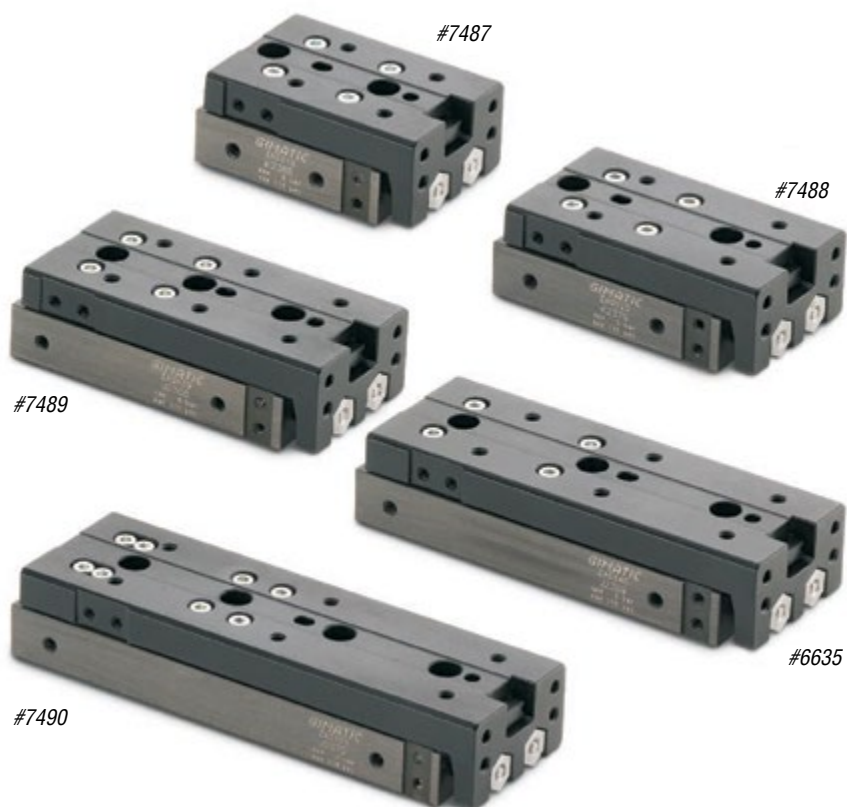


Low-Profile Pneumatic Slides – ZA



Part#	ZA-0610	ZA-0620	ZA-0630	ZA-0640	ZA-0650
Quick#	7487	7488	7489	6635	7490
Price	\$156.00	\$170.00	\$173.00	\$181.00	\$206.00
Medium	Filtered, lubricated / non lubricated compressed air				
Pressure range	44–116 psi				
Extension force at 87 psi	6.5lbf				
Retraction force at 87 psi	4.9lbf				
Maximum total stroke	10mm	20mm	30mm	40mm	50mm
Minimum actuating time	0.03s	0.04s	0.05s	0.06s	0.08s
Cycle air consumption	1cm ³	2cm ³	3cm ³	5cm ³	6cm ³
Weight	100g	120g	135g	170g	205g

Low-Profile Pneumatic Slides – ZA



Part#	ZA-0810	ZA-0820	ZA-0830	ZA-0840	ZA-0850	ZA-0875
Quick#	6630	6978	7491	6977	6809	6810
Price	\$182.00	\$195.00	\$206.00	\$218.00	\$235.00	\$268.00
Medium	Filtered, lubricated / non lubricated compressed air					
Pressure range	36–116 psi					
Extension force at 87 psi	11.4lbf					
Retraction force at 87 psi	8.5lbf					
Maximum total stroke	10mm	20mm	30mm	40mm	50mm	75mm
Minimum actuating time	0.03s	0.05s	0.08s	0.11s	0.15s	0.2s
Cycle air consumption	3cm ³	4cm ³	6cm ³	8cm ³	11cm ³	16cm ³
Weight	170g	185g	215g	270g	310g	450g

Low-Profile Pneumatic Slides – ZA



Part#	ZA-1210	ZA-1220	ZA-1230	ZA-1240	ZA-1250	ZA-1275	ZA-12100
Quick#	7492	7493	7494	7495	6644	7496	7497
Price	\$191.00	\$206.00	\$217.00	\$222.00	\$239.00	\$268.00	\$296.00
Medium	Filtered, lubricated / non lubricated compressed air						
Pressure range	14.5–116 psi						
Extension force at 87 psi	27.4lbf						
Retraction force at 87 psi	22.7lbf						
Maximum total stroke	10mm	20mm	30mm	40mm	50mm	75mm	100mm
Minimum actuating time	0.02s	0.04s	0.06s	0.09s	0.11s	0.14s	0.19s
Cycle air consumption	9cm ³	11cm ³	13cm ³	17cm ³	23cm ³	38cm ³	55cm ³
Weight	390g	390g	395g	440g	535g	715g	955g

