"SE" Series Linear Slides

Ideal for applications

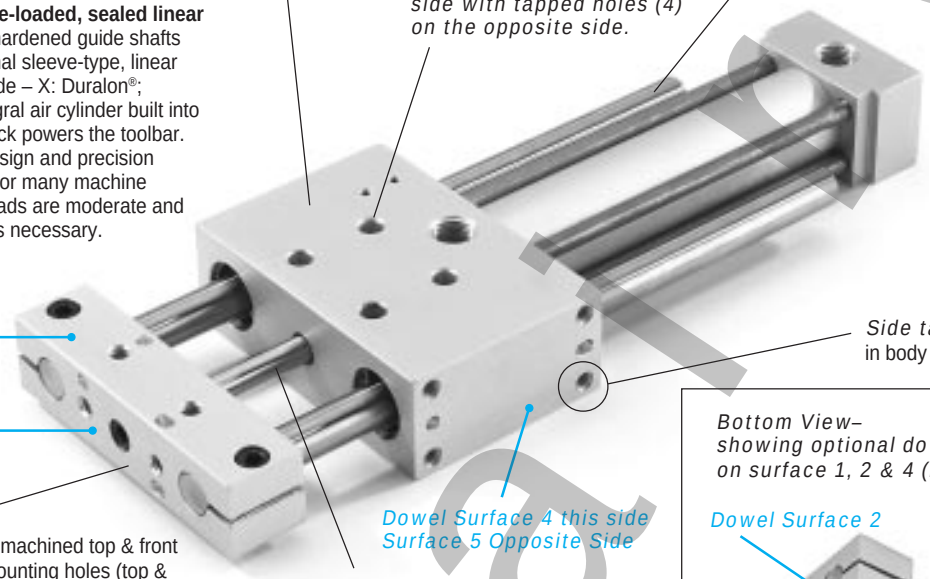
Compact design – The SE Series Linear Slide was designed to fit precision motion applications where only limited space is available. The SE consists of a rugged, clear anodized, aluminum bearing block with **four, pre-loaded, sealed linear ball bearings** supporting hardened guide shafts and a front toolbar. (Optional sleeve-type, linear bearings are available. Code – X: Duralon®; Code –W: Rulon®) An integral air cylinder built into the rear of the bearing block powers the toolbar. The SE slide's compact design and precision construction make it ideal for many machine applications where slide loads are moderate and a minimum overall length is necessary.

Bearing Block
Clear anodized aluminum with precision machined mounting surfaces.

Thru-hole mounting (4) this side with tapped holes (4) on the opposite side.

Precision guide shafts
Straightness .0015" per foot. Standard case hardened (Rc 61 - 65) and ground (9 - 14 microinches RMS). **Optional stainless steel Code – Z.**

Optional Dowel Hole/Slot Code –D□□□□
Optional slip fit dowel holes and slip fit dowel slots allow for repeatably precise slide mounting and/or attachment of end tooling. Option may be specified at any or all of the five surface locations shown in blue.



Dowel Surface 3

Dowel Surface 2

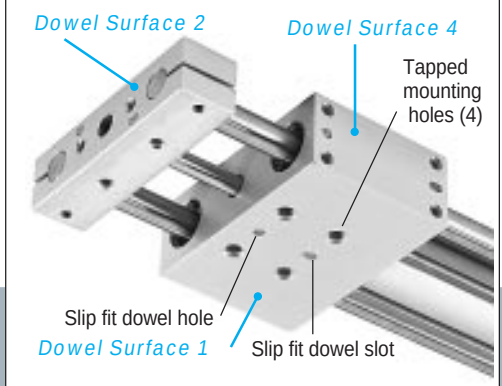
Side tapped mounting holes in body (four on each side).

Dowel Surface 4 this side Surface 5 Opposite Side

Front Toolbar
Clear anodized aluminum, machined top & front for squareness. Tapped mounting holes (top & front) are standard. Optional slip fit dowel holes and slip fit dowel slots assure repeatably precise tooling attachments.
Code – T1: Optional blank toolbar (no mtg holes)
Codes –T3 or T4: Optional toolbars for joining dissimilar slides together. SE and EZ Series can be combined for 2-axis motion.

Stainless steel piston rod – End of piston rod is piloted into the back of the toolbar by a precision machined counter-bore. A socket head cap screw completes attachment to the toolbar. This design eliminates piston rod side loads, increasing cylinder seal life and improving performance.

Bottom View– showing optional dowel holes and slots on surface 1, 2 & 4 (Dowel Code –D124)



Engineering Data

Model	SE250	SE375	SE500	SE625	SE750	SE1000	SE1500
Guide Shaft Diameter	1/4"	3/8"	1/2"	5/8"	3/4"	1"	1-1/2"
Bore	1/2"	3/4"	1-1/8"	1-1/8"	2"	2-1/2"	3-1/4"
Power Factor Extend	.20	.44	.99	.99	3.14	4.91	8.30
Power Factor Retract	.17	.39	.88	.88	2.84	4.47	7.51
Weight, lbs. @ zero stroke	.41	.99	2.79	4.16	10.50	19.79	56.72
Weight per inch of stroke	.06	.13	.21	.27	.52	.81	1.60
Standard Strokes	1/2" to 4" by 1/2" increments	1" to 6" by 1" increments	1" to 10" by 1" increments	1" to 10" by 1" increments	1" to 6" by 1" increments; 8" to 18" by 2" increments	1" to 6" by 1" increments 8" to 20" by 2" increments	2" to 30" by 2" increments

Pressure Rating: Maximum operating pressure is 150 psi

Output Force: Output Force in Pounds = Pressure X Power Factor

Speed: Safe speed range is 6 to 8 inches per second. Speeds from 8 to 20 inches per second are obtainable with the hydraulic shock absorber or urethane bumper option. For higher speeds, and/or heavy reciprocating load applications, consult factory.

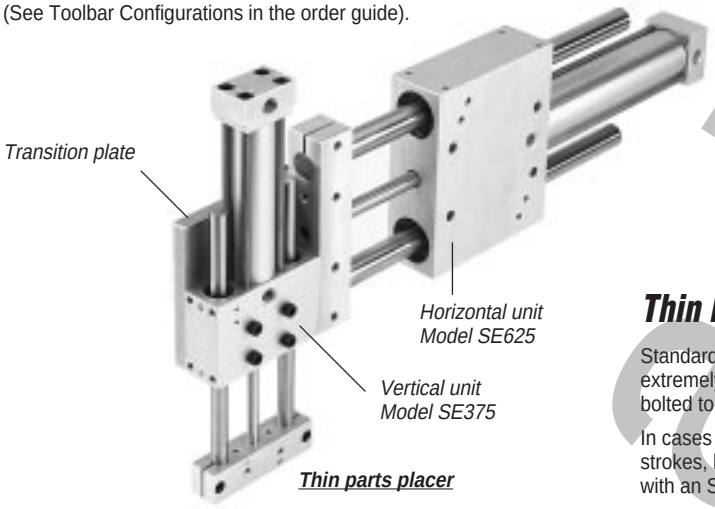
Accuracy: SE Series Slides feature pre-loaded linear ball bearings for play-free operation. Each bearing has .0001"/.0003" pre-load built in with special ground guide shafts. The built-in air cylinder will stroke +.015"/–.000" of nominal stroke. Repeatability of stroke is ±.001". Straightness tolerance is .0015" per foot of shaft.

with moderate side loads & minimum overall length requirements

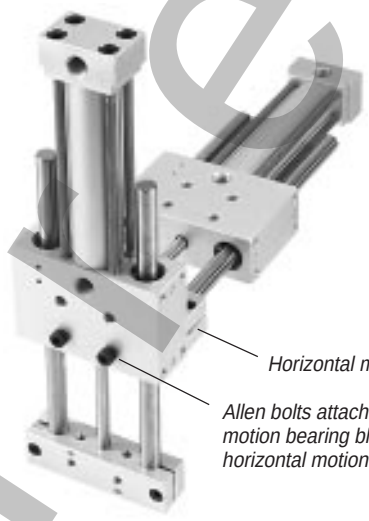
The Flexibility of Creating Custom 2-Axis Motion –

All like model SE Series slides (except the SE500) can be joined together to create a 2-axis motion device using standard toolbars. The bearing block of the vertical slide is easily bolted to the toolbar of the horizontal slide because the bolt hole patterns in the bearing blocks and the toolbars are identical. A no-cost, optional toolbar (T3) is available for joining two SE500s.

Because all SE Series slides (except the SE250) share identical toolbars with their "EZ" Series cousins, an "SE" slide is also easily combined with an "EZ" unit. Optional, no-cost toolbars (T3 & T4) are available for mixing and matching dissimilar "SE" and EZ" models. (See Toolbar Configurations in the order guide).



Thin parts placer



Two Model SE375 slides shown joined together

Thin Parts Placer –

Standard transition plates are available for joining two SE Series slides to create extremely compact 2-axis motion devices. The bearing block of the vertical unit is bolted to the transition plate which is mounted to the toolbar of the horizontal unit.

In cases where wider bearing separation is required on the horizontal unit (for longer strokes, heavier overhung loading, etc.), an EZ Series slide may also be combined with an SE Model.

