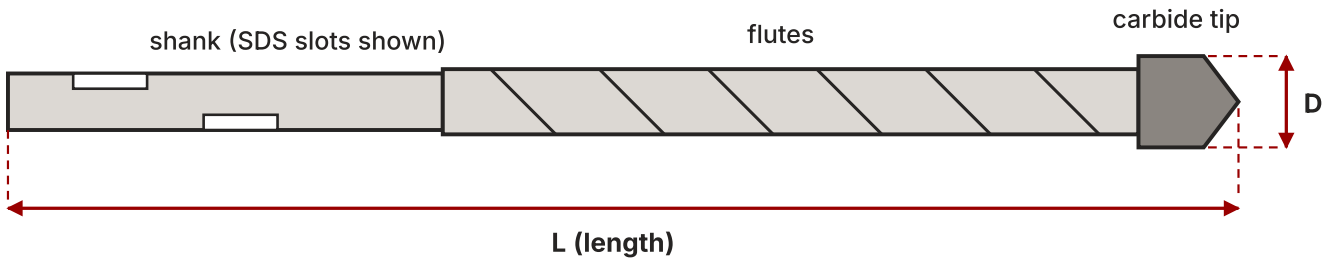
Masonry Drill Bit Sizes

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J & E Supply & FASTENER CO.

Carbide masonry drill bit sizes: the ANSI B212.15 hole tolerance for each size, SDS-plus and SDS-max shanks, and the bit size for each concrete anchor.

A **masonry bit** is a twist drill with a **carbide tip** brazed across its point, made to drill concrete, brick and block in a hammer drill. Its size is the **diameter across the tip**, which is slightly wider than the body. The **shank** must match the drill: a **straight** round shank for a chuck, or **SDS-plus**, **SDS-max** or **spline** for a rotary hammer.



The letters match the tables. Not to scale.

Masonry drill bit tolerance — ANSI B212.15 (inches)

NOMINAL BIT	D MIN	D MAX
3/16″	.198	.206
1/4″	.260	.268
5/16″	.327	.335
3/8″	.390	.398
7/16″	.458	.468
1/2″	.520	.530
9/16″	.582	.592
5/8″	.650	.660
11/16″	.713	.723
3/4″	.775	.787
7/8″	.905	.917
1″	1.030	1.042
1-1/8″	1.160	1.175
1-1/4″	1.285	1.300
1-3/8″	1.410	1.425
1-1/2″	1.535	1.550

The diameter across the carbide tip of a carbide-tipped masonry bit, inches. The sizes both our sources list; for any other size, give us a call.

Rotary hammer shank sizes

SHANK	SHANK DIAMETER
SDS-plus	10 mm
SDS-max	18 mm

The shank, not the bit size, decides which rotary hammer a bit fits.

Masonry bit size for each concrete anchor (inches)

BIT	ANCHOR	ANCHOR SIZE
5/32″	Concrete screw	3/16″
3/16″	Concrete screw	1/4″
1/4″	Wedge anchor	1/4″
	Sleeve anchor	1/4″
5/16″	Sleeve anchor	5/16″
	Calk-in anchor	#8
3/8″	Wedge anchor	3/8″
	Sleeve anchor	3/8″
	Drop-in anchor	1/4″
	Calk-in anchor	#10
1/2″	Wedge anchor	1/2″
	Sleeve anchor	1/2″
	Drop-in anchor	3/8″
	Lag shield	1/4″ (long or short)
	Lag shield	5/16″ (long or short)
	Calk-in anchor	1/4″
	Double expansion shield	1/4″
	Single expansion shield	1/4″
5/8″	Wedge anchor	5/8″
	Sleeve anchor	5/8″
	Drop-in anchor	1/2″
	Lag shield	3/8″ (long or short)
	Calk-in anchor	5/16″
	Double expansion shield	5/16″
	Single expansion shield	5/16″
3/4″	Wedge anchor	3/4″
	Sleeve anchor	3/4″
	Lag shield	1/2″ (long or short)
	Calk-in anchor	3/8″
	Double expansion shield	3/8″
7/8″	Wedge anchor	7/8″
	Drop-in anchor	5/8″
	Lag shield	5/8″ (long or short)

BIT	ANCHOR	ANCHOR SIZE
	Calk-in anchor	1/2″
	Double expansion shield	1/2″
	Single expansion shield	1/2″
1″	Wedge anchor	1″
	Drop-in anchor	3/4″
	Lag shield	3/4″ (short)
	Double expansion shield	5/8″
	Single expansion shield	5/8″
1-1/4″	Wedge anchor	1-1/4″
	Double expansion shield	3/4″

Anchor size: a drop-in is sized by its thread, a lag shield by its lag screw, calk-in anchors and expansion shields by their bolt. From our concrete anchor chart, checked against the anchor makers' own installation data. Only the bits both agree on.

Good to know

Use a bit made to ANSI B212.15 for anchors. Anchor makers call for it: the standard holds the hole a few thousandths over the nominal size, the hole their anchors are tested in. A worn or out-of-tolerance bit can cut an anchor's holding power.

SDS-plus and SDS-max are not interchangeable. Each shank fits only its own chuck, whatever the bit size — match the shank to the rotary hammer.

Quick answers

What size masonry bit for a 1/2 inch wedge anchor?

A **1/2″** carbide masonry bit — a wedge anchor takes a bit the same size as the anchor.

What size bit for a 3/8 drop-in anchor?

A **1/2″** bit: a drop-in is named by its inside thread, and the hole is bigger than the thread.

What size bit for a 1/4 inch concrete screw?

A **3/16″** bit, per our concrete anchor chart.

How big a hole does a 1/2 inch masonry bit drill?

ANSI B212.15 holds a 1/2″ carbide-tipped masonry bit to **.520″ – .530″** across the tip, a little over its size, so anchors fit the hole they were tested in.

What is the shank size of SDS-plus and SDS-max bits?

SDS-plus: **10 mm**. SDS-max: **18 mm**. The two are not interchangeable.

Reference values drawn from the governing standards. For critical applications, confirm against the standard and the manufacturer's published data. Technical information disclaimer →