# TYPHOON HRC

HIGH PERFORMANCE - HARDENED STEEL 45÷62 HRC

Reliable high precision drills for hardened steel 45÷62 HRC.

Punte ad alta precisione per la foratura di acciai temprati 45÷62 HRC.

Hohe Präzision und zuverlässige Bohrungen für gehärteten Stahl 45÷62 HRC.

Forets haute précision et fiables pour acier trempé 45÷62 HRC.

# HRC

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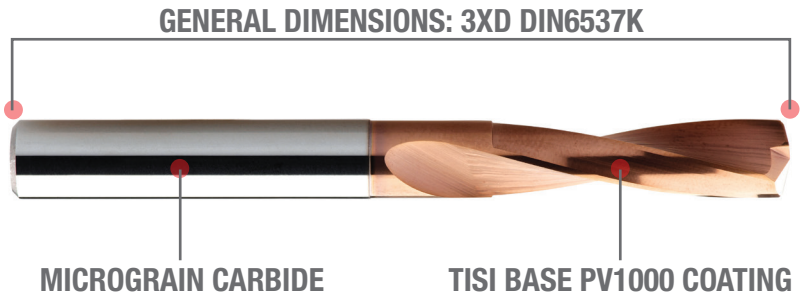
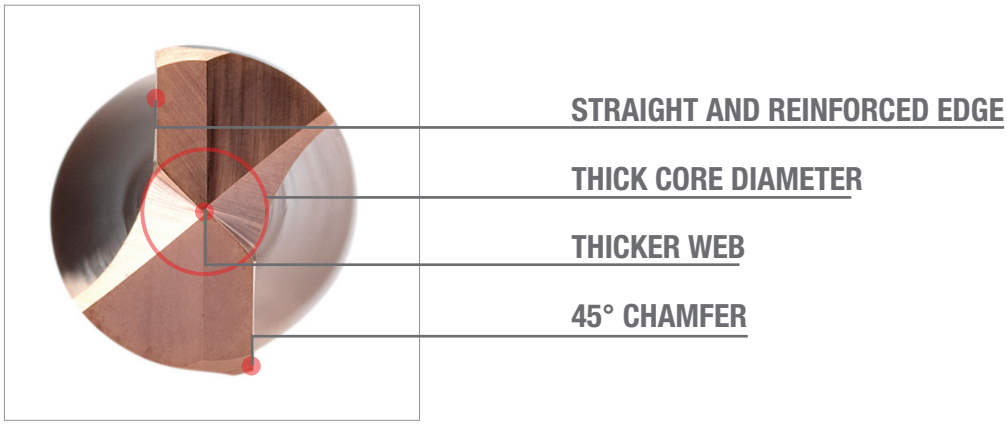
## Features of HRC drills




## Features and Benefits

- Drills for hardened steel 45÷62 HRC
- Self-centering geometry: high accurate holes
- Straight and reinforced edge: high stability and chipping resistance
- 45° chamfer: edge corners protection
- Thicker web: high rigidity and stability
- 15° helix angle: low helix for higher rigidity
- Substrate and coating: specifically selected for high wear resistance, long and stable tool life

- Punte per acciai temprati 45÷62 HRC
- Affilatura autocentrante per l'esecuzione di fori precisi
- Profilo del tagliente diritto e rinforzato
- Geometria degli spigoli: protezione con smusso a 45°
- Nocciolo molto spesso per garantire rigidità e stabilità
- Angolo dell'elica a 15°: angolo poco accentuato per massima robustezza
- Substrato e rivestimento specifici per garantire durata e affidabilità

- Bohrer für gehärteten Stahl 45-62 HRC
- Selbstzentrierender Schliff für die Erstellung von präzisen Bohrungen
- Gerades und verstärktes Schneidkantenprofil
- Geometrie der Kanten: Schutzfase mit 45°
- Sehr starker Kern zur Gewährleistung von Steifigkeit und Stabilität
- Helix 15°: geringer Winkel für maximale Robustheit
- Spezielles Hartmetallsubstrat und Beschichtung zur Gewährleistung von Standzeit und Zuverlässigkeit

