

CV Shank Tools



Kennametal Standard Catalog Number System

CV Shank

BT Shank

DV Shank

HSK Shank

Straight Shank

Collets/Sleeves

Accessories

Toolholding Technical Data

Toolholding Systems

Index

Toolholder Size

examples:

- TG = collet series xx (50),
xxx (100)
- EM = ID size
metric – xx = xx, (20)
inch – xxx = x.xx (075)
- SM = OD size
metric – xx = xx (20)
inch – xxx = x.xx (075)

Tool Length

(flange face to front of tool)
metric – xxx = xxx
inch – xxx = x.xx

Shank Taper Size

40 = 40
50 = 50

Special Feature (optional)

CH = coolant – high pressure

CV

40

B

CH

TG

50

100

Shank Style

DIN Form

Toolholder Style

B = form B
(blank) = tool built to form A/AD

- TG = Tremendous Grip Single Angle collet chuck
- ER = DIN 6499 Single Angle collet chuck
- DA = Double-Angle collet chuck
- DC = drill chuck
- EM = end mill adapter
- WN = Whistle Notch (2°, metric; 5°, inch)
- SSF = adapter for straight shanks with flat (drills)
- SM = shell mill adapter
- SC = slotting cutter adapter
- SF = Shrink Fit toolholder
- SFC = Shrink Fit toolholder with ID coolant grooves
- SD = Powergrip chucks (inch)
- SS = Powergrip chucks (metric)
- CS = combi shell mill adapter
- HC = hydraulic chuck – STANDARD line
- HCT = hydraulic chuck – TREND line
- HCB = hydraulic chuck – BASIC line
- HSK = HSK adapter
- KM = KM adapter
- RC = rapid change – tapping adapter chuck
- STRC = rapid change – solid tapping adapter chuck
- KR = Kennametal / Romicon™ adapter
- MT = Morse taper adapter
- JT = Jacobs taper adapter
- TA = Tap chuck adapter
- BB = bar blank
- GB = gage bar
- P = spindle plug
- SW = spindle wiper



- Kennametal's "balanced-by-design" CV toolholders meet or exceed ANSI B5.50 specifications and recent standard updates. The detent hole in the shallow drive slot is deepened to a controlled depth. This modification enables the toolholder still to be loaded in the ATC in only one position, but now corrects the unnecessary inherent imbalance of the CV taper flange to significantly reduce spindle wear at higher speeds.
- The 7/24 shank cones are produced to the highest industry standards according to ISO-1947, with a taper accuracy of AT3 or better to provide optimum fit between the spindle and toolholder.
- Essential surfaces are not black-oxide to provide better fitments.
- All non-critical surfaces are black-oxide, except for the high-performance toolholders.
- Through-coolant is a standard feature when permitted by toolholder design.
- Depending on the application, Kennametal's CV40 and CV50 balanced-by-design toolholders perform effectively up to 12,000 rpm. All other toolholders are effective at speeds up to 10,000 rpm, unless stated otherwise. Kennametal recommends that toolholder assemblies (toolholder, components, retention knob, collets, cutting tools) should be balanced when used at speeds in excess of 10,000 rpm.

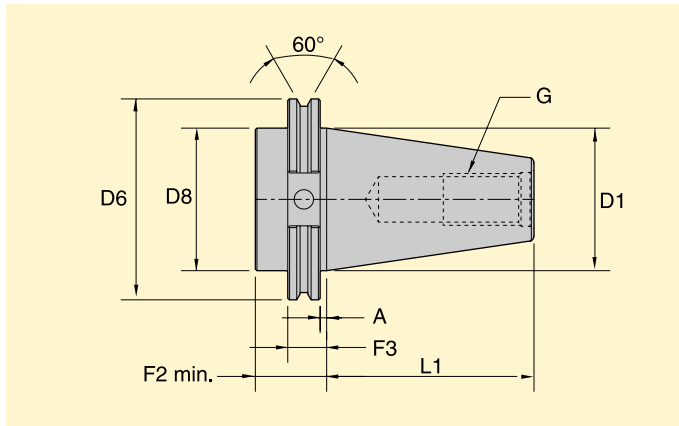
IMPORTANT!


- All critical surfaces need to be protected against damage from dents and scratches from cutting edges. Such damage will impair tool accuracy and performance.
- Always assemble only clean components. Never overtighten tools, which can permanently destroy the function and accuracy of the toolholder.

For retention knobs, please see page S316.



Caterpillar (inch) CV – ANSI B5.50



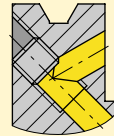
	D1	D6	D8	L1	F2	F3	A	G
30	1.250 (31,75)	1.812 (46,02)	1.250 (31,75)	1.875 (47,63)	1.375 (35,00)	.750 (19,05)	.125 (3,18)	1/2-13 thread
40	1.750 (44,45)	2.500 (63,05)	1.750 (44,45)	2.687 (68,25)	1.375 (35,00)	.750 (19,05)	.125 (3,18)	5/8-11 thread
45	2.250 (57,15)	3.250 (82,50)	2.250 (57,15)	3.250 (82,55)	1.375 (35,00)	.750 (19,05)	.125 (3,18)	3/4-10 thread
50	2.750 (69,85)	3.875 (98,41)	2.750 (69,85)	4.000 (101,60)	1.375 (35,00)	.750 (19,05)	.125 (3,18)	1-8 thread
60	4.250 (107,95)	5.500 (139,70)	4.250 (107,95)	6.375 (161,93)	1.500 (38,10)	.750 (19,05)	.125 (3,18)	1 1/4-7 thread



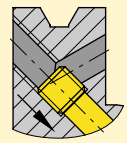
Form B coolant

Some toolholders are equipped with the form B coolant-style feature.

CAUTION!

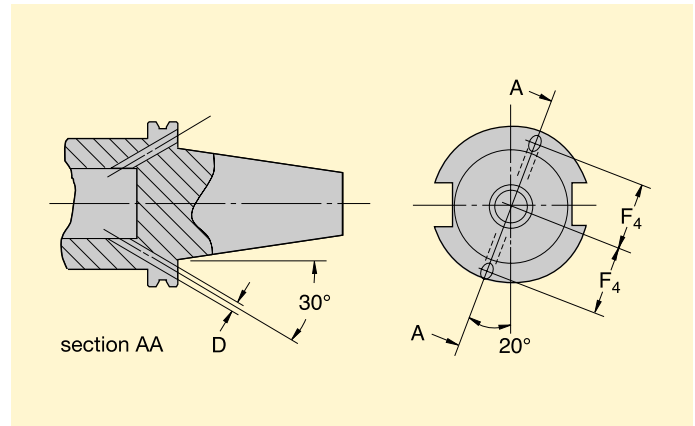



Toolholders are factory set to the form B coolant supply position. When relocating coolant position screws, use of a removable liquid (small screw thread locker) is recommended.



Possible variation of coolant supply to DIN 69871 form AD; tightening screws will stop coolant from escaping through the flange.

Form B – Flange Coolant Entry Ports



	D	F4 ±0.004
30	.157 (4,00)	.827 (21,00)
40	.157 (4,00)	1.063 (27,00)
45	.197 (5,00)	1.378 (35,00)
50	.236 (6,00)	1.654 (42,00)