Load Sizing Guide

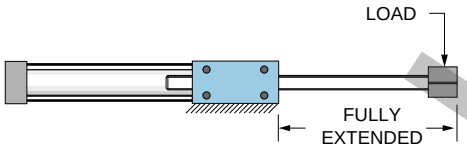


Chart indicates safe loading with standard linear ball bearings

Safe loading involves a combination of factors including: bearing capacity, shaft strength and allowable deflection, life expectancy, how the load is applied, and how fast the load is accelerated/decelerated. – DO NOT OVERLOAD – Overloading can cause reduced product life, shaft bending and loss of positional accuracy, as well as bearing and seal failure. CAUTION: Heavy reciprocating loads can create damaging impact forces at end of stroke. It may be necessary to use stop collars, bumpers, or hydraulic shock absorbers – or reduce speeds.

SAFE LOADS (lbs.)

Model Number	Stroke 1"	2"	3"	4"	5"	6"	7"	8"	9"	10"	12"	14"	16"	18"	20"	Maximum Deflection
SE250	4.0	2.4	1.8	1.3												.005"
	17	10	4.0	2.5												.015"
SE375	28	28	12	6.0	4.0	2.8										.005"
	28	28	28	18	12	6.8										.015"
SE500	84	44	24	12	8.0	6.0	4.0	3.0	1.8	1.4						.005"
	120	120	60	36	24	16	12	8.2	6.0	4.8						.015"
	120	120	110	70	50	32	22	16	12	9.6						.030"
SE625	150	84	44	28	16	12	9.0	7.8	5.6	4.0						.005"
	150	150	124	76	56	34	26	20	16	11						.015"
	150	150	150	140	88	60	56	38	29	22						.030"
SE750		100		56		20		12		8.0	5.0	4.0	2.2	1.8		.005"
		280		114		56		36		26	12	9.0	6.4	5.8		.015"
		300		200		96		40		40	30	19	17.2	12		.030"
SE1000		200		80		44		36		24	12	8.0	6.0	5.0	4.0	.005"
		470		220		120		80		50	36	24	17	13	12	.015"
		470		470		270		130		96	60	46	38	32	30	.030"
SE1500	**Stroke**			**4"**		**6"**		**8"**		**10"**	**12"**		**18"**	**24"**	**30"**	
				600		510		300		200	125		76	50	10	.005"
				800		600		385		340	300		124	70	30	.015"
				800		800		650		600	550		202	104	40	.030"

"SE" Series Linear Slides – Order Guide

Step 1 Select a slide model size, stroke length, mounting style, plus any optional toolbar, attachment (B1), or integral options (such as Viton seals). Helpful hint: ***The model size = guide shaft diameter in 3 decimal places.***

Step 1: Basic Slide Model

SE500 – 5.0 (– Optional Tandem Cylinder Stroke) – MS1T1 – VZ

Series | Model Size | Stroke | Mounting Style & Optional Toolbars | Integral Options

Model Number Will End Here If No Options Are Desired

Leave Blank If No Integral Options Are Desired

Model Size	Guide Shaft Diameter	Bore	Standard Stroke Length
250	1/4"	1/2"	1/2" to 4" by 1/2" increments
375	3/8"	3/4"	1" to 6" by 1" increments
500	1/2"	1-1/8"	1" to 10" by 1" increments
625	5/8"	1-1/8"	1" to 10" by 1" increments
750	3/4"	2"	1" to 6" by 1" increments 8" to 18" by 2" increments
1000	1"	2-1/2"	1" to 6" by 1" increments 8" to 20" by 2" increments
1500	1-1/2"	3-1/4"	2" to 30" by 2" increments

3-Position Tandem Cylinder Slides

(Not available on SE250 or SE375)

Note: See pages 34 & 35 for principle of operation

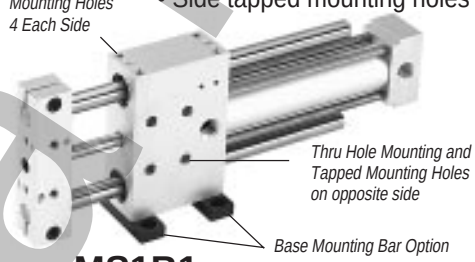
Ordering example: ***SE750 – 5.0 – 2.0 – MS1 – J72 M***

Primary Cylinder Stroke / Secondary Cylinder Stroke

Sensor locations – use "**M**" in the Box ( ) if mid-position sensor is required (3 sensors). Note: "**M**" (mid-position) is **not** available with "**S50, S51, S60**" sensors. All sensors are located on the primary cylinder, which also contains the magnetic piston band for "**E**" & "**J**" options. Shock options "**D, E** & **F**" are **not** available on tandem units.

– MS1 Standard Mounting

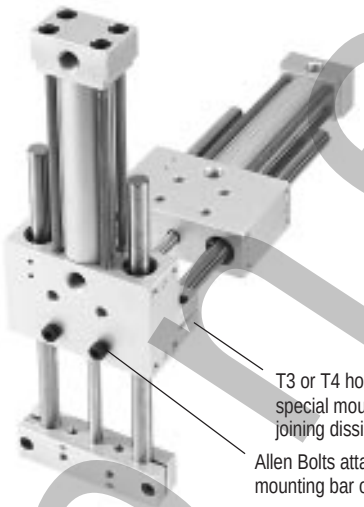
Includes:
- Tapped mounting holes
- Thru mounting holes
- Side tapped mounting holes



– MS1B1

Optional Base Mounting Bars

Toolbar Configurations



Optional toolbars T1, T3, & T4 may be substituted for standard toolbars at no additional cost.

All like models of SE Slides (except SE500) can be joined together for 2-axis motion using the standard toolbars. Use Option T3 to join two SE500 models.

All "SE" Slides (except SE250) share identical toolbars with their "EZ" Series cousins. Thus an "SE" slide is easily combined with an "EZ" slide for 2-axis motion.

Toolbar Option Codes

– ***T1 =*** Blank Toolbar (no mounting holes).

For joining dissimilar models, specify the horizontal toolbar.

	Horizontal Slide	Vertical Slide
– ***T3***	for SE500	SE500 or EZ500
– ***T4***	for SE1000	SE500, EZ500, SE750, or EZ750

To order: Add "Option Code" to Mounting Style.

Example: SE1000 – 10.0 – MS1T4

Integral Option Codes

D □□ –
Dowel Hole/Slot Code & Location(s)
Available on any or all of the 5 mounting surfaces shown in blue on page 30.
Example: D13 specifies dowel hole/slot on bottom surface of bearing block (Surface #1) and on top surface of toolbar (Surface #3).

H– Hydraulic Cylinder Seals (150 psi max.)

V– Viton Cylinder Seals

Bearing Options

Sleeve bearings can be substituted for standard linear ball bearings.

W– Rulon® Shaft Bearings

X– Duralon® Shaft Bearings

Guide Shaft Options

Y– Hollow Guide Shafts
Case hardened & ground #52100 tubular steel available on SE750 Models and larger.

Z– Stainless Steel Guide Shafts: shaft material compatible with bearing type will be provided.

Bearing Type	Shaft Material
Std. linear ball brgs.	440C hardened & ground SS
Option "W" Rulon® sleeve	Hard chrome plated SS
Option "X" Duralon® sleeve	Hard chrome plated SS

S– Grease fittings, Side

T– Grease fittings, Top

Building the Model Number in 3 Easy Steps

Step 2 Add sensors. Choices include proximity switches, snap action mechanical switches, 3-way air pilot switches, magnetically operated electronic sensors and reed switches. Complete with sensors – or brackets only.

Sensor Codes *(Use "S000" if NO Sensors are desired)*

Select a code for sensor type and indicate position

Example: SO3 **B**

- **E** = Extend position only
- **R** = Retract position only
- **B** = Both extend & retract positions
- **M** = 3 sensors (See note 1)

• Sensors beginning with the letter "S" (Prox, Snap Action, Air Pilot) are actuated by "dogs" clamped to the guideshafts. • Sensors beginning with the letter "J" or "E" (Electronic sensors and reed switches) are actuated by a magnetic band on the piston.

Note 1: Mid position "M" not available on SE250 or SE375 with prox options (S01 thru S42). "M" not available on any model with S50, S51, or S60.

Step 2: Sensing Options

– SO3B

(4 Digits)

Model number will end here if no Shock, Stop, or Bumper Options are desired. Continue on to Step 3 if you need any of these options.