Low-Profile Pneumatic Slides – ZA

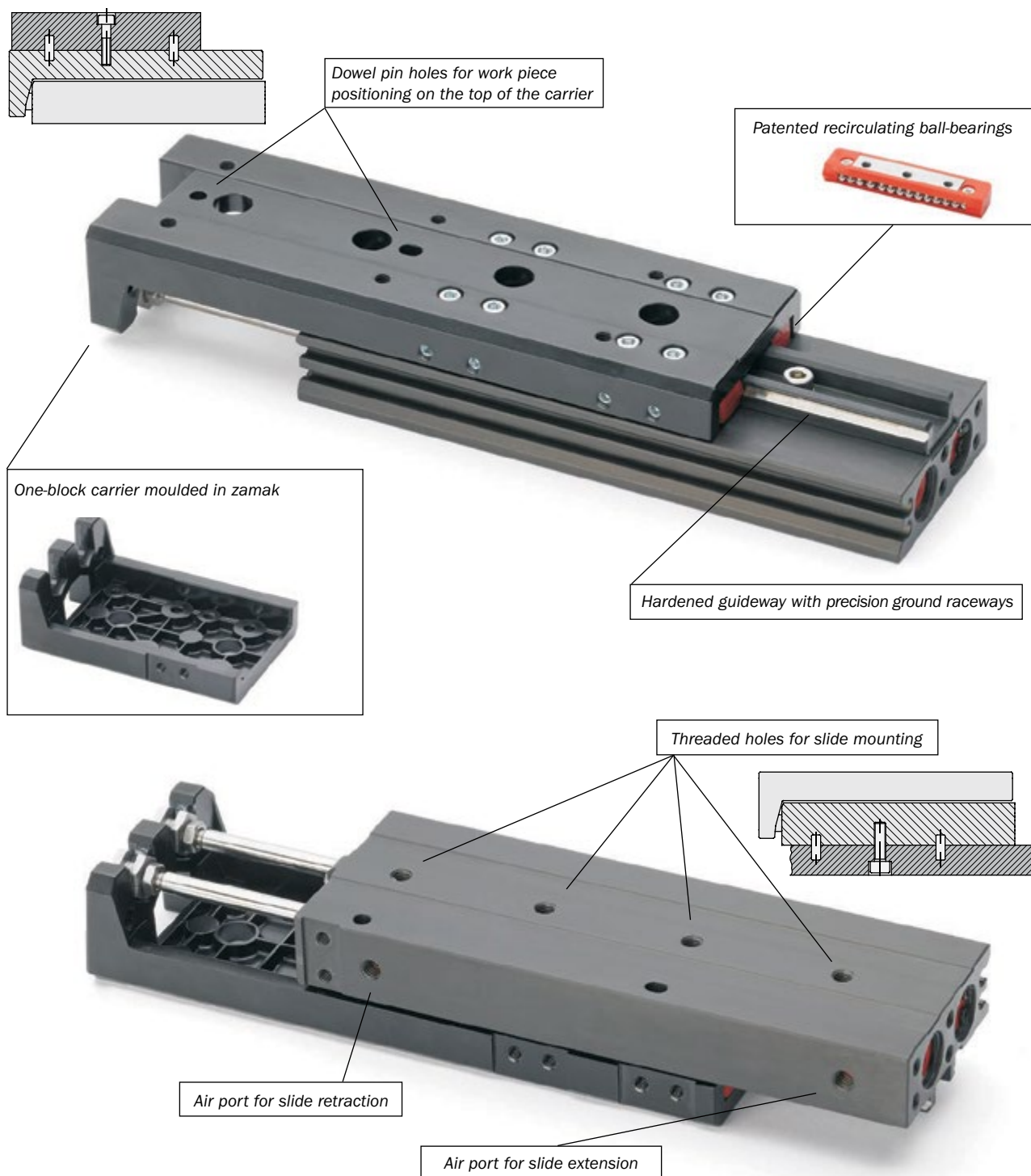


Part#	ZA-1610	ZA-1620	ZA-1630	ZA-1640	ZA-1650	ZA-1675	ZA-16100	ZA-16125
Quick#	7498	7499	7500	7501	7502	6979	7503	7504
Price	\$206.00	\$221.00	\$225.00	\$229.00	\$246.00	\$277.00	\$302.00	\$313.00
Medium	Filtered, lubricated / non lubricated compressed air							
Pressure range	14.5–116 psi							
Extension force at 87 psi	48.7lbf							
Retraction force at 87 psi	44lbf							
Maximum total stroke	10mm	20mm	30mm	40mm	50mm	75mm	100mm	125mm
Minimum actuating time	0.03s	0.04s	0.05s	0.06s	0.06s	0.07s	0.09s	0.11s
Cycle air consumption	16cm ³	19cm ³	23cm ³	31cm ³	40cm ³	69cm ³	98cm ³	127cm ³
Weight	645g	645g	650g	710g	820g	1150g	1475g	1800g

Additional sizes: ZA-2010 through ZA-20150 available online!

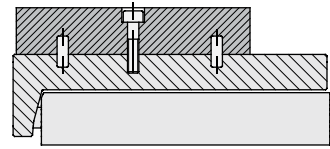
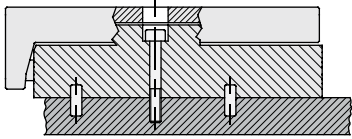
Low-Profile Pneumatic Slides – ZA

- Piston bore 2x6mm, 2x8mm, 2x12mm, 2x16mm, 2x20mm
- Stroke 10mm to 150mm
- Optional end stroke adjusters with shock absorber, rubber bumper (FGD) or grub screw (FPD).
- Optional magnetic sensors

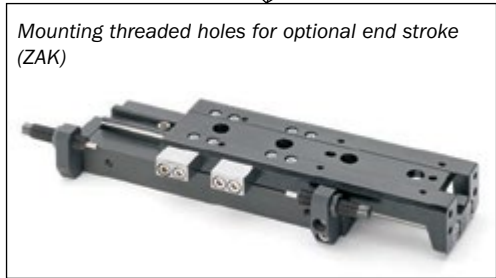
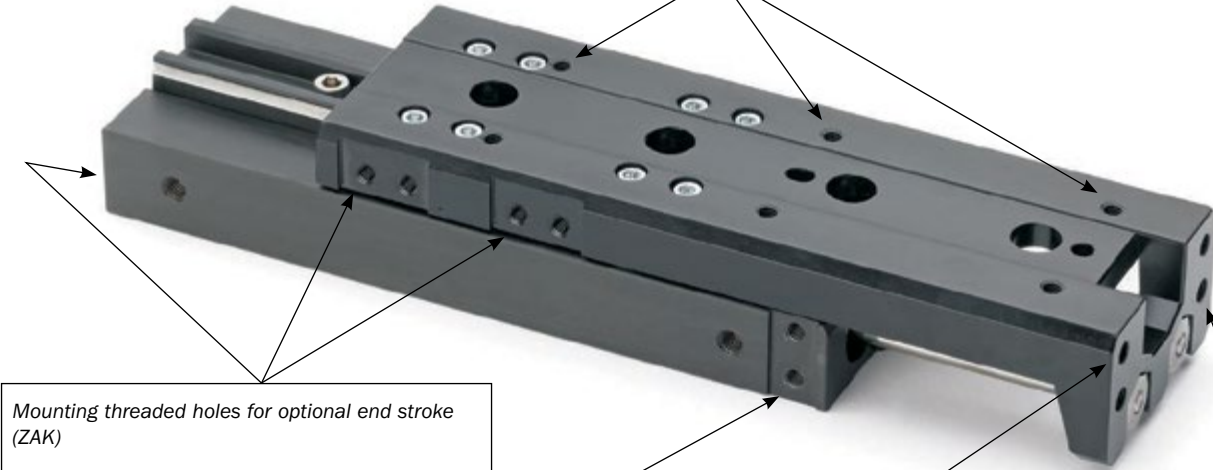


Low-Profile Pneumatic Slides – ZA

Through holes for slide fastening by through screws

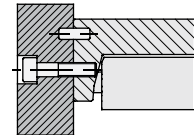


Threaded holes for work piece mounting on the carrier top

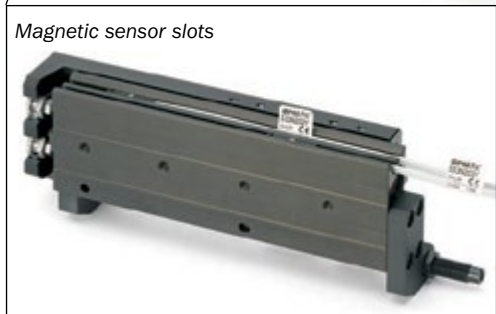
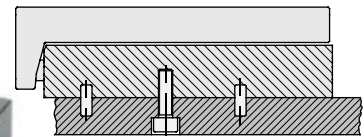


Threaded holes for work piece mounting on the front face of the carrier

Dowel pin holes for work piece positioning on the front face of the carrier



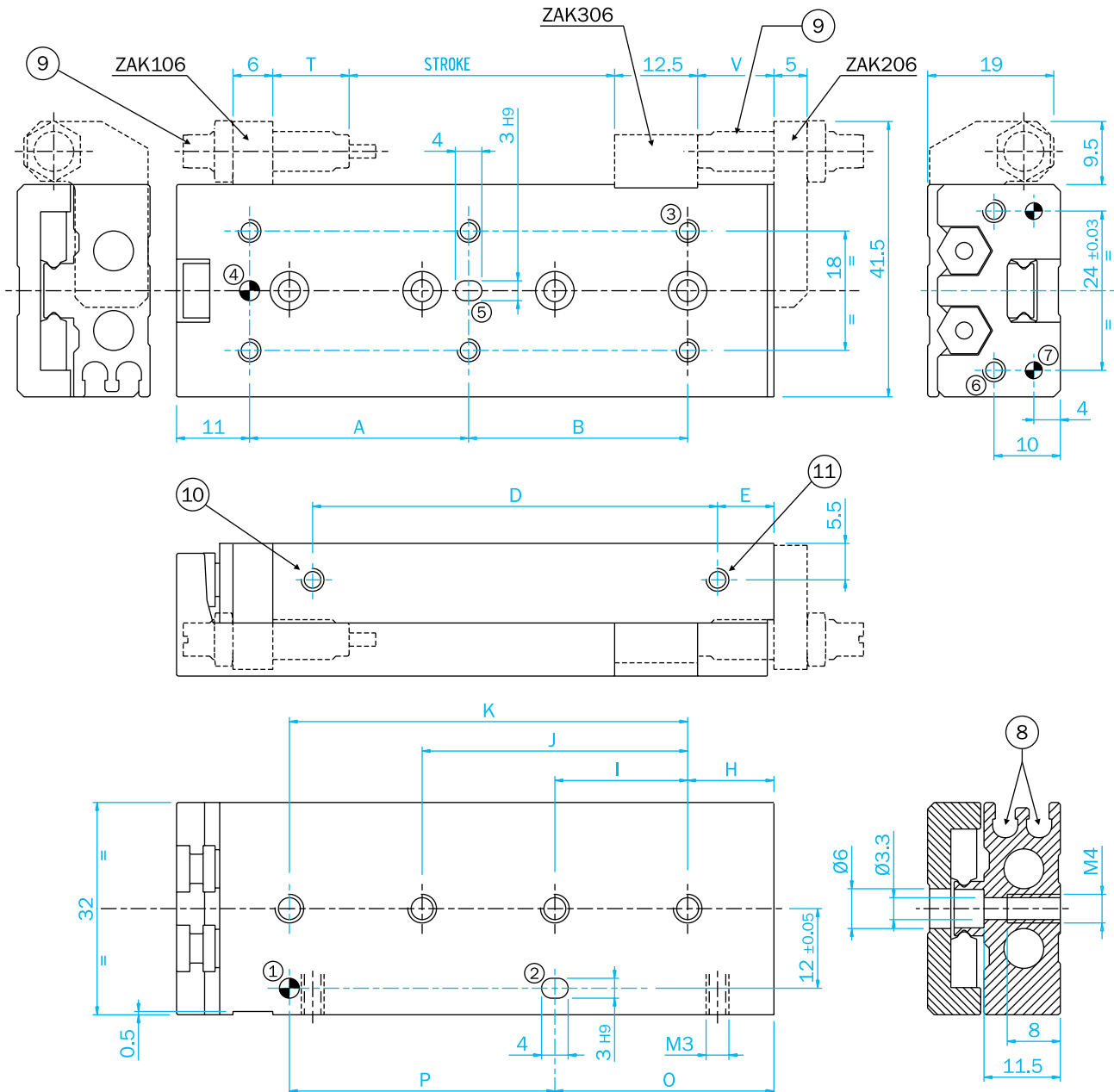
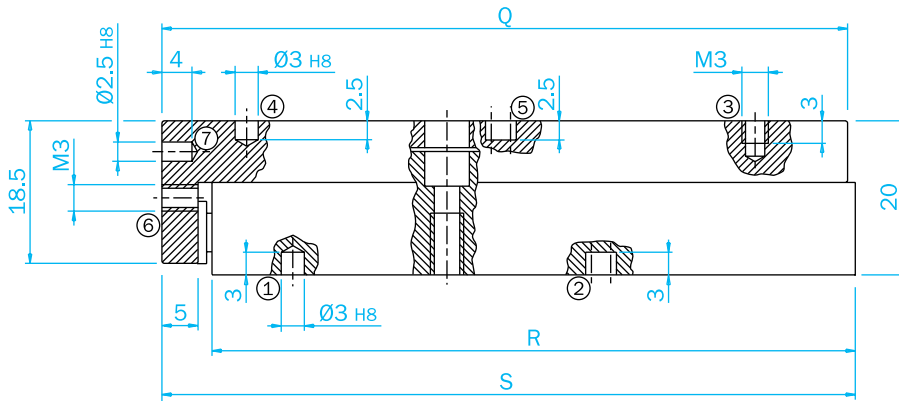
Dowel pin holes for slide positioning



