

THE NEW VALUE FRONTIER

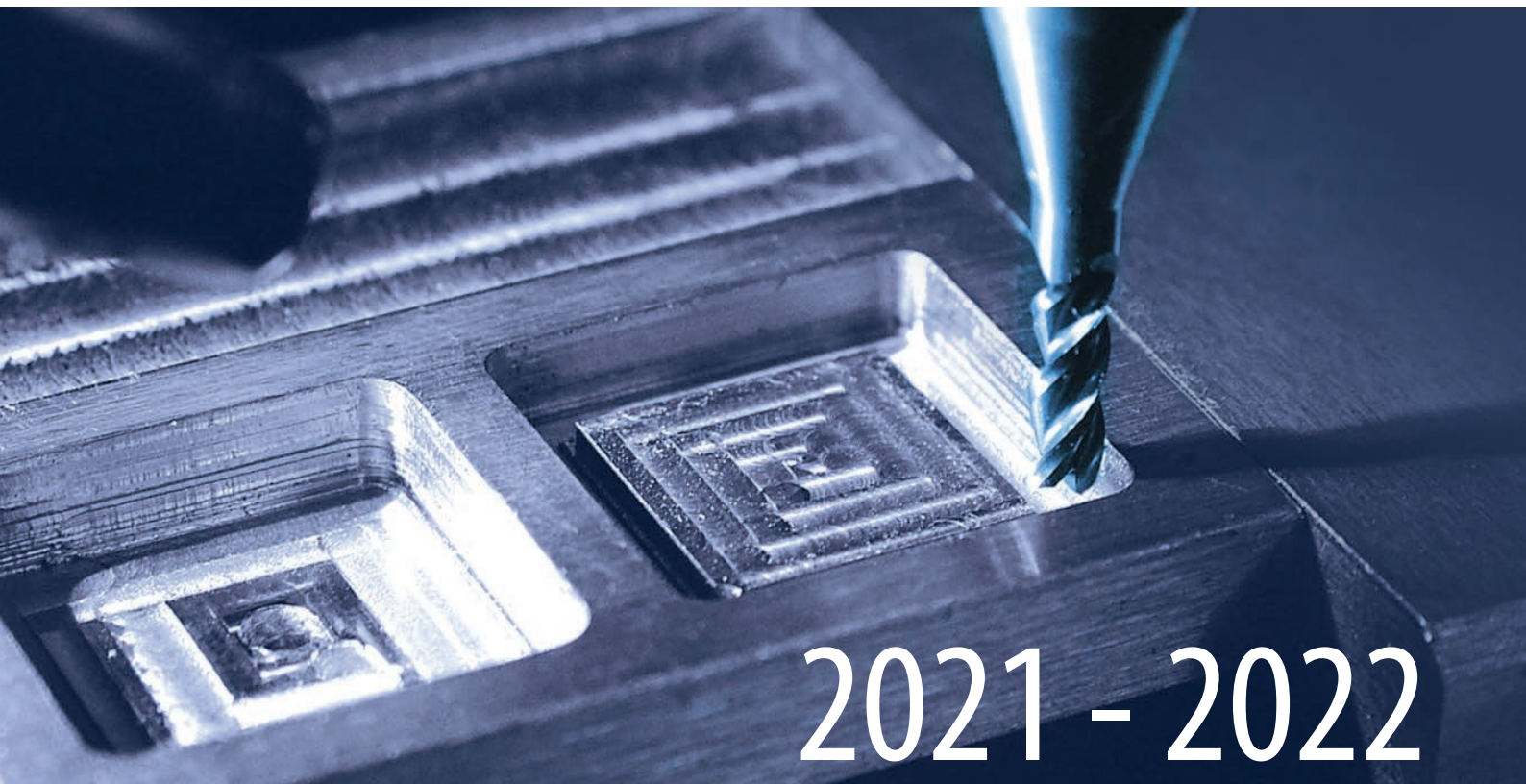


# SOLID CARBIDE MICRO TOOLS

VHM MIKRO ZERSPANUNGSWERKZEUGE

OUTILS D'USINAGE MICRO CARBURE

MICRO UTENSILI IN METALLO DURO



2021 - 2022

# KYOCERA Microtools

Since 1987, Kyocera has designed and manufactured tight tolerance carbide cutting tools and miniature parts for a broad range of markets including the electronics, industrial, medical and aerospace industries. We offer high-volume CNC grinding consistency and superior surface finishes. Kyocera offers a complete range of micro diameter cutting tools.

Our state-of-the-art facilities include over 65 Swiss-made Rollomatic CNC grinding centers and extensive automated optical inspection (AOI) to ensure quality and consistency. Every tool we build is CAD/CAM designed and has SPC lot traceability as our ISO 9001:2008 and 14001:2004 certifications require.

If you have need for advanced technology, consistent quality and technical support, then Kyocera is the perfect partner for you.

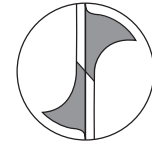
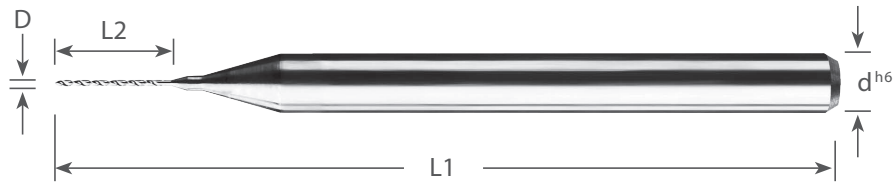


2021 - 2022  
KYOCERA Microtools

<b>DRILLS</b> BOHRER   FORET   PUNTE	03 - 19	<b>DRILLS</b>
<b>END MILLS</b> SCHAFTFRÄSER   FRAISE   FRESE	20 - 26	
END MILLS - Z2 SCHAFTFRÄSER   FRAISE   FRESE	20	<b>END MILLS</b>
END MILLS - Z3 SCHAFTFRÄSER   FRAISE   FRESE	21 - 25	
END MILLS - Z4 SCHAFTFRÄSER   FRAISE   FRESE	26	
<b>REAMERS</b> REIBAHLEN   ALESOIRS   ALESATORI	27 - 32	<b>REAMERS</b>
<b>TECHNICAL INFORMATION</b> TECHNISCHE INFORMATIONEN   INFORMATIONS TECHNIQUES INFORMAZIONI TECNICHE	33 - 42	<b>TECHNICAL INFO</b>

MIKRO BOHRER  
MICRO FORET  
MICRO PUNTE

DRILLS



4 Facet Point Geometry



Standard Length | Standardlänge | Longueur Standard | Lunghezza Standard

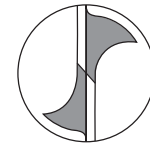
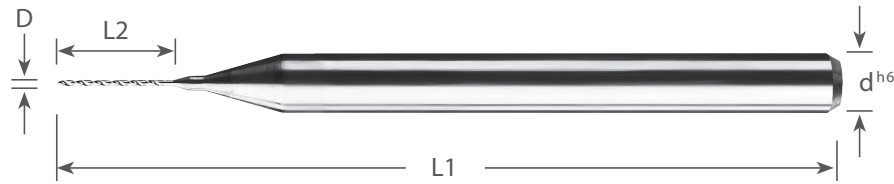
D (mm) +0/-0.008	d (mm) h6	L1 (mm)	L2 (mm)	Art. No. (uncoated)	Art. No. (AlTiN coated)
0.04	3	38	0.5	226-0016.020	
0.045	3	38	0.65	226-0018.025	
0.05	3	38	0.8	226-0020.030	
0.06	3	38	0.8	226-0024.030	
0.07	3	38	1.3	226-0028.050	
0.08	3	38	1.3	226-0031.050	
0.09	3	38	1.3	226-0035.050	
0.10	3	38	1.2	226-0039.040	
0.11	3	38	1.2	226-0043.040	
0.12	3	38	1.2	226-0047.040	
0.13	3	38	1.2	226-0051.040	
0.14	3	38	2.2	226-0055.040	
0.15	3	38	2.2	226-0059.080	
0.16	3	38	2.2	226-0063.080	
0.17	3	38	2.2	226-0067.080	
0.18	3	38	2.7	226-0071.100	
0.19	3	38	2.7	226-0075.100	
0.20	3	38	2.7	226-0079.100	
0.21	3	38	2.7	226-0083.100	
0.22	3	38	2.7	226-0087.100	
0.23	3	38	4.0	226-0091.150	
0.24	3	38	4.0	226-0094.150	
0.25	3	38	4.0	226-0098.150	226-0098L150
0.26	3	38	4.0	226-0102.150	226-0102L150
0.27	3	38	4.0	226-0106.150	226-0106L150
0.28	3	38	4.0	226-0110.150	226-0110L150
0.29	3	38	4.0	226-0114.150	226-0114L150
0.30	3	38	5.9	226-0118.225	226-0118L225
0.31	3	38	5.9	226-0122.225	226-0122L225
0.32	3	38	5.9	226-0126.225	226-0126L225
0.33	3	38	5.9	226-0130.225	226-0130L225
0.34	3	38	5.9	226-0134.225	226-0134L225

SERIES 226 WORKPIECE MATERIAL

Coating	P Steel ~30HRC	P Steel 30~40HRC	H Hardened Steel ~55HRC	H Hardened Steel ~68HRC	M Stainless Steel	K Cast Iron	N Aluminum	N Graphite	N Copper Alloy	N CFRP	N Plastic	N Thermoset Plastic	N High Density Plastic	S Nickel / Cobalt	S Titanium Alloy
AlTiN	★	★	★	★	★	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆
Uncoated							☆	☆	★	☆	★	★	★		☆

★ : Priority Materials ☆ : Applicable Materials

MIKRO BOHRER  
MICRO FORET  
MICRO PUNTE



4 Facet Point Geometry

DRILLS



Standard Length | Standardlänge | Longueur Standard | Lunghezza Standard

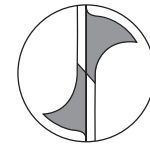
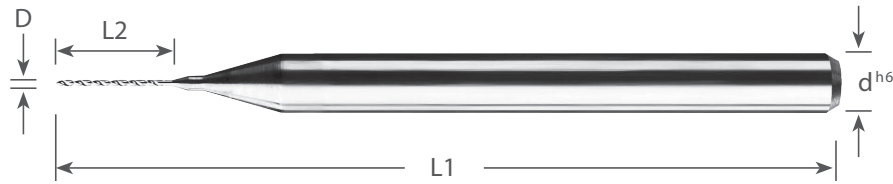
D (mm) +0/-0.008	d (mm) h6	L1 (mm)	L2 (mm)	Art. No. (uncoated)	Art. No. (AlTiN coated)
0.35	3	38	5.7	226-0138.225	226-0138L225
0.36	3	38	5.7	226-0142.225	226-0142L225
0.37	3	38	5.7	226-0146.225	226-0146L225
0.38	3	38	6.4	226-0150.250	226-0150L250
0.39	3	38	6.4	226-0154.250	226-0154L250
0.40	3	38	6.4	226-0157.250	226-0157L250
0.41	3	38	6.4	226-0161.250	226-0161L250
0.42	3	38	6.4	226-0165.250	226-0165L250
0.43	3	38	6.4	226-0169.250	226-0169L250
0.44	3	38	6.4	226-0173.250	226-0173L250
0.45	3	38	6.4	226-0177.250	226-0177L250
0.46	3	38	6.4	226-0181.250	226-0181L250
0.47	3	38	6.4	226-0185.250	226-0185L250
0.48	3	38	6.6	226-0189.260	226-0189L260
0.49	3	38	6.6	226-0193.260	226-0193L260
0.50	3	38	6.6	226-0197.260	226-0197L260
0.51	3	38	6.6	226-0201.260	226-0201L260
0.52	3	38	6.6	226-0205.260	226-0205L260
0.53	3	38	6.6	226-0209.260	226-0209L260
0.54	3	38	6.6	226-0213.260	226-0213L260
0.55	3	38	8.6	226-0217.340	226-0217L340
0.56	3	38	8.6	226-0220.340	226-0220L340
0.57	3	38	8.6	226-0224.340	226-0224L340
0.58	3	38	8.6	226-0228.340	226-0228L340
0.59	3	38	8.6	226-0232.340	226-0232L340
0.60	3	38	8.6	226-0236.340	226-0236L340
0.61	3	38	8.6	226-0240.340	226-0240L340
0.62	3	38	8.6	226-0244.340	226-0244L340
0.63	3	38	8.6	226-0248.340	226-0248L340
0.64	3	38	8.6	226-0252.340	226-0252L340
0.65	3	38	8.6	226-0256.340	226-0256L340
0.66	3	38	8.6	226-0260.340	226-0260L340
0.67	3	38	8.6	226-0264.340	226-0264L340
0.68	3	38	8.6	226-0268.340	226-0268L340
0.69	3	38	8.6	226-0272.340	226-0272L340
0.70	3	38	10.2	226-0276.400	226-0276L400
0.71	3	38	10.2	226-0280.400	226-0280L400
0.72	3	38	10.2	226-0283.400	226-0283L400
0.73	3	38	10.2	226-0287.400	226-0287L400

SERIES 226 WORKPIECE MATERIAL															
Coating	P Steel ~30HRC	P Steel 30~40HRC	H Hardened Steel ~55HRC	H Hardened Steel ~68HRC	M Stainless Steel	K Cast Iron	N Aluminum	N Graphite	N Copper Alloy	N CFRP	N Plastic	N Thermoset Plastic	N High Density Plastic	S Nickel / Cobalt	S Titanium Alloy
AlTiN	★	★	★	★	★	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆
Uncoated						☆	☆	★	☆	★	★	★		☆	☆

★ : Priority Materials ☆ : Applicable Materials

MIKRO BOHRER  
MICRO FORET  
MICRO PUNTE

DRILLS



4 Facet Point Geometry



Standard Length | Standardlänge | Longueur Standard | Lunghezza Standard

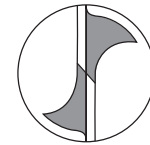
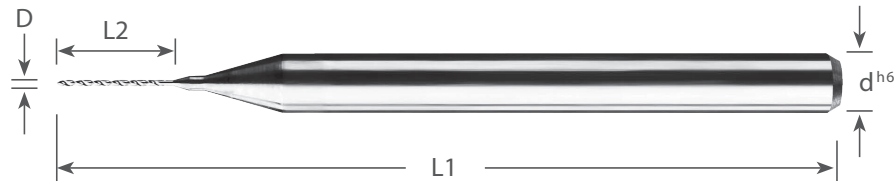
D (mm) +0/-0.008	d (mm) h6	L1 (mm)	L2 (mm)	Art. No. (uncoated)	Art. No. (AITiN coated)
0.74	3	38	10.2	226-0291.400	226-0291L400
0.75	3	38	10.2	226-0295.400	226-0295L400
0.76	3	38	10.2	226-0299.400	226-0299L400
0.77	3	38	10.2	226-0303.400	226-0303L400
0.78	3	38	10.2	226-0307.400	226-0307L400
0.79	3	38	10.2	226-0311.400	226-0311L400
0.80	3	38	10.2	226-0315.400	226-0315L400
0.81	3	38	10.2	226-0319.400	226-0319L400
0.82	3	38	10.2	226-0323.400	226-0323L400
0.83	3	38	10.2	226-0327.400	226-0327L400
0.84	3	38	10.2	226-0331.400	226-0331L400
0.85	3	38	10.2	226-0335.400	226-0335L400
0.86	3	38	10.2	226-0339.400	226-0339L400
0.87	3	38	10.2	226-0343.400	226-0343L400
0.88	3	38	10.2	226-0346.400	226-0346L400
0.89	3	38	10.2	226-0350.400	226-0350L400
0.90	3	38	10.2	226-0354.400	226-0354L400
0.91	3	38	10.2	226-0358.400	226-0358L400
0.92	3	38	10.2	226-0362.400	226-0362L400
0.93	3	38	10.2	226-0366.400	226-0366L400
0.94	3	38	10.2	226-0370.400	226-0370L400
0.95	3	38	10.2	226-0374.400	226-0374L400
0.96	3	38	10.2	226-0378.400	226-0378L400
0.97	3	38	10.2	226-0382.400	226-0382L400
0.98	3	38	10.2	226-0386.400	226-0386L400
0.99	3	38	10.2	226-0390.400	226-0390L400
1.00	3	38	10.2	226-0394.400	226-0394L400
1.01	3	38	10.2	226-0398.400	226-0398L400
1.02	3	38	10.2	226-0402.400	226-0402L400
1.03	3	38	10.2	226-0406.400	226-0406L400
1.04	3	38	10.2	226-0409.400	226-0409L400
1.05	3	38	10.2	226-0413.400	226-0413L400
1.06	3	38	10.2	226-0417.400	226-0417L400
1.07	3	38	10.2	226-0421.400	226-0421L400
1.08	3	38	10.2	226-0425.400	226-0425L400
1.09	3	38	10.2	226-0429.400	226L0429L400
1.10	3	38	10.2	226-0433.400	226-0433L400
1.11	3	38	10.2	226-0437.400	226-0437L400
1.12	3	38	10.2	226-0441.400	226-0441L400

