

# SOLID CARBIDE DENTAL END MILLS



for processing of:

- ⊕ chromium-cobalt
- ⊕ titanium-alloys
- ⊕ zirconium-oxide
- ⊕ synthetic materials/wax



# 0373 55 SOLID CARBIDE DENTAL END MILLS DGT

CBN	HSC	AT

for processing of chromium-cobalt

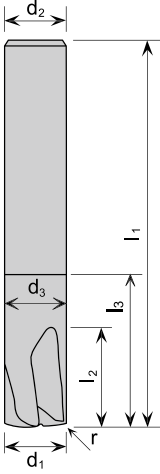
**0373 55 (roughing)**

3 flutes, plain shank, particular end teeth style, PVTi-coated

- standard series
- with working depths
- high-feed end mills (Trigaworx)
- **Attention:  $r^*$  = corner radius to be programmed**
- **other working depths or customized dimensions on request!**

Material qualification	steel	high-temperature alloys	stainless steel	cast iron	non-ferrous-materials	hardened steel	grade	coating
A	●						KAC	PVTi

Solid carbide end mills	Catalogue-No.										price	availability
	$d_1$	$l_2$	$l_3$	$d_3$	$l_1$	$r$	$d_2$	$z$				

w. wd.   standard series											
	NW 0373 55 032	3	3	16	2,9	57	0,2*	6	3		✓
	NW 0373 55 042	4	4	18	3,9	57	0,3*	6	3		✓

## Examples for operation data: milling of dental crowns in chromium-cobalt

<b>Clamping:</b>	three-jaw chuck	<b>End mill diam.:</b>	Ø 3 mm
<b>Kind of chip removal:</b>	roughing	<b>Corner radius:</b>	$r = 0,2$ mm
<b>Machining direction:</b>	climb milling	<b>Cutting material:</b>	solid carbide
<b>Cooling:</b>	oil in water	<b>Manufacturer:</b>	Voha-Tosec
	emulsion, 7.5%	<b>Vc (cutting speed):</b>	80 m/min
<b>Kind of arbor:</b>	power chuck	<b>Vf (feed rate):</b>	2000 mm/min
<b>Overhang:</b>	totally 70 mm	<b>n(revolutions):</b>	8500 1/min
<b>Catalogue-no.:</b>	0373 55 032	<b>ap(depth of cut):</b>	0.1 mm
<b>Type:</b>	Trigaworx	<b>ae(width of cut):</b>	1.0 mm



available as long as stock lasts



on request



stock item, subject to confirmation

# 1462 43 SOLID CARBIDE BALL-NOSE DENTAL END MILLS DGT

VHM	HSC	

for processing of chromium-cobalt

**1462 43 (pre-finishing and finishing)**

2 flutes, plain shank, ball nose, centre cutting, 30° right hand helix, PVCN-coated

- standard series
- also suitable for titanium alloys
- **working depths or customized dimensions on request!**



Material qualification	steel	high-temperature alloys	stainless steel	cast iron	non-ferrous-materials	hardened steel	grade	coating
A		●					KAC	PVCN

Solid carbide end mills	Catalogue-No.								price	availability
	d <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	d <sub>3</sub>	l <sub>1</sub>	r	d <sub>2</sub>	z		

no. wd.   standard series										
	NW 1462 43 010	1		-		50		4		<input checked="" type="checkbox"/>
	NW 1462 43 020	2		-		57		6		<input checked="" type="checkbox"/>
	NW 1462 43 030	3		-		57		6		<input checked="" type="checkbox"/>





# 0453 48 SOLID CARBIDE DENTAL END MILLS DGT

VHM	HPC	AT

for processing of zirconium-oxide, synthetic materials and wax

**0453 48 (roughing)**

3 flutes, plain shank, with corner radius, centre cutting, diamond coated

- standard series
- with working depths
- **other working depths or customized dimensions on request!**

Material qualification	steel	high-temperature alloys	stainless steel	cast iron	non-ferrous-materials	hardened steel	grade	coating
A					●		KAC	PVDiaN


