

DIAMETAL®

NEW TOOLS
DE·EN

MI0112-NR01119

Schaftfräser mit Eckenradius Z2
Corner radius end mill Z2



P1	P2	P3	P4	P5	M1	M2	M3	K1	N1	N2
N3	N4	N5	N6	N7	N8	S1	S2	S3	H1	

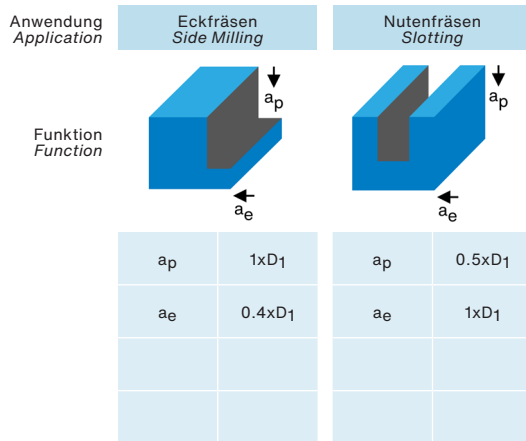


D1	L1	D2	L2	Z	R	DWS Art. N°
0.20	0.30	3	39	2	0.02	460371
0.20	0.60	3	39	2	0.02	460372
0.25	0.38	3	39	2	0.02	460373
0.25	0.75	3	39	2	0.02	460374
0.30	0.45	3	39	2	0.03	460375
0.30	0.90	3	39	2	0.03	460376
0.35	0.53	3	39	2	0.03	460377
0.35	1.05	3	39	2	0.03	460378
0.40	0.60	3	39	2	0.05	460379
0.40	1.20	3	39	2	0.05	460380
0.45	0.68	3	39	2	0.05	460381
0.45	1.35	3	39	2	0.05	460382
0.50	0.75	3	39	2	0.05	460383
0.50	1.50	3	39	2	0.05	460384
0.60	0.90	3	39	2	0.10	460385
0.60	1.80	3	39	2	0.10	460386
0.70	1.05	3	39	2	0.10	460387
0.70	2.10	3	39	2	0.10	460388
0.80	1.20	3	39	2	0.15	460389
0.80	2.40	3	39	2	0.15	460390
0.90	1.35	3	39	2	0.20	460391
0.90	2.70	3	39	2	0.20	460392
1.00	1.50	3	39	2	0.20	460393
1.00	3.00	3	39	2	0.20	460394
1.10	1.65	3	39	2	0.20	460395
1.10	3.30	3	39	2	0.20	460396
1.20	1.80	3	39	2	0.10	460397
1.20	3.60	3	39	2	0.10	460398
1.20	3.60	3	39	2	0.20	460399
1.30	2.60	3	39	2	0.20	460400
1.30	3.90	3	39	2	0.20	460401
1.40	2.80	3	39	2	0.20	460402
1.50	2.25	3	39	2	0.20	460403
1.50	4.50	3	39	2	0.50	460404
1.60	3.20	3	39	2	0.50	460405
1.70	3.70	3	39	2	0.50	460406
1.80	3.60	3	39	2	0.50	460407
1.90	3.80	3	39	2	0.50	460408
2.00	3.00	3	39	2	0.20	460409
2.00	6.00	3	39	2	0.50	460410
2.50	3.75	3	39	2	0.20	460411
2.50	7.50	3	39	2	0.50	460412
2.80	4.50	3	39	2	0.50	460413
3.00	4.50	3	39	2	0.50	460414
3.00	9.00	3	39	2	1.00	460415
3.00	8.00	3	39	2	0.30	460416
3.00	8.00	3	39	2	0.50	460417

Weitere Beschichtungen oder kundenspezifische Lösungen auf Anfrage
Other coatings or customized solutions are available on request

MI0112-NR01119

Schnittparameter
Cutting parameters



ISO	Vc [m/min]	fz [mm]		
		Ø 0.30 - 0.80	Ø 0.90 - 1.20	Ø 1.30 - 2.90
P1	110 - 130	0,004 - 0,009	0.008 - 0.020	0.015 - 0.030
P2	100 - 120	0,004 - 0,009	0.008 - 0.020	0.015 - 0.030
P3	100 - 120	0,004 - 0,009	0.008 - 0.020	0.015 - 0.030
P4	80 - 110	0,004 - 0,009	0.008 - 0.020	0.015 - 0.030
P5	60 - 80	0,004 - 0,009	0.008 - 0.020	0.015 - 0.030
M1	50 - 70	0.003 - 0.008	0.007 - 0.015	0.010 - 0.030
M2	40 - 60	0.003 - 0.008	0.007 - 0.015	0.010 - 0.030
M3	40 - 60	0.003 - 0.008	0.007 - 0.015	0.010 - 0.030
K1	140 - 170	0.004 - 0.009	0.008 - 0.025	0.020 - 0.040
N1	200 - 250	0.004 - 0.009	0.008 - 0.025	0.020 - 0.040
N2	200 - 250	0.004 - 0.009	0.008 - 0.025	0.020 - 0.040
N3	200 - 250	0.004 - 0.009	0.008 - 0.025	0.020 - 0.040
N4	200 - 250	0.004 - 0.009	0.008 - 0.025	0.020 - 0.040
N5	200 - 250	0.004 - 0.009	0.008 - 0.025	0.020 - 0.040
N6	200 - 250	0.004 - 0.009	0.008 - 0.025	0.020 - 0.040
N7	200 - 250	0.004 - 0.009	0.008 - 0.025	0.020 - 0.040
N8	200 - 250	0.004 - 0.009	0.008 - 0.025	0.020 - 0.040
S1	30 - 50	0.003 - 0.008	0.008 - 0.015	0.015 - 0.030
S2	30 - 50	0.003 - 0.008	0.008 - 0.015	0.015 - 0.030
S3	30 - 50	0.003 - 0.008	0.008 - 0.015	0.015 - 0.030
H1	30 - 50	0.002 - 0.004	0.003 - 0.005	0.004 - 0.006
H2				

Richtwerte
Indicative values

MI0112-AR01116

Schaftfräser mit Eckenradius Z3
Corner radius end mill Z3

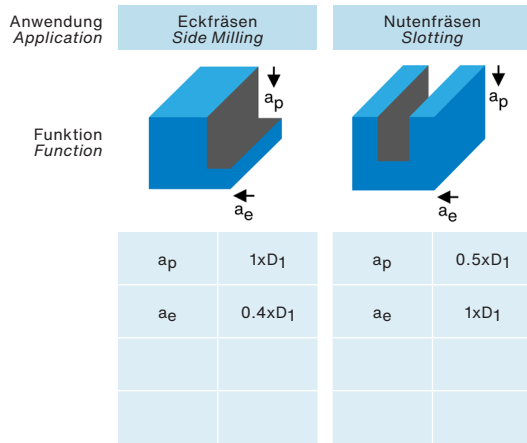


D1	L1	D2	L2	Z	R	DWX Art. N°
0.5	1.25	4	40	3	0.05	460341
0.6	1.50	4	40	3	0.05	460342
0.7	1.75	4	40	3	0.05	460343
0.8	2.00	4	40	3	0.05	460344
1.0	2.50	4	40	3	0.10	460345
1.2	3.00	4	40	3	0.10	460346
1.5	3.75	4	40	3	0.10	460347
1.8	4.50	4	40	3	0.10	460348
2.0	5.00	4	40	3	0.20	460349
2.5	6.25	6	51	3	0.20	460350
3.0	7.50	6	51	3	0.20	460351
3.5	8.75	6	51	3	0.20	460352
4.0	10.00	6	51	3	0.30	460353
4.5	11.25	8	59	3	0.30	460354
5.0	12.50	8	59	3	0.30	460355
5.5	13.75	8	59	3	0.30	460356
6.0	15.00	8	59	3	0.40	460357

