InovaTools® EE

GERMAN TOOLS GROUP

www.inovatools.eu

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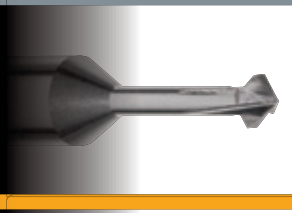



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NEW

TOP PRODUCT

NEW

Einfach und schnell zu Ihrem Werkzeug...

A simple and quick way to your tool...

... mit Hilfe der neuen INOQR-App

... with the aid of the new

Für Ihr Smartphone (Apple und Android) verfügbar
Available for your Smartphone (Apple and Android)

Erhältlich im iTunes Store und im Google Play Store
Available in itunes store and google play store

- Schnelle Artikelauswahl per Scanfunktion für QR-Codes im Katalog
- Schnelle allgemeine Informationen und Lagerbestandsinformationen
- Bestellung von unterwegs (möglich)!

- *Quick article selection via scan function for QR-codes in the catalogue*
- *Fast general information and stock information*
- *Purchase orders (possible) on the way!*

INOCUT – Schnittdaten

... ist eine spezifische Empfehlung der Schnittwerte in Abhängigkeit vom Eingriffsquerschnitt, Werkstoff und Werkzeug.

Durch die ONLINE-Datenbank sind Sie auf allen Systemen immer auf dem aktuellsten Stand.
Die Offline Version, welche Sie auf Anfrage mit USB-Stick erhalten, wird bequem bei verfügbarem Internetzugang automatisch aktualisiert.
Nutzen Sie INOCUT auch unterwegs mit Ihrem Smartphone (iphone, Android oder Tablet)

The INOCUT – Cutting data is a specific recommendation of cutting data depending on cross section, material and tool.

Because of the ONLINE-data base you are always up to date on all systems.
The Offline-version, which you can get on USB-stick upon request, will be automatically up-dated as soon as there is an available internet access.
Also use INOCUT on the way with your Smartphone (iphone, android or tablet)

http://www.schnittdaten.eu/inovatools/

Übersicht und Einsatzempfehlung / Field of application

HPC/Schruppfräser / Roughing cutters

Beschichtung Coating	Z / Teeth	Seite / Page	Artikel / Article	HPC	MTC	HSC	Stahl steel	HRC 45-55	HRC 55-60	HRC 60-65	GG(G)	Alu/NE	Kunststoff plastic	GFK/CFK Graphit	INOX VA	INCONEL TITAN	IK	TYP
ALTIN	3	20	243	●	○		●	○			○	○			●	○		N
nacro	3-4	20	134	●	●		●	●			●	○						N
HP³	4	21	788	●	●	●	●	○	○		○	○				○		N
VAROCON	4	21	377	●	●		●				○	○			●	●		N
ALTIN	4	22	737	●	●		●				○	○			●	○		N
ALTIN	4	22	735	●	●		●				○	○			●	○		N
ALTIN	4	22	738	●	●		●	○			○	○			●			N
ALTIN	4	23	722	●	●		●	○			●	○			○			N
TIALN	4	24	727	●	●		●	○			●	○			●			N
TIALN	4	24	723	●	●		●	○			●	○			○			N
TIALN	4	25	731	●			●	○			●							N-H
TIALN	4	25	732	●			●	○			●							N-H
TIALN	4	25	733	●			●	○			●							N-H
TIALN	4	27	734	●			●	○			●				○			N-H
ALTIN	4	28	729	●			●	○			●				●		●	N-H
TIALN	4	28	728	○			●				●				○			N-H
ALTIN	4	29	310	●		○	●	●	●	○	●							H
ALTIN	3-4	29	315	●		○	●	●	●	○	●							H
VAROCON	4	31	831	●			●	○			●					○		N-H
VAROCON	4	31	832	●			●	○			●					○		N-H
VAROCON	4	31	833	●			●	○			●					○		N-H
ALTIN	4	30	777	●	●		●				●				○	○		N-H

● = geeignet / *applicable* ○ = bedingt geeignet / *partially suitable*

Übersicht und Einsatzempfehlung / Field of application

HPC/Schruppfräser / Roughing cutters

Beschichtung Coating	Z / Teeth	Seite / Page	Artikel / Article	HPC	MTC	HSC	Stahl steel	HRC 45-55	HRC 55-60	HRC 60-65	GG(G)	Alu/NE	Kunststoff plastic	GFK/CFK Graphit	INOX VA	INCONEL TITAN	IK	TYP
TIALN	4	32	304				●				●	○	○		○	○		N
ALTIN	4-5	32	347		●		●				●				●			N-W
TIALN	4	33	334				●				●	●	○		●	○	●	N
ALTIN	4	33	305		●		●				●				●			N-W
ALTIN	3/6	34	344		●		●				○				●	○		N-W
ALTIN	4/6	34	345		●		●				○				●	○		N-W
ALTIN	4-5	34	335		●		●				○	○			●		●	N-W
TIALN	4/6	35	986		○		●				○				●		●	N
TIALN	3-6	35	986		○		●				○				○			N
ZrN	3	36	244	●								●	○					W
ZrN	3	36	245	●								●	○					W
ZrN	4	37	414	●								●						W-N
ZrN	4	37	408	●								●	○			●	●	W-N
ZrN	3	38	252									●	○				●	W
ZrN	3	38	253									●	○				●	W
	3	39	405									●	●					W

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Übersicht und Einsatzempfehlung / Field of application

Universalfräser / Universal cutters

Beschichtung Coating	Z / Teeth	Seite / Page	Artikel / Article	HPC	MTC	HSC	Stahl steel	HRC 45-55	HRC 55-60	HRC 60-65	GG(G)	Alu/NE	Kunststoff plastic	GFK/CFK Graphit	INOX VA	INCONEL TITAN	IK	TYP
TIALN	2	40	132				●	○			●	○	○		○			N
TIALN	2	41	112				●	○			●	○	○		○			N
TIALN	2	41	122				●	○			●	○	○		○			N
TIALN	2	42	126				●	○			●	○	○		○			N
TIALN	3	42	432				●	○			●	○	○		○			N
TIALN	3	43	433				●	○			●	○	○		○			N
naco	3	43	350				●	○			●	○	○		○			N
TIALN	3	44	331				●	○			●	○	○		○			N
TIALN	3	44	113				●	○			●	○	○		○			N
TIALN	3	45	213				●	○			●	○	○		○			N
TIALN	3	45	351				●	○			●	○	○		○			N
TIALN	3	45	223				●	○			●	○	○		○			N
TIALN	4	47	341				●	○			●	○			○			N
TIALN	4	47	114				●	○			●	○			○			N
TIALN	4	47	124				●	○			●	○			○			N
ALTIN	4	49	150				●	○			●	○			○			N
TIALN	4	50	204				●	○			●	○			○			N
TIALN	4	50	214				●	○			●	○			○			N
TIALN	4	50	224				●	○			●	○			○			N

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Schlichtfräser / Finishing cutters

	Beschichtung Coating	Z / Teeth	Seite / Page	Artikel / Article	HPC	MTC	HSC	Stahl steel	HRC 45-55	HRC 55-60	HRC 60-65	GG(G)	Alu/NE	Kunststoff plastic	GFK/CFK Graphit	INOX VA	INCONEL TITAN	IK	TYP
	ALTIN	6	53	736	●			●	○			●	○	○		○	○		N-H
	ALTIN	3/6	53	209				●				●	○	○		○			N
	TIALN	6-8	52	208				●	○			●	○	○		○	○		N
	TIALN	6-8	52	222				●	○			●	○	○		○	○		N
	ALTIN	6-8	54	218				●	●	●	●	●							H
	ALTIN	6-8	54	220				●	●	●	●	●							H
	ALTIN	6-8	54	221				●	●	●	●	●							H
		2	56	256									●	○					W
		2	56	257									●	○					W
		2	57	258									●	○					W
		2	57	402									●	●					W
	ZrN	2	58	407									●	●					W
	DLC	2	58	248									●	○					W
	DLC	3	59	249				○					●	○		○			W-N
		3	59	404									●	●					W
	ZrN	2-4	60	406									●	○					W
	ZrN	3/4	60	412									●	○					W
	ZrN	6	61	246	○								●	○					W

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Übersicht und Einsatzempfehlung / Field of application

Kopierfräser / Profile cutters

Beschichtung Coating	Z / Teeth	Seite / Page	Artikel / Article	HPC	MTC	HSC	Stahl steel	HRC 45-55	HRC 55-60	HRC 60-65	GG(G)	Alu/NE	Kunststoff plastic	GFK/CFK Graphit	INOX VA	INCONEL TITAN	IK	TYP
TIALN	2	62	550			●	●	●	●	○	●							H
naco	4	62	312	●		●	●	●	●	○	●							H
ALTIN	2	64	553			●	●	●	●	●	●							H
naco	2	66	558			●	●	●	●	●	●							H
naco	2	67	010			●	●	●	●	○	●							H
naco	2	68	020			●	●	●	●	○	●							H
naco	4	68	030	○		●	●	●	●	○	●							H
naco	4	69	313	●		●	●	●	●	○	●							H
TIALN	4	70	640			●	●	●	●	●	●							H
TIALN	4	71	641			●	●	●	●	●	●							H
TIALN	4	73	642			●	●	●	●	●	●							H
TIALN	4	74	643			●	●	●	●	○	●							H
TIALN	4	75	644			●	●	●	●	○	●							H
TIALN	4	76	902			●	●	○			●							N
TIALN	6	76	661			●	●	●	●	●	●							H
naco	6	77	060			●	●	●	●	○	●							H
ALTIN	6-8	78	308			●	●	●	●	●	●							H
ALTIN	6-8	78	309			●	●	●	●	●	●							H
ALTIN	2	80	332			●	●	●	●	○	●							H-N
ALTIN	2	80	333			●	●	●	●	○	●							H-N
ALTIN	2	81	336			●	●	●	●	○	●							H
ALTIN	2	81	337			●	●	●	●	○	●							H

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Übersicht und Einsatzempfehlung / Field of application

Kopierfräser / Profile cutters

Beschichtung Coating	Z / Teeth	Seite / Page	Artikel / Article	HPC	MTC	HSC	Stahl steel	HRC 45-55	HRC 55-60	HRC 60-65	GG(G)	Alu/NE	Kunststoff plastic	GFK/CFK Graphit	INOX VA	INCONEL TITAN	IK	TYP
naco	2	82	531			●	●	○			●	○	○		○			N
TIALN	2	83	532				●	○			●	○	○		○			N
ALTIN	2	84	554			●	●	●	●	●	●							H
naco	2	86	559			●	●	●	●	●	●							H
naco	2	88	040			●	●	●	●	○	●							H
naco	2	88	520			●	●	●	●	○	●							H
naco	2	89	521			●	●	●	●	○	●							H
TIALN	2	90	663			●	●	●	●	●	●							H
TIALN	2	90	664			●	●	●	●	●	●							H
ALTIN	2	91	665			●	●	●	●	●	●							H
TIALN	2	92	511				●	○			●				○			N
TIALN	2	92	512				●	○			●				○			N
TIALN	2	93	522				●	○			●				○			N
TIALN	2	93	544				●	○			●				○			N
TIALN	2	93	546				●	○			●				○			N
TIALN	2	93	547				●	○			●				○			N
naco	3	94	050			●	●	●	●	○	●							H
TIALN	4	94	739	●		●	●	○			●				○	○		N-H
TIALN	4	95	514				●	○			●				○	○		N
TIALN	4	95	524				●	○			●				○	○		N
ALTIN	2	96	671			●	●	●	●	●	●					○		H-N
ALTIN	2	96	672			●	●	●	●	●	●					○		H-N
ZrN	2	97	533			●						●	●					W

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Übersicht und Einsatzempfehlung / Field of application

	Beschichtung Coating	Z / Teeth	Seite / Page	Artikel / Article	HPC	MTC	HSC	Stahl steel	HRC 45-55	HRC 55-60	HRC 60-65	GG(G)	Alu/NE	Kunststoff plastic	GFK/CFK Graphit	INOX VA	INCONEL TITAN	IK	TYP
Kopierfräser / Profile cutters																			
	TIALCN	2	98	557			●	●					●			○	○		N-W
	TIALCN	2	99	556			●	●					●			○	○		N-W
	DIAMANT DIA DUR	2	100	560			●					○	○		●				N
	DIAMANT DIA DUR	4	102	563			●					○	○		●				N
	DIAMANT DIA DUR	4	102	564			●					○	○		●				N
	DIAMANT DIA DUR	2	103	565			●					○	○		●				N
	DIAMANT DIA DUR	2	104	561			●					○	○		●				N
	DIAMANT DIA DUR	2	106	566			●					○	○		●				N
Spezialfräser / Special cutters																			
			110	40			●							●	●				W
			111	41			●							●	●				W
			112	42			●							●	●				W
			113	43			●							●	DIAMANT DIA DUR				W
			114	44			●							●	DIAMANT DIA DUR				W
			115	45			●							●	DIAMANT DIA DUR				W
			116	46			●							●	DIAMANT DIA DUR				W
		2	117	47			●						●	●	DIAMANT DIA DUR				W
		1	118	48			●						●	●	DIAMANT DIA DUR				W
		1	119	49			●						●	●	DIAMANT DIA DUR				W
		1	120	200			●						●	●	DIAMANT DIA DUR				W
		1	121	50			●						●	●	DIAMANT DIA DUR				W

DIAMANT DIA DUR auf Anfrage

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Übersicht und Einsatzempfehlung / Field of application

	Beschichtung Coating	Z / Teeth	Seite / Page	Artikel / Article	HPC	MTC	HSC	Stahl steel	HRC 45-55	HRC 55-60	HRC 60-65	GG(G)	Alu/NE	Kunststoff plastic	GFK/CFK Graphit	INOX VA	INCONEL TITAN	IK	TYP
Spezialfräser / Special cutters																			
		1	122	51			●						●	●	DIAMANT DIA DUR				W
		2	123	52			●						●	●	DIAMANT DIA DUR				W
		1	124	750				●	●	○		●				○			N
		1	124	740				●	●	○		●				○			N
	TIALN	1	125	745				●				●	●	●		●			N
	TIALN	6	125	760				●	●	○		●	●	○		●	○		N
	TIALN	6	125	790				●	●	○		●	●	○		●	○		N
		2	126	660				●				●	●	●		○			N
		2	126	690				●				●	●	●		○			N
		2	126	612				●				●	●	●		○			N
	TIALN	4	127	900				●	●	○		●	●	●		●	○		N
	TIALN	4-6	127	903				●	●	○		●	●	●		●	○		N
	TIALN	3-6	128	904				●	○			●	●	●		●	○		N
	TIALN	4	128	780				●	●	○		●	●	●		●	○		N
		4	129	901				●	●	○		●	●	●		●	○		N
Gewindefräser / Thread cutters																			
	TIALCN	3-6	132	800				●	○			●	●	○		●			N
	TIALCN	3-6	134	802				●	○			●	●	○		●		●	N
	TIALCN	3-5	135	803				●	○			●	●	○		●		●	N
	TIALCN	3	136	804				●	○			●	●	○		●			N
	TIALCN	3	137	801				●	○			●	●	○		●			N
	TIALCN	3	137	806				●	○			●	●	○		●			N

DIAMANT DIA DUR auf Anfrage

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Übersicht und Einsatzempfehlung / Field of application

VHM-Bohrer / solid carbide drills

	Beschichtung Coating	Z / Teeth	Seite / Page	Artikel / Article	HPC	MTC	HSC	Stahl steel	HRC 45-55	HRC 55-60	HRC 60-65	GG(G)	Alu/NE	Kunststoff plastic	GFK/CFK Graphit	INOX VA	INCONEL TITAN	IK	TYP
	naco	2	140	810	●			●	●	○		●							H
	TIALN	2	141	303				●	○			●	○			○			N-H
	TIALN	2	142	503				●	○			●	○			○			N-H
	TIALN	2	142	703				●	○			●	○			○		●	N-H
	TIALN	2	147	505				●	○			●	○			○			N-H
	TIALN	2	147	705				●	○			●	○			○		●	N-H
	ALTIN	2	147	704				●	○			●	○			●	○	●	N-W
	TIALN	2	153	805	●			●	○			●	○			○		●	N-H
	nacro	2	153	905	●			●	○			●	○			○		●	N
	TIALN	2	153	845	●			●				●	○			●		●	N
	ZrN	2	153	706	●								●	●		○		●	W
	TIALN	2	158	708				●	○			●	○			○		●	N-H
	TIALN	2	160	710				●	○			●	○			○		●	N-H
	TIALN	2	163	915				●	○			●	○			○		●	N-H
	TIALN	2	165	920				●	○			●	○			○		●	N-H
	TIALN	2	166	926				●	○			●	○			○		●	N
	TIALN	2	167	931				●	○			●	○			○		●	N
	TIALN	4	168	807				●	○			●				○		●	N
	TIALN	3	168	808				●	○			●				○		●	N
	TIALN	2	170	608				●				●	●			○			N
	TIALN	2	171	820				●	●	○		●	●			○	○		N
	TIALN	2	171	830				●	●	○		●	●			○	○		N

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Übersicht und Einsatzempfehlung / Field of application

VHM-Bohrer / solid carbide drills

Beschichtung Coating	Z / Teeth	Seite / Page	Artikel / Article	HPC	MTC	HSC	Stahl steel	HRC 45-55	HRC 55-60	HRC 60-65	GG(G)	Alu/NE	Kunststoff plastic	GFK/CFK Graphit	INOX VA	INCONEL TITAN	IK	TYP
TIALN	2	170	890				●	●	○		●	●			○	○		N
TIALN	2	170	860				●	●	○		●	●			○	○		N
TIALN	2	171	814				●	●	○		●	●			○	○		N
TIALN	2	172	818				●	●	○		●	○			○	○	●	N
TIALN	4	173	711				●	○			●	○					●	N
TIALN	2	174	841				●	○			●	●			○			N
TIALN	2	174	850				●	○			●	●			○			N
TIN	3	175	400							●								H
		176	53									○	●	DIAMANT DIA DUR				W
		177	54									●	●	DIAMANT DIA DUR	○			W

VHM-Senkenwerkzeuge / Solid carbide countersink tools

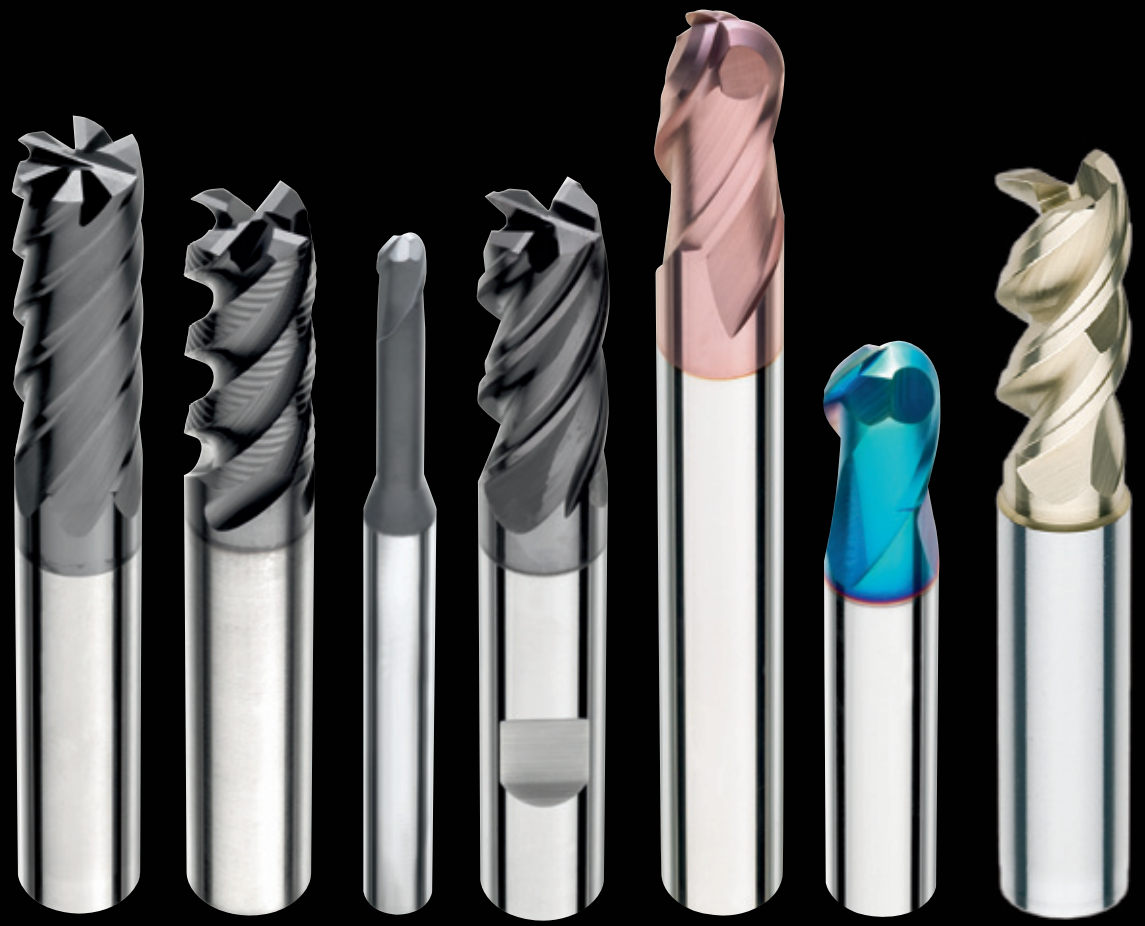
Beschichtung Coating	Z / Teeth	Seite / Page	Artikel / Article	HPC	MTC	HSC	Stahl steel	HRC 45-55	HRC 55-60	HRC 60-65	GG(G)	Alu/NE	Kunststoff plastic	GFK/CFK Graphit	INOX VA	INCONEL TITAN	IK	TYP
	4-6	180	880				●	○			○	●	○		●	○		N
		181	882				●	○			○	●	○		●	○		N
TIALN		182	883				●	○			○	●	○		●	●	●	N
TIALN		182	884				●	○			○	●	○		●	○		N
TIALN		183	730				●	●	○		●	●	○		●	●		N
		186	191				●	○			●	○	○		○			N
		188	192				●	○			●	●	○		○			N

DIAMANT DIA DUR auf Anfrage

● = geeignet / *applicable* ○ = bedingt geeignet / *partially suitable*

VHM-Fräser / *Solid carbide cutters*

HSS - PM - Fräser



HPC/Schruppfräser	*Roughing cutters*
Universalfräser	*Universal cutters*
Schlichtfräser	*Finishing cutters*
Kopierfräser	*Profile cutters*

Artikel-Nr.
243...

VHM – Schaftfräser **Starmax**[3Z]

Solid carbide cutter

TOP PRODUCT

TYP N | 3 | 43°/45°/47° | HPC

Ø1	Ø2	L2	L1	Eckfase *Chamfer*	Z	Artikel-Nr. *Article No.*
3,0	6	8	57	0,05	3	243.030...
4,0	6	11	57	0,05	3	243.040...
5,0	6	13	57	0,08	3	243.050...
6,0	6	13	57	0,08	3	243.060...
7,0	8	16	63	0,08	3	243.070...
8,0	8	19	63	0,10	3	243.080...
9,0	10	19	72	0,10	3	243.090...
10,0	10	22	72	0,10	3	243.100...
12,0	12	26	83	0,15	3	243.120...
16,0	16	32	92	0,20	3	243.160...
20,0	20	38	104	0,20	3	243.200...

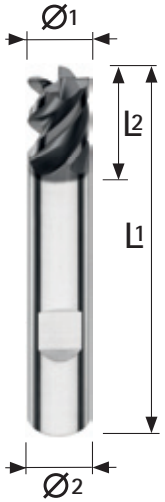
Bitte fügen Sie bei Ihrer Bestellung folgende Codes hinzu: mit Weldon .10 ohne Weldon .00
Please add the following code to your order: with weldon .10 without weldon .00

Artikel-Nr.
134...

VHM – Schaftfräser **Unicut**

Solid carbide cutter

TYP N | 3 | 4 | 45° | HPC | MTC



Ø1	Ø2	L2	L1	Eckfase *Chamfer*	Z	Artikel-Nr. *Article No.*
2,80	6	3	50	0,1	3	134.028.00
3,00	6	3	50	0,1	3	134.030.00
3,80	6	4	54	0,1	3	134.038.00
4,00	6	4	54	0,1	3	134.040.00
4,80	6	5	54	0,2	3	134.048.00
5,00	6	5	54	0,2	3	134.050.00
5,75	6	6	54	0,2	4	134.058.00
6,00	6	6	54	0,2	4	134.060.00
7,75	8	8	58	0,2	4	134.077.00
8,00	8	8	58	0,2	4	134.080.00
9,70	10	10	66	0,2	4	134.097.00
10,00	10	10	66	0,2	4	134.100.00
12,00	12	12	73	0,2	4	134.120.00
14,00	14	14	75	0,2	4	134.140.00
16,00	16	16	82	0,2	4	134.160.00

ALTIN | HA | HB | DIN 6527 lang | INOX VA | Universal

naco | HB | Werks-norm | HRC 45-55 | Universal | GG(G) | ungleiche Teilung

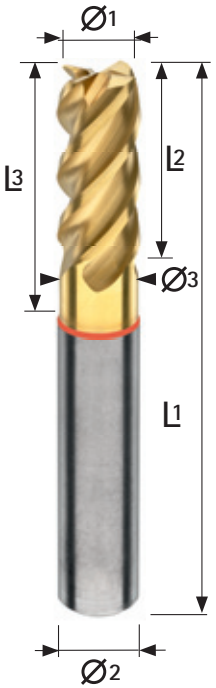
Artikel-Nr.
788...

VHM – Schaftfräser **Power**HP3

Solid carbide cutter

NEW

TYP N | 4 | 45° | HPC | MTC | HSC



Ø1	Ø2	L2	L1	Ø3	L3	Eckfase *Chamfer*	Z	Artikel-Nr. *Article No.*
6,0	6,0	13,0	57	5,5	21	0,20	4	788.060.00
8,0	8,0	19,0	63	7,5	27	0,20	4	788.080.00
10,0	10,0	22,0	72	9,5	32	0,30	4	788.100.00
12,0	12,0	26,0	83	11,50	38	0,30	4	788.120.00
16,0	16,0	32,0	92	15,00	44	0,40	4	788.160.00
20,0	20,0	38,0	104	19,00	52	0,40	4	788.200.00

HP3 | HB | Werks-norm | INOX VA | TITAN | Universal | ungleiche Teilung

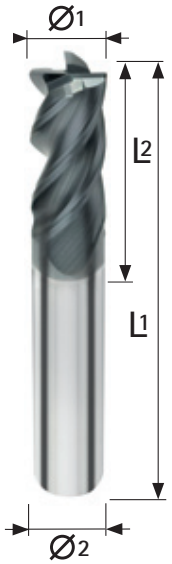
Artikel-Nr.
377...

VHM – Schaftfräser **Flutemax**

Solid carbide cutter

NEW

TYP N | 4 | 35/38° | HPC | MTC



Ø1	Ø2	L2	L1	Eckfase *Chamfer*	Z	Artikel-Nr. *Article No.*
4,0	6	12	55	0,13	4	377.040.00
5,0	6	13	57	0,18	4	377.050.00
6,0	6	13	57	0,20	4	377.060.00
8,0	8	16	63	0,20	4	377.080.00
10,0	10	22	72	0,20	4	377.100.00
12,0	12	26	83	0,30	4	377.120.00
14,0	14	26	83	0,40	4	377.140.00
16,0	16	32	92	0,40	4	377.160.00
18,0	18	32	92	0,50	4	377.180.00
20,0	20	38	104	0,50	4	377.200.00
25,0	25	45	121	0,50	4	377.250.00

VAROCON | HA | Werks-norm | INOX VA | TITAN | Universal | ungleiche Teilung

VHM – Schaftfräser **Starmax Typ N**

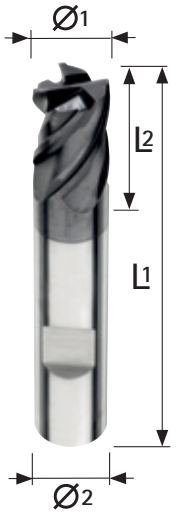
Solid carbide cutters

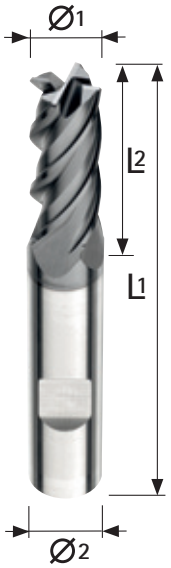
TYP N | 4 | 35/38° | HPC | MTC

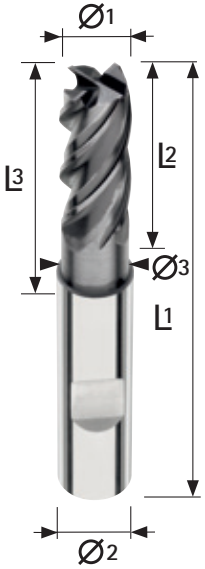
Artikel-Nr.
737...

Artikel-Nr.
735...

Artikel-Nr.
738...







Ø1	Ø2	L2	L1	Ø3	L3	Eckfase *Chamfer*	Z	Artikel-Nr. *Article No.*
3,0	6	6	54	-	-	0,10	4	737.030.00
3,0	6	8	57	-	-	0,13	4	735.030.00
3,0	6	8	57	2,8	18	0,13	4	738.030.00
4,0	6	8	54	-	-	0,13	4	737.040.00
4,0	6	11	57	-	-	0,13	4	735.040.00
4,0	6	11	57	3,6	21	0,18	4	738.040.00
5,0	6	9	54	-	-	0,18	4	737.050.00
5,0	6	13	57	-	-	0,18	4	735.050.00
5,0	6	13	57	4,6	21	0,20	4	738.050.00
6,0	6	10	54	-	-	0,20	4	737.060.00
6,0	6	13	57	-	-	0,20	4	735.060.00
6,0	6	13	57	5,5	21	0,20	4	738.060.00
7,0	8	12	58	-	-	0,20	4	737.070.00
7,0	8	19	63	-	-	0,20	4	735.070.00
7,0	8	19	63	6,5	27	0,20	4	738.070.00
8,0	8	12	58	-	-	0,20	4	737.080.00
8,0	8	19	63	-	-	0,20	4	735.080.00
8,0	8	19	63	7,5	27	0,20	4	738.080.00
9,0	10	14	66	-	-	0,30	4	737.090.00
9,0	10	22	72	-	-	0,30	4	735.090.00
9,0	10	22	72	8,5	32	0,30	4	738.090.00
10,0	10	14	66	-	-	0,30	4	737.100.00
10,0	10	22	72	-	-	0,30	4	735.100.00
10,0	10	22	72	9,5	32	0,30	4	738.100.00

Fortsetzung nächste Seite / to be continued

ALTIN | HB | Werks-norm | INOX VA | Universal | ungleiche Teilung

Fortsetzung / continuation

Artikel-Nr.

737... 735... 738...

Ø1	Ø2	L2	L1	Ø3	L3	Eckfase *Chamfer*	Z	Artikel-Nr. *Article No.*
11,0	12	16	73	-	-	0,30	4	737.110.00
11,0	12	26	83	-	-	0,30	4	735.110.00
11,0	12	26	83	10,5	38	0,30	4	738.110.00
12,0	12	16	73	-	-	0,30	4	737.120.00
12,0	12	26	83	-	-	0,30	4	735.120.00
12,0	12	26	83	11,5	38	0,30	4	738.120.00
13,0	14	18	75	-	-	0,30	4	737.130.00
13,0	14	26	83	12,5	42	0,30	4	738.130.00
14,0	14	18	75	-	-	0,30	4	737.140.00
14,0	14	26	83	-	-	0,30	4	735.140.00
14,0	14	26	83	13,5	42	0,30	4	738.140.00
16,0	16	22	82	-	-	0,40	4	737.160.00
16,0	16	32	92	-	-	0,40	4	735.160.00
16,0	16	32	92	15,5	44	0,40	4	738.160.00
18,0	18	24	84	-	-	0,40	4	737.180.00
18,0	18	32	92	-	-	0,40	4	735.180.00
18,0	18	32	100	17,5	50	0,40	4	738.180.00
20,0	20	26	92	-	-	0,50	4	737.200.00
20,0	20	38	104	-	-	0,50	4	735.200.00
20,0	20	38	104	19,5	54	0,50	4	738.200.00
25,0	25	32	92	-	-	0,50	4	737.250.00
25,0	25	42	104	-	-	0,50	4	735.250.00
25,0	25	42	121	24	65	0,50	4	738.250.00

NEW

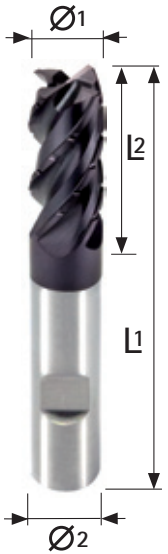
VHM – Schruppfräser **Starmax Typ NF**

Solid carbide cutter

TYP N | 4 | 35/38° | HPC | MTC

Artikel-Nr.

722...



Ø1	Ø2	L2	L1	Eckfase *Chamfer*	Z	Artikel-Nr. *Article No.*
4,0	6	8	54	0,13	4	722.040.00
5,0	6	6	54	0,18	4	722.050.00
6,0	6	10	54	0,20	4	722.060.00
8,0	8	12	58	0,20	4	722.080.00
10,0	10	14	66	0,30	4	722.100.00
12,0	12	16	73	0,30	4	722.120.00
14,0	14	18	75	0,30	4	722.140.00
16,0	16	22	82	0,40	4	722.160.00
20,0	20	26	92	0,50	4	722.200.00

ALTIN | HB | DIN 6527 kurz | GG(G) | ungleiche Teilung

VHM – Schruppfräser **Starmax Typ NF**

Solid carbide cutter

TYP N | 4 | 35/38° | HPC | MTC

Artikel-Nr.

727...

Ø1	Ø2	L2	L1	Eckfase *Chamfer*	Z	Artikel-Nr. *Article No.*
4,0	6	11	57	0,13	4	727.040.00
5,0	6	13	57	0,18	4	727.050.00
6,0	6	13	57	0,20	4	727.060.00
8,0	8	19	63	0,20	4	727.080.00
10,0	10	22	72	0,30	4	727.100.00
12,0	12	26	83	0,30	4	727.120.00
14,0	14	26	83	0,30	4	727.140.00
16,0	16	32	92	0,40	4	727.160.00
20,0	20	38	104	0,50	4	727.200.00

NEW

VHM – Schruppfräser **Starmax Typ NF** extra lang

Solid carbide cutter extra long

TYP N | 4 | 30° | HPC | MTC

Artikel-Nr.

723...

Ø1	Ø2	L2	L1	Eckfase *Chamfer*	Z	Artikel-Nr. *Article No.*
6,0	6	24	68	0,3	4	723.060.00
8,0	8	38	88	0,3	4	723.080.00
10,0	10	45	95	0,4	4	723.100.00
12,0	12	53	110	0,5	4	723.120.00
16,0	16	63	123	0,6	4	723.160.00
20,0	20	75	141	0,6	4	723.200.00

ALTIN | HB | DIN 6527 lang | GG(G) | INOX VA | ungleiche Teilung

TIALN | HB | Werks-norm | GG(G)

TOP PRODUCT

VHM – Schaftfräser **Starmax Typ N-H**

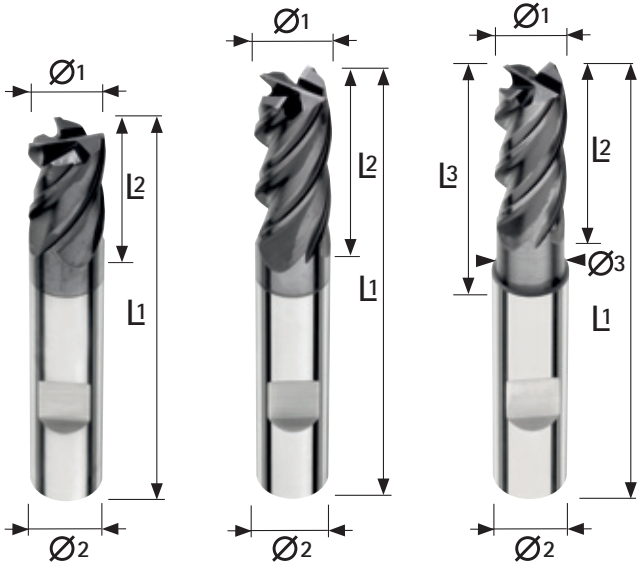
Solid carbide cutters

TYP N-H | 4 | 35/38° | HPC

Artikel-Nr.
731...

Artikel-Nr.
732...

Artikel-Nr.
733...



Ø1	Ø2	L2	L1	Ø3	L3	Eckfase *Chamfer*	Z	Artikel-Nr. *Article No.*
3,0	6	6	54	-	-	0,10	4	731.030.00
3,0	6	8	57	-	-	0,10	4	732.030.00
3,0	6	8	57	2,8	18	0,13	4	733.030.99
4,0	6	8	54	-	-	0,13	4	731.040.00
4,0	6	11	57	-	-	0,13	4	732.040.00
4,0	6	11	57	3,6	21	0,18	4	733.040.99
5,0	6	9	54	-	-	0,18	4	731.050.00
5,0	6	13	57	-	-	0,18	4	732.050.00
5,0	6	13	57	4,6	21	0,20	4	733.050.99
5,5	6	10	54			0,20	4	731.055.00
6,0	6	10	54	-	-	0,20	4	731.060.00
6,0	6	13	57	-	-	0,20	4	732.060.00
6,0	6	13	57	5,5	21	0,20	4	733.060.99
7,0	8	12	58	-	-	0,20	4	731.070.00
7,0	8	19	63	-	-	0,20	4	732.070.00
7,0	8	19	63	6,5	27	0,20	4	733.070.99
7,5	8	12	58			0,20	4	731.075.00
8,0	8	12	58	-	-	0,20	4	731.080.00
8,0	8	19	63	-	-	0,20	4	732.080.00
8,0	8	19	63	7,5	27	0,20	4	733.080.99
9,0	10	14	66	-	-	0,30	4	731.090.00
9,0	10	22	72	-	-	0,30	4	732.090.00
9,0	10	22	72	8,5	32	0,30	4	733.090.99
9,5	10	14	66			0,20	4	731.095.00
10,0	10	14	66	-	-	0,30	4	731.100.00
10,0	10	22	72	-	-	0,30	4	732.100.00
10,0	10	22	72	9,5	32	0,30	4	733.100.99

Fortsetzung nächste Seite / to be continued

TIALN | HB | Werks-norm | GG(G) | ungleiche Teilung

TOP PRODUCT

VHM – Schaftfräser **Starmax Typ N-H**

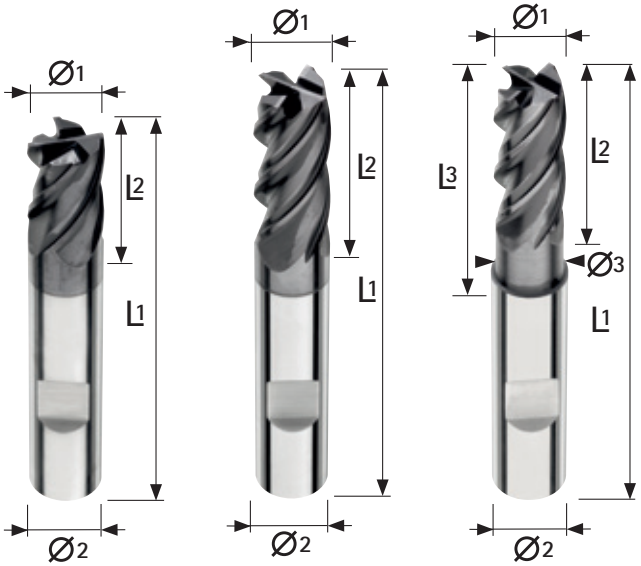
Solid carbide cutters

TYP N-H | 4 | 35/38° | HPC

Artikel-Nr.
731...

Artikel-Nr.
732...

Artikel-Nr.
733...



Fortsetzung / continuation

Artikel-Nr.
731... 732 .. 733...

Ø1	Ø2	L2	L1	Ø3	L3	Eckfase *Chamfer*	Z	Artikel-Nr. *Article No.*
11,0	12	22	73	-	-	0,30	4	731.110.00
11,0	12	16	83	-	-	0,30	4	732.110.00
11,0	12	26	83	10,5	38	0,30	4	733.110.99
11,5	12	16	73	-	-	0,25	4	731.115.00
12,0	12	26	73	-	-	0,30	4	731.120.00
12,0	12	16	83	-	-	0,30	4	732.120.00
12,0	12	26	83	11,5	38	0,30	4	733.120.99
13,0	14	18	75	-	-	0,30	4	731.130.00
13,0	14	26	83	-	-	0,30	4	732.130.00
13,0	14	26	83	12,5	42	0,30	4	733.130.99
13,5	14	18	75			0,25	4	731.135.00
14,0	14	18	75	-	-	0,30	4	731.140.00
14,0	14	26	83	-	-	0,30	4	732.140.00
14,0	14	26	83	13,5	42	0,30	4	733.140.99
15,5	16	22	82			0,25	4	731.155.00
16,0	16	22	82	-	-	0,40	4	731.160.00
16,0	16	32	92	-	-	0,40	4	732.160.00
16,0	16	32	92	15,5	44	0,40	4	733.160.99
17,5	18	24	84			0,25	4	731.175.00
18,0	18	24	84	-	-	0,40	4	731.180.00
18,0	18	32	92	-	-	0,40	4	732.180.00
18,0	18	32	100	17,5	50	0,40	4	733.180.99
19,5	20	26	92			0,25	4	731.195.00
20,0	20	26	92	-	-	0,50	4	731.200.00
20,0	20	38	104	-	-	0,50	4	732.200.00
20,0	20	38	104	19,5	54	0,50	4	733.200.99
25,0	25	32	92	-	-	0,50	4	731.250.00
25,0	25	38	104	-	-	0,50	4	732.250.00
25,0	25	42	121	24,0	65	0,50	4	733.250.99

TIALN | HB | Werks-norm | GG(G) | ungleiche Teilung

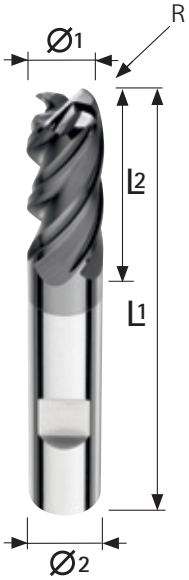
VHM – Schaftfräser **Starmax**ER

Solid carbide cutter with radius

TYP N-H | ER | 4 | 35/38° | HPC

Artikel-Nr.

734...



Ø1	Ø2	L2	L1	Ecken-radius *Corner-radius*	Z	Artikel-Nr. *Article No.*
4,0	6	11	57	0,25	4	734.040.00
4,0	6	11	57	0,50	4	734.041.00
4,0	6	11	57	1,00	4	734.042.00
5,0	6	13	57	0,50	4	734.050.00
5,0	6	13	57	1,00	4	734.051.00
5,0	6	13	57	1,50	4	734.052.00
6,0	6	13	57	0,50	4	734.060.00
6,0	6	13	57	1,00	4	734.061.00
6,0	6	13	57	1,50	4	734.062.00
6,0	6	13	57	2,00	4	734.063.00
8,0	8	19	63	0,50	4	734.080.00
8,0	8	19	63	1,00	4	734.081.00
8,0	8	19	63	1,50	4	734.082.00
8,0	8	19	63	2,00	4	734.083.00
10,0	10	22	72	0,50	4	734.100.00
10,0	10	22	72	1,00	4	734.101.00
10,0	10	22	72	1,50	4	734.102.00
10,0	10	22	72	2,00	4	734.103.00

Ø1	Ø2	L2	L1	Ecken-radius *Corner-radius*	Z	Artikel-Nr. *Article No.*
12,0	12	26	83	0,5	4	734.120.00
12,0	12	26	83	1,0	4	734.121.00
12,0	12	26	83	1,5	4	734.122.00
12,0	12	26	83	2,0	4	734.123.00
14,0	14	26	83	1,0	4	734.140.00
14,0	14	26	83	2,0	4	734.141.00
16,0	16	32	92	1,0	4	734.160.00
16,0	16	32	92	1,5	4	734.161.00
16,0	16	32	92	2,0	4	734.162.00
16,0	16	32	92	2,5	4	734.163.00
18,0	18	32	92	1,5	4	734.180.00
18,0	18	32	92	2,5	4	734.181.00
20,0	20	38	104	1,0	4	734.200.00
20,0	20	38	104	1,5	4	734.201.00
20,0	20	38	104	2,0	4	734.202.00
20,0	20	38	104	2,5	4	734.203.00
20,0	20	38	104	3,0	4	734.204.00
20,0	20	38	104	4,0	4	734.205.00
20,0	20	38	104	5,0	4	734.206.00

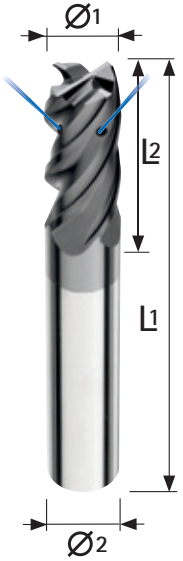
TIALN | HB | Werks-norm | GG(G) | ungleiche Teilung

Artikel-Nr.
729...

VHM – Schaftfräser **Starmax**IK

Solid carbide cutter

TYP N-H | 4 | 35/38° | HPC



Ø1	Ø2	L2	L1	Eckfase *Chamfer*	Z	Artikel-Nr. *Article No.*
6,0	6	13	57	0,2	4	729.060.00
8,0	8	19	63	0,2	4	729.080.00
10,0	10	22	72	0,3	4	729.100.00
12,0	12	26	83	0,3	4	729.120.00
16,0	16	32	92	0,4	4	729.160.00
20,0	20	38	104	0,5	4	729.200.00

Artikel-Nr.
728...

VHM – Schaftfräser **Starmax Typ N-H** extra lang

Solid carbide cutter extra long

TYP N-H | 4 | 35/38°

Ø1	Ø2	L2	L1	Eckfase *Chamfer*	Z	Artikel-Nr. *Article No.*
5,0	6	21	63	0,18	4	728.050.00
6,0	6	22	63	0,20	4	728.060.00
8,0	8	28	80	0,20	4	728.080.00
10,0	10	33	100	0,30	4	728.100.00
12,0	12	42	100	0,30	4	728.120.00
14,0	14	48	100	0,30	4	728.140.00
16,0	16	53	150	0,40	4	728.160.00
20,0	20	68	150	0,50	4	728.200.00
25,0	25	85	165	0,50	4	728.250.00

ALTIN | HB | DIN 6527 lang | INOX VA | GG(G) | Universal | ungleiche Teilung

TIALN | HB | Werks-norm | GG(G) | ungleiche Teilung

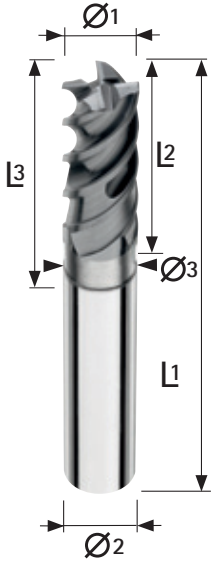
TOP PRODUCT

Artikel-Nr.
310...

VHM – Schaftfräser **Hardmax**

Solid carbide cutter

TYP H | 4 | 52° | HPC



Ø1	Ø2	L2	L1	Ø3	L3	Eckfase *Chamfer*	Z	Artikel-Nr. *Article No.*
2,5	6	6	57	2,3	7	0,10	4	310.025...
3,0	6	8	57	2,8	7	0,10	4	310.030...
4,0	6	11	57	3,8	21	0,10	4	310.040...
5,0	6	13	57	4,8	21	0,10	4	310.050...
6,0	6	13	57	5,8	21	0,10	4	310.060...
8,0	8	19	63	7,8	27	0,15	4	310.080...
10,0	10	22	72	9,8	32	0,15	4	310.100...
12,0	12	26	83	11,8	38	0,20	4	310.120...
14,0	14	26	83	13,8	42	0,20	4	310.140...
16,0	16	32	92	15,8	44	0,20	4	310.160...
18,0	18	32	92	17,8	44	0,30	4	310.180...
20,0	20	38	104	19,8	54	0,30	4	310.200...

Bitte fügen Sie bei Ihrer Bestellung folgende Codes hinzu: mit Weldon .10 ohne Weldon .00
Please add the following code to your order: with weldon .10 without weldon .00

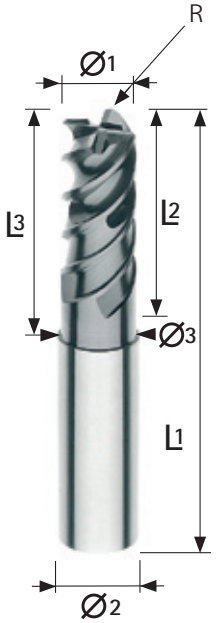
ALTIN | HA | HB | Werks-norm | HRC 55-60 | GG(G)

Artikel-Nr.
315...

VHM – Schaftfräser **Hardmax**ER

Solid carbide cutter with radius

TYP H | ER | 3 | 4 | 52° | HPC



Ø1	Ø2	L2	L1	Ø3	L3	Ecken-radius *Corner-radius*	Z	Artikel-Nr. *Article No.*
3,0	6	8	57	2,9	18	0,2	3	315.031...
3,0	6	8	57	2,9	18	0,5	3	315.032...
4,0	6	11	57	3,8	21	0,3	4	315.041...
4,0	6	11	57	3,8	21	0,5	4	315.042...
4,0	6	11	57	3,8	21	1,0	4	315.043...
5,0	6	13	57	4,8	21	0,3	4	315.051...
5,0	6	13	57	4,8	21	0,5	4	315.052...
5,0	6	13	57	4,8	21	1,0	4	315.053...
6,0	6	13	57	5,8	21	0,3	4	315.061...
6,0	6	13	57	5,8	21	0,5	4	315.062...
6,0	6	13	57	5,8	21	1,0	4	315.063...
6,0	6	13	57	5,8	21	1,5	4	315.064...
6,0	6	13	57	5,8	21	2,0	4	315.065...
8,0	8	19	63	7,8	27	0,5	4	315.081...
8,0	8	19	63	7,8	27	1,0	4	315.082...
8,0	8	19	63	7,8	27	1,5	4	315.083...
8,0	8	19	63	7,8	27	2,0	4	315.084...
10,0	10	22	72	9,8	32	0,5	4	315.101...
10,0	10	22	72	9,8	32	1,0	4	315.102...
10,0	10	22	72	9,8	32	1,5	4	315.103...
10,0	10	22	72	9,8	32	2,0	4	315.104...

Bitte fügen Sie bei Ihrer Bestellung folgende Codes hinzu: mit Weldon .10 ohne Weldon .00
Please add the following code to your order: with weldon .10 without weldon .00

ALTIN | HA | HB | Werks-norm | HRC 55-60 | GG(G)

VHM – Schaftfräser **Hardmax**ER

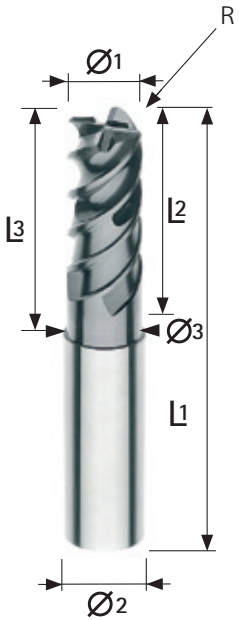
Solid carbide cutter with radius

TYP H | ER | 3 | 4 | 52° | HPC

Fortsetzung / continuation

Artikel-Nr.

315...



Ø1	Ø2	L2	L1	Ø3	L3	Ecken-radius *Corner-radius*	Z	Artikel-Nr. *Article No.*
12,0	12	26	83	11,8	38	0,5	4	315.121...
12,0	12	26	83	11,8	38	1,0	4	315.122...
12,0	12	26	83	11,8	38	1,5	4	315.123...
12,0	12	26	83	11,8	38	2,0	4	315.124...
16,0	16	32	92	15,8	44	0,5	4	315.161...
16,0	16	32	92	15,8	44	1,0	4	315.162...
16,0	16	32	92	15,8	44	1,5	4	315.163...
16,0	16	32	92	15,8	44	2,0	4	315.164...
16,0	16	32	150	15,8	44	1,0	4	315.165...
20,0	20	38	92	19,8	54	0,5	4	315.201...
20,0	20	38	92	19,8	54	1,0	4	315.202...
20,0	20	38	92	19,8	54	1,5	4	315.203...
20,0	20	38	92	19,8	54	2,0	4	315.204...
20,0	20	38	150	19,8	54	1,0	4	315.205...
25,0	25	38	160	19,8	54	2,0	4	315.206...

Bitte fügen Sie bei Ihrer Bestellung folgende Codes hinzu: mit Weldon .10 ohne Weldon .00
Please add the following code to your order: with weldon .10 without weldon .00

ALTIN | HA | HB | Werks-norm | HRC 55-60 | GG(G)

TOP PRODUCT

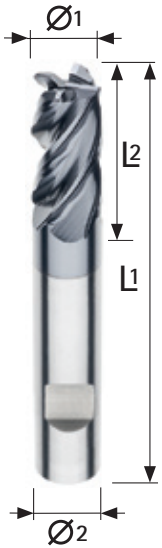
VHM – Schaftfräser **Starmax Ocean**

Solid carbide cutter

TYP N-H | 4 | 30° | HPC | MTC

Artikel-Nr.

777...



Ø1	Ø2	L2	L1	Eckfase *Cham-fer*	Z	Artikel-Nr. *Article No.*
6,0	6	13	57	0,20	4	777.060.00
8,0	8	19	63	0,25	4	777.080.00
10,0	10	22	72	0,30	4	777.100.00
12,0	12	26	83	0,35	4	777.120.00
16,0	16	32	92	0,45	4	777.160.00
20,0	20	42	104	0,50	4	777.200.00
25,0	25	42	110	0,60	4	777.250.00

ALTIN | HB | Werks-norm | GG(G)

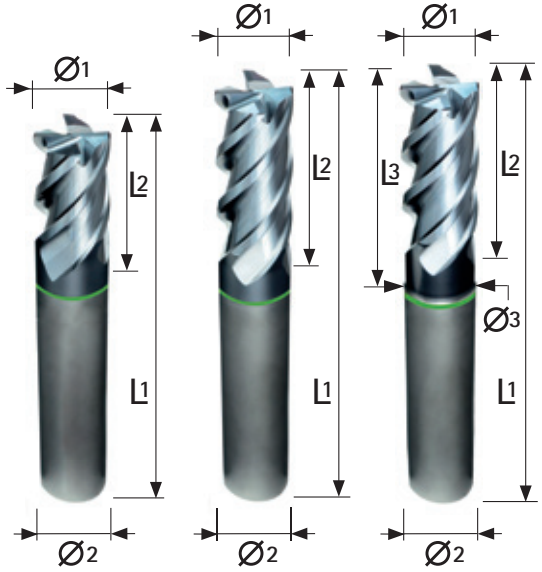
VHM – Schaftfräser **Starmax**^{3G}

Solid carbide cutters

TYP N-H | 4 | 40° | HPC

NEW

Artikel-Nr. 831...	Artikel-Nr. 832...	Artikel-Nr. 833...



Ø1	Ø2	L2	L1	Ø3	L3	Eckfase *Chamfer*	Z	Artikel-Nr. *Article No.*
3,0	6	6	54	-	-	0,10	4	831.030...
3,0	6	8	57	-	-	0,10	4	832.030...
3,0	6	8	57	2,8	18	0,13	4	833.030...
4,0	6	8	54	-	-	0,13	4	831.040...
4,0	6	11	57	-	-	0,13	4	832.040...
4,0	6	11	57	3,6	21	0,18	4	833.040...
5,0	6	9	54	-	-	0,18	4	831.050...
5,0	6	13	57	-	-	0,18	4	832.050...
5,0	6	13	57	4,6	21	0,20	4	833.050...
6,0	6	10	54	-	-	0,20	4	831.060...
6,0	6	13	57	-	-	0,20	4	832.060...
6,0	6	13	57	5,5	21	0,20	4	833.060...
7,0	8	12	58	-	-	0,20	4	831.070...
7,0	8	19	63	-	-	0,20	4	832.070...
7,0	8	19	63	6,5	27	0,20	4	833.070...
8,0	8	12	58	-	-	0,20	4	831.080...
8,0	8	19	63	-	-	0,20	4	832.080...
8,0	8	19	63	7,5	27	0,20	4	833.080...
9,0	10	14	66	-	-	0,30	4	831.090...
9,0	10	22	72	-	-	0,30	4	832.090...
9,0	10	22	72	8,5	32	0,30	4	833.090...
10,0	10	14	66	-	-	0,30	4	831.100...
10,0	10	22	72	-	-	0,30	4	832.100...
10,0	10	22	72	9,5	32	0,30	4	833.100...

Ø1	Ø2	L2	L1	Ø3	L3	Eckfase *Chamfer*	Z	Artikel-Nr. *Article No.*
11,0	12	16	73	-	-	0,30	4	831.110...
11,0	12	26	83	-	-	0,30	4	832.110...
11,0	12	26	83	10,5	38	0,30	4	833.110...
12,0	12	16	73	-	-	0,30	4	831.120...
12,0	12	26	83	-	-	0,30	4	832.120...
12,0	12	26	83	11,5	38	0,30	4	833.120...
13,0	14	18	75	-	-	0,30	4	831.130...
13,0	14	26	83	-	-	0,30	4	832.130...
13,0	14	26	83	12,5	42	0,30	4	833.130...
14,0	14	18	75	-	-	0,30	4	831.140...
14,0	14	26	83	-	-	0,30	4	832.140...
14,0	14	26	83	13,5	42	0,30	4	833.140...
16,0	16	22	82	-	-	0,40	4	831.160...
16,0	16	32	92	-	-	0,40	4	832.160...
16,0	16	32	92	15,5	44	0,40	4	833.160...
18,0	18	24	84	-	-	0,40	4	831.180...
18,0	18	32	92	-	-	0,40	4	832.180...
18,0	18	32	100	17,5	50	0,40	4	833.180...
20,0	20	26	92	-	-	0,50	4	831.200...
20,0	20	38	104	-	-	0,50	4	832.200...
20,0	20	38	104	19,5	54	0,50	4	833.200...
25,0	25	32	92	-	-	0,50	4	831.250...
25,0	25	38	104	-	-	0,50	4	832.250...
25,0	25	42	121	24,0	65	0,50	4	833.250...

Bitte fügen Sie bei Ihrer Bestellung folgende Codes hinzu: mit Weldon .10 ohne Weldon .00
Please add the following code to your order: with weldon .10 without weldon .00

VAROCON | HA | HB | Werks-norm | GG(G) | ungleiche Teilung

Artikel-Nr.

304...

VHM – Schruppfräser **Typ NR**

Solid carbide roughing cutter

TYP N | 4 | 25°

Ø1	Ø2	L2	L1	Z	Artikel-Nr. *Article No.*
3,0	6	6	57	4	304.030.00
4,0	6	8	57	4	304.040.00
5,0	6	10	57	4	304.050.00
6,0	6	13	57	4	304.060.00
8,0	8	16	63	4	304.080.00
10,0	10	22	72	4	304.100.00
12,0	12	26	83	4	304.120.00
14,0	14	26	83	4	304.140.00
16,0	16	32	92	4	304.160.00
18,0	18	32	92	4	304.180.00
20,0	20	38	104	4	304.200.00
25,0	25	45	121	4	304.250.00

TIALN | HB | Werks-norm | GG(G) | Universal

Artikel-Nr.

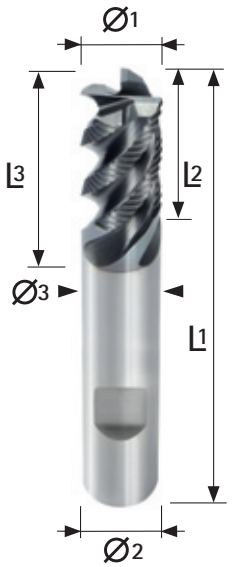
347...

VHM – Schruppfräser **Typ NR**

Solid carbide roughing cutter

NEW

TYP N-W | 4-5 | 45° | MTC



Ø1	Ø2	L2	L1	Ø3	L3	Z	Artikel-Nr. *Article No.*
6,0	6	13	57	5,5	21	4	347.060.00
8,0	8	16	63	7,5	27	4	347.080.00
10,0	10	22	72	9,5	32	4	347.100.00
12,0	12	26	83	11,5	38	4	347.120.00
16,0	16	32	92	15,5	44	5	347.160.00
20,0	20	38	104	19,5	54	5	347.200.00

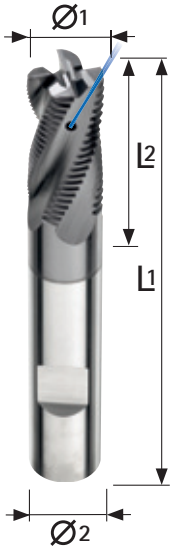
ALTIN | HA | HB | Werks-norm | INOX VA | GG(G) | Universal | ungleiche Teilung

Artikel-Nr.
334...

