B

B100	210
B101	229
B121	231
B156	222
B157	226
B161	228
B162	230
B170	223
B180	219
B181	221
B191	220
B301	215
B334	212
B335	213
B341	211
B500	218
B901	225
B903	216
B951	214
B952	217
B953	227
B954	232
B955	233
B956	234
B957	235

G

G125	253
G126	254
G127	255
G129	241
G131	237
G132	248
G135	236
G136	244
G137	238
G138	249
G139	246
G142	243
G149	242
G154	239
G155	240
G170	250
G171	250
G236	246
G237	247
G314	252
G335	236
G336	245
G338	249
G349	242
G560	245
M138	251

DORMER

	B463	B460	B464	B461	B465	B462	B400	B481	B441	B451	B411	B442	B452	G400	G405
															
	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM
			TiAlN	TiAlN	TiAlN	TiAlN									
	D	D	D	D	D	D	DIN 8093	DIN 8093	DIN 8050	DIN 8050	DIN 8094	DIN 8051	DIN 8051	DIN 335 C	DIN 335
	DIN 6535 HA	DIN 6535 HA	DIN 6535 HA	DIN 6535 HA	DIN 6535 HA	DIN 6535 HA		DIN 6535 HA							
	B	A	B	A	B	A	B	B	A	A	B	A	A		
	H7	H7	H7	H7	H7	H7	H7		H7	H7	H7	H7	H7	90°	90°
	3.97 - 20.00	3.97 - 20.00	3.97 - 20.00	3.97 - 20.00	3.97 - 20.00	3.97 - 20.00	1.00 - 20.00	0.98 - 12.05	10.00 - 20.00	8.00 - 20.00	5.00 - 30.00	10.00 - 20.00	8.00 - 30.00	6.30 - 31.00	8.30 - 12.40
	NEW 2008.09	NEW 2008.09	NEW 2008.09	NEW 2008.09	NEW 2008.09	NEW 2008.09								NEW 2008.09	NEW 2008.09

	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202
1.1	■30D	■30D	■185F	■185F			●18B	●18B	●18B	●16B	●18B	●18B	●16B	■30F	■30F
1.2	■30D	■30D	■185F	■185F			●18B	●18B	●18B	●16B	●18B	●18B	●16B	■25E	■25E
1.3	■30D	■30D	■185F	■185F			●14B	●14B	●14B	●12B	●14B	●14B	●12B	■20D	■20D
1.4	■25D	■25D	■160E	■160E			●14B	●14B	●14B	●12B	●14B	●14B	●12B	■15D	■15D
1.5	■20B	■20B	■140E	■140E			■10C	■10C	■10C	■8C	■10C	■10C	■8C	■10B	■10B
1.6	■15B	■15B	■120E	■120E			■10C	■10C	■10C	■8C	■10C	■10C	■8C	●6A	●6A
1.7															
1.8															
2.1					■40D	■40D								●8C	●8C
2.2					■40D	■40D								●6B	●6B
2.3					■30D	■30D								●4A	●4A
2.4					■30D	■30D									
3.1	■40D	■40D	■120F	■120F			■17D	■17D	■17D	■15D	■17D	■17D	■15D	●25F	●25F
3.2	■40D	■40D	■185F	■185F			■17D	■17D	■17D	■15D	■17D	■17D	■15D	●15D	●15D
3.3	■30D	■30D	■90F	■90F			■17D	■17D	■17D	■15D	■17D	■17D	■15D	●12C	●12C
3.4	■30D	■30D	■60F	■60F			■14D	■14D	■14D	■12D	■14D	■14D	■12D	●8C	●8C
4.1	●15B	●15B					■14C	■14C	■14C	■12C	■14C	■14C	■12C	■12C	■12C
4.2	●10A	●10A					■14C	■14C	■14C	■12C	■14C	■14C	■12C	■10A	■10A
4.3	●10A	●10A					■10B	■10B	■10B	●8B	■10B	■10B	●8B	■8A	■8A
5.1							■10C	■10C	■10C	■8C	■10C	■10C	■8C	■12C	■12C
5.2							■10B	■10B	■10B	■8B	■10B	■10B	■8B	■6B	■6B
5.3							■10B	■10B	■10B	●8B	■10B	■10B	●8B	■4A	■4A
6.1	●80E	●80E					■38E	■38E	■38E	■36E	■38E	■38E	■36E	■25D	■25D
6.2	●80D	●80D					■38E	■38E	■38E	■36E	■38E	■38E	■36E	■20F	■20F
6.3	●50D	●50D					■38E	■38E	■38E	■36E	■38E	■38E	■36E	■25F	■25F
6.4	●30D	●30D					■38D	■38D	■38D	■36D	■38D	■38D	■36D	●10D	●10D
7.1	●80D	●80D					■60D	■60D	■60D	■58D	■60D	■60D	■58D	●30G	●30G
7.2	●80D	●80D					■60D	■60D	■60D	■58D	■60D	■60D	■58D	●25F	●25F
7.3	●80D	●80D					■25D	■25D	■25D	■23D	■25D	■25D	■23D	●20F	●20F
7.4	●80D	●80D					■25D	■25D	■25D	■23D	■25D	■25D	■23D	●10F	●10F
8.1							■25C	■25C	■25C	■23C	■25C	■25C	■23C	●30G	●30G
8.2							■13C	■13C	■13C	■11C	■13C	■13C	■11C	●20G	●20G
8.3															
9.1															
10.1	●40B	●40B													

	Ø mm												
	1,5	2	3	5	8	10	12	16	20	25	30	40	50
A	0,045	0,055	0,078	0,100	0,150	0,170	0,185	0,220	0,250	0,280	0,320	0,390	0,440
B	0,055	0,072	0,110	0,150	0,180	0,210	0,240	0,280	0,310	0,360	0,400	0,500	0,550
C	0,065	0,085	0,135	0,185	0,220	0,260	0,285	0,335	0,390	0,440	0,480	0,600	0,680
D	0,080	0,110	0,160	0,200	0,270	0,320	0,360	0,410	0,470	0,540	0,600	0,730	0,850
E	0,100	0,140	0,180	0,250	0,350	0,390	0,430	0,500	0,530	0,640	0,750	0,910	1,100
mm/REV ± 15%													

	Ø mm									
	6	8	10	16	20	25	32	40	60	80
A	0.03	0.04	0.05	0.06	0.08	0.09	0.10	0.12	0.14	0.16
B	0.04	0.05	0.06	0.08	0.10	0.12	0.14	0.16	0.18	0.20
C	0.05	0.06	0.08	0.10	0.12	0.14	0.16	0.18	0.20	0.22
D	0.06	0.08	0.10	0.12	0.15	0.18	0.20	0.22	0.25	0.28
E	0.08	0.10	0.12	0.15	0.18	0.20	0.25	0.27	0.30	0.32
F	0.09	0.11	0.13	0.16	0.19	0.21	0.26	0.29	0.33	0.36
G	0.10	0.12	0.15	0.18	0.20	0.22	0.28	0.32	0.36	0.40
mm/N										

● General guidelines for stock removal when pre-drilling holes ● Allgemeine Richtlinien für Materialabtragung beim Vorbohren ● Algemene richtijn voor materiaal afname bij voorboren ● Préconisations de surépaisseur de perçage avant alésage ● Guía general para la eliminación de material cuando existe agujero pre-taladrado ● Regras gerais para material a ser removido durante a furação

	Ø (mm)				
	3 - 5mm	**5.1 - 10mm**	**10.1 - 20mm**	**20.1 - 30mm**	**> 30mm**
1.1	0.1-0.2	0.2	0.2-0.3	0.3-0.4	0.4-.05
1.2	0.1-0.2	0.2	0.2-0.3	0.3-0.4	0.4-.05
1.3	0.1-0.2	0.2	0.2-0.3	0.3-0.4	0.4-.05
1.4	0.1-0.2	0.2	0.2	0.3	0.3-0.4
1.5	0.1-0.2	0.2	0.2	0.3	0.3-0.4
1.6	0.1-0.2	0.2	0.2	0.3	0.3-0.4
1.7	0.1-0.2	0.2	0.2	0.3	0.3-0.4
1.8	0.1-0.2	0.2	0.2	0.3	0.3-0.4
2.1	0.1-0.2	0.2	0.2	0.3	0.3-0.4
2.2	0.1-0.2	0.2	0.2	0.3	0.3-0.4
2.3	0.1-0.2	0.2	0.2	0.3	0.3-0.4
2.4	0.1-0.2	0.2	0.2	0.3	0.3-0.4
3.1	0.1-0.2	0.2	0.2-0.3	0.3-0.4	0.4-0.5
3.2	0.1-0.2	0.2	0.2-0.3	0.3-0.4	0.4-0.5
3.3	0.1-0.2	0.2	0.3	0.4	0.5
3.4	0.1-0.2	0.2	0.3	0.4	0.5
4.1	0.1-0.2	0.2	0.2-0.3	0.3-0.4	0.3-0.4
4.2	0.1-0.2	0.2	0.2	0.3	0.3-0.4
4.3	0.1-0.2	0.2	0.2	0.3	0.3-0.4
5.1	0.1-0.2	0.2	0.2-0.3	0.3-0.4	0.4-.05
5.2	0.1-0.2	0.2	0.2	0.3	0.3-0.4
5.3	0.1-0.2	0.2	0.2	0.3	0.3-0.4
6.1	0.1-0.2	0.2-0.3	0.3-0.4	0.4-0.5	0.5
6.2	0.1-0.2	0.2	0.2-0.3	0.3	0.3-0.4
6.3	0.1-0.2	0.2	0.2-0.3	0.3	0.3-0.4
6.4	0.1-0.2	0.2	0.2-0.3	0.3	0.3-0.4
7.1	0.1-0.2	0.2-0.3	0.3-0.4	0.4-0.5	0.5
7.2	0.1-0.2	0.2-0.3	0.3-0.4	0.4-0.5	0.5
7.3	0.1-0.2	0.2-0.3	0.3-0.4	0.4-0.5	0.5
7.4	0.1-0.2	0.2-0.3	0.3-0.4	0.4-0.5	0.5
8.1	0.1-0.2	0.3	0.4	0.4-0.5	0.5
8.2	0.1-0.2	0.2	0.2	0.3	0.3-0.4
8.3	0.1-0.2	0.2	0.2	0.3	0.3-0.4
9.1	0.1-0.2	0.2	0.2	0.3	0.3-0.4
10.1	0.1-0.2	0.2	0.2-0.3	0.3-04.	0.4-0.5

For adjustable or blade reamers reduce stock removal by 30%. For quick helix reamers increase by 50% / Für verstellbare Reibahlen die Materialabtragung um 30% reduzieren. Für Schälreibahlen um 50% erhöhen. / Voor verstelbare ruimers de materiaal afname met 30% reduceren. Voor schilruimers met 50% verhogen. / Pour les alésoirs expansibles ou brasés réduire l'avance de 30%. Pour les alésoirs à hélice rapide augmenter de 50%. / Para escariadores ajustables y con cuchillas reducir la eliminación de material un 30%.Para escariadores de hélice rápida incrementar un 50% / Para alargadores ajustáveis reduza o sobremetal em 30%. Para alargadores com hélice rápida aumente em 50%

B463

- NC - High Speed Precision Reamer
- NC-Präzisionreibahlen
- NC- precisieruimer
- Alésoir de précision - NC
- NC- Escariador de precisión
- Mandril de Precisão p/ CNC

NEW
2008.09

B463

Extremely unequal spacing / Extrem ungleiche Teilung / Differentiaal vertand / Pas différentiel / Espacio extremadamente irregular / Espaçamento Assimétrico

■ 1.1 1.2 1.3 1.4 1.5 1.6 3.1 3.2 3.3 3.4

● 4.1 4.2 4.3 6.1 6.2 6.3 6.4 7.1 7.2 7.3 7.4 10.1

d_1 Ø mm	l_1 mm	l_2 mm	l_3 mm	z	d_2 Øh$_6$ mm	e-Code	
3.97	75	12	39	4	6	B4633.97	1)
3.98	75	12	39	4	6	B4633.98	1)
3.99	75	12	39	4	6	B4633.99	1)
4.00	75	12	39	4	6	B4634.0	
4.01	75	12	39	4	6	B4634.01	1)
4.02	75	12	39	4	6	B4634.02	1)
4.03	75	12	39	4	6	B4634.03	1)
4.50	75	12	39	4	6	B4634.5	
4.97	75	12	39	4	6	B4634.97	1)
4.98	75	12	39	4	6	B4634.98	1)
4.99	75	12	39	4	6	B4634.99	1)
5.00	75	12	39	4	6	B4635.0	
5.01	75	12	39	4	6	B4635.01	1)
5.02	75	12	39	4	6	B4635.02	1)
5.03	75	12	39	4	6	B4635.03	1)
5.50	75	12	39	4	6	B4635.5	
5.97	75	12	39	4	6	B4635.97	2)
5.98	75	12	39	4	6	B4635.98	2)
5.99	75	12	39	4	6	B4635.99	2)
6.00	75	12	39	4	6	B4636.0	
6.01	75	12	39	4	6	B4636.01	2)
6.02	75	12	39	4	6	B4636.02	2)
6.03	75	12	39	4	6	B4636.03	2)
6.50	100	16	64	6	8	B4636.5	
7.00	100	16	64	6	8	B4637.0	
7.50	100	16	64	6	8	B4637.5	
7.97	100	16	64	6	8	B4637.97	2)
7.98	100	16	64	6	8	B4637.98	2)
7.99	100	16	64	6	8	B4637.99	2)
8.00	100	16	64	6	8	B4638.0	
8.01	100	16	64	6	8	B4638.01	2)
8.02	100	16	64	6	8	B4638.02	2)

d_1 Ø mm	l_1 mm	l_2 mm	l_3 mm	z	d_2 Øh$_6$ mm	e-Code	
8.03	100	16	64	6	8	B4638.03	2)
8.50	100	20	60	6	10	B4638.5	
9.00	100	20	60	6	10	B4639.0	
9.50	120	20	80	6	10	B4639.5	
9.97	120	20	80	6	10	B4639.97	2)
9.98	120	20	80	6	10	B4639.98	2)
9.99	120	20	80	6	10	B4639.99	2)
10.00	120	20	80	6	10	B46310.0	
10.01	120	20	80	6	10	B46310.01	2)
10.02	120	20	80	6	10	B46310.02	2)
10.03	120	20	80	6	10	B46310.03	2)
10.50	120	20	75	6	12	B46310.5	
11.00	120	20	75	6	12	B46311.0	
11.50	120	20	75	6	12	B46311.5	
11.97	120	20	75	6	12	B46311.97	2)
11.98	120	20	75	6	12	B46311.98	2)
11.99	120	20	75	6	12	B46311.99	2)
12.00	120	20	75	6	12	B46312.0	
12.01	120	20	75	6	12	B46312.01	2)
12.02	120	20	75	6	12	B46312.02	2)
12.03	120	20	75	6	12	B46312.03	2)
13.00	130	22	85	6	14	B46313.0	
14.00	130	22	85	6	14	B46314.0	
15.00	130	22	82	6	16	B46315.0	
16.00	150	25	102	6	16	B46316.0	
17.00	150	25	102	6	18	B46317.0	
18.00	150	25	102	6	18	B46318.0	
19.00	150	25	100	6	20	B46319.0	
20.00	150	25	100	6	20	B46320.0	

[1] Limit of tolerance +0.0040 / Toleranz +0.0040 / Tolerantie +0.0040 / Tolérance +0.0040 / Límite de tolerancia +0.0040 / Limite de tolerância +0.0040

[2] Limit of tolerance +0.0050 / Toleranz +0.0050 / Tolerantie +0.0050 / Tolérance +0.0050 / Límite de tolerancia +0.0050 / Limite de tolerância +0.0050

B460

DORMER

- NC - High Speed Precision Reamer
- NC-Präzisionreibahlen
- NC- precisieruimer
- Alésoir de précision - NC
- NC- Escariador de precisión
- Mandril de Precisão p/ CNC

NEW
2008.09

B460

Extremely unequal spacing / Extrem ungleiche Teilung / Differentiaal vertand / Pas différentiel / Espacio extremadamente irregular / Espaçamento Assimétrico

HM | D | DIN 6535 HA | A | H7

■ 1.1 1.2 1.3 1.4 1.5 1.6 3.1 3.2 3.3 3.4

● 4.1 4.2 4.3 6.1 6.2 6.3 6.4 7.1 7.2 7.3 7.4 10.1

d_1 Ø mm	l_1 mm	l_2 mm	l_3 mm	z	d_2 Øh$_6$ mm	e-Code	
3.97	75	12	39	4	6	**B4603.97**	1)
3.98	75	12	39	4	6	**B4603.98**	1)
3.99	75	12	39	4	6	**B4603.99**	1)
4.00	75	12	39	4	6	**B4604.0**	
4.01	75	12	39	4	6	**B4604.01**	1)
4.02	75	12	39	4	6	**B4604.02**	1)
4.03	75	12	39	4	6	**B4604.03**	1)
4.50	75	12	39	4	6	**B4604.5**	
4.97	75	12	39	4	6	**B4604.97**	1)
4.98	75	12	39	4	6	**B4604.98**	1)
4.99	75	12	39	4	6	**B4604.99**	1)
5.00	75	12	39	4	6	**B4605.0**	
5.01	75	12	39	4	6	**B4605.01**	1)
5.02	75	12	39	4	6	**B4605.02**	1)
5.03	75	12	39	4	6	**B4605.03**	1)
5.50	75	12	39	4	6	**B4605.5**	
5.97	75	12	39	4	6	**B4605.97**	2)
5.98	75	12	39	4	6	**B4605.98**	2)
5.99	75	12	39	4	6	**B4605.99**	2)
6.00	75	12	39	4	6	**B4606.0**	
6.01	75	12	39	4	6	**B4606.01**	2)
6.02	75	12	39	4	6	**B4606.02**	2)
6.03	75	12	39	4	6	**B4606.03**	2)
6.50	100	16	64	6	8	**B4606.5**	
7.00	100	16	64	6	8	**B4607.0**	
7.50	100	16	64	6	8	**B4607.5**	
7.97	100	16	64	6	8	**B4607.97**	2)
7.98	100	16	64	6	8	**B4607.98**	2)
7.99	100	16	64	6	8	**B4607.99**	2)
8.00	100	16	64	6	8	**B4608.0**	
8.01	100	16	64	6	8	**B4608.01**	2)
8.02	100	16	64	6	8	**B4608.02**	2)

d_1 Ø mm	l_1 mm	l_2 mm	l_3 mm	z	d_2 Øh$_6$ mm	e-Code	
8.03	100	16	64	6	8	**B4608.03**	2)
8.50	100	20	60	6	10	**B4608.5**	
9.00	100	20	60	6	10	**B4609.0**	
9.50	120	20	80	6	10	**B4609.5**	
9.97	120	20	80	6	10	**B4609.97**	2)
9.98	120	20	80	6	10	**B4609.98**	2)
9.99	120	20	80	6	10	**B4609.99**	2)
10.00	120	20	80	6	10	**B46010.0**	
10.01	120	20	80	6	10	**B46010.01**	2)
10.02	120	20	80	6	10	**B46010.02**	2)
10.03	120	20	80	6	10	**B46010.03**	2)
10.50	120	20	75	6	12	**B46010.5**	
11.00	120	20	75	6	12	**B46011.0**	
11.50	120	20	75	6	12	**B46011.5**	
11.97	120	20	75	6	12	**B46011.97**	2)
11.98	120	20	75	6	12	**B46011.98**	2)
11.99	120	20	75	6	12	**B46011.99**	2)
12.00	120	20	75	6	12	**B46012.0**	
12.01	120	20	75	6	12	**B46012.01**	2)
12.02	120	20	75	6	12	**B46012.02**	2)
12.03	120	20	75	6	12	**B46012.03**	2)
13.00	130	22	85	6	14	**B46013.0**	
14.00	130	22	85	6	14	**B46014.0**	
15.00	130	22	82	6	16	**B46015.0**	
16.00	150	25	102	6	16	**B46016.0**	
17.00	150	25	102	6	18	**B46017.0**	
18.00	150	25	102	6	18	**B46018.0**	
19.00	150	25	100	6	20	**B46019.0**	
20.00	150	25	100	6	20	**B46020.0**	

[1] Limit of tolerance +0.0040 / Toleranz +0.0040 / Tolerantie +0.0040 / Tolérance +0.0040 / Límite de tolerancia +0.0040 / Limite de tolerância +0.0040

[2] Limit of tolerance +0.0050 / Toleranz +0.0050 / Tolerantie +0.0050 / Tolérance +0.0050 / Límite de tolerancia +0.0050 / Limite de tolerância +0.0050

B464

- NC - High Speed Precision Reamer
- NC-Präzisionreibahlen
- NC- precisieruimer
- Alésoir de précision - NC
- NC- Escariador de precisión
- Mandril de Precisão p/ CNC

NEW
2008.09

B464

Extremely unequal spacing / Extrem ungleiche Teilung / Differentiaal vertand / Pas différentiel / Espacio extremadamente irregular / Espaçamento Assimétrico

