

● APPLICATION & SELECTION GUIDE

STECHTOL

Cutting Tools

Precision tools for stone shaping & engraving — engineered with premium diamond grits and metal powders through cold-press forming and vacuum hot-press sintering.

GRANITE

QUARTZ STONE

SANDSTONE

MATERIAL

Diamond Grit + Metal Powder

APPLICATIONS

Granite · Quartz · Sandstone

PROCESS

Vacuum Hot-Press Sintering

DOCUMENT

Tool Selection Guide · EN

STECHTOL

SINTERED DIAMOND BURRS · CNC ROUTER TOOLS

00

CONTENTS

Quick Reference Index

How to use this guide. Start with Section 2 — match your stone's Mohs hardness to a scenario, then pick the right D-SIN series. Section 9 lists the full model catalogue. One workpiece often calls for multiple tools; splitting roughing, bottoming, finishing and detail engraving across tools is faster and extends tool life.

01	Tool Overview MATERIAL · PROCESS · PRODUCT FAMILY	03
02	Selection by Scenario MOHS 5.5–7.0+ · GRANITE · QUARTZ	04
03	Parameters & Adjustment RPM · FEED · DEPTH · STEPOVER · FORMULA	05
04	Tool Life Reference HOURS · METERS · WEAR FACTORS	06
05	Per-Profile Tips FLAT · BALL NOSE · TAPERED	07
06	Control & Management FIRST-PIECE TRIAL · RE-SHARPENING	08
07	FAQ SYMPTOMS · CAUSES · ADJUSTMENTS	09
08	Model Quick-Index BY APPLICATION SCENARIO	10
09	Full Product Catalogue 99 MODELS · D-SINS TO D-SINT	11

Need a recommendation?

Send us your stone type and machining scenario — our team will match the right D-SIN series from the full range.

STECHTOL www.stechtoll.com

01

TOOL OVERVIEW

STECHTOL Sintered Diamond Tools

STECHTOL sintered diamond tools are manufactured using carefully selected high-quality diamond grits and premium metal powders. By adopting a **pre-pressing forming and vacuum hot-press sintering** process, we maintain a meticulous attitude in every production stage and enforce strict, standardized quality control procedures to ensure the superior quality of every single tool.

Backed by a robust inventory system and a comprehensive range of specifications, we are well equipped to meet diverse machining requirements with fast response times. From raw material selection to final delivery, STECHTOL is driven by technology and earns trust through quality.

The D-SIN Product Family

D-SINS

GROOVED FLAT END MILL · STANDARD

Standard grooved flat — main series, wear-resistant & sharp

D-SINS-H

GROOVED FLAT END MILL · HARDER

Grooved flat, harder grade for high-wear scenarios

D-SINF

GROOVELESS FLAT END MILL

Grooveless flat — smooth bottom, thick wear layer

D-SIFH

FLAT END MILL · SUPERHARD / HARD FRET

Ultra-hard flat for quartz & ultra-hard stone

D-SIFL

FLAT END MILL · LIMESTONE

Flat end mill for limestone

D-SIFN

FLAT END MILL · NEW SLAB

Flat end mill for new slab

D-SINQ

BALL NOSE · STANDARD

Ball nose, standard grade — roughing & finishing

D-SIQH

BALL NOSE · SUPERHARD

Ball nose, superhard grade for dense stone

D-SINT

TAPERED BALL-NOSE ENGRAVING

Tapered ball nose for small text & detail

3-Step Selection Method. ① **Stone hardness** decides the grade · ② **Machining scenario** decides the tool type (grooved for chip evacuation; grooveless / ball nose for finishing) · ③ **Precision required** decides the series (tapered ball nose for small text and fine detail).

02

SELECTION GUIDE

By Hardness Grade & Machining Scenario

■ Mohs 5.5–6.0 · Soft Granite — e.g. Santa Cecilia, Giallo Veneziano

Machining Scenario	Recommended Tool Type	Key Features	Series
Large-area bottoming / finishing	Grooveless flat end mill	Smooth flat bottom, extra-thick wear layer for polished finish	D-SINF
Relief roughing	Ball nose (larger Ø)	Fast material removal, leaves finishing allowance	D-SINQ
Relief finishing	Ball nose (small Ø / tight stepover)	Stair-step free, smooth curved surface	D-SINQ / D-SIQH
Engraving & small text	Tapered ball-nose bit	Rigid, rounded strokes, no edge chipping	D-SINT