Proximity Switch w/Brackets & Actuators

Prewired w/ 6' Leadwire	Quick Disconnect w/2 M cord set	Quick Disconnect without cord set	Thread Size	Electrical Characteristics
S01 ☐	S02 ☐	S12 ☐	12mm	110v AC, 2-wire, w/LED
S03 ☐	S04 ☐	S14 ☐	12mm	24v DC, 2-wire, w/LED (NPN/PNP)
S05 ☐	S06 ☐	S16 ☐	12mm	24v DC, 3-wire, w/LED (PNP) Sourcing
S07 ☐	S08 ☐	S18 ☐	12mm	24v DC, 3-wire, w/LED (NPN) Sinking

Proximity Switch Brackets & Actuators Only

S40 ☐	12mm	Customer supplies the switches
S41 ☐	8mm	Customer supplies the switches
S42 ☐	5mm	Customer supplies the switches

Snap Action Mechanical Switches

Prewired w/ 6' Leadwire	Conduit Fitting Style Housing	Electrical Characteristics
S50 ☐	S51 ☐	SPDT 10 amp. capacity (N/A on SE250/SE375)

Air Pilot Switch

S60 ☐	Miniature 3-way air valve (N/A on SE250/SE375)

Magnetic Piston & Clamp-On Sensors ("J")

Single sensor –1" stroke min; Dual sensors –2" stroke min. Not available on SE250.

9 Ft. Prewired	Quick Disconnect w/5M cord set	Sensor Type	LED	Electrical Characteristics
J70 ☐	J71 ☐	Reed	Yes	5-120 VDC/VAC, 0.5 Amp Max, 10 Watt Max, SPST N.O., 3.5 Voltage Drop
J72 ☐	J73 ☐	Electronic	Yes	Sourcing PNP 6-24 VDC, 0.50 Amp Max, 1.0 Voltage Drop
J74 ☐	J75 ☐	Electronic	Yes	Sinking NPN 6-24 VDC, 0.50 Amp Max, 1.0 Voltage Drop

Magnetic Piston & Dovetail Style Sensors ("E")

For 1" Stroke & longer on all bores; Reed sensors not available on SE250 or SE375

9 Ft. Prewired	Quick Disconnect w/5M cord set	Sensor Type	LED	Electrical Characteristics
E70 ☐	E71 ☐	Reed	Yes	5-120 VDC/VAC, 0.03 Amp Max, 4 Watt Max, 2.0 Voltage Drop
E72 ☐	E73 ☐	Electronic	Yes	Sourcing PNP 6-24 VDC, 0.20 Amp Max, 0.5 Voltage Drop
E74 ☐	E75 ☐	Electronic	Yes	Sinking NPN 6-24 VDC, 0.20 Amp Max, 0.5 Voltage Drop
E76 ☐	E77 ☐	Reed	No	0-120 VDC/VAC, 0.5 Amp Max, 10 Watt Max, 0 Voltage Drop

Magnetic Piston

J800	Customer supplies the sensors and mounting clamps
E800	Includes Dovetail Mounting Rail; customer supplies the sensors

Prox Switches w/Brackets & Actuators

Prewired style "S01, S03, S05,S07"

Switch actuator has steel sensing flag

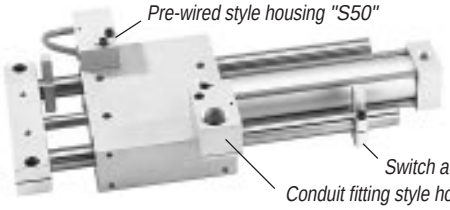
Quick disconnect style "S02, S04, S06, S08" is furnished with straight 2M cord set.

For "S12, S14, S16, S18" order straight or right angle cord set separately.

Female Cordsets w/2 Meter Leadwire for 12mm Proximity Switches		
Option Code	Straight Cordset P/N	Rt. Angle Cordset P/N
S12	PCS01-2M	PCS02-2M
S14	PCS03-2M	PCS04-2M
S16	PCS05-2M	PCS06-2M
S18	PCS05-2M	PCS06-2M

4 meter and 6 meter cord sets are also available. Please consult factory.

Snap Action Mechanical Switches

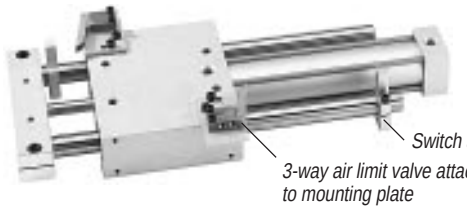


Pre-wired style housing "S50"

Switch actuator

Conduit fitting style housing "S51"

Air Pilot Switches "S60"



Switch actuator

3-way air limit valve attached to mounting plate

Clamp On Style Sensors "J70 – J75"

Sensor clamps mount on the cylinder tie rods

Dovetail Style Sensors "E70 – E77"

Adhesive backed, double dovetail rail (tinted blue for illustration) bonds firmly to cylinder body; dovetail sensors slide and lock into mating slots in the rail.

"SE" Series Linear Slides – Order Guide

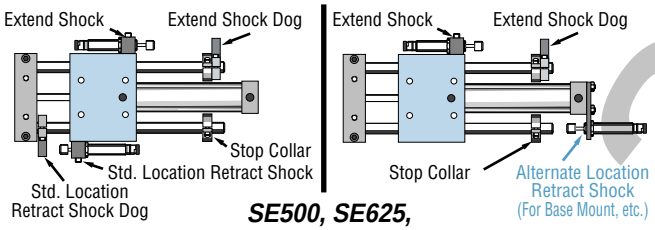
Step 3 Standard mounting brackets are available for Ace or Enidine. Stop collars are available for adjustablility of stroke.

Step 3: Shock, Stop, & Bumper Options

– AB – KE

Shock Absorbers Options

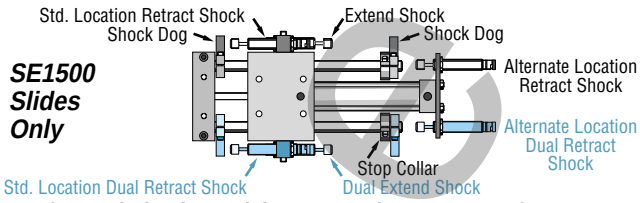
For SE500 through SE1500 Slides *Indicate desired option quantity/location in the box (☐) as follows:* ***E*** *= Extend position;* ***R*** *= Retract position;* ***B*** *= Option located in both extend and retract position. (Stop collars are shown for position only and must be specified separately if desired.)*



SE500, SE625, SE750 and SE1000 Slides

Standard Location Codes		***Alternate Location Codes***
A ☐	..... Ace Shocks	**D** ☐
B ☐	..... Enidine Shocks.....	**E** ☐
C ☐	..... Brackets & Actuators only ..... (Customer supplies the shocks)	**F** ☐

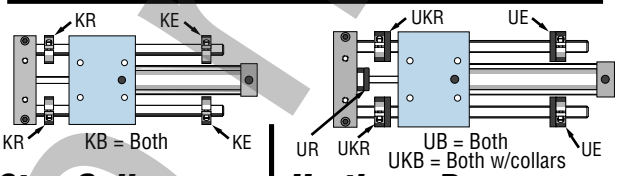
Insert E, R or B in box — Insert R or B in box



SE1500 Slides Only

• ***for Dual Shocks Model SE1500 only: Insert "X" after code letter to denote Dual Shocks***

Example: "DXB" provides four shocks – 2 standard location extend shocks and 2 alternate location retract shocks



Stop Collars

for stroke adjustment.

– KE = Extend only
– KR = Retract only
– KB = Extend & retract

Use of "KR" reduces useable stroke length on SE250 & SE375. SE250 stroke loss = 3/16"; SE375 stroke loss = 1/8".

Urethane Bumpers

Bumpers not compatible with prox, snap-action, or air pilot switches. If sensors are desired use magnetically operated "J" or "E" Options.

– UE = Extend only w/stop collars
– UR = Retract only, no stop collars
– UB = Both w/stop collars extend
–UKR= Retract only with stop collars
–UKB= Both with stop collars both

Bumpers result in some stroke loss.
See page 41

Thin Parts Placers

Standard transition plates are available for joining two SE Series slides to create extremely compact 2-axis motion devices. The bearing block of the vertical unit is bolted to the transition plate which is mounted to the toolbar of the horizontal unit.

In cases where wider bearing separation is required on the horizontal unit (for longer strokes, heavier overhung loading, etc.), an EZ Series slide may also be combined with an SE Model.

Order transition plates by part number shown in the chart below. Order slides and accessories separately.