HM | TiAlN | D | DIN 6535 HA | B | H7

■ 1.1 1.2 1.3 1.4 1.5 1.6 3.1 3.2 3.3 3.4

d_1 Ø	l_1	l_2	l_3		d_2 Øh$_6$		
mm	mm	mm	mm	z	mm	e-Code	
3.97	75	12	39	4	6	B4643.97	1)
3.98	75	12	39	4	6	B4643.98	1)
3.99	75	12	39	4	6	B4643.99	1)
4.00	75	12	39	4	6	B4644.0	
4.01	75	12	39	4	6	B4644.01	1)
4.02	75	12	39	4	6	B4644.02	1)
4.03	75	12	39	4	6	B4644.03	1)
4.50	75	12	39	4	6	B4644.5	
4.97	75	12	39	4	6	B4644.97	1)
4.98	75	12	39	4	6	B4644.98	1)
4.99	75	12	39	4	6	B4644.99	1)
5.00	75	12	39	4	6	B4645.0	
5.01	75	12	39	4	6	B4645.01	1)
5.02	75	12	39	4	6	B4645.02	1)
5.03	75	12	39	4	6	B4645.03	1)
5.50	75	12	39	4	6	B4645.5	
5.97	75	12	39	4	6	B4645.97	2)
5.98	75	12	39	4	6	B4645.98	2)
5.99	75	12	39	4	6	B4645.99	2)
6.00	75	12	39	4	6	B4646.0	
6.01	75	12	39	4	6	B4646.01	2)
6.02	75	12	39	4	6	B4646.02	2)
6.03	75	12	39	4	6	B4646.03	2)
6.50	100	16	64	6	8	B4646.5	
7.00	100	16	64	6	8	B4647.0	
7.50	100	16	64	6	8	B4647.5	
7.97	100	16	64	6	8	B4647.97	2)
7.98	100	16	64	6	8	B4647.98	2)
7.99	100	16	64	6	8	B4647.99	2)
8.00	100	16	64	6	8	B4648.0	
8.01	100	16	64	6	8	B4648.01	2)
8.02	100	16	64	6	8	B4648.02	2)

d_1 Ø	l_1	l_2	l_3		d_2 Øh$_6$		
mm	mm	mm	mm	z	mm	e-Code	
8.03	100	16	64	6	8	B4648.03	2)
8.50	100	20	60	6	10	B4648.5	
9.00	100	20	60	6	10	B4649.0	
9.50	120	20	80	6	10	B4649.5	
9.97	120	20	80	6	10	B4649.97	2)
9.98	120	20	80	6	10	B4649.98	2)
9.99	120	20	80	6	10	B4649.99	2)
10.00	120	20	80	6	10	B46410.0	
10.01	120	20	80	6	10	B46410.01	2)
10.02	120	20	80	6	10	B46410.02	2)
10.03	120	20	80	6	10	B46410.03	2)
10.50	120	20	75	6	12	B46410.5	
11.00	120	20	75	6	12	B46411.0	
11.50	120	20	75	6	12	B46411.5	
11.97	120	20	75	6	12	B46411.97	2)
11.98	120	20	75	6	12	B46411.98	2)
11.99	120	20	75	6	12	B46411.99	2)
12.00	120	20	75	6	12	B46412.0	
12.01	120	20	75	6	12	B46412.01	2)
12.02	120	20	75	6	12	B46412.02	2)
12.03	120	20	75	6	12	B46412.03	2)
13.00	130	22	85	6	14	B46413.0	
14.00	130	22	85	6	14	B46414.0	
15.00	130	22	82	6	16	B46415.0	
16.00	150	25	102	6	16	B46416.0	
17.00	150	25	102	6	18	B46417.0	
18.00	150	25	102	6	18	B46418.0	
19.00	150	25	100	6	20	B46419.0	
20.00	150	25	100	6	20	B46420.0	

[1] Limit of tolerance +0.0040 / Toleranz +0.0040 / Tolerantie +0.0040 / Tolérance +0.0040 / Límite de tolerancia +0.0040 / Limite de tolerância +0.0040

[2] Limit of tolerance +0.0050 / Toleranz +0.0050 / Tolerantie +0.0050 / Tolérance +0.0050 / Límite de tolerancia +0.0050 / Limite de tolerância +0.0050

B461

DORMER

- NC - High Speed Precision Reamer
- NC-Präzisionreibahlen
- NC- precisieruimer
- Alésoir de précision - NC
- NC- Escariador de precisión
- Mandril de Precisão p/ CNC

NEW
2008.09

B461

Extremely unequal spacing / Extrem ungleiche Teilung / Differentiaal vertand / Pas différentiel / Espacio extremadamente irregular / Espaçamento Assimétrico

HM | TiAlN | D | DIN 6535 HA | A | H7

■ 1.1 1.2 1.3 1.4 1.5 1.6 3.1 3.2 3.3 3.4

d_1 Ø	l_1	l_2	l_3		d_2 Øh$_6$		
mm	mm	mm	mm	z	mm	e-Code	
3.97	75	12	39	4	6	B4613.97	1)
3.98	75	12	39	4	6	B4613.98	1)
3.99	75	12	39	4	6	B4613.99	1)
4.00	75	12	39	4	6	B4614.0	
4.01	75	12	39	4	6	B4614.01	1)
4.02	75	12	39	4	6	B4614.02	1)
4.03	75	12	39	4	6	B4614.03	1)
4.50	75	12	39	4	6	B4614.5	
4.97	75	12	39	4	6	B4614.97	1)
4.98	75	12	39	4	6	B4614.98	1)
4.99	75	12	39	4	6	B4614.99	1)
5.00	75	12	39	4	6	B4615.0	
5.01	75	12	39	4	6	B4615.01	1)
5.02	75	12	39	4	6	B4615.02	1)
5.03	75	12	39	4	6	B4615.03	1)
5.50	75	12	39	4	6	B4615.5	
5.97	75	12	39	4	6	B4615.97	2)
5.98	75	12	39	4	6	B4615.98	2)
5.99	75	12	39	4	6	B4615.99	2)
6.00	75	12	39	4	6	B4616.0	
6.01	75	12	39	4	6	B4616.01	2)
6.02	75	12	39	4	6	B4616.02	2)
6.03	75	12	39	4	6	B4616.03	2)
6.50	100	16	64	6	8	B4616.5	
7.00	100	16	64	6	8	B4617.0	
7.50	100	16	64	6	8	B4617.5	
7.97	100	16	64	6	8	B4617.97	2)
7.98	100	16	64	6	8	B4617.98	2)
7.99	100	16	64	6	8	B4617.99	2)
8.00	100	16	64	6	8	B4618.0	
8.01	100	16	64	6	8	B4618.01	2)
8.02	100	16	64	6	8	B4618.02	2)

d_1 Ø	l_1	l_2	l_3		d_2 Øh$_6$		
mm	mm	mm	mm	z	mm	e-Code	
8.03	100	16	64	6	8	B4618.03	2)
8.50	100	20	60	6	10	B4618.5	
9.00	100	20	60	6	10	B4619.0	
9.50	120	20	80	6	10	B4619.5	
9.97	120	20	80	6	10	B4619.97	2)
9.98	120	20	80	6	10	B4619.98	2)
9.99	120	20	80	6	10	B4619.99	2)
10.00	120	20	80	6	10	B46110.0	
10.01	120	20	80	6	10	B46110.01	2)
10.02	120	20	80	6	10	B46110.02	2)
10.03	120	20	80	6	10	B46110.03	2)
10.50	120	20	75	6	12	B46110.5	
11.00	120	20	75	6	12	B46111.0	
11.50	120	20	75	6	12	B46111.5	
11.97	120	20	75	6	12	B46111.97	2)
11.98	120	20	75	6	12	B46111.98	2)
11.99	120	20	75	6	12	B46111.99	2)
12.00	120	20	75	6	12	B46112.0	
12.01	120	20	75	6	12	B46112.01	2)
12.02	120	20	75	6	12	B46112.02	2)
12.03	120	20	75	6	12	B46112.03	2)
13.00	130	22	85	6	14	B46113.0	
14.00	130	22	85	6	14	B46114.0	
15.00	130	22	82	6	16	B46115.0	
16.00	150	25	102	6	16	B46116.0	
17.00	150	25	102	6	18	B46117.0	
18.00	150	25	102	6	18	B46118.0	
19.00	150	25	100	6	20	B46119.0	
20.00	150	25	100	6	20	B46120.0	

[1] Limit of tolerance +0.0040 / Toleranz +0.0040 / Tolerantie +0.0040 / Tolérance +0.0040 / Límite de tolerancia +0.0040 / Limite de tolerância +0.0040

[2] Limit of tolerance +0.0050 / Toleranz +0.0050 / Tolerantie +0.0050 / Tolérance +0.0050 / Límite de tolerancia +0.0050 / Limite de tolerância +0.0050

B465

- NC - High Speed Precision Reamer
- NC-Präzisionreibahlen
- NC- precisieruimer
- Alésoir de précision - NC
- NC- Escariador de precisión
- Mandril de Precisão p/ CNC

NEW
2008.09

B465

HM | TiAlN | D | DIN 6535 HA | B | H7

■ 2.1 2.2 2.3 2.4

d_1 Ø	l_1	l_2	l_3		d_2 Øh$_6$		
mm	mm	mm	mm	z	mm	e-Code	
3.97	75	12	39	4	6	B4653.97	1)
3.98	75	12	39	4	6	B4653.98	1)
3.99	75	12	39	4	6	B4653.99	1)
4.00	75	12	39	4	6	B4654.0	
4.01	75	12	39	4	6	B4654.01	1)
4.02	75	12	39	4	6	B4654.02	1)
4.03	75	12	39	4	6	B4654.03	1)
4.50	75	12	39	4	6	B4654.5	
4.97	75	12	39	4	6	B4654.97	1)
4.98	75	12	39	4	6	B4654.98	1)
4.99	75	12	39	4	6	B4654.99	1)
5.00	75	12	39	4	6	B4655.0	
5.01	75	12	39	4	6	B4655.01	1)
5.02	75	12	39	4	6	B4655.02	1)
5.03	75	12	39	4	6	B4655.03	1)
5.50	75	12	39	4	6	B4655.5	
5.97	75	12	39	4	6	B4655.97	2)
5.98	75	12	39	4	6	B4655.98	2)
5.99	75	12	39	4	6	B4655.99	2)
6.00	75	12	39	4	6	B4656.0	
6.01	75	12	39	4	6	B4656.01	2)
6.02	75	12	39	4	6	B4656.02	2)
6.03	75	12	39	4	6	B4656.03	2)
6.50	100	16	64	6	8	B4656.5	
7.00	100	16	64	6	8	B4657.0	
7.50	100	16	64	6	8	B4657.5	
7.97	100	16	64	6	8	B4657.97	2)
7.98	100	16	64	6	8	B4657.98	2)
7.99	100	16	64	6	8	B4657.99	2)
8.00	100	16	64	6	8	B4658.0	
8.01	100	16	64	6	8	B4658.01	2)
8.02	100	16	64	6	8	B4658.02	2)

d_1 Ø	l_1	l_2	l_3		d_2 Øh$_6$		
mm	mm	mm	mm	z	mm	e-Code	
8.03	100	16	64	6	8	B4658.03	2)
8.50	100	20	60	6	10	B4658.5	
9.00	100	20	60	6	10	B4659.0	
9.50	120	20	80	6	10	B4659.5	
9.97	120	20	80	6	10	B4659.97	2)
9.98	120	20	80	6	10	B4659.98	2)
9.99	120	20	80	6	10	B4659.99	2)
10.00	120	20	80	6	10	B46510.0	
10.01	120	20	80	6	10	B46510.01	2)
10.02	120	20	80	6	10	B46510.02	2)
10.03	120	20	80	6	10	B46510.03	2)
10.50	120	20	75	6	12	B46510.5	
11.00	120	20	75	6	12	B46511.0	
11.50	120	20	75	6	12	B46511.5	
11.97	120	20	75	6	12	B46511.97	2)
11.98	120	20	75	6	12	B46511.98	2)
11.99	120	20	75	6	12	B46511.99	2)
12.00	120	20	75	6	12	B46512.0	
12.01	120	20	75	6	12	B46512.01	2)
12.02	120	20	75	6	12	B46512.02	2)
12.03	120	20	75	6	12	B46512.03	2)
13.00	130	22	85	6	14	B46513.0	
14.00	130	22	85	6	14	B46514.0	
15.00	130	22	82	6	16	B46515.0	
16.00	150	25	102	6	16	B46516.0	
17.00	150	25	102	6	18	B46517.0	
18.00	150	25	102	6	18	B46518.0	
19.00	150	25	100	6	20	B46519.0	
20.00	150	25	100	6	20	B46520.0	

[1] Limit of tolerance +0.0040 / Toleranz +0.0040 / Tolerantie +0.0040 / Tolérance +0.0040 / Límite de tolerancia +0.0040 / Limite de tolerância +0.0040

[2] Limit of tolerance +0.0050 / Toleranz +0.0050 / Tolerantie +0.0050 / Tolérance +0.0050 / Límite de tolerancia +0.0050 / Limite de tolerância +0.0050

B462

DORMER

- NC - High Speed Precision Reamer
- NC-Präzisionreibahlen
- NC- precisieruimer
- Alésoir de précision - NC
- NC- Escariador de precisión
- Mandril de Precisão p/ CNC

NEW
2008.09

B462

HM | TiAlN | D | DIN 6535 HA | A | H7

■ 2.1 2.2 2.3 2.4

d_1 Ø	l_1	l_2	l_3	z	d_2 Øh6	e-Code	
mm	mm	mm	mm		mm		
3.97	75	12	39	4	6	B4623.97	1)
3.98	75	12	39	4	6	B4623.98	1)
3.99	75	12	39	4	6	B4623.99	1)
4.00	75	12	39	4	6	B4624.0	
4.01	75	12	39	4	6	B4624.01	1)
4.02	75	12	39	4	6	B4624.02	1)
4.03	75	12	39	4	6	B4624.03	1)
4.50	75	12	39	4	6	B4624.5	
4.97	75	12	39	4	6	B4624.97	1)
4.98	75	12	39	4	6	B4624.98	1)
4.99	75	12	39	4	6	B4624.99	1)
5.00	75	12	39	4	6	B4625.0	
5.01	75	12	39	4	6	B4625.01	1)
5.02	75	12	39	4	6	B4625.02	1)
5.03	75	12	39	4	6	B4625.03	1)
5.50	75	12	39	4	6	B4625.5	
5.97	75	12	39	4	6	B4625.97	2)
5.98	75	12	39	4	6	B4625.98	2)
5.99	75	12	39	4	6	B4625.99	2)
6.00	75	12	39	4	6	B4626.0	
6.01	75	12	39	4	6	B4626.01	2)
6.02	75	12	39	4	6	B4626.02	2)
6.03	75	12	39	4	6	B4626.03	2)
6.50	100	16	64	6	8	B4626.5	
7.00	100	16	64	6	8	B4627.0	
7.50	100	16	64	6	8	B4627.5	
7.97	100	16	64	6	8	B4627.97	2)
7.98	100	16	64	6	8	B4627.98	2)
7.99	100	16	64	6	8	B4627.99	2)
8.00	100	16	64	6	8	B4628.0	
8.01	100	16	64	6	8	B4628.01	2)
8.02	100	16	64	6	8	B4628.02	2)

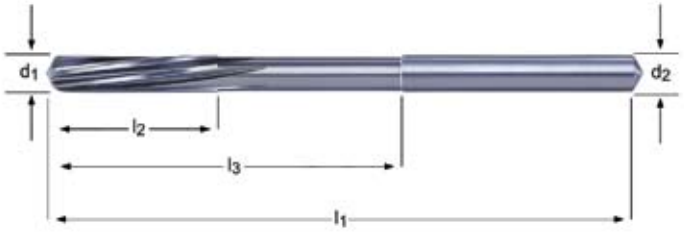
d_1 Ø	l_1	l_2	l_3	z	d_2 Øh6	e-Code	
mm	mm	mm	mm		mm		
8.03	100	16	64	6	8	B4628.03	2)
8.50	100	20	60	6	10	B4628.5	
9.00	100	20	60	6	10	B4629.0	
9.50	120	20	80	6	10	B4629.5	
9.97	120	20	80	6	10	B4629.97	2)
9.98	120	20	80	6	10	B4629.98	2)
9.99	120	20	80	6	10	B4629.99	2)
10.00	120	20	80	6	10	B46210.0	
10.01	120	20	80	6	10	B46210.01	2)
10.02	120	20	80	6	10	B46210.02	2)
10.03	120	20	80	6	10	B46210.03	2)
10.50	120	20	75	6	12	B46210.5	
11.00	120	20	75	6	12	B46211.0	
11.50	120	20	75	6	12	B46211.5	
11.97	120	20	75	6	12	B46211.97	2)
11.98	120	20	75	6	12	B46211.98	2)
11.99	120	20	75	6	12	B46211.99	2)
12.00	120	20	75	6	12	B46212.0	
12.01	120	20	75	6	12	B46212.01	2)
12.02	120	20	75	6	12	B46212.02	2)
12.03	120	20	75	6	12	B46212.03	2)
13.00	130	22	85	6	14	B46213.0	
14.00	130	22	85	6	14	B46214.0	
15.00	130	22	82	6	16	B46215.0	
16.00	150	25	102	6	16	B46216.0	
17.00	150	25	102	6	18	B46217.0	
18.00	150	25	102	6	18	B46218.0	
19.00	150	25	100	6	20	B46219.0	
20.00	150	25	100	6	20	B46220.0	

1) Limit of tolerance +0.0040 / Toleranz +0.0040 / Tolerantie +0.0040 / Tolérance +0.0040 / Límite de tolerancia +0.0040 / Limite de tolerância +0.0040

2) Limit of tolerance +0.0050 / Toleranz +0.0050 / Tolerantie +0.0050 / Tolérance +0.0050 / Límite de tolerancia +0.0050 / Limite de tolerância +0.0050

B400

- Machine Reamer Extremely unequal spacing
- Alésoir machine Pas différentiel
- Maschinenreibahle Extrem ungleiche Teilung
- Escariador de máquina Espacio extremadamente irregular
- Machineruimer Differentiaal vertand
- Mandril p/ Cavilhas Cónicas Espaçamento Assimétrico



B400

HM | DIN 8093 | B | H7

■ 1.5 1.6 3.1 3.2 3.3 3.4 4.1 4.2 4.3 5.1 5.2 5.3 6.1 6.2 6.3 6.4 7.1 7.2 7.3 7.4 8.1 8.2

● 1.1 1.2 1.3 1.4

d_1 Ø mm	l_1 mm	l_2 mm	l_3 mm	z	d_2 Øh$_9$ mm	e-Code	
1.0	34	6	15	3	1.0	**B4001.0**	3)
1.2	38	8	16.5	3	1.2	**B4001.2**	3)
1.4	40	8	18	3	1.4	**B4001.4**	3)
1.5	40	8	18	3	1.5	**B4001.5**	3)
1.6	49	11	26	3	1.6	**B4001.6**	3)
1.8	49	11	25	4	1.8	**B4001.8**	3)
2.0	49	11	24	4	2.0	**B4002.0**	3)
2.2	57	15	30	4	2.2	**B4002.2**	3)
2.5	57	15	28	4	2.5	**B4002.5**	3)
2.8	61	15	32	6	2.8	**B4002.8**	3)
3.0	61	15	30	6	3.0	**B4003.0**	3)
3.2	70	18	33	6	3.2	**B4003.2**	3)
3.5	70	18	33	6	3.5	**B4003.5**	3)
4.0	75	19	44	6	4.0	**B4004.0**	3)

d_1 Ø mm	l_1 mm	l_2 mm	l_3 mm	z	d_2 Øh$_9$ mm	e-Code	
4.5	80	21	46	6	4.5	**B4004.5**	3)
5.0	86	23	53	6	5.0	**B4005.0**	3)
5.5	93	26	56	6	5.6	**B4005.5**	3)
6.0	93	26	56	6	5.6	**B4006.0**	3)
6.5	101	28	63	6	6.3	**B4006.5**	4)
7.0	109	31	69	6	7.1	**B4007.0**	4)
8.0	117	33	75	6	8.0	**B4008.0**	4)
9.0	125	36	81	6	9.0	**B4009.0**	4)
10.0	133	38	87	6	10.0	**B40010.0**	4)
12.0	151	44	105	6	10.0	**B40012.0**	4)
14.0	160	47	110	8	12.5	**B40014.0**	4)
16.0	170	52	120	8	12.5	**B40016.0**	4)
18.0	182	56	130	6	14.0	**B40018.0**	3)
20.0	195	60	137	6	16.0	**B40020.0**	3)

[3] Solid Carbide / VHM / Volhardmetalen machineruimer / Carbure monobloc / Monobloc de Metal Duro / Metal Duro Integral
[4] Carbide Head / VHM-Kopf / Hardmetalen kop / Tête carbure / Cabeza de Metal Duro / Empastilhado

B481

- NC - Centesimal Reamer for High Precision Chucks
- NC - Alésoir au centième pour mandrins haute précision
- NC- 1/100 Reibahle für Hochgenauigkeitsfutter
- NC - Escariador Centesimal para portas de alta precisión
- NC-1/100 ruimers
- NC - Mandril Centesimal p/ buchas de alta precisão

B481

Extremely unequal spacing / Extrem ungleiche Teilung / Differentiaal vertand / Pas différentiel / Espacio extremadamente irregular / Espaçamento Assimétrico