■ Mohs 6.0–6.5 · Medium Granite — e.g. G603, G623, Baltic Brown, Kashmir White

Machining Scenario	Recommended Tool Type	Key Features	Series
Cutting / slotting	Grooved flat end mill	Wear-resistant & sharp, flat bottom finish	D-SINS
Large-area bottoming	Grooveless flat end mill	Smooth bottom, thick wear layer, long service life	D-SINF
Relief roughing	Ball nose (larger Ø)	Rapid stock removal, balanced speed & finish	D-SINQ
Relief finishing	Ball nose (small Ø / tight stepover)	Clean surface, no stair-stepping	D-SINQ / D-SIQH
Deep engraving / hollowing	Grooved flat end mill	Excellent chip evacuation & cooling, anti-seizing	D-SINS
Small text / round-bottom letters	Tapered ball-nose bit	High rigidity, rounded detail, no chipping	D-SINT

A single workpiece often calls for multiple tools — roughing, bottoming, relief finishing and detail engraving should be split across tools. This is faster and extends tool life versus forcing one tool through every stage.

■ **Mohs 6.5–7.0 · Hard Granite** — e.g. Black Galaxy, Absolute Black, Shanxi Black

Machining Scenario	Recommended Tool Type	Key Features	Series
Cutting / slotting	Grooved flat end mill	Ultra-wear-resistant, stays sharp under high abrasion	D-SINS / D-SIFH
Relief roughing	Ball nose (larger Ø)	Fast roughing with impact-resistant grade	D-SINQ
Relief finishing	Ball nose (small Ø / tight stepover)	Fine finish on dense, hard surface	D-SIQH
Deep engraving / slots	Grooved flat end mill	Strong chip evacuation, prevents tool stalling	D-SINS / D-SIFH
Small text / detail carving	Tapered ball-nose bit	Maximum rigidity for fine, chip-free detail	D-SINT

■ **Mohs 7.0+ · Ultra-Hard & High-Quartz** — e.g. Quartz Stone, Engineered Stone, Indian Red

Machining Scenario	Recommended Tool Type	Key Features	Series
Cutting / edge profiling	Ultra-hard grooved flat end mill	Impact-resistant, built for extreme abrasion	D-SIFH
Relief roughing / finishing	Ball nose (hard grade)	Holds edge longer on high-quartz materials	D-SIQH
Deep engraving / hollowing	Grooved flat end mill	Superior cooling & chip clearance, anti-breakage	D-SIFH
Fine detail / lettering	Tapered ball-nose bit	Rigid tip, precise detail on dense stone	D-SINT

Key machining tips. ① **Chip evacuation first** — for deep engraving, hollowing and slots always use a grooved tool (D-SINS); keep chips clear to avoid stalling and overheating. ② **Use tapered bits for detail** — for small text, round-bottom letters and shallow relief, choose a tapered ball nose (D-SINT), far more rigid than thin-shank tools, with no chipping. ③ **Split roughing & finishing** across dedicated tools.

A Soft Granite

Runs faster and lighter. Use a grooveless flat (D-SINF) for a polished bottom or a ball nose (D-SINQ) for relief; fine detail with a tapered ball nose (D-SINT).

B Medium Granite

The balanced range — grooved flat (D-SINS) for cutting & deep slots, grooveless (D-SINF) for bottoming, ball nose (D-SINQ / D-SIQH) for relief.

C Hard Granite

Demands harder, impact-resistant grades. Ultra-wear grooved flats (D-SINS / D-SIFH) for cutting, hard-grade ball nose (D-SIQH) for finishing.

D Ultra-Hard & Quartz

Lowest speed and lightest passes. Ultra-hard grooved flats (D-SIFH) for cutting and deep engraving; hard-grade ball nose (D-SIQH) for relief.

