

Banking Screw Adapter™



Head-treated Stop Screws

Simply attach any standard shielded proximity sensor to the BSA and create a heavy-duty, solid state switch. Available in 8, 12 and 18mm screw diameters and a wide variety of lengths.



Features

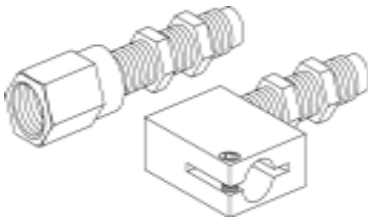
- Heat-treated alloy steel construction
- Mix & match with different sensors
- Optional ball-end piston & spring rates
- Three diameters and many barrel lengths

Benefits

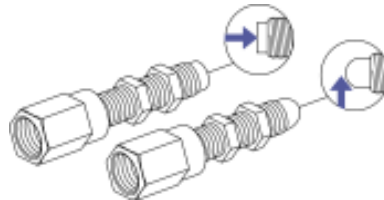
- Stop travel and sense with one device
- Versatile outputs using any shielded sensor
- Isolates sensor from impact damage
- New applications for proximity sensors

Multiple design options

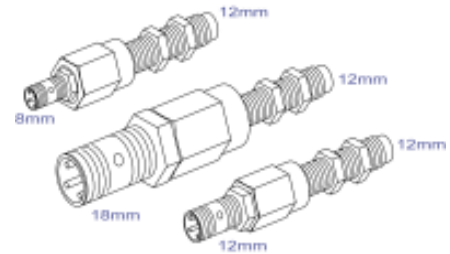
BSA's are configurable to meet your machine design requirements, see below and use the model numbering guide on page 23:



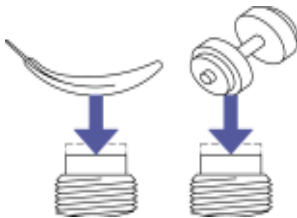
1- Right angle models shorten the overall length and will fit into more confined applications.



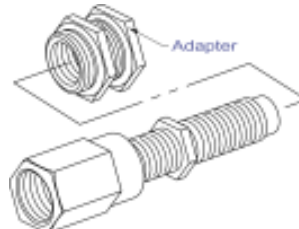
2- Flat pistons are for axial impact forces and ball-end pistons are for laterally moving targets.



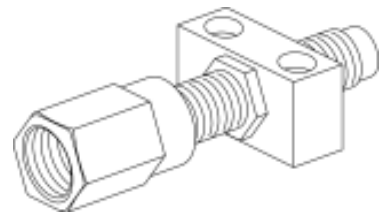
3- Use a smaller, larger or the same diameter sensor as the BSA barrel diameter.



4- Standard models have a light spring rate, but a heavier spring rate is available, see page 21.



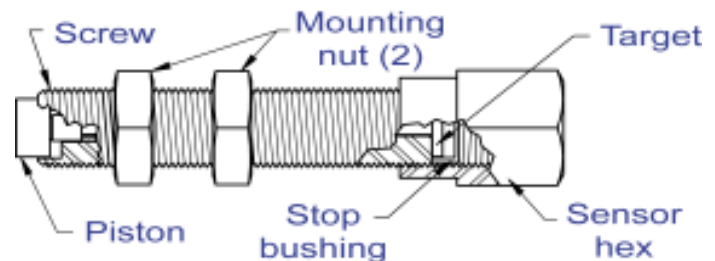
5- Can be supplied with adapters for retrofitting into existing hole/thread locations, see pg. 18.



6- Install with a block mount or bracket, see pages 9-13. SoftNoze can bundle products and make specials.

Construction & Operation

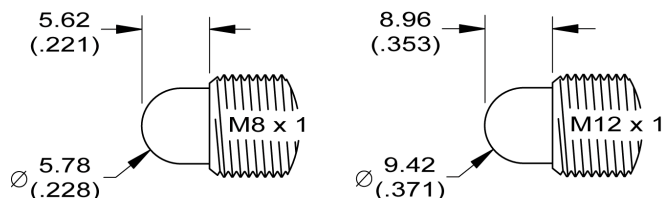
Both the screw and piston are heat-treated to withstand heavy use. A connecting rod ties the spring-loaded piston to a metal target, which triggers the sensor upon displacement of the piston. The sensor is separated and thus isolated from impact from the target by a plastic stop bushing. Two heavy-duty jam nuts, or an optional threaded Block Mount, secure the BSA.