Low-Profile Pneumatic Slides – ZA

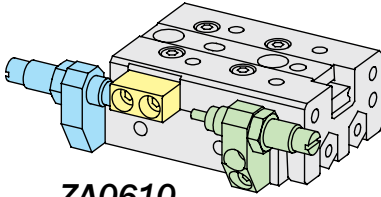
SIZE 06
ZA0610 – ZA0650

- 8: SS & SN Sensor Slot
- 9: Stroke Adjustment
- 10: Air port for slide retraction
- 11: Air port for slide extension

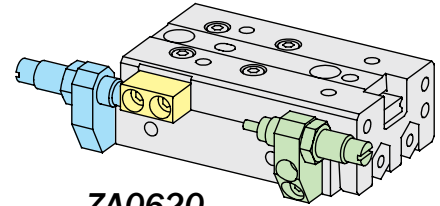


Low-Profile Pneumatic Slides – ZA

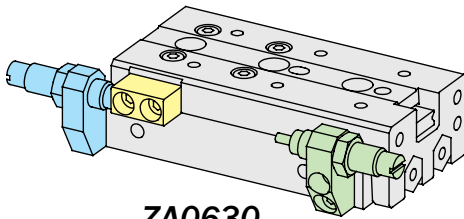
SIZE 06
ZA0610 – ZA0650



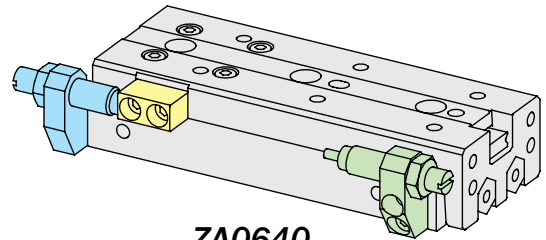
ZA0610



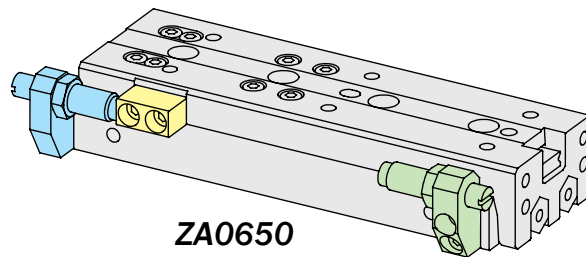
ZA0620



ZA0630



ZA0640



ZA0650

	ZA0610	ZA0620	ZA0630	ZA0640	ZA0650
A	20	30	20	28	38
B	-	-	20	28	38
D	19	29	40	61	76
E	8.5	8.5	7.5	8.5	9.5
H	6	6	11	13	17
I	25	35	20	30	24
J	-	-	40	60	48
K	-	-	-	-	72
O	11	21	31	43	41
P	20	20	20	30	48
R	41.5	51.5	61.5	83.5	99.5
S	48	58	68	90	106
T	5.5	5.5	5.5	11.5	14.5
V	5.5	5.5	5.5	11.5	14.5

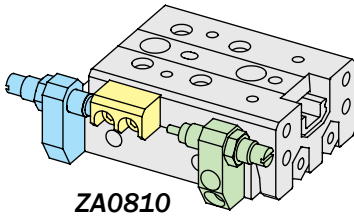
- Retraction Adjustment Bracket
- Stopper
- Extension Adjustment Bracket

Quick #	Part #	Accessory	Price
7512	ZAK-106	Extension Adjustment Bracket	\$18.98
7513	ZAK-206	Retraction Adjustment Bracket	\$18.98
7514	ZAK-306	Stopper	\$18.98

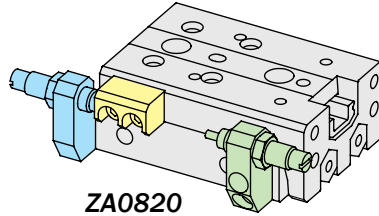
Quick #	Stopper Quantity needed per cylinder stroke (mm)								
	10	20	30	40	50	75	100	125	150
7514	1	1	1	1	1				

