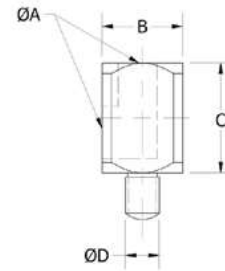


Typically used in higher volume loads with rapid and repetitive action, our cylinders and slides enable robots to make the secondary motions required by today's EOATs.

- **Wide range** of cylinders available
- **Supported** by our equally wide range of manifolds and accessories
- Expansive product and engineering **knowledge**

### VACUUM CUP ADAPTOR

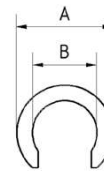


- Mounts a vacuum cup / suction cup to a KHZ short stroke cylinder.
- Used to secure parts with edges perpendicular to the mold face.

	A	B	C	D	Weight (g)	Piab No.
<b>AVI 51-8-3</b>	M5	10	12	M3 x .5	7	0213145
<b>AVI 1/81-16-5</b>	G 1/8"	16	21	M5 x .8	30	0213146
<b>AVI 1/81-16-8</b>	G 1/8"	16	21	M8 x 1.25	29	0213147
<b>AVI 1/41-16-8</b>	G 1/4"	19	26	M8 x 1.25	51	0213148



### DISTANCE CLIPS

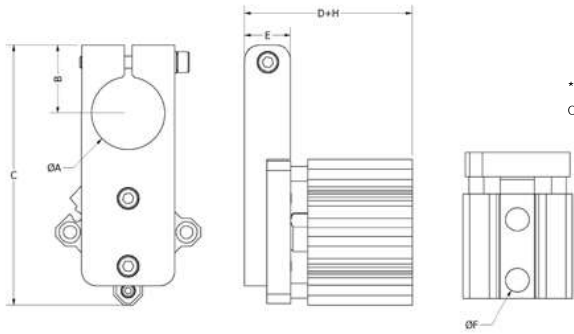


- Distance clips used to reduce the strokes of cylinders.
- Material: plastic.

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



**SINGLE MOUNTING SPECIAL CYLINDERS**



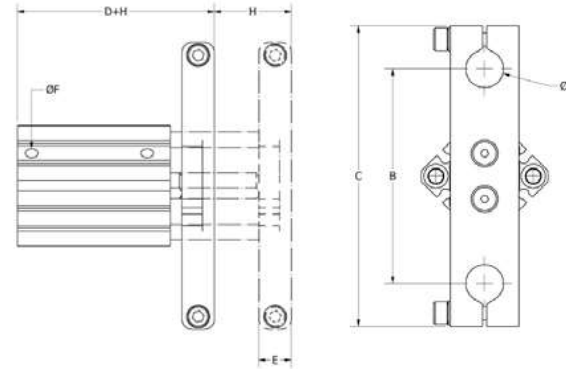
- Perfect for securing sides or flexing parts.
- Usually utilized with GSE arms and vacuum cups or GRF gripper fingers (not included).
- Double Acting Cylinder.

\*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**

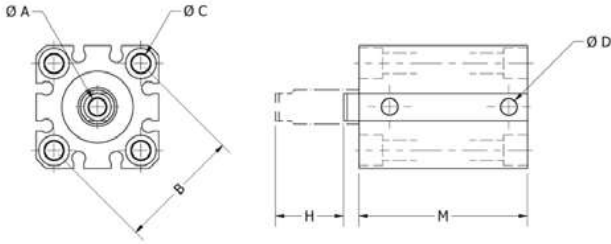


- Perfect for securing sides or flexing parts.
- Usually utilized with GSE arms and vacuum cups or GRF gripper fingers (not included).
- Double Acting Cylinder.

\*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	399	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	-	575	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

**SHORT STROKE CYLINDERS**

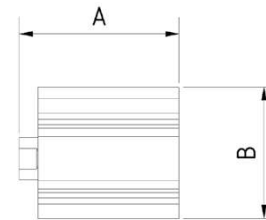


- Cylinders for applications such as applying side pressure.
  - Single and Double Acting Cylinders available.
  - Available with or without sensor capability.
- \*Optional sensor: RRK-93, RRK-93-TP, RRK-M9P, or RRK-M9P-TP.

