Carmex®
Precision Tools Ltd.
The optimal tools for your industry™

MCH

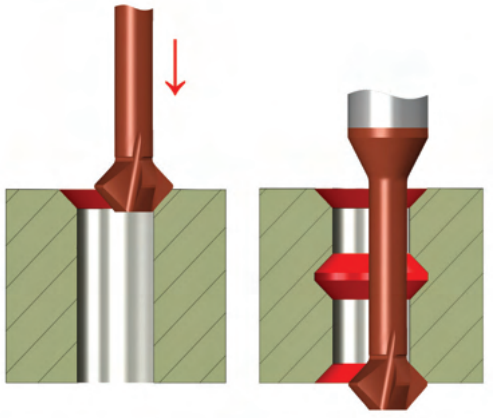
Mini Chamfer Hardcut

Metric

Carmex presents a new type of Solid Carbide End Mill **MCH** type, for Chamfering, Undercuts and V-cuts in Super Alloys and Hard Materials up to 62 HRc.

Features

- Optimal solution for Deburring, Back Chamfering and Grooving in Hardened Materials.
- Double sided cutting, Front and Back chamfering.
- Low cutting forces.
- Spiral flute allows smooth cutting action.
- Multiple edges for highly productive and economic machining.
- Cylindrical shank DIN6535-HA (Weldon shank available upon request).



Front and Back chamfering

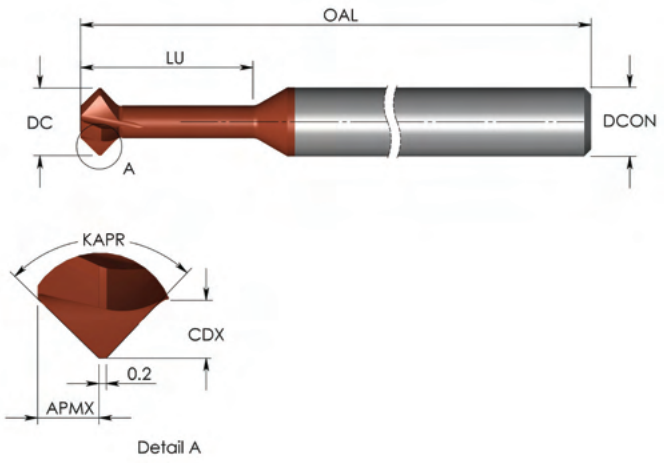
Product Identification

Ordering Codes

MCH	03	025	D	6	A90	MT3

- **MCH** — Mini Chamfer Hard
- **03** — Shank Diameter
  - 03 = 3 mm
  - 04 = 4 mm
  - 05 = 5 mm
  - 06 = 6 mm
  - 08 = 8 mm
  - 10 = 10 mm
- **025** — Cutting Diameter
  - 015 = 1.5 mm
  - 02 = 2.0 mm
  - 025 = 2.5 mm
  - 03 = 3.0 mm
  - 035 = 3.5 mm
  - 04 = 4.0 mm
- **D** — No. of Flutes
  - D = 4
  - E = 5
  - F = 6
  - G = 7
- **6** — Neck Length
  - 3 = 3 mm
  - 4 = 4 mm
  - 5 = 5 mm
  - 6 = 6 mm
- **A90** — Angle
  - A60 = 60°
  - A90 = 90°
- **MT3** — Carbide Grade MT3

Mini Chamfer Hardcut



90°

Grade	P	M	K	N	S	H
MT3	●	○	○	○	●	≤62 HRc

Ordering Code	DCON	DC	LU	CDX	APMX	KAPR	No. of Flutes	OAL
MCH 03015 D3 A90	3	1.5	3.8	0.3	0.4	90°	4	38
MCH 0302 D5 A90	3	2.0	5.0	0.4	0.5	90°	4	38
MCH 03025 D6 A90	3	2.5	6.3	0.5	0.6	90°	4	38
MCH 0303 D7 A90	3	3.0	7.5	0.6	0.7	90°	4	38
MCH 04035 D9 A90	4	3.5	8.8	0.7	0.8	90°	4	50
MCH 0404 D10 A90	4	4.0	10.0	0.8	0.9	90°	4	50
MCH 05045 D11 A90	5	4.5	11.3	1.0	1.1	90°	4	50
MCH 0505 D12 A90	5	5.0	12.5	1.1	1.2	90°	4	50
MCH 06055 D13 A90	6	5.5	13.8	1.2	1.3	90°	4	57
MCH 0606 D15 A90	6	6.0	15.0	1.5	1.6	90°	4	57

