

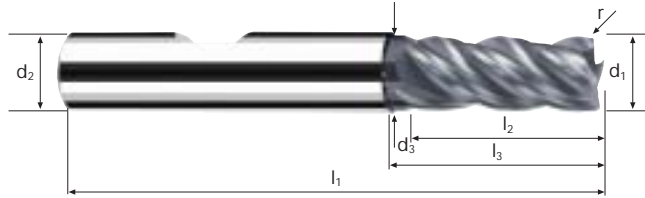
# Eckradiusfräser NF-RNV

Glattschneidig, normale Ausführung mit Kurzhals



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

**Vario**



Schuppen



Schichten



**Rm** < 850    **Rm** 850-1100    **Rm** 1100-1300    **Inox** Stainless    **Ti** Titanium    **GG(G)** Tool Steel    **Nickel-Alloys**

Beispiel: Bestell-Nr. <b>P 45319 178</b>										POLYCHROM
										<b>P45319</b>
										<b>P45219</b>
Ø Code	d1 e8	d2 h6	d3	l1	l2	l3	r 0/+0.03	α	Z	
178	3	6	2.8	57	8	14	0.2	4.5°	4	●
218	4	6	3.7	57	11	16	0.2	3.0°	4	●
258	5	6	4.6	57	13	18	0.2	1.5°	4	●
297	6	6	5.5	57	13	20	0.2	0.0°	4	●
385	8	8	7.4	63	19	26	0.2	0.0°	4	●
445	10	10	9.2	72	22	31	0.2	0.0°	4	●
496	12	12	11.0	83	26	37	0.2	0.0°	4	●
605	16	16	15.0	92	32	43	0.2	0.0°	4	●
180	3	6	2.8	57	8	14	0.5	4.5°	4	●
220	4	6	3.7	57	11	16	0.5	3.0°	4	●
260	5	6	4.6	57	13	18	0.5	1.5°	4	●
300	6	6	5.5	57	13	20	0.5	0.0°	4	●
388	8	8	7.4	63	19	26	0.5	0.0°	4	●
448	10	10	9.2	72	22	31	0.5	0.0°	4	●
498	12	12	11.0	83	26	37	0.5	0.0°	4	●
606	16	16	15.0	92	32	43	0.5	0.0°	4	●
678	20	20	19.0	104	38	53	0.5	0.0°	4	●
301	6	6	5.5	57	13	20	0.8	0.0°	4	●
389	8	8	7.4	63	19	26	0.8	0.0°	4	●
449	10	10	9.2	72	22	31	0.8	0.0°	4	●
499	12	12	11.0	83	26	37	0.8	0.0°	4	●

Anwendung

Werkstoff

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

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]
3	4	170	0.015	4.5	1.2	18040	1080	6.0
4	4	170	0.020	6.0	1.6	13530	1080	10.5
5	4	170	0.025	7.5	2.0	10825	1085	16.5
6	4	170	0.030	9.0	2.4	9020	1080	23.5
8	4	170	0.040	12.0	3.2	6765	1080	41.5
10	4	170	0.050	15.0	4.0	5410	1080	65.0
12	4	170	0.060	18.0	4.8	4510	1080	93.5
16	4	170	0.075	24.0	6.4	3380	1015	156.0
20	4	170	0.095	30.0	8.0	2705	1030	247.0

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

3	4	120	0.015	4.5	1.2	12735	765	4.0
4	4	120	0.020	6.0	1.6	9550	765	7.5
5	4	120	0.025	7.5	2.0	7640	765	11.5
6	4	120	0.030	9.0	2.4	6365	765	16.5
8	4	120	0.040	12.0	3.2	4775	765	29.5
10	4	120	0.050	15.0	4.0	3820	765	46.0
12	4	120	0.060	18.0	4.8	3185	765	66.0
16	4	120	0.075	24.0	6.4	2385	715	110.0
20	4	120	0.095	30.0	8.0	1910	725	174.0

Nichtrostender Stahl  
[Cr-Ni/1.4301]

3	4	80	0.010	4.5	1.2	8490	340	2.0
4	4	80	0.015	6.0	1.6	6365	380	3.5
5	4	80	0.020	7.5	2.0	5095	410	6.0
6	4	80	0.025	9.0	2.4	4245	425	9.0
8	4	80	0.030	12.0	3.2	3185	380	14.5
10	4	80	0.040	15.0	4.0	2545	405	24.5
12	4	80	0.050	18.0	4.8	2120	425	36.5
16	4	80	0.060	24.0	6.4	1590	380	58.5
20	4	80	0.075	30.0	8.0	1275	385	92.5

