



NEU

DS Titan-Programm

Fräser für die Titanbearbeitung
mit polierten Schneiden und
optimierter Geometrie

NEW

DS Titan range

Solid carbide end mills for Titan,
with polished cutting edges and
optimized geometry

TECHNOLOGIEVORSPRUNG IST HORN
HORN - EXCELLENCE IN TECHNOLOGY





DS Titan-Programm

Zur Bearbeitung von Titanwerkstoffen bietet HORN eine überzeugende Palette von speziellen Werkzeugen mit scharfen Schneiden, positivem Spanwinkel, großem Freiwinkel und polierten Schneiden. Die speziell für die Luft- und Raumfahrt sowie die Medizintechnik entwickelte Schneidstoffsorte TSTK für VHM-Fräser zeichnet sich aus durch gute tribologische Eigenschaften, hohe Temperaturbeständigkeit und geringe Wärmeeinleitung ins Substrat – ein Hitzeschild sozusagen.

Die Schaftfräser erhielten unterschiedliche Drallwinkel und unterschiedliche Teilung. Das führt zu weichem, ruhigem Schnitt und vermeidet Vibrationen.

Das Titan-Programm von HORN umfasst damit eine komplett neue Fräserlinie von VHM-Fräsern mit Durchmessern von 2 mm bis 20 mm als Vier- und Fünfschneider in den Ausführungen mit 2 x D und 3 x D.

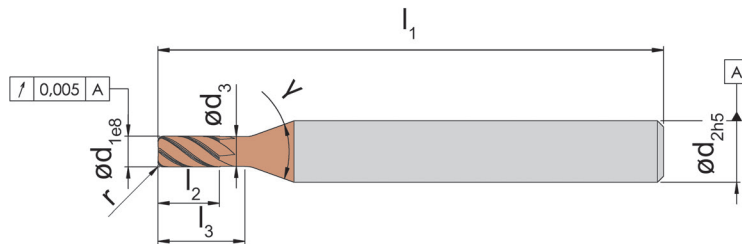
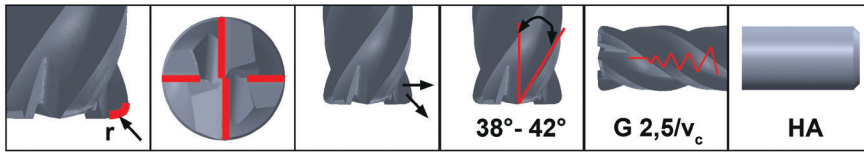
DS Titan range

HORN has developed an impressive array of special tools for machining titanium materials. With their sharp cutting edges, positive cutting angle, large relief angle and polished cutting edges, these tools are designed to overcome the main problems encountered during titanium machining. The TSTK cutting material grade that HORN has developed for its solid carbide milling cutters is specifically intended for machining titanium in the aviation/aerospace and medical technology industries. As well as offering good tribological properties and high temperature resistance, this introduces minimal heat into the substrate and acts as a kind of thermal shield. Another important aspect that had to be considered when developing the solid carbide end mills was that they had to have different helix angles and different pitches. This ensures a soft and gentle cut while avoiding vibrations. Sufficient quantities of coolant are essential when machining titanium.

The HORN titanium range includes a completely new line of solid carbide milling cutters with diameters ranging from 2 mm (0.0787") to 20 mm (0.7874"). These are available with four or five cutting edges and in 2 x D and 3 x D versions.



DSRV



Bestellnummer Part number	d ₁	r	l ₂	l ₃	d ₂	l ₁	d ₃	γ	Z	Form	TSK
DSRV.4.020.010.20	2	0,1	3	4	6	50	1,90	40	4	HA	▲
DSRV.4.020.010.30		0,1	5	6							▲
DSRV.4.020.020.20		0,2	3	4							▲
DSRV.4.020.020.30		0,2	5	6							▲
DSRV.4.030.010.20	3	0,1	5	6	6	50	2,85	40	4	HA	▲
DSRV.4.030.010.30		0,1	7	9							▲
DSRV.4.030.020.20		0,2	5	6							▲
DSRV.4.030.020.30		0,2	7	9							▲
DSRV.4.030.050.20		0,5	5	6							▲
DSRV.4.030.050.30		0,5	7	9							▲
DSRV.4.040.010.20	4	0,1	6	8	6	50	3,80	40	4	HA	▲
DSRV.4.040.010.30		0,1	9	12		57					▲
DSRV.4.040.020.20		0,2	6	8		50					▲
DSRV.4.040.020.30		0,2	9	12		57					▲
DSRV.4.040.050.20		0,5	6	8		50					▲
DSRV.4.040.050.30		0,5	9	12		57					▲
DSRV.4.050.010.20	5	0,1	8	10	6	50	4,75	40	4	HA	▲
DSRV.4.050.010.30		0,1	11	15		57					▲
DSRV.4.050.020.20		0,2	8	10		50					▲
DSRV.4.050.020.30		0,2	11	15		57					▲
DSRV.4.050.050.20		0,5	8	10		50					▲
DSRV.4.050.050.30		0,5	11	15		57					▲
DSRV.4.050.100.20		1,0	8	10		50					▲
DSRV.4.050.100.30		1,0	11	15		57					▲

▲ ab Lager / on stock Δ 4 Wochen / 4 weeks

● Haupteinsatzbereich / main recommendation

○ bedingt einsetzbar / alternative recommendation

■ unbeschichtete HM-Sorten / uncoated grades

■ beschichtete HM-Sorten / coated grades

■ bestückt/Cermet / brazed/Cermet

Abmessungen in mm

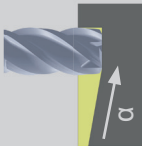
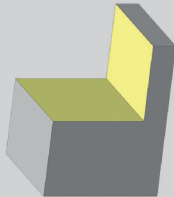
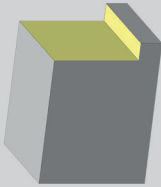
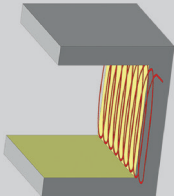
Dimensions in mm

P	•
M	•
K	•
N	•
S	•
H	•

SCHNITTDATEN DSRV4 Ø 2,0 - 5,0 mm

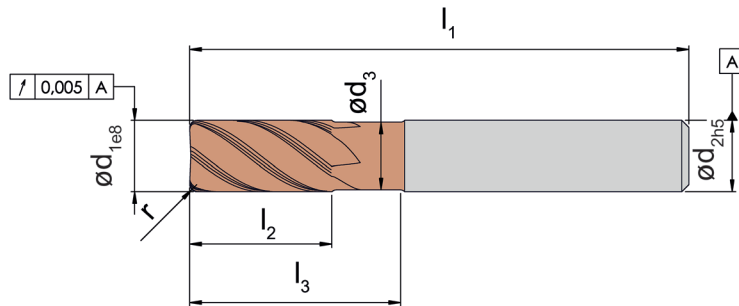
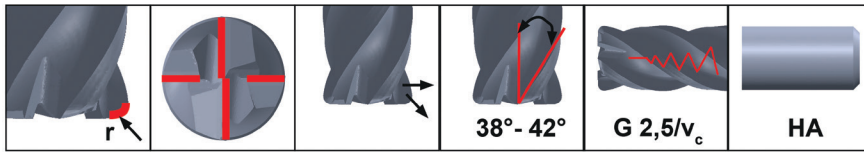
CUTTING DATA DSRV4 Ø 2,0 - 5,0 mm