	Cylinder Bore	A	B	C	D	H (Stroke)	M	Action	Sensor Capable*	Weight (g)	Piab No.
<b>KHZ 12-5-E</b>	12	M3x0.5	22	3.5 / 6.5 Depth 3.5	M5	5	20.5	Single	-	29	0214475
<b>KHZ 12-5-D</b>	12	M3x0.5	22	3.5 / 6.5 Depth 3.5	M5	5	20.5	Double	-	42	0214473
<b>KHZ 12-5-D-A</b>	12	M3x0.5	22	3.5 / 6.5 Depth 3.5	M5	5	31.5	Double	Yes	29	0214474
<b>KHZ 12-10-E</b>	12	M3x0.5	22	3.5 / 6.5 Depth 3.5	M5	10	20.5	Single	-	35	0214472
<b>KHZ 12-10-D</b>	12	M3x0.5	22	3.5 / 6.5 Depth 3.5	M5	10	20.5	Double	-	49	0214471
<b>KHZ 12-10-D-A</b>	12	M3x0.5	22	3.5 / 6.5 Depth 3.5	M5	10	31.5	Double	Yes	35	0213111
<b>KHZ 20-5-E</b>	20	M5x0.8	36	5.5 / 9 Depth 7	M5	5	24	Single	-	63	0214482
<b>KHZ 20-5-D</b>	20	M5x0.8	36	5.5 / 9 Depth 7	M5	5	24	Double	-	94	0214480
<b>KHZ 20-5-D-A</b>	20	M5x0.8	36	5.5 / 9 Depth 7	M5	5	36	Double	Yes	63	0214481
<b>KHZ 20-10-E</b>	20	M5x0.8	36	5.5 / 9 Depth 7	M5	10	24	Single	-	75	0214477
<b>KHZ 20-10-D</b>	20	M5x0.8	36	5.5 / 9 Depth 7	M5	10	24	Double	-	106	0214476
<b>KHZ 20-10-D-A</b>	20	M5x0.8	36	5.5 / 9 Depth 7	M5	10	36	Double	Yes	76	0213112
<b>KHZ 20-20-D</b>	20	M5x0.8	36	5.5 / 9 Depth 7	M5	20	24	Double	-	101	0214478
<b>KHZ 20-20-D-A</b>	20	M5x0.8	36	5.5 / 9 Depth 7	M5	20	36	Double	Yes	131	0213113
<b>KHZ 20-30-D</b>	20	M5x0.8	36	5.5 / 9 Depth 7	M5	30	24	Double	-	127	0214479
<b>KHZ 20-30-D-A</b>	20	M5x0.8	36	5.5 / 9 Depth 7	M5	30	36	Double	Yes	155	0213114
<b>KHZ 32-5-E</b>	32	M8x1.25	48	5.5 / 9 Depth 7	G 1/8"	5	30	Single	-	125	0214489
<b>KHZ 32-5-D</b>	32	M8x1.25	48	5.5 / 9 Depth 7	G 1/8"	5	30	Double	-	182	0214487
<b>KHZ 32-5-D-A</b>	32	M8x1.25	48	5.5 / 9 Depth 7	G 1/8"	5	40	Double	Yes	125	0214488
<b>KHZ 32-10-E</b>	32	M8x1.25	48	5.5 / 9 Depth 7	G 1/8"	10	30	Single	-	145	0214484
<b>KHZ 32-10-D</b>	32	M8x1.25	48	5.5 / 9 Depth 7	G 1/8"	10	30	Double	-	201	0214483
<b>KHZ 32-10-D-A</b>	32	M8x1.25	48	5.5 / 9 Depth 7	G 1/8"	10	40	Double	Yes	145	0213115
<b>KHZ 32-20-D</b>	32	M8x1.25	48	5.5 / 9 Depth 7	G 1/8"	20	30	Double	-	184	0214485
<b>KHZ 32-20-D-A</b>	32	M8x1.25	48	5.5 / 9 Depth 7	G 1/8"	20	40	Double	Yes	241	0213116
<b>KHZ 32-30-D</b>	32	M8x1.25	48	5.5 / 9 Depth 7	G 1/8"	30	30	Double	-	224	0214486
<b>KHZ 32-30-D-A</b>	32	M8x1.25	48	5.5 / 9 Depth 7	G 1/8"	30	40	Double	Yes	281	0213117

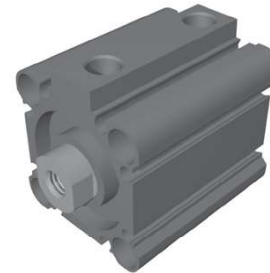


**COMPACT CYLINDERS**

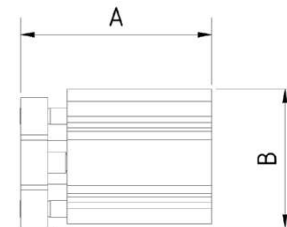


- Cylinder, including magnet, for the purpose of positioning. Inside thread of the piston rod M8.
- Additional Compact Cylinders are available as needed.
- Connection thread G1/8.

