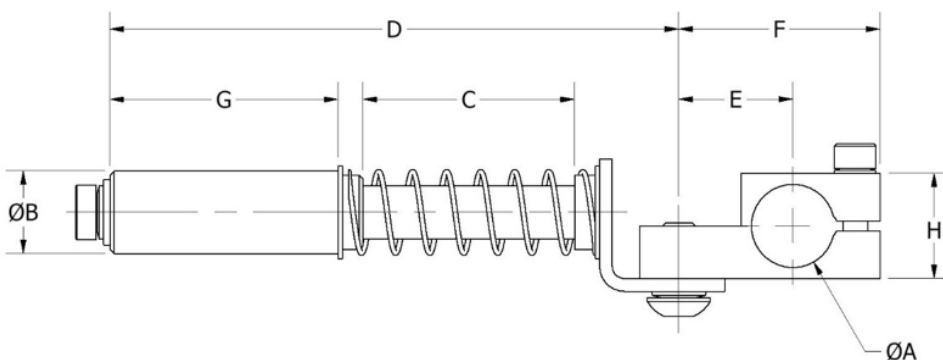


"C" Style

"M" Style

	A	B	C	D	E	F	Weight (g)	Piab No.
GSZ 10-C-10	M5 x 0.8	M5 x 0.8	10	10	62	13	25	0214397
GSZ 10-M-10	M5 x 0.8	M5 x 0.8	M10 x 1	10	62	13	40	0214398
GSZ 14-C-15	G 1/8	G 1/8	14	15	88	19	72	0214399
GSZ 14-C-40	G 1/8	G 1/8	14	15	113	19	68	0214400
GSZ 14-M-15	G 1/8	G 1/8	M14 x 1.5	40	88	19	72	0214401
GSZ 14-M-40	G 1/8	G 1/8	M14 x 1.5	40	113	19	80	0214402
GSZ 20-C-20	G 1/8	G 1/8	20	20	102	22	135	0214403
GSZ 20-C-20-14	G 1/4	G 1/4	20	20	103	22	135	0214404
GSZ 20-C-50	G 1/8	G 1/8	20	50	129	22	160	0214405
GSZ 20-C-50-14	G 1/4	G 1/4	20	50	133	22	160	0214406
GSZ 20-M-20	G 1/8	G 1/8	M20 x 1.5	20	102	22	135	0214407
GSZ 20-M-20-14	G 1/4	G 1/4	M20 x 1.5	20	103	22	175	0214408
GSZ 20-M-50	G 1/8	G 1/8	M20 x 1.5	50	129	22	200	0214409
GSZ 20-M-50-14	G 1/4	G 1/4	M20 x 1.5	50	133	22	200	0214410

SPRING-LOADED ELBOW ARMS

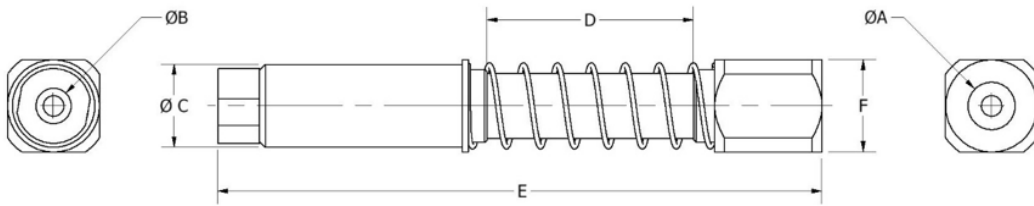


	A	B	C	D	E	F	G	H	Weight (g)	Piab No.
GGA 14-C-15	14	14	15	75	23	40	32	19	113	0214319
GGA 14-C-40	14	14	40	100	23	40	32	19	121	0214320
GGA 20-C-20	20	20	20	107	75.5	48.5	55	25.4	283	0214321
GGA 20-C-50	20	20	50	137	27.5	48.5	55	25.4	311	0214322

- Angle adjustable elbow arm.
- Spring-loaded for part compliance.



SPRING LOADED GRIPPER ARMS



- In-line spring arm extends and mounts vacuum cups to mounting clamps.
- End ported for quick-touch pneumatic hose connectors.
- Spring-loaded for part compliance.

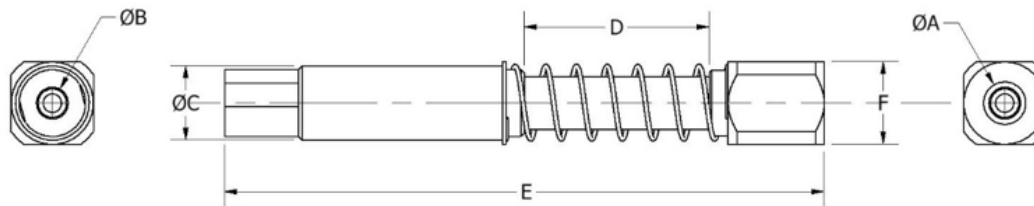
	A	B	C	D	E	F	Weight (g)	Piab No.
GEP 10-C-10	M5	M5	10	10	58	12.7	20	0213063
GEP 14-C-15	G 1/8"	M5	14	15	76	15.9	40	0213065
GEP 14-C-40	G 1/8"	M5	14	40	101	15.9	46	0213067
GEP 20-C-20	G 1/4"	G 1/8"	20	20	111	22.2	123	0213069
GEP 10-M-10	M5	M5	M10 X 1	10	58	12.7	34	0213064
GEP 14-M-15	G 1/8"	M5	M14 X 1.5	15	76	15.9	60	0213066
GEP 20-C-50	G 1/4"	G 1/8"	20	50	141	22.2	140	0213071
GEP 14-M-40	G 1/8"	M5	M14 X 1.5	40	101	15.9	66	0213068
GEP 20-M-20	G 1/4"	G 1/8"	M20 X 1.5	20	111	22.2	161	0213070
GEP 20-M-50	G 1/4"	G 1/8"	M20 X 1.5	50	141	22.2	175	0213072



"M" Style

"C" Style

NON-ROTATIONAL GRIPPER ARM



- Extends and mounts vacuum cups to mounting clamps.
- End ported for quick-touch pneumatic hose connectors.

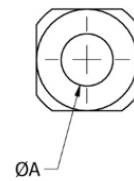
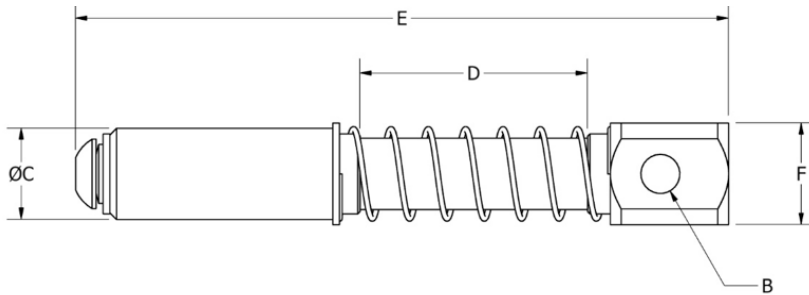
	A	B	ØC	D	E	F	Weight (g)	Piab No.
GNE 10-C-10	M5	M5	10	10	65	13	25	0213073
GNE 10-M-10	M5	M5	M10 x 1	10	65	13	40	0213074
GNE 14-C-15	G 1/8"	G 1/8"	14	15	93	16	65	0213075
GNE 14-C-40	G 1/8"	G 1/8"	14	40	118	16	72	0213077
GNE 14-M-15	G 1/8"	G 1/8"	M14 x 1.5	15	93	16	76	0213076
GNE 14-M-40	G 1/8"	G 1/8"	M14 x 1.5	40	118	16	83	0213078
GNE 20-C-20	G 1/4"	G 1/8"	20	20	132	22	206	0213079
GNE 20-C-50	G 1/4"	G 1/8"	20	50	162	22	234	0213081
GNE 20-M-20	G 1/4"	G 1/8"	M20 x 1.5	20	132	22	250	0213080
GNE 20-M-50	G 1/4"	G 1/8"	M20 x 1.5	50	162	22	280	0213082



"M" Style

"C" Style

SPRING-LOADED GRIPPER ARM



- Extends and mounts vacuum cups to mounting clamps.
- Side ported for quick-touch pneumatic hose connectors.
- Spring-loaded for part compliance.

	A	B	C	D	E	F	Weight (g)	Piab No.
GAF 10-C-10	M5	M5	10	10	60	13	22	0213047
GAF 14-C-15	G 1/8"	G 1/8"	14	15	72	16	42	0213049
GAF 14-C-40	G 1/8"	G 1/8"	14	40	100	16	48	0213051
GAF 20-C-20	G 1/4"	G 1/8"	20	20	109	22	132	0213053
GAF 20-C-50	G 1/4"	G 1/8"	20	50	143	22	148	0213055
GAF 20-C-100	G 1/4"	G 1/8"	20	100	206	22	195	0213057
GAF 30-C-40	G 3/8"	G 1/4"	30	80	180	32	348	0213059
GAF 30-C-80	G 3/8"	G 1/4"	30	80	180	32	399	0213061
GAF 10-M-10	M5	M5	M10 X 1	10	60	13	33	0213048
GAF 14-M-15	G 1/8"	G 1/8"	M14 X 1.5	15	72	16	55	0213050
GAF 14-M-40	G 1/8"	G 1/8"	M14 X 1.5	40	100	16	61	0213052
GAF 20-M-20	G 1/4"	G 1/8"	M20 X 1.5	20	109	22	154	0213054
GAF 20-M-50	G 1/4"	G 1/8"	M20 X 1.5	50	143	22	172	0213056
GAF 20-M-100	G 1/4"	G 1/8"	M20 X 1.5	100	206	22	215	0213058
GAF 30-M-40	G 3/8"	G 1/4"	M30 X 1.5	40	152	32	432	0213060
GAF 30-M-80	G 3/8"	G 1/4"	M30 X 1.5	80	180	32	492	0213062

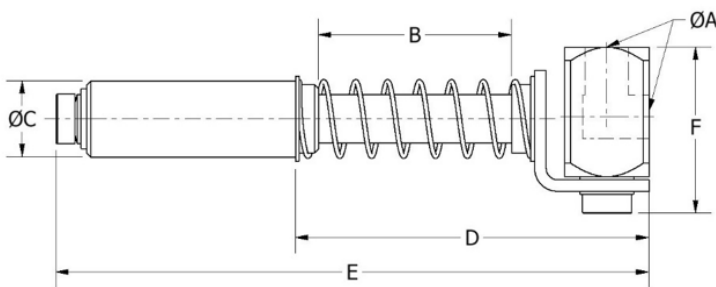


"M" Style



"C" Style

SPRING-LOADED NON-ROTATIONAL GRIPPER ARMS



- Extends and mounts vacuum cups to mounting clamps.
- Side ported for quick-touch pneumatic hose connectors.
- Top bracket adjusts angle to match contour of part.
- Spring-loaded for part compliance.
- Threaded shafts include jam nuts and lock washers for plate mounting.

	A	B	C (Dia/Thread)	D	E	F	Weight (g)	Piab No.
GGs 10-C-10	M5	10	10	34	64	22	34	0213093
GGs 14-C-15	G 1/8"	15	14	51	88	31	93	0213095
GGs 14-C-40	G 1/8"	40	14	76	113	31	105	0213097
GGs 20-C-20	G 1/4"	20	20	63	125	40	251	0213099
GGs 20-C-50	G 1/4"	50	20	93	155	40	283	0213101
GGs 20-M-20	G 1/4"	20	M20 X 1.5	63	125	40	275	0213100
GGs 20-M-50	G 1/4"	50	M20 X 1.5	93	155	40	307	0213102
GGs 10-M-10	M5	10	M10 X 1	34	64	22	46	0213094
GGs 14-M-15	G 1/8"	15	M14 X 1.5	51	88	31	104	0213096
GGs 14-M-40	G 1/8"	40	M14 X 1.5	76	113	31	117	0213098

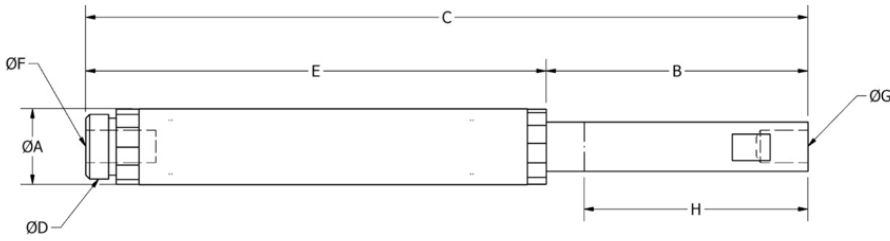


"M" Style



"C" Style

RETRACTING VACUUM ARMS

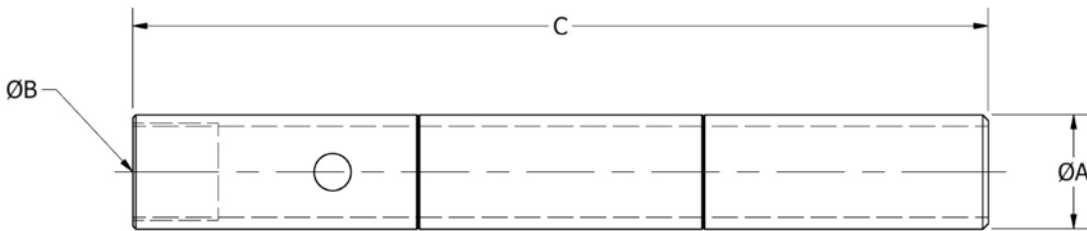


- Used in conjunction with a vacuum cup to retract the work piece once vacuum is made.
- Aids in insert molding, transfer molding, and short cycle molding.
- Extendable for longer reach (using VLR).

	A	B	C	D	E	F	G	H (Stroke)	Weight (g)	Piab No.
RVA 20-60	20	69	190	M17 x 1	121	G 1/8"	G 1/8"	60	68	0214599
RVA 30-50	30	71	190	M27 x 1	119	G 1/8"	G 1/4"	50	157	0214600



ARM EXTENSIONS

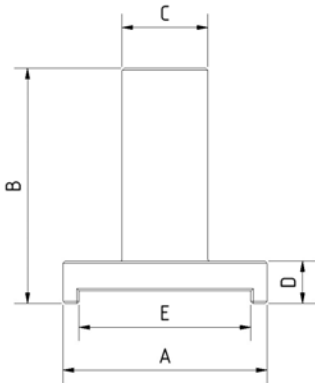


- Extends GRF and GRW gripper fingers.
- Attaches to ADZ and ADG cylinder adapters and to ZTB locators.
- Tightening hole for securing connection to mating parts.

	A	B	C	Weight (g)	Piab No.
VLR 10-90	10	M8 x 1	90	9	0213182
VLR 14-120	14	M12 x 1	120	19	0213183
VLR 20-150	20	M17 x 1	150	46	0213184
VLR 30-200	30	M27 x 1	200	94	0213185



GUIDE ADAPTERS



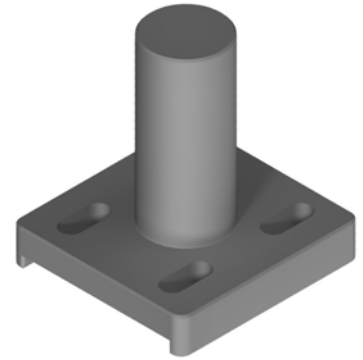
FA-40-45-D20

Product Code: FA-40-45-D20
 • Guide adapter for GZE 25

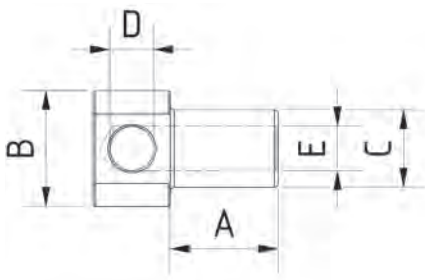
FA-40-45-D25

Product Code: FA-40-45-D25
 • Guide adapter for GZE 32

	A	B	C	D	E	Piab No.
FA-40-45-D20	47.5	55	20	10	40	0216028
FA-40-45-D25	52.5	55	25	10	45	0216029



SUCTION CUP ADAPTERS

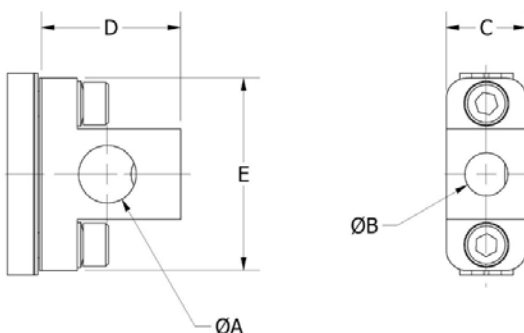


- Suction cup adapters. The component is used for the optimum positioning of a vacuum suction cup including plug.
- Compact design.
- 3 connection possibilities.

	A	B	C	D	E	Piab No.
SA16 - 28 - G1/8 - G1/8	28	25	16	G1/8	G1/8	0213332
SA20 - 28 - G1/4 - G1/4	28	30	20	G1/4	G1/4	0213333
SA25 - 40 - G3/8 - G3/8	40	35	25	G3/8	G3/8	0213334



VACUUM CUP CONNECTORS



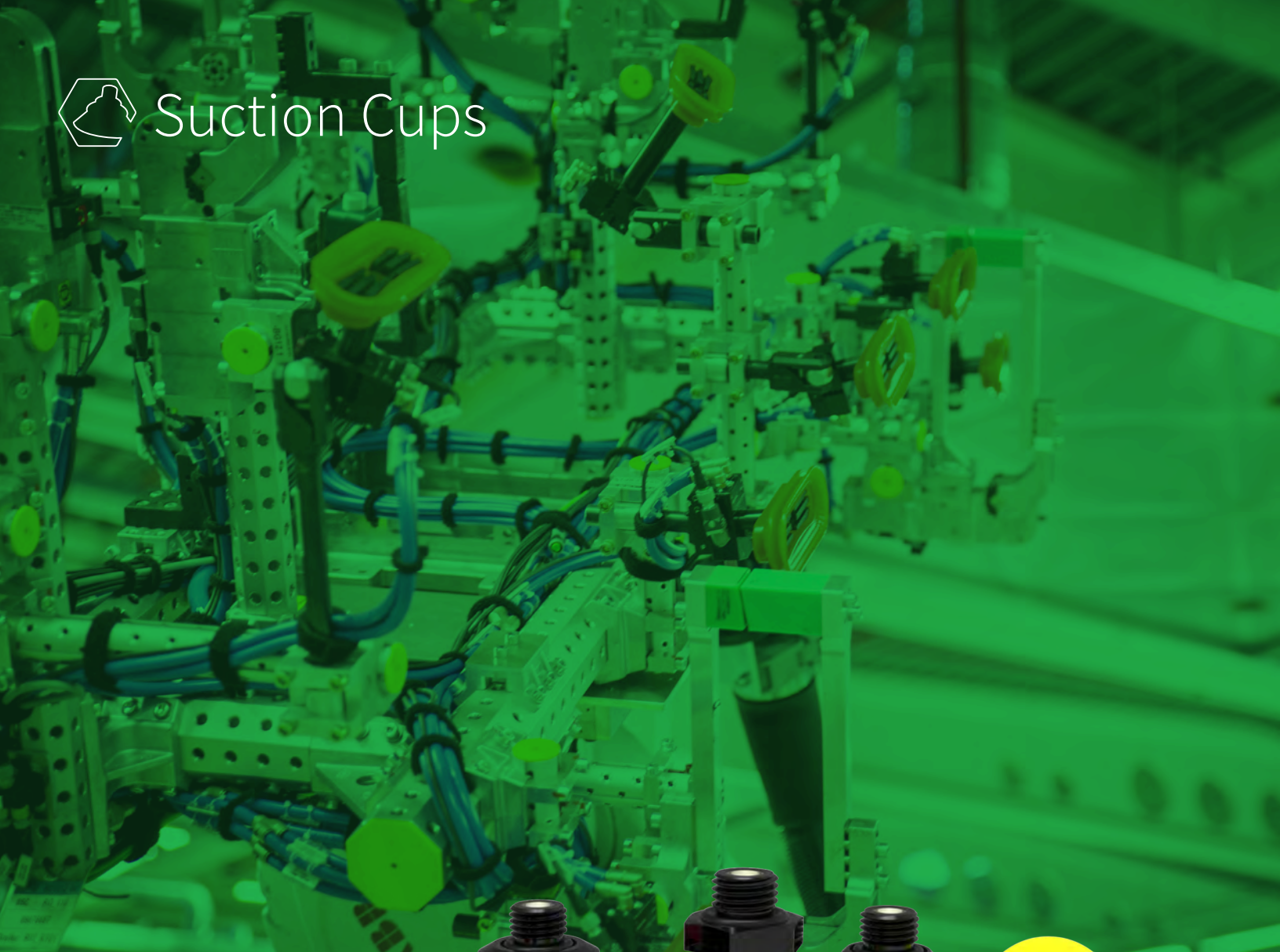
- Provides minimum profile height, allowing vacuum cups to be mounted to the side of the frame profile.
- Adjustable along the channel of the frame profile.



	A	B	C	D	E	Weight (g)	Piab No.
SAS 1/8	G 1/8"	G 1/8"	16	25	38	43	0214609
SAS 1/4	G 1/4"	G 1/8"	16	25	38	42	0214608



Suction Cups



Using suction cups is a lifting technique of many possibilities. You can, for example, handle metal sheets and glass, open bags, pick electronic components and hold objects. Piab offers one of the market's widest ranges of suction cups so that each application will have its own solution.

piGRIP®



The piGRIP® is a unique configurable suction cup concept with individually optimized parts for gripping, lifting and height compensation. Also a large selection of fittings makes it ready to fit new machines and easy to retrofit existing cups. The fittings available are both threaded and push on fittings.



LIPS

Get an excellent grip on almost anything with the right lip for your application. Choose standard lips from 60° shore to extremely flexible, soft lips in 18° shore.

- **Bag lips** – tailor-made for handling bags and pouches
- **Standard lips** – for versatile use, extra wear resistance
- **Flexible lips** – suitable for surface leaking materials
- **Foam lips** – suitable for irregular or textured surfaces

BELLOWS

Firm and Stable 1-, 3- and 6- folded bellows allows for faster machine speeds. Thin-wall design makes them faster to compress using less force and energy. The strength of the material increases lifting capacity between 30-50% compared to similar conventional cups.

FITTINGS

A large selection of fittings makes piGRIP® cups ready to fit new machines and easy to retrofit existing cups. Available are both threaded and push on fittings. piSAVE® restrict and piSAVE® sense are options that are suitable for handling different sized or a variable number of objects, in a centralized vacuum system.



Suction Cups

FLAT SUCTION CUPS



There is a variety of cups in this family to suit a number of different flat surfaces, e.g. cardboard, glass and metal sheets. The cleats stop deformation by preventing suction of the object into the cup. The suction cup has good stability and very little movement. Also suitable when the lifting force is parallel to the surface as the cleats increase friction.

- **Diameters** of 15 – 300mm
- Various **materials** available; DURAFLEX®, silicone, chloroprene, HNBR and more

BELLOWS SUCTION CUPS



The Bellows family is suitable for height differences and slightly uneven or curved surfaces. Several short bellows cups in one lifting device can handle objects with height differences and varying shapes. The bellows also provide a slight lifting movement to separate thin items.

- **Diameters** of 5 – 150mm
- Various **materials** available; DURAFLEX®, silicone, chloroprene, HNBR and more

DEEP SUCTION CUPS



The Deep suction cup family is designed for curved and irregular surfaces. Can lift even over corners and edges.

- **Diameters** of 5 – 50mm
- Available in the **materials** silicone and chloroprene

UNIVERSAL SUCTION CUPS



The Universal suction cup family is designed for flat or slightly curved surfaces.

- **Diameters** of 2 – 50mm
- Various **materials** available; DURAFLEX®, silicone, chloroprene and HNBR

MULTIBELLOWS SUCTION CUPS



This family is designed for height differences, slightly curved planes and uneven surfaces.

- **Diameters** of 10 – 110mm
- Various **materials** available; DURAFLEX®, silicone, chloroprene, HNBR and more

DURAFLEX® – MARK FREE SUCTION CUPS



The patented material DURAFLEX® is specially developed to combine the elasticity of rubber and the wear resistance of polyurethane. DURAFLEX® is mark-free which means that it leaves no trace on the object being handled.

- Various different **sizes** and **shapes** available
- Available with **dual durometers**
- Available with or without **bellows**

EXAMPLE SUCTION CUPS



*Oval Bellows Long
OBL40x90P
40x90mm
Polyurethane*



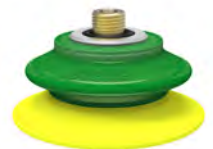
*Rectangular Bellows
RB20x45
20x45mm
DURAFLEX®*



*Flat Concave
FC100P
100mm
DURAFLEX®*



*Flat
F110
100mm
HNBR*



*Bellows DURAFLEX®
B75XP
75mm
DURAFLEX®*



*Bellows
B10-2
10mm
Chloroprene*



*Deep Concave Friction
DCF65P
65mm
DURAFLEX® Friction*



*Extra Large Flat
XLF300
300mm
Nitrile-PVC*



*Universal
U50-2
50mm
Nitrile-PVC*



*Oval Concave Friction
OCF30x90P
30x90mm
DURAFLEX® Friction*



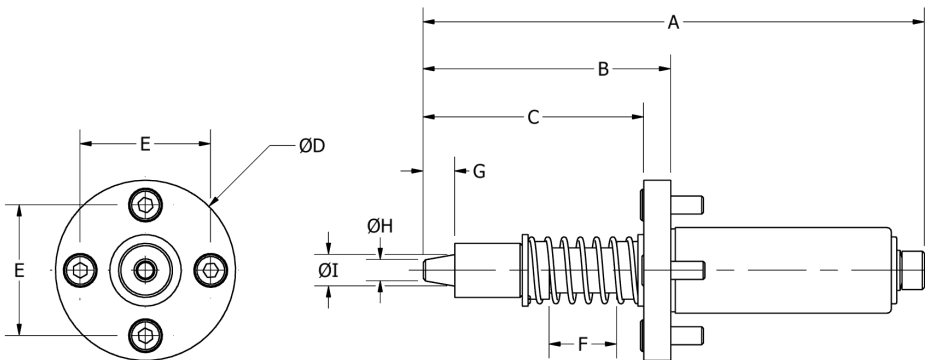
Locators



Our locators attach to cylinder adaptors, tightening and securing the connection to mating parts. Sized to fit your EOAT robot and mold, locators can dock on existing mold locators.

- **Accuracy** of +/- .02mm
- Expansive product and engineering **knowledge**

SPRING LOADED LOCATORS



- Provides accuracy of $\pm .02\text{mm}$.
- Sized to fit your End-of-Arm Tool robot and mold.
- Locators can dock on existing mold locators.

	A	B	C	D	E	F	G	H	I	Weight (g)	Piab No.
SLL 10-15	112	44	49	40	29	15	7	4.7	7	172	0214622
SLL 16-30	152	80	74	48	38	30	11	9.3	13	309	0214623

SLL 10-15

Product Code: SLL 10-15



SLL 16-30

Product Code: SLL 16-30





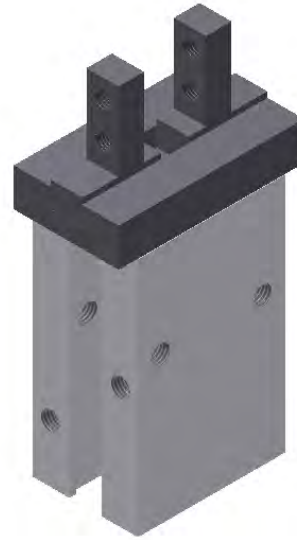
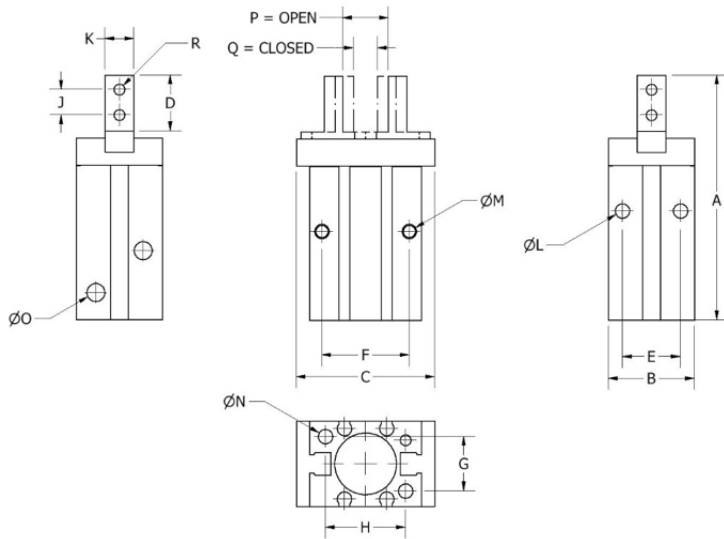
Mechanical Gripping



When vacuum gripping isn't an option, and you require a solution with more rigidity and greater precision, we pride ourselves in offering the highest quality, most dependable, and consistent mechanical gripping solutions.

- **Cost-efficient and reliable** product lines accommodate magnetic and finger systems
- Expansive product and engineering **knowledge**

PARALLEL GRIPPERS



- Double acting.
- Tapped holes in gripper arms allow for easy jaw attachment.
- Compatible with standard mounting clamps when combined with the appropriate ADG and a VLR Arm Extension.

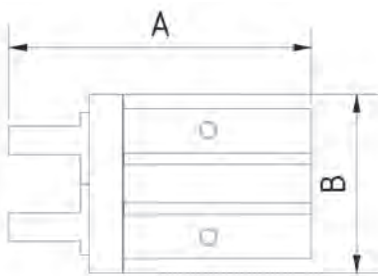
*Optional sensor: RRK-Y59B, RRK-Y59B-TP, RRK-Y7P or RRK-Y7P-TP.

Requirements

- Maximum air pressure 87 psi (6 bar).
- Requires filtered dry air.

	A	B	C	D	E	F	G	H	J	K	L	M	N	O (Air)	P	Q	R	Force (N)	Sensor (Optional)*	Weight (g)	Piab No.
PGR 10-S	57	16	29	12	11	16	12	18	6	5	M3	M3	M3	M3	9.7	5.7	M2.5	17	RRK-Y59B/ RRK-Y7P	55	0214561
PGR 16-S	67	24	38	15	16	24	15	22	7	8	M4	M4	M4	M5	12.6	6.6	M3	40	RRK-Y59B/ RRK-Y7P	120	0214562

PARALLEL GRIPPERS

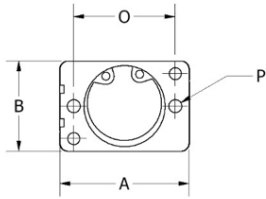
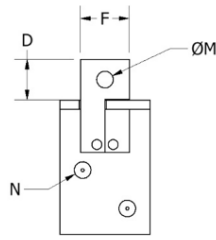
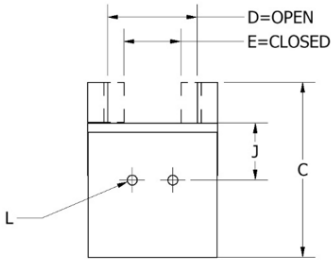


- Cylinder, including magnet, for the purpose of positioning.
- Further parallel grippers on demand.



	A	B	Depth	Stroke per Jaw	Piab No.
PG - MHZ2 - 10D	57	29	16.4	2	0216361
PG - MHZ2 - 16D	67.3	38	23.2	3	0216362
PG - MHZ2 - 20D	84.8	50	27.6	5	0216363
PG - MHZ2 - 25D	102.7	63	33.6	7	0216364

PGR PARALLEL GRIPPER



- Double acting.
- Tapped holes in gripper arms allow for easy jaw attachment.
- Compatible with standard mounting clamps when combined with the appropriate ADG and a VLR Arm Extension.

*Optional sensor: SN 1.5, SP 1.5, SN 1.5-P, or SP 1.5-P (*needs sensor kit to mount)

	A	B	C	D	E	F	G	H	J	L	M	N	O	P	Force (N)	Sensor Kit	Piab No.
PGR 25	25	18	34	17	11	10	4	10	15	M3	M4	M3	20	M3	35	PGR 25 SK	0214563
PGR 32	32	22	43	22	14	12	5	10	19	M3	M5	M5	25	M4	61	PGR 32 SK	0214565
PGR 40	40	26	51	28	16	16	6	10	24	M3	M5	M5	32	M4	110	PGR 40 SK	0214567

PGR 25 SENSOR MOUNTING KIT

Product Code: PGR 25 SK

Piab No. 0214564

- Sensor jaw for PGR 25.
- Includes: Sensor bracket, set screws, and mounting screws.

*Optional sensor: SN 1.5, SP 1.5, SN 1.5-P, SP 1.5-p.

PGR 32 SENSOR MOUNTING KIT

Product Code: PGR 32 SK

Piab No. 0214566

- Sensor jaw for PGR 32.
- Includes: Sensor bracket, set screws, and mounting screws.

*Optional sensor: SN 1.5, SP 1.5, SN 1.5-P, SP 1.5-p.

PGR 40 SENSOR MOUNTING KIT

Product Code: PGR 40 SK

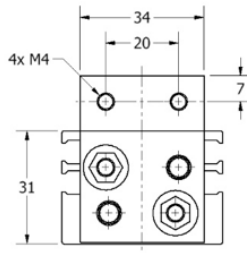
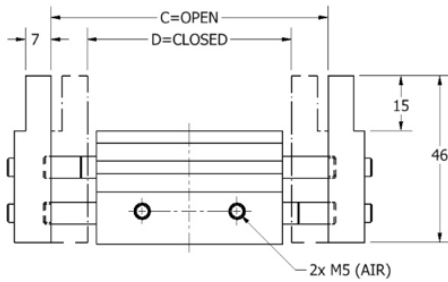
Piab No. 0214568

- Sensor jaw for PGR 40.
- Includes: Sensor bracket, set screws, and mounting screws.

*Optional sensor: SN 1.5, SP 1.5, SN 1.5-P, SP 1.5-p.



LARGE PARALLEL GRIPPERS

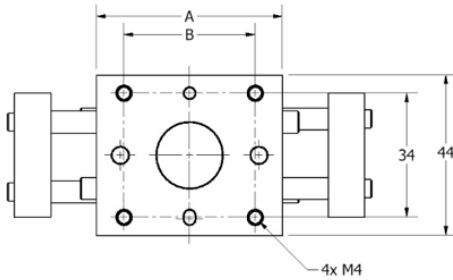


- Double acting.
- Tapped holes in gripper arms allow for easy jaw attachment.
- Compatible with standard mounting clamps when combined with the appropriate ADG and a VLR Arm Extension.

*Optional sensor: RRK-Y59B, RRK-Y59B-TP, RRK-Y7P or RRK-Y7P-TP.

Requirements

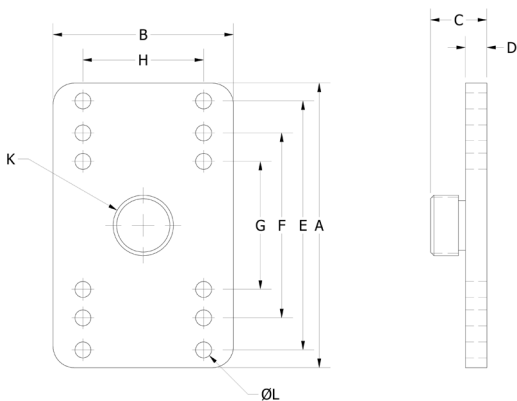
- Maximum air pressure 87 psi (6 bar).
- Requires filtered dry air.



	A	B	C	D	Force (N)	Sensor (Optional)*	Weight (g)	Piab No.
LPG 10-10	51	36	76	56	22	RRK-Y59B/ RRK-Y7P	298	0214520
LPG 10-25	67	52	118	78	22	RRK-Y59B/ RRK-Y7P	377	0214521
LPG 10-30	85	70	156	96	22	RRK-Y59B/ RRK-Y7P	425	0214522



ADAPTERS FOR PARALLEL GRIPPER



- Allows PGR and LPG grippers to attach to standard VLR Arm Extensions and mount in standard mounting clamps.

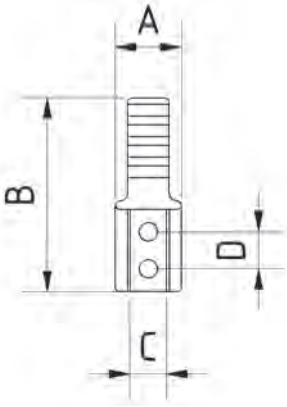


	A	B	C	D	E	F	G	H	K	L	Cylinder	Ext.	Weight (g)	Piab No.
ADG 10-S	30	19	16	6	18	-	-	12	M8 x 1	3.5	PGR 10-S	VLR 10...	7	0214157
ADG 14-S	32	25	16	6	22	-	-	15	M12 x 1	4.5	PGR 16-S	VLR 14...	14	0214160
ADG 14-25	25	16	16	6	20	-	-	-	M12 x 1	3.5	PGR 25	VLR 14...	9	0214158
ADG 14-32	38	19	16	6	25	-	-	-	M12 x 1	4.5	PGR 32	VLR 14...	12	0214159
ADG 20-S	80	51	16	6	70	52	36	34	M17 x 1	4.5	LPG 10-...	VLR 20...	70	0214162
ADG 20-40	45	19	16	6	32	-	-	-	M17 x 1	4.5	PGR 40	VLR 20...	17	0214161



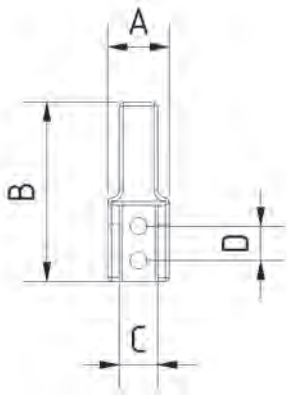
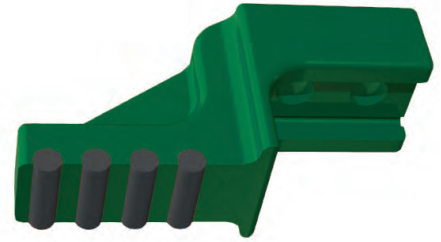
Mechanical Gripping

PLASTIC JAWS



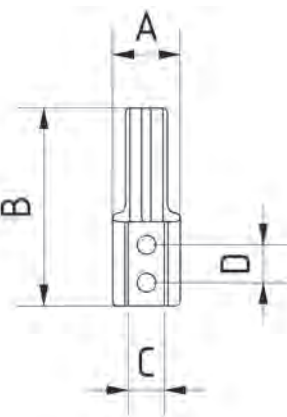
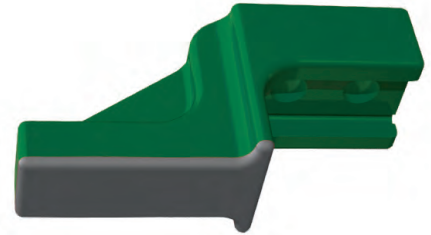
- Plastic jaws made of polyamide 12.
- Rubberized layer. Applied crosswise.

	A	B	C	D	Piab No.	Applicable Gripper
KB - MHZ2 - 10 - GQ	8	27	5	5.5	0213415	PG - MHZ2 - 10D
KB - MHZ2 - 20 - GQ	16	47	10	9	0213417	PG - MHZ2 - 20D
KB - MHZ2 - 25 - GQ	20	55	12	12	0213419	PG - MHZ2 - 25D
KB - MHZ2 - 10 - GL	20	55	12	12	0216333	PG - MHZ2 - 10D
KB - MHZ2 - 20 - GL	20	55	12	12	0216334	PG - MHZ2 - 20D
KB - MHZ2 - 25 - GL	20	55	12	12	0216335	PG - MHZ2 - 25D



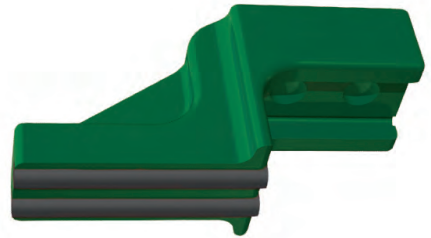
- Plastic jaws made of polyamide 12.
- Flocked layer.

	A	B	C	D	Piab No.	Applicable Gripper
KB-MHZ2 - 10 - Flock	8	27	5	5.5	0213414	PG - MHZ2 - 10D
KB-MHZ2 - 20 - Flock	16	47	10	9	0213416	PG - MHZ2 - 20D



- Plastic jaws made of polyamide 12.
- Rubberized layer.

	A	B	C	D	Piab No.	Applicable Gripper
KB - MHZ2 - 10 - GL	8	27	5	5.5	0216333	PG - MHZ2 - 10D
KB - MHZ2 - 20 - GL	16	47	10	9	0216334	PG - MHZ2 - 20D
KB - MHZ2 - 25 - GL	20	55	12	12	0216335	PG - MHZ2 - 25D



GRZ 10-6

This body size is able to apply 10 N force at midpoint of the jaw.

Requirements

- Maximum air pressure 87 psi (6 bar).
- Requires filtered dry air.

	A	C	D	E	F	H	I	J	K	O	P	Force (N)	Piab No.
GRZ 10-6	10	15	30	12	15	11	6	M4	M5	3	8	10	0214364

Jaw Types Available:

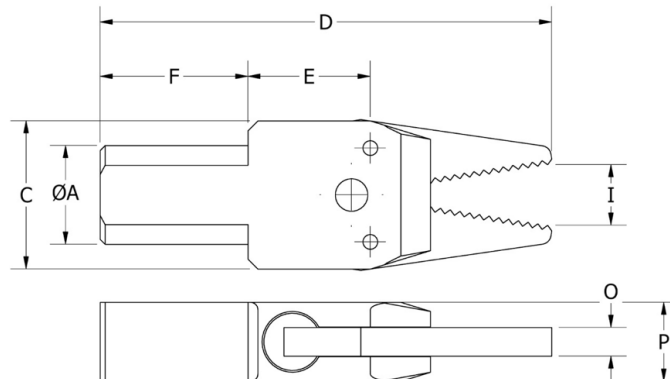


Standard-Type

The Standard-Type jaws come with a knurled pattern on the jaw-face to better grip the sprue / part.

GRZ 10-6 PART/SPRUE GRIPPER

Product Code: GRZ 10-6



- The Standard-Type jaws come with a knurled pattern on the jaw-face to better grip the sprue/part.
- Single action spring return function.
- Fully compatible with Piab's modular EOAT/gripper system.
- Requires 10mm Mounting Clamp.

Mechanical Gripping

GRZ 10-8

This body size is able to apply 19 N force at midpoint of the jaw.

Requirements

- Maximum air pressure 87 psi (6 bar).
- Requires filtered dry air.

	A	C	D	E	F	H	I	J	K	O	P	Force (N)	Sensor (Optional)	Piab No.
GRZ 10-8	10	20	40	16	15	14	8	M6	M5	4	10	19	-	0214365
GRZ 10-8 C	10	20	40	16	15	14	8	M6	M5	4	10	19	Built-in Sensor	0214366

Jaw Types Available:



Standard-Type

The Standard-Type jaws come with a knurled pattern on the jaw-face to better grip the sprue / part.

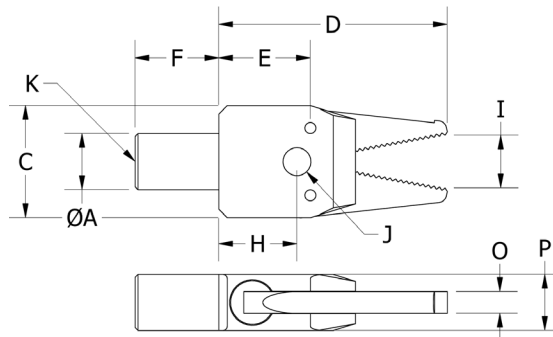


C-Type

The C-Type jaws have sensors added to them to detect when the jaws are in the closed state with a sprue / part clamped within them.

GRZ 10-8 PART/SPRUE GRIPPER

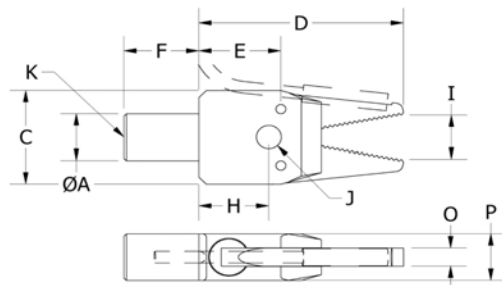
Product Code: GRZ 10-8



- Knurled pattern on the jaw-face with magnetic sensor to detect when jaw is closed.
- Single action spring return function.
- Fully compatible with Piab's modular EOAT/gripper system.
- Requires 10mm Mounting Clamp.

GRZ 10-8 C PART/SPRUE GRIPPER

Product Code: GRZ 10-8 C



- Knurled pattern on the jaw-face with magnetic sensor to detect when jaw is closed.
- Single action spring return function
- Fully compatible with Piab's modular EOAT/gripper system
- In-jaw part sensor does not require adjustment.
- Requires 10mm Mounting Clamp.

GRZ 10-10

This body size is able to apply 20 N force at midpoint of the jaw.

Requirements

- Maximum air pressure 87 psi (6 bar).
- Requires filtered dry air.

Jaw Types Available:



Standard-Type

The Standard-Type jaws come with a knurled pattern on the jaw-face to better grip the sprue / part.



A-Type

The A-Type jaws have 2 holes for mounting custom jaws to the body.



A1-Type

The A1-Type jaws have 3 holes for mounting custom jaws to the body.



C-Type

The C-Type jaws have sensors added to them to detect when the jaws are in the closed state with a sprue/part clamped within them.



KT-Type

The KT-Type jaws have an equatorial diameter to pick parts that are round.



NP-Type

The NP-Type jaws add nitrile rubber pad to the jaws to prevent marring of finished parts.



NPC-Type

The NPC-Type has long jaws with the full surface of saw teeth.



ST-Type

The ST-Type jaw adds aggressive teeth to clamp into the sprue.

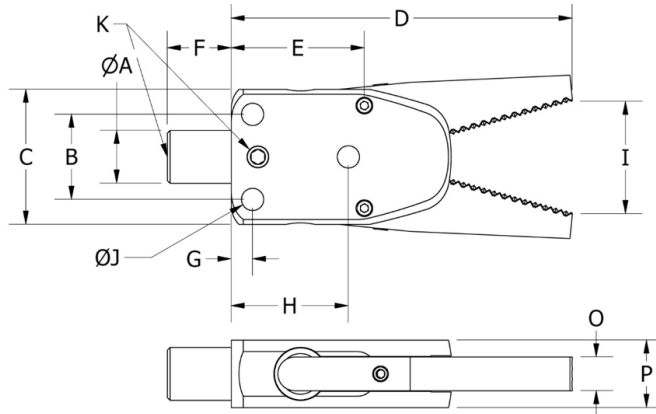


STC-Type

The STC-Type jaw adds aggressive teeth to clamp into the sprue.

GRZ 10-10 PART/SPRUE GRIPPER

Product Code: GRZ 10-10

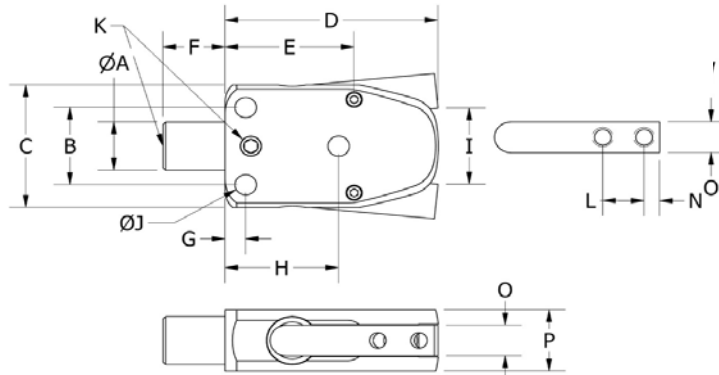


- The Standard-Type jaws come with a knurled pattern on the jaw-face to better grip the sprue/part.
- Single action spring return function.
- Fully compatible with Piab's modular EOAT/gripper system.
- Anodized finish.

	A	B	C	D	E	F	G	H	I	J	K	O	P	Force (N)	Piab No.
GRZ 10-10	10	16	25	64	25	12	4	22	21	4.2	M5	6	13	20	0213190

GRZ 10-10 A PART/SPRUE GRIPPER

Product Code: GRZ 10-10 A

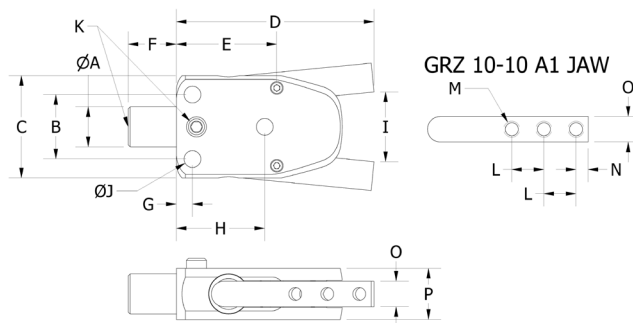


- 2 Holes in the jaws to allow mounting custom jaws.
- Single action spring return function.
- Fully compatible with Piab's modular EOAT/gripper system.
- Anodized Finish.
- Requires 10mm Mounting Clamp, or mounting holes.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Piab No.
GRZ 10-10 A	10	16	25	41	25	12	4	22	17	4.2	M5	8	M4	3	6	13	0214354

GRZ 10-10 A1 PART/SPRUE GRIPPER

Product Code: GRZ 10-10 A1

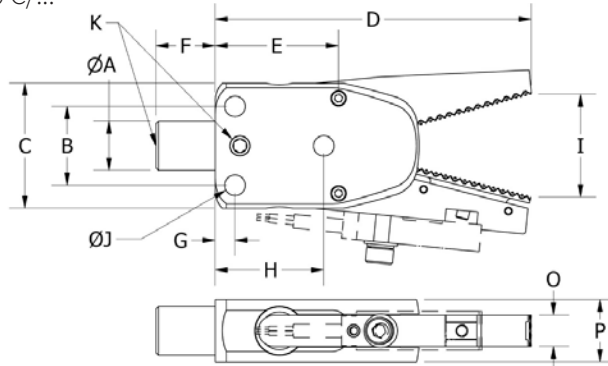


- 3 Holes in the jaws to allow mounting custom jaws.
- Single action spring return function.
- Fully compatible with Piab's modular EOAT/gripper system.
- Anodized Finish.
- Requires 10mm Mounting Clamp, or mounting holes.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Piab No.
GRZ 10-10 A1	10	16	25	48	25	12	4	22	19	4.2	M5	8	M4	3	6	13	0214356

GRZ 10-10 C/... PART/SPRUE GRIPPER

Product Code: GRZ 10-10 C/...

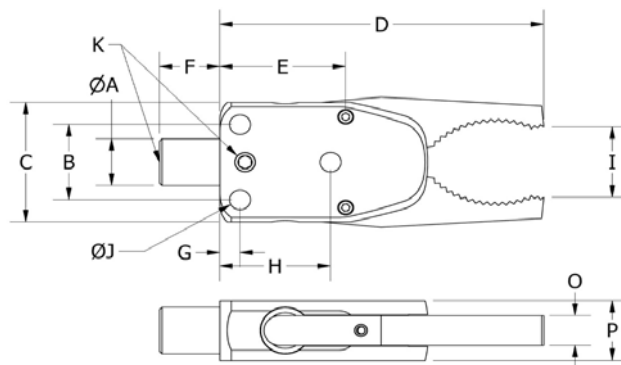


- The C-Type jaws have sensors added to them to detect when the jaws are in the closed state with a sprue/part clamped within them.
- Single action spring return function.
- Fully compatible with Piab's modular EOAT/gripper system.
- Anodized Finish.
- External sensor does not require adjustment.
- Requires 10mm Mounting Clamp, or mounting holes.