VHM – Schruppfräser[IK] **Typ NR**

Solid carbide roughing cutter

TYP N | 4 | 25°



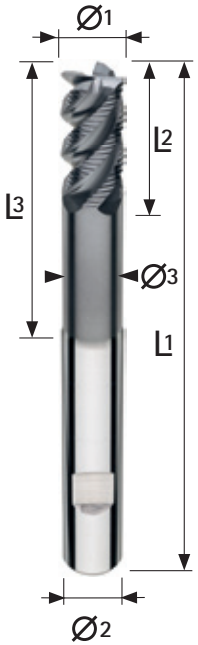
Ø1	Ø2	L2	L1	Z	Artikel-Nr. *Article No.*
6,0	6	13	57	4	334.060.00
8,0	8	16	63	4	334.080.00
10,0	10	22	72	4	334.100.00
12,0	12	26	83	4	334.120.00
16,0	16	32	92	4	334.160.00
20,0	20	38	104	4	334.200.00

Artikel-Nr.
305...

VHM – Schruppfräser **Typ NR** extra lang

Solid carbide roughing cutter extra long

TYP N-W | 4 | 45° | MTC



Ø1	Ø2	L2	L1	Ø3	L3	Eckfase *Chamfer*	Z	Artikel-Nr. *Article No.*
6,0	6	22	80	5,7	40	0,40	4	305.060.00
8,0	8	27	100	7,4	50	0,40	4	305.080.00
10,0	10	32	100	9,2	60	0,40	4	305.100.00
12,0	12	42	120	11,0	60	0,40	4	305.120.00
16,0	16	52	150	15,0	100	0,40	4	305.160.00
20,0	20	62	150	19,0	100	0,40	4	305.200.00
25,0	25	82	150	24,0	100	0,50	4	305.250.00

TIALN | HB | Werks-norm | GG(G) | ALU NE | INOX VA | Universal

ALTIN | HB | Werks-norm | GG(G) | INOX VA | ungleiche Teilung

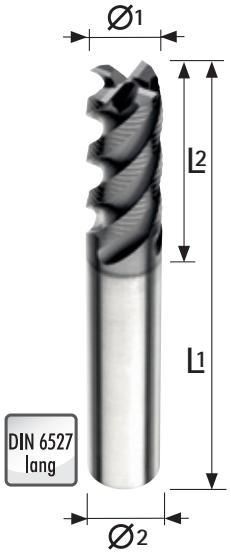
VHM – Schruppfräser **Quickmax** Typ NRf

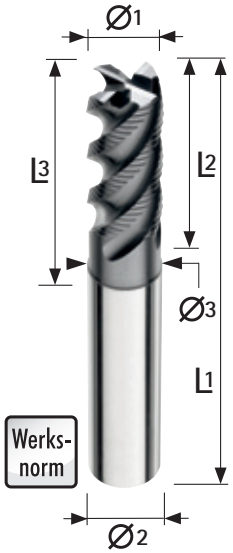
Solid carbide roughing cutters

TYP N-W | 3-6 | 45° | MTC

Artikel-Nr.
344...

Artikel-Nr.
345...





Ø1	Ø2	L2	L1	Ø3	L3	Z	Artikel-Nr. *Article No.*
4,0	6	11	57			3	344.040...
4,0	6	11	57	3,8	18	4	345.040...
5,0	6	13	57			4	344.050...
5,0	6	13	57	4,7	20	4	345.050...
6,0	6	16	57			4	344.060...
6,0	6	16	57	5,5	20	4	345.060...
7,0	8	16	63			4	344.070...
7,0	8	16	63	6,5	25	4	345.070...
8,0	8	16	63			4	344.080...
8,0	8	16	63	7,5	26	4	345.080...
9,0	10	19	72			4	344.090...
9,0	10	19	72	8,5	30	4	345.090...
10,0	10	22	72			4	344.100...
10,0	10	22	72	9,5	31	4	345.100...
12,0	12	26	83			4	344.120...
12,0	12	26	83	11,5	37	4	345.120...
14,0	14	26	83			5	344.140...
14,0	14	26	83	13,5	42	5	345.140...
16,0	16	32	92			5	344.160...
16,0	16	32	100	15,5	51	5	345.160...
20,0	20	38	104			6	344.200...
20,0	20	38	110	19,2	59	5	345.200...
25,0	25	45	121			6	344.250...
25,0	25	45	121	24,0	65	6	345.250...

Bitte fügen Sie bei Ihrer Bestellung folgende Codes hinzu: mit Weldon .10 ohne Weldon .00
Please add the following code to your order: with weldon .10 without weldon .00

ALTIN | HA | HB | Werks-norm | INOX VA

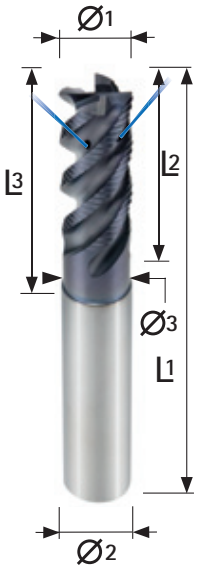
VHM – Schruppfräser **Quickmax**[IK] Typ NRf

Solid carbide roughing cutter

NEW

TYP N-W | 4-5 | 45° | MTC

Artikel-Nr.
335...



Ø1	Ø2	L2	L1	Z	Ø3	L3	Artikel-Nr. *Article No.*
6,0	6	13	57	4	5,5	21	335.060.00
8,0	8	16	63	4	7,5	27	335.080.00
10,0	10	22	72	4	9,5	32	335.100.00
12,0	12	26	83	4	11,5	38	335.120.00
16,0	16	32	92	4	15,5	44	335.160.00
20,0	20	38	104	5	19,5	54	335.200.00

ALTIN | HB | Werks-norm | INOX VA

HSS - PM – Schruppfräser[IK]

HSS - PM - roughing cutter

TYP N | 4 | 6 | 30°

Artikel-Nr.

98.615...

Powder Metal Technology

Ø1	Ø2	L2	L1	Z	Artikel-Nr. *Article No.*
16,0	16	32	92	4	98.615.160
18,0	16	32	92	4	98.615.180
20,0	20	38	104	4	98.615.200
25,0	25	45	121	4	98.615.250
30,0	25	45	121	6	98.615.300
32,0	32	53	133	6	98.615.320

TIALN | HB | Werks-norm | INOX VA | Universal

HSS - PM – Schruppfräser

HSS - PM - roughing cutter

TYP N | 3-6 | 30°

Artikel-Nr.

98.635...

Powder Metal Technology

Ø1	Ø2	L2	L1	Z	Artikel-Nr. *Article No.*
6,0	6	16	60	3	98.635.060
7,0	10	22	72	3	98.635.070
8,0	10	25	75	3	98.635.080
9,0	10	25	75	4	98.635.090
10,0	12	28	78	4	98.635.100
11,0	12	28	85	4	98.635.110
12,0	12	32	89	4	98.635.120
13,0	16	32	89	4	98.635.130
14,0	16	32	92	4	98.635.140
15,0	16	36	96	4	98.635.150
16,0	16	36	96	4	98.635.160
17,0	16	40	100	4	98.635.170
18,0	16	40	100	4	98.635.180
19,0	20	45	105	4	98.635.190
20,0	20	45	111	4	98.635.200
22,0	25	45	111	5	98.635.220
25,0	25	50	126	5	98.635.250
26,0	25	56	132	5	98.635.260
30,0	32	63	139	5	98.635.300
32,0	32	63	143	5	98.635.320
35,0	32	63	143	6	98.635.350
36,0	32	63	143	6	98.635.360

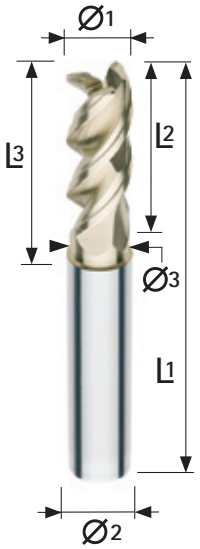
TIALN | HB | Werks-norm | Universal

Artikel-Nr.
244...

VHM – Schaftfräser
Solid carbide cutter

TOP PRODUCT

TYP W | 3 | 45° | HPC



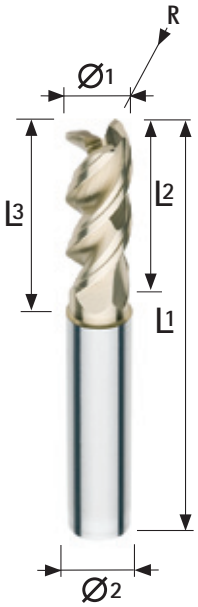
Ø1	Ø2	L2	L1	Ø3	L3	Eckfase *Chamfer*	Z	Artikel-Nr. *Article No.*
3,0	6	8	57	2,8	12	0,1	3	244.030...
4,0	6	11	57	3,8	18	0,1	3	244.040...
5,0	6	13	57	4,8	18	0,1	3	244.050...
6,0	6	13	57	5,8	18	0,2	3	244.060...
6,0	6	13	80	5,8	42	0,2	3	244.061...
8,0	8	21	63	7,8	25	0,2	3	244.080...
8,0	8	21	100	7,8	62	0,2	3	244.081...
10,0	10	22	72	9,7	30	0,2	3	244.100...
10,0	10	22	100	9,7	58	0,2	3	244.101...
12,0	12	26	83	11,7	36	0,2	3	244.120...
12,0	12	26	120	11,7	73	0,2	3	244.121...
16,0	16	36	92	15,7	42	0,2	3	244.160...
16,0	16	36	150	15,7	100	0,2	3	244.161...
18,0	18	36	92	17,6	42	0,2	3	244.180...
18,0	18	36	150	17,6	100	0,2	3	244.181...
20,0	20	41	104	19,5	52	0,2	3	244.200...
20,0	20	41	150	19,5	98	0,2	3	244.201...
25,0	25	50	121	24,5	65	0,3	3	244.250...

Bitte fügen Sie bei Ihrer Bestellung folgende Codes hinzu: mit Weldon .10 ohne Weldon .00
Please add the following code to your order: with weldon .10 without weldon .00

Artikel-Nr.
245...

VHM – Schaftfräser^{ER}
Solid carbide cutter with corner radius

TYP W | ER | 3 | 45° | HPC



Ø1	Ø2	L2	L1	L3	R	Z	Artikel-Nr. *Article No.*
5,0	6	13	57	18	0,5	3	245.050...
5,0	6	13	57	18	1,0	3	245.051...
6,0	6	13	57	18	0,5	3	245.060...
6,0	6	13	57	18	1,0	3	245.061...
8,0	8	21	63	25	0,5	3	245.080...
8,0	8	21	63	25	1,0	3	245.081...
10,0	10	22	72	30	0,5	3	245.100...
10,0	10	22	72	30	1,0	3	245.101...
12,0	12	26	83	36	0,5	3	245.120...
12,0	12	26	83	36	1,0	3	245.121...
16,0	16	36	92	42	2,0	3	245.160...
16,0	16	36	92	42	4,0	3	245.161...
20,0	20	41	104	52	4,0	3	245.200...
25,5	25	50	121	65	5,0	3	245.250...

Bitte fügen Sie bei Ihrer Bestellung folgende Codes hinzu: mit Weldon .10 ohne Weldon .00
Please add the following code to your order: with weldon .10 without weldon .00

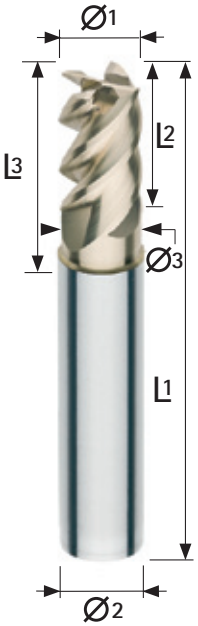
ZrN | geläppt polished | HA | HB | Werks-norm | ALU NE | ungleiche Teilung

ZrN | geläppt polished | HA | HB | DIN 6527 lang | ALU NE | ungleiche Teilung

Artikel-Nr.
414...

VHM – Schaftfräser
Solid carbide cutter

TYP W-N | 4 | 45° | HPC



Ø1	Ø2	L2	L1	Ø3	L3	Eckfase *Chamfer*	Z	Artikel-Nr. *Article No.*
3,0	6	8	57	2,8	12	0,1	4	414.030...
4,0	6	11	57	3,8	18	0,1	4	414.040...
5,0	6	13	57	4,8	18	0,1	4	414.050...
6,0	6	13	57	5,8	18	0,2	4	414.060...
6,0	6	13	80	5,8	42	0,2	4	414.061...
8,0	8	21	63	7,8	25	0,2	4	414.080...
8,0	8	21	100	7,8	62	0,2	4	414.081...
10,0	10	22	72	9,7	30	0,2	4	414.100...
10,0	10	22	100	9,7	58	0,2	4	414.101...
12,0	12	26	83	11,7	36	0,2	4	414.120...
12,0	12	26	120	11,7	73	0,2	4	414.121...
16,0	16	36	92	15,7	42	0,2	4	414.160...
16,0	16	36	150	15,7	100	0,2	4	414.161...
18,0	18	36	92	17,6	42	0,2	4	414.180...
18,0	18	36	150	17,6	100	0,2	4	414.181...
20,0	20	41	104	19,5	52	0,2	4	414.200...
20,0	20	41	150	19,5	98	0,2	4	414.201...
25,0	25	50	121	24,5	65	0,3	4	414.250...

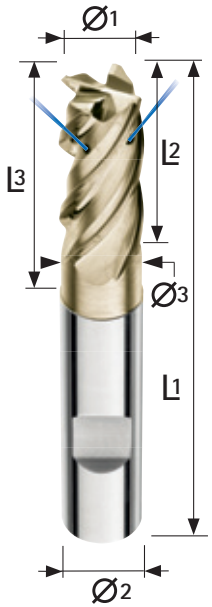
Bitte fügen Sie bei Ihrer Bestellung folgende Codes hinzu: mit Weldon .10 ohne Weldon .00
Please add the following code to your order: with weldon .10 without weldon .00

ZrN | geläppt polished | HA | HB | Werks-norm | ALU NE | ungleiche Teilung

Artikel-Nr.
408...

VHM – Schaftfräser **Starmax NE**[IK]
Solid carbide cutter Starmax non-ferrous

TYP N-W | 4 | 35/38° | HPC



Ø1	Ø2	L2	L1	Ø3	L3	Eckfase *Chamfer*	Z	Artikel-Nr. *Article No.*
3,0	6	11	57	2,8	18	0,20	4	408.030.00
4,0	6	12	57	3,6	21	0,20	4	408.040.00
5,0	6	15	57	4,5	21	0,20	4	408.050.00
6,0	6	15	57	5,5	21	0,20	4	408.060.00
8,0	8	21	63	7,5	28	0,20	4	408.080.00
10,0	10	22	72	9,5	32	0,20	4	408.100.00
12,0	12	28	83	11,5	38	0,20	4	408.120.00
14,0	14	30	83	13,5	42	0,20	4	408.140.00
16,0	16	35	92	15,5	45	0,20	4	408.160.00
20,0	20	41	104	19,5	55	0,20	4	408.200.00

Schaftausführung, Toleranz h5,
Rundlaufgenauigkeit 0,005 mm,
Polierte Ausführung,
erhöhte Radiustoleranz

Shank design, tolerance h5,
rotation accuracy 0,005 mm,
polished design
increased radius tolerance

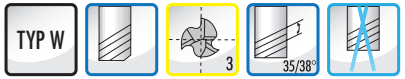
ZrN | geläppt polished | HB | DIN 6527 lang | ALU NE | INCONEL

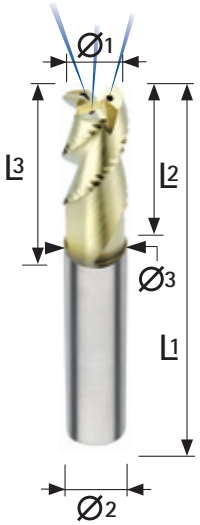
Artikel-Nr.

252...

VHM – Schruppfräser NE Typ WF

Solid carbide cutter





Ø1	Ø2	L2	L1	Ø3	L3	Eckfase *Chamfer*	Z	Artikel-Nr. *Article No.*
6,0	6	13	70	5,7	18	0,4	3	252.060.00
8,0	8	21	80	7,4	25	0,4	3	252.080.00
10,0	10	22	80	9,2	30	0,4	3	252.100.00
12,0	12	26	90	11,0	36	0,4	3	252.120.00
16,0	16	36	100	15,0	42	0,4	3	252.160.10
20,0	20	41	120	19,0	52	0,4	3	252.200.10
25,0	25	50	150	24,0	75	0,5	3	252.250.10

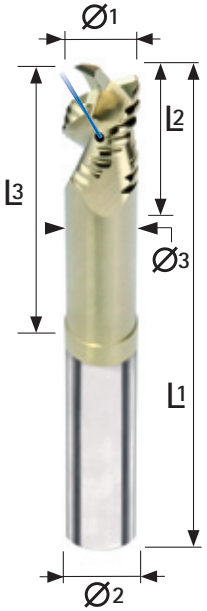
Ø6,0 – Ø12,0 = HA
Ø16,0 – Ø25,0 = HB

Artikel-Nr.

253...

VHM – Schruppfräser NE Typ WR

Solid carbide cutter



Ø1	Ø2	L2	L1	Ø3	L3	Eckfase *Chamfer*	Z	Artikel-Nr. *Article No.*
6,0	6	10	63	5,50	24	0,30	3	253.060.00
8,0	8	12	72	7,50	29	0,40	3	253.080.00
10,0	10	14	83	9,50	35	0,50	3	253.100.00
12,0	12	16	100	11,40	50	0,60	3	253.120.00
16,0	16	20	115	15,20	63	0,80	3	253.160.00
20,0	20	20	125	19,00	70	1,00	3	253.200.00
25,0	25	25	135	23,75	75	1,25	3	253.250.00

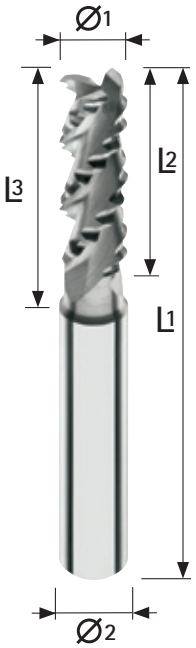
Artikel-Nr.

405...

VHM – Schruppfräser **ALU^{3D}** Typ WR

Solid carbide cutter

TYP W



Ø1	Ø2	L2	L1	L3	Ecken-radius *corner radius*	Z	Artikel-Nr. *Article No.*
6,0	6	16	60	25	0,4	3	405.060...
8,0	8	25	78	33	0,5	3	405.080...
10,0	10	28	78	35	0,6	3	405.100...
12,0	12	32	89	40	0,8	3	405.120...
14,0	14	32	89	40	1,0	3	405.140...
16,0	16	36	96	45	1,0	3	405.160...
20,0	20	45	111	60	1,2	3	405.200...
25,0	25	50	121	65	1,5	3	405.250...

Bitte fügen Sie bei Ihrer Bestellung folgende Codes hinzu: mit Weldon .10 ohne Weldon .00
Please add the following code to your order: with weldon .10 without weldon .00

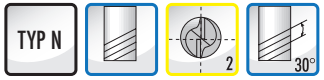
Stirnwinkel x 2 für mehr Spanraum und weniger Schnittdruck.
Two Face angle for more chip space and less cutting pressure.

Diese Spezialkordel mit Facetten hat zusätzlich einen axialen Freiwinkel für schräges Eintauchen.
This special rough-profile has an axial clearance angle for angular milling.

geläppt polished | HA | HB | Werks-norm | ALU NE | Kunststoff plastic

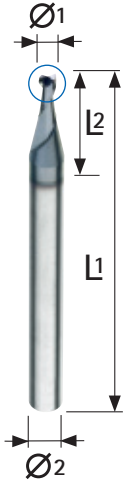
VHM – Minischaftfräser

Solid carbide universal cutter



Artikel-Nr.

132...



Ø1	Ø2	L2	L1	Z	Artikel-Nr. *Article No.*
0,10	3	0,3	38	2	132.010...
0,15	3	0,3	38	2	132.015...
0,20	3	0,5	38	2	132.020...
0,25	3	0,5	38	2	132.025...
0,30	3	1,0	38	2	132.030...
0,40	3	1,0	38	2	132.040...
0,50	3	1,5	38	2	132.050...
0,60	3	1,5	38	2	132.060...
0,70	3	2,0	38	2	132.070...
0,80	3	2,0	38	2	132.080...
0,90	3	2,5	38	2	132.090...

Ø1	Ø2	L2	L1	Z	Artikel-Nr. *Article No.*
1,0	3	3	38	2	132.100...
1,1	3	3	38	2	132.110...
1,2	3	4	38	2	132.120...
1,3	3	4	38	2	132.130...
1,4	3	4	38	2	132.140...
1,5	3	4	38	2	132.150...
1,6	3	4	38	2	132.160...
1,7	3	4	38	2	132.170...
1,8	3	5	38	2	132.180...
1,9	3	5	38	2	132.190...
2,0	3	5	38	2	132.200...

Bitte fügen Sie bei Ihrer Bestellung folgende Codes hinzu: unbeschichtet .09 beschichtet .00
Please add the following code to your order: uncoated .09 coated .00

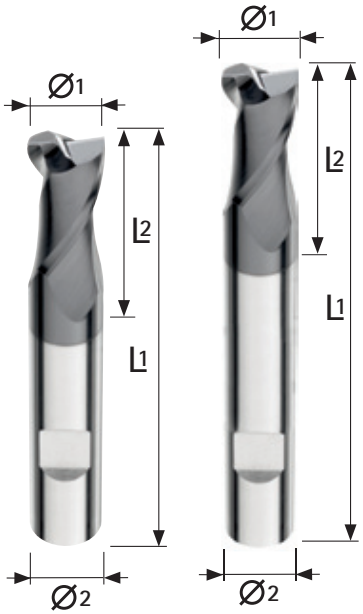
VHM – Schaftfräser

Solid carbide universal cutter

TYP N | 2 | 30°

Artikel-Nr. 112...

Artikel-Nr. 122...



Ø1	Ø2	L2	L1	Z	Artikel-Nr. *Article No.*
1,00	3	2	38	2	112.010...
1,50	3	3	38	2	112.015...
2,00	3	6	38	2	112.020...
2,50	3	6	38	2	112.025...
2,80	3	7	38	2	112.028...
3,00	3	7	38	2	112.030...
3,00	3	20	75	2	122.030...
3,50	6	8	57	2	112.035...
4,00	6	8	57	2	112.040...
4,00	4	25	75	2	122.040...
4,50	6	10	57	2	112.045...
4,80	6	10	57	2	112.048...
5,00	6	10	57	2	112.050...
5,00	5	30	75	2	122.050...
5,50	6	10	57	2	112.055...
5,75	6	10	57	2	112.057...
6,00	6	10	57	2	112.060...
6,00	6	30	75	2	122.060...
6,75	8	13	63	2	112.067...
7,00	8	16	63	2	112.070...
7,50	8	16	63	2	112.075...
7,75	8	16	63	2	112.077...

Ø1	Ø2	L2	L1	Z	Artikel-Nr. *Article No.*
8,0	8	16	63	2	112.080...
8,0	8	40	100	2	122.080...
8,7	10	16	72	2	112.087...
9,0	10	16	72	2	112.090...
9,7	10	19	72	2	112.097...
10,0	10	19	72	2	112.100...
10,0	10	40	100	2	122.100...
11,7	12	22	83	2	112.117...
12,0	12	22	83	2	112.120...
12,0	12	45	150	2	122.120...
13,7	14	22	83	2	112.137...
14,0	14	22	83	2	112.140...
14,0	14	45	150	2	122.140...
15,7	16	26	92	2	112.157...
16,0	16	26	92	2	112.160...
16,0	16	65	150	2	122.160...
18,0	18	26	92	2	112.180...
18,0	18	65	150	2	122.180...
20,0	20	32	104	2	112.200...
20,0	20	65	150	2	122.200...

Bitte fügen Sie bei Ihrer Bestellung folgende Codes hinzu: unbeschichtet .09 beschichtet .00
Please add the following code to your order: uncoated .09 coated .00

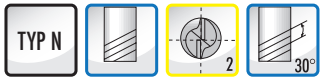
TIALN | HB | DIN 6527 lang | Universal

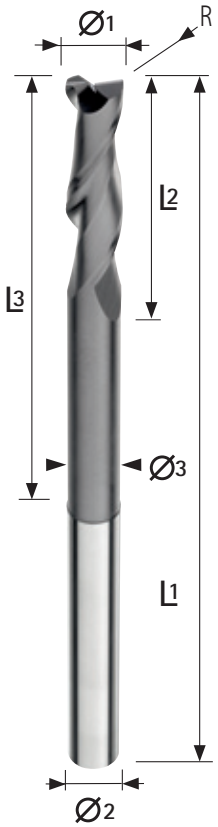
Artikel-Nr.

126...

VHM – Schaftfräser[ER] extra lang

Solid carbide universal cutter with corner radius extra long





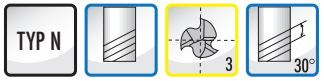
Ø1	Ø2	L2	L1	Ø3	L3	Z	Artikel-Nr. *Article No.*
6,0	6	25	200	5,5	120	2	126.060.00
8,0	8	25	200	7,5	120	2	126.080.00
10,0	10	50	200	9,5	120	2	126.100.00
12,0	12	50	200	11,5	120	2	126.120.00
16,0	16	65	220	15,5	150	2	126.160.00
20,0	20	65	250	19,5	150	2	126.200.00

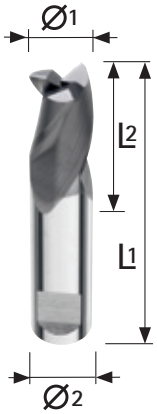
Artikel-Nr.

432...

VHM – Schaftfräser extra short

Solid carbide universal cutter extra short

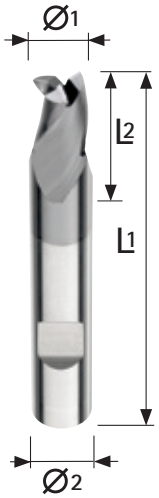




Ø1	Ø2	L2	L1	Z	Artikel-Nr. *Article No.*
0,30	3	1,5	38	3	432.003.00
0,40	3	1,5	38	3	432.004.00
0,50	3	1,5	38	3	432.005.00
0,60	3	1,5	38	3	432.006.00
0,80	3	2,0	38	3	432.008.00
1,00	6	3,0	38	3	432.010.00
1,20	6	3,0	38	3	432.012.00
1,50	6	3,0	38	3	432.015.00
1,80	6	3,0	38	3	432.018.00
2,00	6	4,0	38	3	432.020.00
2,50	6	5,0	38	3	432.025.00
3,00	6	5,0	38	3	432.030.00
3,50	6	6,0	38	3	432.035.00
4,00	6	7,0	38	3	432.040.00
4,50	6	8,0	38	3	432.045.00
5,00	6	8,0	38	3	432.050.00
5,50	6	8,0	38	3	432.055.00
5,75	6	8,0	38	3	432.575.00
6,00	6	8,0	38	3	432.060.00
6,75	8	11,0	43	3	432.675.00
7,00	8	11,0	43	3	432.070.00
7,75	8	11,0	43	3	432.775.00
8,00	8	11,0	43	3	432.080.00
8,70	10	11,0	48	3	432.087.00
9,00	10	11,0	48	3	432.090.00
9,70	10	11,0	48	3	432.097.00
10,00	10	13,0	50	3	432.100.00
12,00	12	15,0	55	3	432.120.00
14,00	14	15,0	58	3	432.140.00
16,00	16	18,0	62	3	432.160.00
18,00	18	20,0	70	3	432.180.00
20,00	20	22,0	75	3	432.200.00

Artikel-Nr.

433...



VHM – Schaftfräser Untermaß

Solid carbide universal cutter undersize

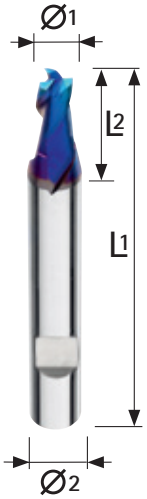
TYP N | 3 | 30°

Ø1	Ø2	L2	L1	Z	Artikel-Nr. *Article No.*
1,2	6	3	50	3	433.012.00
1,5	6	3	50	3	433.015.00
1,8	6	3	50	3	433.018.00
2,8	6	4	50	3	433.028.00
3,8	6	5	50	3	433.038.00
4,8	6	6	50	3	433.048.00
5,8	6	7	50	3	433.058.00
6,7	8	8	50	3	433.670.00
7,8	8	10	60	3	433.078.00
8,7	10	10	70	3	433.870.00
9,7	10	11	70	3	433.970.00
11,5	12	14	73	3	433.115.00
15,5	16	20	82	3	433.155.00
19,5	20	25	92	3	433.195.00

TIALN | HB | Werks-norm | Universal

Artikel-Nr.

350...



VHM – Schaftfräser extra short

Solid carbide universal cutter extra short

TYP N | 3 | 30°

Ø1	Ø2	L2	L1	Z	Artikel-Nr. *Article No.*
1,0	6	3	50	3	350.010.00
2,0	6	4	50	3	350.020.00
3,0	6	5	50	3	350.030.00
4,0	6	7	50	3	350.040.00
5,0	6	8	50	3	350.050.00
6,0	6	8	50	3	350.060.00
7,0	8	11	57	3	350.070.00
8,0	8	11	57	3	350.080.00
9,0	10	15	66	3	350.090.00
10,0	10	15	66	3	350.100.00
12,0	12	21	72	3	350.120.00

naco | HB | Werks-norm | Universal

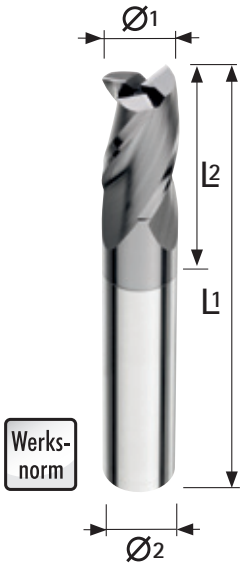
VHM – Schaftfräser

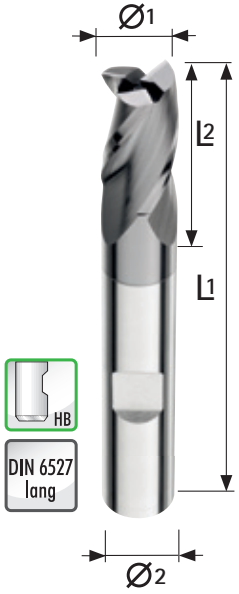
Solid carbide universal cutter

TYP N | 3 | 30°

Artikel-Nr.
331...

Artikel-Nr.
113...





Ø1	Ø2	L2	L1	Z	Artikel-Nr. *Article No.*
1,00	3	3	38	3	331.010.00
1,00	3	5	38	3	113.010.00
1,50	3	5	38	3	331.015.00
1,50	3	7	38	3	113.015.00
2,00	3	7	38	3	331.020.00
2,00	3	6	38	3	113.020.00
2,50	3	7	38	3	331.025.00
3,00	3	8	38	3	331.030.00
3,50	4	11	50	3	331.035.00
3,00	3	7	38	3	113.030.00
4,00	4	11	50	3	331.040.00
4,00	6	8	57	3	113.040.00
4,50	5	11	50	3	331.045.00
5,00	5	10	50	3	331.050.00
5,00	6	10	57	3	113.050.00
5,50	6	10	50	3	331.055.00
6,00	6	10	57	3	331.060.00
6,00	6	10	57	3	113.060.00
6,75	8	13	63	3	331.067.00
7,00	8	13	63	3	331.070.00
7,75	8	16	63	3	331.077.00
8,00	8	16	63	3	331.080.00
8,00	8	16	63	3	113.080.00
8,70	10	16	72	3	331.087.00

Ø1	Ø2	L2	L1	Z	Artikel-Nr. *Article No.*
9,00	10	16	72	3	331.090.00
9,70	10	19	72	3	331.097.00
10,00	10	22	72	3	331.100.00
10,00	10	19	72	3	113.100.00
11,00	12	22	72	3	331.110.00
11,70	12	22	83	3	331.117.00
12,00	12	22	83	3	331.120.00
12,00	12	22	83	3	113.120.00
13,70	14	22	83	3	331.137.00
14,00	14	22	83	3	331.140.00
14,00	14	22	83	3	113.140.00
15,70	16	26	83	3	331.157.00
16,00	16	26	83	3	331.160.00
16,00	16	26	92	3	113.160.00
17,70	18	26	92	3	331.177.00
18,00	18	26	92	3	331.180.00
18,00	18	26	92	3	113.180.00
19,70	20	32	104	3	331.197.00
20,00	20	32	104	3	331.200.00
20,00	20	32	104	3	113.200.00

Artikel-Nr.
113...

Schaft bis Ø 3 ohne HB
ab Schaft Ø 6 mit HB

Shank size up to Ø 3 without HB-shank
Starting from shank size Ø 6 with HB-shank

TIALN | HA | Universal

VHM – Schaftfräser

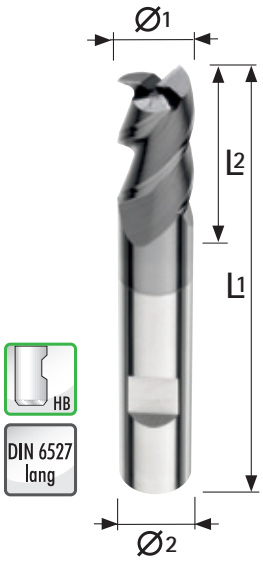
Solid carbide universal cutter

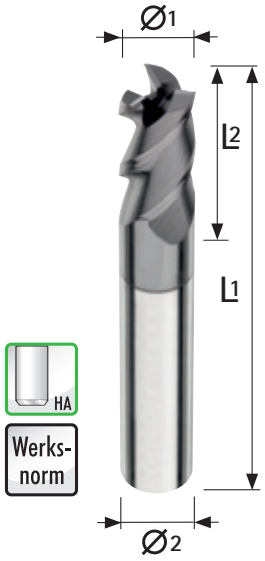
TYP N | 3 | 30°

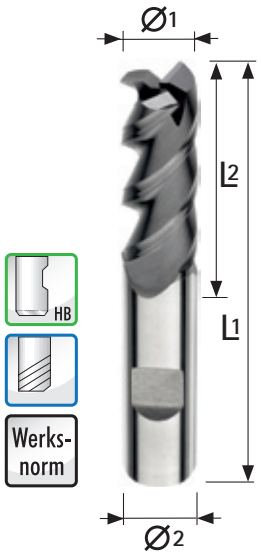
Artikel-Nr.
213...

Artikel-Nr.
351...

Artikel-Nr.
223...







Ø1	Ø2	L2	L1	Eckfase *Chamfer*	Z	Artikel-Nr. *Article No.*
1,0	3	2	38	-	3	213.010...
1,0	6	4	57	-	3	351.010...
1,5	3	3	38	-	3	213.015...
1,5	6	4	57	-	3	351.015...
2,0	6	6	57	-	3	213.020...
2,0	6	8	57	0,05	3	223.020.00
2,0	6	6	57	-	3	351.020...
2,5	6	7	57	-	3	213.025...
2,5	6	6	57	-	3	351.025...
3,0	6	7	57	-	3	213.030...
3,0	6	14	57	0,05	3	223.030.00
3,0	6	7	57	-	3	351.030...
3,5	6	8	57	-	3	351.035...
4,0	6	8	57	-	3	213.040...
4,0	6	18	57	0,10	3	223.040.00
4,0	6	8	57	-	3	351.040...
4,5	6	8	57	-	3	213.045...
4,5	6	10	57	-	3	351.045...
5,0	6	10	57	-	3	213.050...
5,0	6	20	57	0,10	3	223.050.00
5,0	6	10	57	-	3	351.050...
5,5	6	10	57	-	3	351.055...
6,0	6	10	57	-	3	213.060...
6,0	6	22	57	0,10	3	223.060.00
6,0	6	10	57	-	3	351.060...
6,5	8	16	63	-	3	351.065...

Bitte fügen Sie bei Ihrer Bestellung folgende Codes hinzu: unbeschichtet .09 beschichtet .00
Please add the following code to your order: uncoated .09 coated .00

Fortsetzung nächste Seite / to be continued

TIALN | Universal

VHM – Schaftfräser

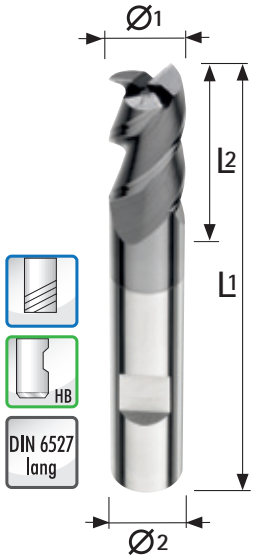
Solid carbide universal cutter

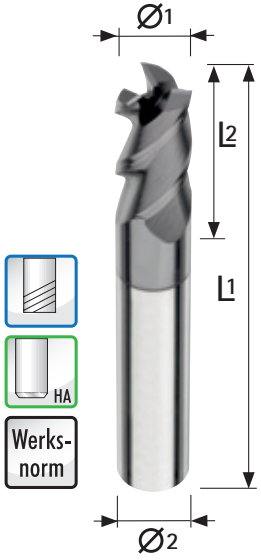
TYP N | 3 | 30°

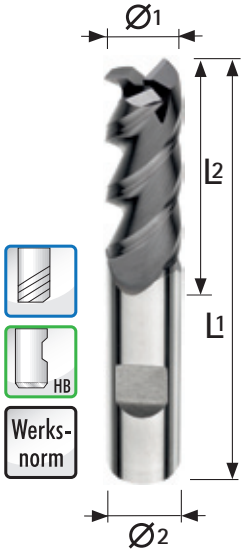
Artikel-Nr.
213...

Artikel-Nr.
351...

Artikel-Nr.
223...







Fortsetzung

Artikel-Nr.
213... 351... 223...

Ø1	Ø2	L2	L1	Eckfase *Chamfer*	Z	Artikel-Nr. *Article No.*
7,0	8	13	63	-	3	213.070...
7,0	8	16	63	-	3	351.070...
7,5	8	19	63	-	3	351.075...
8,0	8	16	63	-	3	213.080...
8,0	8	30	63	0,15	3	223.080.00
8,0	8	19	63	-	3	351.080...
9,0	10	16	72	-	3	213.090...
9,0	10	19	72	-	3	351.090...
10,0	10	19	72	-	3	213.100...
10,0	10	33	72	0,15	3	223.100.00
10,0	10	19	72	-	3	351.100...
12,0	12	22	83	-	3	213.120...
12,0	12	34	83	0,20	3	223.120.00
12,0	12	22	83	-	3	351.120...
14,0	14	22	83	-	3	213.140...
14,0	14	22	83	-	3	351.140...
16,0	16	26	92	-	3	213.160...
16,0	16	38	92	0,20	3	223.160.00
16,0	16	26	92	-	3	351.160...
18,0	18	26	92	-	3	351.180...
20,0	20	32	104	-	3	213.200...
20,0	20	47	104	0,30	3	223.200.00
20,0	20	32	104	-	3	351.200...

Bitte fügen Sie bei Ihrer Bestellung folgende Codes hinzu: unbeschichtet .09 beschichtet .00
Please add the following code to your order: uncoated .09 coated .00

TIALN | Universal

VHM – Schaftfräser

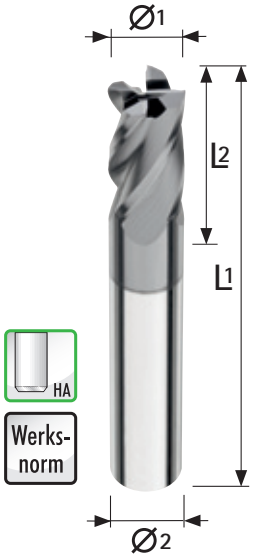
Solid carbide universal cutter

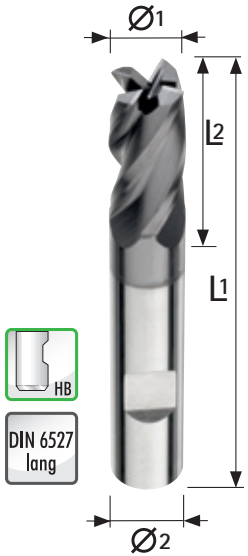
TYP N | 4 | 30°

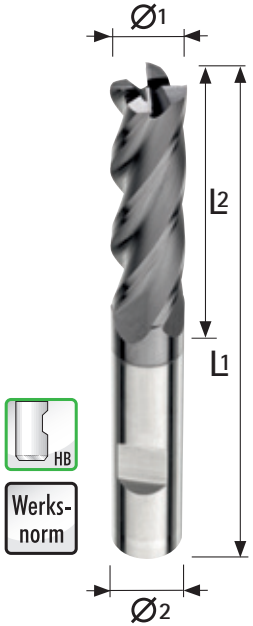
Artikel-Nr.
341...

Artikel-Nr.
114...

Artikel-Nr.
124...







Ø1	Ø2	L2	L1	Z	Artikel-Nr. *Article No.*
1,0	3	3	38	4	341.010...
1,5	3	5	38	4	341.015...
2,0	3	7	38	4	341.020...
2,0	6	7	57	4	114.020...
2,5	3	7	38	4	341.025...
3,0	3	8	38	4	341.030...
3,0	6	8	57	4	114.030...
3,0	3	20	60	4	124.030.00
3,5	4	11	50	4	341.035...
3,5	6	10	57	4	114.035...
4,0	4	11	50	4	341.040...
4,0	6	11	57	4	114.040...
4,0	4	25	60	4	124.040.00
4,5	5	11	50	4	341.045...
5,0	5	10	50	4	341.050...
5,0	6	13	57	4	114.050...
5,0	5	25	75	4	124.050.00
5,5	6	10	57	4	341.055...
6,0	6	10	57	4	341.060...
6,0	6	13	57	4	114.060...
6,0	6	30	75	4	124.060.00
6,0	6	45	100	4	124.061.02
7,0	8	13	63	4	341.070...
7,0	8	16	63	4	114.070...
8,0	8	16	63	4	341.080...
8,0	8	19	63	4	114.080...
8,0	8	45	100	4	124.080.00

Bitte fügen Sie bei Ihrer Bestellung folgende Codes hinzu: unbeschichtet .09 beschichtet .00
Please add the following code to your order: uncoated .09 coated .00

Fortsetzung nächste Seite / to be continued

TIALN | Universal

VHM – Schaftfräser

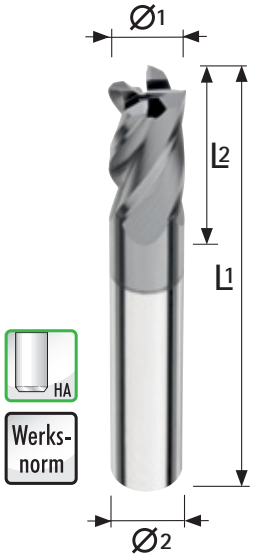
Solid carbide universal cutter

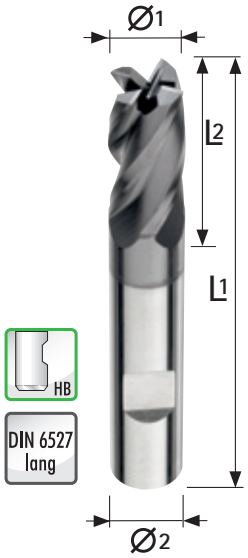
TYP N | 4 | 30°

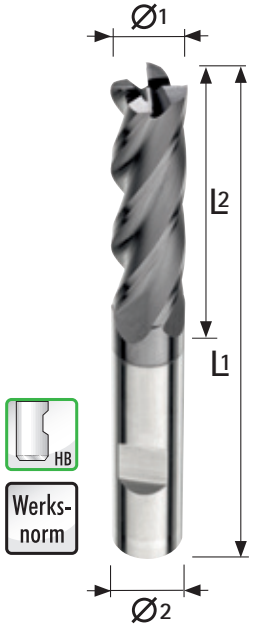
Artikel-Nr.
341...

Artikel-Nr.
114...

Artikel-Nr.
124...







Fortsetzung / continuation

Artikel-Nr.
341... 114... 124...

Ø1	Ø2	L2	L1	Z	Artikel-Nr. *Article No.*
9,0	10	16	72	4	341.090...
9,0	10	22	73	4	114.090...
10,0	10	19	72	4	341.100...
10,0	10	22	72	4	114.100...
10,0	10	45	100	4	124.100.00
11,0	12	19	72	4	341.110...
11,0	12	26	83	4	114.110...
12,0	12	22	83	4	341.120...
12,0	12	26	83	4	114.120...
12,0	12	45	100	4	124.120.00
12,0	12	65	150	4	124.121.02
12,0	12	22	83	4	341.120...
13,0	14	26	83	4	114.113...
14,0	14	22	83	4	341.140...
14,0	14	26	83	4	114.140...
14,0	14	45	100	4	124.140.00
15,0	16	32	92	4	114.150...
16,0	16	32	92	4	114.160...
16,0	16	45	100	4	124.160.00
16,0	16	65	150	4	124.161.02
18,0	18	26	92	4	341.180...
18,0	18	32	92	4	114.180...
18,0	18	45	100	4	124.180.00
18,0	18	65	150	4	124.181.02
20,0	20	32	104	4	341.200...
20,0	20	38	104	4	114.200...
20,0	20	45	150	4	124.200.00
20,0	20	65	150	4	124.201.02

Bitte fügen Sie bei Ihrer Bestellung folgende Codes hinzu: unbeschichtet .09 beschichtet .00
Please add the following code to your order: uncoated .09 coated .00

TIALN | Universal

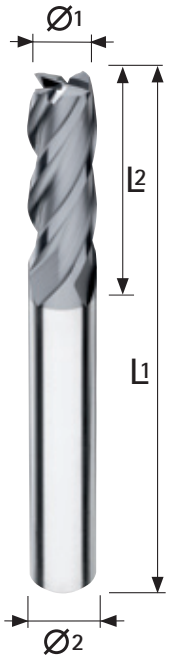
VHM – Schaftfräser

Solid carbide universal cutter

TYP N

Artikel-Nr.

150...



Ø1	Ø2	L2	L1	Z	Artikel-Nr. *Article No.*
2,0	4	8	40	4	150.020.00
3,0	6	12	50	4	150.030.00
4,0	6	15	50	4	150.040.00
5,0	6	20	60	4	150.050.00
6,0	6	20	60	4	150.060.00
8,0	8	25	70	4	150.080.00
10,0	10	30	90	4	150.100.00
12,0	12	30	90	4	150.120.00
14,0	16	40	110	4	150.140.00
16,0	16	50	110	4	150.160.00
18,0	18	50	110	4	150.180.00
20,0	20	55	110	4	150.200.00
25,0	25	75	140	4	150.250.00

ALTIN HA Werks-norm Universal Trocken-bear-beitung

VHM – Schaftfräser

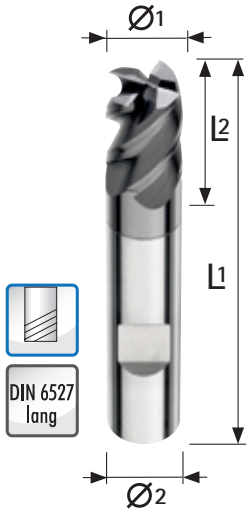
Solid carbide universal cutter

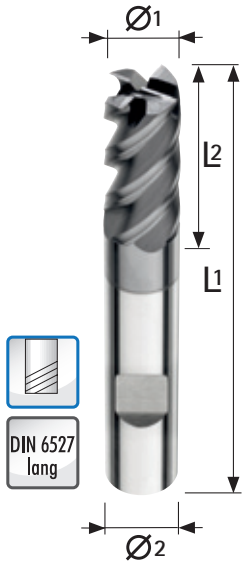
TYP N | 4 | 45°

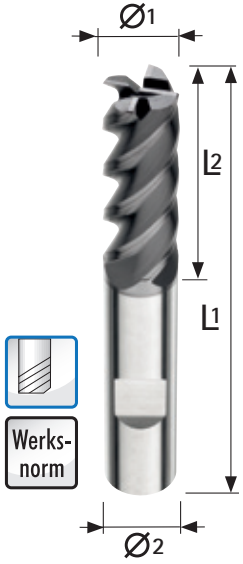
Artikel-Nr.
204...

Artikel-Nr.
214...

Artikel-Nr.
224...







Ø1	Ø2	L2	L1	Eckfase *Chamfer*	Z	Artikel-Nr. *Article No.*
2,0	6	8	57	0,05	4	224.020.00
3,0	6	5	50	-	4	204.030.00
3,0	6	8	57	-	4	214.030...
3,0	6	14	57	0,05	4	224.030.00
4,0	6	8	54	-	4	204.040.00
4,0	6	11	57	-	4	214.040...
4,0	6	18	57	0,10	4	224.040.00
5,0	6	9	54	-	4	204.050.00
5,0	6	13	57	-	4	214.050...
5,0	6	20	57	0,10	4	224.050.00
6,0	6	10	54	-	4	204.060.00
6,0	6	13	57	-	4	214.060...
6,0	6	22	57	0,10	4	224.060.00
8,0	8	12	58	-	4	204.080.00
8,0	8	19	63	-	4	214.080...
8,0	8	30	63	0,15	4	224.080.00
10,0	10	14	66	-	4	204.100.00
10,0	10	22	72	-	4	214.100...
10,0	10	33	72	0,15	4	224.100.00
12,0	12	16	73	-	4	204.120.00
12,0	12	26	83	-	4	214.120...
12,0	12	34	83	0,20	4	224.120.00
14,0	14	18	75	-	4	204.140.00
14,0	14	26	83	-	4	214.140...
16,0	16	22	82	-	4	204.160.00
16,0	16	32	92	-	4	214.160...
16,0	16	38	92	0,20	4	224.160.00
18,0	18	32	92	-	4	214.180...
20,0	20	26	92	-	4	204.200.00
20,0	20	38	104	-	4	214.200...
20,0	20	47	104	0,30	4	224.200.00

Bitte fügen Sie bei Ihrer Bestellung folgende Codes hinzu: unbeschichtet .09 beschichtet .00
Please add the following code to your order: uncoated .09 coated .00

TIALN | HB | Universal

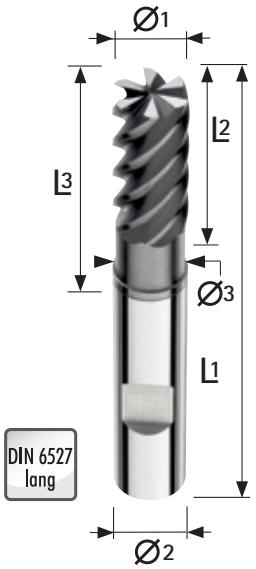
VHM – Schlichtfräser Multicut

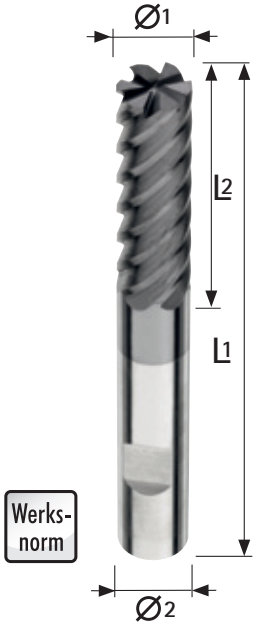
Solid carbide finishing cutter

TYP N | 6 | 8 | 45°

Artikel-Nr.
208...

Artikel-Nr.
222...





Ø1	Ø2	L2	L1	Ø3	L3	Z	Artikel-Nr. *Article No.*
3,0	6	8	57	2,7	11	6	208.030.00
4,0	6	11	57	3,7	16	6	208.040.00
5,0	6	13	57	4,6	18	6	208.050.00
6,0	6	13	57	5,5	18	6	208.060.00
8,0	8	19	63	7,5	24	6	208.080.00
10,0	10	22	72	9,5	32	6	208.100.00
12,0	12	26	83	11,5	36	6	208.120.00
12,0	12	40	100	-	-	6	222.120.00
14,0	14	26	83	13,5	36	6	208.140.00
16,0	16	32	92	15,5	42	6	208.160.00
16,0	16	60	150	-	-	6	222.160.00
18,0	18	32	92	17,5	42	8	208.180.00
20,0	20	38	104	19,5	48	8	208.200.00
20,0	20	80	150	-	-	8	222.200.00
25,0	25	45	121	24,5	65	8	208.250.00
25,0	25	90	150	-	-	8	222.250.00

TIALN | HB | Universal

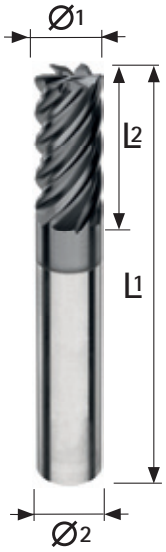
VHM – Schlichtfräser Starmax Super Finish

Solid carbide cutter Starmax Super Finish

TYP N-H | 6 | 42°/44° | HPC

Artikel-Nr.

736...



Ø1	Ø2	L2	L1	Eckfase *Chamfer*	Z	Artikel-Nr. *Article No.*
8,0	8	19	63	0,1	6	736.080.00
10,0	10	22	72	0,1	6	736.100.00
12,0	12	26	83	0,1	6	736.120.00
16,0	16	32	92	0,2	6	736.160.00
20,0	20	42	104	0,2	6	736.200.00
25,0	25	42	110	0,2	6	736.250.00

ALTIN | HA | DIN 6527 lang | GG(G)

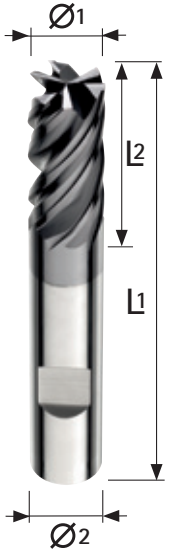
VHM – Schlichtfräser Starmax Multicut

Solid carbide finishing cutter Starmax Multicut

TYP N | 3 | 6 | 35/38°

Artikel-Nr.

209...



Ø1	Ø2	L2	L1	Z	Artikel-Nr. *Article No.*
6,0	6	13	57	3/6	209.060.00
8,0	8	19	63	3/6	209.080.00
10,0	10	22	72	3/6	209.100.00
12,0	12	26	83	3/6	209.120.00
16,0	16	32	92	3/6	209.160.00
20,0	20	38	104	3/6	209.200.00
25,0	25	42	110	3/6	209.250.00

TIALN | HB | Werks-norm | GG(G)

VHM – Schlichtfräser Multicut

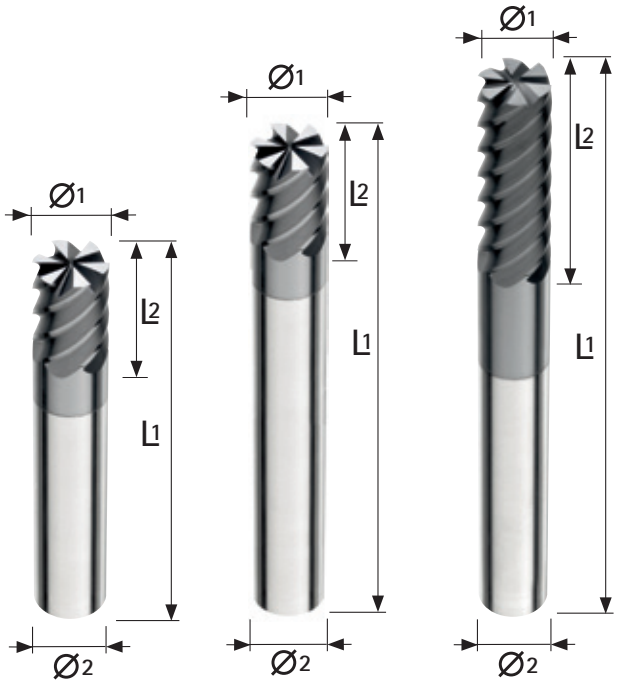
Solid carbide finishing cutter

TYP H | 6 | 8 | 50°

Artikel-Nr.
218...

Artikel-Nr.
220...

Artikel-Nr.
221...



Ø1	Ø2	L2	L1	Z	Artikel-Nr. *Article No.*
3,0	6	8	57	6	220.030.00
4,0	6	10	54	6	218.040.00
4,0	6	11	57	6	220.040.00
5,0	6	10	54	6	218.050.00
5,0	6	13	57	6	220.050.00
6,0	6	10	54	6	218.060.00
6,0	6	13	57	6	220.060.00
6,0	6	18	57	6	221.060.00
7,0	8	12	58	6	218.070.00
8,0	8	12	58	6	218.080.00
8,0	8	19	63	6	220.080.00
8,0	8	24	63	6	221.080.00
9,0	10	14	66	6	218.090.00
10,0	10	14	66	6	218.100.00
10,0	10	22	72	6	220.100.00
10,0	10	30	75	6	221.100.00
12,0	12	16	73	6	218.120.00
12,0	12	26	83	6	220.120.00
12,0	12	36	83	6	221.120.00
12,0	12	36	150	6	221.120.02
14,0	14	20	82	8	218.140.00
14,0	14	26	83	8	220.140.00
16,0	16	20	82	8	218.160.00
16,0	16	32	92	8	220.160.00
16,0	16	48	104	8	221.160.00
16,0	16	65	150	8	221.160.02
18,0	18	25	92	8	218.180.00
18,0	18	32	92	8	220.180.00
20,0	20	25	92	8	218.200.00
20,0	20	38	104	8	220.200.00
20,0	20	55	110	8	221.200.00
20,0	20	65	150	8	221.200.02

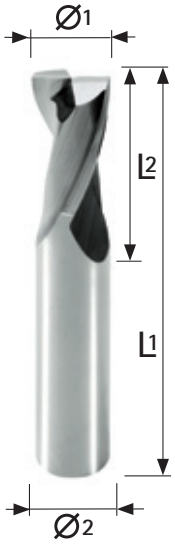
ALTIN | HA | Werks-norm | HRC 60-65 | GG(G)

Artikel-Nr.
256...

VHM – Schlichtfräser
Solid carbide finishing cutter

TYP W

NEW



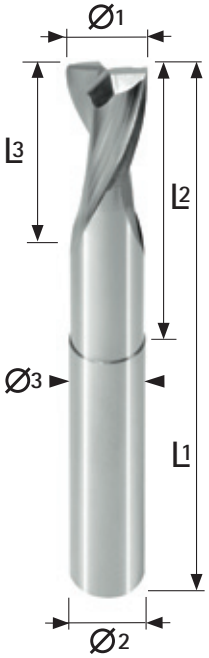
Ø1	Ø2	L2	L1	Z	Artikel-Nr. *Article No.*
1,5	6	3	57	2	256.015.00
2,0	6	6	57	2	256.020.00
2,5	6	7	57	2	256.025.00
3,0	6	7	57	2	256.030.00
4,0	6	8	57	2	256.040.00
5,0	6	10	57	2	256.050.00
6,0	6	10	57	2	256.060.00
8,0	8	16	63	2	256.080.00
10.0	10	19	72	2	256.100.00
12.0	12	22	83	2	256.120.00
16.0	16	26	92	2	256.160.00
20.0	20	32	104	2	256.200.00

Artikel-Nr.
257...

VHM – Schlichtfräser
Solid carbide finishing cutter

TYP W

NEW



Ø1	Ø2	L2	L1	L3	Ø3	Z	Artikel-Nr. *Article No.*
2,0	3	3	38	9	1,92	2	257.020.00
3,0	3	4	38	12	2,90	2	257.030.00
4,0	4	6	50	14	3,80	2	257.040.00
5,0	6	8	57	16	4,75	2	257.050.00
6,0	6	10	65	28	5,70	2	257.060.00
8,0	8	12	80	35	7,60	2	257.080.00
10,0	10	14	90	45	9,50	2	257.100.00
12,0	12	16	100	55	11,40	2	257.120.00
16,0	16	20	115	63	15,20	2	257.160.00
20,0	20	20	125	70	19,00	2	257.200.00

BLANK HA Werks-norm ALU NE

BLANK HA Werks-norm ALU NE

Artikel-Nr.
258...

VHM – Schlichtfräser
Solid carbide finishing cutter

TYP W | 2 | 45°

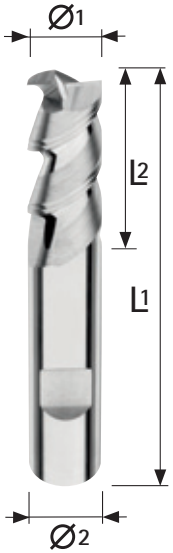
NEW

Ø1	Ø2	L2	L1	Z	Artikel-Nr. *Article No.*
1,5	6	3	57	2	258.015.00
2,0	6	6	57	2	258.020.00
2,5	6	7	57	2	258.025.00
3,0	6	7	57	2	258.030.00
4,0	6	8	57	2	258.040.00
5,0	6	10	57	2	258.050.00
6,0	6	10	57	2	258.060.00
8,0	8	16	63	2	258.080.00
10,0	10	19	72	2	258.100.00
12,0	12	22	83	2	258.120.00
16,0	16	26	92	2	258.160.00
20,0	20	32	104	2	258.200.00

Artikel-Nr.
402...

VHM – Schlichtfräser
Solid carbide finishing cutter

TYP W | 2 | 55°



Ø1	Ø2	L2	L1	Z	Artikel-Nr. *Article No.*
3,0	6	8	57	2	402.030.09
4,0	6	11	57	2	402.040.09
5,0	6	13	57	2	402.050.09
6,0	6	13	57	2	402.060.09
8,0	8	19	63	2	402.080.09
10,0	10	22	72	2	402.100.09
12,0	12	26	83	2	402.120.09
14,0	14	26	83	2	402.140.09
16,0	16	32	92	2	402.160.09
18,0	18	32	92	2	402.180.09
20,0	20	38	104	2	402.200.09

BLANK | HA | Werks-norm | ALU NE

geläppt polished | HB | DIN 6527 lang | ALU NE | GG(G)

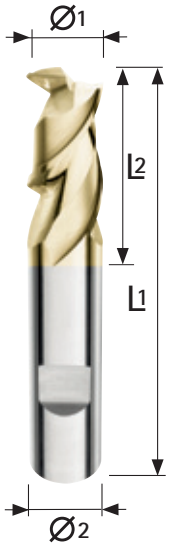
Artikel-Nr.