SERIES 226 WORKPIECE MATERIAL

Coating	P Steel ~30HRC	P Steel 30~40HRC	H Hardened Steel ~55HRC	H Hardened Steel ~68HRC	M Stainless Steel	K Cast Iron	N Aluminum	N Graphite	N Copper Alloy	N CFRP	N Plastic	N Thermoset Plastic	N High Density Plastic	S Nickel / Cobalt	S Titanium Alloy
AITiN	★	★	★	★	★	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆
Uncoated						☆	☆	★	☆	★	★	★		☆	☆

★ : Priority Materials ☆ : Applicable Materials

MIKRO BOHRER  
MICRO FORET  
MICRO PUNTE



4 Facet Point Geometry

DRILLS



Standard Length | Standardlänge | Longueur Standard | Lunghezza Standard

D (mm) +0/-0.008	d (mm) h6	L1 (mm)	L2 (mm)	Art. No. (uncoated)	Art. No. (AITiN coated)
1.13	3	38	10.2	226-0445.400	226-0445L400
1.14	3	38	10.2	226-0449.400	226-0449L400
1.15	3	38	10.2	226-0453.400	226-0453L400
1.16	3	38	10.2	226-0457.400	226-0457L400
1.17	3	38	10.2	226-0461.400	226-0461L400
1.18	3	38	10.2	226-0465.400	226-0465L400
1.19	3	38	10.2	226-0469.400	226-0469L400
1.20	3	38	10.2	226-0472.400	226-0472L400
1.21	3	38	10.2	226-0476.400	226-0476L400
1.22	3	38	10.2	226-0480.400	226-0480L400
1.23	3	38	10.2	226-0484.400	226-0484L400
1.24	3	38	10.2	226-0488.400	226-0488L400
1.25	3	38	10.2	226-0492.400	226-0492L400
1.26	3	38	10.2	226-0496.400	226-0496L400
1.27	3	38	10.2	226-0500.400	226-0500L400
1.28	3	38	10.2	226-0504.400	226-0504L400
1.29	3	38	10.2	226-0508.400	226-0508L400
1.30	3	38	10.2	226-0512.400	226-0512L400
1.31	3	38	10.2	226-0516.400	226-0516L400
1.32	3	38	10.2	226-0520.400	226-0520L400
1.33	3	38	10.2	226-0524.400	226-0524L400
1.34	3	38	10.2	226-0528.400	226-0528L400
1.35	3	38	10.2	226-0531.400	226-0531L400
1.36	3	38	10.2	226-0535.400	226-0535L400
1.37	3	38	10.2	226-0539.400	226-0539L400
1.38	3	38	10.2	226-0543.400	226-0543L400
1.39	3	38	10.2	226-0547.400	226-0547L400
1.40	3	38	10.2	226-0551.400	226-0551L400
1.41	3	38	10.2	226-0555.400	226-0555L400
1.42	3	38	10.2	226-0559.400	226-0559L400
1.43	3	38	10.2	226-0563.400	226-0563L400
1.44	3	38	10.2	226-0567.400	226-0567L400
1.45	3	38	10.2	226-0571.400	226-0571L400
1.46	3	38	10.2	226-0575.400	226-0575L400
1.47	3	38	10.2	226-0579.400	226-0579L400
1.48	3	38	10.2	226-0583.400	226-0583L400
1.49	3	38	10.2	226-0587.400	226-0587L400
1.50	3	38	10.2	226-0591.400	226-0591L400
1.51	3	38	10.2	226-0594.400	226-0594L400

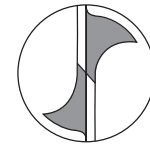
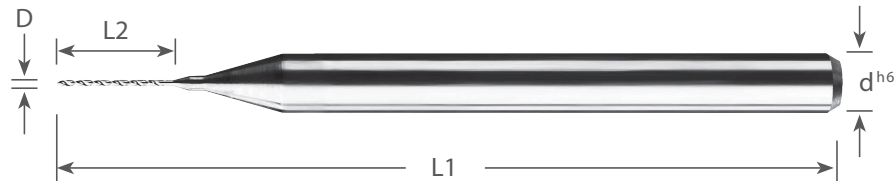
SERIES 226 WORKPIECE MATERIAL															
Coating	P Steel ~30HRC	P Steel 30~40HRC	H Hardened Steel ~55HRC	H Hardened Steel ~68HRC	M Stainless Steel	K Cast Iron	N Aluminum	N Graphite	N Copper Alloy	N CFRP	N Plastic	N Thermoset Plastic	N High Density Plastic	S Nickel / Cobalt	S Titanium Alloy
AITiN	★	★	★	★	★	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆
Uncoated						☆	☆	★	☆	★	★	★		☆	☆

★ : Priority Materials ☆ : Applicable Materials



MIKRO BOHRER  
MICRO FORET  
MICRO PUNTE

DRILLS



4 Facet Point Geometry



Standard Length | Standardlänge | Longueur Standard | Lunghezza Standard

D (mm) +0/-0.008	d (mm) h6	L1 (mm)	L2 (mm)	Art. No. (uncoated)	Art. No. (AlTiN coated)
1.52	3	38	10.2	226-0598.400	226-0598L400
1.53	3	38	10.2	226-0602.400	226-0602L400
1.54	3	38	10.2	226-0606.400	226-0606L400
1.55	3	38	10.2	226-0610.400	226-0610L400
1.56	3	38	10.2	226-0614.400	226-0614L400
1.57	3	38	10.2	226-0618.400	226-0618L400
1.58	3	38	10.2	226-0622.400	226-0622L400
1.59	3	38	10.2	226-0626.400	226-0626L400
1.60	3	38	10.2	226-0630.400	226-0630L400
1.61	3	38	10.2	226-0634.400	226-0634L400
1.62	3	38	10.2	226-0638.400	226-0638L400
1.63	3	38	10.2	226-0642.400	226-0642L400
1.64	3	38	10.2	226-0646.400	226-0646L400
1.65	3	38	10.2	226-0650.400	226-0650L400
1.66	3	38	10.2	226-0654.400	226-0654L400
1.67	3	38	10.2	226-0657.400	226-0657L400
1.68	3	38	10.2	226-0661.400	226-0661L400
1.69	3	38	10.2	226-0665.400	226-0665L400
1.70	3	38	10.2	226-0669.400	226-0669L400
1.71	3	38	10.2	226-0673.400	226-0673L400
1.72	3	38	10.2	226-0677.400	226-0677L400
1.73	3	38	10.2	226-0681.400	226-0681L400
1.74	3	38	10.2	226-0685.400	226-0685L400
1.75	3	38	10.2	226-0689.400	226-0689L400
1.76	3	38	10.2	226-0693.400	226-0693L400
1.77	3	38	10.2	226-0697.400	226-0697L400
1.78	3	38	10.2	226-0701.400	226-0701L400
1.79	3	38	10.2	226-0705.400	226-0705L400
1.80	3	38	10.2	226-0709.400	226-0709L400
1.81	3	38	10.2	226-0713.400	226-0713L400
1.82	3	38	10.2	226-0717.400	226-0717L400
1.83	3	38	10.2	226-0720.400	226-0720L400
1.84	3	38	10.2	226-0724.400	226-0724L400
1.85	3	38	10.2	226-0728.400	226-0728L400
1.86	3	38	10.2	226-0732.400	226-0732L400
1.87	3	38	10.2	226-0736.400	226-0736L400
1.88	3	38	10.2	226-0740.400	226-0740L400
1.89	3	38	10.2	226-0744.400	226-0744L400
1.90	3	38	10.2	226-0748.400	226-0748L400

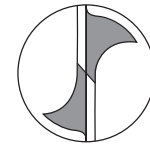
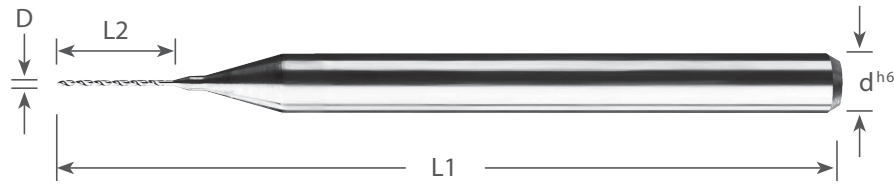
SERIES 226 WORKPIECE MATERIAL

Coating	P Steel ~30HRC	P Steel 30~40HRC	H Hardened Steel ~55HRC	H Hardened Steel ~68HRC	M Stainless Steel	K Cast Iron	N Aluminum	N Graphite	N Copper Alloy	N CFRP	N Plastic	N Thermoset Plastic	N High Density Plastic	S Nickel / Cobalt	S Titanium Alloy
AlTiN	★	★	★	★	★	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆
Uncoated						☆	☆	★	☆	★	★	★		☆	☆

★ : Priority Materials ☆ : Applicable Materials



MIKRO BOHRER  
MICRO FORET  
MICRO PUNTE



4 Facet Point Geometry

DRILLS



Standard Length | Standardlänge | Longueur Standard | Lunghezza Standard

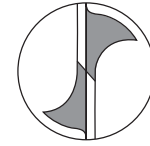
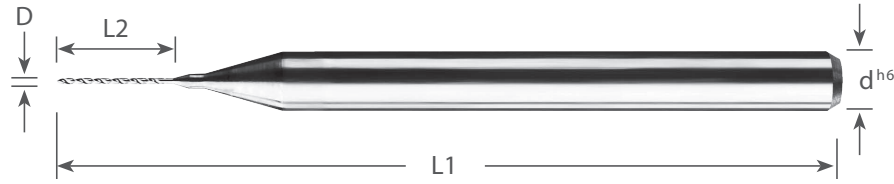
D (mm) +0/-0.008	d (mm) h6	L1 (mm)	L2 (mm)	Art. No. (uncoated)	Art. No. (AITiN coated)
1.91	3	38	10.2	226-0752.400	226-0752L400
1.92	3	38	10.2	226-0756.400	226-0756L400
1.93	3	38	10.2	226-0760.400	226-0760L400
1.94	3	38	10.2	226-0764.400	226-0764L400
1.95	3	38	10.2	226-0768.400	226-0768L400
1.96	3	38	10.2	226-0772.400	226-0772L400
1.97	3	38	10.2	226-0776.400	226-0776L400
1.98	3	38	10.2	226-0780.400	226-0780L400
1.99	3	38	10.2	226-0783.400	226-0783L400
2.00	3	38	10.2	226-0787.400	226-0787L400
2.01	3	38	10.2	226-0791.400	226-0791L400
2.02	3	38	10.2	226-0795.400	226-0795L400
2.03	3	38	10.2	226-0799.400	226-0799L400
2.04	3	38	10.2	226-0803.400	226-0803L400
2.05	3	38	10.2	226-0807.400	226-0807L400
2.06	3	38	10.2	226-0811.400	226-0811L400
2.07	3	38	10.2	226-0815.400	226-0815L400
2.08	3	38	10.2	226-0819.400	226-0819L400
2.09	3	38	10.2	226-0823.400	226-0823L400
2.10	3	38	10.2	226-0827.400	226-0827L400
2.11	3	38	10.2	226-0831.400	226-0831L400
2.12	3	38	10.2	226-0835.400	226-0835L400
2.13	3	38	10.2	226-0839.400	226-0839L400
2.14	3	38	10.2	226-0843.400	226-0843L400
2.15	3	38	10.2	226-0846.400	226-0846L400
2.16	3	38	10.2	226-0850.400	226-0850L400
2.17	3	38	10.2	226-0854.400	226-0854L400
2.18	3	38	10.2	226-0858.400	226-0858L400
2.19	3	38	10.2	226-0862.400	226-0862L400
2.20	3	38	10.2	226-0866.400	226-0866L400
2.21	3	38	10.2	226-0870.400	226-0870L400
2.22	3	38	10.2	226-0874.400	226-0874L400
2.23	3	38	10.2	226-0878.400	226-0878L400
2.24	3	38	10.2	226-0882.400	226-0882L400
2.25	3	38	10.2	226-0886.400	226-0886L400
2.26	3	38	10.2	226-0890.400	226-0890L400
2.27	3	38	10.2	226-0894.400	226-0894L400
2.28	3	38	10.2	226-0898.400	226-0898L400
2.29	3	38	10.2	226-0902.400	226-0902L400

SERIES 226 WORKPIECE MATERIAL															
Coating	P Steel ~30HRC	P Steel 30~40HRC	H Hardened Steel ~55HRC	H Hardened Steel ~68HRC	M Stainless Steel	K Cast Iron	N Aluminum	N Graphite	N Copper Alloy	N CFRP	N Plastic	N Thermoset Plastic	N High Density Plastic	S Nickel / Cobalt	S Titanium Alloy
AITiN	★	★	★	★	★	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆
Uncoated						☆	☆	★	☆	★	★	★			☆

★ : Priority Materials ☆ : Applicable Materials

MIKRO BOHRER  
MICRO FORET  
MICRO PUNTE

DRILLS



4 Facet Point Geometry



Standard Length | Standardlänge | Longueur Standard | Lunghezza Standard

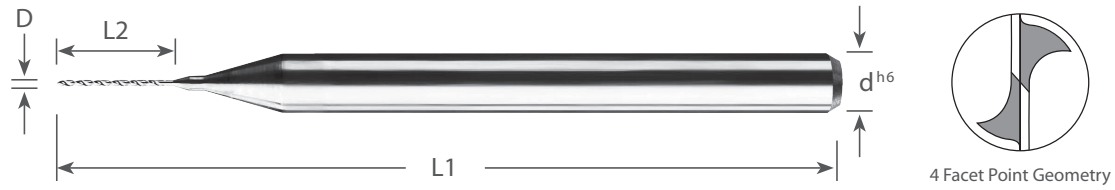
D (mm) +0/-0.008	d (mm) h6	L1 (mm)	L2 (mm)	Art. No. (uncoated)	Art. No. (AITIN coated)
2.30	3	38	10.2	226-0906.400	226-0906L400
2.31	3	38	10.2	226-0909.400	226-0909L400
2.32	3	38	10.2	226-0913.400	226-0913L400
2.33	3	38	10.2	226-0917.400	226-0917L400
2.34	3	38	10.2	226-0921.400	226-0921L400
2.35	3	38	10.2	226-0925.400	226-0925L400
2.36	3	38	10.2	226-0929.400	226-0929L400
2.37	3	38	10.2	226-0933.400	226-0933L400
2.38	3	38	10.2	226-0937.400	226-0937L400
2.39	3	38	10.2	226-0941.400	226-0941L400
2.40	3	38	10.2	226-0945.400	226-0945L400
2.41	3	38	10.2	226-0949.400	226-0949L400
2.42	3	38	10.2	226-0953.400	226-0953L400
2.43	3	38	10.2	226-0957.400	226-0957L400
2.44	3	38	10.2	226-0961.400	226-0961L400
2.45	3	38	10.2	226-0965.400	226-0965L400
2.46	3	38	10.2	226-0969.400	226-0969L400
2.47	3	38	10.2	226-0972.400	226-0972L400
2.48	3	38	10.2	226-0976.400	226-0976L400
2.49	3	38	10.2	226-0980.400	226-0980L400
2.50	3	38	10.2	226-0984.400	226-0984L400
2.51	3	38	10.2	226-0988.400	226-0988L400
2.52	3	38	10.2	226-0992.400	226-0992L400
2.53	3	38	10.2	226-0996.400	226-0996L400
2.54	3	38	10.2	226-1000.400	226-1000L400
2.55	3	38	10.2	226-1004.400	226-1004L400
2.56	3	38	10.2	226-1008.400	226-1008L400
2.57	3	38	10.2	226-1012.400	226-1012L400
2.58	3	38	10.2	226-1016.400	226-1016L400
2.59	3	38	10.2	226-1020.400	226-1020L400
2.60	3	38	10.2	226-1024.400	226-1024L400
2.61	3	38	10.2	226-1028.400	226-1028L400
2.62	3	38	10.2	226-1031.400	226-1031L400
2.63	3	38	10.2	226-1035.400	226-1035L400
2.64	3	38	10.2	226-1039.400	226-1039L400
2.65	3	38	10.2	226-1043.400	226-1043L400
2.66	3	38	10.2	226-1047.400	226-1047L400
2.67	3	38	10.2	226-1051.400	226-1051L400
2.68	3	38	10.2	226-1055.400	226-1055L400

SERIES 226 WORKPIECE MATERIAL

Coating	P Steel ~30HRC	P Steel 30~40HRC	H Hardened Steel ~55HRC	H Hardened Steel ~68HRC	M Stainless Steel	K Cast Iron	N Aluminum	N Graphite	N Copper Alloy	N CFRP	N Plastic	N Thermoset Plastic	N High Density Plastic	S Nickel/ Cobalt	S Titanium Alloy
AITIN	★	★	★	★	★	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆
Uncoated						☆	☆	★	☆	★	★	★			☆