	A	B	C	D	E	F	G	H	I	J	K	O	P	Force (N)	Sensor (Inc.)	Piab No.
GRZ 10-10 C-N	10	16	25	64	25	12	4	22	21	4.2	M5	6	13	20	SN 1.5	0213358
GRZ 10-10 C-N8	10	16	25	64	25	12	4	22	21	4.2	M5	6	13	20	SN 1.5-P	0213396
GRZ 10-10 C-P	10	16	25	64	25	12	4	22	21	4.2	M5	6	13	20	SP 1.5	0213344
GRZ 10-10 C-P8	10	16	25	64	25	12	4	22	21	4.2	M5	6	13	20	SP 1.5-P	0213353

GRZ 10-10 KT PART/SPRUE GRIPPER

Product Code: GRZ 10-10 KT

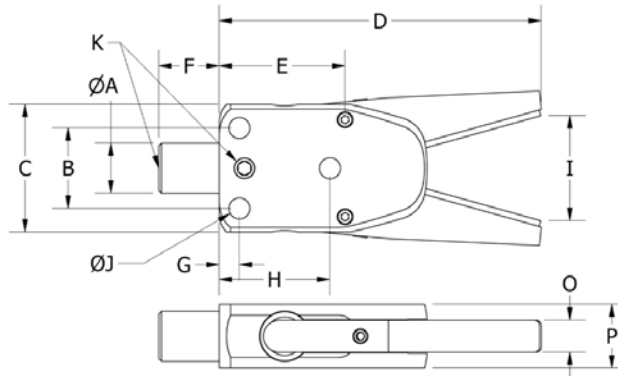


- The KT-Type jaws have an equatorial diameter to pick parts that are round.
- The T-Type jaws adds diagonal teeth to the jaw-face to prevent slipping of the material being grabbed.
- Single action spring return function.
- Fully compatible with Piab's modular EOAT/gripper system.
- Anodized Finish.
- Requires 10mm Mounting Clamp, or mounting holes.

	A	B	C	D	E	F	G	H	I	J	K	O	P	Force (N)	Piab No.
GRZ 10-10 KT	10	16	25	64	25	12	4	22	14	4.2	M5	6	13	20	0214360

GRZ 10-10 NP PART/SPRUE GRIPPER WITH PADDED JAW

Product Code: GRZ 10-10 NP

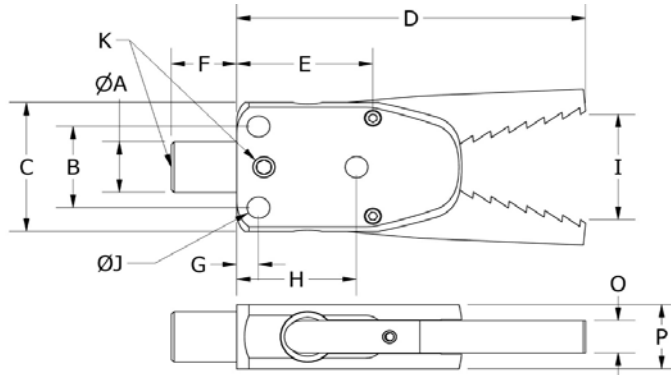


- The NP-Type jaws add nitrile rubber pad to the jaws to prevent marring of finished parts.
- Single action spring return function.
- Fully compatible with Piab's modular EOAT/gripper system.
- Anodized finish.

	A	B	C	D	E	F	G	H	I	J	K	O	P	Force (N)	Piab No.
GRZ 10-10 NP	10	16	25	64	25	12	4	22	21	4.2	M5	6	13	20	0213190

GRZ 10-10 ST PART/SPRUE GRIPPER

Product Code: GRZ 10-10 ST

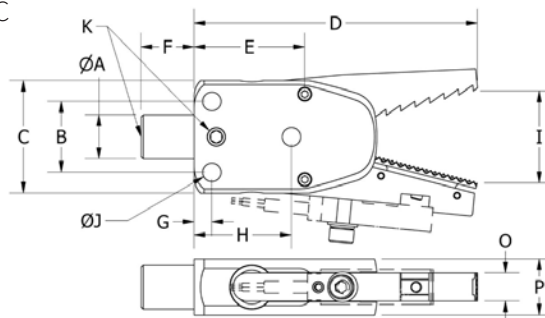


- Aggressive teeth to clamp into the sprue.
- Single action spring return function.
- Fully compatible with Piab's modular EOAT/gripper system.
- Anodized finish.

	A	B	C	D	E	F	G	H	I	J	K	O	P	Force (N)	Piab No.
GRZ 10-10 ST	10	16	25	64	25	12	4	22	21	4.2	M7	6	13	20	0213196

GRZ 10-10 STC PART/SPRUE GRIPPER

Product Code: GRZ 10-10 STC



- Used for aggressive teeth to clamp into the sprue.
- Single action spring return function.
- Fully compatible with Piab's modular EOAT/gripper system.
- Anodized Finish.
- External sensor does not require adjustment.

	A	B	C	D	E	F	G	H	I	J	K	O	P	Force (N)	Sensor (Inc.)	Piab No.
GRZ 10-10 STC-N	10	16	25	64	25	12	4	22	21	4.2	M8	6	13	20	SN 1.5	0213478
GRZ 10-10 STC-N8	10	16	25	64	25	12	4	22	21	4.2	M8	6	13	20	SN 1.5-P	0213741
GRZ 10-10 STC-P	10	16	25	64	25	12	4	22	21	4.2	M8	6	13	20	SP 1.5	0213468
GRZ 10-10 STC-P8	10	16	25	64	25	12	4	22	21	4.2	M8	6	13	20	SP 1.5-P	0213469

GRZ 10-12

This body size is able to apply 34 N force at midpoint of the jaw.

Requirements

- Maximum air pressure 87 psi (6 bar).
- Requires filtered dry air.

Jaw Types Available:



Standard-Type

The Standard-Type jaws come with a knurled pattern on the jaw-face to better grip the sprue/part.



A-Type

The A-Type jaws have 2 holes for mounting custom jaws to the body.



C-Type

The C-Type jaws have sensors added to them to detect when the jaws are in the closed state with a sprue/part clamped within them.



NP-Type

The NP-Type jaws add nitrile rubber pad to the jaws to prevent marring of finished parts.



NPC-Type

The NPC-Type has long jaws with the full surface of saw teeth.



ST-Type

The ST-Type jaw adds aggressive teeth to clamp into the sprue.

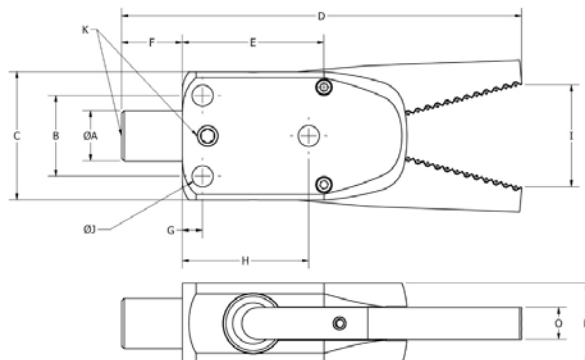


STC-Type

The STC-Type jaw adds aggressive teeth to clamp into the sprue.

GRZ 10-12 PART/SPRUE GRIPPER

Product Code: GRZ 10-12

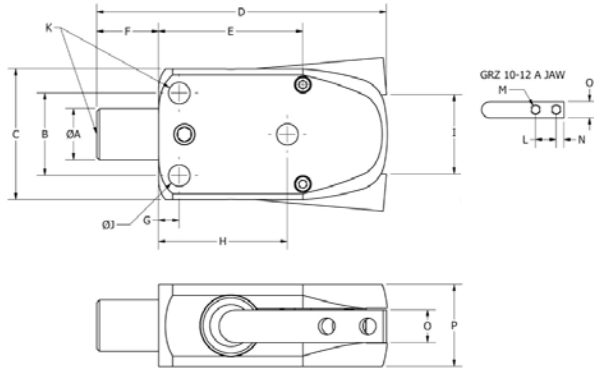


- The Standard-Type jaws come with a knurled pattern on the jaw-face to better grip the sprue/part.
- Single action spring return function.
- Fully compatible with Piab's modular EOAT/gripper system.
- Anodized finish.

	A	B	C	D	E	F	G	H	I	J	K	O	P	Force (N)	Piab No.
GRZ 10-12	10	16	25	67	28	12	4	25	21	4.2	M5	6	16	34	0213191

GRZ 10-12 A PART/SPRUE GRIPPER

Product Code: GRZ 10-12 A

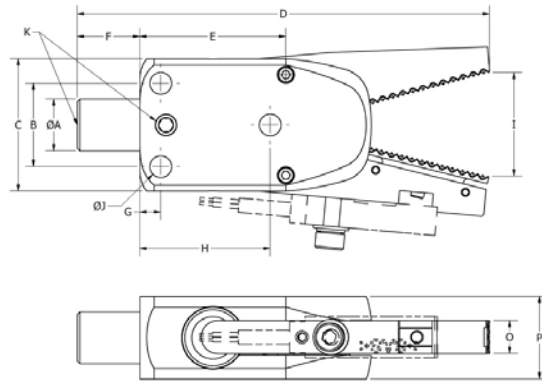


- 2 Holes in the jaws to allow mounting custom jaws .
- Single action spring return function.
- Fully compatible with Piab's modular EOAT/gripper system.
- Anodized finish.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Piab No.
GRZ 10-12 A	10	16	25	44	28	12	4	25	17	4.2	M5	8	M4	3	6	16	0214363

GRZ 10-12 C/... PART/SPRUE GRIPPER

Product Code: GRZ 10-12 C/...

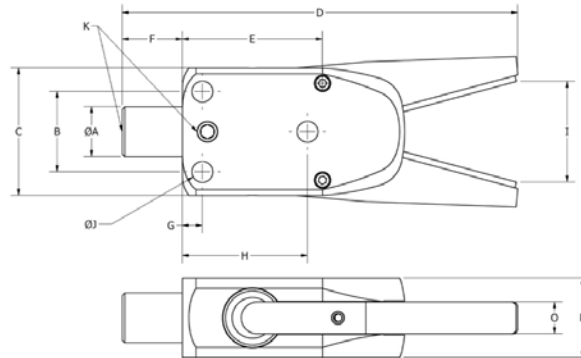


- The C-Type jaws have sensors added to them to detect when the jaws are in the closed state with a sprue/part clamped within them.
- Single action spring return function.
- Fully compatible with Piab's modular EOAT/gripper system.
- Anodized Finish.
- External sensor does not require adjustment.

	A	B	C	D	E	F	G	H	I	J	K	O	P	Force (N)	Sensor (Inc.)	Piab No.
GRZ 10-12 C-N	10	16	25	67	28	12	4	25	21	4.2	M5	6	16	34	SN 1.5	0213399
GRZ 10-12 C-N8	10	16	25	67	28	12	4	25	21	4.2	M5	6	16	34	SN 1.5-P	0213418
GRZ 10-12 C-P	10	16	25	67	28	12	4	25	21	4.2	M5	6	16	34	SP 1.5	0213397
GRZ 10-12 C-P8	10	16	25	67	28	12	4	25	21	4.2	M5	6	16	34	SP 1.5-P	0213398

GRZ 10-12 NP PART/SPRUE GRIPPER WITH PADDED JAW

Product Code: GRZ 10-12 NP

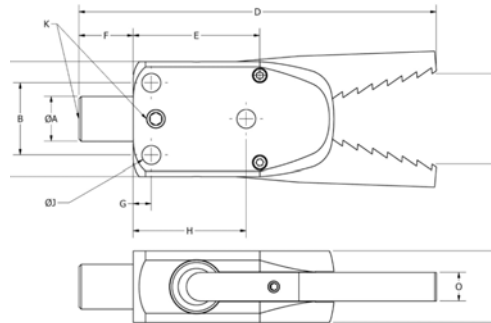


- The NP-Type jaws add nitrile rubber pad to the jaws to prevent marring of finished parts.
- Single action spring return function.
- Fully compatible with Piab's modular EOAT/gripper system.
- Anodized finish.

	A	B	C	D	E	F	G	H	I	J	K	O	P	Force (N)	Piab No.
GRZ 10-12 NP	10	16	25	79.3	28	12	4	25	20	4.2	M5	6	16	34	0213203

GRZ 10-12 ST PART/SPRUE GRIPPER

Product Code: GRZ 10-12 ST

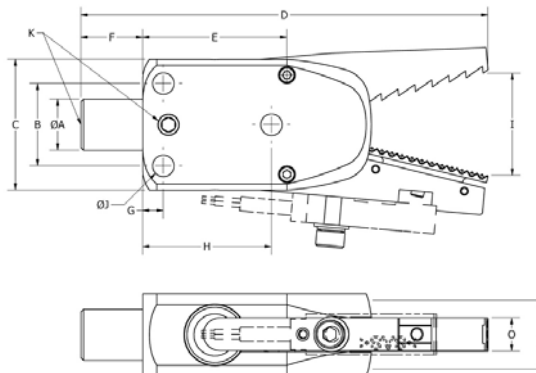


- The ST-Type jaw adds aggressive teeth to clamp into the sprue.
- Single action spring return function.
- Fully compatible with Piab's modular EOAT/gripper system.
- Anodized finish.

	A	B	C	D	E	F	G	H	I	J	K	O	P	Force (N)	Piab No.
GRZ 10-12 ST	10	16	25	67	28	12	4	25	21	4.2	M5	6	16	34	0213197

GRZ 10-12 STC/... PART/SPRUE GRIPPER

Product Code: GRZ 10-12 STC/...



- Aggressive teeth to clamp into the sprue.
- Single action spring return function.
- Fully compatible with Piab's modular EOAT/gripper system.
- Anodized Finish.
- External sensor does not require adjustment.

	A	B	C	D	E	F	G	H	I	J	K	O	P	Force (N)	Sensor (Inc.)	Piab No.
GRZ 10-12 STC-N	10	16	25	67	28	12	4	25	21	4.2	M5	6	16	34	SN 1.5	0213744
GRZ 10-12 STC-N8	10	16	25	67	28	12	4	25	21	4.2	M5	6	16	34	SN 1.5-P	0213745
GRZ 10-12 STC-P	10	16	25	67	28	12	4	25	21	4.2	M5	6	16	34	SP 1.5	0213742
GRZ 10-12 STC-P8	10	16	25	67	28	12	4	25	21	4.2	M5	6	16	34	SP 1.5-P	0213743

Mechanical Gripping

GRZ 20-16 SERIES

This body size with standard length jaws is able to apply 65 N of force at midpoint of the jaw. The L-Type jaw is able to apply 42 N of force at the midpoint of the jaw.

Requirements

- Maximum air pressure 87 psi (6 bar).
- Requires filtered dry air.
- 20mm Mounting Clamp.

Jaw Types Available:



Standard-Type

The Standard-Type jaws come with a knurled pattern on the jaw-face to better grip the sprue / part.



A-Type

The A-Type jaws have 2 holes for mounting custom jaws to the body.



C-Type

The C-Type jaws have sensors added to them to detect when the jaws are in the closed state with a sprue / part clamped within them.



KT-Type

The KT-Type jaws have an equatorial diameter to pick parts that are round.



L-Type

The L-Type jaws increase the length to allow for a greater variation in location of the sprue / part.



NP-Type

The NP-Type jaws add nitrile rubber pad to the jaws to prevent marring of finished parts.



NPC-Type

The NPC-Type has long jaws with the full surface of saw teeth.



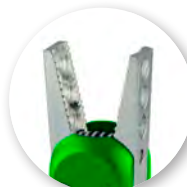
R-Type

The R-Type jaw removes the countersinks from the jaw face.



ST-Type

The ST-Type jaw adds aggressive teeth to clamp into the sprue.



T-Type

The T-Type jaws add diagonal teeth to the jaw-face to prevent slipping of the material being grabbed.



VP-Type

VP-Type jaws add Viton rubber pads to the jaws to prevent marring of finished parts.

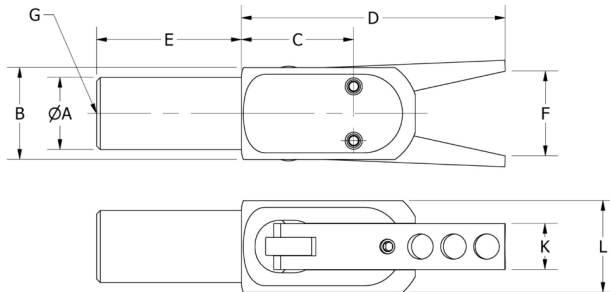


VPC-Type

The VPC-Type has long jaws with the full surface of saw teeth.

GRZ 20-16 PART/SPRUE PLIER

Product Code: GRZ 20-16

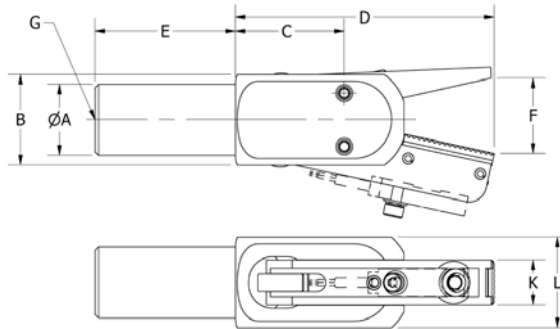


- Bullet nose design for jaw spring protection.
- Single action spring return function.
- Fully compatible with Piab's modular EOAT/gripper system.
- Anodized finish.
- Requires 20mm Mounting Clamp.

	A	B	C	D	E	F	G	K	L	Force (N)	Weight (g)	Piab No.
GRZ 20-16	20	25	32	73	40	23	G 1/8	13	25	65	141	0213192

GRZ 20-16 C/... SPRUE/PARTS PLIER

Product Code: GRZ 20-16 C/...

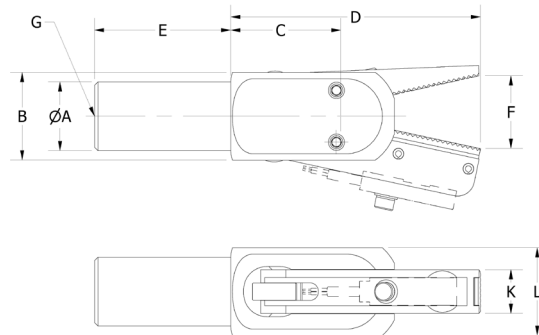


- The C-Type jaws have sensors added to them to detect when the jaws are in the closed state with a sprue/part clamped within them.
- Bullet nose design for jaw spring protection.
- Single action spring return function.
- Fully compatible with Piab's modular EOAT/gripper system.
- Anodized finish.
- External sensor does not require adjustment.

	A	B	C	D	E	F	G	K	L	Force (N)	Sensor (Inc.)	Weight (g)	Piab No.
GRZ 20-16 C-N	20	25	32	73	40	21	G 1/8	13	25	65	SN 1.5	63	0213463
GRZ 20-16 C-N8	20	25	32	73	40	21	G 1/8	13	25	65	SN 1.5-P	63	0213465
GRZ 20-16 C-P	20	25	32	73	40	21	G 1/8	13	25	65	SP 1.5	63	0213437
GRZ 20-16 C-P8	20	25	32	73	40	21	G 1/8	13	25	65	SP 1.5-P	63	0213462

GRZ 20-16 CT SPRUE/PARTS PLIER

Product Code: GRZ 20-16 CT

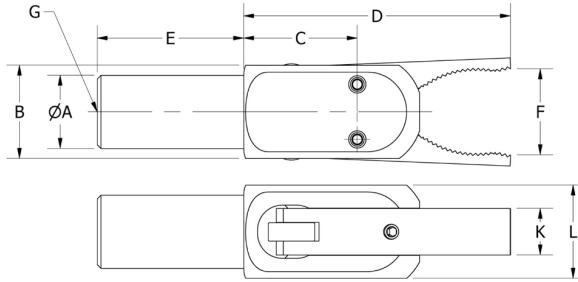


- The C-Type jaws have sensors added to them to detect when the jaws are in the closed state with a sprue/part clamped within them.
- The T-Type jaws adds diagonal teeth to the jaw-face to prevent slipping of the material being grabbed.
- Bullet nose design for jaw spring protection.
- Single action spring return function.
- Fully compatible with Piab's modular EOAT/gripper system.
- Anodized finish.
- External sensor does not require adjustment

	A	B	C	D	E	F	G	K	L	Force (N)	Weight (g)	Piab No.
GRZ 20-16 CT-N	20	25	32	73	40	21	G 1/8	13	25	65	166	0215374
GRZ 20-16 CT-N8	20	25	32	73	40	21	G 1/8	13	25	65	166	0215383
GRZ 20-16 CT-P	20	25	32	73	40	21	G 1/8	13	25	65	166	0215957
GRZ 20-16 CT-P8	20	25	32	73	40	21	G 1/8	13	25	65	166	0215958

GRZ 20-16 KT SPRUE/PART PLIERS

Product Code: GRZ 20-16 KT

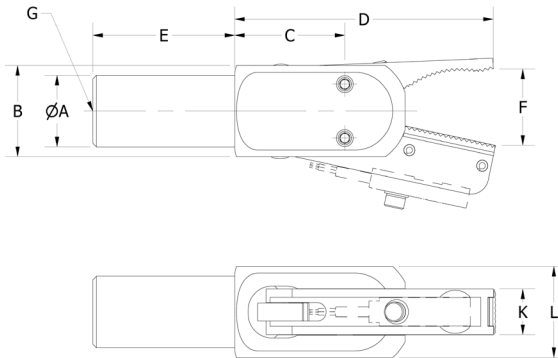


	A	B	C	D	E	F	G	K	L	Force (N)	Weight (g)	Piab No.
GRZ 20-16 KT	20	25	32	73	40	23	G 1/8	13	25	65	149	0214372

- The KT-Type jaws have an equatorial diameter to pick parts that are round.
- The T-Type jaws adds diagonal teeth to the jaw-face to prevent slipping of the material being grabbed.
- Bullet nose design for jaw spring protection.
- Single action spring return function.
- Fully compatible with Piab's modular EOAT/gripper system.
- Anodized finish.

GRZ 20-16 KTC/... SPRUE/PARTS PLIER

Product Code: GRZ 20-16 KTC/...

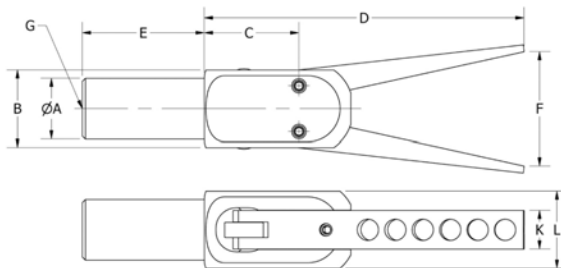


	A	B	C	D	E	F	G	K	L	Force (N)	Sensor (Inc.)	Weight (g)	Piab No.
GRZ 20-16 KTC-N	20	25	32	73	40	21	G 1/8	13	25	65	SN 1.5	165	0215959
GRZ 20-16 KTC-N8	20	25	32	73	40	21	G 1/8	13	25	65	SN 1.5-P	165	0215960
GRZ 20-16 KTC-P	20	25	32	73	40	21	G 1/8	13	25	65	SP 1.5	165	0215961
GRZ 20-16 KTC-P8	20	25	32	73	40	21	G 1/8	13	25	65	SP 1.5-P	165	0215962

- The C-Type jaws have sensors added to them to detect when the jaws are in the closed state with a sprue/part clamped within them.
- The KT-Type jaws have an equatorial diameter to pick parts that are round.
- The T-Type jaws adds diagonal teeth to the jaw-face to prevent slipping of the material being grabbed.
- Bullet nose design for jaw spring protection.
- Single action spring return function.
- Fully compatible with Piab's modular EOAT/gripper system.
- Anodized finish.

GRZ 20-16 L LONG SPRUE/PARTS PLIER

Product Code: GRZ 20-16 L

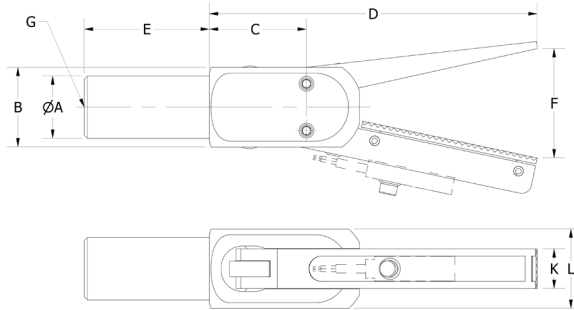


	A	B	C	D	E	F	G	K	L	Force (N)	Weight (g)	Piab No.
GRZ 20-16 L	20	25	32	105	40	37	G 1/8	13	25	42	162	0214375

- The L-Type jaws increase the length to allow for a greater variation in location of the sprue/part.
- Bullet nose design for jaw spring protection.
- Single action spring return function.
- Fully compatible with Piab's modular EOAT/gripper system.
- Anodized finish.

GRZ 20-16 LC/... LONG SPRUE/PARTS PLIER

Product Code: GRZ 20-16 LC/...

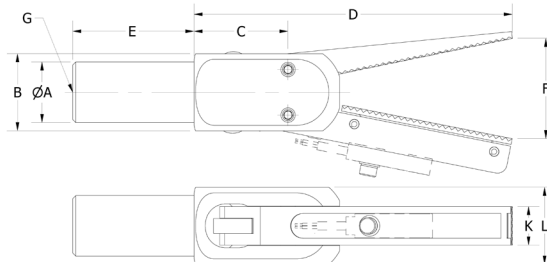


	A	B	C	D	E	F	G	K	L	Force (N)	Sensor (Inc.)	Weight (g)	Piab No.
GRZ 20-16 LC-N	20	25	32	105	40	32	G 1/8	13	25	42	SN 1.5	128	0215963
GRZ 20-16 LC-N8	20	25	32	105	40	32	G 1/8	13	25	42	SN 1.5-P	128	0215964
GRZ 20-16 LC-P	20	25	32	105	40	32	G 1/8	13	25	42	SP 1.5	128	0215965
GRZ 20-16 LC-P8	20	25	32	105	40	32	G 1/8	13	25	42	SP 1.5-P	128	0215966

- The L-Type jaws increase the length to allow for a greater variation in location of the sprue/part.
- The C-Type jaws have sensors added to them to detect when the jaws are in the closed state with a sprue/part clamped within them.
- Bullet nose design for jaw spring protection.
- Single action spring return function.
- Fully compatible with Piab's modular EOAT/gripper system.
- Anodized finish.
- External sensor does not require adjustment.

GRZ 20-16 LCT/... LONG SPRUE/PARTS PLIER

Product Code: GRZ 20-16 LCT/...

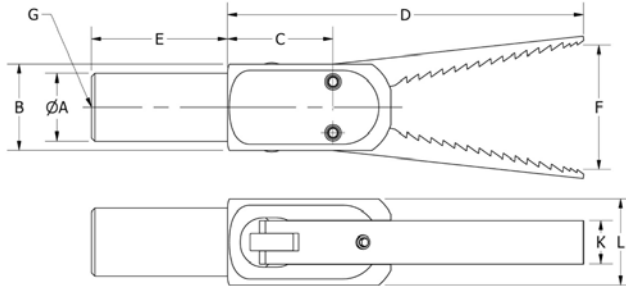


	A	B	C	D	E	F	G	K	L	Force (N)	Sensor (Inc.)	Weight (g)	Piab No.
GRZ 20-16 LCT-P	20	25	32	105	40	32	G 1/8	13	25	42	SP 1.5	157	0213771
GRZ 20-16 LCT-P8	20	25	32	105	40	32	G 1/8	13	25	42	SP 1.5-P	157	0213772
GRZ 20-16 LCT-N	20	25	32	105	40	32	G 1/8	13	25	42	SN 1.5	157	0213773
GRZ 20-16 LCT-N8	20	25	32	105	40	32	G 1/8	13	25	42	SN 1.5-P	157	0213774

- The C-Type jaws have sensors added to them to detect when the jaws are in the closed state with a sprue/part clamped within them.
- The L-Type jaws increase the length to allow for a greater variation in location of the sprue/part.
- The T-Type jaws adds diagonal teeth to the jaw-face to prevent slipping of the material being grabbed.
- Bullet nose design for jaw spring protection.
- Single action spring return function.
- Fully compatible with Piab's modular EOAT/gripper system.
- Anodized finish.
- External sensor does not require adjustment.

GRZ 20-16 LST LONG SAW TOOTH SPRUE/PART PLIER

Product Code: GRZ 20-16 LST

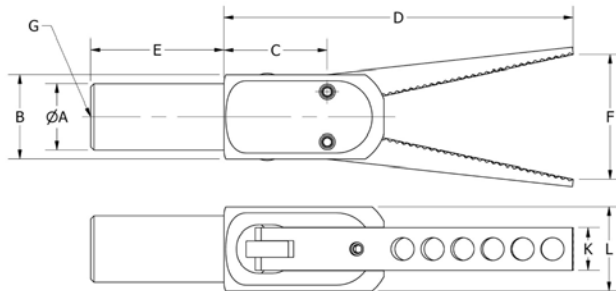


	A	B	C	D	E	F	G	K	L	Force (N)	Weight (g)	Piab No.
GRZ 20-16 LST	20	25	32	105	40	36	G 1/8	13	25	42	154	0214379

- The L-Type jaws increase the length to allow for a greater variation in location of the sprue/part.
- The ST-Type jaw adds aggressive teeth to clamp into the sprue.
- Bullet nose design for jaw spring protection.
- Single action spring return function.
- Fully compatible with Piab's modular EOAT/gripper system.
- Anodized finish.

GRZ 20-16 LT LONG SPRUE/PARTS PLIER

Product Code: GRZ 20-16 LT

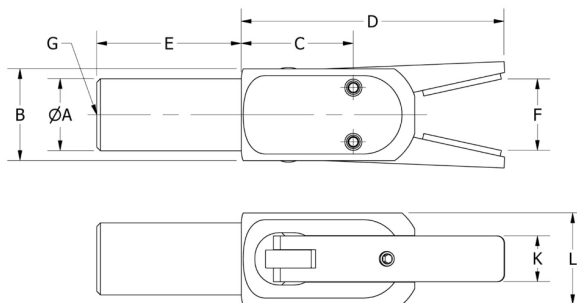


	A	B	C	D	E	F	G	K	L	Force (N)	Weight (g)	Piab No.
GRZ 20-16 LT	20	25	32	105	40	37	G 1/8	13	25	42	219	0213209

- The L-Type jaws increase the length to allow for a greater variation in location of the sprue/part.
- The T-Type jaws adds diagonal teeth to the jaw-face to prevent slipping of the material being grabbed.
- Bullet nose design for jaw spring protection.
- Single action spring return function.
- Fully compatible with Piab's modular EOAT/gripper system.
- Anodized finish.

GRZ 20-16 NP PART/SPRUE GRIPPER

Product Code: GRZ 20-16 NP

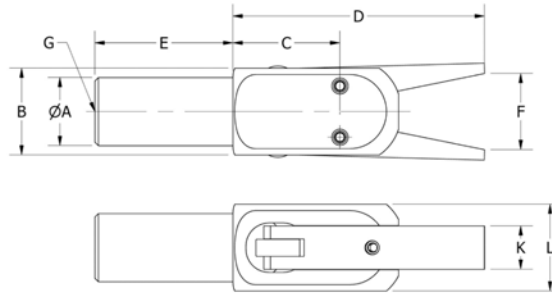


	A	B	C	D	E	F	G	K	L	Force (N)	Weight (g)	Piab No.
GRZ 20-16 NP	20	25	32	73	40	21	G1/8	13	25	65	150	0213204

- Bullet nose design for jaw spring protection.
- Fully compatible with Piab's modular EOAT/gripper system.
- Anodized finish.
- The jaw is lined with non-marking neoprene rubber.
- The temperature range is -30° - 220° F (-34° - 104° C).
- The tensile strength of the neoprene is 1200 psi.

GRZ 20-16 R SPRUE/PARTS PLIER

Product Code: GRZ 20-16 R

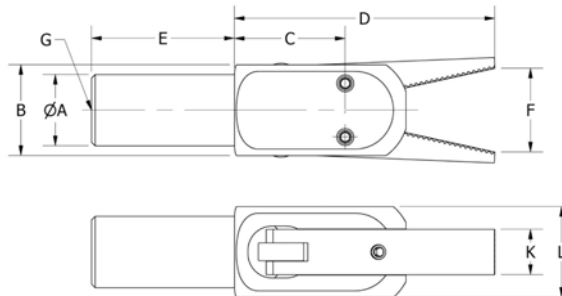


	A	B	C	D	E	F	G	K	L	Force (N)	Weight (g)	Piab No.
GRZ 20-16 R	20	25	32	73	40	23	G 1/8	13	25	65	169	0214383

- Flat and smooth with no gripping pattern to avoid marking of a part being gripped.
- Bullet nose design for jaw spring protection.
- Single action spring return function.
- Fully compatible with Piab's modular EOAT/gripper system.
- Anodized finish.

GRZ 20-16 RT SPRUE/PARTS PLIER

Product Code: GRZ 20-16 RT

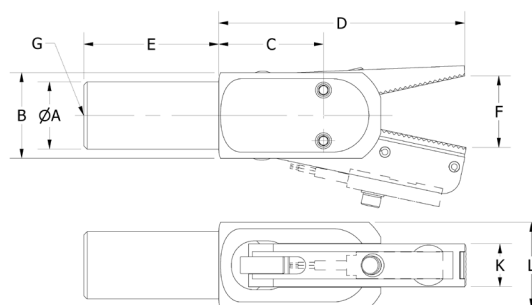


	A	B	C	D	E	F	G	K	L	Force (N)	Weight (g)	Piab No.
GRZ 20-16 RT	20	25	32	73	40	23	G 1/8	13	25	65	362	0214385

- Flat with teeth, allowing for a larger gripping surface area. This prevents hot plastic from getting caught inside the countersink holes of the T-type jaws.
- Bullet nose design for jaw spring protection.
- Single action spring return function.
- Fully compatible with Piab's modular EOAT/gripper system.
- Anodized finish.

GRZ 20-16 RTC/... SPRUE/PART PLIER

Product Code: GRZ 20-16 RTC/...

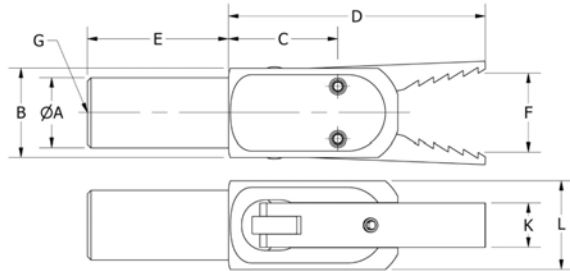


	A	B	C	D	E	F	G	K	L	Force (N)	Sensor (Inc.)	Weight (g)	Piab No.
GRZ 20-16 RTC-N	20	25	32	73	40	21	G 1/8	13	25	65	SN 1.5	177	0215967
GRZ 20-16 RTC-N8	20	25	32	73	40	21	G 1/8	13	25	65	SN 1.5-P	177	0215968
GRZ 20-16 RTC-P	20	25	32	73	40	21	G 1/8	13	25	65	SP 1.5	177	0215969
GRZ 20-16 RTC-P8	20	25	32	73	40	21	G 1/8	13	25	65	SP 1.5-P	177	0215970

- The RT-Type jaw is flat with teeth, allowing for a larger gripping surface area. This prevents hot plastic from getting caught inside the countersink holes of the T-type.
- Bullet nose design for jaw spring protection.
- Single action spring return function.
- Fully compatible with Piab's modular EOAT/gripper system.
- Anodized finish.
- External sensor does not require adjustment.

GRZ 20-16 ST SPRUE/PARTS PLIER

Product Code: GRZ 20-16 ST

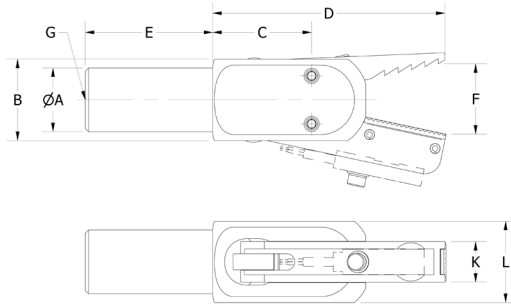


	A	B	C	D	E	F	G	K	L	Force (N)	Weight (g)	Piab No.
GRZ 20-16 ST	20	25	32	73	40	23	G 1/8	13	25	65	46	0213198

- The ST-Type jaw adds aggressive teeth to clamp into the sprue.
- Bullet nose design for jaw spring protection.
- Single action spring return function.
- Fully compatible with Piab's modular EOAT/gripper system.
- Anodized finish.

GRZ 20-16 STC/... SPRUE /PART PLIER

Product Code: GRZ 20-16 STC/...

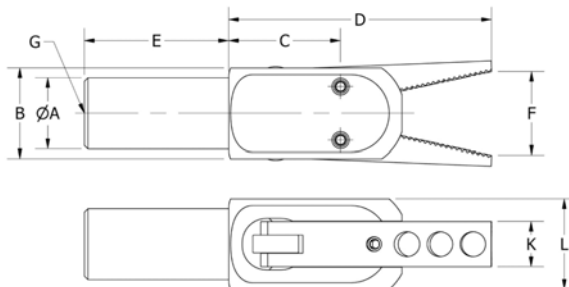


	A	B	C	D	E	F	G	K	L	Force (N)	Sensor (Inc.)	Weight (g)	Piab No.
GRZ 20-16 STC-N	20	25	32	73	40	21	G 1/8	13	25	65	SN 1.5	170	0213748
GRZ 20-16 STC-N8	20	25	32	73	40	21	G 1/8	13	25	65	SN 1.5-P	170	0213749
GRZ 20-16 STC-P	20	25	32	73	40	21	G 1/8	13	25	65	SP 1.5	170	0213746
GRZ 20-16 STC-P8	20	25	32	73	40	21	G 1/8	13	25	65	SP 1.5-P	170	0213747

- The ST-Type jaw adds aggressive teeth to clamp into the sprue.
- Bullet nose design for jaw spring protection.
- Single action spring return function.
- Fully compatible with Piab's modular EOAT/gripper system.
- Anodized finish.
- External sensor does not require adjustment.

GRZ 20-16 T SPRUE/PARTS PLIER WITH TEETH

Product Code: GRZ 20-16 T

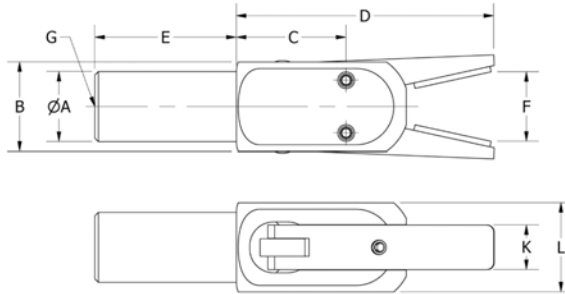


	A	B	C	D	E	F	G	K	L	Force (N)	Weight (g)	Piab No.
GRZ 20-16 T	20	25	32	73	40	23	G 1/8	13	25	65	143	0214389

- The T-Type jaws adds diagonal teeth to the jaw-face to prevent slipping of the material being grabbed.
- Bullet nose design for jaw spring protection.
- Single action spring return function.
- Fully compatible with Piab's modular EOAT/gripper system.
- Anodized finish.

GRZ 20-16 VP PART/SPRUE GRIPPER WITH PADDED JAW

Product Code: GRZ 20-16 VP

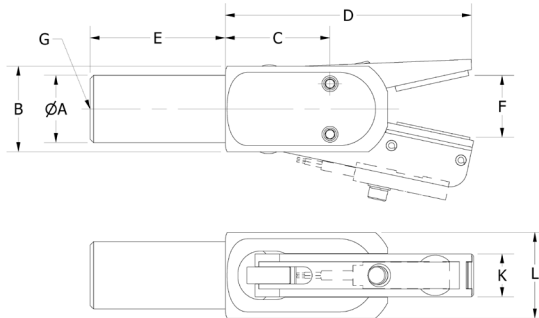


- Jaws add Viton rubber pad to the jaws to prevent marring of finished parts.
- Bullet nose design for jaw spring protection.
- Fully compatible with Piab's modular EOAT/gripper system.
- Anodized finish.
- The jaw is lined with ultra-strength corrosion resistant Viton Rubber.
- The temperature range is 0° - 400° F (-17° - 204° C).
- The tensile strength of the Viton is 1500 psi.

	A	B	C	D	E	F	G	K	L	Force (N)	Weight (g)	Piab No.
GRZ 20-16 VP	20	25	32	73	40	21	G1/8	13	25	65	150	0214391

GRZ 20-16 VPC/... PART/SPRUE GRIPPER WITH PADDED JAW

Product Code: GRZ 20-16 VPC/...



- Jaws add Viton rubber pad to the jaws to prevent marring of finished parts.
- Bullet nose design for jaw spring protection.
- Fully compatible with Piab's modular EOAT/gripper system.
- Anodized finish.
- The jaw is lined with ultra-strength corrosion resistant Viton Rubber.
- The temperature range is 0° - 400° F (-17° - 204° C).
- The tensile strength of the Viton is 1500 psi.
- External sensor does not require adjustment.

	A	B	C	D	E	F	G	K	L	Force (N)	Sensor (Inc.)	Weight (g)	Piab No.
GRZ 20-16 VP-N	20	25	32	73	40	21	G1/8	13	25	65	SN 1.5	150	0215971
GRZ 20-16 VP-N8	20	25	32	73	40	21	G1/8	13	25	65	SN 1.5-P	150	0215972
GRZ 20-16 VP-P	20	25	32	73	40	21	G1/8	13	25	65	SP 1.5	150	0215973
GRZ 20-16 VP-P8	20	25	32	73	40	21	G1/8	13	25	65	SP 1.5-P	150	0215974

Mechanical Gripping

GRZ 20-22 SERIES

This body size is able to apply 110 N of force at midpoint of the jaw.

Requirements

- Maximum air pressure 87 psi (6 bar).
- Requires filtered dry air.

Jaw Types Available:



Standard-Type

The Standard-Type jaws come with a knurled pattern on the jaw-face to better grip the sprue / part.



C-Type

The C-Type jaws have sensors added to them to detect when the jaws are in the closed state with a sprue / part clamped within them.

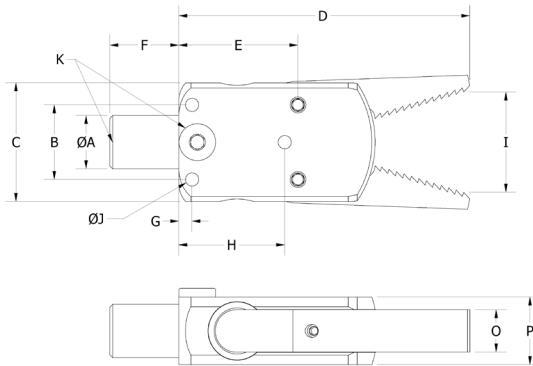


KT-Type

The KT-Type jaws have an equatorial diameter to pick parts that are round.

GRZ 20-22 PART/SPRUE GRIPPER WITH TEETH

Product Code: GRZ 20-22

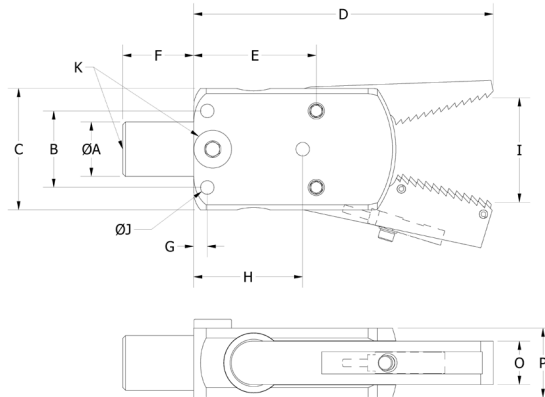


- Standard jaw-face with teeth.
- Single action spring return function.
- Fully compatible with Piab's modular EOAT/gripper system.
- Anodized finish.

	A	B	C	D	E	F	G	H	I	J	K	O	P	Force (N)	Weight (g)	Piab No.
GRZ 20-22	20	28	45	110	45	26	5	40	37	5	G 1/8	16	25	110	365	0214394

GRZ 20-22 C/... PART/SPRUE GRIPPER

Product Code: GRZ 20-22 C/...

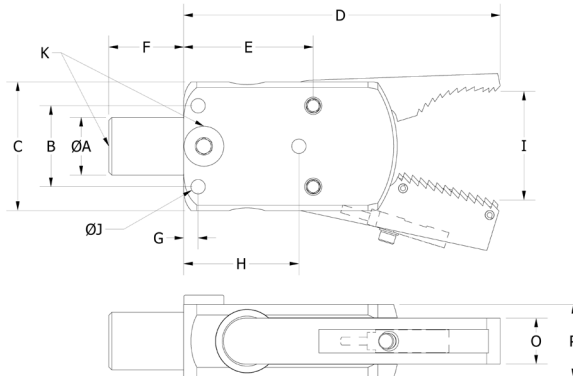
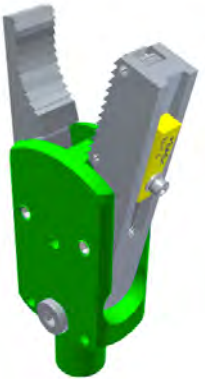


- The C-Type jaws have sensors added to them to detect when the jaws are in the closed state with a sprue/part clamped within them.
- Single action spring return function.
- Fully compatible with Piab's modular EOAT/gripper system.
- Anodized finish.
- External sensor does not require adjustment.

	A	B	C	D	E	F	G	H	I	J	K	O	P	Force (N)	Sensor (Inc.)	Weight (g)	Piab No.
GRZ 20-22 C-N	20	28	45	110	45	26	5	40	37	5	G 1/8	16	25	110	SN 1.5	380	0215975
GRZ 20-22 C-N8	20	28	45	110	45	26	5	40	37	5	G 1/8	16	25	110	SN 1.5-P	380	0215976
GRZ 20-22 C-P	20	28	45	110	45	26	5	40	37	5	G 1/8	16	25	110	SP 1.5	380	0215977
GRZ 20-22 C-P8	20	28	45	110	45	26	5	40	37	5	G 1/8	16	25	110	SP 1.5-P	380	0215978

GRZ 20-22 KTC/... PART/SPRUE GRIPPER

Product Code: GRZ 20-22 KTC/...



- The C-Type jaws have sensors added to them to detect when the jaws are in the closed state with a sprue/part clamped within them.
- The KT-Type jaws have an equatorial diameter to pick parts that are round.
- Single action spring return function.
- Fully compatible with Piab's modular EOAT/gripper system.
- Anodized finish.
- Compact yet strong grip force.
- External sensor does not require adjustment.

	A	B	C	D	E	F	G	H	I	J	K	O	P	Force (N)	Sensor (Inc.)	Weight (g)	Piab No.
GRZ 20-22 KTC-N	20	28	45	110	45	26	5	40	37	5	G 1/8	16	25	110	SN 1.5	168	0215979
GRZ 20-22 KTC-N8	20	28	45	110	45	26	5	40	37	5	G 1/8	16	25	110	SN 1.5-P	168	0215980
GRZ 20-22 KTC-P	20	28	45	110	45	26	5	40	37	5	G 1/8	16	25	110	SP 1.5	168	0215981
GRZ 20-22 KTC-P8	20	28	45	110	45	26	5	40	37	5	G 1/8	16	25	110	SP 1.5-P	168	0215982



Mechanical Gripping

GRZ 20-22 G SERIES

This body size with standard length jaws is able to apply 145 N of force at midpoint of the jaw. The L-Type jaw is able to apply 100 N of force at the midpoint of the jaw.

Requirements

- Maximum air pressure 87 psi (6 bar).
- Requires filtered dry air.

Jaw Types Available:



C-Type

The C-Type jaws have sensors added to them to detect when the jaws are in the closed state with a sprue / part clamped within them.



KT-Type

The KT-Type jaws have an equatorial diameter to pick parts that are round.



LST-Type

The LST-Type has long jaws with the full surface of saw teeth.



ST-Type

The ST-Type jaw adds aggressive teeth to clamp into the sprue.



STC-Type

The STC-Type saw tooth jaw adds aggressive teeth to clamp into the sprue including external sensor.

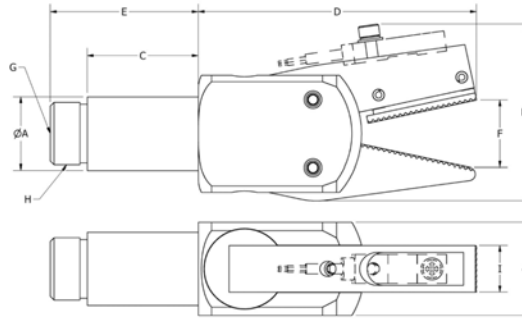
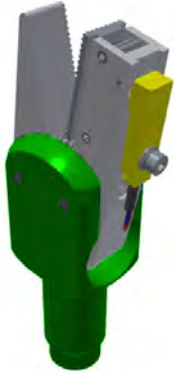


T-Type

The T-Type jaws adds diagonal teeth to the jaw-face to prevent slipping of the material being grabbed.

GRZ 20-22 G-CT/... PART/SPRUE GRIPPER

Product Code: GRZ 20-22 G-CT/...

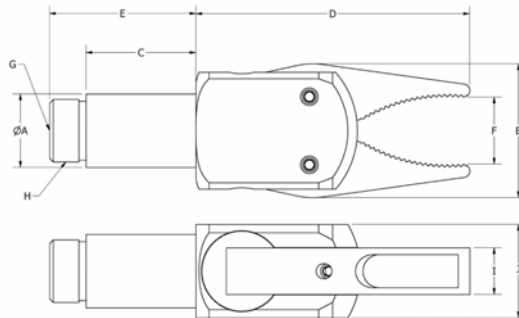


- The C-Type jaws have sensors added to them to detect when the jaws are in the closed state with a sprue / part clamped within them.
- The T-Type jaws adds diagonal teeth to the jaw-face to prevent slipping of the material being grabbed.
- Single action spring return function.
- Fully compatible with Piab's modular EOAT/gripper system.
- Anodized finish.
- Compact yet strong grip force.
- External sensor does not require adjustment.

	A	B	C	D	E	F	G	H	I	J	Force (N)	Sensor (Inc.)	Piab No.
GRZ 20-22 G-CT-N	20	48.5	30	75	40	20	G1/8	M17x1	13	25	145	SN 1.5	0215983
GRZ 20-22 G-CT-N8	20	48.5	30	75	40	20	G1/8	M17x1	13	25	145	SN 1.5-P	0215984
GRZ 20-22 G-CT-P	20	48.5	30	75	40	20	G1/8	M17x1	13	25	145	SP 1.5	0215985
GRZ 20-22 G-CT-P8	20	48.5	30	75	40	20	G1/8	M17x1	13	25	145	SP 1.5-P	0215986

GRZ 20-22 G-KT PART/SPRUE GRIPPER

Product Code: GRZ 20-22 G-KT

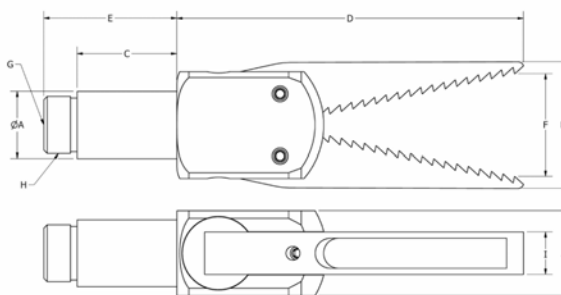


- The KT-Type jaws have an equatorial diameter to pick parts that are round.
- The T-Type jaws adds diagonal teeth to the jaw-face to prevent slipping of the material being grabbed.
- Single action spring return function.
- Fully compatible with Piab's modular EOAT/gripper system.
- Anodized finish.
- Compact yet strong grip force.

	A	B	C	D	E	F	G	H	I	J	Force (N)	Piab No.
GRZ 20-22 G-KT	20	36.5	30	75	40	21	G1/8	M17x1	13	25	145	0215371

GRZ 20-22 G-LST HIGH FORCE SPRUE/PARTS PLIER WITH LONG SAW TOOTH JAWS

Product Code: GRZ 20-22 G-LST

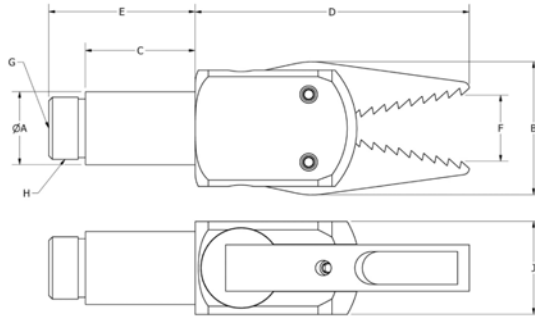


- The L-Type jaws increase the length to allow for a greater variation in location of the sprue/part.
- The ST-Type jaw adds aggressive teeth to clamp into the sprue.
- Single action spring return function.
- Fully compatible with Piab's modular EOAT/gripper system.
- Anodized finish.
- Compact yet strong grip force.