407...

VHM – Schlichtfräser

Solid carbide finishing cutter

TYP W | 2 | 40°



Ø1	Ø2	L2	L1	Z	Artikel-Nr. *Article No.*
6,0	6	13	57	2	407.060.00
8,0	8	19	63	2	407.080.00
10,0	10	22	72	2	407.100.00
12,0	12	26	83	2	407.120.00
16,0	16	32	92	2	407.160.00
20,0	20	42	104	2	407.200.00
25,0	25	42	110	2	407.250.00

Artikel-Nr.

248...

VHM – Schlichtfräser **DLC**

Solid carbide finishing cutter

TYP W | 2 | 45°

Ø1	Ø2	L2	L1	Z	Artikel-Nr. *Article No.*
0,5	4	1,5	50	2	248.005.00
0,6	4	1,5	50	2	248.006.00
0,8	4	2,0	50	2	248.008.00
1,0	6	3,0	50	2	248.010.00
1,2	6	4,0	50	2	248.012.00
1,5	6	4,0	50	2	248.015.00
1,8	6	5,0	50	2	248.018.00
2,0	6	6,0	50	2	248.020.00
3,0	6	8,0	50	2	248.030.00
4,0	6	10,0	50	2	248.040.00
5,0	6	13,0	50	2	248.050.00
6,0	6	15,0	50	2	248.060.00
8,0	8	20,0	60	2	248.080.00
10,0	10	25,0	75	2	248.100.00
12,0	12	30,0	75	2	248.120.00
16,0	16	42,0	104	2	248.160.00
20,0	20	52,0	104	2	248.200.00

ZrN | geläppt polished | HB | DIN 6527 lang | ALU NE | Kunststoff plastic

DLC | geläppt polished | HA | Werks-norm | ALU NE

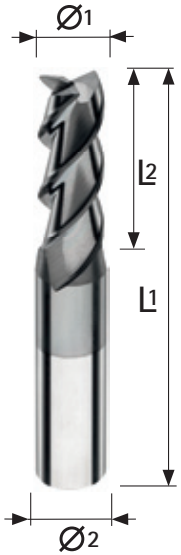
Artikel-Nr.

249...

VHM – Schlichtfräser **DLC**

Solid carbide finishing cutter

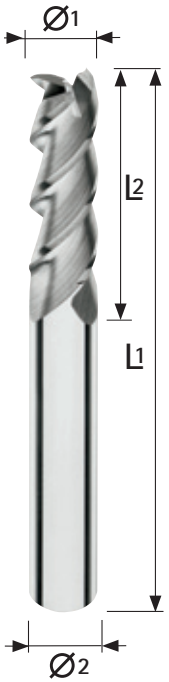
TYP W-N | 3 | 55°



Ø1	Ø2	L2	L1	Z	Artikel-Nr. *Article No.*
1,0	4	3	50	3	249.010.00
1,2	4	4	50	3	249.012.00
1,5	4	4	50	3	249.015.00
1,8	4	5	50	3	249.018.00
2,0	4	6	50	3	249.020.00
3,0	6	8	50	3	249.030.00
4,0	6	10	50	3	249.040.00
5,0	6	13	50	3	249.050.00
6,0	6	15	50	3	249.060.00
8,0	8	20	60	3	249.080.00
10,0	10	25	75	3	249.100.00
12,0	12	30	75	3	249.120.00
16,0	16	42	104	3	249.160.00
20,0	20	52	104	3	249.200.00
25,0	25	62	125	3	249.250.00

Artikel-Nr.

404...



VHM – Schlichtfräser

Solid carbide finishing cutter

TYP W | 3 | 45°

Ø1	Ø2	L2	L1	Z	Artikel-Nr. *Article No.*
6,0	6	16	60	3	404.060...
8,0	8	25	78	3	404.080...
10,0	10	28	78	3	404.100...
12,0	12	32	89	3	404.120...
14,0	14	32	89	3	404.140...
16,0	16	36	96	3	404.160...
20,0	20	45	111	3	404.200...
25,0	25	50	121	3	404.250...

Bitte fügen Sie bei Ihrer Bestellung folgende Codes hinzu: mit Weldon .10 ohne Weldon .00
Please add the following code to your order: with weldon .10 without weldon .00

Stirnwinkel x 2 für mehr Spanraum und weniger Schnittdruck.
Two Face angle for more chip space and less cutting pressure.

DLC | geläppt polished | HA | Werks-norm | ALU NE

geläppt polished | HA | HB | Werks-norm | ALU NE | Kunststoff plastic

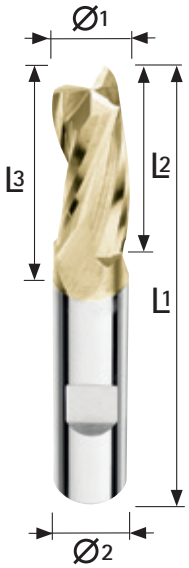
Artikel-Nr.

406...

VHM – Schlichtfräser

Solid carbide finishing cutter

TYP W | 2-4 | 20°



Ø1	Ø2	L2	L1	L3	Z	Artikel-Nr. *Article No.*
4,0	4	13	54	16	2	406.040.00
5,0	5	15	54	18	2	406.050.00
6,0	6	16	64	21	2	406.060.00
8,0	8	22	70	27	2	406.080.00
10,0	10	25	72	32	2	406.100.00
12,0	12	28	83	38	3	406.120.00
14,0	14	30	83	42	3	406.140.00
16,0	16	36	92	44	3	406.160.00
18,0	18	36	92	50	3	406.180.00
20,0	20	41	104	54	4	406.200.00
25,0	25	43	110	63	4	406.250.00

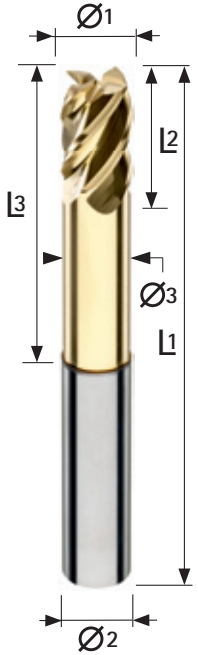
Artikel-Nr.

412...

VHM – Schlichtfräser

Solid carbide finishing cutter

TYP W | 3 | 4 | 40°



Ø1	Ø2	L2	L1	Ø3	L3	Z	Artikel-Nr. *Article No.*
3,0	6	8	70	5,7	20	3	412.030.09
4,0	6	11	70	5,7	25	3	412.040.09
5,0	6	13	70	5,7	30	3	412.050.09
6,0	6	13	70	5,7	30	3	412.060.09
8,0	8	20	80	7,4	35	3	412.080.09
10,0	10	22	90	9,2	45	3	412.100.09
12,0	12	26	100	11,0	55	4	412.120.09
16,0	16	36	115	15,0	65	4	412.160.09
20,0	20	41	125	19,0	75	4	412.200.09
25,0	25	52	150	24,0	95	4	412.250.09

ZrN | geläppt polished | HB | DIN 6527 lang | ALU NE

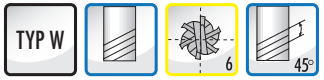
ZrN | geläppt polished | HA | Werks-norm | ALU NE

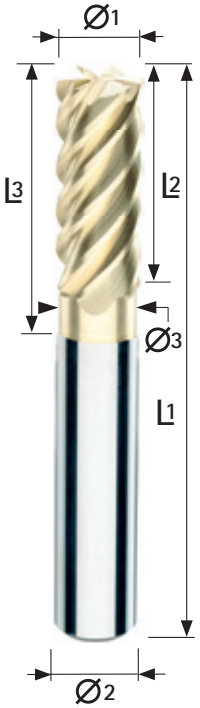
Artikel-Nr.

246...

VHM – Schlichtfräser Multicut

Solid carbide finishing cutter

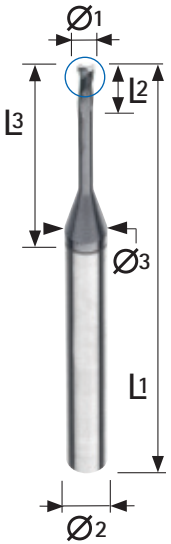


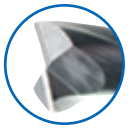


Ø1	Ø2	L2	L1	Ø3	L3	Z	Artikel-Nr. *Article No.*
6,0	6	15	57	20	5,7	6	246.060...
6,0	6	15	80	43	5,7	6	246.061...
8,0	8	20	63	26	7,4	6	246.080...
8,0	8	20	100	62	7,4	6	246.081...
10,0	10	25	73	32	9,2	6	246.100...
10,0	10	25	100	58	9,2	6	246.101...
12,0	12	30	83	37	11,0	6	246.120...
12,0	12	30	120	73	11,0	6	246.121...
16,0	16	40	93	45	15,0	6	246.160...
16,0	16	40	150	100	15,0	6	246.161...
20,0	20	50	104	53	19,0	6	246.200...
20,0	20	50	150	100	19,0	6	246.201...
25,0	25	56	150	92	24,0	6	246.250...

Bitte fügen Sie bei Ihrer Bestellung folgende Codes hinzu: mit Weldon .10 ohne Weldon .00
Please add the following code to your order: with weldon .10 without weldon .00

Artikel-Nr.
550...





VHM – Minischaftfräser

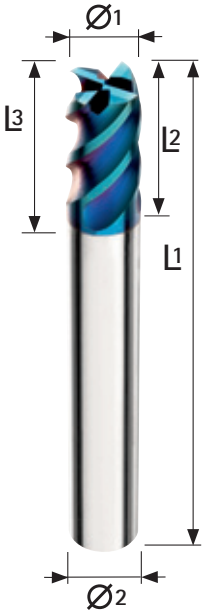
Solid carbide cutter

TYP H | 2 | 30° | HSC

Ø1	Ø2	L2	L1	Ø3	L3	Z	Artikel-Nr. *Article No.*
0,8	4	1,2	45	0,75	6	2	550.008.00
0,9	4	1,4	45	0,85	6	2	550.009.00
1,0	4	1,5	45	0,95	6	2	550.010.00
1,0	4	1,5	45	0,95	12	2	550.011.00
1,2	4	1,8	45	1,15	8	2	550.012.00
1,2	4	1,8	45	1,15	12	2	550.013.00
1,4	4	2,1	45	1,30	12	2	550.014.00
1,5	4	2,3	50	1,40	14	2	550.015.00
1,6	4	2,4	50	1,50	16	2	550.016.00
1,8	4	2,7	50	1,70	16	2	550.018.00
2,0	4	3,0	45	1,90	8	2	550.020.00
2,0	4	3,0	45	1,90	12	2	550.021.00
2,0	4	3,0	50	1,90	16	2	550.022.00
2,0	4	3,0	55	1,90	20	2	550.023.00
2,5	4	3,7	50	2,40	14	2	550.025.00
3,0	6	4,5	45	2,85	12	2	550.030.00
3,0	6	4,5	60	2,85	20	2	550.031.00

TIALN | HA | Werks-norm | HRC 55-60 | GG(G)

Artikel-Nr.
312...



VHM – Minischaftfräser **PrimeLine**

Solid carbide cutter

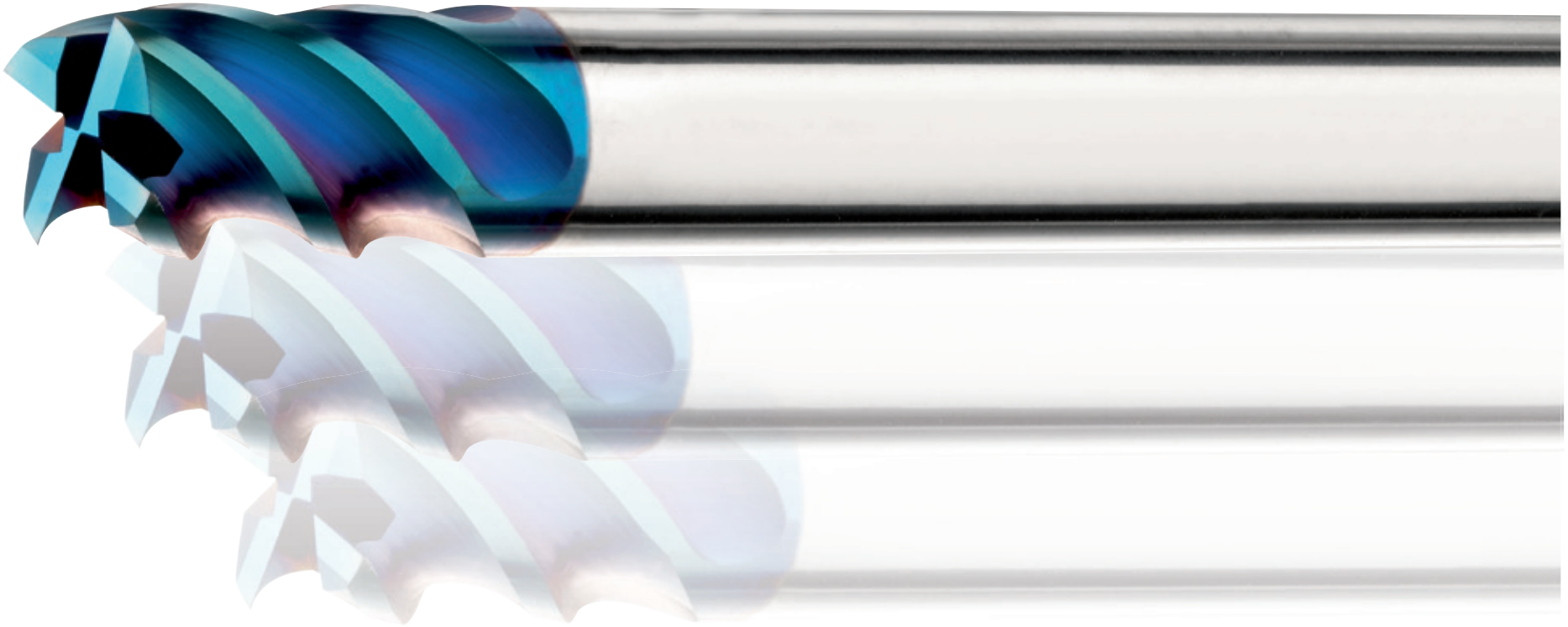
TYP H | 4 | 45° | HPC | HSC

Ø1	Ø2	L2	L1	L3	Z	Artikel-Nr. *Article No.*
1,0	6	3	57	10	4	312.010.00
2,0	6	4	57	12	4	312.020.00
3,0	6	5	57	15	4	312.030.00
4,0	6	6	57	21	4	312.040.00
5,0	6	7	57	21	4	312.050.00
6,0	6	10	57	21	4	312.060.00
8,0	8	12	63	27	4	312.080.00
10,0	10	15	72	32	4	312.100.00
12,0	12	18	83	38	4	312.120.00
16,0	16	24	92	42	4	312.160.00
20,0	20	32	104	51	4	312.200.00

Schaftausführung, Toleranz h5, Rundlaufgenauigkeit 0,005 mm, Polierte Ausführung

Shank design, tolerance h5, rotation accuracy 0,005 mm, polished design

naco | HA | DIN 6527 kurz | Werks-norm | HRC 55-60 | GG(G) | Trocken-bear-beitung

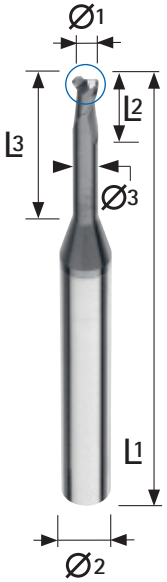


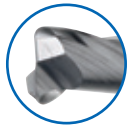
Artikel-Nr.
553...

VHM – Minikopierfräser[ER]

Solid carbide profile cutter with corner radius

TYP H | ER | 2 | 30° | HSC





Ø1	Ø2	L2	L1	Ø3	L3	Ecken-radius *Corner-radius*	Z	Artikel-Nr. *Article No.*
0,3	6	0,45	55	0,28	1	0,05	2	553.030.10
0,3	6	0,45	55	0,28	2	0,05	2	553.030.11
0,3	6	0,45	55	0,28	3	0,05	2	553.030.12
0,3	6	0,45	55	0,28	5	0,05	2	553.030.13
0,4	6	0,60	55	0,38	2	0,05	2	553.040.10
0,4	6	0,60	55	0,38	4	0,05	2	553.040.11
0,4	6	0,60	55	0,38	6	0,05	2	553.040.12
0,5	6	0,70	55	0,48	2	0,05	2	553.050.10
0,5	6	0,70	55	0,48	4	0,05	2	553.050.11
0,5	6	0,70	55	0,48	6	0,05	2	553.050.12
0,6	6	0,90	55	0,58	2	0,06	2	553.060.10
0,6	6	0,90	55	0,58	4	0,06	2	553.060.11
0,6	6	0,90	55	0,58	6	0,06	2	553.060.12
0,6	6	0,90	55	0,58	8	0,06	2	553.060.13
0,8	6	1,20	55	0,77	2	0,08	2	553.080.10
0,8	6	1,20	55	0,77	4	0,08	2	553.080.11
0,8	6	1,20	55	0,77	6	0,08	2	553.080.12
0,8	6	1,20	55	0,77	8	0,08	2	553.080.13
0,8	6	1,20	65	0,77	10	0,08	2	553.080.14

Ø1	Ø2	L2	L1	Ø3	L3	Ecken-radius *Corner-radius*	Z	Artikel-Nr. *Article No.*
1,0	6	1,60	55	1,00	3	0,10	2	553.100.10
1,0	6	1,60	55	0,95	4	0,10	2	553.100.11
1,0	6	1,60	55	1,00	5	0,10	2	553.100.12
1,0	6	1,60	55	1,00	6	0,10	2	553.100.13
1,0	6	1,60	55	1,00	8	0,10	2	553.100.14
1,0	6	1,60	65	0,95	10	0,10	2	553.100.15
1,0	6	1,60	65	0,95	12	0,10	2	553.100.16
1,0	6	1,60	65	0,95	15	0,10	2	553.100.17
1,0	6	1,60	65	0,95	20	0,10	2	553.100.18
1,0	6	1,60	70	0,95	25	0,10	2	553.100.19
1,0	6	1,60	75	0,95	30	0,10	2	553.100.20
1,2	6	1,90	55	1,15	4	0,12	2	553.120.10
1,2	6	1,90	55	1,15	6	0,12	2	553.120.11
1,2	6	1,90	55	1,15	8	0,12	2	553.120.12
1,2	6	1,90	65	1,15	10	0,12	2	553.120.13
1,2	6	1,90	65	1,15	12	0,12	2	553.120.14
1,2	6	1,90	65	1,15	15	0,12	2	553.120.15
1,2	6	1,90	65	1,15	20	0,12	2	553.120.16
1,2	6	1,90	70	1,15	25	0,12	2	553.120.17

Fortsetzung nächste Seite / to be continued

ALTIN | HA | Werks-norm | HRC 60-65 | GG(G) | Trocken-bear-beitung

Fortsetzung / continuation

Artikel-Nr.
553...

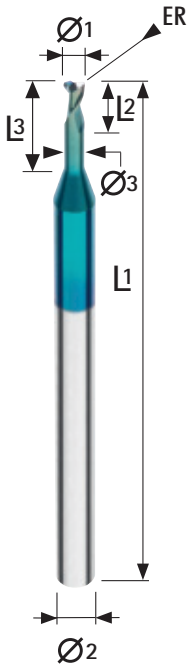
TYP H | ER | 2 | 30° | HSC

Ø1	Ø2	L2	L1	Ø3	L3	Ecken-radius *Corner-radius*	Z	Artikel-Nr. *Article No.*
1,5	6	2,40	55	1,4	5	0,15	2	553.150.10
1,5	6	2,40	55	1,4	6	0,15	2	553.150.11
1,5	6	2,40	55	1,4	8	0,15	2	553.150.12
1,5	6	2,40	65	1,4	10	0,15	2	553.150.13
1,5	6	2,40	65	1,4	12	0,15	2	553.150.14
1,5	6	2,40	65	1,4	15	0,15	2	553.150.15
1,5	6	2,40	65	1,4	20	0,15	2	553.150.16
1,5	6	2,40	70	1,4	25	0,15	2	553.150.17
1,5	6	2,40	75	1,4	30	0,15	2	553.150.18
2,0	6	2,80	55	1,9	6	0,20	2	553.200.10
2,0	6	2,80	55	1,9	8	0,20	2	553.200.11
2,0	6	2,80	65	1,9	10	0,20	2	553.200.12
2,0	6	2,80	65	1,9	12	0,20	2	553.200.13
2,0	6	2,80	65	1,9	15	0,20	2	553.200.14
2,0	6	2,80	65	1,9	20	0,20	2	553.200.15
2,0	6	2,80	70	1,9	25	0,20	2	553.200.16
2,0	6	2,80	75	1,9	30	0,20	2	553.200.17
3,0	6	3,00	55	2,9	5	0,50	2	553.300.10
3,0	6	3,00	55	2,9	8	0,50	2	553.300.11
3,0	6	3,00	65	2,9	10	0,50	2	553.300.12
3,0	6	3,00	65	2,9	15	0,50	2	553.300.13
3,0	6	3,00	65	2,9	20	0,50	2	553.300.14
3,0	6	3,00	70	2,9	25	0,50	2	553.300.15
3,0	6	3,00	75	2,9	30	0,50	2	553.300.16

Ø1	Ø2	L2	L1	Ø3	L3	Ecken-radius *Corner-radius*	Z	Artikel-Nr. *Article No.*
4,0	6	4,00	65	3,9	10	0,50	2	55340010
4,0	6	4,00	65	3,9	15	0,50	2	55340011
4,0	6	4,00	65	3,9	20	0,50	2	55340012
4,0	6	4,00	70	3,9	25	0,50	2	55340013
4,0	6	4,00	75	3,9	30	0,50	2	55340014
5,0	6	5,00	65	4,9	10	0,50	2	55350010
5,0	6	5,00	65	4,9	15	0,50	2	55350011
5,0	6	5,00	65	4,9	20	0,50	2	55350012
5,0	6	5,00	75	4,9	30	0,50	2	55350013
5,0	6	5,00	90	4,9	40	0,50	2	55350014
6,0	6	6,00	65	5,9	10	0,50	2	55360010
6,0	6	6,00	65	5,9	15	0,50	2	55360011
6,0	6	6,00	65	5,9	20	0,50	2	55360012
6,0	6	6,00	75	5,9	30	0,50	2	55360013
6,0	6	6,00	90	5,9	40	0,50	2	55360014
6,0	6	6,00	90	5,9	50	0,50	2	55360015

ALTIN | HA | Werks-norm | HRC 60-65 | GG(G) | Trocken-bear-beitung

Artikel-Nr.
558...



VHM – Minikopierfräser[ER] **PrimeLine**

Solid carbide profile cutter with corner radius

TYP H | ER | 2 | 30° | HSC

Ø1	Ø2	L2	L1	L3	Ø3	Ecken-radius *corner radius*	Z	Artikel-Nr. *Article No.*
0,3	6	0,45	55	1,0	0,28	0,05	2	558.030.10
0,3	6	0,45	55	3,0	0,28	0,05	2	558.030.12
0,4	6	0,60	55	2,0	0,38	0,05	2	558.040.10
0,4	6	0,60	55	4,0	0,38	0,05	2	558.040.11
0,5	6	0,70	55	2,0	0,48	0,05	2	558.050.10
0,5	6	0,70	55	4,0	0,48	0,05	2	558.050.11
0,6	6	0,90	55	2,0	0,58	0,06	2	558.060.10
0,6	6	0,90	55	4,0	0,58	0,06	2	558.060.11
0,6	6	0,90	55	6,0	0,58	0,06	2	558.060.12
0,8	6	1,20	55	2,0	0,77	0,08	2	558.080.10
0,8	6	1,20	55	4,0	0,77	0,08	2	558.080.11
0,8	6	1,20	55	6,0	0,77	0,08	2	558.080.12
0,8	6	1,20	55	8,0	0,77	0,08	2	558.080.13
1,0	6	1,60	55	3,0	0,95	0,10	2	558.100.10
1,0	6	1,60	55	4,0	0,95	0,10	2	558.100.11
1,0	6	1,60	55	5,0	0,95	0,10	2	558.100.12
1,0	6	1,60	55	6,0	0,95	0,10	2	558.100.13
1,0	6	1,60	55	8,0	0,95	0,10	2	558.100.14
1,0	6	1,60	65	10,0	0,95	0,10	2	558.100.15
1,0	6	1,60	65	12,0	0,95	0,10	2	558.100.16

Ø1	Ø2	L2	L1	L3	Ø3	Ecken-radius *corner radius*	Z	Artikel-Nr. *Article No.*
1,2	6	1,90	55	4,0	1,15	0,12	2	558.120.10
1,2	6	1,90	55	6,0	1,15	0,12	2	558.120.11
1,2	6	1,90	55	8,0	1,15	0,12	2	558.120.12
1,2	6	1,90	65	10,0	1,15	0,12	2	558.120.13
1,2	6	1,90	65	12,0	1,15	0,12	2	558.120.14
1,2	6	1,90	65	15,0	1,15	0,12	2	558.120.15
1,5	6	2,40	55	6,0	1,44	0,15	2	558.150.11
1,5	6	2,40	55	8,0	1,44	0,15	2	558.150.12
1,5	6	2,40	65	10,0	1,44	0,15	2	558.150.13
1,5	6	2,40	65	12,0	1,44	0,15	2	558.150.14
2,0	6	2,80	55	6,0	1,92	0,20	2	558.200.10
2,0	6	2,80	55	8,0	1,92	0,20	2	558.200.11
2,0	6	2,80	65	10,0	1,92	0,20	2	558.200.12
2,0	6	2,80	65	12,0	1,92	0,20	2	558.200.13
2,0	6	2,80	65	15,0	1,92	0,20	2	558.200.14
2,0	6	2,80	65	20,0	1,92	0,2	2	558.200.15

Fortsetzung nächste Seite / to be continued

Schaftausführung, Toleranz h5, Rundlaufgenauigkeit 0,005 mm, Polierte Ausführung

Shank design, tolerance h5, rotation accuracy 0,005 mm, polished design

naco | HA | Werks-norm | HRC 60-65 | GG(G)

Fortsetzung / continuation

Artikel-Nr.

558...

TYP H | ER | 2 | 30° | o. IK | HSC

Ø1	Ø2	L2	L1	L3	Ø3	Ecken-radius *corner radius*	Z	Artikel-Nr. *Article No.*
3,0	6	3,00	55	8,0	2,9	0,50	2	558.300.11
3,0	6	3,00	65	10,0	2,9	0,50	2	558.300.12
3,0	6	3,00	65	15,0	2,9	1,00	2	558.300.13
3,0	6	3,00	65	20,0	2,9	0,50	2	558.300.14
4,0	6	4,00	65	10,0	3,9	1,00	2	558.400.10
4,0	6	4,00	65	15,0	3,9	0,50	2	558.400.11
4,0	6	4,00	65	20,0	3,9	0,50	2	558.400.12
4,0	6	4,00	70	25,0	3,9	0,50	2	558.400.13
4,0	6	4,00	75	30,0	3,9	0,50	2	558.400.14
5,0	6	5,00	65	10,0	4,9	0,50	2	558.500.10
5,0	6	5,00	65	15,0	4,9	1,00	2	558.500.11
5,0	6	5,00	65	20,0	4,9	0,50	2	558.500.12
6,0	6	6,00	65	10,0	5,9	0,50	2	558.600.10
6,0	6	6,00	65	20,0	5,9	0,50	2	558.600.12
6,0	6	6,00	75	30,0	5,9	1,00	2	558.600.13
6,0	6	6,00	90	40,0	5,9	0,50	2	558.600.14
6,0	6	6,00	90	50,0	5,9	1,00	2	558.600.15

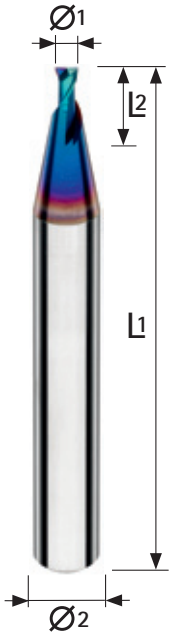
Schaftausführung, Toleranz h5, Rundlaufgenauigkeit 0,005 mm, Polierte Ausführung

Shank design, tolerance h5, rotation accuracy 0,005 mm, polished design

naco | HA | Werks-norm | HRC 60-65 | GG(G)

Artikel-Nr.

010...



VHM – Minikopierfräser **Dynastar**ER

Solid carbide profile cutter with corner radius

TYP H | ER | 2 | 30° | HSC

Ø1	Ø2	L2	L1	Ecken-radius Corner radius	Z	Artikel-Nr. *Article No.*
0,3	6	0,45	50	-	2	010.030.07
0,4	6	0,60	50	-	2	010.040.07
0,5	6	0,70	50	0,05	2	010.050.07
0,6	6	0,90	50	0,05	2	010.060.07
0,8	6	1,20	50	0,05	2	010.080.07
1,0	6	1,50	50	0,10	2	010.100.07
1,2	6	1,80	50	0,10	2	010.120.07
1,5	6	2,20	50	0,15	2	010.150.07
2,0	6	2,20	50	0,15	2	010.200.07

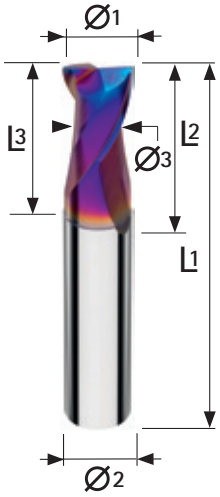
naco | HA | Werks-norm | HRC 55-60 | GG(G) | Trocken-bear-beitung

VHM – Kopierfräser **Dynastar**ER

Solid carbide profile cutter with corner radius

Artikel-Nr.
020...

TYP H | ER | 2 | 30° | HSC



Ø1	Ø2	L2	L1	Ecken-radius Corner radius	Ø3	L3	Z	Artikel-Nr. *Article No.*
0,3	3	0,45	40	-	-	-	2	020.003.07
0,4	3	0,60	40	-	-	-	2	020.004.07
0,5	3	0,70	40	0,05	-	-	2	020.005.07
0,6	3	0,90	40	0,05	-	-	2	020.006.07
0,8	3	1,20	40	0,05	-	-	2	020.008.07
1,0	3	1,50	40	0,10	-	-	2	020.010.07
1,5	3	2,20	40	0,10	-	-	2	020.015.07
2,0	3	3,00	40	0,10	1,9	6	2	020.020.07
2,5	3	4,00	40	0,10	2,4	6	2	020.025.07
3,0	6	4,00	45	0,10	2,9	7	2	020.030.07
3,5	6	5,00	45	0,10	3,3	9	2	020.035.07
4,0	6	5,00	45	0,10	3,8	9	2	020.040.07
4,5	6	6,00	45	0,10	4,3	10	2	020.045.07
5,0	6	6,00	50	0,20	4,8	11	2	020.050.07
6,0	6	7,00	50	0,20	5,8	14	2	020.060.07
8,0	8	9,00	60	0,20	7,8	18	2	020.080.07
10,0	10	12,00	75	0,20	9,7	25	2	020.100.07
12,0	12	15,00	75	0,30	11,7	30	2	020.120.07
16,0	16	18,00	90	0,30	15,7	38	2	020.160.07
20,0	20	24,00	100	0,30	19,7	45	2	020.200.07

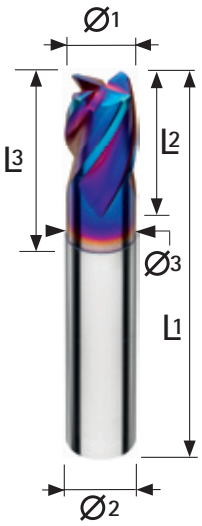
naco | HA | Werks-norm | HRC 55-60 | GG(G) | Trocken-bear-beitung

VHM – Kopierfräser **Dynastar**ER

Solid carbide profile cutter with corner radius

Artikel-Nr.
030...

TYP H | ER | 4 | 30° | HSC



Ø1	Ø2	L2	L1	Ecken-radius Corner radius	Ø3	L3	Z	Artikel-Nr. *Article No.*
1,0	3	1,50	40	0,1	-	-	4	030.010.07
1,5	3	2,20	40	0,1	-	-	4	030.015.07
2,0	3	3,00	40	0,1	1,9	6	4	030.020.07
2,5	3	4,00	40	0,1	2,4	6	4	030.025.07
3,0	6	4,00	45	0,1	2,9	7	4	030.030.07
3,5	6	5,00	45	0,1	3,3	9	4	030.035.07
4,0	6	5,00	45	0,1	3,8	9	4	030.040.07
4,5	6	6,00	45	0,1	4,3	10	4	030.045.07
5,0	6	6,00	50	0,2	4,8	11	4	030.050.07
6,0	6	7,00	50	0,2	5,8	14	4	030.060.07
8,0	8	9,00	60	0,2	7,8	18	4	030.080.07
10,0	10	12,00	75	0,2	9,7	25	4	030.100.07
12,0	12	15,00	75	0,3	11,7	30	4	030.120.07
16,0	16	18,00	90	0,3	15,7	38	4	030.160.07
20,0	20	24,00	100	0,3	19,7	45	4	030.200.07

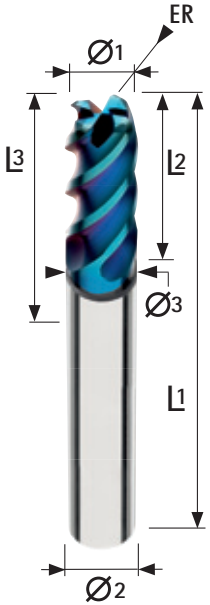
naco | HA | Werks-norm | HRC 55-60 | GG(G) | Trocken-bear-beitung

Artikel-Nr.
313...

VHM – Kopierfräser **Prime Line**ER

Solid carbide profile cutter with corner radius

TYP H | ER | 4 | 45° | HPC | HSC



Ø1	Ø2	L2	L1	L3	Ecken-radius Corner-radius	Ø3	Z	Artikel-Nr. *Article No.*
2,0	6	6	57	12	0,2	1,9	4	313.020.00
2,0	6	6	57	12	0,3	1,9	4	313.030.00
3,0	6	8	57	15	0,3	2,8	4	313.040.00
3,0	6	8	57	15	0,5	2,8	4	313.050.00
4,0	6	11	57	21	0,2	3,6	4	313.060.00
4,0	6	11	57	21	0,3	3,6	4	313.070.00
4,0	6	11	57	21	0,5	3,6	4	313.080.00
4,0	6	11	57	21	1,0	3,6	4	313.090.00
5,0	6	12	57	21	0,2	4,6	4	313.100.00
5,0	6	12	57	21	0,5	4,6	4	313.110.00
5,0	6	12	57	21	1,0	4,6	4	313.120.00
6,0	6	12	57	21	0,1	5,5	4	313.130.00
6,0	6	12	57	21	0,2	5,5	4	313.140.00
6,0	6	12	57	21	0,3	5,5	4	313.150.00
6,0	6	12	57	21	0,5	5,5	4	313.160.00
6,0	6	12	57	21	1,0	5,5	4	313.170.00
6,0	6	12	57	21	2,0	5,5	4	313.180.00

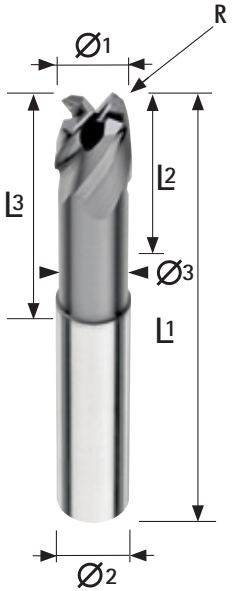
Ø1	Ø2	L2	L1	L3	Ecken-radius Corner-radius	Ø3	Z	Artikel-Nr. *Article No.*
8,0	8	15	75	27	0,3	7,5	4	313.190.00
8,0	8	15	75	27	0,5	7,5	4	313.200.00
8,0	8	15	75	27	1,0	7,5	4	313.210.00
8,0	8	15	75	27	1,5	7,5	4	313.220.00
8,0	8	15	75	27	2,0	7,5	4	313.230.00
10,0	10	17	75	32	0,5	9,5	4	313.240.00
10,0	10	17	80	32	1,0	9,5	4	313.250.00
10,0	10	17	80	32	1,5	9,5	4	313.260.00
10,0	10	17	80	32	2,0	9,5	4	313.270.00
12,0	12	20	100	38	0,5	11,5	4	313.280.00
12,0	12	20	100	38	1,0	11,5	4	313.290.00
12,0	12	20	100	38	1,5	11,5	4	313.300.00
12,0	12	20	100	38	2,0	11,5	4	313.310.00
16,0	16	25	110	42	1,0	15,5	4	313.320.00
16,0	16	25	110	42	1,5	15,5	4	313.330.00
16,0	16	25	110	42	2,0	15,5	4	313.340.00
16,0	16	25	110	42	3,0	15,5	4	313.350.00
20,0	20	32	125	51	1,0	19,5	4	313.360.00

Schaftausführung, Toleranz h5, Rundlaufgenauigkeit 0,005 mm, Polierte Ausführung

Shank design, tolerance h5, rotation accuracy 0,005 mm, polished design

naco | HA | Werks-norm | HRC 55-60 | GG(G) | Trocken-bear-beitung

Artikel-Nr.
640...



VHM – Kopierfräser[ER]

Solid carbide profile cutter with corner radius

TYP H | ER | 4 | 30° | HSC

Radiustoleranz < als 0,01 mm

radius tolerance < als 0,01 mm

Ø1	Ø2	L2	L1	Ø3	L3	Ecken-radius *Corner-radius*	Z	Artikel-Nr. *Article No.*
2,0	6	4	50	1,8	11	0,1	4	640.020.01
2,0	6	4	50	1,8	11	0,2	4	640.020.02
2,0	6	4	50	1,8	11	0,3	4	640.020.03
2,0	6	4	50	1,8	11	0,4	4	640.020.04
3,0	6	4	50	2,8	11	0,2	4	640.030.02
3,0	6	4	50	2,8	11	0,3	4	640.030.03
3,0	6	4	50	2,8	11	0,4	4	640.030.04
3,0	6	4	50	2,8	11	0,5	4	640.030.05
3,0	6	4	50	2,8	11	1,0	4	640.030.10
4,0	6	6	50	3,6	11	0,1	6	640.040.01
4,0	6	6	50	3,6	11	0,2	6	640.040.02
4,0	6	6	50	3,6	11	0,3	6	640.040.03
4,0	6	6	50	3,6	11	0,4	6	640.040.04
4,0	6	6	50	3,6	11	0,5	6	640.040.05
4,0	6	6	50	3,6	11	0,6	6	640.040.06
4,0	6	6	50	3,6	11	0,8	6	640.040.08
4,0	6	6	50	3,6	11	1,0	6	640.040.10
4,0	6	6	50	3,6	11	1,5	6	640.040.15
5,0	6	6	50	4,6	11	0,2	4	640.050.02
5,0	6	6	50	4,6	11	0,3	4	640.050.03
6,0	6	7	50	5,5	11	0,1	4	640.060.01
6,0	6	7	50	5,5	11	0,2	4	640.060.02
6,0	6	7	50	5,5	11	0,3	4	640.060.03
6,0	6	7	50	5,5	11	0,4	4	640.060.04
6,0	6	7	50	5,5	11	0,5	4	640.060.05
6,0	6	7	50	5,5	11	0,6	4	640.060.06

Ø1	Ø2	L2	L1	Ø3	L3	Ecken-radius *Corner-radius*	Z	Artikel-Nr. *Article No.*
6,0	6	7	50	5,5	11	0,7	4	640.060.07
6,0	6	7	50	5,5	11	0,8	4	640.060.08
6,0	6	7	50	5,5	11	0,9	4	640.060.09
6,0	6	7	50	5,5	11	1,0	4	640.060.10
6,0	6	7	50	5,5	11	1,1	4	640.060.11
6,0	6	7	50	5,5	11	1,2	4	640.060.12
6,0	6	7	50	5,5	11	1,3	4	640.060.13
6,0	6	7	50	5,5	11	1,4	4	640.060.14
6,0	6	7	50	5,5	11	1,5	4	640.060.15
6,0	6	7	50	5,5	11	1,6	4	640.060.16
6,0	6	7	50	5,5	11	1,7	4	640.060.17
6,0	6	7	50	5,5	11	1,8	4	640.060.18
6,0	6	7	50	5,5	11	1,9	4	640.060.19
6,0	6	7	50	5,5	11	2,0	4	640.060.20
6,0	6	7	50	5,5	11	2,1	4	640.060.21
6,0	6	7	50	5,5	11	2,2	4	640.060.22
6,0	6	7	50	5,5	11	2,3	4	640.060.23
6,0	6	7	50	5,5	11	2,4	4	640.060.24
6,0	6	7	50	5,5	11	2,5	4	640.060.25
8,0	8	9	58	7,4	13	0,5	4	640.080.05
8,0	8	9	58	7,4	13	1,0	4	640.080.10
8,0	8	9	58	7,4	13	1,5	4	640.080.15
8,0	8	9	58	7,4	13	2,0	4	640.080.20
10,0	10	11	66	9,2	15	0,5	4	640.100.05
10,0	10	11	66	9,2	15	1,0	4	640.100.10
10,0	10	11	66	9,2	15	1,5	4	640.100.15
10,0	10	11	66	9,2	15	2,0	4	640.100.20

TIALN | HA | Werks-norm | HRC 60-65 | GG(G) | Trocken-bear-beitung

Artikel-Nr.
641...

VHM – Kopierfräser[ER]

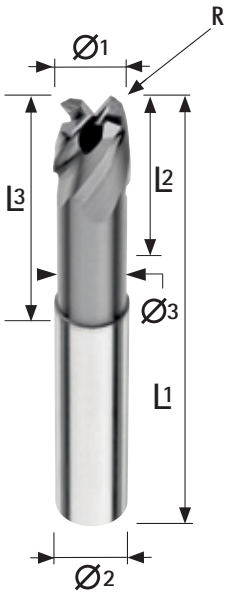
Solid carbide profile cutter with corner radius

TOP PRODUCT

TYP H | ER | 4 | 30° | HSC

Radiustoleranz < als 0,01 mm

radius tolerance < als 0,01 mm



Ø1	Ø2	L2	L1	Ø3	L3	Ecken-radius *Corner-radius*	Z	Artikel-Nr. *Article No.*
2,0	6	4	57	1,8	21	0,1	4	641.020.01
2,0	6	4	57	1,8	21	0,2	4	641.020.02
2,0	6	4	57	1,8	21	0,3	4	641.020.03
2,0	6	4	57	1,8	21	0,4	4	641.020.04
2,0	6	4	57	1,8	21	0,5	4	641.020.05
3,0	6	6	57	2,8	21	0,1	4	641.030.01
3,0	6	6	57	2,8	21	0,2	4	641.030.02
3,0	6	6	57	2,8	21	0,3	4	641.030.03
3,0	6	6	57	2,8	21	0,4	4	641.030.04
3,0	6	6	57	2,8	21	0,5	4	641.030.05
3,0	6	6	57	2,8	21	1,0	4	641.030.10
4,0	6	6	57	3,6	21	0,1	4	641.040.01
4,0	6	6	57	3,6	21	0,2	4	641.040.02
4,0	6	6	57	3,6	21	0,3	4	641.040.03
4,0	6	6	57	3,6	21	0,4	4	641.040.04
4,0	6	6	57	3,6	21	0,5	4	641.040.05
4,0	6	6	57	3,6	21	0,6	4	641.040.06
4,0	6	6	57	3,6	21	0,7	4	641.040.07

Ø1	Ø2	L2	L1	Ø3	L3	Ecken-radius *Corner-radius*	Z	Artikel-Nr. *Article No.*
4,0	6	6	57	3,6	21	0,8	4	641.040.08
4,0	6	6	57	3,6	21	0,9	4	641.040.09
4,0	6	6	57	3,6	21	1,0	4	641.040.10
4,0	6	6	57	3,6	21	1,1	4	641.040.11
4,0	6	6	57	3,6	21	1,2	4	641.040.12
4,0	6	6	57	3,6	21	1,3	4	641.040.13
4,0	6	6	57	3,6	21	1,4	4	641.040.14
4,0	6	6	57	3,6	21	1,5	4	641.040.15
5,0	6	6	57	4,6	21	0,1	4	641.050.01
5,0	6	6	57	4,6	21	0,2	4	641.050.02
5,0	6	6	57	4,6	21	0,3	4	641.050.03
5,0	6	6	57	4,6	21	0,4	4	641.050.04
5,0	6	6	57	4,6	21	0,5	4	641.050.05
5,0	6	6	57	4,6	21	1,0	4	641.050.10
5,0	6	6	57	4,6	21	1,5	4	641.050.15
5,0	6	6	57	4,6	21	2,0	4	641.050.20

Fortsetzung nächste Seite / to be continued

TIALN | HA | Werks-norm | HRC 60-65 | GG(G) | Trocken-bear-beitung

Fortsetzung / continuation

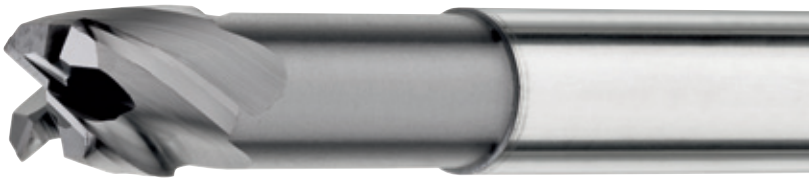
Artikel-Nr.

641...

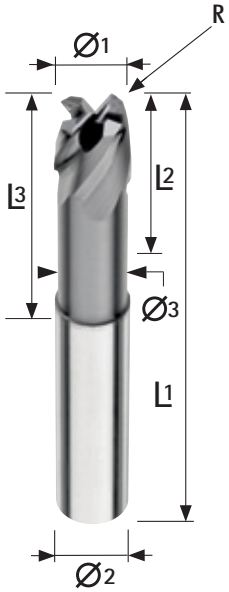
VHM – Kopierfräser[ER]

Solid carbide profile cutter with corner radius

TOP PRODUCT



TYP H | ER | 4 | 30° | HSC



Ø1	Ø2	L2	L1	Ø3	L3	Ecken-radius *Corner-radius*	Z	Artikel-Nr. *Article No.*
6,0	6	7	57	5,5	21	0,1	4	641.060.01
6,0	6	7	57	5,5	21	0,2	4	641.060.02
6,0	6	7	57	5,5	21	0,3	4	641.060.03
6,0	6	7	57	5,5	21	0,4	4	641.060.04
6,0	6	7	57	5,5	21	0,5	4	641.060.05
6,0	6	7	57	5,5	21	0,6	4	641.060.06
6,0	6	7	57	5,5	21	0,7	4	641.060.07
6,0	6	7	57	5,5	21	0,8	4	641.060.08
6,0	6	7	57	5,5	21	0,9	4	641.060.09
6,0	6	7	57	5,5	21	1,0	4	641.060.10
6,0	6	7	57	5,5	21	1,1	4	641.060.11
6,0	6	7	57	5,5	21	1,2	4	641.060.12
6,0	6	7	57	5,5	21	1,3	4	641.060.13
6,0	6	7	57	5,5	21	1,4	4	641.060.14
6,0	6	7	57	5,5	21	1,5	4	641.060.15
6,0	6	7	57	5,5	21	1,6	4	641.060.16
6,0	6	7	57	5,5	21	1,7	4	641.060.17
6,0	6	7	57	5,5	21	1,8	4	641.060.18
6,0	6	7	57	5,5	21	1,9	4	641.060.19
6,0	6	7	57	5,5	21	2,0	4	641.060.20
6,0	6	7	57	5,5	21	2,1	4	641.060.21
6,0	6	7	57	5,5	21	2,2	4	641.060.22
6,0	6	7	57	5,5	21	2,3	4	641.060.23
6,0	6	7	57	5,5	21	2,4	4	641.060.24
6,0	6	7	57	5,5	21	2,5	4	641.060.25

Ø1	Ø2	L2	L1	Ø3	L3	Ecken-radius *Corner-radius*	Z	Artikel-Nr. *Article No.*
8,0	8	9	63	7,4	27	0,1	4	641.080.01
8,0	8	9	63	7,4	27	0,3	4	641.080.03
8,0	8	9	63	7,4	27	0,5	4	641.080.05
8,0	8	9	63	7,4	27	1,0	4	641.080.10
8,0	8	9	63	7,4	27	1,5	4	641.080.15
8,0	8	9	63	7,4	27	2,0	4	641.080.20
10,0	10	11	72	9,2	32	0,1	4	641.100.01
10,0	10	11	72	9,2	32	0,5	4	641.100.05
10,0	10	11	72	9,2	32	1,0	4	641.100.10
10,0	10	11	72	9,2	32	1,5	4	641.100.15
10,0	10	11	72	9,2	32	2,0	4	641.100.20
12,0	12	12	83	11,0	38	0,1	4	641.120.01
12,0	12	12	83	11,0	38	0,5	4	641.120.05
12,0	12	12	83	11,0	38	1,0	4	641.120.10
12,0	12	12	83	11,0	38	1,5	4	641.120.15
12,0	12	12	83	11,0	38	2,0	4	641.120.20
16,0	16	16	92	15,0	44	0,5	4	641.160.05
16,0	16	16	92	15,0	44	1,0	4	641.160.10
16,0	16	16	92	15,0	44	1,5	4	641.160.15
16,0	16	16	92	15,0	44	2,0	4	641.160.20

Radiustoleranz < als 0,01 mm

radius tolerance < als 0,01 mm

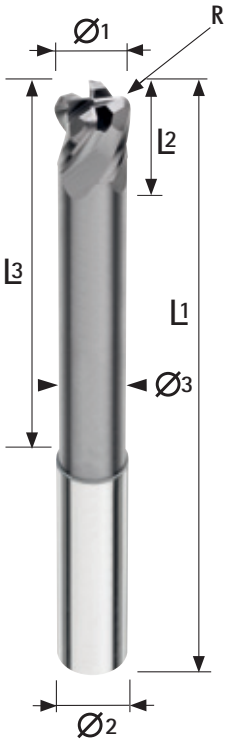
TIALN | HA | Werks-norm | HRC 60-65 | GG(G) | Trocken-bear-beitung

VHM – Kopierfräser[ER]

Solid carbide profile cutter with corner radius

Artikel-Nr.
642...

TYP H | ER | 4 | 30° | HSC



Ø1	Ø2	L2	L1	Ø3	L3	Ecken-radius *Corner-radius*	Z	Artikel-Nr. *Article No.*
6,0	6	7	80	5,5	44	0,1	4	642.060.01
6,0	6	7	80	5,5	44	0,2	4	642.060.02
6,0	6	7	80	5,5	44	0,3	4	642.060.03
6,0	6	7	80	5,5	44	0,4	4	642.060.04
6,0	6	7	80	5,5	44	0,5	4	642.060.05
6,0	6	7	80	5,5	44	0,6	4	642.060.06
6,0	6	7	80	5,5	44	0,7	4	642.060.07
6,0	6	7	80	5,5	44	0,8	4	642.060.08
6,0	6	7	80	5,5	44	0,9	4	642.060.09
6,0	6	7	80	5,5	44	1,0	4	642.060.10
6,0	6	7	80	5,5	44	1,1	4	642.060.11
6,0	6	7	80	5,5	44	1,2	4	642.060.12
6,0	6	7	80	5,5	44	1,3	4	642.060.13
6,0	6	7	80	5,5	44	1,4	4	642.060.14
6,0	6	7	80	5,5	44	1,5	4	642.060.15
6,0	6	7	80	5,5	44	1,6	4	642.060.16
6,0	6	7	80	5,5	44	1,7	4	642.060.17
6,0	6	7	80	5,5	44	1,8	4	642.060.18

Ø1	Ø2	L2	L1	Ø3	L3	Ecken-radius *Corner-radius*	Z	Artikel-Nr. *Article No.*
6,0	6	7	80	5,5	44	1,9	4	642.060.19
6,0	6	7	80	5,5	44	2,0	4	642.060.20
6,0	6	7	80	5,5	44	2,1	4	642.060.21
6,0	6	7	80	5,5	44	2,2	4	642.060.22
6,0	6	7	80	5,5	44	2,3	4	642.060.23
6,0	6	7	80	5,5	44	2,4	4	642.060.24
6,0	6	7	80	5,5	44	2,5	4	642.060.25
8,0	8	9	100	7,4	54	0,5	4	642.080.05
8,0	8	9	100	7,4	54	1,0	4	642.080.10
8,0	8	9	100	7,4	54	1,5	4	642.080.15
8,0	8	9	100	7,4	54	2,0	4	642.080.20
10,0	10	11	100	9,2	60	1,0	4	642.100.10
10,0	10	11	100	9,2	60	1,5	4	642.100.15
10,0	10	11	100	9,2	60	2,0	4	642.100.20
12,0	12	12	120	11,0	75	0,5	4	642.120.05
12,0	12	12	120	11,0	75	1,0	4	642.120.10
12,0	12	12	120	11,0	75	1,5	4	642.120.15
12,0	12	12	120	11,0	75	2,0	4	642.120.20
16,0	16	16	150	15,0	92	2,0	4	642.160.20

Radiustoleranz
< als 0,01 mm

radius tolerance
< als 0,01 mm

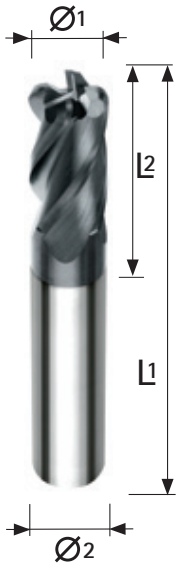
TIALN | HA | Werks-norm | HRC 60-65 | GG(G) | Trocken-bear-beitung

VHM – Kopierfräser[ER]

Solid carbide profile cutter with corner radius

TYP H | ER | 4 | 30° | HSC

Artikel-Nr.
643...



Ø1	Ø2	L2	L1	R	Z	Artikel-Nr. *Article No.*
3,0	3	6	50	0,3	4	643.030.03
3,0	3	6	50	0,5	4	643.030.05
4,0	4	8	60	0,3	4	643.040.03
4,0	4	8	60	0,5	4	643.040.05
4,0	4	8	60	1,0	4	643.040.10
4,0	4	8	60	1,5	4	643.040.15
5,0	5	10	60	0,3	4	643.050.03
5,0	5	10	60	0,5	4	643.050.05
5,0	5	10	60	1,0	4	643.050.10
5,0	5	10	60	1,5	4	643.050.15
5,0	5	10	60	2,0	4	643.050.20
6,0	6	12	70	0,3	4	643.060.03
6,0	6	12	70	0,5	4	643.060.05
6,0	6	12	70	1,0	4	643.060.10
6,0	6	12	70	1,5	4	643.060.15
6,0	6	12	70	2,0	4	643.060.20
6,0	6	12	70	2,5	4	643.060.25
8,0	8	16	70	0,3	4	643.080.03
8,0	8	16	70	0,5	4	643.080.05
8,0	8	16	70	1,0	4	643.080.10
8,0	8	16	70	1,5	4	643.080.15
8,0	8	16	70	2,0	4	643.080.20
8,0	8	16	70	2,5	4	643.080.25
8,0	8	16	70	3,0	4	643.080.30

Schaftausführung, Toleranz h5,
Rundlaufgenauigkeit 0,005 mm,
Polierte Ausführung

Shank design, tolerance h5,
rotation accuracy 0,005 mm,
polished design

Ø1	Ø2	L2	L1	R	Z	Artikel-Nr. *Article No.*
10,0	10	20	70	0,3	4	643.100.03
10,0	10	20	70	0,5	4	643.100.05
10,0	10	20	70	1,0	4	643.100.10
10,0	10	20	70	1,5	4	643.100.15
10,0	10	20	70	2,0	4	643.100.20
10,0	10	20	70	2,5	4	643.100.25
10,0	10	20	70	3,0	4	643.100.30
12,0	12	24	80	0,3	4	643.120.03
12,0	12	24	80	0,5	4	643.120.05
12,0	12	24	80	1,0	4	643.120.10
12,0	12	24	80	1,5	4	643.120.15
12,0	12	24	80	2,0	4	643.120.20
12,0	12	24	80	2,5	4	643.120.25
12,0	12	24	80	3,0	4	643.120.30
14,0	14	28	90	0,5	4	643.140.05
14,0	14	28	90	1,0	4	643.140.10
14,0	14	28	90	1,5	4	643.140.15
14,0	14	28	90	2,0	4	643.140.20
14,0	14	28	90	2,5	4	643.140.25
14,0	14	28	90	3,0	4	643.140.30
16,0	16	32	90	1,0	4	643.160.10
16,0	16	32	90	2,0	4	643.160.20
16,0	16	32	90	3,0	4	643.160.30
20,0	20	40	120	1,0	4	643.200.10
20,0	20	40	120	2,0	4	643.200.20
20,0	20	40	120	3,0	4	643.200.30

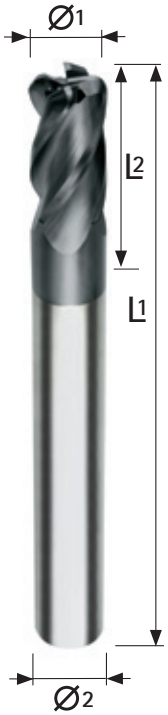
TIALN | HA | DIN 6527 kurz | HRC 55-60 | GG(G) | Trocken-bear-beitung

VHM – Kopierfräser[ER]

Solid carbide profile cutter with corner radius

TYP H | ER | 4 | 30° | HSC

Artikel-Nr.
644...



Ø1	Ø2	L2	L1	R	Z	Artikel-Nr. *Article No.*
3,0	3	6	70	0,3	4	644.030.03
3,0	3	6	70	0,5	4	644.030.05
4,0	4	8	80	0,3	4	644.040.03
4,0	4	8	80	0,5	4	644.040.05
4,0	4	8	80	1,0	4	644.040.10
4,0	4	8	80	1,5	4	644.040.15
5,0	5	10	100	0,3	4	644.050.03
5,0	5	10	100	0,5	4	644.050.05
5,0	5	10	100	1,0	4	644.050.10
5,0	5	10	100	1,5	4	644.050.15
5,0	5	10	100	2,0	4	644.050.20
6,0	6	12	100	0,3	4	644.060.03
6,0	6	12	100	0,5	4	644.060.05
6,0	6	12	100	1,0	4	644.060.10
6,0	6	12	100	1,5	4	644.060.15
6,0	6	12	100	2,0	4	644.060.20
6,0	6	12	100	2,5	4	644.060.25
8,0	8	16	100	0,3	4	644.080.03
8,0	8	16	100	0,5	4	644.080.05
8,0	8	16	100	1,0	4	644.080.10
8,0	8	16	100	1,5	4	644.080.15
8,0	8	16	100	2,0	4	644.080.20
8,0	8	16	100	2,5	4	644.080.25
8,0	8	16	100	3,0	4	644.080.30

Ø1	Ø2	L2	L1	R	Z	Artikel-Nr. *Article No.*
10,0	10	20	120	0,3	4	644.100.03
10,0	10	20	120	0,5	4	644.100.05
10,0	10	20	120	1,0	4	644.100.10
10,0	10	20	120	1,5	4	644.100.15
10,0	10	20	120	2,0	4	644.100.20
10,0	10	20	120	2,5	4	644.100.25
10,0	10	20	120	3,0	4	644.100.30
12,0	12	24	120	0,3	4	644.120.03
12,0	12	24	120	0,5	4	644.120.05
12,0	12	24	120	1,0	4	644.120.10
12,0	12	24	120	1,5	4	644.120.15
12,0	12	24	120	2,0	4	644.120.20
12,0	12	24	120	2,5	4	644.120.25
12,0	12	24	120	3,0	4	644.120.30
14,0	14	28	120	0,5	4	644.140.05
14,0	14	28	120	1,0	4	644.140.10
14,0	14	28	120	1,5	4	644.140.15
14,0	14	28	120	2,0	4	644.140.20
14,0	14	28	120	2,5	4	644.140.25
14,0	14	28	120	3,0	4	644.140.30
16,0	16	32	120	1,0	4	644.160.10
16,0	16	32	120	2,0	4	644.160.20
16,0	16	32	120	3,0	4	644.160.30
20,0	20	40	160	1,0	4	644.200.10
20,0	20	40	160	2,0	4	644.200.20
20,0	20	40	160	3,0	4	644.200.30

Schaftausführung, Toleranz h5, Rundlaufgenauigkeit 0,005 mm, Polierte Ausführung

Shank design, tolerance h5, rotation accuracy 0,005 mm, polished design

TIALN | HA | DIN 6527 lang | HRC 55-60 | GG(G) | Trocken-bear-beitung

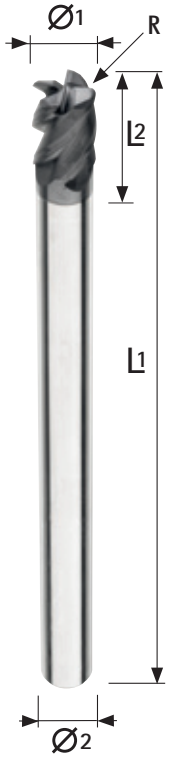
Artikel-Nr.