S																					
	d ₁	l ₂	l ₃	α	v _c	f _z	a _e	a _p	v _c	f _z	a _e	a _p	v _c	f _z	a _e	a _p	f _z	v _c	a _e	a _p	h _m
2		3	4	5°	60	0,008	2	2	80	0,012	0,5	3	100	0,009	0,1	3	125	0,046	0,09	3	0,01
		5	6		60	0,006	2	2	80	0,01	0,5	4	100	0,009	0,1	5	125	0,042	0,09	4	0,009
3		5	6		60	0,011	3	3	80	0,018	0,75	4,5	100	0,013	0,15	5	125	0,069	0,14	4,5	0,015
		7	9		60	0,01	3	3	80	0,015	0,75	6	100	0,013	0,15	7	125	0,063	0,14	6	0,014
4		3	4		60	0,015	4	4	80	0,023	1	6	100	0,018	0,2	3	125	0,092	0,19	6	0,02
		5	6		60	0,013	4	4	80	0,02	1	8	100	0,018	0,2	5	125	0,085	0,19	8	0,018
5		8	10		60	0,019	5	5	80	0,029	1,25	7,5	100	0,022	0,25	8	125	0,115	0,24	7,5	0,025
		11	15		60	0,016	5	5	80	0,025	1,25	10	100	0,022	0,25	11	125	0,106	0,24	10	0,023

Abmessungen in mm
Dimensions in mm

DSRV



Bestellnummer Part number	d ₁	r	l ₂	l ₃	d ₂	l ₁	d ₃	Z	Form	TSK
DSRV.4.060.010.20	6	0,1	9	12	6	50	5,7	4	HA	▲
DSRV.4.060.010.30		0,1	13	18						▲
DSRV.4.060.020.20		0,2	9	12						▲
DSRV.4.060.020.30		0,2	13	18						▲
DSRV.4.060.050.20		0,5	9	12						▲
DSRV.4.060.050.30		0,5	13	18						▲
DSRV.4.060.100.30		1,0	13	18						▲
DSRV.4.060.100.20		1,0	9	12						▲
DSRV.4.080.010.20	8	0,1	12	16	8	58	7,6	4	HA	▲
DSRV.4.080.010.30		0,1	17	24						▲
DSRV.4.080.020.20		0,2	12	16						▲
DSRV.4.080.020.30		0,2	17	24						▲
DSRV.4.080.050.20		0,5	12	16						▲
DSRV.4.080.050.30		0,5	17	24						▲
DSRV.4.080.100.20		1,0	12	16						▲
DSRV.4.080.100.30		1,0	17	24						▲
DSRV.4.080.150.20		1,5	12	16		58				▲
DSRV.4.080.150.30		1,5	17	24						▲

▲ ab Lager / on stock Δ 4 Wochen / 4 weeks

● Haupteinsatzbereich / main recommendation

○ bedingt einsetzbar / alternative recommendation

unbeschichtete HM-Sorten / uncoated grades

beschichtete HM-Sorten / coated grades

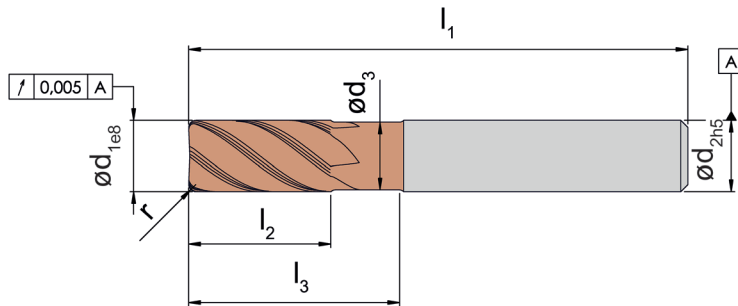
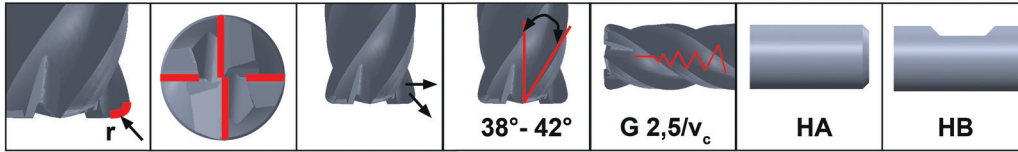
bestückt/Cermet / brazed/Cermet

Abmessungen in mm
Dimensions in mm

P	•
M	•
K	•
N	•
S	•
H	•

Abmessungen in mm
Dimensions in mm

DSRV



Bestellnummer Part number	d ₁	r	l ₂	l ₃	d ₂	l ₁	d ₃	Z	Form	TSTK
DSRV.4.100.010.20	10	0,1	15	20	10	66	9,5	4	HA	▲
DSRV.4.100.010.20B		0,1	15	20		66			HB	▲
DSRV.4.100.010.30		0,1	21	30		72			HA	▲
DSRV.4.100.010.30B		0,1	21	30		72			HB	▲
DSRV.4.100.020.20		0,2	15	20		66			HA	▲
DSRV.4.100.020.20B		0,2	15	20		66			HB	▲
DSRV.4.100.020.30		0,2	21	30		72			HA	▲
DSRV.4.100.020.30B		0,2	21	30		72			HB	▲
DSRV.4.100.050.20		0,5	15	20		66			HA	▲
DSRV.4.100.050.20B		0,5	15	20		66			HB	▲
DSRV.4.100.050.30		0,5	21	30		72			HA	▲
DSRV.4.100.050.30B		0,5	21	30		72			HB	▲
DSRV.4.100.100.20		1,0	15	20		66			HA	▲
DSRV.4.100.100.20B		1,0	15	20		66			HB	▲
DSRV.4.100.100.30		1,0	21	30		72			HA	▲
DSRV.4.100.100.30B		1,0	21	30		72			HB	▲
DSRV.4.100.150.20		1,5	15	20		66			HA	▲
DSRV.4.100.150.20B		1,5	15	20		66			HB	▲
DSRV.4.100.150.30		1,5	21	30		72			HA	▲
DSRV.4.100.150.30B		1,5	21	30		72			HB	▲
DSRV.4.100.200.20		2,0	15	20		66			HA	▲
DSRV.4.100.200.20B		2,0	15	20		66			HB	▲
DSRV.4.100.200.30		2,0	21	30		72			HA	▲
DSRV.4.100.200.30B		2,0	21	30		72			HB	▲
DSRV.4.100.250.20		2,5	15	20		66			HA	▲
DSRV.4.100.250.20B		2,5	15	20		66			HB	▲
DSRV.4.100.250.30		2,5	21	30		72			HA	▲
DSRV.4.100.250.30B		2,5	21	30		72			HB	▲
DSRV.4.100.300.20		3,0	15	20		66			HA	▲
DSRV.4.100.300.20B		3,0	15	20		66			HB	▲
DSRV.4.100.300.30		3,0	21	30		72			HA	▲
DSRV.4.100.300.30B		3,0	21	30		72			HB	▲

▲ ab Lager / on stock Δ 4 Wochen / 4 weeks

● Haupteinsatzbereich / main recommendation

o bedingt einsetzbar / alternative recommendation

unbeschichtete HM-Sorten / uncoated grades

beschichtete HM-Sorten / coated grades

bestückt/Cermet / brazed/Cermet

Abmessungen in mm

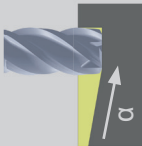
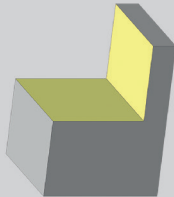
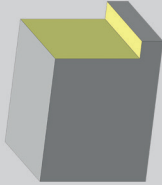
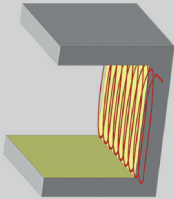
Dimensions in mm