	A	B	C	D	E	F	G	H	I	J	Force (N)	Piab No.
GRZ 20-22 G-LST	20	42.5	30	104	40	35	G1/8	M17x1	13	25	100	0215372

GRZ 20-22 G-ST HIGH FORCE SPRUE/PARTS PLIER WITH SAW TOOTH JAWS

Product Code: GRZ 20-22 G-ST

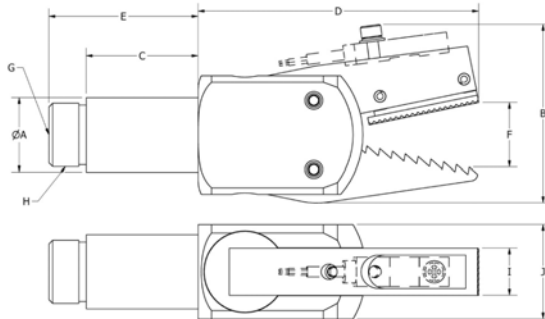


- The ST-Type jaw adds aggressive teeth to clamp into the sprue.
- Single action spring return function.
- Fully compatible with Piab's modular EOAT/gripper system.
- Anodized finish.
- Compact yet strong grip force.

	A	B	C	D	E	F	G	H	I	J	Force (N)	Piab No.
GRZ 20-22 G-ST	20	36.5	30	75	40	21	G1/8	M17x1	13	25	145	0215375

GRZ 20-22 G-STC/... HIGH FORCE SPRUE/PARTS PLIER WITH SAW TOOTH JAW AND SENSOR

Product Code: GRZ 20-22 G-STC/...

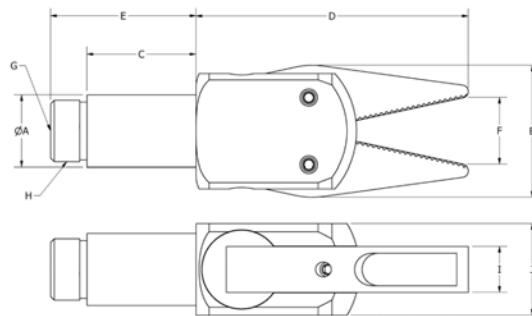


- The ST-Type jaw adds aggressive teeth to clamp into the sprue.
- Single action spring return function.
- Fully compatible with Piab's modular EOAT/gripper system.
- Anodized finish.
- Compact yet strong grip force.
- External sensor does not require adjustment.

	A	B	C	D	E	F	G	H	I	J	Force (N)	Sensor (Inc.)	Piab No.
GRZ 20-22 G-STC-N	20	52	30	75	40	21	G1/8	M17x1	13	25	145	SN 1.5	0215987
GRZ 20-22 G-STC-N8	20	52	30	75	40	21	G1/8	M17x1	13	25	145	SN 1.5-P	0215988
GRZ 20-22 G-STC-P	20	52	30	75	40	21	G1/8	M17x1	13	25	145	SP 1.5	0215989
GRZ 20-22 G-STC-P8	20	52	30	75	40	21	G1/8	M17x1	13	25	145	SP 1.5-P	0215990

GRZ 20-22 G-T HIGH FORCE SPRUE/PART PLIER WITH TEETH

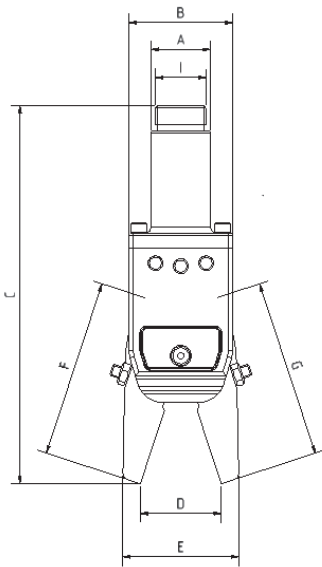
Product Code: GRZ 20-22 G-T



- The T-Type jaws adds diagonal knurl to the jaw-face to prevent slipping of the material being grabbed.
- Single action spring return function.
- Fully compatible with Piab's modular EOAT/gripper system.
- Anodized finish.
- Compact yet strong grip force.

	A	B	C	D	E	F	G	H	I	J	Force (N)	Piab No.
GRZ 20-22 G-T	20	36.5	30	75	40	21	G1/8	M17x1	13	25	145	0215377

GRIPPING PLIERS GZ20 WITHOUT SENSOR



Gripping pliers GZ12 without sensor

- Movement of the jaws by two pistons.
- No inside recuperating spring, therefore no loss of power.
- A wide range of jaws which can be combined as needed.
- Mounting diameter D = 10 mm or M10 x 1.
- 100 % compatible with common products.
- All components are anodized and offer excellent gliding properties as well as maximum wear protection.
- Easily change out jaw by loosening of the safety caps.
- Holding load of 95N at a working pressure of 6 bar.
- Pneumatic connection G1/8.

	A	B	C	D	E	F	G	Depth	I	Piab No.
GZ20 - AS50 - 10 - 10	20	35	127.5	26.5	39	60	60	25	M17x1	0213345
GZ20 - AS50 - 41 - 41	20	35	162	47	61.5	97	97	25	M17x1	0213346
GZ20 - AS50 - 50 - 50	20	35	127.5	26.5	39	60	60	25	M17x1	0213347
GZ20 - AS50 - 60 - 60	20	35	127.5	26.5	39	60	60	20	M17x1	0213348

GZ20 - AS50 - 10 - 10

Product Code:

GZ20 - AS50 - 10 - 10

- With Standard Jaws.

GZ20 - AS50 - 41 - 41

Product Code:

GZ20 - AS50 - 41 - 41

- With shaped jaws long plain/ clamping mode adjustable.

GZ20 - AS50 - 50 - 50

Product Code:

GZ20 - AS50 - 50 - 50

- With Saw Tooth Jaws.

GZ20 - AS50 - 60 - 60

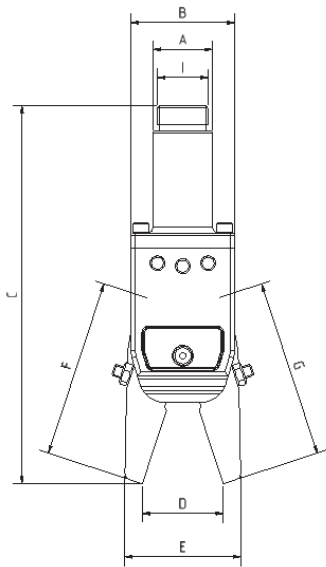
Product Code:

GZ20 - AS50 - 60 - 60

- With Standards Jaws, rubberized.



GRIPPING PLIERS GZ20 WITHOUT SENSOR



Gripping pliers GZ12 without sensor

- Movement of the jaws by two pistons.
- No inside recuperating spring, therefore no loss of power.
- A wide range of jaws which can be combined as needed.
- Mounting diameter D = 10 mm or M10 x 1.
- 100 % compatible with common products.
- All components are anodized and offer excellent gliding properties as well as maximum wear protection.
- Easily change out jaw by loosening of the safety caps.
- Holding load of 95N at a working pressure of 6 bar.
- Pneumatic connection G1/8.

	A	B	C	D	E	F	G	Depth	I	Piab No.
GZ20 - AS50 - 00 - 00	20	35	127.5	26.5	39	60	60	25	M17x1	0216297
GZ20 - AS50 - 12 - 12	20	35	127.5	26.5	39	60	60	28.5	M17x1	0216300
GZ20 - AS50 - 40 - 40	20	35	127.5	26.5	39	60	60	25	M17x1	0216301
GZ20 - AS50 - 10 - 40	20	35	127.5	26.5	39	60	60	25	M17x1	0216298

GZ20 - AS50 - 00 - 00

Product Code:

GZ20 - AS50 - 00 - 00

- With Standard Jaws.

GZ20 - AS50 - 12 - 12

Product Code:

GZ20 - AS50 - 12 - 12

- With Standard Jaws, bride version.

GZ20 - AS50 - 40 - 40

Product Code:

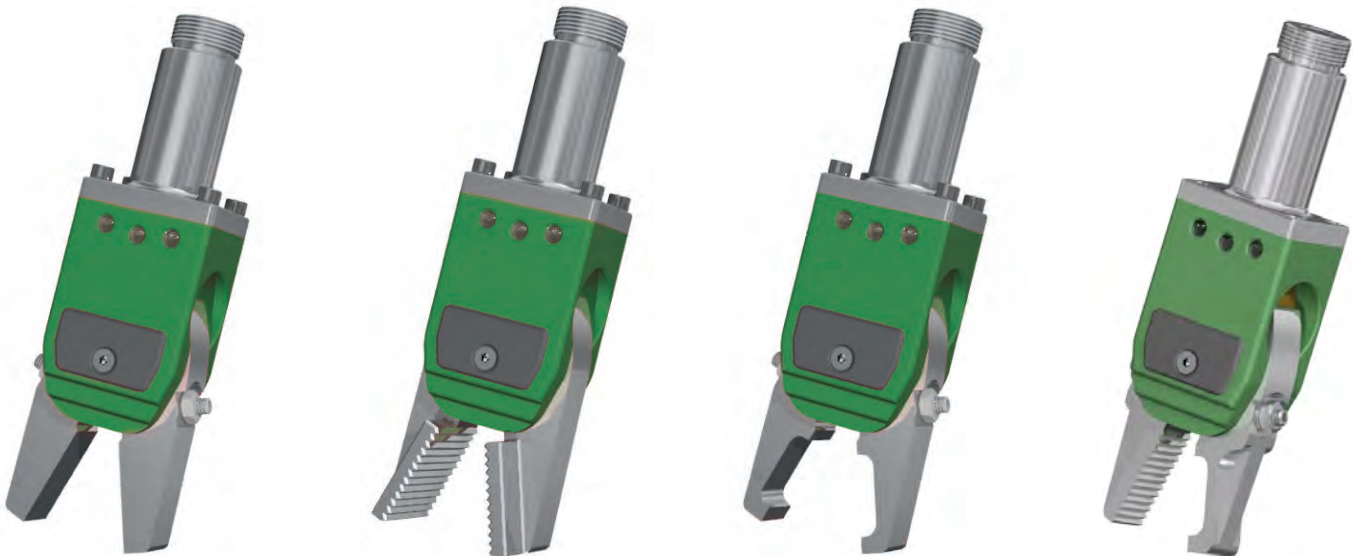
GZ20 - AS50 - 40 - 40

- With Shaped Jaws.

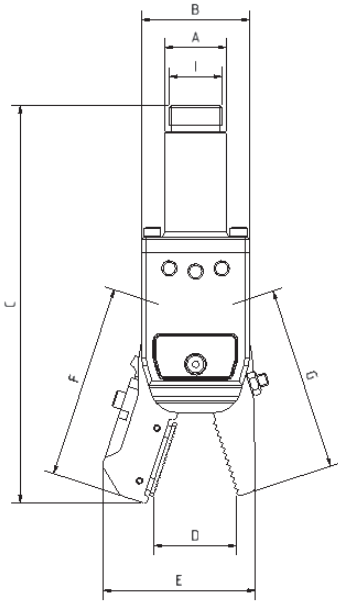
GZ20 - AS50 - 10 - 40

Product Code:

GZ20 - AS50 - 10 - 40



GRIPPING PLIERS GZ20 WITH SENSOR



Gripping pliers GZ20 with sensor

- Movement of the jaws by two pistons.
- No inside recuperating spring, therefore no loss of power.
- A wide range of jaws which can be combined as needed.
- Mounting diameter D = 20 mm or M17 x 1.
- 100 % compatible with common products.
- All components are anodized and offer excellent gliding properties as well as maximum wear protection.
- Sensor with 2m cable (version -90 / -91).
- Sensor with 0.3 m cable and M8 connector (version -95).
- Easily change out jaw by loosening of the safety caps.
- Sensor jaw with impact protection.
- Holding load of 95N at a working pressure of 6 bar.
- Pneumatic connection G1/8.

	A	B	C	D	E	F	G	Depth	I	Piab No.
GZ20 - AS50 - 10 - 95	20	35	130	26.5	50	63	60	25	M17x1	0213406
GZ20 - AS50 - 40 - 95	20	35	130	26.5	50	63	60	25	M17x1	0213350
GZ20 - AS50 - 50 - 95	20	35	130	26.5	50	63	60	25	M17x1	0213352

GZ20 - AS50 - 10 - 95

Product Code: GZ20 - AS50 - 10 - 95

- With Sensor Jaw includes sensor with 0.3m cable and M8 connector.



GZ20 - AS50 - 40 - 95

Product Code: GZ20 - AS50 - 40 - 95

- With Shaped and Sensor Jaw includes sensor with 0.3m cable and M8 connector.



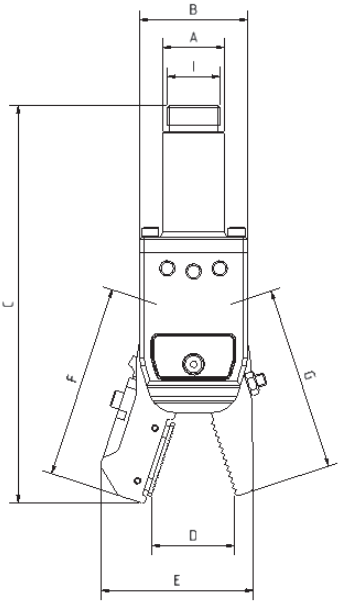
GZ20 - AS50 - 50 - 95

Product Code: GZ20 - AS50 - 50 - 95

- With Saw Tooth- and Sensor Jaws includes sensor with 0.3m cable and M8 connector.



GRIPPING PLIERS GZ20 WITH SENSOR



Gripping pliers GZ20 with sensor

- Movement of the jaws by two pistons.
- No inside recuperating spring, therefore no loss of power.
- A wide range of jaws which can be combined as needed.
- Mounting diameter D = 20 mm or M17 x 1.
- 100 % compatible with common products.
- All components are anodized and offer excellent gliding properties as well as maximum wear protection.
- Sensor with 2m cable (version -90 / -91).
- Sensor with 0.3 m cable and M8 connector (version -95).
- Easily change out jaw by loosening of the safety caps.
- Sensor jaw with impact protection.
- Holding load of 95N at a working pressure of 6 bar.
- Pneumatic connection G1/8.

	A	B	C	D	E	F	G	Depth	I	Piab No.
GZ20 - AS50 - 10 - 90	20	35	130	26.5	50	63	60	25	M17x1	0216299
GZ20 - AS50 - 40 - 90	20	35	130	26.5	50	63	60	25	M17x1	0216302
GZ20 - AS50 - 41 - 91	20	35	162	47	73	100	97	25	M17x1	0216303

GZ20 - AS50 - 10 - 90

Product Code:

GZ20 - AS50 - 10 - 90

- With Sensor Jaw includes sensor with 2m cable.

GZ20 - AS50 - 40 - 90

Product Code:

GZ20 - AS50 - 40 - 90

- With shaped and sensor jaw includes sensor with 2m cable (clamping mode adjustable).

GZ20 - AS50 - 41 - 91

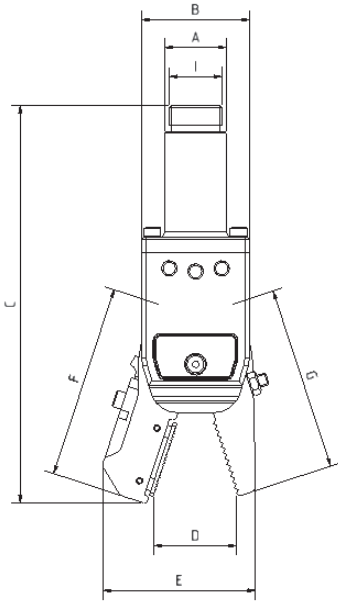
Product Code:

GZ20 - AS50 - 41 - 91

- With shaped and sensor jaw long version includes sensor with 2m cable and M8 connector (huge open angle, clamping mode adjustable).



GRIPPING PLIERS GZ20 WITH SENSOR



Gripping pliers GZ20 with sensor

- Movement of the jaws by two pistons.
- No inside recuperating spring, therefore no loss of power.
- A wide range of jaws which can be combined as needed.
- Mounting diameter D = 20 mm or M17 x 1.
- 100 % compatible with common products.
- All components are anodized and offer excellent gliding properties as well as maximum wear protection.
- Sensor with 2m cable (version -90 / -91).
- Sensor with 0.3 m cable and M8 connector (version -95).
- Easily change out jaw by loosening of the safety caps.
- Sensor jaw with impact protection.
- Holding load of 95N at a working pressure of 6 bar.
- Pneumatic connection G1/8.

	A	B	C	D	E	F	G	Depth	I	Piab No.
GZ20 - AS50 - 41 - 96	20	35	162	47	73	100	97	25	M17x1	0213351
GZ20 - AS50 - 50 - 90	20	35	130	26,5	50	63	60	25	M17x1	0216304
GZ20 - AS50 - 60 - 90	20	35	130	26,5	50	63	60	25	M17x1	0216306

GZ20 - AS50 - 41 - 96

Product Code: GZ20 - AS50 - 41 - 96

- With shaped and sensor jaw long version includes sensor with 0.3m cable and M8 connector.



GZ20 - AS50 - 50 - 90

Product Code: GZ20 - AS50 - 50 - 90

- With saw tooth and sensor jaws includes sensor with 2m cable.



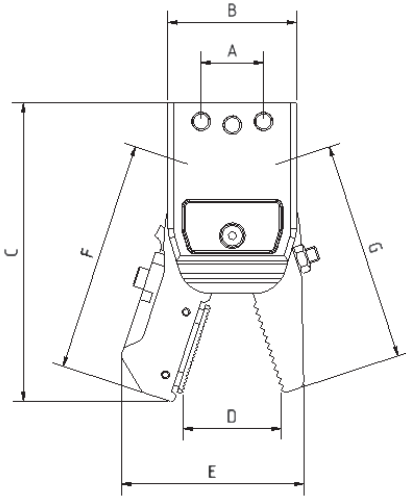
GZ20 - AS50 - 60 - 90

Product Code: GZ20 - AS50 - 60 - 90

- With saw tooth and sensor jaws includes sensor with 2m cable.



GRIPPING PLIERS COMPACT GZK20 WITH SENSOR



Gripping pliers compact GZK20 with sensor

- Movement of the jaws by two pistons.
- No inside recuperating spring, therefore no loss of power.
- A wide range of jaws which can be combined as needed.
- All components are anodized and offer excellent gliding properties as well as maximum wear protection.
- Sensor with 2m cable (version -90 / -91).
- Sensor with 0.3 m cable and M8 connector (version -95).
- Can be fixed directly.
- Easily change out jaw by loosening of the safety caps.
- Sensor jaw with impact protection.
- Holding load of 95N at a working pressure of 6 bar.
- Pneumatic connection G1/8 (frontally and laterally possible).

	A	B	C	D	E	F	G	Depth	I	Piab No.
GZK20 - 41 - 91	17.5	35	118	44.5	69	101.5	97	25	27.5	0213342
GZK20 - 50 - 90	17.5	35	78	25	48	60	60	25	27.5	0213343
GZK20 - 10 - 90	17.5	35	78	25	48	60	60	25	27.5	0213341

GZK20 - 41 - 91

Product Code: GZK20 - 41 - 91

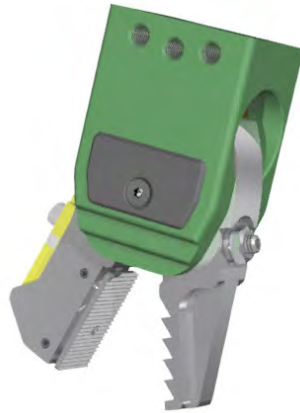
- With Shaped and Sensor Jaw long version includes sensor with 2m cable and M8 connector (huge opening angle, clamping mode adjustable).



GZK20 - 50 - 90

Product Code: GZK20 - 50 - 90

- With Saw Tooth- and Sensor Jaws includes sensor with 2m cable.



GZK20 - 10 - 90

Product Code: GZK20 - 60 - 60

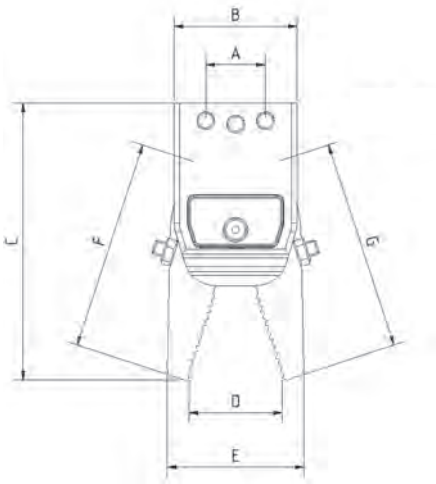
- With Standard Jaws, rubberized.



GRIPPING PLIERS COMPACT GZK20 WITHOUT SENSOR

Gripping pliers compact GZK20 without sensor

- Movement of the jaws by two pistons.
- No inside recuperating spring, therefore no loss of power.
- A wide range of jaws which can be combined as needed.
- All components are anodized and offer excellent gliding properties as well as maximum wear protection.
- Can be fixed directly.
- Easily change out jaw by loosening of the safety caps.
- Holding load of 95N at a working pressure of 6 bar.
- Pneumatic connection G1/8 (front and lateral are possible).



	A	B	C	D	E	F	G	Depth	I	Piab No.
GZK20 - 10 - 10	17.5	35	78	26	38	60	60	25	27.5	0213337
GZK20 - 41 - 41	17.5	35	113	46	59	97	97	25	27.5	0213338
GZK20 - 50 - 50	17.5	35	79	27	38	60	60	25	27.5	0213339
GZK20 - 60 - 60	17.5	35	78	26	38	60	60	25	27.5	0213340

GZK20 - 10 - 10

Product Code:

GZK20 - 10 - 10

- With Standard Jaws.



GZK20 - 41 - 41

Product Code:

GZK20 - 41 - 41

- With Shaped Jaws long plain/ clamping mode adjustable.



GZK20 - 50 - 50

Product Code:

GZK20 - 50 - 50

- With Saw Tooth Jaws



GZK20 - 60 - 60

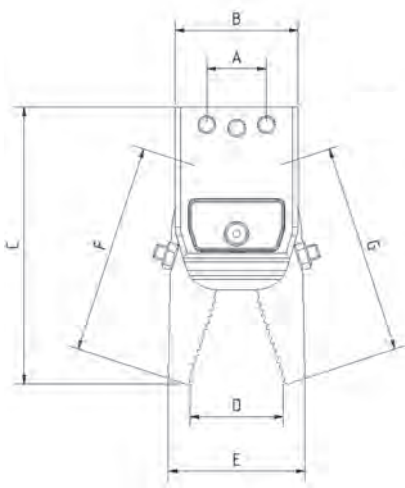
Product Code:

GZK20 - 60 - 60

- With Standard Jaws, rubberized.



GRIPPING PLIERS COMPACT GZK20 WITHOUT SENSOR



Gripping pliers compact GZK2 without sensor

- Movement of the jaws by two pistons.
- No inside recuperating spring, therefore no loss of power.
- A wide range of jaws which can be combined among each other.
- All components are anodized and offer excellent gliding properties as well as the best possible wearing protection.
- Can be fixed directly.
- Easy jaw change by loosening of the safety caps.

	A	B	C	D	E	F	G	Depth	I	Piab No.
GZK20 - 00 - 00	17.5	35	78	26	38	60	60	25	27.5	0216323
GZK20 - 12 - 12	17.5	35	78	26	38	60	60	25	27.5	0216325
GZK20 - 40 - 40	17.5	35	79	27	38	60	60	25	27.5	0216326

GZK20 - 00 - 00

Product Code: GZK20 - 00 - 00

- With Standad Jaws.



GZK20 - 12 - 12

Product Code: GZK20 - 12 - 12

- With standard jaws, bride version.



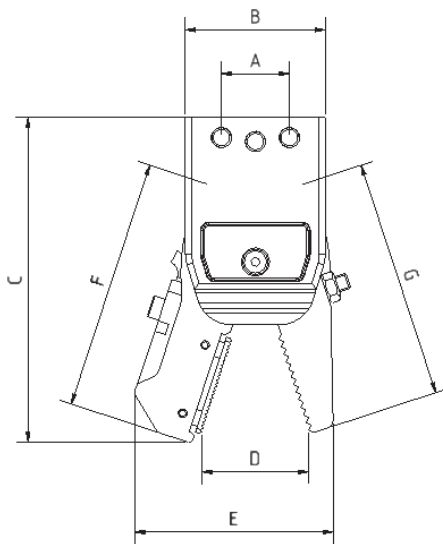
GZK20 - 40 - 40

Product Code: GZK20 - 12 - 12

- With shaped jaws.



GRIPPING PLIERS COMPACT GZK20 WITH SENSOR



Gripping pliers compact GZK20 with sensor

- Movement of the jaws by two pistons.
- No inside recuperating spring, therefore no loss of power.
- A wide range of jaws which can be combined among each other.
- All components are anodized and offer excellent gliding properties as well as the best possible wearing protection.
- Sensor with 2m cable (version -90 / -91).
- Sensor with 0.3 m cable and M8 connector (version -95).
- Can be fixed directly.
- Easy jaw change by loosening of the safety caps.

	A	B	C	D	E	F	G	Depth	I	Piab No.
GZK20 - 10 - 95	17.5	35	78	24	48	60	60	25	27.5	0216324
GZK20 - 40 - 90	17.5	35	78	24	48	60	60	25	27.5	0216327
GZK20 - 40 - 95	17.5	35	78	24	48	60	60	25	27.5	0216328
GZK20 - 50 - 95	17.5	35	78	24	48	60	60	25	27.5	0216329

GZK20 - 10 - 95

Product Code: GZK20 - 10 - 95

- With shaped jaws.

GZK20 - 40 - 90

Product Code:

GZK20 - 40 - 90

- With Shaped and Sensor Jaw includes sensor with 2m cable (clamping mode adjustable).

GZK20 - 40 - 95

Product Code:

GZK20 - 40 - 95

- With Shaped and Sensor Jaw includes sensor with 0.3m cable and M8 connector.

GZK20 - 50 - 95

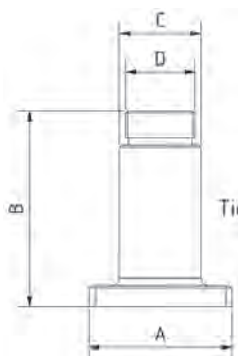
Product Code:

GZK20 - 50 - 95

- With Saw Tooth and Sensor Jaw includes sensor with 0.3m cable and M8 connector.



GRIPPING PLIERS ADAPTERS

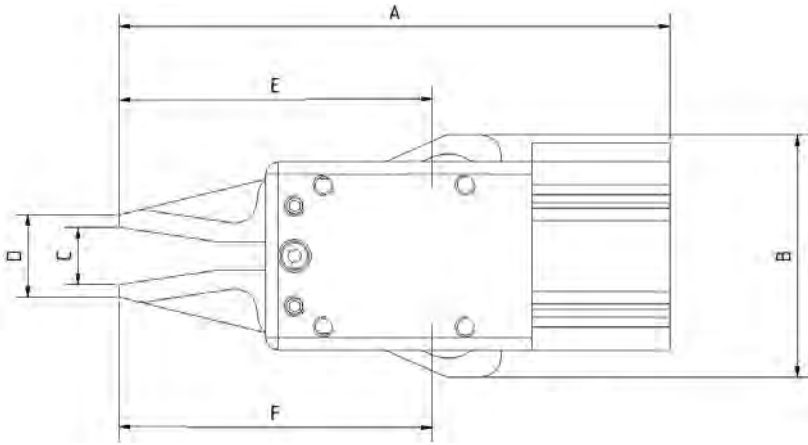


- For connecting the compact gripping pliers (GZK series).

	A	B	C	D	Piab No.
GZA20 - 14	35	40	M12x1	25	0213335
GZA20 - 20	35	48	M17x1	30	0213336



GRIPPING PLIERS COMPACT GZK32



Gripping pliers GZ32

- Activity: double-acting.
- Sensor with 2m cable (version -90).
- Sensor with 0,3m cable M8 connector (version -95).

	A	B	C	D	E	F	Depth	Piab No.
GZK32 - 10 - 10	132	58	13,5	20	75	75	45	0216330
GZK32 - 10 - 60	132	58	13,5	20	75	75	45	0216331

GZK32 - 10 - 10

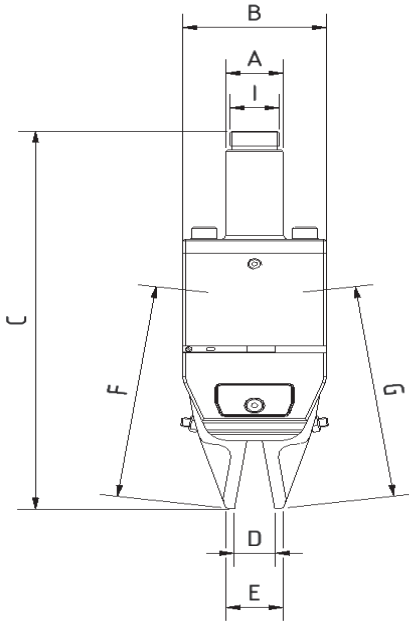
Product Code: GZK32 - 10 - 10
Piab No. 0216330

GZK32 - 10 - 60

Product Code: GZK32 - 10 - 60
Piab No. 0216331



GRIPPING PLIERS GZ25



Gripping pliers GZ25

- Movement of the jaws by two pistons.
- No inside recuperating spring, therefore no loss of power.
- A wide range of jaws which can be combined among each other.
- Position query of the jaws possible.
- Mounting diameter D = 20 mm or M17 x 1
- 100 % compatible with common products.
- All components are anodized and offer excellent gliding properties as well as the best possible wearing protection.
- Sensor with 2m cable (version -90 / -91).
- Sensor with 0.3 m cable and M8 connector (version -95).
- Easy jaw change by loosening of the safety caps.

	A	B	C	D	E	F	G	Depth	Piab No.
GZ25-AS55-00-00	20	50	171	14	20	96	96	30	0213404
GZ25-AS55-10-10	20	50	171	14	20	96	96	30	0113405
GZ25-AS55-10-95	20	50	171	14	41	96	96	30	0213406
GZ25-AS55-60-60	20	50	171	14	20	96	96	30	0213407
GZ25-AS55-00-90	20	50	171	14	41	96	96	30	0216307
GZ25-AS55-00-95	20	35	130	26.5	50	63	60	25	0216308
GZ25-AS55-10-90	20	50	171	14	41	96	96	30	0216309

GZ25-AS55-00-00

- Product Code:
GZ25-AS55-00-00
- With plain jaws



GZ25-AS55-10-10

- Product Code:
GZ25-AS55-10-10
- With Standard Jaws.



GZ25-AS55-10-95

- Product Code:
GZ25-AS55-10-95
- With Standard Jaws and Sensor Jaws.



GZ25-AS55-60-60

- Product Code:
GZ25-AS55-60-60
- With Standard Jaws and Rubberized Jaws.



GZ25-AS55-00-90

- Product Code:
GZ25-AS55-00-90
- With plain and Sensor Jaw includes sensor with 2m cable.



GZ25-AS55-00-95

- Product Code:
GZ25-AS55-00-95
- With plain and Sensor Jaw includes sensor with 0.3m cable and M8 connector

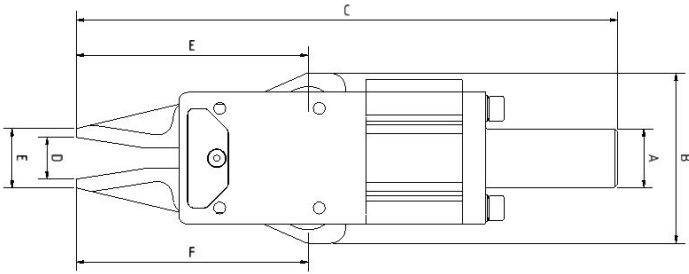


GZ25-AS55-10-90

- Product Code:
GZ25-AS55-10-90
- With Sensor Jaw includes sensor with 2m cable



GRIPPING PLIERS GZ32



Gripping pliers GZ32

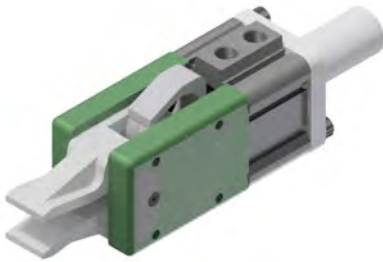
- Activity: double-acting.
- Sensor with 2m cable (version -90).
- Sensor with 0, 3m cable M8 connector (version -95).

	A	B	C	D	E	F	Depth	Piab No.
GZ32-AS50-10-10	20	58	185	13.5	20	75	75	0213355
GZ32-AS50-10-95	20	58	185	14	40	75	75	0213357
GZ32-AS50-60-60	20	58	185	13.5	20	75	75	0213356
GZ32-AS50-00-00	20	58	185	13.5	20	75	75	0216312
GZ32-AS50-00-90	20	58	185	14	40	75	75	0216693
GZ32-AS50-00-95	20	58	185	14	40	75	75	0216694

GZ32-AS50-10-10

Product Code: GZ32-AS50-10-10

- With Knurled Jaws.



GZ32-AS50-10-95

Product Code: GZ32-AS50-10-95

- With Knurled Jaws and sensor.



GZ32-AS50-60-60

Product Code: GZ32-AS50-60-60

- With Padded Jaws.



GZ32-AS50-00-00

Product Code:

GZ32-AS50-00-00



GZ32-AS50-00-90

Product Code:

GZ32-AS50-00-90



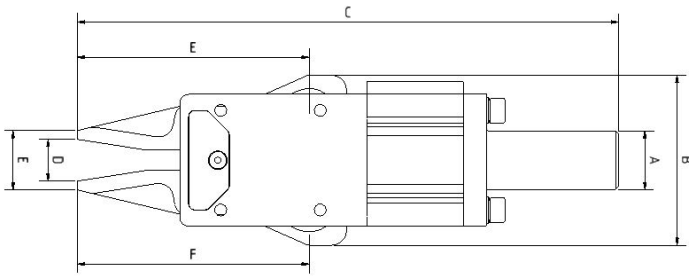
GZ32-AS50-00-95

Product Code:

GZ32-AS50-00-95



GRIPPING PLIERS GZ32



Gripping pliers GZ32

- Activity: double-acting.
- Sensor with 2m cable (version -90).
- Sensor with 0, 3m cable M8 connector (version -95).

	A	B	C	D	E	F	Depth	Piab No.
GZ32-AS50-10-40	20	58	185	13.5	20	75	75	0216313
GZ32-AS50-10-60	20	58	185	13.5	20	75	75	0216314
GZ32-AS50-10-90	20	58	185	14	40	75	75	0216315
GZ32-AS50-60-90	20	58	185	14	40	75	75	0216316
GZ32-AS50-60-95	20	58	185	14	40	75	75	0216317

GZ32-AS50-10-40

Product Code:
GZ32-AS50-10-40



GZ32-AS50-10-60

Product Code:
GZ32-AS50-10-60



GZ32-AS50-10-90

Product Code:
GZ32-AS50-10-90



GZ32-AS50-60-90

Product Code:
GZ32-AS50-60-90

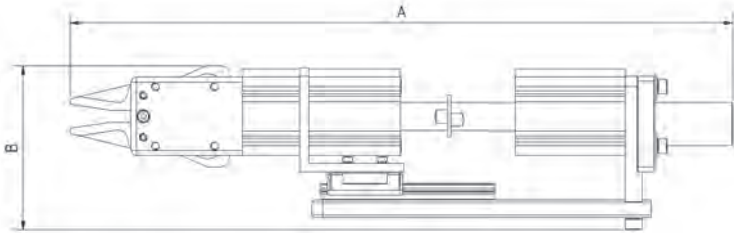


GZ32-AS50-60-95

Product Code:
GZ32-AS50-60-95



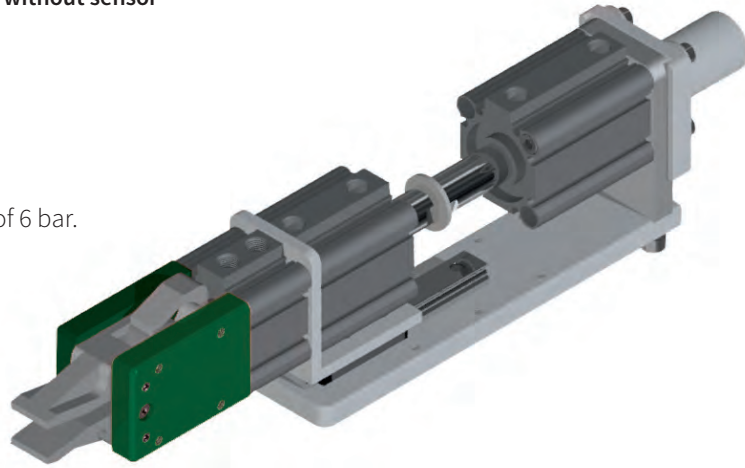
GRIPPING PLIERS GZE32



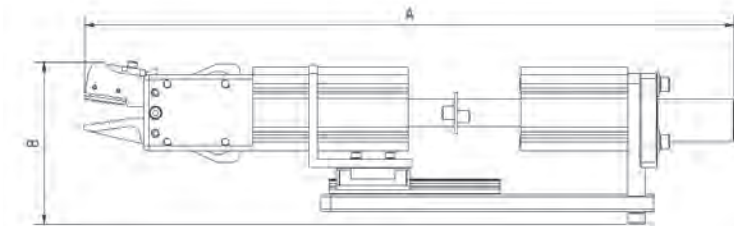
	A	B	Depth	Piab No.
GZE321010 - DH3020 - 25	382	90	45	0213360
GZE321010 - DH1010 - 25	322	90	45	0213359
GZE326060 - DH2010 - 25	342	75	40	0213361
GZE326060 - DH3020 - 25	382	75	40	0213362
GZE321060 - DH2010 - 25	382	75	40	0216320
GZE321060 - DH3020 - 25	382	75	40	0216321

Gripping pliers unit GZE25 / GZE32 with double stroke and without sensor

- Activity: double-acting.
- Fixing possibility on two sides.
- Ball-bearing slides with precision guidance.
- Adjustable low profile linear guide.
- The heavy-duty solution with double stroke.
- Holding load of 375N / 265N at a working pressure of 6 bar.
- Other strokes available as needed.
- Pneumatic connections G1/8 / M5.
- Connection diameter 25 mm.



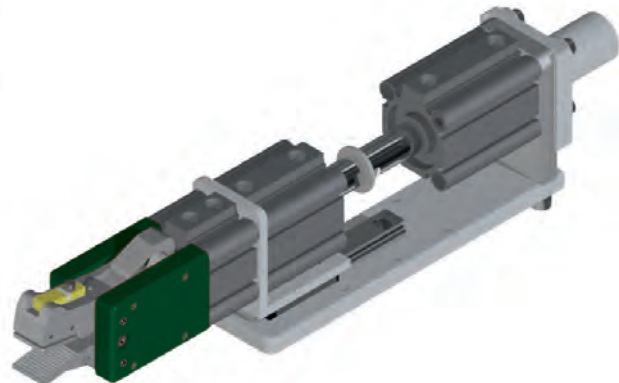
GRIPPING PLIERS GZE32



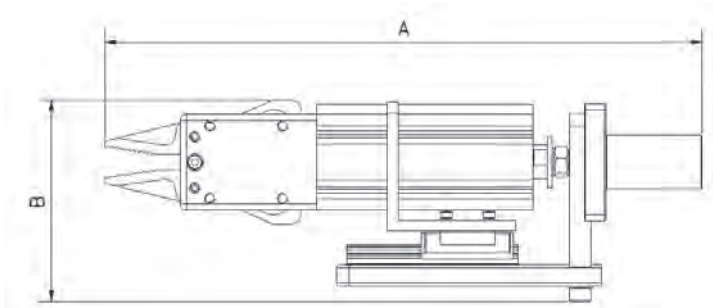
	A	B	Depth	Piab No.
GZE321095 - DH2010 - 25	342	90	45	0213363
GZE321095 - DH3020 - 25	382	90	45	0213364

Gripping pliers unit GZE25 / GZE32 with double stroke and sensor

- Activity: double-acting.
- Fixing possibility on two sides.
- Adjustable low profile linear guide.
- Sensor with 2m cable (version -90).
- Sensor with 0.3 m cable and M8 connector (version -95).



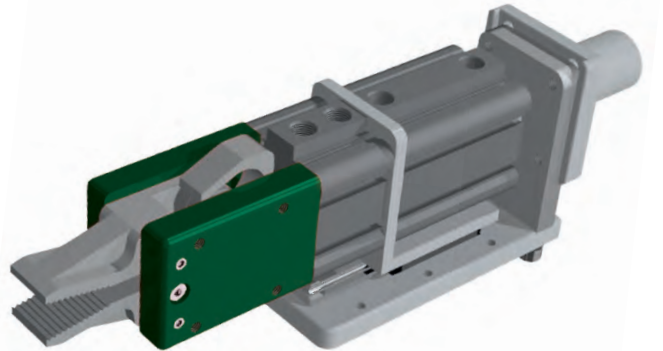
GRIPPING PLIERS GZE32



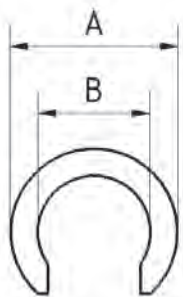
	A	B	Depth	Piab No.
GZE321010 - EH10 - 25	259	90	45	0213408
GZE321010 - EH20 - 25	269	90	45	0213409
GZE321060 - EH20 - 25	382	75	40	0216322
GZE326060 - EH10 - 25	259	90	45	0213410
GZE326060 - EH10 - 25	269	90	45	0213411

Gripping pliers unit GZE25 / GZE32 with single stroke and without sensor

- Activity: double-acting.
- Fixing possibility on two sides.
- Adjustable low profile linear guide.
- The heavy-duty solution with single stroke.
- Holding load of 375N / 265N at a working pressure of 6 bar.
- Other strokes available as needed.
- Pneumatic connections G1/8 / M5.
- Connection diameter 25 mm.



DISTANCE CLIPS

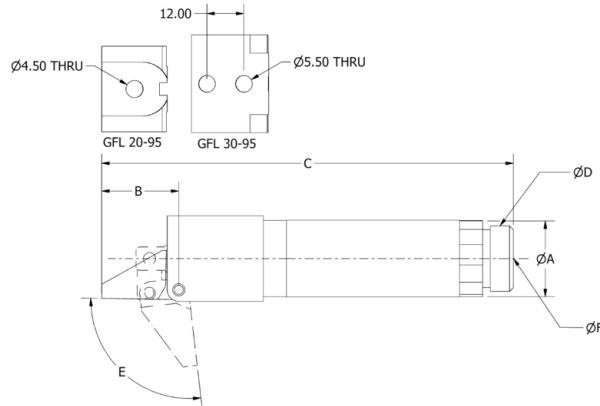


- Distance clips used to reduce the strokes of cylinders.
- Material: plastic

	A	B	Depth	Piab No.
DK16 - 3	24	16	3	0213379
DK16 - 5	24	16	5	0213380
DK16 - 10	24	16	10	0213378



GFL DOUBLE ACTING GRIPPER FINGER



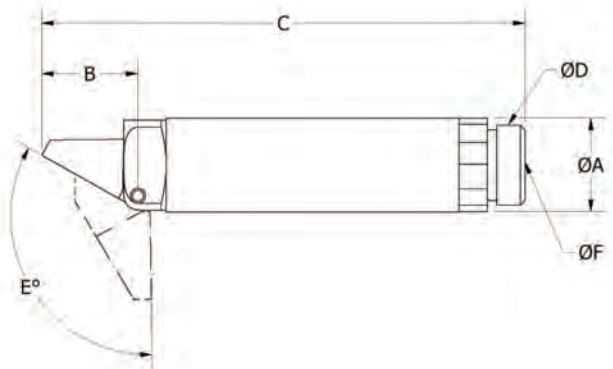
- Cam locking design remains locked in the event of pressure loss.
- Normally is protected and located with our ZTS and backed up with the ANF finger guide.
- Extendable for longer reach using VLR arm extensions.
- Fully compatible with Piab's modular EOAT gripper system.
- Has two M5 thru holes on gripper finger head, 12mm apart.

Requirements

- Maximum air pressure 87 psi (6 bar).
- Requires filtered dry air.

	A	B	C	D	E (Degrees)	F	Force (N)	Weight (g)	Piab No.
GFL 20-95	20	20	107	M17x1	95	G 1/8"	110	83	0214317
GFL 30-95	30	33	147	M17x1	95	G 1/8"	160	245	0214318

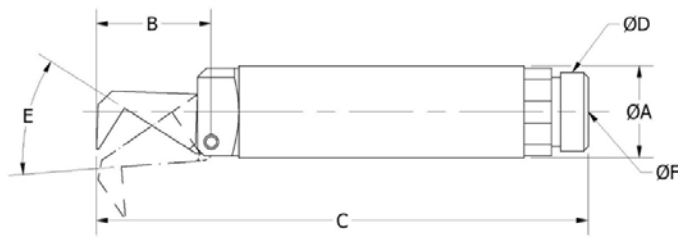
GRF GRIPPER FINGERS



- Normally is protected and located with our ZTS and backed-up with the ANF.
- Finger guide.
- Pneumatically single acting, spring return function.
- Extendable for longer reach using VLR Arm Extensions.
- Fully compatible with modular EOAT gripper system.

	A	B	C	D	E (Degrees)	F	Weight (g)	Piab No.
GRF 14-120	55	71	3.27	M12x1	120	M5"	88	0213164
GRF 20-120	79	79	4.06	M17x1	120	G 1/8"	2.12	0213165
GRF 30-120	1.18	1.22	5.91	M27x1	120	G 1/8"	6.88	0213166

GRF GRIPPER FINGER (SPRING RETURN)



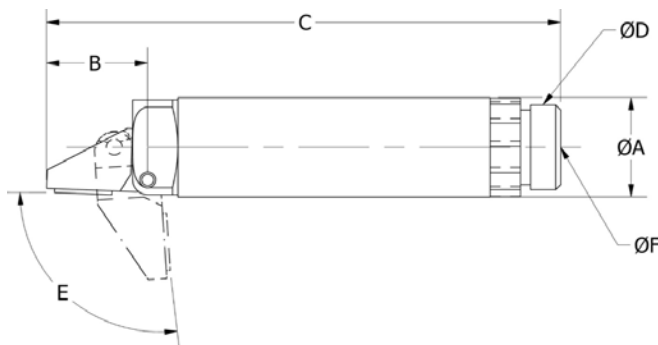
- Finger claw that securely flips & reaches around the part.
- Especially designed for difficult part-removal applications.
- Pneumatically single acting, spring return function.
- Extendable for longer reach using VLR Arm Extensions.
- Fully compatible with Piab's modular EOAT gripper system.

Requirements

- Maximum air pressure 87 psi (6 bar).
- Requires filtered dry air.

	A	B	C	D	E (Degrees)	F	Force (N)	Weight (g)	Piab No.
GRF 14-35	14	18.5	84	M12 x 1	35	G 1/8"	25	30	0213158
GRF 20-35	20	23	105	M17 x 1	35	G 1/8"	55	102	0213159
GRF 30-35	30	34	142	M27 x 1	35	G 1/8"	190	207	0213155

GRF WITH VITON RUBBER PADDED GRIPPER FINGER



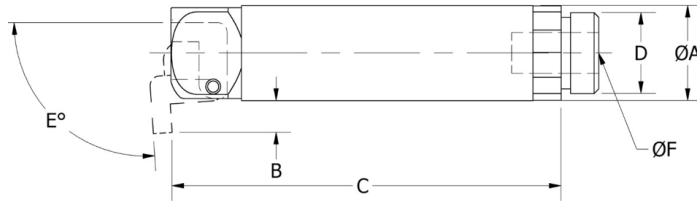
- GRF gripper finger with Viton rubber pad.
- Prevents marring of finished parts.
- Pneumatically single acting, spring return function.
- Extendable for longer reach using VLR Arm Extensions.
- Fully compatible with Piab's modular EOAT gripper system.

Requirements

- Maximum air pressure 87 psi (6 bar).
- Requires filtered dry air.

	A	B	C	D	E (Degrees)	F	Force (N)	Weight (g)	Piab No.
GRF 14-95 VP	14	19	77	M12 x 1	95	M5	16	30	0213151
GRF 20-95 VP	20	20	95	M17 x 1	95	G 1/8"	42	60	0213154
GRF 30-95 VP	30	29	137	M27 x 1	95	G 1/8"	120	200	0213157

GRF GRIPPER FINGER (SPRING RETURN)



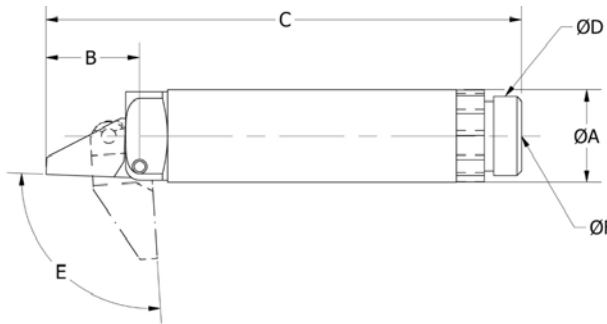
- Specially designed to flip and secure thin edges.
- Normally is backed-up with our ANS finger guide.
- Pneumatically single acting, spring return function.
- Extendable for longer reach using VLR Arm Extensions.
- Fully compatible with Piab's modular EOAT gripper system.

Requirements

- Maximum air pressure 87 psi (6 bar).
- Requires filtered dry air.

	A	B	C	D	E (Degrees)	F	Force (N)	Weight (g)	Piab No.
GRF 14-90	14	5	72	M12x1	90	M5	20	28	0213161
GRF 20-90	20	7	83	M17 x 1	90	G 1/8"	95	58	0213162
GRF 30-90	30	11	124	M27 x 1	90	G 1/8"	220	205	0213163

GRF GRIPPER FINGER (SPRING RETURN)



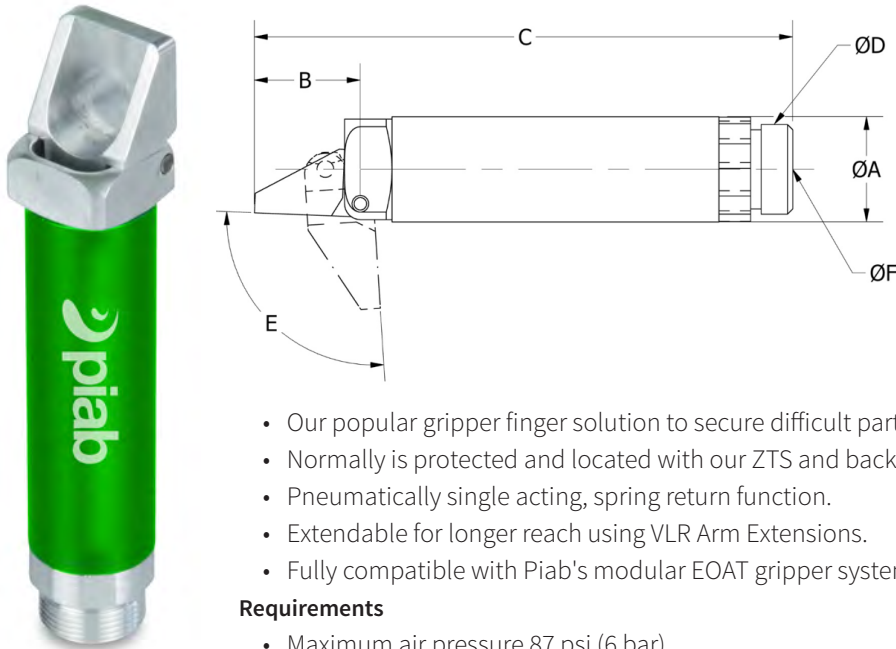
- Our popular gripper finger solution to secure difficult parts.
- Normally is protected and located with our ZTS and backed-up with the ANF finger guide.
- Pneumatically single acting, spring return function.
- Extendable for longer reach using VLR Arm Extensions.
- Fully compatible with Piab's modular EOAT gripper system.