Weitere Beschichtungen oder kundenspezifische Lösungen auf Anfrage
Other coatings or customized solutions are available on request

MI0112-AR01116

Schnittparameter
Cutting parameters

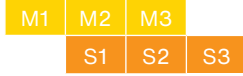


ISO	V _c [m/min]	f _z [mm]			
		Ø 0.30 - 0.80	Ø 0.90 - 1.20	Ø 1.30 - 2.90	Ø 3.00 - 6.00
P1					
P2					
P3					
P4					
P5					
M1	50 - 70	0.003 - 0.008	0.007 - 0.015	0.010 - 0.030	0.015 - 0.035
M2	40 - 60	0.003 - 0.008	0.007 - 0.015	0.010 - 0.030	0.015 - 0.035
M3	40 - 60	0.003 - 0.008	0.007 - 0.015	0.010 - 0.030	0.015 - 0.035
K1					
N1					
N2					
N3					
N4					
N5					
N6					
N7					
N8					
S1	30 - 50	0.003 - 0.008	0.008 - 0.015	0.015 - 0.030	0.025 - 0.045
S2	30 - 50	0.003 - 0.008	0.008 - 0.015	0.015 - 0.030	0.025 - 0.045
S3	30 - 50	0.003 - 0.008	0.008 - 0.015	0.015 - 0.030	0.025 - 0.045
H1					
H2					

Richtwerte
Indicative values

MI0112-AR01117

Schaftfräser mit Eckenradius Z4
 Corner radius end mill Z4

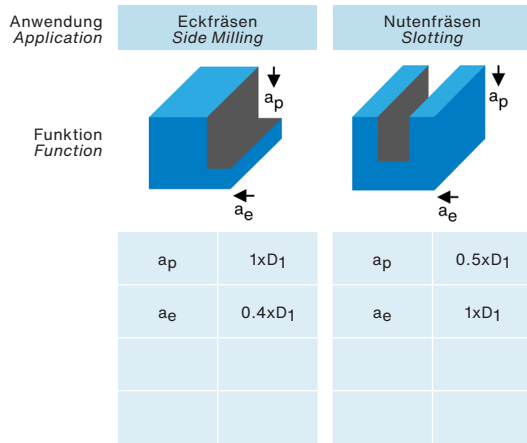


D1	L1	D2	L2	Z	R	DWX Art. N°
1.0	2.50	4	40	4	0.10	460358
1.2	3.00	4	40	4	0.10	460359
1.5	3.75	4	40	4	0.10	460360
1.8	4.50	4	40	4	0.10	460361
2.0	5.00	4	40	4	0.20	460362
2.5	6.25	6	51	4	0.20	460363
3.0	7.50	6	51	4	0.20	460364
3.5	8.75	6	51	4	0.20	460365
4.0	10.00	6	51	4	0.30	460366
4.5	11.25	8	59	4	0.30	460367
5.0	12.50	8	59	4	0.30	460368
5.5	13.75	8	59	4	0.30	460369
6.0	15.00	8	59	4	0.40	460370

Weitere Beschichtungen oder kundenspezifische Lösungen auf Anfrage
 Other coatings or customized solutions are available on request

MIO112-AR01117

Schnittparameter
Cutting parameters



ISO	V _c [m/min]	f _z [mm]			
		Ø 0.30 - 0.80	Ø 0.90 - 1.20	Ø 1.30 - 2.90	Ø 3.00 - 6.00
P1					
P2					
P3					
P4					
P5					
M1	50 - 70	0.003 - 0.008	0.007 - 0.015	0.010 - 0.030	0.015 - 0.035
M2	40 - 60	0.003 - 0.008	0.007 - 0.015	0.010 - 0.030	0.015 - 0.035
M3	40 - 60	0.003 - 0.008	0.007 - 0.015	0.010 - 0.030	0.015 - 0.035
K1					
N1					
N2					
N3					
N4					
N5					
N6					
N7					
N8					
S1	30 - 50	0.003 - 0.008	0.008 - 0.015	0.015 - 0.030	0.025 - 0.045
S2	30 - 50	0.003 - 0.008	0.008 - 0.015	0.015 - 0.030	0.025 - 0.045
S3	30 - 50	0.003 - 0.008	0.008 - 0.015	0.015 - 0.030	0.025 - 0.045
H1					
H2					

Richtwerte
Indicative values

MI0114-NR01120

Schaftfräser mit Fase
Corner chamfer end mill



P1	P2	P3	P4	P5	M1	M2	M3	K1	N1	N2
N3	N4	N5	N6	N7	N8	S1	S2	S3	H1	

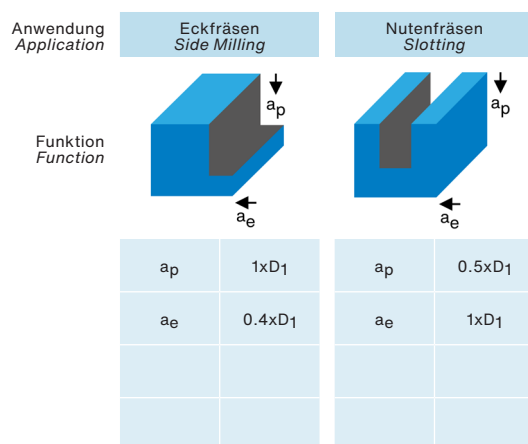
VHM					
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D1	L1	D2	L2	Z	C	DWS Art. N°
0.3	0.75	3	39	3	0.01x45°	460501
0.4	1.00	3	39	4	0.01x45°	460502
0.5	1.25	3	39	4	0.01x45°	460503
0.6	1.50	3	39	4	0.01x45°	460504
0.8	2.00	3	39	4	0.01x45°	460505
1.0	2.50	3	39	4	0.01x45°	460506
1.5	3.75	3	39	4	0.01x45°	460507
2.0	5.00	3	39	4	0.01x45°	460508
2.5	6.25	3	39	4	0.01x45°	460509
3.0	7.50	4	51	4	0.01x45°	460510
3.5	8.75	4	51	4	0.02x45°	460511
4.0	10.00	5	51	4	0.02x45°	460512
4.5	11.25	5	51	4	0.02x45°	460513
5.0	12.50	6	58	4	0.02x45°	460514
5.5	13.75	6	58	4	0.02x45°	460515
6.0	15.00	8	64	4	0.02x45°	460516