Trans. Plate P/N	TPL01	TPL02
Horizontal Slide	SE250	SE375
Vertical Slide	SE250	SE250
"A" Dimension	1.63	1.63
"B" Dimension	.63	.63
"C" Dimension	.56	.56

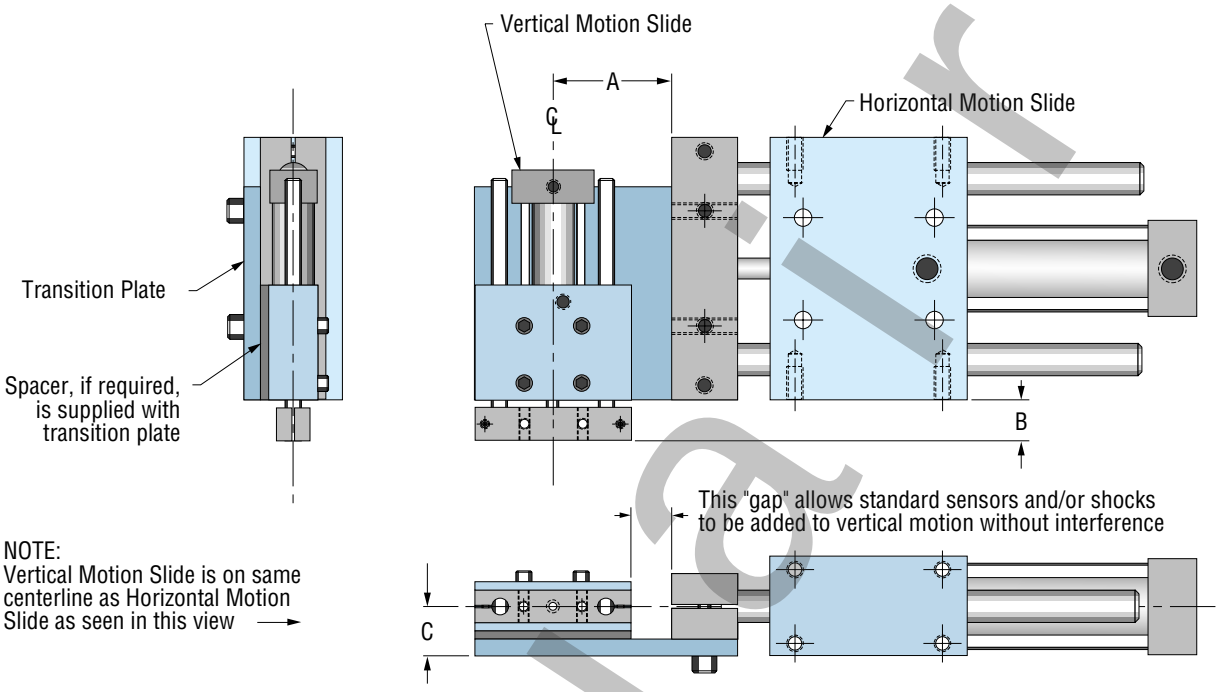
3-Position Tandem Cylinder Models

Available on SE500, SE625, SE750, SE1000 and SE1500

Principle of Operation

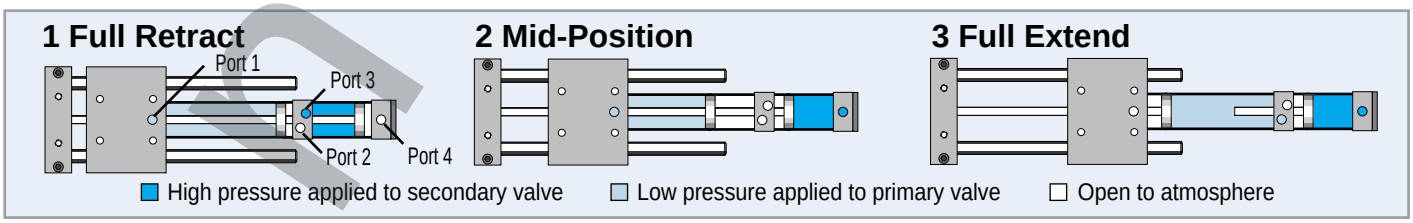
Generally, when two 4-way valves are used to actuate a 3-position slide, separate regulators supply each valve. A self-relieving regulator, upstream of the valve controlling the primary cylinder, is set at 20 to 40 psi lower than the secondary cylinder supply.

Slide Combinations – Transition Plate Part Numbers – Dimensions



NOTE:
Vertical Motion Slide is on same centerline as Horizontal Motion Slide as seen in this view →

	TPL03	TPL04	TPL05	TPL06	TPL07	TPL08	TPL09	TPL10	TPL11	TPL12	TPL13	TPL14	TPL15	TPL16	TPL17	TPL18	TPL19
	SE375	SE500	SE500	SE500	SE625	SE625	SE625	SE750	SE750	SE750	SE750	SE1000	SE1000	SE1000	SE1000	SE1500	SE1500
	SE375	SE250	SE375	SE500	SE375	SE500	SE625	SE375	SE500	SE625	SE750	SE500	SE625	SE750	SE1000	SE750	SE1000
	2.00	1.63	2.00	3.25	2.00	3.25	3.38	2.00	3.25	3.38	5.00	3.25	3.38	5.00	6.00	5.00	6.00
	1.00	.63	1.00	1.50	1.00	1.50	1.50	1.00	1.50	1.50	2.25	1.50	1.50	2.25	2.75	2.25	2.75
	.75	.75	.75	1.00	.75	1.00	1.00	1.13	1.13	1.13	1.75	1.50	1.50	1.75	2.00	2.00	2.25



Step 1 – In the retract position, ports 1 & 3 are pressurized.

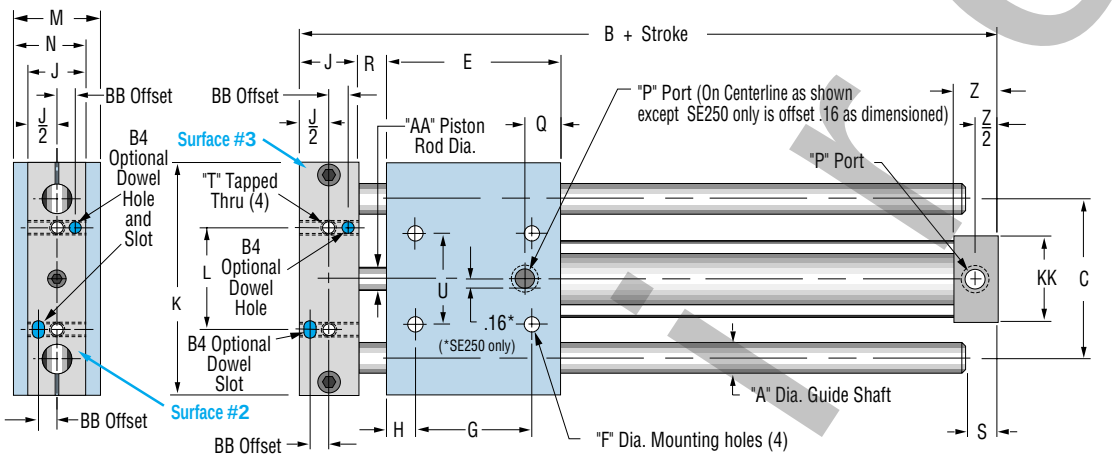
Step 2 – High pressure applied at port #4 will override pressure at port #1 and extend the secondary cylinder to its full stroke pushing the primary cylinder forward to mid-position. Exhaust air from the primary cylinder is forced back through the valve and out the self-relieving regulator to atmosphere.

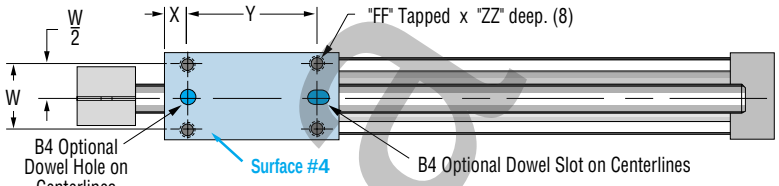
Step 3 – Shifting the primary cylinder's 4-way valve to apply pressure to port #2 extends the slide to full extend position, "uncoupling" the primary piston from the secondary piston rod.

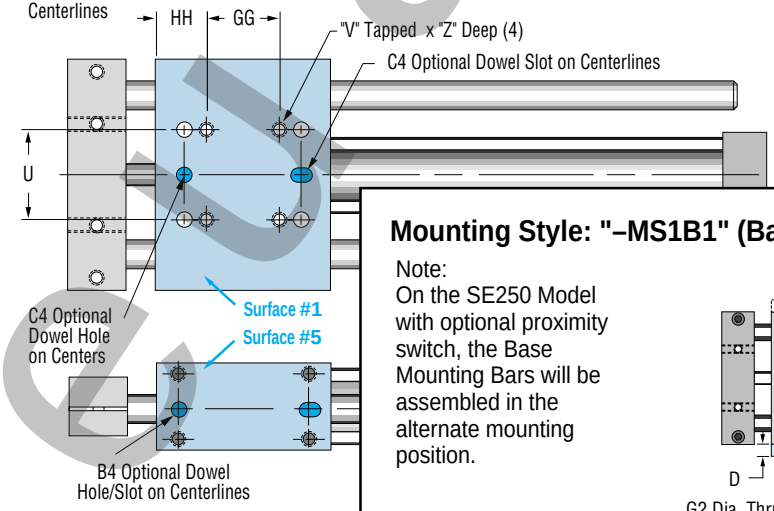
The slide can now be retracted to its mid-position by shifting the primary valve (retracting the primary piston until it stops against the extended secondary piston rod) – or the slide can be fully retracted by shifting both the primary and secondary valves.