Requirements

- Maximum air pressure 87 psi (6 bar).
- Requires filtered dry air.

	A	B	C	D	E (Degrees)	F	Force (N)	Weight (g)	Sensor Kit	Piab No.
GRF 14-95 C	14	19	77	M12 x 1	95	M5	16	30	GRF 14 SR	0213150
GRF 20-95 C	20	20	95	M17 x 1	95	G 1/8"	42	61	GRF 20 SR	0213153
GRF 30-95 C	30	29	137	M27 x 1	95	G 1/8"	120	204	GRF 30 SR	0213156

GRF GRIPPER FINGER (SPRING RETURN)



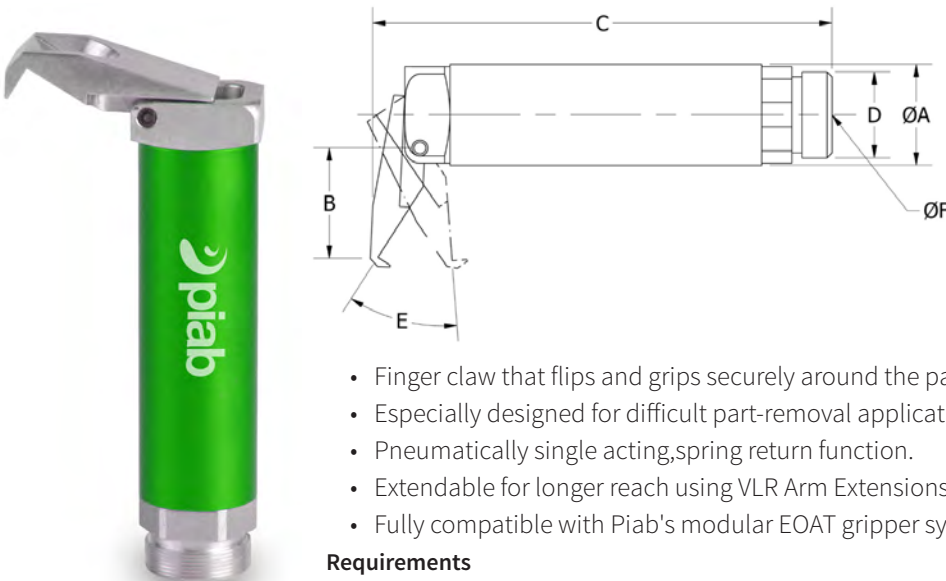
- Our popular gripper finger solution to secure difficult parts.
- Normally is protected and located with our ZTS and backed-up with the ANF finger guide.
- Pneumatically single acting, spring return function.
- Extendable for longer reach using VLR Arm Extensions.
- Fully compatible with Piab's modular EOAT gripper system.

Requirements

- Maximum air pressure 87 psi (6 bar).
- Requires filtered dry air.

	A	B	C	D	E (Degrees)	F	Force (N)	Weight (g)	Sensors	Piab No.
GRF 14-95	14	19	77	M12 x 1	95	M5	16	30	No	0213149
GRF 20-95	20	20	95	M17 x 1	95	G 1/8"	42	61	No	0213152
GRF 30-95	30	29	137	M27 x 1	95	G 1/8"	120	204	No	0213155

GRW GRIPPER FINGER (SPRING RETURN)



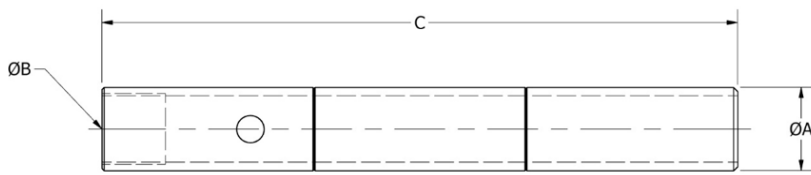
- Finger claw that flips and grips securely around the part.
- Especially designed for difficult part-removal applications.
- Pneumatically single acting, spring return function.
- Extendable for longer reach using VLR Arm Extensions.
- Fully compatible with Piab's modular EOAT gripper system.

Requirements

- Maximum air pressure 87 psi (6 bar).
- Requires filtered dry air.

	A	B	C	D	E (Degrees)	F	Force (N)	Weight (g)	Sensors	Piab No.
GRW 20-35	20	20	85	M17 x 1	35	G 1/8"	50	62	-	0214352
GRW 30-35	30	34	123	M27 x 1	35	G 1/8"	160	203	Yes	0214353

ARM EXTENSIONS

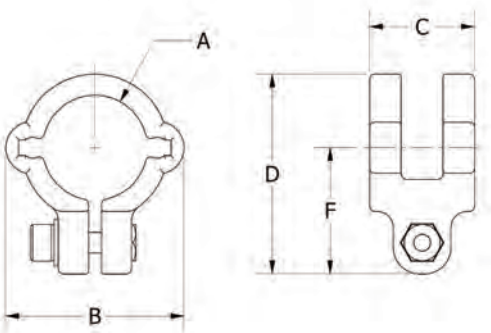


- Extends GRF and GRW gripper fingers.
- Attaches to ADZ and ADG cylinder adapters and to ZTB locators.
- Tightening hole for securing connection to mating parts.



	A	B	C	Weight (g)	Piab No.
VLR 10-90	10	M8 x 1	90	9	0213182
VLR 14-120	14	M12 x 1	120	19	0213183
VLR 20-150	20	M17 x 1	150	46	0213184
VLR 30-200	30	M27 x 1	200	94	0213185

GRF SENSOR MOUNTS



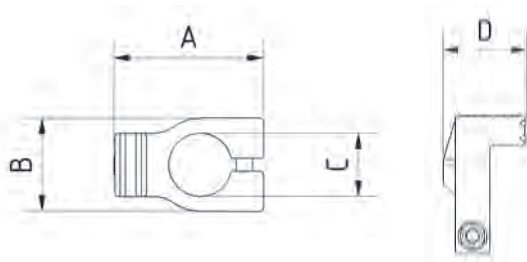
- Allows mounting of 1 or 2 sensors to sensor capable GRF's.
- The sensors can sense open or closed position of the fingers.
- Typically used with VLR extension arms.

*Optional sensor: RRK-93, RRK-93-TP, RRK-M9P, or RRK-M9P-TP.



	A	B	C	D	F	Piab No.
GRF 14 SR	14	28	18	29	18	0213167
GRF 20 SR	20	34	20	38	24	0213168
GRF 30 SR	30	44	26	51	32	0213169

FIXING DEVICES FOR GRIPPING FINGERS

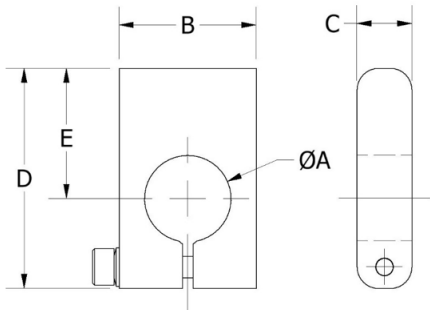


- Fixing devices for gripping fingers with a rubberized layer.
- Rubberized and silicone-free layer.



	A	B	C	D	Piab No.
GZK20 - 50 - 50	40.5	24	14	22.5	0213339
GZK20 - 60 - 60	47.3	30	20	28.5	0213340

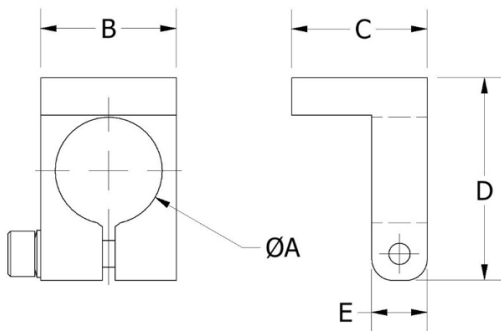
ANF DELRIN FINGER ACCESSORY



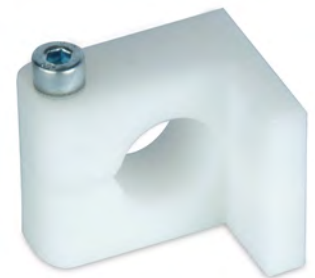
- Used as a finger backup and locator.
- Made of Delrin to protect part.

	A	B	C	D	E	Gripper Finger	Weight (g)	Piab No.
ANF 14	14	22	10	42	25	GRF 14-95 / GRF 14-95 VP	13	0213173
ANF 20	20	32	13	51	30	GRF 20-95 / GRF 20-95 VP / GRW 20-35	26	0213174
ANF 30	30	38	19	66	42	GRF 30-95 / GRF 30-95 VP / GRW 30-35	52	0213175
ANF 14 P	30	38	19	66	42	GRF 14-95 / GRF 14-95 VP	52	0213176
ANF 20 P	30	38	19	66	42	GRF 20-95 / GRF 20-95 VP / GRW 20-3	52	0213177
ANF 30 P	30	38	19	66	42	GRF 30-95 / GRF 30-95 VP / GRW 30-35	52	0213178

ANS DELRIN FINGER ACCESSORY

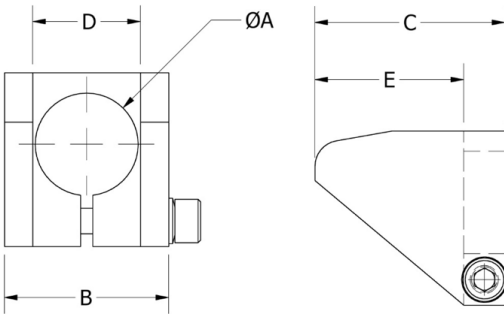


- Used with GRF...-90 to back up the finger for a firm mechanical grip.
- Made of Delrin to protect part.



	A	B	C	D	E	Gripper Finger	Weight (g)	Piab No.
ANS 14	14	19	23	31	10	GRF 14-90	10	0213179
ANS 20	20	25	25	38	10	GRF 20-90	17	0215263
ANS 30	30	38	38	57	11	GRF 30-90	30	0213181

ZTS DELRIN FINGER ACCESSORY

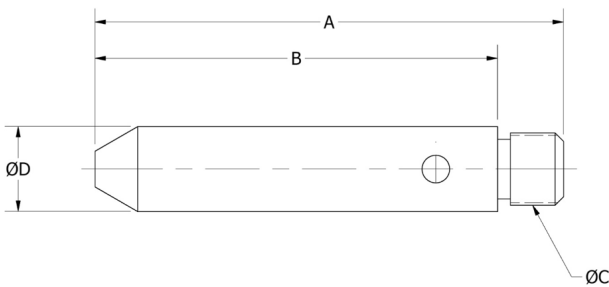


- Aligns part to finger.
- Protects both part and finger.



	A	B	C	D	E	Gripper Finger	Weight (g)	Piab No.
ZTS 14-95	14	25	35	17	27	GRF 14-95	13	0213170
ZTS 20-95	20	32	37	22	29	GRF 20-95	21	0213171
ZTS 30-95	30	45	65	32	53	GRF 30-95	84	0213172

ZTB DELRIN LOCATOR PIN



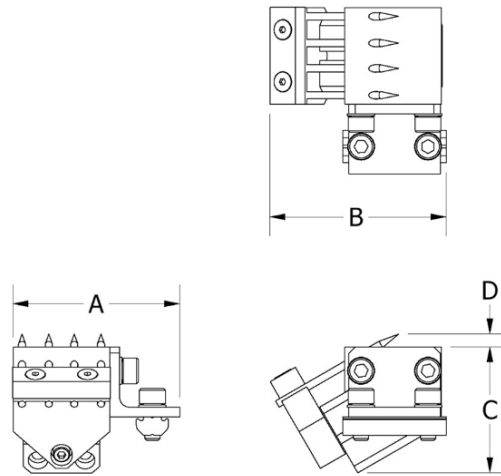
- Aligns and locates EOAT to parts.
- Clamps directly into standard mounting clamps and mates to VLR Arm Extensions.
- Tightening hole for secure connection to VLR's.



	A	B	C	D	Extension	Weight (g)	Piab No.
ZTB 10	50	40	M8 x 1	10	VLR 10-L	4	0213186
ZTB 14	110	95	M12 x 1	14	VLR 14-L	19	0213187
ZTB 20	110	95	M17 x 1	20	VLR 20-L	44	0213188
ZTB 30	100	85	M27 x 1	30	VLR 30-L	91	0213189

GRN 12-10 X NEEDLE GRIPPER

Product Code: GRN 12-10 X



- Ideal for gripping fabric or mesh.
- Normally used in insert molding applications.
- Adjustable needle length.
- Replacement needles also available.

*Optional sensor: RRK-93, RRK-93-TP, RRK-M9P-TP or RRK-M9P-TP.

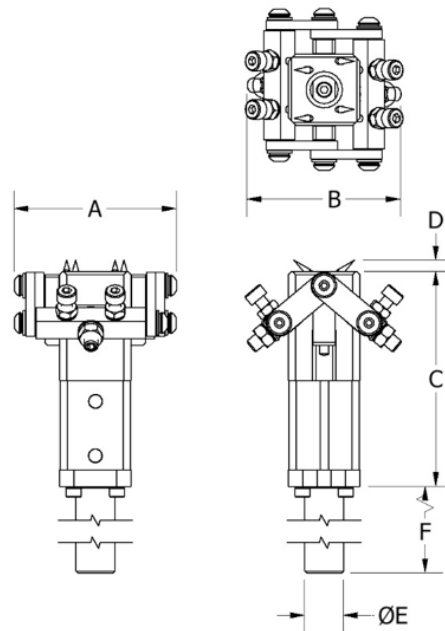
Requirements

- Maximum air pressure 87 psi (6 bar).
- Requires filtered dry air.

	A	B	C	D	Air Cons. (cm ³ / Hub)	Sensor (optional)	Weight (g)	Piab No.
GRN 12-10 X	55	56	41	0-5	1.13	RRK-93/RRK-F9P	132	0214349

GRN 12-10-14 NEEDLE GRIPPER

Product Code: GRN 12-10-14



- Ideal for gripping fabric or mesh.
- Normally used in insert molding applications.
- Adjustable needle length.
- Replacement needles also available.

*Optional sensor: RRK-93, RRK-93-TP, RRK-M9P, or RRK-M9P-TP.

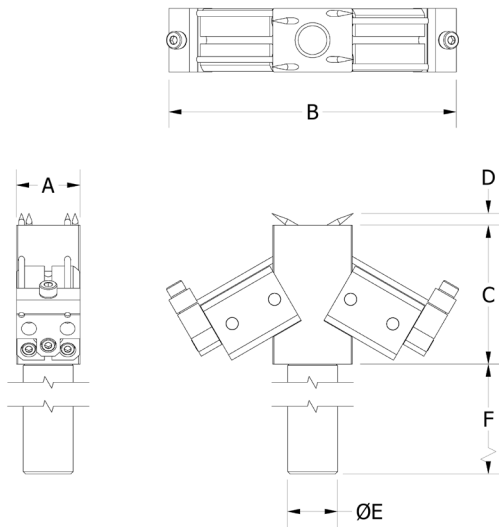
Requirements

- Maximum air pressure 87 psi (6 bar).
- Requires filtered dry air.

	A	B	C	D	E	F	Air Cons. (cm ³ / Hub)	Sensor (optional)	Weight (g)	Piab No.
GRN 12-10-14	57	55	77	0-5	14	40	1.13	RRK-93/RRK-F9P	232	0214350

GRN 12-10-20 NEEDLE GRIPPER

Product Code: GRN 12-10-20



- Ideal for gripping fabric or mesh.
- Normally used in insert molding applications.
- Adjustable to needle lengths.
- Replacement needles available.
- Spring loaded for compliance.

*Optional sensor: RRK-93, RRK-93-TP, RRK-M9P, or RRK-M9P-TP.

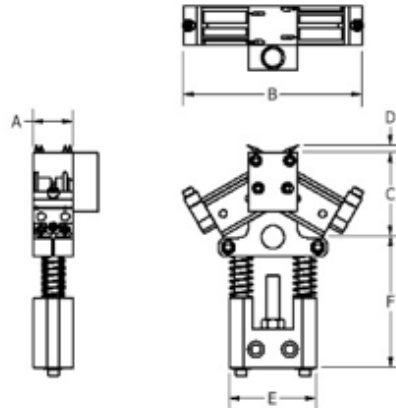
Requirements

- Maximum air pressure 87 psi (6 bar).
- Requires filtered dry air.

	A	B	C	D	E	F	Air Cons. (cm3/ Hub)	Sensor (optional)	Weight (g)	Piab No.
GRN 12-10-20	25	112	55	0-3	20	50	1.13	RRK-93/RRK-F9P	294	0214351

GRN 12-10 SL NEEDLE GRIPPER

Product Code: GRN 12-10 SL



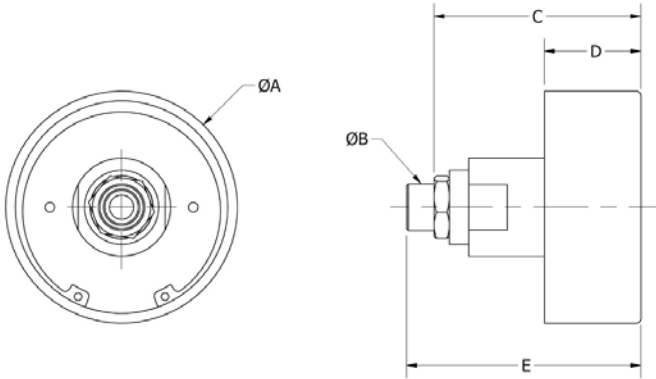
- Ideal for gripping fabric or mesh.
- Normally used in insert molding applications.
- Adjustable to needle lengths.
- Replacement needles available.
- Spring loaded for compliance.

Requirements

- Maximum air pressure 87 psi (6 bar).
- Requires filtered dry air.

	A	B	C	D	E	F	Air Cons. (cm3/ Hub)	Weight (g)	Piab No.
GRN 12-10 SL	25	81	40	0-5	56	84	1.13	722	0214348

MAGNETIC GRIPPERS



Part #	A	B	C	D	E	Weight (g)	Piab No.
GRM 38-3/8	38	G3/8"	74	32	85	269	0214346
GRM 76-3/8	76	G3/8"	76	32	85	370	0214347
GRM 127-3/8	127	G3/8"	111	50	122	1360	0214345

GRM 38-3/8

Product Code: GRM 38-3/8



GRM 76-3/8

Product Code: GRM 76-3/8



GRM 127-3/8

Product Code: GRM 127-3/8



BLACK URETHANE BOOTS

Part #	Non-Skid Covers	Weight (g)	Piab No.
GRB 38	Black Urethane Boot for GRM 38-3/8	13	0214343
GRB 76	Black Urethane Boot for GRM 76-3/8	25	0214344
GRB 127	Black Urethane Boot for GRM 127-3/8	45	0214342

Low Skid Boots protect against marring of class "A" blanks while extending the life of the magnet by protecting the face from wear. In many applications the boots and pads also assist in keeping parts from shifting under shear in transport. The boots cover the edge of the cup for complete blank protection while the pads cover the face of the cup for increased wear protection to extend the life of the magnet.





Cutting and Degating

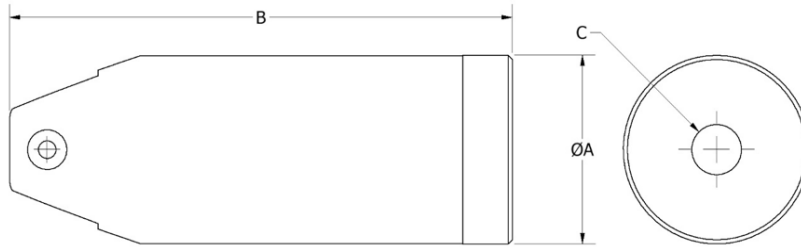


We offer a complete line of high quality hand cutters, pneumatic cutters, EOAT mounted cutters, standard and custom degaters, and more.

- Appropriate levels of **precision and efficiency** on all our products
- Hand-operated cutters are all equipped with **safety levers**
- Expansive product and engineering **knowledge**
- Blades are made of HS steel and can be re-sharpened. Carbide tipped blades are available upon request.



NIPPER BODY



- Hand-operated sprue cutters come with safety levers.
 - Standard and special blades available.
- *Blades sold separately.

	Cutting Capacity	A	B	C	Weight (g)	Air Consumption	Working Air Pressure	Blade Category	Weight (g)	Piab No.
MR10	Soft Plastic ø5 Hard Plastic ø4	36	124	G 1/4"	150	116 cm ³ / stroke	5~6 bars	I	200	0214541
MR20	Soft Plastic ø7 Hard Plastic ø5	45	140	G 1/4"	260	230 cm ³ / stroke	5~6 bars	I	340	0214542
MR30A	Soft Plastic ø10 Hard Plastic ø6.5	56	176	G 1/4"	460	584 cm ³ / stroke	5~6 bars	I	520	0214543
MR50FK	Soft Plastic ø12 Hard Plastic ø6.5	75	197	G 1/4"	1040	1100 cm ³ / stroke	5~6 bars	I	1170	0215491
MP35A	Soft Plastic ø13 Hard Plastic ø6.5	56	249	G 1/4"	790	956 cm ³ / stroke	bars 5~6	I	830	0214540

* Soft Plastics are PP & PE ** Hard Plastics are ABS, Polycarbonates, Acrylic resin, POM & PS

MR10

Product Code: MR10



MR20

Product Code: MR20



MR30A

Product Code: MR30A



MP35A (HEAVY DUTY)

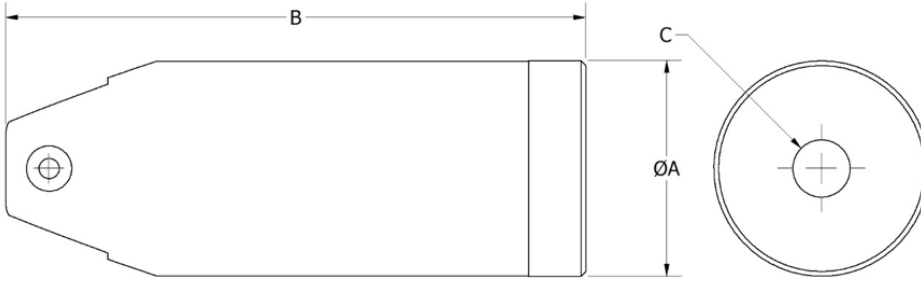
Product Code: MP35A





Cutting and Degating

AIR NIPPER BODY



- Automatic Type is fixture mountable.
- Standard and special blades available.

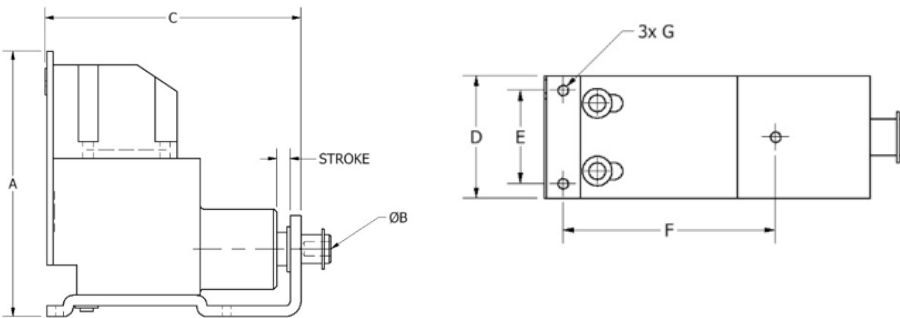
*Blades sold separately.



	Cutting Capacity	A	B	C	Weight (g)	Air Consumption	Working Air Pressure	Blade Category	Weight (g)	Piab No.
MR3M	Soft Plastic ø1	20	112	G 1/4"	60	35 cm ³ / stroke	4-5 bars	I	70	0214544
MR5M	Soft Plastic ø2	30	103	G 1/4"	100	64 cm ³ / stroke	4-5 bars	I	100	0214545
MR10M	Soft Plastic ø5 Hard Plastic ø4	36	124	G 1/4"	150	116 cm ³ / stroke	5-6 bars	I	160	0213210
MR20M	Soft Plastic ø7 Hard Plastic ø5	45	140	G 1/4"	260	230 cm ³ / stroke	5-6 bars	I	270	0213211
MR30AM	Soft Plastic ø10 Hard Plastic ø6.5	56	176	G 1/4"	460	584 cm ³ / stroke	5-6 bars	I	470	0213212
MR50FM	Soft Plastic ø12 Hard Plastic ø6.5	75	197	G 1/4"	1040	1100 cm ³ / stroke	5-6 bars	I	1040	0213213

* Soft Plastics are PP & PE ** Hard Plastics are ABS, Polycarbonates, Acrylic resin, POM & PS

SLIDE, CUT & COMPACT TYPE BODY



- Separate ports for cutter slide and blade activation.
- Slide function moves blades flush to part.

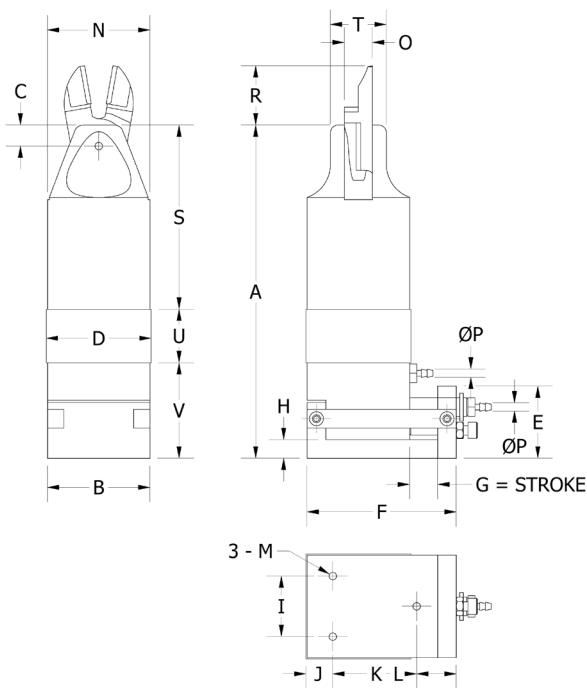
*Blades sold separately.



	A	B	C	D	E	F	G	Stroke	Blade Category	Max. Sprue Dia.	Weight (g)	Piab No.
ME 3	77	4	71	20	14	21	M3	3	II	1	170	0214530
ME 5	79	4	78	29	22	29	M3	3	II	1.2	290	0214532
ME 10	102	4	90	35	26	36	M3	3	II	2.5	540	0214528
ME 20	116	4	104	44	26	36	M4	5	II	4.5	810	0214529
ME 30	149	4	131	56	26	50	M4	5	II	6	1490	0214531



SLIDE & CUT AIR NIPPER BODY



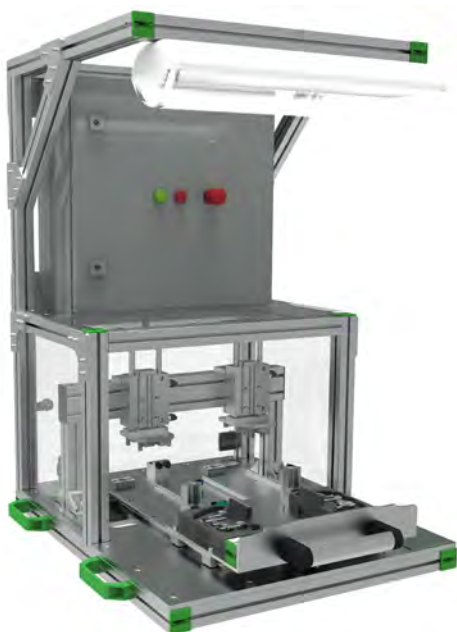
- Separate Ports for cutter slide and blade activation.
 - Slide function moves blades flush to part.
 - Utilizes a wider variety of blades than the ME cutter.
 - Only one air circuit is needed when Pneumatic Timing Unit (TU-01) is used.
- *Blades sold separately.



	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	R	S	T	U	V	Piab No.
ML-10	128	35	7	36	31	63	10	8	26	11	31	17	M3	35	9	4	19	71	18	16	41	0213218
ML-20	143	44	9	45	31	64	10	8	26	11	36	17	M4	44	12	4	26	79	24	23	41	0213219
ML-30	184	55	15	56	33	76	10	8	26	14	38	24	M4	55	17	4	50	123	34	18	43	0213220

	Cutting Capacity	Weight(g)	Air Consumption (cm ³ /stroke)	Working Air Pressure (bars)	Blade Category	Weight (g)
ML-10	Soft Plastic Ø5 Hard Plastic Ø4	340	136	4-5	I	340
ML-20	Soft Plastic Ø7 Hard Plastic Ø5	500	250	5-6	I	500
ML-30	Soft Plastic Ø10 Hard Plastic Ø6.5	870	634	5-6	I	870

* Soft Plastics are PP & PE ** Hard Plastics are ABS, Polycarbonates, Acrylic resin, POM & PS



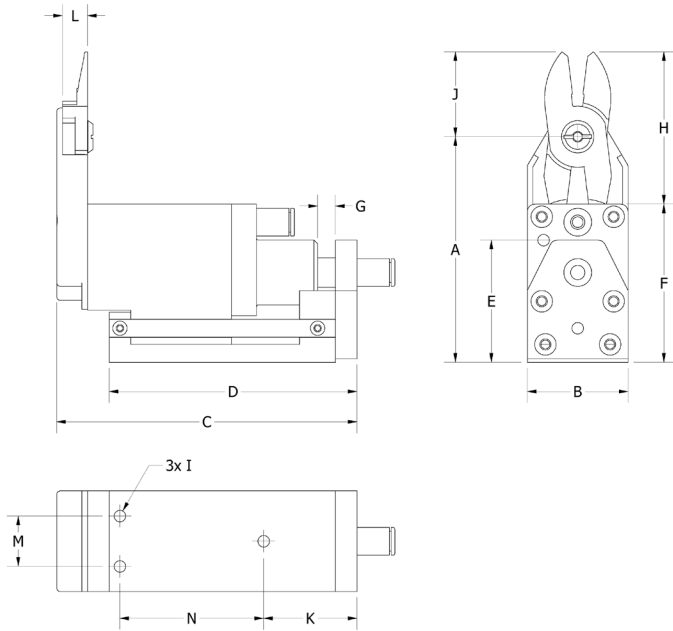
Piab designs and builds cutting stations with high safety standards for your manual or fully automatic cutting.

Please reach out to your Piab contact to learn more about how we can support your need.



Cutting and Degating

STROKE & CUT AIR NIPPER BODY



- Adjustable travel from 0-5mm.
- Separate Ports for cutter slide and blade activation.
- Only one air circuit is needed when Pneumatic Timing Unit (TU-01) is used.
- SN - Series (Pull and cut)
- SNP - Series (Push and cut)
- *Blades sold separately.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	Piab No.
SN-3	59	23	80	65	31	40	5	43	M4	24	25	7	12	37	0213232
SN-5	63	28	84	69	34	44	5	43	M4	24	26	7	14	40	0213233
SN-10	70	33	92	75	38	48	5	49	M4	27	27	9	18	45	0213238
SN-20	82	42	110	90	46	59	5	58	M4	35	28	12	22	58	0213239

	Cutting Capacity	Weight (g)	Air Consumption	Working Air Pressure (bars)	Blade Category
SN-3	Hard Plastic ø 2	228	46 cm ³ / stroke	4~5	V
SN-5	Hard Plastic ø 3	220	68 cm ³ / stroke	5~6	V
SN-10	Hard Plastic ø 4	379	117 cm ³ / stroke	4~5	V
SN-20	Hard Plastic ø 5	711	204 cm ³ / stroke	5~6	V

* Soft Plastics are PP & PE ** Hard Plastics are ABS, Polycarbonates, Acrylic resin, POM & PS



	A	B	C	D	E	F	G	H	I	J	K	L	M	N	Piab No.
SNP-3	59	23	75	65	31	⁴⁰	5	43	M4	24	25	7	12	37	0213236
SNP-5	63	28	79	69	34	44	5	43	M4	24	26	7	14	40	0213237
SNP-10	70	33	87	75	38	48	5	49	M4	27	27	9	18	45	0213238
SNP-20	82	42	105	90	46	59	5	58	M4	35	28	12	22	58	0213239

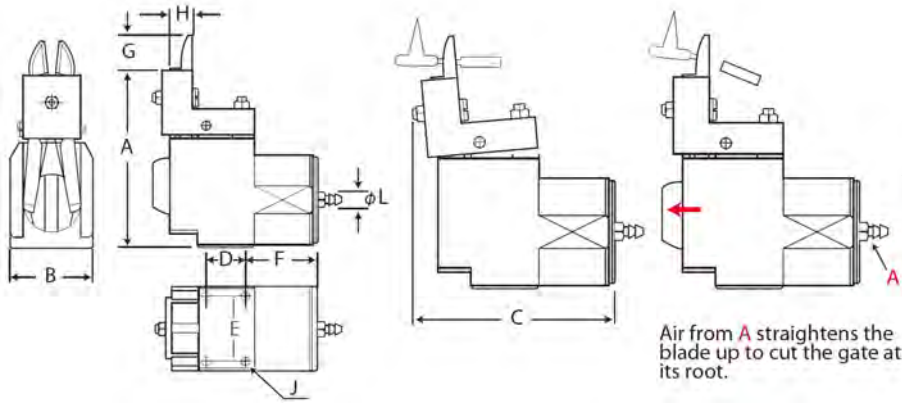
	Cutting Capacity	Weight (g)	Air Consumption	Working Air Pressure (bars)	Blade Category
SNP-3	Hard Plastic ø 2	170	46 cm ³ / stroke	4~5	VI
SNP-5	Hard Plastic ø 3	220	68 cm ³ / stroke	5~6	VI
SNP-10	Hard Plastic ø 4	300	117 cm ³ / stroke	4~5	VI
SNP-20	Hard Plastic ø 5	595	204 cm ³ / stroke	5~6	VI

* Soft Plastics are PP & PE ** Hard Plastics are ABS, Polycarbonates, Acrylic resin, POM & PS





SLIDE & CUT AIR NIPPER BODY

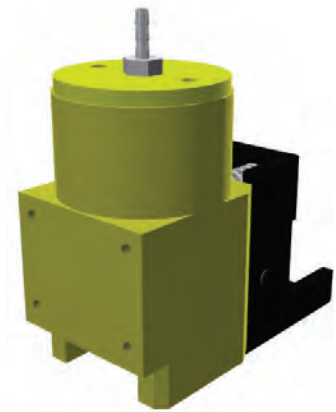


- Cutter body tilts up to the part before the blade cuts.
 - Separate Ports for cutter tilt and blade activation.
 - Only one air circuit is needed when Pneumatic Timing Unit (TU-01) is used.
- *Blades sold separately.

	A	B	C	D	E	F	G	H	J	L	Piab No.
MG-3	50	20	60	16	14	²⁵	15	7	M3	4	0214539
MG-10	73	35	73	20	27	29	18	9	M3	4	0214537
MG-20	95	46	89	21	36	39	19	12	M4	4	0214538

	Cutting Capacity	Air Consumption	Working Air Pressure (bars)	Blade Category	Weight (g)
MG-3	Soft Plastic ø 2	21 cm ³ / stroke	4-5	III	80
MG-10	Soft Plastic ø 4	70 cm ³ / stroke	4-5	III	230
MG-20	Soft Plastic ø 6	213 cm ³ / stroke	4-5	III	420

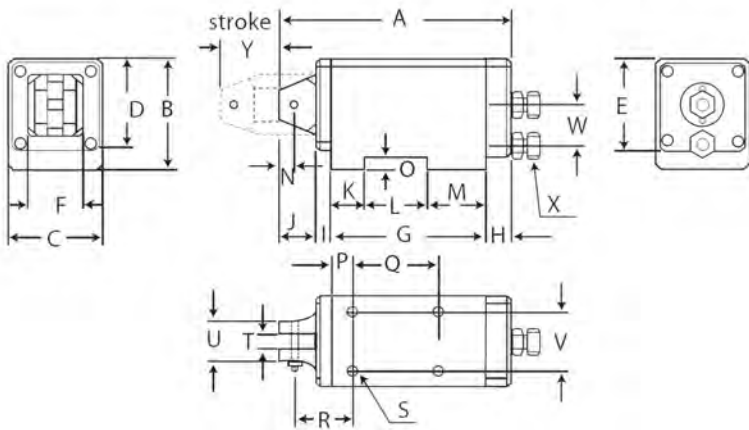
* Soft Plastics are PP & PE ** Hard Plastics are ABS, Polycarbonates, Acrylic resin, POM & PS





Cutting and Degating

TURTLE NECK CUTTER BODY



- Separate Ports for cutter slide and blade activation.
- As air is applied to the cutter's slide port, the movable part of the cutter body extends 30 mm.
- As air to the cutter's slide port is exhausted, the movable part of the cutter body returns.
- Only one air circuit is needed when Pneumatic Timing Unit (TU-01) is used.

*Blades sold separately.



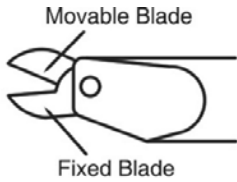
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	Piab No.
CF-5	124	54	44	44	47	28	80	15	10	19	16	33	31	7	8	10	45	32	M6	7	20	30	18	0214175
CF-10	146	64	54	54	54	34	100	15	10	21	26	40	34	7	8	16	60	40	M6	9	20	30	19	0214173
CF-20	165	70	62	62	62	42	117	15	10	23	26	55	36	9	8	16	75	40	M6	12	26	34	21	0214174

	Cutting Capacity	Weight(g)	Air Consumption	Working Air Pressure (bars)	Blade Category	Weight (g)
CF-5	Soft Plastic Ø 2	570	490 cm ³ / stroke	5-6	I	570
CF-10	Soft Plastic Ø 4Hard Plastic Ø 2.6	940	830 cm ³ / stroke	4-5	I	940
CF-20	Soft Plastic Ø 7Hard Plastic Ø 5	1300	1160 cm ³ / stroke	5-6	I	1300

* Soft Plastics are PP & PE ** Hard Plastics are ABS, Polycarbonates, Acrylic resin, POM & PS



AIR CUTTERS BODY



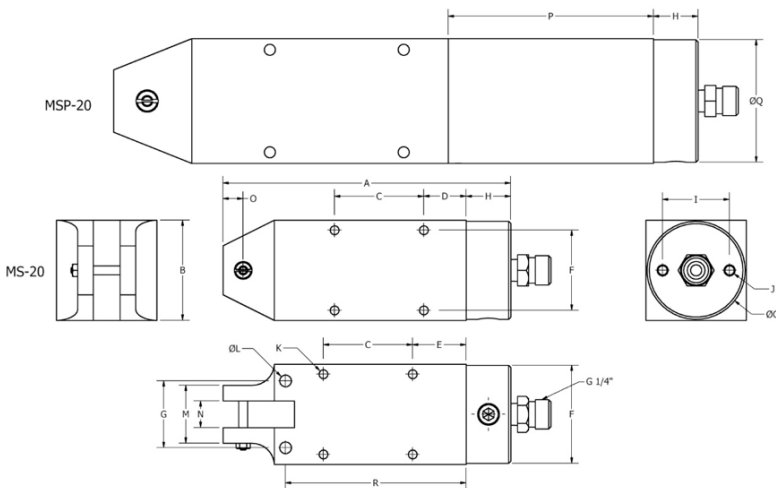
- Scissor style cutting method.
 - Blade has a movable and a fixed side.
- *Blades sold separately.



	Cutting Capacity	Body Length	Body ø	Weight (g)	Air Consumption	Working Air Pressure (bars)	Blade Category	Piab No.
CP-10M	Soft Plastic ø 4 Hard Plastic ø 2.6	132	220	220	116 cm ³ / stroke	4-5	IV	0214176
CP-20M	Soft Plastic ø7 Hard Plastic ø5	155	400	400	230 cm ³ / stroke	5-6	IV	0214177
CP-30M	Soft Plastic ø10 Hard Plastic ø6.5	185	630	630	584 cm ³ / stroke	5-6	IV	0214178

* Soft Plastics are PP & PE ** Hard Plastics are ABS, Polycarbonates, Acrylic resin, POM & PS

STANDARD SQUARE TYPE/PRESSURE BOOSTER TYPE



- Square body with mounting holes on all four sides.
 - MSP-Type has a pressure booster.
- *Blades sold separately.

Model	Weight(g)	Air Consumption	Air Pressure (mpa)
MS3	100	31	0.4-0.5
MS5	160	56	0.4-0.5
MS10	260	584 cm ³ / stroke	0.4-0.5
MS20	430	116 cm ³ / stroke	0.5-0.6
MS30	810	116 cm ³ / stroke	0.5-0.6
MSP20	650	116 cm ³ / stroke	0.4-0.5
MSP30	1,220	116 cm ³ / stroke	0.5-0.6

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	Piab No.
MS-3	89	20	40	19	24	16	14	21	14	M3	M3	3.3	20	7	7	-	-	71	0214548
MS-5	74	30	30	14	19	24	20	20	20	M4	M3	4.3	20	7	7	-	-	55	0214550
MS-10	93	36	30	18	23	28	28	20	24	M4	M4	4.3	20	9	7	-	-	65	0214546
MS-20	109	45	40	19	24	36	36	20	30	M5	M4	5.3	26	12	9	-	-	81	0214547
MS-30	150	56	60	20	30	46	46	20	40	M6	M5	5.3	36	17	15	-	-	110	0214549
MSP-20	109	45	40	19	24	36	36	20	30	M5	M4	5.3	26	12	9	87	45	81	0214554
MSP-30	150	56	60	20	30	46	46	20	40	M6	M5	5.3	36	17	15	92	56	110	0214555

MS



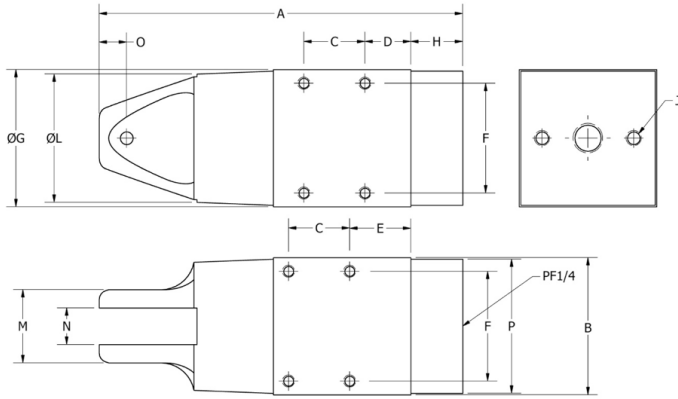
MSP





Cutting and Degating

SQUARE TYPE



- Square body for secure mounting.
 - Cylindrical head fits in to tight spaces.
- *Blades sold separately.

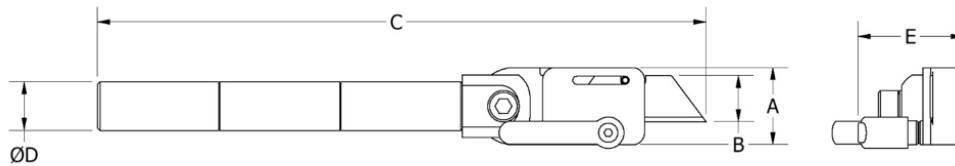


	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Piab No.
MSK-10	87	36	18	10	15	28	35	17	24	M4	M4	33	18	9	7	35	0214551
MSK-20	102	45	20	15	20	36	44	17	30	M5	M4	42	24	12	9	44	0214552
MSK-30	141	56	27	18	26	46	55	17	40	M6	M5	52	34	17	15	55	0214553

	CuttingCapacity	Weight(g)	Air Consumption	Working Air Pressure (bars)	BladeCategory
MSK-10	Soft Plastic ø 4Hard Plastic ø 2.6	190	116 cm ³ / stroke	4-5	I
MSK-20	Soft Plastic ø 7Hard Plastic ø 5	340	230 cm ³ / stroke	5-6	I
MSK-30	Soft Plastic ø 10Hard Plastic ø 6.5	590	584 cm ³ / stroke	5-6	I

GCK 20-150 ADJUSTABLE GATE CUTTING KNIFE

Product Code: GCK 20-150

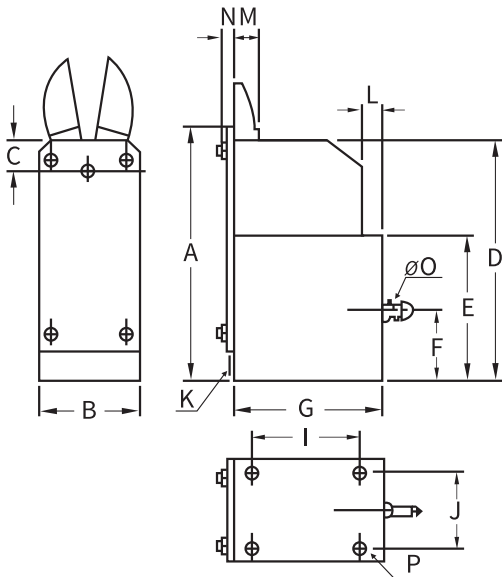


- Easily mounts to standard mounting clamps.
- Lightweight for maximum efficiency in cutting applications.
- Elbow arm allows for fine adjustment of cutter blade.

	A	B	C	D	Weight (g)	Material	Piab No.
GCK 20-150	32	19	198	20	232	Aluminum	0214314



BODY VERTICAL TYPE



- Automatic Type is fixture mountable.
 - Standard and special blades available.
- *Blades sold separately.



	Cutting Capacity Plastic ømm	Weight (g)	Air consumption (cm ³ /stroke)	Air pressure (MPa)	Blade Category	Piab No.
MF-3	1	71	30	0.4-0.5	II	0214535
MF-5	1.2	73	40	0.4-0.5	II	0214536
MF-10	2.5	96	90	0.4-0.5	II	0214533
MF-20	4.5	110	150	0.5-0.6	II	0214534

* Soft Plastics are PP & PE ** Hard Plastics are ABS, Polycarbonates, Acrylic resin, POM & PS

	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	I (mm)	J (mm)	K (mm)	L (mm)	M (mm)	N (mm)	O (mm)
MF-3	71	20	8	68	40	10	38	25	14	2	14	7	3.3	4
MF-5	73	29	9	69	41	20	44	30	22	2	22	7	4.0	4
MF-10	96	35	10	91	56	20	53	40	26	2	26	9	4.0	4
MF-20	110	44	13	102	60	20	64	45	34	2	34	12	3.0	4



Cutting and Degating

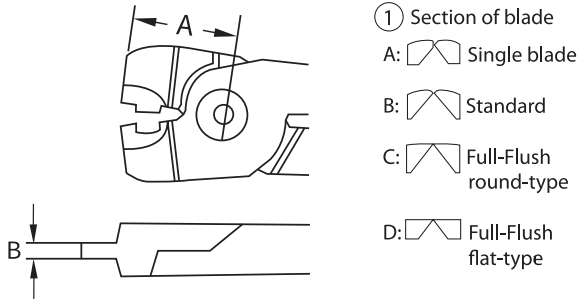
CATEGORY I - STANDARD, CRIMPER BLADES

CRIMPER BLADE

AR8P-2.0

Product Code: AR8P-2.0

- Can be used on MR, MP cutters.
- 2.0mm crimping capacity for ring terminal use.

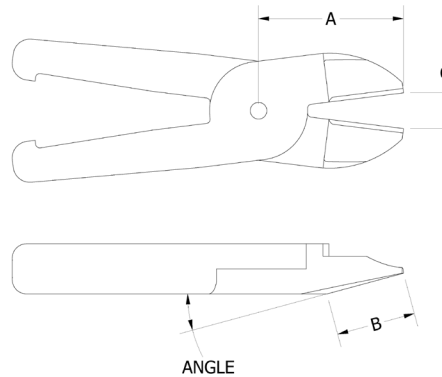
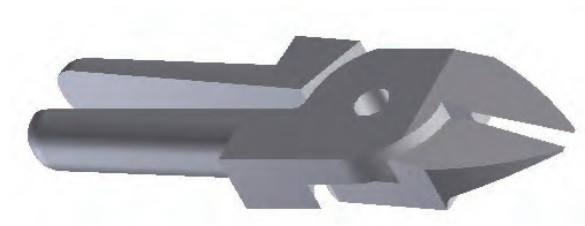


	A (Pivot Location)mm	B (Edge Length)mm	C (Blade Opening)mm	Cutter Body Size	Weight (g)	Piab No.
AR8P-2.0	34	6.5	7.0	MR30A	150	0215169

CATEGORY I - STANDARD TYPE, F

F10 BLADE

Product Code: F10

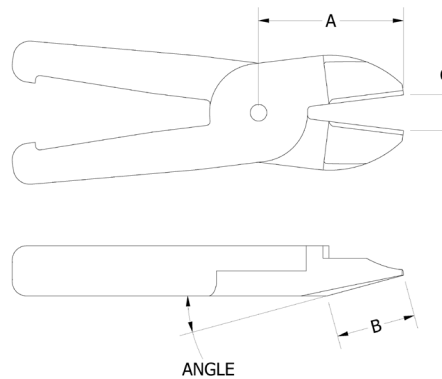


- Can be used on MR, MS cutters.

	A (Pivot Location)	B (Edge Length)	C (Blade Opening)	Blade Angle	Cutter Body Size	Weight (g)	Piab No.
F10	24	12	2.5	15°	3	35	0214224

F1 BLADE

Product Code: F1



- Can be used on MR, CF, CL and MS cutters.

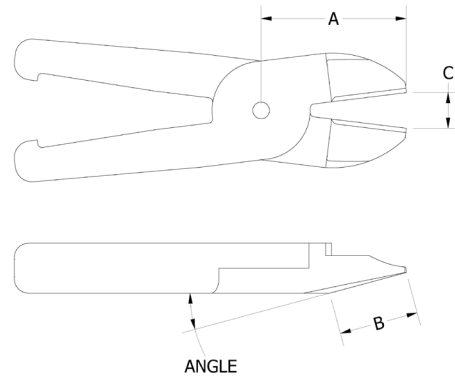
	A (Pivot Location)	B (Edge Length)	C (Blade Opening)	Blade Angle	Cutter Body Size	Weight (g)	Piab No.
F1	24	12	3	15°	5	39	0214223



CATEGORY I - STANDARD TYPE, F

F3 BLADE

Product Code: F3

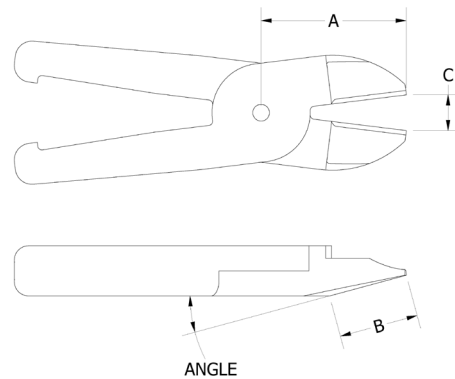


- Can be used on MR, ML, CF, CL, MS, MSK cutters.

	A (Pivot Location)	B (Edge Length)	C (Blade Opening)	Blade Angle	Cutter Body Size	Weight (g)	Piab No.
F3	27	12	4.5	25°	10	70	0213223

F5 BLADE

Product Code: F5

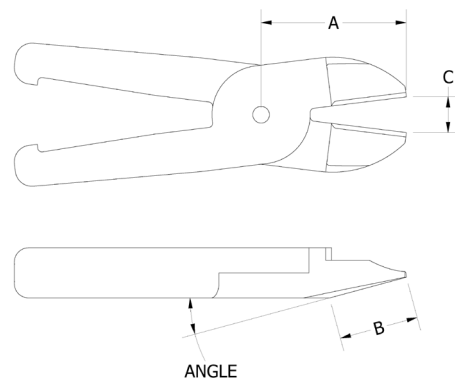


- Can be used on MR, ML, CF, CL, MS, MSP, MSK cutters.

	A (Pivot Location)	B (Edge Length)	C (Blade Opening)	Blade Angle	Cutter Body Size	Weight (g)	Piab No.
F5	35	15	8.5	15°	20	122	0213224

F9PF BLADE

Product Code: F9PF



- Can be used on MR, MP, ML, MS, MSP, MSK cutters.