902...

VHM – Schaftfräser^{ER}

Solid carbide profile cutter with corner radius

TYP N | ER | 4 | 45° | HSC



Ø1	Ø2	L2	L1	Ecken-radius Corner-radius	Z	Artikel-Nr. *Article No.*
7,0	6	9	120	0,5	4	902.070.00
9,0	8	12	135	1,0	4	902.090.00
11,0	10	15	150	1,0	4	902.110.00
13,0	12	18	160	1,0	4	902.130.00
17,0	16	24	180	1,5	4	902.170.00

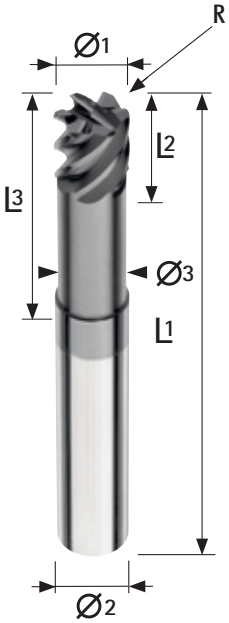
Artikel-Nr.

661...

VHM – Kopierfräser Multicut^{ER}

Solid carbide profile cutter with corner radius

TYP H | ER | 4 | 6 | 45° | HSC



Ø1	Ø2	L2	L1	Ø3	L3	Ecken-radius *Corner-radius*	Z	Artikel-Nr. *Article No.*
3,0	6	4	50	2,7	14	0,3	4	661.030.00
3,0	6	4	50	2,7	14	0,5	4	661.030.01
4,0	6	5	54	3,7	16	0,4	4	661.040.00
5,0	6	6	54	4,6	18	0,5	4	661.050.00
6,0	6	7	65	5,5	21	0,5	6	661.060.00
6,0	6	7	65	5,5	21	1,0	6	661.060.01
8,0	8	9	70	7,4	27	0,5	6	661.080.00
8,0	8	9	70	7,4	27	1,0	6	661.080.01
10,0	10	11	80	9,2	32	0,5	6	661.100.00
10,0	10	11	80	9,2	32	1,0	6	661.100.01
10,0	10	11	80	9,2	32	1,5	6	661.100.02
10,0	10	11	80	9,2	32	2,0	6	661.100.03
20,0	12	12	93	11,0	38	0,5	6	661.120.00
12,0	12	12	93	11,0	38	1,0	6	661.120.01
12,0	12	12	93	11,0	38	1,5	6	661.120.02
12,0	12	12	93	11,0	38	2,0	6	661.120.03

TIALN | HA | Werks-norm | Universal

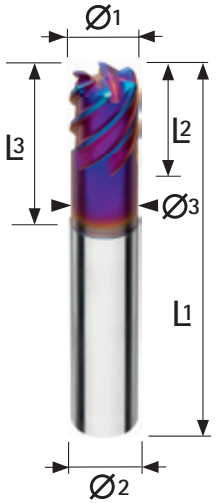
TIALN | HA | Werks-norm | HRC 60-65 | GG(G) | Trocken-bear-beitung

Artikel-Nr.
060...

VHM – Schaftfräser **Dynastar**ER

Solid carbide profile cutter with corner radius

TYP H | ER | 6 | 45° | HSC



Ø1	Ø2	L2	L1	Ecken-radius Corner radius	Ø3	L3	Z	Artikel-Nr. *Article No.*
6,0	6	6	50	0,5	5,7	14	6	060.060.07
6,0	6	13	70	0,5	-	-	6	060.061.07
6,0	6	26	70	0,5	-	-	6	060.062.07
8,0	8	8	60	0,5	7,65	24	6	060.080.07
8,0	8	19	90	0,5	-	-	6	060.081.07
8,0	8	36	90	0,5	-	-	6	060.082.07
10,0	10	10	70	1,0	9,65	30	6	060.100.07
10,0	10	22	100	0,5	-	-	6	060.101.07
10,0	10	22	100	1,0	-	-	6	060.102.07
10,0	10	46	100	1,0	-	-	6	060.103.07
12,0	12	12	75	1,0	11,6	30	6	060.120.07
12,0	12	26	110	0,5	-	-	6	060.121.07
12,0	12	26	110	1,0	-	-	6	060.122.07
12,0	12	56	110	1,0	-	-	6	060.123.07
16,0	16	32	130	1,0	-	-	6	060.161.07
16,0	16	32	130	1,5	-	-	6	060.162.07
16,0	16	66	130	1,5	-	-	6	060.163.07
20,0	20	38	140	1,0	-	-	6	060.201.07
20,0	20	38	140	1,5	-	-	6	060.202.07
20,0	20	38	140	2,0	-	-	6	060.203.07
20,0	20	76	140	2,0	-	-	6	060.204.07

naco | HA | Werks-norm | HRC 55-60 | GG(G) | Trocken-bear-beitung

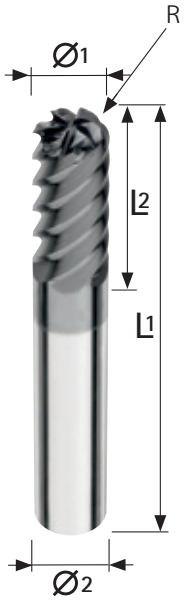
VHM – Kopierfräser Multicut^{ER}

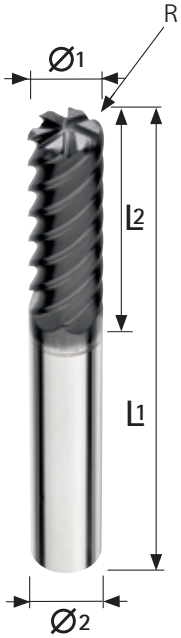
Solid carbide cutter with corner radius

TYP H | ER | 6 | 8 | 50° | HSC

Artikel-Nr.
308...

Artikel-Nr.
309...





Ø1	Ø2	L2	L1	Ecken-radius *Corner-radius*	Z	Artikel-Nr. *Article No.*
6,0	6	13	57	0,5	6	308.060.05
6,0	6	13	57	1,0	6	308.060.10
6,0	6	18	62	0,5	6	309.060.05
8,0	8	19	63	0,5	6	308.080.05
8,0	8	19	63	1,0	6	308.080.10
8,0	8	24	68	0,5	6	309.080.05
8,0	8	24	68	1,0	6	309.080.10
10,0	10	22	72	0,5	6	308.100.05
10,0	10	22	72	1,0	6	308.100.10
10,0	10	30	80	0,5	6	309.100.05
10,0	10	30	80	1,5	6	309.100.15
12,0	12	26	83	0,5	6	308.120.05
12,0	12	26	83	1,0	6	308.120.10
12,0	12	26	83	1,5	6	308.120.15
12,0	12	26	83	2,0	6	308.120.20
12,0	12	26	83	2,5	6	308.120.25
12,0	12	36	93	0,5	6	309.120.05
12,0	12	36	93	1,0	6	309.120.10
12,0	12	36	93	1,5	6	309.120.15
12,0	12	36	93	2,0	6	309.120.20

Ø1	Ø2	L2	L1	Ecken-radius *Corner-radius*	Z	Artikel-Nr. *Article No.*
16,0	16	32	92	0,5	8	308.160.05
16,0	16	32	92	1,0	8	308.160.10
16,0	16	32	92	1,5	8	308.160.15
16,0	16	32	92	2,0	8	308.160.20
16,0	16	32	92	2,5	8	308.160.25
16,0	16	32	92	3,0	8	308.160.30
16,0	16	48	108	0,5	8	309.160.05
16,0	16	48	108	1,0	8	309.160.10
16,0	16	48	108	1,5	8	309.160.15
16,0	16	48	108	2,0	8	309.160.20
20,0	20	38	104	2,0	8	308.200.20
20,0	20	60	126	2,0	8	309.200.20

ALTIN | HA | Werks-norm | HRC 60-65 | GG(G)

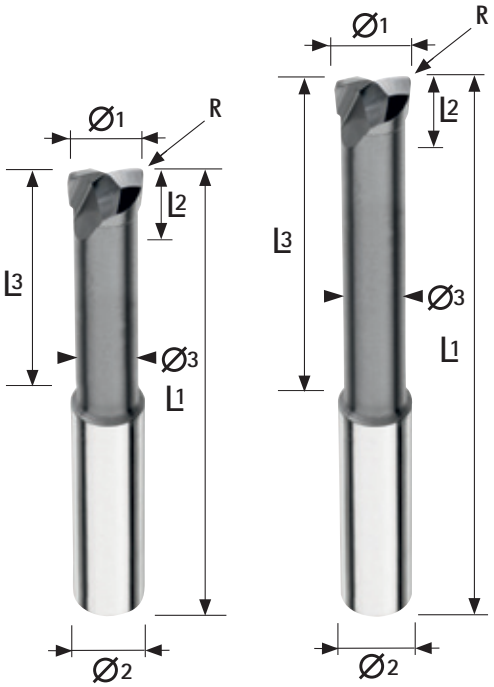
VHM – Kopierfräser **Stirntorus**

Solid carbide profile cutter with face radius

TYP H-N | HSC

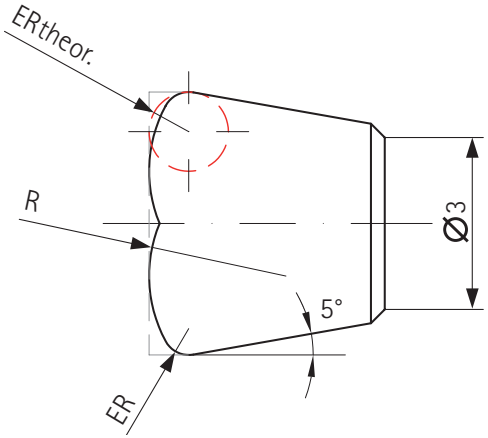
Artikel-Nr.
332...

Artikel-Nr.
333...



Der theoretische Eckenradius wird zur Erleichterung der Programmierung für das Kopierfräsen angenommen.

The theoretic corner radius will be used for easier programming in copy milling.



Ø1	Ø2	L2	L1	Ø3	L3	Ecken-radius *Corner radius*	ERtheor.	R	Z	Artikel-Nr. *Article No.*
4,0	6	3,7	57	3,4	20	0,33	0,40	7	2	332.040.00
4,0	6	3,7	80	3,4	40	0,33	0,40	7	2	333.040.00
5,0	6	4,0	57	4,2	20	0,35	0,50	7	2	332.050.00
5,0	6	4,0	80	4,2	40	0,35	0,50	7	2	333.050.00
6,0	6	4,0	57	5,0	25	0,42	0,55	10	2	332.060.00
6,0	6	4,0	80	5,0	45	0,42	0,55	10	2	333.060.00
8,0	8	4,0	63	6,7	25	0,52	0,80	10	2	332.080.00
8,0	8	4,0	90	6,7	55	0,52	0,80	10	2	333.080.00
10,0	10	6,0	72	8,7	35	0,64	0,90	15	2	332.100.00
10,0	10	6,0	100	8,7	60	0,64	0,90	15	2	333.100.00
12,0	12	6,0	83	10,0	40	0,75	1,10	15	2	332.120.00
12,0	12	6,0	110	10,0	65	0,75	1,10	15	2	333.120.00
16,0	16	8,0	92	13,5	45	1,06	1,45	25	2	332.160.00
16,0	16	8,0	130	13,5	80	1,06	1,45	25	2	333.160.00
20,0	20	8,3	104	17,0	55	1,25	1,65	50	2	332.200.00
20,0	20	8,3	150	17,0	95	1,25	1,65	50	2	333.200.00

ALTIN | HA | Werks-norm | HRC 55-60 | GG(G)

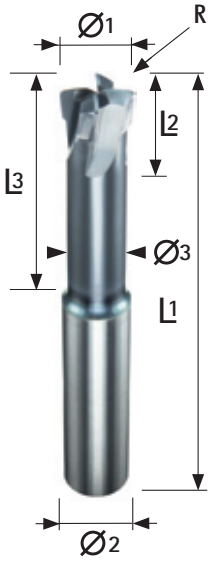
VHM – Kopierfräser **Stirntorus**

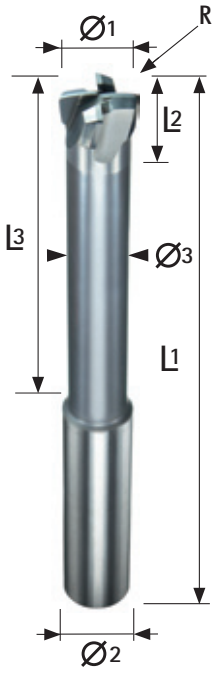
Solid carbide profile cutter with face radius

TYP H | ER R | 4 | 15° | HSC

Artikel-Nr.
336...

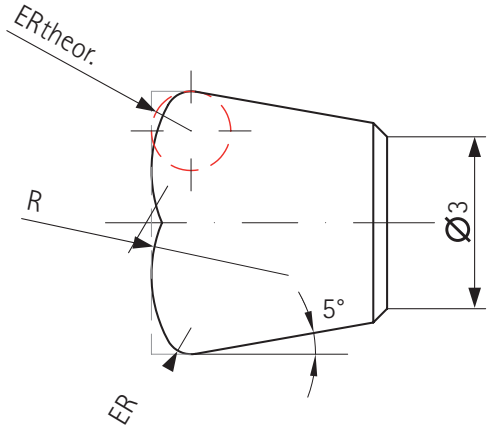
Artikel-Nr.
337...





Der theoretische Eckenradius wird zur Erleichterung der Programmierung für das Kopierfräsen angenommen.

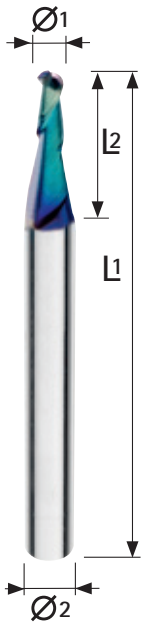
The theoretic corner radius will be used for easier programming in copy milling.



Ø1	Ø2	L2	L1	Ø3	L3	Ecken-radius *Corner radius*	ERtheor.	R	Z	Artikel-Nr. *Article No.*
4,0	6	3,7	57	3,4	20	0,33	0,40	7	4	336.040.00
4,0	6	3,7	80	3,4	40	0,33	0,40	7	4	337.040.00
5,0	6	4,0	57	4,2	20	0,35	0,50	7	4	336.050.00
5,0	6	4,0	80	4,2	40	0,35	0,50	7	4	337.050.00
6,0	6	4,0	57	5,0	25	0,42	0,55	10	4	336.060.00
6,0	6	4,0	80	5,0	45	0,42	0,55	10	4	337.060.00
8,0	8	4,0	63	6,7	25	0,52	0,80	10	4	336.080.00
8,0	8	4,0	90	6,7	55	0,52	0,80	10	4	337.080.00
10,0	10	6,0	72	8,7	35	0,64	0,90	15	4	336.100.00
10,0	10	6,0	100	8,7	60	0,64	0,90	15	4	337.100.00
12,0	12	6,0	83	10,0	40	0,75	1,10	15	4	336.120.00
12,0	12	6,0	110	10,0	65	0,75	1,10	15	4	337.120.00
16,0	16	8,0	92	13,5	45	1,06	1,45	25	4	336.160.00
16,0	16	8,0	130	13,5	80	1,06	1,45	25	4	337.160.00
20,0	20	8,3	104	17,0	55	1,25	1,65	50	4	336.200.00
20,0	20	8,3	150	17,0	95	1,25	1,65	50	4	337.200.00

ALTIN | HA | Werks-norm | HRC 55-60 | GG(G)

Artikel-Nr.
531...



VHM – Vollradiusfräser **PrimeLine**

Solid carbide ball-nosed universal cutter

TYP N | R | 2 | 30° | HSC

Ø1	Ø2	L2	L1	Radius	Z	Artikel-Nr. *Article No.*
0,25	4	0,5	50	0,125	2	531.002.00
0,30	4	1,0	50	0,150	2	531.003.00
0,40	4	1,0	50	0,200	2	531.004.00
0,50	4	1,5	50	0,250	2	531.005.00
0,60	4	1,5	50	0,300	2	531.006.00
0,70	4	2,0	50	0,350	2	531.007.00
0,80	4	2,0	50	0,400	2	531.008.00
0,90	4	2,5	50	0,450	2	531.009.00
1,00	4	3,0	50	0,500	2	531.010.00
1,10	4	3,0	50	0,550	2	531.011.00
1,20	4	3,0	50	0,600	2	531.012.00
1,40	4	4,0	50	0,700	2	531.014.00
1,50	4	4,0	50	0,750	2	531.015.00
1,60	4	5,0	50	0,800	2	531.016.00
1,80	4	5,0	50	0,900	2	531.018.00
2,00	4	5,0	50	1,000	2	531.020.00

Ø1	Ø2	L2	L1	Radius	Z	Artikel-Nr. *Article No.*
2,5	4	5	50	1,25	2	531.025.00
3,0	6	6	50	1,5	2	531.030.00
4,0	6	8	54	2,0	2	531.040.00
5,0	6	9	54	2,5	2	531.050.00
6,0	6	10	54	3,0	2	531.060.00
8,0	8	12	58	4,0	2	531.080.00
10,0	10	14	66	5,0	2	531.100.00
12,0	12	16	73	6,0	2	531.120.00
14,0	14	18	75	7,0	2	531.140.00
16,0	16	20	82	8,0	2	531.160.00
20,0	20	24	92	10,0	2	531.200.00

Schaftausführung, Toleranz h5, Rundlaufgenauigkeit 0,005 mm, Polierte Ausführung

Shank design, tolerance h5, rotation accuracy 0,005 mm, polished design

Radiustoleranz
radius tolerance

r_p max +0,003
– 0,003

d_1 max +0,000
– 0,015

naco | HA | Werks-norm | GG(G)

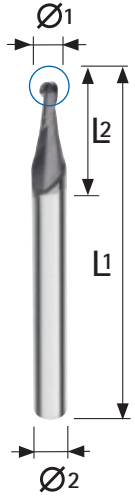
Artikel-Nr.

532...

VHM – Vollradiusfräser

Solid carbide ball-nosed universal cutter

TYP N

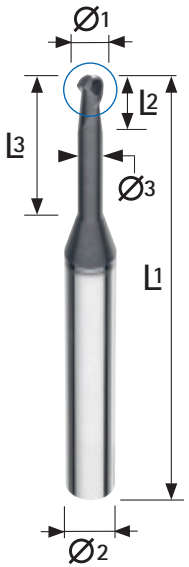


Ø1	Ø2	L2	L1	Z	Artikel-Nr. *Article No.*
0,20	3	0,5	38	2	532.020...
0,25	3	0,5	38	2	532.025...
0,30	3	1,0	38	2	532.030...
0,40	3	1,0	38	2	532.040...
0,50	3	1,5	38	2	532.050...
0,60	3	1,5	38	2	532.060...
0,70	3	2,0	38	2	532.070...
0,80	3	2,0	38	2	532.080...
0,90	3	2,5	38	2	532.090...
1,00	3	3,0	38	2	532.100...
1,10	3	3,0	38	2	532.110...
1,20	3	3,0	38	2	532.120...
1,40	3	4,0	38	2	532.140...
1,50	3	4,0	38	2	532.150...
1,60	3	5,0	38	2	532.160...
1,80	3	5,0	38	2	532.180...
2,00	3	5,0	38	2	532.200...

Bitte fügen Sie bei Ihrer Bestellung folgende Codes hinzu: unbeschichtet .09 beschichtet .00
Please add the following code to your order: uncoated .09 coated .00

TIALN HA Werks-norm GG(G) Universal

Artikel-Nr.
554...



VHM – Minivollradiusfräser

Solid carbide ball-nosed cutter

TYP H | R | 2 | 30° | HSC

Ø1	Ø2	L2	L1	Ø3	L3	Radius	Z	Artikel-Nr. *Article No.*
0,3	6	0,25	55	0,28	1	0,15	2	554.030.10
0,3	6	0,25	55	0,28	2	0,15	2	554.030.11
0,3	6	0,25	55	0,28	3	0,15	2	554.030.12
0,3	6	0,25	55	0,28	5	0,15	2	554.030.13
0,4	6	0,30	55	0,38	2	0,20	2	554.040.10
0,4	6	0,30	55	0,38	4	0,20	2	554.040.11
0,4	6	0,30	55	0,38	6	0,20	2	554.040.12
0,5	6	0,40	55	0,48	2	0,25	2	554.050.10
0,5	6	0,40	55	0,48	4	0,25	2	554.050.11
0,5	6	0,40	55	0,48	6	0,25	2	554.050.12
0,6	6	0,50	55	0,58	2	0,30	2	554.060.10
0,6	6	0,50	55	0,58	4	0,30	2	554.060.11
0,6	6	0,50	55	0,58	6	0,30	2	554.060.12
0,6	6	0,50	55	0,58	8	0,30	2	554.060.13
0,8	6	0,60	55	0,77	4	0,40	2	554.080.10
0,8	6	0,60	55	0,77	6	0,40	2	554.080.11
0,8	6	0,60	55	0,77	8	0,40	2	554.080.12
0,8	6	0,60	55	0,77	10	0,40	2	554.080.13

Ø1	Ø2	L2	L1	Ø3	L3	Radius	Z	Artikel-Nr. *Article No.*
1,0	6	0,80	55	0,95	4	0,50	2	554.100.10
1,0	6	0,80	55	0,95	6	0,50	2	554.100.11
1,0	6	0,80	55	0,95	8	0,50	2	554.100.12
1,0	6	0,80	65	0,95	10	0,50	2	554.100.13
1,0	6	0,80	65	0,95	12	0,50	2	554.100.14
1,0	6	0,80	65	0,95	15	0,50	2	554.100.15
1,0	6	0,80	65	0,95	20	0,50	2	554.100.16
1,0	6	0,80	70	0,95	25	0,50	2	554.100.17
1,0	6	0,80	75	0,95	30	0,50	2	554.100.18
1,2	6	1,00	55	1,15	5	0,60	2	554.120.10
1,2	6	1,00	55	1,15	6	0,60	2	554.120.11
1,2	6	1,00	55	1,15	8	0,60	2	554.120.12
1,2	6	1,00	65	1,15	10	0,60	2	554.120.13
1,2	6	1,00	65	1,15	12	0,60	2	554.120.14
1,2	6	1,00	65	1,15	15	0,60	2	554.120.15
1,2	6	1,00	65	1,15	20	0,60	2	554.120.16
1,2	6	1,00	70	1,15	25	0,60	2	554.120.17

Fortsetzung nächste Seite / to be continued

ALTIN | HA | Werks-norm | HRC 60-65 | GG(G) | Trocken-bear-beitung

Fortsetzung / continuation

Artikel-Nr.

554...

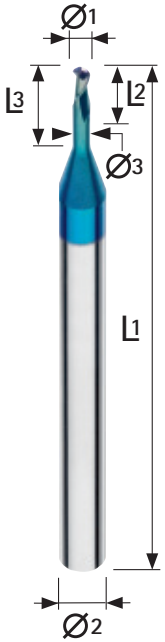
TYP H | R | 2 | 30° | HSC

Ø1	Ø2	L2	L1	Ø3	L3	Radius	Z	Artikel-Nr. *Article No.*
1,5	6	1,2	55	1,44	6	0,75	2	554.150.10
1,5	6	1,2	55	1,44	8	0,75	2	554.150.11
1,5	6	1,2	65	1,44	10	0,75	2	554.150.12
1,5	6	1,2	65	1,44	12	0,75	2	554.150.13
1,5	6	1,2	65	1,44	15	0,75	2	554.150.14
1,5	6	1,2	65	1,44	20	0,75	2	554.150.15
1,5	6	1,2	65	1,44	25	0,75	2	554.150.16
1,5	6	1,2	70	1,44	30	0,75	2	554.150.17
2,0	6	1,5	55	1,92	6	1,00	2	554.200.10
2,0	6	1,5	55	1,92	8	1,00	2	554.200.11
2,0	6	1,5	65	1,92	10	1,00	2	554.200.12
2,0	6	1,5	65	1,92	12	1,00	2	554.200.13
2,0	6	1,5	65	1,92	15	1,00	2	554.200.14
2,0	6	1,5	65	1,92	20	1,00	2	554.200.15
2,0	6	1,5	70	1,92	25	1,00	2	554.200.16
2,0	6	1,5	75	1,92	30	1,00	2	554.200.17
3,0	6	2,5	55	2,90	5	1,50	2	554.300.10
3,0	6	2,5	65	2,90	10	1,50	2	554.300.11
3,0	6	2,5	65	2,90	15	1,50	2	554.300.12
3,0	6	2,5	65	2,90	20	1,50	2	554.300.13
3,0	6	2,5	70	2,90	25	1,50	2	554.300.14
3,0	6	2,5	75	2,90	30	1,50	2	554.300.15

Ø1	Ø2	L2	L1	Ø3	L3	Radius	Z	Artikel-Nr. *Article No.*
4,0	6	3,2	65	3,90	10	2,00	2	554.400.10
4,0	6	3,2	65	3,90	15	2,00	2	554.400.11
4,0	6	3,2	65	3,90	20	2,00	2	554.400.12
4,0	6	3,2	70	3,90	25	2,00	2	554.400.13
4,0	6	3,2	75	3,90	30	2,00	2	554.400.14
5,0	6	4,0	65	4,90	10	2,50	2	554.500.10
5,0	6	4,0	65	4,90	15	2,50	2	554.500.11
5,0	6	4,0	65	4,90	20	2,50	2	554.500.12
5,0	6	4,0	70	4,90	25	2,50	2	554.500.13
5,0	6	4,0	75	4,90	30	2,50	2	554.500.14
5,0	6	4,0	90	4,90	40	2,50	2	554.500.15
6,0	6	5,0	65	5,90	10	3,00	2	554.600.10

ALTIN | HA | Werks-norm | HRC 60-65 | GG(G) | Trocken-bear-beitung

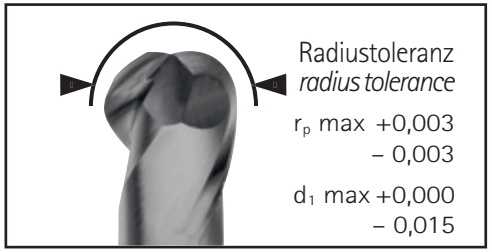
Artikel-Nr.
559...



VHM – Minivollradiusfräser **PrimeLine**

Solid carbide ball-nosed cutter

TYP H | R | 2 | 30° | HSC



Ø1	Ø2	L2	L1	L3	Ø3	Radius	Z	Artikel-Nr. *Article No.*
0,3	6	0,25	55	1	0,28	0,15	2	559.030.10
0,3	6	0,25	55	2	0,28	0,15	2	559.030.11
0,3	6	0,25	55	3	0,28	0,15	2	559.030.12
0,3	6	0,25	55	5	0,28	0,15	2	559.030.13
0,4	6	0,30	55	2	0,38	0,20	2	559.040.10
0,4	6	0,30	55	4	0,38	0,20	2	559.040.11
0,4	6	0,30	55	6	0,38	0,20	2	559.040.12
0,5	6	0,40	55	2	0,48	0,25	2	559.050.10
0,5	6	0,40	55	4	0,48	0,25	2	559.050.11
0,5	6	0,40	55	6	0,48	0,25	2	559.050.12
0,6	6	0,50	55	2	0,58	0,30	2	559.060.10
0,6	6	0,50	55	4	0,58	0,30	2	559.060.11
0,6	6	0,50	55	6	0,58	0,30	2	559.060.12
0,6	6	0,50	55	8	0,58	0,30	2	559.060.13
0,8	6	0,60	55	4	0,77	0,40	2	559.080.10
0,8	6	0,60	55	6	0,77	0,40	2	559.080.11
0,8	6	0,60	55	8	0,77	0,40	2	559.080.12
0,8	6	0,60	55	10	0,77	0,40	2	559.080.13

Ø1	Ø2	L2	L1	L3	Ø3	Radius	Z	Artikel-Nr. *Article No.*
1,0	6	0,80	55	4	0,95	0,50	2	559.100.10
1,0	6	0,80	55	6	0,95	0,50	2	559.100.11
1,0	6	0,80	55	8	0,95	0,50	2	559.100.12
1,0	6	0,80	65	10	0,95	0,50	2	559.100.13
1,0	6	0,80	65	12	0,95	0,50	2	559.100.14
1,0	6	0,80	65	15	0,95	0,50	2	559.100.15
1,0	6	0,80	65	20	0,95	0,50	2	559.100.16
1,0	6	0,80	70	25	0,95	0,50	2	559.100.17
1,0	6	0,80	75	30	0,95	0,50	2	559.100.18
1,2	6	1,00	55	5	1,15	0,60	2	559.120.10
1,2	6	1,00	55	6	1,15	0,60	2	559.120.11
1,2	6	1,00	55	8	1,15	0,60	2	559.120.12
1,2	6	1,00	65	10	1,15	0,60	2	559.120.13
1,2	6	1,00	65	12	1,15	0,60	2	559.120.14
1,2	6	1,00	65	15	1,15	0,60	2	559.120.15
1,2	6	1,00	65	20	1,15	0,60	2	559.120.16
1,2	6	1,00	70	25	1,15	0,60	2	559.120.17

Fortsetzung nächste Seite / to be continued

Schaftausführung, Toleranz h5, Rundlaufgenauigkeit 0,005 mm, Polierte Ausführung

Shank design, tolerance h5, rotation accuracy 0,005 mm, polished design

naco | HA | Werks-norm | HRC 60-65 | GG(G)

Radiustoleranz
radius tolerance

r_p max +0,003
– 0,003

d_1 max +0,000
– 0,015

Fortsetzung / continuation

Artikel-Nr.

559...

TYP H | R | 2 | 30° | HSC

Ø1	Ø2	L2	L1	L3	Ø3	Radius	Z	Artikel-Nr. *Article No.*
1,5	6	1,2	55	6	1,44	0,75	2	559.150.10
1,5	6	1,2	55	8	1,44	0,75	2	559.150.11
1,5	6	1,2	65	10	1,44	0,75	2	559.150.12
1,5	6	1,2	65	12	1,44	0,75	2	559.150.13
1,5	6	1,2	65	15	1,44	0,75	2	559.150.14
1,5	6	1,2	65	20	1,44	0,75	2	559.150.15
1,5	6	1,2	65	25	1,44	0,75	2	559.150.16
1,5	6	1,2	70	30	1,44	0,75	2	559.150.17
2,0	6	1,5	55	6	1,92	1,00	2	559.200.10
2,0	6	1,5	55	8	1,92	1,00	2	559.200.11
2,0	6	1,5	65	10	1,92	1,00	2	559.200.12
2,0	6	1,5	65	12	1,92	1,00	2	559.200.13
2,0	6	1,5	65	15	1,92	1,00	2	559.200.14
2,0	6	1,5	65	20	1,92	1,00	2	559.200.15
2,0	6	1,5	70	25	1,92	1,00	2	559.200.16
2,0	6	1,5	75	30	1,92	1,00	2	559.200.17
3,0	6	2,5	55	5	2,90	1,50	2	559.300.10
3,0	6	2,5	65	10	2,90	1,50	2	559.300.11
3,0	6	2,5	65	15	2,90	1,50	2	559.300.12
3,0	6	2,5	65	20	2,90	1,50	2	559.300.13
3,0	6	2,5	70	25	2,90	1,50	2	559.300.14
3,0	6	2,5	75	30	2,90	1,50	2	559.300.15

Ø1	Ø2	L2	L1	L3	Ø3	Radius	Z	Artikel-Nr. *Article No.*
4,0	6	3,2	65	10	3,9	2,0	2	559.400.10
4,0	6	3,2	65	15	3,9	2,0	2	559.400.11
4,0	6	3,2	65	20	3,9	2,0	2	559.400.12
4,0	6	3,2	70	25	3,9	2,0	2	559.400.13
4,0	6	3,2	75	30	3,9	2,0	2	559.400.14
5,0	6	4,0	65	10	4,9	2,5	2	559.500.10
5,0	6	4,0	65	15	4,9	2,5	2	559.500.11
5,0	6	4,0	65	20	4,9	2,5	2	559.500.12
5,0	6	4,0	70	25	4,9	2,5	2	559.500.13
5,0	6	4,0	75	30	4,9	2,5	2	559.500.14
5,0	6	4,0	90	40	4,9	2,5	2	559.500.15
6,0	6	5,0	65	10	5,9	3,0	2	559.600.10
6,0	6	5,0	65	15	5,9	3,0	2	559.600.11
6,0	6	5,0	65	20	5,9	3,0	2	559.600.12
6,0	6	5,0	70	25	5,9	3,0	2	559.600.13
6,0	6	5,0	75	30	5,9	3,0	2	559.600.14
6,0	6	5,0	90	40	5,9	3,0	2	559.600.15
6,0	6	5,0	90	50	5,9	3,0	2	559.600.16

Schaftausführung, Toleranz h5,
Rundlaufgenauigkeit 0,005 mm,
Polierte Ausführung

Shank design, tolerance h5,
rotation accuracy 0,005 mm,
polished design

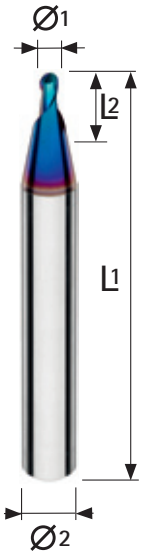
naco | HA | Werks-norm | HRC 60-65 | GG(G)

Artikel-Nr.
040...

VHM – Vollradiusfräser **Dynastar**

Solid carbide ball-nosed cutter

TYP H | R | 2 | 30° | HSC



Ø1	Ø2	L2	L1	Radius	Z	Artikel-Nr. *Article No.*
0,4	6	0,4	50	0,20	2	040.040.07
0,5	6	0,5	50	0,25	2	040.050.07
0,6	6	0,6	50	0,30	2	040.060.07
0,8	6	0,8	50	0,40	2	040.080.07
1,0	6	1,0	50	0,50	2	040.100.07
1,2	6	1,2	50	0,60	2	040.120.07
1,5	6	1,5	50	0,75	2	040.150.07
2,0	6	2,0	50	1,00	2	040.200.07
3,0	6	3,0	50	1,50	2	040.300.07
4,0	6	4,0	50	2,00	2	040.400.07
6,0	6	6,0	50	3,00	2	040.600.07

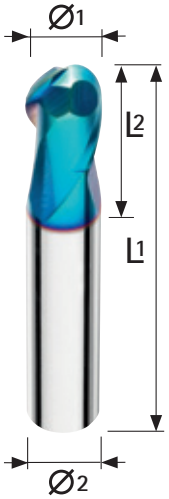
naco | HA | Werks-norm | HRC 55-60 | GG(G) | Trocken-bear-beitung

Artikel-Nr.
520...

VHM – Vollradiusfräser **Dynastar**

Solid carbide ball-nosed cutter flutes

TYP H | R | 2 | 30° | HSC | HPC



Ø1	Ø2	L2	L1	Z	Artikel-Nr. *Article No.*
0,5	3	1,5	38	2	520.005.00
0,6	3	1,5	38	2	520.006.00
0,7	3	2,0	38	2	520.007.00
0,8	3	2,0	38	2	520.008.00
0,9	3	2,5	38	2	520.009.00
1,0	3	2,0	50	2	520.010.00
1,0	6	2,0	54	2	520.013.00
1,1	3	3,0	50	2	520.011.00
1,2	3	3,0	50	2	520.012.00
1,4	3	3,0	50	2	520.014.00
1,5	3	3,0	50	2	520.015.00
1,5	6	3,0	54	2	520.017.00
1,6	3	4,0	50	2	520.016.00
1,8	3	4,0	50	2	520.018.00
2,0	3	4,0	50	2	520.020.00
2,0	6	4,0	54	2	520.021.00
2,5	3	5,0	50	2	520.025.00
2,5	6	5,0	54	2	520.026.00

Fortsetzung nächste Seite / to be continued

naco | HA | Werks-norm | GG(G) | HRC 55-60 | Trocken-bear-beitung

Fortsetzung / continuation

Artikel-Nr.

520...

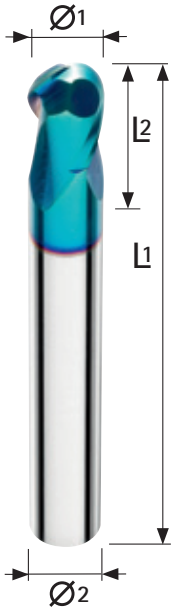
TYP H | R | 2 | 30° | HSC | HPC

Ø1	Ø2	L2	L1	Z	Artikel-Nr. *Article No.*
3,0	3	5,0	50	2	520.030.00
3,0	6	5,0	54	2	520.031.00
4,0	4	8,0	54	2	520.040.00
4,0	6	8,0	54	2	520.041.00
5,0	5	9,0	54	2	520.050.00
5,0	6	9,0	54	2	520.051.00
6,0	6	10,0	54	2	520.060.00
8,0	8	12,0	58	2	520.080.00
10,0	10	14,0	66	2	520.100.00
12,0	12	16,0	73	2	520.120.00
14,0	14	18,0	75	2	520.140.00
16,0	16	22,0	82	2	520.160.00
20,0	20	26,0	92	2	520.200.00

naco | HA | Werks-norm | GG(G) | HRC 55-60 | Trocken-bear-beitung

Artikel-Nr.

521...



VHM – Vollradiusfräser **Dynastar**

Solid carbide ball-nosed cutter

TYP H | R | 2 | 30° | HSC | HPC

Ø1	Ø2	L2	L1	Z	Artikel-Nr. *Article No.*
2,5	6	5	80	2	521.025.00
3,0	3	5	75	2	521.030.00
3,0	6	5	80	2	521.031.00
4,0	4	8	75	2	521.040.00
4,0	6	8	80	2	521.041.00
5,0	5	9	75	2	521.050.00
5,0	6	9	80	2	521.051.00
6,0	6	10	100	2	521.060.00
8,0	8	12	100	2	521.080.00
10,0	10	14	100	2	521.100.00
12,0	12	16	100	2	521.120.00
14,0	14	18	100	2	521.140.00
16,0	16	22	150	2	521.160.00
20,0	20	26	150	2	521.200.00

naco | HA | Werks-norm | GG(G) | HRC 55-60 | Trocken-bear-beitung

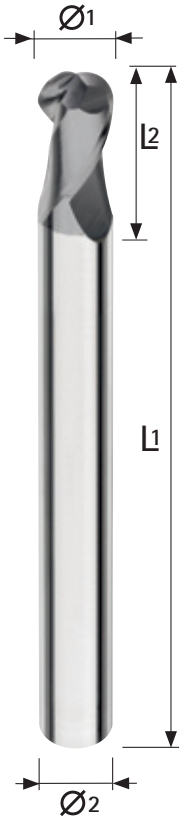
Artikel-Nr.

663...

VHM – Vollradiusfräser

Solid carbide ball-nosed cutter flutes

TYP H | R | 2 | 30° | HSC



Ø1	Ø2	L2	L1	Z	Artikel-Nr. *Article No.*
1,0	3	1,5	50	2	663.010.00
1,5	3	2,5	50	2	663.015.00
2,0	3	3,0	50	2	663.020.00
2,5	3	4,0	50	2	663.025.00
3,0	3	6,0	75	2	663.030.00
4,0	4	8,0	75	2	663.040.00
5,0	5	10,0	75	2	663.050.00
6,0	6	12,0	100	2	663.060.00
8,0	8	14,0	100	2	663.080.00
10,0	10	18,0	100	2	663.100.00
12,0	12	22,0	150	2	663.120.00
14,0	14	26,0	150	2	663.140.00
16,0	16	30,0	150	2	663.160.00
18,0	18	34,0	150	2	663.180.00
20,0	20	38,0	150	2	663.200.00

TIALN | HA | Werks-norm | HRC 60-65 | GG(G)

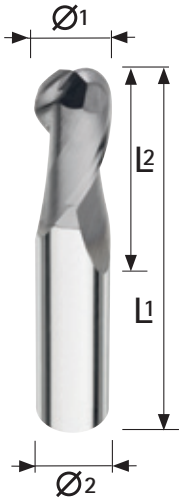
Artikel-Nr.

664...

VHM – Vollradiusfräser

Solid carbide ball-nosed cutter flutes

TYP H | R | 2 | 30° | HSC



Ø1	Ø2	L2	L1	Z	Artikel-Nr. *Article No.*
3,0	3	6	50	2	664.030.00
4,0	4	8	54	2	664.040.00
5,0	5	10	54	2	664.050.00
6,0	6	12	54	2	664.060.00
8,0	8	14	58	2	664.080.00
10,0	10	18	66	2	664.100.00
12,0	12	22	73	2	664.120.00
14,0	14	26	75	2	664.140.00
16,0	16	30	82	2	664.160.00
18,0	18	34	84	2	664.180.00
20,0	20	38	92	2	664.200.00

TIALN | HA | Werks-norm | HRC 60-65 | GG(G)

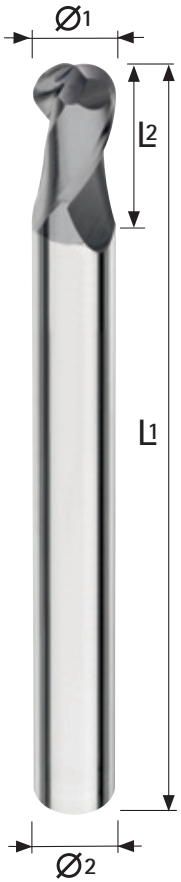
Artikel-Nr.

665...

VHM – Vollradiusfräser **Prime Line**

Solid carbide ball-nosed cutter flutes

TYP H | R | 2 | 30° | HSC



Ø1	Ø2	L2	L1	Radius	Z	Artikel-Nr. *Article No.*
1,0	6	1,5	50	0,50	2	665.010.00
1,5	6	2,5	50	0,75	2	665.015.00
2,0	6	3,0	50	1,00	2	665.020.00
2,5	6	4,0	50	1,25	2	665.025.00
3,0	6	6,0	75	1,50	2	665.030.00
4,0	6	8,0	75	2,00	2	665.040.00
5,0	6	10,0	75	2,50	2	665.050.00
6,0	6	12,0	100	3,00	2	665.060.00
8,0	8	14,0	100	4,00	2	665.080.00
10,0	10	18,0	100	5,00	2	665.100.00
12,0	12	22,0	150	6,00	2	665.120.00
14,0	14	26,0	150	7,00	2	665.140.00
16,0	16	30,0	150	8,00	2	665.160.00
18,0	18	34,0	150	9,00	2	665.180.00
20,0	20	38,0	150	10,00	2	665.200.00

Schaftausführung, Toleranz h5, Rundlaufgenauigkeit 0,005 mm, Polierte Ausführung

Shank design, tolerance h5, rotation accuracy 0,005 mm, polished design

Radiustoleranz
radius tolerance

r_p max +0,003
– 0,003

d_1 max +0,000
– 0,015

ALTIN | HA | Werks-norm | HRC 60-65 | GG(G) | Trocken-bear-beitung

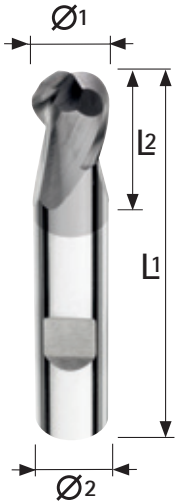
VHM – Vollradiusfräser

Solid carbide ball-nosed universal cutter

TYP N

Artikel-Nr.

511...



Ø1	Ø2	L2	L1	Z	Artikel-Nr. *Article No.*
1,0	6	3	50	2	511.010.00
2,0	6	4	50	2	511.020.00
2,5	6	4	50	2	511.025.00
3,0	6	5	50	2	511.030.00
3,5	6	5	50	2	511.035.00
4,0	6	6	54	2	511.040.00
4,5	6	6	54	2	511.045.00
5,0	6	7	54	2	511.050.00
6,0	6	9	54	2	511.060.00
8,0	8	12	58	2	511.080.00
10,0	10	14	66	2	511.100.00
12,0	12	14	73	2	511.120.00
14,0	14	16	75	2	511.140.00
16,0	16	18	82	2	511.160.00
18,0	18	20	88	2	511.180.00
20,0	20	22	92	2	511.200.00

Schneidendurchmesser 1 mm bis 6 mm mit Schaftdurchmesser 6 mm

flute ∅ 1 mm bis 6 mm with shank ∅ 6 mm

TIALN HB Werks-norm Universal

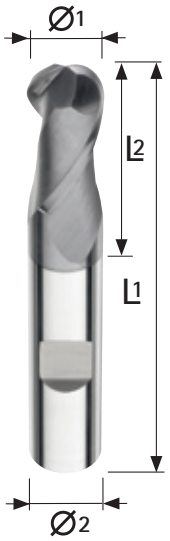
VHM – Vollradiusfräser

Solid carbide ball-nosed universal cutter

TYP N

Artikel-Nr.

512...



Ø1	Ø2	L2	L1	Z	Artikel-Nr. *Article No.*
3,0	3	7	38	2	512.030...
4,0	4	14	50	2	512.040...
5,0	6	16	50	2	512.050...
6,0	6	19	57	2	512.060...
8,0	8	20	63	2	512.080...
10,0	10	21	72	2	512.100...
12,0	12	25	83	2	512.120...
16,0	16	32	92	2	512.160...
20,0	20	38	104	2	512.200...

Bitte fügen Sie bei Ihrer Bestellung folgende Codes hinzu: unbeschichtet .09 beschichtet .00
Please add the following code to your order: uncoated .09 coated .00

TIALN HB Werks-norm Universal

VHM – Vollradiusfräser

Solid carbide ball-nosed universal cutter flutes

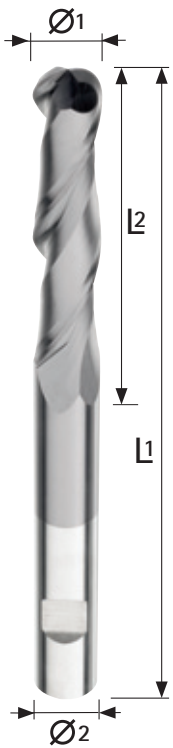
TYP N | R | 2 | 30°

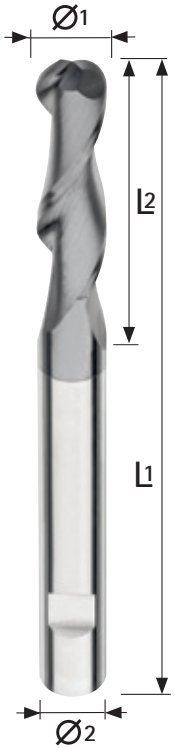
Artikel-Nr.
522...

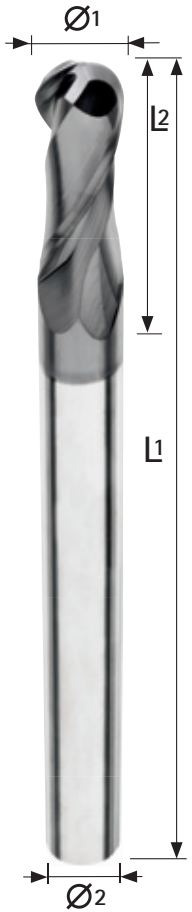
Artikel-Nr.
544...

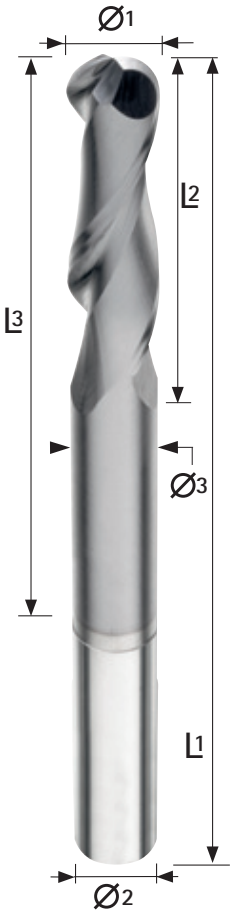
Artikel-Nr.
546...

Artikel-Nr.
547...









Ø1	Ø2	L2	L1	L3	Ø3	Z	Artikel-Nr. *Article No.*
3,0	3	20	60	-	-	2	522.030.00
4,0	4	25	60	-	-	2	522.040.00
5,0	5	25	75	-	-	2	522.050.00
6,0	6	30	75	-	-	2	522.060.00
6,0	6	40	150	-	-	2	544.060.00
6,0	6	25	200	120	5,5	2	547.060.00
8,0	8	45	100	-	-	2	522.080.00
8,0	8	40	150	-	-	2	544.080.00
8,0	8	25	200	120	7,5	2	547.080.00
10,0	10	45	100	-	-	2	522.100.00
10,0	10	40	150	-	-	2	544.100.00
10,0	10	50	200	120	9,5	2	547.100.00
12,0	12	45	100	-	-	2	522.120.00
12,0	12	65	150	-	-	2	522.120.02
12,0	12	50	150	-	-	2	544.120.00
12,0	12	50	200	120	11,5	2	547.120.00
16,0	16	45	100	-	-	2	522.160.00
16,0	16	65	150	-	-	2	522.160.02
16,0	16	50	150	-	-	2	544.160.00
16,0	16	60	310	-	-	2	546.160.00
16,0	16	65	220	150	15,5	2	547.160.00
20,0	20	45	100	-	-	2	522.200.00
20,0	20	65	150	-	-	2	522.200.02
20,0	20	50	150	-	-	2	544.200.00
20,0	20	60	310	-	-	2	546.200.00
20,0	20	65	250	150	19,5	2	547.200.00
25,0	25	50	150	-	-	2	544.250.00
25,0	25	60	310	-	-	2	546.250.00
25,0	25	120	310	-	-	2	546.260.00
32,0	32	60	310	-	-	2	546.320.00

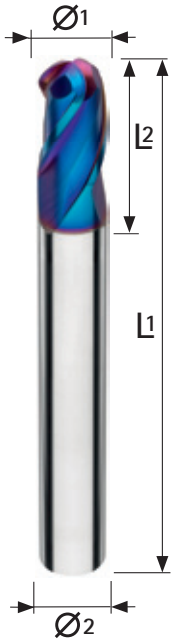
TIALN | HB | Werks-norm | Universal

Artikel-Nr.
050...

VHM – Vollradiusfräser **Dynastar**

Solid carbide ball-nosed cutter

TYP H | R | 3 | 30° | HSC | HPC



Ø1	Ø2	L2	L1	Radius	Z	Artikel-Nr. *Article No.*
3,0	6	8,0	60	1,5	3	050.030.07
4,0	6	8,0	70	2,0	3	050.040.07
5,0	6	10,0	80	2,5	3	050.050.07
6,0	6	12,0	90	3,0	3	050.060.07
8,0	8	14,0	100	4,0	3	050.080.07
10,0	10	18,0	100	5,0	3	050.100.07
12,0	12	22,0	110	6,0	3	050.120.07
16,0	16	30,0	140	8,0	3	050.160.07
20,0	20	38,0	160	10,0	3	050.200.07

Artikel-Nr.
739...

VHM – Vollradiusfräser **Starmax** Typ N-H

Solid carbide ball-nosed Starmax cutter

TYP N-H | R | 4 | 35/38° | HPC | HSC

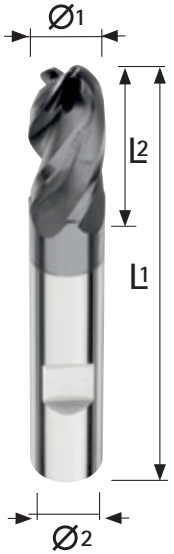
Ø1	Ø2	L2	L1	R	Z	Artikel-Nr. *Article No.*
3,0	6	8	57	1,5	4	739.030.00
4,0	6	10	57	2,0	4	739.040.00
5,0	6	13	57	2,5	4	739.050.00
6,0	6	13	57	3,0	4	739.060.00
8,0	8	16	63	4,0	4	739.080.00
10,0	10	22	72	5,0	4	739.100.00
12,0	12	26	83	6,0	4	739.120.00
14,0	14	26	83	7,0	4	739.140.00
16,0	16	32	92	8,0	4	739.160.00
20,0	20	38	104	10,0	4	739.200.00

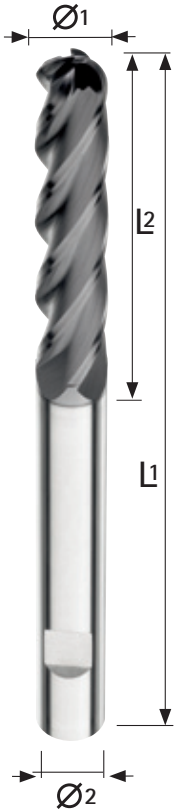
naco | Werks-norm | HRC 55-60 | Trocken-bear-beitung

TIALN | HB | DIN 6527 lang | GG(G)

Artikel-Nr.
514...

Artikel-Nr.
524...





VHM – Vollradiusfräser

Solid carbide ball-nosed universal cutter

TYP N

Ø1	Ø2	L2	L1	Z	Artikel-Nr. *Article No.*
3,0	3	7	38	4	514.030...
3,0	3	20	75	4	524.030.00
4,0	4	14	50	4	514.040...
4,0	4	25	75	4	524.040.00
5,0	6	16	50	4	514.050...
5,0	5	25	75	4	524.050.00
6,0	6	19	60	4	514.060...
6,0	6	30	75	4	524.060.00
6,0	6	45	100	4	524.061.00
8,0	8	20	63	4	514.080...
8,0	8	45	100	4	524.080.00
10,0	10	21	70	4	514.100...
10,0	10	45	100	4	524.100.00
12,0	12	25	75	4	514.120...
12,0	12	45	100	4	524.120.00
12,0	12	65	150	4	524.120.02
16,0	16	32	88	4	514.160...
16,0	16	45	100	4	524.160.00
16,0	16	65	150	4	524.160.02
20,0	20	38	104	4	514.200...
20,0	20	45	100	4	524.200.00
20,0	20	65	150	4	524.200.02

Bitte fügen Sie bei Ihrer Bestellung folgende Codes hinzu: unbeschichtet .09 beschichtet .00
Please add the following code to your order: uncoated .09 coated .00

TIALN HB Werks-norm Universal

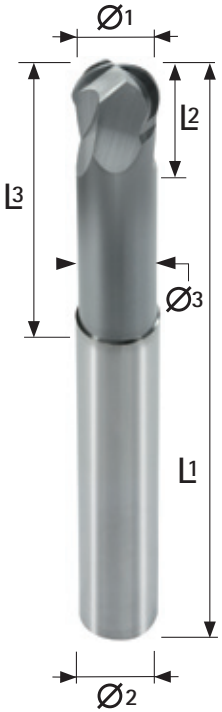
Artikel-Nr.

671...

VHM – Kugelkopffräser

Solid carbide lolly cutter flutes

TYP H-N | R | 2 | 15° | HSC



Ø1	Ø2	L1	Ø3	L3	Z	Artikel-Nr. *Article No.*
1,0	6	80	0,9	5	2	671.010.00
2,0	6	80	1,8	10	2	671.020.00
3,0	6	80	2,8	15	2	671.030.00
4,0	6	80	3,8	20	2	671.040.00
5,0	6	90	4,7	25	2	671.050.00
6,0	6	100	5,7	30	2	671.060.00
8,0	8	100	7,5	40	2	671.080.00
10,0	10	120	9,4	50	2	671.100.00
12,0	12	120	11,2	50	2	671.120.00
16,0	16	150	15,0	60	2	671.160.00

Umschließungswinkel 220°
ball nose 220°

ALTIN | HA | Werks-norm | HRC 60-65 | GG(G) | Trocken-bear-beitung

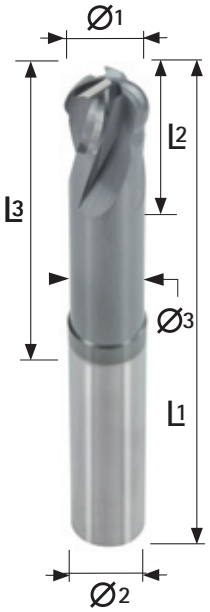
Artikel-Nr.

672...

VHM – Kugelkopffräser

Solid carbide lolly cutter flutes

TYP H-N | R | 4 | 15° | HSC



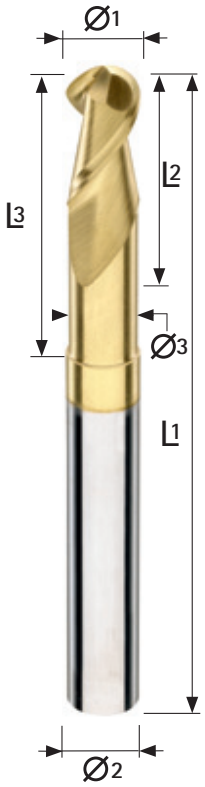
Ø1	Ø2	L1	Ø3	L3	Z	Artikel-Nr. *Article No.*
5,0	6	80	4,7	25	4	672.050.00
6,0	6	100	5,7	30	4	672.060.00
8,0	8	100	7,5	40	4	672.080.00
10,0	10	100	9,4	50	4	672.100.00
12,0	12	100	11,2	50	4	672.120.00
16,0	16	150	15,0	60	4	672.160.00

Umschließungswinkel 220°
ball nose 220°

ALTIN | HA | Werks-norm | HRC 60-65 | GG(G) | Trocken-bear-beitung

Artikel-Nr.

533...



VHM – Vollradiusfräser **ALU**

Solid carbide ball-nosed cutter

TYP W | R | 2 | 40° | HSC

Ø1	Ø2	L2	L1	Ø3	L3	Z	Artikel-Nr. *Article No.*
1,0	6	2	60	0,9	15	2	533.010.07
2,0	6	4	60	1,8	20	2	533.020.07
3,0	6	6	70	2,8	25	2	533.030.07
4,0	6	8	70	3,7	25	2	533.040.07
5,0	6	10	70	4,6	25	2	533.050.07
6,0	6	12	80	5,5	35	2	533.060.07
8,0	8	16	80	7,4	35	2	533.080.07
10,0	10	20	90	9,2	45	2	533.100.07
12,0	12	24	100	11,0	50	2	533.120.07
14,0	14	26	100	13,2	60	2	533.140.07
16,0	16	30	150	15,0	92	2	533.160.07
20,0	20	40	150	19,0	92	2	533.200.07

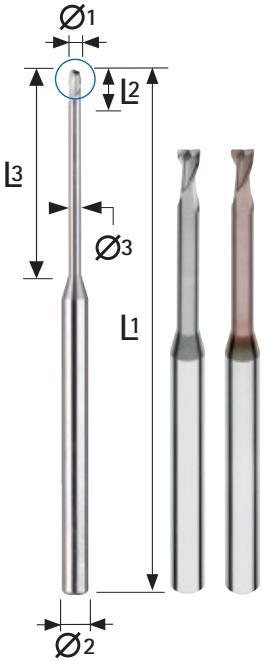
ZrN | HA | Werks-norm | ALU NE | Kunststoff plastic

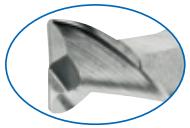
Artikel-Nr.
557...

VHM – Minikopierfräser NE^ER

Solid carbide profile cutter with corner radius

TYP N-W | ER | 2 | 30° | HSC





Ø1	Ø2	L2	L1	rp +0/ -0,005 Radius	Ø3	L3	Artikel-Nr. *Article No.*
0,4	3	0,5	55	0,05	0,38	2	557.041...
0,4	3	0,5	55	0,05	0,38	4	557.042...
0,5	3	0,6	55	0,05	0,48	3	557.051...
0,5	3	0,6	55	0,05	0,48	5	557.052...
0,6	4	0,8	55	0,06	0,58	2	557.061...
0,6	4	0,8	55	0,06	0,58	4	557.062...
0,6	4	0,8	55	0,06	0,58	6	557.063...
0,8	4	1,0	55	0,08	0,77	4	557.081...
0,8	4	1,0	55	0,08	0,77	6	557.082...
0,8	4	1,0	55	0,08	0,77	8	557.083...
0,8	4	1,0	55	0,08	0,77	10	557.084...
1,0	4	1,2	55	0,10	0,95	5	557.101...
1,0	4	1,2	55	0,10	0,95	10	557.102...
1,0	4	1,2	55	0,10	0,95	15	557.103...
1,0	4	1,2	55	0,10	0,95	20	557.104...
1,0	4	1,2	60	0,10	0,95	25	557.105...
1,2	4	1,4	55	0,12	1,15	6	557.121...
1,2	4	1,4	55	0,12	1,15	12	557.122...
1,2	4	1,4	55	0,12	1,15	18	557.123...
1,2	4	1,4	60	0,12	1,15	25	557.124...
1,5	4	1,8	55	0,15	1,44	4	557.151...
1,5	4	1,8	55	0,20	1,44	8	557.152...
1,5	4	1,8	55	0,20	1,44	12	557.153...
1,5	4	1,8	55	0,20	1,44	16	557.154...
1,5	4	1,8	55	0,20	1,44	20	557.155...
1,5	4	1,8	60	0,20	1,44	25	557.156...

