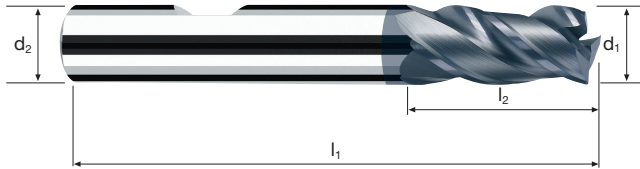
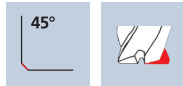


# Zylindrische Fräser NF-NV3

Glattschneidig, normale Ausführung



**HM**  $\lambda$  40°  
 $\gamma$  6°



Schruppen



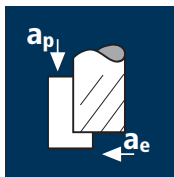
Schichten



<b>Rm</b> < 850	<b>Rm</b> 850-1100	<b>Rm</b> 1100-1300					<b>Inox</b> Stainless	<b>Ti</b> Titanium	<b>GG(G)</b> Tool Steel Nickel Alloys
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Beispiel: Bestell-Nr.		Beschichtung		Artikel-Nr.		ø-Code				POLYCHROM
		<b>P</b>		<b>45333</b>		<b>140</b>				<b>P45333</b>
										<b>P45233</b>
ø Code	d1 e8	d2 h6	l1	l2	45°	α	z			
140	2.0	6	54	6	0.10	8.0°	3	●		
160	2.5	6	54	6	0.10	7.5°	3	●		
180	3.0	6	57	7	0.10	6.0°	3	●		
200	3.5	6	57	7	0.10	5.5°	3	●		
220	4.0	6	57	8	0.10	4.5°	3	●		
240	4.5	6	57	8	0.15	3.5°	3	●		
260	5.0	6	57	10	0.15	2.5°	3	●		
280	5.5	6	57	10	0.15	1.5°	3	●		
300	6.0	6	57	10	0.15	0.0°	3	●		
322	6.5	8	63	13	0.15	2.5°	3	●		
331	7.0	8	63	13	0.15	2.0°	3	●		
362	7.5	8	63	16	0.15	1.0°	3	●		
391	8.0	8	63	16	0.15	0.0°	3	●		
410	8.5	10	72	16	0.20	2.5°	3	●		
420	9.0	10	72	16	0.20	1.5°	3	●		
430	9.5	10	72	19	0.20	1.0°	3	●		
450	10.0	10	72	19	0.20	0.0°	3	●		

## Anwendung



## Werkstoff

Stahl  
< 850 N/mm<sup>2</sup>



Stahl  
850 - 1100 N/mm<sup>2</sup>



Nichtrostender Stahl  
[Cr-Ni/1.4301]



Gusseisen  
GG(G)



d1 [mm]	z	v <sub>c</sub> [m/min]	f <sub>z</sub> [mm]	a <sub>p</sub> [mm]	a <sub>e</sub> [mm]	n [min <sup>-1</sup> ]	v <sub>f</sub> [mm/min]	Q [cm <sup>3</sup> /min]
2	3	165	0.005	3.0	1.3	26260	395	1.5
3	3	165	0.010	4.5	2.0	17510	525	4.5
4	3	165	0.015	6.0	2.6	13130	590	9.0
5	3	165	0.020	7.5	3.3	10505	630	15.5
6	3	165	0.020	9.0	3.9	8755	525	18.5
7	3	165	0.025	10.5	4.6	7505	565	27.0
8	3	165	0.030	12.0	5.2	6565	590	37.0
9	3	165	0.030	13.5	5.9	5835	525	41.5
10	3	165	0.035	15.0	6.5	5250	550	53.5

2	3	110	0.005	3.0	1.3	17510	265	1.0
3	3	110	0.010	4.5	2.0	11670	350	3.0
4	3	110	0.015	6.0	2.6	8755	395	6.0
5	3	110	0.020	7.5	3.3	7005	420	10.0
6	3	110	0.020	9.0	3.9	5835	350	12.5
7	3	110	0.025	10.5	4.6	5000	375	18.0
8	3	110	0.030	12.0	5.2	4375	395	24.5
9	3	110	0.030	13.5	5.9	3890	350	27.5
10	3	110	0.035	15.0	6.5	3500	370	36.0