	A (Pivot Location)	B (Edge Length)	C (Blade Opening)	Blade Angle	Cutter Body Size	Weight (g)	Piab No.
F9PF	65	38	15	15°	30/50	397	0213225

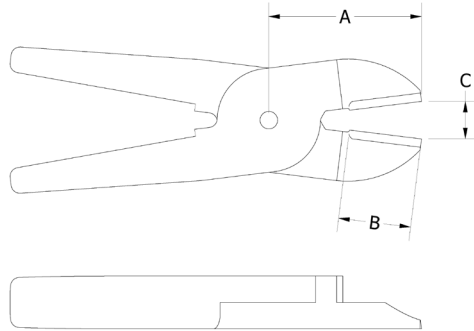


Cutting and Degating

CATEGORY I - STANDARD TYPE, FS

F10S BLADE

Product Code: F10S

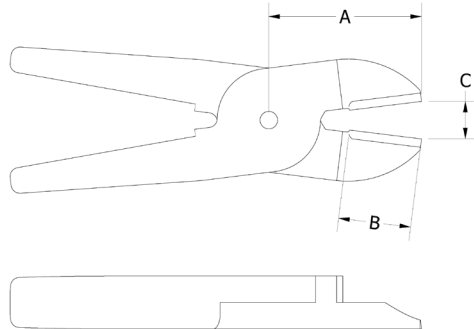


- Can be used on MR, MS cutters.

	A (Pivot Location)	B (Edge Length)	C (Blade Opening)	Cutter Body Size	Weight (g)	Piab No.
F10S	24	12	2.5	3	33	0214227

F1S BLADE

Product Code: F1S

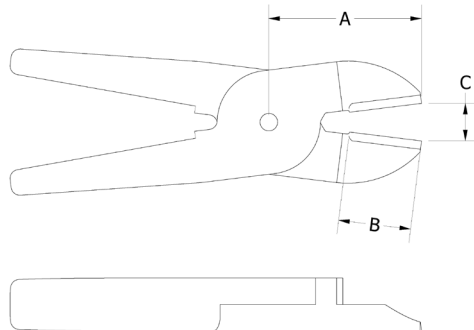


- Can be used on MR, CF, CL, MS cutters.

	A (Pivot Location)	B (Edge Length)	C (Blade Opening)	Cutter Body Size	Weight (g)	Piab No.
F1S	24	12	3	5	40	0214230

F3S BLADE

Product Code: F3S



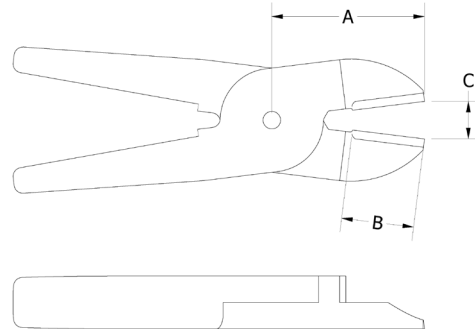
- Can be used on MR, ML, CF, CL, MS/MSP, MSK cutters.

	A (Pivot Location)	B (Edge Length)	C (Blade Opening)	Cutter Body Size	Weight (g)	Piab No.
F3S	27	13	4.5	10	69	0213226



F5S BLADE

Product Code: F5S

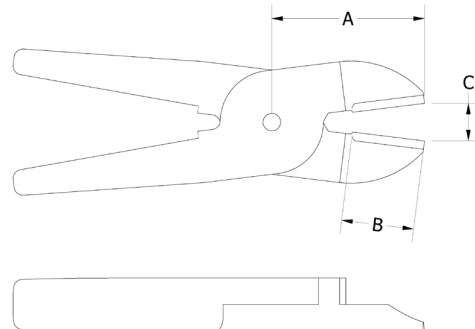


- Can be used on MR, ML, CF, CL, MS, MSK cutters.

	A (Pivot Location)	B (Edge Length)	C (Blade Opening)	Cutter Body Size	Weight (g)	Piab No.
F5S	35	16	8.5	20	121	0213227

F9PSF BLADE

Product Code: F9PSF



- Can be used on MR, MP, ML, MS, MSP, MSK cutters.

	A (Pivot Location)	B (Edge Length)	C (Blade Opening)	Cutter Body Size	Weight (g)	Piab No.
F9PSF	65	37	15	30/50	416	0213228

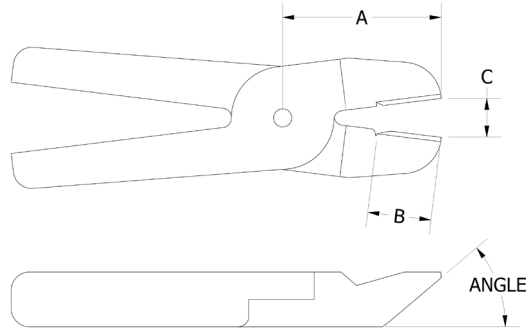


Cutting and Degating

CATEGORY I - STANDARD TYPE, FD

FD10 BLADE

Product Code: FD10

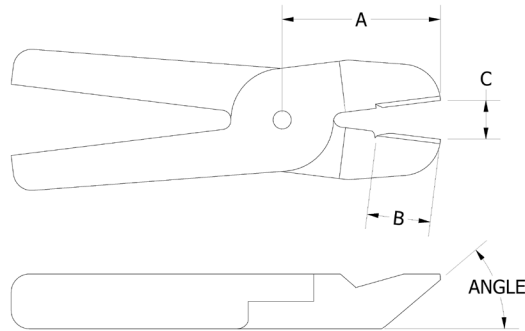


- Can be used on MR, MS cutters.

	A (Pivot Location)	B (Edge Length)	C (Blade Opening)	Blade Angle	Cutter Body Size	Weight (g)	Piab No.
FD10	24	12	2.5	40°	3	35	0214257

FD1 BLADE

Product Code: FD1

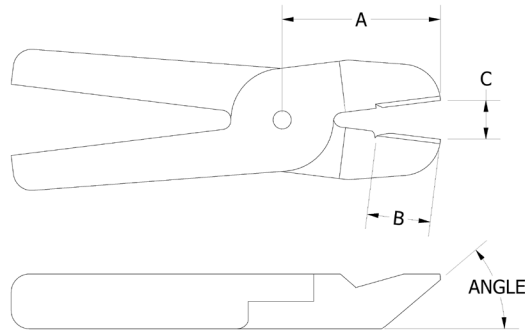


- Can be used on MR, CF, CL, MS cutters.

Blade No.	A (Pivot Location)	B (Edge Length)	C (Blade Opening)	Blade Angle	Cutter Body Size	Weight (g)	Piab No.
FD1	24	12	3.0	40°	5	40	0214256

FD3 BLADE

Product Code: FD3



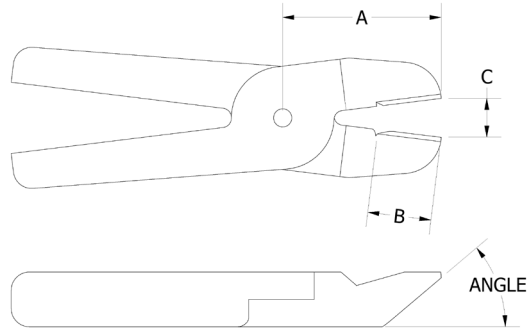
- Can be used on MR, ML, CF, CL, MS, MSK cutters.

Blade No.	A (Pivot Location)	B (Edge Length)	C (Blade Opening)	Blade Angle	Cutter Body Size	Weight (g)	Piab No.
FD3	27	13	4.5	40°	10	71	0213229



FD5 BLADE

Product Code: FD5

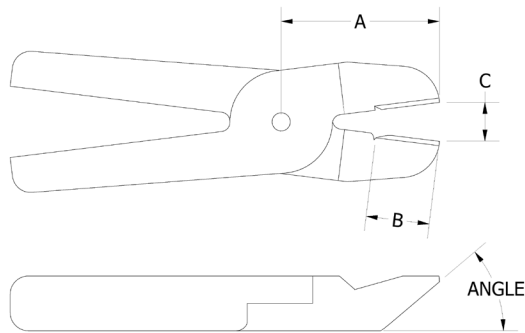


- Can be used on MR, ML, CF, CL, MS, MSP, MSK cutters.

	A (Pivot Location)	B (Edge Length)	C (Blade Opening)	Blade Angle	Cutter Body Size	Weight (g)	Piab No.
FD5	35	16	8.5	40°	20	123	0213230

FD7 BLADE

Product Code: FD7

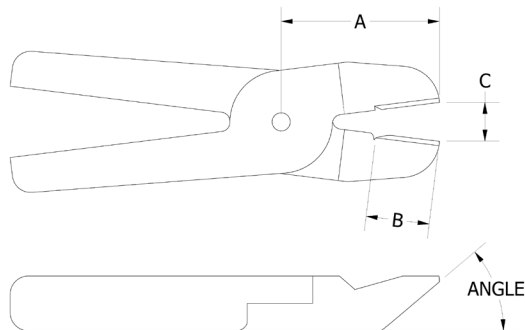


- Can be used on MR cutters.

	A (Pivot Location)	B (Edge Length)	C (Blade Opening)	Blade Angle	Cutter Body Size	Weight (g)	Piab No.
FD7	27	12	3.4	40°	7	70	0214260

FD9P (F) BLADE

Product Code: FD9PF



- Can be used on MR, MP, ML, CF, CL, MS, MSP, MSK cutters.

	A (Pivot Location)	B (Edge Length)	C (Blade Opening)	Blade Angle	Cutter Body Size	Weight (g)	Piab No.
FD9PF	65	28	15.0	30°	30/50	415	0213231

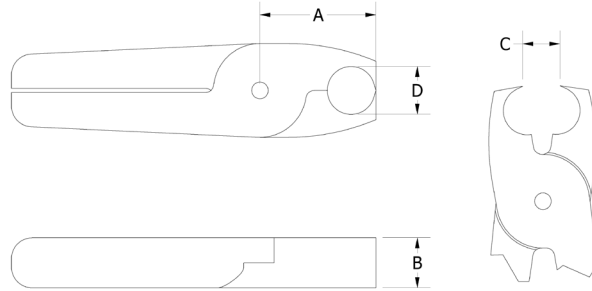
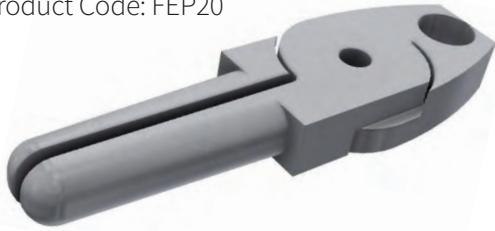


Cutting and Degating

CATEGORY I - STANDARD TYPE, FEP

FEP20 BLADE

Product Code: FEP20

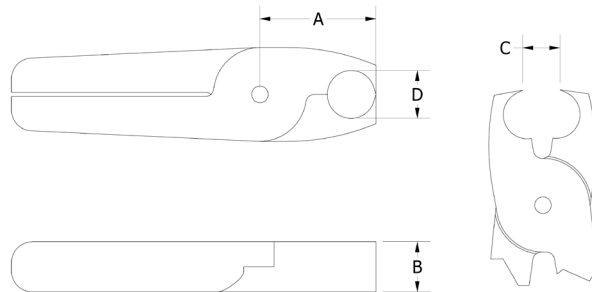


- Can be used on MR and MS cutters.

	A (Pivot Location)	B (Edge Length)	C (Blade Opening)	D	Cutter Body Size	Weight (g)	Piab No.
FEP20	20	7	2.3	7.5	3	40	0214264

FEP2 BLADE

Product Code: FEP2

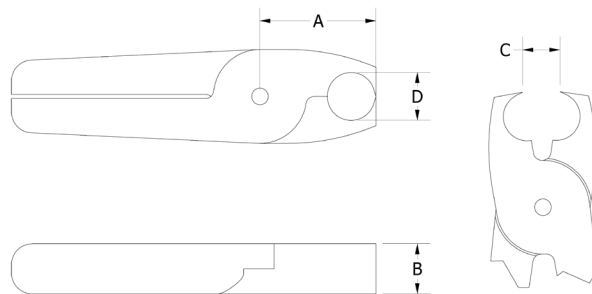


- Can be used on MR, CF, CL and MS cutters.

	A (Pivot Location)	B (Edge Length)	C (Blade Opening)	D	Cutter Body Size	Weight (g)	Piab No.
FEP2	20	7	3.1	7.5	5	41	0214263

FEP4 BLADE

Product Code: FEP4



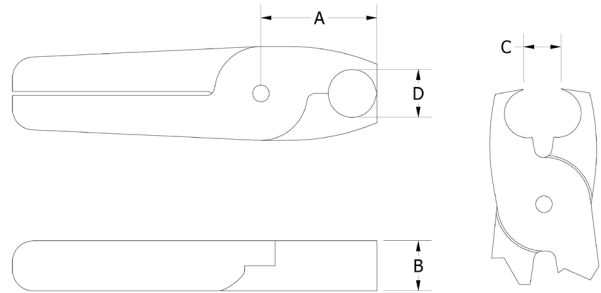
- Can be used on MR, ML, CF, CL, MS and MSK cutters.

	A (Pivot Location)	B (Edge Length)	C (Blade Opening)	D	Cutter Body Size	Weight (g)	Piab No.
FEP4	26	9	5.2	7.5	10	70	0214265



FEP6 BLADE

Product Code: FEP6

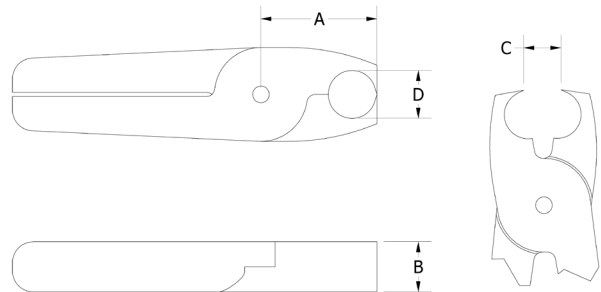


- Can be used on MR, ML, CF, CL, MS, MSP and MSK cutters.

	A (Pivot Location)	B (Edge Length)	C (Blade Opening)	D	Cutter Body Size	Weight (g)	Piab No.
FEP6	28	12	8.9	11.5	20	112	0214266

FEP7 BLADE

Product Code: FEP7

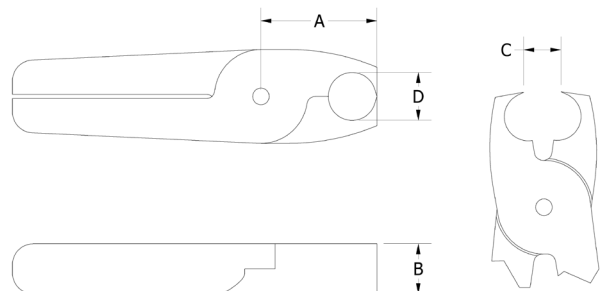


- Can be used on MR cutters.

	A (Pivot Location)	B (Edge Length)	C (Blade Opening)	D	Cutter Body Size	Weight (g)	Piab No.
FEP7	26	9	3.2	7.5	7	90	0214267

FEP10P(F) BLADE

Product Code: FEP10PF



- Can be used on MR, ML, MS, MSP and MSK cutters.

	A (Pivot Location)	B (Edge Length)	C (Blade Opening)	D	Cutter Body Size	Weight (g)	Piab No.
FEP10PF	34	17	6	11.5	30	353	0214262

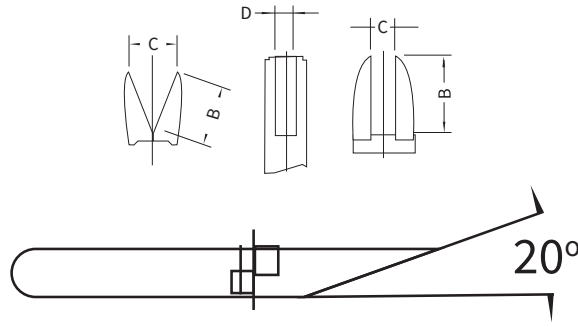


Cutting and Degating

CATEGORY I - STANDARD TYPE, F5 FD EP

F55U23 CUSTOM BLADE

Product Code: F55U23

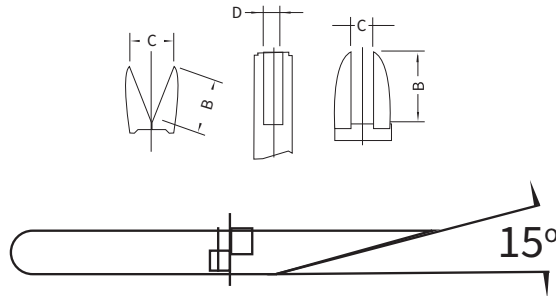


- Can be used on MR, ML, CF, CL, MS, MSP and MSK cutters.

	A (Pivot Location)	B (Edge Length)	C (Blade Opening)	D (Center Gap)	Blade Angle	Cutter Body Size	Weight (g)	Piab No.
F55U23	44	25	12	-	20°	20	145	0214235

F5X1 CUSTOM BLADE

Product Code: F5X1

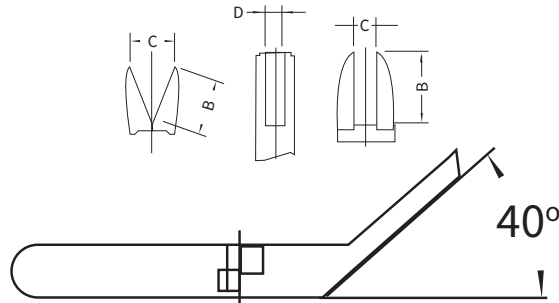


- Can be used on MR, ML, CF, CL, MS, MSP and MSK cutters.

	A (Pivot Location)	B (Edge Length)	C (Blade Opening)	D (Center Gap)	Blade Angle	Cutter Body Size	Weight (g)	Piab No.
F5X1	62	34	17	-	15°	20	211	0214244

F5NR329 CUSTOM BLADE

Product Code: F5NR329



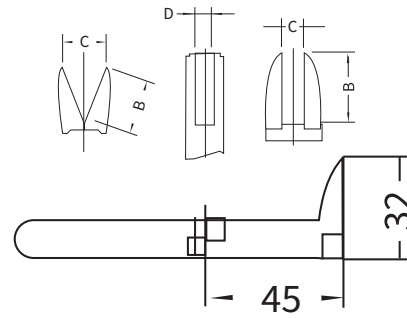
- Can be used on MR, ML, CF, CL, MS, MSP and MSK cutters.

	A (Pivot Location)	B (Edge Length)	C (Blade Opening)	D (Center Gap)	Blade Angle	Cutter Body Size	Weight (g)	Piab No.
F5NR329	52	33	7	-	40°	20	180	0214242



F5NR279 CUSTOM BLADE

Product Code: F5NR279

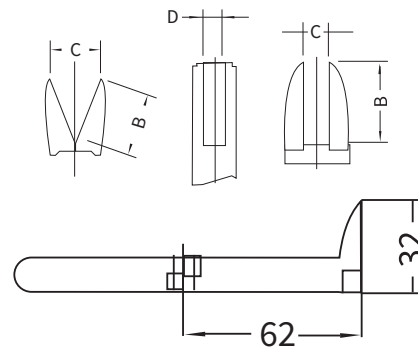


- Can be used on MR, ML, CF, CL, MS, MSP and MSK cutters.

	A (Pivot Location)	B (Edge Length)	C (Blade Opening)	D (Center Gap)	Blade Angle	Cutter Body Size	Weight (g)	Piab No.
F5NR279	45	23	11	-	90°	20	200	0214239

F5N62 CUSTOM BLADE

Product Code: F5N62

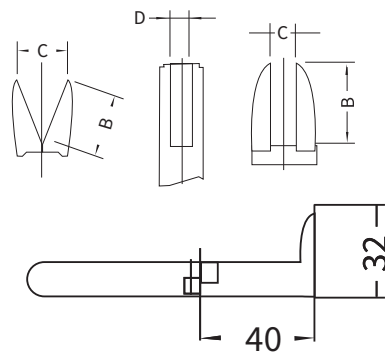
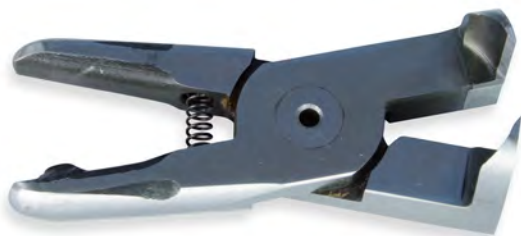


- Can be used on MR, ML, CF, CL, MS, MSP and MSK cutters.

	A (Pivot Location)	B (Edge Length)	C (Blade Opening)	D (Center Gap)	Blade Angle	Cutter Body Size	Weight (g)	Piab No.
F5N62	61	18	16	-	90°	20	261	0214238

F5NR325 CUSTOM BLADE

Product Code: F5NR325



- Can be used on MR, ML, CF, CL, MS, MSP and MSK cutters.

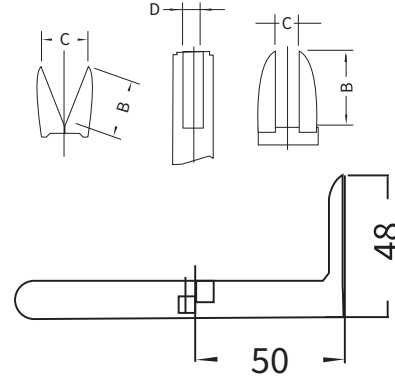
	A (Pivot Location)	B (Edge Length)	C (Blade Opening)	D (Center Gap)	Blade Angle	Cutter Body Size	Weight (g)	Piab No.
F5NR325	40	16	10	-	90°	20	221	0214241



Cutting and Degating

F5NR302 CUSTOM BLADE

Product Code: F5NR302

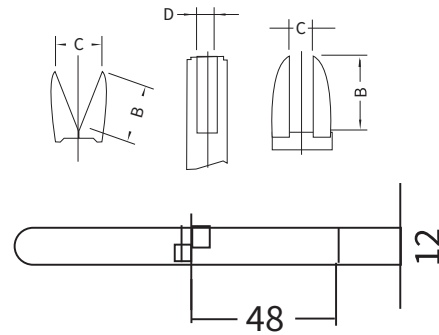


- Can be used on MR, ML, CF, CL, MS, MSP and MSK cutters.

	A (Pivot Location)	B (Edge Length)	C (Blade Opening)	D (Center Gap)	Blade Angle	Cutter Body Size	Weight (g)	Piab No.
F5NR302	50	34	11	8	90°	20	171	0214240

EP6XR322C F5 FD EP TYPE

Product Code: EP6XR322C

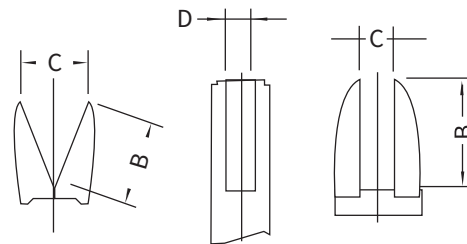


- Can be used on MR, ML, CF, CL, MS, MSP and MSK cutters.

	A (Pivot Location)	B (Edge Length)	C (Blade Opening)	D (Center Gap)	Blade Angle	Cutter Body Size	Weight (g)	Piab No.
EP6UR322C	48	12	11	8	90°	20	171	0214193

EP6XR322 F5 FD EP TYPE

Product Code: EP6XR322



- Can be used on MR, ML, CF, CL, MS, MSP and MSK cutters.

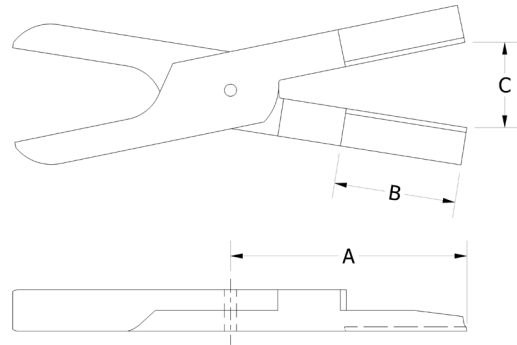
	A (Pivot Location)	B (Edge Length)	C (Blade Opening)	D (Center Gap)	Blade Angle	Cutter Body Size	Weight (g)	Piab No.
EP6UR322	48	6	11	8	90°	20	166	0214192



CATEGORY I - STANDARD TYPE, F9

F9PZXR352F CUSTOM BLADE

Product Code: F9PZXR352F

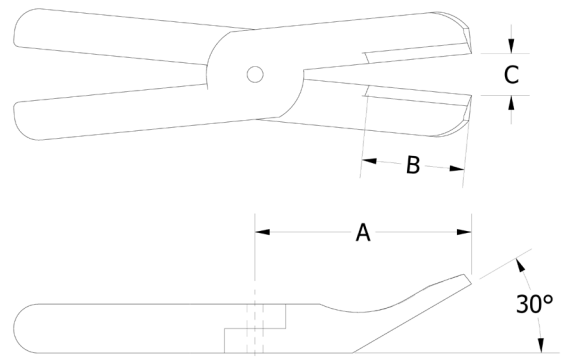


- Can be used on MR, ML, MS, MSP and MSK cutters.

	A (Pivot Location)	B (Edge Length)	C (Blade Opening) 30 Series	C (Blade Opening) 50 Series	D (Center Gap)	Blade Angle	Weight (g)	Piab No.
F9PZXR352F	100	50	16	35	~	0°	514	0214253

F9VPOF CUTTER BLADE

Product Code: F9VPOF

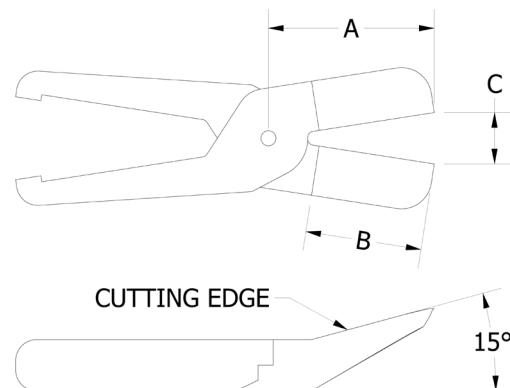


- Can be used on MR, ML, MS, MSP and MSK cutters.

	A (Pivot Location)	B (Edge Length)	C (Blade Opening) 30 Series	C (Blade Opening) 50 Series	D (Center Gap)	Blade Angle	Weight (g)	Piab No.
F9VPOF	60	40	15	20	~	30°	417	0214255

F9PVR48F CUSTOM BLADE

Product Code: F9PVR48F



- Can be used on MR, ML, MS, MSP and MSK cutters.

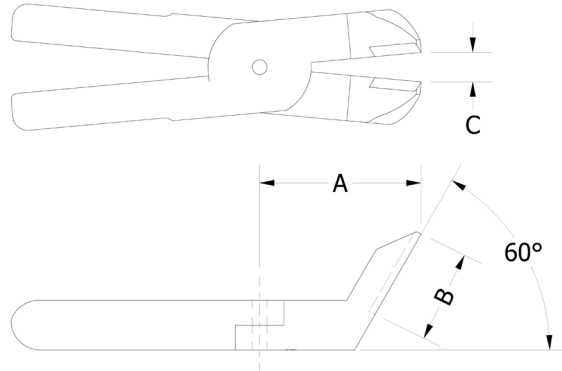
	A (Pivot Location)	B (Edge Length)	C (Blade Opening) 30 Series	C (Blade Opening) 50 Series	D (Center Gap)	Blade Angle	Weight (g)	Piab No.
F9PVR48F	75	40	17	30	~	30°	383	0214251



Cutting and Degating

F9PGM60F CUSTOM BLADE

Product Code: F9PGM60F

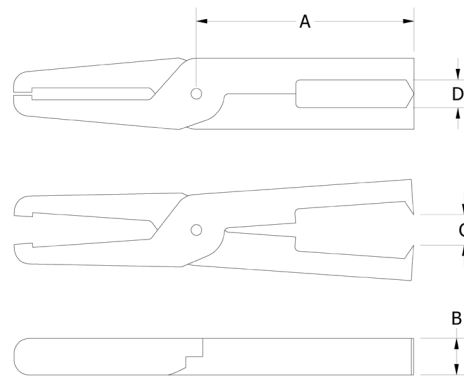


- Can be used on MR, ML, MS, MSP and MSK cutters.

	A (Pivot Location)	B (Edge Length)	C (Blade Opening) 30 Series	C (Blade Opening) 50 Series	D (Center Gap)	Blade Angle	Weight (g)	Piab No.
F9PVR48F	75	40	17	30	~	30°	383	0214248

F9PZXR261F CUSTOM BLADE

Product Code: F9PZXR261F

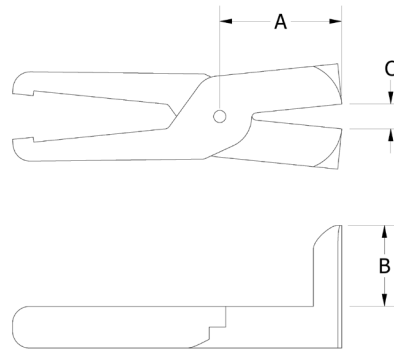


- Can be used on MR, ML, MS, MSP and MSK cutters.

	A (Pivot Location)	B (Edge Length)	C (Blade Opening) 30 Series	C (Blade Opening) 50 Series	D (Center Gap)	Blade Angle	Weight (g)	Piab No.
F9PZXR261F	110	17	14	34	13.5	85°	633	0214252

F9PNR25F CUSTOM BLADE

Product Code: F9PNR25F



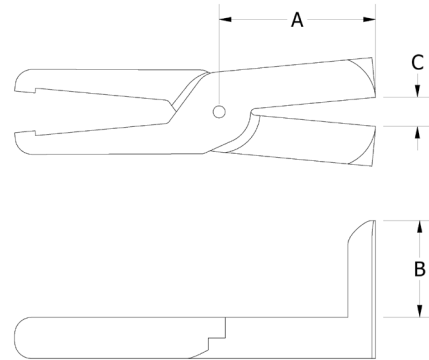
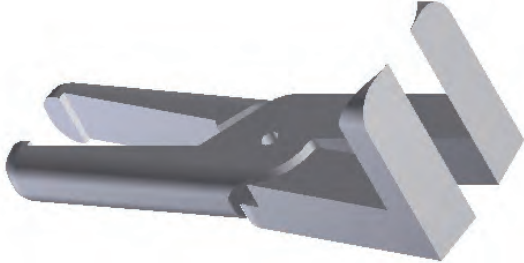
- Can be used on MR, ML, MS, MSP and MSK cutters.

	A (Pivot Location)	B (Edge Length)	C (Blade Opening) 30 Series	C (Blade Opening) 50 Series	D (Center Gap)	Blade Angle	Weight (g)	Piab No.
F9PNR25F	50	33	10	19	~	90°	467	0214249



F9PNR322F CUSTOM BLADE

Product Code: F9PNR322F

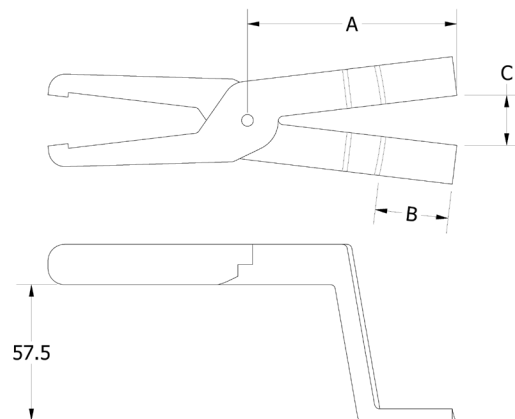
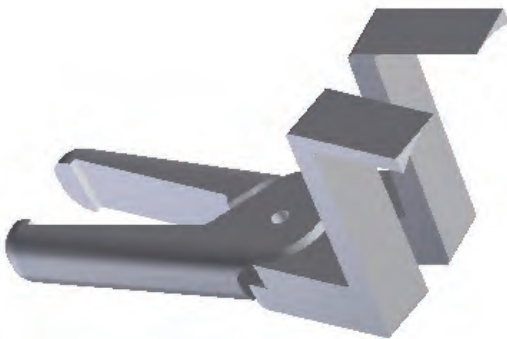


- Can be used on MR, ML, MS, MSP and MSK cutters.

	A (Pivot Location)	B (Edge Length)	C (Blade Opening) 30 Series	C (Blade Opening) 50 Series	D (Center Gap)	Blade Angle	Weight (g)	Piab No.
F9PNR322F	65	40	12	27	~	90°	525	0214250

F9PZXR393F CUSTOM BLADE

Product Code: F9PZXR393F



- Can be used on MR, ML, MS, MSP and MSK cutters.

	A (Pivot Location)	B (Edge Length)	C (Blade Opening) 30 Series	C (Blade Opening) 50 Series	D (Center Gap)	Blade Angle	Weight (g)	Piab No.
F9PZXR393F	80	30	21	37	~	0° (offset)	600	0214254

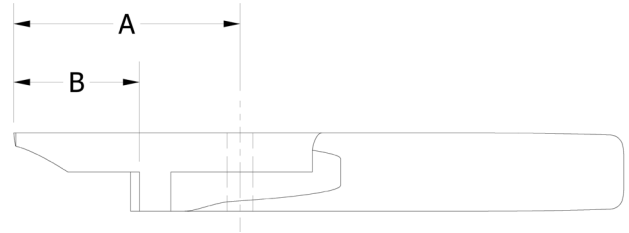
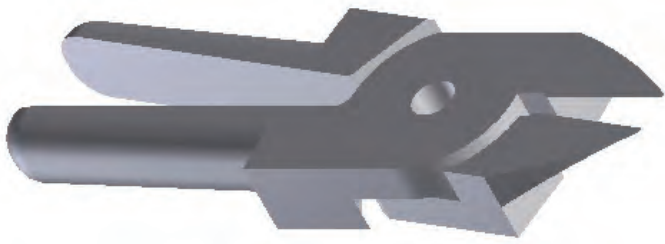


Cutting and Degating

CATEGORY II - STANDARD TYPE, FE

F10E BLADE

Product Code: F10E

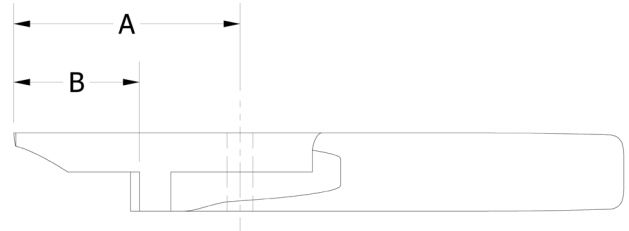


- Can be used on ME cutters.

	A (Pivot Location)	B (Edge Length)	C (Blade Opening)	Cutter Body Size	Weight (g)	Piab No.
F10E	24	13	3.5	3	26	0214225

F1E BLADE

Product Code: F1E

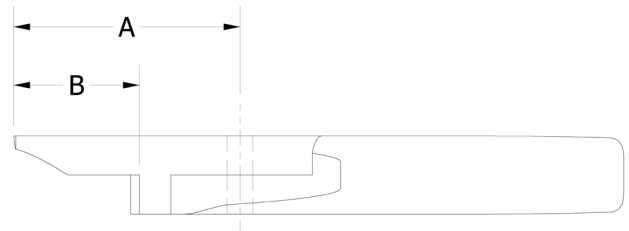


- Can be used on ME cutters.

	A (Pivot Location)	B (Edge Length)	C (Blade Opening)	Cutter Body Size	Weight (g)	Piab No.
F1E	24	12	5.5	5	40	0214228

F3E BLADE

Product Code: F3E



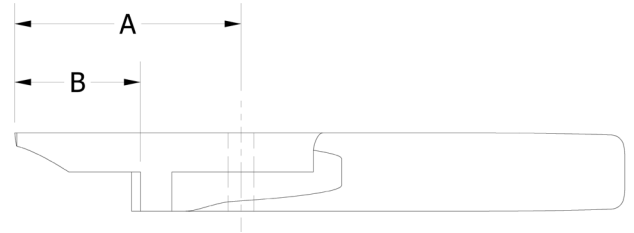
- Can be used on ME cutters.

	A (Pivot Location)	B (Edge Length)	C (Blade Opening)	Cutter Body Size	Weight (g)	Piab No.
F3E	27	13	7	10	59	0214232



F5E BLADE

Product Code: F5E

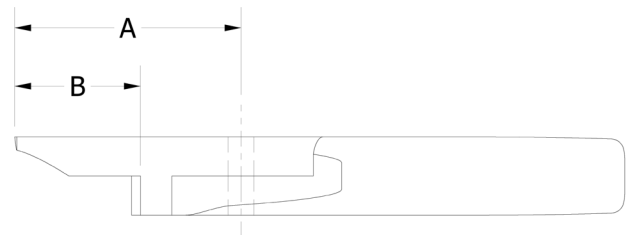


- Can be used on ME cutters.

	A (Pivot Location)	B (Edge Length)	C (Blade Opening)	Cutter Body Size	Weight (g)	Piab No.
F5E	35	18	9	20	118	0214236

F9E BLADE

Product Code: F9E



- Can be used on ME cutters.

	A (Pivot Location)	B (Edge Length)	C (Blade Opening)	Cutter Body Size	Weight (g)	Piab No.
F9E	65	39	15	30	384	0214246

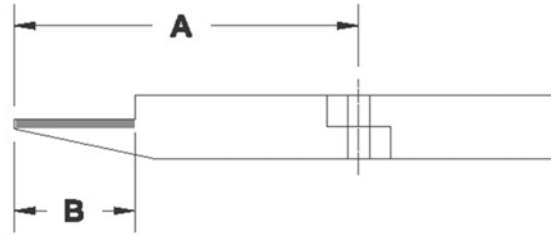
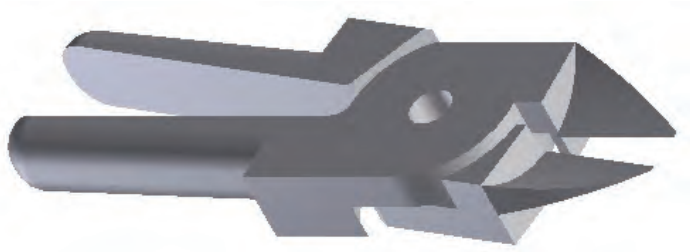


Cutting and Degating

CATEGORY II - STANDARD TYPE, FEK

F10EK BLADE

Product Code: F10EK

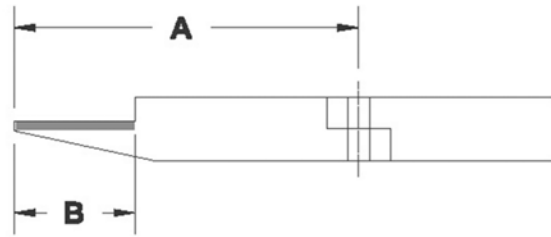


- Can be used on ME cutters.

	A (Pivot Location)	B (Edge Length)	C (Blade Opening)	Cutter Body Size	Weight (g)	Piab No.
F10EK	24	13	7	3	26	0214226

F1EK BLADE

Product Code: F1EK

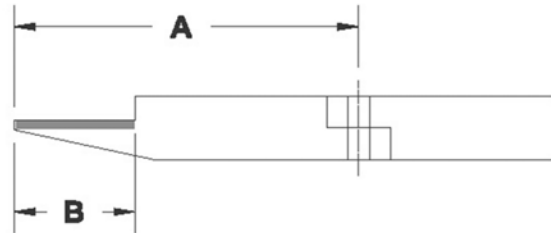
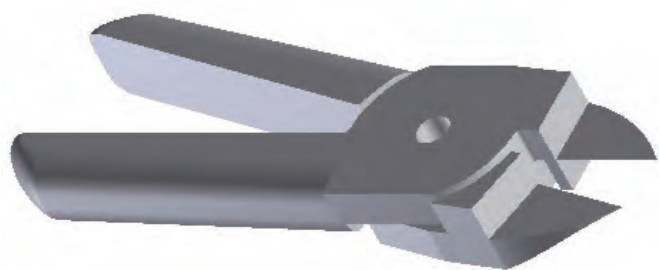


- Can be used on ME cutters.

	A (Pivot Location)	B (Edge Length)	C (Blade Opening)	Cutter Body Size	Weight (g)	Piab No.
F1EK	24	12	9	5	33	0214229

F3EK BLADE

Product Code: F3EK



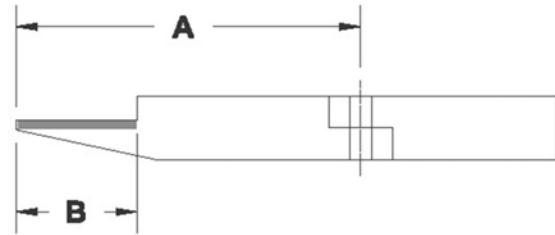
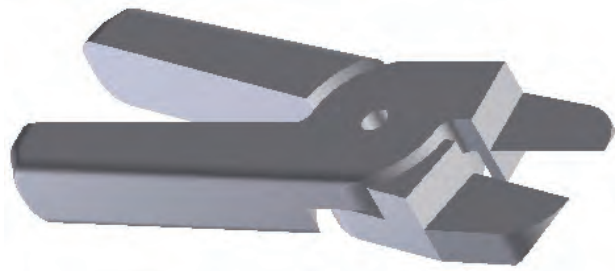
- Can be used on ME cutters.

	A (Pivot Location)	B (Edge Length)	C (Blade Opening)	Cutter Body Size	Weight (g)	Piab No.
F3EK	27	13	15	10	59	0214233



F5EK BLADE

Product Code: F5EK

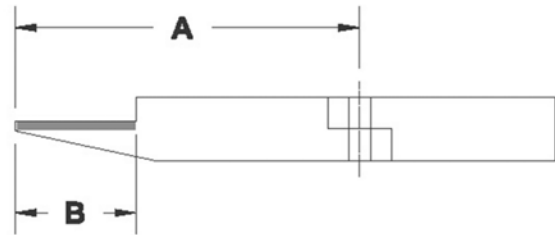
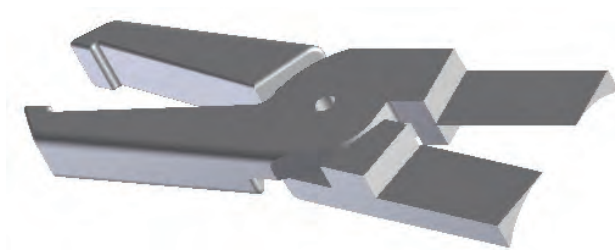


- Can be used on ME cutters.

	A (Pivot Location)	B (Edge Length)	C (Blade Opening)	Cutter Body Size	Weight (g)	Piab No.
F5EK	35	18	9.0	20	112	0214237

F9EK BLADE

Product Code: F9EK



- Can be used on ME cutters.

	A (Pivot Location)	B (Edge Length)	C (Blade Opening)	Cutter Body Size	Weight (g)	Piab No.
F9EK	65	39	15.0	30	396	0214247

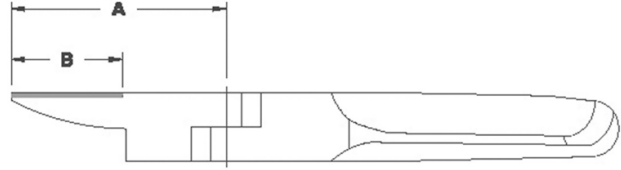


Cutting and Degating

CATEGORY III - STANDARD TYPE, FG

FG10 BLADE

Product Code: FG10

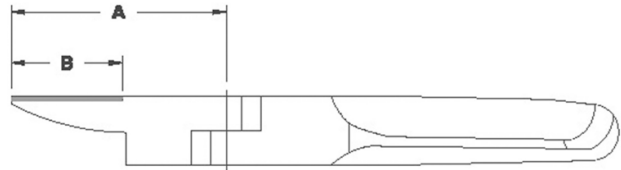


- Can be used on MG cutter.

	A (Pivot Location)	B (Edge Length)	C (Blade Opening)	Cutter Body Size	Weight (g)	Piab No.
FG10	24	13	4	3	26	0214268

FG3 BLADE

Product Code: FG3



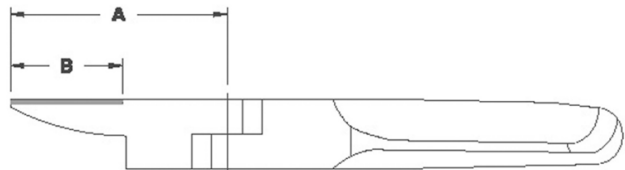
- Can be used on MG cutter.

	A (Pivot Location)	B (Edge Length)	C (Blade Opening)	Cutter Body Size	Weight (g)	Piab No.
FG3	27	13	7	10	59	0214270

CATEGORY III - STANDARD TYPE, FE

FG5 BLADE

Product Code: FG5



- Can be used on MG cutter.

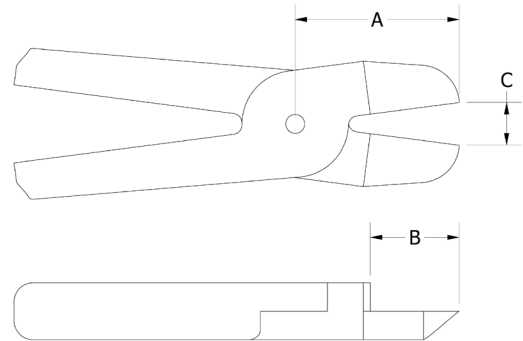
	A (Pivot Location)	B (Edge Length)	C (Blade Opening)	Cutter Body Size	Weight (g)	Piab No.
FG5	34	18	8	20	107	0214272



CATEGORY III - STANDARD TYPE, FGK

FG10K BLADE

Product Code: FG10K

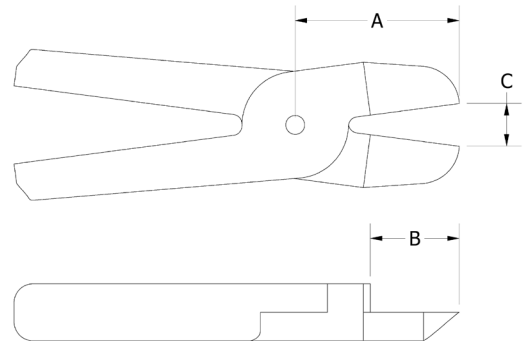
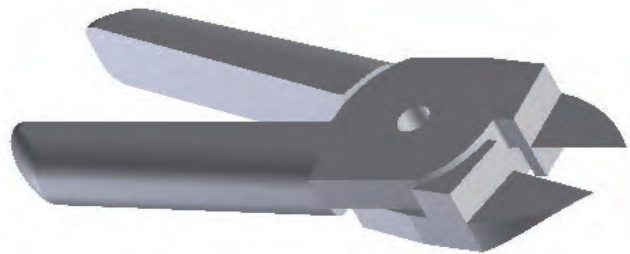


- Can be used on MG cutter.

	A (Pivot Location)	B (Edge Length)	C (Blade Opening)	Cutter Body Size	Piab No.
FG10K	24	13	4	3	0214269

FG3K BLADE

Product Code: FG3K

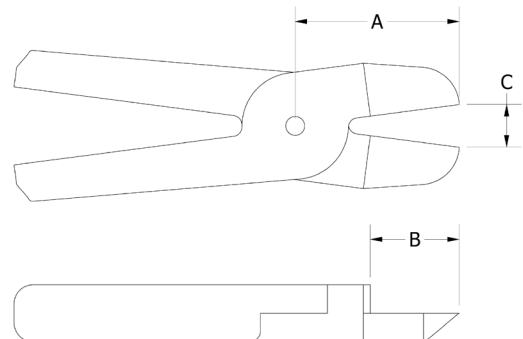
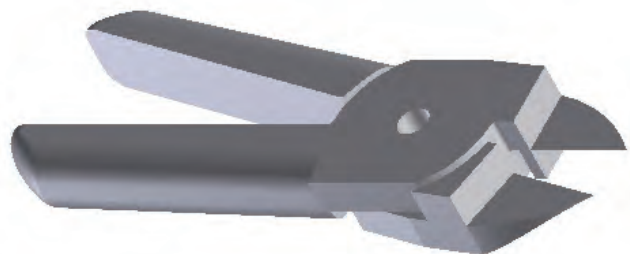


- Can be used on MG cutter.

	A (Pivot Location)	B (Edge Length)	C (Blade Opening)	Cutter Body Size	Piab No.
FG3K	27	13	7	10	0214271

FG5K BLADE

Product Code: FG5K



- Can be used on MG cutter.

	A (Pivot Location)	B (Edge Length)	C (Blade Opening)	Cutter Body Size	Piab No.
FG5K	34	18	8	20	0214273

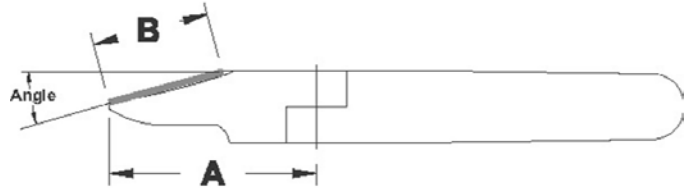


Cutting and Degating

CATEGORY IV - STANDARD TYPE, F

F300 BLADE

Product Code: F300

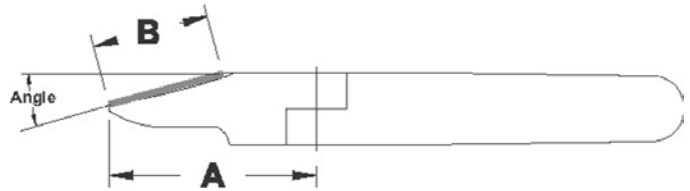


- Can be used on CP cutters.
- Only one side of the blade moves, making locating cut easier.

	A (Pivot Location)	B (Edge Length)	C (Blade Opening)	Blade Angle	Cutter Body Size	Weight (g)	Piab No.
F300	27	15	3	15°	10	55	0214231

F500 BLADE

Product Code: F500

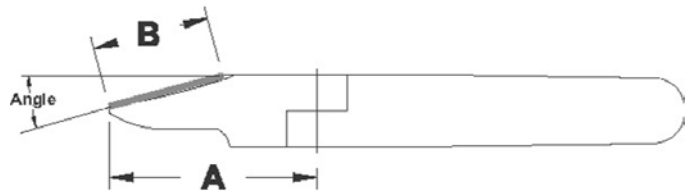


- Can be used on CP cutters.
- Only one side of the blade moves, making locating cut easier.

	A (Pivot Location)	B (Edge Length)	C (Blade Opening)	Blade Angle	Cutter Body Size	Weight (g)	Piab No.
F500	35	22	7	15°	20	113	0214234

F900 BLADE

Product Code: F900



- Can be used on CP cutters.
- Only one side of the blade moves, making locating cut easier.

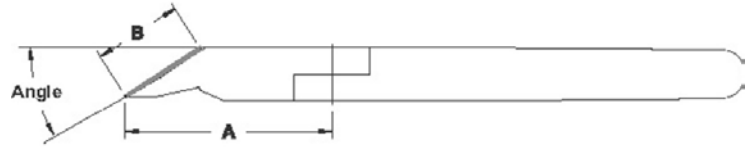
	A (Pivot Location)	B (Edge Length)	C (Blade Opening)	Blade Angle	Cutter Body Size	Weight (g)	Piab No.
F900	65	45	10	15°	30	370	0214245



CATEGORY IV - STANDARD TYPE, FD

FD300 BLADE

Product Code: FD300

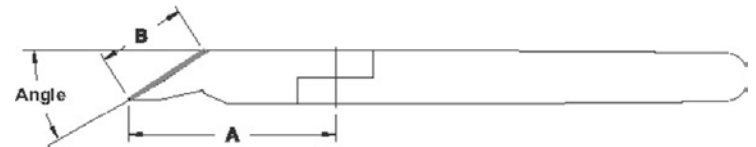


- Can be used on CP cutters.
- Only one side of the blade moves, making locating cut easier.

	A (Pivot Location)	B (Edge Length)	C (Blade Opening)	Blade Angle	Cutter Body Size	Piab No.
FD300	27	15	3	40°	10	0214258

FD500 BLADE

Product Code: FD500

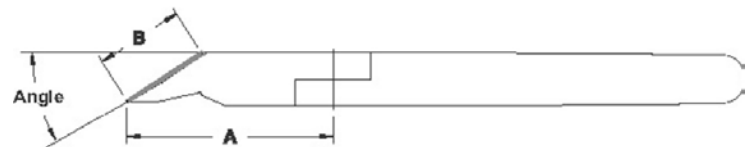


- Can be used on CP cutters.
- Only one side of the blade moves, making locating cut easier.