Low-Profile Pneumatic Slides – ZA

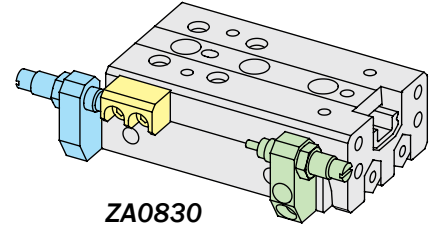
SIZE 08
ZA0810 – ZA0875



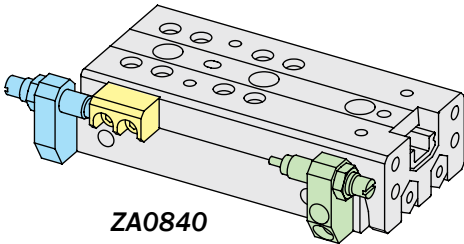
ZA0810



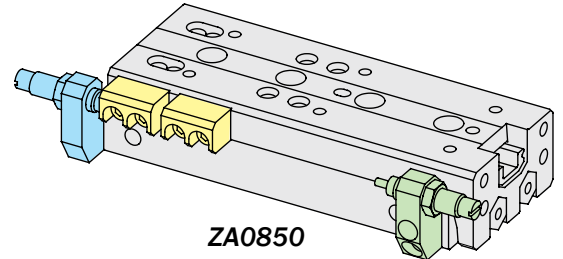
ZA0820



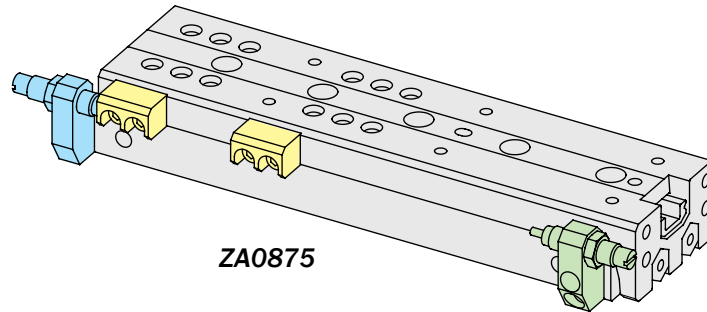
ZA0830



ZA0840






ZA0850



ZA0875

	ZA0810	ZA0820	ZA0830	ZA0840	ZA0850	ZA0875
A	25	25	40	50	38	50
B	-	-	-	-	38	50
D	21	30	41	59	77	127
E	12.5	8.5	8.5	8.5	8.5	8.5
F	34	41	52	66	71	98
G	-	-	-	-	89	137
H	9	12	13	15	20	27
I	28	30	20	28	23	28
J	-	-	40	56	46	56
K	-	-	-	-	69	84
L	-	-	-	-	-	112
O	17	12	33	43	43	83
P	20	30	20	28	46	56
Q	55	60	71	89	107	157
R	48.5	53.5	64.5	82.5	100.5	150.5
S	56	61	72	90	108	158
T	7.5	4.5	5.5	9.5	4.5	6.5
V	7	5	5	9	4	6

-  Retraction Adjustment Bracket
-  Stopper
-  Extension Adjustment Bracket

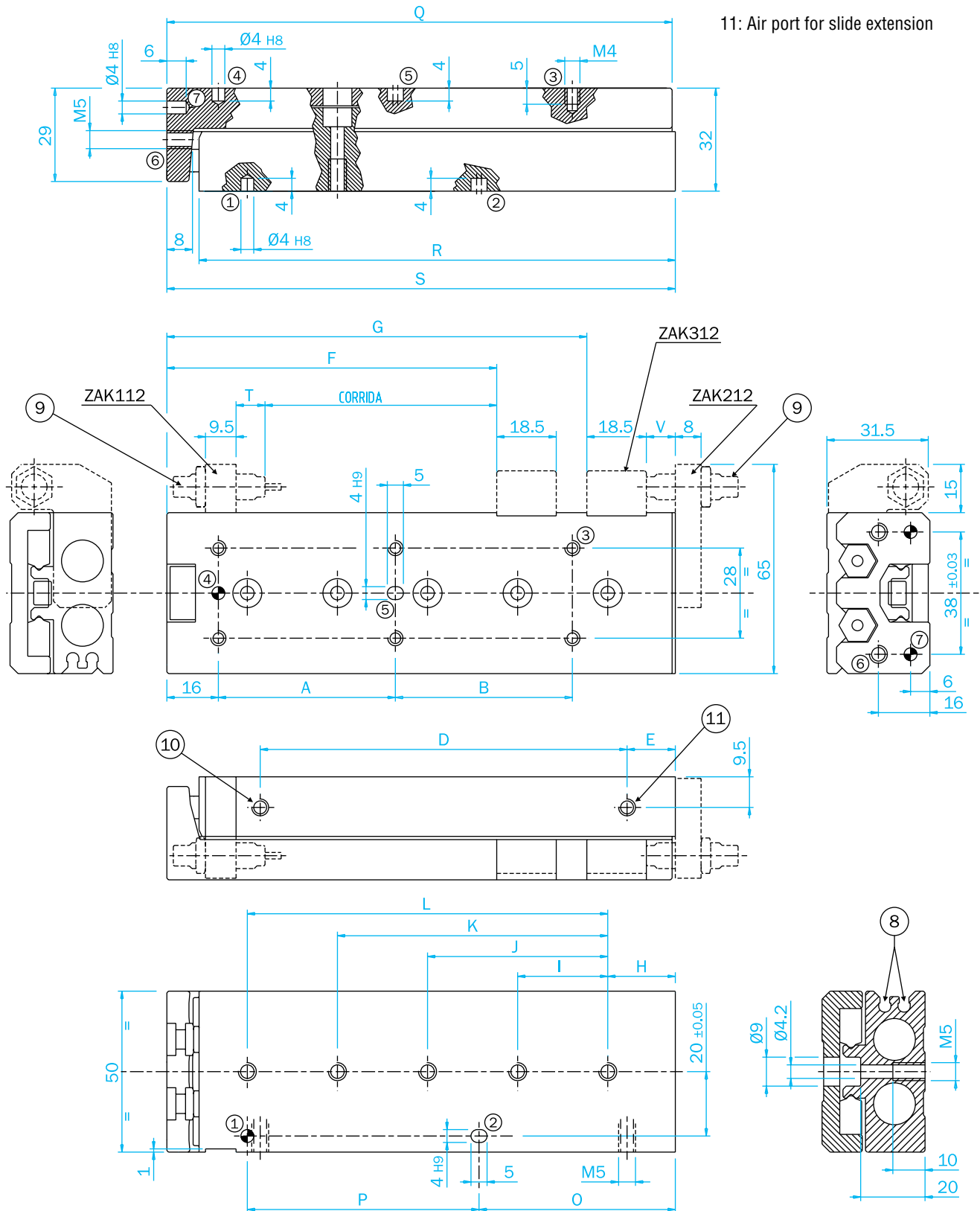
Quick #	Part #	Accessory	Price
6632	ZAK-108	Extension Adjustment Bracket	\$19.33
6633	ZAK-208	Retraction Adjustment Bracket	\$19.48
6634	ZAK-308	Stopper	\$19.48

Quick #	Stopper Quantity needed per cylinder stroke (mm)								
	10	20	30	40	50	75	100	125	150
6634	1	1	1	1	2	2			

Low-Profile Pneumatic Slides – ZA

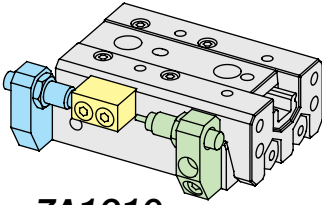
SIZE 12
ZA1210 – ZA12100

- 8: SS & SN Sensor Slot
- 9: Stroke Adjustment
- 10: Air port for slide retraction
- 11: Air port for slide extension