Gusseisen  
GG(G)

3	4	150	0.015	4.5	1.2	15915	955	5.0
4	4	150	0.020	6.0	1.6	11935	955	9.0
5	4	150	0.030	7.5	2.0	9550	1145	17.0
6	4	150	0.035	9.0	2.4	7960	1115	24.0
8	4	150	0.045	12.0	3.2	5970	1075	41.5
10	4	150	0.055	15.0	4.0	4775	1050	63.0
12	4	150	0.065	18.0	4.8	3980	1035	89.5
16	4	150	0.085	24.0	6.4	2985	1015	156.0
20	4	150	0.105	30.0	8.0	2385	1000	240.0

Anwendung

Werkstoff

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

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]
3	4	135	0.010	3.0	3	14325	575	5.0
4	4	135	0.015	4.0	4	10745	645	10.5
5	4	135	0.020	5.0	5	8595	690	17.5
6	4	135	0.025	6.0	6	7160	715	25.5
8	4	135	0.030	8.0	8	5370	645	41.5
10	4	135	0.040	10.0	10	4295	685	68.5
12	4	135	0.045	12.0	12	3580	645	93.0
16	4	135	0.055	8.0	16	2685	590	75.5
20	4	135	0.070	10.0	20	2150	600	120.0

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

3	4	95	0.010	3.0	3	10080	405	3.5
4	4	95	0.015	4.0	4	7560	455	7.5
5	4	95	0.020	5.0	5	6050	485	12.0
6	4	95	0.025	6.0	6	5040	505	18.0
8	4	95	0.030	8.0	8	3780	455	29.0
10	4	95	0.040	10.0	10	3025	485	48.5
12	4	95	0.045	12.0	12	2520	455	65.5
16	4	95	0.055	8.0	16	1890	415	53.0
20	4	95	0.070	10.0	20	1510	425	85.0

Nichtrostender Stahl  
[Cr-Ni/1.4301]

3	4	65	0.010	2.1	3	6895	275	1.5
4	4	65	0.010	2.8	4	5175	205	2.5
5	4	65	0.015	3.5	5	4140	250	4.5
6	4	65	0.020	4.2	6	3450	275	7.0
8	4	65	0.025	8.0	8	2585	260	16.5
10	4	65	0.030	10.0	10	2070	250	25.0
12	4	65	0.040	12.0	12	1725	275	39.5
16	4	65	0.045	8.0	16	1295	235	30.0
20	4	65	0.055	10.0	20	1035	230	46.0

Gusseisen  
GG(G)

3	4	125	0.010	3.0	3	13265	530	5.0
4	4	125	0.015	4.0	4	9945	595	9.5
5	4	125	0.025	5.0	5	7960	795	20.0
6	4	125	0.025	6.0	6	6630	665	24.0
8	4	125	0.035	8.0	8	4975	695	44.5
10	4	125	0.040	10.0	10	3980	635	63.5
12	4	125	0.050	12.0	12	3315	665	96.0
16	4	125	0.065	8.0	16	2485	645	82.5
20	4	125	0.080	10.0	20	1990	635	127.0

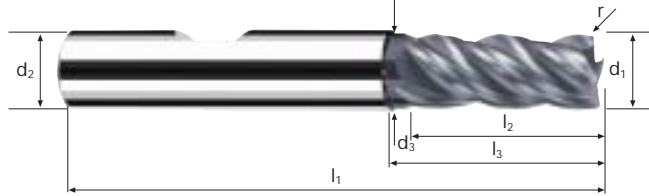
# Eckradiusfräser NF-RNV

Glattschneidig, normale Ausführung mit Kurzhals



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

**Vario**



Schruppen



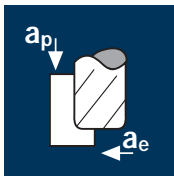
Schichten



**Rm** < 850    **Rm** 850-1100    **Rm** 1100-1300    **Inox** Stainless    **Ti** Titanium    **GG(G)** Tool Steel    **Nickel-Alloys**