Weitere Beschichtungen oder kundenspezifische Lösungen auf Anfrage
Other coatings or customized solutions are available on request

MI0114-NR01120

Schnittparameter
Cutting parameters



ISO	V_c [m/min]	f_z [mm]			
		Ø 0.30 - 0.80	Ø 0.90 - 1.20	Ø 1.30 - 2.90	Ø 3.00 - 6.00
P1	140 - 170	0.004 - 0.009	0.008 - 0.020	0.015 - 0.030	0.020 - 0.040
P2	140 - 170	0.004 - 0.009	0.008 - 0.020	0.015 - 0.030	0.020 - 0.040
P3	140 - 170	0.004 - 0.009	0.008 - 0.020	0.015 - 0.030	0.020 - 0.040
P4	120 - 150	0.004 - 0.009	0.008 - 0.020	0.015 - 0.030	0.020 - 0.040
P5	90 - 120	0.004 - 0.009	0.008 - 0.020	0.015 - 0.030	0.020 - 0.040
M1	50 - 70	0.003 - 0.008	0.007 - 0.015	0.010 - 0.030	0.015 - 0.035
M2	40 - 60	0.003 - 0.008	0.007 - 0.015	0.010 - 0.030	0.015 - 0.035
M3	40 - 60	0.003 - 0.008	0.007 - 0.015	0.010 - 0.030	0.015 - 0.035
K1	140 - 170	0.004 - 0.009	0.008 - 0.025	0.020 - 0.040	0.030 - 0.060
N1	300 - 400	0.004 - 0.009	0.008 - 0.025	0.020 - 0.040	0.030 - 0.060
N2	300 - 400	0.004 - 0.009	0.008 - 0.025	0.020 - 0.040	0.030 - 0.060
N3	300 - 400	0.004 - 0.009	0.008 - 0.025	0.020 - 0.040	0.030 - 0.060
N4	300 - 400	0.004 - 0.009	0.008 - 0.025	0.020 - 0.040	0.030 - 0.060
N5	300 - 400	0.004 - 0.009	0.008 - 0.025	0.020 - 0.040	0.030 - 0.060
N6	200 - 300	0.004 - 0.009	0.008 - 0.025	0.020 - 0.040	0.030 - 0.060
N7	200 - 300	0.004 - 0.009	0.008 - 0.025	0.020 - 0.040	0.030 - 0.060
N8	300 - 400	0.004 - 0.009	0.008 - 0.025	0.020 - 0.040	0.030 - 0.060
S1	30 - 50	0.003 - 0.008	0.008 - 0.015	0.015 - 0.030	0.025 - 0.045
S2	30 - 50	0.003 - 0.008	0.008 - 0.015	0.015 - 0.030	0.025 - 0.045
S3	30 - 50	0.003 - 0.008	0.008 - 0.015	0.015 - 0.030	0.025 - 0.045
H1	30 - 50	0.002 - 0.004	0.003 - 0.005	0.004 - 0.006	0.005 - 0.008
H2					

Richtwerte
Indicative values

MI0116-NR01102

Kugelfräser Z2
Ball end mill Z2



P1	P2	P3	P4	P5	M1	M2	M3	K1	N1	N2
N3	N4	N5	N6	N7	N8	S1	S2	S3	H1	



D1	L1	D2	L2	Z	DWS Art. N°
0.20	0.30	3	39	2	460418
0.20	0.60	3	39	2	460419
0.25	0.38	3	39	2	460420
0.25	0.75	3	39	2	460421
0.30	0.45	3	39	2	460422
0.30	0.90	3	39	2	460423
0.35	0.53	3	39	2	460424
0.35	1.05	3	39	2	460425
0.40	0.60	3	39	2	460426
0.40	1.20	3	39	2	460427
0.45	0.68	3	39	2	460428
0.45	1.35	3	39	2	460429
0.50	0.75	3	39	2	460430
0.50	1.50	3	39	2	460431
0.60	0.90	3	39	2	460432
0.6	1.80	3	39	2	460433
0.70	1.05	3	39	2	460434
0.70	2.10	3	39	2	460435
0.80	1.20	3	39	2	460436
0.80	2.40	3	39	2	460437
0.90	1.35	3	39	2	460438
0.90	2.70	3	39	2	460439
1.00	1.50	3	39	2	460440
1.00	3.00	3	39	2	460441
1.10	1.65	3	39	2	460442
1.10	3.30	3	39	2	460443
1.20	1.80	3	39	2	460444
1.20	3.60	3	39	2	460445
1.30	1.95	3	39	2	460446
1.30	3.90	3	39	2	460447
1.40	2.10	3	39	2	460448
1.40	4.20	3	39	2	460449
1.50	2.25	3	39	2	460450
1.50	4.50	3	39	2	460451
1.60	2.40	3	39	2	460452
1.60	4.80	3	39	2	460453
1.70	2.50	3	39	2	460454
1.70	5.10	3	39	2	460455
1.80	2.70	3	39	2	460456
1.80	5.40	3	39	2	460457
1.90	2.85	3	39	2	460458
1.90	5.70	3	39	2	460459
2.00	3.00	3	39	2	460460
2.00	6.00	3	39	2	460461
2.50	3.75	3	39	2	460462
2.50	7.50	3	39	2	460463
3.00	4.50	3	39	2	460464
3.00	9.00	3	39	2	460465

Weitere Beschichtungen oder kundenspezifische Lösungen auf Anfrage
Other coatings or customized solutions are available on request

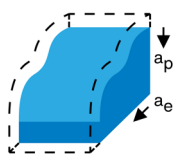
MI0116-NR01102

Schnittparameter
Cutting parameters

Anwendung
Application

3D Kopie
3D copy milling

Funktion
Function



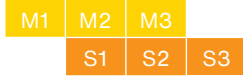
a_p	0.1xD ₁
a_e	0.3xD ₁

ISO	V _c [m/min]	f _z [mm]		
		Ø 0.30 - 0.80	Ø 0.90 - 1.20	Ø 1.30 - 3.00
P1	70 - 100	0.004 - 0.009	0.008 - 0.020	0.015 - 0.030
P2	70 - 100	0.004 - 0.009	0.008 - 0.020	0.015 - 0.030
P3	50 - 70	0.004 - 0.009	0.008 - 0.020	0.015 - 0.030
P4	40 - 60	0.004 - 0.009	0.008 - 0.020	0.015 - 0.030
P5	40 - 60	0.004 - 0.009	0.008 - 0.020	0.015 - 0.030
M1	50 - 70	0.003 - 0.008	0.007 - 0.015	0.010 - 0.030
M2	50 - 70	0.003 - 0.008	0.007 - 0.015	0.010 - 0.030
M3	50 - 70	0.003 - 0.008	0.007 - 0.015	0.010 - 0.030
K1	90 - 120	0.004 - 0.009	0.008-0.025	0.020 - 0.040
N1	200 - 250	0.004 - 0.009	0.008 - 0.025	0.020 - 0.040
N2	200 - 250	0.004 - 0.009	0.008 - 0.025	0.020 - 0.040
N3	140 - 180	0.004 - 0.009	0.008 - 0.025	0.020 - 0.040
N4	140 - 180	0.004 - 0.009	0.008 - 0.025	0.020 - 0.040
N5	110 - 160	0.004 - 0.009	0.008 - 0.025	0.020 - 0.040
N6	100 - 200	0.004 - 0.009	0.008 - 0.025	0.020 - 0.040
N7	100 - 200	0.004 - 0.009	0.008 - 0.025	0.020 - 0.040
N8	200 - 250	0.004 - 0.009	0.008 - 0.025	0.020 - 0.040
S1	30 - 50	0.003 - 0.008	0.008 - 0.015	0.015 - 0.030
S2	25 - 35	0.003 - 0.008	0.008 - 0.015	0.015 - 0.030
S3	30 - 50	0.003 - 0.008	0.008 - 0.015	0.015 - 0.030
H1	25 - 35	0.002 - 0.004	0.003 - 0.005	0.004 - 0.006
H2				