	A	B	Depth	Hub / Stroke	Piab No.
<b>KZ - ECDQ2B32 - 10D</b>	50	45	45	10	0216358
<b>KZ - ECDQ2B32 - 20D</b>	60	45	45	20	0216359
<b>KZ - ECDQ2B32 - 30D</b>	72	-	-	-	0216360



**COMPACT CYLINDERS GUIDED**

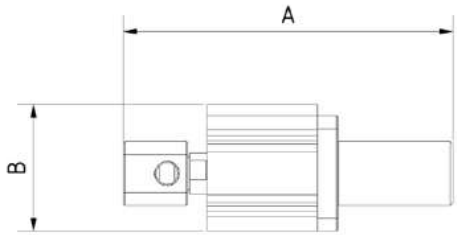


- Cylinder, including magnet, for the purpose of positioning.
- Additional compact cylinders are available as needed.
- Connection thread G1/8.
- Return stroke can be limited infinitely variable.

	A	B	Depth	Hub / Stroke	Piab No.
<b>KZG - ECDQMB32 - 10</b>	50	45	45	10	0213440
<b>KZG - ECDQMB32 - 20</b>	60	45	45	20	0213441
<b>KZG - ECDQMB32 - 25</b>	65	45	45	25	0213442
<b>KZG - ECDQMB32 - 40</b>	80	45	45	40	0213443

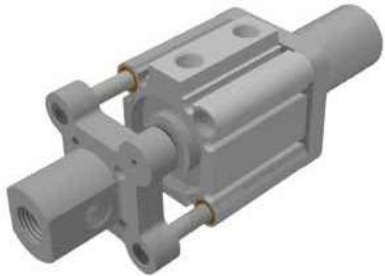


**MOVEABLE VACUUM UNIT WITH SINGLE STROKE**

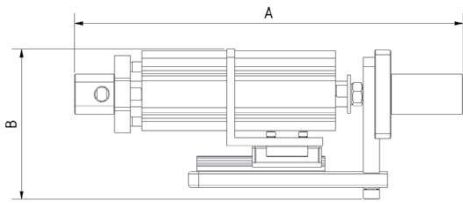


- Movable vacuum unit BVAE32 with double stroke
- Activity: double-acting.
- Fixing possibility on two sides.
- Adjustable low profile linear guide.
- Including adapter for vacuum suction cup.
- For distance clips refer to DK16.
- For suction cup adapters refer to SA - AG3/8 - G1/8 - M8 and SA - IG1/4 - G1/8 - M8.
- Connection diameter 25 mm.

	A	B	Width	Piab No.
<b>BVAE32-EH10-20</b>	128	49.5	45	0213372
<b>BVAE32-EHG10-20</b>	138	49.5	45	0213375

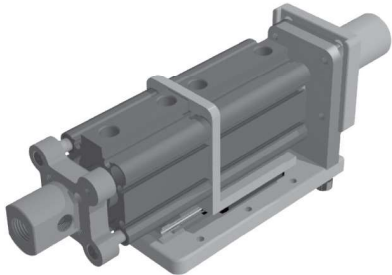


**MOVEABLE VACUUM UNIT WITH DOUBLE STROKE GUIDED**

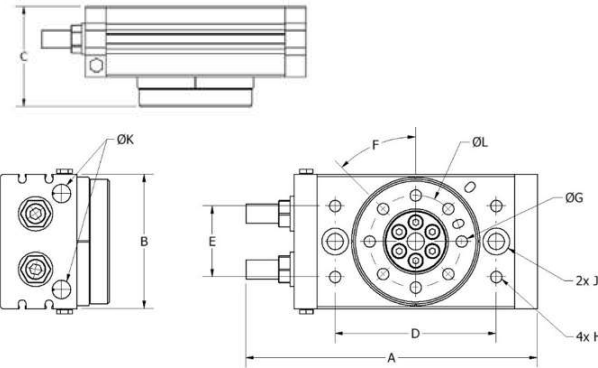


- Activity: double-acting.
- Fixing possibility on two sides.
- Adjustable low profile linear guide.
- Including adapter for vacuum suction cup.
- Connection diameter 25 mm.