★ : Priority Materials ☆ : Applicable Materials

MIKRO BOHRER  
MICRO FORET  
MICRO PUNTE



Standard Length | Standardlänge | Longueur Standard | Lunghezza Standard

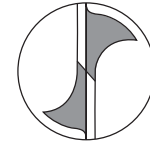
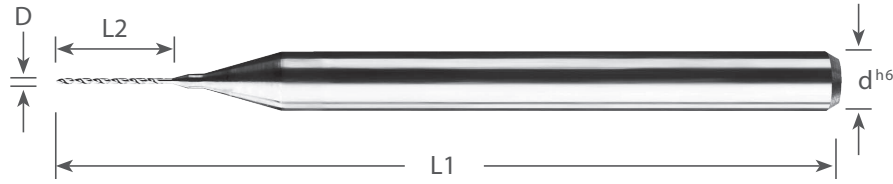
D (mm) +0/-0.008	d (mm) h6	L1 (mm)	L2 (mm)	Art. No. (uncoated)	Art. No. (AlTiN coated)
2.69	3	38	10.2	226-1059.400	226-1059L400
2.70	3	38	10.2	226-1063.400	226-1063L400
2.71	3	38	10.2	226-1067.400	226-1067L400
2.72	3	38	10.2	226-1071.400	226-1071L400
2.73	3	38	10.2	226-1075.400	226-1075L400
2.74	3	38	10.2	226-1079.400	226-1079L400
2.75	3	38	10.2	226-1083.400	226-1083L400
2.76	3	38	10.2	226-1087.400	226-1087L400
2.77	3	38	10.2	226-1091.400	226-1091L400
2.78	3	38	10.2	226-1094.400	226-1094L400
2.79	3	38	10.2	226-1098.400	226-1098L400
2.80	3	38	10.2	226-1102.400	226-1102L400
2.81	3	38	10.2	226-1106.400	226-1106L400
2.82	3	38	10.2	226-1110.400	226-1110L400
2.83	3	38	10.2	226-1114.400	226-1114L400
2.84	3	38	10.2	226-1118.400	226-1118L400
2.85	3	38	10.2	226-1122.400	226-1122L400
2.86	3	38	10.2	226-1126.400	226-1126L400
2.87	3	38	10.2	226-1130.400	226-1130L400
2.88	3	38	10.2	226-1134.400	226-1134L400
2.89	3	38	10.2	226-1138.400	226-1138L400
2.90	3	38	10.2	226-1142.400	226-1142L400
2.91	3	38	10.2	226-1146.400	226-1146L400
2.92	3	38	10.2	226-1150.400	226-1150L400
2.93	3	38	10.2	226-1154.400	226-1154L400
2.94	3	38	10.2	226-1157.400	226-1157L400
2.95	3	38	10.2	226-1161.400	226-1161L400
2.96	3	38	10.2	226-1165.400	226-1165L400
2.97	3	38	10.2	226-1169.400	226-1169L400
2.98	3	38	10.2	226-1173.400	226-1173L400
2.99	3	38	10.2	226-1177.400	226-1177L400
3.00	3	38	10.2	226-1181.400	226-1181L400

SERIES 226 WORKPIECE MATERIAL															
Coating	P Steel ~30HRC	P Steel 30~40HRC	H Hardened Steel ~55HRC	H Hardened Steel ~68HRC	M Stainless Steel	K Cast Iron	N Aluminum	N Graphite	N Copper Alloy	N CFRP	N Plastic	N Thermoset Plastic	N High Density Plastic	S Nickel / Cobalt	S Titanium Alloy
AlTiN	★	★	★	★	★	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆
Uncoated							☆	☆	★	☆	★	★	★		☆

★ : Priority Materials ☆ : Applicable Materials

MIKRO BOHRER  
MICRO FORET  
MICRO PUNTE

DRILLS



4 Facet Point Geometry



Extended Reach | Lange Ausführung | Exécution Longue | Versione Lunga

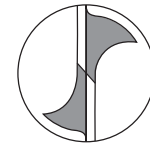
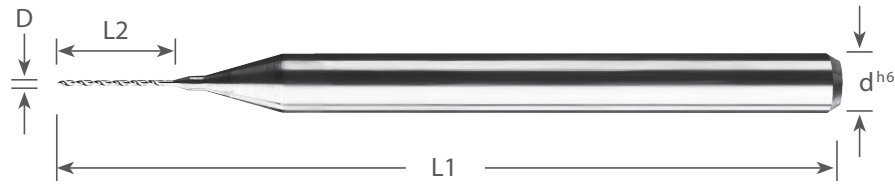
D (mm) +0/-0.008	d (mm) h6	L1 (mm)	L2 (mm)	Art. No. (uncoated)	Art. No. (AlTiN coated)
0.75	3	50	11.0	226-0295.433	226-0295L433
0.80	3	50	11.0	226-0315.433	226-0315L433
0.85	3	50	13.0	226-0335.512	226-0335L512
0.90	3	50	13.0	226-0354.512	226-0354L512
0.95	3	50	15.0	226-0374.591	226-0374L591
1.00	3	50	15.0	226-0394.591	226-0394L591
1.05	3	50	17.0	226-0413.670	226-0413L670
1.10	3	50	17.0	226-0433.670	226-0433L670
1.15	3	50	17.0	226-0453.670	226-0453L670
1.20	3	50	17.0	226-0472.670	226-0472L670
1.25	3	50	19.0	226-0492.749	226-0492L749
1.30	3	50	19.0	226-0512.749	226-0512L749
1.35	3	50	19.0	226-0531.749	226-0531L749
1.40	3	50	19.0	226-0551.749	226-0551L749
1.45	3	50	20.0	226-0571.788	226-0571L788
1.50	3	50	20.0	226-0591.788	226-0591L788
1.55	3	50	20.0	226-0610.788	226-0610L788
1.60	3	50	20.0	226-0630.788	226-0630L788
1.65	3	50	20.0	226-0650.788	226-0650L788
1.70	3	50	20.0	226-0669.788	226-0669L788
1.75	3	50	20.0	226-0689.788	226-0689L788
1.80	3	50	20.0	226-0709.788	226-0709L788
1.85	3	50	22.8	226-0728.898	226-0728L898
1.90	3	60	22.8	226-0748.898	226-0748L898
1.95	3	60	23.4	226-0768.945	226-0768L945
2.00	3	60	24.0	226-0787.945	226-0787L945
2.05	3	60	24.6	226-0807.992	226-0807L992
2.10	3	60	25.2	226-0827.992	226-0827L992
2.15	3	60	25.8	226-0846.1039	226-0846L1039
2.20	3	60	26.4	226-0866.1039	226-0866L1039
2.25	3	60	27.0	226-0886.1087	226-0886L1087
2.30	3	60	27.6	226-0906.1087	226-0906L1087
2.35	3	60	28.2	226-0925.1134	226-0925L1134
2.40	3	60	28.8	226-0945.1134	226-0945L1134
2.45	3	60	29.4	226-0965.1181	226-0965L1181
2.50	3	60	30.0	226-0984.1181	226-0984L1181
2.55	3	60	30.6	226-1004.1228	226-1004L1228
2.60	3	60	31.2	226-1024.1228	226-1024L1228
2.65	3	60	31.8	226-1043.1276	226-1043L1276

SERIES 226 WORKPIECE MATERIAL

Coating	P Steel ~30HRC	P Steel 30~40HRC	H Hardened Steel ~55HRC	H Hardened Steel ~68HRC	M Stainless Steel	K Cast Iron	N Aluminum	N Graphite	N Copper Alloy	N CFRP	N Plastic	N Thermoset Plastic	N High Density Plastic	S Nickel/ Cobalt	S Titanium Alloy
AlTiN	★	★	★	★	★	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆
Uncoated							☆	☆	★	☆	★	★	★		☆

★ : Priority Materials ☆ : Applicable Materials

MIKRO BOHRER  
MICRO FORET  
MICRO PUNTE



4 Facet Point Geometry

DRILLS



Extended Reach | Lange Ausführung | Exécution Longue | Versione Lunga

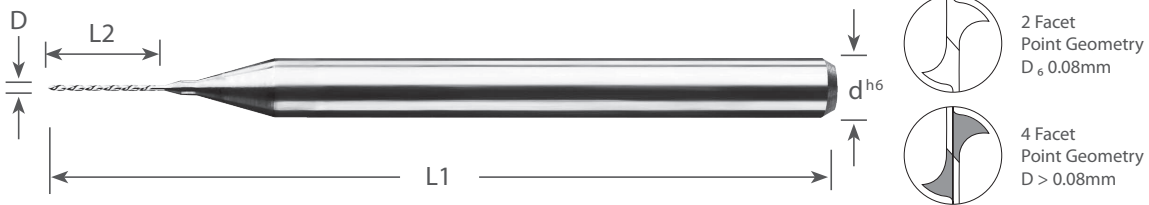
D (mm) +0/-0.008	d (mm) h6	L1 (mm)	L2 (mm)	Art. No. (uncoated)	Art. No. (AlTiN coated)
2.70	3	60	32.4	226-1063.1276	226-1063L1276
2.75	3	60	33.0	226-1083.1299	226-1083L1299
2.80	3	60	33.6	226-1102.1323	226-1102L1323
2.85	3	60	34.2	226-1122.1346	226-1122L1346
2.90	3	60	34.8	226-1142.1370	226-1142L1370
2.95	3	60	35.4	226-1161.1394	226-1161L1394
3.00	3	60	36.0	226-1181.1417	226-1181L1417

SERIES 226 WORKPIECE MATERIAL															
Coating	P Steel ~30HRC	P Steel 30-40HRC	H Hardened Steel ~55HRC	H Hardened Steel ~68HRC	M Stainless Steel	K Cast Iron	N Aluminum	N Graphite	N Copper Alloy	N CFRP	N Plastic	N Thermoset Plastic	N High Density Plastic	S Nickel/ Cobalt	S Titanium Alloy
AlTiN	★	★	★	★	★	☆		☆	☆	☆	☆	☆	☆	☆	☆
Uncoated							☆	☆	★	☆	★	★	★		☆

★ : Priority Materials ☆ : Applicable Materials

MIKRO BOHRER / LINKSSCHNEIDEND  
 MICRO FORET / COUPE A GAUCHE  
 MICRO PUNTE / ESECUZIONE SINISTRA

DRILLS



Standard Length | Standardlänge | Longueur Standard | Lunghezza Standard

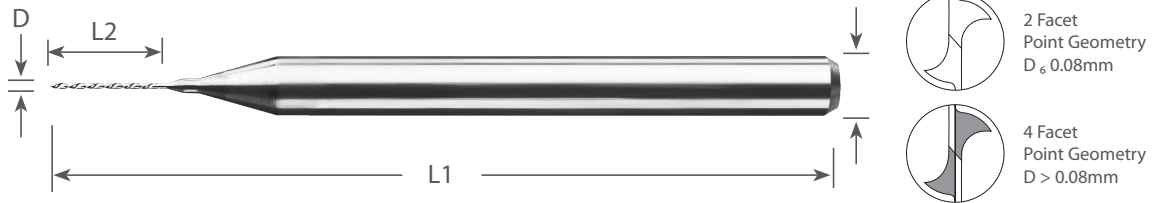
D (mm) +0/-0.008	d (mm) h6	L1 (mm)	L2 (mm)	Art. No. (uncoated)	Art. No. (AlTiN coated)
0.04	3	38	0.5	226L-0016.020*	
0.05	3	38	0.8	226L-0020.030*	
0.06	3	38	0.8	226L-0024.030*	
0.07	3	38	1.3	226L-0028.050*	
0.08	3	38	1.3	226L-0031.050*	
0.09	3	38	1.3	226L-0035.050*	
0.10	3	38	1.0	226L-0039.040*	
0.11	3	38	1.0	226L-0043.040*	
0.12	3	38	1.0	226L-0047.040*	
0.13	3	38	1.0	226L-0051.040*	
0.14	3	38	2.0	226L-0055.080*	
0.15	3	38	2.0	226L-0059.080*	
0.16	3	38	2.0	226L-0063.080*	
0.17	3	38	2.0	226L-0067.080*	
0.18	3	38	2.5	226L-0071.100*	
0.19	3	38	2.5	226L-0075.100*	
0.20	3	38	2.5	226L-0079.100*	
0.21	3	38	2.5	226L-0083.100*	
0.22	3	38	2.5	226L-0087.100*	
0.23	3	38	3.8	226L-0091.150*	
0.24	3	38	3.8	226L-0094.150*	
0.25	3	38	3.8	226L-0098.150*	226L-0098L150
0.26	3	38	3.8	226L-0102.150*	226L-0102L150*
0.27	3	38	3.8	226L-0106.150*	226L-0106L150*
0.28	3	38	3.8	226L-0110.150*	226L-0110L150*
0.29	3	38	3.8	226L-0114.150*	226L-0114L150*
0.30	3	38	5.7	226L-0118.225*	226L-0118L225*
0.31	3	38	5.7	226L-0122.225*	226L-0122L225*
0.32	3	38	5.7	226L-0126.225*	226L-0126L225*
0.33	3	38	5.7	226L-0130.225*	226L-0130L225*
0.34	3	38	5.7	226L-0134.225*	226L-0134L225*

\*CHECK AVAILABILITY | VERFÜGBARKEIT PRÜFEN | VERIFIER LA DISPONIBILITE | DA VERIFICARE

SERIES 226L WORKPIECE MATERIAL															
Coating	P Steel ~30HRC	P Steel 30~40HRC	H Hardened Steel ~55HRC	H Hardened Steel ~68HRC	M Stainless Steel	K Cast Iron	N Aluminum	N Graphite	N Copper Alloy	N CFRP	N Plastic	N Thermoset Plastic	N High Density Plastic	S Nickel / Cobalt	S Titanium Alloy
AlTiN	★	★	★	★	★	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆
Uncoated							☆	☆	★	☆	★	★	★		☆

★ : Priority Materials ☆ : Applicable Materials

MIKRO BOHRER / LINKSSCHNEIDEND  
 MICRO FORET / COUPE A GAUCHE  
 MICRO PUNTE / ESECUZIONE SINISTRA



### Standard Length | Standardlänge | Longueur Standard | Lunghezza Standard

D (mm) +0/-0.008	d (mm) h6	L1 (mm)	L2 (mm)	Art. No. (uncoated)	Art. No. (AlTiN coated)
0.35	3	38	5.7	226L-0138.225*	226L-0138L225*
0.36	3	38	5.7	226L-0142.225*	226L-0142L225*
0.37	3	38	5.7	226L-0146.225*	226L-0146L225*
0.38	3	38	6.4	226L-0150.250*	226L-0150L250*
0.39	3	38	6.4	226L-0154.250*	226L-0154L250*
0.40	3	38	6.4	226L-0157.250*	226L-0157L250*
0.41	3	38	6.4	226L-0161.250*	226L-0161L250*
0.42	3	38	6.4	226L-0165.250*	226L-0165L250*
0.43	3	38	6.4	226L-0169.250*	226L-0169L250*
0.44	3	38	6.4	226L-0173.250*	226L-0173L250*
0.45	3	38	6.4	226L-0177.250*	226L-0177L250*
0.46	3	38	6.4	226L-0181.250*	226L-0181L250*
0.47	3	38	6.4	226L-0185.250*	226L-0185L250*
0.48	3	38	6.6	226L-0189.260*	226L-0189L260*
0.49	3	38	6.6	226L-0193.260*	226L-0193L260*
0.50	3	38	6.6	226L-0197.260*	226L-0197L260*
0.51	3	38	6.6	226L-0201.260*	226L-0201L260*
0.52	3	38	6.6	226L-0205.260*	226L-0205L260*
0.53	3	38	6.6	226L-0209.260*	226L-0209L260*
0.54	3	38	6.6	226L-0213.260*	226L-0213L260*

\*CHECK AVAILABILITY | VERFÜGBARKEIT PRÜFEN | VERIFIER LA DISPONIBILITE | DA VERIFICARE

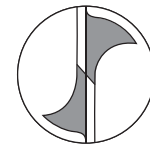
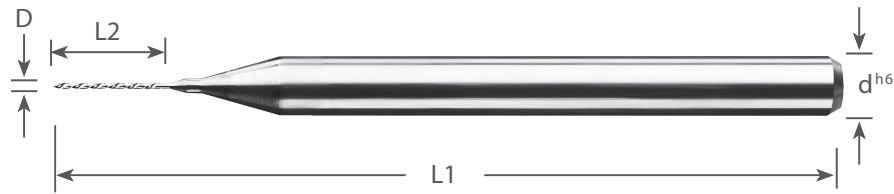
SERIES 226L WORKPIECE MATERIAL															
Coating	P	P	H	H	M	K	N	N	N	N	N	N	N	S	S
	Steel ~30HRC	Steel 30~40HRC	Hardened Steel ~55HRC	Hardened Steel ~68HRC	Stainless Steel	Cast Iron	Aluminum	Graphite	Copper Alloy	CFRP	Plastic	Thermoset Plastic	High Density Plastic	Nickel / Cobalt	Titanium Alloy
AlTiN	★	★	★	★	★	☆		☆	☆	☆	☆	☆	☆	☆	☆
Uncoated							☆	☆	★	☆	★	★	★		☆