Beispiel: Bestell-Nr. <b>P 45319 302</b>										POLYCHROM
										<b>P45319</b>
										<b>P45219</b>
Ø Code	d1 e8	d2 h6	d3	l1	l2	l3	r 0/+0.03	α	Z	
302	6	6	5.5	57	13	20	1.0	0.0°	4	●
391	8	8	7.4	63	19	26	1.0	0.0°	4	●
450	10	10	9.2	72	22	31	1.0	0.0°	4	●
501	12	12	11.0	83	26	37	1.0	0.0°	4	●
608	16	16	15.0	92	32	43	1.0	0.0°	4	●
680	20	20	19.0	104	38	53	1.0	0.0°	4	●
304	6	6	5.5	57	13	20	1.5	0.0°	4	●
393	8	8	7.4	63	19	26	1.5	0.0°	4	●
453	10	10	9.2	72	22	31	1.5	0.0°	4	●
503	12	12	11.0	83	26	37	1.5	0.0°	4	●
610	16	16	15.0	92	32	43	1.5	0.0°	4	●
306	6	6	5.5	57	13	20	2.0	0.0°	4	●
395	8	8	7.4	63	19	26	2.0	0.0°	4	●
455	10	10	9.2	72	22	31	2.0	0.0°	4	●
505	12	12	11.0	83	26	37	2.0	0.0°	4	●
611	16	16	15.0	92	32	43	2.0	0.0°	4	●
683	20	20	19.0	104	38	53	2.0	0.0°	4	●

## 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)



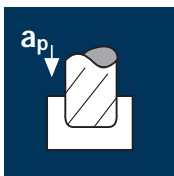
d1 [mm]	z	v <sub>c</sub> [m/min]	f <sub>z</sub> [mm]	a <sub>p</sub> [mm]	a <sub>e</sub> [mm]	n [min <sup>-1</sup> ]	v <sub>f</sub> [mm/min]	Q [cm <sup>3</sup> /min]
6	4	170	0.030	9.0	2.4	9020	1080	23.5
8	4	170	0.040	12.0	3.2	6765	1080	41.5
10	4	170	0.050	15.0	4.0	5410	1080	65.0
12	4	170	0.060	18.0	4.8	4510	1080	93.5
16	4	170	0.075	24.0	6.4	3380	1015	156.0
20	4	170	0.095	30.0	8.0	2705	1030	247.0

6	4	120	0.030	9.0	2.4	6365	765	16.5
8	4	120	0.040	12.0	3.2	4775	765	29.5
10	4	120	0.050	15.0	4.0	3820	765	46.0
12	4	120	0.060	18.0	4.8	3185	765	66.0
16	4	120	0.075	24.0	6.4	2385	715	110.0
20	4	120	0.095	30.0	8.0	1910	725	174.0

6	4	80	0.025	9.0	2.4	4245	425	9.0
8	4	80	0.030	12.0	3.2	3185	380	14.5
10	4	80	0.040	15.0	4.0	2545	405	24.5
12	4	80	0.050	18.0	4.8	2120	425	36.5
16	4	80	0.060	24.0	6.4	1590	380	58.5
20	4	80	0.075	30.0	8.0	1275	385	92.5

6	4	150	0.035	9.0	2.4	7960	1115	24.0
8	4	150	0.045	12.0	3.2	5970	1075	41.5
10	4	150	0.055	15.0	4.0	4775	1050	63.0
12	4	150	0.065	18.0	4.8	3980	1035	89.5
16	4	150	0.085	24.0	6.4	2985	1015	156.0
20	4	150	0.105	30.0	8.0	2385	1000	240.0

## 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]
6	4	135	0.025	6.0	6	7160	715	25.5
8	4	135	0.030	8.0	8	5370	645	41.5
10	4	135	0.040	10.0	10	4295	685	68.5
12	4	135	0.045	12.0	12	3580	645	93.0
16	4	135	0.055	8.0	16	2685	590	75.5
20	4	135	0.070	10.0	20	2150	600	120.0

6	4	95	0.025	6.0	6	5040	505	18.0
8	4	95	0.030	8.0	8	3780	455	29.0
10	4	95	0.040	10.0	10	3025	485	48.5
12	4	95	0.045	12.0	12	2520	455	65.5
16	4	95	0.055	8.0	16	1890	415	53.0
20	4	95	0.070	10.0	20	1510	425	85.0

6	4	65	0.020	4.2	6	3450	275	7.0
8	4	65	0.025	8.0	8	2585	260	16.5
10	4	65	0.030	10.0	10	2070	250	25.0
12	4	65	0.040	12.0	12	1725	275	39.5
16	4	65	0.045	8.0	16	1295	235	30.0
20	4	65	0.055	10.0	20	1035	230	46.0

6	4	125	0.025	6.0	6	6630	665	24.0
8	4	125	0.035	8.0	8	4975	695	44.5
10	4	125	0.040	10.0	10	3980	635	63.5
12	4	125	0.050	12.0	12	3315	665	96.0
16	4	125	0.065	8.0	16	2485	645	82.5
20	4	125	0.080	10.0	20	1990	635	127.0