P	•
M	•
K	•
N	•
S	•
H	•

SCHNITTDATEN DSRV4 Ø 10,0 mm

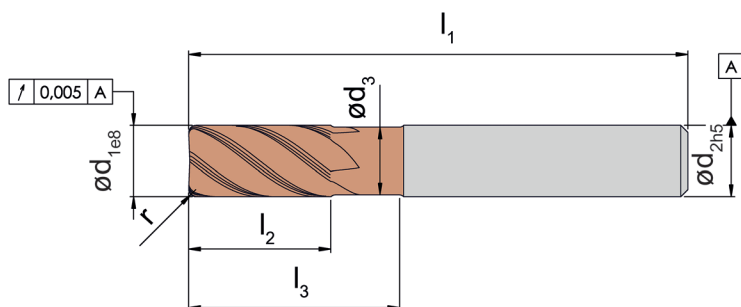
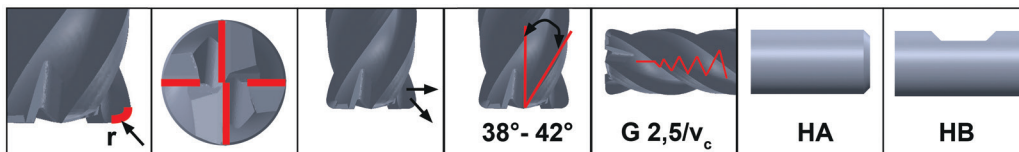
CUTTING DATA DSRV4 Ø 10,0 mm



S																					
	d_1	l_2	l_3	α	v_c	f_z	a_e	a_p	v_c	f_z	a_e	a_p	v_c	f_z	a_e	a_p	v_c	f_z	a_e	a_p	h_m
10	15	20		5°	60	0,038	10	10	80	0,058	2,5	15	100	0,045	0,5	15	125	0,231	0,47	15	0,05
	21	30			60	0,032	10	10	80	0,05	2,5	20	100	0,045	0,5	21	125	0,211	0,47	20	0,046

Abmessungen in mm
Dimensions in mm

DSRV



Bestellnummer Part number	d ₁	r	l ₂	l ₃	d ₂	l ₁	d ₃	Z	Form	TSTK
DSRV.4.120.020.20	12	0,2	18	24	12	73	11,4	4	HA	▲
DSRV.4.120.020.20B		0,2	18	24		73			HB	▲
DSRV.4.120.020.30		0,2	26	36		83			HA	▲
DSRV.4.120.020.30B		0,2	26	36		83			HB	▲
DSRV.4.120.050.20		0,5	18	24		73			HA	▲
DSRV.4.120.050.20B		0,5	18	24		73			HB	▲
DSRV.4.120.050.30		0,5	26	36		83			HA	▲
DSRV.4.120.050.30B		0,5	26	36		83			HB	▲
DSRV.4.120.100.20		1,0	18	24		73			HA	▲
DSRV.4.120.100.20B		1,0	18	24		73			HB	▲
DSRV.4.120.100.30		1,0	26	36		83			HA	▲
DSRV.4.120.100.30B		1,0	26	36		83			HB	▲
DSRV.4.120.150.20		1,5	18	24		73			HA	▲
DSRV.4.120.150.20B		1,5	18	24		73			HB	▲
DSRV.4.120.150.30		1,5	26	36		83			HA	▲
DSRV.4.120.150.30B		1,5	26	36		83			HB	▲
DSRV.4.120.200.20		2,0	18	24		73			HA	▲
DSRV.4.120.200.20B		2,0	18	24		73			HB	▲
DSRV.4.120.200.30		2,0	26	36		83			HA	▲
DSRV.4.120.200.30B		2,0	26	36		83			HB	▲
DSRV.4.120.250.20		2,5	18	24		73			HA	▲
DSRV.4.120.250.20B		2,5	18	24		73			HB	▲
DSRV.4.120.250.30		2,5	26	36		83			HA	▲
DSRV.4.120.250.30B		2,5	26	36		83			HB	▲
DSRV.4.120.300.30		3,0	26	36		83			HA	▲
DSRV.4.120.300.30B		3,0	26	36		83			HB	▲
DSRV.4.120.300.20		3,0	18	24		73			HA	▲
DSRV.4.120.300.20B		3,0	18	24		73			HB	▲

▲ ab Lager / on stock Δ 4 Wochen / 4 weeks

● Haupteinsatzbereich / main recommendation

o bedingt einsetzbar / alternative recommendation

unbeschichtete HM-Sorten / uncoated grades

beschichtete HM-Sorten / coated grades

bestückt/Cermet / brazed/Cermet

Abmessungen in mm

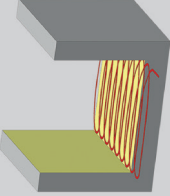
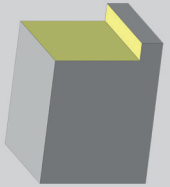
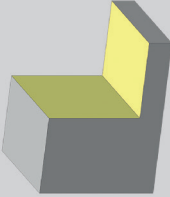
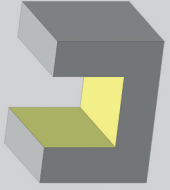
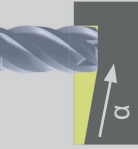
Dimensions in mm

P	•
M	•
K	•
N	•
S	•
H	•

SCHNITTDATEN DSRV4 Ø 12,0 mm

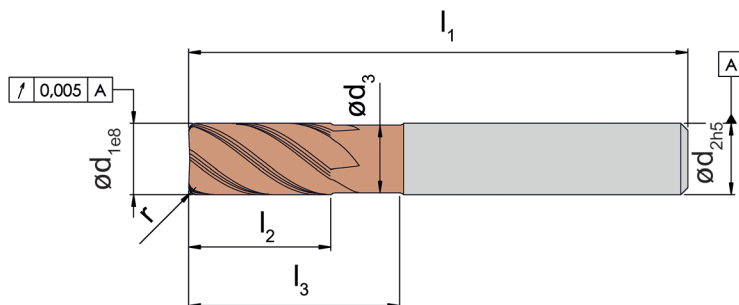
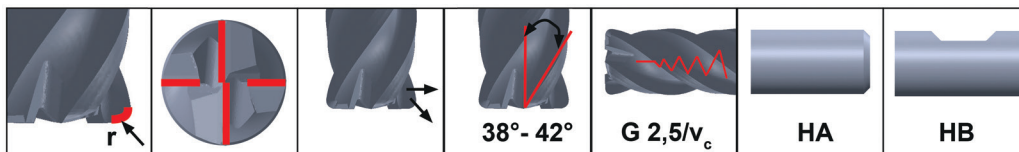
CUTTING DATA DSRV4 Ø 12,0 mm



S		h_m	0,06	0,055
		a_p	18	24
		a_e	0,56	0,56
		f_z	0,277	0,254
		v_c	125	125
		a_p	18	26
		a_e	0,6	0,6
		f_z	0,054	0,054
		v_c	100	100
		a_p	18	24
		a_e	3	3
		f_z	0,07	0,06
		v_c	80	80
		a_p	12	12
		a_e	12	12
		f_z	0,045	0,038
		v_c	60	60
	α		5°	
	l_3		24	36
	l_2		18	26
	d_1		12	