Richtwerte
Indicative values

MI0116-AR01101

Kugelfräser Z4
Ball end mill Z4



D1	L1	D2	L2	Z	DWX Art. N°
1.00	3.00	3	51	4	460488
1.50	4.50	3	51	4	460489
2.00	6.00	3	51	4	460490
2.50	7.00	3	51	4	460491
3.00	8.00	6	58	4	460492
4.00	9.00	6	58	4	460493
5.00	11.00	6	58	4	460494
6.00	13.00	6	58	4	460495

Weitere Beschichtungen oder kundenspezifische Lösungen auf Anfrage
Other coatings or customized solutions are available on request

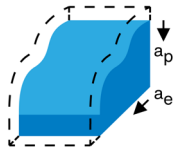
MI0116-AR01101

Schnittparameter
Cutting parameters

Anwendung
Application

3D Kopie
3D copy milling

Funktion
Function



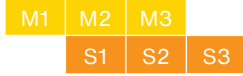
a_p	0.1xD ₁
a_e	0.3xD ₁

ISO	V _c [m/min]	f _z [mm]			
		Ø 0.30 - 0.80	Ø 0.90 - 1.20	Ø 1.30 - 2.50	Ø 3.00 - 6.00
P1					
P2					
P3					
P4					
P5					
M1	50 - 70	0.003 - 0.008	0.007 - 0.015	0.010 - 0.030	0.025 - 0.040
M2	50 - 70	0.003 - 0.008	0.007 - 0.015	0.010 - 0.030	0.025 - 0.040
M3	50 - 70	0.003 - 0.008	0.007 - 0.015	0.010 - 0.030	0.025 - 0.040
K1					
N1					
N2					
N3					
N4					
N5					
N6					
N7					
N8					
S1	30 - 50	0.003 - 0.008	0.008 - 0.015	0.015 - 0.030	0.025 - 0.040
S2	25 - 35	0.003 - 0.008	0.008 - 0.015	0.015 - 0.030	0.025 - 0.040
S3	30 - 50	0.003 - 0.008	0.008 - 0.015	0.015 - 0.030	0.025 - 0.040
H1					
H2					

Richtwerte
Indicative values

MI0418-AR01104

Kantenfräser frontal 90°
Front chamfer end mill 90°



D1	L3	D2	L2	L0	α	Z	DWX Art. N°
0.30	0.60	3	39	0.05	90°	4	460330
0.50	1.00	3	39	0.05	90°	4	460331
0.80	1.60	3	39	0.05	90°	4	460332
1.00	2.00	3	39	0.05	90°	4	460333
1.50	3.00	3	39	0.05	90°	4	460334
2.00	4.00	3	39	0.05	90°	4	460335
2.50	5.00	3	39	0.05	90°	4	460336
3.00		3	39	0.05	90°	4	460337
3.00		3	39	0.45	90°	5	460338
4.00		4	51	0.60	90°	5	460339
6.00		6	58	0.90	90°	5	460340

Weitere Beschichtungen oder kundenspezifische Lösungen auf Anfrage
Other coatings or customized solutions are available on request

MIO418-AR01104

Schnittparameter
Cutting parameters

ISO	V _c [m/min]	f _z [mm]				
		Ø 0.30 - 0.49	Ø 0.50 - 0.99	Ø 1.00 - 2.00	Ø 2.10 - 2.50	Ø 3.00 - 6.00
P1						
P2						
P3						
P4						
P5						
M1	40 - 60	0.002 - 0.003	0.003 - 0.004	0.004 - 0.006	0.006 - 0.009	0.010 - 0.020
M2	60 - 80	0.002 - 0.003	0.003 - 0.004	0.004 - 0.006	0.006 - 0.009	0.010 - 0.020
M3	40 - 60	0.002 - 0.003	0.003 - 0.004	0.004 - 0.006	0.006 - 0.009	0.010 - 0.020
K1						
N1						
N2						
N3						
N4						
N5						
N6						
N7						
N8						
S1	40 - 50	0.002 - 0.003	0.003 - 0.004	0.004 - 0.006	0.006 - 0.009	0.010 - 0.020
S2	40 - 50	0.002 - 0.003	0.003 - 0.004	0.004 - 0.006	0.006 - 0.009	0.010 - 0.020
S3	40 - 50	0.002 - 0.003	0.003 - 0.004	0.004 - 0.006	0.006 - 0.009	0.010 - 0.020
H1						
H2						

Richtwerte
Indicative values

MI0114-NR01120

Schaftfräser mit Fase
Corner chamfer end mill



P1	P2	P3	P4	P5	M1	M2	M3	K1	N1	N2
N3	N4	N5	N6	N7	N8	S1	S2	S3	H1	

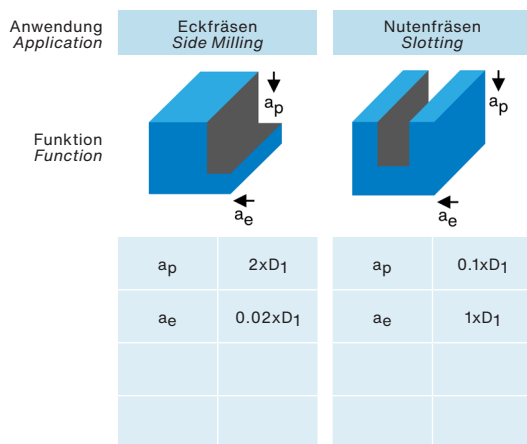
Cer			2.5xD	
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D1	L1	D2	L2	Z	C	DWS Art. N°
0.30	0.75	3	29	3	0.01x45°	460517
0.40	1.00	3	29	4	0.01x45°	460518
0.50	1.25	3	29	4	0.01x45°	460519
0.60	1.50	3	29	4	0.01x45°	460520
0.80	2.00	3	29	4	0.01x45°	460521
1.00	2.50	3	29	4	0.01x45°	460522
1.50	3.75	3	29	4	0.01x45°	460523
2.00	5.00	3	29	4	0.01x45°	460524
2.50	6.25	3	29	4	0.01x45°	460525
3.00	7.50	4	29	4	0.01x45°	460526