HM | DIN 8093 | DIN 6535 HA | B | Ø.95-5.5 0,+0.004 Ø5.51-12 0,+0.005

■ 1.5 1.6 3.1 3.2 3.3 3.4 4.1 4.2 4.3 5.1 5.2 5.3 6.1 6.2 6.3 6.4 7.1 7.2 7.3 7.4 8.1 8.2

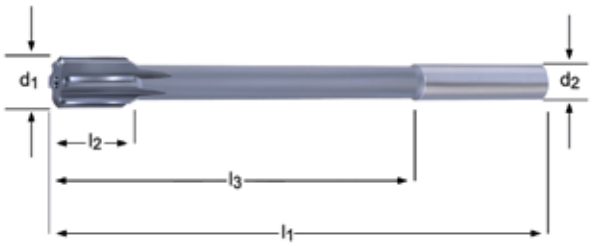
● 1.1 1.2 1.3 1.4

d_1 Ø mm	l_1 mm	l_2 mm	l_3 mm	z	d_2 Øh$_6$ mm	e-Code
0.98	49.5	6	21.5	3	4	**B4810.98**
0.99	49.5	6	21.5	3	4	**B4810.99**
1.00	49.5	6	21.5	3	4	**B4811.00**
1.01	49.5	6	21.5	3	4	**B4811.01**
1.02	49.5	6	21.5	3	4	**B4811.02**
1.03	49.5	9	21.5	3	4	**B4811.03**
1.48	49	9	21	3	4	**B4811.48**
1.49	49	9	21	3	4	**B4811.49**
1.50	49	9	21	3	4	**B4811.50**
1.51	49	9	21	3	4	**B4811.51**
1.52	49	9	21	3	4	**B4811.52**
1.53	49	9	21	3	4	**B4811.53**
1.98	49	12	21	4	4	**B4811.98**
1.99	49	12	21	4	4	**B4811.99**
2.00	49	12	21	4	4	**B4812.00**
2.01	49	12	21	4	4	**B4812.01**
2.02	49	12	21	4	4	**B4812.02**
2.03	49	12	21	4	4	**B4812.03**
2.48	59	16	31	4	4	**B4812.48**
2.49	59	16	31	4	4	**B4812.49**
2.50	59	16	31	4	4	**B4812.50**
2.51	59	16	31	4	4	**B4812.51**
2.52	59	16	31	4	4	**B4812.52**
2.53	59	16	31	4	4	**B4812.53**
2.97	62.5	17	35	6	4	**B4812.97**
2.98	62.5	17	35	6	4	**B4812.98**
2.99	62.5	17	35	6	4	**B4812.99**
3.00	62.5	17	35	6	4	**B4813.00**
3.01	62.5	17	35	6	4	**B4813.01**
3.02	62.5	17	35	6	4	**B4813.02**
3.03	62.5	17	35	6	4	**B4813.03**
3.97	75	19	47	6	4	**B4813.97**
3.98	75	19	47	6	4	**B4813.98**
3.99	75	19	47	6	4	**B4813.99**
4.00	75	19	47	6	4	**B4814.00**
4.01	75	19	47	6	4	**B4814.01**
4.02	75	19	47	6	4	**B4814.02**
4.03	75	19	47	6	4	**B4814.03**
4.97	86	23	50	6	6	**B4814.97**
4.98	86	23	50	6	6	**B4814.98**

d_1 Ø mm	l_1 mm	l_2 mm	l_3 mm	z	d_2 Øh$_6$ mm	e-Code
4.99	86	23	50	6	6	**B4814.99**
5.00	86	23	50	6	6	**B4815.00**
5.01	86	23	50	6	6	**B4815.01**
5.02	86	23	50	6	5	**B4815.02**
5.03	86	23	50	6	6	**B4815.03**
5.97	93	26	57	6	6	**B4815.97**
5.98	93	26	57	6	6	**B4815.98**
5.99	93	26	57	6	6	**B4815.99**
6.00	93	26	57	6	6	**B4816.00**
6.01	93	26	57	6	6	**B4816.01**
6.02	93	26	57	6	6	**B4816.02**
6.03	93	26	57	6	6	**B4816.03**
7.97	117	33	81	6	8	**B4817.97**
7.98	117	33	81	6	8	**B4817.98**
7.99	117	33	81	6	8	**B4817.99**
8.00	117	33	81	6	8	**B4818.00**
8.01	117	33	81	6	8	**B4818.01**
8.02	117	33	81	6	8	**B4818.02**
8.03	117	33	81	6	8	**B4818.03**
8.04	117	33	81	6	8	**B4818.04**
9.97	133	38	93	6	10	**B4819.97**
9.98	133	38	93	6	10	**B4819.98**
9.99	133	38	93	6	10	**B4819.99**
10.00	133	38	93	6	10	**B48110.00**
10.01	133	38	93	6	10	**B48110.01**
10.02	133	38	93	6	10	**B48110.02**
10.03	133	38	93	6	10	**B48110.03**
10.04	133	38	93	6	10	**B48110.04**
10.05	133	38	93	6	10	**B48110.05**
11.97	151	44	106	6	12	**B48111.97**
11.98	151	44	106	6	12	**B48111.98**
11.99	151	44	106	6	12	**B48111.99**
12.00	151	44	106	6	12	**B48112.00**
12.01	151	44	106	6	12	**B48112.01**
12.02	151	44	106	6	12	**B48112.02**
12.03	151	44	106	6	12	**B48112.03**
12.04	151	44	106	6	12	**B48112.04**
12.05	151	44	106	6	12	**B48112.05**

B441

- Machine Reamer Extremely unequal spacing
- Alésoir machine Pas différentiel
- Maschinenreibahle Extrem ungleiche Teilung
- Escariador de máquina Espacio extremadamente irregular
- Machineruimer Differentiaal vertand
- Mandril p/ Cavilhas Cónicas Espaçamento Assimétrico



B441

HM | DIN 8050 | A | H7

■ 1.5 1.6 3.1 3.2 3.3 3.4 4.1 4.2 4.3 5.1 5.2 5.3 6.1 6.2 6.3 6.4 7.1 7.2 7.3 7.4 8.1 8.2

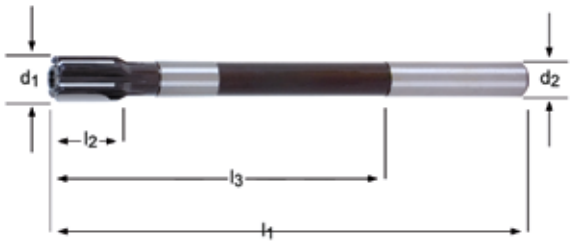
● 1.1 1.2 1.3 1.4

d_1 Ø	l_1	l_2	l_3		d_2 Øh_9	
mm	mm	mm	mm	z	mm	e-Code
10.0	133	19	87	6	10	**B44110.0**
11.0	142	19	96	6	10	**B44111.0**
12.0	151	19	105	6	10	**B44112.0**
13.0	151	19	105	6	10	**B44113.0**
14.0	160	19	110	6	12.5	**B44114.0**
15.0	162	19	112	6	12.5	**B44115.0**

d_1 Ø	l_1	l_2	l_3		d_2 Øh_9	
mm	mm	mm	mm	z	mm	e-Code
16.0	170	22	120	6	12.5	**B44116.0**
17.0	175	22	123	6	14	**B44117.0**
18.0	182	22	130	6	14	**B44118.0**
19.0	189	22	131	6	16	**B44119.0**
20.0	195	22	137	6	16	**B44120.0**

B451

- Expanding Machine Reamer
- Maschinenreibahle, einstellbar
- Machineruimer - nastelbaar
- Alésoir machine queue cône morse - Réglable
- Escariador de máquina , mango cónico - regulable
- Mandril de Máq. c/ Haste Cónica - Ajustáveis



B451

Adjustment Range 0.03mm / verstellbar im Bereich 0,03mm / Instelbereik 0.03 mm / Gamme réglable à 0,03 mm / 0,03 mm / Gama Ajustável 0,03mm

Ajustable

HM | DIN 8050 | A | H7

■ 1.5 1.6 3.1 3.2 3.3 3.4 4.1 4.2 5.1 5.2 6.1 6.2 6.3 6.4 7.1 7.2 7.3 7.4 8.1 8.2

● 1.1 1.2 1.3 1.4 4.3 5.3

d_1 Ø	l_1	l_2	l_3		d_2 Øh6	
mm	mm	mm	mm	z	mm	e-Code
8.0	117	12	75	4	8.0	**B4518.0**
9.0	125	12	79	6	10.0	**B4519.0**
10.0	133	12	87	6	10.0	**B45110.0**
11.0	142	12	96	6	10.0	**B45111.0**
12.0	151	12	105	6	10.0	**B45112.0**
13.0	151	12	105	6	10.0	**B45113.0**

d_1 Ø	l_1	l_2	l_3		d_2 Øh6	
mm	mm	mm	mm	z	mm	e-Code
14.0	160	16	110	6	12.0	**B45114.0**
15.0	162	16	112	6	12.0	**B45115.0**
16.0	170	19	120	6	12.0	**B45116.0**
18.0	182	19	130	6	14.0	**B45118.0**
20.0	195	19	137	6	16.0	**B45120.0**

B411

- Machine Reamer Extremely unequal spacing
- Alésoir machine Pas différentiel
- Maschinenreibahle Extrem ungleiche Teilung
- Escariador de máquina Espacio extremadamente irregular
- Machineruimer Differentiaal vertand
- Mandril p/ Cavilhas Cónicas Espaçamento Assimétrico

B411

HM | DIN 8094 | B | H7

■ 1.5 1.6 3.1 3.2 3.3 3.4 4.1 4.2 4.3 5.1 5.2 5.3 6.1 6.2 6.3 6.4 7.1 7.2 7.3 7.4 8.1 8.2

● 1.1 1.2 1.3 1.4

d_1 Ø	l_1	l_2	l_3				
mm	mm	mm	mm	z	MK	e-Code	
5.0	133	23	67.5	6	1	**B4115.0**	1)
6.0	138	26	72.5	6	1	**B4116.0**	1)
7.0	150	31	84.5	6	1	**B4117.0**	1)
8.0	156	33	90.5	6	1	**B4118.0**	1)
9.0	162	36	96.5	6	1	**B4119.0**	1)
10.0	168	38	102.5	6	1	**B41110.0**	1)
12.0	182	44	116.5	6	1	**B41112.0**	1)
14.0	189	47	123.5	8	1	**B41114.0**	1)
15.0	204	50	124	8	2	**B41115.0**	1)
16.0	210	52	130	8	2	**B41116.0**	1)

d_1 Ø	l_1	l_2	l_3				
mm	mm	mm	mm	z	MK	e-Code	
17.0	214	54	134	6	2	**B41117.0**	2)
18.0	219	56	139	6	2	**B41118.0**	2)
19.0	223	58	143	6	2	**B41119.0**	2)
20.0	228	60	148	6	2	**B41120.0**	2)
22.0	237	64	157	6	2	**B41122.0**	2)
24.0	268	68	169	8	3	**B41124.0**	2)
25.0	268	68	169	8	3	**B41125.0**	2)
26.0	273	70	174	8	3	**B41126.0**	2)
30.0	281	73	182	8	3	**B41130.0**	2)

1) Solid Carbide / VHM / Volhardmetalen machineruimer / Carbure monobloc / Monobloc de Metal Duro / Metal Duro Integral
2) Carbide Head / VHM-Kopf / Hardmetalen kop / Tête carbure / Cabeza de Metal Duro / Empastilhado

B442

- Machine Reamer Extremely unequal spacing
- Alésoir machine Pas différentiel
- Maschinenreibahle Extrem ungleiche Teilung
- Escariador de máquina Espacio extremadamente irregular
- Machineruimer Differentiaal vertand
- Mandril p/ Cavilhas Cónicas Espaçamento Assimétrico

B442

HM | DIN 8051 | A | H7

■ 1.5 1.6 3.1 3.2 3.3 3.4 4.1 4.2 4.3 5.1 5.2 5.3 6.1 6.2 6.3 6.4 7.1 7.2 7.3 7.4 8.1 8.2

● 1.1 1.2 1.3 1.4

d_1 Ø	l_1	l_2	l_3			
mm	mm	mm	mm	z	MK	e-Code
10.0	168	19	102.5	6	1	**B44210.0**
12.0	182	19	116.5	6	1	**B44212.0**
14.0	189	19	123.5	6	1	**B44214.0**
15.0	204	19	124	6	2	**B44215.0**
16.0	210	22	130	6	2	**B44216.0**
17.0	214	22	134	6	2	**B44217.0**

d_1 Ø	l_1	l_2	l_3			
mm	mm	mm	mm	z	MK	e-Code
18.0	219	22	139	6	2	**B44218.0**
19.0	223	22	143	6	2	**B44219.0**
20.0	228	22	148	6	2	**B44220.0**

B452

- Expanding Machine Reamer
- Maschinenreibahle, einstellbar
- Machineruimer - nastelbaar
- Alésoir machine queue cône morse - Réglable
- Escariador de máquina , mango cónico - regulable
- Mandril de Máq. c/ Haste Cónica - Ajustáveis

B452

Adjustment Range 0.03mm / verstellbar im Bereich 0,03mm / Verstelbare diameters (0,03 mm / Gamme réglable à 0,03 mm / Ajustable 0,03 mm / Gama Ajustável 0,03mm

HM | DIN 8051 | A | H7

■ 1.5 1.6 3.1 3.2 3.3 3.4 4.1 4.2 5.1 5.2 6.1 6.2 6.3 6.4 7.1 7.2 7.3 7.4 8.1 8.2

● 1.1 1.2 1.3 1.4 4.3 5.3

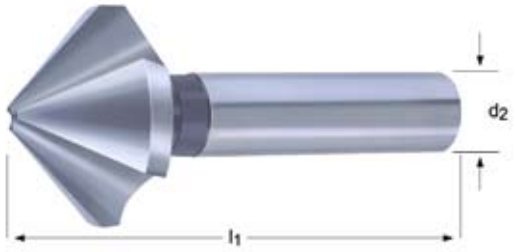
d_1 Ø	l_1	l_2	l_3			
mm	mm	mm	mm	z	MK	e-Code
8.0	156	12	90.5	4	1	**B4528.0**
10.0	168	12	102.5	6	1	**B45210.0**
11.0	175	12	109.5	6	1	**B45211.0**
12.0	182	12	116.5	6	1	**B45212.0**
13.0	182	12	116.5	6	1	**B45213.0**
14.0	189	16	123.5	6	1	**B45214.0**
15.0	204	16	124	6	2	**B45215.0**
16.0	210	19	130	6	2	**B45216.0**
17.0	214	19	134	6	2	**B45217.0**
18.0	219	19	139	6	2	**B45218.0**

d_1 Ø	l_1	l_2	l_3			
mm	mm	mm	mm	z	MK	e-Code
19.0	223	19	143	6	2	**B45219.0**
20.0	228	19	148	6	2	**B45220.0**
22.0	237	22	157	6	2	**B45222.0**
24.0	268	22	169	6	3	**B45224.0**
25.0	268	22	169	6	3	**B45225.0**
26.0	273	22	174	6	3	**B45226.0**
28.0	277	25	178	6	3	**B45228.0**
30.0	281	25	182	6	3	**B45230.0**

G400

- Countersink for High Precision Chucks
- Fraise à chanfreiner pour mandrins haute précision
- Senker für Hochgenauigkeitsfutter
- Avellanadores para portas de alta precisión
- Verzinkers voor High Precision opnames
- Escaredores p/ buchas de alta precisão

NEW
2008.09



G400

HM | DIN 335 C | 90°

■ 1.1 1.2 1.3 1.4 1.5 4.1 4.2 4.3 5.1 5.2 5.3 6.1 6.2 6.3

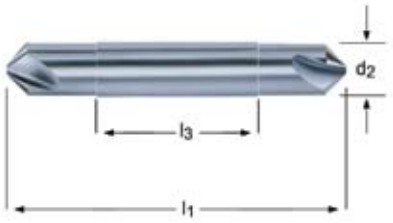
● 1.6 2.1 2.2 2.3 3.1 3.2 3.3 3.4 6.4 7.1 7.2 7.3 7.4 8.1 8.2

max d mm	min d	l_1 mm	d_2 Øh$_6$ mm	z	e-Code
6.3	1.5	45	5	3	**G4006.3**
8.3	2.0	50	6	3	**G4008.3**
10.4	2.5	50	6	3	**G40010.4**
12.4	2.8	56	8	3	**G40012.4**
16.5	3.2	60	10	3	**G40016.5**
20.5	3.5	63	10	3	**G40020.5**
25.0	3.8	67	10	3	**G40025.0**
31.0	4.2	71	12	3	**G40031.0**

G405

- Countersink Double Ended
- Senker , 2-seitig
- Verzinkers - dubbelzijdig
- Fraise à chanfreiner - Double
- Avellanadores - Doble punta
- Escareador - Dupla

NEW
2008.09



G405

HM | DIN 335 | 90°

■ 1.1 1.2 1.3 1.4 1.5 4.1 4.2 4.3 5.1 5.2 5.3 6.1 6.2 6.3

● 1.6 2.1 2.2 2.3 3.1 3.2 3.3 3.4 6.4 7.1 7.2 7.3 7.4 8.1 8.2

max d mm	min d	l_1 mm	l_3 mm	d_2 Øh$_6$ mm	z	e-Code
8.3	2.0	67	46	10	3	**G4058.3**
10.4	2.5	74	47	12	3	**G40510.4**
12.4	2.8	76	45	14	3	**G40512.4**

DORMER

	B100	B341	B334	B335	B951	B301	B903	B952	B500	B180	B191	B181
												
	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS-E	HSS-E	HSS-E	HSS-E
	ST	ST			ST	ST	ST					
	DIN 206	DIN 859	D	D	D	BS 328	DIN 9	DIN 9	DIN 212	DIN 212	DIN 212	DIN 212
										DIN 6535 HA	DIN 6535 HA	DIN 6535 HA
	B	B			B	A	A	B	A	B	B	B
	H7								H7	H7	H7	
					1:10	1:48	1:50	1:50				
	1.50 - 50.00	6.00 - 20.00	N000 - N16	N000 - N16	10.00 - 45.00	1/16 - 7/8	1.50 - 20.00	1.20 - 50.00	2.00 - 20.00	1.50 - 20.00	Set 10S	1.00 - 12.00
	210	**211**	**212**	**213**	**214**	**215**	**216**	**217**	**218**	**219**	**220**	**221**
1.1	■18C	■18C	■18C		■18C	■18C	■18C	■18C		■25C	■25C	■25C
1.2	■14C	■14C	■14C		■14C	■14C	■14C	■14C		■20C	■20C	■20C
1.3	■11C	■11C	■11C		■11C	■11C	■11C	■11C		■16C	■16C	■16C
1.4	■10B	■10B	■10B		■10B	■10B	■10B	■10B		■15B	■15B	■15B
1.5	●5B	●5B	●5B		●5B	●5B	●5B	●5B		●9B	●9B	●9B
1.6	●4A	●4A	●4A		●4A	●4A	●4A	●4A		●5A	●5A	●5A
1.7												
1.8												
2.1	■8F	■8F	■8F		■8C	■8C	■8C	■8C		■11C	■11C	■11C
2.2						●5B	●5B	●5B		●6B	●6B	●6B
2.3						●6B	●6B	●6B		●8B	●8B	●8B
2.4										●6B	●6B	
3.1	■14E	■14E	■14E		■14E	■14E	■14E	■14E	■16E	●16E	●16E	●16E
3.2	●11D	●11D	●11D		●11D	●11D	●11D	●11D	●15D	●15D	●15D	●15D
3.3	●10C	●10C	●10C		●10C	●10C	●10C	●10C	●13C	●13C	●13C	●13C
3.4	●9C	●9C	●9C		●9C	●9C	●9C	●9C	●11C	●11C	●11C	●11C
4.1	■11C	■11C	■11C		■11C	■11C	■11C	■11C	■11C	●15C	●15C	●15C
4.2	●5B	●5B	●5B		●5B	●5B	●5B	●5B		■9B	■9B	■9B
4.3	●4B	●4B	●4B		●4B	●4B	●4B	●4B		●5B	●5B	●5B
5.1	●5D	●5D	●5D		●5D	●5D	●5D	●5D		■8D	■8D	■8D
5.2	●3C	●3C	●3C		●3C	●3C	●3C	●3C		●5C	●5C	●5C
5.3	●2C	●2C	●2C		●2C	●2C	●2C	●2C		●3C	●3C	●3C
6.1	●18D	●18D	●18D		●18D	●18D	●18D	●18D		●25D	●25D	●25D
6.2	■20E	■20E	■20E		■20E	■20E	■20E	■20E	●28E	●28E	●28E	●28E
6.3	●18D	●18D	●18D		●18D	●18D	●18D	●18D	●25D	●25D	●25D	●25D
6.4	●11D	●11D	●11D		●11D	●11D	●11D	●11D	●14D	●14D	●14D	●14D
7.1	●23F	●23F	●23F		●23F	●23F	●23F	●23F				
7.2	●18F	●18F	●18F		●18F	●18F	●18F	●18F				
7.3						●15E	●15E	●15E				
7.4						●14D	●14D	●14D				
8.1												
8.2	●21B	●21B	●21B		●21B	●21B	●21B	●21B	●30B			
8.3												
9.1												
10.1												