Abmessungen in mm
Dimensions in mm

DSRV



Bestellnummer Part number	d ₁	r	l ₂	l ₃	d ₂	l ₁	d ₃	Z	Form	TSTK
DSRV.4.160.020.20	16	0,2	24	32	16	82	15,2	4	HA	▲
DSRV.4.160.020.20B		0,2	24	32		82			HB	▲
DSRV.4.160.020.30		0,2	34	48		100			HA	▲
DSRV.4.160.020.30B		0,2	34	48		100			HB	▲
DSRV.4.160.050.20		0,5	24	32		82			HA	▲
DSRV.4.160.050.20B		0,5	24	32		82			HB	▲
DSRV.4.160.050.30		0,5	34	48		100			HA	▲
DSRV.4.160.050.30B		0,5	34	48		100			HB	▲
DSRV.4.160.100.20		1,0	24	32		82			HA	▲
DSRV.4.160.100.20B		1,0	24	32		82			HB	▲
DSRV.4.160.100.30		1,0	34	48		100			HA	▲
DSRV.4.160.100.30B		1,0	34	48		100			HB	▲
DSRV.4.160.150.20		1,5	24	32		82			HA	▲
DSRV.4.160.150.30		1,5	34	48		100			HA	▲
DSRV.4.160.150.20B		1,5	24	32		82			HB	▲
DSRV.4.160.150.30B		1,5	34	48		100			HB	▲
DSRV.4.160.200.20		2,0	24	32		82			HA	▲
DSRV.4.160.200.20B		2,0	24	32		82			HB	▲
DSRV.4.160.200.30		2,0	34	48		100			HA	▲
DSRV.4.160.200.30B		2,0	34	48		100			HB	▲
DSRV.4.160.250.20		2,5	24	32		82			HA	▲
DSRV.4.160.250.20B		2,5	24	32		82			HB	▲
DSRV.4.160.250.30		2,5	34	48		100			HA	▲
DSRV.4.160.250.30B		2,5	34	48		100			HB	▲
DSRV.4.160.300.20		3,0	24	32		82			HA	▲
DSRV.4.160.300.20B		3,0	24	32		82			HB	▲
DSRV.4.160.300.30		3,0	34	48		100			HA	▲
DSRV.4.160.300.30B		3,0	34	48		100			HB	▲
DSRV.4.160.400.20		4,0	24	32		82			HA	▲
DSRV.4.160.400.20B		4,0	24	32		82			HB	▲
DSRV.4.160.400.30		4,0	34	48		100			HA	▲
DSRV.4.160.400.30B		4,0	34	48		100			HB	▲

▲ ab Lager / on stock Δ 4 Wochen / 4 weeks

● Haupteinsatzbereich / main recommendation

o bedingt einsetzbar / alternative recommendation

unbeschichtete HM-Sorten / uncoated grades

beschichtete HM-Sorten / coated grades

bestückt/Cermet / brazed/Cermet

Abmessungen in mm

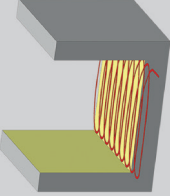
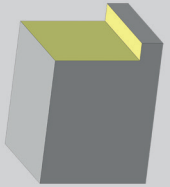
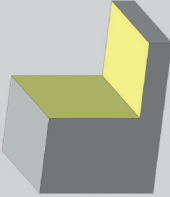
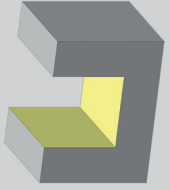
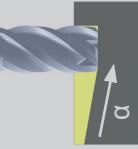
Dimensions in mm

P	•
M	•
K	•
N	•
S	•
H	•

SCHNITTDATEN DSRV4 Ø 16,0 mm

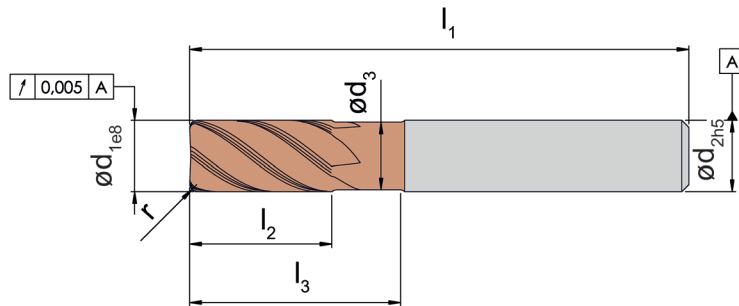
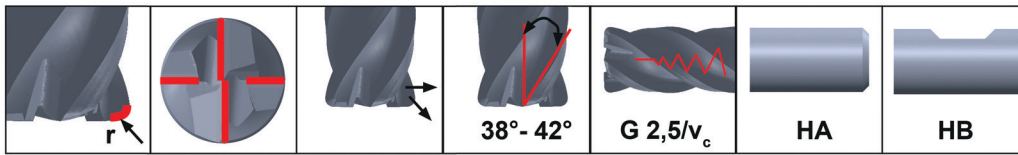
CUTTING DATA DSRV4 Ø 16,0 mm



S		h_m	0,08	0,073
		a_p	24	32
		a_e	0,75	0,75
		f_z	0,369	0,338
		v_c	125	125
		a_p	24	34
		a_e	0,8	0,8
		f_z	0,072	0,072
		v_c	100	100
		a_p	24	32
		a_e	4	4
		f_z	0,093	0,08
		v_c	80	80
		a_p	16	16
		a_e	16	16
		f_z	0,06	0,051
		v_c	60	60
		α	5°	
		l_3	32	48
		l_2	24	34
		d_1	16	

Abmessungen in mm
Dimensions in mm

DSRV



Bestellnummer Part number	d ₁	r	l ₂	l ₃	d ₂	l ₁	d ₃	Z	Form	TSTK
DSRV.4.200.020.20	20	0,2	30	40	20	92	19	4	HA	▲
DSRV.4.200.020.20B		0,2	30	40		92			HB	▲
DSRV.4.200.020.30		0,2	42	60		120			HA	▲
DSRV.4.200.020.30B		0,2	42	60		120			HB	▲
DSRV.4.200.050.20		0,5	30	40		92			HA	▲
DSRV.4.200.050.20B		0,5	30	40		92			HB	▲
DSRV.4.200.050.30		0,5	42	60		120			HA	▲
DSRV.4.200.050.30B		0,5	42	60		120			HB	▲
DSRV.4.200.100.20		1,0	30	40		92			HA	▲
DSRV.4.200.100.20B		1,0	30	40		92			HB	▲
DSRV.4.200.100.30		1,0	42	60		120			HA	▲
DSRV.4.200.100.30B		1,0	42	60		120			HB	▲
DSRV.4.200.150.20		1,5	30	40		92			HA	▲
DSRV.4.200.150.20B		1,5	30	40		92			HB	▲
DSRV.4.200.150.30		1,5	42	60		120			HA	▲
DSRV.4.200.150.30B		1,5	42	60		120			HB	▲
DSRV.4.200.200.20		2,0	30	40		92			HA	▲
DSRV.4.200.200.20B		2,0	30	40		92			HB	▲
DSRV.4.200.200.30		2,0	42	60		120			HA	▲
DSRV.4.200.200.30B		2,0	42	60		120			HB	▲
DSRV.4.200.250.20		2,5	30	40		92			HA	▲
DSRV.4.200.250.20B		2,5	30	40		92			HB	▲
DSRV.4.200.250.30		2,5	42	60		120			HA	▲
DSRV.4.200.250.30B		2,5	42	60		120			HB	▲
DSRV.4.200.300.20		3,0	30	40		92			HA	▲
DSRV.4.200.300.20B		3,0	30	40		92			HB	▲
DSRV.4.200.300.30		3,0	42	60		120			HA	▲
DSRV.4.200.300.30B		3,0	42	60		120			HB	▲
DSRV.4.200.400.20		4,0	30	40		92			HA	▲
DSRV.4.200.400.20B		4,0	30	40		92			HB	▲
DSRV.4.200.400.30		4,0	42	60		120			HA	▲
DSRV.4.200.400.30B		4,0	42	60		120			HB	▲

▲ ab Lager / on stock Δ 4 Wochen / 4 weeks

● Haupteinsatzbereich / main recommendation

o bedingt einsetzbar / alternative recommendation

unbeschichtete HM-Sorten / uncoated grades

beschichtete HM-Sorten / coated grades

bestückt/Cermet / brazed/Cermet

Abmessungen in mm

Dimensions in mm

P	•
M	•
K	•
N	•
S	•
H	•

SCHNITTDATEN DSRV4 Ø 20,0 mm

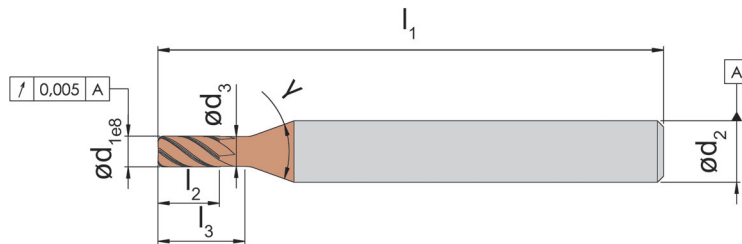
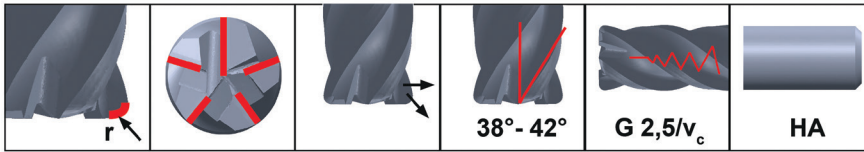
CUTTING DATA DSRV4 Ø 20,0 mm