	A	B	Depth	Piab No.
<b>BVAE32 - DHG2010 - 25</b>	221	90	45	0213370
<b>BVAE32 - DHG3020 - 25</b>	231	90	45	0213371
<b>BVAE32 - DH2010 - 25</b>	211	90	45	0213368
<b>BVAE32 - DH3020 - 25</b>	231	90	45	0213369



**ROTARY CYLINDERS**

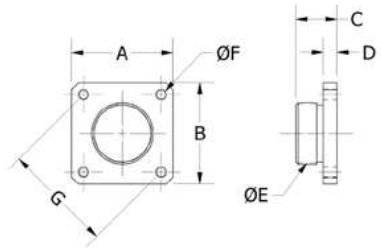


- Allows for 0-180° rotational motion.
- Adjustable angle with rubber bumpers.
- Double acting.

\*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.
<b>RC 10-S</b>	110	50	47	60	27	45°	M5	M5	6.8 / 11	M5	32	RRK-93/ RRK-F9P	500	0214587
<b>RC 20-S</b>	142	65	54	76	34	45°	M6	M6	8.6 / 14	M5	43	RRK-93/ RRK-F9P	940	0214588
<b>RC 30-S</b>	152	70	57	84	37	45°	M6	M6	8.6 / 14	G 1/8"	48	RRK-93/ RRK-F9P	1230	0214589
<b>RC 50-S</b>	183	80	66	100	50	45°	M8	M8	10.5 / 18	G 1/8"	55	RRK-93/ RRK-F9P	1990	0214590

### 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)	Plab No.
<b>ADZ 14-12</b>	KHZ 12...	25	25	18	6	M12 x 1	M3	22	VLR 14	13	0213130
<b>ADZ 20-20</b>	KHZ 20...	38	38	18	6	M17 x 1	M5	36	VLR 20	29	0213131
<b>ADZ 20-32</b>	KHZ 32...	45	45	18	6	M17 x 1	M5	48	VLR 20	38	0213132
<b>ADZ 30-32</b>	KHZ 32...	45	45	18	6	M27 x 1	M5	48	VLR 30	49	0213133

**ADZ 14-12**  
Product Code: ADZ 14-12

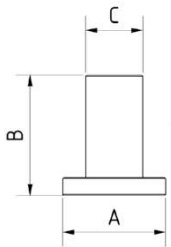
**ADZ 20-20**  
Product Code: ADZ 20-20

**ADZ 20-32**  
Product Code: ADZ 20-32

**ADZ 30-32**  
Product Code: ADZ 30-32



### CYLINDER ADAPTERS

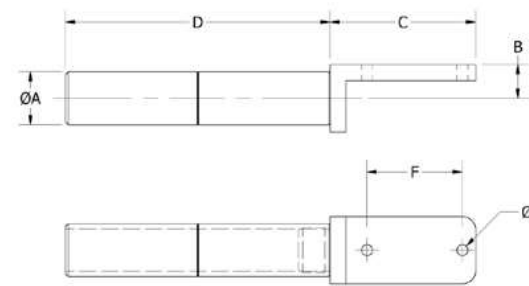


- Cylinder adapters with 4 x M5 inside threads for fastening.
- Suitable for compact cylinders.

	A	B	C	Depth	Plab No.
<b>ZA - ECDQ2B32 - G - D20</b>	45	53	20	45	0213476
<b>ZA - ECDQ2B32 - G - D25</b>	45	53	25	45	0213477



### SPECIAL CYLINDER MOUNTING ARMS

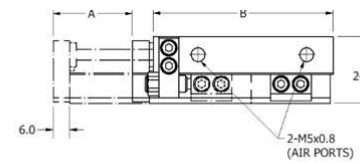


- Mounts SZD, SZS, and KHZ to standard mounting clamps and gripper mounting arms.

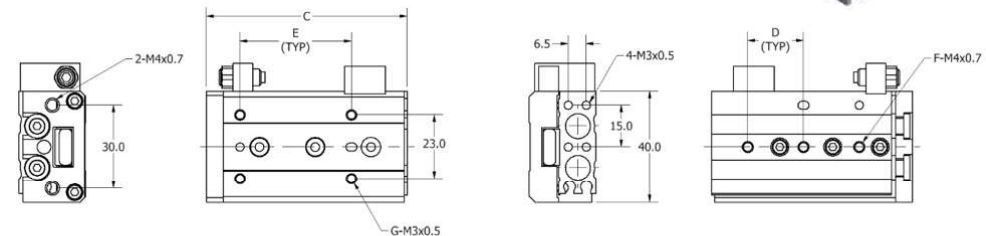


	A	B	C	D	E	F	Cylinder	Weight (g)	Material	Plab No.
<b>GAZ 12-10-90</b>	10	15	25	90	M3	22	SZD 12 / KHZ 12	18	Aluminum	0213141
<b>GAZ 12-14-120</b>	14	15	25	120	M3	22	SZD 12 / KHZ 12	31	Aluminum	0213142
<b>GAZ 20-20-150</b>	20	13	59	150	M5	36.1	SZD 20 / KHZ 20	83	Aluminum	0213143
<b>GAZ 32-20-150</b>	20	13	64	150	M5	48.1	SZD 32 / KHZ 32	88	Aluminum	0213144