- Forets pour aciers trempés 45÷62 HRC
- Affûtage autocentré pour l'exécution de trous précis
- Profil de l'arête droit et renforcé
- Géométrie des angles : protection avec biseau à 45°
- Cœur très épais pour garantir rigidité et stabilité
- Angle de l'hélice à 15° : angle peu accentué pour une solidité maximale
- Substrat et revêtement spécifiques pour garantir durée et fiabilité

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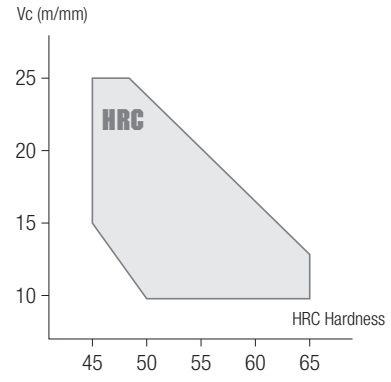
## Cutting speed Vc range




## Use case

| | |
|---|---|
| **Tool Type** | 353HRC |
| **Workpiece** | W.-Nr 1.2379 X155CrVMo12 1(K110) 52HRC |
| **Parameters** | Vc 20 m/min, fn 0,06 mm/rev |
| **Diameter** | 6,8 mm |
| **Coolant** | air |
| **Hole depth** | 25 mm |
| **Machining time:** | |