Solid carbide end mills	Catalogue-No.										price	availability
	d <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	d <sub>3</sub>	l <sub>1</sub>	r	d <sub>2</sub>	z				

w. wd.   standard series													
	NV 0453 48 0303	3	4,5	15	2,9	50	0,3	4	3			<input checked="" type="checkbox"/>	
	NV 0453 48 0402	4	6	10	3,8	50	0,3	4	3			<input checked="" type="checkbox"/>	



available as long as stock lasts      on request      stock item, subject to confirmation

# 1452 48 SOLID CARBIDE BALL-NOSE DENTAL END MILLS DGT

VHM	HSC	AT
		



for processing of zirconium-oxide, synthetic materials and wax

### 1452 48 (pre-finishing and finishing)

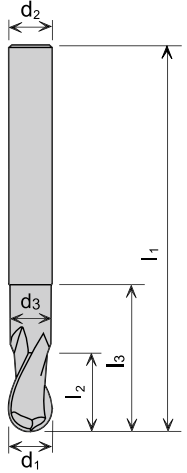
2 flutes, plain shank, ball nose, centre cutting, 30° right hand helix, diamond-coated

- standard series
- with working depths
- **other working depths or customized dimensions on request!**

Material qualification	steel	high-temperature alloys	stainless steel	cast iron	non-ferrous-materials	hardened steel	grade	coating
A					●		KAC	PVDiaN

Solid carbide end mills	Catalogue-No.										price	availability
	d <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	d <sub>3</sub>	l <sub>1</sub>	r	d <sub>2</sub>	z				

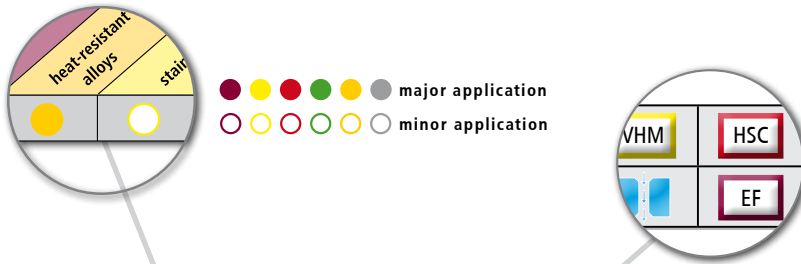
### w. wd. | standard series

	NV 1452 48 01000	1	1,5	5	0,95	50	0,5	4	2		<input checked="" type="checkbox"/>
	NV 1452 48 0201	2	3	5	1,9	50	1	4	2		<input checked="" type="checkbox"/>
	NV 1452 48 0301	3	4,5	5	2,9	50	1,5	4	2		<input checked="" type="checkbox"/>



# QUICKFINDER –

It's easy! Don't search, find!



**1192 85**  
**BALL NOSE END MILLS** FGT  
 2 flutes for steel  
 2 flutes, plain shank, ball nose, centre cutting, right hand helix, PVTIH-coated  
 high precision,  $r = \pm 0,005$   
 with working depth up to 20 times  $d$ ,



Qualification table

	Steel	heat-resistant alloys	stainless steel	cast iron	non-ferrous alloys	hardened steel	grit	coating
A	●	○	○	○	○	○	UMGC	PVTIH

Solid carbide end mills

catalogue No.	d	L	L <sub>1</sub>	d <sub>1</sub>	L <sub>2</sub>	r	d <sub>2</sub>	z	price €	features
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w. wd. | high-precision