	B156	B170	B901	B157	B953	B161	B101	B162	B121	B954	B955	B956	B957
													
	HSS-E	HSS-E	HSS	HSS-E	HSS-E	HSS-E	HSS	HSS-E	HSS	HSS-E	HSS-E	HSS-E	
			ST				ST				ST		
	DIN 212	DIN 212	BS 328	DIN 212	DIN 2179	DIN 208	BS 328	DIN 208	DIN 311	DIN 2180	DIN 219	DIN 217	
	B	B	B	E		B	B	C			B		
	H7		H7	H7		H7	H7	H7	k11		H7		
					1:50					1:50			
	1.50 - 20.00	0.98 - 12.00	1.50 - 1/2	2.00 - 20.00	1.00 - 12.00	3.00 - 50.00	3.00 - 2“	8.00 - 32.00	10.00 - 30.00	5.00 - 30.00	25.00 - 80.00	13.00 - 40.00	N3 - N9

	222	223	225	226	227	228	229	230	231	232	233	234	235
1.1	■25C	■25C	■18C	●25C	●25C	■25C	■18C	■18C	■18C	●25C	■18C		
1.2	■20C	■20C	■14C	●20C	●20C	■20C	■14C	■14C	■14C	●20C	■14C		
1.3	■16C	■16C	■11C	●16C	●16C	■16C	■11C	■11C	■11C	●16C	■11C		
1.4	■15B	■15B	■10B	●15B	●15B	■15B	■10B	■10B	■10B	●15B	■10B		
1.5	●9B	●9B	●5B	●9B	●9B	●9B	●5B	●5B	●5B	●9B	●5B		
1.6	●5A	●5A	●4A	●5A	●5A	●5A	●4A	●4A	●4A	●5A	●4A		
1.7													
1.8													
2.1	■11C	■11C	■8C	■11C	■11C	■11C	■8C	■8C		■11C	■8C		
2.2	●6B	●6B		■6B	■6B	●6B		●5B		■6B	●5B		
2.3	●8B	●8B		■8B	■8B	●8B		●6B		■8B	●6B		
2.4													
3.1	●16E	●16E	■14E			●16E	■14E	●14E	■14E		●14E		
3.2	●15D	●15D	●11D			●15D	●11D		●11D				
3.3	●13C	●13C	●10C			●13C	●10C		●10C				
3.4	●11C	●11C	●9C			●11C	●9C		●9C				
4.1	●15C	●15C	■11C	■15C	■15C	■15C	■11C	■11C	■11C	■15C	■11C		
4.2	■9B	■9B	●5B	■9B	■9B	●9B	●5B	●5B		■9B	●5B		
4.3	●5B	●5B	●4B	■5B	■5B	●5B	●4B	●4B		■5B	●4B		
5.1	■8D	■8D	●5D	■8D	■8D	■8D	●5D	■5D		■8D	■5D		
5.2	●5C	●5C	●3C	■5C	■5C	●5C	●3C	●3C		■5C	●3C		
5.3	●3C	●3C	●2C	■3C	■3C	●3C	●2C	●2C		■3C	●2C		
6.1	●25D	●25D	●18D	■25D	■25D	●25D	●18D	●18D		■25D	●18D		
6.2	●28E	●28E	■20E	●28E	●28E	●28E	■20E	●20E		●28E	●20E		
6.3	●25D	●25D	●18D			●25D	●18D						
6.4	●14D	●14D	●11D			●14D	●11D						
7.1			●23F	■28F	■28F		●23F	■23F		■28F	●23F		
7.2			●18F	■25F	■25F		●18F	■23F		■25F	●18F		
7.3				■20E	■20E			■15E		■20E	●15E		
7.4				■16D	■16D			■14D		■16D	●14D		
8.1				■30B	■30B			■21B		■30B			
8.2			●21B				●21B		●21B		●21B		
8.3													
9.1				●3A	●3A			●5A		●3A			
10.1													

DORMER

	G135	G335	G131	G137	G154	G155	G129	G149	G349
									
	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS-E	HSS-E
		TiN							TiN
	DIN 334 C	DIN 334 C	DIN 334 A	DIN 334 D	DIN 335 C	DIN 335 D	D	D	D
	60°	60°	60°	60°	82°	82°	90°	90°	90°
	6.30 - 25.00	6.30 - 25.00	8.00 - 20.00	16.00 - 80.00	6.30 - 25.00	16.50 - 80.00	6.00 - 31.50	5.00 - 50.00	5.00 - 20.00
	236	**236**	**237**	**238**	**239**	**240**	**241**	**242**	**242**
1.1	■30F	■50E		■30F	■30F	■30F	■30D	■30D	■50D
1.2	■25E	■40E		■25E	■25E	■25E	■25D	■25D	■40D
1.3	■20D	■30D	■20E	■20D	■20D	■20D	■20C	■20C	■30C
1.4	■15D	●20D	■15D	■15D	■15D	■15D	■15B	■15B	■20B
1.5	■10B	●15B	■10D	■10B	■10B	■10B	■10A	●10A	■15A
1.6	●6A	●10B	■6B	●6A	●6A	●6A	●6A	●6A	●10A
1.7									
1.8									
2.1	●8C			●8C	●8C	●8C	●8B	●8B	
2.2	●6B			●6B	●6B	●6B	●6A	●6A	
2.3	●4A		●4B	●4A	●4A	●4A			
2.4									
3.1	●25F	■45F		●25F	●25F	●25F	●25D	●25D	■45D
3.2	●15D	■35D		●15D	●15D	●15D	●15C	●15C	■35C
3.3	●12C	■30C		●12C	●12C	●12C	●12A	●12A	■30A
3.4	●8C	■30C	■8D	●8C	●8C	●8C	●8A	●8A	■30A
4.1	■12C	●20C		■12C	■12C	■12C	■12B	■12B	●20B
4.2	■10A	●15A	■8A	■10A	■10A	■10A	■10A	■10A	●15A
4.3	■8A	●10A	■8A	■8A	■8A	■8A	●8A	●8A	●10A
5.1	■12C	●20C		■12C	■12C	■12C	■12B	■12B	●20B
5.2	■6B	●10B	■6C	■6B	■6B	■6B	■6A	■6A	●10A
5.3	■4A	●6A	■4B	■4A	■4A	■4A	●4A	●4A	●6A
6.1	■25D	●40D		■25D	■25D	■25D	■25B	■25B	●40B
6.2	■20F	●30F		■20F	■20F	■20F	■20C	■20C	●30C
6.3	■25F	●40F		■25F	■25F	■25F	■25C	■25C	●40C
6.4	●10D	●15D	■10F	●10D	●10D	●10D	●10B	●10B	●15B
7.1	●30G	■50G		●30G	●30G	●30G	■30D	■30D	■50D
7.2	●25F	■40F		●25F	●25F	●25F	■25C	■25C	■40C
7.3	●20F	■30F		●20F	●20F	●20F	●20C	●20C	■30C
7.4	●10F	■15F		●10F	●10F	●10F	●10C	●10C	■15C
8.1	●30G	●50G		●30G	●30G	●30G	●30D	●30D	●50D
8.2	●20G	●30G		●20G	●20G	●20G	●20D	●20D	●30D
8.3			●5G						
9.1									
10.1									

	G142	G136	G336	G560	G139	G236	G237	G132
								
	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS
			TiN	TiAlN			TiAlN	
	DIN 335 C	DIN 335 C	DIN 335 C	DIN 335 C	DIN 335 C	DIN 335 C	DIN 335 C	DIN 335 A
	90°	90°	90°	90°	90°	90°	90°	90°
	4.80 - 31.00	4.30 - 31.00	5.00 - 31.00	6.30 - 31.00	Set No.70 - Set No.72	Set No.1 - Set No.2	Set No.10	8.00 - 20.00
	243	**244**	**245**	**245**	**246**	**246**	**247**	**248**
249	■30F	■30F	■50F	■50E	■30F	■30F	■50E	
1.2	■25E	■25E	■40E	■40E	■25E	■25E	■40E	
1.3	•20D	■20D	■30D	■30D	■20D	■20D	■30D	•20E
1.4	•15D	■15D	■20D	•20D	■15D	■15D	•20D	•15D
1.5		■10B	■15B	•15B	■10B	■10B	•15B	■10D
1.6		•6A	•10A	•10B	•6A	•6A	•10B	■6B
1.7								
1.8								
2.1	■8C	•8C			•8C	•8C		
2.2	■6B	•6B			•6B	•6B		
2.3	■4A	•4A			•4A	•4A		•4B
2.4								
3.1		•25F	■45F	■45F	•25F	•25F	■45F	
3.2		•15D	■35D	■35D	•15D	•15D	■35D	
3.3		•12C	■30C	■30C	•12C	•12C	■30C	
3.4		•8C	■30C	■30C	•8C	•8C	■30C	■8D
4.1	■12C	■12C	•20C	•20C	■12C	■12C	•20C	
4.2	•10A	■10A	•15A	•15A	■10A	■10A	•15A	■8A
4.3		■8A	•10A	•10A	■8A	■8A	•10A	■8A
5.1	■12C	■12C	•20C	•20C	■12C	■12C	•20C	
5.2	•6B	■6B	•10B	•10B	■6B	■6B	•10B	■6C
5.3		■4A	•6A	•6A	■4A	■4A	•6A	■4B
6.1	■25D	■25D	•40D	•40D	■25D	■25D	•40D	
6.2	■20F	■20F	•30F	•30F	■20F	■20F	•30F	
6.3	•25F	■25F	•40F	•40F	■25F	■25F	•40F	
6.4		•10D	•15D	•15D	•10D	•10D	•15D	■10F
7.1	■30G	•30G	■50G	■50G	•30G	•30G	■50G	
7.2	■25F	•25F	■40F	■40F	•25F	•25F	■40F	
7.3	•20F	•20F	■30F	■30F	•20F	•20F	■30F	
7.4	•10F	•10F	■15F	■15F	•10F	•10F	■15F	
8.1	■30G	•30G	•50G	•50G	•30G	•30G	•50G	
8.2	■20G	•20G	•30G	•30G	•20G	•20G	•30G	
8.3								•5G
9.1								
10.1								

DORMER

	G138	G338	G170	G171	M138	G314	G125	G126	G127
									
	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS
		TIN		TiAlN	ST			ST	
	DIN 335 D	DIN 335 D	DIN 335 C	DIN 335 C	D	D	DIN 373	DIN 375	DIN 1868
	90°	90°	100°	100°	20°	20°	180°	180°	
	15.00 - 80.00	25.00 - 63.00	6.30 - 25.00	6.30 - 25.00	N1 - N6	4.00 - 30.00	6.50 - 20.00	15.00 - 46.00	6.80 - 33.00
	249	**249**	**250**	**250**	**251**	**252**	**253**	**254**	**255**
1.1	■30F	■50F	■30F	■50E	■30D	■30D	■30E	■30E	
1.2	■25E	■40E	■25E	■40E	■25D	■25D	■25E	■25E	
1.3	■20D	■30D	■20D	■30D	■20C	■20C	■20D	■20D	
1.4	■15D	■20D	■15D	●20D	■15B	■15B	●15D	●15D	
1.5	■10B	■15B	■10B	●15B	●10A	●10A	●10C	●10C	
1.6	●6A	●10A	●6A	●10B	●6A	●6A	●6C	●6C	
1.7									
1.8									
2.1	●8C		●8C		●8B	●8B	■8D	■8D	
2.2	●6B		●6B		●6A	●6A	●6C	●6C	
2.3	●4A		●4A		●4A	●4A			
2.4									
3.1	●25F	■45F	●25F	■45F	●25D	●25D	■25E	■25E	
3.2	●15D	■35D	●15D	■35D	●15C	●15C	■15E	■15E	
3.3	●12C	■30C	●12C	■30C	●12A	●12A	●12D	●12D	
3.4	●8C	■30C	●8C	■30C	●8A	●8A	●8C	●8C	
4.1	■12C	●20C	■12C	●20C	■12B	■12B	●12E	●12E	
4.2	■10A	●15A	■10A	●15A	■10A	■10A	●10E	●10E	
4.3	■8A	●10A	■8A	●10A	■8A	■8A	●8E	●8E	
5.1	■12C	●20C	■12C	●20C	■12B	■12B	●12E	●12E	
5.2	■6B	●10B	■6B	●10B	■6A	■6A	●6C	●6C	
5.3	■4A	●6A	■4A	●6A	■4A	■4A	●4E	●4E	
6.1	■25D	●40D	■25D	●40D	■25B	■25B	●25C	●25C	
6.2	■20F	●30F	■20F	●30F	■20C	■20C	●20C	●20C	
6.3	■25F	●40F	■25F	●40F	■25C	■25C	●25C	●25C	
6.4	●10D	●15D	●10D	●15D	●10B	●10B			
7.1	●30G	■50G	●30G	■50G	■30D	■30D	■30G	■30G	
7.2	●25F	■40F	●25F	■40F	■25C	■25C	■25G	■25G	
7.3	●20F	■30F	●20F	■30F	●20C	●20C	●20G	●20G	
7.4	●10F	■15F	●10F	■15F	●10C	●10C	●10E	●10E	
8.1	●30G	●50G	●30G	●50G	■30D	■30D	■30C	■30C	
8.2	●20G	●30G	●20G	●30G	■20D	■20D	●20C	●20C	
8.3									
9.1									
10.1									

	Ø mm												
	1,5	2	3	5	8	10	12	16	20	25	30	40	50
A	0,045	0,055	0,078	0,100	0,150	0,170	0,185	0,220	0,250	0,280	0,320	0,390	0,440
B	0,055	0,072	0,110	0,150	0,180	0,210	0,240	0,280	0,310	0,360	0,400	0,500	0,550
C	0,065	0,085	0,135	0,185	0,220	0,260	0,285	0,335	0,390	0,440	0,480	0,600	0,680
D	0,080	0,110	0,160	0,200	0,270	0,320	0,360	0,410	0,470	0,540	0,600	0,730	0,850
E	0,100	0,140	0,180	0,250	0,350	0,390	0,430	0,500	0,530	0,640	0,750	0,910	1,100
F	0,140	0,180	0,260	0,350	0,440	0,500	0,550	0,630	0,700	0,800	0,930	1,200	1,500
mm/REV ± 15%													

	Ø mm									
	6	8	10	16	20	25	32	40	60	80
A	0.03	0.04	0.05	0.06	0.08	0.09	0.10	0.12	0.14	0.16
B	0.04	0.05	0.06	0.08	0.10	0.12	0.14	0.16	0.18	0.20
C	0.05	0.06	0.08	0.10	0.12	0.14	0.16	0.18	0.20	0.22
D	0.06	0.08	0.10	0.12	0.15	0.18	0.20	0.22	0.25	0.28
E	0.08	0.10	0.12	0.15	0.18	0.20	0.25	0.27	0.30	0.32
F	0.09	0.11	0.13	0.16	0.19	0.21	0.26	0.29	0.33	0.36
G	0.10	0.12	0.15	0.18	0.20	0.22	0.28	0.32	0.36	0.40
H	0.12	0.15	0.18	0.20	0.22	0.25	0.30	0.35	0.40	0.45
mm/N										

● General guidelines for stock removal when pre-drilling holes ● Allgemeine Richtlinien für Materialabtragung beim Vorbohren ● Algemene richtijn voor materiaal afname bij voorboren ● Préconisations de surépaisseur de perçage avant alésage ● Guía general para la eliminación de material cuando existe agujero pre-taladrado ● Regras gerais para material a ser removido durante a furação

	Ø (mm)				
	3 - 5mm	**5.1 - 10mm**	**10.1 - 20mm**	**20.1 - 30mm**	**> 30mm**
1.1	0.1-0.2	0.2	0.2-0.3	0.3-0.4	0.4-.05
1.2	0.1-0.2	0.2	0.2-0.3	0.3-0.4	0.4-.05
1.3	0.1-0.2	0.2	0.2-0.3	0.3-0.4	0.4-.05
1.4	0.1-0.2	0.2	0.2	0.3	0.3-0.4
1.5	0.1-0.2	0.2	0.2	0.3	0.3-0.4
1.6	0.1-0.2	0.2	0.2	0.3	0.3-0.4
1.7	0.1-0.2	0.2	0.2	0.3	0.3-0.4
1.8	0.1-0.2	0.2	0.2	0.3	0.3-0.4
2.1	0.1-0.2	0.2	0.2	0.3	0.3-0.4
2.2	0.1-0.2	0.2	0.2	0.3	0.3-0.4
2.3	0.1-0.2	0.2	0.2	0.3	0.3-0.4
2.4	0.1-0.2	0.2	0.2	0.3	0.3-0.4
3.1	0.1-0.2	0.2	0.2-0.3	0.3-0.4	0.4-0.5
3.2	0.1-0.2	0.2	0.2-0.3	0.3-0.4	0.4-0.5
3.3	0.1-0.2	0.2	0.3	0.4	0.5
3.4	0.1-0.2	0.2	0.3	0.4	0.5
4.1	0.1-0.2	0.2	0.2-0.3	0.3-0.4	0.3-0.4
4.2	0.1-0.2	0.2	0.2	0.3	0.3-0.4
4.3	0.1-0.2	0.2	0.2	0.3	0.3-0.4
5.1	0.1-0.2	0.2	0.2-0.3	0.3-0.4	0.4-.05
5.2	0.1-0.2	0.2	0.2	0.3	0.3-0.4
5.3	0.1-0.2	0.2	0.2	0.3	0.3-0.4
6.1	0.1-0.2	0.2-0.3	0.3-0.4	0.4-0.5	0.5
6.2	0.1-0.2	0.2	0.2-0.3	0.3	0.3-0.4
6.3	0.1-0.2	0.2	0.2-0.3	0.3	0.3-0.4
6.4	0.1-0.2	0.2	0.2-0.3	0.3	0.3-0.4
7.1	0.1-0.2	0.2-0.3	0.3-0.4	0.4-0.5	0.5
7.2	0.1-0.2	0.2-0.3	0.3-0.4	0.4-0.5	0.5
7.3	0.1-0.2	0.2-0.3	0.3-0.4	0.4-0.5	0.5
7.4	0.1-0.2	0.2-0.3	0.3-0.4	0.4-0.5	0.5
8.1	0.1-0.2	0.3	0.4	0.4-0.5	0.5
8.2	0.1-0.2	0.2	0.2	0.3	0.3-0.4
8.3	0.1-0.2	0.2	0.2	0.3	0.3-0.4
9.1	0.1-0.2	0.2	0.2	0.3	0.3-0.4
10.1	0.1-0.2	0.2	0.2-0.3	0.3-04.	0.4-0.5

For adjustable or blade reamers reduce stock removal by 30%. For quick helix reamers increase by 50% / Für verstellbare Reibahlen die Materialabtragung um 30% reduzieren. Für Schälreibahlen um 50% erhöhen. / Voor verstelbare ruimers de materiaal afname met 30% reduceren. Voor schilruimers met 50% verhogen. / Pour les alésoirs expansibles ou brasés réduire l'avance de 30%. Pour les alésoirs à hélice rapide augmenter de 50%. / Para escariadores ajustables y con cuchillas reducir la eliminación de material un 30%.Para escariadores de hélice rápida incrementar un 50% / Para alargadores ajustáveis reduza o sobremetal em 30%. Para alargadores com hélice rápida aumente em 50%

B100

- Hand Reamer
- Handreibahle
- Handruimer
- Alésoir à main
- Escariador de mano
- Mandril Manual

B100

d2=d1 with tolerance e9 / d2=d1 mit Toleranz e9 / d2=d1 met tolerantie e9 / d2=d1 en tolérance e9 / d2=d1 con tolerancia e9 / d2=d1 tolerância e9

