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FASTENER SPECIALISTS SINCE 1977

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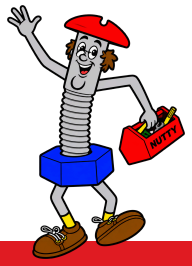
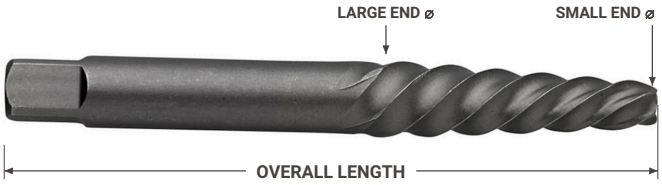


PRODUCT DATA SHEET

Screw Extractors – Spiral & Square



SPIRAL FLUTE – X1 SERIES



STRAIGHT SQUARE – X2 SERIES

- **Screw extractors** remove broken screws, bolts, studs and pipe fittings. Drill a pilot hole, insert the extractor and turn counterclockwise.
- **Spiral flute (X1):** left hand tapered spiral flutes bite in as you turn, sizes #1–#12.
- **Straight square (X2):** tapered straight flutes are tapped in, then turned. They do not expand the part, ideal for thin walled pipe and fittings, sizes #1–#7.
- **Removes** right hand threaded parts.

1.0 Spiral Flute Screw Extractors – X1 Series with drill size required, inches

Stock #	Extractor Size	Drill Size Required		Removes Bolts & Screws (Dia.)	Removes Pipe (NPT)	Small End Dia.	Large End Dia.	Overall Length
		Fraction	Decimal					
X1-1	#1	5/64"	.0781	3/16" – 1/4"	–	.054"	5/32"	2"
X1-2	#2	7/64"	.1094	1/4" – 5/16"	–	.080"	3/16"	2-3/8"
X1-3	#3	5/32"	.1563	5/16" – 7/16"	–	1/8"	1/4"	2-11/16"
X1-4	#4	1/4"	.2500	7/16" – 9/16"	–	3/16"	21/64"	2-7/8"
X1-5	#5	19/64"	.2969	9/16" – 3/4"	1/8", 1/4"	1/4"	7/16"	3-3/8"
X1-6	#6	13/32"	.4063	3/4" – 1"	3/8"	3/8"	19/32"	3-3/4"
X1-7	#7	17/32"	.5313	1" – 1-3/8"	1/2"	1/2"	3/4"	4-1/8"
X1-8	#8	13/16"	.8125	1-3/8" – 1-3/4"	3/4"	3/4"	1"	4-3/8"
X1-9	#9	1-1/16"	1.0625	1-3/4" – 2-1/8"	1"	1"	1-9/32"	4-5/8"
X1-10	#10	1-5/16"	1.3125	2-1/8" – 2-1/2"	1-1/4"	1-1/4"	1-9/16"	5"
X1-11	#11	1-9/16"	1.5625	2-1/2" – 3"	1-1/2"	1-1/2"	1-7/8"	5-5/8"
X1-12	#12	1-15/16"	1.9375	3" – 3-1/2"	2"	1-7/8"	2-9/32"	6-1/4"

How to read: find the diameter of the broken bolt or screw, read across to the extractor size, then drill the pilot hole with the drill size shown in red.

2.0 Straight Square Screw Extractors – X2 Series with drill size required, inches

Stock #	Extractor Size	Drill Size Required		Removes Bolts & Screws (Dia.)	Removes Pipe (NPT)	Small End Dia.	Large End Dia.	Overall Length
		Fraction	Decimal					
X2-1	#1	5/64"	.0781	3/16" – 1/4"	–	.054"	5/32"	2"
X2-2	#2	7/64"	.1094	1/4" – 5/16"	–	.080"	3/16"	2-3/8"
X2-3	#3	5/32"	.1563	5/16" – 7/16"	–	1/8"	1/4"	2-11/16"
X2-4	#4	1/4"	.2500	7/16" – 9/16"	–	3/16"	21/64"	2-7/8"
X2-5	#5	19/64"	.2969	9/16" – 3/4"	1/8", 1/4"	1/4"	7/16"	3-3/8"
X2-6	#6	13/32"	.4063	3/4" – 1"	3/8"	3/8"	19/32"	3-3/4"
X2-7	#7	17/32"	.5313	1" – 1-3/8"	1/2"	1/2"	3/4"	4-1/8"

3.0 Screw Extractor Sets

Stock #	Description	Sizes Included	Drill Sizes Required (inches)
X1-1-5	5 pc. Spiral Screw Extractor Set	#1 – #5	5/64, 7/64, 5/32, 1/4, 19/64
X1-1-6	6 pc. Spiral Screw Extractor Set	#1 – #6	5/64, 7/64, 5/32, 1/4, 19/64, 13/32
X2-1-5	5 pc. Square Screw Extractor Set	#1 – #5	5/64, 7/64, 5/32, 1/4, 19/64
X2-1-6	6 pc. Square Screw Extractor Set	#1 – #6	5/64, 7/64, 5/32, 1/4, 19/64, 13/32

4.0 How to Remove a Broken Screw or Bolt

1. **Center punch** the exact center of the broken screw or bolt so the drill does not wander.
2. **Drill the pilot hole** with the drill size listed for your extractor, straight down the center line and deep enough for the extractor to grip without bottoming out. A left hand drill bit often backs the broken piece out on its own.
3. **Spiral:** insert the extractor and turn it **counterclockwise** with a tap wrench. The left hand flutes bite harder as resistance increases.
4. **Square:** tap the extractor lightly into the hole with a hammer so the straight flutes seat, then turn **counterclockwise** with a tap wrench or wrench. Square extractors do not expand the part, which helps on thin walled pipe and fittings.
5. **Steady, even pressure.** Extractors are hardened and brittle; do not use an impact driver or strike them sideways. Penetrating oil and heat help free rusted or seized parts.

Disclaimer: The above is a compilation of manufacturer and industry data. The Nutty Company, Inc. has made every effort to present the data accurately. However, The Nutty Company, Inc. cannot be held liable for any claim traceable to any errors, typographical or otherwise, contained herein. Drill and fastener sizes are recommendations; always wear eye protection.



Need a left hand drill, tap wrench or a size you don't see?
Call 203.877.1709 or email sales@nutty.com – shop online at nutty.com/tools/screw-bolt-extractors