03 PARAMETERS & ADJUSTMENT

Cutting Parameters & Adjustment Guide

1 · Core Parameter Recommendations for a Ø10 mm sintered diamond end mill

Stone Type	Spindle Speed (rpm)	Feed Rate (mm/min)	Depth of Cut / Pass	Stepover	Cooling / Notes
Ordinary Granite Mohs 6–6.5 Ø10 mm sintered tool	4,000–7,000	Roughing 300–800 Finishing 200–500	Roughing 1–3 mm Finishing 0.3–1.0 mm	Roughing 20–40% Finishing 5–15%	Water cooling 2–4 L/min onto the cutting point; dry cutting only for shallow engraving
Soft Granite Mohs 5.5–6	6,000–10,000	Roughing 800–1,500 Finishing 400–800	Roughing 2–4 mm Finishing 0.5–1.5 mm	Roughing 20–40% Finishing 5–15%	Small-diameter electroplated tools can be used for detail work, good efficiency
Hard Granite Mohs 6.5–7	4,000–6,000	Roughing 200–500 Finishing 150–350	Roughing 1–2 mm Finishing 0.2–0.8 mm	Roughing 20–40% Finishing 5–15%	Under Ø3 mm use for engraving only, not heavy cutting; soft bond prevents polishing
Ultra-Hard / Quartzite Mohs 7–7.5+	3,000–5,000	Roughing 150–350 Finishing 100–250	Roughing 0.5–1.5 mm Finishing 0.1–0.5 mm	Roughing 20–40% Finishing 5–15%	Control line speed 20–35 m/s; lower rpm on large-diameter tools

Entry method (all types): helical / ramp entry only — vertical plunging is forbidden (sintered tools have only average impact resistance).

2 · Peripheral Speed Formula

Recommended peripheral speed for diamond tools: **20 – 35 m/s**.

$$V = \pi \times D \times N / 60000$$

Where **V** = peripheral speed (m/s) · **D** = tool diameter (mm) · **N** = spindle speed (rpm)

Example: a Ø12 mm tool running at 25 m/s → **N ≈ 39,789 rpm**. Small tools can run at high speed; large tools must run at lower speed.

3 · First Trial Cut & Dynamic Adjustment

Starting point for a first job: **12,000 rpm · 1,000 mm/min · 1.5 mm depth**; increase gradually once the cutting sound is stable. A generous bottom allowance on roughing allows slightly more aggressive parameters; finishing must stay conservative. Rule of thumb: the harder the granite and the higher its quartz content, the more conservative the parameters.

Symptoms & Adjustment Strategy

Abnormal Symptom	STECHTOL Adjustment Suggestion
Machine groans / loses speed / vibrates heavily	Reduce feed first, then reduce depth of cut
Tool heats up / smokes / wears quickly	Lower rpm or feed and increase coolant flow
Bottom edge chipping / coarse marks	Reduce feed, reduce stepover, leave a finishing pass
Edge spalling / bursting	Excessive depth / too-fast feed / dull tool / no cooling / low rigidity
Tool tip breaks	Vertical plunge / Z-feed too fast / overhang — switch to ramp entry
Shrill sound / polished surface	Diamond glazing — lowering feed won't help; sharpen or replace the tool

Parameters above are based on conventional stone CNC-machining experience. Always adjust gradually through trial cuts, according to machine condition and coolant supply.

4 · Four Tuning Rules

- 0 **Hard stone:** moderate rpm, slow feed, shallow cut, ramp entry, plenty of water cooling.
- 1 **Soft stone:** feed can be raised and cuts a little deeper — but still guard against edge chipping.
- 2 **High quartz:** soft bond + coarse grit, and avoid excessive radial load.
- 3 **Reading the symptoms:** shrill sound / smoke / polished surface → glazing, change or re-sharpen the tool; edge spalling → depth / feed / cooling; tip breakage → entry method / overhang.

The figures above are based on conventional stone CNC-machining experience. Always adjust gradually through trial cuts, according to machine condition and coolant supply.

04 TOOL LIFE Expected Service Life Under Standard Conditions

With sufficient water cooling, normal spindle rigidity and properly selected parameters (the "high speed, slow feed" approach):

80–120_h Ø6–Ø10 mm flat tool, continuous granite cutting	60–90_h Ø12 mm and above · higher load, shorter life	800–1000_m Total effective cutting length (granite wears ~30% faster than marble)	300–500_{m²} Surface milling equivalent for large-area bottoming
---	---	---	---

■ Tool-Life Differences by Profile

G Grooved Flat

Good chip evacuation and low resistance, but the metal layer at the tip is relatively thin — ideal for deep engraving. Overall life is slightly affected by groove wear.

N Grooveless Flat

Thick wear layer, more durable for large-area bottoming, but higher friction. If cooling is poor it can “burn” and lose life suddenly.