S		α	5°	
	l_2	30	42	
	l_3	40	60	
	d_1	20		
	v_c	60	60	
	f_z	0,075	0,063	
	a_e	20	20	
	a_p	20	20	
	v_c	80	80	
	f_z	0,117	0,1	
	a_e	5	5	
	a_p	30	40	
	v_c	100	100	
	f_z	0,089	0,089	
	a_e	1	1	
	a_p	30	42	
	v_c	125	125	
	f_z	0,461	0,423	
	a_e	0,94	0,94	
	a_p	30	40	
	h_m	0,1	0,092	

Abmessungen in mm
Dimensions in mm

DSRV



Bestellnummer Part number	d ₁	r	l ₂	l ₃	d ₂	l ₁	d ₃	γ	Z	Form	TSK
DSRV.5.020.010.20	2	0,1	3	4	6	50	1,90	40	5	HA	▲
DSRV.5.020.010.30		0,1	5	6							▲
DSRV.5.020.020.20		0,2	3	4							▲
DSRV.5.020.020.30		0,2	5	6							▲
DSRV.5.030.010.20	3	0,1	5	6	6	50	2,85	40	5	HA	▲
DSRV.5.030.010.30		0,1	7	9							▲
DSRV.5.030.020.20		0,2	5	6							▲
DSRV.5.030.020.30		0,2	7	9							▲
DSRV.5.030.050.20		0,5	5	6							▲
DSRV.5.030.050.30		0,5	7	9							▲
DSRV.5.040.010.20	4	0,1	6	8	6	50	3,80	40	5	HA	▲
DSRV.5.040.010.30		0,1	9	12		57					▲
DSRV.5.040.020.20		0,2	6	8		50					▲
DSRV.5.040.020.30		0,2	9	12		57					▲
DSRV.5.040.050.20		0,5	6	8		50					▲
DSRV.5.040.050.30		0,5	9	12		57					▲

▲ ab Lager / on stock Δ 4 Wochen / 4 weeks
 ● Haupteinsatzbereich / main recommendation
 ○ bedingt einsetzbar / alternative recommendation
 unbeschichtete HM-Sorten / uncoated grades
 beschichtete HM-Sorten / coated grades
 bestückt/Cermet / brazed/Cermet

Abmessungen in mm
 Dimensions in mm

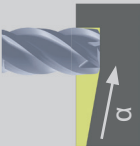
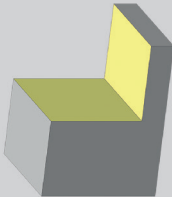
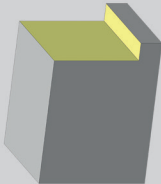
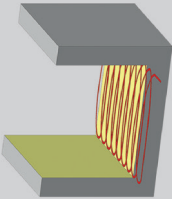
P ●
 M ●
 K ○
 N
 S ●
 H

HM-Sorten
 Carbide grades

SCHNITTDATEN DSRV5 Ø 2,0 - 5,0 mm

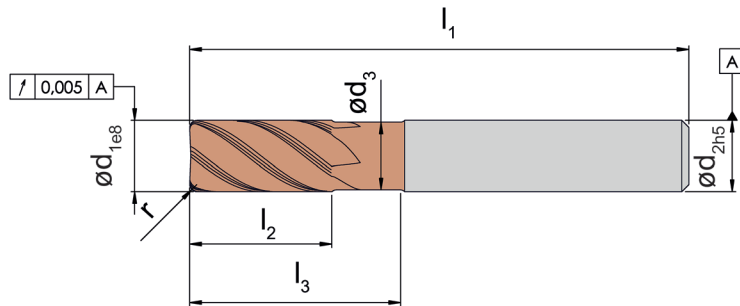
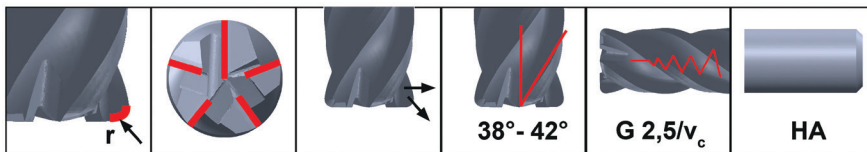
CUTTING DATA DSRV5 Ø 2,0 - 5,0 mm



S																				
		d ₁	l ₂	l ₃	α	v _c	f _z	a _e	a _p	v _c	f _z	a _e	a _p	v _c	f _z	a _e	a _p	h _m		
2	3	4	3°		60	0,008	2	2	80	0,012	0,45	3	100	0,009	0,1	3	125	0,046	3	0,01
	5	6			60	0,006	2	2	80	0,011	0,45	4	100	0,009	0,1	5	125	0,042	4	0,009
3	5	6	3°		60	0,011	3	3	80	0,018	0,675	4,5	100	0,013	0,15	5	125	0,069	4,5	0,015
	7	9			60	0,01	3	3	80	0,016	0,675	6	100	0,013	0,15	7	125	0,063	6	0,014
4	3	4	3°		60	0,015	4	4	80	0,025	0,9	6	100	0,018	0,2	3	125	0,092	6	0,02
	5	6			60	0,013	4	4	80	0,021	0,9	8	100	0,018	0,2	5	125	0,085	8	0,018
5	8	10	3°		60	0,019	5	5	80	0,031	1,125	7,5	100	0,022	0,25	8	125	0,115	7,5	0,025
	11	15			60	0,016	5	5	80	0,026	1,125	10	100	0,022	0,25	11	125	0,106	10	0,023

Abmessungen in mm
Dimensions in mm

DSRV



Bestellnummer Part number	d ₁	r	l ₂	l ₃	d ₂	l ₁	d ₃	Z	Form	TSK
DSRV.5.060.010.20	6	0,1	9	12	6	50	5,7	5	HA	▲
DSRV.5.060.010.30		0,1	13	18						▲
DSRV.5.060.020.20		0,2	9	12						▲
DSRV.5.060.020.30		0,2	13	18						▲
DSRV.5.060.050.20		0,5	9	12						▲
DSRV.5.060.050.30		0,5	13	18						▲
DSRV.5.060.100.20		1,0	9	12						▲
DSRV.5.060.100.30		1,0	13	18						▲
DSRV.5.080.010.20	8	0,1	12	16	8	58	7,6	5	HA	▲
DSRV.5.080.010.30		0,1	17	24						▲
DSRV.5.080.020.20		0,2	12	16						▲
DSRV.5.080.020.30		0,2	17	24						▲
DSRV.5.080.050.20		0,5	12	16						▲
DSRV.5.080.050.30		0,5	17	24						▲
DSRV.5.080.100.20		1,0	12	16						▲
DSRV.5.080.100.30		1,0	17	24						▲
DSRV.5.080.150.20	8	1,5	12	16	8	58	7,6	5	HA	▲
DSRV.5.080.150.30		1,5	17	24						▲

