



CHIPSURFER

90° FLAT COUNTERSINK CND_

90° FLAT COUNTERSINK CND_

Up to 1.2xD drilling, boring and countersinking in tolerance h7 •

Reliable material entry •

Precise 90 degrees •

Unique interchangeable head solution •

Diameter range Ø8 / Ø10 / Ø12 / Ø16 / Ø20 •



Product Overview

The proven interchangeable head system of "ChipSurfer" gets an extension for the area of drilling and countersinking.

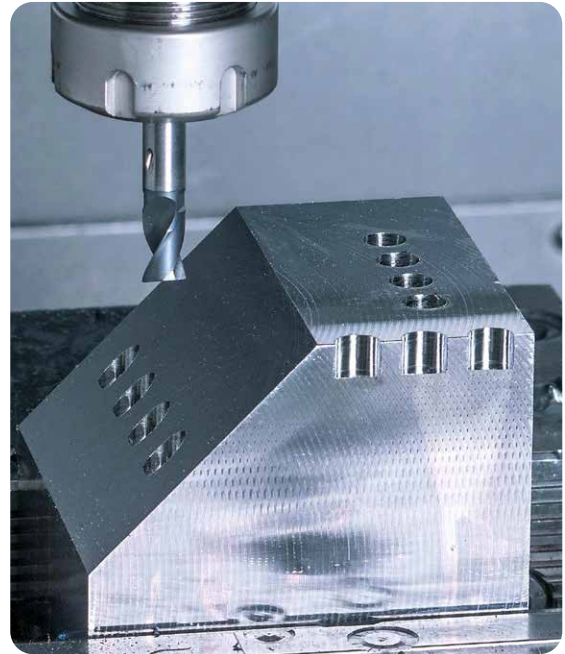
The 90 ° flat countersink CND... will cover the diameter range Ø8 / Ø10 / Ø12 / Ø16 and Ø20.

Application Range

The milling heads are designed with sharp corners and therefore without chamfered edges or corner radius. The new 90° flat countersinks can be used for shallow drilling operations as well as for boring or countersinking with small material allowance. Due to the special designed face cutting edge process-reliable material entry is guaranteed even with uneven or inclined workpiece surfaces.

Drilling is possible up to 1,2xD with a diameter tolerance of „h7“.

Grade **IN2005** and the special cutting edge geometry ensure best results in all industrial sectors in both single and series production. Steels of material group „P“, stainless steels of material group „M“, difficult-to-cut materials of group „S“ and cast materials of group „K“ can be machined excellently.



Technical Features

Narrow diameter tolerances and the high interchangeable accuracy of +/- 20 µm of the **ChipSurfer** system make it possible to exchange the tools directly at the machine spindle and thus simplify tool handling in praxis.

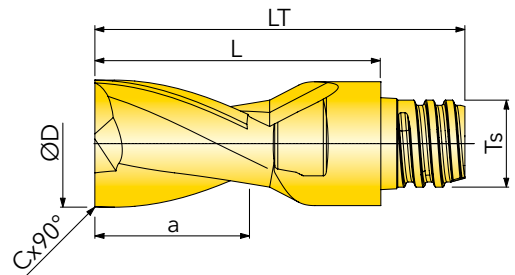
Thanks to the long proven **ChipSurfer** system every version of shank extension is available. With short steel extensions and the extra-long vibration-damped carbide and heavy metal shanks, the **ChipSurfers** are very flexible in meeting the most diverse requirements for processing cavities, machine and, above all, workpiece conditions.

Advantages

- Process-reliable material entry, even at uneven or inclined workpiece surfaces.
- Exact 90° at bottom of borehole
- Unique interchangeable head solution
- Available in diameters Ø8 / Ø10 / Ø12 / Ø16 / Ø20
- Shank extensions in steel, carbide and heavy metal
- Diameter tolerance „h7“ and exchange accuracy of +/- 20µm

CHIPSURFER 90° FLAT COUNTERSINK CND_

FOR EXCHANGEABLE HEAD SYSTEM



Grade

IN2005

P	M	K	N _(K)	S _(M)	H _(PK)
+	+	+		+	

+ first choice ○ second choice

D

h7



Designation	D	LT	L	λ	a	R	C	Ts	Z	kg	①
CND0800TQR01	8	25,1	18	30	10	0	0	T5	2	0,009	WS-0043
CND1000T6R01	10	28,65	22	30	12	0	0	T6	2	0,015	WS-0029
CND1200T8R01	12	35	27	30	15	0	0	T8	2	0,027	WS-0030
CND1600TRR01	16	41,5	33,5	30	20	0	0	T10	2	0,061	WS-0044
CND2000TSR01	20	52,5	41	30	25	0	0	T12	2	0,110	WS-0059

① = Wrench

90° Flat countersink CND_

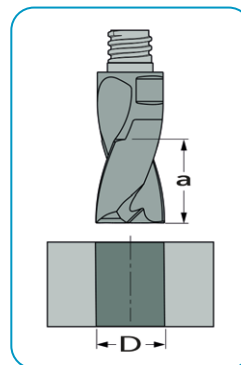


Recommended cutting data up to 1.2xØ for drilling on flat surfaces:

ISO	material	cutting speed vc [m/min]	carbide grade	revolution speed fu [mm]
P	unalloyed steel	120 - 220	IN2005	0.10 - 0.25
	alloyed steel 800 N/mm ²	120 - 220	IN2005	0.10 - 0.25
	alloyed steel 1100 N/mm ²	120 - 220	IN2005	0.10 - 0.25
M	stainless steel	60 - 120	IN2005	0.06 - 0.15
K	gray cast iron	160 - 220	IN2005	0.10 - 0.25
	nodular cast iron	160 - 220	IN2005	0.10 - 0.25
N	aluminum	-	-	-
S	heat resistant alloys	30 - 60	IN2005	0.05 - 0.12
	titanium alloys	30 - 60	IN2005	0.05 - 0.12
H	hard machining < 54 HRC	-	-	-
	hard machining < 63 HRC	-	-	-

Tips:

- For through bores it is recommended to reduce feed rate by 50% before exiting workpiece material.



- For drilling on inclined surfaces up to 30° it is recommended to reduce parameters by 30% and on surfaces up to 45° by 50%.