B Ball Nose

Light cuts during finishing mean slow wear; but using a ball nose for rough engraving (large depth) wears the tip flat very quickly.

■ Four Core Variables That Decide Tool Life

1 Granite Material

High-silica / high-quartz stone (e.g. Shanxi Black, deep grey granite) is extremely abrasive — life may be reduced by **30–50%**. Ordinary white / medium granite is close to standard life.

2 Cooling & Chip Evacuation

Strong water cooling directed at the tool tip gives the longest life. Above ~680 °C the matrix softens and diamond graphitises / falls off — the tool can fail within hours.

3 Cutting Parameters

Excessively fast feed or deep cuts (e.g. forcing a >3 mm deep slot) increase impact, chipping and grit loss. Too low rpm (“ploughing” rather than cutting) also accelerates matrix wear.

4 Tool Formulation

Diamond concentration and matrix hardness (cobalt / nickel based) must match the granite. Too soft a matrix → fast grit loss; too hard a matrix → no self-sharpening, dull & overheated.

05

OPERATING TIPS

Per-Profile Practical Guide

① Flat End Mill — Grooved / Grooveless

- **Grooved:** first choice for deep slots and hollowing. At greater depths the grooves guide water and stone slurry out, avoiding stalling. Note: if feed is too fast the bottom may show slight wave marks — better suited to roughing and 2-D large text.
- **Grooveless:** first choice for large-area bottoming. With no side grooves, the bottom cut is continuous and flatter — ideal for the final finishing pass or straight-wall contour finishing. Higher friction, so keep cuts shallow and cooling water covering the tool tip.

② Ball Nose — Relief / Curved Surfaces

- **Roughing:** use a larger step (e.g. 0.5–0.8 mm for an R3 ball nose) to remove background and rough轮廓 quickly, leaving 0.2–0.5 mm for finishing.
- **Finishing (light cut):** stepover is critical — keep it very small (e.g. 0.1–0.2 mm for an R3 ball nose) to avoid “terracing”. Prefer contour or 3-D parallel + crosshatch toolpaths; complex reliefs may need multi-axis or zoned finishing.
- **Wear monitoring:** when the ball tip flattens, the machined surface shows flat-bottom marks — re-sharpen with a diamond wheel or replace in time.

③ Tapered Ball-Nose Engraving Tool

- **Positioning:** designed for small granite text (common character height 10–30 mm), round-bottom letters, fine strokes and shallow-relief detail. The ball tip gives rounded, non-chipping strokes; the tapered shank adds rigidity.
- **Parameters:** high rpm, slow feed — spindle 18,000–24,000 rpm and feed 300–800 mm/min (very fine text: 22,000–30,000 rpm, feed 200–500 mm/min).
- **Shallow cut & tight stepover:** single pass 0.2–0.5 mm (very fine text 0.1–0.3 mm); stepover 5–8% of ball diameter (e.g. R1.5 → 0.15–0.24 mm) for a smooth, edge-free stroke bottom.
- **Layering:** total text depth 0.6–1.2 mm in 3–4 passes; the final pass at the same depth for a clean sweep — never plunge deep in one hit.
- **Toolpath & setup:** helical / ramp entry only, never vertical plunge. Enable 30–50% corner deceleration in CAM — corners are the highest-risk zone for chipping and breakage on brittle granite. Keep overhang ≤ flute length and direct cooling water straight at the cutting point.
- **Wear check:** watch for a small flat on the ball tip, flat-bottom marks in strokes or increasing edge burr. When dull, lightly re-sharpen with a diamond wheel (grind <0.1 mm) — never force a dull tool.

06

CONTROL & MANAGEMENT

Practical Forecasting & Control Suggestions

1

"First-piece trial + logbook"

On a new tool, trial cut at 50% feed and record the initial state; during production record each tool's cumulative machining hours / meters to learn the pattern for your most-cut stones (e.g. average 80 h on Sesame Black before re-sharpening).

2

Break in the tool

Light cuts on the first few passes (or a break-in on scrap stone) let the diamond expose its cutting edges evenly and extends subsequent life.

3

Parameter red lines

Layer the depth of cut (deep slots $\leq 2-3$ mm per layer), decelerate on corners and keep cooling water coverage complete.