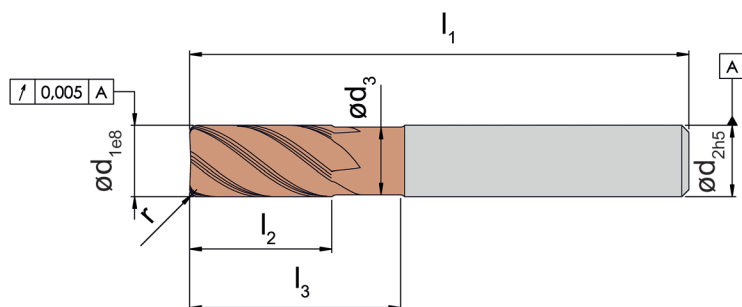
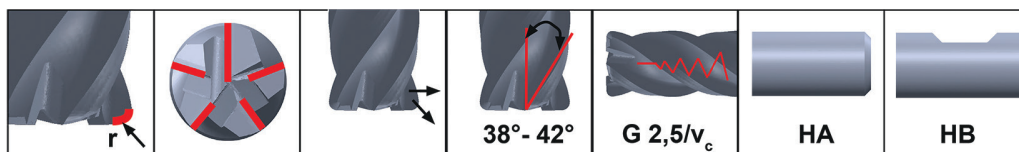
▲ ab Lager / on stock Δ 4 Wochen / 4 weeks
 ● Haupteinsatzbereich / main recommendation
 ○ bedingt einsetzbar / alternative recommendation
 ■ unbeschichtete HM-Sorten / uncoated grades
 ■ beschichtete HM-Sorten / coated grades
 ■ bestückt/Cermet / brazed/Cermet

Abmessungen in mm
 Dimensions in mm

P	●
M	●
K	○
N	●
S	●
H	●

Abmessungen in mm
Dimensions in mm

DSRV



Bestellnummer Part number	d ₁	r	l ₂	l ₃	d ₂	l ₁	d ₃	Z	Form	TSTK
DSRV.5.100.010.20	10	0,1	15	20	10	66	9,5	5	HA	▲
DSRV.5.100.010.20B		0,1	15	20		66			HB	▲
DSRV.5.100.010.30		0,1	21	30		72			HA	▲
DSRV.5.100.010.30B		0,1	21	30		72			HB	▲
DSRV.5.100.020.20		0,2	15	20		66			HA	▲
DSRV.5.100.020.20B		0,2	15	20		66			HB	▲
DSRV.5.100.020.30		0,2	21	30		72			HA	▲
DSRV.5.100.020.30B		0,2	21	30		72			HB	▲
DSRV.5.100.050.20		0,5	15	20		66			HA	▲
DSRV.5.100.050.20B		0,5	15	20		66			HB	▲
DSRV.5.100.050.30B		0,5	21	30		72			HB	▲
DSRV.5.100.050.30		0,5	21	30		72			HA	▲
DSRV.5.100.100.20		1,0	15	20		66			HA	▲
DSRV.5.100.100.20B		1,0	15	20		66			HB	▲
DSRV.5.100.100.30		1,0	21	30		72			HA	▲
DSRV.5.100.100.30B		1,0	21	30		72			HB	▲
DSRV.5.100.150.20		1,5	15	20		66			HA	▲
DSRV.5.100.150.20B		1,5	15	20		66			HB	▲
DSRV.5.100.150.30		1,5	21	30		72			HA	▲
DSRV.5.100.150.30B		1,5	21	30		72			HB	▲
DSRV.5.100.200.20		2,0	15	20		66			HA	▲
DSRV.5.100.200.20B		2,0	15	20		66			HB	▲
DSRV.5.100.200.30		2,0	21	30		72			HA	▲
DSRV.5.100.200.30B		2,0	21	30		72			HB	▲
DSRV.5.100.250.20		2,5	15	20		66			HA	▲
DSRV.5.100.250.20B		2,5	15	20		66			HB	▲
DSRV.5.100.250.30		2,5	21	30		72			HA	▲
DSRV.5.100.250.30B		2,5	21	30		72			HB	▲
DSRV.5.100.300.20		3,0	15	20		66			HA	▲
DSRV.5.100.300.20B		3,0	15	20		66			HB	▲
DSRV.5.100.300.30		3,0	21	30		72			HA	▲
DSRV.5.100.300.30B		3,0	21	30		72			HB	▲

▲ ab Lager / on stock Δ 4 Wochen / 4 weeks

● Haupteinsatzbereich / main recommendation

o bedingt einsetzbar / alternative recommendation

unbeschichtete HM-Sorten / uncoated grades

beschichtete HM-Sorten / coated grades

bestückt/Cermet / brazed/Cermet

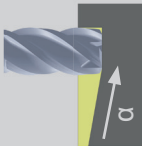
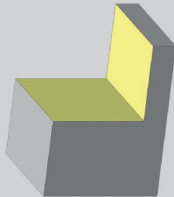
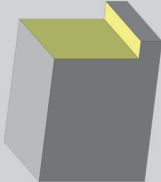
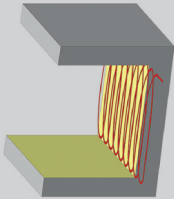
P	•
M	•
K	•
N	•
S	•
H	•

Abmessungen in mm
Dimensions in mm

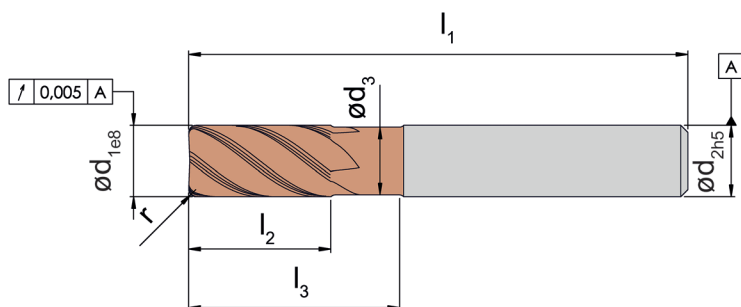
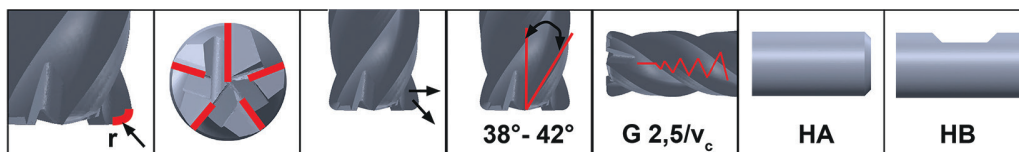
SCHNITTDATEN DSRV5 Ø 10,0 mm

CUTTING DATA DSRV5 Ø 10,0 mm



S																
	d_1	l_2	l_3	α	v_c	f_z	a_e	a_p	v_c	f_z	a_e	a_p	f_z	a_e	a_p	h_m
10	15	20			60	0,038	10	10	60	0,038	10	10	0,231	0,47	15	0,05
	21	30		3°	60	0,032	10	10	60	0,032	10	10	0,211	0,47	20	0,046

DSRV



Bestellnummer Part number	d ₁	r	l ₂	l ₃	d ₂	l ₁	d ₃	Z	Form	TSTK
DSRV.5.120.020.20	12	0,2	18	24	12	73	11,4	5	HA	▲
DSRV.5.120.020.20B		0,2	18	24		73			HB	▲
DSRV.5.120.020.30		0,2	26	36		83			HA	▲
DSRV.5.120.020.30B		0,2	26	36		83			HB	▲
DSRV.5.120.050.20		0,5	18	24		73			HA	▲
DSRV.5.120.050.20B		0,5	18	24		73			HB	▲
DSRV.5.120.050.30		0,5	26	36		83			HA	▲
DSRV.5.120.050.30B		0,5	26	36		83			HB	▲
DSRV.5.120.100.20		1,0	18	24		73			HA	▲
DSRV.5.120.100.20B		1,0	18	24		73			HB	▲
DSRV.5.120.100.30		1,0	26	36		83			HA	▲
DSRV.5.120.100.30B		1,0	26	36		83			HB	▲
DSRV.5.120.150.20		1,5	18	24		73			HA	▲
DSRV.5.120.150.20B		1,5	18	24		73			HB	▲
DSRV.5.120.150.30		1,5	26	36		83			HA	▲
DSRV.5.120.150.30B		1,5	26	36		83			HB	▲
DSRV.5.120.200.20		2,0	18	24		73			HA	▲
DSRV.5.120.200.20B		2,0	18	24		73			HB	▲
DSRV.5.120.200.30		2,0	26	36		83			HA	▲
DSRV.5.120.200.30B		2,0	26	36		83			HB	▲
DSRV.5.120.250.20		2,5	18	24		73			HA	▲
DSRV.5.120.250.20B		2,5	18	24		73			HB	▲
DSRV.5.120.250.30		2,5	26	36		83			HA	▲
DSRV.5.120.250.30B		2,5	26	36		83			HB	▲
DSRV.5.120.300.20		3,0	18	24		73			HA	▲
DSRV.5.120.300.20B		3,0	18	24		73			HB	▲
DSRV.5.120.300.30		3,0	26	36		83			HA	▲
DSRV.5.120.300.30B		3,0	26	36		83			HB	▲