★ : Priority Materials ☆ : Applicable Materials



MIKRO BOHRER / LINKSSCHNEIDEND  
 MICRO FORET / COUPE A GAUCHE  
 MICRO PUNTE / ESECUZIONE SINISTRA

DRILLS



4 Facet Point Geometry



Standard Length | Standardlänge | Longueur Standard | Lunghezza Standard

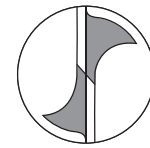
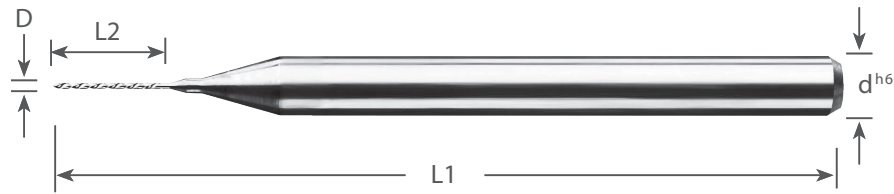
D (mm) +0/-0.008	d (mm) h6	L1 (mm)	L2 (mm)	Art. No. (uncoated)	Art. No. (AlTiN coated)
0.55	3	38	8.6	226L-0217.340*	226L-0217L340*
0.56	3	38	8.6	226L-0220.340*	226L-0220L340*
0.57	3	38	8.6	226L-0224.340*	226L-0224L340*
0.58	3	38	8.6	226L-0228.340*	226L-0228L340*
0.59	3	38	8.6	226L-0232.340*	226L-0232L340*
0.60	3	38	8.6	226L-0236.340*	226L-0236L340*
0.61	3	38	8.6	226L-0240.340*	226L-0240L340*
0.62	3	38	8.6	226L-0244.340*	226L-0244L340*
0.63	3	38	8.6	226L-0248.340*	226L-0248L340*
0.64	3	38	8.6	226L-0252.340*	226L-0252L340*
0.65	3	38	8.6	226L-0256.340*	226L-0256L340*
0.66	3	38	8.6	226L-0260.340*	226L-0260L340*
0.67	3	38	8.6	226L-0264.340*	226L-0264L340*
0.68	3	38	8.6	226L-0268.340*	226L-0268L340*
0.69	3	38	8.6	226L-0272.340*	226L-0272L340*
0.70	3	38	10.2	226L-0276.400*	226L-0276L400*
0.71	3	38	10.2	226L-0280.400*	226L-0280L400*
0.72	3	38	10.2	226L-0283.400*	226L-0283L400*
0.73	3	38	10.2	226L-0287.400*	226L-0287L400*
0.74	3	38	10.2	226L-0291.400*	226L-0291L400*
0.75	3	38	10.2	226L-0295.400*	226L-0295L400*
0.76	3	38	10.2	226L-0299.400*	226L-0299L400*
0.77	3	38	10.2	226L-0303.400*	226L-0303L400*
0.78	3	38	10.2	226L-0307.400*	226L-0307L400*
0.79	3	38	10.2	226L-0311.400*	226L-0311L400*
0.80	3	38	10.2	226L-0315.400*	226L-0315L400*
0.81	3	38	10.2	226L-0319.400*	226L-0319L400*
0.82	3	38	10.2	226L-0323.400*	226L-0323L400*
0.83	3	38	10.2	226L-0327.400*	226L-0327L400*
0.84	3	38	10.2	226L-0331.400*	226L-0331L400*
0.85	3	38	10.2	226L-0335.400*	226L-0335L400*
0.86	3	38	10.2	226L-0339.400*	226L-0339L400*
0.87	3	38	10.2	226L-0343.400*	226L-0343L400*
0.88	3	38	10.2	226L-0346.400*	226L-0346L400*
0.89	3	38	10.2	226L-0350.400*	226L-0350L400*
0.90	3	38	10.2	226L-0354.400*	226L-0354L400*
0.91	3	38	10.2	226L-0358.400*	226L-0358L400*
0.92	3	38	10.2	226L-0362.400*	226L-0362L400*
0.93	3	38	10.2	226L-0366.400*	226L-0366L400*

\*CHECK AVAILABILITY | VERFÜGBARKEIT PRÜFEN | VERIFIER LA DISPONIBILITE | DA VERIFICARE

SERIES 226L WORKPIECE MATERIAL															
Coating	P Steel ~30HRC	P Steel 30~40HRC	H Hardened Steel ~55HRC	H Hardened Steel ~68HRC	M Stainless Steel	K Cast Iron	N Aluminum	N Graphite	N Copper Alloy	N CFRP	N Plastic	N Thermoset Plastic	N High Density Plastic	S Nickel / Cobalt	S Titanium Alloy
AlTiN	★	★	★	★	★	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆
Uncoated						☆	☆	★	☆	★	★	★		☆	☆

★ : Priority Materials ☆ : Applicable Materials

MIKRO BOHRER / LINKSSCHNEIDEND  
 MICRO FORET / COUPE A GAUCHE  
 MICRO PUNTE / ESECUZIONE SINISTRA



4 Facet Point Geometry

DRILLS



### Standard Length | Standardlänge | Longueur Standard | Lunghezza Standard

D (mm) +0/-0.008	d (mm) h6	L1 (mm)	L2 (mm)	Art. No. (uncoated)	Art. No. (AlTiN coated)
0.94	3	38	10.2	226L-0370.400*	226L-0370L400*
0.95	3	38	10.2	226L-0374.400*	226L-0374L400*
0.96	3	38	10.2	226L-0378.400*	226L-0378L400*
0.97	3	38	10.2	226L-0382.400*	226L-0382L400*
0.98	3	38	10.2	226L-0386.400*	226L-0386L400*
0.99	3	38	10.2	226L-0390.400*	226L-0390L400*
1.00	3	38	10.2	226L-0394.400*	226L-0394L400*
1.05	3	38	10.2	226L-0413.400*	226L-0413L400*
1.10	3	38	10.2	226L-0433.400*	226L-0433L400*
1.15	3	38	10.2	226L-0453.400*	226L-0453L400*
1.20	3	38	10.2	226L-0472.400*	226L-0472L400*
1.25	3	38	10.2	226L-0492.400*	226L-0492L400*
1.30	3	38	10.2	226L-0512.400*	226L-0512L400*
1.35	3	38	10.2	226L-0531.400*	226L-0531L400*
1.40	3	38	10.2	226L-0551.400*	226L-0551L400*
1.45	3	38	10.2	226L-0571.400*	226L-0571L400*
1.50	3	38	10.2	226L-0591.400*	226L-0591L400*
1.55	3	38	10.2	226L-0610.400*	226L-0610L400*
1.60	3	38	10.2	226L-0630.400*	226L-0630L400*
1.65	3	38	10.2	226L-0650.400*	226L-0650L400*
1.70	3	38	10.2	226L-0669.400*	226L-0669L400*
1.75	3	38	10.2	226L-0689.400*	226L-0689L400*
1.80	3	38	10.2	226L-0709.400*	226L-0709L400*
1.85	3	38	10.2	226L-0728.400*	226L-0728L400*
1.90	3	38	10.2	226L-0748.400*	226L-0748L400*
1.95	3	38	10.2	226L-0768.400*	226L-0768L400*
2.00	3	38	10.2	226L-0787.400*	226L-0787L400*
2.05	3	38	10.2	226L-0807.400*	226L-0807L400*
2.10	3	38	10.2	226L-0827.400*	226L-0827L400*
2.15	3	38	10.2	226L-0846.400*	226L-0846L400*
2.20	3	38	10.2	226L-0866.400*	226L-0866L400*
2.25	3	38	10.2	226L-0886.400*	226L-0886L400*
2.30	3	38	10.2	226L-0906.400*	226L-0906L400*
2.35	3	38	10.2	226L-0925.400*	226L-0925L400*
2.40	3	38	10.2	226L-0945.400*	226L-0945L400*
2.45	3	38	10.2	226L-0965.400*	226L-0965L400*
2.50	3	38	10.2	226L-0984.400*	226L-0984L400*
2.55	3	38	10.2	226L-1004.400*	226L-1004L400*
2.60	3	38	10.2	226L-1024.400*	226L-1024L400*

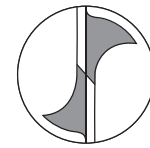
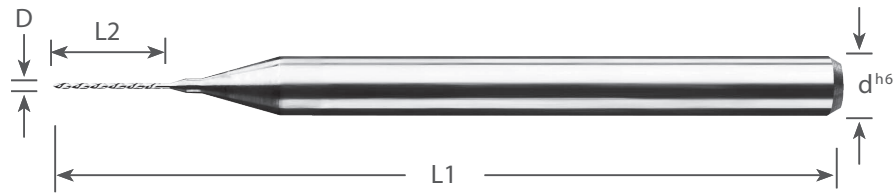
\*CHECK AVAILABILITY | VERFÜGBARKEIT PRÜFEN | VÉRIFIER LA DISPONIBILITÉ | DA VERIFICARE

Coating		P	P	H	H	M	K	N	N	N	N	N	N	S	S	
		Steel ~30HRC	Steel 30~40HRC	Hardened Steel ~55HRC	Hardened Steel ~68HRC	Stainless Steel	Cast Iron	Aluminum	Graphite	Copper Alloy	CFRP	Plastic	Thermoset Plastic	High Density Plastic	Nickel / Cobalt	Titanium Alloy
AlTiN		★	★	★	★	★	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆
Uncoated								☆	☆	★	☆	★	★	★		☆

★ : Priority Materials ☆ : Applicable Materials

MIKRO BOHRER / LINKSSCHNEIDEND  
 MICRO FORET / COUPE A GAUCHE  
 MICRO PUNTE / ESECUZIONE SINISTRA

DRILLS



4 Facet Point Geometry

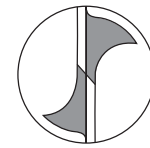
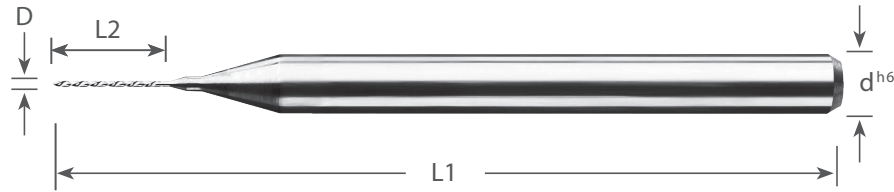


### Standard Length | Standardlänge | Longueur Standard | Lunghezza Standard

D (mm) +0/-0.008	d (mm) h6	L1 (mm)	L2 (mm)	Art. No. (uncoated)	Art. No. (AlTiN coated)
2.65	3	38	10.2	226L-1043.400*	226L1043L400*
2.70	3	38	10.2	226L-1063.400*	226L-1063L400*
2.75	3	38	10.2	226L-1083.400*	226L-1083L400*
2.80	3	38	10.2	226L-1102.400*	226L-1102L400*
2.85	3	38	10.2	226L-1122.400*	226L-1122L400*
2.90	3	38	10.2	226L-1142.400*	226L-1142L400*
2.95	3	38	10.2	226L-1161.400*	226L-1161L400*
3.00	3	38	10.2	226L-1181.400*	226L-1181L400*

★ : Priority Materials ☆ : Applicable Materials

MIKRO BOHRER / LINKSSCHNEIDEND  
 MICRO FORET / COUPE A GAUCHE  
 MICRO PUNTE / ESECUZIONE SINISTRA



4 Facet Point Geometry

DRILLS



Extended Reach | Lange Ausführung | Exécution Longue | Versione Lunga

D (mm) +0/-0.008	d (mm) h6	L1 (mm)	L2 (mm)	Art. No. (uncoated)	Art. No. (AlTiN coated)
0.75	3	50	11.0	226L-0295.433*	226L-0295L433*
0.80	3	50	11.0	226L-0315.433*	226L-0315L433*
0.85	3	50	13.0	226L-0335.512*	226L-0335L512*
0.90	3	50	13.0	226L-0354.512*	226L-0354L512*
0.95	3	50	15.0	226L-0374.591*	226L-0374L591*
1.00	3	50	15.0	226L-0394.591*	226L-0394L591*
1.05	3	50	17.0	226L-0413.670*	226L-0413L670*
1.10	3	50	17.0	226L-0433.670*	226L-0433L670*
1.15	3	50	17.0	226L-0453.670*	226L-0453L670*
1.20	3	50	17.0	226L-0472.670*	226L-0472L670*
1.25	3	50	19.0	226L-0492.749*	226L-0492L749*
1.30	3	50	19.0	226L-0512.749*	226L-0512L749*
1.35	3	50	19.0	226L-0531.749*	226L-0531L749*
1.40	3	50	19.0	226L-0551.749*	226L-0551L749*
1.45	3	50	20.0	226L-0571.788*	226L-0571L788*
1.50	3	50	20.0	226L-0591.788*	226L-0591L788*
1.55	3	50	20.0	226L-0610.788*	226L-0610L788*
1.60	3	50	20.0	226L-0630.788*	226L-0630L788*
1.65	3	50	20.0	226L-0650.788*	226L-0650L788*
1.70	3	50	20.0	226L-0669.788*	226L-0669L788*
1.75	3	50	20.0	226L-0689.788*	226L-0689L788*
1.80	3	50	20.0	226L-0709.788*	226L-0709L788*
1.85	3	50	22.8	226L-0728.898*	226L-0728L898*
1.90	3	60	22.8	226L-0748.898*	226L-0748L898*
1.95	3	60	23.4	226L-0768.921*	226L-0768L921*
2.00	3	60	24.0	226L-0787.945*	226L-0787L945*
2.05	3	60	24.6	226L-0807.969*	226L-0807L969*
2.10	3	60	25.2	226L-0827.992*	226L-0827L992*
2.15	3	60	25.8	226L-0846.1016*	226L-0846L1016*
2.20	3	60	26.4	226L-0866.1039*	226L-0866L1039*
2.25	3	60	27.0	226L-0886.1063*	226L-0886L1063*
2.30	3	60	27.6	226L-0906.1087*	226L-0906L1087*
2.35	3	60	28.2	226L-0925.1110*	226L-0925L1110*
2.40	3	60	28.8	226L-0945.1134*	226L-0945L1134*
2.45	3	60	29.4	226L-0965.1157*	226L-0965L1157*
2.50	3	60	30.0	226L-0984.1181*	226L-0984L1181*
2.55	3	60	30.6	226L-1004.1205*	226L-1004L1205*
2.60	3	60	31.2	226L-1024.1228*	226L-1024L1228*
2.65	3	60	31.8	226L-1043.1252*	226L-1043L1252*

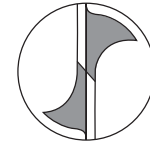
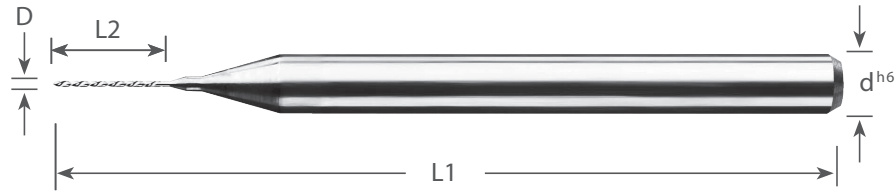
\*CHECK AVAILABILITY | VERFÜGBARKEIT PRÜFEN | VERIFIER LA DISPONIBILITE | DA VERIFICARE

SERIES 226L WORKPIECE MATERIAL															
Coating	P	P	H	H	M	K	N	N	N	N	N	N	S	S	
	Steel ~30HRC	Steel 30~40HRC	Hardened Steel ~55HRC	Hardened Steel ~68HRC	Stainless Steel	Cast Iron	Aluminum	Graphite	Copper Alloy	CFRP	Plastic	Thermoset Plastic	High Density Plastic	Nickel/ Cobalt	Titanium Alloy
AlTiN	★	★	★	★	★	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆
Uncoated							☆	☆	★	☆	★	★	★		☆

★ : Priority Materials ☆ : Applicable Materials

MIKRO BOHRER / LINKSSCHNEIDEND  
 MICRO FORET / COUPE A GAUCHE  
 MICRO PUNTE / ESECUZIONE SINISTRA

DRILLS



4 Facet Point Geometry



Extended Reach | Lange Ausführung | Exécution Longue | Versione Lunga

D (mm) +0/-0.008	d (mm) h6	L1 (mm)	L2 (mm)	Art. No. (uncoated)	Art. No. (AlTiN coated)
2.70	3	60	32.4	226L-1063.1276*	226L-1063L1276*
2.75	3	60	33.0	226L-1083.1299*	226L-1083L1299*
2.80	3	60	33.6	226L-1102.1323*	226L-1102L1323*
2.85	3	60	34.2	226L-1122.1346*	226L-1122L1346*
2.90	3	60	34.8	226L-1142.1370*	226L-1142L1370*
2.95	3	60	35.4	226L-1161.1394*	226L-1161L1394*
3.00	3	60	36.0	226L-1181.1417*	226L-1181L1417*