Weitere Beschichtungen oder kundenspezifische Lösungen auf Anfrage
Other coatings or customized solutions are available on request

MIO114-NR01120

Schnittparameter
Cutting parameters



ISO	V _c [m/min]	f _z [mm]		
		Ø 0.30 - 0.80	Ø 0.90 - 1.20	Ø 1.30 - 3.00
P1	320 - 400	0.008 - 0.020	0.015 - 0.030	0.020 - 0.040
P2	320 - 400	0.008 - 0.020	0.015 - 0.030	0.020 - 0.040
P3	320 - 400	0.008 - 0.020	0.015 - 0.030	0.020 - 0.040
P4	270 - 330	0.008 - 0.020	0.015 - 0.030	0.020 - 0.040
P5	250 - 320	0.008 - 0.020	0.015 - 0.030	0.020 - 0.040
M1	280 - 350	0.007 - 0.015	0.010 - 0.030	0.015 - 0.035
M2	280 - 350	0.007 - 0.015	0.010 - 0.030	0.015 - 0.035
M3	280 - 350	0.007 - 0.015	0.010 - 0.030	0.015 - 0.035
K1	350 - 450	0.008 - 0.025	0.020 - 0.040	0.030 - 0.060
N1	350 - 450	0.008 - 0.025	0.020 - 0.040	0.030 - 0.060
N2	350 - 450	0.008 - 0.025	0.020 - 0.040	0.030 - 0.060
N3	350 - 450	0.008 - 0.025	0.020 - 0.040	0.030 - 0.060
N4	350 - 450	0.008 - 0.025	0.020 - 0.040	0.030 - 0.060
N5	350 - 450	0.008 - 0.025	0.020 - 0.040	0.030 - 0.060
N6	250 - 300	0.008 - 0.025	0.020 - 0.040	0.030 - 0.060
N7	250 - 300	0.008 - 0.025	0.020 - 0.040	0.030 - 0.060
N8	350 - 450	0.008 - 0.025	0.020 - 0.040	0.030 - 0.060
S1	280 - 350	0.008 - 0.015	0.015 - 0.030	0.025 - 0.045
S2	280 - 350	0.008 - 0.015	0.015 - 0.030	0.025 - 0.045
S3	280 - 350	0.008 - 0.015	0.015 - 0.030	0.025 - 0.045
H1	280 - 350	0.003 - 0.005	0.004 - 0.006	0.005 - 0.008
H2				

Richtwerte
Indicative values

MI0116-NR01102

Kugelfräser Z2
Ball end mill Z2



P1	P2	P3	P4	P5	M1	M2	M3	K1	N1	N2
N3	N4	N5	N6	N7	N8	S1	S2	S3	H1	



D1	L1	D2	L2	Z	DWS Art. N°
0.20	0.30	3	29	2	460466
0.30	0.45	3	29	2	460467
0.40	0.60	3	29	2	460468
0.50	0.75	3	29	2	460469
0.60	0.90	3	29	2	460470
0.70	1.05	3	29	2	460471
0.80	1.20	3	29	2	460472
0.90	1.35	3	29	2	460473
1.00	1.50	3	29	2	460474
1.10	1.65	3	29	2	460475
1.20	1.80	3	29	2	460476
1.30	1.95	3	29	2	460477
1.40	2.10	3	29	2	460478
1.50	2.25	3	29	2	460479
1.60	2.40	3	29	2	460480
1.70	2.50	3	29	2	460481
1.80	2.70	3	29	2	460482
1.90	2.85	3	29	2	460483
2.00	3.00	3	29	2	460484
2.50	3.75	3	29	2	460485
3.00	4.50	3	29	2	460486
3.00	9.00	3	29	2	460487

Weitere Beschichtungen oder kundenspezifische Lösungen auf Anfrage
Other coatings or customized solutions are available on request

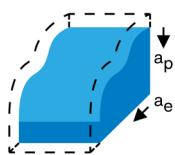
MI0116-NR01102

Schnittparameter
Cutting parameters

Anwendung
Application

3D Kopie
3D copy milling

Funktion
Function



a_p 0.1xD₁

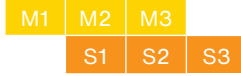
a_e 0.3xD₁

ISO	V _c [m/min]	f _z [mm]		
		Ø 0.30 - 0.80	Ø 0.90 - 1.20	Ø 1.30 - 3.00
P1	320 - 400	0.008 - 0.020	0.015 - 0.030	0.025 - 0.045
P2	320 - 400	0.008 - 0.020	0.015 - 0.030	0.025 - 0.045
P3	320 - 400	0.008 - 0.020	0.015 - 0.030	0.025 - 0.045
P4	270 - 330	0.008 - 0.020	0.015 - 0.030	0.025 - 0.045
P5	250 - 320	0.008 - 0.020	0.015 - 0.030	0.025 - 0.045
M1	280 - 350	0.007 - 0.015	0.010 - 0.030	0.020 - 0.040
M2	280 - 350	0.007 - 0.015	0.010 - 0.030	0.020 - 0.040
M3	280 - 350	0.007 - 0.015	0.010 - 0.030	0.020 - 0.040
K1	350 - 450	0.008 - 0.025	0.020 - 0.040	0.030 - 0.050
N1	350 - 450	0.008 - 0.025	0.020 - 0.040	0.030 - 0.050
N2	350 - 450	0.008 - 0.025	0.020 - 0.040	0.030 - 0.050
N3	350 - 450	0.008 - 0.025	0.020 - 0.040	0.030 - 0.050
N4	350 - 450	0.008 - 0.025	0.020 - 0.040	0.030 - 0.050
N5	350 - 450	0.008 - 0.025	0.020 - 0.040	0.030 - 0.050
N6	250 - 300	0.008 - 0.025	0.020 - 0.040	0.030 - 0.050
N7	250 - 300	0.008 - 0.025	0.020 - 0.040	0.030 - 0.050
N8	350 - 450	0.008 - 0.025	0.020 - 0.040	0.030 - 0.050
S1	280 - 350	0.008 - 0.015	0.015 - 0.030	0.025 - 0.035
S2	280 - 350	0.008 - 0.015	0.015 - 0.030	0.025 - 0.035
S3	280 - 350	0.008 - 0.015	0.015 - 0.030	0.025 - 0.035
H1	280 - 350	0.003 - 0.005	0.004 - 0.006	0.005 - 0.007
H2				

Richtwerte
Indicative values

MI0116-AR01101

Kugelfräser Z4
Ball end mill Z4



D1	L1	D2	L2	Z	DWX Art. N°
1.00	3.00	3	29	4	460496
1.50	4.50	3	29	4	460497
2.00	6.00	3	29	4	460498
2.50	7.00	3	29	4	460499
3.00	8.00	6	29	4	460500

Weitere Beschichtungen oder kundenspezifische Lösungen auf Anfrage
Other coatings or customized solutions are available on request