Ø1	Ø2	L2	L1	rp +0/ -0,005 Radius	Ø3	L3	Artikel-Nr. *Article No.*
2,0	4	2	65	0,2	1,92	5	557.201...
2,0	4	2	65	0,2	1,92	10	557.202...
2,0	4	2	65	0,2	1,92	15	557.203...
2,0	4	2	75	0,2	1,92	20	557.204...
2,0	4	2	75	0,2	1,92	25	557.205...
2,0	4	2	75	0,2	1,92	30	557.206...
3,0	4	3	65	0,3	2,90	5	557.301...
3,0	4	3	65	0,3	2,90	10	557.302...
3,0	4	3	65	0,3	2,90	15	557.303...
3,0	4	3	65	0,3	2,90	20	557.304...
3,0	4	3	75	0,3	2,90	25	557.305...
3,0	4	3	75	0,3	2,90	30	557.306...
4,0	6	4	65	0,3	3,90	10	557.401...
4,0	6	4	65	0,3	3,90	15	557.402...
4,0	6	4	65	0,3	3,90	20	557.403...
4,0	6	4	75	0,3	3,90	25	557.404...
4,0	6	4	75	0,3	3,90	30	557.405...
5,0	6	5	65	0,3	4,90	10	557.501...
5,0	6	5	65	0,3	4,90	20	557.502...
5,0	6	5	75	0,3	4,90	30	557.503...
5,0	6	5	90	0,3	4,90	40	557.504...
6,0	6	6	65	0,3	5,90	10	557.601...
6,0	6	6	65	0,3	5,90	20	557.602...
6,0	6	6	75	0,3	5,90	30	557.603...
6,0	6	6	90	0,3	5,90	40	557.604...
6,0	6	6	90	0,3	5,90	50	557.605...

Bitte fügen Sie bei Ihrer Bestellung folgende Codes hinzu: unbeschichtet .09 beschichtet .55
Please add the following code to your order: uncoated .09 coated .55

TIALCN | HA | Werks-norm | ALU NE | Universal

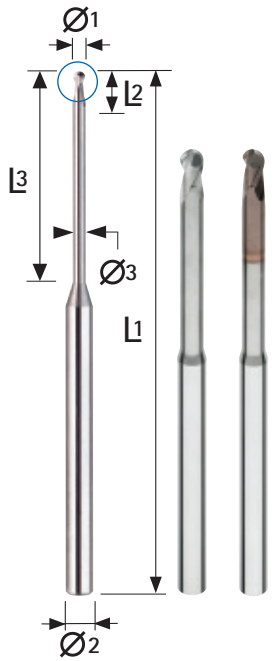
Artikel-Nr.

556...

VHM – Minivollradiusfräser NE

Solid carbide profile cutter with corner radius

TYP N-W | R | 2 | 30° | HSC



Ø1	Ø2	L2	L1	rp +0/ -0,005 Radius	Ø3	L3	Artikel-Nr. *Article No.*
0,4	3	0,5	55	0,20	0,38	2	556.041...
0,4	3	0,5	55	0,20	0,38	4	556.042...
0,5	3	0,6	55	0,25	0,48	3	556.051...
0,5	3	0,6	55	0,25	0,48	5	556.052...
0,6	4	0,8	55	0,30	0,58	2	556.061...
0,6	4	0,8	55	0,30	0,58	4	556.062...
0,6	4	0,8	55	0,30	0,58	6	556.063...
0,8	4	1,0	55	0,40	0,77	4	556.081...
0,8	4	1,0	55	0,40	0,77	6	556.082...
0,8	4	1,0	55	0,40	0,77	8	556.083...
0,8	4	1,0	55	0,40	0,77	10	556.084...
1,0	4	1,2	55	0,50	0,95	5	556.101...
1,0	4	1,2	55	0,50	0,95	10	556.102...
1,0	4	1,2	55	0,50	0,95	15	556.103...
1,0	4	1,2	55	0,50	0,95	20	556.104...
1,0	4	1,2	60	0,50	0,95	25	556.105...
1,2	4	1,4	55	0,60	1,15	6	556.121...
1,2	4	1,4	55	0,60	1,15	12	556.122...
1,2	4	1,4	55	0,60	1,15	18	556.123...
1,2	4	1,4	60	0,60	1,15	25	556.124...
1,5	4	1,8	55	0,75	1,44	4	556.151...
1,5	4	1,8	55	0,80	1,44	8	556.152...
1,5	4	1,8	55	0,80	1,44	12	556.153...
1,5	4	1,8	55	0,80	1,44	16	556.154...
1,5	4	1,8	55	0,80	1,44	20	556.155...
1,5	4	1,8	60	0,80	1,44	25	556.156...

Ø1	Ø2	L2	L1	rp +0/ -0,005 Radius	Ø3	L3	Artikel-Nr. *Article No.*
2,0	4	2	65	1,0	1,92	5	556.201...
2,0	4	2	65	1,0	1,92	10	556.202...
2,0	4	2	65	1,0	1,92	15	556.203...
2,0	4	2	65	1,0	1,92	20	556.204...
2,0	4	2	75	1,0	1,92	25	556.205...
2,0	4	2	75	1,0	1,92	30	556.206...
3,0	4	3	65	1,5	2,90	5	556.301...
3,0	4	3	65	1,5	2,90	10	556.302...
3,0	4	3	65	1,5	2,90	15	556.303...
3,0	4	3	65	1,5	2,90	20	556.304...
3,0	4	3	75	1,5	2,90	25	556.305...
3,0	4	3	75	1,5	2,90	30	556.306...
4,0	6	4	65	2,0	3,90	10	556.401...
4,0	6	4	65	2,0	3,90	15	556.402...
4,0	6	4	65	2,0	3,90	20	556.403...
4,0	6	4	75	2,0	3,90	25	556.404...
4,0	6	4	75	2,0	3,90	30	556.405...
5,0	6	5	65	2,5	4,90	10	556.501...
5,0	6	5	65	2,5	4,90	20	556.502...
5,0	6	5	75	2,5	4,90	30	556.503...
5,0	6	5	90	2,5	4,90	40	556.504...
6,0	6	6	65	3,0	5,90	10	556.601...
6,0	6	6	65	3,0	5,90	20	556.602...
6,0	6	6	75	3,0	5,90	30	556.603...
6,0	6	6	90	3,0	5,90	40	556.604...
6,0	6	6	90	3,0	5,90	50	556.605...

Bitte fügen Sie bei Ihrer Bestellung folgende Codes hinzu: unbeschichtet .09 beschichtet .55
Please add the following code to your order: uncoated .09 coated .55

TIALCN | HA | Werks-norm | ALU NE | Universal

Artikel-Nr.
560...

VHM – Kopierfräser **DIA-DUR**ER

Solid carbide profile cutter with corner radius

TYP N | ER | 2 | 30° | HSC

HQ-Linie

TOP PRODUCT

Schichtstärke 10 +2µm
Layer thickness 10 +2µm

Ø1	Ø2	L2	L1	Ecken-radius / Corner-radius	Ø3	L3	Z	Artikel-Nr. / *Article No.*
0,2	3	0,2	55	0,05	0,20	1	2	560.020.75
0,2	4	0,2	55	0,05	0,20	1	2	560.021.75
0,3	3	0,3	55	0,05	0,27	1	2	560.030.75
0,3	4	0,3	55	0,05	0,27	1	2	560.330.75
0,3	3	0,3	55	0,05	0,27	3	2	560.031.75
0,3	4	0,3	55	0,05	0,27	3	2	560.032.75
0,4	3	0,4	55	0,05	0,35	2	2	560.040.75
0,4	4	0,4	55	0,05	0,35	2	2	560.440.75
0,4	3	0,4	55	0,05	0,35	4	2	560.041.75
0,4	4	0,4	55	0,05	0,35	4	2	560.441.75
0,4	3	0,4	55	0,05	0,35	8	2	560.042.75
0,4	4	0,4	55	0,05	0,35	8	2	560.043.75
0,5	3	0,5	55	0,05	0,45	2	2	560.050.75
0,5	4	0,5	55	0,05	0,45	2	2	560.550.75
0,5	3	0,5	55	0,05	0,45	5	2	560.051.75
0,5	4	0,5	55	0,05	0,45	5	2	560.551.75
0,5	3	0,5	55	0,05	0,45	10	2	560.052.75
0,5	4	0,5	55	0,05	0,45	10	2	560.053.75
0,6	3	0,8	55	0,06	0,56	3	2	560.060.75
0,6	4	0,8	55	0,06	0,56	3	2	560.660.75
0,6	3	0,8	55	0,06	0,56	6	2	560.061.75
0,6	4	0,8	55	0,06	0,56	6	2	560.661.75
0,6	3	0,8	55	0,06	0,56	9	2	560.062.75
0,6	4	0,8	55	0,06	0,56	9	2	560.662.75
0,6	3	0,8	55	0,06	0,56	12	2	560.063.75
0,6	4	0,8	55	0,06	0,56	12	2	560.663.75
0,8	3	1,0	55	0,08	0,75	4	2	560.080.75
0,8	4	1,0	55	0,08	0,75	4	2	560.880.75
0,8	3	1,0	55	0,08	0,75	8	2	560.081.75
0,8	4	1,0	55	0,08	0,75	8	2	560.881.75
0,8	3	1,0	55	0,08	0,75	12	2	560.082.75
0,8	4	1,0	55	0,08	0,75	12	2	560.882.75
0,8	3	1,0	55	0,08	0,75	16	2	560.083.75
0,8	4	1,0	55	0,08	0,75	16	2	560.883.75

Ø1	Ø2	L2	L1	Ecken-radius / Corner-radius	Ø3	L3	Z	Artikel-Nr. / *Article No.*
1,0	3	1,0	55	0,1	0,9	5	2	560.100.75
1,0	4	1,0	55	0,1	0,9	5	2	560.110.75
1,0	3	1,0	55	0,1	0,9	10	2	560.101.75
1,0	4	1,0	55	0,1	0,9	10	2	560.111.75
1,0	3	1,0	55	0,1	0,9	15	2	560.102.75
1,0	4	1,0	55	0,1	0,9	15	2	560.112.75
1,0	3	1,0	55	0,1	0,9	20	2	560.103.75
1,0	4	1,0	55	0,1	0,9	20	2	560.113.75
1,0	3	1,0	55	0,1	0,9	25	2	560.104.75
1,0	4	1,0	55	0,1	0,9	25	2	560.114.75
1,0	6	1,0	55	0,1	0,9	15	2	560.115.75
1,2	3	1,5	55	0,1	1,1	5	2	560.120.75
1,2	4	1,5	55	0,1	1,1	5	2	560.125.75
1,2	3	1,5	55	0,1	1,1	10	2	560.121.75
1,2	4	1,5	55	0,1	1,1	10	2	560.124.75
1,2	3	1,5	55	0,1	1,1	15	2	560.122.75
1,2	4	1,5	55	0,1	1,1	15	2	560.123.75
1,5	3	2,0	55	0,2	1,4	5	2	560.150.75
1,5	4	2,0	55	0,2	1,4	5	2	560.161.75
1,5	3	2,0	55	0,2	1,4	8	2	560.151.75
1,5	4	2,0	55	0,2	1,4	8	2	560.160.75
1,5	3	2,0	55	0,2	1,4	10	2	560.152.75
1,5	4	2,0	55	0,2	1,4	10	2	560.159.75
1,5	3	2,0	55	0,2	1,4	15	2	560.153.75
1,5	4	2,0	55	0,2	1,4	15	2	560.158.75
1,5	3	2,0	55	0,2	1,4	20	2	560.154.75
1,5	4	2,0	55	0,2	1,4	20	2	560.157.75
1,5	3	2,0	55	0,2	1,4	25	2	560.155.75
1,5	4	2,0	55	0,2	1,4	25	2	560.156.75
1,5	6	2,0	55	0,1	1,4	15	2	560.179.75
1,8	3	2,0	55	0,2	1,7	10	2	560.180.75
1,8	4	2,0	55	0,2	1,7	10	2	560.183.75
1,8	3	2,0	55	0,2	1,7	20	2	560.181.75
1,8	4	2,0	55	0,2	1,7	20	2	560.182.75

Schaftausführung, Toleranz h5, Rundlaufgenauigkeit 0,005 mm, Polierte Ausführung
Shank design, tolerance h5, rotation accuracy 0,005 mm, polished design

Fortsetzung nächste Seite / to be continued

DIAMANT DIA DUR | HA | Werks-norm | GFK/CFK Graphit

Fortsetzung / continuation

Artikel-Nr.

560...

TYP N | ER | 2 | 30° | HSC

HQ-Linie

TOP PRODUCT

Schichtstärke 10 +2µm

Layer thickness 10 +2µm

Ø1	Ø2	L2	L1	Ecken-radius / Corner-radius	Ø3	L3	Z	Artikel-Nr. / *Article No.*
2,0	3	2	65	0,2	1,9	10	2	560.200.75
2,0	4	2	65	0,2	1,9	10	2	560.210.75
2,0	3	2	65	0,2	1,9	15	2	560.201.75
2,0	4	2	65	0,2	1,9	15	2	560.221.75
2,0	3	2	65	0,2	1,9	20	2	560.202.75
2,0	4	2	65	0,2	1,9	20	2	560.222.75
2,0	6	2	65	0,2	1,9	20	2	560.209.75
2,0	3	2	65	0,2	1,9	25	2	560.203.75
2,0	4	2	65	0,2	1,9	25	2	560.231.75
2,0	3	2	65	0,5	1,9	10	2	560.204.75
2,0	4	2	65	0,5	1,9	10	2	560.241.75
2,0	3	2	65	0,5	1,9	15	2	560.205.75
2,0	4	2	65	0,5	1,9	15	2	560.251.75
2,0	3	2	65	0,5	1,9	20	2	560.206.75
2,0	4	2	65	0,5	1,9	20	2	560.261.75
2,0	3	2	65	0,5	1,9	25	2	560.207.75
2,0	4	2	65	0,5	1,9	25	2	560.208.75
2,0	6	2	65	0,2	1,9	20	2	560.209.75
2,5	6	3	65	0,2	2,4	20	2	560.250.75
3,0	4	3	65	0,3	2,9	15	2	560.300.75
3,0	4	3	75	0,3	2,9	25	2	560.301.75
3,0	4	3	65	0,5	2,9	10	2	560.302.75
3,0	4	3	65	0,5	2,9	15	2	560.303.75
3,0	4	3	65	0,5	2,9	20	2	560.304.75
3,0	4	3	75	0,5	2,9	25	2	560.305.75
3,0	4	3	75	0,5	2,9	30	2	560.306.75
3,0	6	4	65	0,3	3,9	15	2	560.307.75
3,0	6	3	65	0,5	2,9	20	2	560.308.09
3,5	6	3	65	0,5	3,4	20	2	560.350.75

Ø1	Ø2	L2	L1	Ecken-radius / Corner-radius	Ø3	L3	Z	Artikel-Nr. / *Article No.*
4,0	6	4	65	0,4	3,9	15	2	560.400.75
4,0	6	4	75	0,4	3,9	25	2	560.401.75
4,0	6	4	65	0,5	3,9	20	2	560.402.75
4,0	6	4	75	0,5	3,9	30	2	560.403.75
4,0	6	4	90	0,5	3,9	40	2	560.404.75
5,0	6	5	75	0,5	4,9	20	2	560.500.75
5,0	6	5	75	0,5	4,9	30	2	560.501.75
5,0	6	5	90	0,5	4,9	40	2	560.502.75
5,0	6	5	90	0,5	4,9	50	2	560.503.75
6,0	6	6	75	0,3	5,9	30	2	560.504.75
6,0	6	6	75	0,5	5,9	30	2	560.600.75
6,0	6	6	90	0,5	5,9	40	2	560.601.75
6,0	6	6	90	0,5	5,9	50	2	560.602.75
6,0	6	6	100	0,5	5,9	60	2	560.603.75
6,0	6	6	75	1,0	5,9	30	2	560.604.75
6,0	6	6	90	1,0	5,9	40	2	560.605.75
8,0	8	8	80	0,5	7,8	30	2	560.800.75
8,0	8	8	100	0,5	7,8	60	2	560.801.75
8,0	8	8	80	1,0	7,8	30	2	560.802.75
8,0	8	8	100	1,0	7,8	60	2	560.803.75
10,0	10	10	80	0,5	9,8	30	2	560.900.75
10,0	10	10	100	0,5	9,8	60	2	560.901.75
10,0	10	10	80	1,0	9,8	30	2	560.902.75
10,0	10	10	100	1,0	9,8	60	2	560.903.75
12,0	12	12	80	0,5	11,8	30	2	560.904.75
12,0	12	12	100	0,5	11,8	60	2	560.905.75
12,0	12	12	80	1,0	11,8	30	2	560.906.75
12,0	12	12	100	1,0	11,8	60	2	560.907.75

Schaftausführung, Toleranz h5, Rundlaufgenauigkeit 0,005 mm, Polierte Ausführung
Shank design, tolerance h5, rotation accuracy 0,005 mm, polished design

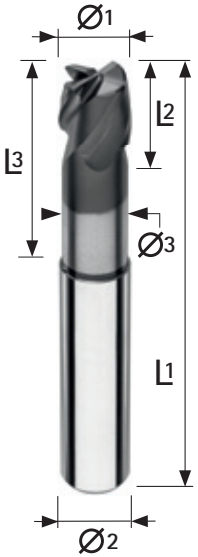
DIAMANT DIA DUR | HA | Werks-norm | GFK/CFK Graphit

VHM – Kopierfräser **DIA-DUR**ER

Solid carbide profile cutter with corner radius

Artikel-Nr.
563...

TYP N | ER | 4 | 30° | HSC



Ø1	Ø2	L2	L1	Ecken-radius Corner-radius	L3	Ø3	Z	Artikel-Nr. *Article No.*
3,0	3	6	50	0,3	14	2,7	4	563.030.75
3,0	3	6	50	0,5	14	2,7	4	563.031.75
3,0	3	6	50	1,0	14	2,7	4	563.032.75
4,0	4	8	50	0,4	16	3,7	4	563.040.75
4,0	4	8	50	0,5	16	3,7	4	563.041.75
4,0	4	8	50	1,0	16	3,7	4	563.042.75
5,0	5	10	54	0,5	18	4,6	4	563.050.75
5,0	5	10	54	1,0	18	4,6	4	563.051.75
6,0	6	13	57	0,5	21	5,5	4	563.060.75
6,0	6	13	57	1,0	21	5,5	4	563.061.75
6,0	6	13	57	1,5	21	5,5	4	563.062.75
8,0	8	15	63	0,5	27	7,4	4	563.080.75
8,0	8	15	63	1,0	27	7,4	4	563.081.75
8,0	8	15	63	1,5	27	7,4	4	563.082.75
8,0	8	15	63	2,0	27	7,4	4	563.083.75
10,0	10	18	72	0,5	32	9,2	4	563.100.75
10,0	10	18	72	1,0	32	9,2	4	563.101.75
10,0	10	18	72	1,5	32	9,2	4	563.102.75
10,0	10	18	72	2,0	32	9,2	4	563.103.75
12,0	12	26	83	0,5	38	11,0	4	563.120.75
12,0	12	26	83	1,0	38	11,0	4	563.121.75
12,0	12	26	83	1,5	38	11,0	4	563.122.75
12,0	12	26	83	2,0	38	11,0	4	563.123.75
16,0	16	32	92	0,5	50	15,0	4	563.160.75
16,0	16	32	92	1,0	50	15,0	4	563.161.75
16,0	16	32	92	1,5	50	15,0	4	563.162.75
16,0	16	32	92	2,0	50	15,0	4	563.163.75

Schaftausführung, Toleranz h5, Rundlaufgenauigkeit 0,005 mm,
Shank design, tolerance h5, rotation accuracy 0,005 mm,

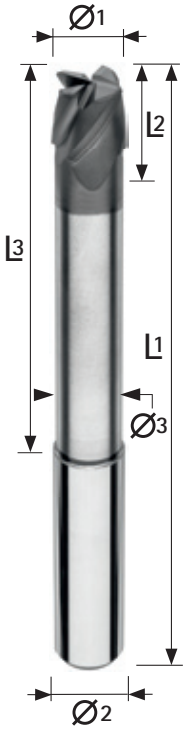
DIAMANT DIA DUR | HA | Werks-norm | GFK/CFK Graphit

VHM – Kopierfräser **DIA-DUR**ER

Solid carbide profile cutter with corner radius

Artikel-Nr.
564...

TYP N | ER | 4 | 30° | o. IK | HSC



Ø1	Ø2	L2	L1	Ecken-radius Corner-radius	L3	Ø3	Z	Artikel-Nr. *Article No.*
3,0	3	6	80	0,3	32	2,7	4	564.030.75
3,0	3	6	80	0,5	32	2,7	4	564.031.75
3,0	3	6	80	1,0	32	2,7	4	564.032.75
4,0	4	8	80	0,4	36	3,7	4	564.040.75
4,0	4	8	80	0,5	36	3,7	4	564.041.75
4,0	4	8	80	1,0	36	3,7	4	564.042.75
5,0	5	10	80	0,5	40	4,6	4	564.050.75
5,0	5	10	80	1,0	40	4,6	4	564.051.75
6,0	6	13	90	0,5	44	5,5	4	564.060.75
6,0	6	13	90	1,0	44	5,5	4	564.061.75
6,0	6	13	90	1,5	44	5,5	4	564.062.75
8,0	8	15	100	0,5	54	7,4	4	564.080.75
8,0	8	15	100	1,0	54	7,4	4	564.081.75
8,0	8	15	100	1,5	54	7,4	4	564.082.75
8,0	8	15	100	2,0	54	7,4	4	564.083.75
10,0	10	18	100	0,5	60	9,2	4	564.100.75
10,0	10	18	100	1,0	60	9,2	4	564.101.75
10,0	10	18	100	1,5	60	9,2	4	564.102.75
10,0	10	18	100	2,0	60	9,2	4	564.103.75
12,0	12	26	120	0,5	75	11,0	4	564.120.75
12,0	12	26	120	1,0	75	11,0	4	564.121.75
12,0	12	26	120	1,5	75	11,0	4	564.122.75
12,0	12	26	120	2,0	75	11,0	4	564.123.75
16,0	16	32	120	0,5	85	15,0	4	564.160.75
16,0	16	32	120	1,0	85	15,0	4	564.161.75
16,0	16	32	120	1,5	85	15,0	4	564.162.75
16,0	16	32	120	2,0	85	15,0	4	564.163.75

Schaftausführung, Toleranz h5, Rundlaufgenauigkeit 0,005 mm,
Shank design, tolerance h5, rotation accuracy 0,005 mm,

DIAMANT DIA DUR | HA | Werks-norm | GFK/CFK Graphit

VHM – Kopierfräser **DIA-DUR**ER

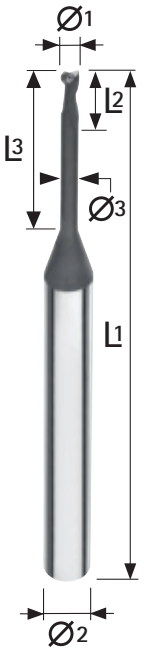
Solid carbide profile cutter with corner radius

Artikel-Nr.

565...

TYP N | ER | 2 | 30° | HSC

SQ-Linie



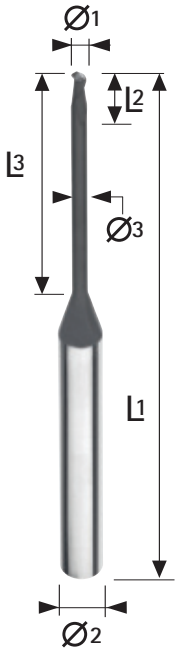
Ø1	Ø2	L2	L1	Ecken-radius Corner-radius	L3	Ø3	Z	Artikel-Nr. *Article No.*
0,4	3	0,4	55	0,05	4	0,35	2	565.041.75
0,5	3	0,5	55	0,05	10	0,45	2	565.052.75
0,8	3	1,0	55	0,08	4	0,75	2	565.080.75
0,8	3	1,0	55	0,08	8	0,75	2	565.081.75
1,0	3	1,0	55	0,10	5	0,90	2	565.100.75
1,0	3	1,0	55	0,10	10	0,90	2	565.101.75
1,0	3	1,0	55	0,10	15	0,90	2	565.102.75
1,0	6	1,0	55	0,10	15	0,90	2	565.103.75
1,5	3	2,0	55	0,15	10	1,40	2	565.152.75
1,5	3	2,0	55	0,15	15	1,40	2	565.153.75
1,5	6	2,0	55	0,10	15	1,40	2	565.154.75
2,0	3	2,0	65	0,20	10	1,90	2	565.200.75
2,0	3	2,0	65	0,20	15	1,90	2	565.201.75
2,0	3	2,0	65	0,20	20	1,90	2	565.202.75
2,0	3	2,0	65	0,20	25	1,90	2	565.203.75
2,0	3	2,0	65	0,50	15	1,90	2	565.205.75
2,0	6	2,0	65	0,20	20	1,90	2	565.206.75
2,5	6	3,0	65	0,20	20	2,40	2	565.250.75
3,0	4	3,0	65	0,30	15	2,90	2	565.300.75
3,0	4	3,0	75	0,30	25	2,90	2	565.301.75
3,0	4	3,0	75	0,50	30	2,90	2	565.306.75
3,0	6	3,0	65	0,50	20	2,90	2	565.307.75
3,5	6	3,0	65	0,50	20	3,40	2	565.350.75
4,0	5	4,0	75	0,50	30	3,90	2	565.403.75
4,0	5	4,0	90	0,50	40	3,90	2	565.404.75
6,0	6	6,0	75	0,50	30	5,90	2	565.600.75
6,0	6	6,0	90	0,50	40	5,90	2	565.601.75
6,0	6	6,0	90	1,00	40	5,90	2	565.605.75

Schichtstärke 6 +2µm

Layer thickness 6 +2µm

DIAMANT DIA DUR | HA | Werks-norm | GFK/CFK Graphit

Artikel-Nr.
561...



VHM – Vollradiusfräser **DIA-DUR**ER

Solid carbide ball-nosed cutter

TYP N | R | 2 | 30° | HSC

TOP PRODUCT

Radiustoleranz
radius tolerance
r_p max +0,003
– 0,003
d_1 max +0,000
– 0,015

HQ-Linie

Ø1	Ø2	L2	L1	Radius	Ø3	L3	Z	Artikel-Nr. *Article No.*
0,2	3	0,2	55	0,10	0,18	1	2	561.020.75
0,2	4	0,2	55	0,10	0,18	1	2	561.550.75
0,3	3	0,3	55	0,15	0,27	1	2	561.030.75
0,3	4	0,3	55	0,15	0,27	1	2	561.551.75
0,3	3	0,3	55	0,15	0,27	3	2	561.031.75
0,3	4	0,3	55	0,15	0,27	3	2	561.552.75
0,3	3	0,3	55	0,15	0,27	5	2	561.032.75
0,3	4	0,3	55	0,15	0,27	5	2	561.553.75
0,3	3	0,3	55	0,15	0,27	8	2	561.033.75
0,3	4	0,3	55	0,15	0,27	8	2	561.554.75
0,4	3	0,4	55	0,20	0,35	4	2	561.040.75
0,4	4	0,4	55	0,20	0,35	4	2	561.555.75
0,4	3	0,4	55	0,20	0,35	6	2	561.041.75
0,4	4	0,4	55	0,20	0,35	6	2	561.556.75
0,4	3	0,4	55	0,20	0,35	8	2	561.042.75
0,4	4	0,4	55	0,20	0,35	8	2	561.557.75
0,5	3	0,5	55	0,25	0,45	5	2	561.050.75
0,5	4	0,5	55	0,25	0,45	5	2	561.558.75
0,5	3	0,5	55	0,25	0,45	10	2	561.051.75
0,5	4	0,5	55	0,25	0,45	10	2	561.559.75
0,6	3	0,8	55	0,30	0,56	6	2	561.060.75
0,6	4	0,8	55	0,30	0,56	6	2	561.560.75
0,6	3	0,8	55	0,30	0,56	9	2	561.061.75
0,6	4	0,8	55	0,30	0,56	9	2	561.561.75
0,6	3	0,8	55	0,30	0,56	12	2	561.062.75
0,6	4	0,8	55	0,30	0,56	12	2	561.562.75

Ø1	Ø2	L2	L1	Radius	Ø3	L3	Z	Artikel-Nr. *Article No.*
0,7	3	0,9	55	0,35	0,65	7	2	561.070.75
0,7	4	0,9	55	0,35	0,65	7	2	561.563.75
0,7	3	0,9	55	0,35	0,65	14	2	561.071.75
0,7	4	0,9	55	0,35	0,65	14	2	561.564.75
0,8	3	1,0	55	0,40	0,75	8	2	561.080.75
0,8	4	1,0	55	0,40	0,75	8	2	561.565.75
0,8	3	1,0	55	0,40	0,75	12	2	561.081.75
0,8	4	1,0	55	0,40	0,75	12	2	561.566.75
0,8	3	1,0	55	0,40	0,75	16	2	561.082.75
0,8	4	1,0	55	0,40	0,75	16	2	561.567.75
1,0	3	1,0	55	0,50	0,90	5	2	561.100.75
1,0	4	1,0	55	0,50	0,90	5	2	561.568.75
1,0	3	1,0	55	0,50	0,90	10	2	561.101.75
1,0	4	1,0	55	0,50	0,90	10	2	561.569.75
1,0	3	1,0	55	0,50	0,90	15	2	561.102.75
1,0	4	1,0	55	0,50	0,90	15	2	561.570.75
1,0	3	1,0	55	0,50	0,90	20	2	561.103.75
1,0	4	1,0	55	0,50	0,90	20	2	561.571.75
1,0	3	1,0	55	0,50	0,90	25	2	561.104.75
1,0	4	1,0	55	0,50	0,90	25	2	561.572.75
1,0	3	1,0	65	0,50	0,90	30	2	561.105.75
1,0	4	1,0	65	0,50	0,90	30	2	561.573.75
1,2	3	1,5	55	0,60	1,10	5	2	561.120.75
1,2	4	1,5	55	0,60	1,10	5	2	561.574.75
1,2	3	1,5	55	0,60	1,10	10	2	561.121.75
1,2	4	1,5	55	0,60	1,10	10	2	561.575.75

Fortsetzung nächste Seite / to be continued

Schichtstärke 10 +2µm

Layer thickness 10 +2µm

Schaftausführung, Toleranz h5, Rundlaufgenauigkeit 0,005 mm,

Shank design, tolerance h5, rotation accuracy 0,005 mm,

DIAMANT DIA DUR | HA | Werks-norm | GFK/CFK Graphit

Fortsetzung / continuation

Artikel-Nr.

561...

TYP N | R | 2 | 30° | HSC

TOP PRODUCT

Radiustoleranz
radius tolerance

r_p max +0,003
– 0,003

d_1 max +0,000
– 0,015

HQ-Linie

Ø1	Ø2	L2	L1	Radius	Ø3	L3	Z	Artikel-Nr. *Article No.*
1,0	6	1,0	55	0,50	0,9	15	2	561.106.75
1,2	3	1,5	55	0,60	1,1	15	2	561.122.75
1,2	4	1,5	55	0,60	1,1	15	2	561.576.75
1,5	3	2,0	55	0,75	1,4	5	2	561.150.75
1,5	4	2,0	55	0,75	1,4	5	2	561.577.75
1,5	3	2,0	55	0,75	1,4	10	2	561.151.75
1,5	4	2,0	55	0,75	1,4	10	2	561.578.75
1,5	3	2,0	55	0,75	1,4	15	2	561.152.75
1,5	4	2,0	55	0,75	1,4	15	2	561.579.75
1,5	3	2,0	55	0,75	1,4	20	2	561.153.75
1,5	4	2,0	55	0,75	1,4	20	2	561.580.75
1,5	3	2,0	55	0,75	1,4	25	2	561.154.75
1,5	4	2,0	55	0,75	1,4	25	2	561.581.75
1,5	6	2,0	55	0,75	1,4	15	2	561.155.75
1,8	3	2,0	55	0,90	1,7	10	2	561.180.75
1,8	4	2,0	55	0,90	1,7	10	2	561.582.75
1,8	3	2,0	55	0,90	1,7	20	2	561.181.75
1,8	4	2,0	55	0,90	1,7	20	2	561.583.75
2,0	3	2,0	55	1,00	1,9	10	2	561.200.75
2,0	4	2,0	55	1,00	1,9	10	2	561.584.75
2,0	3	2,0	55	1,00	1,9	15	2	561.201.75
2,0	4	2,0	55	1,00	1,9	15	2	561.585.75
2,0	3	2,0	55	1,00	1,9	20	2	561.202.75
2,0	4	2,0	55	1,00	1,9	20	2	561.586.75
2,0	6	2,0	65	1,00	1,9	20	2	561.205.75
2,0	3	2,0	65	1,00	1,9	25	2	561.203.75
2,0	4	2,0	65	1,00	1,9	25	2	561.587.75

Ø1	Ø2	L2	L1	Radius	Ø3	L3	Z	Artikel-Nr. *Article No.*
2,0	3	2	65	1,00	1,9	30	2	561.204.75
2,0	4	2	65	1,00	1,9	30	2	561.588.75
2,0	6	2	65	1,25	2,4	20	2	561.205.75
2,5	6	3	65	1,25	2,4	20	2	561.250.75
3,0	4	3	65	1,50	2,9	10	2	561.300.75
3,0	4	3	65	1,50	2,9	15	2	561.301.75
3,0	4	3	65	1,50	2,9	20	2	561.302.75
3,0	4	3	75	1,50	2,9	25	2	561.303.75
3,0	4	3	75	1,50	2,9	30	2	561.304.75
3,0	6	3	65	1,50	2,9	20	2	561.305.75
3,5	6	3	65	1,75	3,4	20	2	561.350.75
4,0	6	4	65	2,00	3,9	20	2	561.400.75
4,0	6	4	75	2,00	3,9	30	2	561.401.75
4,0	6	4	90	2,00	3,9	40	2	561.402.75
5,0	6	5	65	2,50	4,9	20	2	561.500.75
5,0	6	5	75	2,50	4,9	30	2	561.501.75
5,0	6	5	90	2,50	4,9	40	2	561.502.75
5,0	6	5	90	2,50	4,9	50	2	561.503.75
6,0	6	6	75	3,00	5,9	30	2	561.600.75
6,0	6	6	90	3,00	5,9	40	2	561.601.75
6,0	6	6	90	3,00	5,9	50	2	561.602.75
6,0	6	6	100	3,00	5,9	60	2	561.603.75
8,0	8	8	80	4,00	7,8	30	2	561.800.75
8,0	8	8	100	4,00	7,8	60	2	561.801.75
10,0	10	10	80	5,00	9,8	30	2	561.900.75
10,0	10	10	100	5,00	9,8	60	2	561.901.75
12,0	12	12	83	6,00	11,8	30	2	561.902.75
12,0	12	12	100	6,00	11,8	60	2	561.903.75

Schichtstärke 10 +2µm

Layer thickness 10 +2µm

Schaftausführung, Toleranz h5, Rundlaufgenauigkeit 0,005 mm,

Shank design, tolerance h5, rotation accuracy 0,005 mm,

DIAMANT DIA DUR | HA | Werks-norm | GFK/CFK Graphit

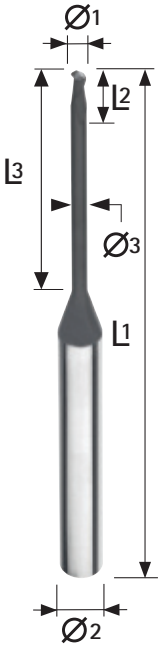
Artikel-Nr.
566...

VHM – Vollradiusfräser **DIA-DUR**ER

Solid carbide ball-nosed cutter

SQ-Linie

TYP N | R | 2 | 30° | HSC



Ø1	Ø2	L2	L1	Ecken-radius / Corner-radius	L3	Ø3	Z	Artikel-Nr. / *Article No.*
0,4	3	0,4	55	0,20	4	0,35	2	566.040.75
0,4	3	0,4	55	0,20	6	0,35	2	566.041.75
0,5	3	0,5	55	0,25	5	0,45	2	566.050.75
0,5	3	0,5	55	0,25	10	0,45	2	566.051.75
0,6	3	0,8	55	0,30	6	0,56	2	566.060.75
0,8	3	1,0	55	0,40	8	0,75	2	566.080.75
0,8	3	1,0	55	0,40	12	0,75	2	566.081.75
1,0	3	1,0	55	0,50	5	0,90	2	566.100.75
1,0	3	1,0	55	0,50	10	0,90	2	566.101.75
1,0	3	1,0	55	0,50	15	0,90	2	566.102.75
1,0	3	1,0	55	0,50	20	0,90	2	566.103.75
1,0	6	1,0	55	0,50	15	0,90	2	566.104.75
1,5	3	2,0	55	0,75	10	1,40	2	566.151.75
1,5	3	2,0	55	0,75	15	1,40	2	566.152.75
1,5	3	2,0	55	0,75	25	1,40	2	566.154.75
1,5	6	2,0	55	0,75	15	1,40	2	566.155.75
2,0	3	2,0	55	1,00	10	1,90	2	566.200.75
2,0	3	2,0	55	1,00	15	1,90	2	566.201.75
2,0	3	2,0	55	1,00	20	1,90	2	566.202.75
2,0	3	2,0	65	1,00	25	1,90	2	566.203.75
2,0	3	2,0	65	1,00	30	1,90	2	566.204.75
2,0	6	2,0	65	1,00	20	1,90	2	566.205.75
2,5	6	3,0	65	1,25	20	2,40	2	566.250.75
3,0	4	3,0	65	1,50	15	2,90	2	566.301.75
3,0	4	3,0	75	1,50	30	2,90	2	566.304.75
3,0	6	3,0	65	1,50	20	2,90	2	566.305.75
3,5	6	3,0	65	1,75	20	3,40	2	566.350.75
4,0	5	4,0	65	2,00	20	3,90	2	566.400.75
4,0	5	4,0	75	2,00	30	3,90	2	566.401.75
6,0	6	6,0	75	3,00	30	5,90	2	566.600.75
6,0	6	6,0	90	3,00	50	5,90	2	566.602.75

Schichtstärke 6 +2µm
Layer thickness 6 +2µm

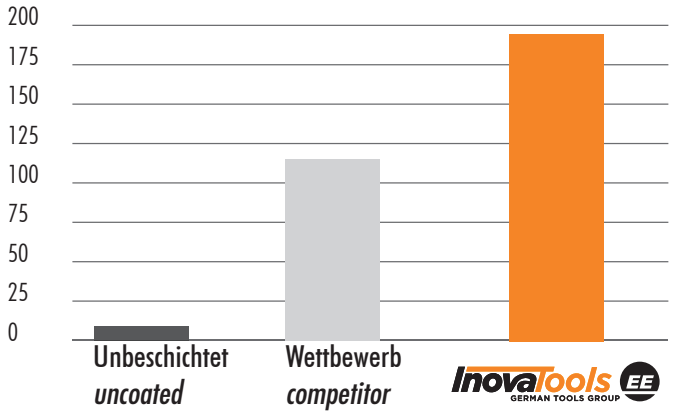
DIAMANT DIA DUR | HA | Werks-norm | GFK/CFK Graphit

Diamantbeschichtung DIA-DUR

Die speziell für unser Diamantprogramm entwickelte kristalline Diamantschicht (DIA DUR) ist für die Bearbeitung von Graphit, GFK-Werkstoffen und Kupfer bestens geeignet. Durch die hervorragende Schichthaftung auf dem speziell dafür ausgewählten Hartmetall erzielen Sie mit unserem Diamantprogramm höchste Standzeiten. Außerdem ist diese Schicht extrem abrasionsbeständig, und es entstehen keine typischen CVD Nasen auf den scharfen Schneiden. Das alles heißt für Sie, eine Erhöhung der Wirtschaftlichkeit und dadurch Kostensenkung und höherer Ertrag. Vorteile an denen Sie nicht vorbei kommen.

The crystalline diamond coating, which was especially developed for our diamond program (DIADUR), is optimally suited for the treatment of Graphite, glass-reinforced plastic and copper.
Due to the excellent coat adhesion on hard metal that has been especially selected for this purpose, our diamond program achieves highest tool lives. Additionally, this coat is extremely abrasion-proof, there are no typical CVD lugs on the sharp cutting edges. To you, all of this means an increase of the profitability and due to this, a cost reduction and higher earnings. Advantages which you are unable to avoid.

Werkzeugstandzeit / *Tool life (m)*



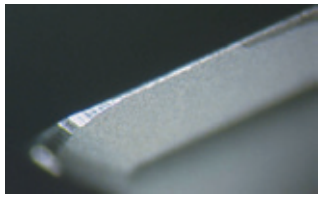
Standzeit um Faktor 19 erhöht beim Fräsen von Graphit

Extended tool life by factor of 19 when cuttering Graphite

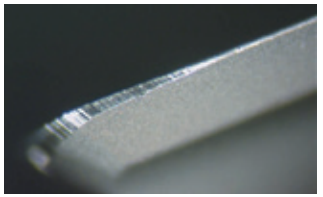
Ausgangslage
- Hartmetall: GK05
- Werkzeug: Fräser, Ø 12 mm
- Material: Graphit EK85
- Bearbeitung: Fräsen
- Kühlung: trocken/Luft
- Standzeitkriterium: werkzeugverschleiß

application
- *carbide: GK05*
- *tool: cutter, Ø 12 mm*
- *material: Graphite EK85*
- *treatment: cuttering*
- *cooling: dry/air*
- *tool life criteria: tool wear*

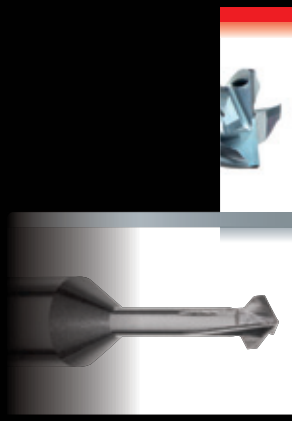
Verschleiß nach Bearbeitung von Graphit EK85
Abrasion after treatment of Graphite EK 85

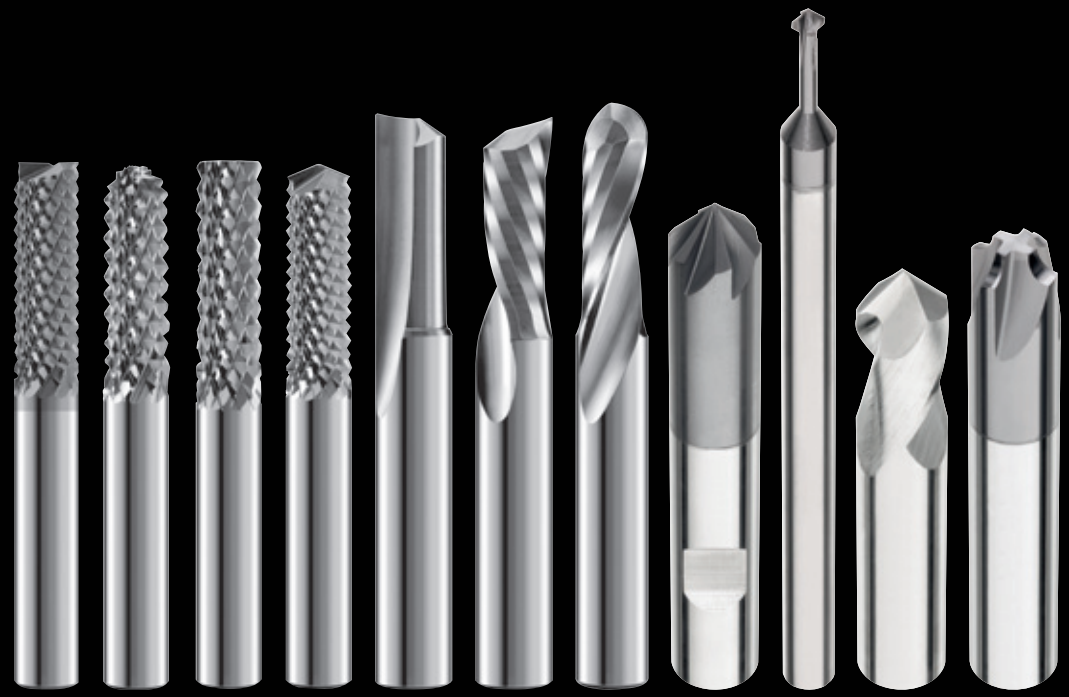


Wettbewerb
competitor



Sonder-/Spezialfräser/GFK / *Special cutters/GFK*

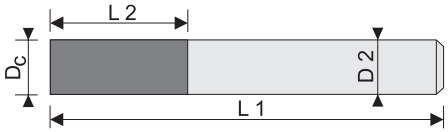


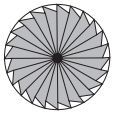


Schnell ausdauernd präzise
Fast endurance precise

Artikel-Nr.
40....55..

Artikel-Nr.
40....66..



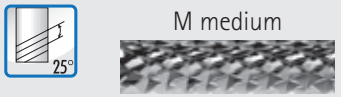


VHM – Router

Solid carbide router

TYP W | HSC

Dc h10	L2	L1	D2 h6	40....55.. Diamant-Beschichtet *Diamond-coated*		40....66.. Diamant-Beschichtet *Diamond-coated*	
2,0	7	40	2	40.020755.75	○	40.020766.75	●
2,0	7	50	6	40.020855.75	○	40.020866.75	●
3,0	10	40	3	40.031055.75	○	40.031066.75	●
3,0	12	50	6	40.031255.75	○	40.031266.75	●
4,0	15	40	4	40.041555.75	○	40.041566.75	●
4,0	20	50	6	40.042055.75	○	40.042066.75	●
5,0	16	50	5	40.051655.75	○	40.051666.75	●
5,0	25	75	6	40.052555.75	○	40.052566.75	●
6,0	18	50	6	40.061855.75	○	40.061866.75	●
6,0	35	75	6	40.063555.75	○	40.063566.75	●
8,0	25	63	8	40.082555.75	○	40.082566.75	●
8,0	40	100	8	40.054055.75	○	40.054066.75	●
10,0	30	72	10	40.103055.75	○	40.103066.75	●
12,0	32	83	12	40.123255.75	○	40.123266.75	●
16,0	36	92	16	40.163655.75	○	40.163666.75	○
20,0	40	104	20	40.204055.75	○	40.204066.75	○

Verzahnung - Typ Toothing - Type	F fein F fine	M mittel M medium
		

● Lager / in Stock
○ Auf Anfrage / on request

unbeschichtet auf Anfrage
uncoated - on request

DIAMANT DIA DUR | HA | Werks-norm | Kunststoff plastic | GFK/CFK Graphit

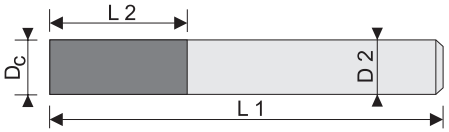
VHM – Router

Solid carbide router

TYP W | HSC

Artikel-Nr.
41....55..

Artikel-Nr.
41....66..



Dc h10	L2	L1	D2 h6	41....55.. Diamant-Beschichtet *Diamond-coated*		41....66.. Diamant-Beschichtet *Diamond-coated*	
2,0	7	40	2	41.020755.75	○	41.020766.75	●
2,0	7	50	6	41.020855.75	○	41.020866.75	●
3,0	10	40	3	41.031055.75	○	41.031066.75	●
3,0	12	50	6	41.031255.75	○	41.031266.75	●
4,0	15	40	4	41.041555.75	○	41.041566.75	●
4,0	20	50	6	41.042055.75	○	41.042066.75	●
5,0	16	50	5	41.051655.75	○	41.051666.75	●
5,0	25	75	6	41.052555.75	○	41.052566.75	●
6,0	18	50	6	41.061855.75	○	41.061866.75	●
6,0	35	75	6	41.063555.75	○	41.063566.75	●
8,0	25	63	8	41.082555.75	○	41.082566.75	●
8,0	40	100	8	41.054055.75	○	41.054066.75	●
10,0	30	72	10	41.103055.75	○	41.103066.75	●
12,0	32	83	12	41.123255.75	○	41.123266.75	●
16,0	36	92	16	41.163655.75	○	41.163666.75	○
20,0	40	104	20	41.204055.75	○	41.204066.75	○

Verzahnung - Typ Toothing - Type	F fein F fine	M mittel M medium
	 	 

● Lager / in Stock
○ Auf Anfrage / on request

unbeschichtet auf Anfrage
uncoated - on request

DIAMANT DIA DUR | HA | Werks-norm | Kunststoff plastic | GFK/CFK Graphit

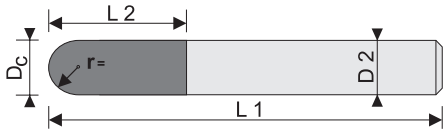
VHM – Router

Solid carbide router

TYP W | R | HSC

Artikel-Nr. 42....55..

Artikel-Nr. 42....66..



Dc h10	L2	L1	D2 h6	42....55.. Diamant-Beschichtet *Diamond-coated*		42....66.. Diamant-Beschichtet *Diamond-coated*	
2,0	7	40	2	42.020755.75	○	42.020766.75	●
2,0	7	50	6	42.020855.75	○	42.020866.75	●
3,0	10	40	3	42.031055.75	○	42.031066.75	●
3,0	12	50	6	42.031255.75	○	42.031266.75	●
4,0	15	40	4	42.041555.75	○	42.041566.75	●
4,0	20	50	6	42.042055.75	○	42.042066.75	●
5,0	16	50	5	42.051655.75	○	42.051666.75	●
5,0	25	75	6	42.052555.75	○	42.052566.75	●
6,0	18	50	6	42.061855.75	○	42.061866.75	●
6,0	35	75	6	42.063555.75	○	42.063566.75	●
8,0	25	63	8	42.082555.75	○	42.082566.75	●
8,0	40	100	8	42.054555.75	○	42.082566.75	●
10,0	30	72	10	42.103055.75	○	42.103066.75	●
12,0	32	83	12	42.123255.75	○	42.123266.75	●
16,0	36	92	16	42.163655.75	○	42.163666.75	○
20,0	40	104	20	42.204055.75	○	42.204066.75	○
Verzahnung - Typ Toothing - Type				 F fein F fine 		 M mittel M medium 	

● Lager / in Stock
○ Auf Anfrage / on request

unbeschichtet auf Anfrage
uncoated - on request

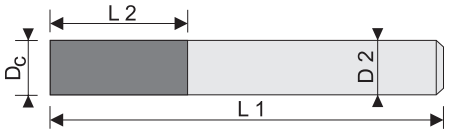
DIAMANT DIA DUR | HA | Werks-norm | Kunststoff plastic | GFK/CFK Graphit

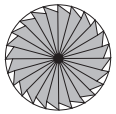
VHM – Router

Solid carbide router

Artikel-Nr. 43....55..

Artikel-Nr. 43....66..





TYP W | HSC

Dc h10	L2	L1	D2 h6	43....55.. Unbeschichtet *uncoated*		43....66.. Unbeschichtet *uncoated*		43....77.. Unbeschichtet *uncoated*	
2,0	7	40	2,0	43.020755.09	●	43.020766.09	○	43.020777.09	○
2,0	7	50	6,0	43.020855.09	●	43.020766.09	○	43.020877.09	○
3,0	10	40	3,0	43.031055.09	●	43.031066.09	○	43.031077.09	○
3,0	12	50	6,0	43.031255.09	●	43.031266.09	○	43.031277.09	○
3,5	12	40	3,5	43.351255.09	○	43.351266.09	○	43.351277.09	○
4,0	15	40	4,0	43.041555.09	●	43.041566.09	○	43.041577.09	○
4,0	20	50	6,0	43.042055.09	●	43.042066.09	○	43.042077.09	○
4,5	15	50	4,5	43.451555.09	○	43.451566.09	○	43.451577.09	○
5,0	16	50	5,0	43.051655.09	●	43.051666.09	○	43.051677.09	○
5,0	25	75	6,0	43.052555.09	●	43.052566.09	○	43.052577.09	○
6,0	18	50	6,0	43.061855.09	●	43.061866.09	○	43.061877.09	○
6,0	35	75	6,0	43.063555.09	●	43.063566.09	○	43.063577.09	○
7,0	22	60	7,0	43.072255.09	○	43.072266.09	○	43.072277.09	○
8,0	25	63	8,0	43.082555.09	●	43.082566.09	○	43.082577.09	○
8,0	40	100	8,0	43.084055.09	●	43.084066.09	○	43.084077.09	○
9,0	25	63	9,0	43.092555.09	○	43.092566.09	○	43.092577.09	○
10,0	30	72	10,0	43.103055.09	●	43.103066.09	○	43.103077.09	○
12,0	32	83	12,0	43.123255.09	●	43.123266.09	○	43.123277.09	○
14,0	32	83	14,0	43.143255.09	○	43.143266.09	○	43.143277.09	○
16,0	36	92	16,0	43.163655.09	○	43.163666.09	○	43.163677.09	○
18,0	40	92	40,0	43.184055.09	○	43.184066.09	○	43.184077.09	○
20,0	45	104	20,0	43.204555.09	○	43.204566.09	○	43.204577.09	○

Verzahnung - Typ Toothing - Type	F fein F fine	M mittel M medium	G grob G rough
	30°	25°	20°

● Lager / in Stock

○ Auf Anfrage / on request

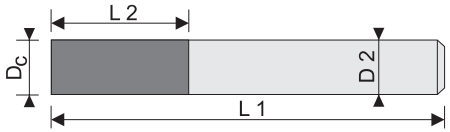
beschichtet auf Anfrage

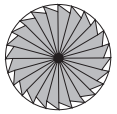
coated - on request

BLANK | HA | Werks-norm | Kunststoff plastic

Artikel-Nr.
44....55..

Artikel-Nr.
44....66..





VHM – Router

Solid carbide router

TYP W | HSC

Dc h10	L2	L1	D2 h6	44....55.. Unbeschichtet *uncoated*		44....66.. Unbeschichtet *uncoated*		44....77.. Unbeschichtet *uncoated*	
2,0	7	40	2,0	44.020755.09	●	44.020766.09	○	44.020777.09	○
2,0	7	50	6,0	44.020855.09	●	44.020866.09	○	44.020877.09	○
3,0	10	40	3,0	44.031055.09	●	44.031066.09	○	44.031077.09	○
3,0	12	50	6,0	44.031255.09	●	44.031266.09	○	44.031277.09	○
3,5	12	40	3,5	44.351255.09	○	44.351266.09	○	44.351277.09	○
4,0	15	40	4,0	44.041555.09	●	44.041566.09	○	44.041577.09	○
4,0	20	50	6,0	44.042055.09	●	44.042066.09	○	44.042077.09	○
4,5	15	50	4,5	44.451555.09	○	44.451566.09	○	44.451577.09	○
5,0	16	50	5,0	44.051655.09	●	44.051666.09	○	44.051677.09	○
5,0	25	75	6,0	44.052555.09	●	44.052566.09	○	44.052577.09	○
6,0	18	50	6,0	44.061855.09	●	44.061866.09	○	44.061877.09	○
6,0	35	75	6,0	44.063555.09	●	44.063566.09	○	44.063577.09	○
7,0	22	60	7,0	44.072255.09	○	44.072266.09	○	44.072277.09	○
8,0	25	63	8,0	44.082555.09	●	44.082566.09	○	44.082577.09	○
8,0	40	100	8,0	44.084055.09	●	44.084066.09	○	44.084077.09	○
9,0	25	63	9,0	44.092555.09	○	44.092566.09	○	44.092577.09	○
10,0	30	72	10,0	44.103055.09	●	44.103066.09	○	44.103077.09	○
12,0	32	83	12,0	44.123255.09	●	44.123266.09	○	44.123277.09	○
14,0	32	83	14,0	44.143255.09	○	44.143266.09	○	44.143277.09	○
16,0	36	92	16,0	44.163655.09	○	44.163666.09	○	44.163677.09	○
18,0	40	92	40,0	44.184055.09	○	44.184066.09	○	44.184077.09	○
20,0	45	104	20,0	44.204555.09	○	44.204566.09	○	44.204577.09	○
Verzahnung - Typ Toothing - Type				F fein F fine		M mittel M medium		G grob G rough	

● Lager / in Stock
○ Auf Anfrage / on request

beschichtet auf Anfrage
coated - on request

BLANK | HA | Werks-norm | Kunststoff plastic

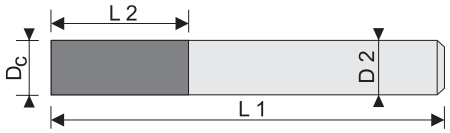
VHM – Router

Solid carbide router

TYP W | HSC

Artikel-Nr. 45....55..

Artikel-Nr. 45....66..



Dc h10	L2	L1	D2 h6	45....55.. Unbeschichtet *uncoated*		45....66.. Unbeschichtet *uncoated*		45....77.. Unbeschichtet *uncoated*	
2,0	7	40	2,0	45.020755.09	●	45.020766.09	○	45.020777.09	○
2,0	7	50	6,0	45.020855.09	●	45.020866.09	○	45.020877.09	○
3,0	10	40	3,0	45.031055.09	●	45.031066.09	○	45.031077.09	○
3,0	12	50	6,0	45.031255.09	●	45.031266.09	○	45.031277.09	○
3,5	12	40	3,5	45.351255.09	○	45.351266.09	○	45.351277.09	○
4,0	15	40	4,0	45.041555.09	●	45.041566.09	○	45.041577.09	○
4,0	20	50	6,0	45.042055.09	●	45.042066.09	○	45.042077.09	○
4,5	15	50	4,5	45.451555.09	○	45.451566.09	○	45.451577.09	○
5,0	16	50	5,0	45.051655.09	●	45.051666.09	○	45.051677.09	○
5,0	25	75	6,0	45.052555.09	●	45.052566.09	○	45.052577.09	○
6,0	18	50	6,0	45.061855.09	●	45.061866.09	○	45.061877.09	○
6,0	35	75	6,0	45.063555.09	●	45.063566.09	○	45.063577.09	○
7,0	22	60	7,0	45.072255.09	○	45.072266.09	○	45.072277.09	○
8,0	25	63	8,0	45.082555.09	●	45.082566.09	○	45.082577.09	○
8,0	40	100	8,0	45.084055.09	●	45.084066.09	○	45.084077.09	○
9,0	25	63	9,0	45.092555.09	○	45.092566.09	○	45.092577.09	○
10,0	30	72	10,0	45.103055.09	●	45.103066.09	○	45.103077.09	○
12,0	32	83	12,0	45.123255.09	●	45.123266.09	○	45.123277.09	○
14,0	32	83	14,0	45.143255.09	○	45.143266.09	○	45.143277.09	○
16,0	36	92	16,0	45.163655.09	○	45.163666.09	○	45.163677.09	○
18,0	40	92	40,0	45.184055.09	○	45.184066.09	○	45.184077.09	○
20,0	45	104	20,0	45.204555.09	○	45.204566.09	○	45.204577.09	○

Verzahnung - Typ Toothing - Type	F fein F fine	M mittel M medium	G grob G rough
	30°	25°	20°

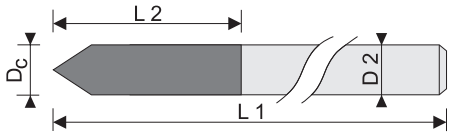
● Lager / in Stock
○ Auf Anfrage / on request

beschichtet auf Anfrage
coated - on request

BLANK | HA | Werks-norm | Kunststoff plastic

Artikel-Nr.
46....55..

Artikel-Nr.
46....66..



VHM – Router mit Bohrerspitze

Solid carbide router with drill bit

TYP W | HSC

Dc h10	L2	L1	D2 h6	46....55.. Unbeschichtet *uncoated*		46....66.. Unbeschichtet *uncoated*		46....77.. Unbeschichtet *uncoated*	
2,0	7	40	2,0	46.020755.09	●	46.020766.09	○	46.020777.09	○
2,0	7	50	6,0	46.020855.09	●	46.020866.09	○	46.020877.09	○
3,0	10	40	3,0	46.031055.09	●	46.031066.09	○	46.031077.09	○
3,0	12	50	6,0	46.031255.09	●	46.031266.09	○	46.031277.09	○
3,5	12	40	3,5	46.351255.09	○	46.351266.09	○	46.351277.09	○
4,0	15	40	4,0	46.041555.09	●	46.041566.09	○	46.041577.09	○
4,0	20	50	6,0	46.042055.09	●	46.042066.09	○	46.042077.09	○
4,5	15	50	4,5	46.451555.09	○	46.451566.09	○	46.451577.09	○
5,0	16	50	5,0	46.051655.09	●	46.051666.09	○	46.051677.09	○
5,0	25	75	6,0	46.052555.09	●	46.052566.09	○	46.052577.09	○
6,0	18	50	6,0	46.061855.09	●	46.061866.09	○	46.061877.09	○
6,0	35	75	6,0	46.063555.09	●	46.063566.09	○	46.063577.09	○
7,0	22	60	7,0	46.072255.09	○	46.072266.09	○	46.072277.09	○
8,0	25	63	8,0	46.082555.09	●	46.082566.09	○	46.082577.09	○
8,0	40	100	8,0	46.084055.09	●	46.084066.09	○	46.084077.09	○
9,0	25	63	9,0	46.092555.09	○	46.092566.09	○	46.092577.09	○
10,0	30	72	10,0	46.103055.09	●	46.103066.09	○	46.103077.09	○
12,0	32	83	12,0	46.123255.09	●	46.123266.09	○	46.123277.09	○
14,0	32	83	14,0	46.143255.09	○	46.143266.09	○	46.143277.09	○
16,0	36	92	16,0	46.163655.09	○	46.163666.09	○	46.163677.09	○
18,0	40	92	40,0	46.184055.09	○	46.184066.09	○	46.184077.09	○
20,0	45	104	20,0	46.204555.09	○	46.204566.09	○	46.204577.09	○

Verzahnung - Typ Toothing - Type	F fein F fine	M mittel M medium	G grob G rough
	30°	25°	20°

● Lager / in Stock
○ Auf Anfrage / on request

beschichtet auf Anfrage
coated - on request

BLANK | HA | Werks-norm | Kunststoff plastic

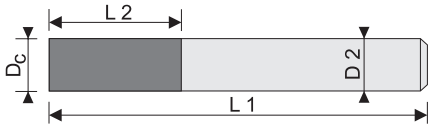
VHM – Schaftfräser **SoftLine**

Solid carbide cutter

TYP W | 2 | 14° | HSC

Artikel-Nr. 47....09..