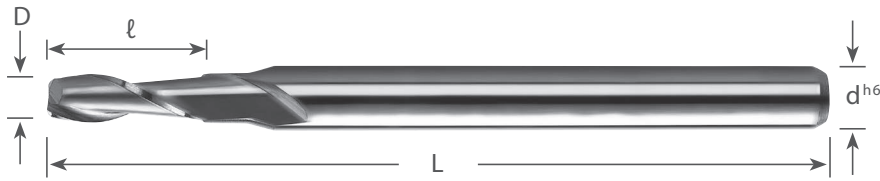
\*CHECK AVAILABILITY | VERFÜGBARKEIT PRÜFEN | VERIFIER LA DISPONIBILITE | DA VERIFICARE

### SERIES 226L WORKPIECE MATERIAL

Coating	P Steel ~30HRC	P Steel 30-40HRC	H Hardened Steel ~55HRC	H Hardened Steel ~68HRC	M Stainless Steel	K Cast Iron	N Aluminum	N Graphite	N Copper Alloy	N CFRP	N Plastic	N Thermoset Plastic	N High Density Plastic	S Nickel/ Cobalt	S Titanium Alloy
AlTiN	★	★	★	★	★	☆		☆	☆	☆	☆	☆	☆	☆	☆
Uncoated							☆	☆	★	☆	★	★	★		☆

★ : Priority Materials ☆ : Applicable Materials

MIKRO SCHAFTFRÄSER  
MICRO FRAISE  
MICRO FRESE



Standard Length | Standardlänge | Longueur Standard | Lunghezza Standard

D (mm) +0/-0.02	ℓ (mm)	d (mm) h6	L (mm)	Art. No. (uncoated)	Art. No. (AlTiN coated)
0.10	0.30	3	38	1610-0039.012	1610-0039L012
0.15	0.45	3	38	1610-0059.018	1610-0059L018
0.20	0.60	3	38	1610-0079.024	1610-0079L024
0.25	0.75	3	38	1610-0098.029	1610-0098L029
0.30	0.90	3	38	1610-0118.035	1610-0118L035
0.35	1.05	3	38	1610-0138.041	1610-0138L041
0.40	1.20	3	38	1610-0157.047	1610-0157L047
0.45	1.35	3	38	1610-0177.053	1610-0177L053
0.50	1.50	3	38	1610-0197.059	1610-0197L059
0.60	1.80	3	38	1610-0236.071	1610-0236L071
0.70	2.10	3	38	1610-0276.083	1610-0276L083
0.80	2.40	3	38	1610-0315.095	1610-0315L095
0.90	2.70	3	38	1610-0354.106	1610-0354L106
1.00	3.00	3	38	1610-0394.118	1610-0394L118
1.10	3.30	3	38	1610-0433.130	1610-0433L130
1.20	3.60	3	38	1610-0472.142	1610-0472L142
1.30	3.90	3	38	1610-0512.154	1610-0512L154
1.40	4.20	3	38	1610-0551.165	1610-0551L165
1.50	4.50	3	38	1610-0591.177	1610-0591L177
1.60	4.80	3	38	1610-0630.189	1610-0630L189
1.70	5.10	3	38	1610-0669.201	1610-0669L201
1.80	5.40	3	38	1610-0709.213	1610-0709L213
1.90	5.70	3	38	1610-0748.224	1610-0748L224
2.00	6.00	3	38	1610-0787.236	1610-0787L236
2.50	7.50	3	38	1610-0984.295	1610-0984L295
2.80	9.00	3	38	1610-1102.354	1610-1102L354
3.00	9.00	3	38	1610-1181.354	1610-1181L354
3.50	10.50	4	50	1610-1378.413	1610-1378L413
3.80	12.00	5	50	1610-1496.473	1610-1496L473
4.00	12.00	5	50	1610-1575.473	1610-1575L473
4.50	13.50	5	50	1610-1772.532	1610-1772L532
4.80	15.00	5	50	1610-1890.590	1610-1890L590
5.00	15.00	5	50	1610-1968.590	1610-1968L590
5.50	16.50	6	50	1610-2165.650	1610-2165L650
5.80	18.00	6	50	1610-2283.709	1610-2283L709
6.00	18.00	6	50	1610-2362.709	1610-2362L709

END MILLS

SERIES 1610 WORKPIECE MATERIAL															
Coating	P Steel ~30HRC	P Steel 30-40HRC	H Hardened Steel ~55HRC	H Hardened Steel ~68HRC	M Stainless Steel	K Cast Iron	N Aluminum	N Graphite	N Copper Alloy	N CFRP	N Plastic	N Thermoset Plastic	N High Density Plastic	S Nickel / Cobalt	S Titanium Alloy
AlTiN	★	★	★	☆	☆	☆								☆	☆
Uncoated							☆	☆	★	☆	★	★	☆		☆

★ : Priority Materials ☆ : Applicable Materials

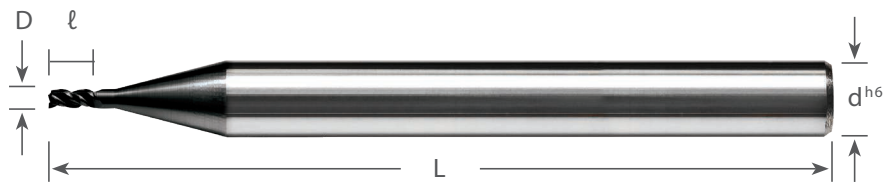
MIKRO SCHAFTFRÄSER  
MICRO FRAISE  
MICRO FRESE



END MILLS

### Stub Length | Kurze Ausführung | Exécution Courte | Versione Corta

D (mm) +0/-0.02	d (mm) h6	ℓ (mm)	L (mm)	Art. No. (AX coated)
1.00	6	1.5	63.5	T03940059
1.50	6	2.5	63.5	T05910098
2.00	6	3.0	63.5	T07870118
2.50	6	4.0	63.5	T09840157
3.00	6	5.0	63.5	T11810197
4.00	6	6.0	63.5	T15750236
5.00	6	8.0	63.5	T19690315
6.00	6	9.0	63.5	T23620354
8.00	8	12.0	63.5	T31500472



### Standard Length | Standardlänge | Longueur Standard | Lunghezza Standard

D (mm) +0/-0.02	d (mm) h6	ℓ (mm)	L (mm)	Art. No. (AX coated)
1.00	6	3.0	63.5	T03940118
1.50	6	4.5	63.5	T05910177
2.00	6	6.0	63.5	T07870236
2.50	6	7.5	63.5	T09840295
3.00	6	9.0	63.5	T11810354
4.00	6	12.0	63.5	T15750472
5.00	6	15.0	63.5	T19690591
6.00	6	18.0	63.5	T23620709
8.00	8	24.0	63.5	T31500945

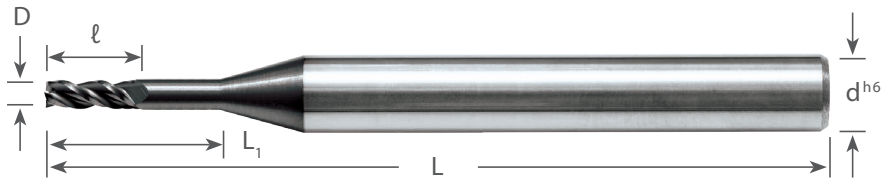
#### TITAN-AX / TITAN-AXM WORKPIECE MATERIAL

Coating	P	P	H	H	M	K	N	N	N	N	N	N	S	S	
	Steel ~30HRC	Steel 30~40HRC	Hardened Steel ~55HRC	Hardened Steel ~68HRC	Stainless Steel	Cast Iron	Aluminum	Graphite	Copper Alloy	CFRP	Plastic	Thermoset Plastic	High Density Plastic	Nickel / Cobalt	Titanium Alloy
AX	☆	☆	★	★	☆	☆								★	★

★ : Priority Materials ☆ : Applicable Materials



MIKRO SCHAFTFRÄSER  
MICRO FRAISE  
MICRO FRESE



Extended Reach | Lange Ausführung | Exécution Longue | Versione Lunga

D (mm) +0/-0.02	d (mm) h6	ℓ (mm)	L (mm)	L1 (mm)	Art. No. (AlTiN coated)
1.00	6	3.0	75	10	T03940118ER
1.50	6	4.5	75	15	T05910177ER
2.00	6	6.0	75	20	T07870236ER
2.50	6	7.5	75	25	T09840295ER
3.00	6	9.0	75	30	T11810354ER
4.00	6	12.0	75	30	T15750472ER
5.00	6	15.0	75	40	T19690591ER
6.00	6	18.0	75	45	T23620709ER
8.00	8	24.0	100	50	T31500945ER

END MILLS

TITAN-AX / TITAN-AXM WORKPIECE MATERIAL															
Coating	P	P	H	H	M	K	N	N	N	N	N	N	S	S	
	Steel ~30HRC	Steel 30~40HRC	Hardened Steel ~55HRC	Hardened Steel ~68HRC	Stainless Steel	Cast Iron	Aluminum	Graphite	Copper Alloy	CFRP	Plastic	Thermoset Plastic	High Density Plastic	Nickel / Cobalt	Titanium Alloy
AX	☆	☆	★	★	☆	☆								★	★

★ : Priority Materials ☆ : Applicable Materials

MIKRO SCHAFTFRÄSER MIT ECKENRADIUS  
 MICRO FRAISE TORIQUE  
 MICRO FRESE CON RAGGIO ANGOLARE



END MILLS

Stub Length | Kurze Ausführung | Exécution Courte | Versione Corta

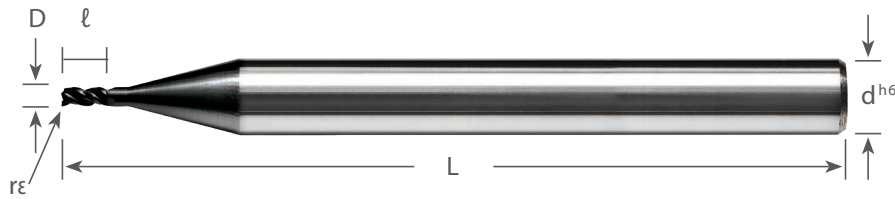
D (mm) +0/-0.02	d (mm) h6	ℓ (mm)	L (mm)	rε	Art. No. (AX coated)
1.00	6	1.5	63.5	0.1	T03940059CR1
1.00	6	1.5	63.5	0.2	T03940059CR2
1.00	6	1.5	63.5	0.3	T03940059CR3
1.50	6	2.5	63.5	0.1	T05910098CR1
1.50	6	2.5	63.5	0.2	T05910098CR2
1.50	6	2.5	63.5	0.3	T05910098CR3
1.50	6	2.5	63.5	0.5	T05910098CR4
2.00	6	3.0	63.5	0.2	T07870118CR1
2.00	6	3.0	63.5	0.3	T07870118CR2
2.00	6	3.0	63.5	0.5	T07870118CR3
2.50	6	4.0	63.5	0.2	T09840157CR1
2.50	6	4.0	63.5	0.3	T09840157CR2
2.50	6	4.0	63.5	0.5	T09840157CR3
3.00	6	5.0	63.5	0.2	T11810197CR1
3.00	6	5.0	63.5	0.3	T11810197CR2
3.00	6	5.0	63.5	0.5	T11810197CR3
3.00	6	5.0	63.5	1.0	T11810197CR4
4.00	6	6.0	63.5	0.2	T15750236CR1
4.00	6	6.0	63.5	0.3	T15750236CR2
4.00	6	6.0	63.5	0.5	T15750236CR3
4.00	6	6.0	63.5	1.0	T15750236CR4
5.00	6	8.0	63.5	0.2	T19690315CR1
5.00	6	8.0	63.5	0.3	T19690315CR2
5.00	6	8.0	63.5	0.5	T19690315CR3
5.00	6	8.0	63.5	1.0	T19690315CR4
5.00	6	8.0	63.5	1.5	T19690315CR5
6.00	6	9.0	63.5	0.2	T23620354CR1
6.00	6	9.0	63.5	0.3	T23620354CR2
6.00	6	9.0	63.5	0.5	T23620354CR3
6.00	6	9.0	63.5	1.0	T23620354CR4
6.00	6	9.0	63.5	1.5	T23620354CR5
6.00	6	9.0	63.5	2.0	T23620354CR6
8.00	8	12.0	63.5	0.2	T31500472CR1
8.00	8	12.0	63.5	0.3	T31500472CR2
8.00	8	12.0	63.5	0.5	T31500472CR3
8.00	8	12.0	63.5	1.0	T31500472CR4
8.00	8	12.0	63.5	1.5	T31500472CR5
8.00	8	12.0	63.5	2.0	T31500472CR6

TITAN-AX / TITAN-AXM WORKPIECE MATERIAL

Coating	P	P	H	H	M	K	N	N	N	N	N	N	S	S	
	Steel ~30HRC	Steel 30~40HRC	Hardened Steel ~55HRC	Hardened Steel ~68HRC	Stainless Steel	Cast Iron	Aluminum	Graphite	Copper Alloy	CFRP	Plastic	Thermoset Plastic	High Density Plastic	Nickel / Cobalt	Titanium Alloy
AX	☆	☆	★	★	☆	☆								★	★

★ : Priority Materials ☆ : Applicable Materials

MIKRO SCHAFTFRÄSER MIT ECKENRADIUS  
 MICRO FRAISE TORIQUE  
 MICRO FRESE CON RAGGIO ANGOLARE



Standard Length | Standardlänge | Longueur Standard | Lunghezza Standard

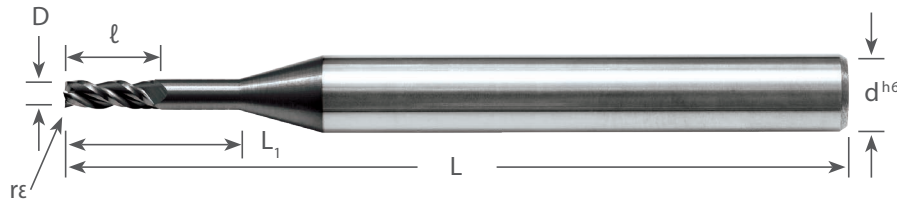
D (mm) +0/-0.02	d (mm) h6	ℓ (mm)	L (mm)	rε	Art. No. (AX coated)
1.00	6	3.0	63.5	0.1	T03940118CR1
1.00	6	3.0	63.5	0.2	T03940118CR2
1.00	6	3.0	63.5	0.3	T03940118CR3
1.50	6	4.5	63.5	0.1	T05910177CR1
1.50	6	4.5	63.5	0.2	T05910177CR2
1.50	6	4.5	63.5	0.3	T05910177CR3
1.50	6	4.5	63.5	0.5	T05910177CR4
2.00	6	6.0	63.5	0.2	T07870236CR1
2.00	6	6.0	63.5	0.3	T07870236CR2
2.00	6	6.0	63.5	0.5	T07870236CR3
2.50	6	7.5	63.5	0.2	T09840295CR1
2.50	6	7.5	63.5	0.3	T09840295CR2
2.50	6	7.5	63.5	0.5	T09840295CR3
3.00	6	9.0	63.5	0.2	T11810354CR1
3.00	6	9.0	63.5	0.3	T11810354CR2
3.00	6	9.0	63.5	0.5	T11810354CR3
3.00	6	9.0	63.5	1.0	T11810354CR4
4.00	6	12.0	63.5	0.2	T15750472CR1
4.00	6	12.0	63.5	0.3	T15750472CR2
4.00	6	12.0	63.5	0.5	T15750472CR3
4.00	6	12.0	63.5	1.0	T15750472CR4
5.00	6	15.0	63.5	0.2	T19690591CR1
5.00	6	15.0	63.5	0.3	T19690591CR2
5.00	6	15.0	63.5	0.5	T19690591CR3
5.00	6	15.0	63.5	1.0	T19690591CR4
5.00	6	15.0	63.5	1.5	T19690591CR5
6.00	6	18.0	63.5	0.2	T23620709CR1
6.00	6	18.0	63.5	0.3	T23620709CR2
6.00	6	18.0	63.5	0.5	T23620709CR3
6.00	6	18.0	63.5	1.0	T23620709CR4
6.00	6	18.0	63.5	1.5	T23620709CR5
6.00	6	18.0	63.5	2.0	T23620709CR6
8.00	8	24.0	63.5	0.2	T31500945CR1
8.00	8	24.0	63.5	0.3	T31500945CR2
8.00	8	24.0	63.5	0.5	T31500945CR3
8.00	8	24.0	63.5	1.0	T31500945CR4
8.00	8	24.0	63.5	1.5	T31500945CR5
8.00	8	24.0	63.5	2.0	T31500945CR6

TITAN-AX / TITAN-AXM WORKPIECE MATERIAL															
Coating	P	P	H	H	M	K	N	N	N	N	N	S	S		
	Steel ~30HRC	Steel 30~40HRC	Hardened Steel ~55HRC	Hardened Steel ~68HRC	Stainless Steel	Cast Iron	Aluminum	Graphite	Copper Alloy	CFRP	Plastic	Thermoset Plastic	High Density Plastic	Nickel / Cobalt	Titanium Alloy
AX	☆	☆	★	★	☆	☆								★	★