HSS | ST | DIN 206 | B | H7

■ 1.1 1.2 1.3 1.4 2.1 3.1 4.1 6.2

● 1.5 1.6 3.2 3.3 3.4 4.2 4.3 5.1 5.2 5.3 6.1 6.3 6.4 7.1 7.2 8.2

d_1 Ø Inch	d_1 Ø mm	l_1 mm	l_2 mm	z	a mm	e-Code
	1.50	41	20	3	1.12	**B1001.5**
1/16	1.59	41	20	3	1.12	**B1001/16**
	1.60	44	21	3	1.25	**B1001.6**
5/64	1.98	47	23	4	1.40	**B1005/64**
	2.00	50	25	4	1.60	**B1002.0**
3/32	2.38	54	27	4	1.80	**B1003/32**
	2.50	58	29	4	2.10	**B1002.5**
7/64	2.78	62	31	6	2.10	**B1007/64**
	3.00	62	31	6	2.40	**B1003.0**
1/8	3.18	66	33	6	2.40	**B1001/8**
	3.20	66	33	6	2.40	**B1003.2**
	3.50	71	35	6	2.70	**B1003.5**
9/64	3.57	71	35	6	2.70	**B1009/64**
5/32	3.97	76	38	6	3.00	**B1005/32**
	4.00	76	38	6	3.00	**B1004.0**
11/64	4.37	81	41	6	3.40	**B10011/64**
	4.50	81	41	6	3.40	**B1004.5**
3/16	4.76	87	44	6	3.80	**B1003/16**
	5.00	87	44	6	3.80	**B1005.0**
13/64	5.16	87	44	6	3.80	**B10013/64**
	5.50	93	47	6	4.30	**B1005.5**
7/32	5.56	93	47	6	4.30	**B1007/32**
15/64	5.95	93	47	6	4.90	**B10015/64**
	6.00	93	47	6	4.90	**B1006.0**
1/4	6.35	100	50	6	4.90	**B1001/4**
	6.50	100	50	6	4.90	**B1006.5**
17/64	6.75	107	54	6	5.50	**B10017/64**
	7.00	107	54	6	5.50	**B1007.0**
9/32	7.14	107	54	6	6.20	**B1009/32**
	7.50	107	54	6	6.20	**B1007.5**
19/64	7.54	115	58	6	6.20	**B10019/64**
5/16	7.94	115	58	6	6.20	**B1005/16**
	8.00	115	58	6	6.20	**B1008.0**
21/64	8.33	115	58	6	7.00	**B10021/64**
	8.50	115	58	6	7.00	**B1008.5**
11/32	8.73	124	62	6	7.00	**B10011/32**
	9.00	124	62	6	7.00	**B1009.0**
23/64	9.13	124	62	6	8.00	**B10023/64**
	9.50	124	62	6	8.00	**B1009.5**
3/8	9.53	124	62	6	8.00	**B1003/8**
25/64	9.92	133	66	6	8.00	**B10025/64**
	10.00	133	66	6	8.00	**B10010.0**
13/32	10.32	133	66	6	8.00	**B10013/32**
	10.50	133	66	6	8.00	**B10010.5**
	11.00	142	71	6	9.00	**B10011.0**
7/16	11.11	142	71	6	9.00	**B1007/16**

d_1 Ø Inch	d_1 Ø mm	l_1 mm	l_2 mm	z	a mm	e-Code
	11.50	142	71	6	9.00	**B10011.5**
	12.00	152	76	6	9.00	**B10012.0**
	12.50	152	76	6	10.00	**B10012.5**
1/2	12.70	152	76	6	10.00	**B1001/2**
	13.00	152	76	6	10.00	**B10013.0**
17/32	13.49	163	81	8	11.00	**B10017/32**
	13.50	163	81	8	11.00	**B10013.5**
	14.00	163	81	8	11.00	**B10014.0**
9/16	14.29	163	81	8	11.00	**B1009/16**
	14.50	163	81	8	11.00	**B10014.5**
	15.00	163	81	8	12.00	**B10015.0**
19/32	15.08	163	81	8	12.00	**B10019/32**
5/8	15.88	175	87	8	12.00	**B1005/8**
	16.00	175	87	8	12.00	**B10016.0**
	17.00	175	87	8	13.00	**B10017.0**
11/16	17.46	188	93	8	14.50	**B10011/16**
	18.00	188	93	8	14.50	**B10018.0**
	19.00	188	93	8	14.50	**B10019.0**
3/4	19.05	188	93	8	14.50	**B1003/4**
	20.00	201	100	8	16.00	**B10020.0**
13/16	20.64	201	100	8	16.00	**B10013/16**
	21.00	201	100	8	16.00	**B10021.0**
	22.00	215	107	8	18.00	**B10022.0**
7/8	22.23	215	107	8	18.00	**B1007/8**
	23.00	215	107	8	18.00	**B10023.0**
	24.00	231	115	8	18.00	**B10024.0**
	25.00	231	115	8	20.00	**B10025.0**
1“	25.40	231	115	8	20.00	**B1001**
	26.00	231	115	8	20.00	**B10026.0**
	27.00	247	124	10	22.00	**B10027.0**
	28.00	247	124	10	22.00	**B10028.0**
	29.00	247	124	10	22.00	**B10029.0**
	30.00	247	124	10	24.00	**B10030.0**
	31.00	265	133	10	24.00	**B10031.0**
	32.00	265	133	10	24.00	**B10032.0**
	33.00	265	133	10	26.00	**B10033.0**
	34.00	284	142	10	26.00	**B10034.0**
	35.00	284	142	10	29.00	**B10035.0**
	36.00	284	142	10	29.00	**B10036.0**
	37.00	284	142	10	29.00	**B10037.0**
	38.00	305	152	10	29.00	**B10038.0**
	39.00	305	152	10	32.00	**B10039.0**
	40.00	305	152	10	32.00	**B10040.0**
	45.00	326	163	12	35.00	**B10045.0**
	50.00	347	174	12	39.00	**B10050.0**

B341

- Adjustable Hand Reamer
- Handreibahle, verstellbar
- Handruimer - nastelbaar
- Alesoir main réglable
- Escariador de mano ajustable
- Mandril Manual Ajustável

B341

d2=d1 with tolerance e9, adjustment Range 1/100 of Diameter / d2=d1 mit Toleranz e9, einstellbereich 1/100 Durchmesser / d2=d1 met tolerantie e9, instelbereik 1/100 diameter / d2=d1 en tolérance e9, gamme complémentaire au 1/100 / d2=d1 con tolerancia e9, gama de ajuste 1/100 del Diámetro / d2=d1 tolerância e9

HSS | ST | DIN 859 | B

■ 1.1 1.2 1.3 1.4 2.1 3.1 4.1 6.2

● 1.5 1.6 3.2 3.3 3.4 4.2 4.3 5.1 5.2 5.3 6.1 6.3 6.4 7.1 7.2 8.2

d_1 Ø mm	l_1 mm	l_2 mm	z	a mm	e-Code
6.0	93	33	6	4.9	**B3416.0**
7.0	107	38	9	5.5	**B3417.0**
8.0	115	42	9	6.2	**B3418.0**
10.0	133	50	9	8.0	**B34110.0**
11.0	142	51	9	9.0	**B34111.0**
12.0	152	56	9	9.0	**B34112.0**

d_1 Ø mm	l_1 mm	l_2 mm	z	a mm	e-Code
14.0	163	61	9	11.0	**B34114.0**
16.0	175	67	9	12.0	**B34116.0**
18.0	188	68	9	14.5	**B34118.0**
20.0	201	75	9	16.0	**B34120.0**

B334

- Hand Reamer Quickly Adjustable
- Verstellbare-Handreibahle
- Verstelbare handruimers
- Alésoirs à main expansibles
- Escariador de mano Extensibles
- Mandril Manual Expansível

B334

HSS

■ 1.1 1.2 1.3 1.4 2.1 3.1 4.1 6.2

● 1.5 1.6 3.2 3.3 3.4 4.2 4.3 5.1 5.2 5.3 6.1 6.3 6.4 7.1 7.2 8.2

Nr.	d min-max mm	l_1 mm	l_2 mm	z	a mm	e-Code
000	6.4 - 7.2	110	32	4	3.0	**B334000**
00	7.2 - 8.0	110	32	4	3.4	**B33400**
0	8.0 - 9.0	115	34	5	3.8	**B3340**
1	9.0 - 10.0	115	34	5	4.3	**B3341**
2	10.0 - 11.0	115	34	5	4.9	**B3342**
3	11.0 - 12.0	125	35	5	4.9	**B3343**
4	12.0 - 13.5	135	41	5	6.2	**B3344**
5	13.5 - 15.5	146	50	5	7.0	**B3345**
6	15.5 - 18.0	166	60	5	8.0	**B3346**
7	18.0 - 21.0	178	65	5	9.0	**B3347**

Nr.	d min-max mm	l_1 mm	l_2 mm	z	a mm	e-Code
8	21.0 - 24.0	195	76	5	11.0	**B3348**
9	24.0 - 27.5	218	82	5	12.0	**B3349**
10	27.5 - 31.5	245	86	5	14.5	**B33410**
11	31.5 - 37.0	280	98	6	18.0	**B33411**
12	37.0 - 45.0	325	108	6	20.0	**B33412**
13	45.0 - 55.0	370	118	6	26.0	**B33413**
14	55.0 - 67.0	400	125	6	32.0	**B33414**
15	67.0 - 80.0	435	140	8	39.0	**B33415**
16	80.0 - 95.0	475	155	8	49.0	**B33416**

B335

- Hand Reamer Quickly Adjustable - Spare Parts (B334)
- Accessoires pour alésoirs à main expansibles (B334)
- Ersatzteile für B334
- Accesorios para el porta-escariador tipo B334
- Verstelbare handruimers - reserve onderdelen (B334)
- Acessórios de Substituição p/ B334

BLADES

NUT

B335

HSS D

Nr.	e-Code
000	B335000BLADES
000	B335000NUT
00	B33500BLADES
00	B33500NUT
0	B3350BLADES
0	B3350NUT
1	B3351BLADES
1	B3351NUT
2	B3352BLADES
2	B3352NUT
3	B3353BLADES
3	B3353NUT
4	B3354BLADES
4	B3354NUT
5	B3355BLADES
5	B3355NUT
6	B3356BLADES
6	B3356NUT
7	B3357BLADES
7	B3357NUT

Nr.	e-Code
8	B3358BLADES
8	B3358NUT
9	B3359BLADES
9	B3359NUT
10	B33510BLADES
10	B33510NUT
11	B33511BLADES
11	B33511NUT
12	B33512BLADES
12	B33512NUT
13	B33513BLADES
13	B33513NUT
14	B33514BLADES
14	B33514NUT
15	B33515BLADES
15	B33515NUT
16	B33516BLADES
16	B33516NUT

B951

- Hand Taper Reamer
- Handreibahle, konisch, spiralgenutet
- Conische handruimer
- Alésoir à main conique
- Escariador conico de mano
- Mandril Manual Cónico

B951

HSS | ST | D | B | 1:10

■ 1.1 1.2 1.3 1.4 2.1 3.1 4.1 6.2

● 1.5 1.6 3.2 3.3 3.4 4.2 4.3 5.1 5.2 5.3 6.1 6.3 6.4 7.1 7.2 8.2

d_2 Ø mm	d_1 Ø mm	l_1 mm	l_2 mm	z	a mm	d_3 Øh_{11} mm	e-Code
10	3	100	70	5	6.2	8	**B95110.0**
15	5	140	100	7	10.0	13	**B95115.0**
25	10	195	150	9	16.0	21	**B95125.0**
35	15	250	200	11	24.0	30	**B95135.0**

d_2 Ø mm	d_1 Ø mm	l_1 mm	l_2 mm	z	a mm	d_3 Øh_{11} mm	e-Code
45	20	275	220	11	32.0	40	**B95145.0**

B301

- Hand Taper Pin Reamer
- Handreibahle, konisch
- Pengat handruimers
- Alésoir à main conique
- Escariador de mano para pasadores cónicos
- Mandril Manual Cónico p/ Cavilhas

B301

HSS | ST | BS 328 | A | 1:48

■ 1.1 1.2 1.3 1.4 2.1 3.1 4.1 6.2

● 1.5 1.6 2.2 2.3 3.2 3.3 3.4 4.2 4.3 5.1 5.2 5.3 6.1 6.3 6.4 7.1 7.2 7.3 7.4 8.2

nom Ø	d_1 Ø mm	l_1 mm	l_2 mm	z	a mm	d_2 Ø mm	e-Code	
1/16	1.10	51	25	4	1.2	1.63	**B3011/16**	1)
5/64	1.50	51	25	4	1.6	2.03	**B3015/64**	1)
3/32	1.75	57	32	4	2.0	2.41	**B3013/32**	1)
7/64	2.03	64	38	4	2.2	2.82	**B3017/64**	1)
1/8	2.30	70	44	4	2.5	3.23	**B3011/8**	1)
9/64	2.64	73	48	4	2.8	3.63	**B3019/64**	1)
5/32	2.95	76	51	4	3.1	4.01	**B3015/32**	1)
11/64	3.23	89	57	4	3.6	4.42	**B30111/64**	1)
3/16	3.50	102	70	4	4.0	4.95	**B3013/16**	1)
7/32	4.13	102	70	6	4.5	5.59	**B3017/32**	1)
1/4	4.64	117	86	6	5.0	6.43	**B3011/4**	2)
9/32	5.23	143	105	6	5.6	7.42	**B3019/32**	2)
5/16	5.84	143	105	6	6.3	8.03	**B3015/16**	2)
11/32	6.43	152	114	6	7.1	8.81	**B30111/32**	2)
3/8	7.03	165	127	6	8.0	9.68	**B3013/8**	2)
13/32	7.42	191	146	6	8.0	10.46	**B30113/32**	2)
7/16	8.21	191	146	6	9.0	11.25	**B3017/16**	2)
1/2	9.41	210	165	6	10.0	12.85	**B3011/2**	2)
9/16	10.93	216	171	6	11.2	14.50	**B3019/16**	2)
5/8	12.11	235	191	6	12.5	16.08	**B3015/8**	2)
3/4	14.67	273	222	6	16.0	19.30	**B3013/4**	2)
7/8	17.45	305	241	6	18.0	22.48	**B3017/8**	2)

[1] Limit of tolerance +0.0030 / Toleranz +0.0030 / Tolerantie +0.0030 / Tolérance +0.0030 / Límite de tolerancia +0.0030 / Limite de tolerância +0.0030

[2] Limit of tolerance +0.0050 / Toleranz +0.0050 / Tolerantie +0.0050 / Tolérance +0.0050 / Límite de tolerancia +0.0050 / Limite de tolerância +0.0050

B903

- Hand Taper Pin Reamer
- Handreibahle, konisch
- Pengat handruimers
- Alésoir à main conique
- Escariador de mano para pasadores cónicos
- Mandril Manual Cónico p/ Cavilhas

B903

HSS | ST | DIN 9 | A | 1:50

■ 1.1 1.2 1.3 1.4 2.1 3.1 4.1 6.2

● 1.5 1.6 2.2 2.3 3.2 3.3 3.4 4.2 4.3 5.1 5.2 5.3 6.1 6.3 6.4 7.1 7.2 7.3 7.4 8.2

nom Ø	d_1 Ø mm	d_2 Ø mm	l_1 mm	l_2 mm	z	a mm	d_3 Øh_{11} mm	e-Code	
1.5	1.40	2.14	57	37	4	1.80	2.14	**B9031.5**	1)
2.0	1.90	2.86	68	48	4	2.24	2.86	**B9032.0**	1)
2.5	2.40	3.36	68	48	4	2.80	3.36	**B9032.5**	1)
3.0	2.90	4.06	80	58	4	3.15	4.00	**B9033.0**	1)
4.0	3.90	5.26	93	68	4	4.00	5.00	**B9034.0**	1)
5.0	4.90	6.36	100	73	4	5.00	6.30	**B9035.0**	1)
6.0	5.90	8.00	135	105	6	6.30	7.90	**B9036.0**	2)
8.0	7.90	10.80	180	145	6	8.00	10.50	**B9038.0**	2)
10.0	9.90	13.40	215	175	6	10.00	13.30	**B90310.0**	2)
12.0	11.80	16.00	255	210	8	11.20	16.00	**B90312.0**	2)
13.0	12.86	16.74	255	210	8	12.50	16.74	**B90313.0**	2)
14.0	13.86	17.74	255	210	8	12.50	17.74	**B90314.0**	2)
16.0	15.80	20.40	280	230	8	14.00	20.40	**B90316.0**	2)
20.0	19.80	24.80	310	250	8	18.00	24.80	**B90320.0**	2)

[1] Limit of tolerance +0.0750 / Toleranz +0.0750 / Tolerantie +0.0750 / Tolérance +0.0750 / Límite de tolerancia +0.0750 / Limite de tolerância +0.0750

[2] Limit of tolerance +0.1250 / Toleranz +0.1250 / Tolerantie +0.1250 / Tolérance +0.1250 / Límite de tolerancia +0.1250 / Limite de tolerância +0.1250

B952

- Hand Taper Pin Reamer
- Handreibahle, konisch
- Pengat handruimers
- Alésoir à main conique
- Escariador de mano para pasadores cónicos
- Mandril Manual Cónico p/ Cavilhas

B952

■ 1.1 1.2 1.3 1.4 2.1 3.1 4.1 6.2

● 1.5 1.6 2.2 2.3 3.2 3.3 3.4 4.2 4.3 5.1 5.2 5.3 6.1 6.3 6.4 7.1 7.2 7.3 7.4 8.2

nom Ø	d_1 Ø mm	d_2 Ø mm	l_1 mm	l_2 mm	z	a mm	d_3 Øh_{11} mm	e-Code	
1.2	1.1	1.74	50	32	3	2.4	3.15	**B9521.2**	1)
1.5	1.4	2.14	57	37	3	2.4	3.15	**B9521.5**	1)
2.0	1.9	2.86	68	48	3	2.4	3.15	**B9522.0**	1)
2.5	2.4	3.36	68	48	4	2.4	3.15	**B9522.5**	1)
3.0	2.9	4.06	80	58	5	3.0	4.00	**B9523.0**	
3.5	3.4	4.66	87	63	5	3.4	4.50	**B9523.5**	
4.0	3.9	5.26	93	68	5	3.8	5.00	**B9524.0**	
4.5	4.4	5.80	95	70	5	4.3	5.60	**B9524.5**	
5.0	4.9	6.36	100	73	5	4.9	6.30	**B9525.0**	
5.5	5.4	7.20	118	90	6	5.5	7.10	**B9525.5**	
6.0	5.9	8.00	135	105	6	6.2	8.00	**B9526.0**	
6.5	6.4	8.60	140	110	6	6.2	8.00	**B9526.5**	
7.0	6.9	9.40	160	125	6	7.0	9.00	**B9527.0**	
8.0	7.9	10.8	180	145	6	8.0	10.00	**B9528.0**	
9.0	8.9	12.1	195	160	6	9.0	11.20	**B9529.0**	
10.0	9.9	13.4	215	175	6	10.0	12.50	**B95210.0**	
12.0	11.8	16.0	255	210	8	11.0	14.00	**B95212.0**	
13.0	12.8	17.0	255	210	8	12.0	16.00	**B95213.0**	
14.0	13.8	18.0	255	210	8	12.0	16.00	**B95214.0**	
16.0	15.8	20.4	280	230	8	14.5	18.00	**B95216.0**	
20.0	19.8	24.8	310	250	8	18.0	22.40	**B95220.0**	
25.0	24.7	30.7	370	300	10	22.0	28.00	**B95225.0**	
30.0	29.7	36.1	400	320	10	24.0	31.50	**B95230.0**	
40.0	39.7	46.5	430	340	12	32.0	40.00	**B95240.0**	
50.0	49.7	56.9	460	360	12	39.0	50.00	**B95250.0**	

1) Straight Flute, form A / Geradegenuttet, Form A / Rechte groeven, vorm A / Goujure droite, Forme A / Estrías rectas, forma A /

B500

- Machine Reamer
- Maschinenreibahle
- Machineruimer
- Alésoir machine
- Escariador de máquina
- Mandril p/ Cavilhas Cónicas

B500

HSS-E | DIN 212 | A | H7

■ 3.1 4.1

● 3.2 3.3 3.4 6.2 6.3 6.4 8.2

d_1 Ø	l_1	l_2	l_3		d_2 Øh$_9$	
mm	mm	mm	mm	z	mm	e-Code
2.0	49	11	24	4	2.0	**B5002.0**
2.5	57	14	28	4	2.5	**B5002.5**
3.0	61	15	32	6	3.0	**B5003.0**
3.5	70	18	40	6	3.5	**B5003.5**
4.0	75	19	43	6	4.0	**B5004.0**
4.5	80	21	47	6	4.5	**B5004.5**
5.0	86	23	52	6	5.0	**B5005.0**
6.0	93	26	57	6	5.6	**B5006.0**
7.0	109	31	69	6	7.1	**B5007.0**
8.0	117	33	75	6	8.0	**B5008.0**
9.0	125	36	81	6	9.0	**B5009.0**
10.0	133	38	87	6	10.0	**B50010.0**

d_1 Ø	l_1	l_2	l_3		d_2 Øh$_9$	
mm	mm	mm	mm	z	mm	e-Code
11.0	142	41	96	6	10.0	**B50011.0**
12.0	151	44	105	6	10.0	**B50012.0**
13.0	151	44	105	6	10.0	**B50013.0**
14.0	160	47	110	8	12.5	**B50014.0**
15.0	162	50	112	8	12.5	**B50015.0**
16.0	170	52	120	8	12.5	**B50016.0**
17.0	175	54	123	8	14.0	**B50017.0**
18.0	182	56	130	8	14.0	**B50018.0**
19.0	189	58	131	8	16.0	**B50019.0**
20.0	195	60	137	8	16.0	**B50020.0**

B180

- NC - Reamer for High Precision Chucks
- Alésoir de précision - NC
- NC-Maschinen-Reibahle
- NC- Escariador de precisión
- NC- precisieruimer met eenheidschacht
- Mandril de Precisão p/ CNC