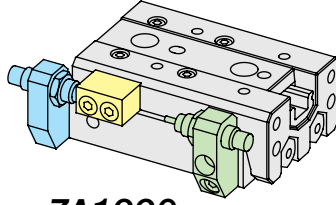


Low-Profile Pneumatic Slides – ZA

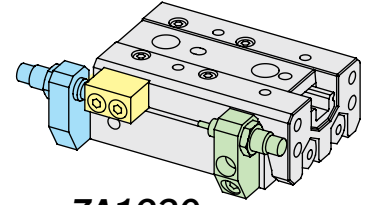
SIZE 12
ZA1210 – ZA12100



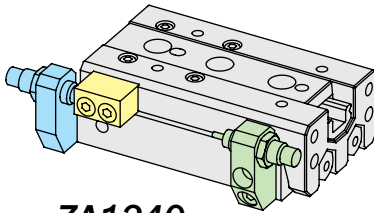
ZA1210



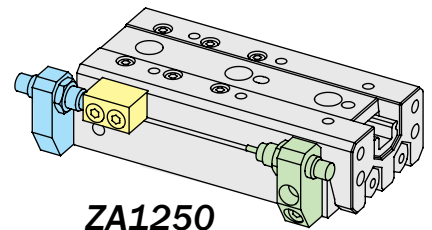
ZA1220



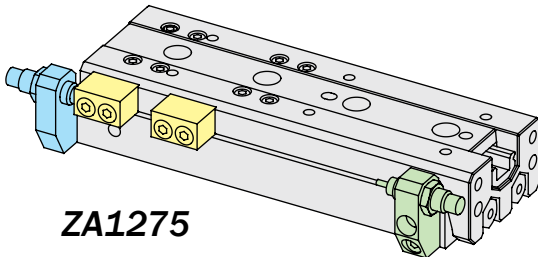
ZA1230



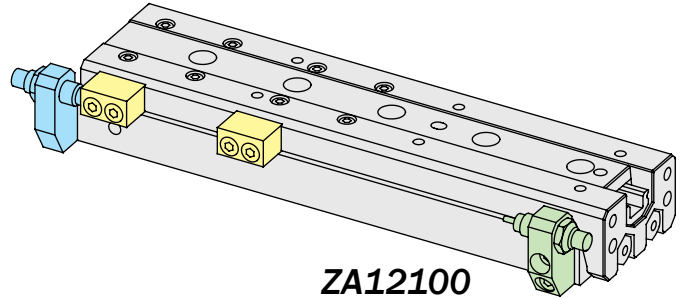
ZA1240



ZA1250






ZA1275



ZA12100

	ZA1210	ZA1220	ZA1230	ZA1240	ZA1250	ZA1275	ZA12100
A	35	35	35	50	35	55	65
B	-	-	-	-	35	55	65
D	41.5	41.5	41.5	53	73	114	168
E	9.5	9.5	9.5	10	10	15	15
F	46.5	51.5	56.5	67.5	82.5	102.5	130
G	-	-	-	-	-	133.5	185
H	15	15	15	17	15	25	35
I	40	40	40	25	36	36	38
J	-	-	-	50	72	72	76
K	-	-	-	-	-	108	114
L	-	-	-	-	-	-	152
O	15	15	15	42	51	61	111
P	40	40	40	25	36	72	76
Q	79	79	79	91	111	157	211
R	70	70	70	82	102	148	202
S	80	80	80	92	112	158	212
T	15	10	5	6	11	6	8.5
V	15	9.5	5	6	11	6	8.5

-  Retraction Adjustment Bracket
-  Stopper
-  Extension Adjustment Bracket

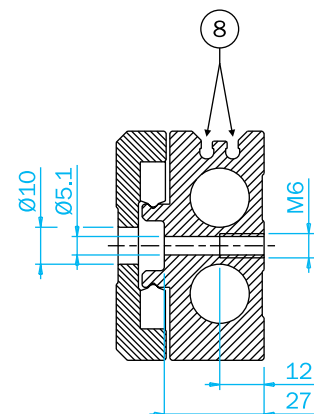
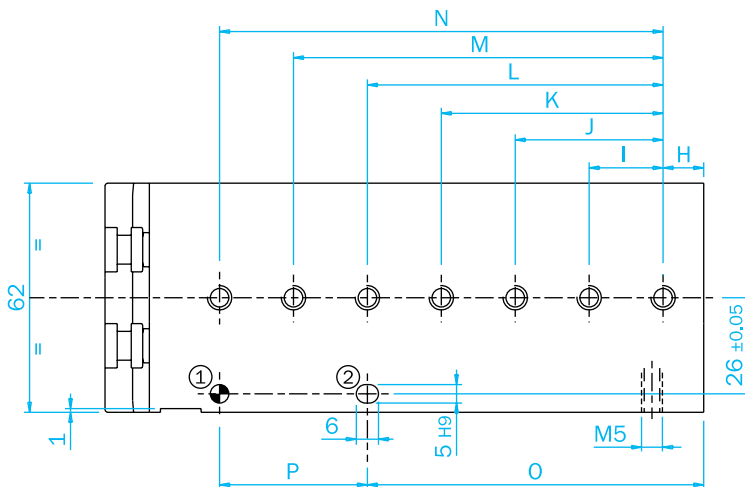
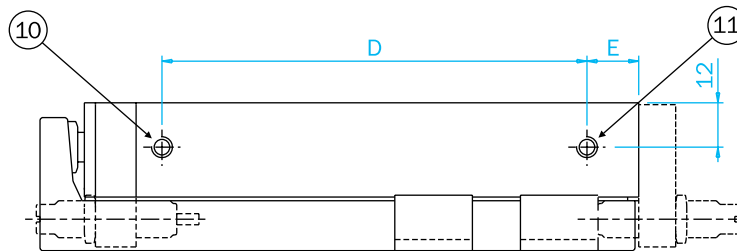
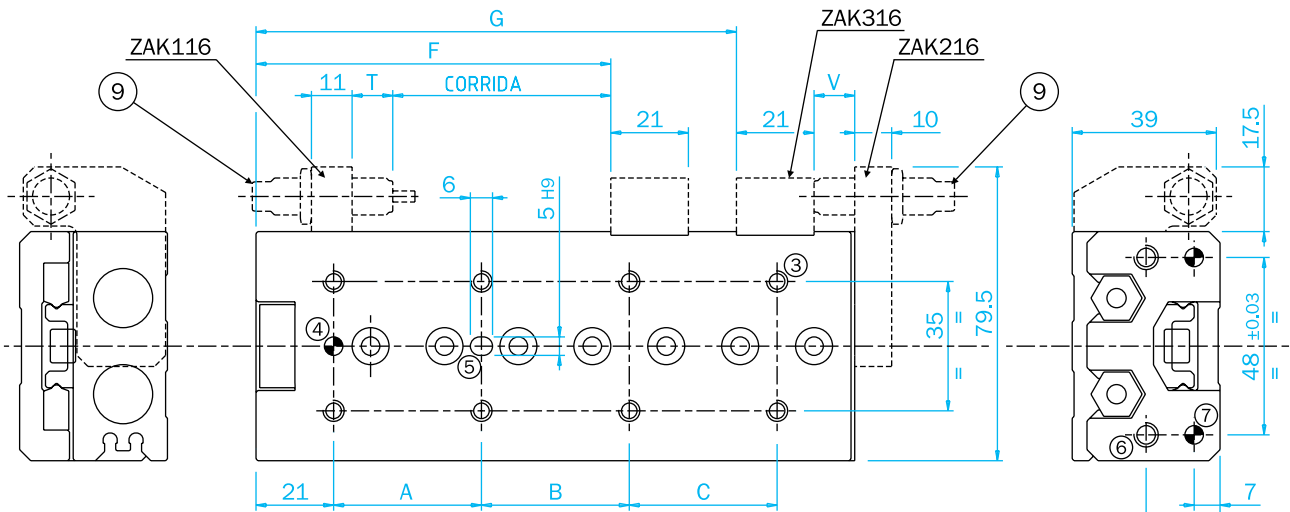
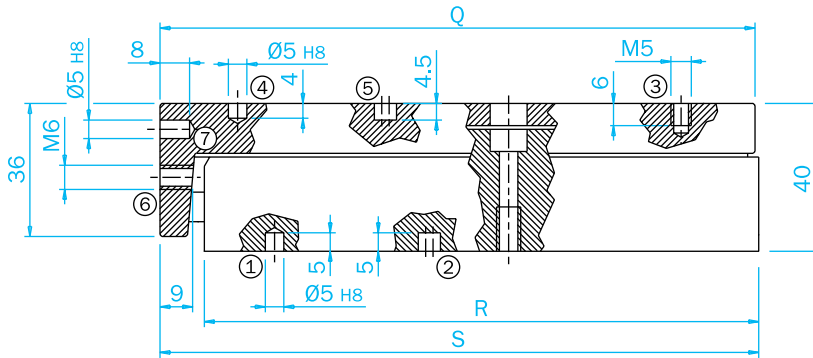
Quick #	Part #	Accessory	Price
7162	ZAK-112	Extension Adjustment Bracket	\$23.46
7515	ZAK-212	Retraction Adjustment Bracket	\$20.10
7163	ZAK-312	Stopper	\$20.10

Quick #	Stopper Quantity needed per cylinder stroke (mm)								
	10	20	30	40	50	75	100	125	150
7163	1	1	1	1	1	2	2		

Low-Profile Pneumatic Slides – ZA

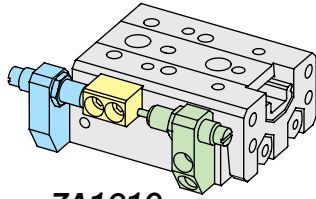
SIZE 16
ZA1610 – ZA16125

- 8: SS & SN Sensor Slot
- 9: Stroke Adjustment
- 10: Air port for slide retraction
- 11: Air port for slide extension