4

Re-sharpen for reuse

When dull, a light touch with a diamond wheel (grind < 0.1 mm) restores sharpness — far more economical than scrapping the tool.

Summary. Under conventional (medium-hard) granite + standard water cooling + reasonable parameters, the predicted life of a single tool is **~80–120 hours (or ~800 linear meters)**. In practice, forecast dynamically using a **machining-hours logbook plus visual / audible wear signals**; for high-hardness stone apply a **50–70% discount** to the estimate.

07

FAQ

Frequently Asked Questions

1

Grooved or grooveless — which to choose?

For large-area milling and bottom finishing choose **grooveless** for a flatter bottom. For deep engraving, hollowing and deep slots choose **grooved** — better chip evacuation and cooling, less breakage or stalling.

2

Why does the machine scream while cutting?

A sharp squeal usually means the linear feed is far too low for the current rpm — the tool is scrubbing and burning rock instead of cutting it. **Lower the rpm or raise the feed rate.**

3

Why do relief edges spall / peel?

Severe edge chipping is usually caused by too-fast plunge / Z-feed or a badly worn tool. Lower the Z-axis feed rate, ensure a ramp entry path, and check that coolant hits the cutting zone directly.

4

How do I find the right feed rate for an unknown stone?

Always use a digital test grid. Start very conservatively (e.g. 6,000 rpm, 500 mm/min) with a shallow straight cut, then increase feed in ~10% steps until the machine chatters or surface quality drops; back off ~15% for a safe production speed.

Symptom → Cause → Adjustment

Symptom	Possible Cause	Adjustment Suggestion
Tool heats up, smokes	Insufficient cooling or rpm too high	Increase water cooling, lower rpm / feed
Bottom edge chipping, coarse marks	Feed too fast, stepover too large	Reduce feed, reduce stepover, leave a finishing allowance
Machine groans, vibrates heavily	Feed too fast or depth too large	Reduce feed first, then reduce depth of cut
Ball-nose tip wears flat	Using a ball nose for rough engraving	Use a flat end mill for roughing; ball nose for finishing only
Tool catches at entry	Direct vertical plunge	Use a helical or ramp Z-axis entry path
Deep ridges in 3-D relief	Step height set too large	Reduce stepover to 8–10% of tool diameter
Diamond grit tears out	Insufficient coolant flow	Clean the brass nozzle and increase pump pressure

08

MODEL QUICK-INDEX

By Application Scenario

① Cutting / Milling / Deep Slots Flat End Mill

Scenario	Model Series	Groove / Taper	Grade	Notes
Conventional cutting / bottoming	D-SINS-xxxx	Grooved	Standard / Superhard	Main series — wear-resistant & sharp
Large-area finishing	D-SINF-xxxx	Grooveless	Standard	Smoother bottom finish
Ultra-hard stone	D-SIFH-xxxx	Grooveless / Grooved	Superhard	Impact-resistant

② Relief / Curved Surfaces Ball Nose

Scenario	Model Series	Groove / Taper	Grade	Notes
Conventional relief	D-SINQ-xxxx	—	Standard	Roughing & finishing
Ultra-hard stone relief	D-SIQH-xxxx	—	Superhard	Small text / detail

③ Engraving / Detail Tapered Ball Nose / Tapered Flat

Scenario	Model Series	Groove / Taper	Grade	Notes
Granite relief / engraving	D-SINT-xxxx	Tapered	Standard / Hard	Designed for hard stone

④ Soft Stone (Sandstone / Limestone) Soft-Stone Flat

Scenario	Model Series	Groove / Taper	Grade	Notes
Limestone	D-SIFL-xxxx	Grooveless	Limestone	For limestone
New slab	D-SIFN-xxxx	Grooveless	New Slab	For new slab

09 FULL PRODUCT CATALOGUE

STECHTOL D-SIN Model Catalogue

All models in the current D-SIN range, grouped by series. Dimensions in mm — **SHK** shank · **CED** cutting-edge diameter · **CEL** cutting-edge length · **OAL** overall length.

