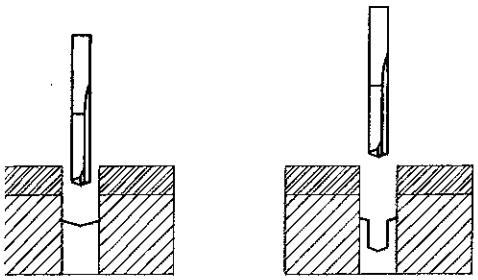
3 - Set **ZBDR4** – provides 4 solid carbide drills for drilling operation, for acceptance andard straight flute extractors (not provided). Solid carbide drills will drill in hardened rials. Use with drilling speeds, very carefully drill with no side pressure to the drill.

MATCO #	Dia.	for Extractor Size (Not Included)
ZBDR125	1/8	SE1 #1
ZBDR187	3/16	SE2 #2
ZBDR234	15/64	SE3 #3
ZBDR312	5/16	SE4 #4



ways wear proper safety glasses and equipment when operating any cutting tool

MATCO TOOLS

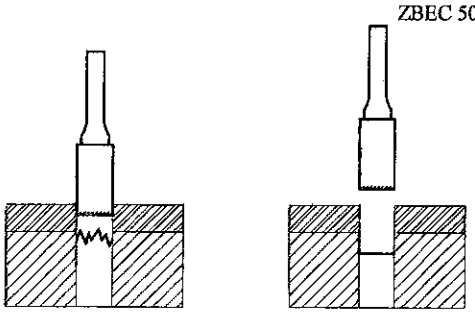
Bust-N-Out ™
Broken Bolt Removal System

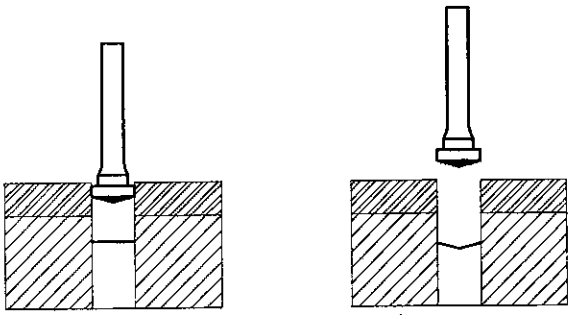
System specifically designed for successful removal of sub-surface broken bolts and studs. Each tool is made for specific bolt hole sizes to properly prepare the broken surface, greatly increasing the operators ability to drill the broken bolt on center saving the existing threaded hole and the component.
Bust-N-Out carbide burrs are designed for use in high speed die grinders. Right angle die grinders provide the operator with proper speeds and best control. Carefully keep tool orientation straight to the surface of the broken bolt to achieve best results.

USER GUIDE

OP 1 – Set ZBEC5 – provides 5 specialty end cutting carbide burrs to properly prepare (flatten) the rough surface of the broken bolt. Use in a high speed right angle die grinder, careful to keep burr orientation straight to the surface being ground.. The broken surface will now be properly prepared for OP2 to locate the broken bolts centerline.

MATCO #	Bolt Size
ZBEC250	1/4-20, 24, 28, M6
ZBEC312	5/16-18, 24, 32, M8
ZBEC375	3/8-16, 24, M10
ZBEC437	7/16-14, 20, M12
ZBEC 500	1/2-13, 20, M14



OP 2 – Set ZBCD5 – provides 5 specialty angle ground burs for use after OP 1, will properly locate broken bolts center point providing greater ability for the drilling operation to drill in center.

MATCO#	Bolt Size
ZBCD250	1/4-20, 24, 28, M6
ZBCD312	5/16-18, 24,3 2, M8
ZBCD375	3/8-16, 24, M10
ZBCD437	7/16-14, 20, M12
ZBCD500	1/2-13, 20, M14