★ : Priority Materials ☆ : Applicable Materials

END MILLS

MIKRO SCHAFTFRÄSER MIT ECKENRADIUS  
 MICRO FRAISE TORIQUE  
 MICRO FRESE CON RAGGIO ANGOLARE



END MILLS

Extended Reach | Lange Ausführung | Exécution Longue | Versione Lunga

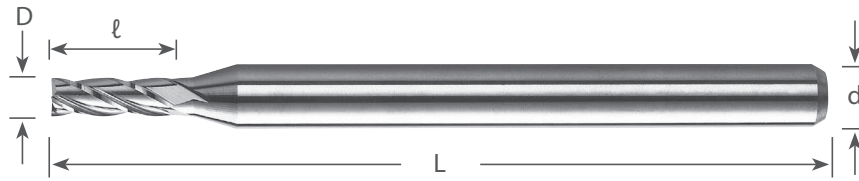
D (mm) +0/-0.02	d (mm) h6	ℓ (mm)	L (mm)	L1 (mm)	rε	Art. No. (AX coated)
1.00	6	3.0	75	10	0.1	T03940118ECR1
1.00	6	3.0	75	10	0.2	T03940118ECR2
1.00	6	3.0	75	10	0.3	T03940118ECR3
1.50	6	4.5	75	15	0.1	T05910177ECR1
1.50	6	4.5	75	15	0.2	T05910177ECR2
1.50	6	4.5	75	15	0.3	T05910177ECR3
1.50	6	4.5	75	15	0.5	T05910177ECR4
2.00	6	6.0	75	20	0.2	T07870236ECR1
2.00	6	6.0	75	20	0.3	T07870236ECR2
2.00	6	6.0	75	20	0.5	T07870236ECR3
2.50	6	7.5	75	25	0.2	T09840295ECR1
2.50	6	7.5	75	25	0.3	T09840295ECR2
2.50	6	7.5	75	25	0.5	T09840295ECR3
3.00	6	9.0	75	30	0.2	T11810354ECR1
3.00	6	9.0	75	30	0.3	T11810354ECR2
3.00	6	9.0	75	30	0.5	T11810354ECR3
3.00	6	9.0	75	30	1.0	T11810354ECR4
4.00	6	12.0	75	30	0.2	T15750472ECR1
4.00	6	12.0	75	30	0.3	T15750472ECR2
4.00	6	12.0	75	30	0.5	T15750472ECR3
4.00	6	12.0	75	30	1.0	T15750472ECR4
5.00	6	15.0	75	40	0.2	T19690591ECR1
5.00	6	15.0	75	40	0.3	T19690591ECR2
5.00	6	15.0	75	40	0.5	T19690591ECR3
5.00	6	15.0	75	40	1.0	T19690591ECR4
5.00	6	15.0	75	40	1.5	T19690591ECR5
6.00	6	18.0	75	45	0.2	T23620709ECR1
6.00	6	18.0	75	45	0.3	T23620709ECR2
6.00	6	18.0	75	45	0.5	T23620709ECR3
6.00	6	18.0	75	45	1.0	T23620709ECR4
6.00	6	18.0	75	45	1.5	T23620709ECR5
6.00	6	18.0	75	45	2.0	T23620709ECR6
8.00	8	24.0	100	50	0.2	T31500945ECR1
8.00	8	24.0	100	50	0.3	T31500945ECR2
8.00	8	24.0	100	50	0.5	T31500945ECR3
8.00	8	24.0	100	50	1.0	T31500945ECR4
8.00	8	24.0	100	50	1.5	T31500945ECR5
8.00	8	24.0	100	50	2.0	T31500945ECR6

TITAN-AX / TITAN-AXM WORKPIECE MATERIAL

Coating	P	P	H	H	M	K	N	N	N	N	N	N	S	S	
	Steel ~30HRC	Steel 30~40HRC	Hardened Steel ~55HRC	Hardened Steel ~68HRC	Stainless Steel	Cast Iron	Aluminum	Graphite	Copper Alloy	CFRP	Plastic	Thermoset Plastic	High Density Plastic	Nickel / Cobalt	Titanium Alloy
AX	☆	☆	★	★	☆	☆								★	★

★ : Priority Materials ☆ : Applicable Materials

MIKRO SCHAFTFRÄSER  
MICRO FRAISE  
MICRO FRESE



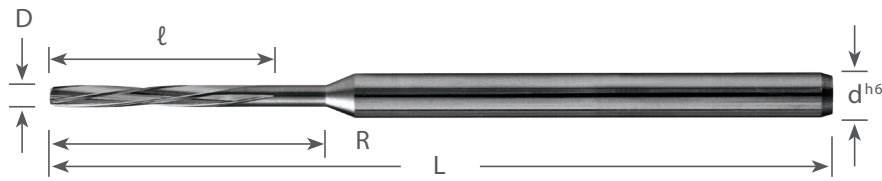
Standard Length | Standardlänge | Longueur Standard | Lunghezza Standard

D (mm) +0/-0.02	ℓ (mm)	d (mm) h6	L (mm)	Art. No. (uncoated)	Art. No. (AlTiN coated)
0.10	0.30	3	38	1810-0039.012	1810-0039L012
0.15	0.45	3	38	1810-0059.018	1810-0059L018
0.20	0.60	3	38	1810-0079.024	1810-0079L024
0.25	0.75	3	38	1810-0098.029	1810-0098L029
0.30	0.90	3	38	1810-0118.035	1810-0118L035
0.35	1.05	3	38	1810-0138.041	1810-0138L041
0.40	1.20	3	38	1810-0157.047	1810-0157L047
0.45	1.35	3	38	1810-0177.053	1810-0177L053
0.50	1.50	3	38	1810-0197.059	1810-0197L059
0.60	1.80	3	38	1810-0236.071	1810-0236L071
0.70	2.10	3	38	1810-0276.083	1810-0276L083
0.80	2.40	3	38	1810-0315.095	1810-0315L095
0.90	2.70	3	38	1810-0354.106	1810-0354L106
1.00	3.00	3	38	1810-0394.118	1810-0394L118
1.10	3.30	3	38	1810-0433.130	1810-0433L130
1.20	3.60	3	38	1810-0472.142	1810-0472L142
1.30	3.90	3	38	1810-0512.154	1810-0512L154
1.40	4.20	3	38	1810-0551.165	1810-0551L165
1.50	4.50	3	38	1810-0591.177	1810-0591L177
1.60	4.80	3	38	1810-0630.189	1810-0630L189
1.70	5.10	3	38	1810-0669.200	1810-0669L200
1.80	5.40	3	38	1810-0709.213	1810-0709L213
1.90	5.70	3	38	1810-0748.224	1810-0748L224
2.00	6.00	3	38	1810-0787.236	1810-0787L236
2.50	7.50	3	38	1810-0984.295	1810-0984L295
2.80	9.00	3	38	1810-1102.354	1810-1102L354
3.00	9.00	3	38	1810-1181.354	1810-1181L354
3.50	10.50	4	50	1810-1378.413	1810-1378L413
3.80	12.00	5	50	1810-1496.473	1810-1496L473
4.00	12.00	5	50	1810-1575.473	1810-1575L473
4.50	13.50	5	50	1810-1772.532	1810-1772L532
4.80	15.00	5	50	1810-1890.590	1810-1890L590
5.00	15.00	5	50	1810-1968.590	1810-1968L590
5.50	16.50	6	50	1810-2165.650	1810-2165L650
5.80	18.00	6	50	1810-2283.709	1810-2283L709
6.00	18.00	6	50	1810-2362.709	1810-2362L709

SERIES 1810 WORKPIECE MATERIAL															
Coating	P Steel ~30HRC	P Steel 30~40HRC	H Hardened Steel ~55HRC	H Hardened Steel ~68HRC	M Stainless Steel	K Cast Iron	N Aluminum	N Graphite	N Copper Alloy	N CFRP	N Plastic	N Thermoset Plastic	N High Density Plastic	S Nickel / Cobalt	S Titanium Alloy
AlTiN	★	★	★	☆	☆	☆								☆	☆
Uncoated							☆	☆	☆	☆	☆	☆	☆		☆

★ : Priority Materials ☆ : Applicable Materials

MIKRO REIBAHLEN  
MICRO ALESOIRS  
MICRO ALESATORI



Standard Length | Standardlänge | Longueur Standard | Lunghezza Standard

D (mm) 0/+0.003	ℓ (mm)	R	d (mm) h6	L (mm)	Art. No. (uncoated)
0.20	1.5	3	3	50	MR34-0079.059
0.21	1.5	3	3	50	MR34-0083.059
0.22	1.5	3	3	50	MR34-0087.059
0.23	1.5	3	3	50	MR34-0091.059
0.24	1.5	3	3	50	MR34-0094.059
0.25	1.5	3	3	50	MR34-0098.059
0.26	1.5	3	3	50	MR34-0102.059
0.27	1.5	3	3	50	MR34-0106.059
0.28	1.5	3	3	50	MR34-0110.059
0.29	1.5	3	3	50	MR34-0114.059
0.30	2.0	4	3	50	MR34-0118.079
0.31	2.0	4	3	50	MR34-0122.079
0.32	2.0	4	3	50	MR34-0126.079
0.33	2.0	4	3	50	MR34-0130.079
0.34	2.0	4	3	50	MR34-0134.079
0.35	2.0	4	3	50	MR34-0138.079
0.36	2.0	4	3	50	MR34-0142.079
0.37	2.0	4	3	50	MR34-0146.079
0.38	2.0	4	3	50	MR34-0150.079
0.39	2.0	4	3	50	MR34-0154.079
0.40	2.5	5	3	50	MR34-0157.099
0.41	2.5	5	3	50	MR34-0161.099
0.42	2.5	5	3	50	MR34-0165.099
0.43	2.5	5	3	50	MR34-0169.099
0.44	2.5	5	3	50	MR34-0173.099
0.45	2.5	5	3	50	MR34-0177.099
0.46	2.5	5	3	50	MR34-0181.099
0.47	2.5	5	3	50	MR34-0185.099
0.48	2.5	5	3	50	MR34-0189.099
0.49	2.5	5	3	50	MR34-0193.099
0.50	3	6	3	50	MR34-0197.118
0.51	3	6	3	50	MR34-0201.118
0.52	3	6	3	50	MR34-0205.118
0.53	3	6	3	50	MR34-0209.118
0.54	3	6	3	50	MR34-0213.118
0.55	3	6	3	50	MR34-0216.118
0.56	3	6	3	50	MR34-0220.118
0.57	3	6	3	50	MR34-0224.118
0.58	3	6	3	50	MR34-0228.118

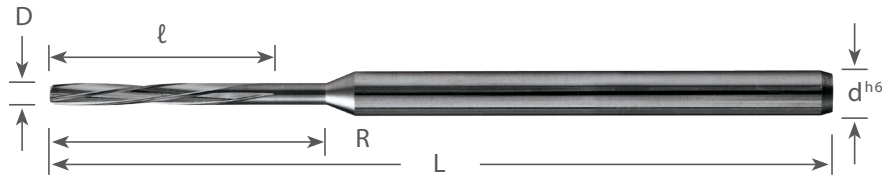
REAMERS

SERIES MR34 WORKPIECE MATERIAL

Coating	P	P	H	H	M	K	N	N	N	N	N	N	N	S	S
	Steel ~30HRC	Steel 30~40HRC	Hardened Steel ~55HRC	Hardened Steel ~68HRC	Stainless Steel	Cast Iron	Aluminum	Graphite	Copper Alloy	CFRP	Plastic	Thermoset Plastic	High Density Plastic	Nickel / Cobalt	Titanium Alloy
Uncoated	★	★	★	★	★	☆	☆	☆	☆	☆	☆	☆	☆	★	★

★ : Priority Materials ☆ : Applicable Materials

MIKRO REIBAHLEN  
MICRO ALESOIRS  
MICRO ALESATORI



Standard Length | Standardlänge | Longueur Standard | Lunghezza Standard

D (mm) 0/+0.003	ℓ (mm)	R	d (mm) h6	L (mm)	Art. No. (uncoated)
0.59	3	6	3	50	MR34-0232.118
0.60	7	18	3	50	MR34-0236.281
0.61	7	18	3	50	MR34-0240.281
0.62	7	18	3	50	MR34-0244.281
0.63	7	18	3	50	MR34-0248.281
0.64	7	18	3	50	MR34-0252.281
0.65	7	18	3	50	MR34-0256.281
0.66	7	18	3	50	MR34-0260.281
0.67	7	18	3	50	MR34-0264.281
0.68	7	18	3	50	MR34-0268.281
0.69	7	18	3	50	MR34-0272.281
0.70	7	18	3	50	MR34-0276.281
0.71	7	18	3	50	MR34-0279.281
0.72	7	18	3	50	MR34-0283.281
0.73	7	18	3	50	MR34-0287.281
0.74	7	18	3	50	MR34-0291.281
0.75	7	18	3	50	MR34-0295.281
0.76	7	18	3	50	MR34-0299.281
0.77	7	18	3	50	MR34-0303.281
0.78	7	18	3	50	MR34-0307.281
0.79	7	18	3	50	MR34-0311.281
0.80	7	18	3	50	MR34-0315.281
0.81	7	18	3	50	MR34-0319.281
0.82	7	18	3	50	MR34-0323.281
0.83	7	18	3	50	MR34-0327.281
0.84	7	18	3	50	MR34-0331.281
0.85	7	18	3	50	MR34-0335.281
0.86	7	18	3	50	MR34-0338.281
0.87	7	18	3	50	MR34-0342.281
0.88	7	18	3	50	MR34-0346.281
0.89	7	18	3	50	MR34-0350.281
0.90	7	18	3	50	MR34-0354.281
0.91	7	18	3	50	MR34-0358.281
0.92	7	18	3	50	MR34-0362.281
0.93	7	18	3	50	MR34-0366.281
0.94	7	18	3	50	MR34-0370.281
0.95	7	18	3	50	MR34-0374.281
0.96	7	18	3	50	MR34-0378.281
0.97	7	18	3	50	MR34-0382.281

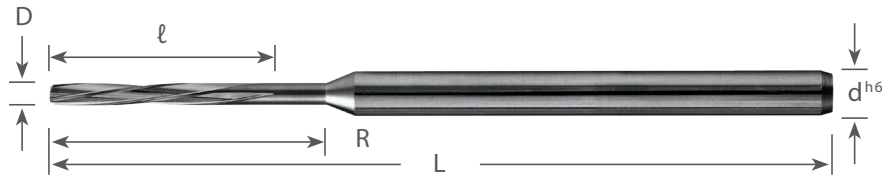
REAMERS

SERIES MR34 WORKPIECE MATERIAL															
Coating	<b>P</b> Steel ~30HRC	<b>P</b> Steel 30~40HRC	<b>H</b> Hardened Steel ~55HRC	<b>H</b> Hardened Steel ~68HRC	<b>M</b> Stainless Steel	<b>K</b> Cast Iron	<b>N</b> Aluminum	<b>N</b> Graphite	<b>N</b> Copper Alloy	<b>N</b> CFRP	<b>N</b> Plastic	<b>N</b> Thermoset Plastic	<b>N</b> High Density Plastic	<b>S</b> Nickel / Cobalt	<b>S</b> Titanium Alloy
Uncoated	★	★	★	★	★	☆	☆	☆	☆	☆	☆	☆	☆	★	★

★ : Priority Materials ☆ : Applicable Materials



MIKRO REIBAHLEN  
MICRO ALESOIRS  
MICRO ALESATORI



Standard Length | Standardlänge | Longueur Standard | Lunghezza Standard

D (mm) 0/+0.003	ℓ (mm)	R	d (mm) h6	L (mm)	Art. No. (uncoated)
0.98	7	18	3	50	MR34-0386.281
0.99	7	18	3	50	MR34-0390.281
1.00	7	18	3	50	MR34-0394.281
1.01	7	18	3	50	MR34-0398.281
1.02	7	18	3	50	MR34-0401.281
1.03	7	18	3	50	MR34-0405.281
1.04	7	18	3	50	MR34-0409.281
1.05	7	18	3	50	MR34-0413.281
1.06	10	18	3	50	MR34-0417.406
1.07	10	18	3	50	MR34-0421.406
1.08	10	18	3	50	MR34-0425.406
1.09	10	18	3	50	MR34-0429.406
1.10	10	18	3	50	MR34-0433.406
1.11	10	18	3	50	MR34-0437.406
1.12	10	18	3	50	MR34-0441.406
1.13	10	18	3	50	MR34-0445.406
1.14	10	18	3	50	MR34-0449.406
1.15	10	18	3	50	MR34-0453.406
1.16	10	18	3	50	MR34-0457.406
1.17	10	18	3	50	MR34-0461.406
1.18	10	18	3	50	MR34-0464.406
1.19	10	18	3	50	MR34-0468.406
1.20	10	18	3	50	MR34-0472.406
1.21	10	18	3	50	MR34-0476.406
1.22	10	18	3	50	MR34-0480.406
1.23	10	18	3	50	MR34-0484.406
1.24	10	18	3	50	MR34-0488.406
1.25	10	18	3	50	MR34-0492.406
1.26	10	18	3	50	MR34-0496.406
1.27	10	18	3	50	MR34-0500.406
1.28	10	18	3	50	MR34-0504.406
1.29	10	18	3	50	MR34-0508.406
1.30	10	18	3	50	MR34-0512.406
1.31	10	18	3	50	MR34-0516.406
1.32	10	18	3	50	MR34-0520.406
1.33	10	18	3	50	MR34-0523.406
1.34	10	18	3	50	MR34-0527.406
1.35	10	18	3	50	MR34-0531.406
1.36	10	18	3	50	MR34-0535.406