Artikel-Nr. 47....00..



Dc h10	L2	L1	D2 h6	47.... Unbeschichtet *uncoated*	
1,0	3	57	6	47.010357.09	●
2,0	5	57	6	47.020557.09	●
3,0	10	57	6	47.031057.09	●
4,0	13	57	6	47.041357.09	●
5,0	15	57	6	47.051557.09	●
6,0	18	57	6	47.061857.09	●
7,0	20	63	8	47.072063.09	●
8,0	20	63	8	47.082063.09	●
9,0	22	72	10	47.092272.09	●
10,0	25	72	10	47.102572.09	●
12,0	30	83	12	47.123083.09	●

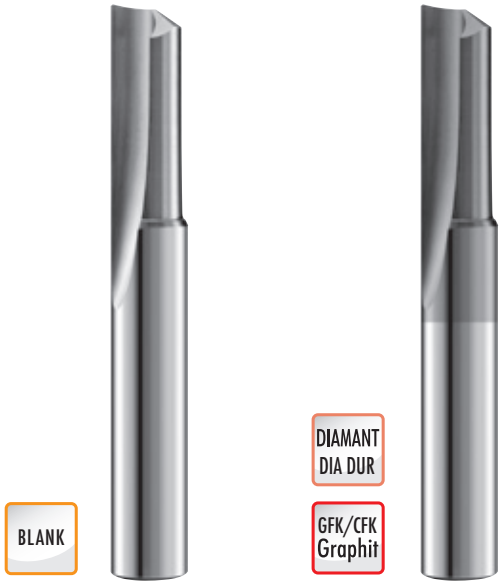
● Lager / in Stock
○ Auf Anfrage / on request

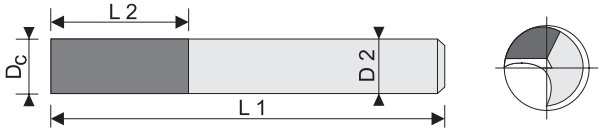
beschichtet auf Anfrage
coated - on request

HA | Werks-norm | ALU NE | Kunststoff plastic

Artikel-Nr.
48....09..

Artikel-Nr.
48....00..





VHM – Einzahnfräser **SoftLine**

Solid carbide one-flute cutter

TYP W | HSC

D_c h10	L2	L1	D_2 h6	48.... Unbeschichtet *uncoated*	
1,5	6	40	3	48.150640.09	○
2,0	6	40	3	48.020640.09	●
2,0	10	40	2	48.021040.09	○
2,0	10	60	6	48.021060.09	●
2,0	12	60	6	48.021260.09	○
3,0	12	40	3	48.031240.09	●
3,0	12	60	6	48.031260.09	○
3,0	15	60	6	48.031560.09	●
4,0	15	60	6	48.041560.09	●
5,0	16	60	6	48.051660.09	●
6,0	20	60	6	48.062060.09	●
6,0	30	60	6	48.063060.09	○
6,0	35	75	6	48.063575.09	●
8,0	22	63	8	48.082263.09	●
8,0	40	100	8	48.084010.09	●
10,0	25	72	10	48.102572.09	●
12,0	30	83	12	48.123083.09	●

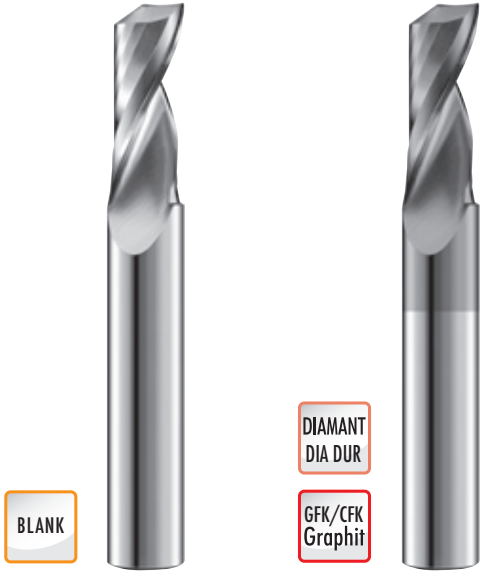
● Lager / in Stock
○ Auf Anfrage / on request

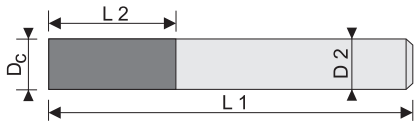
beschichtet auf Anfrage
coated - on request

HA | Werks-norm | ALU NE | Kunststoff plastic

Artikel-Nr.
49....09..

Artikel-Nr.
49....00..





VHM – Einzahnfräser **SoftLine**

Solid carbide one-flute cutter

TYP W | 1 | 30° | HSC

D_c h10	L2	L1	D_2 h6	49.... Unbeschichtet *uncoated*	
1,5	6	40	3	49.150640.09	●
2,0	10	40	2	49.021040.09	●
2,0	8	40	3	49.020840.09	●
2,0	6	50	6	49.020650.09	●
2,5	8	50	6	49.250850.09	●
3,0	10	40	3	49.031040.09	●
3,0	10	50	6	49.031050.09	●
3,5	10	50	6	49.351050.09	●
4,0	12	50	4	49.041250.09	●
4,0	12	50	6	49.041251.09	●
4,5	12	50	6	49.451250.09	●
5,0	14	50	5	49.051450.09	●
5,0	14	50	6	49.051451.09	●
5,5	14	50	6	49.551450.09	●
6,0	14	50	6	49.061450.09	●
6,0	20	60	6	49.062060.09	●
6,0	35	75	6	49.063575.09	●
8,0	25	63	8	49.082563.09	●
10,0	25	72	10	49.102572.09	●
12,0	25	83	12	49.122583.09	●

● Lager / in Stock
○ Auf Anfrage / on request

beschichtet auf Anfrage
coated - on request

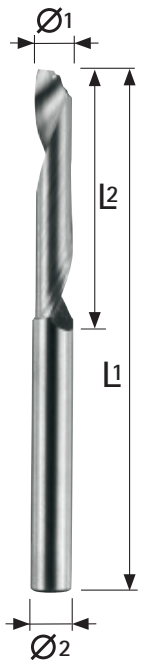
HA | Werks-norm | ALU NE | Kunststoff plastic

Artikel-Nr.
200...

VHM – Einzahnfräser **SoftLine**

Solid carbide one-flute cutter

TYP W | 1 | 26° | HSC



Ø1	Ø2	L2	L1	Z	Artikel-Nr. *Article No.*
1,5	3	6	50	1	200.015.09
2,0	3	8	50	1	200.020.09
3,0	3	12	50	1	200.030.09
4,0	4	15	60	1	200.040.09
5,0	5	17	60	1	200.050.09
6,0	6	20	65	1	200.060.09
8,0	8	22	65	1	200.080.09
10,0	10	25	75	1	200.100.09
12,0	12	30	80	1	200.120.09

BLANK | HA | Werks-norm | ALU NE | Kunststoff plastic

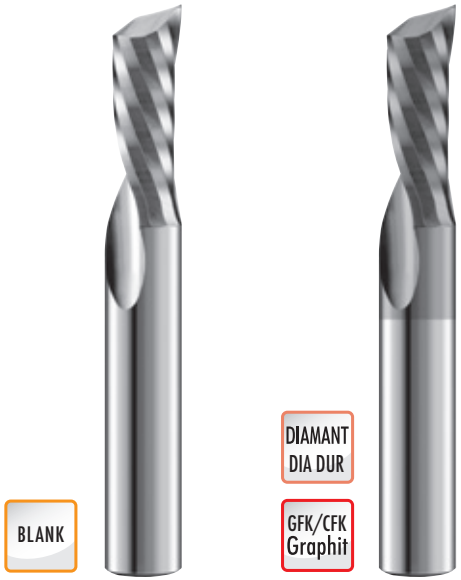
VHM – Einzahnfräser **SoftLine**

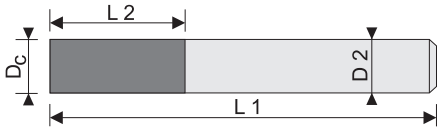
Solid carbide one-flute cutter

TYP W | HSC

Artikel-Nr. 50....09..

Artikel-Nr. 50....00..





D_c h10	L2	L1	D_2 h6	50.... Unbeschichtet *uncoated*	
1,5	6	40	3,0	50.150640.09	○
2,0	6	40	3,0	50.020640.09	●
2,0	10	40	2,0	50.021040.09	○
2,0	10	60	6,0	50.021060.09	●
2,0	12	60	6,0	50.021260.09	○
2,5	6	40	2,5	50.250640.09	○
3,0	12	40	3,0	50.031240.09	●
3,0	10	60	6,0	50.031060.09	○
3,0	12	60	6,0	50.031260.09	○
3,0	15	60	6,0	50.031560.09	●
4,0	15	40	4,0	50.041540.09	○
4,0	15	60	6,0	50.041560.09	●
5,0	16	50	6,0	50.051650.09	○
5,0	16	60	6,0	50.051660.09	●
6,0	20	60	6,0	50.062060.09	●
6,0	30	60	6,0	50.063060.09	○
6,0	35	75	6,0	50.063575.09	●
8,0	22	63	8,0	50.082263.09	●
8,0	40	100	8,0	50.084010.09	●
10,0	25	72	10,0	50.102572.09	●
12,0	30	83	12,0	50.123083.09	●
14,0	30	83	14,0	50.143083.09	○
16,0	35	92	16,0	50.163592.09	○
18,0	35	92	18,0	50.183592.09	○
20,0	40	104	20,0	50.204010.09	○

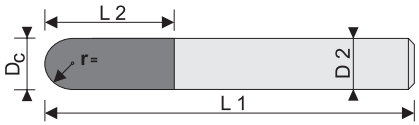
● Lager / in Stock
○ Auf Anfrage / on request

beschichtet auf Anfrage
coated - on request

HA | Werks-norm | ALU NE | Kunststoff plastic

Artikel-Nr.
51....09..

Artikel-Nr.
51....00..



VHM – Einzahnvollradiusfräser **SoftLine**

Solid carbide one-flute ball-nosed cutter

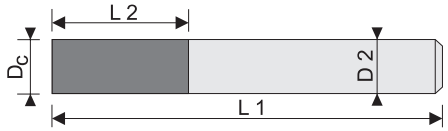
D_c h10	L2	L1	D_2 h6	51.... Unbeschichtet *uncoated*	
1,5	6	40	3	51.150640.09	●
2,0	6	40	3	51.020640.09	○
2,0	10	40	2	51.021040.09	●
2,0	10	60	6	51.021060.09	●
2,0	12	60	6	51.021260.09	○
3,0	12	40	3	51.031240.09	●
3,0	12	60	6	51.031260.09	●
3,0	15	60	6	51.031560.09	○
4,0	15	60	6	51.041560.09	●
5,0	16	60	6	51.051660.09	●
6,0	20	60	6	51.062060.09	●
6,0	30	60	6	51.063060.09	○
6,0	35	75	6	51.063575.09	●
8,0	22	63	8	51.082263.09	●
8,0	40	100	8	51.084010.09	●
10,0	25	72	10	51.102572.09	○
10,0	30	83	10	51.123083.09	●

● Lager / in Stock
○ Auf Anfrage / on request

beschichtet auf Anfrage
coated - on request

Artikel-Nr.
52....09..

Artikel-Nr.
52....00..



VHM – Schaftfräser SoftLine

Solid carbide cutter

TYP W | R | 2 | 30° | HSC

D_c h10	L2	L1	D_2 h6	52.... Unbeschichtet *uncoated*	
2,0	6	40	2,0	52.020640.09	○
2,0	6	50	6,0	52.020650.09	○
2,5	7	40	2,5	52.250740.09	○
3,0	12	40	3,0	52.031240.09	●
3,0	12	50	6,0	52.031250.09	●
4,0	14	40	4,0	52.041440.09	●
5,0	16	50	5,0	52.051650.09	●
6,0	18	50	6,0	52.061850.09	●
8,0	20	63	8,0	52.082063.09	●
10,0	25	72	10,0	52.102572.09	●
12,0	30	83	12,0	52.123083.09	●
16,0	35	92	16,0	52.163593.09	○
20,0	45	104	20,0	52.204510.09	○

● Lager / in Stock
○ Auf Anfrage / on request

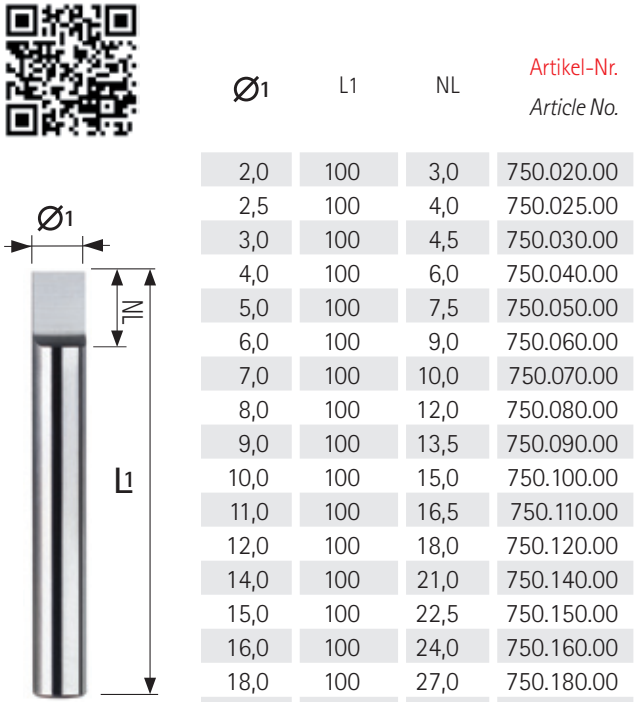
beschichtet auf Anfrage
coated - on request

HA | Werks-norm | ALU NE | Kunststoff plastic

Artikel-Nr.
750...

VHM - Stichelrohling
Solid carbide blank

TYP N

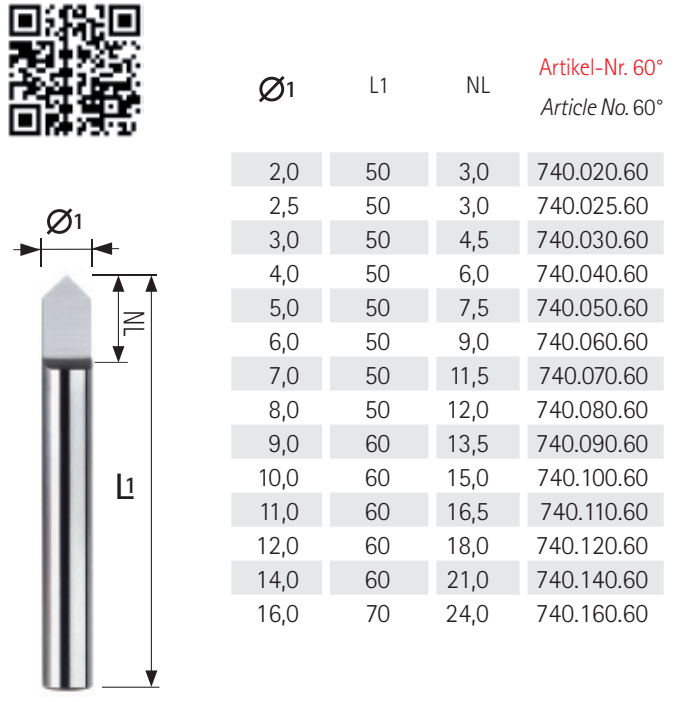


Ø1	L1	NL	Artikel-Nr. *Article No.*
2,0	100	3,0	750.020.00
2,5	100	4,0	750.025.00
3,0	100	4,5	750.030.00
4,0	100	6,0	750.040.00
5,0	100	7,5	750.050.00
6,0	100	9,0	750.060.00
7,0	100	10,0	750.070.00
8,0	100	12,0	750.080.00
9,0	100	13,5	750.090.00
10,0	100	15,0	750.100.00
11,0	100	16,5	750.110.00
12,0	100	18,0	750.120.00
14,0	100	21,0	750.140.00
15,0	100	22,5	750.150.00
16,0	100	24,0	750.160.00
18,0	100	27,0	750.180.00
20,0	100	30,0	750.200.00

Artikel-Nr.
740...

VHM – Gravierstichel 60°, 90°, 100°
Solid carbide graver

TYP N



Ø1	L1	NL	Artikel-Nr. 60° *Article No. 60°*	Artikel-Nr. 90° *Article No. 90°*	Artikel-Nr. 100° *Article No. 100°*
2,0	50	3,0	740.020.60	740.020.90	740.020.10
2,5	50	3,0	740.025.60	740.025.90	740.025.10
3,0	50	4,5	740.030.60	740.030.90	740.030.10
4,0	50	6,0	740.040.60	740.040.90	740.040.10
5,0	50	7,5	740.050.60	740.050.90	740.050.10
6,0	50	9,0	740.060.60	740.060.90	740.060.10
7,0	50	11,5	740.070.60	740.070.90	740.070.10
8,0	50	12,0	740.080.60	740.080.90	740.080.10
9,0	60	13,5	740.090.60	740.090.90	740.090.10
10,0	60	15,0	740.100.60	740.100.90	740.100.10
11,0	60	16,5	740.110.60	740.110.90	740.110.10
12,0	60	18,0	740.120.60	740.120.90	740.120.10
14,0	60	21,0	740.140.60	740.140.90	740.140.10
16,0	70	24,0	740.160.60	740.160.90	740.160.10

BLANK | Werks-norm

BLANK | HA | Werks-norm | HRC 45-55 | GG(G)

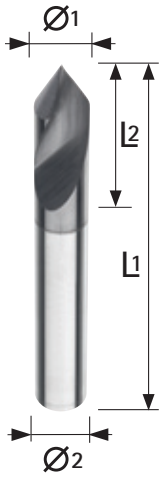
VHM – Gravierstichel 60°

Solid carbide graver

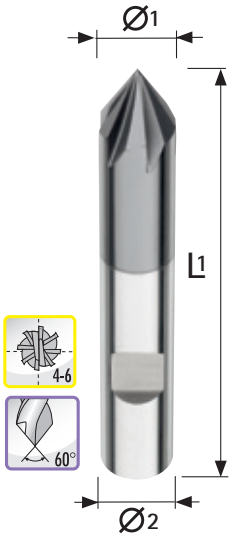
Artikel-Nr.
745...

TYP N | 60° | 1

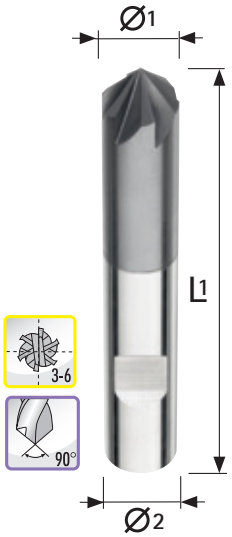
Ø1	Ø2	L2	L1	Artikel-Nr. *Article No.*
3,0	3,0	10	40	745.030.00
4,0	4,0	10	40	745.040.00
6,0	6,0	10	50	745.060.00



Artikel-Nr.
760...



Artikel-Nr.
790...



VHM – Entgrater

Solid carbide deburring tool

TYP N

Ø1	Ø2	L1	Z	Artikel-Nr. *Article No.*
1,0	3	38	3	790.010...
2,0	3	38	3	790.020...
3,0	3	38	4	790.030...
4,0	4	54	4	760.040...
4,0	4	54	4	790.040...
6,0	6	57	4	760.060...
6,0	6	57	4	790.060...
8,0	8	63	5	760.080...
8,0	8	63	5	790.080...
10,0	10	72	6	760.100...
10,0	10	72	6	790.100...
12,0	12	83	6	760.120...
12,0	12	83	6	790.120...
16,0	16	92	6	760.160...
16,0	16	92	6	790.160...
20,0	20	104	6	760.200...
20,0	20	104	6	790.200...

Bitte fügen Sie bei Ihrer Bestellung folgende Codes hinzu: unbeschichtet .09 beschichtet .00
Please add the following code to your order: uncoated .09 coated .00

unter Ø 6 ohne Weldonspannfläche
below Ø 6 without weldon shank

TIALN | HA | Werks-norm | Universal

TIALN | HA | HB | DIN 6527 lang | Universal

VHM – Multimill

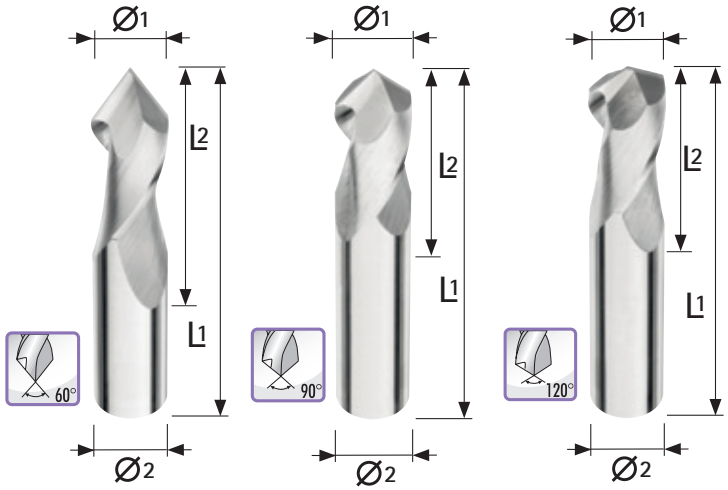
Solid carbide cutter

TYP N | 2 | 30°

Artikel-Nr.
660...

Artikel-Nr.
690...

Artikel-Nr.
612...



Ø1	Ø2	L2	L1	Z	Artikel-Nr. *Article No.*
3,0	4	6	50	2	660.030.09
3,0	4	6	50	2	690.030.09
3,0	4	6	50	2	612.030.09
4,0	5	8	50	2	660.040.09
4,0	5	8	50	2	690.040.09
4,0	5	8	50	2	612.040.09
5,0	6	10	50	2	660.050.09
5,0	6	10	50	2	690.050.09
5,0	6	10	50	2	612.050.09
6,0	8	12	60	2	660.060.09
6,0	8	12	60	2	690.060.09
6,0	8	12	60	2	612.060.09
8,0	10	16	70	2	660.080.09
8,0	10	16	70	2	690.080.09
8,0	10	16	70	2	612.080.09
10,0	12	18	73	2	660.100.09
10,0	12	18	73	2	690.100.09
10,0	12	18	73	2	612.100.09
12,0	12	20	73	2	660.120.09
12,0	12	20	73	2	690.120.09
12,0	12	20	73	2	612.120.09
16,0	16	26	82	2	660.160.09
16,0	16	26	82	2	690.160.09
16,0	16	26	82	2	612.160.09
20,0	20	32	100	2	660.200.09
20,0	20	32	100	2	690.200.09
20,0	20	32	100	2	612.200.09

BLANK | HA | Werks-norm | Universal

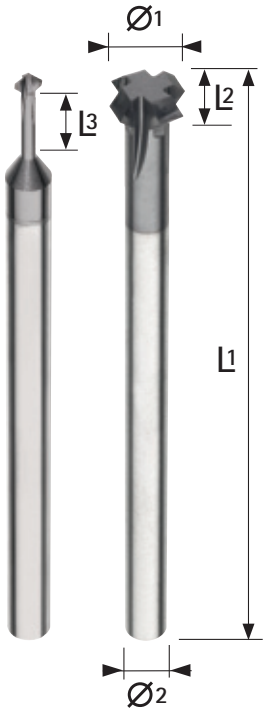
Artikel-Nr.

900...

VHM – Vor- und Rückwärtsentgrater

Solid carbide forward and backward deburring tool

TYP N | 4 | 0°



Ø1	Ø2	L2	L1	L3	Z	Artikel-Nr. *Article No.*
2,0	6	1,5	100	8	4	900.020.00
3,0	6	1,8	100	8	4	900.030.00
4,0	6	3,0	100	10	4	900.040.00
6,0	6	4,0	100	15	4	900.060.00
8,0	6	3,2	100	-	4	900.080.00
10,0	6	4,3	100	-	4	900.100.00
12,0	6	5,0	100	-	4	900.120.00
16,0	10	8,0	100	-	4	900.160.00

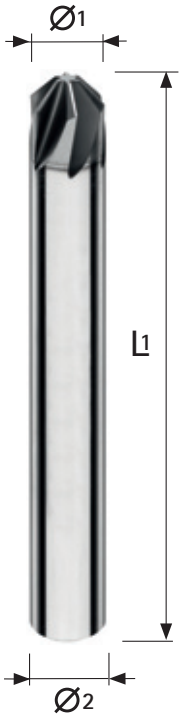
Artikel-Nr.

903...

VHM – Fasenfräser 90°

Solid carbide chamfer cutter

TYP N | 4-6 | 15°



Ø1	Ø2	kleiner Ø	L1	Z	Artikel-Nr. *Article No.*
1,0	3	0,3	40	4	903.010.00
2,0	3	0,6	40	4	903.020.00
3,0	3	1,0	50	5	903.030.00
4,0	4	1,5	50	6	903.040.00
6,0	6	2,0	50	6	903.060.00

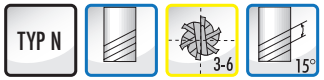
TIALN | HA | Werks-norm | Universal

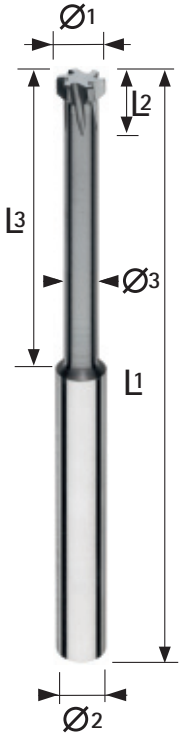
TIALN | HA | Werks-norm | Universal

Artikel-Nr.
904...

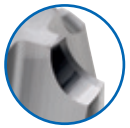
VHM – Rückwärtsentgrater

Solid carbide backward deburring tool





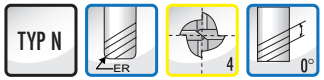
Ø1	Ø2	L2	L1	L3	Ø3	Z	Artikel-Nr. *Article No.*
0,36	3	0,20	50	2,44	0,22	3	904.036.00
0,46	3	0,25	50	3,00	0,30	3	904.046.00
0,65	3	0,35	50	4,20	0,40	3	904.065.00
0,90	4	0,50	60	6,00	0,60	4	904.090.00
1,40	4	0,90	60	9,00	0,95	4	904.140.00
1,90	4	1,00	60	12,00	1,40	5	904.190.00
2,90	4	1,50	70	18,00	2,10	5	904.290.00
3,70	4	2,00	70	24,00	2,70	5	904.370.00
4,70	6	2,00	80	30,00	3,30	6	904.470.00
5,70	6	2,00	80	36,00	4,00	6	904.570.00

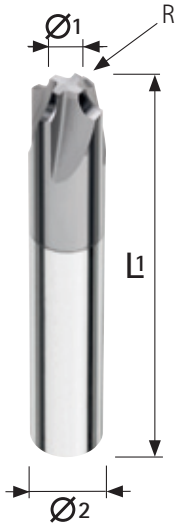


Artikel-Nr.
780...

VHM – Viertelkreisfräser

Solid carbide quadrant cutter





Radius	Ø1	Ø2	L1	Z	Artikel-Nr. *Article No.*
0,2	5,6	6	58	4	780.002...
0,3	5,4	6	58	4	780.003...
0,4	5,2	6	58	4	780.004...
0,5	7,0	8	70	4	780.005...
1,0	6,0	8	70	4	780.010...
1,5	7,0	10	75	4	780.015...
2,0	6,0	10	75	4	780.020...
2,5	7,0	12	75	4	780.025...
3,0	6,0	12	75	4	780.030...
3,5	9,0	16	80	4	780.035...
4,0	8,0	16	80	4	780.040...
4,5	7,0	16	80	4	780.045...
5,0	10,0	20	80	4	780.050...
6,0	8,0	20	80	4	780.060...
8,0	9,0	25	100	4	780.080...
10,0	5,0	25	100	4	780.100...

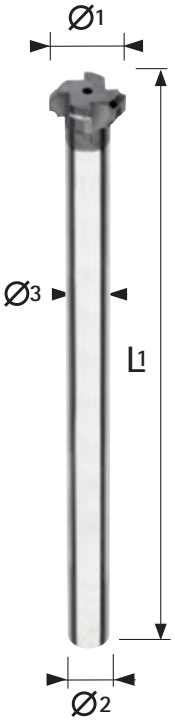
Bitte fügen Sie bei Ihrer Bestellung folgende Codes hinzu: unbeschichtet .09 beschichtet .00
Please add the following code to your order: uncoated .09 coated .00

Artikel-Nr.
901...

VHM – Viertelkreisfräser

Solid carbide forward and backward quadrant cutter

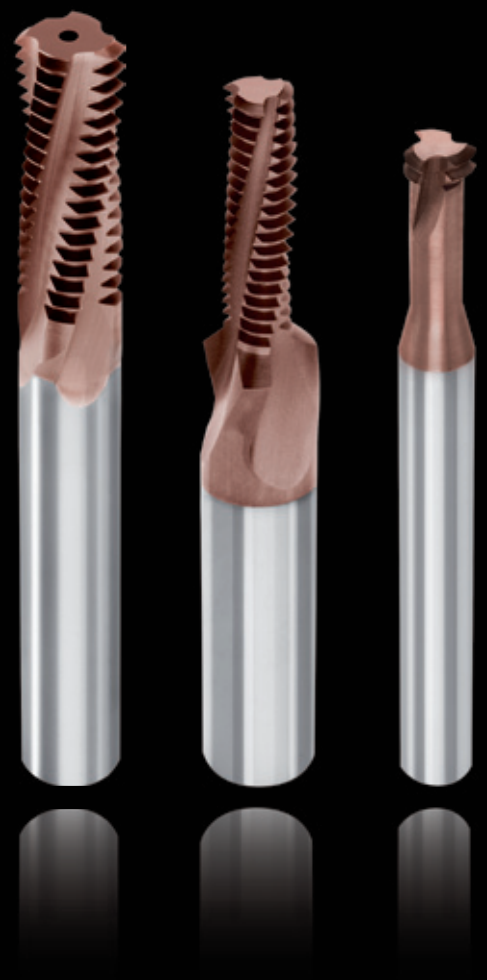
TYP N



Ø1	Ø2	L1	Ø3	Radius	Z	Artikel-Nr. *Article No.*
8,0	6	100	7,6	0,2	4	901.080.00
8,0	6	100	7,4	0,3	4	901.081.00
8,0	6	100	7,2	0,4	4	901.082.00
8,0	6	100	7,0	0,5	4	901.083.00
10,0	6	100	8,4	0,8	4	901.084.00
10,0	6	100	8,0	1,0	4	901.085.00
10,0	6	100	7,6	1,2	4	901.086.00
10,0	6	100	7,0	1,5	4	901.087.00

geläppt polished | HA | Werks-norm | Universal

VHM-Gewindefräser / *Solid carbide thread cutters*

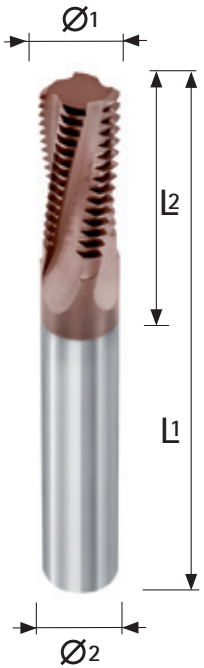


Schnell ausdauernd präzise
Fast endurance precise

Fortsetzung...

Artikel-Nr.

800...



VHM-Hochleistungs-/Innengewindefräser

Solid carbide HP threadcutters - internal

TYP N | 3 | 15°

Steigung mm *Pitch mm*	Einsatz-bereich *M coarse*	Größe *M fine*	Ø1	Ø2	L2	L1	Z	Artikel-Nr. *Article No.*
0,40	M2 (1,5xD)		1,5	4	3,40	50	3	800.040.0001
0,40	M2 (2xD)		1,5	4	4,60	50	3	800.040.0002
0,45	M2,2 (1,5xD)		1,6	4	3,82	50	3	800.045.0003
0,45	M2,2 (2xD)		1,6	4	5,17	50	3	800.045.0004
0,45	M2,5 (1,5xD)		1,9	4	4,27	50	3	800.045.0005
0,45	M2,5 (2xD)		1,9	4	5,62	50	3	800.045.0006
0,50	M3 (1,5xD)	≥ M4	2,3	4	5,25	50	3	800.050.0007
0,50	M3 (2xD)	≥ M4	2,3	4	6,75	50	3	800.050.0008
0,50	M3 (2,5xD)	≥ M4	2,3	4	8,25	50	3	800.050.0009
0,50	M3 (1,5xD)	≥ M4	2,3	6	5,25	63	3	800.050.0010
0,50	M3 (2xD)	≥ M4	2,3	6	6,75	63	3	800.050.0011
0,50	M3 (2,5xD)	≥ M4	2,3	6	8,25	63	3	800.050.0012
0,50		≥ M5	3,8	4	10,75	50	3	800.050.0013
0,50		≥ M5	3,8	6	10,75	63	3	800.050.0014
0,60	M3,5 (1,5xD)		2,6	4	6,30	50	3	800.060.0015
0,60	M3,5 (2xD)		2,6	4	8,10	50	3	800.050.0016
0,70	M4 (1,5xD)		3,0	4	7,35	50	3	800.070.0017
0,70	M4 (2xD)		3,0	4	8,75	50	3	800.070.0018
0,70	M4 (2,5xD)		3,0	4	10,85	50	3	800.070.0019
0,70	M4 (1,5xD)		3,0	6	7,35	63	3	800.070.0020
0,70	M4 (2xD)		3,0	6	8,75	63	3	800.070.0021
0,70	M4 (2,5xD)		3,0	6	10,85	63	3	800.070.0022
0,75	M4,5 (1,5xD)		3,4	4	7,87	50	3	800.075.0023
0,75	M4,5 (2xD)		3,4	4	10,12	50	3	800.075.0024
0,75		≥ M6	4,5	6	10,87	63	3	800.075.0025

Steigung mm *Pitch mm*	Einsatz-bereich *M coarse*	Größe *M fine*	Ø1	Ø2	L2	L1	Z	Artikel-Nr. *Article No.*
0,75		≥ M6	4,5	6	16,87	63	3	800.075.0026
0,80	M5 (1,5xD)		3,8	4	8,40	50	3	800.080.0027
0,80	M5 (2xD)		3,8	4	10,80	50	3	800.080.0028
0,80	M5 (2,5xD)		3,8	4	13,20	50	3	800.080.0029
0,80	M5 (1,5xD)		3,8	6	8,40	63	3	800.080.0030
0,80	M5 (2xD)		3,8	6	10,80	63	3	800.080.0031
0,80	M5 (2,5xD)		3,8	6	13,20	63	3	800.080.0032
1,00	M6 (1,5xD)	≥ M8	4,5	6	10,50	63	3	800.100.0033
1,00	M6 (2xD)	≥ M8	4,5	6	13,50	63	3	800.100.0034
1,00	M6 (2,5xD)	≥ M8	4,5	6	16,50	63	3	800.100.0035
1,00	M6 (3xD)	≥ M8	4,5	6	19,50	63	3	800.100.0036
1,00		≥ M8	6,0	6	13,50	63	3	800.100.0037
1,00		≥ M10	8,0	8	17,50	63	4	800.100.0038
1,00		≥ M14	12,0	12	21,50	83	6	800.100.0039
1,25	M8 (1,5xD)	≥ M10	6,0	6	14,37	63	3	800.125.0040
1,25	M8 (2xD)	≥ M10	6,0	6	18,12	63	3	800.125.0041
1,25	M8 (2,5xD)	≥ M10	6,0	6	21,87	63	3	800.125.0042
1,25	M8 (3xD)	≥ M10	6,0	6	25,62	76	3	800.125.0043
1,50	M10 (1,5xD)	≥ M12	7,5	8	17,25	63	3	800.150.0044
1,50	M10 (2xD)	≥ M12	7,5	8	21,75	76	3	800.150.0045
1,50	M10 (2,5xD)	≥ M12	7,5	8	27,75	76	3	800.150.0046
1,50	M10 (3xD)	≥ M12	7,5	8	32,25	76	3	800.150.0047
1,50		≥ M14	10,0	10	23,25	76	4	800.150.0048
1,50		≥ M16	12,0	12	29,25	83	4	800.150.0049
1,50		≥ M20	16,0	16	35,25	100	6	800.150.0050

Fortsetzung nächste Seite / to be continued

TIALCN | HA | Werks-norm | Universal | 60°

Fortsetzung / continuation

Artikel-Nr.
800...

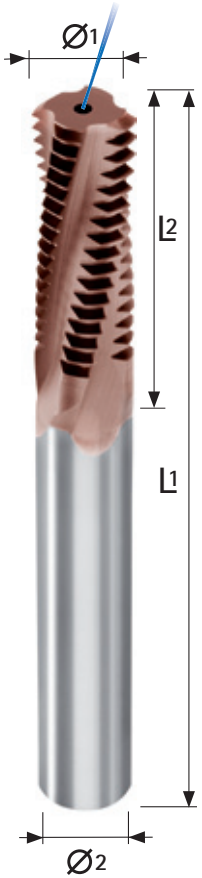
TYP N

Steigung mm *Pitch mm*	Einsatz-bereich *M coarse*	Größe *M fine*	Ø1	Ø2	L2	L1	Z	Artikel-Nr. *Article No.*
1,75	M12 (1,5xD)		8	8	20,12	76	3	800.175.0051
1,75	M12 (2xD)		8	8	27,12	76	3	800.175.0052
1,75	M12 (1,5xD)		9	10	20,12	76	3	800.175.0053
1,75	M12 (2xD)		9	10	27,12	76	3	800.175.0054
1,75	M12 (2,5xD)		9	10	32,37	100	3	800.175.0055
1,75	M12 (3xD)		9	10	37,62	100	3	800.175.0056
2,00	M14 (1,5xD)	≥ M18	10	10	23,00	76	3	800.200.0057
2,00	M14 (2xD)	≥ M18	10	10	31,00	100	3	800.200.0058
2,00	M14 (2,5xD)	≥ M18	10	10	37,00	100	3	800.200.0059
2,00	M16 (1,5xD)	≥ M18	12	12	27,00	83	4	800.200.0060
2,00	M16 (2xD)	≥ M18	12	12	35,00	100	4	800.200.0061
2,00	M16 (2,5xD)	≥ M18	12	12	43,00	100	4	800.200.0062
2,00	M16 (3xD)	≥ M18	12	12	51,00	100	3	800.200.0063
2,00		≥ M20	16	16	39,00	100	5	800.200.0064
2,00		≥ M24	20	20	43,00	100	6	800.200.0065
2,00		≥ M30	25	25	57,00	130	6	800.200.0066
2,50	M18 (1,5xD)		12	12	31,25	100	3	800.250.0067
2,50	M18 (2xD)		12	12	38,75	100	3	800.250.0068
2,50	M18 (2,5xD)		12	12	48,75	100	3	800.250.0069
2,50	M20 (1,5xD)		14	14	33,75	89	4	800.250.0070
2,50	M20 (2xD)		14	14	43,75	100	4	800.250.0071
2,50	M20 (2,5xD)		15	16	53,75	120	4	800.250.0072
2,50	M20 (3xD)		15	16	63,75	120	3	800.250.0073
3,00	M24 (1,5xD)	≥ M30	16	16	40,50	100	3	800.300.0074
3,00	M24 (2xD)	≥ M30	16	16	52,50	120	3	800.300.0075
3,0	M24 (2,5xD)	≥ M30	18	18	64,50	130	3	800.300.0076
3,0		≥ M30	20	20	46,50	120	4	800.300.0077
3,0		≥ M33	25	25	61,50	130	4	800.300.0078
3,5	M30 (1,5xD)		20	20	50,75	120	3	800.350.0079
3,5	M30 (2xD)		20	20	64,75	150	3	800.350.0080
3,5	M30 (2,5xD)		20	20	78,75	150	3	800.350.0081
4,0	M36 (1,5xD)	≥ M42	25	25	58,00	130	3	800.400.0082
4,0	M36 (2xD)	≥ M42	25	25	78,00	150	3	800.400.0083
1,0			10	10	21,50	76	4	800.401.0084
1,5			12	12	26,25	83	4	800.401.0085
2,0			16	16	35,00	100	4	800.401.0086

TIALCN | HA | Werks-norm | Universal | 60°

Artikel-Nr.

802...



VHM – Innengewindefräser[IK]

Solid carbide internal-thread cutter

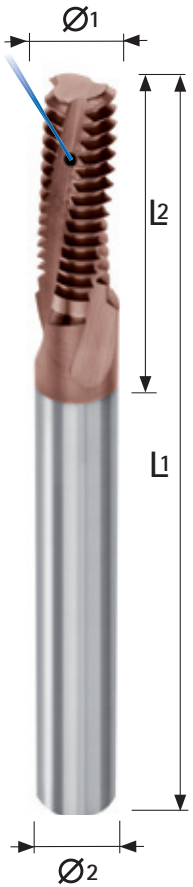
TYP N | 3 | 15°

Steigung mm *Pitch mm*	Einsatz-bereich *M coarse*	Größe *M fine*	Ø1	Ø2	L2	L1	Z	Artikel-Nr. *Article No.*
0,80	M5 (1,5xD)		3,8	4	8,40	50	3	802.050.0001
0,80	M5 (2xD)		3,8	4	10,80	50	3	802.050.0002
0,80	M5 (2,5xD)		3,8	4	13,20	50	3	802.050.0003
1,00	M6 (1,5xD)		4,5	6	10,50	63	3	802.060.0004
1,00	M6 (2xD)		4,5	6	13,50	63	3	802.060.0005
1,00	M6 (2,5xD)		4,5	6	16,50	63	3	802.060.0006
1,00		≥ M10	8,0	8	17,50	76	3	802.060.0007
1,25	M8 (1,5xD)	≥ M10	6,0	6	14,37	63	3	802.080.0008
1,25	M8 (2xD)	≥ M10	6,0	6	18,12	63	3	802.080.0009
1,25	M8 (2,5xD)	≥ M10	6,0	6	21,87	63	3	802.080.0010
1,50	M10 (1,5xD)	≥ M12	7,5	8	17,25	76	3	802.100.0011
1,50	M10 (2xD)	≥ M12	7,5	8	21,75	76	3	802.100.0012
1,50	M10 (2,5xD)	≥ M12	7,5	8	27,75	76	3	802.100.0013
1,50	M10 (3xD)	≥ M12	7,5	8	32,25	76	3	802.100.0014
1,50		≥ M16	12,0	12	29,25	100	4	802.100.0015
1,50		≥ M20	16,0	16	35,25	120	6	802.100.0016
1,75	M12 (1,5xD)		8,0	8	20,12	76	3	802.120.0017
1,75	M12 (2xD)		8,0	8	27,12	76	3	802.120.0018

Steigung mm *Pitch mm*	Einsatz-bereich *M coarse*	Größe *M fine*	Ø1	Ø2	L2	L1	Z	Artikel-Nr. *Article No.*
1,75	M12 (1,5xD)		9	10	20,12	100	3	802.120.0019
1,75	M12 (2xD)		9	10	27,12	100	3	802.120.0020
1,75	M12 (2,5xD)		9	10	32,37	100	3	802.120.0021
1,75	M12 (3xD)		9	10	37,62	100	3	802.120.0022
2,00	M14 (1,5xD)	≥ M18	10	10	23,00	100	3	802.140.0023
2,00	M14 (2xD)	≥ M18	10	10	31,00	100	3	802.140.0024
2,00	M16 (1,5xD)	≥ M18	12	12	27,00	100	4	802.160.0025
2,00	M16 (2xD)	≥ M18	12	12	35,00	100	4	802.160.0026
2,00	M16 (2,5xD)	≥ M18	12	12	43,00	100	4	802.160.0027
2,00	M16 (3xD)	≥ M18	12	12	51,00	100	3	802.160.0028
2,00		≥ M20	16	16	39,00	120	5	802.160.0029
2,50	M20 (1,5xD)		14	14	33,75	100	4	802.200.0030
2,50	M20 (2xD)		14	14	43,75	100	4	802.200.0031
2,50	M20 (2,5xD)		15	16	53,75	120	4	802.200.0032
3,00	M24 (1,5xD)	≥ M30	16	16	40,50	120	3	802.240.0033
3,00	M24 (2xD)	≥ M30	16	16	52,50	120	3	802.240.0034
3,50	M30 (1,5xD)		20	20	50,75	150	3	802.300.0035
3,50	M30 (2xD)		20	20	64,75	150	3	802.300.0036

TIALCN | HA | Werks-norm | Universal | 60°

Artikel-Nr.
803...



VHM – Innengewindefräser[IK]

Solid carbide internal-thread cutter

TYP N

Steigung mm *Pitch mm*	Einsatz-bereich *M coarse*	Größe *M fine*	Ø1	Ø2	L2	L1	Z	Artikel-Nr. *Article No.*
1,00	M8 (2xD)	≥ M10	8,0	8	17,5	76	4	803.100.0001
1,25	M10 (2xD)	≥ M10	6,0	6	18,12	76	3	803.125.0002
1,50		≥ M12	7,5	8	21,75	76	3	803.150.0003
1,50	M12 (2xD)	≥ M16	12,0	12	29,25	100	4	803.150.0004
1,75	M12 (2xD)		8,0	8	27,12	76	3	803.175.0005
1,75	M14 (2xD)		9,0	10	27,12	100	3	803.175.0006
2,00	M16 (2xD)	≥ M18	10,0	10	31,00	100	3	803.200.0007
2,00		≥ M18	12,0	12	35,00	100	4	803.200.0008
2,00		≥ M20	16,0	16	39,00	100	5	803.200.0009

Steigung mm Pitch TPI	Norm			L2	L1	Z	Artikel-Nr. Article No.
28,00	G 1/8	6,0	6	10,43	76	3	803.200.0010
19,00	G 1/4 - 3/8	10,0	10	22,06	100	4	803.200.0011
14,00	G 1/2 - 7/8	12,0	12	28,12	100	4	803.200.0012
11,00	G 1 - 3	16,0	16	40,41	100	4	803.200.0013

TIALCN | HA | Werks-norm | Universal | 60° | 55°

Artikel-Nr.
804...

VHM – Einzahn Micro-Innengewindefräser

Solid carbide one tooth internal-thread cutter

TYP N | 3 | 15°

Einsatz-bereich *M coarse*	Größe *M fine*	UNC *UNF*		Ø1	Ø2	L2	L1	Z	Artikel-Nr. *Article No.*
M2-M2,2	M1,8-M2	No.2	(1,5xD)	1,5	3	3,8	39	3	804.222.0001
M2-M2,2	M1,8-M2	No.2	(2,25xD)	1,5	3	5,4	39	3	804.222.0002
M2,5	M2,2	No.3	(1,5xD)	1,9	3	4,3	39	3	804.250.0003
M2,5	M2,2	No.3	(2,25xD)	1,9	3	6,2	39	3	804.250.0004
	M2,5	No.4	(1,5xD)	2,1	3	4,9	39	3	804.250.0005
	M2,5	No.4	(2,25xD)	2,1	3	7,1	39	3	804.250.0006
M3		No.5	(1,5xD)	2,3	3	5,4	39	3	804.300.0007
M3		No.5	(2,25xD)	2,3	3	7,8	39	3	804.300.0008
M3,5	M3	No.6	(1,5xD)	2,6	3	6,1	39	3	804.350.0009
M3,5	M3	No.6	(2,25xD)	2,6	3	8,7	39	3	804.350.0010
M4	M3,5-M4	No.8	(1,5xD)	3,0	3	7,1	39	3	804.400.0011
M4	M3,5-M4	No.8	(2,25xD)	3,0	3	10,2	39	3	804.400.0012
M4,5	M4,5	No.10	(1,5xD)	3,6	4	8,3	50	3	804.450.0013
M4,5	M4,5	No.10	(2,25xD)	3,6	4	12,0	50	3	804.450.0014
M5-M6	M5-M6	No.12	(1,5xD)	4,0	4	10,0	50	3	804.500.0015
M5-M6	M5-M6	No.12	(2,25xD)	4,0	4	14,5	50	3	804.600.0016

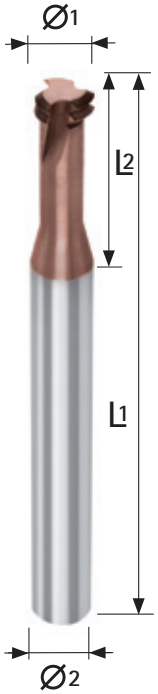
TIALCN | HA | Werks-norm | Universal | 60°

VHM – Doppelzahn Micro-Innengewindefräser

Solid carbide double teeth internal-thread cutter

Artikel-Nr.
801...

TYP N



Steigung mm *Pitch mm*	Einsatz-bereich *M coarse*	Ø1	Ø2	L2	L1	Z	Artikel-Nr. *Article No.*
0,40	M2 (1,5xD)	1,5	3	3,4	39	3	801.040.0001
0,40	M2 (2,25xD)	1,5	3	5,0	39	3	801.040.0002
0,45	M2,2 (1,5xD)	1,6	3	3,8	39	3	801.045.0003
0,45	M2,2 (2,25xD)	1,6	3	5,4	39	3	801.045.0004
0,45	M2,5 (1,5xD)	1,9	3	4,2	39	3	801.045.0005
0,45	M2,5 (2,25xD)	1,9	3	6,1	39	3	801.045.0006
0,50	M3 (1,5xD)	2,3	3	5,0	39	3	801.050.0007
0,50	M3 (2,25xD)	2,3	3	7,3	39	3	801.050.0008
0,60	M3,5 (1,5xD)	2,6	3	6,0	39	3	801.060.0009
0,60	M3,5 (2,25xD)	2,6	3	8,5	39	3	801.060.0010
0,70	M4 (1,5xD)	3,0	3	7,0	39	3	801.070.0011
0,70	M4 (2,25xD)	3,0	3	10,0	39	3	801.070.0012
0,80	M5 (1,5xD)	3,8	4	9,0	50	3	801.080.0013
0,80	M5 (2,25xD)	3,8	4	12,1	50	3	801.080.0014
1,00	M6 (1,5xD)	4,5	6	10,0	63	3	801.100.0015
1,00	M6 (2,25xD)	4,5	6	14,5	63	3	801.100.0016
1,25	M8 (1,5xD)	6,0	6	14,0	63	3	801.125.0017
1,25	M8 (2,25xD)	6,0	6	19,3	63	3	801.125.0018

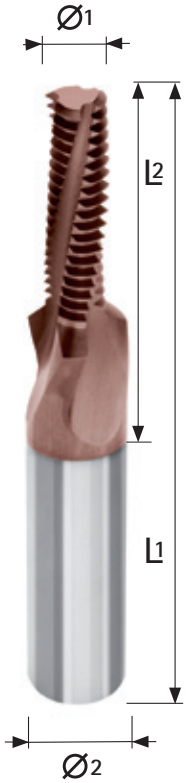
TIALCN | HA | Werks-norm | Universal | 60°

VHM – Innengewindefräser mit Senkstufe *Solid*

Solid carbide thread cutter

Artikel-Nr.
806...

TYP N



Steigung mm *Pitch mm*	Einsatz-bereich *M coarse*	Ø1	Ø2	L2	L3	L1	Z	Artikel-Nr. *Article No.*
0,50	M3 (1,5xD)	2,3	6	5,25	5,85	63	3	806.050.0001
0,50	M3 (2xD)	2,3	6	6,75	7,35	63	3	806.050.0002
0,50	M3 (2,5xD)	2,3	6	8,25	8,85	63	3	806.050.0003
0,50	M3 (3xD)	2,3	6	9,75	10,35	63	3	806.050.0004
0,70	M4 (1,5xD)	3,0	6	7,35	8,2	63	3	806.070.0005
0,70	M4 (2xD)	3,0	6	8,75	9,6	63	3	806.070.0006
0,70	M4 (2,5xD)	3,0	6	10,85	11,7	63	3	806.070.0007
0,70	M4 (3xD)	3,0	6	12,95	13,8	63	3	806.070.0008
0,80	M5 (1,5xD)	3,8	6	8,40	9,4	63	3	806.080.0009
0,80	M5 (2xD)	3,8	6	10,80	11,8	63	3	806.080.0010
0,80	M5 (2,5xD)	3,8	6	13,20	14,2	63	3	806.080.0011
0,80	M5 (3xD)	3,8	6	16,40	17,4	63	3	806.080.0012
1,00	M6 (1,5xD)	4,5	8	10,50	11,75	63	3	806.100.0013
1,00	M6 (2xD)	4,5	8	13,50	14,75	63	3	806.100.0014
1,00	M6 (2,5xD)	4,5	8	16,50	17,75	63	3	806.100.0015
1,25	M8 (1,5xD)	6,0	10	14,37	16	76	3	806.125.0016
1,25	M8 (2xD)	6,0	10	18,12	19,75	76	3	806.125.0017
1,25	M8 (2,5xD)	6,0	10	21,87	23,5	76	3	806.125.0018
1,50	M10 (1,5xD)	7,5	12	17,25	19,25	83	3	806.150.0019
1,50	M10 (2xD)	7,5	12	21,75	23,75	83	3	806.150.0020
1,50	M10 (2,5xD)	7,5	12	27,75	29,75	83	3	806.150.0021
1,75	M12 (1,5xD)	9,0	14	20,12	22,5	89	3	806.175.0022
1,75	M12 (2xD)	9,0	14	27,12	29,5	89	3	806.175.0023
1,75	M12 (2,5xD)	9,0	14	32,37	34,75	89	3	806.175.0024

TIALCN | HA | Werks-norm | Universal | 60°

Qualität

Mehr Qualität – nicht nur bei unseren Werkzeugen. Auch bei unseren Problemlösungen, bei der Beratung und Betreuung unserer Kunden. Erwarten Sie von uns in Zukunft noch mehr persönliches Engagement, noch mehr Flexibilität. Wir haben die Zahl unserer technischen Berater im Bereich Technik und Service erweitert. Während unserer Arbeitszeiten erreichen Sie bei uns jederzeit einen kompetenten Gesprächspartner!

Service

Mehr Service für Sie! Kompetente und aktuelle Informationen zu technischen und kaufmännischen Themen. Professionelle Verkaufsunterlagen für Ihren Erfolg. Kürzere Lieferzeiten! Wir optimieren ständig.
Ein wichtiger Schritt dabei: Unsere aktuellen Neu-Investitionen in Fertigungshallen, Maschinen und Bürogebäude zur Sicherung unserer Lieferbereitschaft.

Wert

Mehr Wert! Herausragende Werkzeugqualität garantiert für die wirtschaftliche Fertigung höchster Produktqualität. Wir liefern diese Qualität: Schnell. Ausdauernd. Präzise! Und wir bauen unseren Qualitäts-Vorsprung weiterhin aus: mit innovativer Technik und innovativen Serviceleistungen für Sie!

Quality

More quality – not even for our tools. Also as far as problem solution in consulting and serving of our customers is concerned. In the future you can expect even more personal engagement and flexibility.
We extended the number of our technical adviser. During our working time you can contact a competent conversational partner at any time!

Service

More service for you! Competent and current information to all technical and commercial themes. Professional sales documents for your success. Shorter delivery times! We are optimizing constantly.
An important step therefor: Our current new investments in production halls, machines and office buildings to ensure our readiness to deliver.

Value

More value! Best tool quality guarantees the economical production of highest product quality. We deliver this quality: Fast. Endurance. Precise! And we still continue to extend our advance in quality: with innovative technique and innovative services for you!

VHM-Bohrer / *Solid carbide drills*

Standradbohrer	*Standard drills*
Zentrierbohrer	*Center drills*
Spezialbohrer	*Special drills*

Unsere Präzision ist die Basis Ihrer Qualität!
Our precision is the basis of your quality!

VHM – Hochleistungsbohrer 4xD HPC

Solid carbide drill with high performance

NEW

Artikel-Nr.
810...

TYP H | 140° | 2 | o. IK | HPC

Ø1	Ø2	L2	L1	Artikel-Nr. *Article No.*
2,8	6	20	62	810.028.00
3,0	6	20	62	810.030.00
3,3	6	20	62	810.033.00
3,4	6	20	62	810.034.00
3,5	6	20	62	810.035.00
3,8	6	24	66	810.038.00
4,0	6	24	66	810.040.00
4,2	6	24	66	810.042.00
4,3	6	24	66	810.043.00
4,5	6	24	66	810.045.00
4,8	6	28	66	810.048.00
5,0	6	28	66	810.050.00
5,2	6	28	66	810.052.00
5,5	6	28	66	810.055.00
5,8	6	28	66	810.058.00
6,0	6	28	66	810.060.00
6,5	8	34	79	810.065.00
6,8	8	34	79	810.068.00
7,0	8	34	79	810.070.00
7,2	8	41	79	810.082.00
7,8	8	41	79	810.078.00
8,0	8	41	79	810.080.00

Ø1	Ø2	L2	L1	Artikel-Nr. *Article No.*
8,5	10	47	89	810.085.00
8,7	10	47	89	810.087.00
8,8	10	47	89	810.088.00
9,0	10	47	89	810.090.00
9,8	10	47	89	810.098.00
10,0	10	47	89	810.100.00
10,2	12	55	102	810.102.00
10,3	12	55	102	810.103.00
10,5	12	55	102	810.105.00
10,8	12	55	102	810.108.00
11,0	12	55	102	810.110.00
11,8	12	55	102	810.118.00
12,0	12	55	102	810.120.00
12,5	107	60	107	810.125.00
12,8	107	60	107	810.128.00
13,0	107	60	107	810.130.00
13,8	107	60	107	810.138.00
14,0	107	60	107	810.140.00
14,8	115	65	115	810.148.00
15,0	115	65	115	810.150.00
15,8	115	65	115	810.158.00
16,0	115	65	115	810.160.00

naco | HA | Werks-norm | 4xD | HRC 45-55 | Universal

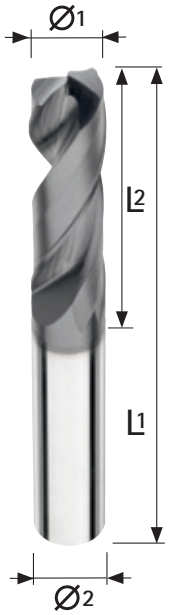
VHM – Spiralbohrer extra kurz

Solid carbide drill extra short

Artikel-Nr.

303...

