



General information and recommendations about tools for drilling, counterboring, countersinking, tapping and milling of Hardox® HiTuf, 400, 450, 500, 550, 600 and Extreme. For more information about how to machine Hardox wear plate see our brochure “Machining” on www.hardox.com or consult our Technical Customer Service. Note that not all recommendations are valid for all grades.

Hardox material characteristics

Name	Typical Hardness [HBW]	Typical tensile strength, R_m [N/mm ²]
Hardox HiTuf	350	940
Hardox 400	400	1250
Hardox 450	450	1400
Hardox 500	500	1550
Hardox 550	550	1650
Hardox 600	600	1800
Hardox Extreme	650–700	not applicable

Drilling in Hardox

INDEXABLE DRILL FOR HARDOX HITUF, 400, 450, 500, 550 AND 600

Maximum drill length: $2-5 \times D_c$
 Insert grades: Center insert LM 1044,
 Peripheral insert LM 4044

Supplier:
 Sandvik Coromant AB
 Sweden
www.sandvik.com



Tool name	Article nr	Diameter range [mm]
Corodrill 880	880-Dxxxxxx-xx	12.0–63.00

INDEXABLE HEAD DRILL FOR HARDOX HITUF, 400, 450, 500, 550 AND 600

Maximum drill length $3 \times D_c$ and $5 \times D_c$
 Drillhead grade: IC908

Supplier:
 Iscar
 Israel
www.iscar.com



Tool name	Article nr	Diameter range [mm]
Chamdrill	DCM xxx-xxx-xxA-xD	7.50–25.9

BRAZED CARBIDE DRILL FOR HARDOX HITUF, 400, 450, 500 AND 600

Maximum drill length $3,5 \times \varnothing$

Supplier:
 Sandvik Coromant AB
 Sweden
www.sandvik.com



Tool name	Article nr	Diameter range [mm]
Coromant Delta drill	R411.5-xxxxDxx.xx	9.50–30.40

HIGH SPEED STEEL DRILL ALLOYED WITH 8% COBALT (HSS-CO8%) FOR HARDOX HITUF, 400, 450, 500

Supplier:
 Alpen-MayKestag
 Austria
www.alpenmaykestag.com



Tool name	Article nr	Diameter range [mm]
HSS ECo 8 Taper Shank Drills, WN 103	832xxxxx	8.00–40.00

SOLID CARBIDE DRILL FOR HARDOX HITUF, 400, 450, 500, 550, 600 AND EXTREME

Start recommendation for Hardox Extreme $V_c 16-26$,
 $f_n 0.07-0.12$.

Supplier:
 Granlund tools AB
 Sweden
www.granlund.com



Tool name	Article nr	Diameter range [mm]
THUNDER/T80	T80-xx.x	10.00–30.00

Counterboring in Hardox

HARDOX HITUF, 400, 450, 500, 550 AND 600

Use counterbore with indexable inserts.
 Remember always use a revolving pilot.

Supplier:
 Granlund tools AB
 Sweden
www.granlund.com



Tool name	Article nr	Diameter range [mm]
WHV counterbore	xWHV-xx,x	18.0–75.00

Countersinking in Hardox

HARDOX HITUF, 400, 450, 500, 550 AND 600

Use countersink with indexable inserts. Remember always use a revolving pilot.

Supplier:

Granlund tools AB
Sweden
www.granlund.com



Tool name	Article nr	Diameter range [mm]
KV countersink	xKV9-xx.x	20.5–60.

Tapping in Hardox

HARDOX HITUF, 400, 450 AND 500

Use high speed steel, alloyed with cobalt, coated with TiCN. In applications in which thread strength is not critical, a somewhat larger than standard hole diameter can be drilled (about 3% larger). For blind holes use thread milling.

Suppliers:

Manigley
Switzerland
www.manigley.ch

Emuge Franken

Germany
www.emuge.de/english/Home.htm



Through hole		
Tool name	Article nr	Diameter range
105/4 DUO	433xx	M3–M27



Through hole		
Tool name	Article nr	Diameter range
Rek 2C-NI-TiCN C816	C030J401-xxxx	M3–M20

Thread milling in Hardox

HARDOX HITUF, 400, 450, 500, 550 AND 600

Use solid carbide thread milling cutter coated with TiCN. Use this tool only together with a numerically controlled milling machine.

Supplier:

Emuge Franken
Germany
www.emuge.de/english/Home.htm



Tool name	Article nr	Diameter range
VHM TiCN G271	GF 333106.xxxx	M4–M16

Face milling

IN HARDOX HITUF, 400, 450, 500 AND 600

When roughing, use a cutter with round inserts for maximum stability. When finishing, select a cutter with 45° setting angle. In both cases, make sure to obtain a light cutting edge geometry. The carbide grade should be in the range P10 to P30. The following manufacturers of metal cutting tools operate around the world.

Suppliers:

Kennametal Inc
USA
www.kennametal.com

Iscar

Israel
www.iscar.com

Sandvik Coromant AB

Sweden
www.coromant.sandvik.com

Seco Tool AB

Sweden
www.secotools.com



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