• D-SINS (1) · Grooved Flat End Mill · Standard

Model	SHK	CED	CEL	OAL	Remark
D-SINS-0620070	6	6	20	70	
D-SINS-0820070	8	8	20	70	
D-SINS-0820120	8	8	20	120	
D-SINS-1020090	10	10	20	90	
D-SINS-1030090	10	10	30	90	
D-SINS-1030120	10	10	30	120	
D-SINS-1230090	12	12	30	90	
D-SINS-1230120	12	12	30	120	
D-SINS-1230150	12	12	30	150	
D-SINS-1630200	16	16	30	200	
D-SINS-6020060	6	6	20	60	Harder
D-SINS-6020090	6	6	20	90	
D-SINS-8020080	8	8	20	80	Harder
D-SINS-8030090	8	8	30	90	Harder
D-SINS-8020115	8	8	20	115	Harder
D-SINS-1010020	10	10	20	100	Harder
D-SINS-1012030	10	10	30	120	Harder
D-SINS-1220090	12	12	20	90	Harder
D-SINS-1225120	12	12	25	120	Harder
D-SINS-1212030	12	12	30	120	Harder

• D-SINF · Grooveless Flat End Mill

Model	SHK	CED	CEL	OAL	Remark
D-SINF-0620070	6	6	20	70	
D-SINF-0820070	8	8	20	70	
D-SINF-0820120	8	8	20	120	
D-SINF-0830090	8	8	30	90	
D-SINF-1020090	10	10	20	90	
D-SINF-1030100	10	10	30	100	
D-SINF-1030120	10	10	30	120	
D-SINF-1230090	12	12	30	90	
D-SINF-1230120	12	12	30	120	
D-SINF-1230150	12	12	30	150	
D-SINF-1430120	14	14	30	120	
D-SINF-1430160	14	14	30	160	
D-SINF-1630120	16	16	30	120	
D-SINF-1630160	16	16	30	160	
D-SINF-1630200	16	16	30	200	

• D-SINS (2) · Grooved Flat End Mill · Standard

Model	SHK	CED	CEL	OAL	Remark
D-SINS-1215030	12	12	30	150	Harder
D-SINS-1425120	14	14	25	120	Harder
D-SINS-1425160	14	14	25	160	Harder
D-SINS-1625120	16	16	25	120	Harder
D-SINS-1625160	16	16	25	160	Harder
D-SINS-1625200	16	16	25	200	Harder
D-SINS-1213020	12.7	13	20	150	
D-SINS-1512730	12.7	13	30	150	
D-SINS-2001730	16	17	30	200	Sharp
D-SINS-3001630	16	17	30	300	Sharp
D-SINS-2021260	20	21	30	260	
D-SINS-1501530	15	15	30	150	
D-SINS-1501620	16	16	20	150	
D-SINS-1201625	16	16	25	120	Harder
D-SINS-1601625	16	16	25	160	Harder
D-SINS-2001625	16	16	25	200	Harder
D-SINS-1001001	16	16	25	230	Harder

• D-SIFH (1) · Flat End Mill · Superhard / Hard Fret

Model	SHK	CED	CEL	OAL	Remark
D-SIFH-0412050	4	4	12	50	Superhard
D-SIFH-0412080	4	4	12	80	Superhard
D-SIFH-0512050	5	5	12	50	Superhard
D-SIFH-0512080	5	5	12	80	Superhard
D-SIFH-0618060	6	6	18	60	Hard Fret
D-SIFH-0620060	6	6	20	60	Superhard
D-SIFH-0620090	6	6	20	90	Superhard
D-SIFH-0820080	8	8	20	80	Superhard
D-SIFH-0820110	8	8	20	110	Superhard
D-SIFH-0830090	8	8	30	90	Superhard
D-SIFH-1020085	10	10	20	85	Superhard
D-SIFH-1020100	10	10	20	100	Superhard
D-SIFH-1030120	10	10	30	120	Superhard
D-SIFH-1025140	10	10	30	150	Superhard
D-SIFH-1040120	10	10	40	120	Superhard
D-SIFH-1220080	12	12	20	80	Superhard
D-SIFH-1225120	12	12	25	120	Superhard
D-SIFH-1213025	12	12	13	120	Superhard
D-SIFH-1230120	12	12	30	120	Superhard
D-SIFH-1230150	12	12	30	150	Superhard

09

FULL PRODUCT CATALOGUE

STECHTOL D-SIN Model Catalogue

• D-SIFH (2) · Flat End Mill · Superhard / Hard Fret

Model	SHK	CED	CEL	OAL	Remark
D-SIFH-1240120	12	12	40	120	Superhard
D-SIFH-1425120	14	14	25	120	Superhard
D-SIFH-1425160	14	14	25	160	Superhard
D-SIFH-1625120	16	16	25	120	Superhard
D-SIFH-1625160	16	16	25	160	Superhard
D-SIFH-1625200	16	16	25	200	Superhard