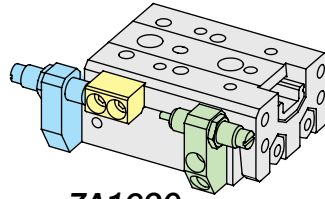


Low-Profile Pneumatic Slides – ZA

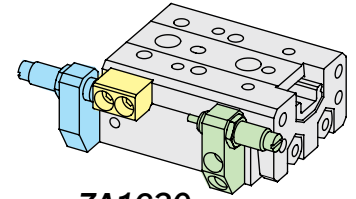
SIZE 16
ZA1610 – ZA16125



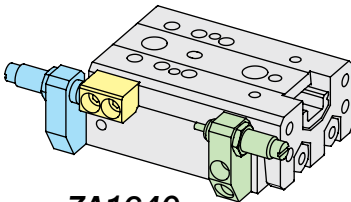
ZA1610



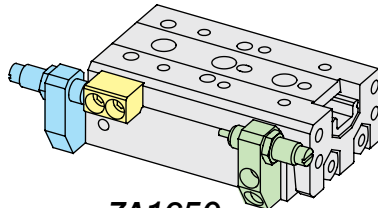
ZA1620



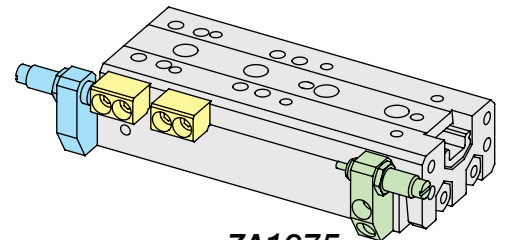
ZA1630



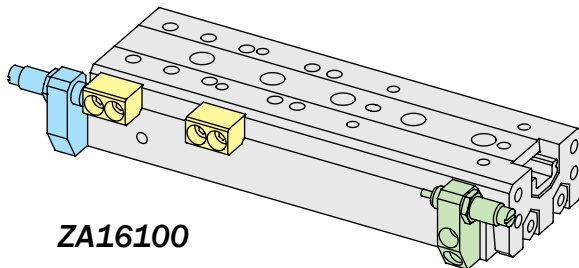
ZA1640



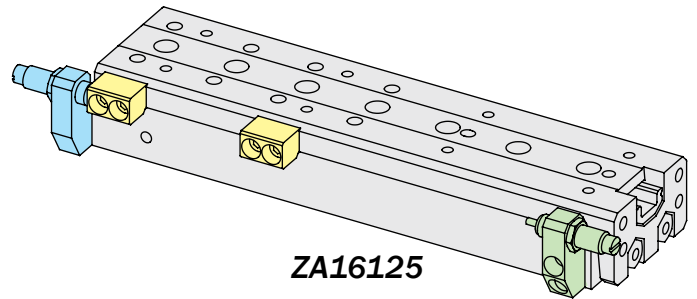
ZA1650



ZA1675



ZA16100



ZA16125

	ZA1610	ZA1620	ZA1630	ZA1640	ZA1650	ZA1675	ZA16100	ZA16125
A	35	35	35	40	30	55	65	70
B	-	-	-	-	30	55	65	70
C	-	-	-	-	-	-	-	70
D	46.5	46.5	46.5	56.5	70	115	150	200
E	7.5	7.5	7.5	7.5	9	14	27	27
F	51	56	61	71	83.5	106	132	157
G	-	-	-	-	-	136	183	233
H	16	16	16	16	21	26	39	19
I	40	40	40	50	30	35	35	35
J	-	-	-	-	60	70	70	70
K	-	-	-	-	-	105	105	105
L	-	-	-	-	-	-	140	140
M	-	-	-	-	-	-	-	175
N	-	-	-	-	-	-	-	210
O	16	16	16	16	51	61	109	159
P	40	40	40	50	30	70	70	70
Q	86	86	86	96	111	161	209	259
R	75	75	75	85	100	150	198	248
S	87	87	87	97	112	162	210	260
T	15	10	5	5	7.5	5	6	6
V	15	10	5	5	7.5	5	6	6

- Retraction Adjustment Bracket
- Stopper
- Extension Adjustment Bracket

Quick #	Part #	Accessory	Price
6980	ZAK-116	Extension Adjustment Bracket	\$27.50
6981	ZAK-216	Retraction Adjustment Bracket	\$20.60
6982	ZAK-316	Stopper	\$20.60

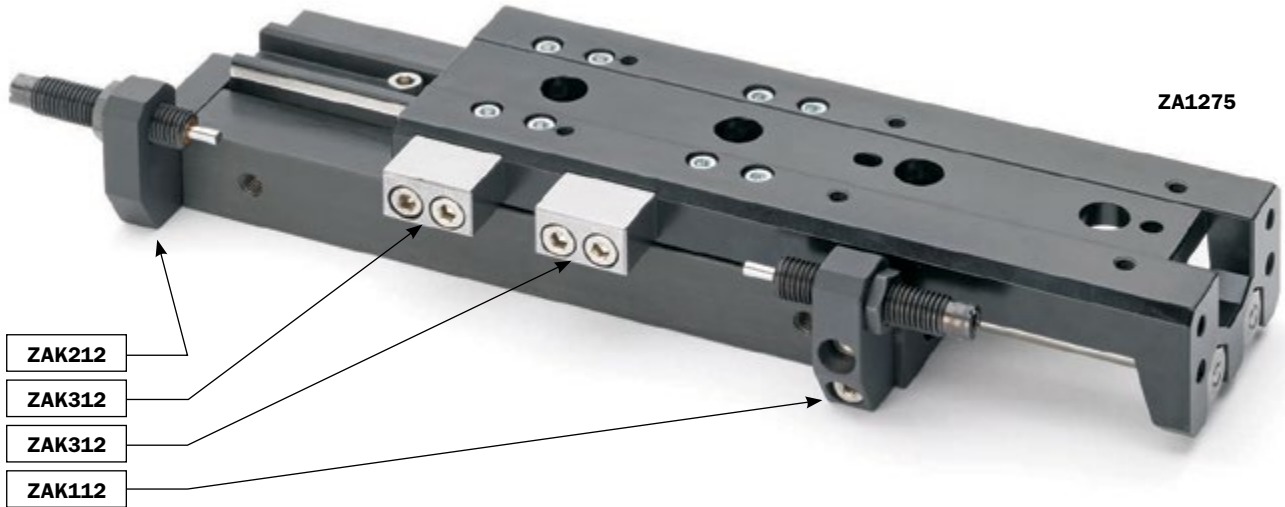
Quick #	Stopper Quantity needed per cylinder stroke (mm)								
	10	20	30	40	50	75	100	125	150
6982	1	1	1	1	1	2	2	2	

Low-Profile Pneumatic Slides – ZA

Accessories

The stroke can be adjusted by shock-absorbers, rubber bumpers (FGD), or grub screws (FPD), according with the kinetic energy the slide has to bear.

The bracket and stoppers (ZAK) are necessary to mount the adjusters.



Ordering code **ZAK 1 1 2**

Quick #	Part #	Price
7512	ZAK-106	\$18.98
6632	ZAK-108	\$19.33
7162	ZAK-112	\$23.46
6980	ZAK-116	\$27.50
6702	ZAK-120	\$28.65
7513	ZAK-206	\$18.98
6633	ZAK-208	\$19.48
7515	ZAK-212	\$20.10
6981	ZAK-216	\$20.60
6703	ZAK-220	\$22.34
7514	ZAK-306	\$18.98
6634	ZAK-308	\$19.48
7163	ZAK-312	\$20.10
6982	ZAK-316	\$20.60
6704	ZAK-320	\$21.22

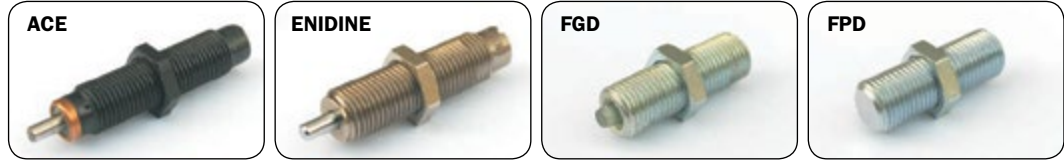
- Bore
- 1** Bracket for extension adjustment
- 2** Bracket for retraction adjustment
- 3** Stopper (*)
On the long stroke slides, two stoppers are necessary; check on the dimensions page.

The ZAK accessories are provided with the necessary screws. These ones must be glued by an anaerobic adhesive (medium resistance), to avoid unscrewing due to vibrations.