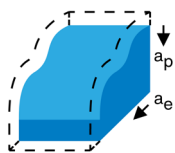
MI0116-AR01101

Schnittparameter
Cutting parameters

Anwendung
Application

3D Kopie
3D copy milling

Funktion
Function



a_p	0.1xD ₁
a_e	0.1xD ₁

ISO	V _c [m/min]	f _z [mm]		
		Ø 0.30 - 0.80	Ø 0.90 - 1.20	Ø 1.30 - 3.00
P1				
P2				
P3				
P4				
P5				
M1	280 - 350	0.007 - 0.015	0.010 - 0.030	0.020 - 0.040
M2	280 - 350	0.007 - 0.015	0.010 - 0.030	0.020 - 0.040
M3	280 - 350	0.007 - 0.015	0.010 - 0.030	0.020 - 0.040
K1				
N1				
N2				
N3				
N4				
N5				
N6				
N7				
N8				
S1	280 - 350	0.008 - 0.015	0.015 - 0.030	0.025 - 0.035
S2	280 - 350	0.008 - 0.015	0.015 - 0.030	0.025 - 0.035
S3	280 - 350	0.008 - 0.015	0.015 - 0.030	0.025 - 0.035
H1				
H2				

Richtwerte
Indicative values

MI0522-NR01101

Gravierfräser 1/2 scharfkantig
Engraving end mill 1/2 with flat



P1	P2	P3	P4	P5	M1	M2	M3	K1	N1	N2
N3	N4	N5	N6	N7	N8	S1	S2	S3	H1	



α	D1	L1	D2	L2	Z	Unbeschichtet Uncoated Art. N°	DWS Art. N°
30°	0.05	4.00	3	39	1	460198	460216
30°	0.10	4.00	3	39	1	460199	460217
30°	0.15	4.00	3	39	1	460200	460218
30°	0.20	4.00	3	39	1	460201	460219
50°	0.05	3.00	3	39	1	460202	460220
50°	0.08	3.00	3	39	1	460203	460221
50°	0.10	3.00	3	39	1	460204	460222
50°	0.15	3.00	3	39	1	460205	460223
50°	0.20	3.00	3	39	1	460206	460224
60°	0.05	2.40	3	39	1	460207	460225
60°	0.08	2.40	3	39	1	460208	460226
60°	0.10	2.40	3	39	1	460209	460227
60°	0.15	2.40	3	39	1	460210	460228
60°	0.20	2.40	3	39	1	460211	460229
90°	0.05	1.45	3	39	1	460212	460230
90°	0.10	1.45	3	39	1	460213	460231
120°	0.05	0.84	3	39	1	460214	460232
120°	0.10	0.84	3	39	1	460215	460233

Weitere Beschichtungen oder kundenspezifische Lösungen auf Anfrage
Other coatings or customized solutions are available on request

MI0522-NR01101

Schnittparameter
Cutting parameters

ISO	n [1/min]	F [mm/min]		ap [mm]
		Ø 0.05 - 0.10	Ø 0.15 - 0.20	
P1	25000 - 40000	50 - 200	80 - 250	0.02 - 0.30
P2	25000 - 40000	50 - 200	80 - 250	0.02 - 0.30
P3	25000 - 40000	50 - 200	80 - 250	0.02 - 0.30
P4	20000 - 35000	50 - 150	70 - 200	0.02 - 0.30
P5	20000 - 35000	50 - 150	70 - 200	0.02 - 0.25
M1	20000 - 35000	50 - 150	70 - 200	0.02 - 0.20
M2	20000 - 35000	50 - 150	70 - 200	0.02 - 0.20
M3	20000 - 35000	50 - 150	70 - 200	0.02 - 0.20
K1	25000 - 40000	50 - 250	80 - 300	0.02 - 0.30
N1	25000 - 40000	50 - 300	100 - 350	0.02 - 0.30
N2	25000 - 40000	50 - 300	100 - 350	0.02 - 0.30
N3	25000 - 40000	50 - 250	100 - 300	0.02 - 0.30
N4	25000 - 40000	50 - 250	100 - 300	0.02 - 0.30
N5	25000 - 40000	50 - 250	100 - 300	0.02 - 0.30
N6	25000 - 40000	50 - 250	100 - 300	0.02 - 0.30
N7	25000 - 40000	50 - 250	100 - 300	0.02 - 0.30
N8	25000 - 40000	50 - 300	100 - 300	0.02 - 0.30
S1	25000 - 40000	50 - 150	70 - 200	0.02 - 0.25
S2	25000 - 40000	50 - 150	70 - 200	0.02 - 0.25
S3	20000 - 35000	50 - 150	70 - 200	0.02 - 0.10
H1	20000 - 35000	50 - 100	70 - 200	0.02 - 0.20
H2				

Richtwerte
Indicative values

MI0521-NR01101

Gravierfräser 3/4 scharfkantig
Engraving end mill 3/4 with flat



P1	P2	P3	P4	P5	M1	M2	M3	K1	N1	N2
N3	N4	N5	N6	N7	N8	S1	S2	S3	H1	



α	D1	L1	D2	L2	D3	L3	Z	Unbeschichtet Uncoated Art. N°	DWS Art. N°
30°	0.05	2.50	3	39	1.5	3.4	1	460234	460258
30°	0.08	2.50	3	39	1.5	3.4	1	460235	460259
30°	0.10	2.50	3	39	1.5	3.4	1	460236	460260
30°	0.15	2.50	3	39	1.5	3.4	1	460237	460261
35°	0.05	2.00	3	39	1.5	3.4	1	460238	460262
35°	0.08	2.00	3	39	1.5	3.4	1	460239	460263
35°	0.10	2.00	3	39	1.5	3.4	1	460240	460264
35°	0.15	2.00	3	39	1.5	3.4	1	460241	460265
35°	0.20	2.00	3	39	1.5	3.4	1	460242	460266
40°	0.05	1.70	3	39	1.5	3.2	1	460243	460267
40°	0.08	1.70	3	39	1.5	3.2	1	460244	460268
40°	0.10	1.70	3	39	1.5	3.2	1	460245	460269
40°	0.15	1.70	3	39	1.5	3.2	1	460246	460270
40°	0.20	1.70	3	39	1.5	3.2	1	460247	460271
50°	0.05	1.40	3	39	1.5	2.3	1	460248	460272
50°	0.08	1.40	3	39	1.5	2.3	1	460249	460273
50°	0.10	1.40	3	39	1.5	2.3	1	460250	460274
50°	0.15	1.40	3	39	1.5	2.3	1	460251	460275
60°	0.05	1.10	3	39	1.5	2.3	1	460252	460276
60°	0.08	1.10	3	39	1.5	2.3	1	460253	460277
60°	0.10	1.10	3	39	1.5	2.3	1	460254	460278
60°	0.15	1.10	3	39	1.5	2.3	1	460255	460279
90°	0.10	0.60	3	39	1.5	2.3	1	460256	460280
90°	0.15	0.60	3	39	1.5	2.3	1	460257	460281

Weitere Beschichtungen oder kundenspezifische Lösungen auf Anfrage
Other coatings or customized solutions are available on request