"SE" Series Linear Slides

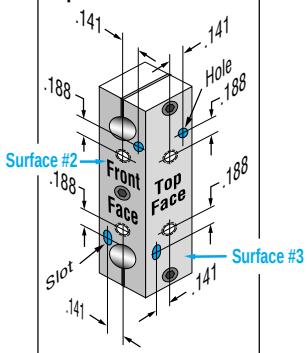
Standard Mounting Style –MS1







SE250 Only – Optional Dowel Detail

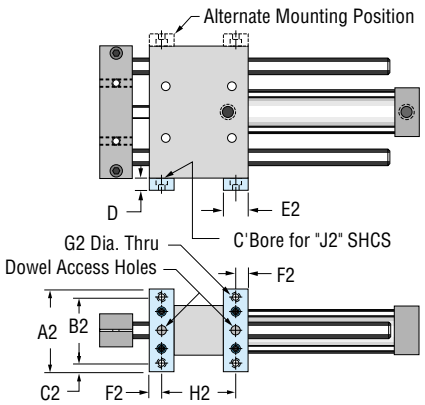


Toolbar dowel holes/slots are offset outward from tapped mounting hole as shown here.

Mounting Style: "–MS1B1" (Base Mounting Bars)

Note:
On the SE250 Model with optional proximity switch, the Base Mounting Bars will be assembled in the alternate mounting position.

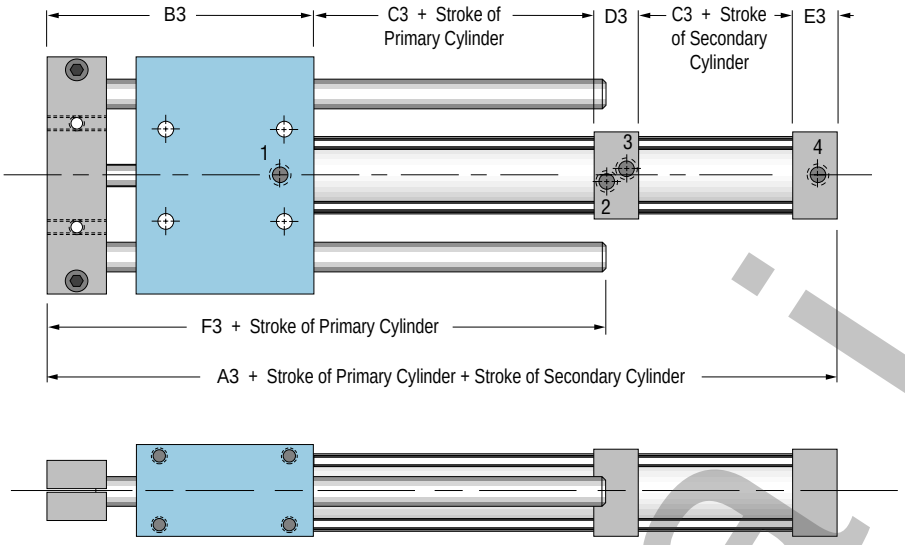
On the SE500 through SE1000 Models the Base Mounting Bar Option cannot be used with S50, S51 or S60 sensing options.



"SE" Series Dimensional Data

Model	Bore	A	A2	B	B2	C	C2	D	E	E2	F	F2	G	G2	H	H2	J	J2	K	L	M	N	P Port
SE250	1/2	1/4	1.38	3.13	1.063	1.625	.16	.25	1.75	.50	.173	.25	.875	.128	.25	1.250	.50	#5	2.38	.875	.75	.625	#10-32
SE375	3/4	3/8	1.75	4.50	1.375	2.000	.19	.25	2.00	.50	.204	.25	.750	.169	.38	1.500	.75	#8	3.00	1.000	1.00	.875	1/8 NPT
SE500	1-1/8	1/2	2.50	6.00	2.000	2.750	.25	.38	3.00	.75	.266	.38	2.000	.196	.50	2.250	1.00	#10	4.00	1.750	1.50	1.250	1/8 NPT
SE625	1-1/8	5/8	2.50	7.00	2.000	3.250	.25	.38	4.00	.75	.266	.38	3.000	.196	.50	3.250	1.00	#10	4.75	1.750	1.50	1.250	1/8 NPT
SE750	2	3/4	4.00	8.63	3.250	4.500	.38	.75	4.25	1.00	.406	.50	2.750	.406	.75	3.250	1.50	3/8	6.38	2.750	2.50	2.000	1/4 NPT
SE1000	2-1/2	1	5.00	10.38	4.000	5.500	.50	1.00	5.00	1.25	.531	.63	3.000	.531	1.00	3.750	2.00	1/2	8.00	3.250	3.00	2.500	1/4 NPT
SE1500	3-1/4	1-1/2	6.00	13.75	5.000	7.500	.50	1.00	7.00	1.25	.656	.63	4.500	.531	1.25	5.750	2.50	–	11.00	4.250	4.00	3.250	3/8 NPT

3-Position Tandem Cylinder Models Available on SE500, SE625, SE750, SE1000 and SE1500



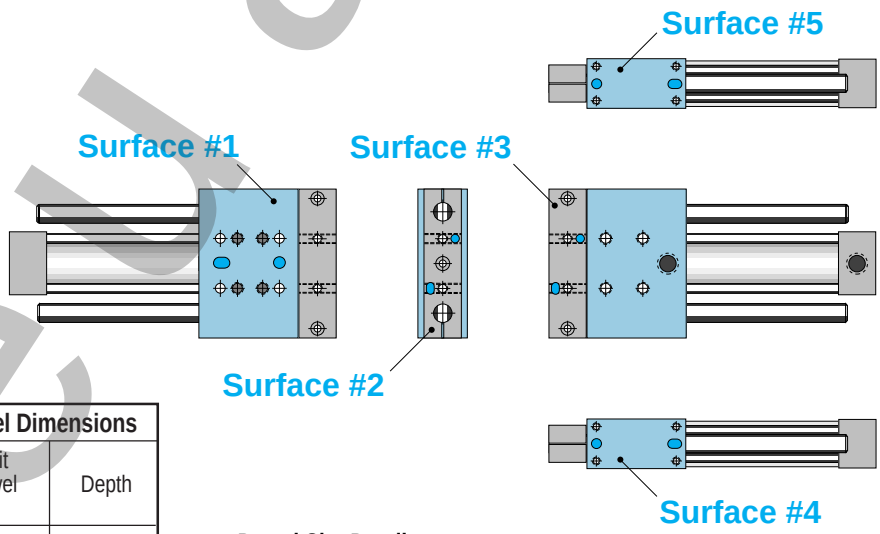
Tandem Model Dimensions

Model	A3	B3	C3	D3	E3	F3
SE500	7.75	4.50	.75	1.00	.75	5.50
SE625	8.75	5.50	.75	1.00	.75	6.50
SE750	11.00	6.50	1.12	1.25	1.00	7.75
SE1000	13.50	7.75	1.12	2.00	1.50	9.12
SE1500	17.75	10.25	1.50	2.25	2.00	12.25

Dowel Holes

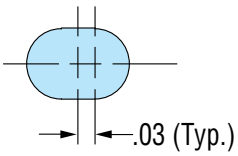
Fabco-Air Dowel Holes feature a slip fit dowel hole and a slip fit dowel slot, allowing 2 dowels to be pressed into the mounting surface or the end tooling. This "hole and slot" method provides precision alignment, yet dowel pin centerlines do not have to be held at a critical dimension.

Dowel holes/slots may be located on any of the five surfaces shown at the right and in blue on the dimension drawings on page 36.



Model	B4 Dowel Dimensions		C4 Dowel Dimensions	
	Slip Fit for Dowel Size	Depth	Slip Fit for Dowel Size	Depth
SE250	3/32	.09	1/8	.12
SE375	1/8	.12	3 /16	.18
SE500	3/16	.16	1/4	.25
SE625	3/16	.16	1/4	.25
SE750	1/4	.25	3/8	.37
SE1000	5/16	.37	3/8	.37
SE1500	3/8	.43	1/2	.50

Dowel Slot Detail



Q	R	S	T	U	V	W	X	Y	Z	AA	BB	FF	GG	HH	KK	ZZ
.25	.13	.13	#8-32	.875	#10-24	.500	.19	1.375	.50	.187	.141	#5-40	.375	.50	1.24	.19
.38	.25	.62	#10-24	1.000	1/4-20	.688	.19	1.625	.75	.250	.250	#8-32	.750	.38	1.50	.25
.63	.50	.50	1/4-20	1.562	1/4-20	1.125	.38	2.250	.75	.375	.313	#10-24	1.250	.88	1.47	.38
.63	.50	.50	1/4-20	1.750	1/4-20	1.125	.38	3.250	.75	.375	.313	#10-24	2.250	.88	1.47	.38
.63	.75	.87	3/8-16	2.750	3/8-16	1.750	.50	3.250	1.00	.625	.500	3/8-16	1.750	1.25	2.44	.75
.75	.75	1.25	1/2-13	3.250	1/2-13	2.125	.63	3.750	1.50	.750	.688	1/2-13	1.750	1.63	2.94	1.00
1.00	.75	1.50	5/8-11	4.250	5/8-11	3.000	.50	6.000	1.50	1.000	.875	1/2-13	3.000	2.00	3.94	1.00

Integral Option: "–Y" (Hollow Guide Shafts)

Tubular guide shafts are available on SE750, SE1000 and SE1500. They can be used to reduce reciprocating weight – or to run air and/or electrical lines through the shafts.