Low-Profile Pneumatic Slides – ZA

The table shows the codes of the suitable shock-absorbers.
The optional FGD and FPD are Gimatic products.

Hydraulic shock-absorbers



		Part#	Quick#	Part#	Quick#	Part#	Quick#	Part#	Quick#
ZA06	M6x0.5	MC9M1	387	TKSM2	6610	FGD0620 (L=20mm)	7516	FPD-0620 (L=20mm)	6631
ZA08	M6x0.5	MC9M1	387	TKSM2	6610	FGD0620 (L=20mm)	7516	FPD-0620 (L=20mm)	6631
ZA12	M8x1	MC10ML	6077	ECO-8-MC-3	5649	FGD0830 (L=30mm)	6620	FPD-0830 (L=30mm)	7282
ZA16	M10x1	MC25M-NB	6567	TK10M-4	6609	FGD1030 (L=30mm)	6622	FPD-1030 (L=30mm)	7517

Sensors

The operating position can be checked by magnetic sensors (optional), that detect the inner magnet. Therefore, a nearby large mass of ferromagnetic material or intense magnetic fields may cause sensing troubles.



Sensor Type	Quick#	Part#	Signal	Connection	Price
90° Lead Exit SN Style Sensor	6278	SN4N225G	PNP	2.5m Lead	\$26.14
	6357	SN4M225G	NPN	2.5m Lead	\$26.14
	6277	SN3N203G	PNP	.3m lead & M8 Connector	\$29.96
	6356	SN3M203G	NPN	.3m lead & M8 Connector	\$29.96
3-wire SS Style Sensor	1882	SS4N225G	PNP	2.5m Lead	\$26.14
	1883	SS4M225G	NPN	2.5m Lead	\$26.14
	6282	SS3N203G	PNP	.3m lead & M8 Connector	\$29.96
	1884	SS3M203G	NPN	.3m lead & M8 Connector	\$29.96



Low-Profile Pneumatic Slides – ZA

Safety loads

Check the tables below.

Excessive loads can damage the slide, cause functioning troubles, and endanger the safety of the operator.

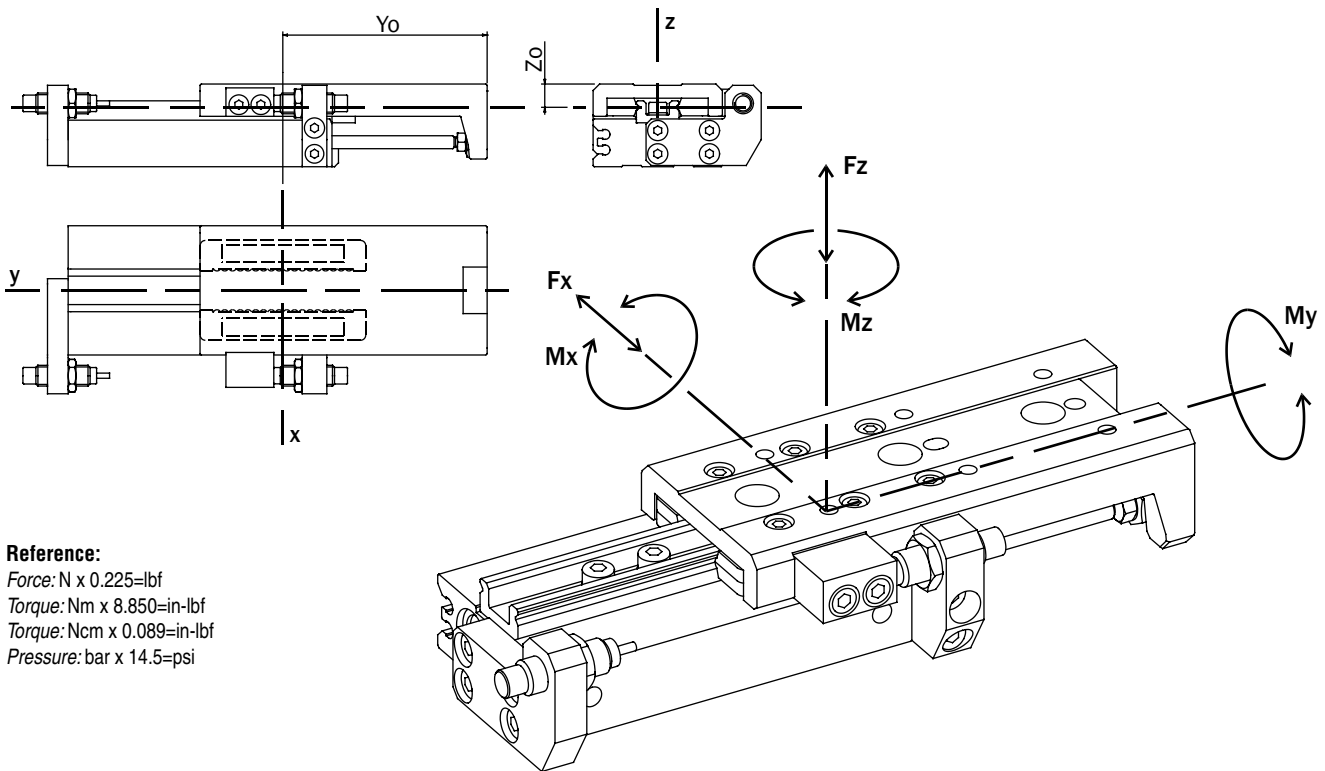
The dimensions Y_0 and Z_0 identify the linear bearing center position.

$F_x s$, $F_y s$, $M_x s$, $M_y s$, $M_z s$ are maximum permitted static loads.

$F_x d$, $F_y d$, $M_x d$, $M_y d$, $M_z d$ are maximum permitted dynamic loads.

The static loads can be applied when the carrier is motionless, the dynamic loads when the carrier is running.

In the tables you can also find the maximum payload (m_{max}).



Reference:

Force: N x 0.225=lbf

Torque: Nm x 8.850=in-lbf

Torque: Ncm x 0.089=in-lbf

Pressure: bar x 14.5=psi

	ZA0610	ZA0620	ZA0630	ZA0640	ZA0650
Z₀	5.5mm	5.5mm	5.5mm	5.5mm	5.5mm
Y₀	28mm	38mm	48mm	65mm	77mm
F_{x s}	15 N	15 N	15 N	18 N	18 N
F_{z s}	15 N	15 N	15 N	18 N	18 N
M_{x s}	1 Nm	1 Nm	1 Nm	2 Nm	2 Nm
M_{y s}	1 Nm	1 Nm	1 Nm	1.5 Nm	1.5 Nm
M_{z s}	1 Nm	1 Nm	1 Nm	2 Nm	2 Nm
F_{x d}	6 N	6 N	6 N	7 N	7 N
F_{z d}	6 N	6 N	6 N	7 N	7 N
M_{x d}	0.2 Nm	0.2 Nm	0.2 Nm	0.4 Nm	0.4 Nm
M_{y d}	0.2 Nm	0.2 Nm	0.2 Nm	0.3 Nm	0.3 Nm
M_{z d}	0.2 Nm	0.2 Nm	0.2 Nm	0.4 Nm	0.4 Nm
m max.	0.6 kg	0.6 kg	0.6 kg	0.7 kg	0.7 kg

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	ZA0810	ZA0820	ZA0830	ZA0840	ZA0850	ZA0875
Zo	7.5mm	7.5mm	7.5mm	7.5mm	7.5mm	7.5mm
Yo	36mm	41mm	52mm	66mm	77mm	115mm
Fx s	30 N	30 N	30 N	30 N	30 N	60 N
Fz s	30 N	30 N	30 N	30 N	30 N	60 N
Mx s	1.5 Nm	1.5 Nm	1.5 Nm	2 Nm	4 Nm	6 Nm
My s	2 Nm	2 Nm	2 Nm	3 Nm	2 Nm	4 Nm
Mz s	1.5 Nm	1.5 Nm	1.5 Nm	2 Nm	4 Nm	6 Nm
Fx d	10 N	10 N	10 N	10 N	10 N	20 N
Fz d	10 N	10 N	10 N	10 N	10 N	20 N
Mx d	0.3 Nm	0.3 Nm	0.3 Nm	0.4 Nm	0.8 Nm	1.2 Nm
My d	0.4 Nm	0.4 Nm	0.4 Nm	0.6 Nm	0.4 Nm	0.8 Nm
Mz d	0.3 Nm	0.3 Nm	0.3 Nm	0.4 Nm	0.8 Nm	1.2 Nm
m max.	1 kg	1 kg	1 kg	1 kg	1 kg	1 kg