B191
220

B180

HSS-E | DIN 212 | DIN 6535 HA | B | H7

■ 1.1 1.2 1.3 1.4 2.1 4.2 5.1

● 1.5 1.6 2.2 2.3 2.4 3.1 3.2 3.3 3.4 4.1 4.3 5.2 5.3 6.1 6.2 6.3 6.4

d_1 Ø mm	l_1 mm	l_2 mm	l_3 mm	z	d_2 Øh$_6$ mm	e-Code
1.5	40	8	18	3	2	B1801.5
1.6	43	9	20	3	2	B1801.6
1.7	43	9	20	3	2	B1801.7
1.8	46	10	22	4	2	B1801.8
1.9	46	10	22	4	2	B1801.9
2.0	49	11	24	4	2	B1802.0
2.1	49	11	24	4	2	B1802.1
2.2	53	12	26	4	3	B1802.2
2.3	53	12	26	4	3	B1802.3
2.4	57	14	28	4	3	B1802.4
2.5	57	14	28	4	3	B1802.5
2.6	57	14	28	4	3	B1802.6
2.7	61	15	32	6	3	B1802.7
2.8	61	15	32	6	3	B1802.8
2.9	61	15	32	6	3	B1802.9
3.0	61	15	32	6	3	B1803.0
3.1	65	16	35	6	4	B1803.1
3.2	65	16	35	6	4	B1803.2
3.3	65	16	35	6	4	B1803.3
3.4	70	18	40	6	4	B1803.4
3.5	70	18	40	6	4	B1803.5
3.6	70	18	40	6	4	B1803.6
3.7	70	18	40	6	4	B1803.7
3.8	75	19	43	6	4	B1803.8
3.9	75	19	43	6	4	B1803.9
4.0	75	19	43	6	4	B1804.0
4.1	75	19	43	6	4	B1804.1
4.2	75	19	43	6	4	B1804.2
4.3	80	21	47	6	5	B1804.3
4.4	80	21	47	6	5	B1804.4
4.5	80	21	47	6	5	B1804.5
4.6	80	21	47	6	5	B1804.6
4.7	80	21	47	6	5	B1804.7
4.8	86	23	52	6	5	B1804.8
4.9	86	23	52	6	5	B1804.9
5.0	86	23	52	6	5	B1805.0
5.1	86	23	52	6	5	B1805.1
5.2	86	23	52	6	5	B1805.2
5.3	86	23	52	6	5	B1805.3
5.4	93	26	57	6	6	B1805.4
5.5	93	26	57	6	6	B1805.5
5.6	93	26	57	6	6	B1805.6
5.7	93	26	57	6	6	B1805.7
5.8	93	26	57	6	6	B1805.8
5.9	93	26	57	6	6	B1805.9
6.0	93	26	57	6	6	B1806.0
6.1	101	28	63	6	6	B1806.1
6.2	101	28	63	6	6	B1806.2

d_1 Ø mm	l_1 mm	l_2 mm	l_3 mm	z	d_2 Øh$_6$ mm	e-Code
6.3	101	28	63	6	6	B1806.3
6.4	101	28	63	6	6	B1806.4
6.5	101	28	63	6	6	B1806.5
6.6	101	28	63	6	6	B1806.6
6.7	101	28	63	6	6	B1806.7
6.8	109	31	69	6	8	B1806.8
6.9	109	31	69	6	8	B1806.9
7.0	109	31	69	6	8	B1807.0
7.1	109	31	69	6	8	B1807.1
7.2	109	31	69	6	8	B1807.2
7.3	109	31	69	6	8	B1807.3
7.4	109	31	69	6	8	B1807.4
7.5	109	31	69	6	8	B1807.5
7.6	117	33	75	6	8	B1807.6
7.7	117	33	75	6	8	B1807.7
7.8	117	33	75	6	8	B1807.8
7.9	117	33	75	6	8	B1807.9
8.0	117	33	75	6	8	B1808.0
8.1	117	33	75	6	8	B1808.1
8.2	117	33	75	6	8	B1808.2
8.3	117	33	75	6	8	B1808.3
8.4	117	33	75	6	8	B1808.4
8.5	117	33	75	6	8	B1808.5
8.6	125	36	81	6	10	B1808.6
8.7	125	36	81	6	10	B1808.7
8.8	125	36	81	6	10	B1808.8
8.9	125	36	81	6	10	B1808.9
9.0	125	36	81	6	10	B1809.0
9.1	125	36	81	6	10	B1809.1
9.2	125	36	81	6	10	B1809.2
9.3	125	36	81	6	10	B1809.3
9.4	125	36	81	6	10	B1809.4
9.5	125	36	81	6	10	B1809.5
9.6	133	38	87	6	10	B1809.6
9.7	133	38	87	6	10	B1809.7
9.8	133	38	87	6	10	B1809.8
9.9	133	38	87	6	10	B1809.9
10.0	133	38	87	6	10	B18010.0
11.0	142	41	96	6	10	B18011.0
12.0	151	44	105	6	10	B18012.0
13.0	151	44	105	6	10	B18013.0
14.0	160	47	110	8	14	B18014.0
15.0	162	50	112	8	14	B18015.0
16.0	170	52	120	8	14	B18016.0
17.0	175	54	123	8	14	B18017.0
18.0	182	56	130	8	14	B18018.0
19.0	189	58	131	8	16	B18019.0
20.0	195	60	137	8	16	B18020.0

B191

- NC - Reamer for High Precision Chucks, set (B180)
- Alésoir de précision - NC
- NC-Maschinen-Reibahle
- NC- Escariador de precisión
- NC- precisieruimer met eenheidschacht
- Mandril de Precisão p/ CNC

B191

A=Types in Set, B=No. in Set, C=Diameters in Set / A = Typen in Satz, B=Stückzahl, C=Durchmesser im Satz / A = Typen in set, B=No. ruimers in set, C=Diameters in set / A = Types de coffrets, B=Nombre de forets dans le coffret, C=Diamètres dans le coffret / A = Tipos en el juego, B=No. Brocas en el Juego, C=Diámetros en el Juego / A = Tipos no Jogo, B=No. brocas/jogo, C=Diâmetros por Jogo

Nr.	A	B	C	e-Code
10S	B180 type inside	10 pcs	1.5mm 2.0mm 3.0mm 4.0mm 5.0mm 6.0mm 7.0mm 8.0mm 10.0mm 12.0mm	**B19110S**

B181

- NC - Centesimal Reamer for High Precision Chucks
- NC - Alésoir au centième pour mandrins haute précision
- NC- 1/100 Reibahle für Hochgenauigkeitsfutter
- NC - Escariador Centesimal para portas de alta precisión
- NC-1/100 ruimers met eenheidschacht
- NC - Mandril Centesimal p/ buchas de alta precisão

B181

■ 1.1 1.2 1.3 1.4 2.1 4.2 5.1

● 1.5 1.6 2.2 2.3 3.1 3.2 3.3 3.4 4.1 4.3 5.2 5.3 6.1 6.2 6.3 6.4

d_1 Ø mm	l_1 mm	l_2 mm	l_3 mm	z	d_2 Øh$_6$ mm	e-Code
1.00	34	5.5	15	3	1	**B1811.00**
1.01	34	5.5	15	3	1	**B1811.01**
1.02	34	5.5	15	3	1	**B1811.02**
1.50	40	8.0	18	3	2	**B1811.50**
1.51	43	9.0	20	3	2	**B1811.51**
1.52	43	9.0	20	3	2	**B1811.52**
1.97	49	11.0	24	4	2	**B1811.97**
1.98	49	11.0	24	4	2	**B1811.98**
1.99	49	11.0	24	4	2	**B1811.99**
2.00	49	11.0	24	4	2	**B1812.00**
2.01	49	11.0	24	4	2	**B1812.01**
2.02	49	11.0	24	4	2	**B1812.02**
2.48	57	14.0	28	4	3	**B1812.48**
2.49	57	14.0	28	4	3	**B1812.49**
2.50	57	14.0	28	4	3	**B1812.50**
2.51	57	14.0	28	4	3	**B1812.51**
2.52	57	14.0	28	4	3	**B1812.52**
2.97	61	15.0	32	6	3	**B1812.97**
2.98	61	15.0	32	6	3	**B1812.98**
2.99	61	15.0	32	6	3	**B1812.99**
3.00	61	15.0	32	6	3	**B1813.00**
3.01	65	16.0	35	6	4	**B1813.01**
3.02	65	16.0	35	6	4	**B1813.02**
3.97	75	19.0	43	6	4	**B1813.97**
3.98	75	19.0	43	6	4	**B1813.98**
3.99	75	19.0	43	6	4	**B1813.99**
4.00	75	19.0	43	6	4	**B1814.00**
4.01	75	19.0	43	6	4	**B1814.01**
4.02	75	19.0	43	6	4	**B1814.02**
4.97	86	23.0	52	6	5	**B1814.97**

d_1 Ø mm	l_1 mm	l_2 mm	l_3 mm	z	d_2 Øh$_6$ mm	e-Code
4.98	86	23.0	52	6	5	**B1814.98**
4.99	86	23.0	52	6	5	**B1814.99**
5.00	86	23.0	52	6	5	**B1815.00**
5.01	86	23.0	52	6	5	**B1815.01**
5.02	86	23.0	52	6	5	**B1815.02**
5.97	93	26.0	57	6	6	**B1815.97**
5.98	93	26.0	57	6	6	**B1815.98**
5.99	93	26.0	57	6	6	**B1815.99**
6.00	93	26.0	57	6	6	**B1816.00**
6.01	101	28.0	63	6	6	**B1816.01**
6.02	101	28.0	63	6	6	**B1816.02**
7.97	117	33.0	75	6	8	**B1817.97**
7.98	117	33.0	75	6	8	**B1817.98**
7.99	117	33.0	75	6	8	**B1817.99**
8.00	117	33.0	75	6	8	**B1818.00**
8.01	117	33.0	75	6	8	**B1818.01**
8.02	117	33.0	75	6	8	**B1818.02**
9.00	125	36.0	81	6	10	**B1819.00**
9.01	125	36.0	81	6	10	**B1819.01**
9.02	125	36.0	81	6	10	**B1819.02**
9.97	133	38.0	87	6	10	**B1819.97**
9.98	133	38.0	87	6	10	**B1819.98**
9.99	133	38.0	87	6	10	**B1819.99**
10.00	133	38.0	87	6	10	**B18110.00**
10.01	133	38.0	87	6	10	**B18110.01**
10.02	133	38.0	87	6	10	**B18110.02**
11.97	151	44.0	105	6	10	**B18111.97**
11.98	151	44.0	105	6	10	**B18111.98**
11.99	151	44.0	105	6	10	**B18111.99**
12.00	151	44.0	105	6	10	**B18112.00**

B156

- Machine Reamer
- Alésoir machine
- Maschinenreibahle
- Escariador de máquina
- Machineruimer
- Mandril p/ Cavilhas Cónicas

B156

HSS-E | DIN 212 | B | H7

■ 1.1 1.2 1.3 1.4 2.1 4.2 5.1

● 1.5 1.6 2.2 2.3 3.1 3.2 3.3 3.4 4.1 4.3 5.2 5.3 6.1 6.2 6.3 6.4

d_1 Ø mm	l_1 mm	l_2 mm	l_3 mm	z	d_2 Øh$_9$ mm	e-Code
1.5	40	8	18	3	1.5	**B1561.5**
1.6	43	9	20	3	1.6	**B1561.6**
1.8	46	10	22	4	1.8	**B1561.8**
2.0	49	11	24	4	2.0	**B1562.0**
2.2	53	12	26	4	2.2	**B1562.2**
2.5	57	14	28	4	2.5	**B1562.5**
2.8	61	15	32	6	2.8	**B1562.8**
3.0	61	15	32	6	3.0	**B1563.0**
3.2	65	16	35	6	3.2	**B1563.2**
3.5	70	18	40	6	3.5	**B1563.5**
4.0	75	19	43	6	4.0	**B1564.0**
4.5	80	21	47	6	4.5	**B1564.5**
5.0	86	23	52	6	5.0	**B1565.0**
5.5	93	26	57	6	5.6	**B1565.5**
6.0	93	26	57	6	5.6	**B1566.0**
6.5	101	28	63	6	6.3	**B1566.5**

d_1 Ø mm	l_1 mm	l_2 mm	l_3 mm	z	d_2 Øh$_9$ mm	e-Code
7.0	109	31	69	6	7.1	**B1567.0**
8.0	117	33	75	6	8.0	**B1568.0**
9.0	125	36	81	6	9.0	**B1569.0**
10.0	133	38	87	6	10.0	**B15610.0**
11.0	142	41	96	6	10.0	**B15611.0**
12.0	151	44	105	6	10.0	**B15612.0**
13.0	151	44	105	6	10.0	**B15613.0**
14.0	160	47	110	8	12.5	**B15614.0**
15.0	162	50	112	8	12.5	**B15615.0**
16.0	170	52	120	8	12.5	**B15616.0**
17.0	175	54	123	8	14.0	**B15617.0**
18.0	182	56	130	8	14.0	**B15618.0**
19.0	189	58	131	8	16.0	**B15619.0**
20.0	195	60	137	8	16.0	**B15620.0**

B170

DORMER

- Machine Centesimal Reamer
- 1/100 Maschinen-Reibahle
- 1/100 Machineruimers
- Alésoir Machine au centième
- Escariador de máquina centesimal
- NC - Mandril de Máquina Centesimal

B170

■ 1.1 1.2 1.3 1.4 2.1 4.2 5.1

● 1.5 1.6 2.2 2.3 3.1 3.2 3.3 3.4 4.1 4.3 5.2 5.3 6.1 6.2 6.3 6.4

d_1 Ø mm	l_1 mm	l_2 mm	l_3 mm	z	d_2 Øh$_9$ mm	e-Code
0.98	34	5.5	15	3	1.0	B170.98
0.99	34	5.5	15	3	1.0	B170.99
1.00	34	5.5	15	3	1.0	B1701.0
1.01	34	5.5	15	3	1.0	B1701.01
1.02	34	5.5	15	3	1.0	B1701.02
1.03	34	5.5	15	3	1.0	B1701.03
1.04	34	5.5	15	3	1.0	B1701.04
1.05	34	5.5	15	3	1.0	B1701.05
1.49	40	8.0	18	3	1.5	B1701.49
1.50	40	8.0	18	3	1.5	B1701.5
1.51	43	9.0	20	3	1.6	B1701.51
1.52	43	9.0	20	3	1.6	B1701.52
1.98	49	11.0	24	4	2.0	B1701.98
1.99	49	11.0	24	4	2.0	B1701.99
2.00	49	11.0	24	4	2.0	B1702.0
2.01	49	11.0	24	4	2.0	B1702.01
2.02	49	11.0	24	4	2.0	B1702.02
2.03	49	11.0	24	4	2.0	B1702.03
2.04	49	11.0	24	4	2.0	B1702.04
2.05	49	11.0	24	4	2.0	B1702.05
2.49	57	14.0	28	4	2.5	B1702.49
2.50	57	14.0	28	4	2.5	B1702.5
2.51	57	14.0	28	4	2.5	B1702.51
2.52	57	14.0	28	4	2.5	B1702.52
2.98	61	15.0	32	6	3.0	B1702.98
2.99	61	15.0	32	6	3.0	B1702.99
3.00	61	15.0	32	6	3.0	B1703.0
3.01	65	16.0	35	6	3.2	B1703.01
3.02	65	16.0	35	6	3.2	B1703.02
3.03	65	16.0	35	6	3.2	B1703.03
3.04	65	16.0	35	6	3.2	B1703.04
3.05	65	16.0	35	6	3.2	B1703.05
3.49	70	18.0	40	6	3.5	B1703.49
3.50	70	18.0	40	6	3.5	B1703.5
3.51	70	18.0	40	6	3.5	B1703.51
3.52	70	18.0	40	6	3.5	B1703.52
3.98	75	19.0	43	6	4.0	B1703.98
3.99	75	19.0	43	6	4.0	B1703.99
4.00	75	19.0	43	6	4.0	B1704.0
4.01	75	19.0	43	6	4.0	B1704.01
4.02	75	19.0	43	6	4.0	B1704.02
4.03	75	19.0	43	6	4.0	B1704.03
4.04	75	19.0	43	6	4.0	B1704.04
4.05	75	19.0	43	6	4.0	B1704.05

d_1 Ø mm	l_1 mm	l_2 mm	l_3 mm	z	d_2 Øh$_9$ mm	e-Code
4.49	80	21.0	47	6	4.5	B1704.49
4.50	80	21.0	47	6	4.5	B1704.5
4.51	80	21.0	47	6	4.5	B1704.51
4.52	80	21.0	47	6	4.5	B1704.52
4.98	86	23.0	52	6	5.0	B1704.98
4.99	86	23.0	52	6	5.0	B1704.99
5.00	86	23.0	52	6	5.0	B1705.0
5.01	86	23.0	52	6	5.0	B1705.01
5.02	86	23.0	52	6	5.0	B1705.02
5.03	86	23.0	52	6	5.0	B1705.03
5.04	86	23.0	52	6	5.0	B1705.04
5.05	86	23.0	52	6	5.0	B1705.05
5.49	93	26.0	57	6	5.6	B1705.49
5.50	93	26.0	57	6	5.6	B1705.5
5.51	93	26.0	57	6	5.6	B1705.51
5.52	93	26.0	57	6	5.6	B1705.52
5.98	93	26.0	57	6	5.6	B1705.98
5.99	93	26.0	57	6	5.6	B1705.99
6.00	93	26.0	57	6	5.6	B1706.0
6.01	101	28.0	63	6	6.3	B1706.01
6.02	101	28.0	63	6	6.3	B1706.02
6.03	101	28.0	63	6	6.3	B1706.03
6.04	101	28.0	63	6	6.3	B1706.04
6.05	101	28.0	63	6	6.3	B1706.05
6.49	101	28.0	63	6	6.3	B1706.49
6.50	101	28.0	63	6	6.3	B1706.5
6.51	101	28.0	63	6	6.3	B1706.51
6.52	101	28.0	63	6	6.3	B1706.52
6.98	109	31.0	69	6	7.1	B1706.98
6.99	109	31.0	69	6	7.1	B1706.99
7.00	109	31.0	69	6	7.1	B1707.0
7.01	109	31.0	69	6	7.1	B1707.01
7.02	109	31.0	69	6	7.1	B1707.02
7.03	109	31.0	69	6	7.1	B1707.03
7.04	109	31.0	69	6	7.1	B1707.04
7.05	109	31.0	69	6	7.1	B1707.05
7.49	109	31.0	69	6	7.1	B1707.49
7.50	109	31.0	69	6	7.1	B1707.5
7.51	117	33.0	75	6	8.0	B1707.51
7.52	117	33.0	75	6	8.0	B1707.52
7.98	117	33.0	75	6	8.0	B1707.98
7.99	117	33.0	75	6	8.0	B1707.99
8.00	117	33.0	75	6	8.0	B1708.0
8.01	117	33.0	75	6	8.0	B1708.01

DORMER

B170

d_1 Ø	l_1	l_2	l_3		d_2 Øh_9	
mm	mm	mm	mm	z	mm	e-Code
8.02	117	33.0	75	6	8.0	**B1708.02**
8.03	117	33.0	75	6	8.0	**B1708.03**
8.04	117	33.0	75	6	8.0	**B1708.04**
8.05	117	33.0	75	6	8.0	**B1708.05**
8.49	117	33.0	75	6	8.0	**B1708.49**
8.50	117	33.0	75	6	8.0	**B1708.5**
8.51	125	36.0	81	6	9.0	**B1708.51**
8.52	125	36.0	81	6	9.0	**B1708.52**
8.98	125	36.0	81	6	9.0	**B1708.98**
8.99	125	36.0	81	6	9.0	**B1708.99**
9.00	125	36.0	81	6	9.0	**B1709.0**
9.01	125	36.0	81	6	9.0	**B1709.01**
9.02	125	36.0	81	6	9.0	**B1709.02**
9.03	125	36.0	81	6	9.0	**B1709.03**
9.04	125	36.0	81	6	9.0	**B1709.04**
9.05	125	36.0	81	6	9.0	**B1709.05**
9.49	125	36.0	81	6	9.0	**B1709.49**
9.50	125	36.0	81	6	9.0	**B1709.5**
9.51	133	38.0	87	6	10.0	**B1709.51**
9.52	133	38.0	87	6	10.0	**B1709.52**
9.98	133	38.0	87	6	10.0	**B1709.98**
9.99	133	38.0	87	6	10.0	**B1709.99**
10.00	133	38.0	87	6	10.0	**B17010.0**
10.01	133	38.0	87	6	10.0	**B17010.01**

d_1 Ø	l_1	l_2	l_3		d_2 Øh_9	
mm	mm	mm	mm	z	mm	e-Code
10.02	133	38.0	87	6	10.0	**B17010.02**
10.03	133	38.0	87	6	10.0	**B17010.03**
10.04	133	38.0	87	6	10.0	**B17010.04**
10.05	133	38.0	87	6	10.0	**B17010.05**
10.49	133	38.0	87	6	10.0	**B17010.49**
10.50	133	38.0	87	6	10.0	**B17010.5**
10.51	133	38.0	87	6	10.0	**B17010.51**
10.52	133	38.0	87	6	10.0	**B17010.52**
10.98	142	41.0	96	6	10.0	**B17010.98**
10.99	142	41.0	96	6	10.0	**B17010.99**
11.00	142	41.0	96	6	10.0	**B17011.0**
11.01	142	41.0	96	6	10.0	**B17011.01**
11.02	142	41.0	96	6	10.0	**B17011.02**
11.03	142	41.0	96	6	10.0	**B17011.03**
11.04	142	41.0	96	6	10.0	**B17011.04**
11.05	142	41.0	96	6	10.0	**B17011.05**
11.49	142	41.0	96	6	10.0	**B17011.49**
11.50	142	41.0	96	6	10.0	**B17011.5**
11.51	142	41.0	96	6	10.0	**B17011.51**
11.52	142	41.0	96	6	10.0	**B17011.52**
11.98	151	44.0	105	6	10.0	**B17011.98**
11.99	151	44.0	105	6	10.0	**B17011.99**
12.00	151	44.0	105	6	10.0	**B17012.0**