2	3	80	0.005	3.0	1.3	12735	190	0.5
3	3	80	0.010	4.5	2.0	8490	255	2.0
4	3	80	0.010	6.0	2.6	6365	190	3.0
5	3	80	0.015	7.5	3.3	5095	230	5.5
6	3	80	0.015	9.0	3.9	4245	190	6.5
7	3	80	0.020	10.5	4.6	3640	220	10.5
8	3	80	0.020	12.0	5.2	3185	190	12.0
9	3	80	0.025	13.5	5.9	2830	210	16.5
10	3	80	0.025	15.0	6.5	2545	190	18.5

2	3	130	0.005	3.0	1.3	20690	310	1.0
3	3	130	0.010	4.5	2.0	13795	415	3.5
4	3	130	0.015	6.0	2.6	10345	465	7.5
5	3	130	0.020	7.5	3.3	8275	495	12.0
6	3	130	0.020	9.0	3.9	6895	415	14.5
7	3	130	0.025	10.5	4.6	5910	445	21.5
8	3	130	0.030	12.0	5.2	5175	465	29.0
9	3	130	0.030	13.5	5.9	4600	415	33.0
10	3	130	0.035	15.0	6.5	4140	435	42.5

## Anwendung



## Werkstoff

Stahl  
< 850 N/mm<sup>2</sup>



Stahl  
850 - 1100 N/mm<sup>2</sup>



Nichtrostender Stahl  
[Cr-Ni/1.4301]



Gusseisen  
GG(G)



d1 [mm]	z	v <sub>c</sub> [m/min]	f <sub>z</sub> [mm]	a <sub>p</sub> [mm]	a <sub>e</sub> [mm]	n [min <sup>-1</sup> ]	v <sub>f</sub> [mm/min]	Q [cm <sup>3</sup> /min]
2	3	130	0.005	2.8	2	20690	310	1.5
3	3	130	0.010	4.2	3	13795	415	5.0
4	3	130	0.015	5.6	4	10345	465	10.5
5	3	130	0.015	7.0	5	8275	370	13.0
6	3	130	0.020	8.4	6	6895	415	21.0
7	3	130	0.025	9.8	7	5910	445	30.5
8	3	130	0.025	11.2	8	5175	390	35.0
9	3	130	0.030	12.6	9	4600	415	47.0
10	3	130	0.030	14.0	10	4140	375	52.5

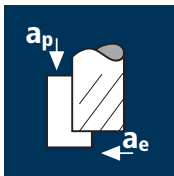
2	3	85	0.005	2.8	2	13530	205	1.0
3	3	85	0.010	4.2	3	9020	270	3.5
4	3	85	0.015	5.6	4	6765	305	7.0
5	3	85	0.015	7.0	5	5410	245	8.5
6	3	85	0.020	8.4	6	4510	270	13.5
7	3	85	0.025	9.8	7	3865	290	20.0
8	3	85	0.025	11.2	8	3380	255	23.0
9	3	85	0.030	12.6	9	3005	270	30.5
10	3	85	0.030	14.0	10	2705	245	34.5

2	3	65	0.005	2.8	2	10345	155	1.0
3	3	65	0.005	4.2	3	6895	105	1.5
4	3	65	0.010	5.6	4	5175	155	3.5
5	3	65	0.010	7.0	5	4140	125	4.5
6	3	65	0.015	8.4	6	3450	155	8.0
7	3	65	0.015	9.8	7	2955	135	9.5
8	3	65	0.020	11.2	8	2585	155	14.0
9	3	65	0.020	12.6	9	2300	140	16.0
10	3	65	0.025	14.0	10	2070	155	21.5

2	3	110	0.005	2.8	2	17510	265	1.5
3	3	110	0.010	4.2	3	11670	350	4.5
4	3	110	0.015	5.6	4	8755	395	9.0
5	3	110	0.015	7.0	5	7005	315	11.0
6	3	110	0.020	8.4	6	5835	350	17.5
7	3	110	0.025	9.8	7	5000	375	25.5
8	3	110	0.025	11.2	8	4375	330	29.5
9	3	110	0.030	12.6	9	3890	350	39.5
10	3	110	0.030	14.0	10	3500	315	44.0



## Anwendung



## Werkstoff

Stahl  
< 850 N/mm<sup>2</sup>

Stahl  
850 - 1100 N/mm<sup>2</sup>

Nichtrostender Stahl  
[Cr-Ni/1.4301]

Gusseisen  
GG(G)