▲ ab Lager / on stock Δ 4 Wochen / 4 weeks

● Haupteinsatzbereich / main recommendation

○ bedingt einsetzbar / alternative recommendation

■ unbeschichtete HM-Sorten / uncoated grades

■ beschichtete HM-Sorten / coated grades

■ bestückt/Cermet / brazed/Cermet

Abmessungen in mm

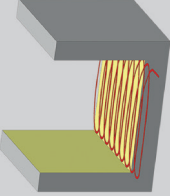
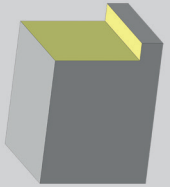
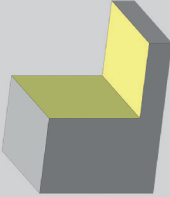
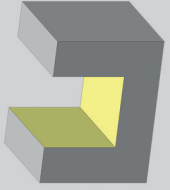
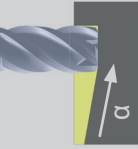
Dimensions in mm

P	•
M	•
K	•
N	•
S	•
H	•

SCHNITTDATEN DSRV5 Ø 12,0 mm

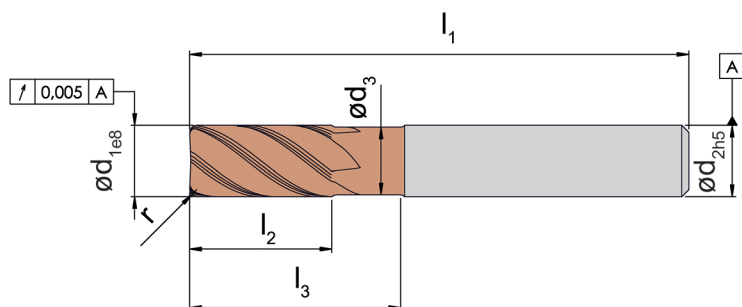
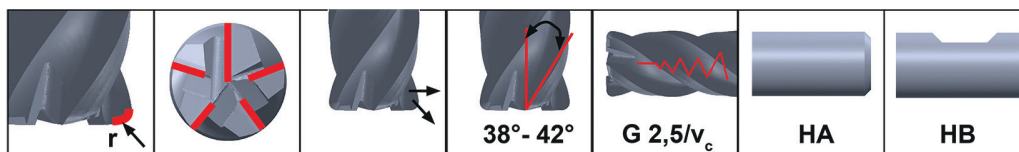
CUTTING DATA DSRV5 Ø 12,0 mm



S		h_m	0,055	0,052
		a_p	18	24
		a_e	0,56	0,56
		f_z	0,254	0,24
		v_c	125	125
		a_p	18	26
		a_e	0,6	0,6
		f_z	0,045	0,045
		v_c	100	100
		a_p	18	24
		a_e	2,7	2,7
		f_z	0,063	0,057
		v_c	80	80
		a_p	12	12
		a_e	12	12
		f_z	0,04	0,037
		v_c	60	60
		α	3°	
		l_3	24	36
		l_2	18	26
		d_1	12	

Abmessungen in mm
Dimensions in mm

DSRV



Bestellnummer Part number	d ₁	r	l ₂	l ₃	d ₂	l ₁	d ₃	Z	Form	TSK
DSRV.5.160.020.20	16	0,2	24	32	16	82	15,2	5	HA	▲
DSRV.5.160.020.20B		0,2	24	32		82			HB	▲
DSRV.5.160.020.30		0,2	34	48		100			HA	▲
DSRV.5.160.020.30B		0,2	34	48		100			HB	▲
DSRV.5.160.050.20		0,5	24	32		82			HA	▲
DSRV.5.160.050.20B		0,5	24	32		82			HB	▲
DSRV.5.160.050.30		0,5	34	48		100			HA	▲
DSRV.5.160.050.30B		0,5	34	48		100			HB	▲
DSRV.5.160.100.20		1,0	24	32		82			HA	▲
DSRV.5.160.100.20B		1,0	24	32		82			HB	▲
DSRV.5.160.100.30		1,0	34	48		100			HA	▲
DSRV.5.160.100.30B		1,0	34	48		100			HB	▲
DSRV.5.160.150.20		1,5	24	32		82			HA	▲
DSRV.5.160.150.20B		1,5	24	32		82			HB	▲
DSRV.5.160.150.30		1,5	34	48		100			HA	▲
DSRV.5.160.150.30B		1,5	34	48		100			HB	▲
DSRV.5.160.200.20		2,0	24	32		82			HA	▲
DSRV.5.160.200.20B		2,0	24	32		82			HB	▲
DSRV.5.160.200.30		2,0	34	48		100			HA	▲
DSRV.5.160.200.30B		2,0	34	48		100			HB	▲
DSRV.5.160.250.20		2,5	24	32		82			HA	▲
DSRV.5.160.250.20B		2,5	24	32		82			HB	▲
DSRV.5.160.250.30		2,5	34	48		100			HA	▲
DSRV.5.160.250.30B		2,5	34	48		100			HB	▲
DSRV.5.160.300.20		3,0	24	32		82			HA	▲
DSRV.5.160.300.20B		3,0	24	32		82			HB	▲
DSRV.5.160.300.30		3,0	34	48		100			HA	▲
DSRV.5.160.300.30B		3,0	34	48		100			HB	▲
DSRV.5.160.400.20		4,0	24	32		82			HA	▲
DSRV.5.160.400.20B		4,0	24	32		82			HB	▲
DSRV.5.160.400.30		4,0	34	48		100			HA	▲
DSRV.5.160.400.30B		4,0	34	48		100			HB	▲

▲ ab Lager / on stock Δ 4 Wochen / 4 weeks

● Haupteinsatzbereich / main recommendation

o bedingt einsetzbar / alternative recommendation

unbeschichtete HM-Sorten / uncoated grades

beschichtete HM-Sorten / coated grades

bestückt/Cermet / brazed/Cermet

Abmessungen in mm

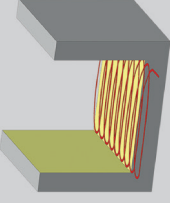
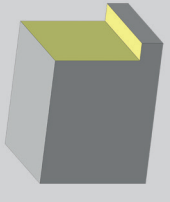
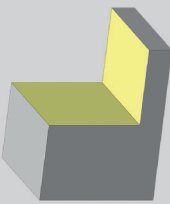
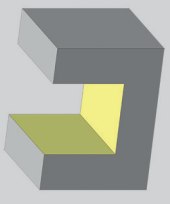
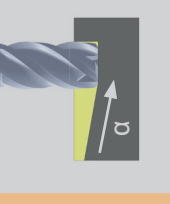
Dimensions in mm

