

LSES Lag Screw Expansion Shield

The Lag Screw Expansion Shield is a die cast zinc alloy expansion shield for anchoring lag screws in a variety of base materials, including concrete, concrete block, brick and mortar joints. Radial ribs provide additional holding power in softer material.

MATERIAL: Die cast Zamac 3 Alloy

INSTALLATION:

! **Caution:** Oversized holes may make it impossible to set the anchor and will reduce the anchor's load capacity.

- Drill a hole in the base material using the appropriate-diameter carbide drill bit as specified in the table. Drill the hole to the specified embedment depth plus 1/8" for flush mounting and blow it clean using compressed air. Alternatively, drill the hole deep enough to accommodate embedment depth and dust from drilling. Overhead installations need not be blown clean.
- Insert anchor into hole. Tap with hammer until flush with surface of base material.
- Position fixture; insert screw and tighten.



LSES

LSES Product Data and Tension Loads in Normal-Weight Concrete

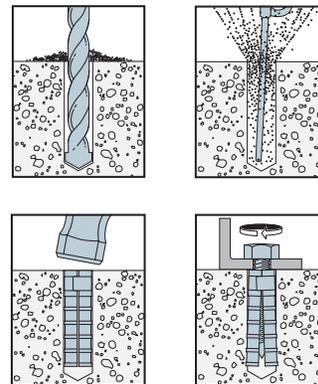


Size (in.)	Model No.	Drill Bit Dia. (in.)	Embed. Depth (in.)	Allowable Tension Load (lbs.)		Quantity	
				$f'_c \geq 3000$ psi		Box	Carton
1/4 Short	LSES25S	1/2	1	90		100	500
5/16 Short	LSES31S	1/2	1 1/4	100		100	500
3/8 Short	LSES37S	5/8	1 3/4	220		50	250
1/2 Short	LSES50S	3/4	2	250		25	125
1/4 Long	LSES25L	1/2	1 1/2	120		50	250
5/16 Long	LSES31L	1/2	1 3/4	150		50	250
3/8 Long	LSES37L	5/8	2 1/2	260		50	200
1/2 Long	LSES50L	3/4	3	310		25	100

*See page 13 for an explanation of the load table icons

1. The allowable loads listed are based on a safety factor of 4.0.
2. The minimum concrete thickness is 1 1/2 times the embedment depth.
3. Screw is not included.

Installation Sequence



Mechanical Anchors

ESA Expansion Screw Anchor

The ESA was the original internally threaded mechanical anchor design. The malleable lead shield allows for secure mounting.

MATERIAL: Cone: Die Cast Zamac 3 alloy; Expander Shield: 3 - 5% antimonial lead

INSTALLATION:

- Drill a hole in the base material using the appropriate diameter carbide drill bit as specified in the table. Drill the hole to the specified embedment depth plus 1/8" for flush mounting. Blow the hole clean using compressed air. Overhead installations need not be blown clean.
- Insert anchor into hole.
- Using a piloted setting punch, drive expander shield over cone.
- Position fixture; insert fastener and tighten.

CODES: Meets Federal Specifications A-A-1922A, Type 1, except ESA50.

ESA Product Data and Tension Loads in Normal-Weight Concrete



Internal Thread Size (dia. - threads per inch)	Model No.	Drill Bit Dia. (in.)	Embed. Depth (in.)	Allowable Tension Load (lbs.)		Quantity	
				$f'_c \geq 3000$ psi		Box	Carton
#10 - 24	ESA10	3/8	5/8	140		100	1600
1/4 - 20	ESA25	1/2	7/8	190		100	500
3/8 - 16	ESA37	3/4	1 1/4	380		50	200
1/2 - 13	ESA50	7/8	1 1/2	400		50	200

1. The allowable loads listed are based on a safety factor of 4.0.
2. The minimum concrete thickness is 1 1/2 times the embedment depth.
3. Machine bolt is not included.
4. One piloted setting punch is included in each box.

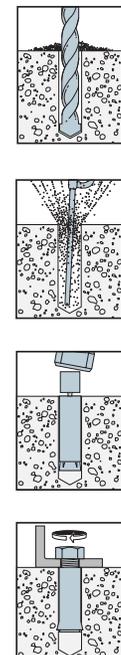


ESA



Piloted Setting Punch

Installation Sequence



Piloted Setting Punch Product Data

Model No.	For Use With	Box Qty.
PSP10	ESA10	10
PSP25	ESA25	10
PSP37	ESA37	10
PSP50	ESA50	10