B901

- Machine Reamer
- Alésoir machine
- Maschinenreibahle
- Escariador de máquina
- Machineruimer
- Mandril p/ Cavilhas Cónicas

B901

d2=d1-0.025

HSS | ST | BS 328 | B | H7

■ 1.1 1.2 1.3 1.4 2.1 3.1 4.1 6.2

● 1.5 1.6 3.2 3.3 3.4 4.2 4.3 5.1 5.2 5.3 6.1 6.3 6.4 7.1 7.2 8.2

d_1 Ø Inch	d_1 Ø mm	l_1 mm	l_2 mm	z	e-Code
	1.50	44	21	4	**B9011.5**
1/16	1.59	44	21	4	**B9011/16**
	2.00	50	25	4	**B9012.0**
3/32	2.38	58	29	4	**B9013/32**
	2.50	58	29	4	**B9012.5**
	3.00	62	31	4	**B9013.0**
1/8	3.18	66	33	4	**B9011/8**
	3.50	71	35	4	**B9013.5**
9/64	3.57	71	35	4	**B9019/64**
5/32	3.97	76	38	6	**B9015/32**
	4.00	76	38	6	**B9014.0**
11/64	4.37	81	41	6	**B90111/64**
	4.50	81	41	6	**B9014.5**
3/16	4.76	87	44	6	**B9013/16**
	5.00	87	44	6	**B9015.0**
13/64	5.16	87	44	6	**B90113/64**
	5.50	93	47	6	**B9015.5**
7/32	5.56	93	47	6	**B9017/32**

d_1 Ø Inch	d_1 Ø mm	l_1 mm	l_2 mm	z	e-Code
15/64	5.95	93	47	6	**B90115/64**
	6.00	93	47	6	**B9016.0**
1/4	6.35	100	50	6	**B9011/4**
	7.00	107	54	6	**B9017.0**
9/32	7.14	107	54	6	**B9019/32**
5/16	7.94	115	58	6	**B9015/16**
	8.00	115	58	6	**B9018.0**
11/32	8.73	124	62	6	**B90111/32**
	9.00	124	62	6	**B9019.0**
3/8	9.53	133	66	6	**B9013/8**
	10.00	133	66	6	**B90110.0**
13/32	10.32	133	66	6	**B90113/32**
	11.00	142	71	6	**B90111.0**
7/16	11.11	142	71	6	**B9017/16**
	12.00	152	76	6	**B90112.0**
1/2	12.70	152	76	6	**B9011/2**

B157

- Machine Reamer Left Hand Helix 45°
- Alésoir Machine Hélice 45° à gauche
- Maschinenreibahle mit 45° linksdrall
- Escariador de máquina Hélice a izquierdas 45°
- Machine-schilruimer met 45° linkse spiraal
- Mandril de Máquina Hélice à Esquerda - 45°

B157

HSS-E | DIN 212 | E | H7

■ 2.1 2.2 2.3 4.1 4.2 4.3 5.1 5.2 5.3 6.1 7.1 7.2 7.3 7.4 8.1

● 1.1 1.2 1.3 1.4 1.5 1.6 6.2 9.1

d_1 Ø mm	l_1 mm	l_2 mm	l_3 mm	z	d_2 Øh$_9$ mm	e-Code
2.0	49	11	24	3	2.0	**B1572.0**
3.0	61	15	32	3	3.0	**B1573.0**
4.0	75	19	43	3	4.0	**B1574.0**
5.0	86	23	52	3	5.0	**B1575.0**
6.0	93	26	57	3	5.6	**B1576.0**
7.0	109	31	69	3	7.1	**B1577.0**
8.0	117	33	75	3	8.0	**B1578.0**
9.0	125	36	81	3	9.0	**B1579.0**
10.0	133	38	87	3	10.0	**B15710.0**
11.0	142	41	96	3	10.0	**B15711.0**

d_1 Ø mm	l_1 mm	l_2 mm	l_3 mm	z	d_2 Øh$_9$ mm	e-Code
12.0	151	44	105	3	10.0	**B15712.0**
13.0	151	44	105	3	10.0	**B15713.0**
14.0	160	47	110	3	12.5	**B15714.0**
15.0	162	50	112	3	12.5	**B15715.0**
16.0	170	52	120	3	12.5	**B15716.0**
17.0	175	54	123	3	14.0	**B15717.0**
18.0	182	56	130	3	14.0	**B15718.0**
19.0	189	58	131	3	16.0	**B15719.0**
20.0	195	60	137	3	16.0	**B15720.0**

B953

- Machine Reamer for Conical Pin Left Hand Helix 45°
- Alésoir Machine pour goupille conique Hélice à gauche à 45°
- Maschinen-Kegelreibahle mit 45° linksdrall
- Escariador de máquina para pasadores cónicos Hélice a izquierdas 45°
- Machine-pengatruimer met 45° linkse spiraal
- Mandril de Máquina p/ Cavilhas Cónicas Hélice à Esquerda - 45º

B953

Tang to DIN 1809 / mit Mitnehmer DIN 1809 / met lip DIN 1809 / Tenon selon la DIN 1809 / Lengüeta según DIN 1809 / Lingueta DIN 1809

■ 2.1 2.2 2.3 4.1 4.2 4.3 5.1 5.2 5.3 6.1 7.1 7.2 7.3 7.4 8.1

● 1.1 1.2 1.3 1.4 1.5 1.6 6.2 9.1

nom Ø	d_1 Ø mm	d_2 Ø mm	l_1 mm	l_2 mm	z	d_3 Øh$_9$ mm	e-Code
1.0	0.8	1.46	60	33	2	1.4	**B9531.0**
1.5	1.4	2.14	70	37	2	2.1	**B9531.5**
2.0	1.9	2.86	86	48	3	3.15	**B9532.0**
2.5	2.4	3.36	86	48	3	3.15	**B9532.5**
3.0	2.9	4.06	100	58	3	4.0	**B9533.0**
4.0	3.9	5.26	112	68	3	5.0	**B9534.0**

nom Ø	d_1 Ø mm	d_2 Ø mm	l_1 mm	l_2 mm	z	d_3 Øh$_9$ mm	e-Code
5.0	4.9	6.36	122	73	3	6.3	**B9535.0**
6.0	5.9	8.00	160	105	3	8.0	**B9536.0**
6.5	6.4	8.78	188	119	3	8.5	**B9536.5**
8.0	7.9	10.80	207	145	3	10.0	**B9538.0**
10.0	9.9	13.40	245	175	3	12.5	**B95310.0**
12.0	11.8	16.00	290	210	3	16.0	**B95312.0**

B161

- Machine Reamer
- Alésoir machine
- Maschinenreibahle
- Escariador de máquina
- Machineruimer
- Mandril p/ Cavilhas Cónicas

B161

HSS-E | DIN 208 | B | H7

■ 1.1 1.2 1.3 1.4 2.1 4.1 5.1

● 1.5 1.6 2.2 2.3 3.1 3.2 3.3 3.4 4.2 4.3 5.2 5.3 6.1 6.2 6.3 6.4

d_1 Ø	l_1	l_2	l_3			
mm	mm	mm	mm	z	MK	e-Code
3.0	113	15	47.5	6	1	**B1613.0**
4.0	124	19	58.5	6	1	**B1614.0**
5.0	133	23	67.5	6	1	**B1615.0**
6.0	138	26	72.5	6	1	**B1616.0**
7.0	150	31	84.5	6	1	**B1617.0**
8.0	156	33	90.5	6	1	**B1618.0**
9.0	162	36	96.5	6	1	**B1619.0**
10.0	168	38	102.5	6	1	**B16110.0**
11.0	175	41	109.5	6	1	**B16111.0**
12.0	182	44	116.5	6	1	**B16112.0**
13.0	182	44	116.5	6	1	**B16113.0**
14.0	189	47	123.5	8	1	**B16114.0**
15.0	204	50	124	8	2	**B16115.0**
16.0	210	52	130	8	2	**B16116.0**
17.0	214	54	134	8	2	**B16117.0**
18.0	219	56	139	8	2	**B16118.0**
19.0	223	58	143	8	2	**B16119.0**
20.0	228	60	148	8	2	**B16120.0**
21.0	232	62	152	8	2	**B16121.0**
22.0	237	64	157	8	2	**B16122.0**
23.0	241	66	161	8	2	**B16123.0**
24.0	268	68	169	8	3	**B16124.0**

d_1 Ø	l_1	l_2	l_3			
mm	mm	mm	mm	z	MK	e-Code
25.0	268	68	169	8	3	**B16125.0**
26.0	273	70	174	8	3	**B16126.0**
27.0	277	71	178	10	3	**B16127.0**
28.0	277	71	178	10	3	**B16128.0**
29.0	281	73	182	10	3	**B16129.0**
30.0	281	73	182	10	3	**B16130.0**
31.0	285	75	186	10	3	**B16131.0**
32.0	317	77	193	10	4	**B16132.0**
33.0	317	77	193	10	4	**B16133.0**
34.0	321	78	197	10	4	**B16134.0**
35.0	321	78	197	10	4	**B16135.0**
36.0	325	79	201	10	4	**B16136.0**
38.0	329	81	205	10	4	**B16138.0**
40.0	329	81	205	10	4	**B16140.0**
42.0	333	82	209	12	4	**B16142.0**
44.0	336	83	212	12	4	**B16144.0**
45.0	336	83	212	12	4	**B16145.0**
46.0	340	84	216	12	4	**B16146.0**
47.0	340	84	216	12	4	**B16147.0**
48.0	344	86	220	12	4	**B16148.0**
50.0	344	86	220	12	4	**B16150.0**

B101

DORMER

- Machine Reamer
- Maschinenreibahle
- Machineruimer
- Alésoir machine conique pour trous de goupilles
- Escariador de máquina
- Mandril p/ Cavilhas Cónicas

B101

HSS | ST | BS 328 | B | H7

■ 1.1 1.2 1.3 1.4 2.1 3.1 4.1 6.2

● 1.5 1.6 3.2 3.3 3.4 4.2 4.3 5.1 5.2 5.3 6.1 6.3 6.4 7.1 7.2 8.2

d_1 Ø Inch	d_1 Ø mm	l_1 mm	l_2 mm	z	MK	e-Code
	3.00	112	33	4	1	B1013.0
1/8	3.18	112	33	4	1	B1011/8
	3.50	115	35	6	1	B1013.5
5/32	3.97	117	38	6	1	B1015/32
	4.00	117	38	6	1	B1014.0
	4.50	120	41	6	1	B1014.5
3/16	4.76	124	44	6	1	B1013/16
	5.00	124	44	6	1	B1015.0
	5.50	127	47	6	1	B1015.5
7/32	5.56	127	47	6	1	B1017/32
	6.00	127	47	6	1	B1016.0
1/4	6.35	130	50	6	1	B1011/4
	6.50	130	50	6	1	B1016.5
	7.00	134	54	6	1	B1017.0
9/32	7.14	134	54	6	1	B1019/32
	7.50	134	54	6	1	B1017.5
5/16	7.94	138	58	6	1	B1015/16
	8.00	138	58	6	1	B1018.0
	8.50	138	58	6	1	B1018.5
11/32	8.73	142	62	6	1	B10111/32
	9.00	142	62	6	1	B1019.0
	9.50	142	62	6	1	B1019.5
3/8	9.53	146	66	6	1	B1013/8
	10.00	146	66	6	1	B10110.0
13/32	10.32	146	66	6	1	B10113/32
	10.50	146	66	6	1	B10110.5
	11.00	151	71	6	1	B10111.0
7/16	11.11	151	71	6	1	B1017/16
	11.50	151	71	6	1	B10111.5
15/32	11.91	156	76	6	1	B10115/32
	12.00	156	76	6	1	B10112.0
	12.50	156	76	6	1	B10112.5
1/2	12.70	156	76	6	1	B1011/2
	13.00	156	76	6	1	B10113.0
17/32	13.49	161	81	6	1	B10117/32
	13.50	161	81	6	1	B10113.5
	14.00	161	81	8	1	B10114.0
9/16	14.29	181	81	8	2	B1019/16
	14.50	181	81	8	2	B10114.5
	15.00	181	81	8	2	B10115.0
19/32	15.08	187	87	8	2	B10119/32
	15.50	187	87	8	2	B10115.5
5/8	15.88	187	87	8	2	B1015/8
	16.00	187	87	8	2	B10116.0
	16.50	187	87	8	2	B10116.5
	17.00	187	87	8	2	B10117.0

d_1 Ø Inch	d_1 Ø mm	l_1 mm	l_2 mm	z	MK	e-Code
11/16	17.46	193	93	8	2	B10111/16
	18.00	193	93	8	2	B10118.0
	19.00	193	93	8	2	B10119.0
3/4	19.05	200	100	8	2	B1013/4
	20.00	200	100	8	2	B10120.0
13/16	20.64	200	100	8	2	B10113/16
	21.00	200	100	8	2	B10121.0
	22.00	207	107	8	2	B10122.0
7/8	22.23	207	107	8	2	B1017/8
	23.00	207	107	8	2	B10123.0
15/16	23.81	242	115	8	3	B10115/16
	24.00	242	115	8	3	B10124.0
	25.00	242	115	10	3	B10125.0
1“	25.40	242	115	10	3	B1011
	26.00	242	115	10	3	B10126.0
1.1/16	26.99	251	124	10	3	B1011.1/16
	27.00	251	124	10	3	B10127.0
	28.00	251	124	10	3	B10128.0
1.1/8	28.58	251	124	10	3	B1011.1/8
	29.00	251	124	10	3	B10129.0
	30.00	251	124	10	3	B10130.0
1.3/16	30.16	260	133	10	3	B1011.3/16
	31.00	260	133	10	3	B10131.0
1.1/4	31.75	260	133	10	3	B1011.1/4
	32.00	293	133	10	4	B10132.0
	33.00	293	133	10	4	B10133.0
	34.00	302	142	10	4	B10134.0
1.3/8	34.93	302	142	10	4	B1011.3/8
	35.00	302	142	10	4	B10135.0
	36.00	302	142	10	4	B10136.0
	37.00	302	142	10	4	B10137.0
	38.00	312	152	10	4	B10138.0
1.1/2	38.10	312	152	10	4	B1011.1/2
	39.00	312	152	10	4	B10139.0
	40.00	312	152	10	4	B10140.0
	41.00	312	152	10	4	B10141.0
	42.00	312	152	10	4	B10142.0
	43.00	323	163	10	4	B10143.0
	44.00	323	163	10	4	B10144.0
1.3/4	44.45	323	163	10	4	B1011.3/4
	45.00	323	163	12	4	B10145.0
	46.00	323	163	12	4	B10146.0
	47.00	323	163	12	4	B10147.0
	48.00	334	174	12	4	B10148.0
	50.00	334	174	12	4	B10150.0
2“	50.80	334	174	12	4	B1012

B162

- Machine Reamer Left Hand Helix 45°
- Alésoir Machine Hélice 45° à gauche
- Maschinenreibahle mit 45° linksdrall
- Escariador de máquina Hélice a izquierdas 45°
- Machine-schilruimer met 45° linkse spiraal
- Mandril de Máquina Hélice à Esquerda - 45°

B162

HSS-E | DIN 208 | C | H7

■ 1.1 1.2 1.3 1.4 2.1 4.1 5.1 7.1 7.2 7.3 7.4 8.1

● 1.5 1.6 2.2 2.3 3.1 4.2 4.3 5.2 5.3 6.1 6.2 9.1

d_1 Ø	l_1	l_2	l_3			
mm	mm	mm	mm	z	MK	e-Code
8.0	156	33	90.5	3	1	**B1628.0**
10.0	168	38	102.5	3	1	**B16210.0**
12.0	182	44	116.5	3	1	**B16212.0**
13.0	182	44	116.5	3	1	**B16213.0**
14.0	189	47	123.5	3	1	**B16214.0**
16.0	210	52	130	3	2	**B16216.0**
17.0	214	54	134	3	2	**B16217.0**
18.0	219	56	139	3	2	**B16218.0**

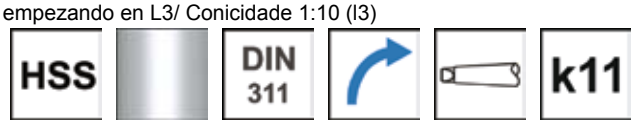
d_1 Ø	l_1	l_2	l_3			
mm	mm	mm	mm	z	MK	e-Code
20.0	228	60	148	3	2	**B16220.0**
22.0	237	64	157	3	2	**B16222.0**
24.0	268	68	169	3	3	**B16224.0**
25.0	268	68	169	3	3	**B16225.0**
28.0	277	71	178	3	3	**B16228.0**
30.0	281	73	182	3	3	**B16230.0**
32.0	317	77	193	3	4	**B16232.0**

B121

- Bridge Reamer
- Alésoirs de chaudronnerie queue cône morse
- Nietloch-Reibahlen mit Morsekegel,
- Escariador de mango cónico
- Klinkgatruimer
- Mandril de Caldeireiro Haste Cónica

B121

With 1:10 starting taper (l3) / für Kegelstifte 1:10 (l3) / Coniciteit 1:10 (l3)/ Avec une conicité de départ de 1:10 (l3) / Conicidad 1:10 empezando en L3/ Conicidade 1:10 (l3)



■ 1.1 1.2 1.3 1.4 3.1 4.1

● 1.5 1.6 3.2 3.3 3.4 7.2 8.2

d_1 Ø	l_1	l_3	l_2			
mm	mm	mm	mm	z	MK	e-Code
10.0	171	30	95	4	1	**B12110.0**
11.0	176	33	100	4	1	**B12111.0**
12.0	199	39	105	4	2	**B12112.0**
13.0	199	39	105	4	2	**B12113.0**
14.0	209	42	115	4	2	**B12114.0**
15.0	219	45	125	4	2	**B12115.0**
16.0	229	48	135	4	2	**B12116.0**
17.0	251	51	135	4	3	**B12117.0**
18.0	261	58	145	4	3	**B12118.0**
19.0	261	58	145	4	3	**B12119.0**

d_1 Ø	l_1	l_3	l_2			
mm	mm	mm	mm	z	MK	e-Code
20.0	271	62	155	4	3	**B12120.0**
21.0	271	62	155	4	3	**B12121.0**
22.0	281	66	165	4	3	**B12122.0**
23.0	281	66	165	4	3	**B12123.0**
24.0	296	72	180	4	3	**B12124.0**
25.0	296	72	180	4	3	**B12125.0**
26.0	296	72	180	4	3	**B12126.0**
30.0	311	78	195	5	3	**B12130.0**

B954

- Machine Reamer for Conical Pin Left Hand Helix 45°
- Alésoir Machine pour goupille conique Hélice à gauche à 45°
- Maschinen-Kegelreibahle mit 45° linksdrall
- Escariador de máquina para pasadores cónicos Hélice a izquierdas 45°
- Machine-pengatruimer met 45° linkse spiraal
- Mandril de Máquina p/ Cavilhas Cónicas Hélice à Esquerda - 45º

B954

■ 2.1 2.2 2.3 4.1 4.2 4.3 5.1 5.2 5.3 6.1 7.1 7.2 7.3 7.4 8.1

● 1.1 1.2 1.3 1.4 1.5 1.6 6.2 9.1

nom Ø	d_1 Ø mm	d_2 Ø mm	l_1 mm	l_2 mm	z	MK	e-Code
5.0	4.90	6.36	155	73	3	1	**B9545.0**
6.0	5.90	8.00	187	105	3	1	**B9546.0**
8.0	7.90	10.80	227	145	3	1	**B9548.0**
10.0	9.90	13.40	257	175	3	1	**B95410.0**
12.0	11.80	16.00	315	210	3	2	**B95412.0**
13.0	12.86	16.74	295	194	3	2	**B95413.0**

nom Ø	d_1 Ø mm	d_2 Ø mm	l_1 mm	l_2 mm	z	MK	e-Code
14.0	13.86	17.74	295	194	3	2	**B95414.0**
16.0	15.80	20.40	335	230	3	2	**B95416.0**
20.0	19.80	24.80	377	250	3	3	**B95420.0**
25.0	24.70	30.70	427	300	3	3	**B95425.0**
30.0	29.70	36.10	475	320	4	4	**B95430.0**

B955

- Shell Reamer
- Maschinen-Aufsteck-Reibahle
- Opsteekruimer
- Alésoir creux machine
- Escariador hueco
- Cabeça de Mandrilar

B955

d2=Nominal diameter d1 of B956 / d2=Nom. Durchmesser d1von B956 / d2=Nom. diameter d1van B956 / d2=Diamètre nominal d1 du B956 / d2=Diámetro nominal d1de B956 / d2=Diâmetro Nominal d1de B956