P	•
M	•
K	•
N	•
S	•
H	•

SCHNITTDATEN DSRV5 Ø 16,0 mm

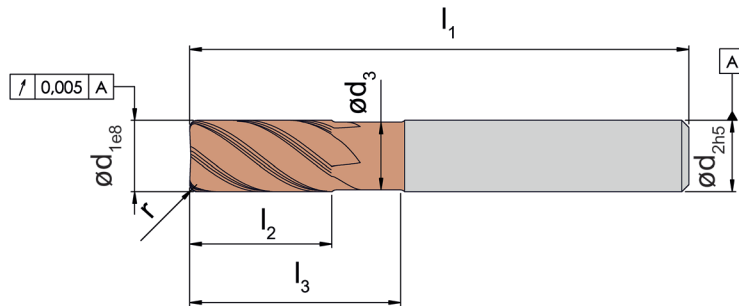
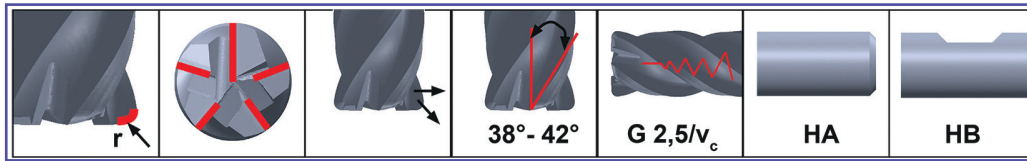
CUTTING DATA DSRV5 Ø 16,0 mm



S		h_m	0,08	0,073
		a_p	24	32
		a_e	0,75	0,75
		f_z	0,369	0,338
		v_c	125	125
		a_p	24	34
		a_e	0,8	0,8
		f_z	0,072	0,072
		v_c	100	100
		a_p	24	32
		a_e	3,6	3,6
		f_z	0,098	0,084
		v_c	80	80
		a_p	16	16
		a_e	16	16
		f_z	0,06	0,051
		v_c	60	60
		α	3°	
		l_3	32	48
		l_2	24	34
		d_1	16	

Abmessungen in mm
Dimensions in mm

DSRV



Bestellnummer Part number	d ₁	r	l ₂	l ₃	d ₂	l ₁	d ₃	Z	Form	TSTK
DSRV.5.200.020.20	20	0,2	30	40	20	92	19	5	HA	▲
DSRV.5.200.020.20B		0,2	30	40		92			HB	▲
DSRV.5.200.020.30		0,2	42	60		120			HA	▲
DSRV.5.200.020.30B		0,2	42	60		120			HB	▲
DSRV.5.200.050.20		0,5	30	40		92			HA	▲
DSRV.5.200.050.20B		0,5	30	40		92			HB	▲
DSRV.5.200.050.30		0,5	42	60		120			HA	▲
DSRV.5.200.050.30B		0,5	42	60		120			HB	▲
DSRV.5.200.100.20		1,0	30	40		92			HA	▲
DSRV.5.200.100.20B		1,0	30	40		92			HB	▲
DSRV.5.200.100.30		1,0	42	60		120			HA	▲
DSRV.5.200.100.30B		1,0	42	60		120			HB	▲
DSRV.5.200.150.20		1,5	30	40		92			HA	▲
DSRV.5.200.150.20B		1,5	30	40		92			HB	▲
DSRV.5.200.150.30		1,5	42	60		120			HA	▲
DSRV.5.200.150.30B		1,5	42	60		120			HB	▲
DSRV.5.200.200.20		2,0	30	40		92			HA	▲
DSRV.5.200.200.20B		2,0	30	40		92			HB	▲
DSRV.5.200.200.30		2,0	42	60		120			HA	▲
DSRV.5.200.200.30B		2,0	42	60		120			HB	▲
DSRV.5.200.250.20		2,5	30	40		92			HA	▲
DSRV.5.200.250.20B		2,5	30	40		92			HB	▲
DSRV.5.200.250.30		2,5	42	60		120			HA	▲
DSRV.5.200.250.30B		2,5	42	60		120			HB	▲
DSRV.5.200.300.20		3,0	30	40		92			HA	▲
DSRV.5.200.300.20B		3,0	30	40		92			HB	▲
DSRV.5.200.300.30		3,0	42	60		120			HA	▲
DSRV.5.200.300.30B		3,0	42	60		120			HB	▲
DSRV.5.200.400.20		4,0	30	40		92			HA	▲
DSRV.5.200.400.20B		4,0	30	40		92			HB	▲
DSRV.5.200.400.30		4,0	42	60		120			HA	▲
DSRV.5.200.400.30B		4,0	42	60		120			HB	▲

▲ ab Lager / on stock Δ 4 Wochen / 4 weeks

● Haupteinsatzbereich / main recommendation

o bedingt einsetzbar / alternative recommendation

unbeschichtete HM-Sorten / uncoated grades

beschichtete HM-Sorten / coated grades

bestückt/Cermet / brazed/Cermet

Abmessungen in mm

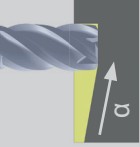
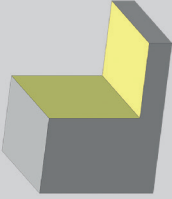
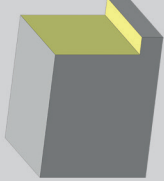
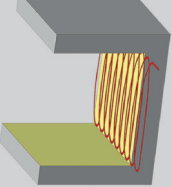
Dimensions in mm

P	•
M	•
K	•
N	•
S	•
H	•

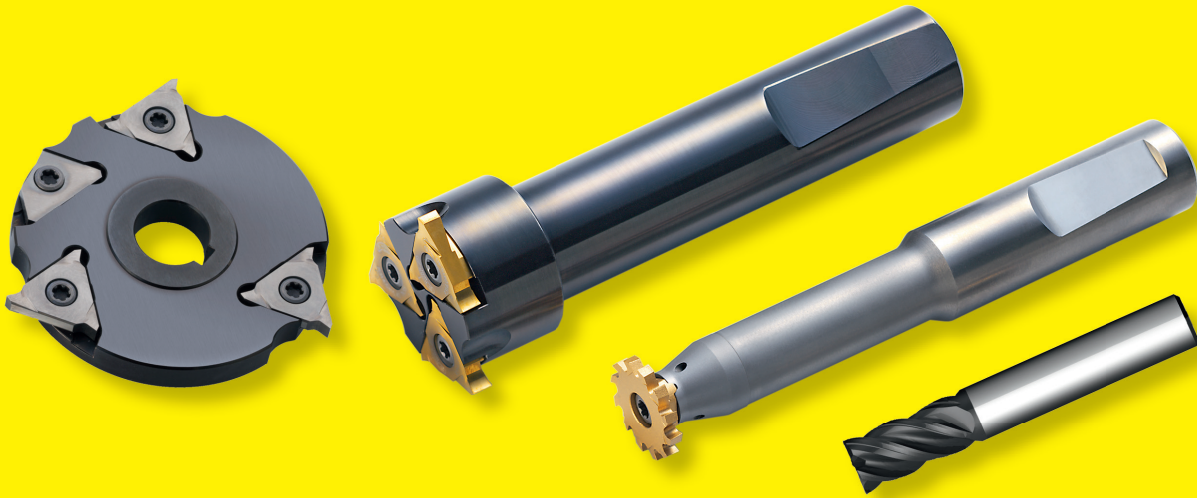
SCHNITTDATEN DSRV5 ø 20,0 mm

CUTTING DATA DSRV5 ø 20,0 mm



S		α	l_3	l_2	d_1
		3°	40	30	20
			60	42	
	v_c	f_z	a_e	a_p	
	60	0,075	20	20	
	60	0,063	20	20	
	v_c	f_z	a_e	a_p	
	80	0,123	4,5	30	
	80	0,105	4,5	40	
	v_c	f_z	a_e	a_p	
	100	0,089	1	30	
	100	0,089	1	42	
	v_c	f_z	a_e	a_p	h_m
	125	0,461	0,94	30	0,1
	125	0,423	0,94	40	0,092

Abmessungen in mm
Dimensions in mm



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