	ZA1210	ZA1220	ZA1230	ZA1240	ZA1250	ZA1275	ZA12100
Zo	9mm	9mm	9mm	9mm	9mm	9mm	9mm
Yo	53mm	53mm	53mm	65mm	83mm	115mm	154mm
Fx s	60 N	60 N	60 N	60 N	90 N	90 N	120 N
Fz s	60 N	60 N	60 N	60 N	90 N	90 N	120 N
Mx s	4 Nm	4 Nm	4 Nm	4 Nm	7 Nm	10 Nm	15 N
My s	6 Nm	6 Nm	6 Nm	6 Nm	8 Nm	8 Nm	10 Nm
Mz s	4 Nm	4 Nm	4 Nm	4 Nm	7 Nm	10 Nm	15 N
Fx d	20 N	20 N	20 N	20 N	30 N	30 N	40 N
Fz d	20 N	20 N	20 N	20 N	30 N	30 N	40 N
Mx d	0.8 Nm	0.8 Nm	0.8 Nm	0.8 Nm	1.4 Nm	2 Nm	3 Nm
My d	1.2 Nm	1.2 Nm	1.2 Nm	1.2 Nm	1.6 Nm	1.6 Nm	2 Nm
Mz d	0.8 Nm	0.8 Nm	0.8 Nm	0.8 Nm	1.4 Nm	2 Nm	3 Nm
m max.	2 kg	2 kg	2 kg	2 kg	3 kg	3 kg	4 kg

	ZA1610	ZA1620	ZA1630	ZA1640	ZA1650	ZA1675	ZA16100	ZA16125
Zo	10mm	10mm	10mm	10mm	10mm	10mm	10mm	10mm
Yo	60mm	60mm	60mm	68mm	79mm	118mm	155mm	192mm
Fx s	100 N	100 N	100 N	100 N	120 N	120 N	180 N	250 N
Fz s	100 N	100 N	100 N	100 N	120 N	120 N	180 N	250 N
Mx s	6 Nm	6 Nm	6 Nm	6 Nm	7 Nm	15 Nm	25 Nm	46 Nm
My s	8 Nm	8 Nm	8 Nm	8 Nm	11 Nm	10 Nm	16 Nm	22 Nm
Mz s	6 Nm	6 Nm	6 Nm	6 Nm	7 Nm	15 Nm	25 Nm	46 Nm
Fx d	30 N	30 N	30 N	30 N	40 N	40 N	50 N	60 N
Fz d	30 N	30 N	30 N	30 N	40 N	40 N	50 N	60 N
Mx d	1.2 Nm	1.2 Nm	1.2 Nm	1.2 Nm	1.4 Nm	3 Nm	5 Nm	9.2 Nm
My d	1.6 Nm	1.6 Nm	1.6 Nm	1.6 Nm	2.2 Nm	2 Nm	3.2 Nm	4.4 Nm
Mz d	1.2 Nm	1.2 Nm	1.2 Nm	1.2 Nm	1.4 Nm	3 Nm	5 Nm	9.2 Nm
m max.	3 kg	3 kg	3 kg	3 kg	4 kg	4 kg	5 kg	6 kg

Low-Profile Pneumatic Slides – ZA

Kinetic Energy

The energy the slide has to dissipate at each end stroke is:

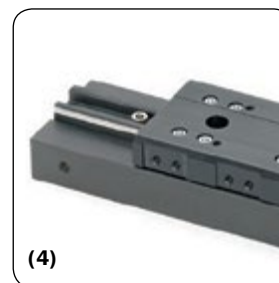
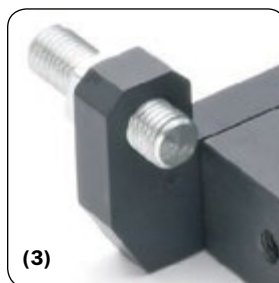
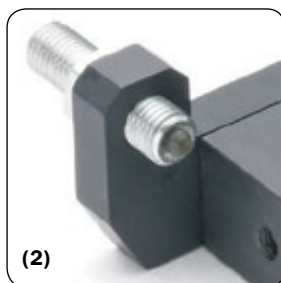
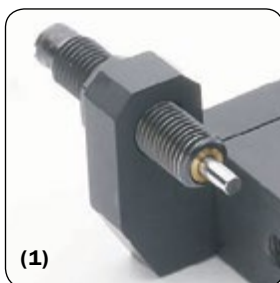
The maximum permitted values of E are in the table below.

$$E = \frac{m_{WP} \times s^2}{t^2}$$

where:

m_{WP} is the work piece mass [kg];
 s is the travel stroke [m];
 t is the travel time [s].

		ZA06	ZA08	ZA12	ZA16
With shock-absorber	1	5.5mm	5.5mm	5.5mm	5.5mm
With rubber bumper	2	28mm	38mm	48mm	65mm
With grub screw	3	15 N	15 N	15 N	18 N
With stroke adjusters	4	15 N	15 N	15 N	18 N



Repeatability

The accessories used for the end-stroke adjustment affect the slide repeatability.

Use the shock-absorber option or the grub screw option, when a precise end-stroke positioning (+/- 0.02mm) is needed.

Low-Profile Pneumatic Slides – ZA

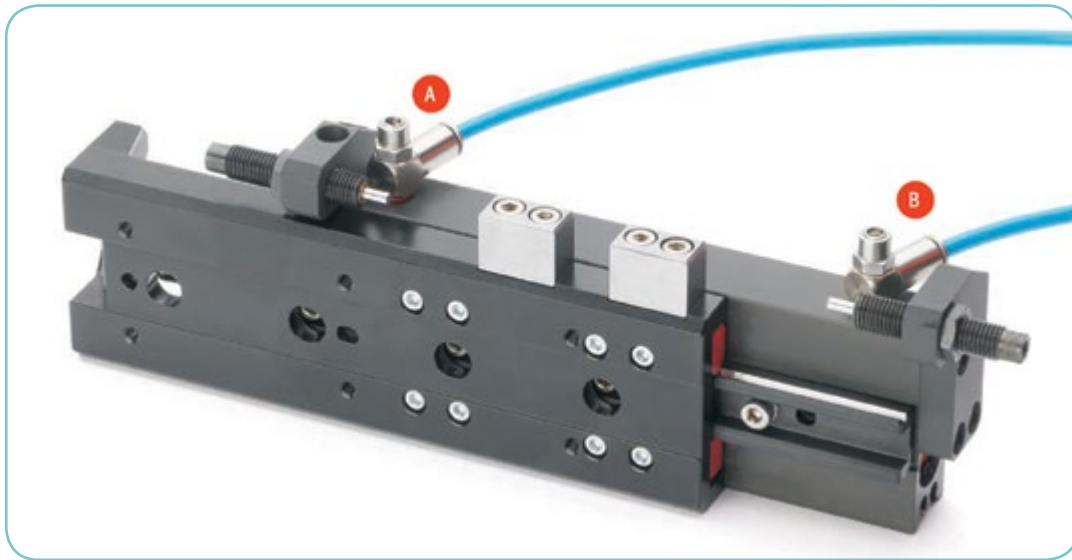
Compressed air feeding

The compressed air feeding can be accomplished on the lateral or rear air ports (A and B) with M5 fittings (not supplied).

Compressed air in A: retraction stroke.
Compressed air in B: extension stroke.

The compressed air must be filtered from 5 to 40 µm.
Maintain the medium selected at the start, lubricated or not, for the complete service life of the slide.

The pneumatic circuit must be pressurized progressively to avoid uncontrolled movements.



Pneumatic circuit

Possible problems on a compressed air circuit:

- 1- Pressure variation
- 2- Pressurizing
- 3- Sudden pressure black-out
- 4- Excessive speed

Possible solutions:

- 1- Compressed air storage (E)
- 2- Start-up valve (G)
- 3- Safety valve (C)
- 4- Flow controller (D)