Banking Screw Adapter™

BSA- A - XX - XX - XX - X - X

Banking **S**crew **A**dapter
"A" for 90° angle style
 Barrel thread, dimen. **"A"**
 Barrel length, dimen. **"B"**
 Sensor size- **08, 12 or 18**
"R" for round piston (8 & 12 only)
"H" for heavy spring rate¹

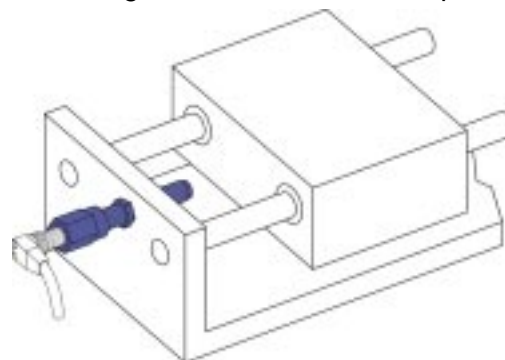


M8 x 1 Models M12 x 1 Models

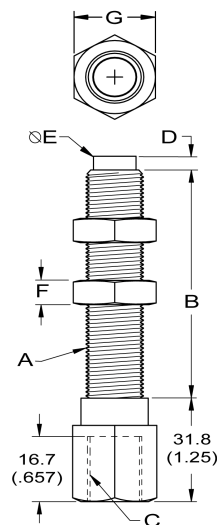
Rounded Piston Dimensions

Typical Application

Shown below, a BSA is used as a reliable and rugged stop for a linear slide unit. Accurate and easy adjustments to end of stroke positions are possible using a standard, shielded, prox sensor:



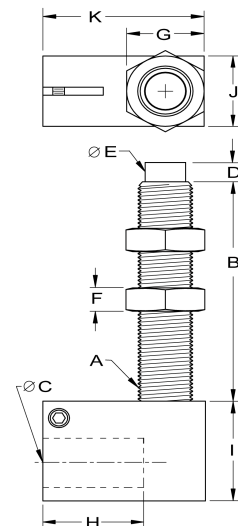
BSA	A	B	C	D	E	F	G...
08-25	M8 x 1	25.0 (0.98)	M8 x 1 or M12 x 1	3.16 (0.12)	5.84 (0.23)	6.26 (0.24)	...of mounting nut (2):
08-50		50.0 (1.97)					M8x1: 12.8 (0.50)
12-25	M12 x 1	25.0 (0.98)	M8 x 1 or M12 x 1 or M18 x 1	4.32 (0.17)	9.40 (0.37)	5.94 (0.23)	M12x1: 15.7 (0.62)
12-50		50.0 (1.97)					M18x1: 22.1 (0.87)
12-75		75.0 (2.95)					...of sensor hex:
12-100		100 (3.94)					M8x1: 11.0 (0.43)
18-25	M18 x 1	25.0 (0.98)	M8 x 1 or M12 x 1 or M18 x 1	4.32 (0.17)	14.2 (0.56)	6.36 (0.25)	M12x1: 15.7 (0.62)
18-50		50.0 (1.97)					M18x1: 22.1 (0.87)
18-75		75.0 (2.95)					
18-100		100 (3.94)					



"BSA" Type
Flat piston
version
shown

Notes: Dimensions mm(inch). Spring rates; standard models require 252grams(9oz.) for sensor activation and heavy spring rate models 1120 grams(40oz.). Maximum allowable impact force (F') on pistons is; 2 K-N (450 lb-ft) for 8mm models, 20.5 K-N (4.6K lb-ft) for 12mm models and 45 K-N (10.1 K lb-ft) for 18mm models. Calculate by, $F' = M \times A$ where F' is in newtons(N), M (mass) is in kilograms and A (acceleration), in meters/second(m/s). Piston displacement, all models: 1.93(.076). Use only shielded-type proximity sensors.

BSAA	A	B	C	D	E	F	G	H	I	J	K
08-25	M8 x 1	25.0 (0.98)	8mm or 12mm	3.16 (0.12)	5.84 (0.23)	6.26 (0.24)	12.8 (0.50)	17.8 (0.70)	22.2 (0.88)	12.7 (0.50)	25.4 (1.00)
08-50		50.0 (1.97)									
12-25	M12 x 1	25.0 (0.98)	8mm or 12mm	4.32 (0.17)	9.40 (0.37)	5.94 (0.23)	15.7 (0.62)	18.0 (0.71)	25.4 (1.00)	15.9 (0.62)	31.8 (1.25)
12-50		50.0 (1.97)									
12-75		75.0 (2.95)									
12-100		100 (3.94)									
18-25	M18 x 1	25.0 (0.98)	12mm	4.32 (0.17)	14.2 (0.56)	6.36 (0.25)	22.1 (0.87)	27.9 (1.10)	25.4 (1.00)	22.2 (0.88)	44.4 (1.75)
18-50		50.0 (1.97)									
18-75		75.0 (2.95)									
18-100		100 (3.94)									



"BSA-A" Type
Flat piston
version
shown