MI0521-NR01101

Schnittparameter
Cutting parameters

ISO	n [1/min]	F [mm/min]		ap [mm]
		Ø 0.05 - 0.10	Ø 0.15 - 0.20	
P1	25000 - 40000	50 - 200	80 - 250	0.02 - 0.30
P2	25000 - 40000	50 - 200	80 - 250	0.02 - 0.30
P3	25000 - 40000	50 - 200	80 - 250	0.02 - 0.30
P4	20000 - 35000	50 - 150	70 - 200	0.02 - 0.30
P5	20000 - 35000	50 - 150	70 - 200	0.02 - 0.25
M1	20000 - 35000	50 - 150	70 - 200	0.02 - 0.20
M2	20000 - 35000	50 - 150	70 - 200	0.02 - 0.20
M3	20000 - 35000	50 - 150	70 - 200	0.02 - 0.20
K1	25000 - 40000	50 - 250	80 - 300	0.02 - 0.30
N1	25000 - 40000	50 - 300	100 - 350	0.02 - 0.30
N2	25000 - 40000	50 - 300	100 - 350	0.02 - 0.30
N3	25000 - 40000	50 - 250	100 - 300	0.02 - 0.30
N4	25000 - 40000	50 - 250	100 - 300	0.02 - 0.30
N5	25000 - 40000	50 - 250	100 - 300	0.02 - 0.30
N6	25000 - 40000	50 - 250	100 - 300	0.02 - 0.30
N7	25000 - 40000	50 - 250	100 - 300	0.02 - 0.30
N8	25000 - 40000	50 - 300	100 - 300	0.02 - 0.30
S1	25000 - 40000	50 - 150	70 - 200	0.02 - 0.25
S2	25000 - 40000	50 - 150	70 - 200	0.02 - 0.25
S3	20000 - 35000	50 - 150	70 - 200	0.02 - 0.10
H1	20000 - 35000	50 - 100	70 - 200	0.02 - 0.20
H2				

Richtwerte
Indicative values

MI0523-NR01101

Gravierfräser 3/4 mit Radius
Engraving end mill 3/4 with flatradius



P1	P2	P3	P4	P5	M1	M2	M3	K1	N1	N2
N3	N4	N5	N6	N7	N8	S1	S2	S3	H1	



α	R	L1	D2	L2	D3	L3	Z	Unbeschichtet Uncoated Art. N°	DWS Art. N°
35°	0.05	1.90	3	39	1.5	3.4	1	460282	460286
35°	0.10	1.90	3	39	1.5	3.4	1	460283	460287
35°	0.15	1.90	3	39	1.5	3.4	1	460284	460288
35°	0.20	1.90	3	39	1.5	3.4	1	460285	460289

Weitere Beschichtungen oder kundenspezifische Lösungen auf Anfrage
Other coatings or customized solutions are available on request

MI0523-NR01101

Schnittparameter
Cutting parameters

ISO	n [1/min]	F [mm/min]		ap [mm]
		Ø 0.05 - 0.10	Ø 0.15 - 0.20	
P1	25000 - 40000	50 - 200	80 - 250	0.02 - 0.30
P2	25000 - 40000	50 - 200	80 - 250	0.02 - 0.30
P3	25000 - 40000	50 - 200	80 - 250	0.02 - 0.30
P4	20000 - 35000	50 - 150	70 - 200	0.02 - 0.30
P5	20000 - 35000	50 - 150	70 - 200	0.02 - 0.25
M1	20000 - 35000	50 - 150	70 - 200	0.02 - 0.20
M2	20000 - 35000	50 - 150	70 - 200	0.02 - 0.20
M3	20000 - 35000	50 - 150	70 - 200	0.02 - 0.20
K1	25000 - 40000	50 - 250	80 - 300	0.02 - 0.30
N1	25000 - 40000	50 - 300	100 - 350	0.02 - 0.30
N2	25000 - 40000	50 - 300	100 - 350	0.02 - 0.30
N3	25000 - 40000	50 - 250	100 - 300	0.02 - 0.30
N4	25000 - 40000	50 - 250	100 - 300	0.02 - 0.30
N5	25000 - 40000	50 - 250	100 - 300	0.02 - 0.30
N6	25000 - 40000	50 - 250	100 - 300	0.02 - 0.30
N7	25000 - 40000	50 - 250	100 - 300	0.02 - 0.30
N8	25000 - 40000	50 - 300	100 - 300	0.02 - 0.30
S1	25000 - 40000	50 - 150	70 - 200	0.02 - 0.25
S2	25000 - 40000	50 - 150	70 - 200	0.02 - 0.25
S3	20000 - 35000	50 - 150	70 - 200	0.02 - 0.10
H1	20000 - 35000	50 - 100	70 - 200	0.02 - 0.20
H2				

Richtwerte
Indicative values

MI0525-NR01101

Gravierfräser spiral scharfkantig
Engraving end mill Helical with flat



P1	P2	P3	P4	P5	M1	M2	M3	K1	N1	N2
N3	N4	N5	N6	N7	N8	S1	S2	S3	H1	



α	D1	L1	D2	L2	D3	L3	Z	Unbeschichtet Uncoated Art. N°	DWS Art. N°
30°	0.05	2.50	3	39	1.5	3	1	460290	460310
30°	0.08	2.50	3	39	1.5	3	1	460291	460311
30°	0.10	2.50	3	39	1.5	3	1	460292	460312
30°	0.15	2.50	3	39	1.5	3	1	460293	460313
35°	0.05	2.50	3	39	1.5	3	1	460294	460314
35°	0.08	2.50	3	39	1.5	3	1	460295	460315
35°	0.10	2.50	3	39	1.5	3	1	460296	460316
35°	0.15	2.50	3	39	1.5	3	1	460297	460317
40°	0.05	2.50	3	39	1.5	3	1	460298	460318
40°	0.08	2.50	3	39	1.5	3	1	460299	460319
40°	0.10	2.50	3	39	1.5	3	1	460300	460320
40°	0.15	2.50	3	39	1.5	3	1	460301	460321
50°	0.05	2.00	3	39	1.5	3	1	460302	460322
50°	0.08	2.00	3	39	1.5	3	1	460303	460323
50°	0.10	2.00	3	39	1.5	3	1	460304	460324
50°	0.15	2.00	3	39	1.5	3	1	460305	460325
60°	0.05	2.00	3	39	1.5	3	1	460306	460326
60°	0.08	2.00	3	39	1.5	3	1	460307	460327
60°	0.10	2.00	3	39	1.5	3	1	460308	460328
60°	0.15	2.00	3	39	1.5	3	1	460309	460329

Weitere Beschichtungen oder kundenspezifische Lösungen auf Anfrage
Other coatings or customized solutions are available on request