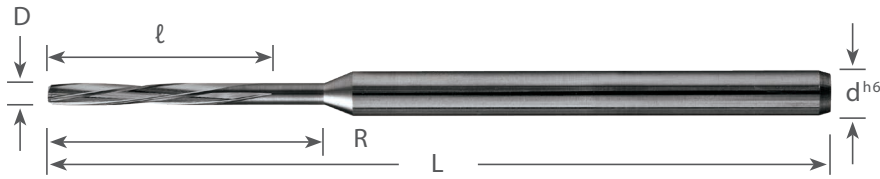
REAMERS

SERIES MR34 WORKPIECE MATERIAL

Coating	P	P	H	H	M	K	N	N	N	N	N	N	N	S	S
	Steel ~30HRC	Steel 30~40HRC	Hardened Steel ~55HRC	Hardened Steel ~68HRC	Stainless Steel	Cast Iron	Aluminum	Graphite	Copper Alloy	CFRP	Plastic	Thermoset Plastic	High Density Plastic	Nickel / Cobalt	Titanium Alloy
Uncoated	★	★	★	★	★	☆	☆	☆	☆	☆	☆	☆	☆	★	★

★ : Priority Materials ☆ : Applicable Materials

MIKRO REIBAHLEN  
MICRO ALESOIRS  
MICRO ALESATORI



Standard Length | Standardlänge | Longueur Standard | Lunghezza Standard

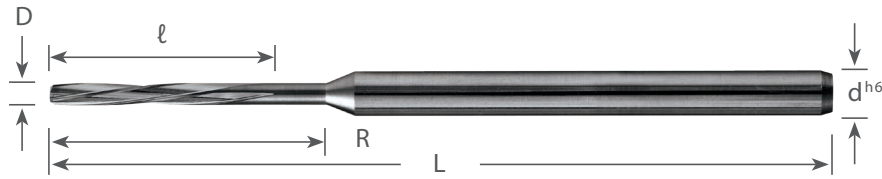
D (mm) 0/+0.003	ℓ (mm)	R	d (mm) h6	L (mm)	Art. No. (uncoated)
1.37	10	18	3	50	MR34-0539.406
1.38	10	18	3	50	MR34-0543.406
1.39	10	18	3	50	MR34-0547.406
1.40	10	18	3	50	MR34-0551.406
1.41	10	18	3	50	MR34-0555.406
1.42	10	18	3	50	MR34-0559.406
1.43	10	18	3	50	MR34-0563.406
1.44	10	18	3	50	MR34-0567.406
1.45	10	18	3	50	MR34-0571.406
1.46	10	18	3	50	MR34-0575.406
1.47	10	18	3	50	MR34-0579.406
1.48	10	18	3	50	MR34-0583.406
1.49	10	18	3	50	MR34-0586.406
1.50	10	18	3	50	MR34-0590.406
1.51	10	18	3	50	MR34-0594.406
1.52	10	18	3	50	MR34-0598.406
1.53	10	18	3	50	MR34-0602.406
1.54	10	18	3	50	MR34-0606.406
1.55	10	18	3	50	MR34-0610.406
1.56	10	18	3	50	MR34-0614.406
1.57	10	18	3	50	MR34-0618.406
1.58	10	18	3	50	MR34-0622.406
1.59	10	18	3	50	MR34-0626.406
1.60	10	18	3	50	MR34-0630.406
1.61	10	18	3	50	MR34-0634.406
1.62	10	18	3	50	MR34-0638.406
1.63	10	18	3	50	MR34-0642.406
1.64	10	18	3	50	MR34-0646.406
1.65	10	18	3	50	MR34-0649.406
1.66	10	18	3	50	MR34-0653.406
1.67	10	18	3	50	MR34-0657.406
1.68	10	18	3	50	MR34-0661.406
1.69	10	18	3	50	MR34-0665.406
1.70	10	18	3	50	MR34-0669.406
1.71	10	18	3	50	MR34-0673.406
1.72	10	18	3	50	MR34-0677.406
1.73	10	18	3	50	MR34-0681.406
1.74	10	18	3	50	MR34-0685.406
1.75	10	18	3	50	MR34-0689.406

SERIES MR34 WORKPIECE MATERIAL															
Coating	<b>P</b> Steel ~30HRC	<b>P</b> Steel 30~40HRC	<b>H</b> Hardened Steel ~55HRC	<b>H</b> Hardened Steel ~68HRC	<b>M</b> Stainless Steel	<b>K</b> Cast Iron	<b>N</b> Aluminum	<b>N</b> Graphite	<b>N</b> Copper Alloy	<b>N</b> CFRP	<b>N</b> Plastic	<b>N</b> Thermoset Plastic	<b>N</b> High Density Plastic	<b>S</b> Nickel / Cobalt	<b>S</b> Titanium Alloy
Uncoated	★	★	★	★	★	☆	☆	☆	☆	☆	☆	☆	☆	★	★

★ : Priority Materials ☆ : Applicable Materials

REAMERS

MIKRO REIBAHLEN  
MICRO ALESOIRS  
MICRO ALESATORI



Standard Length | Standardlänge | Longueur Standard | Lunghezza Standard

D (mm) 0/+0.003	ℓ (mm)	R	d (mm) h6	L (mm)	Art. No. (uncoated)
1.76	10	18	3	50	MR34-0693.406
1.77	10	18	3	50	MR34-0697.406
1.78	10	18	3	50	MR34-0701.406
1.79	10	18	3	50	MR34-0705.406
1.80	10	18	3	50	MR34-0708.406
1.81	10	18	3	50	MR34-0712.406
1.82	10	18	3	50	MR34-0716.406
1.83	10	18	3	50	MR34-0720.406
1.84	10	18	3	50	MR34-0724.406
1.85	10	18	3	50	MR34-0728.406
1.86	10	18	3	50	MR34-0732.406
1.87	10	18	3	50	MR34-0736.406
1.88	10	18	3	50	MR34-0740.406
1.89	10	18	3	50	MR34-0744.406
1.90	10	18	3	50	MR34-0748.406
1.91	10	18	3	50	MR34-0752.406
1.92	10	18	3	50	MR34-0756.406
1.93	10	18	3	50	MR34-0760.406
1.94	10	18	3	50	MR34-0764.406
1.95	10	18	3	50	MR34-0768.406
1.96	11	20.5	3	50	MR34-0771.438
1.97	11	20.5	3	50	MR34-0775.438
1.98	11	20.5	3	50	MR34-0779.438
1.99	11	20.5	3	50	MR34-0783.438
2.00	11	20.5	3	50	MR34-0787.438
2.01	11	20.5	3	50	MR34-0791.438
2.02	11	20.5	3	50	MR34-0795.438
2.03	11	20.5	3	50	MR34-0799.438
2.04	11	20.5	3	50	MR34-0803.438
2.05	11	20.5	3	50	MR34-0807.438
2.06	11	20.5	3	50	MR34-0811.438
2.07	11	20.5	3	50	MR34-0815.438
2.08	11	20.5	3	50	MR34-0819.438
2.09	11	20.5	3	50	MR34-0823.438
2.10	11	20.5	3	50	MR34-0827.438
2.11	11	20.5	3	50	MR34-0830.438
2.12	11	20.5	3	50	MR34-0835.438
2.13	11	20.5	3	50	MR34-0838.438
2.14	11	20.5	3	50	MR34-0843.438

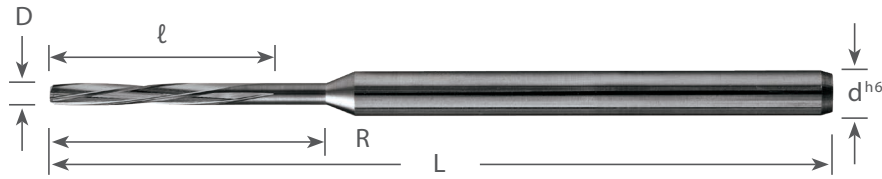
REAMERS

SERIES MR34 WORKPIECE MATERIAL

Coating	P	P	H	H	M	K	N	N	N	N	N	N	N	S	S
	Steel ~30HRC	Steel 30~40HRC	Hardened Steel ~55HRC	Hardened Steel ~68HRC	Stainless Steel	Cast Iron	Aluminum	Graphite	Copper Alloy	CFRP	Plastic	Thermoset Plastic	High Density Plastic	Nickel / Cobalt	Titanium Alloy
Uncoated	★	★	★	★	★	☆	☆	☆	☆	☆	☆	☆	☆	★	★

★ : Priority Materials ☆ : Applicable Materials

MIKRO REIBAHLEN  
MICRO ALESOIRS  
MICRO ALESATORI



Standard Length | Standardlänge | Longueur Standard | Lunghezza Standard









D (mm) 0/+0.003	ℓ (mm)	R	d (mm) h6	L (mm)	Art. No. (uncoated)
2.15	11	20.5	3	50	MR34-0846.438
2.16	11	20.5	3	50	MR34-0850.438
2.17	11	20.5	3	50	MR34-0854.438
2.18	11	20.5	3	50	MR34-0858.438
2.19	11	20.5	3	50	MR34-0862.438
2.20	11	20.5	3	50	MR34-0866.438
2.21	11	20.5	3	50	MR34-0870.438
2.22	11	20.5	3	50	MR34-0874.438
2.23	11	20.5	3	50	MR34-0878.438
2.24	11	20.5	3	50	MR34-0882.438
2.25	11	20.5	3	50	MR34-0886.438
2.26	11	20.5	3	50	MR34-0890.438
2.27	11	20.5	3	50	MR34-0894.438
2.28	11	20.5	3	50	MR34-0896.438
2.29	11	20.5	3	50	MR34-0901.438
2.30	11	20.5	3	50	MR34-0906.438
2.31	11	20.5	3	50	MR34-0909.438
2.32	11	20.5	3	50	MR34-0913.438
2.33	11	20.5	3	50	MR34-0917.438
2.34	11	20.5	3	50	MR34-0921.438
2.35	11	20.5	3	50	MR34-0925.438
2.36	11	20.5	3	50	MR34-0929.438
2.37	11	20.5	3	50	MR34-0933.438
2.38	11	20.5	3	50	MR34-0937.438
2.39	11	20.5	3	50	MR34-0941.438
2.40	11	20.5	3	50	MR34-0945.438

SERIES MR34 WORKPIECE MATERIAL															
Coating	P	P	H	H	M	K	N	N	N	N	N	N	S	S	
	Steel ~30HRC	Steel 30~40HRC	Hardened Steel ~55HRC	Hardened Steel ~68HRC	Stainless Steel	Cast Iron	Aluminum	Graphite	Copper Alloy	CFRP	Plastic	Thermoset Plastic	High Density Plastic	Nickel / Cobalt	Titanium Alloy
Uncoated	★	★	★	★	★	☆	☆	☆	☆	☆	☆	☆	☆	★	★











★ : Priority Materials ☆ : Applicable Materials

EMPFOLHENE SCHNITTBEDINGUNGEN  
 CONDITIONS DE COUPE RECOMMANDEES  
 CONDIZIONI DI TAGLIO CONSIGLIATE

REAMERS | REIBAHLEN | ALESOIRS | ALESATORE

Material	Property	Vc (m/min) uncoated	Vc (m/min) ALTiN	f = mm/rev.				
				ø < 1	ø < 1.5	ø < 3	ø < 6	ø < 10
	<500 N/mm <sup>2</sup>	30 - 45	40 - 60	0.018	0.036	0.076	0.15	0.25
	<800 N/mm <sup>2</sup>	20 - 30	26 - 40	0.015	0.030	0.066	0.12	0.18
	<1,200 N/mm <sup>2</sup>	15 - 25	20 - 33	0.013	0.025	0.061	0.09	0.15
		20 - 30	26 - 40	0.013	0.025	0.071	0.1	0.12
		10 - 15	13 - 20	0.018	0.036	0.081	0.1	0.12
		15 - 20	20 - 26	0.015	0.030	0.066	0.1	0.12
		25 - 55	33 - 72	0.05	0.041	0.090	0.12	0.15
		40 - 65	52 - 85	0.015	0.030	0.080	0.18	0.22
		70 - 100	91 - 130	0.020	0.041	0.102	0.2	0.3











PRE-DRILL DIAMETERS FOR REAMERS | VORBOHRDURCHMESSER REIBAHLEN  
 DIAMETRE DE PERCEGE AVANT ALESOIR | DIAMETRI PER PRE-FORI DI ALESATURA

ø of drill hole	Pre-Drill Diameter (mm)									
										
0.3	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24
0.4	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32
0.5	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42
0.6	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
0.8	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68
1.0	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
2.0	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80
3.0	2.80	2.80	2.80	2.80	2.80	2.80	2.80	2.80	2.80	2.80
4.0	3.80	3.80	3.80	3.80	3.80	3.80	3.80	3.80	3.80	3.80
5.0	4.80	4.80	4.80	4.80	4.80	4.80	4.80	4.80	4.80	4.80
6.0	5.80	5.80	5.80	5.80	5.80	5.80	5.80	5.80	5.80	5.80
8.0	7.80	7.80	7.80	7.80	7.80	7.80	7.70	7.70	7.80	7.80

\*All recommendations should be considered starting points. Parameters should be adjusted based on quality, throughput, material hardness.

EMPFOHLENE SCHNITTBEDINGUNGEN  
 CONDITIONS DE COUPE RECOMMANDEES  
 CONDIZIONI DI TAGLIO CONSIGLIATE

MICRO DRILLS | MIKRO BOHRER | MICRO FORET | MICRO PUNTE

Material	Property	Vc (m/min) uncoated	Vc (m/min) coated	f = mm/rev.				
				ø < 1.0	ø < 1.5	ø < 2.0	ø < 2.5	ø < 3.0
	<500 N/mm <sup>2</sup>	15 - 45	20 - 50	0.035 - 0.045	0.040 - 0.055	0.050 - 0.065	0.060 - 0.075	0.065 - 0.080
	<800 N/mm <sup>2</sup>	15 - 45	20 - 50	0.030 - 0.035	0.035 - 0.045	0.040 - 0.055	0.050 - 0.065	0.055 - 0.070
	<1,000 N/mm <sup>2</sup>	10 - 30	15 - 35	0.020 - 0.025	0.025 - 0.035	0.030 - 0.040	0.035 - 0.045	0.040 - 0.050
	<1,300 N/mm <sup>2</sup>	8 - 20	10 - 25	0.010 - 0.015	0.010 - 0.015	0.015 - 0.020	0.015 - 0.025	0.020 - 0.025
	55 HRC	15 - 45	20 - 50	0.015 - 0.020	0.020 - 0.030	0.025 - 0.035	0.030 - 0.040	0.035 - 0.045
	austenitic	10 - 35	15 - 40	0.020 - 0.025	0.025 - 0.035	0.030 - 0.040	0.035 - 0.045	0.040 - 0.050
	martensitic	8 - 20	10 - 25	0.005 - 0.010	0.005 - 0.010	0.010 - 0.015	0.010 - 0.015	0.015 - 0.020
	-	3 - 8	5 - 10	0.010 - 0.015	0.010 - 0.015	0.015 - 0.020	0.020 - 0.025	0.020 - 0.025
	<900 N/mm <sup>2</sup>	3 - 8	5 - 10	0.005 - 0.010	0.005 - 0.010	0.010 - 0.015	0.010 - 0.015	0.015 - 0.020
	<180 HB	20 - 60	25 - 65	0.040 - 0.050	0.045 - 0.065	0.060 - 0.075	0.070 - 0.090	0.080 - 0.095
	>180 HB	20 - 55	25 - 60	0.040 - 0.050	0.045 - 0.065	0.060 - 0.075	0.070 - 0.090	0.080 - 0.095
	Aluminum	40 - 140	50 - 150	0.040 - 0.050	0.045 - 0.065	0.060 - 0.075	0.070 - 0.090	0.080 - 0.095
	Silicon <6%	40 - 100	45 - 110	0.040 - 0.050	0.045 - 0.065	0.060 - 0.075	0.070 - 0.090	0.080 - 0.095
	Silicon >6%	40 - 100	45 - 110	0.045 - 0.060	0.055 - 0.075	0.070 - 0.090	0.080 - 0.100	0.090 - 0.120
	Brass	40 - 80	50 - 90	0.030 - 0.060	0.060 - 0.100	0.100 - 0.150	0.150 - 0.180	0.180 - 0.200
	-	70 - 110	80 - 120	0.030 - 0.060	0.030 - 0.060	0.030 - 0.060	0.030 - 0.060	0.030 - 0.060