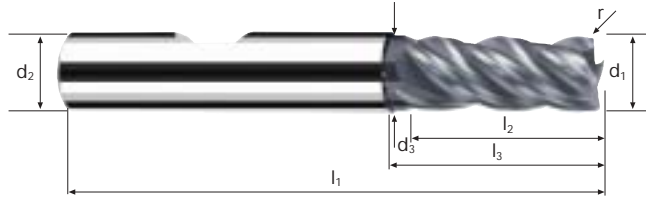
# Eckradiusfräser NF-RNV

Glattschneidig, normale Ausführung mit Kurzhals



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

**Vario**



Schruppen



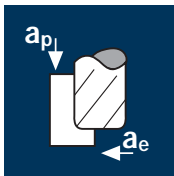
Schichten



**Rm** < 850   **Rm** 850-1100   **Rm** 1100-1300   **Inox** Stainless   **Ti** Titanium   **GG(G)** Tool Steel   **Nickel-Alloys**

										POLYCHROM
Beispiel: Bestell-Nr.										P45319
Beschichtung   Artikel-Nr. $\alpha$ -Code										P45219
P   45319   457										
$\emptyset$ Code	d1 e8	d2 h6	d3	l1	l2	l3	r 0/+0.03	$\alpha$	Z	
457	10	10	9.2	72	22	31	2.5	0.0°	4	●
506	12	12	11.0	83	26	37	2.5	0.0°	4	●
612	16	16	15.0	92	32	43	2.5	0.0°	4	●
684	20	20	19.0	104	38	53	2.5	0.0°	4	●
508	12	12	11.0	83	26	37	4.0	0.0°	4	●
614	16	16	15.0	92	32	43	4.0	0.0°	4	●
686	20	20	19.0	104	38	53	4.0	0.0°	4	●

## 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)



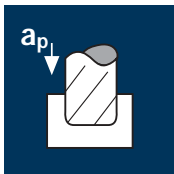
d1 [mm]	z	v <sub>c</sub> [m/min]	f <sub>z</sub> [mm]	a <sub>p</sub> [mm]	a <sub>e</sub> [mm]	n [min <sup>-1</sup> ]	v <sub>f</sub> [mm/min]	Q [cm <sup>3</sup> /min]
10	4	170	0.050	15.0	4.0	5410	1080	65.0
12	4	170	0.060	18.0	4.8	4510	1080	93.5
16	4	170	0.075	24.0	6.4	3380	1015	156.0
20	4	170	0.095	30.0	8.0	2705	1030	247.0

10	4	120	0.050	15.0	4.0	3820	765	46.0
12	4	120	0.060	18.0	4.8	3185	765	66.0
16	4	120	0.075	24.0	6.4	2385	715	110.0
20	4	120	0.095	30.0	8.0	1910	725	174.0

10	4	80	0.040	15.0	4.0	2545	405	24.5
12	4	80	0.050	18.0	4.8	2120	425	36.5
16	4	80	0.060	24.0	6.4	1590	380	58.5
20	4	80	0.075	30.0	8.0	1275	385	92.5

10	4	150	0.055	15.0	4.0	4775	1050	63.0
12	4	150	0.065	18.0	4.8	3980	1035	89.5
16	4	150	0.085	24.0	6.4	2985	1015	156.0
20	4	150	0.105	30.0	8.0	2385	1000	240.0

## 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]
10	4	135	0.040	10.0	10	4295	685	68.5
12	4	135	0.045	12.0	12	3580	645	93.0
16	4	135	0.055	8.0	16	2685	590	75.5
20	4	135	0.070	10.0	20	2150	600	120.0

10	4	95	0.040	10.0	10	3025	485	48.5
12	4	95	0.045	12.0	12	2520	455	65.5
16	4	95	0.055	8.0	16	1890	415	53.0
20	4	95	0.070	10.0	20	1510	425	85.0

10	4	65	0.030	10.0	10	2070	250	25.0
12	4	65	0.040	12.0	12	1725	275	39.5
16	4	65	0.045	8.0	16	1295	235	30.0
20	4	65	0.055	10.0	20	1035	230	46.0

10	4	125	0.040	10.0	10	3980	635	63.5
12	4	125	0.050	12.0	12	3315	665	96.0
16	4	125	0.065	8.0	16	2485	645	82.5
20	4	125	0.080	10.0	20	1990	635	127.0