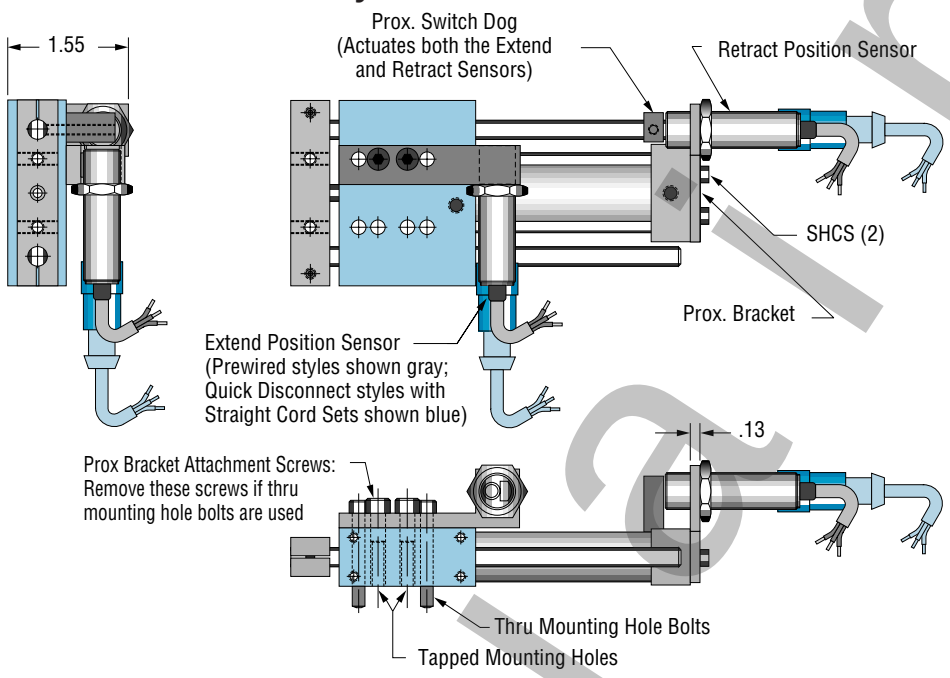
Internal Diameters are as follows:

SE750 – .44 ± .02
SE1000 – .60 ± .03
SE1500 – .89 ± .05

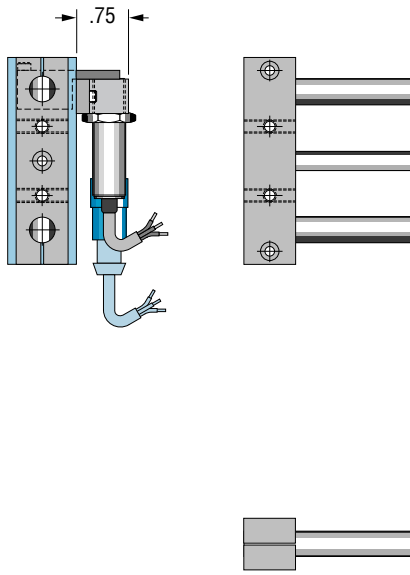
"SE" Series Linear Slides

Note: Proximity Switches shown are 12mm. Options S01, S03, S05 & S07 prewired styles are supplied with 6 ft. lead wire. Options S02, S04, S06 & S08 quick disconnect style are supplied with straight 2 meter cord set. Options S12, S14, S16, S18 are quick disconnect style without cord sets. S40, S41 & S42 are brackets and actuators only, no switches.