EMPFOHLENE SCHNITTBEDINGUNGEN  
 CONDITIONS DE COUPE RECOMMANDEES  
 CONDIZIONI DI TAGLIO CONSIGLIATE

CARBIDE DRILLS | HARTMETALL BOHRER | CARBURE FORETS | PUNTE IN METALLO DURO

Material	Property	Vc (m/min) uncoated	Vc (m/min) coated	f = mm/rev.				
				ø2	ø4	ø8	ø12	ø16
<b>P</b> Steel ~30HRC	<500 N/mm <sup>2</sup>	80	100	0.04	0.06	0.12	0.17	0.23
	<800 N/mm <sup>2</sup>	80	100	0.04	0.06	0.12	0.17	0.23
<b>P</b> Steel 30-40HRC	<1,000 N/mm <sup>2</sup>	65	80	0.03	0.04	0.08	0.13	0.16
	<1,300 N/mm <sup>2</sup>	40	60	0.02	0.04	0.07	0.11	0.16
<b>H</b> Hardened Steel ~55HRC	55 HRC	6 - 10	8 - 12	0.02	0.03	0.06	0.07	0.08
<b>H</b> Hardened Steel ~68HRC	68 HRC	6 - 10	8 - 12	0.02	0.03	0.06	0.07	0.08
<b>M</b> Stainless Steel	ferritic	70	80	0.03	0.04	0.08	0.13	0.16
	martensitic	50	60	0.03	0.04	0.08	0.13	0.16
	austenitic	35	40	0.03	0.04	0.08	0.13	0.16
<b>S</b> Nickel / Cobalt	-	35	50	0.02	0.04	0.07	0.11	0.16
	-	25	40	0.02	0.03	0.06	0.07	0.08
<b>S</b> Titanium Alloy	<900 N/mm <sup>2</sup>	35	50	0.03	0.04	0.08	0.13	0.16
	>900 N/mm <sup>2</sup>	25	40	0.04	0.06	0.12	0.17	0.23
<b>K</b> Cast Iron	<180 HB	70	80	0.06	0.09	0.20	0.25	0.35
	>180 HB	35	50	0.05	0.08	0.12	0.24	0.28
<b>N</b> Aluminum	Silicon <10%	130	150	0.05	0.08	0.12	0.24	0.28
	Silicon >10%	70	80	0.05	0.08	0.12	0.24	0.28
<b>N</b> Copper Alloy	Brass	80	100	0.06	0.09	0.20	0.25	0.35
<b>N</b> Plastic	thermoplastic	100	100 - 120	0.02	0.04	0.07	0.11	0.16
	thermoset	100	100 - 120	0.02	0.04	0.07	0.11	0.16
<b>N</b> Graphite	-	80	100 - 150	0.02	0.04	0.07	0.11	0.16










CARBIDE CENTERING DRILLS | HM ZENTRIEFROHRER | FORETS A CENTRER CARBURE | PUNTE DA CENTRO IN METALLO DURO

Material	Property	Vc (m/min) uncoated	Vc (m/min) coated	f = mm/rev.				
				ø2	ø3	ø6	ø10	ø16
<b>P</b> Steel ~30HRC	<500 N/mm <sup>2</sup>	70 - 80	80 - 90	0.10	0.12	0.22	0.33	0.45
	<800 N/mm <sup>2</sup>	60 - 70	70 - 90	0.10	0.12	0.22	0.33	0.45
<b>P</b> Steel 30-40HRC	<1,000 N/mm <sup>2</sup>	50 - 60	60 - 70	0.07	0.08	0.15	0.23	0.31
	<1,300 N/mm <sup>2</sup>	25 - 30	30 - 50	0.06	0.07	0.13	0.20	0.27
<b>M</b> Stainless Steel	-	20 - 30	30 - 40	0.06	0.08	0.15	0.20	0.30
<b>S</b> Nickel / Cobalt	-	20 - 30	30 - 40	0.50	0.70	0.13	0.18	0.27
<b>S</b> Titanium Alloy	<900 N/mm <sup>2</sup>	20 - 30	30 - 40	0.06	0.08	0.15	0.20	0.30
<b>K</b> Cast Iron	<180 HB	50 - 60	60 - 70	0.10	0.12	0.22	0.33	0.45
	>180 HB	35 - 40	40 - 60	0.08	0.10	0.17	0.30	0.40
<b>N</b> Aluminum	Silicon <10%	100	100 - 150	0.05	0.08	0.12	0.24	0.28
	Silicon >10%	70	70 - 90	0.12	0.15	0.20	0.25	0.40
<b>N</b> Copper Alloy	-	70	70 - 90	0.12	0.15	0.20	0.25	0.40
<b>N</b> Plastic	-	150	150 - 200	0.13	0.15	0.25	0.40	0.50













EMPFOLGENE SCHNITTBEDINGUNGEN  
 CONDITIONS DE COUPE RECOMMANDEES  
 CONDIZIONI DI TAGLIO CONSIGLIATE

CARBIDE SPOTTING DRILLS | NC HM-ANBOHRER | FORET A POINTER NC (CARBURE) | PUNTE DA CENTRO (METALLO DURO)

Material	Property	Vc (m/min) uncoated	Vc (m/min) ALTiN	f = mm/rev.				
				ø2	ø3	ø6	ø10	ø16
	<500 N/mm <sup>2</sup>	80 - 100	100 - 120	0.10	0.12	0.22	0.33	0.45
	<800 N/mm <sup>2</sup>	60 - 90	80 - 110	0.10	0.12	0.22	0.33	0.45
	<1,000 N/mm <sup>2</sup>	55 - 75	60 - 80	0.07	0.08	0.15	0.23	0.31
	<1,300 N/mm <sup>2</sup>	30 - 50	40 - 60	0.06	0.07	0.13	0.20	0.27
		25 - 50	30 - 60	0.06	0.08	0.15	0.20	0.30
		25 - 35	30 - 40	0.50	0.70	0.13	0.18	0.27
	<900 N/mm <sup>2</sup>	35 - 35	30 - 40	0.06	0.06	0.15	0.20	0.30
	<180 HB	80 - 100	80 - 90	0.10	0.12	0.22	0.33	0.45
	>180 HB	60 - 90	70 - 90	0.08	0.10	0.17	0.30	0.40
		100 - 180	150 - 200	0.12	0.15	0.20	0.25	0.40
		90 - 120	110 - 140	0.12	0.15	0.20	0.25	0.40
		100 - 180	150 - 200	0.12	0.15	0.20	0.25	0.40

EMPFOHLENE SCHNITTBEDINGUNGEN  
 CONDITIONS DE COUPE RECOMMANDEES  
 CONDIZIONI DI TAGLIO CONSIGLIATE












CARBIDE MICRO END MILLS | HM MIKRO SCHAFTFRÄSER | MICRO FRAISE (CARBURE) | MICRO FRESE (METALLO DURO)

Material	Property	Vc (m/min) uncoated	Vc (m/min) ALTiN	Application	f = mm/tooth						
					ø0.2	ø0.5	ø0.8	ø1.0	ø1.5	ø2.0	ø3.0
	<500 N/mm <sup>2</sup>	60	80	Slotting ap = 1.0; ae = 1.0	0.001	0.001	0.002	0.002	0.003	0.004	0.006
				Finishing ap = 1.0; ae = 0.3	0.000	0.000	0.000	0.000	0.000	0.000	0.001
	<800 N/mm <sup>2</sup>	60	80	Slotting ap = 1.0; ae = 1.0	0.001	0.001	0.002	0.002	0.003	0.004	0.006
				Finishing ap = 1.0; ae = 0.3	0.000	0.000	0.000	0.000	0.000	0.000	0.001
	<1,000 N/mm <sup>2</sup>	60	80	Finishing ap = 1.0; ae = 0.3	0.000	0.000	0.000	0.000	0.000	0.000	0.001
	<1,300 N/mm <sup>2</sup>	40	60	Slotting ap = 1.0; ae = 1.0	0.001	0.001	0.002	0.002	0.003	0.004	0.006
	-	40	60	Slotting ap = 1.0; ae = 1.0	0.001	0.001	0.002	0.002	0.003	0.004	0.006
				Finishing ap = 1.0; ae = 0.3	0.000	0.000	0.000	0.000	0.000	0.000	0.001
	-	25	45	Slotting ap = 1.0; ae = 1.0	0.001	0.001	0.002	0.002	0.003	0.004	0.006
				Finishing ap = 1.0; ae = 0.3	0.000	0.000	0.000	0.000	0.000	0.000	0.001
	-	60	80	Slotting ap = 1.0; ae = 1.0	0.001	0.001	0.002	0.002	0.003	0.004	0.006
				Finishing ap = 1.0; ae = 0.3	0.000	0.000	0.000	0.000	0.000	0.000	0.001
	-	100	120	Slotting ap = 1.0; ae = 1.0	0.002	0.005	0.009	0.012	0.018	0.024	0.036
				Finishing ap = 1.0; ae = 0.3	0.000	0.001	0.001	0.001	0.002	0.002	0.004
	-	150	200	Slotting ap = 1.0; ae = 1.0	0.001	0.001	0.002	0.002	0.003	0.004	0.006
				Finishing ap = 1.0; ae = 0.3	0.000	0.000	0.000	0.000	0.000	0.000	0.001
	-	150	-	Slotting ap = 1.0; ae = 1.0	0.002	0.006	0.008	0.012	0.018	0.024	0.036
				Finishing ap = 1.0; ae = 0.3	0.000	0.001	0.001	0.001	0.002	0.002	0.004
	-	200	-	Slotting ap = 1.0; ae = 1.0	0.002	0.005	0.008	0.010	0.015	0.020	0.030
				Finishing ap = 1.0; ae = 0.3	0.000	0.001	0.001	0.001	0.002	0.002	0.003
	-	80	-	Slotting ap = 1.0; ae = 1.0	0.002	0.005	0.008	0.010	0.015	0.020	0.030
				Finishing ap = 1.0; ae = 0.3	0.001	0.001	0.001	0.001	0.002	0.002	0.003

EMPFOHLENE SCHNITTBEDINGUNGEN  
 CONDITIONS DE COUPE RECOMMANDEES  
 CONDIZIONI DI TAGLIO CONSIGLIATE







TITAN-AXM

MOLD AND DIE MATERIALS | MATERIAL FÜR FORM UND GESENKBAU | MATÉRIAUX MOULISTES | MATERIALI PER STAMPI

Material	Property	Vc (m/min) ALTIN	Application	f= mm/tooth						
				ø0.2	ø0.5	ø0.8	ø1.0	ø1.5	ø2.0	ø3.0
	<500 N/mm <sup>2</sup>	200	High Speed ap = 0.1 x Ø; ae = 1.0 x Ø	0.002	0.002	0.004	0.005	0.005	0.006	0.007
			Copy Milling	0.001	0.002	0.003	0.004	0.004	0.005	0.006
	<800 N/mm <sup>2</sup>	200	High Speed ap = 0.1 x Ø; ae = 1.0 x Ø	0.002	0.002	0.004	0.005	0.005	0.006	0.007
			Copy Milling	0.001	0.002	0.003	0.004	0.004	0.005	0.006
	<1,000 N/mm <sup>2</sup>	200	High Speed ap = 0.1 x Ø; ae = 1.0 x Ø	0.002	0.002	0.004	0.005	0.005	0.006	0.007
			Copy Milling	0.001	0.002	0.003	0.004	0.004	0.005	0.006
	<1,300 N/mm <sup>2</sup>	120	High Speed ap = 0.1 x Ø; ae = 1.0 x Ø	0.002	0.002	0.004	0.005	0.005	0.006	0.007
			Copy Milling	0.001	0.002	0.003	0.004	0.004	0.005	0.006
	< 55 HRC	80	High Speed ap = 0.1 x Ø; ae = 1.0 x Ø	0.002	0.002	0.004	0.005	0.005	0.006	0.007
			Copy Milling	0.001	0.002	0.003	0.004	0.004	0.005	0.006
	< 68 HRC	60	High Speed ap = 0.1 x Ø; ae = 1.0 x Ø	0.002	0.002	0.004	0.005	0.005	0.006	0.007
			Copy Milling	0.001	0.002	0.003	0.004	0.004	0.005	0.006
		100	High Speed ap = 0.1 x Ø; ae = 1.0 x Ø	0.002	0.002	0.004	0.005	0.005	0.006	0.007
			Copy Milling	0.001	0.002	0.003	0.004	0.004	0.005	0.006
		80	High Speed ap = 0.1 x Ø; ae = 1.0 x Ø	0.002	0.002	0.004	0.005	0.005	0.006	0.007
			Copy Milling	0.001	0.002	0.003	0.004	0.004	0.005	0.006
		80	High Speed ap = 0.1 x Ø; ae = 1.0 x Ø	0.002	0.002	0.004	0.005	0.005	0.006	0.007
			Copy Milling	0.001	0.002	0.003	0.004	0.004	0.005	0.006
		200	High Speed ap = 0.1 x Ø; ae = 1.0 x Ø	0.002	0.002	0.004	0.005	0.005	0.006	0.007
			Copy Milling	0.001	0.002	0.003	0.004	0.004	0.005	0.006
		300	High Speed ap = 0.1 x Ø; ae = 1.0 x Ø	0.001	0.003	0.004	0.005	0.006	0.008	0.009
			Copy Milling	0.001	0.002	0.003	0.004	0.005	0.006	0.007
		200	High Speed ap = 0.1 x Ø; ae = 1.0 x Ø	0.001	0.003	0.004	0.005	0.006	0.008	0.009
			Copy Milling	0.001	0.002	0.003	0.004	0.005	0.006	0.007
		120	High Speed ap = 0.1 x Ø; ae = 1.0 x Ø	0.001	0.003	0.004	0.005	0.006	0.008	0.009
			Copy Milling	0.001	0.002	0.003	0.004	0.005	0.006	0.007

EMPFOLGENE SCHNITTBEDINGUNGEN  
 CONDITIONS DE COUPE RECOMMANDEES  
 CONDIZIONI DI TAGLIO CONSIGLIATE

CARBIDE END MILLS | HM SCHAFTFRÄSER | FRAISE (CARBURE) | FRESE (METALLO DURO)

Material	Property	Vc (m/min) uncoated	Vc (m/min) ALTiN	Application	f <sub>z</sub> = mm/Z		
					ø4	ø6	ø8
	<400 N/mm <sup>2</sup>	100	150	Roughing	0.017	0.035	0.046
				Finishing	0.024	0.048	0.064
				Slotting	0.012	0.024	0.032
	<700 N/mm <sup>2</sup>	100	150	Roughing	0.016	0.032	0.042
				Finishing	0.022	0.044	0.059
				Slotting	0.011	0.022	0.029
	<1,000 N/mm <sup>2</sup>	70	110	Roughing	0.013	0.026	0.034
				Finishing	0.018	0.036	0.048
				Slotting	0.009	0.018	0.024
	<1,300 N/mm <sup>2</sup>	60	100	Roughing	0.012	0.023	0.031
				Finishing	0.016	0.032	0.043
				Slotting	0.008	0.016	0.021
	55 HRC	30	60	Roughing	0.010	0.020	0.027
				Finishing	0.014	0.028	0.037
				Slotting	0.007	0.014	0.019
	68 HRC	20	40	Roughing	0.009	0.017	0.023
				Finishing	0.012	0.024	0.032
				Slotting	0.006	0.012	0.016
	<900 N/mm <sup>2</sup>	60	90	Roughing	0.013	0.026	0.034
				Finishing	0.018	0.036	0.048
				Slotting	0.009	0.018	0.024
	>900 N/mm <sup>2</sup>	50	80	Roughing	0.012	0.023	0.031
				Finishing	0.016	0.032	0.043
				Slotting	0.008	0.016	0.021
	<900 N/mm <sup>2</sup>	40	60	Roughing	0.010	0.020	0.027
				Finishing	0.014	0.028	0.037
				Slotting	0.007	0.014	0.019
	>900 N/mm <sup>2</sup>	30	50	Roughing	0.009	0.017	0.023
				Finishing	0.012	0.024	0.032
				Slotting	0.006	0.012	0.016
	<900 N/mm <sup>2</sup>	30	50	Roughing	0.010	0.020	0.027
				Finishing	0.014	0.028	0.037
				Slotting	0.007	0.014	0.019
	>900 N/mm <sup>2</sup>	20	40	Roughing	0.009	0.017	0.023
				Finishing	0.012	0.024	0.032
				Slotting	0.006	0.012	0.016
	<180 HB	100	150	Roughing	0.016	0.032	0.042
				Finishing	0.022	0.044	0.059
				Slotting	0.011	0.022	0.029
	>180 HB	80	120	Roughing	0.014	0.029	0.038
				Finishing	0.020	0.040	0.054
				Slotting	0.010	0.020	0.027
	Silicon <10%	300	500	Roughing	0.017	0.035	0.046
				Finishing	0.024	0.048	0.064
				Slotting	0.012	0.024	0.032
	Silicon >10%	200	400	Roughing	0.016	0.032	0.042
				Finishing	0.022	0.044	0.059
				Slotting	0.011	0.022	0.029
	Bronze	100	150	Roughing	0.014	0.029	0.038
				Finishing	0.020	0.040	0.054
				Slotting	0.010	0.020	0.027
	Brass	80	120	Roughing	0.014	0.029	0.038
				Finishing	0.020	0.040	0.054
				Slotting	0.010	0.020	0.027
	-	300	500	Roughing	0.014	0.029	0.038
				Finishing	0.020	0.040	0.054
				Slotting	0.010	0.020	0.027