• D-SIFL · Flat End Mill · Limestone

Model	SHK	CED	CEL	OAL	Remark
D-SIFL-0618060	6	6	18	60	Limestone
D-SIFL-0820080	8	8	20	80	Limestone
D-SIFL-1020085	10	10	20	85	Limestone
D-SIFL-1020100	10	10	20	100	Limestone

• D-SIFN · Flat End Mill · New Slab

Model	SHK	CED	CEL	OAL	Remark
D-SIFN-1020100	10	10	20	100	New Slab

• D-SINQ · Ball Nose · Standard

Model	SHK	CED	CEL	OAL	Remark
D-SINQ-0604010	6	4	10	60	
D-SINQ-0615070	6	6	15	70	
D-SINQ-0820080	8	8	20	80	
D-SINQ-1030120	10	10	30	120	
D-SINQ-1230120	12	12	30	120	
D-SINQ-1230150	12	12	30	150	
D-SINQ-1630200	16	16	30	200	

• D-SIQH · Ball Nose · Superhard

Model	SHK	CED	CEL	OAL	Remark
D-SIQH-0603010	6	3	10	60	Superhard
D-SIQH-0604010	6	4	10	60	Superhard
D-SIQH-0605010	6	5	10	60	Superhard
D-SIQH-0615050	6	6	15	50	Superhard
D-SIQH-0820080	8	8	20	80	Superhard
D-SIQH-1020100	10	10	20	100	Superhard
D-SIQH-1225120	12	12	25	120	Superhard
D-SIQH-1230150	12	12	30	150	Superhard

09 FULL PRODUCT CATALOGUE

STECHTOL D-SIN Model Catalogue

• D-SINT (1) · Tapered Ball-Nose Engraving

Model	SHK	CED	CEL	OAL	Remark
D-SINT-6218060	6	2	18	60	
D-SINT-6318060	6	3	18	60	
D-SINT-6418060	6	4	18	60	
D-SINT-8325080	8	3	25	80	
D-SINT-8425080	8	4	25	80	
D-SINT-1043090	10	4	30	90	
D-SINT-1063090	10	6	30	90	
D-SINT-1263012	12	6	30	120	
D-SINT-1283090	12	8	30	90	
D-SINT-1283012	12	8	30	120	
D-SINT-6215055	6	2	15	55	Hard
D-SINT-6315055	6	3	15	55	Hard
D-SINT-6415055	6	4	15	55	Hard
D-SINT-8325800	8	3	25	80	Hard
D-SINT-8425800	8	4	25	80	Hard
D-SINT-8625800	8	6	25	80	Hard
D-SINT-1033010	10	3	30	100	Hard
D-SINT-1043009	10	4	30	90	Hard
D-SINT-1063009	10	6	30	90	Hard
D-SINT-1063010	10	6	30	100	Hard

• D-SINT (2) · Tapered Ball-Nose Engraving

Model	SHK	CED	CEL	OAL	Remark
D-SINT-1083012	10	8	30	120	Hard
D-SINT-1064010	10	6	40	100	Hard
D-SINT-1243010	12	4	30	100	Hard
D-SINT-1263010	12	6	30	100	Hard
D-SINT-1263120	12	6	30	120	Hard
D-SINT-1283011	12	8	30	110	Hard
D-SINT-1264012	12	6	40	120	Hard
D-SINT-1284012	12	8	40	120	Hard
D-SINT-1265012	12	6	50	120	Hard
D-SINT-1285012	12	8	50	120	Hard

Selection by application. ① Cutting / milling / deep slots — flat end mills **D-SINS / D-SIFH** · ② Relief / curved surfaces — ball nose **D-SINQ / D-SIQH** · ③ Engraving / fine detail — tapered ball nose **D-SINT** · ④ Soft stone — limestone / new-slab grades **D-SIFL / D-SIFN**.

Choose STECHTOL — choose efficiency, stability and long-lasting durability.

Send us your stone type and machining scenario and we will recommend the matching D-SIN series from the full range.

STECHTOL www.stechtoll.com

STECHTOL · Sintered Diamond Tools · Application Guide