	A (Pivot Location)	B (Edge Length)	C (Blade Opening)	Blade Angle	Cutter Body Size	Piab No.
FD500	34	20	7	40°	20	0214259

FD900 BLADE

Product Code: FD900



- Can be used on CP cutters.
- Only one side of the blade moves, making locating cut easier.

	A (Pivot Location)	B (Edge Length)	C (Blade Opening)	Blade Angle	Cutter Body Size	Piab No.
FD900	65	27	10	40°	30	0214261

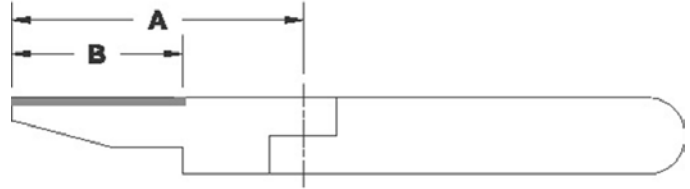


Cutting and Degating

CATEGORY V - STANDARD TYPE, FN

FN1 BLADE

Product Code: FN1

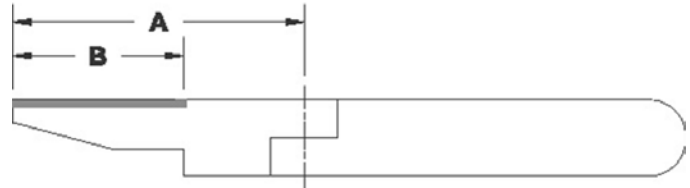


- Can be used on SN cutters.
- Pushes up close to part when cutter strokes in.
- Pulls cut material away from part as cutter returns.

	A (Pivot Location)	B (Edge Length)	C (Blade Opening)	Cutter Body Size	Piab No.
FN1	24	11	5.5	5	0213243

FN3 BLADE

Product Code: FN3



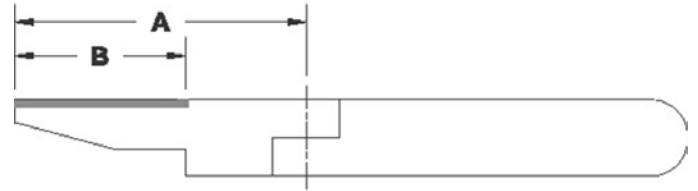
- Can be used on SN cutters.
- Pushes up close to part when cutter strokes in.
- Pulls cut material away from part as cutter returns.

	A (Pivot Location)	B (Edge Length)	C (Blade Opening)	Cutter Body Size	Piab No.
FN3	27	12	7.5	10	0213244



FN5 BLADE

Product Code: FN5

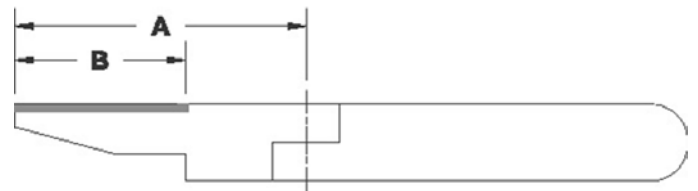


- Can be used on SN cutters.
- Pushes up close to part when cutter strokes in.
- Pulls cut material away from part as cutter returns.

	A (Pivot Location)	B (Edge Length)	C (Blade Opening)	Cutter Body Size	Piab No.
FN5	35	15	8.5	20	0213245

FN10 BLADE

Product Code: FN10



- Can be used on SN cutters.
- Pushes up close to part when cutter strokes in.
- Pulls cut material away from part as cutter returns.

	A (Pivot Location)	B (Edge Length)	C (Blade Opening)	Cutter Body Size	Piab No.
FN10	24	11	3.5	3	0213242

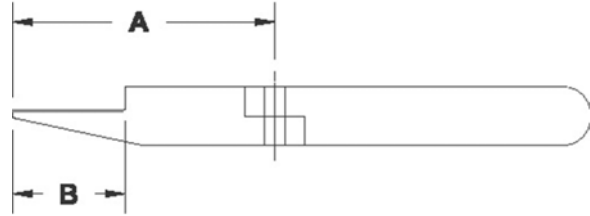
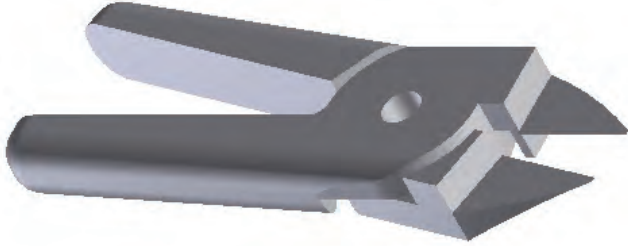


Cutting and Degating

CATEGORY VI - STANDARD TYPE, FNP

FNP1 BLADE

Product Code: FNP1

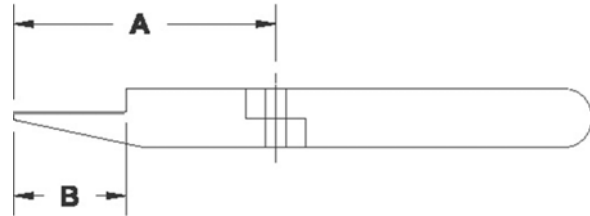


- Can be used on SNP cutters.
- Pulls up close to part when cutter strokes out.
- Pushes cut material away from part as cutter returns.

	A (PivotLocation)	B (Edge Length)	C (Blade Opening)	Cutter Body Size	Piab No.
FNP1	24	11	5,5	5	0213247

FNP3 BLADE

Product Code: FNP3



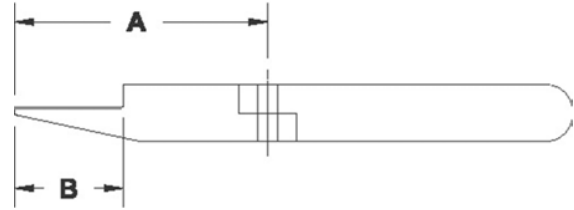
- Can be used on SNP cutters.
- Pulls up close to part when cutter strokes out.
- Pushes cut material away from part as cutter returns.

	A (PivotLocation)	B (Edge Length)	C (Blade Opening)	Cutter Body Size	Piab No.
FNP3	27	12	7,5	10	0213248



FNP5 BLADE

Product Code: FNP5

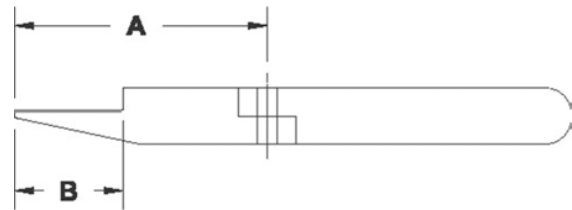


- Can be used on SNP cutters.
- Pulls up close to part when cutter strokes out.
- Pushes cut material away from part as cutter returns.

	A (PivotLocation)	B (Edge Length)	C (Blade Opening)	Cutter Body Size	Piab No.
FNP5	35	15	8.5	20	0213249

FNP10 BLADE

Product Code: FNP10



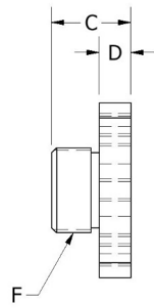
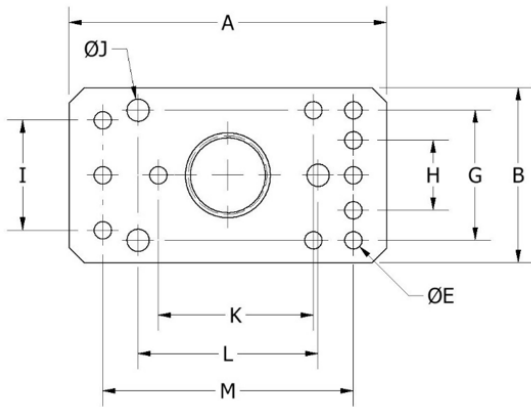
- Can be used on SNP cutters.
- Pulls up close to part when cutter strokes out.
- Pushes cut material away from part as cutter returns.

	A (PivotLocation)	B (Edge Length)	C (Blade Opening)	Cutter Body Size	Piab No.
FNP10	24	11	3.5	3	0213246



Cutting and Degating

ADAPTER FOR ME CUTTERS

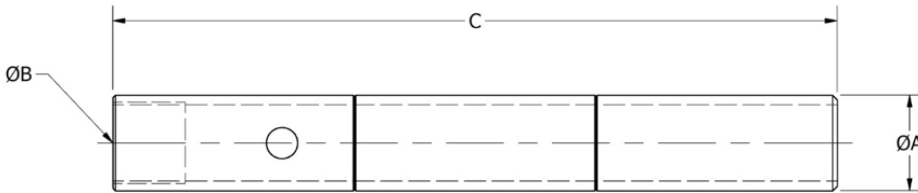


- Allows ME sprue cutters to attach to standard VLR Arm Extensions and mount in standard mounting clamps.



	A	B	C	D	E	F	G	H	I	J	K	L	M	Cutter	Extension	Piab No.
ME-HP 3/5/10	63	35	16	6	3.5	M17 X 1	26	14	22	4.5	31	34	50	ME 3/5/10 / ML 10/20	VLR 20-L	0213221
ME-HP 20/30	100	51	16	6	4.5	M27 X 1	34	26	40	4.5	34	40	85	ME 20/30 / ML 30	VLR 30-L	0213222

ARM EXTENSION



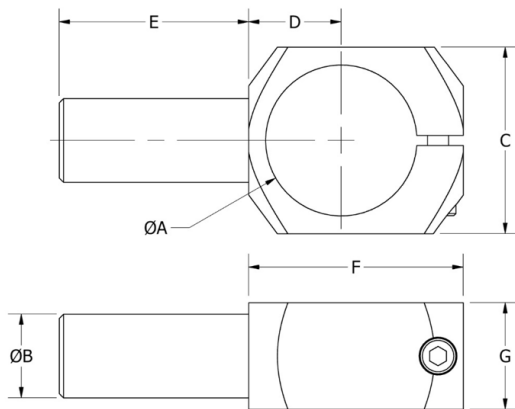
	A	B	C	Weight (g)	Piab No.
VLR 10-90	10	M8 x 1	90	9	0213182
VLR 14-120	14	M12 x 1	120	19	0213183
VLR 20-150	20	M17 x 1	150	46	0213184
VLR 30-200	30	M27 x 1	200	94	0213185

- Extends GRF and GRW gripper fingers.
- Attaches to ADZ and ADG cylinder adapters.
- Extends ZTB locators.
- Tightening hole for securing connection to mating parts.





STANDARD SPRUE CUTTER CLAMP



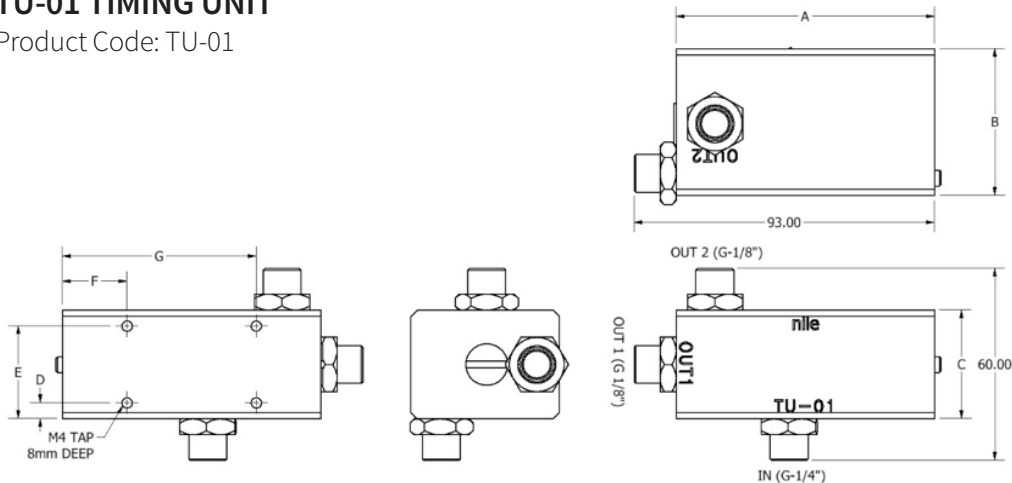
- Adjustable clamp for the cutter body.
- Mounts any 20 series gripper mounting arms and mounting clamps, including GLA's, WKA's, WSL's, and WST's.



	A	B	C	D	E	F	G	Sprue Cutter	Weight (g)	Piab No.
MR-KS 10	36	20	45	22	45	51	25	MR 10 A	92	0213214
MR-KS 20	45	20	51	35	45	70	25	MR 20 A	132	0213215
MR-KS 30	56	20	64	40	45	80	25	MR 30 A	168	0213216
MR-KS 50	75	20	89	50	50	100	25	MR 50 A	296	0213217

TU-01 TIMING UNIT

Product Code: TU-01



- Out 1 Port fires first and is intended to control the slide or tilt motion of the cutter body.
- Out 2 Port fires after a short delay and is intended to control the blade.
- Delay between port firing is adjustable to suit specific applications.
- Port Size G 1/8"

	A	B	C	D	E	F	G	Piab No.
TU-01	80	46	34	5	29	20	60	0214719





Electrical



At the cutting edge of smart development, our line of electrical components help you create a smarter tool system.

CYLINDER SENSORS

	Sensor Type	Supply Voltage (VDC)	Applicable Component/Cylinder	Cable Length	Wires	Output	Weight (g)	Piab No.
RRK-93	Reed Switch	24	ISC / KHZ / SZD / SZS / PG / KZ RC	3m	2	24 VDC	29	0214591
RRK-M9P	Solid State Switch	4.5-28	ISC / KHZ / SZD / SZS / PG / KZ RC	3m	3	PNP	41	0214593
RRK-Y59B	Reed Switch	24	LPG 10-/PGR...-S	3m	2	24 VDC	44	0214595

RRK-93

Product Code: RRK-93

- 2-Wire reed switch sensors have higher voltage resistance capability.



RRK-M9P

Product Code: RRK-M9P

- 3-Wire solid state switches have faster reaction time.
- Sensor with flying leads.



RRK-Y59B

Product Code: RRK-Y59B

- 2-Wire reed switch sensors have higher voltage resistance capability.



SOLID STATE SENSORS

RRK-DFSHP PNP

Product Code: RRK-DFSHP
Piab No. 0213128



RRK-DFSHN NPN

Product Code: RRK-DFSHN
Piab No. 0213129



- Magnetic solid state sensor.
- Sensors cylinder position by sensing a magnet on the piston.

Electrical Data	
Cable specification	2.8 O, 3C, Grey Oil Resistant PVC
Cable length	2m
Current, consumption	3 mA
Display	Red LED, Green LED
Supply voltage	5 – 30 VDC
Voltage drop, max	0.5 VDC (@ 200 mA)
EOAT (End Of Arm Tooling)	
Applicable Component / Cylinder	ISC / KHZ / SZD / SZS / PG / KZ RC
Switching logic	Solid state, normally open
Switching current	200 mA
Switching rating	6 W
Leakage current	0.01 mA
Switching frequency	1000 Hz
Protection, circuit	Power reverse polarity, surge suppression

CYLINDER SENSORS

	Sensor Type	Supply Voltage (VDC)	Applicable Component/Cylinder	Cable Length	Wires	Output	Weight (g)	Piab No.
RRK-Y7P	Solid State Switch	4.5-28	LPG 10-/PGR...-S	2m	3	PNP	51	0214597
SN 1.5	Ind. Proximity	10-30	GRZ	2m	3	NPN	30	0213252
SP 1.5	Ind. Proximity	10-30	GRZ	2m	3	PNP	29	0213250

RRK-Y7P

Product Code: RRK-Y7P

- 3-Wire solid state switches have faster reaction time.



SN 1.5

Product Code: SN 1.5

- NPN.
- 3 wire.



SP 1.5

Product Code: SP 1.5

- PNP.
- 3 wire.



CYLINDER SENSORS

	Sensor Type	Supply Voltage (VDC)	Applicable Component/Cylinder	Cable Length	Wires	Output	Weight (g)	Piab No.
RRK-93-TP	Reed Switch	24	ISC / KHZ / SZD / SZS / PG / KZ / RC	0.5m	2	24 VDC	10	0214592
RRK-M9P-TP	Solid State Switch	4.5-28	IST / KHZ / RC B-S / SZD	0.5m	3	PNP	10	0214594
RRK-Y59B-TP	Reed Switch	24	LPG 10 / PGR -S	0.5m	2	24 VDC	12	0214596

RRK-93-TP

Product Code: RRK-93-TP

- 2-Wire reed switch sensors have higher voltage resistance capability.
- M8 3 pin, plug connector.



RRK-M9P-TP

Product Code: RRK-M9P-TP

- 3-Wire solid state switches have faster reaction time.
- Sensor with connector end.
- M8 3 pin, plug connector.



RRK-Y59B-TP

Product Code: RRK-Y59B-TP

- 2-Wire reed switch sensors have higher voltage resistance capability.
- M8 3 pin, plug connector.



CYLINDER SENSORS

	Sensor Type	Supply Voltage (VDC)	Applicable Component/Cylinder	Cable Length	Wires	Output	Weight (g)	Piab No.
RRK-Y7P-TP	Solid State Switch	4.5-28	LPG 10 / PGR -S	0.5m	3	PNP	31	0214598
SN 1.5-P	Ind. Proximity	10-30	GRZ	200mm	3	NPN	12	0213253
SP 1.5-P	Ind. Proximity	10-30	GRZ	200mm	3	PNP	13	0213251

RRK-Y7P-TP

Product Code: RRK-Y7P-TP

- 3-Wire solid state switches have faster reaction time.



SN 1.5-P

Product Code: SN 1.5-P

- NPN.
- M8 3 pin, plug connector.



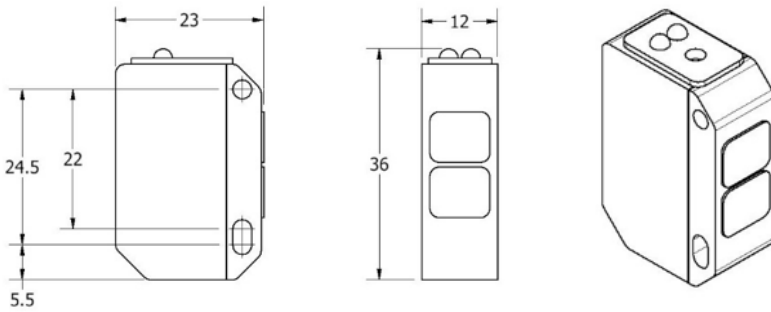
SP 1.5-P

Product Code: SP 1.5-P

- PNP.
- M8 3 pin, plug connector.



OPTICAL SENSORS

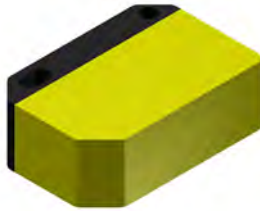


	Sensor Type	Supply Voltage (VDC)	Sensing Range (mm)	Cable Length	Wires	Quick Connector	Output	Weight (g)	Piab No.
LES-5	Diffuse Reflective	10-30	0-250	2m	3	-	PNP	86	0214518
LES-5P	Diffuse Reflective	10-30	0-250	150mm	3	3-Pin Plug	PNP	70	0214519
LRS-14	Diffuse Reflective	10-30	0-300	2m	3	-	PNP	91	0213254
LRS-18	Diffuse Reflective	10-30	0-400	2m	3	-	PNP	80	0213255

LES-5

Product Code: LES-5

- Diffuse photoelectric sensor.
- 0-250mm sensing range.
- Used for part presence when vacuum sensing is not available.
- Using the GGE 14-120 FS the sensor can mount to standard clamps.



LES-5P

Product Code: LES-5P

- Diffuse photoelectric sensor.
- 0-250mm sensing range.
- Used for part presence when vacuum sensing is not available.
- Using the GGE 14-120 FS the sensor can mount to standard clamps.



LRS-14

Product Code: LRS-14

- Diffuse photoelectric sensor.
- 0-400mm sensing range.
- used for part presence when vacuum sensing is not available.
- Using the GLA 14-120 the sensor can mount to standard clamps.
- 12mm threaded-barrel sensor.



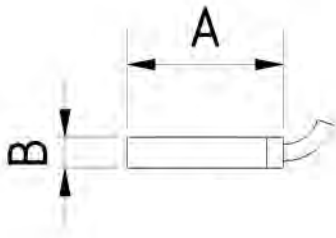
LRS-18

Product Code: LRS-18

- Diffuse photoelectric sensor.
- 0-300mm sensing range.
- used for part presence when vacuum sensing is not available.
- Using the GLA 20-150 the sensor can mount to standard clamps.
- 18mm threaded-barrel sensor.



INDUCTIVE SENSORS



	A	B	Depth	Piab No.
FB - BI2 - Q5,5 - AP6X	28	5,5	8	0213390
FB - BI2 - Q5,5 - AP6X - 0,3 - PS	28	5,5	8	0213391

FB - BI2 - Q5,5 - AP6X

Product Code: FB - BI2 - Q5,5 - AP6X

FB - BI2 - Q5,5 - AP6X

- Inductive sensor.
- Cuboid.
- Height = 5.5 mm.
- Active surface on top.
- Plastic, PP.
- DC3 wire, 10...30 VDC, make contact, PNP output, cable connection.
- Length of cable: 2 m.
- Reference switching distance: 2 mm, flush.



FB - BI2 - Q5,5 - AP6X - 0,3 - PS

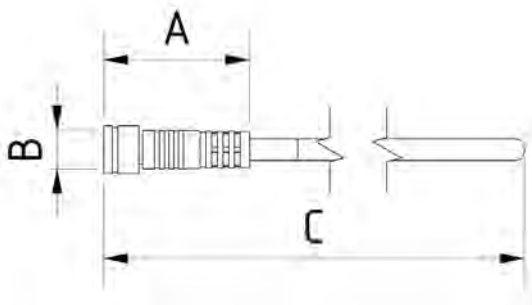
Product Code: FB - BI2 - Q5,5 - AP6X - 0,3 - PS

FB - BI2 - Q5,5 - AP6X - 0,3 - PS

- Inductive sensor.
- Cuboid.
- Height = 5.5 mm.
- Active surface on top.
- Plastic, PP.
- DC3 wire, 10...30 VDC make contact, PNP output, pin-and-socket connector, M8 x 1.
- Length of cable: 0.3 m.
- Reference switching distance: 2 mm, flush.



REFLECTION LIGHT SWITCH



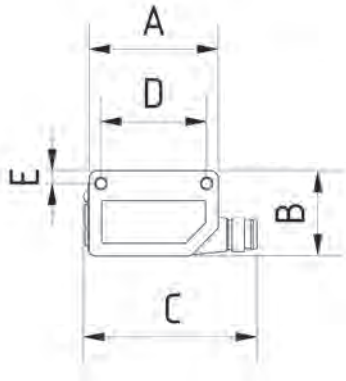
Cable socket, 3-pin FB - KDG - M8 - 3 - 2m

- Cable socket 2m.
- M8 3 pin connector straight.
- 3 x 0,34 mm².
- PUR.
- Cable socket with stable knurled nut made of aluminum.
- For fast replacement of the connected components.

	A	B	C	Piab No.
FB - KDG - M8 - 3 - 2m	30,5	M8	2M	0213394

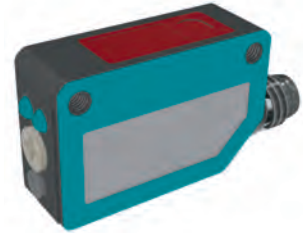


REFLECTION LIGHT SWITCH

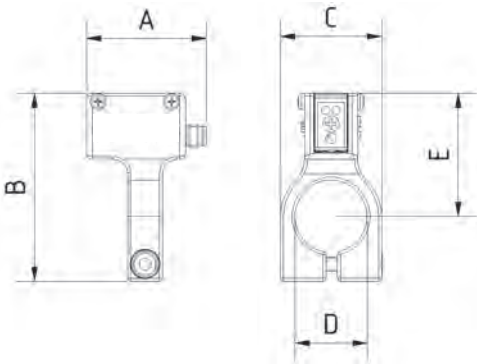


- Reflection light switch.
- Background suppression.
- Standard miniature housing with M3 threaded mounting holes.
- 11mm x 31mm x 20mm.
- Sensing range max. 5mm - 100mm.
- Sensing range 20mm - 100mm.
- Type of light: visible redlight.
- Connector M8, ME3-pin.
- Material: plastic.

	A	B	C	D	E	Depth	Piab No.
FB-WTB8-P2111	31	20	42	25.4	3	11	0213395
FB-GTB6-P5211	31.5	21	42	25.4	3	12	0213393



SENSOR MOUNT



- Sensor devices SH25 for WTB8.
- Easy to mount.
- Protects circumferential.
- Very light.
- Material: plastic.

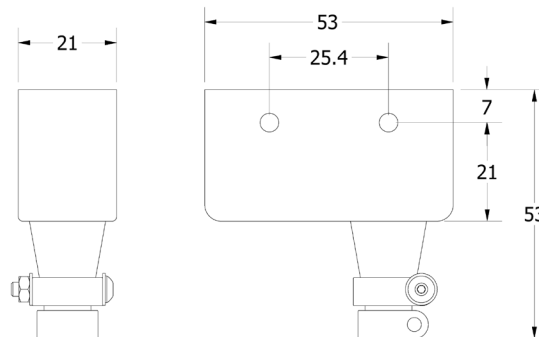
	A	B	C	D	E	Piab No.
SH25-WTB8	42	65	35	25	43	0213456
SH25-GTB6	42	65	35	25	43	0213455



TERMINAL ENCLOSURE

GEO-10

Product Code: GEO-10



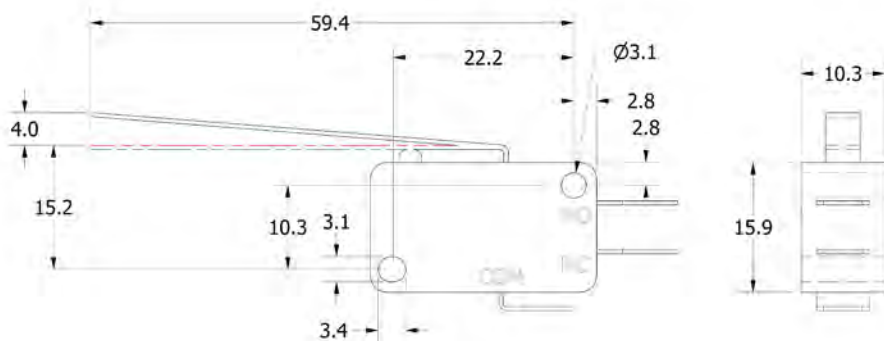
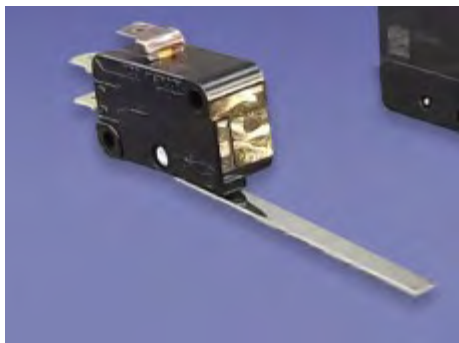
- GEO houses and protects an SEO's terminals.

	Description	Weight (g)	Piab No.
GEO-10	Terminal Enclosure for SEO 10	15	0214315

MECHANICAL SENSOR

SEO-5

Product Code: SEO-5

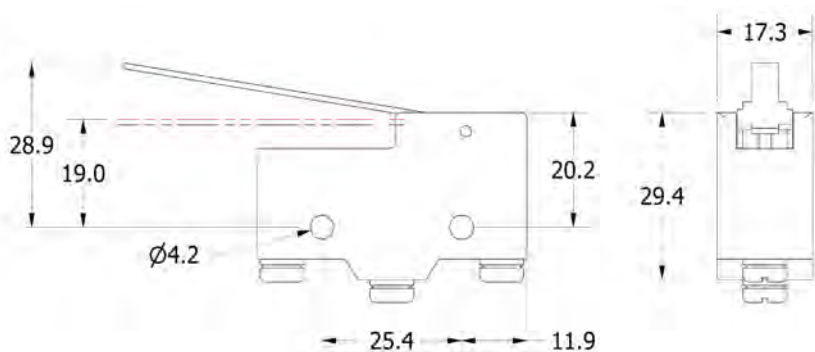


- Provides part present sensing when vacuum sensors can't be used and a short sensing range is necessary.
- SEO sensor can be used with standard mounting clamps when attached to a GGE 14-120 Fs.

	Description	Max. Supply Voltage	Wires	Weight (g)	Piab No.
SEO-5	Mechanical Switch	125 VDC (0.1A)/125 VAC	2	18	0214611

SEO-10

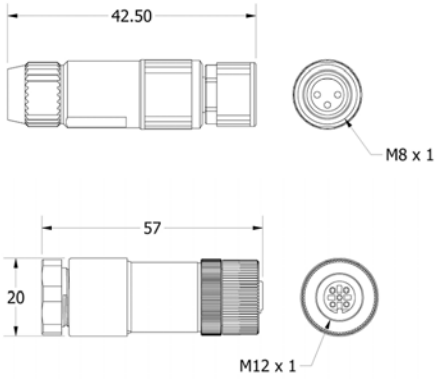
Product Code: SEO-10



- Provides part present sensing when vacuum sensors can't be used and a short sensing range is necessary.
- SEO sensor can be used with standard mounting clamps when attached to a GGE 14-120 FS.

	Description	Max. Supply Voltage	Wires	Weight (g)	Piab No.
SEO-10	Mechanical Switch	125 VDC (0.1A)/125 VAC	2	32	0214610

ELECTRICAL CONNECTORS FEMALE



- Field wireable screw down terminal cable ends.
- No soldering required.

	Connector Size	Pins	Piab No.
TFP-3	M8	3	0214715
TFP-5	M12	5	0214716

TFP-3

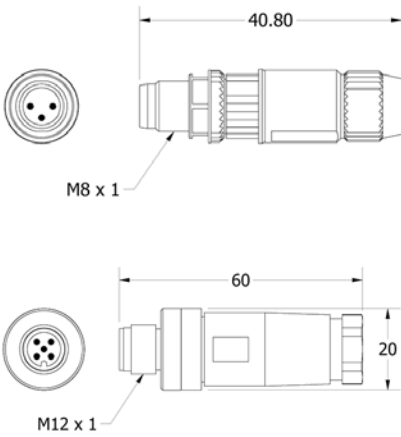
Product Code: TFP-3

TFP-5

Product Code: TFP-5



ELECTRICAL CONNECTORS MALE



- Field wireable screw down terminal cable ends.
- No soldering required.

	Connector Size	Pins	Piab No.
TMP-3	M8	3	0214717
TMP-5	M12	5	0214718

TMP-3

Product Code: TMP-3

TMP-5

Product Code: TMP-5



QEC-FPC FEMALE PLUG HD15 1.5 METER CABLE

Product Code: QEC-FPC

Piab No. 0212969

- 5-Foot molded HD15F to open with custom stripping dimension.



QEC-MPC MALE PLUG HD15 1.5 METER CABLE

Product Code: QEC-MPC

Piab No. 0212970

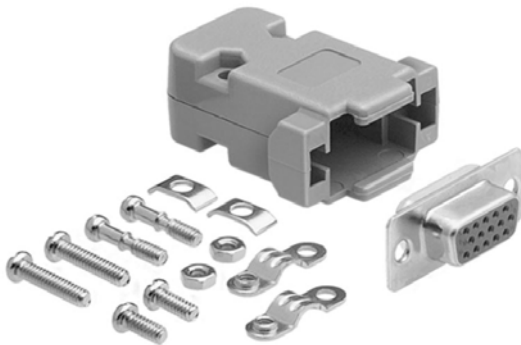
- 5-Foot molded HD15M to open with custom stripping dimension.



QEC-FSC FEMALE SOLDER CONNECTOR

Product Code: QEC-FSC

Piab No. 0214585



- Assemble your own DB and HD connectors to replace worn out connectors or convert existing cables for different uses. Crimper (sold separately) is ratchet style to ensure a secure crimp with less force. Extraction tool (sold separately) allows you to remove the pins after crimping.
- Computer solder connector, HD15 connection, unshielded socket.
- Solder unshielded socket 30-20 plastic housing.

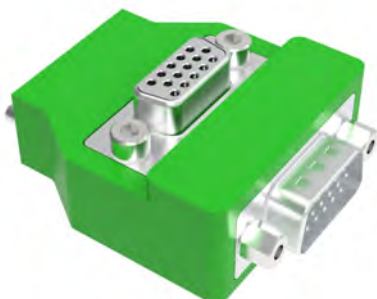
ELECTRICAL CONNECTORS

- Electrical connector for the QST / QSR.
- QEC-T is the tool side and the QEC-R is the robot side.
- 15 conductor plugs.

	A	B	C	Weight	Piab No.
QEC-R	17	38	47	50	0212967
QEC-T	17	38	47	50	0212968

QEC-R ELECTRICAL CONNECTOR FOR QSR

Product Code: QEC-R

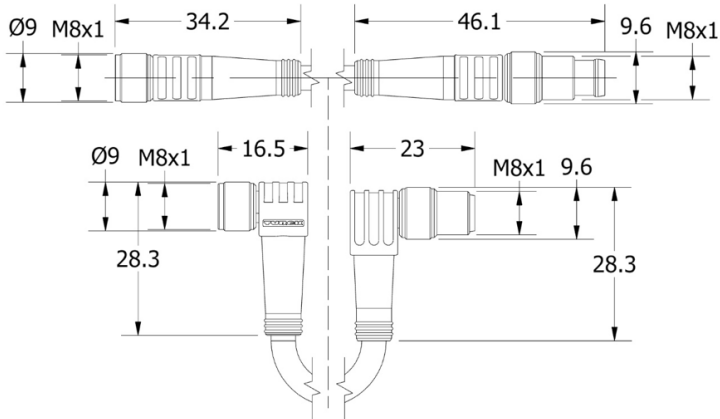


QEC-T ELECTRICAL CONNECTOR FOR QST

Product Code: QEC-T



CABLE



- Threaded plug extension cables.
- Types available for sensors, PJB's, AJB's, and J-Boxes.
- High-flexibility insulation for long cable life.

	Connector Size	Female Connector	Male Connector	# of Leads (Wires)	Length (Meters)	Weight (g)	Piab No.
FM3-SS.5	M8	Straight	Straight	3	0.5	25	0214283
FM3-RS.5	M8	Right	Straight	3	0.5	25	0214277
FM3-SR.5	M8	Straight	Right	3	0.5	25	0214280
FM3-RR.5	M8	Right	Right	3	0.5	23	0214274

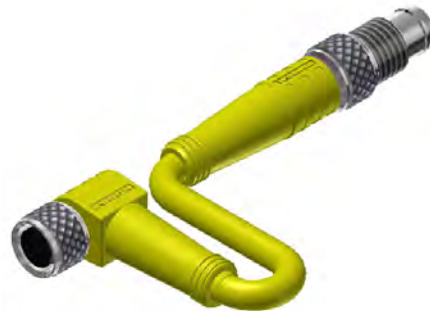
FM3-SS.5

Product Code: FM3-SS.5



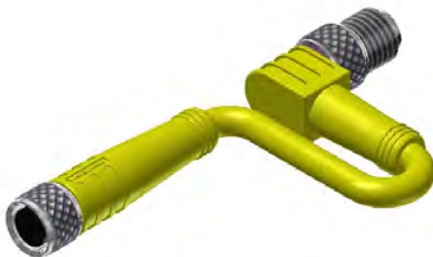
FM3-RS.5

Product Code: FM3-RS.5



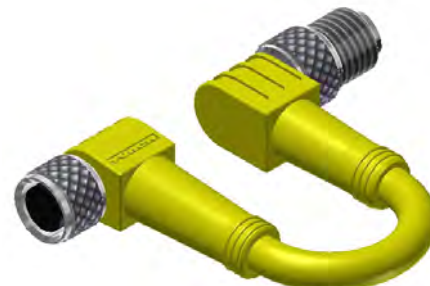
FM3-SR.5

Product Code: FM3-SR.5

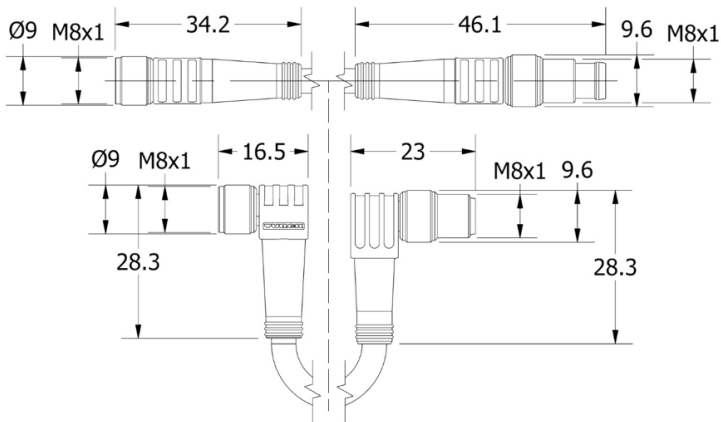


FM3-RR.5

Product Code: FM3-RR.5



CABLE



- Threaded plug extension cables.
- Types available for sensors, PJB's, AJB's, and J-Boxes.
- High-flexibility insulation for long cable life.

	Connector Size	Female Connector	Male Connector	# of Leads (Wires)	Length (Meters)	Weight (g)	Piab No.
FM3-SS1.3	M8	Straight	Straight	3	1	35	0214284
FM3-RS1	M8	Right	Straight	3	1	35	0214278
FM3-SR1	M8	Straight	Right	3	1	35	0214281
FM3-RR1	M8	Right	Right	3	1	36	0214275

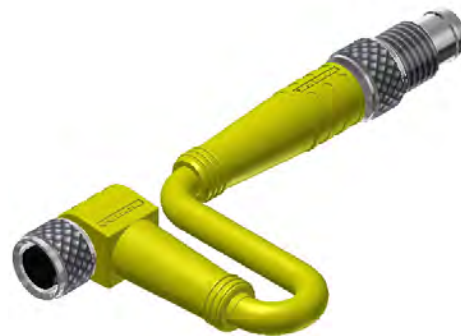
FM3-SS1.3

Product Code: FM3-SS1.3



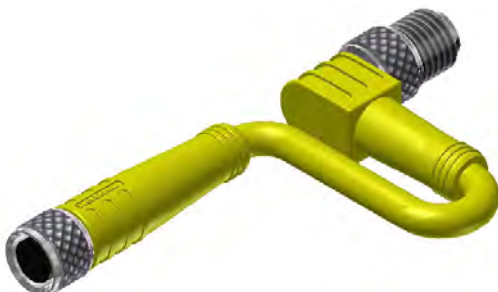
FM3-RS1

Product Code: FM3-RS1



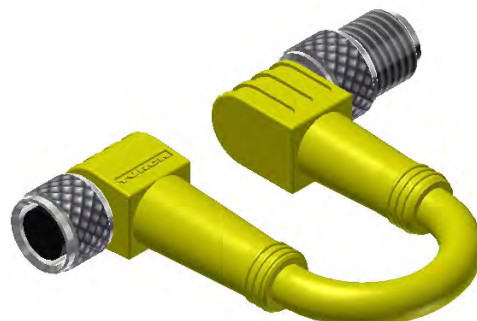
FM3-SR1

Product Code: FM3-SR1

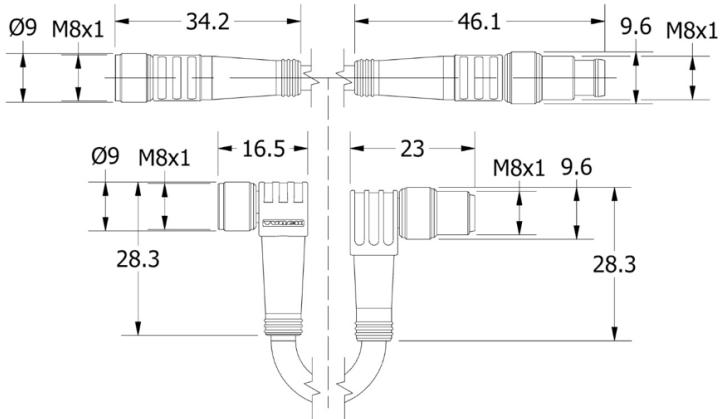


FM3-RR1

Product Code: FM3-RR1



CABLE



- Threaded plug extension cables.
- Types available for sensors, PJB's, AJB's, and J-Boxes.
- High-flexibility insulation for long cable life.

	Connector Size	Female Connector	Male Connector	# of Leads (Wires)	Length (Meters)	Weight (g)	Piab No.
FM3-SS2	M8	Straight	Straight	3	2	62	0214285
FM3-RS2	M8	Right	Straight	3	2	65	0214279
FM3-SR2	M8	Straight	Right	3	2	61	0214282
FM3-RR2	M8	Right	Right	3	2	65	0214276

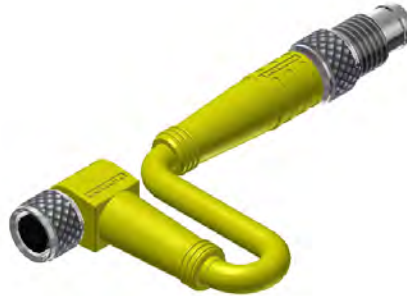
FM3-SS2

Product Code: FM3-SS2



FM3-RS2

Product Code: FM3-RS2



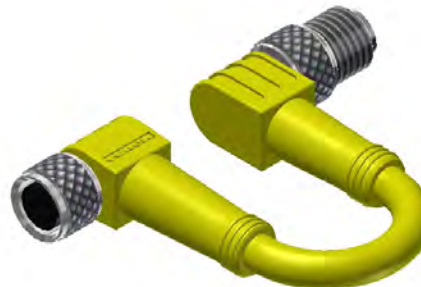
FM3-SR2

Product Code: FM3-SR2

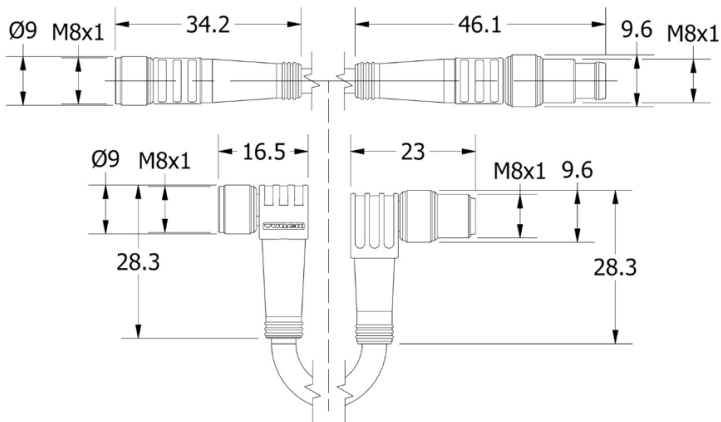


FM3-RR2

Product Code: FM3-RR2



CABLE



- Threaded plug extension cables.
- Types available for sensors, PJB's, AJB's, and J-Boxes.
- High-flexibility insulation for long cable life.

	Connector Size	Female Connector	Male Connector	# of Leads (Wires)	Length (Meters)	Weight (g)	Piab No.
FW3-SW2	M8	Straight	Wireable	3	2	60	0214299
FW3-RW2	M8	Right	Wireable	3	2	60	0214297
FW3-SW4	M8	Straight	Wireable	3	4	115	0214300
FW3-RW4	M8	Right	Wireable	3	4	115	0214298

FW3-SW2

Product Code: FW3-SW2



FW3-RW2

Product Code: FW3-RW2



FW3-SW4

Product Code: FW3-SW4



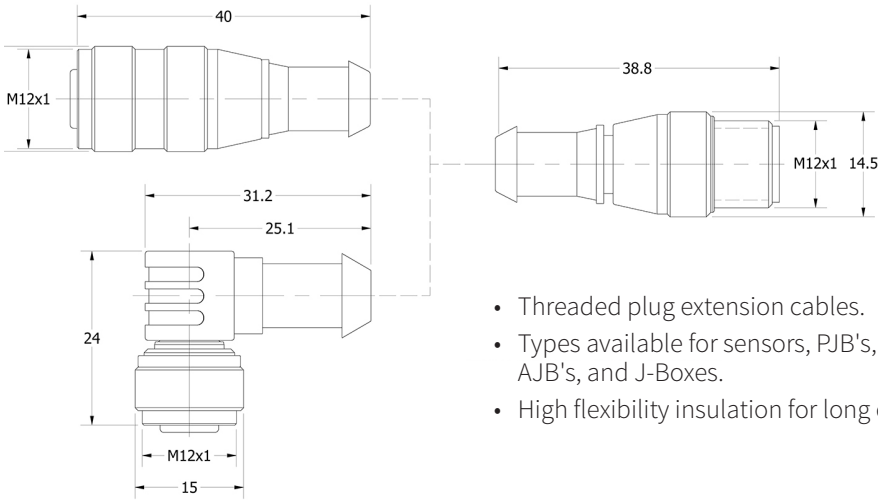
FW3-RW4

Product Code: FW3-RW4



CABLE

	Connector Size	Female Connector	Male Connector	# of Leads (Wires)	Length (Meters)	Weight (g)	Piab No.
FM5-SS3	M12	Straight	Straight	5	3	160	0214289
FM5-RS3	M12	Right	Straight	5	3	160	0214287
FM5-SS10	M12	Straight	Straight	5	10	410	0214288
FM5-RS10	M12	Right	Straight	5	10	410	0214286
FW5-SW3	M12	Straight	Wireable	5	3	160	0214304
FW5-SW5	M12	Straight	Wireable	5	5	250	0214305
FW5-RW5	M12	Right	Wireable	5	5	250	0214302
FW5-SW10	M12	Straight	Wireable	5	10	410	0214303
FW5-RW10	M12	Right	Wireable	5	10	410	0214301



- Threaded plug extension cables.
- Types available for sensors, PJB's, AJB's, and J-Boxes.
- High flexibility insulation for long cable life.

FM5-SS3

Product Code: FM5-SS3



FM5-RS3

Product Code: FM5-RS3



FM5-SS10

Product Code: FM5-SS10



FM5-RS10

Product Code: FM5-RS10



FW5-SW3

Product Code: FW5-SW3



FW5-SW5

Product Code: FW5-SW5



FW5-RW5

Product Code: FW5-RW5



FW5-SW10

Product Code: FW5-SW10

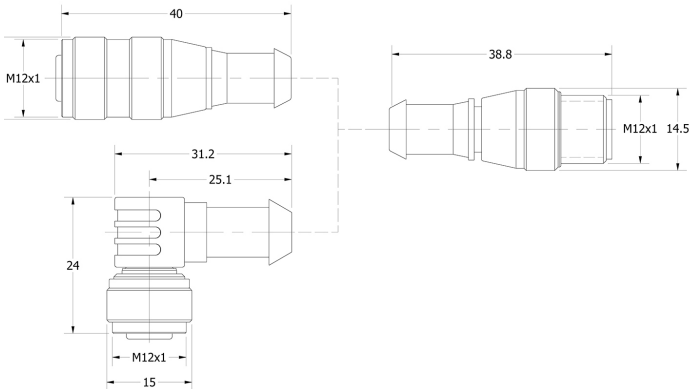


FW5-RW10

Product Code: FW5-RW10



CABLE



- Threaded plug extension cables.
- Types available for sensors, PJB's, AJB's, and J-Boxes.
- High-flexibility insulation for long cable life.

	Connector Size	Female Connector	Male Connector	# of Leads (Wires)	Length (Meters)	Weight (g)	Piab No.
FW8-SW5	M12	Straight	Wireable	8	5	230	0214309
FW8-RW5	M12	Right	Wireable	8	5	250	0214307
FW8-SW10	M12	Straight	Wireable	8	10	480	0214308
FW8-RW10	M12	Right	Wireable	8	10	500	0214306

FW8-SW5

Product Code: FW8-SW5



FW8-RW5

Product Code: FW8-RW5



FW8-SW10

Product Code: FW8-SW10

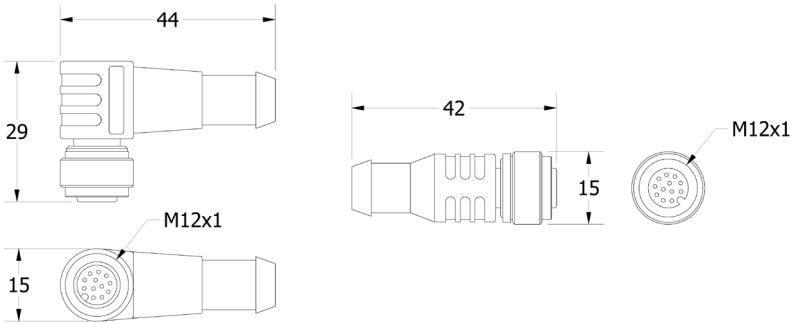


FW8-RW10

Product Code: FW8-RW10



CABLE



- Flexible for long life.
- Cables and cable sets for TB junction box.

	Connector Size	Female Connector	Male Connector	# of Conductors	Length (Meters)	Piab No.
FW12-SW2	M12	Straight	Wireable	12	2	0222659
FW12-SW4	M12	Straight	Wireable	12	4	0222660
FW12-SW10.1	M12	Straight	Wireable	12	10	0222661
FW12-SR2	M12	Straight	Right	12	2	0222662
FW12-SR4	M12	Straight	Right	12	4	0222663
FW12-SR10	M12	Straight	Right	12	10	0222664

FW12-SW2

Product Code: FW12-SW2



FW12-SW4

Product Code: FW12-SW4



FW12-SW10.1

Product Code: FW12-SW10.1



FW12-SR2

Product Code: FW12-SR2



FW12-SR4

Product Code: FW12-SR4

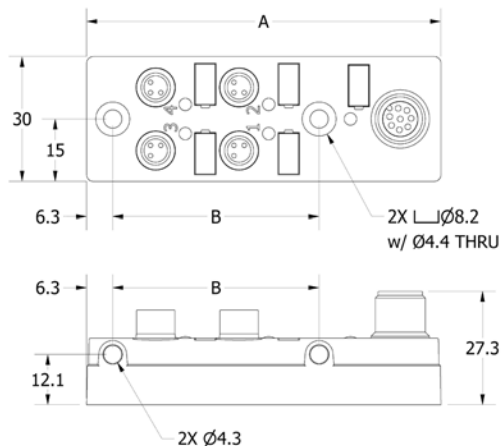
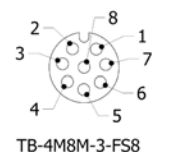
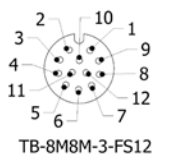


FW12-SR10

Product Code: FW12-SR10



JUNCTION BOXES



- Pass-through junction box with screw in terminals.
- Works with PNP or NPN sensors.
- Compact design for easy mounting on almost any tool.
- Female input connectors.
- Male output connectors.
- Can use standard channel nuts to mount to aluminum profile.