### INDEXING GUIDED CYLINDERS

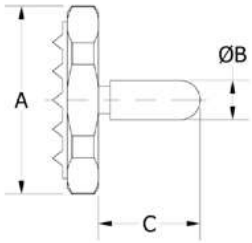


- Allows for indexing motion on linear bearings.
- Adjustable end stop.
- Double acting.



	A (Stroke)	B	C	D	E	F	G	Cylinder Bore	Sensor (Optional)*	Plab No.
<b>ISC 8-10</b>	10	49	56	28	25	2	4	8	RRK-93/ RRK-M9P	0214450
<b>ISC 8-20</b>	20	54	61	30	25	2	4	8	RRK-93/ RRK-M9P	0214451
<b>ISC 8-30</b>	30	65	72	20	40	3	4	8	RRK-93/ RRK-M9P	0214452
<b>ISC 8-40</b>	40	83	90	28	50	3	4	8	RRK-93/ RRK-M9P	0214453
<b>ISC 8-50</b>	50	101	108	23	38	4	6	8	RRK-93/ RRK-M9P	0214454

**PRESSURE PLATES**



- Pad plates for KHZ cylinders or GRF gripper fingers.

	A	B	C	Face Material	Weight (g)	F	Cylinder	Weight (g)	Plab No.
<b>DPL 12-3</b>	12	M3	9	Steel	3	22	SZD 12 / KHZ 12	18	0213134
<b>DPL 20-5</b>	20	M5	10	Ribbed Vinyl	9	22	SZD 12 / KHZ 12	18	0213135
<b>DPL 24-8</b>	24	G 1/8"	10	Ribbed Vinyl	6	22	SZD 12 / KHZ 12	31	0213136
<b>DPL 25-3</b>	25	M3	7	Ribbed Vinyl	11	22	SZD 12 / KHZ 12	31	0213137
<b>DPL 25-4</b>	25	M4	13	Ribbed Vinyl	11	36.1	SZD 20 / KHZ 20	83	0213138
<b>DPL 25-5</b>	25	M5	13	Ribbed Vinyl	11	36.1	SZD 20 / KHZ 20	83	0213139
<b>DPL 31-4</b>	31	M4	10	Ribbed Vinyl	15	48.1	SZD 32 / KHZ 32	88	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

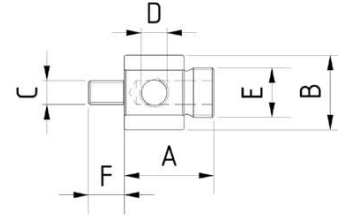


**DPL 31-4**

Product Code: DPL 31-4



**SUCTION CUP ADAPTERS**

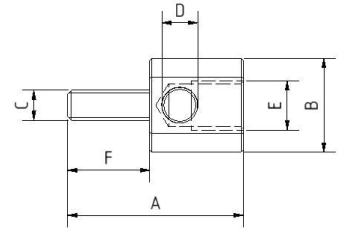


- For guided and unguided short-stroke cylinders.

	A	B	C	D	E	F	Plab No.
<b>SA - AG3/8 - G1/8 - M8 - 12</b>	42	25	M8	G1/8	G3/8	12	0213451
<b>SA - AG3/8 - G1/8 - M8 - 22</b>	52	25	M8	G1/8	G3/8	22	0213452



**SUCTION CUP ADAPTERS**

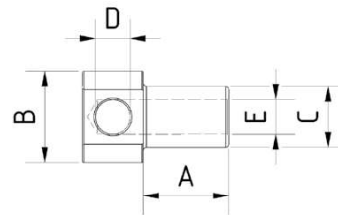


- For guided and unguided short-stroke cylinders.

	A	B	C	D	E	F	Plab No.
<b>SA - IG1/4 - G1/8 - M8 - 12</b>	37	25	M8	G1/8	G1/4	12	0213453
<b>SA - IG1/4 - G1/8 - M8 - 22</b>	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	Plab No.
<b>SA16 - 28 - G1/8 - G1/8</b>	28	25	16	G1/8	G1/8	0213332
<b>SA20 - 28 - G1/4 - G1/4</b>	28	30	20	G1/4	G1/4	0213333