Order example: MCH 0303 D7 A90 MT3

Long Reach 90°

Grade	P	M	K	N	S	H
MT3	●	○	○	○	●	≤62 HRc

Ordering Code	DCON	DC	LU	CDX	APMX	KAPR	No. of Flutes	OAL
MCH 0303 D12 A90	3	3.0	12.0	0.6	0.7	90°	4	38
MCH 04035 D14 A90	4	3.5	14.0	0.7	0.8	90°	4	50
MCH 0404 D16 A90	4	4.0	16.0	0.8	0.9	90°	4	50
MCH 05045 D18 A90	5	4.5	18.0	1.0	1.1	90°	4	50
MCH 0505 D20 A90	5	5.0	20.0	1.1	1.2	90°	4	50
MCH 06055 D22 A90	6	5.5	22.0	1.2	1.3	90°	4	57
MCH 0606 D24 A90	6	6.0	24.0	1.5	1.6	90°	4	57
MCH 0808 E28 A90	8	8.0	28.0	1.6	1.7	90°	5	63
MCH 1010 F35 A90	10	10.0	35.0	1.8	1.9	90°	6	72
MCH 1212 G42 A90	12	12.0	42.0	2.1	2.2	90°	7	83

60°

Ordering Code	DCON	DC	LU	CDX	APMX	KAPR	No. of Flutes	OAL
MCH 0302 D5 A60	3	2.0	5.0	0.4	0.3	60°	4	38
MCH 0303 D7 A60	3	3.0	7.5	0.6	0.3	60°	4	38
MCH 04035 D9 A60	4	3.5	8.8	0.7	0.5	60°	4	50
MCH 0404 D10 A60	4	4.0	10.0	0.8	0.5	60°	4	50
MCH 05045 D11 A60	5	4.5	11.3	1.0	0.6	60°	4	50
MCH 0505 D12 A60	5	5.0	12.5	1.1	0.7	60°	4	50

Order example: MCH 04035 D9 A60 MT3

● First choice ○ Alternative

MT3

Ultra-Fine carbide grade with PVD multi-layer coating for machining Super Alloys and Hard materials up to 62 HRc.
Provides supreme edge stability with high heat and wear resistance.
For increased productivity and high performance.

Cutting Data

ISO	Materials	Cutting Speed m/min	Feed mm/tooth Cutting Diameter=D									
			Ø1.5	Ø2	Ø3	Ø4	Ø5	Ø6	Ø7	Ø8	Ø10	Ø12
P	Low and Medium Carbon Steels <0.55%C	60 - 120	0.03	0.04	0.05	0.06	0.08	0.09	0.10	0.11	0.11	0.12
	High Carbon Steels ≥0.55%C	60 - 90	0.02	0.04	0.04	0.06	0.06	0.07	0.08	0.09	0.10	0.11
	Alloy Steels, Treated Steels	50 - 80	0.02	0.03	0.04	0.04	0.04	0.05	0.05	0.06	0.07	0.08
M	Stainless Steels - Free Cutting	70 - 100	0.01	0.02	0.03	0.04	0.04	0.04	0.05	0.06	0.07	0.08
	Stainless Steels - Austenitic	60 - 90	0.01	0.02	0.03	0.04	0.04	0.04	0.05	0.06	0.07	0.08
	Cast Steels	70 - 90	0.02	0.03	0.04	0.04	0.04	0.05	0.05	0.06	0.07	0.08
K	Cast Iron	40 - 80	0.03	0.04	0.05	0.06	0.08	0.09	0.10	0.11	0.11	0.12
N	Aluminum ≤12%Si, Copper	100 - 200	0.03	0.04	0.05	0.06	0.08	0.09	0.10	0.11	0.11	0.12
	Aluminum >12% Si	60 - 140	0.02	0.02	0.03	0.04	0.04	0.04	0.05	0.06	0.07	0.08
	Synthetics, Duroplastics, Thermoplastics	50 - 200	0.06	0.08	0.08	0.10	0.11	0.13	0.13	0.13	0.13	0.13
S	Nickel Alloys, Titanium Alloys	20 - 40	0.02	0.02	0.03	0.03	0.04	0.04	0.04	0.04	0.05	0.05
H	Hardened Steel, 45-50 HRc	60 - 70	0.02	0.03	0.04	0.04	0.04	0.04	0.05	0.05	0.06	0.06
	51-55 HRc	50 - 60	0.02	0.03	0.03	0.03	0.03	0.03	0.04	0.04	0.05	0.05
	56-62 HRc	40 - 50	0.01	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.04	0.04

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