	Inputs	Logic	Supply Voltage (VDC)	Output Connector Size	Output Connector Pins	Signal Output	A	B	Piab No.
TB-4M8M-3-FS8	4	PASS THROUGH	30	M12	8	PNP / NPN	85	49.5	0222681
TB-8M8M-3-FS12	8	PASS THROUGH	30	M12	12	PNP / NPN	125	89.5	0222682

TB-8M8M-3-FS12

	Pin #
V+	1
V-	2
Position 1	3
Position 2	4
Position 3	6
Position 4	8
Position 5	5
Position 6	9
Position 7	7
Position 8	10

TB-4M8M-3-FS8

	Pin #
V+	5
V-	7
Position 1	1
Position 2	2
Position 3	3
Position 4	4

TB-4M8M / TB-8M8M

	Pin #
V+	1
V-	3
Position 1	4

TB-4M8M-3-FS8

Product Code: TB-4M8M-3-FS8

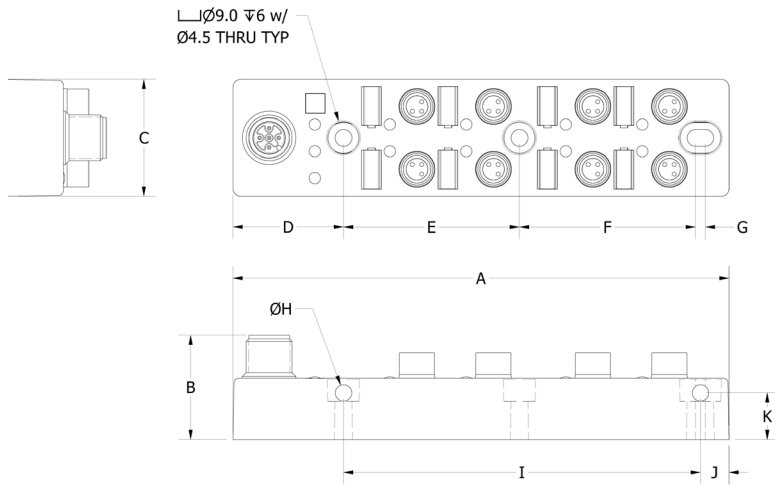


TB-8M8M-3-FS12

Product Code: TB-8M8M-3-FS12



JUNCTION BOXES



The VL31 series junction box is capable of putting PNP sensors in series providing 1 or more signals for the robot. This saves in reducing the number of inputs needed by the robot. The AND / OR version allows for all sensors in series (AND) or if only 1 of the sensors are made (OR). The AND / AND version allows for all of the sensors in series or half of the sensors in series and the other half in series for 2 signals. The Jumper FB-VK000042 must be used if all of the positions are not used by sensors.

	A	B	C	D	E	F	G	H	I	J	K	Piab No
FB VL310104	88.2	27.3	30.6	28.9	49.6	-	7.2	4.3	49.6	9.7	12.2	0216067
VL310114	88.2	27.3	30.6	28.9	49.6	-	7.2	4.3	49.6	9.7	12.2	0222640
FB VL310108	129.7	27.3	30.6	28.9	46	46	2.6	4.3	93.3	7.5	12.2	0216068
VL310118	129.7	27.3	30.6	28.9	46	46	2.6	4.3	93.3	7.5	12.2	0222641
FB VL31010A	149.7	27.3	30.6	28.9	46	66	2.6	4.3	113.3	7.5	12.2	0216069
VL31011A	149.7	27.3	30.6	28.9	46	66	2.6	4.3	113.3	7.5	12.2	0222642

ELECTRICAL DATA	FB VL310104	VL310114	FB VL310108	VL310118	FB VL31010A	VL31011A
input	PNP NO					
output	AND 4-way, OR 4-way	AND, 2 x 2-way, 4-way	AND 8-way, OR 8-way	AND, 2 x 4-way, 8-way	AND 10-way, OR 10-way	AND, 2 x 5-way, 10-way
operating voltage	10 ... 30 VDC					
current consumption (max. load)	1A					
output current (max. load)	200mA					
insulation resistance	≥ 108Ω					
module connection	M12-connector, 4-pin	M12-connector, 5-pin	M12-connector, 4-pin	M12-connector, 5-pin	M12-connector, 4-pin	M12-connector, 5-pin
sensor connection	4 x M8-coupling, 3-pin					
applicable cable series	FB-VK200421	FW5 Series	FB-VK200421	FW5 Series	FB-VK200421	FW5 Series

MECHANICAL DATA	FB VL310104	VL310114	FB VL310108	VL310118	FB VL31010A	VL31011A
input status LED	4 x yellow LED	4 x yellow LED	8 x yellow LED	8 x yellow LED	10 x yellow LED	10 x yellow LED
output status LED	1 x yellow LED	1 x yellow LED per output	1 x yellow LED	1 x yellow LED per output	1 x yellow LED	1 x yellow LED per output
housing material	plastic PA					
contact material	CuZn, gold-plated					
Operating temperature	-30 ... +90°C					
Rating	IP67					

M12-Connector pin assignment	AND / OR	AND / AND
1	24 VDC	24 VDC
2	output OR	output 1
3	0 VDC	0 VDC
4	output AND	output 2
5	-	output all

FB-VL310104/ VL310114



FB-VL310108/ VL310118



FB-VL31010A/ VL31011A



JUMPER PLUG

FB-VK000042

Product Code: FB-VK000042

Piab No. 0216065



CABLE SOCKET

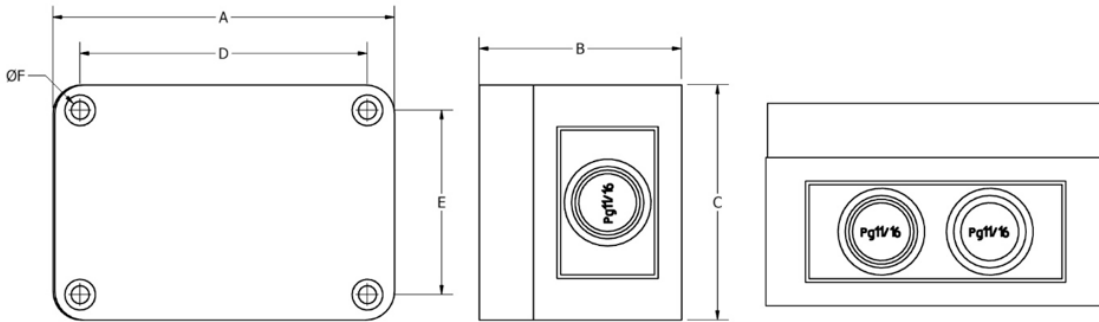
FB-VK200421

Product Code: FB-VK200421

Piab No. 0216066



SENSOR LOGIC BOXES

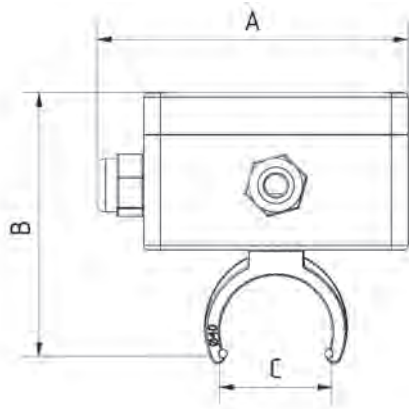


- Minimize interface wiring and maximize utilization of controller inputs by providing termination/ power distribution points for up to 2 inputs.
- Inputs/ Outputs can be either current sourcing (PNP), sinking (NPN), or a combination of the two.
- Includes enclosure and cable grips.
- Accessible terminals allow for easy wiring.
- May be installed into "Snap Track" on DIN mounting.
- Solid State logic for long life.
- KK's provide "Pass Through" functionality.
- RPL's provide "AND" Logic functionality.
- RPL can convert PNP signals to NPN and NPN signals to PNP.
- US PAT. #6,812,593.



	Inputs	Logic	Supply Voltage (VCD)	Signal Output	A	B	C	D	E	F	Weight (g)	Piab No.
RPL 2	2	AND (series)	15-35	PNP /NPN / RELAY 'C'	94	56	65	79	50	4.5	179	0213256
RPL 4	4	AND (series)	15-35	PNP /NPN / RELAY 'C'	94	56	65	79	50	4.5	184	0213257
RPL 6	6	AND (series)	15-35	PNP /NPN / RELAY 'C'	130	56	94	115	79	4.5	280	0213258
RPL 8	8	AND (series)	15-35	PNP /NPN / RELAY 'C'	130	56	94	115	79	4.5	297	0213259
KK 1	1-4	Pass Through / Wireable AND	15-35	(same as input)	94	56	65	79	50	4.5	182	0213260
KK 2	1-8	Pass Through / Wireable AND	15-35	(same as input)	130	56	94	115	79	4.5	298	0213261

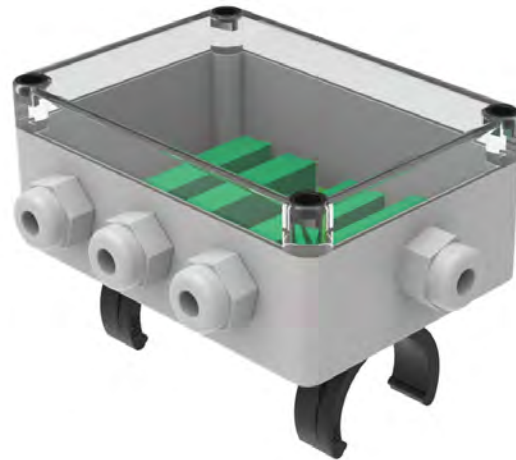
ELECTRICAL DISTRIBUTION BOXES



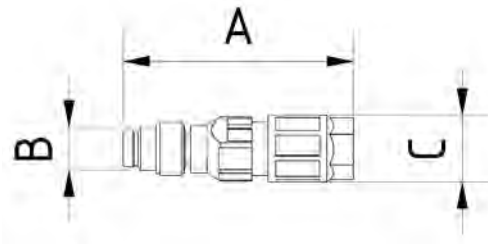
Electrical distribution boxes (EDB) incl. EASY clips

- Seamless fixing of the EDB at the stay pipe.
- No need for a complex screwing down on an aluminum plate.

	A	B	C	Depth	Including Fixing Clips for Aluminum Pipe	Cable / Outputs	Piab No.
EVB-19-25-1m-ST	118	72	25	145	AR40 x 4	including Schunk-connector, 1 m cable with 25 leads, numbers of outputs = 19	0216026
EVB-19-40-1m-ST	118	72	40	145	AR40 x 4	including Schunk-connector, 1 m cable with 25 leads, numbers of outputs = 19	0216027
EVB-19-25-1m	118	62	25	145	AR25 x 5	with cable, 1m	0213365
EVB-19-40-1m	118	72	40	145	AR40 x 4	numbers of outputs = 19	0213366



CABLE CONNECTOR

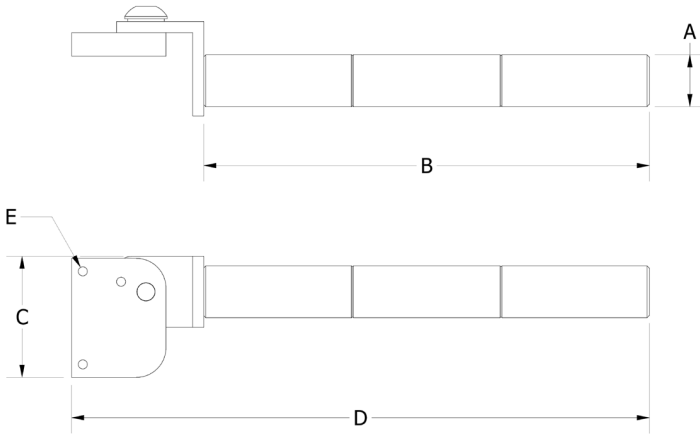


- Sensor-/actuator connector.
- M8 3-PIN straight connector.
- Max. cable diameter 5.0 mm.



	A	B	C	Piab No.
FB - EST - M8 - 3P	43	M8	Diameter 12.5	0213392

SENSOR GRIPPER ARM



- Allows LES and SEO sensors to mount to standard mounting clamps.
- Top bracket adjusts angle to optimize sensing position.

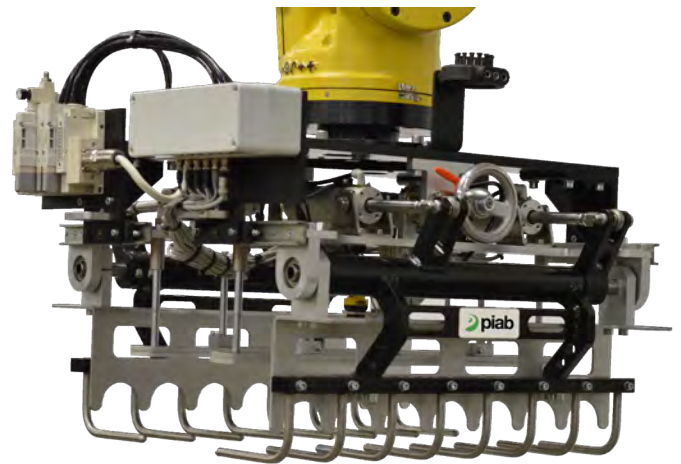
	A	B	C	D	E	Sensor (sold separately)	Weight (g)	Piab No.
GGE 14-120 FS	14	120	32.5	156	3.5	LES-5 / LES 5 P	54	0214323
GGE 14-120 FB	14	120	32.5	156	M3	SEO-5/SEO-10	55	0215339

PIAB OFFERS FULL RANGE OF PALLETIZING END OF ARM TOOLS - HEAVY DUTY ADJUSTABLE BAG GRIPPERS WITH 25 & 50 KG PAYLOADS FOR PALLETIZING PLASTIC, WOVEN CLOTH OR PAPER BAGS.

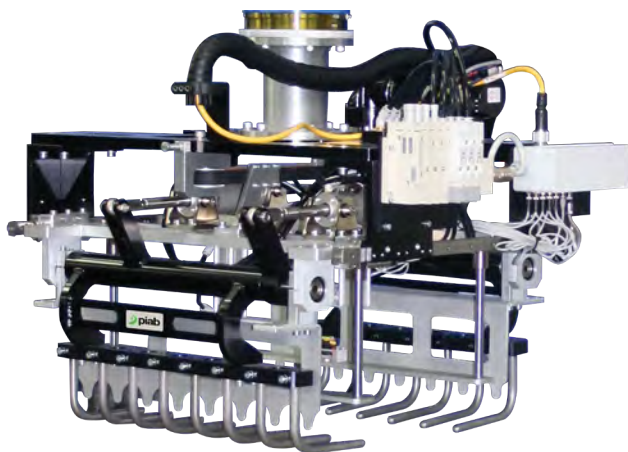
The grippers come in three versions; fixed bag width (FBG), adjustable bag width (ABG), and servo adjustable bag width (SBG). All versions comes with independent Decking Plates square-up and align the bag for precise placement on the pallet and creates a very tight loading pattern. Top mounted Bag Clamps maintain bag position on the tool during robot travel to the pallet and allows for high speed and precision in the movement. Slip Sheet and Pallet Hook options are available to increase the flexibility even further.



The FBG fixed width models are for your operation with low frequency of bag size changes, the FBG can be re-adjusted within 4 minutes to fit the new bag size.



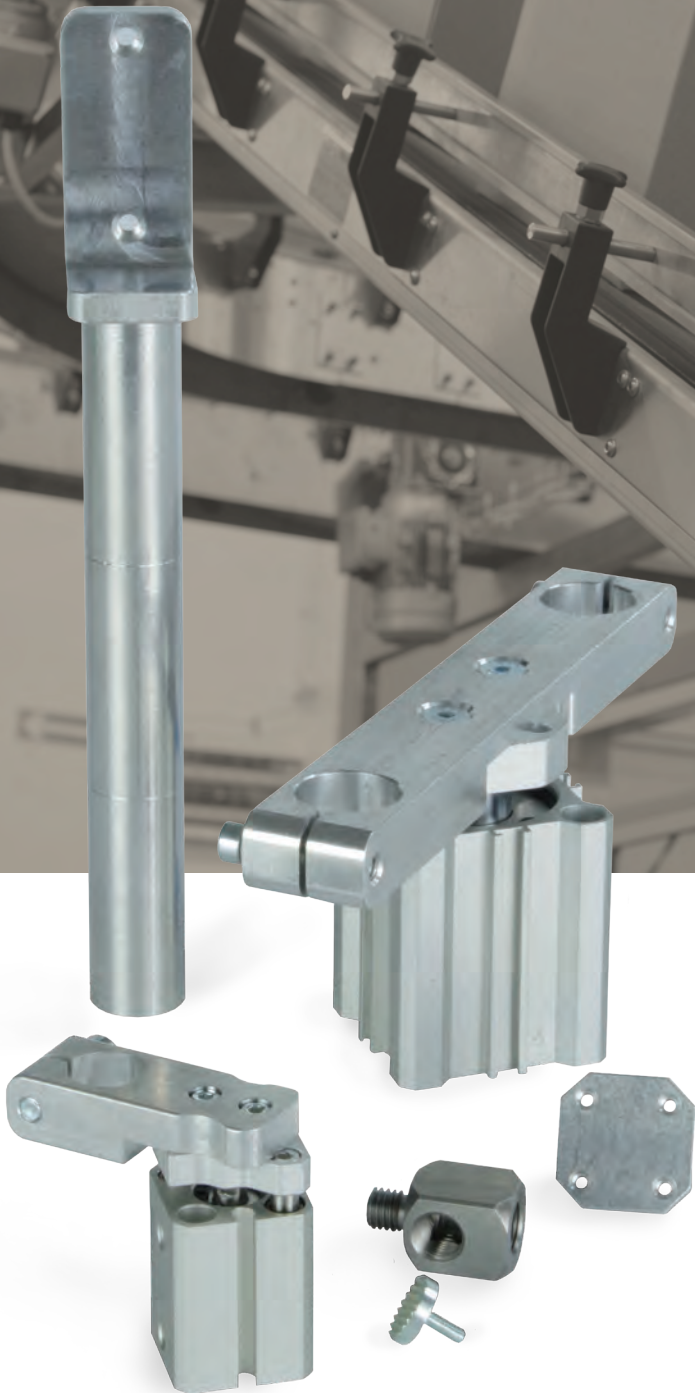
The ABG adjustable width model are for a low to medium frequency of bag changes, the ABG can be re-adjusted within 30 seconds to fit the new bag size.



The SBG servo adjustable model, can be adjusted according to your need within seconds and is suitable for the medium to high frequency of bag changes.



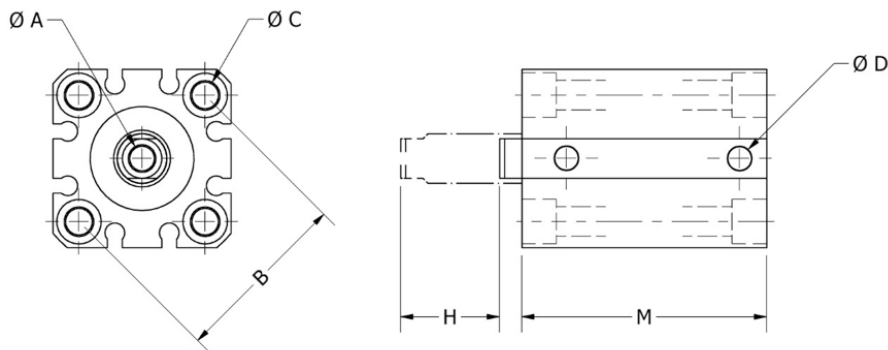
If your need is not covered Piab also produces custom made version for your unique application.



Typically used in higher volume loads with rapid and repetitive action, our cylinders and slides enable robots to make the secondary motions required by today's EOATs.

- **Wide range** of cylinders available
- **Supported** by our equally wide range of manifolds and accessories
- Expansive product and engineering **knowledge**

SHORT STROKE CYLINDERS



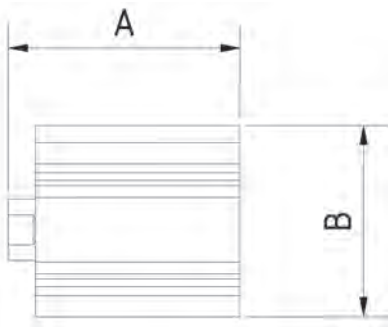
- Cylinders for applications such as applying side pressure.
- Single and Double Acting Cylinders available.
- Available with or without sensor capability.

*Optional sensor: RRK-93, RRK-93-TP, RRK-M9P, or RRK-M9P-TP.

	Cylinder Bore	A	B	C	D	H (Stroke)	M	Action	Sensor Capable*	Weight (g)	Piab No.
KHZ 12-5-E	12	M3x0.5	22	3.5 / 6.5 Depth 3.5	M5	5	20.5	Single	-	29	0214475
KHZ 12-5-D	12	M3x0.5	22	3.5 / 6.5 Depth 3.5	M5	5	20.5	Double	-	42	0214473
KHZ 12-5-D-A	12	M3x0.5	22	3.5 / 6.5 Depth 3.5	M5	5	31.5	Double	Yes	29	0214474
KHZ 12-10-E	12	M3x0.5	22	3.5 / 6.5 Depth 3.5	M5	10	20.5	Single	-	35	0214472
KHZ 12-10-D	12	M3x0.5	22	3.5 / 6.5 Depth 3.5	M5	10	20.5	Double	-	49	0214471
KHZ 12-10-D-A	12	M3x0.5	22	3.5 / 6.5 Depth 3.5	M5	10	31.5	Double	Yes	35	0213111
KHZ 20-5-E	20	M5x0.8	36	5.5 / 9 Depth 7	M5	5	24	Single	-	63	0214482
KHZ 20-5-D	20	M5x0.8	36	5.5 / 9 Depth 7	M5	5	24	Double	-	94	0214480
KHZ 20-5-D-A	20	M5x0.8	36	5.5 / 9 Depth 7	M5	5	36	Double	Yes	63	0214481
KHZ 20-10-E	20	M5x0.8	36	5.5 / 9 Depth 7	M5	10	24	Single	-	75	0214477
KHZ 20-10-D	20	M5x0.8	36	5.5 / 9 Depth 7	M5	10	24	Double	-	106	0214476
KHZ 20-10-D-A	20	M5x0.8	36	5.5 / 9 Depth 7	M5	10	36	Double	Yes	76	0213112
KHZ 20-20-D	20	M5x0.8	36	5.5 / 9 Depth 7	M5	20	24	Double	-	101	0214478
KHZ 20-20-D-A	20	M5x0.8	36	5.5 / 9 Depth 7	M5	20	36	Double	Yes	131	0213113
KHZ 20-30-D	20	M5x0.8	36	5.5 / 9 Depth 7	M5	30	24	Double	-	127	0214479
KHZ 20-30-D-A	20	M5x0.8	36	5.5 / 9 Depth 7	M5	30	36	Double	Yes	155	0213114
KHZ 32-5-E	32	M8x1.25	48	5.5 / 9 Depth 7	G 1/8"	5	30	Single	-	125	0214489
KHZ 32-5-D	32	M8x1.25	48	5.5 / 9 Depth 7	G 1/8"	5	30	Double	-	182	0214487
KHZ 32-5-D-A	32	M8x1.25	48	5.5 / 9 Depth 7	G 1/8"	5	40	Double	Yes	125	0214488
KHZ 32-10-E	32	M8x1.25	48	5.5 / 9 Depth 7	G 1/8"	10	30	Single	-	145	0214484
KHZ 32-10-D	32	M8x1.25	48	5.5 / 9 Depth 7	G 1/8"	10	30	Double	-	201	0214483
KHZ 32-10-D-A	32	M8x1.25	48	5.5 / 9 Depth 7	G 1/8"	10	40	Double	Yes	145	0213115
KHZ 32-20-D	32	M8x1.25	48	5.5 / 9 Depth 7	G 1/8"	20	30	Double	-	184	0214485
KHZ 32-20-D-A	32	M8x1.25	48	5.5 / 9 Depth 7	G 1/8"	20	40	Double	Yes	241	0213116
KHZ 32-30-D	32	M8x1.25	48	5.5 / 9 Depth 7	G 1/8"	30	30	Double	-	224	0214486
KHZ 32-30-D-A	32	M8x1.25	48	5.5 / 9 Depth 7	G 1/8"	30	40	Double	Yes	281	0213117



COMPACT CYLINDERS

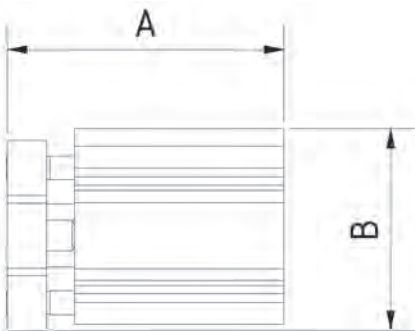


- Cylinder, including magnet, for the purpose of positioning. Inside thread of the piston rod M8.
- Additional Compact Cylinders are available as needed.
- Connection thread G1/8.

	A	B	Depth	Hub / Stroke	Piab No.
KZ - ECDQ2B32 - 10D	50	45	45	10	0216358
KZ - ECDQ2B32 - 20D	60	45	45	20	0216359
KZ - ECDQ2B32 - 30D	72	-	-	-	0216360



COMPACT CYLINDERS GUIDED

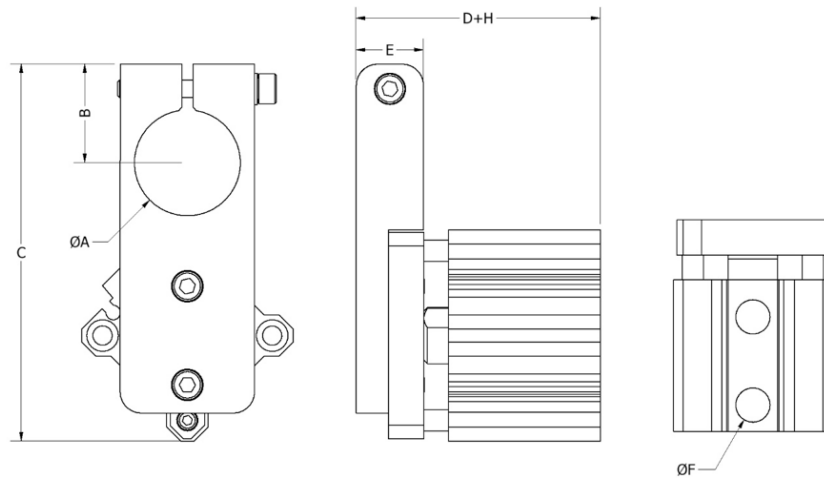


- Cylinder, including magnet, for the purpose of positioning.
- Additional compact cylinders are available as needed.
- Connection thread G1/8.
- Return stroke can be limited infinitely variable.

	A	B	Depth	Hub / Stroke	Piab No.
KZG - ECDQMB32 - 10	50	45	45	10	0213440
KZG - ECDQMB32 - 20	60	45	45	20	0213441
KZG - ECDQMB32 - 25	65	45	45	25	0213442
KZG - ECDQMB32 - 40	80	45	45	40	0213443



SINGLE MOUNTING SPECIAL CYLINDERS



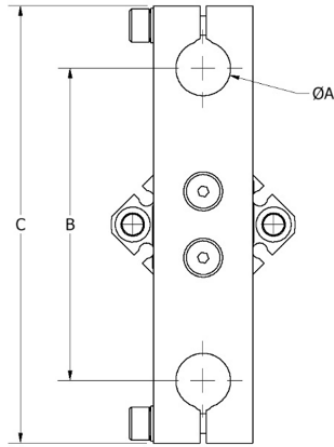
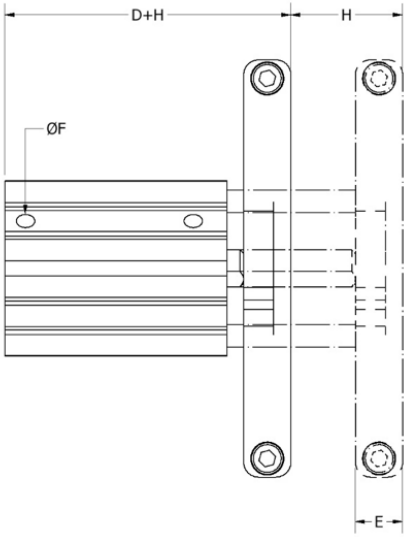
- Perfect for securing sides or flexing parts.
- Usually utilized with GSE arms and vacuum cups or GRF gripper fingers (not included).
- Double Acting Cylinder.

*Optional sensor: RRK-93, RRK-93-TP, RRK-M9P, or RRK-M9P-TP.

	A	B	C	D	E	H (Stroke)	F	Sensor Capable	Weight (g)	Piab No.
SZS 12-10-14	14	15	56	44	13	10	M5	-	85	0214662
SZS 12-10-14 A	14	15	56	49	13	10	M5	Yes	78	0214663
SZS 12-20-14	14	15	56	54	13	20	M5	-	103	0214664
SZS 12-20-14 A	14	15	56	59	13	20	M5	Yes	95	0214665
SZS 20-10-20	20	19	79	50	16	10	M5	-	190	0214666
SZS 20-10-20 A	20	19	79	60	16	10	M5	Yes	159	2014667
SZS 20-20-20	20	19	79	60	16	20	M5	-	220	0214668
SZS 20-20-20 A	20	19	79	70	16	20	M5	Yes	189	0214669
SZS 20-30-20	20	19	79	70	16	30	M5	-	249	0214670
SZS 20-30-20 A	20	19	79	80	16	30	M5	Yes	219	0214671
SZS 20-40-20	20	19	79	80	16	40	M5	-	279	0214672
SZS 20-40-20 A	20	19	79	90	16	40	M5	Yes	250	0214673
SZS 20-50-20	20	19	79	90	16	50	M5	-	309	0214674
SZS 20-50-20 A	20	19	79	100	16	50	M5	Yes	279	0214675
SZS 32-10-30	30	28	107	60	19	10	G 1/8"	-	383	0214676
SZS 32-10-30 A	30	28	107	70	19	10	G 1/8"	Yes	324	0214677
SZS 32-20-30	30	28	107	70	19	20	G 1/8"	-	428	0214678
SZS 32-20-30 A	30	28	107	80	19	20	G 1/8"	Yes	369	0214679
SZS 32-30-30	30	28	107	80	19	30	G 1/8"	-	475	0214680
SZS 32-30-30 A	30	28	107	90	19	30	G 1/8"	Yes	416	0214681
SZS 32-40-30	30	28	107	90	19	40	G 1/8"	-	520	0214682
SZS 32-40-30 A	30	28	107	100	19	40	G 1/8"	Yes	462	0214683
SZS 32-50-30	30	28	107	100	19	50	G 1/8"	-	567	0214684
SZS 32-50-30 A	30	28	107	110	19	50	G 1/8"	Yes	508	0214685



SPECIAL CYLINDER

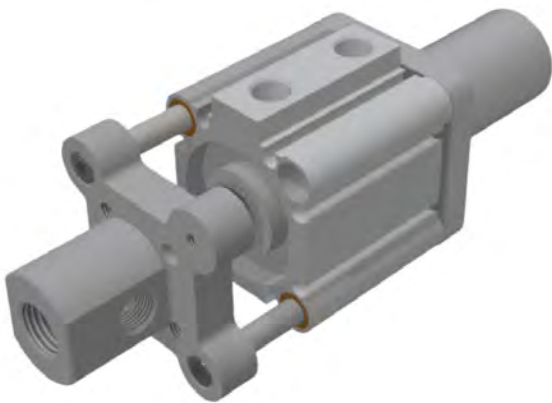
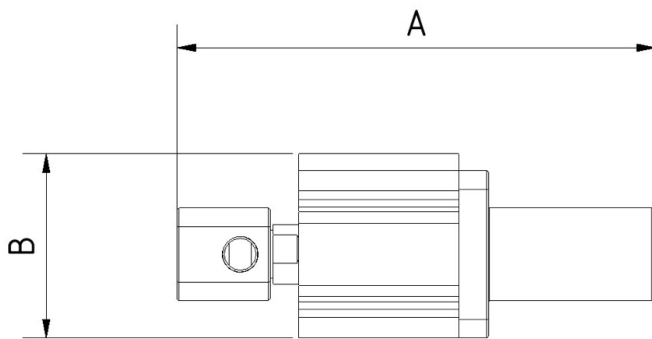


- Perfect for securing sides or flexing parts.
- Usually utilized with GSE arms and vacuum cups or GRF gripper fingers (not included).
- Double Acting Cylinder.

*Optional sensor: RRK-93, RRK-93-TP, RRK-M9P, or RRK-M9P-TP.

	Cylinder Bore	A	B	C	D	E	F	H (Stroke)	Sensor Capable*	Weight (g)	Piab No.
SZD 12-10	12	10	55	81	30	10	M5	10	-	85	0214648
SZD 12-10-A	12	10	55	81	35	10	M5	10	Yes	78	0213118
SZD 12-20	12	10	55	81	30	10	M5	20	-	103	0214649
SZD 12-20-A	12	10	55	81	35	10	M5	20	Yes	95	0213119
SZD 20-10	20	14	80	112	37	13	M5	10	-	214	0214650
SZD 20-10-A	20	14	80	112	47	13	M5	10	Yes	183	0213120
SZD 20-20	20	14	80	112	37	13	M5	20	-	244	0214651
SZD 20-20-A	20	14	80	112	47	13	M5	20	Yes	213	0213121
SZD 20-30	20	14	80	112	37	13	M5	30	-	273	0214652
SZD 20-30-A	20	14	80	112	47	13	M5	30	Yes	243	0213122
SZD 20-40	20	14	80	112	37	13	M5	40	-	303	0214653
SZD 20-40-A	20	14	80	112	47	13	M5	40	Yes	274	0214654
SZD 20-50	20	14	80	112	37	13	M5	50	-	333	0214655
SZD 20-50-A	20	14	80	112	47	13	M5	50	Yes	303	0213123
SZD 32-10	32	20	120	180	46	16	G 1/8"	10	-	388	0214656
SZD 32-10-A	32	20	120	180	56	16	G 1/8"	10	Yes	329	0213124
SZD 32-20	32	20	120	180	46	16	G 1/8"	20	-	433	0214657
SZD 32-20-A	32	20	120	180	56	16	G 1/8"	20	Yes	374	0213125
SZD 32-30	32	20	120	180	46	16	G 1/8"	30	-	480	0214658
SZD 32-30-A	32	20	120	180	56	16	G 1/8"	30	Yes	421	0213126
SZD 32-40	32	20	120	180	46	16	G 1/8"	40	-	525	0214659
SZD 32-40-A	32	20	120	180	56	16	G 1/8"	40	Yes	467	0214660
SZD 32-50	32	20	120	180	46	16	G 1/8"	50	-	572	0214661
SZD 32-50-A	32	20	120	180	56	16	G 1/8"	50	Yes	513	0213127

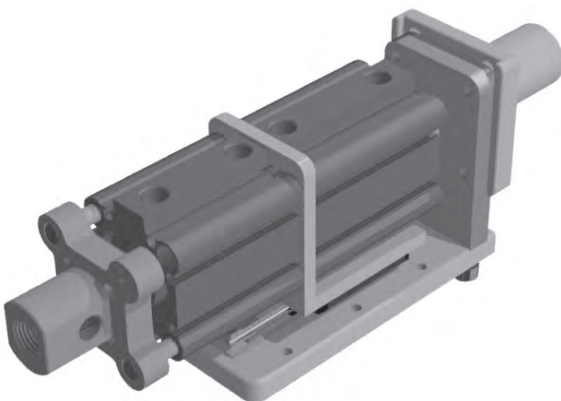
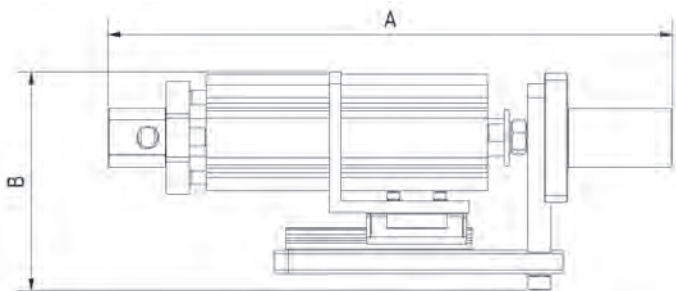
MOVEABLE VACUUM UNIT WITH SINGLE STROKE



- Movable vacuum unit BVAE32 with double stroke
- Activity: double-acting.
- Fixing possibility on two sides.
- Adjustable low profile linear guide.
- Including adapter for vacuum suction cup.
- For distance clips refer to DK16.
- For suction cup adapters refer to SA - AG3/8 - G1/8 - M8 and SA - IG1/4 - G1/8 - M8.
- Connection diameter 25 mm.

	A	B	Width	Piab No.
BVAE32-EH10-20	128	49.5	45	0213372
BVAE32-EHG10-20	138	49.5	45	0213375

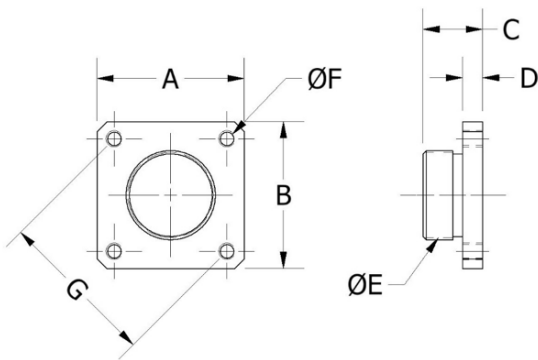
MOVEABLE VACUUM UNIT WITH DOUBLE STROKE GUIDED



- Activity: double-acting.
- Fixing possibility on two sides.
- Adjustable low profile linear guide.
- Including adapter for vacuum suction cup.
- Connection diameter 25 mm.

	A	B	Depth	Piab No.
BVAE32 - DHG2010 - 25	221	90	45	0213370
BVAE32 - DHG3020 - 25	231	90	45	0213371
BVAE32 - DH2010 - 25	211	90	45	0213368
BVAE32 - DH3020 - 25	231	90	45	0213369

SHORT STROKE CYLINDER ADAPTERS



- Allows KHZ cylinders to attach to standard VLR Arm Extensions and mount in standard mounting clamps.

	Cylinder	A	B	C	D	E	F	G	Extension	Weight (g)	Piab No.
ADZ 14-12	KHZ 12...	25	25	18	6	M12 x 1	M3	22	VLR 14	13	0213130
ADZ 20-20	KHZ 20...	38	38	18	6	M17 x 1	M5	36	VLR 20	29	0213131
ADZ 20-32	KHZ 32...	45	45	18	6	M17 x 1	M5	48	VLR 20	38	0213132
ADZ 30-32	KHZ 32...	45	45	18	6	M27 x 1	M5	48	VLR 30	49	0213133

ADZ 14-12

Product Code: ADZ 14-12



ADZ 20-20

Product Code: ADZ 20-20



ADZ 20-32

Product Code: ADZ 20-32

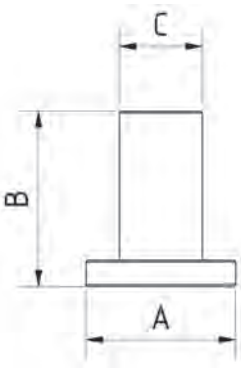


ADZ 30-32

Product Code: ADZ 30-32



CYLINDER ADAPTERS

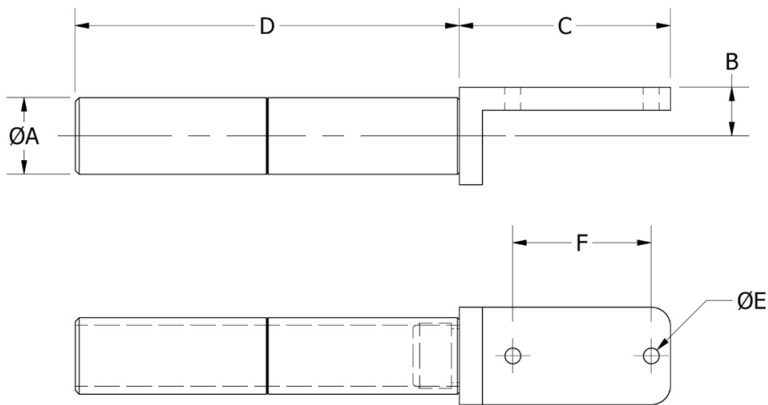


- Cylinder adapters with 4 x M5 inside threads for fastening.
- Suitable for compact cylinders.

	A	B	C	Depth	Piab No.
ZA - ECDQ2B32 - G - D20	45	53	20	45	0213476
ZA - ECDQ2B32 - G - D25	45	53	25	45	0213477



SPECIAL CYLINDER MOUNTING ARMS

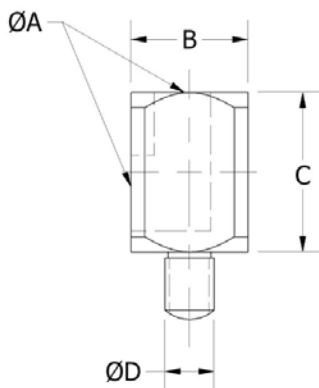


- Mounts SZD, SZS, and KHZ to standard mounting clamps and gripper mounting arms.



	A	B	C	D	E	F	Cylinder	Weight (g)	Material	Piab No.
GAZ 12-10-90	10	15	25	90	M3	22	SZD 12 / KHZ 12	18	Aluminum	0213141
GAZ 12-14-120	14	15	25	120	M3	22	SZD 12 / KHZ 12	31	Aluminum	0213142
GAZ 20-20-150	20	13	59	150	M5	36.1	SZD 20 / KHZ 20	83	Aluminum	0213143
GAZ 32-20-150	20	13	64	150	M5	48.1	SZD 32 / KHZ 32	88	Aluminum	0213144

VACUUM CUP ADAPTOR

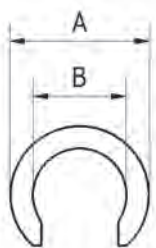


- Mounts a vacuum cup / suction cup to a KHZ short stroke cylinder.
- Used to secure parts with edges perpendicular to the mold face.

	A	B	C	D	Weight (g)	Piab No.
AVI 51-8-3	M5	10	12	M3 x .5	7	0213145
AVI 1/81-16-5	G 1/8"	16	21	M5 x .8	30	0213146
AVI 1/81-16-8	G 1/8"	16	21	M8 x 1.25	29	0213147
AVI 1/41-16-8	G 1/4"	19	26	M8 x 1.25	51	0213148



DISTANCE CLIPS

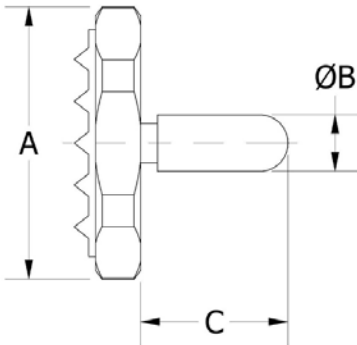


- Distance clips used to reduce the strokes of cylinders.
- Material: plastic.

	A	B	Depth	Piab No.
DK16 - 3	24	16	3	0213379
DK16 - 5	24	16	5	0213380
DK16 - 10	24	16	10	0213378



PRESSURE PLATES



- Pad plates for KHZ cylinders or GRF gripper fingers.

	A	B	C	Material	Weight (g)	Cylinder	Piab No.
DPL 12-3	12	M3	9	Steel	3	SZD 12 / KHZ 12	0213134
DPL 20-5	20	M5	10	Ribbed Vinyl	9	SZD 20 / KHZ 20	0213135
DPL 24-8	24	G 1/8"	10	Ribbed Vinyl	6	Spring Arms	0213136
DPL 25-3	25	M3	7	Ribbed Vinyl	11	SZD 12 / KHZ 12	0213137
DPL 25-4	25	M4	11	Ribbed Vinyl	11	-	0213138
DPL 25-5	25	M5	13	Ribbed Vinyl	11	SZD 20 / KHZ 20	0213139
DPL 31-4	31	G 1/4"	10	Ribbed Vinyl	15	Spring Arms	0213140

DPL 12-3

Product Code: DPL 12-3



DPL 20-5

Product Code: DPL 20-5



DPL 24-8

Product Code: DPL 24-8



DPL 25-3

Product Code: DPL 25-3



DPL 25-4

Product Code: DPL 25-4



DPL 25-5

Product Code: DPL 25-5

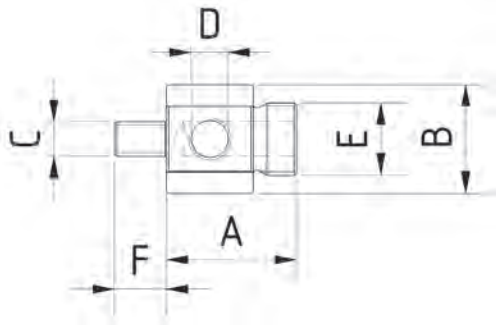


DPL 31-4

Product Code: DPL 31-4



SUCTION CUP ADAPTERS

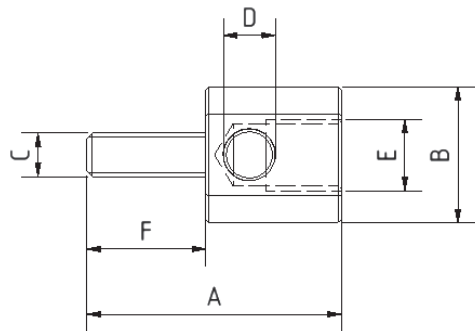


- For guided and unguided short-stroke cylinders.

	A	B	C	D	E	F	Piab No.
SA - AG3/8 - G1/8 - M8 - 12	42	25	M8	G1/8	G3/8	12	0213451
SA - AG3/8 - G1/8 - M8 - 22	52	25	M8	G1/8	G3/8	22	0213452



SUCTION CUP ADAPTERS

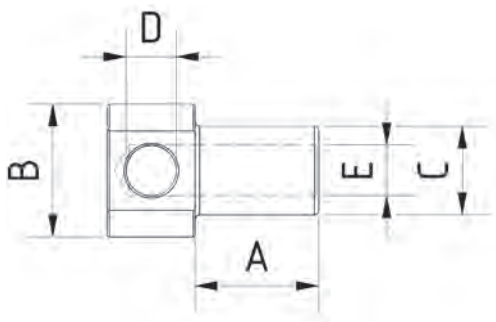


- For guided and unguided short-stroke cylinders.

	A	B	C	D	E	F	Piab No.
SA - IG1/4 - G1/8 - M8 - 12	37	25	M8	G1/8	G1/4	12	0213453
SA - IG1/4 - G1/8 - M8 - 22	47	25	M8	G1/8	G1/4	22	0213454



SUCTION CUP ADAPTERS

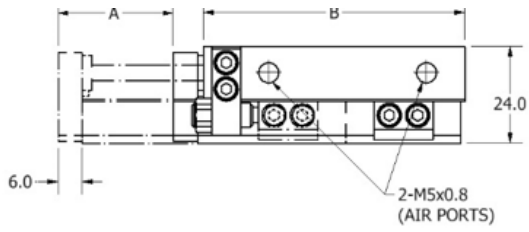


- Suction cup adapters.
- The component is used for the optimum positioning of a vacuum suction cup including plug.

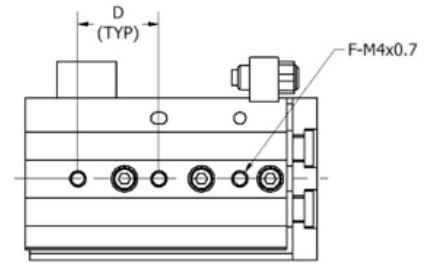
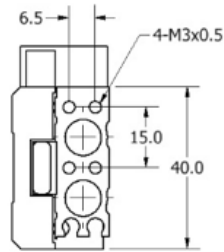
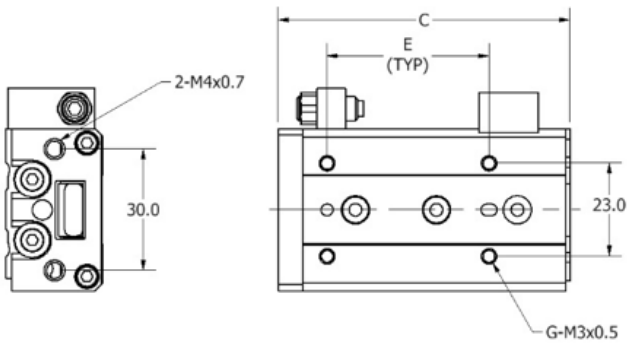
	A	B	C	D	E	Piab No.
SA16 - 28 - G1/8 - G1/8	28	25	16	G1/8	G1/8	0213332
SA20 - 28 - G1/4 - G1/4	28	30	20	G1/4	G1/4	0213333



INDEXING GUIDED CYLINDERS

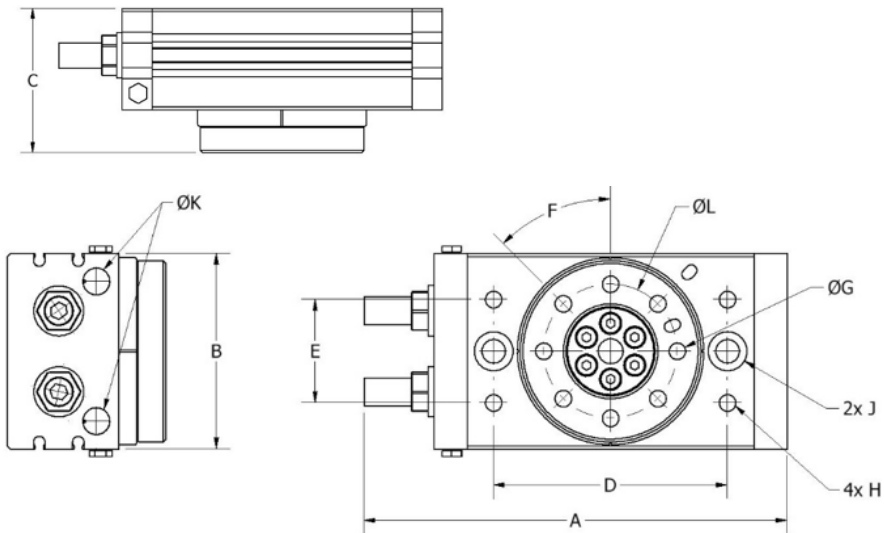


- Allows for indexing motion on linear bearings.
- Adjustable end stop.
- Double acting.



	A (Stroke)	B	C	D	E	F	G	Cylinder Bore	Sensor (Optional)*	Piab No.
ISC 8-10	10	49	56	28	25	2	4	8	RRK-93/ RRK-M9P	0214450
ISC 8-20	20	54	61	30	25	2	4	8	RRK-93/ RRK-M9P	0214451
ISC 8-30	30	65	72	20	40	3	4	8	RRK-93/ RRK-M9P	0214452
ISC 8-40	40	83	90	28	50	3	4	8	RRK-93/ RRK-M9P	0214453
ISC 8-50	50	101	108	23	38	4	6	8	RRK-93/ RRK-M9P	0214454

ROTARY CYLINDERS



- Allows for 0-180° rotational motion.
- Adjustable angle with rubber bumpers.
- Double acting.

*Optional sensor: RRK-93, RRK-93-TP, RRK-M9P, or RRK-M9P-TP.

	A	B	C	D	E	F	G	H	J	K	L	Sensor (Optional)*	Weight (g)	Piab No.
RC 10-S	110	50	47	60	27	45°	M5	M5	6.8 / 11	M5	32	RRK-93/ RRK-F9P	500	0214587
RC 20-S	142	65	54	76	34	45°	M6	M6	8.6 / 14	M5	43	RRK-93/ RRK-F9P	940	0214588
RC 30-S	152	70	57	84	37	45°	M6	M6	8.6 / 14	G 1/8"	48	RRK-93/ RRK-F9P	1230	0214589
RC 50-S	183	80	66	100	50	45°	M8	M8	10.5 / 18	G 1/8"	55	RRK-93/ RRK-F9P	1990	0214590



Manifolds, Fittings, Tubing and Accessories

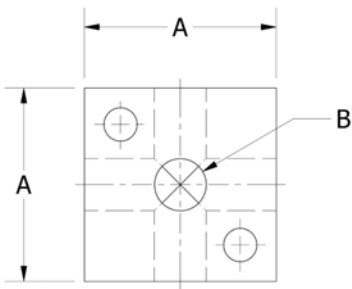


We offer a wide range of connectors, blocks, fittings, and accessories, plus a variety of manifolds supporting our pneumatic systems.

- Each product is **highly configurable**
- Made of **high quality materials and construction**
- Expansive product and engineering **knowledge**



MANIFOLD BLOCKS

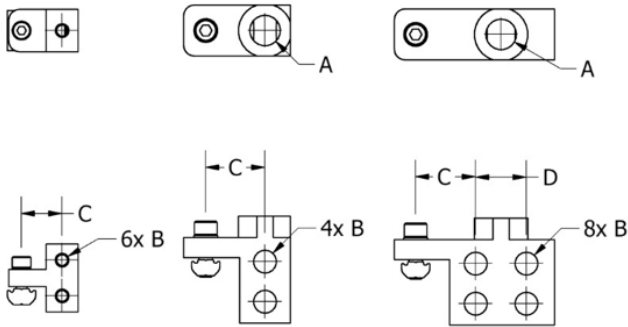


- Allows for multiple porting of pneumatic vacuum or air circuits.
- Ports in 5 directions for easy distribution.
- Spread out port design accommodates large fittings.
- Use with X, JX, HX, and D type profile.