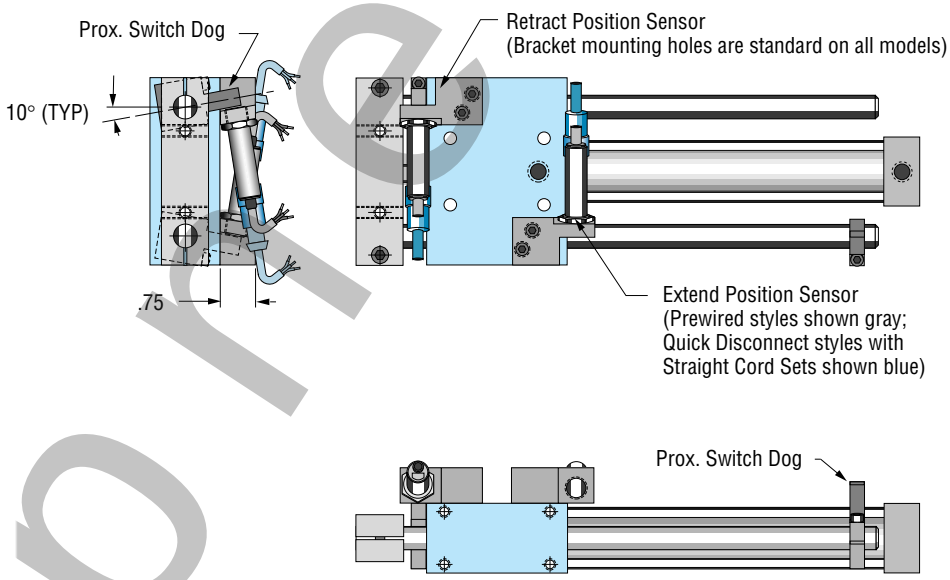
Proximity Switch for SE250



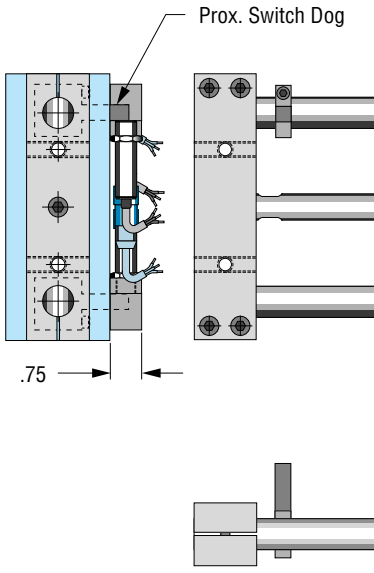
Proximity



Proximity Switch for SE500 & SE625

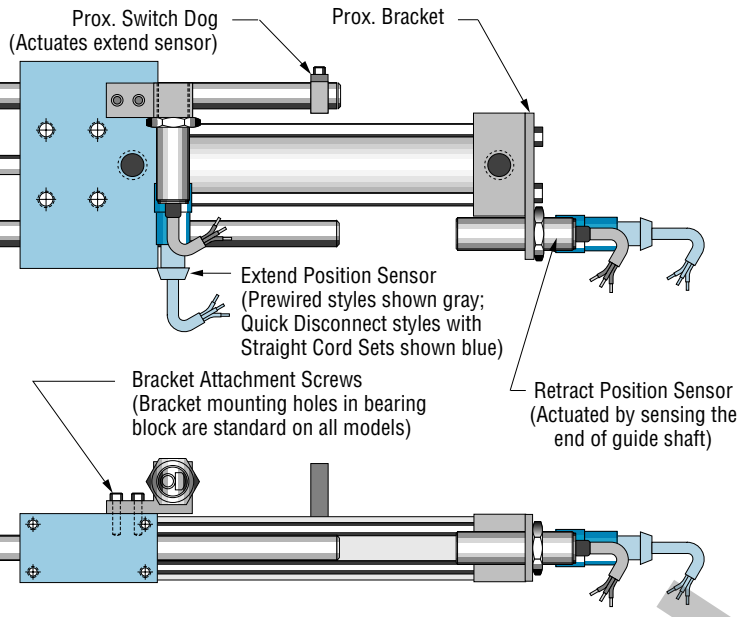


Proximity

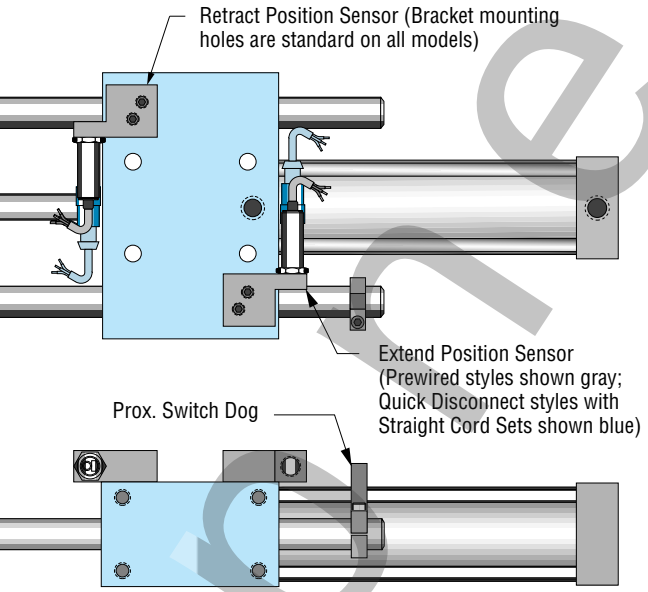


Proximity Switch, Snap Action & Air Pilot Switch Options

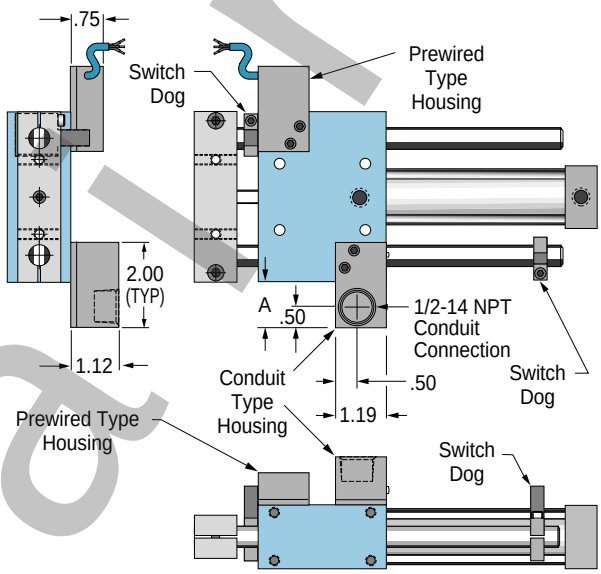
Switch for SE375



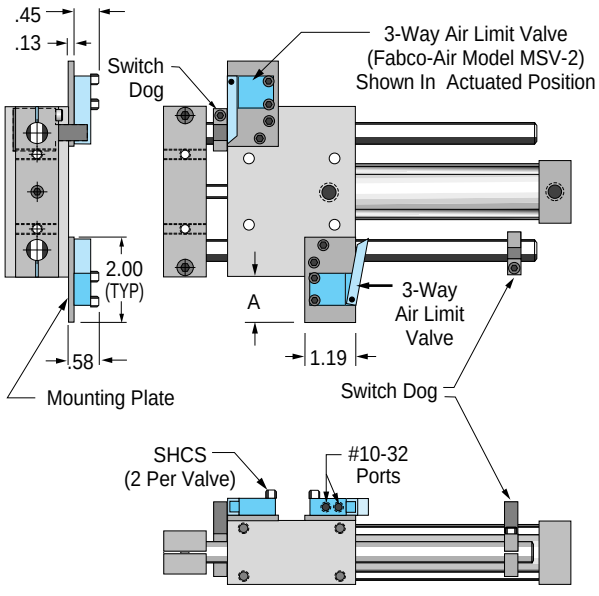
Switch for SE750 thru SE1500



Snap Action Mechanical Switch for SE500 thru SE1500



Air Pilot Switch for SE500 thru SE1500 Models



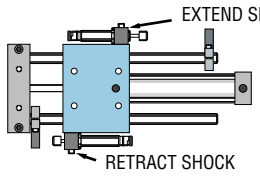
Snap Action & Pilot Switch Dimensions					
Model	SE500	SE625	SE750	SE1000	SE1500
A	1.06	.94	.75	.44	.00

"SE" Series Linear Slides

Shock Absorber Options

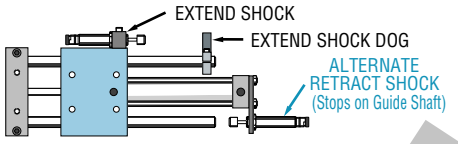
Standard Location – Codes (Insert E, R or B)

A ☐ Ace Shocks
B ☐ Enidine Shocks
C ☐ Brackets & Actuators only

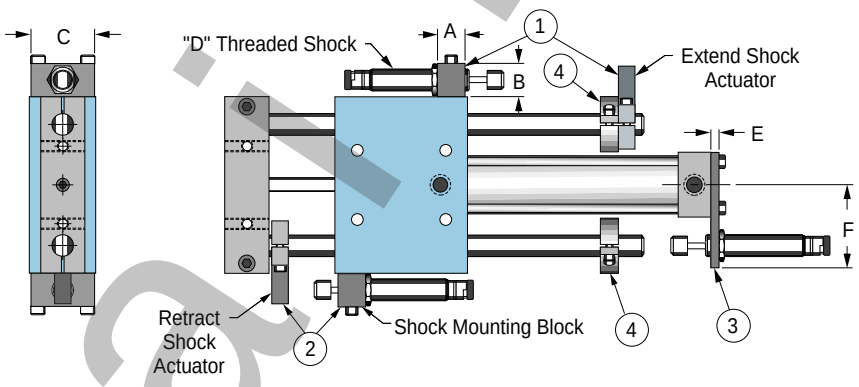


Alternate Location – Codes (Insert R or B)

D ☐ Ace Shocks
E ☐ Enidine Shocks
F ☐ Brackets & Actuators only



SE500 thru SE1000 Models



① Extend shock mounting package

② Standard retract shock mounting package

③ Alternate retract shock mounting package

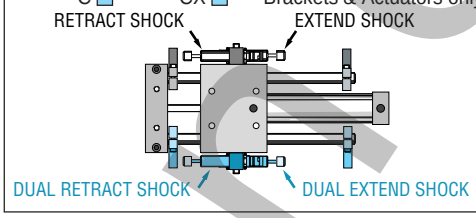
④ Stop collars are compatible with all shock mounting packages.

Model	A	B	C	D	E	F
SE500	.62	.75	1.44	1/2-20	.19	1.88
SE625	.62	.75	1.44	1/2-20	.19	2.12
SE750	1.25	1.38	1.75	1.0-12	.38	3.00
SE1000	1.25	1.38	2.88	1.0-12	.38	3.53

SE1500 Model – Standard and Dual Shock Options

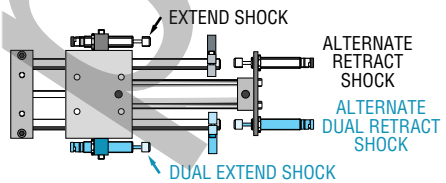
Standard Location – Option Codes (Insert E, R or B)

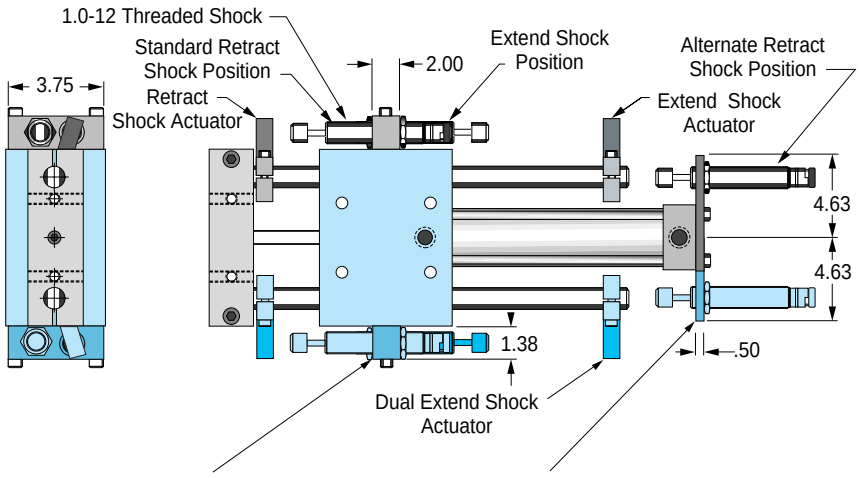
Single Shock	Dual Shocks	
A ☐	AX ☐	Ace Shocks
B ☐	BX ☐	Enidine Shocks
C ☐	CX ☐	Brackets & Actuators only



Alternate Location – Option Codes (Insert R or B)

Single Shock	Dual Shocks	
D ☐	DX ☐	Ace Shocks
E ☐	EX ☐	Enidine Shocks
F ☐	FX ☐	Brackets & Actuators only



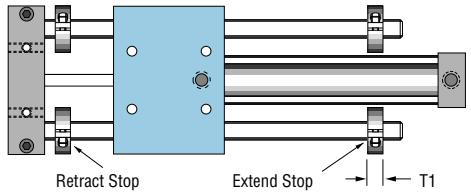


This shock mounting bracket is required only with applicable dual shock options

This retract shock mounting bracket (shaded blue) is required only with applicable alternate location, dual shock options

Stop and Bumper Options

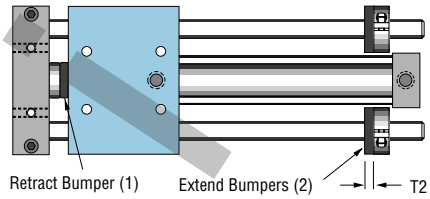
Stop Collars – SE250 thru SE1500 Models



Bumper options use of a combination of urethane washers and stop collars to create a cushioned stop. Bumpers are ideal for applications in which space limitations preclude use of hydraulic shock absorbers.
Note: The Bumper Option is NOT compatible with standard proximity switch, snap action switch or air pilot options.

