

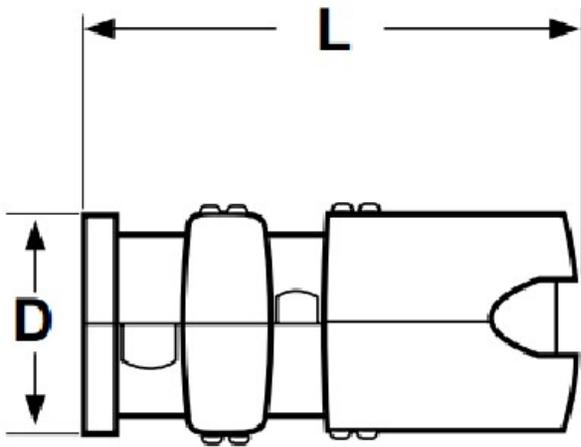


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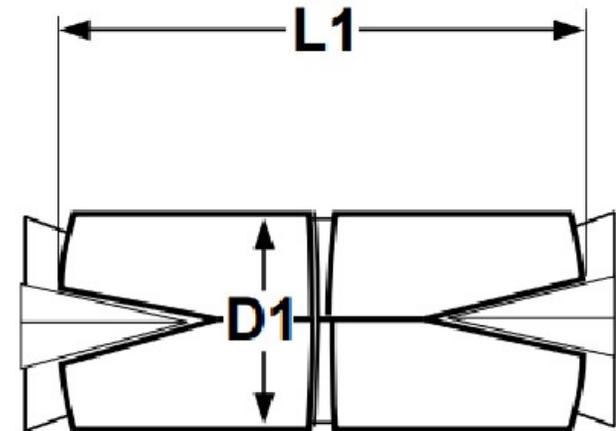
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## SINGLE & DOUBLE EXPANSION ANCHORS



**SINGLE EXPANSION**



**DOUBLE EXPANSION**



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Bolt Diameter	Recommended Hole Diameter	Single Expansion Anchors			Proof Test Load (Ultimate Tensile Strength)  In 3000 PSI Strength Concrete	Double Expansion Anchors		
		D  Minimum Diameter of Shield Body	L  Minimum Length of Shield Body			D1  Minimum Diameter of Shield Body	L1  Minimum Length of Shield Body	Proof Test Load (Ultimate Tensile Strength)  In 3000 PSI Strength
			Short	Regular				
1/4	1/2	7/16	1-1/4	1-1/2	800	1/2	1-1/4	1100
5/16	5/8	1/2	1-3/8	1-5/8	1100	9/16	1-5/8	1450
3/8	3/4	11/16	1-1/2	2	1450	11/16	2	1750
1/2	7/8	7/8	2	2-1/2	1850	7/8	2-1/4	2200
5/8	1	1	2-1/2	2-3/4	2400	1	2-3/4	3250
3/4	1-1/4	1-1/8	2-3/4	3-1/4	3000	1-1/8	3-1/4	4600
7/8	1-5/8	1-1/2	-	4-1/2	3700	1-1/2	4	5850
1	1-3/4	1-5/8	-	5	4400	1-5/8	4-1/4	6700

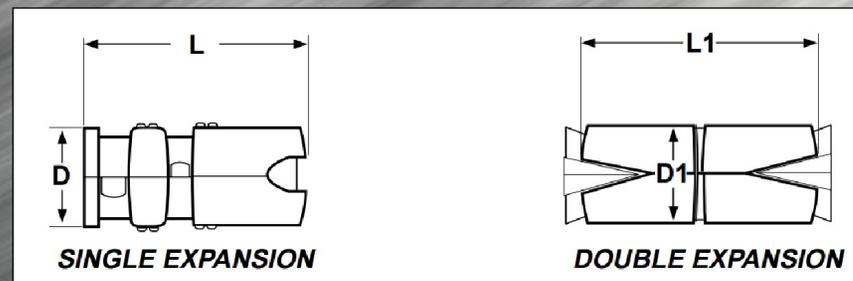


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### SINGLE EXPANSION

**DESCRIPTION:** This anchor consists of three parts — (A) a two-piece expansion shield held together by a steel band or wire, or interlocked by ears and lugs; (B) an expander nut. The outer surface of the shield is designed with ribs or corrugations to resist turning. The nut is either conical or elliptical in shape so as to fit within the shield body.

**APPLICATIONS/ADVANTAGES:** Used in soft masonry with machine screws or machine bolts which are exposed to vibration or side pressure. The expander nut climbs the anchor bolt as it is tightened, expanding the shield body. The bolt can be removed and replaced without affecting the holding power of the anchor system. Can also be used in harder materials, including stone, brick or concrete.

**MATERIAL:** Expansion shield and nut may be made of alloy zinc, brass, malleable iron or steel.

**ANCHOR SPACING:** Anchors should be installed a minimum of ten anchor diameters between each other and a minimum of five anchor diameters from the edge.

**DEPTH OF HOLE:** Should be equal to or slightly longer than the length of the anchor.

**TENSILE STRENGTH:** Expansion anchors shall not be removable or show evidence of failure when subjected to axially applied proof test loads as specified in the above table when set in concrete of 3000 PSI compressive strength. The suggested safe working load is one-fourth the average proof test loads shown in the above table.

### DOUBLE EXPANSION

**DESCRIPTION:** This anchor consists of four parts — a two piece tubular shield, a hollow wedge-shaped cone, and a wedge-shaped nut—brought together into a single anchor unit. The shields are connected by a pair of spring bands. At one end is the nut and at the other the cone, each designed so as to not turn during expansion.

**APPLICATIONS/ADVANTAGES:** Used in soft masonry with machine screws or machine bolts which are exposed to vibration or side pressure. As the anchor sets, the opposite ends pull towards each other causing the elongation of the anchor body. It doesn't fracture and allows for a fastening of any length. Can also be used in harder materials, including stone, brick, concrete or block.

**MATERIAL:** Expansion shield and nut may be made of alloy zinc, brass, malleable iron or steel.

**ANCHOR SPACING:** Anchors should be installed a minimum of ten anchor diameters between each other and a minimum of five anchor diameters from the edge.

**DEPTH OF HOLE:** Should be equal to or slightly longer than the length of the anchor.

**TENSILE STRENGTH:** Expansion anchors shall not be removable or show evidence of failure when subjected to axially applied proof test loads as specified in the above table when set in concrete of 3000 PSI compressive strength. The suggested safe working load is one-fourth the average proof test loads shown in the above table.