TYP N-H | 140° | 2 | 30° | o. IK



Schaftdurchmesser = Schneidendurchmesser

Shank ∅ = Drill ∅

Ø1	L2	L1	Artikel-Nr. *Article No.*
3,0	16	46	303.030.00
3,1	18	49	303.031.00
3,2	18	49	303.032.00
3,3	18	49	303.033.00
3,4	20	52	303.034.00
3,5	20	52	303.035.00
3,6	20	52	303.036.00
3,7	20	52	303.037.00
3,8	22	55	303.038.00
3,9	22	55	303.039.00
4,0	22	55	303.040.00
4,1	22	55	303.041.00
4,2	22	55	303.042.00
4,3	24	58	303.043.00
4,4	24	58	303.044.00
4,5	24	58	303.045.00
4,6	24	58	303.046.00
4,7	24	58	303.047.00
4,8	26	62	303.048.00
4,9	26	62	303.049.00
5,0	26	62	303.050.00
5,1	26	62	303.051.00
5,2	26	62	303.052.00
5,3	26	62	303.053.00
5,4	28	66	303.054.00
5,5	28	66	303.055.00
5,6	28	66	303.056.00
5,7	28	66	303.057.00
5,8	28	66	303.058.00
5,9	28	66	303.059.00
6,0	28	66	303.060.00

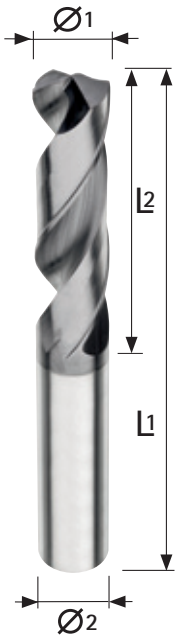
Ø1	L2	L1	Artikel-Nr. *Article No.*
6,1	31	70	303.061.00
6,2	31	70	303.062.00
6,3	31	70	303.063.00
6,4	31	70	303.064.00
6,5	31	70	303.065.00
6,6	31	70	303.066.00
6,7	31	70	303.067.00
6,8	34	74	303.068.00
6,9	34	74	303.069.00
7,0	34	74	303.070.00
7,1	34	74	303.071.00
7,2	34	74	303.072.00
7,3	34	74	303.073.00
7,4	34	74	303.074.00
7,5	34	74	303.075.00
7,6	37	79	303.076.00
7,7	37	79	303.077.00
7,8	37	79	303.078.00
7,9	37	79	303.079.00
8,0	37	79	303.080.00
8,1	37	79	303.081.00
8,2	37	79	303.082.00
8,3	37	79	303.083.00
8,4	37	79	303.084.00
8,5	37	79	303.085.00
8,6	40	84	303.086.00
8,7	40	84	303.087.00
8,8	40	84	303.088.00
8,9	40	84	303.089.00
9,0	40	84	303.090.00
9,1	40	84	303.091.00

Ø1	L2	L1	Artikel-Nr. *Article No.*
9,2	40	84	303.092.00
9,3	40	84	303.093.00
9,4	40	84	303.094.00
9,5	40	84	303.095.00
9,6	43	89	303.096.00
9,7	43	89	303.097.00
9,8	43	89	303.098.00
9,9	43	89	303.099.00
10,0	43	89	303.100.00
10,2	43	89	303.102.00
10,3	43	89	303.103.00
10,5	43	89	303.105.00
11,0	47	95	303.110.00
11,5	47	95	303.115.00
11,8	47	95	303.118.00
12,0	51	102	303.120.00
13,0	51	102	303.130.00
13,5	54	107	303.135.00
14,0	54	107	303.140.00
14,5	56	111	303.145.00
15,0	56	111	303.150.00
15,5	58	115	303.155.00
16,0	58	115	303.160.00
16,5	60	119	303.165.00
17,0	60	119	303.170.00
17,5	62	123	303.175.00
18,0	62	123	303.180.00
18,5	64	127	303.185.00
19,0	64	127	303.190.00
19,5	66	131	303.195.00
20,0	66	131	303.200.00

TIALN | HA | Universal

VHM – Spiralbohrer extra kurz

Solid carbide drill extra short



Ø1	Ø2	L2	L1	NL	Artikel-Nr. 503... Artikel-Nr. *Article No.*	Artikel-Nr. 703... Artikel-Nr. *Article No.*
3,0	6	20	62	14	503.030.00	703.030
3,1	6	20	62	14	503.031.00	703.031
3,2	6	20	62	14	503.032.00	703.032
3,3	6	20	62	14	503.033.00	703.033
3,4	6	20	62	14	503.034.00	703.034
3,5	6	20	62	14	503.035.00	703.035
3,6	6	20	62	14	503.036.00	703.036
3,7	6	20	62	14	503.037.00	703.037
3,8	6	24	66	17	503.038.00	703.038
3,9	6	24	66	17	503.039.00	703.039
4,0	6	24	66	17	503.040.00	703.040
4,1	6	24	66	17	503.041.00	703.041
4,2	6	24	66	17	503.042.00	703.042
4,3	6	24	66	17	503.043.00	703.043
4,4	6	24	66	17	503.044.00	703.044
4,5	6	24	66	17	503.045.00	703.045
4,6	6	24	66	17	503.046.00	703.046
4,7	6	24	66	17	503.047.00	703.047
4,8	6	28	66	20	503.048.00	703.048
4,9	6	28	66	20	503.049.00	703.049
5,0	6	28	66	20	503.050.00	703.050
5,1	6	28	66	20	503.051.00	703.051
5,2	6	28	66	20	503.052.00	703.052
5,3	6	28	66	20	503.053.00	703.053
5,4	6	28	66	20	503.054.00	703.054

Fortsetzung nächste Seite / to be continued

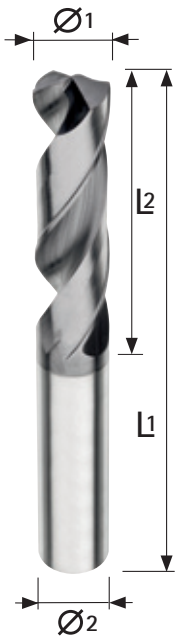
TYP N-H · 140° · 2 · o. IK

TIALN · HA · 3xD · Universal

Fortsetzung / continuation

VHM – Spiralbohrer extra kurz

Solid carbide drill extra short



Ø1	Ø2	L2	L1	NL	Artikel-Nr. 503... Artikel-Nr. *Article No.*	Artikel-Nr. 703... Artikel-Nr. *Article No.*
5,5	6	28	66	20	503.055.00	703.055
5,6	6	28	66	20	503.056.00	703.056
5,7	6	28	66	20	503.057.00	703.057
5,8	6	28	66	20	503.058.00	703.058
5,9	6	28	66	20	503.059.00	703.059
6,0	6	28	66	20	503.060.00	703.060
6,1	8	34	79	24	503.061.00	703.061
6,2	8	34	79	24	503.062.00	703.062
6,3	8	34	79	24	503.063.00	703.063
6,4	8	34	79	24	503.064.00	703.064
6,5	8	34	79	24	503.065.00	703.065
6,6	8	34	79	24	503.066.00	703.066
6,7	8	34	79	24	503.067.00	703.067
6,8	8	34	79	24	503.068.00	703.068
6,9	8	34	79	24	503.069.00	703.069
7,0	8	34	79	24	503.070.00	703.070
7,1	8	41	79	29	503.071.00	703.071
7,2	8	41	79	29	503.072.00	703.072
7,3	8	41	79	29	503.073.00	703.073
7,4	8	41	79	29	503.074.00	703.074
7,5	8	41	79	29	503.075.00	703.075
7,6	8	41	79	29	503.076.00	703.076
7,7	8	41	79	29	503.077.00	703.077
7,8	8	41	79	29	503.078.00	703.078
7,9	8	41	79	29	503.079.00	703.079

TYP N-H · 140° · 2 · o. IK

TYP N-H · 140° · 2 · IK

Fortsetzung nächste Seite / to be continued

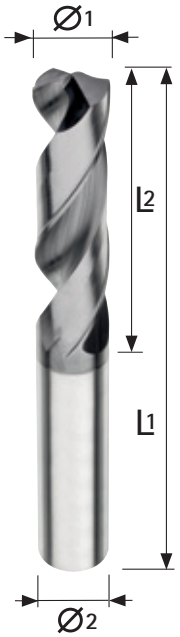
TIALN · HA · 3xD · Universal

TIALN · HA · 3xD · Universal

Fortsetzung / continuation

VHM – Spiralbohrer extra kurz

Solid carbide drill extra short



Ø1	Ø2	L2	L1	NL	Artikel-Nr. 503... Article No.	Artikel-Nr. 703... Article No.
8,0	8	41	79	29	503.080.00	703.080
8,1	10	47	89	35	503.081.00	703.081
8,2	10	47	89	35	503.082.00	703.082
8,3	10	47	89	35	503.083.00	703.083
8,4	10	47	89	35	503.084.00	703.084
8,5	10	47	89	35	503.085.00	703.085
8,6	10	47	89	35	503.086.00	703.086
8,7	10	47	89	35	503.087.00	703.087
8,8	10	47	89	35	503.088.00	703.088
8,9	10	47	89	35	503.089.00	703.089
9,0	10	47	89	35	503.090.00	703.090
9,1	10	47	89	35	503.091.00	703.091
9,2	10	47	89	35	503.092.00	703.092
9,3	10	47	89	35	503.093.00	703.093
9,4	10	47	89	35	503.094.00	703.094
9,5	10	47	89	35	503.095.00	703.095
9,6	10	47	89	35	503.096.00	703.096
9,7	10	47	89	35	503.097.00	703.097
9,8	10	47	89	35	503.098.00	703.098
9,9	10	47	89	35	503.099.00	703.099
10,0	10	47	89	35	503.100.00	703.100
10,1	12	55	102	40	503.101.00	703.101
10,2	12	55	102	40	503.102.00	703.102
10,3	12	55	102	40	503.103.00	703.103

TYP N-H
140°
2
o. IK

TYP N-H
140°
2
IK

Fortsetzung nächste Seite / to be continued

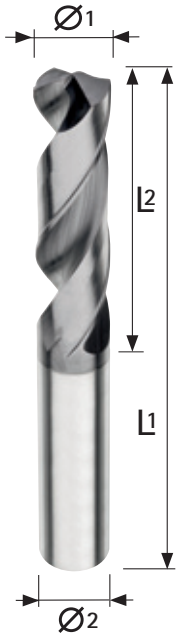
TIALN HA 3xD Universal

TIALN HA 3xD Universal

Fortsetzung / continuation

VHM – Spiralbohrer extra kurz

Solid carbide drill extra short



Ø1	Ø2	L2	L1	NL	Artikel-Nr. 503... Article No.	Artikel-Nr. 703... Article No.
10,4	12	55	102	40	503.104.00	703.104
10,5	12	55	102	40	503.105.00	703.105
10,6	12	55	102	40	503.106.00	703.106
10,7	12	55	102	40	503.107.00	703.107
10,8	12	55	102	40	503.108.00	703.108
10,9	12	55	102	40	503.109.00	703.109
11,0	12	55	102	40	503.110.00	703.110
11,1	12	55	102	40	503.111.00	703.111
11,2	12	55	102	40	503.112.00	703.112
11,3	12	55	102	40	503.113.00	703.113
11,4	12	55	102	40	503.114.00	703.114
11,5	12	55	102	40	503.115.00	703.115
11,6	12	55	102	40	503.116.00	703.116
11,7	12	55	102	40	503.117.00	703.117
11,8	12	55	102	40	503.118.00	703.118
11,9	12	55	102	40	503.119.00	703.119
12,0	12	55	102	40	503.120.00	703.120
12,3	14	60	107	43	503.123.00	703.123
12,5	14	60	107	43	503.125.00	703.125
12,8	14	60	107	43	503.128.00	703.128
13,0	14	60	107	43	503.130.00	703.130
13,5	14	60	107	43	503.135.00	703.135
13,8	14	60	107	43	503.138.00	703.138
14,0	14	60	107	43	503.140.00	703.140
14,2	16	65	115	45	503.142.00	
14,5	16	65	115	45	503.145.00	703.145

Fortsetzung nächste Seite / to be continued

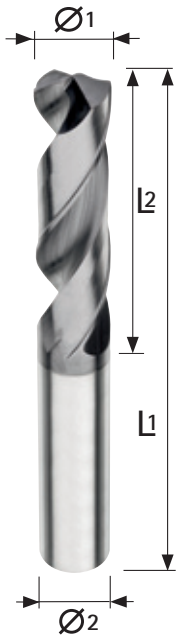
TIALN HA 3xD Universal

TIALN HA 3xD Universal

Fortsetzung / continuation

VHM – Spiralbohrer extra kurz

Solid carbide drill extra short



Ø1	Ø2	L2	L1	NL	Artikel-Nr. 503... Article No.	Artikel-Nr. 703... Article No.
14,8	16	65	115	45	503.148.00	703.148
15,0	16	65	115	45	503.150.00	703.150
15,5	16	65	115	45	503.155.00	703.155
15,8	16	65	115	45	503.158.00	703.158
16,0	16	65	115	45	503.160.00	703.160
16,5	18	73	123	51	503.165.00	703.165
16,8	18	73	123	51	503.168.00	703.168
17,0	18	73	123	51	503.170.00	703.170
17,5	18	73	123	51	503.175.00	703.175
17,8	18	73	123	51	503.178.00	703.178
18,0	18	73	123	51	503.180.00	703.180
18,5	20	79	131	55	503.185.00	703.185
19,0	20	79	131	55	503.190.00	703.190
19,5	20	79	131	55	503.195.00	703.195
19,8	20	79	131	55	503.198.00	703.198
20,0	20	79	131	55	503.200.00	703.200

TYP N-H
140°
2
o. IK

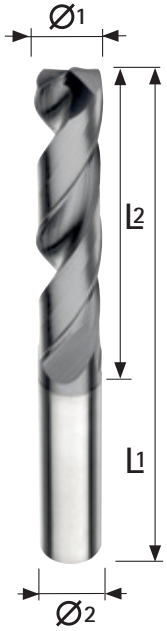
TYP N-H
140°
2
IK

TIALN HA 3xD Universal

TIALN HA 3xD Universal

VHM – Spiralbohrer 5xD

Solid carbide drill



Ø1	Ø2	L2	L1	NL	Artikel-Nr. 505... Artikel-Nr. Article No.	Artikel-Nr. 705... Artikel-Nr. Article No.	Artikel-Nr. 704... Artikel-Nr. Article No.
0,50	3	10	50		505.005		
0,60	3	10	50		505.006		
0,70	3	10	50		505.007		
0,80	3	10	50		505.008		
0,90	3	10	50		505.009		
1,00	3	10	55	7	505.010	705.010	704.010.00
1,10	3	12	55	10	505.011	705.011	704.011.00
1,20	3	12	55	10	505.012	705.012	704.012.00
1,30	3	12	55	10	505.013	705.013	704.013.00
1,40	3	12	55	10	505.014	705.014	704.014.00
1,50	3	12	55	10	505.015	705.015	704.015.00
1,60	3	16	55	13	505.016	705.016	704.016.00
1,70	3	16	55	13	505.017	705.017	704.017.00
1,80	3	16	55	13	505.018	705.018	704.018.00
1,90	3	16	55	13	505.019	705.019	704.019.00
2,00	3	16	57	13	505.020	705.020	704.020.00
2,10	3	21	57	16	505.021	705.021	704.021.00
2,20	3	21	57	16	505.022	705.022	704.022.00
2,30	3	21	57	16	505.023	705.023	704.023.00
2,40	3	21	57	16	505.024	705.024	704.024.00
2,50	3	21	57	16	505.025	705.025	704.025.00
2,60	3	21	57	19	505.026	705.026	704.026.00
2,70	3	21	57	19	505.027	705.027	704.027.00
2,75	3	21	57	19		705.275	
2,80	3	21	57	19	505.028	705.028	704.028.00
2,90	3	21	57	18	505.029	705.029	704.029.00

TOP PRODUCT

TYP N-H | 140° | 2 | o. IK

TYP N-H | 140° | 2 | IK

TYP N-W | 140° | 2 | IK

Fortsetzung nächste Seite / to be continued

TIALN | HA | 5xD | Universal

TIALN | HA | 5xD | Universal

ALTIN | HA | 5xD | INOX VA | Universal

Fortsetzung / continuation

VHM – Spiralbohrer 5xD

Solid carbide drill

Ø1	Ø2	L2	L1	NL	Artikel-Nr. 505... Artikel-Nr. *Article No.*	Artikel-Nr. 705... Artikel-Nr. *Article No.*	Artikel-Nr. 704... Artikel-Nr. *Article No.*
3,00	6	28	66	23	505.030	705.030	704.030.00
3,10	6	28	66	23	505.031	705.031	704.031.00
3,20	6	28	66	23	505.032	705.032	704.032.00
3,30	6	28	66	23	505.033	705.033	704.033.00
3,40	6	28	66	23	505.034	705.034	704.034.00
3,50	6	28	66	23	505.035	705.035	704.035.00
3,60	6	28	66	23	505.036	705.036	704.036.00
3,65	6	28	66	23		705.365	
3,70	6	28	66	23	505.037	705.037	704.037.00
3,80	6	36	74	29	505.038	705.038	704.038.00
3,90	6	36	74	29	505.039	705.039	704.039.00
4,00	6	36	74	29	505.040	705.040	704.040.00
4,10	6	36	74	29	505.041	705.041	704.041.00
4,20	6	36	74	29	505.042	705.042	704.042.00
4,30	6	36	74	29	505.043	705.043	704.043.00
4,40	6	36	74	29	505.044	705.044	704.044.00
4,50	6	36	74	29	505.045	705.045	704.045.00
4,60	6	36	74	29	505.046	705.046	704.046.00
4,65	6	36	74	29	505.465	705.465	704.465.00
4,70	6	36	74	29	505.047	705.047	704.047.00
4,80	6	44	82	35	505.048	705.048	704.048.00
4,90	6	44	82	35	505.049	705.049	704.049.00
5,00	6	44	82	35	505.050	705.050	704.050.00
5,10	6	44	82	35	505.051	705.051	704.051.00
5,20	6	44	82	35	505.052	705.052	704.052.00
5,30	6	44	82	35	505.053	705.053	704.053.00

TOP PRODUCT

TYP N-H, 140°, 2, o. IK

TYP N-H, 140°, 2, IK

TYP N-W, 140°, 2, IK

Fortsetzung nächste Seite / to be continued

TIALN HA 5xD Universal

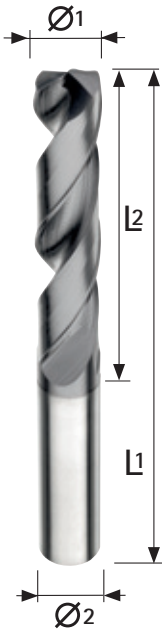
TIALN HA 5xD Universal

ALTIN HA 5xD INOX VA Universal

Fortsetzung / continuation

VHM – Spiralbohrer 5xD

Solid carbide drill



TOP PRODUCT

Ø1	Ø2	L2	L1	NL	Artikel-Nr. 505... Artikel-Nr. *Article No.*	Artikel-Nr. 705... Artikel-Nr. *Article No.*	Artikel-Nr. 704... Artikel-Nr. *Article No.*
5,40	6	44	82	35	505.054	705.054	704.054.00
5,50	6	44	82	35	505.055	705.055	704.055.00
5,55	6	44	82	35	505.555	705.555	704.555.00
5,60	6	44	82	35	505.056	705.056	704.056.00
5,65	6	44	82	35		705.565	
5,70	6	44	82	35	505.057	705.057	704.057.00
5,80	6	44	82	35	505.058	705.058	704.058.00
5,90	6	44	82	35	505.059	705.059	704.059.00
6,00	6	44	82	35	505.060	705.060	704.060.00
6,10	8	53	91	43	505.061	705.061	704.061.00
6,20	8	53	91	43	505.062	705.062	704.062.00
6,30	8	53	91	43	505.063	705.063	704.063.00
6,40	8	53	91	43	505.064	705.064	704.064.00
6,50	8	53	91	43	505.065	705.065	704.065.00
6,60	8	53	91	43	505.066	705.066	704.066.00
6,70	8	53	91	43	505.067	705.067	704.067.00
6,80	8	53	91	43	505.068	705.068	704.068.00
6,90	8	53	91	43	505.069	705.069	704.069.00
7,00	8	53	91	43	505.070	705.070	704.070.00
7,10	8	53	91	43	505.071	705.071	704.071.00
7,20	8	53	91	43	505.072	705.072	704.072.00
7,30	8	53	91	43	505.073	705.073	704.073.00
7,40	8	53	91	43	505.074	705.074	704.074.00
7,50	8	53	91	43	505.075	705.075	704.075.00
7,60	8	53	91	43	505.076	705.076	704.076.00
7,65	8	53	91	43		705.765	
7,70	8	53	91	43	505.077	705.077	704.077.00

TYP N-H, 140°, 2, o. IK

TYP N-H, 140°, 2, IK

TYP N-W, 140°, 2, IK

Fortsetzung nächste Seite / to be continued

TIALN HA 5xD Universal

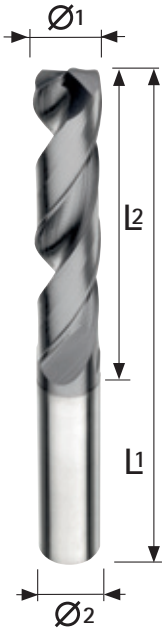
TIALN HA 5xD Universal

ALTIN HA 5xD INOX VA Universal

Fortsetzung / continuation

VHM – Spiralbohrer 5xD

Solid carbide drill



Ø1	Ø2	L2	L1	NL	Artikel-Nr. 505... Artikel-Nr. *Article No.*	Artikel-Nr. 705... Artikel-Nr. *Article No.*	Artikel-Nr. 704... Artikel-Nr. *Article No.*
7,80	8	53	91	43	505.078	705.078	704.078.00
7,90	8	53	91	43	505.079	705.079	704.079.00
8,00	8	53	91	43	505.080	705.080	704.080.00
8,10	10	61	103	49	505.081	705.081	704.081.00
8,20	10	61	103	49	505.082	705.082	704.082.00
8,30	10	61	103	49	505.083	705.083	704.083.00
8,40	10	61	103	49	505.084	705.084	704.084.00
8,50	10	61	103	49	505.085	705.085	704.085.00
8,60	10	61	103	49	505.086	705.086	704.086.00
8,70	10	61	103	49	505.087	705.087	704.087.00
8,80	10	61	103	49	505.088	705.088	704.088.00
8,90	10	61	103	49	505.089	705.089	704.089.00
9,00	10	61	103	49	505.090	705.090	704.090.00
9,10	10	61	103	49	505.091	705.091	704.091.00
9,20	10	61	103	49	505.092	705.092	704.092.00
9,30	10	61	103	49	505.093	705.093	704.093.00
9,40	10	61	103	49	505.094	705.094	704.094.00
9,50	10	61	103	49	505.095	705.095	704.095.00
9,55	10	61	103	49		705.955	
9,60	10	61	103	49	505.096	705.096	704.096.00
9,70	10	61	103	49	505.097	705.097	704.097.00
9,80	10	61	103	49	505.098	705.098	704.098.00
9,90	10	61	103	49	505.099	705.099	704.099.00
10,00	10	61	103	49	505.100	705.100	704.100.00
10,10	12	71	118	56	505.101	705.101	704.101.00
10,20	12	71	118	56	505.102	705.102	704.102.00

TOP PRODUCT

TYP N-H, 140°, 2, o. IK

TYP N-H, 140°, 2, IK

TYP N-W, 140°, 2, IK

Fortsetzung nächste Seite / to be continued

TIALN HA 5xD Universal

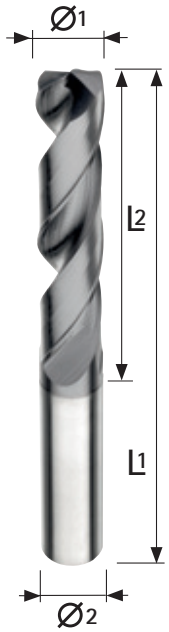
TIALN HA 5xD Universal

ALTIN HA 5xD INOX VA Universal

Fortsetzung / continuation

VHM – Spiralbohrer 5xD

Solid carbide drill



Ø1	Ø2	L2	L1	NL	Artikel-Nr. 505... Artikel-Nr. Article No.	Artikel-Nr. 705... Artikel-Nr. Article No.	Artikel-Nr. 704... Artikel-Nr. Article No.
10,30	12	71	118	56	505.103	705.103	704.103.00
10,40	12	71	118	56	505.104	705.104	704.104.00
10,50	12	71	118	56	505.105	705.105	704.105.00
10,60	12	71	118	56	505.106	705.106	704.106.00
10,70	12	71	118	56	505.107	705.107	704.107.00
10,80	12	71	118	56	505.108	705.108	704.108.00
10,90	12	71	118	56	505.109	705.109	704.109.00
11,00	12	71	118	56	505.110	705.110	704.110.00
11,10	12	71	118	56	505.111	705.111	704.111.00
11,20	12	71	118	56	505.112	705.112	704.112.00
11,30	12	71	118	56	505.113	705.113	704.113.00
11,40	12	71	118	56	505.114	705.114	704.114.00
11,50	12	71	118	56	505.115	705.115	704.115.00
11,55	12	71	118	56		705.1155	
11,60	12	71	118	56	505.116	705.116	704.116.00
11,70	12	71	118	56	505.117	705.117	704.117.00
11,80	12	71	118	56	505.118	705.118	704.118.00
11,90	12	71	118	56	505.119	705.119	704.119.00
12,00	12	71	118	56	505.120	705.120	704.120.00
12,20	14	77	124	60	505.122	705.122	704.122.00
12,30	14	77	124	60	505.123	705.123	704.123.00
12,50	14	77	124	60	505.125	705.125	704.125.00
12,80	14	77	124	60	505.128	705.128	704.128.00
13,00	14	77	124	60	505.130	705.130	704.130.00
13,50	14	77	124	60	505.135	705.135	704.135.00
13,80	14	77	124	60	505.138	705.138	704.138.00

TOP PRODUCT

TYP N-H | 140° | 2 | o. IK

TYP N-H | 140° | 2 | IK

TYP N-W | 140° | 2 | IK

Fortsetzung nächste Seite / to be continued

TIALN | HA | 5xD | Universal

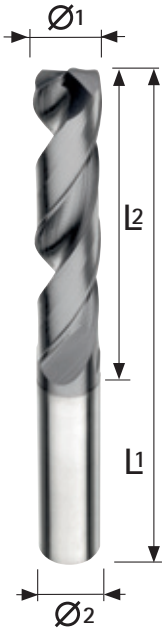
TIALN | HA | 5xD | Universal

ALTIN | HA | 5xD | INOX VA | Universal

Fortsetzung / continuation

VHM – Spiralbohrer 5xD

Solid carbide drill



Ø1	Ø2	L2	L1	NL	Artikel-Nr. 505... Article No.	Artikel-Nr. 705... Article No.	Artikel-Nr. 704... Article No.
14,0	14	77	124	60	505.140	705.140	704.140.00
14,5	16	83	133	63	505.145	705.145	704.145.00
14,8	16	83	133	63	505.148	705.148	704.148.00
15,0	16	83	133	63	505.150	705.150	704.150.00
15,1	16	83	133	63		705.151	
15,5	16	83	133	63	505.155	705.155	704.155.00
15,8	16	83	133	63	505.158	705.158	704.158.00
16,0	16	83	133	63	505.160	705.160	704.160.00
16,5	18	93	143	71	505.165	705.165	704.165.00
16,8	18	93	143	71	505.168	705.168	704.168.00
17,0	18	93	143	71	505.170	705.170	704.170.00
17,5	18	93	143	71	505.175	705.175	704.175.00
17,8	18	93	143	71	505.178	705.178	704.178.00
18,0	18	93	143	71	505.180	705.180	704.180.00
18,5	20	101	153	77	505.185	705.185	704.185.00
19,0	20	101	153	77	505.190	705.190	704.190.00
19,5	20	101	153	77	505.195	705.195	704.195.00
20,0	20	101	153	77	505.200	705.200	704.200.00

TOP PRODUCT

TYP N-H | 140° | 2 | o. IK

TYP N-H | 140° | 2 | IK

TYP N-W | 140° | 2 | IK

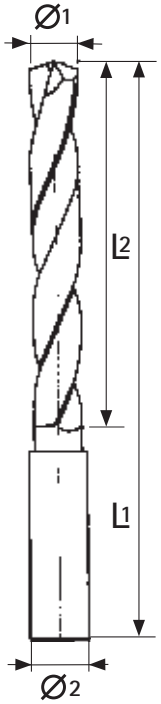
TIALN | HA | 5xD | Universal

TIALN | HA | 5xD | Universal

ALTIN | HA | 5xD | INOX VA | Universal

VHM–Hochleistungsspiralbohrer 5xD

Solid carbide high power drill



Ø1	Ø2	L2	L1	NL	Artikel-Nr. 805... TYP N-H Article No.	Artikel-Nr. 905... SPRINTMAX TYP N Article No.	Artikel-Nr. 845... SPEEDMAX TYP N Article No.	Artikel-Nr. 706... TYP W Article No.
3,0	6	28	66	23	805.030.00	905.030.00	845.030.00	706.030.00
3,1	6	28	66	23	805.031.00	905.031.00	845.031.00	706.031.00
3,2	6	28	66	23	805.032.00	905.032.00	845.032.00	706.032.00
3,3	6	28	66	23	805.033.00	905.033.00	845.033.00	706.033.00
3,4	6	28	66	23	805.034.00	905.034.00	845.034.00	706.034.00
3,5	6	28	66	23	805.035.00	905.035.00	845.035.00	706.035.00
3,6	6	28	66	23	805.036.00	905.036.00	845.036.00	706.036.00
3,7	6	28	66	23	805.037.00	905.037.00	845.037.00	706.037.00
3,8	6	36	74	29	805.038.00	905.038.00	845.038.00	706.038.00
3,9	6	36	74	29	805.039.00	905.039.00	845.039.00	706.039.00
4,0	6	36	74	29	805.040.00	905.040.00	845.040.00	706.040.00
4,1	6	36	74	29	805.041.00	905.041.00	845.041.00	706.041.00
4,2	6	36	74	29	805.042.00	905.042.00	845.042.00	706.042.00
4,3	6	36	74	29	805.043.00	905.043.00	845.043.00	706.043.00
4,4	6	36	74	29	805.044.00	905.044.00	845.044.00	706.044.00
4,5	6	36	74	29	805.045.00	905.045.00	845.045.00	706.045.00
4,6	6	36	74	29	805.046.00	905.046.00	845.046.00	706.046.00
4,6	6	36	74	29		905.465.00	845.465.00	
4,7	6	36	74	29	805.047.00	905.047.00	845.047.00	706.047.00
4,8	6	44	82	35	805.048.00	905.048.00	845.048.00	706.048.00
4,9	6	44	82	35	805.049.00	905.049.00	845.049.00	706.049.00
5,0	6	44	82	35	805.050.00	905.050.00	845.050.00	706.050.00
5,1	6	44	82	35	805.051.00	905.051.00	845.051.00	706.051.00
5,2	6	44	82	35	805.052.00	905.052.00	845.052.00	706.052.00
5,3	6	44	82	35	805.053.00	905.053.00	845.053.00	706.053.00
5,4	6	44	82	35	805.054.00	905.054.00	845.054.00	706.054.00
5,5	6	44	82	35	805.055.00	905.055.00	845.055.00	706.055.00
5,5	6	44	82	35		905.555.00		
5,6	6	44	82	35	805.056.00	905.056.00	845.056.00	706.056.00




Fortsetzung nächste Seite / to be continued

TIALN | Universal | 4-Fasen

nacro | Universal | 3-Fasen

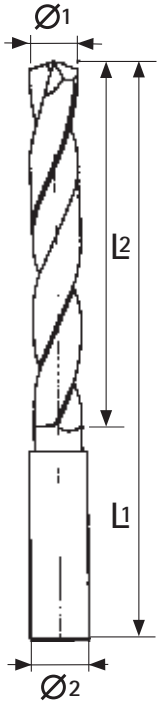
TIALN | INOX VA | Universal

ZrN | ALU NE | Kunststoff plastic

Fortsetzung / continuation

VHM–Hochleistungsspiralbohrer 5xD

Solid carbide high power drill



Ø1	Ø2	L2	L1	NL	Artikel-Nr. 805... Artikel-Nr. / Article No.	Artikel-Nr. 905... SPRINTMAX Artikel-Nr. / Article No.	Artikel-Nr. 845... SPEEDMAX Artikel-Nr. / Article No.	Artikel-Nr. 706... Artikel-Nr. / Article No.
					TYP N-H	TYP N	TYP N	TYP W
5,7	6	44	82	35	805.057.00	905.057.00	845.057.00	706.057.00
5,8	6	44	82	35	805.058.00	905.058.00	845.058.00	706.058.00
5,9	6	44	82	35	805.059.00	905.059.00	845.059.00	706.059.00
6,0	6	44	82	35	805.060.00	905.060.00	845.060.00	706.060.00
6,1	8	53	91	43	805.061.00	905.061.00	845.061.00	706.061.00
6,2	8	53	91	43	805.062.00	905.062.00	845.062.00	706.062.00
6,3	8	53	91	43	805.063.00	905.063.00	845.063.00	706.063.00
6,4	8	53	91	43	805.064.00	905.064.00	845.064.00	706.064.00
6,5	8	53	91	43	805.065.00	905.065.00	845.065.00	706.065.00
6,6	8	53	91	43	805.066.00	905.066.00	845.066.00	706.066.00
6,7	8	53	91	43	805.067.00	905.067.00	845.067.00	706.067.00
6,8	8	53	91	43	805.068.00	905.068.00	845.068.00	706.068.00
6,9	8	53	91	43	805.069.00	905.069.00	845.069.00	706.069.00
7,0	8	53	91	43	805.070.00	905.070.00	845.070.00	706.070.00
7,1	8	53	91	43	805.071.00	905.071.00	845.071.00	706.071.00
7,2	8	53	91	43	805.072.00	905.072.00	845.072.00	706.072.00
7,3	8	53	91	43	805.073.00	905.073.00	845.073.00	706.073.00
7,4	8	53	91	43	805.074.00	905.074.00	845.074.00	706.074.00
7,5	8	53	91	43	805.075.00	905.075.00	845.075.00	706.075.00
7,6	8	53	91	43	805.076.00	905.076.00	845.076.00	706.076.00
7,7	8	53	91	43	805.077.00	905.077.00	845.077.00	706.077.00
7,8	8	53	91	43	805.078.00	905.078.00	845.078.00	706.078.00
7,9	8	53	91	43	805.079.00	905.079.00	845.079.00	706.079.00
8,0	8	53	91	43	805.080.00	905.080.00	845.080.00	706.080.00
8,1	10	61	103	49	805.081.00	905.081.00	845.081.00	706.081.00
8,2	10	61	103	49	805.082.00	905.082.00	845.082.00	706.082.00
8,3	10	61	103	49	805.083.00	905.083.00	845.083.00	706.083.00
8,4	10	61	103	49	805.084.00	905.084.00	845.084.00	706.084.00
8,5	10	61	103	49	805.085.00	905.085.00	845.085.00	706.085.00
8,6	10	61	103	49	805.086.00	905.086.00	845.086.00	706.086.00

Fortsetzung nächste Seite / to be continued

TIALN | Universal | 4-Fasen

nacro | Universal | 3-Fasen

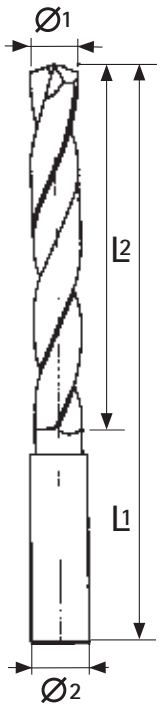
TIALN | INOX VA | Universal

ZrN | ALU NE | Kunststoff plastic

Fortsetzung / continuation

VHM–Hochleistungsspiralbohrer 5xD

Solid carbide high power drill



Ø1	Ø2	L2	L1	NL	Artikel-Nr. 805... TYP N-H	Artikel-Nr. 905... TYP N	Artikel-Nr. 845... TYP N	Artikel-Nr. 706... TYP W
					Article No.	Article No.	Article No.	Article No.
8,7	10	61	103	49	805.087.00	905.087.00	845.087.00	706.087.00
8,8	10	61	103	49	805.088.00	905.088.00	845.088.00	706.088.00
8,9	10	61	103	49	805.089.00	905.089.00	845.089.00	706.089.00
9,0	10	61	103	49	805.090.00	905.090.00	845.090.00	706.090.00
9,1	10	61	103	49	805.091.00	905.091.00	845.091.00	706.091.00
9,2	10	61	103	49	805.092.00	905.092.00	845.092.00	706.092.00
9,3	10	61	103	49	805.093.00	905.093.00	845.093.00	706.093.00
9,4	10	61	103	49	805.094.00	905.094.00	845.094.00	706.094.00
9,5	10	61	103	49	805.095.00	905.095.00	845.095.00	706.095.00
9,6	10	61	103	49	805.096.00	905.096.00	845.096.00	706.096.00
9,7	10	61	103	49	805.097.00	905.097.00	845.097.00	706.097.00
9,8	10	61	103	49	805.098.00	905.098.00	845.098.00	706.098.00
9,9	10	61	103	49	805.099.00	905.099.00	845.099.00	706.099.00
10,0	10	61	103	49	805.100.00	905.100.00	845.100.00	706.100.00
10,1	12	71	118	56	805.101.00	905.101.00	845.101.00	706.101.00
10,2	12	71	118	56	805.102.00	905.102.00	845.102.00	706.102.00
10,3	12	71	118	56	805.103.00	905.103.00	845.103.00	706.103.00
10,4	12	71	118	56	805.104.00	905.104.00	845.104.00	706.104.00
10,5	12	71	118	56	805.105.00	905.105.00	845.105.00	706.105.00
10,6	12	71	118	56	805.106.00	905.106.00	845.106.00	706.106.00
10,7	12	71	118	56	805.107.00	905.107.00	845.107.00	706.107.00
10,8	12	71	118	56	805.108.00	905.108.00	845.108.00	706.108.00
10,9	12	71	118	56	805.109.00	905.109.00	845.109.00	706.109.00
11,0	12	71	118	56	805.110.00	905.110.00	845.110.00	706.110.00
11,1	12	71	118	56	805.111.00	905.111.00	845.111.00	706.111.00
11,2	12	71	118	56	805.112.00	905.112.00	845.112.00	706.112.00
11,3	12	71	118	56	805.113.00	905.113.00	845.113.00	706.113.00
11,4	12	71	118	56	805.114.00	905.114.00	845.114.00	706.114.00
11,5	12	71	118	56	805.115.00	905.115.00	845.115.00	706.115.00
11,6	12	71	118	56	805.116.00	905.116.00	845.116.00	706.116.00

SPRINTMAX

SPEEDMAX

Fortsetzung nächste Seite / to be continued

TIALN | Universal | 4-Fasen

nacro | Universal | 3-Fasen

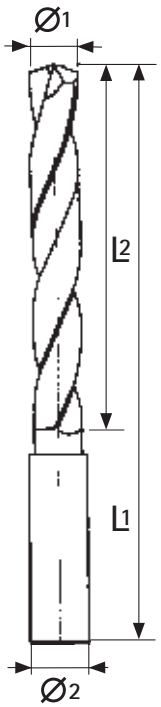
TIALN | INOX VA | Universal

ZrN | ALU NE | Kunststoff plastic

Fortsetzung / continuation

VHM–Hochleistungsspiralbohrer 5xD

Solid carbide high power drill



Artikel-Nr. 805...						Artikel-Nr. 905... SPRINTMAX		Artikel-Nr. 845... SPEEDMAX		Artikel-Nr. 706...	
Ø1	Ø2	L2	L1	NL	TYP N-H	Artikel-Nr. / *Article No.*	TYP N	Artikel-Nr. / *Article No.*	TYP N	Artikel-Nr. / *Article No.*	TYP W	Artikel-Nr. / *Article No.*
11,7	12	71	118	56	140°	805.117.00	140°	905.117.00	140°	845.117.00	140°	706.117.00
11,8	12	71	118	56		805.118.00		905.118.00		845.118.00		706.118.00
11,9	12	71	118	56	2	805.119.00	2	905.119.00	2	845.119.00	2	706.119.00
12,0	12	71	118	56		805.120.00		905.120.00		845.120.00		706.120.00
12,2	14	77	124	60		805.122.00		905.122.00		845.122.00		706.122.00
12,3	14	77	124	60	IK	805.123.00	IK	905.123.00	IK	845.123.00	IK	706.123.00
12,5	14	77	124	60		805.125.00		905.125.00		845.125.00		706.125.00
12,8	14	77	124	60		805.128.00		905.128.00		845.128.00		706.128.00
13,0	14	77	124	60		805.130.00		905.130.00		845.130.00		706.130.00
13,5	14	77	124	60	HA	805.135.00	HA	905.135.00	HA	845.135.00	HA	706.135.00
13,8	14	77	124	60		805.138.00		905.138.00		845.138.00		706.138.00
14,0	14	77	124	60		805.140.00		905.140.00		845.140.00		706.140.00
14,5	16	83	133	63	5xD	805.145.00	5xD	905.145.00	5xD	845.145.00	5xD	706.145.00
14,8	16	83	133	63		805.148.00		905.148.00		845.148.00		706.148.00
15,0	16	83	133	63	HPC	805.150.00	HPC	905.150.00	HPC	845.150.00	HPC	706.150.00
15,5	16	83	133	63		805.155.00		905.155.00		845.155.00		706.155.00
15,8	16	83	133	63		805.158.00		905.158.00		845.158.00		706.158.00
16,0	16	83	133	63		805.160.00		905.160.00		845.160.00		706.160.00
16,5	18	93	143	71		805.165.00		905.165.00		845.165.00		706.165.00
16,8	18	93	143	71		805.168.00		905.168.00		845.168.00		706.168.00
17,0	18	93	143	71		805.170.00		905.170.00		845.170.00		706.170.00
17,5	18	93	143	71		805.175.00		905.175.00		845.175.00		706.175.00
17,8	18	93	143	71		805.178.00		905.178.00		845.178.00		706.178.00
18,0	18	93	143	71		805.180.00		905.180.00		845.180.00		706.180.00
18,5	20	101	153	77		805.185.00		905.185.00		845.185.00		706.185.00
19,0	20	101	153	77		805.190.00		905.190.00		845.190.00		706.190.00
19,5	20	101	153	77		805.195.00		905.195.00		845.195.00		706.195.00
20,0	20	101	153	77		805.200.00		905.200.00		845.200.00		706.200.00




TIALN | Universal | 4-Fasen

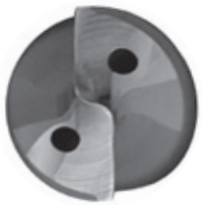
nacro | Universal | 3-Fasen

TIALN | INOX VA | Universal

ZrN | ALU NE | Kunststoff plastic

Artikel-Nr.
845...

SPEEDMAX



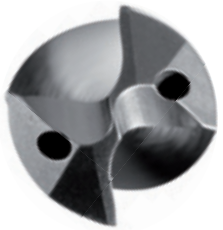
VHM-Hochleistungsbohrer

Solid carbide high performance drill

- Selbstzentrierend
  - self-centering
- Beste Ergebnisse in Guss und Stahl
  - best results in cast iron and steel
- 50% mehr Produktivität
  - 50% more productivity
- Für Hochleistungsbohren in INOX, Werkzeugstähle und Stahl
  - for high performance drilling in INOX, tool steels and steel
- Polierte und spezielle Spannut für bessere Spanabfuhr
  - polished special chip flute for better chip flow
- Spezielle Hartmetallsorte mit neuer spezieller Beschichtung
  - special type of carbide with new special coating

Artikel-Nr.
905...

SPRINTMAX



VHM-Hochleistungsbohrer

Solid carbide high performance drill

- Neue Schneidengeometrie; 3 Führungsfasen (ungleichteilung)
  - new cutting geometry, 3 guide margins (unequal division)
- Bis zu 3-fache Vorschubgeschwindigkeit
  - up to triple feed rate
- Polierte und feinstgeschliffene Spannuten
  - polished and superfinished chip flutes
- Neue Hartmetallsorte mit neuer verschleißfester Beschichtung
  - new type of carbide with new wear-resistant coating
- Für Naß und Trockenbearbeitung
  - for wet and dry processing
- Höchste Bohrungsqualität
  - maximum bore quality

VHM – Spiralbohrer 8xD

Solid carbide drill

Artikel-Nr.
708...

TYP N-H | 140° | 2 | IK

Ø1	Ø2	L2	L1	NL	Artikel-Nr. *Article No.*
1,0	3	11	55	9,0	708.010
1,1	3	17	55	13,5	708.011
1,2	3	17	55	13,5	708.012
1,3	3	17	55	13,5	708.013
1,4	3	17	55	13,5	708.014
1,5	3	22	65	17,5	708.015
1,6	3	22	65	17,5	708.016
1,7	3	22	65	17,5	708.017
1,8	3	22	65	17,5	708.018
1,9	3	22	65	17,5	708.019
2,0	3	28	74	22,5	708.020
2,1	3	28	74	22,5	708.021
2,2	3	28	74	22,5	708.022
2,3	3	28	74	22,5	708.023
2,4	3	28	74	22,5	708.024
2,5	3	32	81	22,5	708.025
2,6	3	32	81	22,5	708.026
2,7	3	32	81	22,5	708.027
2,8	3	32	81	22,5	708.028
2,9	3	32	81	22,5	708.029
3,0	6	34	72	27,0	708.030
3,1	6	34	72	27,0	708.031
3,2	6	34	72	27,0	708.032
3,3	6	34	72	27,0	708.033
3,4	6	34	72	27,0	708.034
3,5	6	34	72	27,0	708.035
3,6	6	34	72	27,0	708.036
3,7	6	34	72	27,0	708.037
3,8	6	43	81	35,0	708.038
3,9	6	43	81	35,0	708.039

Ø1	Ø2	L2	L1	NL	Artikel-Nr. *Article No.*
4,0	6	43	81	35	708.040
4,1	6	43	81	35	708.041
4,2	6	43	81	35	708.042
4,3	6	43	81	35	708.043
4,4	6	43	81	35	708.044
4,5	6	43	81	35	708.045
4,6	6	43	81	35	708.046
4,7	6	57	95	35	708.047
4,8	6	57	95	45	708.048
4,9	6	57	95	45	708.049
5,0	6	57	95	45	708.050
5,1	6	57	95	45	708.051
5,2	6	57	95	45	708.052
5,3	6	57	95	45	708.053
5,4	6	57	95	45	708.054
5,5	6	57	95	45	708.055
5,6	6	57	95	45	708.056
5,7	6	57	95	45	708.057
5,8	6	57	95	45	708.058
5,9	6	57	95	45	708.059
6,0	6	57	95	45	708.060
6,1	8	76	114	52	708.061
6,2	8	76	114	52	708.062
6,3	8	76	114	52	708.063
6,4	8	76	114	52	708.064
6,5	8	76	114	52	708.065
6,6	8	76	114	52	708.066
6,7	8	76	114	52	708.067
6,8	8	76	114	52	708.068
6,9	8	76	114	52	708.069

Fortsetzung nächste Seite / to be continued

TIALN | HA | 8xD | Universal | 4-Fasen

Fortsetzung / continuation

Artikel-Nr.

708...

VHM – Spiralbohrer 8xD

Solid carbide drill

TYP N-H | 140° | 2 | IK

Ø1	Ø2	L2	L1	NL	Artikel-Nr. *Article No.*
7,0	8	76	114	60	708.070
7,1	8	76	114	60	708.071
7,2	8	76	114	60	708.072
7,3	8	76	114	60	708.073
7,4	8	76	114	60	708.074
7,5	8	76	114	60	708.075
7,6	8	76	114	60	708.076
7,7	8	76	114	60	708.077
7,8	8	76	114	60	708.078
7,9	8	76	114	60	708.079
8,0	8	76	114	60	708.080
8,1	10	95	142	68	708.081
8,2	10	95	142	68	708.082
8,3	10	95	142	68	708.083
8,4	10	95	142	68	708.084
8,5	10	95	142	68	708.085
8,6	10	95	142	68	708.086
8,7	10	95	142	68	708.087
8,8	10	95	142	68	708.088
8,9	10	95	142	68	708.089
9,0	10	95	142	68	708.090
9,1	10	95	142	76	708.091
9,2	10	95	142	76	708.092
9,3	10	95	142	76	708.093
9,4	10	95	142	76	708.094
9,5	10	95	142	76	708.095
9,6	10	95	142	76	708.096
9,7	10	95	142	76	708.097
9,8	10	95	142	76	708.098
9,9	10	95	142	76	708.099

Ø1	Ø2	L2	L1	NL	Artikel-Nr. *Article No.*
10,0	10	95	142	76	708.100
10,1	12	114	162	90	708.101
10,2	12	114	162	90	708.102
10,3	12	114	162	90	708.103
10,4	12	114	162	90	708.104
10,5	12	114	162	90	708.105
10,6	12	114	162	90	708.106
10,7	12	114	162	90	708.107
10,8	12	114	162	90	708.108
10,9	12	114	162	90	708.109
11,0	12	114	162	90	708.110
11,1	12	114	162	90	708.111
11,2	12	114	162	90	708.112
11,3	12	114	162	90	708.113
11,4	12	114	162	90	708.114
11,5	12	114	162	90	708.115
11,6	12	114	162	90	708.116
11,7	12	114	162	90	708.117
11,8	12	114	162	90	708.118
11,9	12	114	162	90	708.119
12,0	12	114	162	90	708.120
12,5	14	133	178	106	708.125
12,8	14	133	178	106	708.128
13,0	14	133	178	106	708.130
13,5	14	133	178	106	708.135
14,0	14	133	178	106	708.140
14,5	16	152	203	122	708.145
15,0	16	152	203	122	708.150
15,5	16	152	203	122	708.155
16,0	16	152	203	122	708.160

TIALN | HA | 8xD | Universal | 4-Fasen

VHM – Spiralbohrer 12xD

Solid carbide drill

Artikel-Nr.
710...

TYP N-H | 140° | 2 | IK

Ø1	Ø2	L2	L1	NL	Artikel-Nr. *Article No.*
1,0	3	55	15	12,0	710.010.00
1,1	3	55	23	18,5	710.011.00
1,2	3	55	23	18,5	710.012.00
1,3	3	55	23	18,5	710.013.00
1,4	3	55	23	18,5	710.014.00
1,5	3	55	23	18,5	710.015.00
1,6	3	65	30	24,0	710.016.00
1,7	3	65	30	24,0	710.017.00
1,8	3	65	30	24,0	710.018.00
1,9	3	65	30	24,0	710.019.00
2,0	3	65	30	24,0	710.020.00
2,1	3	74	38	30,5	710.021.00
2,2	3	74	38	30,5	710.022.00
2,3	3	74	38	30,5	710.023.00
2,4	3	74	38	30,5	710.024.00
2,5	3	74	38	30,5	710.025.00
2,6	3	81	44	30,5	710.026.00
2,7	3	81	44	35,0	710.027.00
2,8	3	81	44	35,0	710.028.00
2,9	3	81	44	35,0	710.029.00

Ø1	Ø2	L2	L1	NL	Artikel-Nr. *Article No.*
3,0	6	92	54	48,0	710.030.00
3,1	6	92	54	48,0	710.031.00
3,2	6	92	54	48,0	710.032.00
3,3	6	92	54	48,0	710.033.00
3,4	6	92	54	48,0	710.034.00
3,5	6	92	54	48,0	710.035.00
3,6	6	92	54	48,0	710.036.00
3,7	6	92	54	48,0	710.037.00
3,8	6	102	64	58,0	710.038.00
3,9	6	102	64	58,0	710.039.00
4,0	6	102	64	58,0	710.040.00
4,1	6	102	64	58,0	710.041.00
4,2	6	102	64	58,0	710.042.00
4,3	6	102	64	58,0	710.043.00
4,4	6	102	64	58,0	710.044.00
4,5	6	102	64	58,0	710.045.00
4,6	6	102	64	58,0	710.046.00
4,7	6	102	64	58,0	710.047.00
4,8	6	118	78	70,0	710.048.00
4,9	6	118	78	70,0	710.049.00

Fortsetzung nächste Seite / to be continued

TIALN | HA | 12xD | Universal | 4-Fasen

Fortsetzung / continuation

Artikel-Nr.

710...

VHM – Spiralbohrer 12xD

Solid carbide drill

TYP N-H | 140° | 2 | IK

Ø1	Ø2	L2	L1	NL	Artikel-Nr. *Article No.*
5,0	6	118	78	70,0	710.050.00
5,1	6	118	78	70,0	710.051.00
5,2	6	118	78	70,0	710.052.00
5,3	6	118	78	70,0	710.053.00
5,4	6	118	78	70,0	710.054.00
5,5	6	118	78	70,0	710.055.00
5,6	6	118	78	70,0	710.056.00
5,7	6	118	78	70,0	710.057.00
5,8	6	118	78	70,0	710.058.00
5,9	6	118	78	70,0	710.059.00
6,0	6	118	78	70,0	710.060.00
6,1	8	146	78	94,0	710.061.00
6,2	8	146	78	94,0	710.062.00
6,3	8	146	78	94,0	710.063.00
6,4	8	146	78	94,0	710.064.00
6,5	8	146	78	94,0	710.065.00
6,6	8	146	78	94,0	710.066.00
6,7	8	146	78	94,0	710.067.00
6,8	8	146	78	94,0	710.068.00
6,9	8	146	78	94,0	710.069.00

Ø1	Ø2	L2	L1	NL	Artikel-Nr. *Article No.*
7,0	8	146	78	94,0	710.070.00
7,1	8	146	78	94,0	710.071.00
7,2	8	146	78	94,0	710.720.00
7,3	8	146	78	94,0	710.073.00
7,4	8	146	78	94,0	710.074.00
7,5	8	146	78	94,0	710.075.00
7,6	8	146	78	94,0	710.076.00
7,7	8	146	78	94,0	710.077.00
7,8	8	146	78	94,0	710.078.00
7,9	8	146	78	94,0	710.079.00
8,0	8	146	78	94,0	710.080.00
8,1	10	162	120	110,0	710.081.00
8,2	10	162	120	110,0	710.082.00
8,3	10	162	120	110,0	710.083.00
8,4	10	162	120	110,0	710.084.00
8,5	10	162	120	110,0	710.085.00
8,6	10	162	120	110,0	710.086.00
8,7	10	162	120	110,0	710.087.00
8,8	10	162	120	110,0	710.088.00
8,9	10	162	120	110,0	710.089.00

Fortsetzung nächste Seite / to be continued

TIALN | HA | 12xD | Universal | 4-Fasen

VHM – Spiralbohrer 12xD

Solid carbide drill

TYP N-H | 140° | 2 | IK

Fortsetzung / continuation

Artikel-Nr.

710...

Ø1	Ø2	L2	L1	NL	Artikel-Nr. *Article No.*
9,0	10	162	120	110,0	710.090.00
9,1	10	162	120	110,0	710.091.00
9,2	10	162	120	110,0	710.092.00
9,3	10	162	120	110,0	710.093.00
9,4	10	162	120	110,0	710.094.00
9,5	10	162	120	110,0	710.095.00
9,6	10	162	120	110,0	710.096.00
9,7	10	162	120	110,0	710.097.00
9,8	10	162	120	110,0	710.098.00
9,9	10	162	120	110,0	710.099.00
10,0	10	162	120	110,0	710.100.00
10,1	12	204	156	142,0	710.101.00
10,2	12	204	156	142,0	710.102.00
10,3	12	204	156	142,0	710.103.00
10,4	12	204	156	142,0	710.104.00
10,5	12	204	156	142,0	710.105.00
10,6	12	204	156	142,0	710.106.00
10,7	12	204	156	142,0	710.107.00
10,8	12	204	156	142,0	710.108.00
10,9	12	204	156	142,0	710.109.00
11,0	12	204	156	142,0	710.110.00
11,1	12	204	156	142,0	710.111.00
11,2	12	204	156	142,0	710.112.00
11,3	12	204	156	142,0	710.113.00
11,4	12	204	156	142,0	710.114.00
11,5	12	204	156	142,0	710.115.00
11,6	12	204	156	142,0	710.116.00
11,7	12	204	156	142,0	710.117.00

Ø1	Ø2	L2	L1	NL	Artikel-Nr. *Article No.*
11,8	12	204	156	142,0	710.118.00
11,9	12	204	156	142,0	710.119.00
12,0	12	204	156	142,0	710.120.00
12,5	14	230	182	166,0	710.125.00
12,8	14	230	182	166,0	710.128.00
13,0	14	230	182	166,0	710.130.00
13,5	14	230	182	166,0	710.135.00
13,8	14	230	182	166,0	710.138.00
14,0	14	230	182	166,0	710.140.00
14,5	16	260	208	192,0	710.145.00
14,8	16	260	208	192,0	710.148.00
15,0	16	260	208	192,0	710.150.00
15,5	16	260	208	192,0	710.155.00
15,8	16	260	208	192,0	710.158.00
16,0	16	260	208	192,0	710.160.00
16,5	18	285	234	216,0	710.165.00
16,8	18	285	234	216,0	710.168.00
17,0	18	285	234	216,0	710.170.00
17,5	18	285	234	216,0	710.175.00
17,8	18	285	234	216,0	710.178.00
18,0	18	285	234	216,0	710.180.00
18,5	20	310	258	238,0	710.185.00
18,8	20	310	258	238,0	710.188.00
19,0	20	310	258	238,0	710.190.00
19,5	20	310	258	238,0	710.195.00
19,8	20	310	258	238,0	710.198.00
20,0	20	310	258	238,0	710.200.00

TIALN | HA | 12xD | Universal | 4-Fasen

VHM-Spiralbohrer 15xD

Solid carbide dril

TYP N-H | 140° | 2 | IK

Artikel-Nr.

915...

Ø1	Ø2	L2	L1	Artikel-Nr. *Article No.*
1,0	3	20	60	915.010.00
1,1	3	22	60	915.011.00
1,2	3	24	60	915.012.00
1,3	3	25	60	915.013.00
1,4	3	27	60	915.014.00
1,5	3	27	60	915.015.00
1,6	3	32	65	915.016.00
1,7	3	32	65	915.017.00
1,8	3	35	65	915.018.00
1,9	3	35	65	915.019.00
2,0	3	35	65	915.020.00
2,1	3	40	75	915.021.00
2,2	3	40	75	915.022.00
2,3	3	40	75	915023.00
2,4	3	45	75	915.024.00
2,5	3	45	75	915.025.00
2,6	3	48	80	915.026.00
2,7	3	48	80	915.027.00

Ø1	Ø2	L2	L1	Artikel-Nr. *Article No.*
2,8	3	50	80	915.028.00
2,9	3	50	80	915.029.00
3,0	6	60	100	915.030.00
3,1	6	60	100	915.031.00
3,2	6	60	100	915.032.00
3,3	6	60	100	915.033.00
3,4	6	60	100	915.034.00
3,5	6	60	100	915.035.00
3,6	6	78	115	915.036.00
3,7	6	78	115	915.037.00
3,8	6	78	115	915.038.00
3,9	6	78	115	915.039.00
4,0	6	78	115	915.040.00
4,1	6	78	115	915.041.00
4,2	6	78	115	915.042.00
4,3	6	78	115	915.043.00
4,4	6	78	115	915.044.00
4,5	6	78	115	915.045.00

Fortsetzung nächste Seite / to be continued

TIALN | HA | 15xD | Universal | 4-Fasen

Fortsetzung / continuation

Artikel-Nr.

915...

VHM-Spiralbohrer 15xD

Solid carbide dril

TYP N-H | 140° | 2 | IK

Ø1	Ø2	L2	L1	Artikel-Nr. *Article No.*
4,6	6	92	130	915.046.00
4,7	6	92	130	915.047.00
4,8	6	92	130	915.048.00
4,9	6	92	130	915.049.00
5,0	6	92	130	915.050.00
5,1	6	92	130	915.051.00
5,2	6	92	130	915.052.00
5,3	6	92	130	915.053.00
5,4	6	92	130	915.054.00
5,5	6	100	145	915.055.00
5,6	6	100	145	915.056.00
5,7	6	100	145	915.057.00
5,8	6	100	145	915.058.00
5,9	6	100	145	915.059.00
6,0	6	100	145	915.060.00
6,1	8	108	145	915.061.00
6,2	8	108	145	915.062.00
6,3	8	108	145	915.063.00
6,4	8	108	145	915.064.00
6,5	8	130	170	915.065.00
6,6	8	130	170	915.066.00
6,7	8	130	170	915.067.00
6,8	8	130	170	915.068.00
6,9	8	130	170	915.069.00
7,0	8	130	170	915.070.00
7,5	8	130	170	915.075.00

Ø1	Ø2	L2	L1	Artikel-Nr. *Article No.*
7,8	8	130	170	915.078.00
8,0	8	130	170	915.080.00
8,5	10	163	208	915.085.00
8,8	10	163	208	915.088.00
9,0	10	163	208	915.090.00
9,5	10	163	208	915.095.00
9,8	10	163	208	915.098.00
10,0	10	163	208	915.100.00
10,2	12	195	245	915.102.00
10,5	12	195	245	915.105.00
10,8	12	195	245	915.108.00
11,0	12	195	245	915.110.00
11,2	12	195	245	915.112.00
11,5	12	195	245	915.115.00
11,8	12	195	245	915.118.00
12,0	12	195	245	915.120.00
12,5	14	230	280	915.125.00
13,0	14	230	280	915.130.00
13,8	14	230	280	915.138.00
14,0	14	230	280	915.140.00
14,8	16	260	310	915.148.00
15,0	16	260	310	915.150.00
15,8	16	260	310	915.158.00
16,0	16	260	310	915.160.00

TIALN | HA | 15xD | Universal | 4-Fasen

Artikel-Nr.
920...

VHM-Spiralbohrer 20xD

Solid carbide dril

NEW

TYP N-H | 140° | 2 | IK

Ø1	Ø2	L2	L1	Artikel-Nr. *Article No.*
2,0	4	50	92	920.020.00
2,2	4	50	92	920.022.00
2,3	4	50	92	920.023.00
2,4	4	70	112	920.024.00
2,5	4	70	112	920.025.00
2,7	4	70	112	920.027.00
2,8	4	70	112	920.028.00
3,0	6	80	120	920.030.00
3,2	6	80	120	920.032.00
3,3	6	80	120	920.033.00
3,5	6	80	120	920.035.00
3,8	6	90	130	920.038.00
4,0	6	90	130	920.040.00
4,2	6	110	160	920.042.00
4,5	6	110	160	920.045.00
4,8	6	120	160	920.048.00
5,0	6	120	160	920.050.00
5,5	6	140	185	920.055.00
5,8	6	140	185	920.058.00

Ø1	Ø2	L2	L1	Artikel-Nr. *Article No.*
6,0	6	140	185	920.060.00
6,5	8	155	210	920.065.00
6,8	8	160	210	920.068.00
7,0	8	160	210	920.070.00
7,5	8	180	230	920.075.00
7,8	8	180	230	920.078.00
8,0	8	180	230	920.080.00
8,5	10	195	260	920.085.00
8,8	10	230	290	920.088.00
9,0	10	230	290	920.090.00
9,8	10	230	290	920.098.00
10,0	10	230	290	920.100.00
10,2	12	270	315	920.102.00
10,8	12	270	315	920.108.00
11,8	12	270	315	920.118.00
12,0	12	270	315	920.120.00

TIALN | HA | Werks-norm | 20xD | Universal | 4-Fasen

Artikel-Nr.
926...

VHM-Spiralbohrer 25xD

Solid carbide dril

NEW

TYP N | 140° | 2 | IK

Ø1	Ø2	L2	L1	Artikel-Nr. *Article No.*
3,0	6	98	135	926.030.00
3,2	6	98	135	926.032.00
3,3	6	110	150	926.033.00
3,5	6	110	150	926.035.00
3,8	6	120	160	926.038.00
4,0	6	120	160	926.040.00
4,2	6	120	160	926.042.00
4,5	6	135	180	926.045.00
4,8	6	135	180	926.048.00
5,0	6	135	180	926.050.00
5,5	6	168	205	926.055.00
5,8	6	168	205	926.058.00
6,0	6	168	205	926.060.00
6,5	8	200	240	926.065.00
6,8	8	200	240	926.068.00

Ø1	Ø2	L2	L1	Artikel-Nr. *Article No.*
7,0	8	200	240	926.070.00
7,5	8	220	260	926.075.00
7,8	8	220	260	926.078.00
8,0	8	220	260	926.080.00
8,5	10	240	285	926.085.00
8,8	10	270	310	926.088.00
9,0	10	270	310	926.090.00
9,8	10	270	310	926.098.00
10,0	10	270	310	926.100.00
10,2	12	325	375	926.102.00
10,8	12	325	375	926.108.00
11,8	12	325	375	926.118.00
12,0	12	325	375	926.120.00

TIALN | HA | Werks-norm | 25xD | Universal | 4-Fasen

Artikel-Nr.
931...