MI0525-NR01101

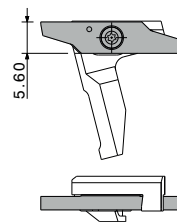
Schnittparameter
Cutting parameters

ISO	n [1/min]	F [mm/min]		ap [mm]
		Ø 0.05 - 0.10	Ø 0.15 - 0.20	
P1	25000 - 40000	50 - 200	80 - 250	0.02 - 0.30
P2	25000 - 40000	50 - 200	80 - 250	0.02 - 0.30
P3	25000 - 40000	50 - 200	80 - 250	0.02 - 0.30
P4	20000 - 35000	50 - 150	70 - 200	0.02 - 0.30
P5	20000 - 35000	50 - 150	70 - 200	0.02 - 0.25
M1	20000 - 35000	50 - 150	70 - 200	0.02 - 0.20
M2	20000 - 35000	50 - 150	70 - 200	0.02 - 0.20
M3	20000 - 35000	50 - 150	70 - 200	0.02 - 0.20
K1	25000 - 40000	50 - 250	80 - 300	0.02 - 0.30
N1	25000 - 40000	50 - 300	100 - 350	0.02 - 0.30
N2	25000 - 40000	50 - 300	100 - 350	0.02 - 0.30
N3	25000 - 40000	50 - 250	100 - 300	0.02 - 0.30
N4	25000 - 40000	50 - 250	100 - 300	0.02 - 0.30
N5	25000 - 40000	50 - 250	100 - 300	0.02 - 0.30
N6	25000 - 40000	50 - 250	100 - 300	0.02 - 0.30
N7	25000 - 40000	50 - 250	100 - 300	0.02 - 0.30
N8	25000 - 40000	50 - 300	100 - 300	0.02 - 0.30
S1	25000 - 40000	50 - 150	70 - 200	0.02 - 0.25
S2	25000 - 40000	50 - 150	70 - 200	0.02 - 0.25
S3	20000 - 35000	50 - 150	70 - 200	0.02 - 0.10
H1	20000 - 35000	50 - 100	70 - 200	0.02 - 0.20
H2				

Richtwerte
Indicative values

TURNDEC ESCOMATIC

Präzisions-Werkzeughalter für ESCOMATIC Maschinen
Precision toolholder for ESCOMATIC machine



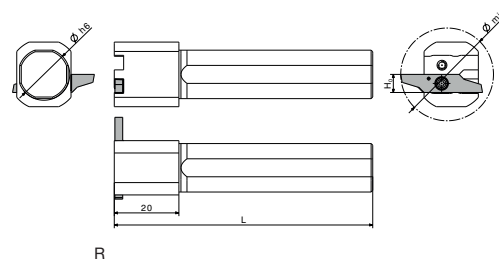
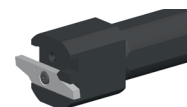
R

A x B x L	Dir. L Art. N°	Dir. R Art. N°
TE-R/L6 25.2 x 8.1	458637	458638

Werkzeughalter mit Schraube & Schraubenzieher geliefert
Toolholder provided with screw & screwdriver

TURNDEC FRONT

Turndec Frontaler Drehhalter
Turndec frontal toolholder



R

Ø x L	H0	Ø min.	Dir. L Art. N°	Dir. R Art. N°
TF-R/L6				
Ø 16 x 80	5.60	30.00	460953	460953
Ø 16 x 160	5.60	30.00	460955	460955
Ø 19.05 x 80	5.60	30.00	460956	460956
Ø 19.05 x 160	5.60	30.00	460957	460957
Ø 20 x 80	5.60	30.00	460959	460959
Ø 20 x 160	5.60	30.00	460960	460960
Ø 22 x 80	5.60	30.00	460961	460961
Ø 22 x 160	5.60	30.00	460962	460962
Ø 25 x 80	5.60	30.00	460963	460963
Ø 25 x 160	5.60	30.00	460964	460964
Ø 25.4 x 80	5.60	30.00	460965	460965
Ø 25.4 x 160	5.60	30.00	460966	460966

Werkzeughalter mit Schraube & Schraubenzieher geliefert
Toolholder provided with screw & screwdriver

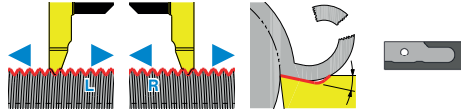
GF 60°

Gewindeschneiden mit vollem Profil
Threading with full profile

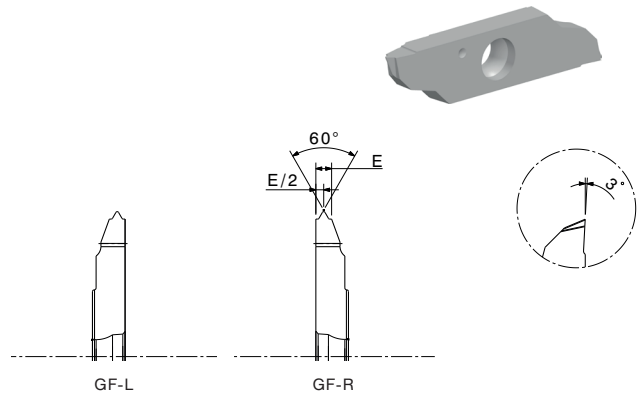


P1	P2	P3	P4	P5	M1	M2	M3	K1	N1	N2
N3	N4	N5	N6	N7	N8	S1	S2	S3	H1	H2

Schruppen
Roughing



Schlichten
Finishing



Dir.	W	Steigung Pitch P	Unbeschichtet Uncoated Art. N°	DWS Art. N°	D60 Art. N°
GF6-L 60°					
L	60.0°	0.25	459108	459121	459134
L	60.0°	0.30	459109	459122	459135
L	60.0°	0.35	459110	459123	459136
L	60.0°	0.40	459111	459124	459137
L	60.0°	0.45	459112	459125	459138
L	60.0°	0.50	459113	459126	459139
GF6-R 60°					
R	60.0°	0.25	459069	459082	459095
R	60.0°	0.30	459070	459083	459096
R	60.0°	0.35	459071	459084	459097
R	60.0°	0.40	459072	459085	459098
R	60.0°	0.45	459073	459086	459099
R	60.0°	0.50	459074	459087	459100
GF8-L 60°					
L	60.0°	0.60	459159	459168	459177
L	60.0°	0.70	459160	459169	459178
GF8-R 60°					
R	60.0°	0.60	459147	459151	459155
R	60.0°	0.70	459148	459152	459156

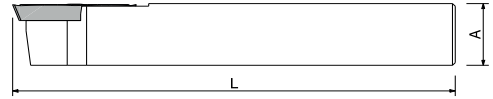
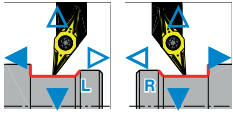
Weitere Ausführungen auf Anfrage
Other executions on request

SVJN 93°

Hochpräzisions-Werkzeughalter für Feinstdrehen
High-precision toolholder for fine turning



PATENTED



R

A x B x L	Dir. L Art. N°	Dir. R Art. N°
SVJNL & SVJNR		
10 x 10 x 120		436621
12 x 12 x 120		436622
16 x 16 x 120		436623
20 x 20 x 120		436624

Werkzeughalter mit Schraube & Schraubenzieher geliefert
Toolholder provided with screw & screwdriver



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