OSAWA +42%

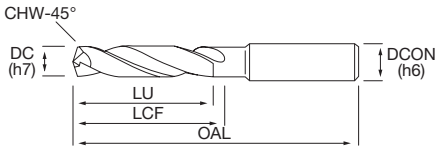
Competitor A

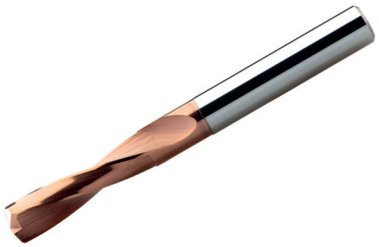
Competitor B

# 353HRC

- Hardened steel 45÷62 HRC

| P | M | K | N | S | H |
|---|---|---|---|---|---|
| | | | | | ★ |



3xD | DIN 6537K | HRC | MG PV1000 | SIG 150° | FHA 15° | CH-45°

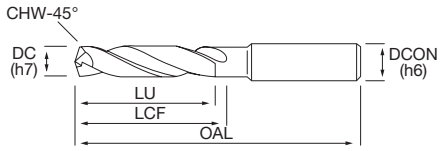
| DC | DC tol. | DCON | TCDCON | LU | LCF | OAL | EDP no. | Stock |
|---|---|---|---|---|---|---|---|---|
| 2.6 | 0/-0.010 | 6 | h6 | 14 | 20 | 62 | **353HRC0260** | ● |
| 3 | 0/-0.010 | 6 | h6 | 14 | 20 | 62 | **353HRC0300** | ● |
| 3.3 | 0/-0.012 | 6 | h6 | 14 | 20 | 62 | **353HRC0330** | ● |
| 3.4 | 0/-0.012 | 6 | h6 | 14 | 20 | 62 | **353HRC0340** | ● |
| 3.5 | 0/-0.012 | 6 | h6 | 14 | 20 | 62 | **353HRC0350** | ● |
| 3.7 | 0/-0.012 | 6 | h6 | 14 | 20 | 62 | **353HRC0370** | ▽ |
| 3.8 | 0/-0.012 | 6 | h6 | 17 | 24 | 66 | **353HRC0380** | ● |
| 4 | 0/-0.012 | 6 | h6 | 17 | 24 | 66 | **353HRC0400** | ● |
| 4.1 | 0/-0.012 | 6 | h6 | 17 | 24 | 66 | **353HRC0410** | ● |
| 4.2 | 0/-0.012 | 6 | h6 | 17 | 24 | 66 | **353HRC0420** | ● |
| 4.3 | 0/-0.012 | 6 | h6 | 17 | 24 | 66 | **353HRC0430** | ● |
| 4.5 | 0/-0.012 | 6 | h6 | 17 | 24 | 66 | **353HRC0450** | ● |
| 4.6 | 0/-0.012 | 6 | h6 | 17 | 24 | 66 | **353HRC0460** | ● |
| 4.8 | 0/-0.012 | 6 | h6 | 20 | 28 | 66 | **353HRC0480** | ● |
| 5 | 0/-0.012 | 6 | h6 | 20 | 28 | 66 | **353HRC0500** | ● |
| 5.1 | 0/-0.012 | 6 | h6 | 20 | 28 | 66 | **353HRC0510** | ● |
| 5.2 | 0/-0.012 | 6 | h6 | 20 | 28 | 66 | **353HRC0520** | ● |
| 5.3 | 0/-0.012 | 6 | h6 | 20 | 28 | 66 | **353HRC0530** | ● |
| 5.5 | 0/-0.012 | 6 | h6 | 20 | 28 | 66 | **353HRC0550** | ● |
| 5.6 | 0/-0.012 | 6 | h6 | 20 | 28 | 66 | **353HRC0560** | ▽ |
| 5.8 | 0/-0.012 | 6 | h6 | 20 | 28 | 66 | **353HRC0580** | ● |
| 6 | 0/-0.012 | 6 | h6 | 20 | 28 | 66 | **353HRC0600** | ● |
| 6.1 | 0/-0.015 | 8 | h6 | 29 | 41 | 79 | **353HRC0610** | ● |
| 6.2 | 0/-0.015 | 8 | h6 | 29 | 41 | 79 | **353HRC0620** | ● |
| 6.5 | 0/-0.015 | 8 | h6 | 29 | 41 | 79 | **353HRC0650** | ● |
| 6.8 | 0/-0.015 | 8 | h6 | 29 | 41 | 79 | **353HRC0680** | ● |
| 6.9 | 0/-0.015 | 8 | h6 | 29 | 41 | 79 | **353HRC0690** | ● |
| 7 | 0/-0.015 | 8 | h6 | 29 | 41 | 79 | **353HRC0700** | ● |
| 7.4 | 0/-0.015 | 8 | h6 | 29 | 41 | 79 | **353HRC0740** | ● |
| 7.5 | 0/-0.015 | 8 | h6 | 29 | 41 | 79 | **353HRC0750** | ● |
| 7.8 | 0/-0.015 | 8 | h6 | 29 | 41 | 79 | **353HRC0780** | ● |
| 8 | 0/-0.015 | 8 | h6 | 29 | 41 | 79 | **353HRC0800** | ● |
| 8.1 | 0/-0.015 | 10 | h6 | 35 | 47 | 89 | **353HRC0810** | ● |
| 8.2 | 0/-0.015 | 10 | h6 | 35 | 47 | 89 | **353HRC0820** | ● |
| 8.5 | 0/-0.015 | 10 | h6 | 35 | 47 | 89 | **353HRC0850** | ● |
| 8.7 | 0/-0.015 | 10 | h6 | 35 | 47 | 89 | **353HRC0870** | ● |
| 8.8 | 0/-0.015 | 10 | h6 | 35 | 47 | 89 | **353HRC0880** | ● |
| 9 | 0/-0.015 | 10 | h6 | 35 | 47 | 89 | **353HRC0900** | ● |
| 9.3 | 0/-0.015 | 10 | h6 | 35 | 47 | 89 | **353HRC0930** | ● |
| 9.5 | 0/-0.015 | 10 | h6 | 35 | 47 | 89 | **353HRC0950** | ● |
| 9.8 | 0/-0.015 | 10 | h6 | 35 | 47 | 89 | **353HRC0980** | ● |
| 10 | 0/-0.015 | 10 | h6 | 35 | 47 | 89 | **353HRC1000** | ● |
| 10.2 | 0/-0.018 | 12 | h6 | 40 | 55 | 102 | **353HRC1020** | ● |
| 10.3 | 0/-0.018 | 12 | h6 | 40 | 55 | 102 | **353HRC1030** | ● |
| 10.4 | 0/-0.018 | 12 | h6 | 40 | 55 | 102 | **353HRC1040** | ○ |