VHM-Spiralbohrer 30xD

Solid carbide dril

NEW

TYP N | 140° | 2 | IK

Ø1	Ø2	L2	L1	Artikel-Nr. *Article No.*
2,0	4	70	115	931.020.00
2,2	4	70	115	931.022.00
2,3	4	70	115	931.023.00
2,4	4	90	138	931.024.00
2,5	4	90	138	931.025.00
2,7	4	90	138	931.027.00
2,8	4	90	138	931.028.00
3,0	6	105	150	931.030.00
3,2	6	105	150	931.032.00
3,3	6	135	185	931.033.00
3,5	6	135	185	931.035.00
3,8	6	135	185	931.038.00
4,0	6	135	185	931.040.00
4,2	6	135	185	931.042.00
4,5	6	165	215	931.045.00
4,8	6	165	215	931.048.00
5,0	6	165	215	931.050.00
5,5	6	180	230	931.055.00
5,8	6	180	230	931.058.00

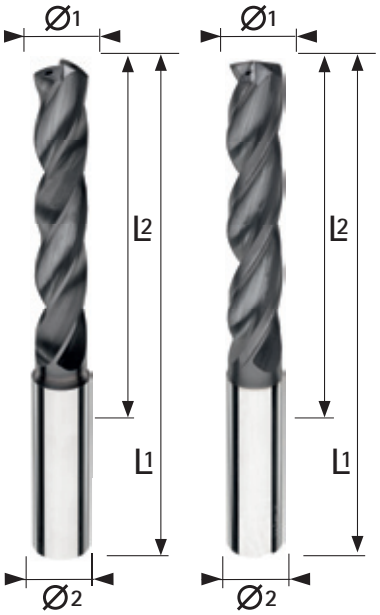
Ø1	Ø2	L2	L1	Artikel-Nr. *Article No.*
6,0	6	180	230	931.060.00
6,5	8	215	280	931.065.00
6,8	8	230	280	931.068.00
7,0	8	230	280	931.070.00
7,5	8	230	280	931.075.00
7,8	8	265	315	931.078.00
8,0	8	265	315	931.080.00
8,5	10	295	350	931.085.00
8,8	10	330	380	931.088.00
9,0	10	330	380	931.090.00
9,8	10	330	380	931.098.00
10,0	10	330	380	931.100.00

TIALN | HA | Werks-norm | 30xD | Universal | 4-Fasen

VHM-Spiralbohrer 5xD

Solid carbide drill

Artikel-Nr. 807... | Artikel-Nr. 808...



Ø1	Ø2	L2	L1	Artikel-Nr. 807... Article No.	Z	Artikel-Nr. 808... Article No.	Z
4,0	6	39	77			808.040.00	3
4,2	6	39	77			808.042.00	3
4,5	6	39	77			808.045.00	3
4,8	6	39	77			808.048.00	3
5,0	6	39	77	807.050.00	2	808.050.00	3
5,1	6	39	77	807.051.00	2	808.051.00	3
5,2	6	39	77	807.052.00	2	808.052.00	3
5,5	6	39	77	807.055.00	2	808.055.00	3
5,8	6	39	77	807.058.00	2	808.058.00	3
6,0	6	39	77	807.060.00	2	808.060.00	3
6,2	8	52	90	807.062.00	2	808.062.00	3
6,5	8	52	90	807.065.00	2	808.065.00	3
6,8	8	52	90	807.068.00	2	808.068.00	3
7,0	8	52	90	807.070.00	2	808.070.00	3
7,2	8	52	90	807.072.00	2	808.072.00	3
7,5	8	52	90	807.075.00	2	808.075.00	3
7,8	8	52	90	807.078.00	2	808.078.00	3
8,0	8	52	90	807.080.00	2	808.080.00	3
8,2	10	60	102	807.082.00	2	808.082.00	3
8,5	10	60	102	807.085.00	2	808.085.00	3
8,8	10	60	102	807.088.00	2	808.088.00	3
9,0	10	60	102	807.090.00	2	808.090.00	3
9,2	10	60	102	807.092.00	2	808.092.00	3
9,5	10	60	102	807.095.00	2	808.095.00	3
9,8	10	60	102	807.098.00	2	808.098.00	3

TYP N | 140° | 2 | o. IK

TIALN | 140° | 3 | IK

Fortsetzung nächste Seite / to be continued

TIALN | HA | 5xD | Universal | 4 Führungs-fasen

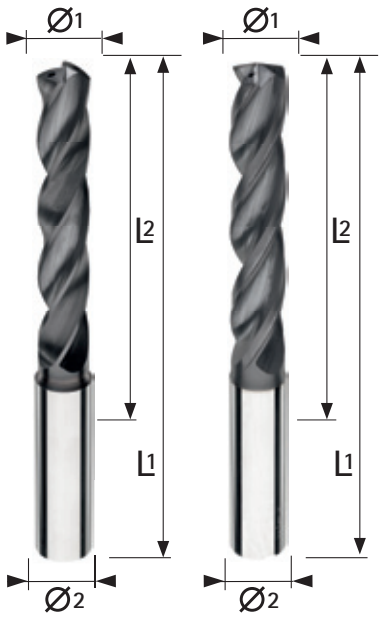
TIALN | HA | 5xD | Universal

VHM-Spiralbohrer 5xD

Solid carbide drill

Fortsetzung / continuation

Artikel-Nr. 807... | Artikel-Nr. 808...



Ø1	Ø2	L2	L1	Artikel-Nr. 807... Article No.	Z	Artikel-Nr. 808... Article No.	Z
10,0	10	60	102	807.100.00	2	808.100.00	3
10,2	12	72	120	807.102.00	2	808.102.00	3
10,5	12	72	120	807.105.00	2	808.105.00	3
10,8	12	72	120	807.108.00	2	808.108.00	3
11,0	12	72	120	807.110.00	2	808.110.00	3
11,2	12	72	120	807.112.00	2	808.112.00	3
11,5	12	72	120	807.115.00	2	808.115.00	3
11,8	12	72	120	807.118.00	2	808.118.00	3
12,0	12	72	120	807.120.00	2	808.120.00	3
12,5	14	82	130	807.125.00	2	808.125.00	3
12,8	14	82	130	807.128.00	2	808.128.00	3
13,0	14	82	130	807.130.00	2	808.130.00	3
13,5	14	82	130	807.135.00	2	808.135.00	3
13,8	14	82	130	807.138.00	2	808.138.00	3
14,0	14	82	130	807.140.00	2	808.140.00	3
14,5	16	85	135	807.145.00	2	808.145.00	3
14,8	16	85	135	807.148.00	2	808.148.00	3
15,0	16	85	135	807.150.00	2	808.150.00	3
15,5	16	85	135	807.155.00	2	808.155.00	3
15,8	16	85	135	807.158.00	2	808.158.00	3
16,0	16	85	135	807.160.00	2	808.160.00	3

TYP N | 140° | 2 | o. IK

TIALN | 140° | 3 | IK

TIALN | HA | 5xD | Universal | 4 Führungs-fasen

TIALN | HA | 5xD | Universal

VHM – Zentrierbohrer

Solid carbide center drill

Artikel-Nr.
608...

TYP N

Ø1	Ø2	L2	L1	Artikel-Nr. *Article No.*
0,50	3,15	0,8	31,5	608.050.09
0,80	3,15	1,1	31,5	608.080.09
1,00	3,15	1,3	31,5	608.100.09
1,25	3,15	1,6	31,5	608.125.09
1,60	4,00	2,0	35,5	608.160.09
2,00	5,00	2,5	40,0	608.200.09
2,50	6,30	3,1	45,0	608.250.09
3,15	8,00	3,9	50,0	608.315.09
4,00	10,00	5,0	56,0	608.400.09
5,00	12,50	6,3	63,0	608.500.09
6,30	16,00	8,0	71,0	608.630.09

D

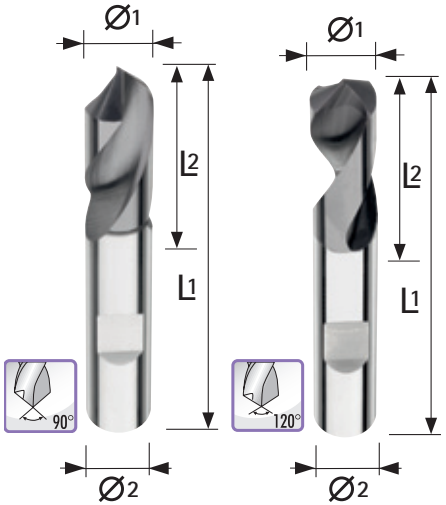
Ausführung
unbeschichtet
selbstzentrierend
Zyl. Schaft
Spezielle Geometrie zum
Bohren, mit erhöhten Vorschub-

GB

Execution
uncoated
self-centering
cylindrical shank
Special geometry for drilling,
with higher feed rate

Artikel-Nr.
890...

Artikel-Nr.
860...



VHM – Anbohrer 90°/120°

Solid carbide spot drill

TYP N | 2 | 30° | o. IK

Ø1	Ø2	L2	L1	Z	Artikel-Nr. *Article No.*
3,0	3	8,0	38	2	890.030...
3,0	3	8,0	38	2	860.030...
4,0	4	10,0	50	2	890.040...
4,0	4	10,0	50	2	860.040...
5,0	5	13,0	50	2	890.050...
5,0	5	13,0	50	2	860.050...
6,0	6	13,0	57	2	890.060...
6,0	6	13,0	57	2	860.060...
8,0	8	19,0	63	2	890.080...
8,0	8	19,0	63	2	860.080...
10,0	10	20,0	66	2	890.100...
10,0	10	20,0	66	2	860.100...
12,0	12	22,0	73	2	890.120...
12,0	12	22,0	73	2	860.120...
16,0	16	24,0	82	2	890.160...
16,0	16	24,0	82	2	860.160...
20,0	20	30,0	92	2	890.200...
20,0	20	30,0	92	2	860.200...

Bitte fügen Sie bei Ihrer Bestellung folgende Codes hinzu: unbeschichtet .09 beschichtet .00
Please add the following code to your order: uncoated .09 coated .00

BLANK | HA | Werks-norm | Universal

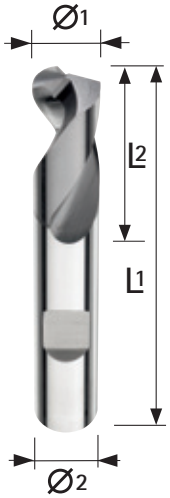
TIALN | HB | Werks-norm | Universal

VHM – Anbohrer 142°

Solid carbide spot drill extra long

Artikel-Nr.
814...

TYP N | 142° | 2 | 30° | o. IK

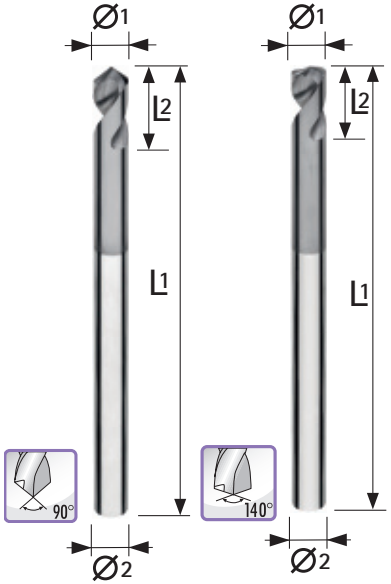


Ø1	Ø2	L2	L1	Z	Artikel-Nr. *Article No.*
3,0	3,0	8	38	2	814.030...
4,0	4,0	10	50	2	814.040...
5,0	5,0	13	50	2	814.050...
6,0	6,0	11	57	2	814.060...
8,0	8,0	19	63	2	814.080...
10,0	10,0	20	66	2	814.100...
12,0	12,0	22	73	2	814.120...
16,0	16,0	24	82	2	814.160...
20,0	20,0	30	92	2	814.200...

Bitte fügen Sie bei Ihrer Bestellung folgende Codes hinzu: unbeschichtet .09 beschichtet .00
Please add the following code to your order: uncoated .09 coated .00

Artikel-Nr.
820...

Artikel-Nr.
830...



VHM – Anbohrer 90°/142° extra lang

Solid carbide spot drill extra long

TYP N | 2 | o. IK

Ø1	Ø2	L2	L1	Z	Artikel-Nr. *Article No.*
4,0	6	10	120	2	820.040.00
4,0	6	10	120	2	830.040.00
5,0	6	13	132	2	820.050.00
5,0	6	13	132	2	830.050.00
6,0	6	15	139	2	820.060.00
6,0	6	15	139	2	830.060.00
8,0	8	17	165	2	820.080.00
8,0	8	17	165	2	830.080.00
10,0	10	20	184	2	820.100.00
10,0	10	20	184	2	830.100.00
12,0	12	25	205	2	820.120.00
12,0	12	25	205	2	830.120.00
16,0	16	30	230	2	820.160.00
16,0	16	30	230	2	830.160.00

TIALN | HB | Werks-norm | Universal

TIALN | HA | Universal

Artikel-Nr.

818...

Toleranz m7

VHM – Flachbohrer

Solid carbide flat drill

NEW

TYP N | 180° | 2 | IK

Ø1	Ø2	L2	L1	Z	Artikel-Nr. *Article No.*
8,0	8	53	91	2	818.080.00
9,0	9	61	103	2	818.090.00
10,0	10	61	103	2	818.100.00
11,0	12	69	116	2	818.110.00
15,0	16	81	131	2	818.150.00
18,0	18	91	141	2	818.180.00
20,0	20	99	151	2	818.200.00

TIALN | HA | Werks-norm | 5xD | Universal | 4-Fasen

Artikel-Nr.

711...

VHM-Bohr-Reibahle - 5xD

Solid carbide drillreamer

NEW

TYP N | 140° | 4 | IK

Toleranz H7

Ø1	Ø2	L2	L1	Z	Artikel-Nr. *Article No.*
5,98	6	53	91	4	711.051.00
5,99	6	53	91	4	711.052.00
6,00	6	53	91	4	711.060.00
6,01	6	53	91	4	711.061.00
6,02	6	53	91	4	711.062.00
7,98	8	53	91	4	711.070.00
7,99	8	53	91	4	711.071.00
8,00	8	53	91	4	711.080.00
8,01	8	53	91	4	711.081.00
8,02	8	53	91	4	711.082.00
9,98	10	61	103	4	711.090.00
9,99	10	61	102	4	711.091.00
10,00	10	61	103	4	711.092.00
10,01	10	61	103	4	711.100.00
10,02	10	61	103	4	711.101.00
11,98	12	71	118	4	711.110.00
11,99	12	71	118	4	711.111.00
12,00	12	71	118	4	711.120.00
12,01	12	71	118	4	711.121.00
12,02	12	71	118	4	711.122.00
14,00	14	77	124	4	711.140.00
16,00	16	83	133	4	711.160.00
18,00	18	93	143	4	711.180.00
20,00	20	101	153	4	711.200.00

TIALN | HA | Werks-norm | 5xD | Universal | H7

Artikel-Nr.

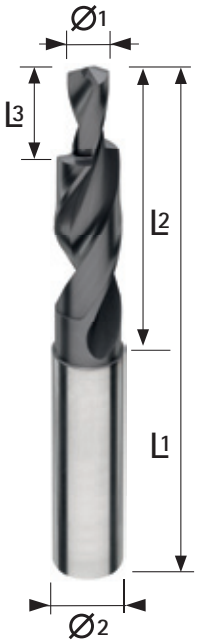
841...

VHM – Stufenbohrer kurz

Solid carbide stepdrill short

TYP N | 2 | o. IK

h8



Senker-durchm. *Countersinker diameter*	Ø1	Ø2	L3	L2	L1	Z	Artikel-Nr. *Article No.*
6,0	3,40	6	9	28	64	2	841.034.00
8,0	4,50	8	11	37	79	2	841.045.00
10,0	5,50	10	13	43	89	2	841.055.00
11,0	6,60	12	15	55	102	2	841.066.00
15,0	9,00	16	19	65	115	2	841.090.00
18,0	11,00	18	23	62	123	2	841.110.00

Senkung 180°
Counterbore 180°

TIALN | HA

Artikel-Nr.

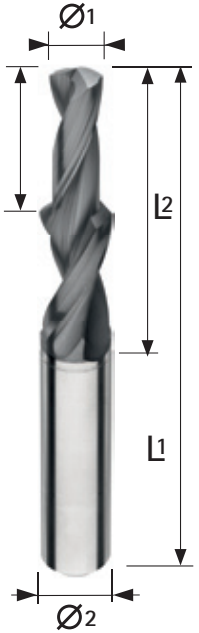
850...

VHM – Stufenbohrer kurz

Solid carbide stepdrill short

TYP N | 140° | 2 | 30° | o. IK

h7



h6

Ø1	Ø2	L3	L2	L1	Z	Artikel-Nr. *Article No.*
2,50	6,0	8,8	28	66	2	850.025.00
3,30	6,0	11,4	28	66	2	850.033.00
4,20	6,0	13,6	28	66	2	850.042.00
5,00	8,0	16,5	41	79	2	850.050.00
6,80	10,0	21,0	47	89	2	850.068.00
8,50	12,0	25,5	55	102	2	850.085.00
10,20	14,0	30,0	60	107	2	850.102.00

Senkung 90°
Counterbore 90°

TIALN | HA | Werks-norm

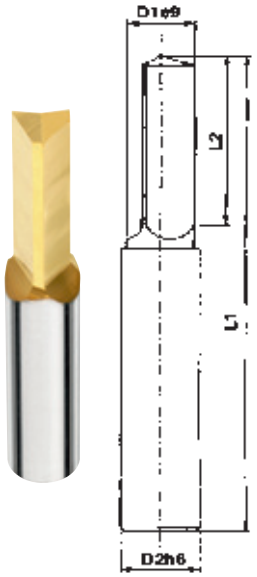
Artikel-Nr.

400...

VHM – Gewindebohrer-Ausbohrwerkzeug

Solid carbide thread cutter destroyer

TYP H

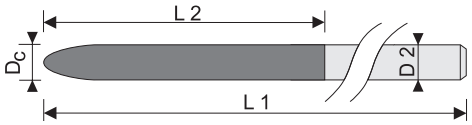


Ø1	Ø2	L2	L1	Z	Artikel-Nr. *Article No.*
2,5	6,0	12	50	2	400.025
3,3	6,0	15	50	3	400.033
4,2	6,0	15	50	3	400.042
5,0	6,0	15	50	3	400.050
6,8	8,0	20	60	3	400.068
8,5	10,0	25	70	3	400.085
10,2	12,0	30	75	3	400.102
12,0	12,0	30	75	3	400.120
14,0	14,0	40	100	3	400.140
15,5	16,0	40	100	3	400.155
17,5	18,0	50	100	3	400.175

TIN | HA | Werks-norm | HRC 60-65

Artikel-Nr.
53....09..

Artikel-Nr.
53....00..



VHM – Bohrreibwerkzeug für faserarmierte Kunststoffe

Solid carbide drilling and frictional tool for composites

TYP W

D_c h10	L2	L1	D_2 h6	53.... Unbeschichtet *uncoated*	
2,00	50	100	2,00	53.025010.09	○
2,48	50	100	2,48	53.255010.09	○
3.,00	50	100	3,00	53.035010.09	○
3,17	50	100	3,17	53.315010.09	○
4,00	50	100	4,00	53.045010.09	○
4,21	50	100	4,21	53.425010.09	○
4,76	50	100	4,76	53.475010.09	○
4,82	50	100	4,82	53.485010.09	○
5,05	50	100	5,05	53.055010.09	○
5,53	50	100	5,53	53.555010.09	○
6,00	50	100	6,00	53.065010.09	○
6,33	50	100	6,33	53.635010.09	○
6,60	50	100	6,60	53.665010.09	○
7,00	50	100	7,00	53.075010.09	○
7,92	50	100	7,92	53.795010.09	○
8,00	50	100	8,00	53.085010.09	○
8,63	50	100	8,63	53.865010.09	○
9,00	50	100	9,00	53.095010.09	○
10,00	50	100	10,00	53.105010.09	○
12,00	50	100	12,00	53.125010.09	○

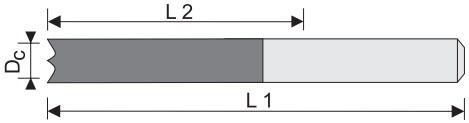
● Lager / in Stock
○ Auf Anfrage / on request

beschichtet auf Anfrage
coated - on request

HA Kunststoff plastic LANG

Artikel-Nr.
54....09..

Artikel-Nr.
54....00..



VHM – Spezial - Kevlarbohrer

Solid carbide special Kevlar drill

TYP W

Dc h10	L2	L1	D2 h6	54.... Unbeschichtet *uncoated*	
2,38	12	40	2,38	54.231240.09	○
3,00	12	40	3,00	54.031240.09	○
3,17	12	40	3,17	54.311240.09	○
4,00	18	55	4,00	54.041855.09	○
4,76	24	58	4,76	54.472458.09	○
5,00	26	62	5,00	54.052662.09	○
5,55	28	66	5,55	54.552866.09	○
6,00	28	66	6,00	54.062866.09	○
6,35	31	70	6,35	54.633170.09	○
6,50	31	70	6,50	54.653170.09	○
7,00	34	74	7,00	54.073474.09	○
7,93	37	79	7,93	54.793779.09	○
8,00	37	79	8,00	54.083779.09	○
8,50	37	79	8,50	54.853779.09	○
9,00	40	84	9,00	54.954084.09	○
9,52	40	84	9,52	54.964084.09	○
10,00	48	89	10,00	54.104889.09	○
12,00	50	102	12,00	54.125010.09	○

● Lager / in Stock
○ Auf Anfrage / on request

beschichtet auf Anfrage
coated - on request

HA | DIN 6527 | ALU NE | Kunststoff plastic

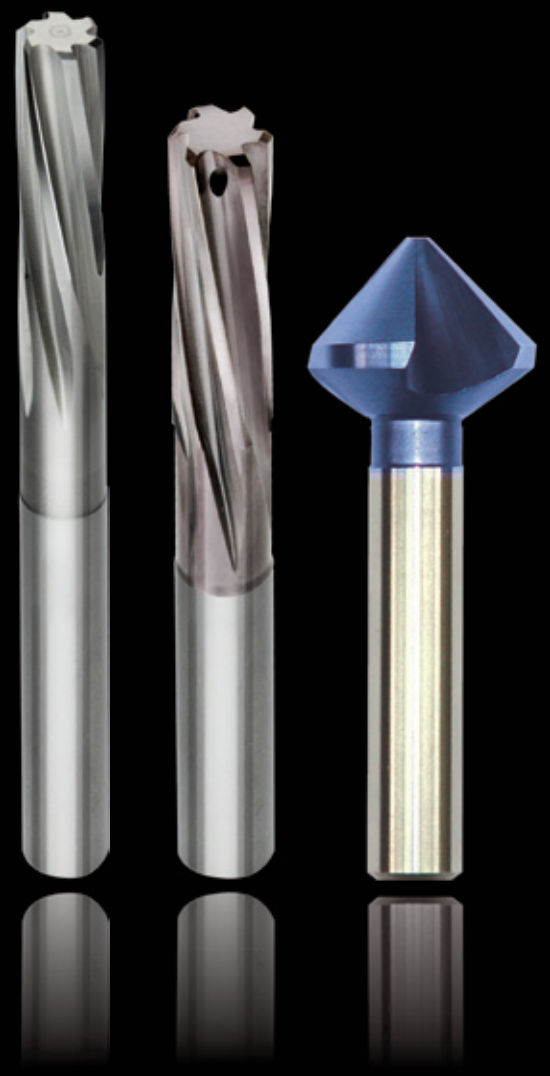
Sonderwerkzeuge / *Special tools*

Wir entwickeln und fertigen Sonderwerkzeuge für komplizierte Bohr- oder Fräsarbeiten und höchste Präzision und Genauigkeit im µ-Bereich. Erfahrung aus der Tätigkeit für verschiedenste Branchen mit unterschiedlichsten Aufgabenstellungen, das Fachwissen qualifizierter Mitarbeiter und modernste, technische Möglichkeiten: Erwarten Sie innovative Ideen, praxisgerechte Lösungen und absolute Perfektion. Das Außergewöhnliche gehört bei uns zum Alltag!

We develop and manufacture special tools for complicated drillings and cutterings and for highest precision and exactness in the field of µ.

Experiences from the work in many different sectors with varying tasks, the specialized knowledge of qualified employees and the most up-to-date, technical possibilities: Expect innovative ideas, practicable solutions and complete perfection. The exceptional belongs to everyday life.

VHM-Senkwerkzeuge / *Solid countersinking tools*



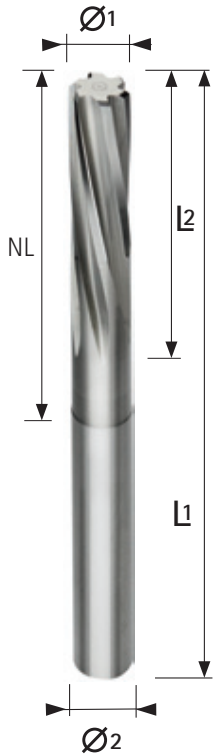
Wir bringen innovative Ideen in Form!
We design innovative ideas!

Bei unserer Art.-Nr. 880 handelt es sich ausschließlich um speziell angefertigte Sonderreibahlen. Deshalb ist die Art.-Nr. 880 komplett von jeglichem Umtausch ausgeschlossen.

Our art.-no. 880 is always especially produced according to customer request and therefore this art-no. 880 is a non-returnable special reamer.

Artikel-Nr.

880...



VHM – Maschinenreibahle kurz

Solid carbide machine reamer short

TYP N

Ø1	Ø2	L2	L1	NL	Z	Artikel-Nr. *Article No.*
0,48 - 0,53	1,5	5	35	10	4	880.....
0,54 - 0,59	1,5	5	35	10	4	880.....
0,60 - 0,69	1,5	6	35	12	4	880.....
0,70 - 0,79	1,5	6	35	12	4	880.....
0,80 - 0,90	1,5	6	35	15	4	880.....
0,91 - 1,00	1,5	8	35	15	4	880.....
1,01 - 1,20	1,5	10	35	17	4	880.....
1,21 - 1,50	1,5	12	40	23	4	880.....
1,51 - 2,00	2,0	16	45	28	4	880.....
2,01 - 2,40	2,0 - 3,0	18	50	31	4	880.....
2,41 - 2,70	3,0	20	55	34	4	880.....
2,71 - 3,10	3,0	20	60	39	4-6	880.....
3,11 - 3,70	4,0	22	60	37	6	880.....
3,71 - 4,10	4,0	24	65	40	6	880.....
4,11 - 4,60	5,0	24	65	40	6	880.....
4,61 - 4,90	5,0	26	65	38	6	880.....
4,91 - 5,20	5,0	28	75	48	6	880.....
5,21 - 5,70	5,0	28	75	48	6	880.....
5,71 - 6,20	5,0 - 6,0	28	75	48	6	880.....
6,21 - 6,60	6,0	30	80	49	6	880.....
6,61 - 6,90	6,0 - 7,0	30	80	49	6	880.....

Ø1	Ø2	L2	L1	NL	Z	Artikel-Nr. *Article No.*
6,91 - 7,20	7,0	35	90	59	6	880.....
7,21 - 7,70	7,0	35	90	59	6	880.....
7,71 - 8,20	7,0 - 8,0	35	95	59	6	880.....
8,21 - 8,70	8,0	35	100	64	6	880.....
8,71 - 8,90	8,0 - 9,0	35	100	64	6	880.....
8,91 - 9,20	9,0	35	100	64	6	880.....
9,21 - 9,70	9,0	35	100	64	6	880.....
9,71 - 9,90	9,0 - 10,0	35	100	64	6	880.....
9,91 - 10,70	10,0	35	100	64	6	880.....
10,71 - 10,90	10,0 - 11,0	35	100	64	6	880.....
10,91 - 11,20	11,0	35	100	64	6	880.....
11,21 - 11,70	11,0	35	100	64	6	880.....
11,71 - 11,90	11,0 - 12,0	35	100	64	6	880.....
11,91 - 12,60	12,0	35	100	64	6	880.....
12,61 - 12,90	12,0 - 13,0	35	100	64	6	880.....
12,91 - 13,52	13,0	35	100	64	6	880.....
13,90 - 14,10	14,0	35	100	64	6	880.....
14,90 - 15,10	14,0	35	100	64	6	880.....
15,90 - 16,10	16,0	35	100	64	6	880.....
17,90 - 18,10	18,0	35	100	64	6	880.....

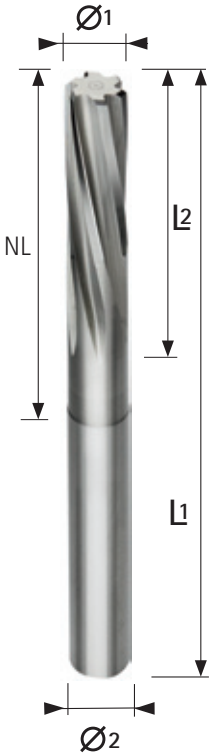
▶ Bitte fügen Sie bei Ihrer Bestellung den Durchmesser hinzu: z.B. 880 5,71

▶ *Please add the cutter diameter to your order: e.g. 880 5,71*

BLANK HA Universal

Artikel-Nr.

882...



VHM – Maschinenreibahle lang

Solid carbide machine reamer long

TYP N

Ø1	Ø2	L2	L1	NL	Z	Artikel-Nr. *Article No.*
1,0	3	10	50	25	4	882.010.00
1,5	3	10	50	25	4	882.015.00
2,0	3	15	60	25	4	882.020.00
2,5	3	15	60	25	4	882.025.00
3,0	3	18	60	30	4	882.030.00
3,5	6	18	80	40	4	882.035.00
4,0	6	20	80	50	4	882.040.00
4,5	6	20	80	50	4	882.045.00
5,0	6	26	100	60	6	882.050.00
5,5	6	26	100	60	6	882.055.00
6,0	6	26	100	60	6	882.060.00
6,5	8	36	118	75	6	882.065.00
7,0	8	36	118	75	6	882.070.00
7,5	8	36	118	75	6	882.075.00
8,0	8	36	118	75	6	882.080.00
8,5	10	36	135	75	6	882.085.00

Ø1	Ø2	L2	L1	NL	Z	Artikel-Nr. *Article No.*
9,0	10	36	135	75	6	882.090.00
9,5	10	36	135	75	6	882.095.00
10,0	10	36	135	75	6	882.100.00
10,5	12	45	150	105	6	882.105.00
11,0	12	45	150	105	6	882.110.00
11,5	12	45	150	105	6	882.115.00
12,0	12	45	150	105	6	882.120.00
13,0	14	45	165	115	6	882.130.00
14,0	14	45	165	115	6	882.140.00
15,0	16	50	165	120	6	882.150.00
16,0	16	50	165	120	6	882.160.00
17,0	18	50	165	120	6	882.170.00
18,0	18	50	165	120	6	882.180.00
19,0	20	60	200	150	6	882.190.00
20,0	20	60	200	150	6	882.200.00

BLANK HA Universal

Bei unserer Art.-Nr. 884 handelt es sich ausschließlich um speziell angefertigte Sonderreibahlen. Deshalb ist die Art.-Nr. 884 komplett von jeglichem Umtausch ausgeschlossen.

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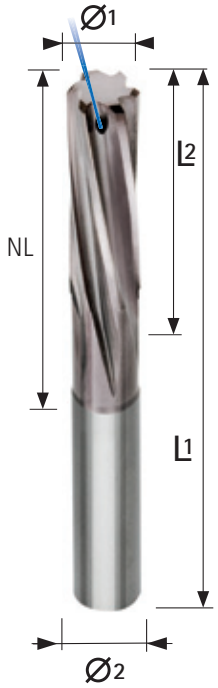
Artikel-Nr.

883...

VHM – Maschinenreibahle^{IK} lang

Solid carbide machine reamer long

TYP N



Ø1	Ø2	L2	L1	NL	Z	Artikel-Nr. *Article No.*
3,0	6	18	75	40	4	883.030.00
4,0	6	18	75	40	6	883.040.00
5,0	6	18	75	40	6	883.050.00
6,0	6	18	75	40	6	883.060.00
8,0	8	30	80	45	6	883.080.00
10,0	10	40	108	65	6	883.100.00
12,0	12	40	108	65	6	883.120.00
14,0	14	50	130	85	6	883.140.00
16,0	16	50	150	105	6	883.160.00
18,0	18	50	150	105	6	883.180.00
20,0	20	60	150	105	6	883.200.00

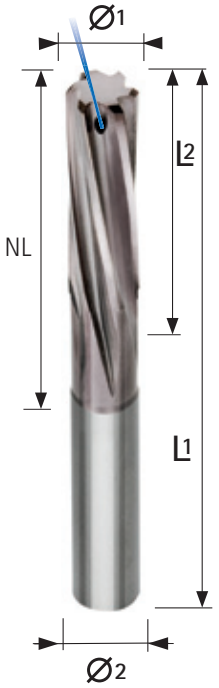
Artikel-Nr.

884...

VHM – Maschinenreibahle^{IK} lang

Solid carbide machine reamer long

TYP N



Ø1	Ø2	L2	L1	NL	Z	Artikel-Nr. *Article No.*
2,95-3,05	6	22	75	40	6	884...
3,06-3,96	6	24	75	40	6	884...
3,97-4,05	6	24	75	40	6	884...
4,06-4,96	6	24	75	40	6	884...
4,97-5,05	6	24	75	40	6	884...
5,06-5,96	6	24	75	40	6	884...
5,97-6,05	6	30	80	45	6	884...
6,06-6,47	6	30	80	45	6	884...
6,48-6,96	8	30	103	63	6	884...
6,97-7,05	8	30	103	63	6	884...
7,06-7,96	8	30	103	63	6	884...
7,97-8,05	8	35	103	63	6	884...
8,06-8,47	8	35	103	63	6	884...
8,48-8,96	10	35	103	63	6	884...
8,97-9,05	10	35	103	63	6	884...
9,06-9,96	10	35	103	63	6	884...
9,97-10,05	10	35	103	63	6	884...
10,06-10,47	10	35	103	63	6	884...
10,48-10,96	12	40	103	63	6	884...
10,97-11,05	12	40	103	63	6	884...
11,06-11,96	12	40	103	63	6	884...
11,97-12,05	12	40	103	63	6	884...

TIALN HA Universal

TIALN HA Universal

Artikel-Nr.

730...

VHM – Hochleistungskegelsenker 90°

Solid carbide performance countersink

TYP N

Ø1	Ø2	L1	Z	Artikel-Nr. *Article No.*
4,3	4	40	3	730.043.00
5,3	4	40	3	730.053.00
6,3	5	45	3	730.063.00
8,3	6	50	3	730.083.00
10,4	6	50	3	730.104.00
12,4	8	56	3	730.124.00
16,5	10	60	3	730.165.00
20,5	10	63	3	730.205.00
25,0	10	67	3	730.250.00

Komplett aus Vollhartmetall

Completely made of solid carbide

TIALN HA Werks-norm Universal

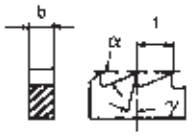
Innovative Präzisionsprodukte für die unterschiedlichsten Einsatzbereiche!
Innovative precision products for most different areas of use!

VHM – Kreissägeblätter feine Verzahnung

Solid carbide slitting saw with fine teeth

Artikel-Nr.
191...

DIN 1837



Winkelzahn: A
Angular tooth: A

Sägeblatt ø slitting saw ø	15mm		20 mm		25 mm		30 mm		40 mm		50 mm		63 mm	
Bohrung ø bore ø H7	5mm		5mm		8 mm		8mm		10 mm		13 mm		16 mm	
Breite b =mm *width b = mm*		*Z*		*Z*		*Z*		*Z*		*Z*		*Z*		*Z*
0,1	191.015.01	64	191.020.01	80	191.025.01	80	191.030.01	100						
0,2	191.015.02	64	191.020.02	80	191.025.02	80	191.030.02	100			191.050.02	128	191.063.02	160
0,3	191.015.03	64	191.020.03	64	191.025.03	80	191.030.03	80	191.040.03	100	191.050.03	128	191.063.03	128
0,4	191.015.04	64	191.020.04	64	191.025.04	64	191.030.04	80	191.040.04	100	191.050.04	100	191.063.04	128
0,5	191.015.06	48	191.020.06	48	191.025.06	64	191.030.06	80	191.040.06	80	191.050.06	100	191.063.06	128
0,6	191.015.07	48	191.020.07	48	191.025.07	64	191.030.07	64	191.040.07	80	191.050.07	100	191.063.07	100
0,7	191.015.08	48	191.020.08	48	191.025.08	48	191.030.08	64	191.040.08	80	191.050.08	80	191.063.08	100
0,8	191.015.09	40	191.020.09	48	191.025.09	48	191.030.09	64	191.040.09	80	191.050.09	80	191.063.09	100
0,9	191.015.10	40	191.020.10	40	191.025.10	48	191.030.10	64	191.040.10	64	191.050.10	80	191.063.10	100
1,0	191.015.11	40	191.020.11	40	191.025.11	48	191.030.11	64	191.040.11	64	191.050.11	80	191.063.11	100
1,1	191.015.12	40	191.020.12	40	191.025.12	48	191.030.12	64	191.040.12	64	191.050.12	80	191.063.12	80
1,2	191.015.13	40	191.020.13	40	191.025.13	48	191.030.13	48	191.040.13	64	191.050.13	80	191.063.13	80
1,3	191.015.14	40	191.020.14	40	191.025.14	40	191.030.14	48	191.040.14	64	191.050.14	64	191.063.14	80
1,4	191.015.15	40	191.020.15	40	191.025.15	40	191.030.15	48	191.040.15	64	191.050.15	64	191.063.15	80
1,5	191.015.16	40	191.020.16	40	191.025.16	40	191.030.16	48	191.040.16	64	191.050.16	64	191.063.16	80
1,6	191.015.17	40	191.020.17	40	191.025.17	40	191.030.17	48	191.040.17	64	191.050.17	64	191.063.17	80
1,7	191.015.18	40	191.020.18	40	191.025.18	40	191.030.18	48	191.040.18	48	191.050.18	64	191.063.18	80
1,8	191.015.19	40	191.020.19	32	191.025.19	40	191.030.19	48	191.040.19	48	191.050.19	64	191.063.19	80
1,9	191.015.20	40	191.020.20	32	191.025.20	40	191.030.20	48	191.040.20	48	191.050.20	64	191.063.20	80
2,0	191.015.21	40	191.020.21	32	191.025.21	40	191.030.21	48	191.040.21	48	191.050.21	64	191.063.21	80
2,5	191.015.22	40	191.020.22	32	191.025.22	40	191.030.22	40	191.040.22	48	191.050.22	64	191.063.22	64
3,0	191.015.23	40	191.020.23	32	191.025.23	32	191.030.23	40	191.040.23	48	191.050.23	48	191.063.23	64
3,5	191.015.24	40	191.020.24	24	191.025.24	32	191.030.24	40	191.040.24	48	191.050.24	48	191.063.24	64
4,0	191.015.25	40	191.020.25	24	191.025.25	32	191.030.25	40	191.040.25	40	191.050.25	48	191.063.25	64
5,0	191.015.26	40	191.020.26	24	191.025.26	32	191.030.26	32	191.040.26	40	191.050.26	48	191.063.26	48
6,0	191.015.27	40	191.020.27	24	191.025.27	32	191.030.27	32	191.040.27	40	191.050.27	40	191.063.27	48

Fortsetzung nächste Seite / to be continued

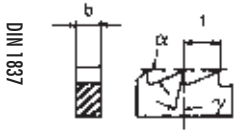
VHM – Kreissägeblätter feine Verzahnung

Solid carbide slitting saw with fine teeth

Fortsetzung / continuation

Artikel-Nr.

191...



DIN 1837

Winkelzahn: A
Angular tooth: A

Sägeblatt ø slitting saw ø	80 mm		100 mm		125 mm		150 mm		160 mm		200 mm	
Bohrung ø bore ø H7	22 mm		22 mm		22 mm		32 mm		32 mm		32 mm	
Breite b =mm / *width b = mm*		*Z*		*Z*		*Z*		*Z*		*Z*		*Z*
0,1												
0,2												
0,3	191.080.03	160										
0,4	191.080.04	160										
0,5	191.080.06	128	191.100.06	160								
0,6	191.080.07	128	191.100.07	160								
0,7	191.080.08	128	191.100.08	128								
0,8	191.080.09	128	191.100.09	128	191.125.09	160						
0,9	191.080.10	100	191.100.10	128	191.125.10	160						
1,0	191.080.11	100	191.100.11	128	191.125.11	160	191.150.11	150	191.160.11	160		
1,1	191.080.12	100	191.100.12	128	191.125.12	128						
1,2	191.080.13	100	191.100.13	128	191.125.13	128	191.150.13	150	191.160.13	160		
1,3	191.080.14	100	191.100.14	100	191.125.14	128						
1,4	191.080.15	100	191.100.15	100	191.125.15	128						
1,5	191.080.16	100	191.100.16	100	191.125.16	128	191.150.16	150	191.160.16	160	191.200.16	160
1,6	191.080.17	100	191.100.17	100	191.125.17	128	191.150.17	150	191.160.17	160	191.200.17	160
1,7	191.080.18	80	191.100.18	100	191.125.18	128						
1,8	191.080.19	80	191.100.19	100	191.125.19	128						
1,9	191.080.20	80	191.100.20	100	191.125.20	128						
2,0	191.080.21	80	191.100.21	100	191.125.21	128	191.150.21	128	191.160.21	128	191.200.21	160
2,5	191.080.22	80	191.100.22	100	191.125.22	100	191.150.22	128	191.160.22	128	191.200.22	160
3,0	191.080.23	80	191.100.23	80	191.125.23	100	191.150.23	128	191.160.23	128	191.200.23	128
3,5	191.080.24	64	191.100.24	80	191.125.24	100						
4,0	191.080.25	64	191.100.25	80	191.125.25	100	191.150.25	128	191.160.25	100	191.200.25	128
5,0	191.080.26	64	191.100.26	80	191.125.26	80						
6,0	191.080.27	64	191.100.27	64	191.125.27	80						

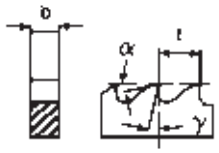
Universal

VHM – Kreissägeblätter grobe Verzahnung

Solid carbide slitting saw with large teeth

Artikel-Nr.

192...



Bogenzahn: B
Rounded tooth: B

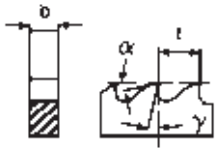
Sägeblatt ø slitting saw ø	15mm		20 mm		25 mm		30 mm		40 mm	
Bohrung ø bore ø H7	5mm		5mm		8 mm		8mm		10 mm	
Breite b =mm *width b = mm*		*Z*		*Z*		*Z*		*Z*		*Z*
0,2	192.015.01	20	192.020.01	20	192.025.01	20	192.030.01	30	192.040.01	40
0,3	192.015.02	20	192.020.02	20	192.025.02	20	192.030.02	30	192.040.02	40
0,4	192.015.03	20	192.020.03	20	192.025.03	20	192.030.03	30	192.040.03	40
0,5	192.015.04	20	192.020.04	20	192.025.04	20	192.030.04	30	192.040.04	40
0,6	192.015.05	20	192.020.05	20	192.025.05	20	192.030.05	30	192.040.05	40
0,7	192.015.06	20	192.020.06	20	192.025.06	20	192.030.06	30	192.040.06	40
0,8	192.015.07	20	192.020.07	20	192.025.07	20	192.030.07	30	192.040.07	40
1,0	192.015.08	20	192.020.08	20	192.025.08	20	192.030.08	24	192.040.08	32
1,2	192.015.09	20	192.020.09	20	192.025.09	20	192.030.09	24	192.040.09	32
1,5	192.015.10	20	192.020.10	20	192.025.10	20	192.030.10	24	192.040.10	32
1,6	192.015.11	20	192.020.11	20	192.025.11	20	192.030.11	24	192.040.11	32
1,8	192.015.12	20	192.020.12	20	192.025.12	20	192.030.12	24	192.040.12	32
2,0	192.015.13	20	192.020.13	20	192.025.13	20	192.030.13	24	192.040.13	32
2,5	192.015.14	20	192.020.14	20	192.025.14	20	192.030.14	24	192.040.14	32
3,0	192.015.15	20	192.020.15	20	192.025.15	20	192.030.15	24	192.040.15	32
4,0	192.015.16	20	192.020.16	20	192.025.16	20	192.030.16	24	192.040.16	32
5,0	192.015.17	20	192.020.17	20	192.025.17	20	192.030.17	24	192.040.17	32
6,0	192.015.18	20	192.020.18	20	192.025.18	20	192.030.18	24	192.040.18	32

Fortsetzung nächste Seite / to be continued

Fortsetzung / continuation

Artikel-Nr.

192...



Bogenzahn: B
Rounded tooth: B

VHM – Kreissägeblätter grobe Verzahnung

Solid carbide slitting saw with large teeth

Sägeblatt ø slitting saw ø	50 mm		63 mm		80 mm		100 mm		125 mm	
Bohrung ø bore ø H7	22 mm		22 mm		22 mm		32 mm		32 mm	
Breite b =mm *width b = mm*		*Z*		*Z*		*Z*		*Z*		*Z*
0,2										
0,3										
0,4	192.050.03	48	192.063.03	64						
0,5	192.050.04	48	192.063.04	64						
0,6	192.050.05	48	192.063.05	48	192.080.05	64	192.100.05	80		
0,7	192.050.06	40	192.063.06	48	192.080.06	64	192.100.06	80		
0,8	192.050.07	40	192.063.07	48	192.080.07	64	192.100.07	64	192.125.07	80
1,0	192.050.08	40	192.063.08	48	192.080.08	48	192.100.08	64	192.125.08	80
1,2	192.050.09	40	192.063.09	40	192.080.09	48	192.100.09	64	192.125.09	64
1,5	192.050.10	32	192.063.10	40	192.080.10	48	192.100.10	48	192.125.10	64
1,6	192.050.11	32	192.063.11	40	192.080.11	48	192.100.11	48	192.125.11	64
1,8	192.050.12	32	192.063.12	40	192.080.12	40	192.100.12	48	192.125.12	64
2,0	192.050.13	32	192.063.13	40	192.080.13	40	192.100.13	48	192.125.13	64
2,5	192.050.14	32	192.063.14	32	192.080.14	40	192.100.14	48	192.125.14	48
3,0	192.050.15	24	192.063.15	32	192.080.15	40	192.100.15	40	192.125.15	48
4,0	192.050.16	24	192.063.16	32	192.080.16	32	192.100.16	40	192.125.16	48
5,0	192.050.17	24	192.063.17	24	192.080.17	32	192.100.17	40	192.125.17	40
6,0	192.050.18	24	192.063.18	24	192.080.18	32	192.100.18	32	192.125.18	40

Drehzahltabelle

	vc[m/min] Umfangsgeschwindigkeit bzw. Schnittgeschwindigkeit																									
	5	10	15	20	25	30	35	40	45	50	55	60	65	70	80	90	100	120	140	160	180	200	250	300	400	500
D[mm]	Drehzahl n [U/min]																									
1,0	1592	3183	4775	6366	7958	9549	11141	12732	14324	15915	17507	19099	20690	22282	25465	28648	31831	38197	44563	50930	57296	63662	79577	95493	127324	159155
1,5	1061	2122	3183	4244	5305	6366	7427	8488	9549	10610	11671	12732	13793	14854	16977	19099	21221	25465	29709	33953	38197	42441	53052	63662	84883	106103
2,0	796	1592	2387	3183	3979	4775	5570	6366	7162	7958	8754	9549	10345	11141	12732	14324	15915	19099	22282	25465	28648	31831	39789	47746	63662	79577
2,5	637	1273	1910	2546	3183	3820	4456	5093	5730	6366	7003	7639	8276	8913	10186	11459	12732	15279	17825	20372	22918	25465	31831	38197	50930	63662
3,0	531	1061	1592	2122	2653	3183	3714	4244	4775	5305	5836	6366	6897	7427	8488	9549	10610	12732	14854	16977	19099	21221	26526	31831	42441	53052
3,5	455	909	1364	1819	2274	2728	3183	3638	4093	4547	5002	5457	5911	6366	7276	8185	9095	10913	12732	14551	16370	18189	22736	27284	36378	45473
4,0	398	796	1194	1592	1989	2387	2785	3183	3581	3979	4377	4775	5173	5570	6366	7162	7958	9549	11141	12732	14324	15915	19894	23873	31831	39789
4,5	354	707	1061	1415	1768	2122	2476	2829	3183	3537	3890	4244	4598	4951	5659	6366	7074	8488	9903	11318	12732	14147	17684	21221	28294	35368
5,0	318	637	955	1273	1592	1910	2228	2546	2865	3183	3501	3820	4138	4456	5093	5730	6366	7639	8913	10186	11459	12732	15915	19099	25465	31831
6,0	265	531	796	1061	1326	1592	1857	2122	2387	2653	2918	3183	3448	3714	4244	4775	5305	6366	7427	8488	9549	10610	13263	15915	21221	26526
7,0	227	455	682	909	1137	1364	1592	1819	2046	2274	2501	2728	2956	3183	3638	4093	4547	5457	6366	7276	8185	9095	11368	13642	18189	22736
8,0	199	398	597	796	995	1194	1393	1592	1790	1989	2188	2387	2586	2785	3183	3581	3979	4775	5570	6366	7162	7958	9947	11937	15915	19894
9,0	177	354	531	707	884	1061	1238	1415	1592	1768	1945	2122	2299	2476	2829	3183	3537	4244	4951	5659	6366	7074	8842	10610	14147	17684
10,0	159	318	477	637	796	955	1114	1273	1432	1592	1751	1910	2069	2228	2546	2865	3183	3820	4456	5093	5730	6366	7958	9549	12732	15915
11,0	145	289	434	579	723	868	1013	1157	1302	1447	1592	1736	1881	2026	2315	2604	2894	3472	4051	4630	5209	5787	7234	8681	11575	14469
12,0	133	265	398	531	663	796	928	1061	1194	1326	1459	1592	1724	1857	2122	2387	2653	3183	3714	4244	4775	5305	6631	7958	10610	13263
13,0	122	245	367	490	612	735	857	979	1102	1224	1347	1469	1592	1714	1959	2204	2449	2938	3428	3918	4407	4897	6121	7346	9794	12243
14,0	114	227	341	455	568	682	796	909	1023	1137	1251	1364	1478	1592	1819	2046	2274	2728	3183	3638	4093	4547	5684	6821	9095	11368
15,0	106	212	318	424	531	637	743	849	955	1061	1167	1273	1379	1485	1698	1910	2122	2546	2971	3395	3820	4244	5305	6366	8488	10610
16,0	99	199	298	398	497	597	696	796	895	995	1094	1194	1293	1393	1592	1790	1989	2387	2785	3183	3581	3979	4974	5968	7958	9947
17,0	94	187	281	374	468	562	655	749	843	936	1030	1123	1217	1311	1498	1685	1872	2247	2621	2996	3370	3745	4681	5617	7490	9362
18,0	88	177	265	354	442	531	619	707	796	884	973	1061	1149	1238	1415	1592	1768	2122	2476	2829	3183	3537	4421	5305	7074	8842
19,0	84	168	251	335	419	503	586	670	754	838	921	1005	1089	1173	1340	1508	1675	2010	2345	2681	3016	3351	4188	5026	6701	8377
20,0	80	159	239	318	398	477	557	637	716	796	875	955	1035	1114	1273	1432	1592	1910	2228	2546	2865	3183	3979	4775	6366	7958
25,0	64	127	191	255	318	382	446	509	573	637	700	764	828	891	1019	1146	1273	1528	1783	2037	2292	2546	3183	3820	5093	6366
30,0	53	106	159	212	265	318	371	424	477	531	584	637	690	743	849	955	1061	1273	1485	1698	1910	2122	2653	3183	4244	5305
32,0	50	99	149	199	249	298	348	398	448	497	547	597	647	696	796	895	995	1194	1393	1592	1790	1989	2487	2984	3979	4974
36,0	44	88	133	177	221	265	309	354	398	442	486	531	575	619	707	796	884	1061	1238	1415	1592	1768	2210	2653	3537	4421
40,0	40	80	119	159	199	239	279	318	358	398	438	477	517	557	637	716	796	955	1114	1273	1432	1592	1989	2387	3183	3979
50,0	32	64	95	127	159	191	223	255	286	318	350	382	414	446	509	573	637	764	891	1019	1146	1273	1592	1910	2546	3183
63,0	25	51	76	101	126	152	177	202	227	253	278	303	328	354	404	455	505	606	707	808	909	1011	1263	1516	2021	2526
80,0	20	40	60	80	99	119	139	159	179	199	219	239	259	279	318	358	398	477	557	637	716	796	995	1194	1592	1989
100,0	16	32	48	64	80	95	111	127	143	159	175	191	207	223	255	286	318	382	446	509	573	637	796	955	1273	1592
125,0	13	25	38	51	64	76	89	102	115	127	140	153	166	178	204	229	255	306	357	407	458	509	637	764	1019	1273
160,0	10	20	30	40	50	60	70	80	90	99	109	119	129	139	159	179	199	239	279	318	358	398	497	597	796	995
250,0	6	13	19	25	32	38	45	51	57	64	70	76	83	89	102	115	127	153	178	204	229	255	318	382	509	637
300,0	5	11	16	21	27	32	37	42	48	53	58	64	69	74	85	95	106	127	149	170	191	212	265	318	424	531
400,0	4	8	12	16	20	24	28	32	36	40	44	48	52	56	64	72	80	95	111	127	143	159	199	239	318	398
500,0	3	6	10	13	16	19	22	25	29	32	35	38	41	45	51	57	64	76	89	102	115	127	159	191	255	318

Hartmetalle von Inovatools

Unsere Hartmetallsorten, produziert mit neuester Sintertechnologie, garantieren homogenes Gefüge, hohe Härte, hohe Biegebruchfestigkeit und dadurch maximale Standzeiten.

Die Auswahl der geeigneten Hartmetallsorte entscheidet maßgeblich über die Qualität des Endprodukts. Wir nennen Ihnen für Ihren Anwendungsfall die am Besten geeignete Sorte. Wir dokumentieren Ihre Auswahl: Ihre Qualität wird reproduzierbar.

Solid carbide of Inovatools

Our types of solid carbide which are produced by recent sinter technology guarantee homogeneous structure, high hardness, high bending strength and thereby maximum tool life.

Selection of the L3propriate type of solid carbide significantly decides on quality of the final product. We indicate our customers the best L3propriate type of solid carbide for their L3plication. We also document your selection: Your quality will be reproduceable.

Hartmetallsorten für die Zerspanungstechnik

Types of solid carbide for cutting technique

Sorte	Verwendung	mittlere WC Korngröße	WC in %	Co in %	Dichte g/cm³	Härte HV30	Biegebruchfestigkeit Bending strength	
Type	Application	Average WC grit size	WC in %	Co in %	Tightness g/cm³	Hardness HV30	N/mm²	1000 psi
K 44	Hart- und Trockenbearbeitung	0,5	88	12	14,1	1680	3800	551
K40	Universal	0,6	90	10	14,5	1610	3600	522
K 34	Schruppen	0,5	91	9	14,3	1930	3900	565
K15	DIA-DUR-Beschichtung Graphit	1	94	6	15	1630	2600	377

Beschreibung der Icons / Description of Icons

Geometrie für Werkstoffe weich bis hart geometry for materials soft to hard	TYP N, TYP H, TYP W, TYP N-H, TYP N-W, TYP H-N, TYP W-N	mit Innenkühlung with coolant hole	IK
		ohne Innenkühlung without coolant hole	o. IK
Scharfkantig sharp-edged		Höchstes Zerspanungsvolumen High Performance Cutting	HPC
Eckenfase / Eckfase protection chamfer		Hohes Zerspanungsvolumen bei geringeren Schnittkräften Multi Task Cutting	MTC
Eckenradius / Torus corner radius	ER	Hochgeschwindigkeitsbearbeitung High Speed Cutting	HSC
Vollradius ballnose	R	Hartbearbeitung Hard machining	HRC 45-55, HRC 55-60, HRC 70
Stirntorus frontal radius	ER, R	geläppt polished	geläppt polished
Spitzenwinkel point angle	60°, 90°, 140°	Unbeschichtet uncoated	BLANK
	1, 2, 3	Schaftausführung shank design	HA, HB, HE
Zähne (Schneiden) flutes	4, 5-7, 6	Werksnorm works standard	Werks-norm
	8, 16, 3-6	Lange Ausführung long design	DIN 6527 lang
Drallwinkel spiral angle	20°, 30°, 45°	Kurze Ausführung short design	DIN 6527 kurz

Universell einsetzbar universal processing	Universal
Gusseisen cast iron	GG(G)
Aluminium / Nichteisen Metalle aluminium / non-ferrous metal	ALU NE
Kunststoff plastic	Kunststoff plastic
GFK / CFK / Graphit fibreglass/carbonfibre plastics/graphite	GFK/CFK Graphit
Rost- und Säurebeständige Stähle rost and acid constant steel	INOX VA
Inconel / Titan Legierung Inconel / titanium alloy	INCONEL TITAN
Trockenbearbeitung dry processing	Trocken-bear-beitung
Vorschubrichtung feed direction	
Drei / Four Führungsfasen three / four guide margins	3-Fasen, 4-Fasen
ungleiche Teilung uneven pitch	ungleiche Teilung
Flankenwinkel flank angle	60°, 55°

Beschreibung der Beschichtung / Description of coatings

Icons Icons	Farbe Colour	Anwendung Application	Beschreibung description			Härte Hardness
TIALN	violett-anthrazit violet-anthracite	Stahl/Gußbearbeitung / Schruppen/Schlichten steel/ cast iron-machining / finishing/roughing	Universelle Hochleistungsschicht für das Zerspanen, auch geeignet für die Trockenbearbeitung	/	Universal high performance coating for chipping, also suitable for dry processing	3500 HV
ALTIN	anthrazit-schwarz anthracite-black	HSC und Hartbearbeitung hard machining and HSC	Hochleistungsschicht mit hohem Aluminiumgehalt, hohe Wärmehärte und Oxidationsbeständigkeit	/	High performance layer with high aluminum content, high hot hardness and oxidation resistance	3800 HV
TIALCN	burgund-violett burgund-violet	Bearbeitung von NE-Metalle machining of NE-metals	Universalschicht mit Nanogradianten Struktur mit hoher Wärmehärte und hoher Zähigkeit	/	Universal nano gradiant layer structure with high hot hardness and high heat resistance	3300 HV
TICN	silber grau silver gray	zum Fräsen und Gewindebohren for milling and tapping	Konventionelle Titankarbonnitridschicht für unterbrochenen Schnitt beim Fräsen und Bohren	/	Conventional titanium carbon nitride coating for interrupted cutting at milling and drilling	3200 HV
TIN	gold gold	Bohren, universelle Zerspanung drilling, chipping universal	Universal Schicht für Zerspanwerkzeuge	/	Universal coating for cutting tools	2400 HV
naco	anthrazit anthacite	Hochleistungszerspanung / Hartbearbeitung high performance chipping / hard machining	Nanokompositschicht mit extremer Härte / Wärmehärte und Oxidationsbeständigkeit	/	Nanocomposite coating with extreme hardness / heat and oxidation resistance	4500 HV
naco blue	blau blue	Hochleistungszerspanung / Hartbearbeitung high performance chipping / hard machining	Nanokompositschicht mit extremer Härte / Wärmehärte und Oxidationsbeständigkeit	/	Nanocomposite coating with extreme hardness / heat and oxidation resistance	4500 HV
HP³	gold golden	Hochleistungszerspanung von Superlegierungen high performance chipping of superalloies	Nanokompositschicht mit extremer Härte / Wärmehärte und Gleiteigenschaften	/	Nanocomposite coating with extreme hardness / heat and sliding material	4000 HV
ZrN	weißgold white gold	Aluminium und Titan Legierungen aluminum and titanium alloys	Monolayerschicht für Spezialanwendungen, Reduzierte Aufbauschneiden von Aluminium und Titanlegierungen	/	Monolayer coating for special applications, reduced built-up edges of aluminum and titanium alloys	2000 HV
DIAMANT DIA DUR	grau gray	Graphitbearbeitung/Kupfer Treatment of graphite/cooper	Multilayer Diamantschicht	/	Multilayer diamond coating	10000 HV
DLC	anthrazit anthracite	Hochleistungsschicht für Al-Cu und Titanbearbeitung high performance layer for treatment of Al-Cu and titanium	für Al-Cu–Titan Fräsen + Bohren	/	for Al-Cu-titanium milling + drilling	2800 HV
nacro	silbergrau silver grey	Powerschicht für Bohrer powercoating for drills	Nanokompositschicht mit extremer Härte, Wärmehärte, Oxidationsbeständigkeit und speziellen Gleiteigenschaften	/	nanocomposite coating with extreme hardness, heat, oxidation resistance and special sliding material	4000 HV