NVV 1192 85 004	0,4	0,4	1,5	0,385	50	0,2	4	2		✓
NVV 1192 85 004Q	0,4	0,4	3	0,385	50	0,2	4	2		✓
NVV 1192 85 004E	0,4	0,4	5	0,385	50	0,2	4	2		✓
NVV 1192 85 003	0,5	0,5	3	0,48	50	0,25	4	2		✓
NVV 1192 85 003Q	0,5	0,5	5	0,48	50	0,25	4	2		✓
NVV 1192 85 0053	0,5	0,5	10	0,48	50	0,25	4	2		✓
NVV 1192 85 008	0,6	0,6	3	0,58	50	0,3	4	2		✓
NVV 1192 85 0062	0,6	0,6	5	0,58	50	0,3	4	2		✓
NVV 1192 85 008	0,6	0,6	10	0,58	50	0,3	4	2		✓
NVV 1192 85 0081	0,8	0,8	3	0,78	50	0,4	4	2		✓
NVV 1192 85 0082	0,8	0,8	5	0,78	50	0,4	4	2		✓
NVV 1192 85 008B	0,8	0,8	10	0,78	50	0,4	4	2		✓
NVV 1192 85 008E	0,8	0,8	15	0,78	50	0,4	4	2		?
NVV 1192 85 010	1	1	5	0,98	50	0,5	4	2		✓
NVV 1192 85 010Q	1	1	10	0,98	50	0,5	4	2		✓
NVV 1192 85 010B	1	1	15	0,98	50	0,5	4	2		✓
NVV 1192 85 010E	1	1	20	0,98	75	0,5	4	2		?
NVV 1192 85 010B	1	1	25	0,98	75	0,5	4	2		?
NVV 1192 85 013	1,5	1,5	5	1,45	50	0,75	4	2		✓

⚠ available as long as stock lasts    ? on request    ✓ stock item, subject to confirmation

**AVAILABILITY**

- ⚠ available as long as stock lasts
- ? on request
- ✓ stock item, subject to confirmation

**END MILLS TYPE**

- FGT: high-precision End-Mills restricted tolerance
- GGT: HPC-graphite-roughing-tool
- UGT: unequal division unequal helix angle extremely smooth running

**MATERIAL**

- VHM Solid Carbide End Mills
- CBN CBN tipped End Mills
- PCD PCD tipped End Mills
- CVD CVD tipped End Mills

**APPLICATION**

- HSC · high cutting speeds  
· small steps  
· constant high feed rates  
· reduced mechanical stress for tooling and machine  
· heat elimination by chips
- HPC · high chip volume  
· mean cutting speeds  
· high feed rates  
· increased feed motion
- UNI · normal cutting speeds  
· normal feed rates

**FEATURES**

- AT End Mills with working depth (reach)
- toric End Mills
- EF End Mills with chamfer for edge stabilisation
- End Mills shank with clamping flats
- End Mills with IKZ (internal coolant supply)
- DIA - diamond coated



# QUICKFINDER

## general-purpose tolerances for Pokolm tools:

Type of tool	$d_1$	$d_2$	r
FGT	$f_8$	$h_5$	+/- 0,005
GGT	+0 / -0,12	$h_6$	
UGT/HGT	$e_8$	$h_6$	+0,02 / -0,025 / -0,035
Ball Nose- and Corner Radius End Mills	$f_8$	$h_6$	$f_8$
straight face	$e_8$	$h_6$	

## Theoretical usable end mill length of Solid carbide end mills in mm\*:

	diam. of shank (DIN 6535) d2 h6	2 - 5	6 + 8	10	12 + 14	16 + 18
	length of shank (DIN 6535) l2 $\begin{smallmatrix} +2 \\ -0 \end{smallmatrix}$	28	36	40	45	48
	diam. of shank (DIN 6535) d2 h6	20	25	32 + 36		
	length of shank (DIN 6535) l2 $\begin{smallmatrix} +2 \\ -0 \end{smallmatrix}$	50	56	60		
* this usable length appears through deduction of the DIN-shank-length (l2 according to DIN 6535) from the overall length l1 of the end mill or of the solid carbide adapters. See table above.						

## End-Mill-dimensions by DIN:

$d_1$ = cutting diameter	$l_2$ = cutting length	$l_3$ = working depth length	$d_3$ = working depth diameter (neck diameter)
$l_1$ = total length End Mill	r = radius	$d_2$ = diam. of shank	z = no. of teeth

## Notes:

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## CONTACT

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