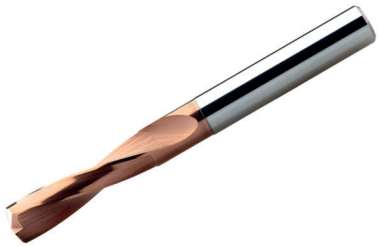
★ 1st choice, ☆ suitable, ● stock standard, ◉ non-stock standard (no MOQ), ○ non-stock standard (MOQ), ▲ upcoming product, ▽ stock exhaustion

# 353HRC

- Hardened steel 45÷62 HRC

| P | M | K | N | S | H |
|---|---|---|---|---|---|
| | | | | | ★ |



3xD | DIN 6537K | HRC | MG PV1000 | SIG 150° | FHA 15° | CH-45°

| DC | DC tol. | DCON | TCDCON | LU | LCF | OAL | EDP no. | Stock |
|---|---|---|---|---|---|---|---|---|
| 10.5 | 0/-0.018 | 12 | h6 | 40 | 55 | 102 | **353HRC1050** | ● |
| 10.8 | 0/-0.018 | 12 | h6 | 40 | 55 | 102 | **353HRC1080** | ● |
| 11 | 0/-0.018 | 12 | h6 | 40 | 55 | 102 | **353HRC1100** | ● |
| 11.2 | 0/-0.018 | 12 | h6 | 40 | 55 | 102 | **353HRC1120** | ● |
| 11.5 | 0/-0.018 | 12 | h6 | 40 | 55 | 102 | **353HRC1150** | ● |
| 11.8 | 0/-0.018 | 12 | h6 | 40 | 55 | 102 | **353HRC1180** | ● |
| 12 | 0/-0.018 | 12 | h6 | 40 | 55 | 102 | **353HRC1200** | ● |
| 12.2 | 0/-0.018 | 14 | h6 | 43 | 60 | 107 | **353HRC1220** | ▽ |
| 12.5 | 0/-0.018 | 14 | h6 | 43 | 60 | 107 | **353HRC1250** | ● |
| 12.8 | 0/-0.018 | 14 | h6 | 43 | 60 | 107 | **353HRC1280** | ▽ |
| 13 | 0/-0.018 | 14 | h6 | 43 | 60 | 107 | **353HRC1300** | ● |
| 14.2 | 0/-0.018 | 16 | h6 | 45 | 65 | 115 | **353HRC1420** | ● |

★ 1st choice, ☆ suitable, ● stock standard, ⦿ non-stock standard (no MOQ), ○ non-stock standard (MOQ), ▲ upcoming product, ▽ stock exhaustion

## Cutting Parameters

### 353HRC

| | Material Group ISO 513 | H1 H4 | H2 | H3 | H5 | | |
|---|---|---|---|---|---|---|---|
| | Hardness/Rm | 50÷65 HRC | 54÷62 HRC | 60÷65 HRC | 48÷65 HRC | | |
| | Vc (m/min) | **15÷25** | **12÷18** | **8÷12** | **20÷30** | | |
| | DC (mm) | fn (mm/rev) | fn (mm/rev) | fn (mm/rev) | | | |
| | **3** | 0.020 | 0.017 | 0.013 | 0.020 | | |
| | **4** | 0.030 | 0.026 | 0.020 | 0.030 | | |
| | **5** | 0.040 | 0.034 | 0.026 | 0.040 | | |
| | **6** | 0.050 | 0.043 | 0.033 | 0.050 | | |
| | **7** | 0.060 | 0.051 | 0.039 | 0.060 | | |
| | **8** | 0.070 | 0.060 | 0.046 | 0.070 | | |
| | **9** | 0.080 | 0.068 | 0.052 | 0.080 | | |
| | **10** | 0.090 | 0.077 | 0.059 | 0.090 | | |
| | **11** | 0.100 | 0.085 | 0.065 | 0.100 | | |
| | **12** | 0.110 | 0.094 | 0.072 | 0.110 | | |
| | **13** | 0.120 | 0.102 | 0.078 | 0.120 | | |
| | **14** | 0.130 | 0.111 | 0.085 | 0.130 | | |
| | **15** | 0.140 | 0.119 | 0.091 | 0.140 | | |
| | **16** | 0.150 | 0.128 | 0.098 | 0.150 | | |