	A	B (5 Places)	Profile	Weight (g)	Piab No.
LVT M5	22	M5	L/X	29	0214526
LVT 1/8 X	32	G 1/8"	X/HX	56	0214525
LVT 1/4 X	38	G 1/4"	X/JX/HX	80	0214524



MANIFOLD PARALLEL BLOCKS



- Allows for multiple porting of pneumatic vacuum or air circuits.
- Assures stable attachment to frame profile.
- Aligns tubing parallel to the frame for clean plumbing.
- Use with L type profile.

	A	B	C	D	Profile	Weight (g)	Piab No.
VTB M5 L	-	M5	15	-	L	23	0212971
VTB 1/4 X	G 1/4"	G 1/8"	22	-	X	41	0212972
VTB 2-1-1/4 X	G 1/4"	G 1/8"	22	20	X	63	0214748
VTB 2-2-1/4 X	G 1/4"	G 1/8"	22	20	X	69	0214750
VTB 1/4 JX	G 1/4"	G 1/8"	30	-	JX	47	0214746
VTB 2-1-1/4 JX	G 1/4"	G 1/8"	30	20	JX	71	0214747
VTB 2-2-1/4 JX	G 1/4"	G 1/8"	30	20	JX	75	0214749

VTB M5 L

Product Code: VTB M5 L



VTB 1/4 X

Product Code: VTB 1/4 X



VTB 2-1-1/4 X

Product Code: VTB 2-1-1/4 X



VTB 2-2-1/4 X

Product Code: VTB 2-2-1/4 X



VTB 1/4 JX

Product Code: VTB 1/4 JX



VTB 2-1-1/4 JX

Product Code: VTB 2-1-1/4 JX



VTB 2-2-1/4 JX

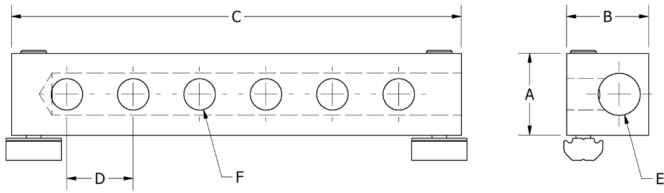
Product Code: VTB 2-2-1/4 JX





Manifolds, Fittings, Tubing and Accessories

MANIFOLD SERIES BLOCKS



- Can mount to Piab's aluminum profile or a custom plate.

	A	B	C	D	E	F	Weight (g)	Piab No.
VPI 1-2-1/4	23	23	50	20	G 1/4	G 1/8	67	0214738
VPI 1-2-3/8	26	26	60	20	G 3/8	G 1/4	92	0214739
VPI 1-4-1/4	23	23	86	20	G 1/4	G 1/8	103	0214740
VPI 1-4-3/8	26	26	100	20	G 3/8	G 1/4	139	0214741
VPI 1-6-1/4	23	23	122	20	G 1/4	G 1/8	138	0214742
VPI 1-6-3/8	26	26	140	20	G 3/8	G 1/4	184	0214743
VPI 1-8-1/4	23	23	158	20	G 1/4	G 1/8	67	0214744
VPI 1-8-3/8	26	26	180	20	G 3/8	G 1/4	247	0214745

VPI 1-2-1/4

Product Code: VPI 1-2-1/4

- 1 x G 1/4" inlet.
- 2 x G 1/8" outlets.
- Use with L, X, D, JX & HX type profile.



VPI 1-2-3/8

Product Code: VPI 1-2-3/8

- 1 x G 3/8" inlet.
- 4 x G 1/4" outlets.
- Use with X, D, JX & HX type profile.



VPI 1-4-1/4

Product Code: VPI 1-4-1/4

- 1 x G 1/4" inlet.
- 4 x G 1/8" outlets.
- Use with L, X, D, JX & HX type profile.



VPI 1-4-3/8

Product Code: VPI 1-4-3/8

- 1 x G 3/8" inlet.
- 4 x G 1/4" outlets.
- Use with X, D, JX & HX type profile.



VPI 1-6-1/4

Product Code: VPI 1-6-1/4

- 1 x G 1/4" inlet.
- 6 x G 1/8" outlets.
- Use with X, D, JX & HX type profile.



VPI 1-6-3/8

Product Code: VPI 1-6-3/8

- 1 x G 3/8" inlet.
- 6 x G 1/4" outlets.
- Use with X, D, JX & HX type profile.



VPI 1-8-1/4

Product Code: VPI 1-8-1/4

- 1 x G 1/4" inlet.
- 8 x G 1/8" outlets.
- Use with D, JX & HX type profile.



VPI 1-8-3/8

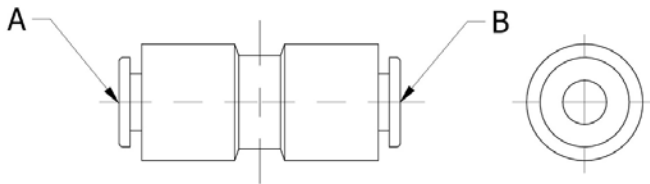
Product Code: VPI 1-8-3/8

- 1 x G 3/8" inlet.
- 8 x G 1/4" outlets.
- Use with D, JX & HX type profile.





STRAIGHT UNION



	A(Tubing Size)	B(Tubing Size)	Weight (g)	Piab
H04-00-10	4	4	16	0214440
H04-06-10	4	6	20	0214442
H06-00-10	6	6	21	0214444
H06-08-10	6	8	28	0214445
H08-00-10	8	8	35	0214446

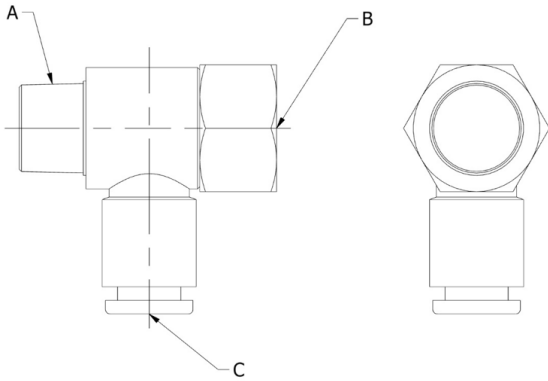
- Accepts FEP, PFA, nylon, soft nylon, and polyurethane tubes.
 - Fluid: air, water.
 - Operating pressure range: -100kPa~1MPa.
 - Release collar allows easy removal of tubing without causing damage to the tube.
 - This product is not intended for use in potable water systems.
 - One-touch straight union fitting.
- * Sold in packs of 10.





Manifolds, Fittings, Tubing and Accessories

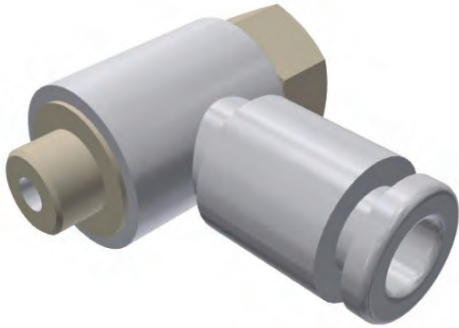
UNIVERSAL FEMALE ELBOW



- Accepts FEP, PFA, nylon, soft nylon, and polyurethane tubes.
- Fluid: air, water.
- Operating pressure range: -100kPa~1MPa.
- Release collar allows easy removal of tubing without causing damage to the tube.
- This product is not intended for use in potable water systems.

* Sold in packs of 10.

	A(Tubing Size)	B(Male Thread)	C (Female Thread)	Weight (g)	Piab No.
VF04-M5-10	4	M5 x .8	M5 x 0.8	60	0214729
VF04-01S-10	4	R 1/8"	Rc 1/8	18	0214728
VF06-M5-10	6	M5 x .8	M5 x 0.8	6	0214732
VF06-01S-10	6	R 1/8"	Rc 1/8	19	0214730
VF06-02S-10	6	R 1/4"	Rc 1/4	36	0214731
VF08-01S-10	8	R 1/8"	Rc 1/8	29	0214733
VF08-02S-10	8	R 1/4"	Rc 1/4	37	0214734



FINGER VALVES

Finger valve series VHK has a large effective area of 2.0 to 17.5mm². This series begins with a minimum tube O.D of ø4. The valve direction clearly indicates whether the valve is open or closed (shut to open is counter- clockwise). Classification of knob by color difference facilitates distinction between 2 port valves (gray) and 3 port valves (blue). The optional flame resistant model's knob, whether using the 2 or 3 port valve, is red.

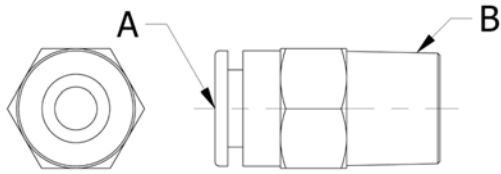
- Finger valve, standard.
- 2 or 3 port available.
- Effective area: 2.0 to 17.5mm².
- Max. operating pressure: 1.0MPa.
- Fluid: air.

	Piab No.
VHK2-04F-04F	0214735
VHK2-06F-06F	0214736
VHK2-08F-08F	0214737





MALE CONNECTORS

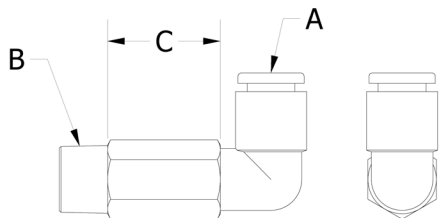


	A(Tubing Size)	B(Male Thread)	Weight (g)	Piab No.
H04-M3-10	4	M3	30	0214443
H04-M5-10	4	M5	35	0212973
H04-01S-10	4	R 1/8"	55	0212974
H04-02S-10	4	R 1/4"	100	0214441
H06-M5-10	6	M5	45	0212975
H06-01S-10	6	R 1/8"	105	0212976
H06-02S-10	6	R 1/4"	115	0212977
H08-01S-10	8	R 1/8"	115	0212978
H08-02S-10	8	R 1/4"	125	0212979

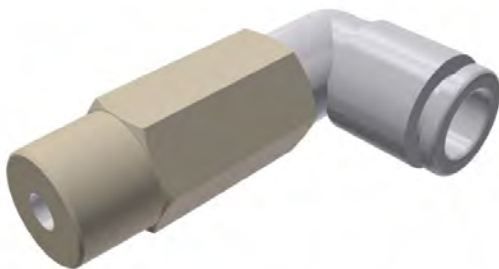
- Accepts FEP, PFA, nylon, soft nylon, and polyurethane tubes.
 - Fluid: air, water.
 - Operating pressure range: -100kPa~1MPa.
 - Release collar allows easy removal of tubing without causing damage to the tube.
 - This product is not intended for use in potable water systems.
 - One-touch male fitting.
- * Sold in packs of 10.



EXTENDED MALE ELBOW



- Accepts FEP, PFA, nylon, soft nylon, and polyurethane tubes.
 - Fluid: air, water.
 - Operating pressure range: -100kPa~1MPa.
 - Release collar allows easy removal of tubing without causing damage to the tube.
 - This product is not intended for use in potable water systems.
- * Sold in packs of 10.

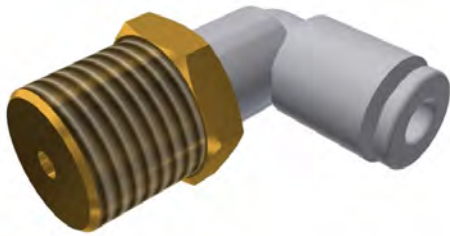
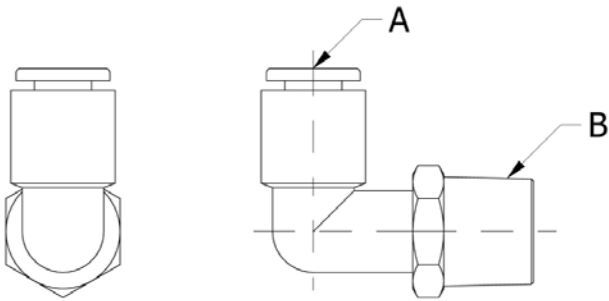


	A (Tubing Size mm)	B (Male Thread)	C (mm)	Weight (g)	Piab No.
W04-01S-10	4	R 1/8"	16.5	16	0214751
W04-M5-10	4	M5 x .8	19.1	11	0214752
W06-01S-10	6	R 1/8"	16.5	17	0214753
W06-02S-10	6	R 1/4"	18.8	30	0214754
W06-M5-10	6	M5 x .8	19.1	11	0214755
W08-01S-10	8	R 1/8"	16.5	27	0214756
W08-02S-10	8	R 1/4"	18.8	35	0214757



Manifolds, Fittings, Tubing and Accessories

MALE ELBOW

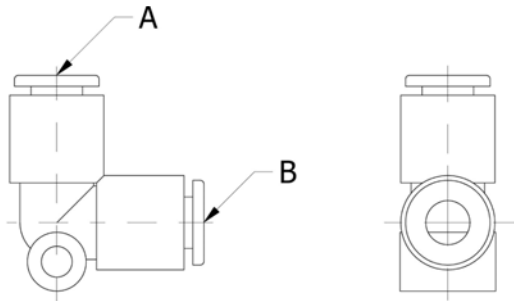


- Accepts FEP, PFA, nylon, soft nylon, and polyurethane tubes.
 - Fluid: air, water.
 - Operating pressure range: -100kPa~1MPa.
 - Release collar allows easy removal of tubing without causing damage to the tube.
 - This product is not intended for use in potable water systems.
 - Fits standard female threads: BSP, BSPT, G, Rc.
- * Sold in packs of 10.

	A(Tubing Size)	B(Male Thread)	Weight (g)	Piab No.
L04-M3-10	4	M3 x .5	2.4	0214514
L04-M5-10	4	M5 x .8	3.4	0212980
L04-01S-10	4	R 1/8"	8	0212981
L04-02S-10	4	R 1/4"	13	0214513
L06-M5-10	6	M5 x .8	3.6	0212982
L06-01S-10	6	R 1/8"	5	0212983
L06-02S-10	6	R 1/4"	4	0212984
L08-01S-10	8	R 1/8"	6	0212985
L08-02S-10	8	R 1/4"	13	0212986
L08-03S-10	8	R 3/8"	25	0214517



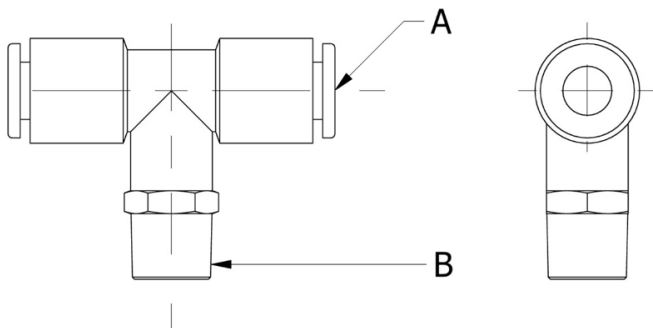
UNION ELBOWS



- Accepts FEP, PFA, nylon, soft nylon, and polyurethane tubes.
 - Fluid: air, water.
 - Operating pressure range: -100kPa~1MPa.
 - Release collar allows easy removal of tubing without causing damage to the tube.
 - This product is not intended for use in potable water systems.
- * Sold in packs of 10.

	A(Tubing Size)	B (Tubing Size)	Weight (g)	Piab No.
L04-00-10	4	4	3	0214512
L06-00-10	6	6	3	0214515
L08-00-10	8	8	8	0214516

MALE BRANCH TEE



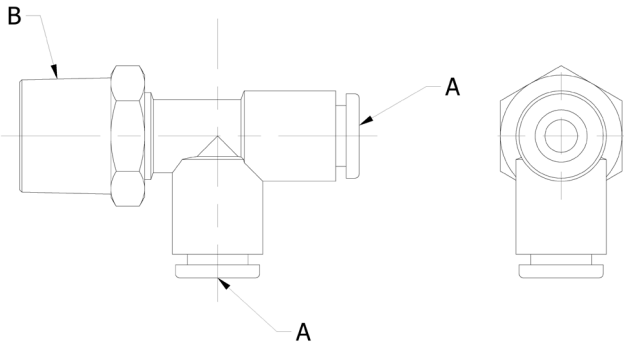
- Accepts FEP, PFA, nylon, soft nylon, and polyurethane tubes.
 - Fluid: air, water.
 - Operating pressure range: -100kPa~1MPa.
 - Release collar allows easy removal of tubing without causing damage to the tube.
 - This product is not intended for use in potable water systems.
- * Sold in packs of 10.

	A(Tubing Size)	B(Tubing Size)	Weight (g)	Piab No.
T04-M5-10	4	M5 x .8	4	0214689
T04-015-10	4	R 1/8"	5	0214687
T06-M5-10	6	M5 x .8	5	0214694
T06-015-10	6	R 1/8"	6	0214691
T06-025-10	6	R 1/4"	20	0214692
T08-015-10	8	R 1/8"	14	0214696
T08-025-10	8	R 1/4"	23	0214697



Manifolds, Fittings, Tubing and Accessories

MALE RUN TEE

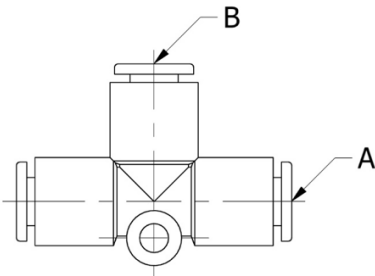
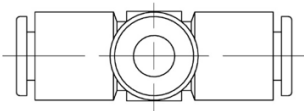


- Accepts FEP, PFA, nylon, soft nylon, and polyurethane tubes.
- Fluid: air, water.
- Operating pressure range: -100kPa~1MPa.
- Release collar allows easy removal of tubing without causing damage to the tube.
- This product is not intended for use in potable water systems.

* Sold in packs of 10.

	A(Tubing Size)	B(Male Thread)	Weight (g)	Piab No.
Y04-M5-10	4	M5 x .8	4	0214791
Y04-01S-10	4	R 1/8"	9	0214789
Y04-02S-10	4	R 1/4"	20	0214790
Y06-M5-10	6	M5 x .8	4.6	0214794
Y06-01S-10	6	R 1/8"	6.2	0214792
Y06-02S-10	6	R 1/4"	4.7	0214793
Y08-01S-10	6	R 1/8"	15	0214795
Y08-02S-10	6	R 1/4"	24	0214796

UNION TEE



- Accepts FEP, PFA, nylon, soft nylon, and polyurethane tubes.
- Fluid: air, water.
- Operating pressure range: -100kPa~1MPa.
- Release collar allows easy removal of tubing without causing damage to the tube.
- This product is not intended for use in potable water systems.

* Sold in packs of 10.

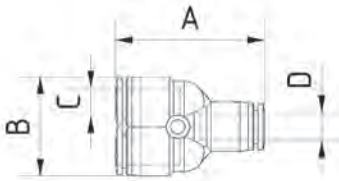


	A(Tubing Size)	B(Tubing Size)	Weight (g)	Piab No.
T04-00-10	4	4	3	0214686
T04-06-10	4	6	3	0214688
T06-00-10	6	6	7	0214690
T06-08-10	6	8	8	0214693
T08-00-10	8	8	7	0214695

Manifolds, Fittings, Tubing and Accessories



UNION Y

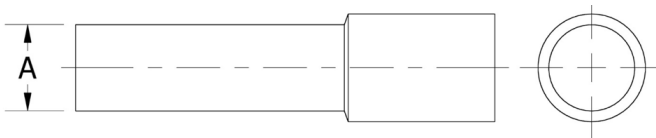


- Accepts FEP, PFA, nylon, soft nylon, and polyurethane tubes.
 - Fluid: air, water.
 - Operating pressure range: -100kPa~1MPa.
 - Release collar allows easy removal of tubing without causing damage to the tube.
 - This product is not intended for use in potable water systems.
- * Sold in packs of 10.

	A(Tubing Size)	A2(Tubing Size)	Weight (g)	Piab No.
U04-00-10	4	4	8	0214720
U04-06-10	4	6	7	0214721
U06-00-10	6	6	10	0214722
U06-08-10	6	8	12	0214723
U08-00-10	8	8	12	0214724



PLUG

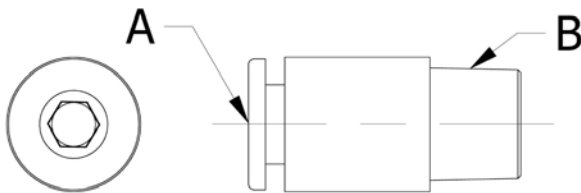


- Plugs for one-touch fittings.
 - Ideal for testing or for blocking off unnecessary air lines.
- * Sold in packs of 10.



	A	Weight (g)	Piab No.
P-04-10	4	7	0214556
P-06-10	6	10	0214557
P-08-10	8	12	0214558
P-10-10	10	3.5	0214559
P-12-10	12	5	0214560

INTERNAL HEX MALE CONNECTOR



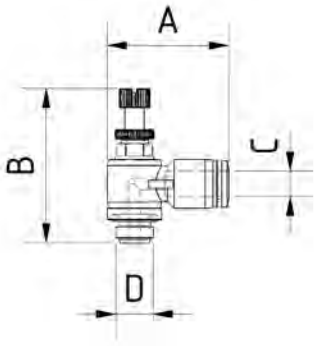
- Accepts FEP, PFA, nylon, soft nylon, and polyurethane tubes.
 - Fluid: air, water.
 - Operating pressure range: -100kPa~1MPa.
 - Release collar allows easy removal of tubing without causing damage to the tube.
 - This product is not intended for use in potable water systems.
 - Can be used in tight spaces where wrenches or sockets won't fit.
- * Sold in packs of 10.

	A(Tubing Size)	B(Male Thread)	Weight (g)	Piab No.
S04-M5-10	4	M5 x .8	3	0214602
S04-01S-10	4	R 1/8"	8	0214601
S06-M5-10	6	M5 x .8	4	0214605
S06-01S-10	6	R 1/8"	6	0214603
S06-02S-10	6	R 1/4"	13	0214604
S08-01S-10	8	R 1/8"	12	0214606
S08-02S-10	8	R 1/4"	11	0214607



Manifolds, Fittings, Tubing and Accessories

ELBOW JOINT

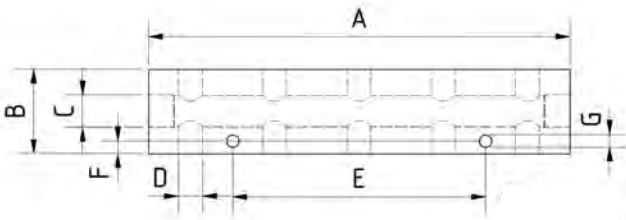


- Elbow screwed joints with flow control.

	A	B	C	D	Piab No.
WEVD - M5 - 4	25.1	30.2	4	M5	0213466
WEVD - M5 - 6	27.8	30.2	6	M5	0213467
WEVD - 18 - 6	31.2	40.1	6	G1/8	0213464



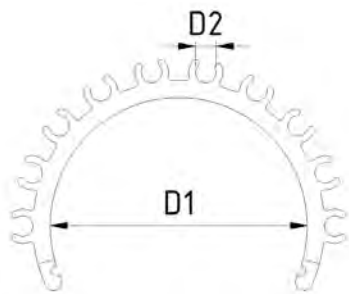
DISTRIBUTOR BLOCK



	A	B	C	D	E	F	G	Depth	Piab No.
VB - 8G1/8 - 2G1/4	85	25	G1/4	G1/8	13	6	5.5	20	0213461
VB - 10G1/8 - 2G1/4	150	30	G1/4	G1/8	90	4.5	4.5	20	0213460



HOSE-SORTING-CLIPS



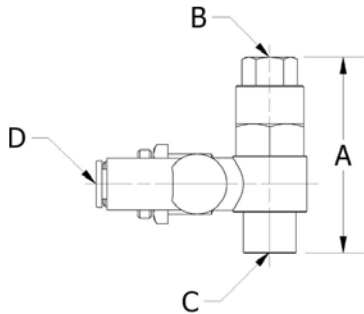
- Material: polyamide.
- Further dimensions available as needed.

	A	B	Tube Number	Piab No.
SSK16 - 6 - 3	16	6	3	0213265
SSK25 - 6 - 5	25	6	5	0213266
SSK40 - 6 - 7	40	6	7	0213267





FLOW CONTROL WITH PILOT CHECK

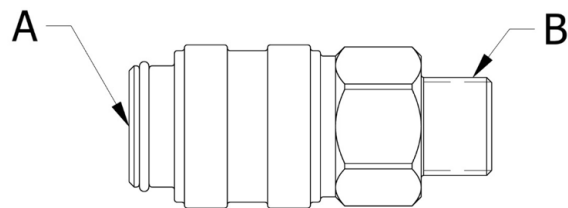


- One-touch flow control.
- Allows for fine control of gripper and cylinder speed without loss of clamping pressure.
- Can be used on inlet or exhaust ports.
- Pilot Check Valve gives added security by providing a back up air supply.



	A	B (Female Thread)	C (Male Thread)	D (Tubing Size)	Max Operating Pressure (bars)	Min Operating Pressure (bars)	Flow Rate	Piab No.
ASP330F-01-06S	40	M5	R 1/8"	6	10	1	180	0214170
ASP430F-02-06S	49	G 1/8"	R 1/4"	6	10	1	330	0214171
ASP430F-02-08S	49	G 1/8"	R 1/4"	8	10	1	350	0214172

QUICK RELEASE COUPLING



- Quick release couplings for faster tool changes.
- Replacement couplings for SWM series Quick Change Mounting Chucks.

	A(Male Thread)	B(Series)	Weight (g)	Piab No.
92-5002	M5 x .8	20	8	0212954
92-0204	R 1/8"	21	27	0212955
92-0406	R 1/4"	26	73	0212956

92-5002

Product Code: 92-5002



92-0204

Product Code: 92-0204

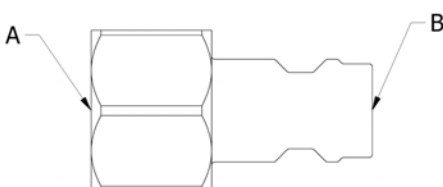


92-0406

Product Code: 92-0406



QUICK RELEASE PLUG



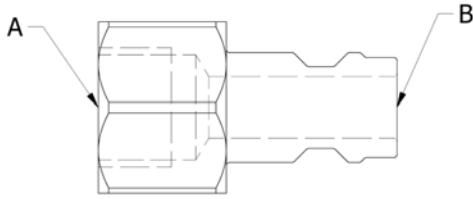
- Quick Release plugs for fast tool changes.
 - EOAT plugs for mating SWM couplings.
- * Sold in packs of 10.

	A (Female Thread)	B (Series)	Weight (g)	Piab No.
94-4902-10	M5 x .8	20	26	0212951
94-0104-10	G 1/8"	21	143	0212952
94-0306-10	G 1/4"	26	246	0212953



Manifolds, Fittings, Tubing and Accessories

QUICK RELEASE PLUG WITH HOSE CONNECTOR

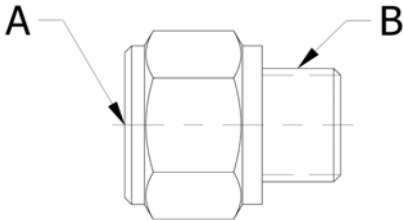


- Quick Release plugs for fast tool changes.
 - EOAT plugs for mating SWM couplings.
- * Sold in packs of 10.

	A (Tubing Size)	B (Series)	Weight (g)	Piab No.
94-0403	4	20	50	0214154
94-0604	6	21	150	0214155
94-0806	8	26	180	0214156



HEX BUSHING



- Fits male threads BSP, BSPT, G, R.
- Fits female threads BSP, BSPT, G, Rc.

	A (Female Thread)	B (Male Thread)	Piab No.
66-0201-10	G 1/8"	R 1/8	0214145
66-0403-10	G 1/4"	R 1/4	0214147

66-0201-10

Product Code: 66-0201-10

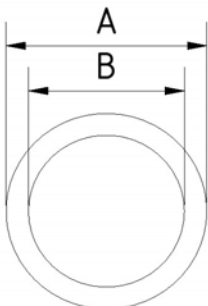


66-0403-10

Product Code: 66-0403-10



SEALING RINGS



FB-DR-14-K

Product Code: FB-DR-14-K

- Sealing ring PVC for G 1/4

FB-DR-18-K

Product Code: FB-DR-18-K

- Sealing ring PVC for G 1/8

FB-DR-38-K

Product Code: FB-DR-38-K

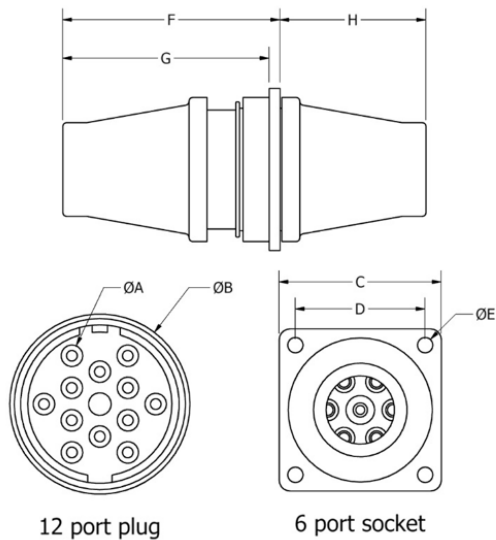
- Sealing ring PVC for G 3/8

	A	B	Piab No.
FB-DR-14-K	18	13.2	0216048
FB-DR-18-K	13	10.1	0216049
FB-DR-38-K	22	16.8	0216050





MULTI-PORT TUBE CONNECTOR

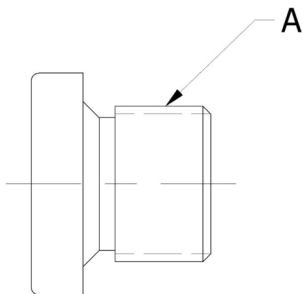


- Quick change all your hose connections with one plug.
- Cover can be removed from socket side for panel mounting.
- Working Pressure up to 1.0 MPa.

Plugs	Ports	A	B	C	D	E	F	G	H	Weight (g)	Piab No.
DMC-04-06P	6	4	37	-	-	-	60	56	-	87	0214184
DMC-04-06S	6	4	44	44	36	4.5	-	-	41	85	0214185
DMC-06-06P	6	6	37	-	-	-	60	56	-	84	0214188
DMC-06-06S	6	6	44	44	36	4.5	-	-	41	82	0214189
DMC-04-12P	12	4	47	-	-	-	70	56	-	126	0214186
DMC-04-12S	12	4	53	55	43	4.5	-	-	51	115	0214191
DMC-06-12P	12	6	47	-	-	-	70	56	-	120	0214190



PIPE PLUG

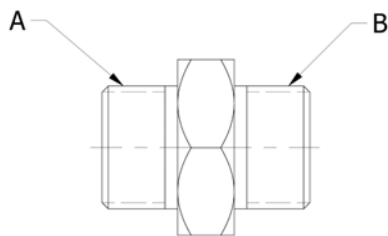


- Fits female threads BSP, BSPT, G.
- * Sold in packs of 10.

	A(Female Thread)	Weight (g)	Piab No.
21-50-10	M5	20	0214131
23-02-10	G1/8"	68	0214132
23-04-10	G1/4"	155	0214133



MULTI-PORT TUBE CONNECTOR



- Fits female threads BSP, BSPT, G, Rc.
- * Sold in packs of 10.

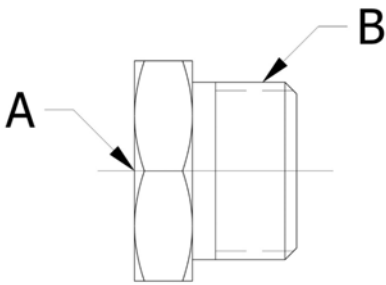
	A (Male Thread)	B (Male Thread)	Weight (g)	Piab No.
41-5050-10	M5 x .8	M5 x .8	25	0214134
42-0202-10	G 1/8"	G 1/8"	88	0214135
43-0250-10	G 1/8"	M5 x .8	76	0214137
42-0404-10	G 1/4"	G 1/4"	161	0214136
43-0402-10	G 1/4"	G 1/8"	149	0214138
43-0604-10	G 3/8"	G 1/4"	200	0214139





Manifolds, Fittings, Tubing and Accessories

REDUCTION BUSHING



- Fits male threads BSP, BSPT, G, R.
- Fits female threads BSP, BSPT, G, Rc.

*Sold in packs of 10.

	A (Female Thread)	B (Male Thread)	Weight (g)	Piab No.
70-5041-10	M3 x .5	M5 x .8	11	0214153
70-0249-10	M5 x .8	R 1/8"	73	0214150
70-0401-10	G 1/8"	R 1/4"	122	0214151
66-2050-10	G 1/8"	M5 x .8	75	0214149
66-0401-10	G 1/4"	R 1/8"	145	0214146
70-0604-10	G 1/4"	R 3/8"	131	0214152
66-0604-10	G 3/8"	R 1/4"	199	0214148

70-5041-10

Product Code: 70-5041-10



70-0249-10

Product Code: 70-0249-10



70-0401-10

Product Code: 70-0401-10



66-2050-10

Product Code: 66-2050-10



66-0401-10

Product Code: 66-0401-10



70-0604-10

Product Code: 70-0604-10



66-0604-10

Product Code: 66-0604-10

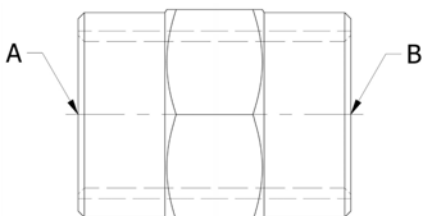


66-0403-10

Product Code: 66-0403-10



PIPE COUPLING



- Fits male threads BSP, BSPT, G, R.

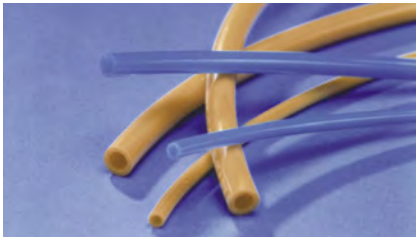
* Sold in packs of 10.

	A(Female Thread)	B(Female Thread)	Weight (g)	Piab No.
60-49-10	M5 x .8	M5 x .8	31	0214143
60-5002-10	G 1/8"	M5 x .8	93	0214144
60-0204-10	G 1/4"	G 1/8"	145	0214142





PNEUMATIC TUBING



- Flexible pneumatic hose tubing.
- Polyurethane material reduces "kinking".
- Supports pressurized air up to 0.8 Mpa (116 psi).

	Color	Outer Diameter (mm)	Inner Diameter (mm)	Length (m)	Weight (g)	Piab No.
03-0403-100	Black	4	2.5	100	1320	0214122
03-0403-20	Black	4	2.5	20	600	0214123
03-0403B-100	Blue	4	2.5	100	1338	0212988
03-0403B-20	Blue	4	2.5	20	180	0212987
03-0403Y-100	Yellow	4	2.5	100	1338	0212990
03-0403Y-20	Yellow	4	2.5	20	200	0212989
03-0604-100	Black	6	4	100	2330	0214124
03-0604-20	Black	6	4	20	465	0214125
03-0604B-100	Blue	6	4	100	5040	0212992
03-0604B-120	Blue	6	4	20	440	0212991
03-0604Y-100	Yellow	6	4	100	2380	02112994
03-0604Y-20	Yellow	6	4	20	440	0212993
03-0805-100	Black	8	5	100	4260	0214126
03-0805-20	Black	8	5	20	795	0214217
03-0805B-100	Blue	8	5	100	3945	0212996
03-0805B-120	Blue	8	5	20	836	0212995
03-0805Y-100	Yellow	8	5	100	3990	0212998
03-0805Y-20	Yellow	8	5	20	763	0212997
03-1065-20	Black	10	6.5	20	1390	0214128
03-1208-20	Black	12	8	20	1570	0214129
TU0425BU2-100x108	Clear Blue	4	2.5	100	1320	0215642
TU0425G2-100x108	Clear Green	4	2.5	100	1320	0215643
TU0425PU2-100x108	Clear Purple	4	2.5	100	1320	0215644
TU0425R2-100x108	Clear Red	4	2.5	100	1320	0215645
TU0425Y2-100x108	Clear Yellow	4	2.5	100	1320	0215646
TU0425YR1-100x108	Clear Orange	4	2.5	100	1320	0215647
TU0604BU2-100x108	Clear Blue	6	4	100	5040	0215648
TU0604G2-100x108	Clear Green	6	4	100	5040	0215649
TU0604PU2-100x108	Clear Purple	6	4	100	5040	0215650
TU0604R2-100x108	Clear Red	6	4	100	5040	0215651
TU0604Y2-100x108	Clear Yellow	6	4	100	5040	0215652
TU0604YR1-100x108	Clear Orange	6	4	100	5040	0215653



Manifolds, Fittings, Tubing and Accessories

TUBING CUTTER

TC-21 TUBING CUTTER

Product Code: TC-21

Piab No. 0214708

- 6 cutting edges on each blade insert.
- One handed operation and cutter lock.
- Integrated 1m tape measure.
- Max Tubing Size: 15mm / 1/2".

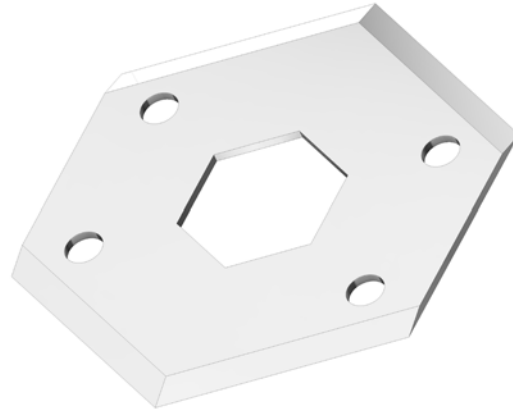


TC-C BLADE FOR TC-21 TUBE CUTTER

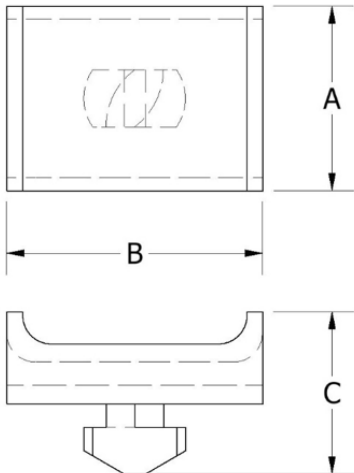
Product Code: TC-C

Piab No. 0214709

- TC-C Blade for TC-21 Tube Cutter.
- Sold in packs of 10.



CABLE AND HOSE



CTM-15

Product Code: CTM-15

- Convenient wiring and tubing tie-down twists tightly into standard frame profile.
- Easily movable and removable.
- CTM-15 designed to fit into L, X, & D profiles.
- Sold in packs of 10.



CTM-25

Product Code: CTM-25

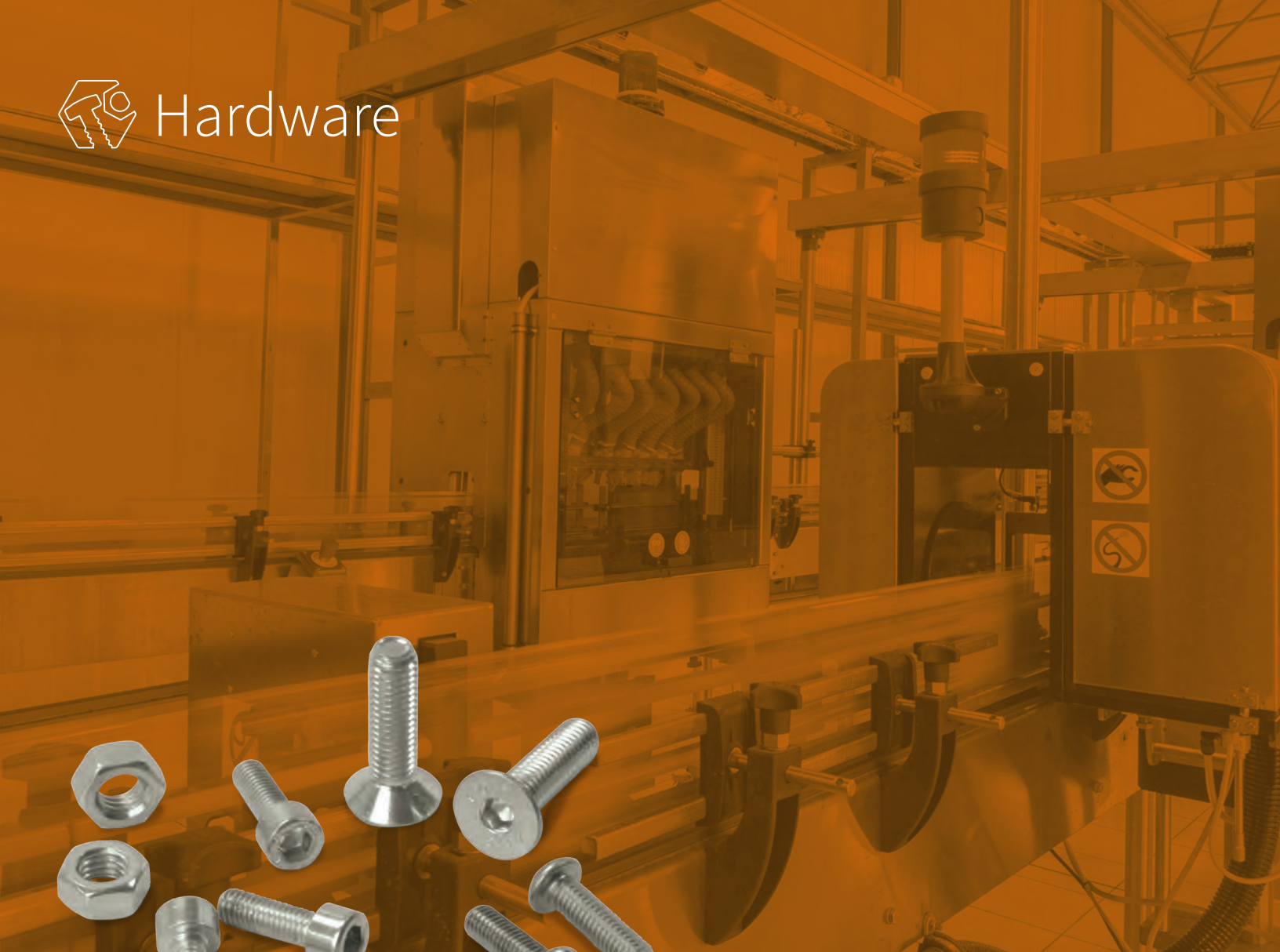
- Convenient wiring and tubing tie-down twists tightly into standard frame profile.
- Easily movable and removable.
- CTM-25 designed to fit into JX & HX profiles.
- Sold in packs of 10.



	A	B	C	Piab No.
CTM-15	12	15	16	0214179
CTM-25	18	25	16	0214180

Manifolds, Fittings, Tubing and Accessories





- Hardware made from zinc-plated steel to resist corrosion (accept for seal rings).
- Sold in packs of 25.

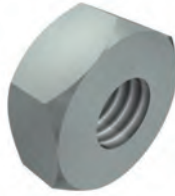
Recommended Torque: (approx.)

	Nm	Ft.-lbs.
M3	1.3	1
M4	3	2
M5	5.5	4
M6	9.5	7
M8	23	17

HEX NUTS

Sold in packs of 25

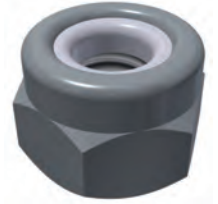
	Thread Type	Piab No.
M3 Hex Nut	M3	0214994
M4 Hex Nut	M4	0215009
M5 Hex Nut	M5	0215028
M6 Hex Nut	M6	0215051
M8 Hex Nut	M8	0215075



LOCK NUTS

Sold in packs of 25

	Thread Type	Piab No.
M3 Lock Nut	M3	0214996
M4 Lock Nut	M4	0215011
M5 Lock Nut	M5	0215030
M6 Lock Nut	M6	0215053
M8 Lock Nut	M8	0215077



M3 SOCKET HEAD CAP SCREWS

Sold in packs of 25

	Thread Type	Length (mm)	Piab No.
M3x8 SHCS	M3	8	0215007
M3x10 SHCS	M3	10	0214998
M3x12 SHCS	M3	12	0214999
M3x16 SHCS	M3	16	0215000
M3x20 SHCS	M3	20	0215001
M3x25 SHCS	M3	25	0215002
M3x30 SHCS	M3	30	0215003
M3x35 SHCS	M3	35	0215004
M3x40 SHCS	M3	40	0215005
M3x50 SHCS	M3	50	0215006

Note: Screws longer than 20mm are not fully threaded.



M4 SOCKET HEAD CAP SCREWS

Sold in packs of 25

	Thread Type	Length (mm)	Piab No.
M4x8	M4	8	0215026
M4x10	M4	10	0215013
M4x12	M4	12	0215014
M4x14	M4	14	0215015
M4x16	M4	16	0215016
M4x18	M4	18	0215017
M4x20	M4	20	0215018
M4x22	M4	22	0215019



M4 SOCKET HEAD CAP SCREWS

Sold in packs of 25

	Thread Type	Length (mm)	Piab No.
M4x25	M4	25	0215020
M4x30	M4	30	0215021
M4x35	M4	35	0215022
M4x40	M4	40	0215023
M4x45	M4	45	0215024
M4x50	M4	50	0215025

Note: Screws longer than 30mm are not fully threaded.



M5 SOCKET HEAD CAP SCREWS

Sold in packs of 25

	Thread Type	Length (mm)	Piab No.
M5x10 SHCS	M5	10	0215032
M5x12 SHCS	M5	12	0215033
M5x14 SHCS	M5	14	0215034
M5x16 SHCS	M5	16	0215035
M5x18 SHCS	M5	18	0215036
M5x20 SHCS	M5	20	0215037
M5x22 SHCS	M5	22	0215038
M5x25 SHCS	M5	25	0215039
M5x30 SHCS	M5	30	0215040
M5x35 SHCS	M5	35	0215041
M5x40 SHCS	M5	40	0215042
M5x45 SHCS	M5	45	0215043
M5x50 SHCS	M5	50	0215044
M5x55 SHCS	M5	55	0215045
M5x60 SHCS	M5	60	0215046
M5x65 SHCS	M5	65	0215047
M5x70 SHCS	M5	70	0215048
M5x80 SHCS	M5	80	0215049



Note: Screws longer than 25mm are not fully threaded.

M6 SOCKET HEAD CAP SCREWS

Sold in packs of 25

	Thread Type	Length (mm)	Piab No.
M6x10 SHCS	M6	10	0215055
M6x12 SHCS	M6	12	0215058
M6x14 SHCS	M6	14	0215059
M6x16 SHCS	M6	16	0215060
M6x18 SHCS	M6	18	0215061
M6x20 SHCS	M6	20	0215062
M6x22 SHCS	M6	22	0215063
M6x25 SHCS	M6	25	0215064
M6x30 SHCS	M6	30	0215065
M6x35 SHCS	M6	35	0215066
M6x40 SHCS	M6	40	0215067
M6x45 SHCS	M6	45	0215068
M6x50 SHCS	M6	50	0215069
M6x55 SHCS	M6	55	0215070
M6x60 SHCS	M6	60	0215071
M6x70 SHCS	M6	70	0215072
M6x80 SHCS	M6	80	0215073
M6x100 SHCS	M6	100	0215056
M6x110 SHCS	M6	110	0215057



Note: Screws longer than 30mm are not fully threaded.

M8 SOCKET HEAD CAP SCREWS

Sold in packs of 25

	Thread Type	Length (mm)	Piab No.
M8x10 SHCS	M8	10	0215079
M8x12 SHCS	M8	12	0215080
M8x16 SHCS	M8	16	0215081
M8x25 SHCS	M8	25	0215083
M8x30 SHCS	M8	30	0215084
M8x35 SHCS	M8	35	0215085
M8x50 SHCS	M8	50	0215086

Note: Screws longer than 35mm are not fully threaded.



FLATWASHERS

Sold in packs of 25

	Thread Type	Piab No.
M3 Flatwasher	M3	0214993
M4 Flatwasher	M4	0215008
M5 Flatwasher	M5	0215027
M6 Flatwasher	M6	0215050
M8 Flatwasher	M8	0215074



LARGE FLATWASHERS

Sold in packs of 25

	Thread Type	Piab No.
M3 Large Flatwasher	M3	0214995
M4 Large Flatwasher	M4	0215010
M5 Large Flatwasher	M5	0215029
M6 Large Flatwasher	M6	0215052
M8 Large Flatwasher	M8	0215076



ALUMINUM SEAL RINGS

Sold in packs of 25

	Thread Type	Piab No.
M5 Aluminum Seal Ring	M5	0214527



RIBBED LOCKWASHERS

Sold in packs of 25

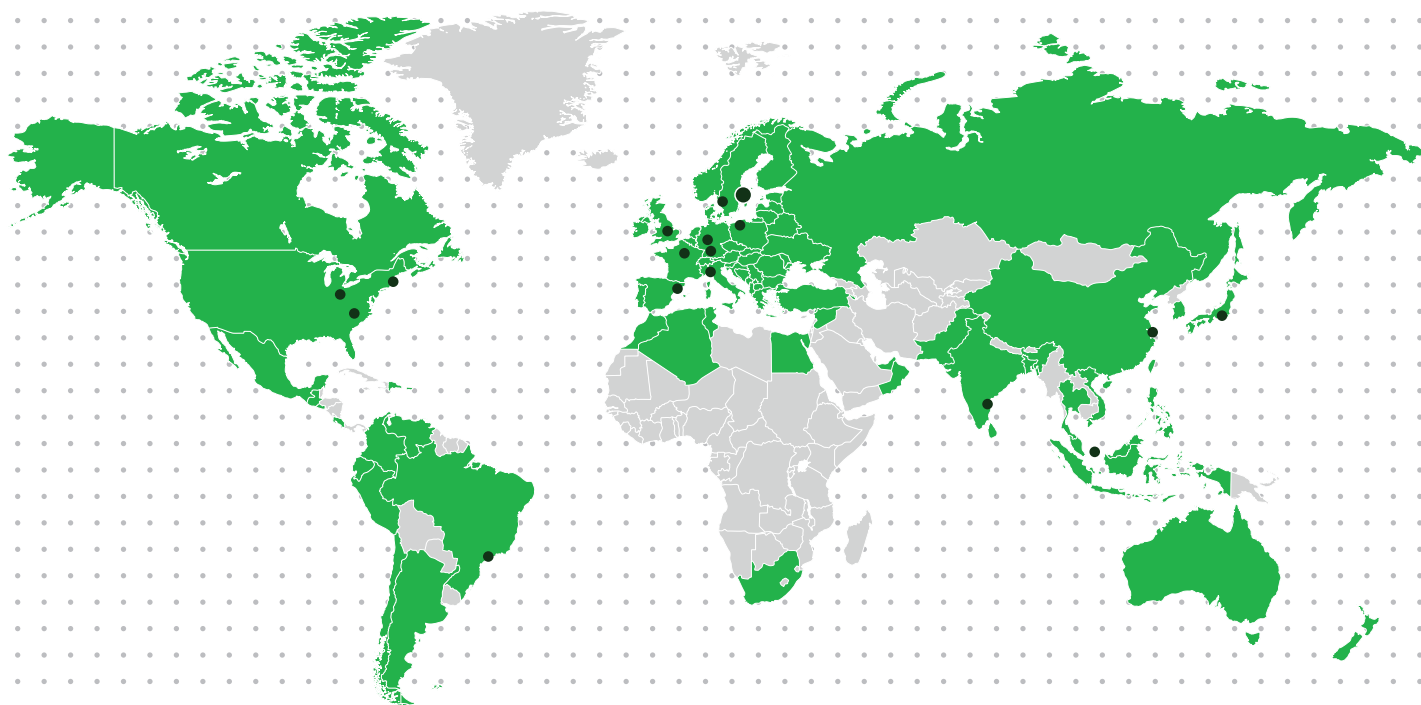
	Thread Type	Length (mm)	Piab No.
M3 Ribbed Lockwasher	M3	8	0214997
M4 Ribbed Lockwasher	M4	10	0215012
M5 Ribbed Lockwasher	M5	12	0215031
M6 Ribbed Lockwasher	M6	16	0215054
M8 Ribbed Lockwasher	M8	20	0215078



Notes







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