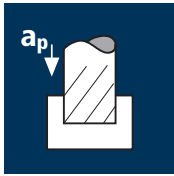
d1 [mm]	z	v <sub>c</sub> [m/min]	f <sub>z</sub> [mm]	a <sub>p</sub> [mm]	a <sub>e</sub> [mm]	n [min <sup>-1</sup> ]	v <sub>f</sub> [mm/min]	Q [cm <sup>3</sup> /min]
11	3	165	0.040	16.5	7.2	4775	575	68.0
12	3	165	0.045	18.0	7.4	4375	590	79.0
13	3	165	0.045	19.5	7.8	4040	545	83.0
14	3	165	0.050	21.0	8.1	3750	565	96.5
15	3	165	0.055	22.5	8.4	3500	580	109.5
16	3	165	0.055	24.0	8.8	3285	540	114.0
20	3	165	0.070	30.0	11.0	2625	550	181.5

11	3	110	0.040	16.5	7.2	3185	380	45.0
12	3	110	0.045	18.0	7.4	2920	395	53.0
13	3	110	0.045	19.5	7.8	2695	365	55.5
14	3	110	0.050	21.0	8.1	2500	375	64.0
15	3	110	0.055	22.5	8.4	2335	385	73.0
16	3	110	0.055	24.0	8.8	2190	360	76.0
20	3	110	0.070	30.0	11.0	1750	370	122.0

11	3	80	0.030	16.5	7.2	2315	210	25.0
12	3	80	0.030	18.0	7.4	2120	190	25.5
13	3	80	0.035	19.5	7.8	1960	205	31.0
14	3	80	0.035	21.0	8.1	1820	190	32.5
15	3	80	0.040	22.5	8.4	1700	205	38.5
16	3	80	0.040	24.0	8.8	1590	190	40.0
20	3	80	0.055	30.0	11.0	1275	210	69.5

11	3	130	0.040	16.5	7.2	3760	450	53.0
12	3	130	0.045	18.0	7.4	3450	465	62.5
13	3	130	0.045	19.5	7.8	3185	430	65.5
14	3	130	0.050	21.0	8.1	2955	445	76.0
15	3	130	0.055	22.5	8.4	2760	455	86.0
16	3	130	0.055	24.0	8.8	2585	425	90.0
20	3	130	0.070	30.0	11.0	2070	435	143.5

## Anwendung



## Werkstoff

Stahl  
< 850 N/mm<sup>2</sup>

Stahl  
850 - 1100 N/mm<sup>2</sup>

Nichtrostender Stahl  
[Cr-Ni/1.4301]

Gusseisen  
GG(G)

d1 [mm]	z	v <sub>c</sub> [m/min]	f <sub>z</sub> [mm]	a <sub>p</sub> [mm]	a <sub>e</sub> [mm]	n [min <sup>-1</sup> ]	v <sub>f</sub> [mm/min]	Q [cm <sup>3</sup> /min]
11	3	130	0.035	15.4	11	3760	395	67.0
12	3	130	0.040	16.2	12	3450	415	80.5
13	3	130	0.040	17.0	13	3185	380	84.0
14	3	130	0.045	18.0	14	2955	400	100.5
15	3	130	0.050	18.8	15	2760	415	116.5
16	3	130	0.050	19.2	16	2585	390	120.0
20	3	130	0.065	22.0	20	2070	405	178.0

11	3	85	0.035	15.4	11	2460	260	44.0
12	3	85	0.040	16.2	12	2255	270	52.5
13	3	85	0.040	17.0	13	2080	250	55.5
14	3	85	0.045	18.0	14	1935	260	65.5
15	3	85	0.050	18.8	15	1805	270	76.0
16	3	85	0.050	19.2	16	1690	255	78.5
20	3	85	0.065	22.0	20	1355	265	116.5

11	3	65	0.025	15.4	11	1880	140	23.5
12	3	65	0.030	16.2	12	1725	155	30.0
13	3	65	0.030	17.0	13	1590	145	32.0
14	3	65	0.035	18.0	14	1480	155	39.0
15	3	65	0.035	18.8	15	1380	145	41.0
16	3	65	0.040	19.2	16	1295	155	47.5
20	3	65	0.045	22.0	20	1035	140	61.5

11	3	110	0.035	15.4	11	3185	335	56.7
12	3	110	0.040	16.2	12	2920	350	68.0
13	3	110	0.040	17.0	13	2695	325	72.0
14	3	110	0.045	18.0	14	2500	340	85.5
15	3	110	0.050	18.8	15	2335	350	98.5
16	3	110	0.050	19.2	16	2190	330	101.5
20	3	110	0.065	22.0	20	1750	340	149.5