Note 1: Retract stop collars reduce useable stroke length on SE250 & SE375. SE250 stroke loss = 3/16". SE375 stroke loss = 1/8"

Bumpers – SE250 thru SE1500 Models



Model	SE250	SE375	SE500	SE750	SE1000	SE1500
T1	.28	.34	.41	.50	.50	.56
T2	1/8	1/8	1/8	1/8	1/4	1/4

Note 2: Bumper stroke losses all models.
Code UE = 1/16"; Code UR = 1/8"; Code UB = 3/16"
Note 3: Bumper stroke losses SE250 & SE375.
Code UKR = 5/16" for SE250; Code UKR = 1/4" for SE375

Multi-Power® "Hi-Thrust" Slides

NEW

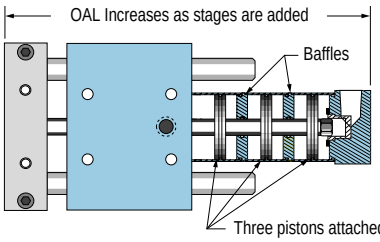
Get Increased Thrust Without Increasing the Cylinder Bore

Fabco-Air incorporates its famous Multi-Power® cylinder on SE and EZ Series slide models to increase slide thrust. For example, a 2-stage Multi-Power® cylinder on an SE750 Model increases thrust from 314 to 584 pounds at 100 psi supply pressure. The sketch at the right shows a cutaway view of a 3-stage Multi-Power® slide which would effectively raise thrust to over 850 pounds at the same 100 psi supply!

How it works
The cylinder uses multiple pistons attached to a common shaft. Each piston is isolated within its own chamber by means of baffles integral with the outer cylinder wall. Unique internal porting allows air pressure to simultaneously energize all pistons – thus multiplying the slide's thrust.

Contact the factory for applicable Multi-Power® solutions for your high force requirements.

Note: Adding additional stages does increase the overall cylinder length.



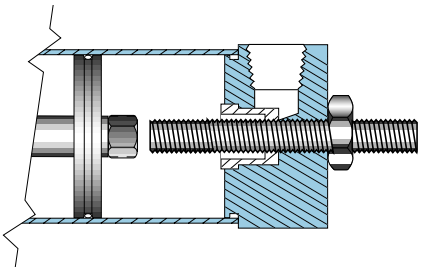
The cut-away view (left) illustrates the Multi-Power® principle in a 3-stage slide.

Shown above is an SE1000, 4-stage Multi-Power® slide capable of producing 1,830 pounds extend force at 100 psi supply pressure. A conventional cylinder would yield only 491 pounds of force at the same supply pressure.

"SE" Series Linear Slides

Specials

Alternate Adjustable Retract Stroke



An adjusting screw with a thread sealing locknut mounted in the rear end cap provides a simple, yet rugged adjustment of the cylinder stroke in the retract direction. The fine thread of the adjusting screw provides precision adjustment.

Rear Piston Rod Extension

This special configuration consists of a modified rear end cap with rod seal and an extended piston rod, allowing various special application uses. By adding a simple compression spring and clamp collar, a vertical load can be held in mid-position and powered either downward or upward.

Other uses include special sensing and/or position feedback devices attached to the extended piston rod.

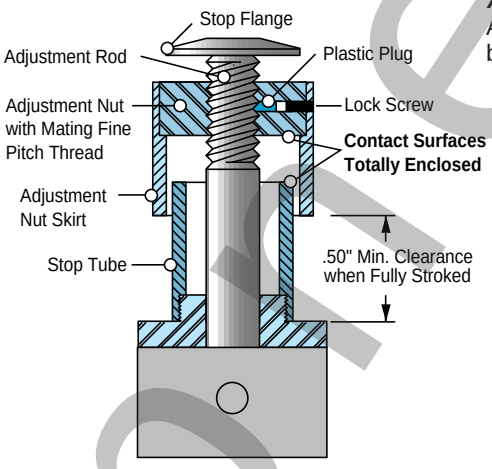
An extended rear piston rod added to a tandem cylinder option allows the slide to have a mid-position adjustment capability.

Alternate Adjustable Extend Stroke

Fabco-Air's popular Dial-A-Stroke® can be applied to most SE Series models for precise adjustability of extend strokes.

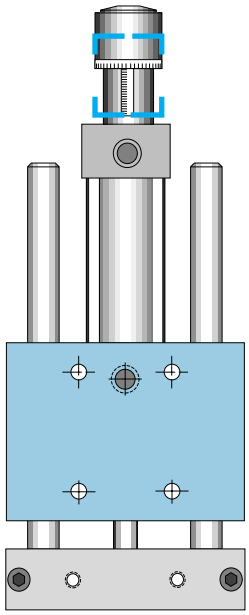
Operator Safety –
The stop tube, adjustment nut with skirt, and minimum clearances combine to eliminate pinch points.

Construction –



The stop tube is black anodized aluminum – the adjustment nut is blackened steel with a black anodized aluminum skirt – the stop flange is red anodized aluminum: all for corrosion resistance and appearance.
The adjustment nut, steel for long life, includes a lock screw with a plastic plug so the adjustment nut can be locked in place without damaging the threads. Precision adjustment is achieved with fine pitch threads on the adjustment rod.
The stop flange is mounted on the end of the adjustment rod so the nut will not come off during adjustment.

Adjustment –
Adjustment settings are simplified by convenient scale markings.



Step 1

SE500 – 5.0

Indicate "SE" series.

Select model size based on guide shaft dia.

Select a stroke (Special strokes also available)

Model Size	*Guide Shaft Diameter*	*Bore*
250	1/4"	1/2"
375	3/8"	3/4"
500	1/2"	1-1/8"
625	5/8"	1-1/8"
750	3/4"	2"
1000	1"	2-1/2"
1500	1-1/2"	3-1/4"

Model	*Standard Stroke Length*
SE250	1/2" to 4" by 1/2" increments
SE375	1" to 6" by 1" increments
SE500	1" to 10" by 1" increments
SE625	1" to 10" by 1" increments
SE750	1" to 6" by 1" increments 8" to 18" by 2" increments
SE1000	1" to 6" by 1" increments 8" to 20" by 2" increments
SE1500	2" to 30" by 2" increments

How to Order Summary

	Step 2	Step 3
–MS1 T3 – VZS	– S03B	– CB – KE
Choose Mounting Style & Toolbars / Select Integral Options	Sensor Options	Select Shock Absorber, Bumper, and Adjustable Stop Options

Mounting Styles

MS1 = **Standard Mounting**
Includes: • Tapped mounting holes
• Thru mounting holes
• Side tapped mounting holes

MS1B1 = **Base Mounting Bars (1 Pair)**

Toolbars

– T1 = Blank Toolbar

– T3 = Toolbar for Model SE500 to attach an SE500 or an EZ500

– T4 = Toolbar for Model SE1000 to attach an SE500, EZ500, SE750 or EZ750

Integral Options

D ☐☐ **–** Dowel Hole and Slot
Specify Surface Location(s) 1, 2, 3, 4, or 5 in box(es)

H– Hydraulic Cylinder Seals

V– Viton Cylinder Seals

Bearing Options

W– Rulon® Sleeve Bearings

X– Duralon® Sleeve Bearings

Guide Shaft Options

Y– Hollow Guide Shafts

Z– Stainless Steel Guide Shafts

S– Grease fittings, Side

T– Grease fittings, Top

Sensor Options

S000 – *Indicates **NO SENSORS** desired*

Note: Indicate sensor location in the box (☐).
E= Extend, R=Retract, B=Both Extend & Retract , M=3 Sensors

S01 ☐ **thru S18** ☐
12mm Prox Switch w/Brackets & Actuators
– Choose desired electrical characteristics
– Choose pre-wired or quick disconnect with or without cord set

S40 ☐ **thru S42** ☐
Prox Switch Brackets & Actuators Only, no Switches.
– Choose 12mm, 8mm, or 5mm

S50 ☐ **, S51** ☐ (E, R or B only)
Snap Action Mechanical Switches
– Choose pre-wired or with conduit fitting

S60 ☐ (E, R or B only)
Air Pilot Switch

J70 ☐ **thru J75** ☐ ***(Not available on SE250)***
Magnetic Piston and Clamp-on Sensors.
– Choose reed or electronic (PNP or NPN)
– Choose pre-wired or quick disconnect with cord set
Single sensor – 1" stroke min.
Dual sensors – 2" stroke min.

J800
Magnetic Piston Only, No Sensors

E70 ☐ **thru E77** ☐
Magnetic Piston & Dovetail Style Sensors
– Choose reed or electronic (PNP or NPN)
– Choose pre-wired or quick disconnect with cord set.
Requires 1" or longer stroke. Reed switches not available on SE250 or SE375.

E800
Magnetic Piston & Dovetail Mounting Rail (attached) only, no sensors. Requires 1" or longer stroke

Shock Options

*Specify **E, R, or B** in box* (☐).
A ☐ – Ace Shocks
B ☐ – Enidine Shocks
C ☐ – Brackets and actuators only

Alternate Location
Specify R or B
D ☐ – Ace Shocks
E ☐ – Enidine Shocks
F ☐ – Brackets and actuators only

Dual Shock Options for Model SE1500 only

Specify E, R, or B in box
AX ☐ – Ace Shocks
BX ☐ – Enidine Shocks
CX ☐ – Brkts & actuators

Alternate Location
Specify R, or B in box
DX ☐ – Ace Shocks
EX ☐ – Enidine Shocks
FX ☐ – Brkts & actuators

Other Options

KE – Stop collars, extend
KR – Stop collars retract
KB – Stop collars both
UE – Bumpers extend with stop collars
UR – Bumpers retract only without stop collars
UB – Bumpers both ends w/stop collars extend
UKR – Bumper retract only with stop collars
UKB – Bumpers both ends with stop collars both ends