HSS-E | ST | DIN 219 | B | H7

■ 1.1 1.2 1.3 1.4 2.1 4.1 5.1

● 1.5 1.6 2.2 2.3 3.1 4.2 4.3 5.2 5.3 6.1 6.2 7.1 7.2 7.3 7.4 8.2

d_1 Ø mm	l_1 mm	l_2 mm	z	d_2 Ø mm	e-Code
25.0	45	32	8	13	**B95525.0**
26.0	45	32	8	13	**B95526.0**
27.0	45	32	8	13	**B95527.0**
28.0	45	32	8	13	**B95528.0**
29.0	45	32	8	13	**B95529.0**
30.0	45	32	8	13	**B95530.0**
31.0	50	36	10	16	**B95531.0**
32.0	50	36	10	16	**B95532.0**
34.0	50	36	10	16	**B95534.0**
35.0	50	36	10	16	**B95535.0**
36.0	56	40	10	19	**B95536.0**
37.0	56	40	10	19	**B95537.0**
38.0	56	40	10	19	**B95538.0**
40.0	56	40	10	19	**B95540.0**

d_1 Ø mm	l_1 mm	l_2 mm	z	d_2 Ø mm	e-Code
42.0	56	40	10	19	**B95542.0**
44.0	63	45	12	22	**B95544.0**
45.0	63	45	12	22	**B95545.0**
48.0	63	45	12	22	**B95548.0**
50.0	63	45	12	22	**B95550.0**
52.0	71	50	12	27	**B95552.0**
55.0	71	50	12	27	**B95555.0**
58.0	71	50	12	27	**B95558.0**
60.0	71	50	12	27	**B95560.0**
65.0	80	56	14	32	**B95565.0**
70.0	80	56	14	32	**B95570.0**
75.0	90	63	14	40	**B95575.0**
80.0	90	63	14	40	**B95580.0**

B956

- Shell Reamer Arbor (B955)
- Porte-alésoirs creux
- MK-Halter für Aufsteck-Reibahle
- Portaescariadores para escariadores huecos
- Houder voor opsteekruimer
- Haste p/ Cabeças de Mandrilar

B956

HSS-E | DIN 217

d_1 Ø	l_1	l_2	l_3		
mm	mm	mm	mm	MK	e-Code
13.0	250	45	151	3	**B95613.0**
16.0	261	50	162	3	**B95616.0**
19.0	298	56	174	4	**B95619.0**
22.0	312	63	188	4	**B95622.0**

d_1 Ø	l_1	l_2	l_3		
mm	mm	mm	mm	MK	e-Code
27.0	359	71	203	5	**B95627.0**
32.0	376	80	220	5	**B95632.0**
40.0	396	90	240	5	**B95640.0**

B957

- Shell Reamer Arbor - Spare Parts (B956)
- Accessoires pour porte-alésoirs creux machine (B956)
- Ersatzteile für B956
- Portaescariadores para escariadores huecos - Accesorios (B956)
- Onderdelen voor B956
- Suplentes p/ (B956)

B957

Nr.	d	e-Code
3	13.00	B957N3DRIVER
3		B957N3NUT
3		B957N3WASHER
4	16.00	B957N4DRIVER
4		B957N4NUT
4		B957N4WASHER
5	19.00	B957N5DRIVER
5		B957N5NUT
5		B957N5WASHER
6	22.00	B957N6DRIVER
6		B957N6NUT
6		B957N6WASHER

Nr.	d	e-Code
7	27.00	B957N7DRIVER
7		B957N7NUT
7		B957N7WASHER
8	32.00	B957N8DRIVER
8		B957N8NUT
8		B957N8WASHER
9	40.00	B957N9DRIVER
9		B957N9NUT
9		B957N9WASHER

G135 / G335

- Countersink
- Kegelsenker
- Verzinkboren
- Fraise à ébavurer et à chanfreiner
- Avellanadores
- Escareador

G135

HSS | DIN 334 C | 60°

■ 1.1 1.2 1.3 1.4 1.5 4.1 4.2 4.3 5.1 5.2 5.3 6.1 6.2 6.3

● 1.6 2.1 2.2 2.3 3.1 3.2 3.3 3.4 6.4 7.1 7.2 7.3 7.4 8.1 8.2

max d mm	min d	l_1 mm	d_2 Øh9 mm	z	e-Code
6.3	1.6	45	5	3	**G1356.3**
8.0	2.0	50	6	3	**G1358.0**
10.0	2.5	50	6	3	**G13510.0**
12.5	3.2	56	8	3	**G13512.5**

max d mm	min d	l_1 mm	d_2 Øh9 mm	z	e-Code
16.0	4.0	63	10	3	**G13516.0**
20.0	5.0	67	10	3	**G13520.0**
25.0	6.3	71	10	3	**G13525.0**

G335

HSS | TiN | DIN 334 C | 60°

■ 1.1 1.2 1.3 3.1 3.2 3.3 3.4 7.1 7.2 7.3 7.4

● 1.4 1.5 1.6 4.1 4.2 4.3 5.1 5.2 5.3 6.1 6.2 6.3 6.4 8.1 8.2

max d mm	min d	l_1 mm	d_2 Øh9 mm	z	e-Code
6.3	1.6	45	5	3	**G3356.3**
8.0	2.0	50	6	3	**G3358.0**
10.0	2.5	50	6	3	**G33510.0**
12.5	3.2	56	8	3	**G33512.5**

max d mm	min d	l_1 mm	d_2 Øh9 mm	z	e-Code
16.0	4.0	63	10	3	**G33516.0**
20.0	5.0	67	10	3	**G33520.0**
25.0	6.3	71	10	3	**G33525.0**

G131

- Countersink
- Fraise à ébavurer et à chanfreiner
- Kegelsenker
- Avellanadores
- Verzinkboren
- Escareador

G131

HSS | DIN 334 A | 60°

■ 1.3 1.4 1.5 1.6 3.4 4.2 4.3 5.2 5.3 6.4

● 2.3 8.3

max d mm	min d	l_1 mm	d_2 Øh$_9$ mm	z	e-Code
8.0	-	50	8	5	**G1318.0**
12.5	2.0	50	8	5	**G13112.5**

max d mm	min d	l_1 mm	d_2 Øh$_9$ mm	z	e-Code
16.0	3.2	60	10	7	**G13116.0**
20.0	5.0	63	10	7	**G13120.0**

G137

- Countersink
- Fraise à ébavurer et à chanfreiner
- Kegelsenker
- Avellanadores
- Verzinkboren
- Escareador

G137

HSS | DIN 334 D | 60°

■ 1.1 1.2 1.3 1.4 1.5 4.1 4.2 4.3 5.1 5.2 5.3 6.1 6.2 6.3

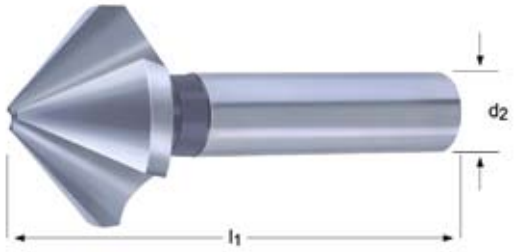
● 1.6 2.1 2.2 2.3 3.1 3.2 3.3 3.4 6.4 7.1 7.2 7.3 7.4 8.1 8.2

max d mm	min d	l_1 mm	MK	z	e-Code
16.0	4.0	90	1	3	**G13716.0**
20.0	5.0	106	2	3	**G13720.0**
25.0	6.3	112	2	3	**G13725.0**
31.5	10.0	118	2	3	**G13731.5**

max d mm	min d	l_1 mm	MK	z	e-Code
40.0	12.5	150	3	3	**G13740.0**
50.0	16.0	160	3	3	**G13750.0**
63.0	20.0	190	4	3	**G13763.0**
80.0	25.0	200	4	3	**G13780.0**

G154

- Countersink
- Fraise à ébavurer et à chanfreiner
- Kegelsenker
- Avellanadores
- Verzinkboren
- Escareador



G154

HSS | DIN 335 C | 82°

■ 1.1 1.2 1.3 1.4 1.5 4.1 4.2 4.3 5.1 5.2 5.3 6.1 6.2 6.3

● 1.6 2.1 2.2 2.3 3.1 3.2 3.3 3.4 6.4 7.1 7.2 7.3 7.4 8.1 8.2

max d mm	min d	l_1 mm	d_2 Øh$_9$ mm	z	e-Code
6.3	1.5	45	5	3	**G1546.3**
8.3	2.0	50	6	3	**G1548.3**
10.4	2.5	50	6	3	**G15410.4**
12.4	2.8	56	8	3	**G15412.4**

max d mm	min d	l_1 mm	d_2 Øh$_9$ mm	z	e-Code
16.5	3.2	60	10	3	**G15416.5**
20.5	3.5	63	10	3	**G15420.5**
25.0	3.8	67	10	3	**G15425.0**

G155

- Countersink
- Fraise à ébavurer et à chanfreiner
- Kegelsenker
- Avellanadores
- Verzinkboren
- Escareador

G155

■ 1.1 1.2 1.3 1.4 1.5 4.1 4.2 4.3 5.1 5.2 5.3 6.1 6.2 6.3

● 1.6 2.1 2.2 2.3 3.1 3.2 3.3 3.4 6.4 7.1 7.2 7.3 7.4 8.1 8.2

max d mm	min d	l_1 mm	MK	z	e-Code
16.5	3.2	85	1	3	**G15516.5**
20.5	3.5	100	2	3	**G15520.5**
25.0	3.8	106	2	3	**G15525.0**
31.0	4.2	112	2	3	**G15531.0**

max d mm	min d	l_1 mm	MK	z	e-Code
40.0	10.0	140	3	3	**G15540.0**
50.0	14.0	150	3	3	**G15550.0**
63.0	16.0	180	4	3	**G15563.0**
80.0	22.0	190	4	3	**G15580.0**

G129

- Countersink
- Fraise à ébavurer et à chanfreiner
- Kegelsenker
- Avellanadores
- Verzinkboren
- Escareador

G129

HSS | D | 90°

■ 1.1 1.2 1.3 1.4 1.5 4.1 4.2 5.1 5.2 6.1 6.2 6.3 7.1 7.2

● 1.6 2.1 2.2 3.1 3.2 3.3 3.4 4.3 5.3 6.4 7.3 7.4 8.1 8.2

max d mm	l_1 mm	d_2 Øh$_9$ mm	z	e-Code
6.00	45	6	1	**G1296.0**
8.00	50	8	1	**G1298.0**
10.00	49	8	1	**G12910.0**
12.50	49	8	1	**G12912.5**

max d mm	l_1 mm	d_2 Øh$_9$ mm	z	e-Code
16.00	56	10	1	**G12916.0**
20.00	60	10	1	**G12920.0**
25.00	75	12	1	**G12925.0**
31.50	80	12	1	**G12931.5**

G149 / G349

- Countersink
- Kegelsenker
- Verzinkboren
- Fraise à ébavurer et à chanfreiner
- Avellanadores
- Escareador

G149

HSS-E | D | 90°

■ 1.1 1.2 1.3 1.4 4.1 4.2 5.1 5.2 6.1 6.2 6.3 7.1 7.2

● 1.5 1.6 2.1 2.2 3.1 3.2 3.3 3.4 4.3 5.3 6.4 7.3 7.4 8.1 8.2

max d mm	min d	l_1 mm	d_2 Ø mm	d_1 Ø mm	z	e-Code
5	2	45	6	10	1	**G1495**
10	5	48	8	14	1	**G14910**
15	10	65	10	21	1	**G14915**
20	15	84	12	28	1	**G14920**
25	20	102	15	35	1	**G14925**
30	25	115	15	44	1	**G14930**

max d mm	min d	l_1 mm	d_2 Ø mm	d_1 Ø mm	z	e-Code
35	30	127	15	48	1	**G14935**
40	35	136	15	53	1	**G14940**
50	40	166	20	60	1	**G14950**

G349

HSS-E | TiN | D | 90°

■ 1.1 1.2 1.3 1.4 1.5 3.1 3.2 3.3 3.4 7.1 7.2 7.3 7.4

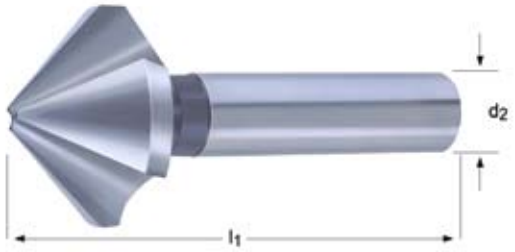
● 1.6 4.1 4.2 4.3 5.1 5.2 5.3 6.1 6.2 6.3 6.4 8.1 8.2

max d mm	min d	l_1 mm	d_2 Ø mm	d_1 Ø mm	z	e-Code
5	2	45	6	10	1	**G3495**
10	5	48	8	14	1	**G34910**

max d mm	min d	l_1 mm	d_2 Ø mm	d_1 Ø mm	z	e-Code
15	10	65	10	21	1	**G34915**
20	15	84	12	28	1	**G34920**

G142

- Countersink with extra radial relief
- Fraise à chanfreiner avec dépouille accentuée
- Senker, radial hinterschliffen
- Escareador com alívio radial extra
- Verzinker, radiaal achtergeslepen
- Escareador (extra radial relief)



G142

■ 1.1 1.2 2.1 2.2 2.3 4.1 5.1 6.1 6.2 7.1 7.2 8.1 8.2

● 1.3 1.4 4.2 5.2 6.3 7.3 7.4

max d mm	min d	l_1 mm	d_2 Øh$_9$ mm	z	e-Code
4.8	1.3	40	4	3	**G1424.8**
5.0	1.5	40	4	3	**G1425.0**
6.0	1.5	45	4	3	**G1426.0**
6.3	1.5	45	5	3	**G1426.3**
7.0	1.8	50	6	3	**G1427.0**
7.3	1.8	50	6	3	**G1427.3**
8.0	2.0	50	6	3	**G1428.0**
8.3	2.0	50	6	3	**G1428.3**
10.0	2.5	50	6	3	**G14210.0**
10.4	2.5	50	6	3	**G14210.4**

max d mm	min d	l_1 mm	d_2 Øh$_9$ mm	z	e-Code
11.5	2.8	56	8	3	**G14211.5**
12.4	2.8	56	8	3	**G14212.4**
15.0	3.2	60	10	3	**G14215.0**
16.5	3.2	60	10	3	**G14216.5**
19.0	3.5	63	10	3	**G14219.0**
20.5	3.5	63	10	3	**G14220.5**
23.0	3.8	67	10	3	**G14223.0**
25.0	3.8	67	10	3	**G14225.0**
31.0	4.2	71	12	3	**G14231.0**

G136

- Countersink
- Fraise à ébavurer et à chanfreiner
- Kegelsenker
- Avellanadores
- Verzinkboren
- Escareador

G139 246
G236 246

G136

HSS | DIN 335 C | 90°

■ 1.1 1.2 1.3 1.4 1.5 4.1 4.2 4.3 5.1 5.2 5.3 6.1 6.2 6.3

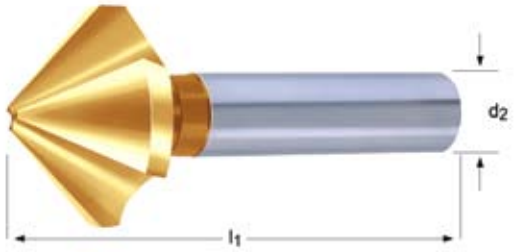
● 1.6 2.1 2.2 2.3 3.1 3.2 3.3 3.4 6.4 7.1 7.2 7.3 7.4 8.1 8.2

max d mm	min d	l_1 mm	d_2 Øh$_9$ mm	z	e-Code
4.3	1.3	40	4	3	**G1364.3**
5.0	1.5	40	4	3	**G1365.0**
5.3	1.5	40	4	3	**G1365.3**
5.8	1.5	45	5	3	**G1365.8**
6.0	1.5	45	5	3	**G1366.0**
6.3	1.5	45	5	3	**G1366.3**
7.0	1.8	50	6	3	**G1367.0**
7.3	1.8	50	6	3	**G1367.3**
8.0	2.0	50	6	3	**G1368.0**
8.3	2.0	50	6	3	**G1368.3**
9.4	2.2	50	6	3	**G1369.4**
10.0	2.5	50	6	3	**G13610.0**
10.4	2.5	50	6	3	**G13610.4**
11.5	2.8	56	8	3	**G13611.5**

max d mm	min d	l_1 mm	d_2 Øh$_9$ mm	z	e-Code
12.4	2.8	56	8	3	**G13612.4**
13.4	2.9	56	8	3	**G13613.4**
15.0	3.2	60	10	3	**G13615.0**
16.5	3.2	60	10	3	**G13616.5**
19.0	3.5	63	10	3	**G13619.0**
20.5	3.5	63	10	3	**G13620.5**
23.0	3.8	67	10	3	**G13623.0**
25.0	3.8	67	10	3	**G13625.0**
26.0	3.8	67	10	3	**G13626.0**
28.0	4.0	71	12	3	**G13628.0**
30.0	4.2	71	12	3	**G13630.0**
31.0	4.2	71	12	3	**G13631.0**

G336 / G560

- Countersink
- Fraise à ébavurer et à chanfreiner
- Kegelsenker
- Avellanadores
- Verzinkboren
- Escareador



G336

HSS | TiN | DIN 335 C | 90°

■ 1.1 1.2 1.3 1.4 1.5 3.1 3.2 3.3 3.4 7.1 7.2 7.3 7.4

● 1.6 4.1 4.2 4.3 5.1 5.2 5.3 6.1 6.2 6.3 6.4 8.1 8.2

max d mm	min d	l_1 mm	d_2 Øh9 mm	z	e-Code
5.0	1.5	40	4	3	**G3365.0**
6.0	1.5	45	5	3	**G3366.0**
6.3	1.5	45	5	3	**G3366.3**
7.0	1.8	50	6	3	**G3367.0**
7.3	1.8	50	6	3	**G3367.3**
8.0	2.0	50	6	3	**G3368.0**
8.3	2.0	50	6	3	**G3368.3**
10.0	2.5	50	6	3	**G33610.0**
10.4	2.5	50	6	3	**G33610.4**
11.5	2.8	56	8	3	**G33611.5**
12.4	2.8	56	8	3	**G33612.4**
15.0	3.2	60	10	3	**G33615.0**
16.5	3.2	60	10	3	**G33616.5**
19.0	3.5	63	10	3	**G33619.0**
20.5	3.5	63	10	3	**G33620.5**
23.0	3.8	67	10	3	**G33623.0**
25.0	3.8	67	10	3	**G33625.0**
31.0	4.2	71	12	3	**G33631.0**

G237 247

G560

HSS | TiAlN | DIN 335 C | 90°

■ 1.1 1.2 1.3 3.1 3.2 3.3 3.4 7.1 7.2 7.3 7.4

● 1.4 1.5 1.6 4.1 4.2 4.3 5.1 5.2 5.3 6.1 6.2 6.3 6.4 8.1 8.2

max d mm	min d	l_1 mm	d_2 Øh9 mm	z	e-Code
6.3	1.5	45	5	3	**G5606.3**
8.0	2.0	50	6	3	**G5608.0**
8.3	2.0	50	6	3	**G5608.3**
10.0	2.5	50	6	3	**G56010.0**
10.4	2.5	50	6	3	**G56010.4**
12.4	2.8	56	8	3	**G56012.4**
16.5	3.2	60	10	3	**G56016.5**
20.5	3.5	63	10	3	**G56020.5**
25.0	3.8	67	10	3	**G56025.0**
31.0	4.2	71	12	3	**G56031.0**

G139 / G236

- Countersink, set
- Kegelsenker-Satz
- Verzinkboren in sets
- Coffrets de fraises à ébavurer et à chanfreiner
- Juego de Avellanadores
- Jogo de Escareadores

G139

HSS | DIN 335 C | 90°

Nr.	A	e-Code
70	G136 6.3 - 8.3 - 10.4 - 12.4 - 16.5 - 20.5	**G13970**
71	G136 6.0 - 8.0 - 10.0 - 11.5 - 15.0 - 19.0	**G13971**
72	G136 6.3 - 8.3 - 10.4 - 12.4 - 16.5 - 20.5 - 25.0	**G13972**

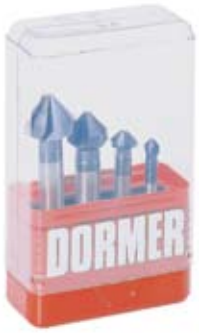
G236

HSS | DIN 335 C | 90°

Nr.	A	e-Code
1	G136 6.3 - 8.3 - 10.4 - 12.4 - 16.5 - 20.5	**G2361**
2	G136 6.3 - 10.4 - 16.5 - 20.5	**G2362**

G237

- Countersink, set
- Coffrets de fraises à ébavurer et à chanfreiner
- Kegelsenker-Satz
- Juego de Avellanadores
- Verzinkboren in sets
- Jogo de Escareadores



G237

HSS | TiAlN | DIN 335 C | 90°

Nr.	A		e-Code
10	G560	6.3 - 10.4 - 16.5 - 20.5	**G23710**

G132

- Countersink
- Fraise à ébavurer et à chanfreiner
- Kegelsenker
- Avellanadores
- Verzinkboren
- Escareador

G132

HSS | DIN 335 A | 90°

■ 1.5 1.6 3.4 4.2 4.3 5.2 5.3 6.4

● 1.3 1.4 2.3 8.3

max d mm	min d	l_1 mm	d_2 Øh9 mm	z	e-Code
8.0	-	48	8	5	**G1328.0**
12.5	2.0	48	8	5	**G13212.5**
16.0	3.2	56	10	7	**G13216.0**
20.0	5.0	60	10	7	**G13220.0**

G138 / G338

DORMER

- Countersink
- Fraise à ébavurer et à chanfreiner
- Kegelsenker
- Avellanadores
- Verzinkboren
- Escareador

G138

HSS | DIN 335 D | 90°

■ 1.1 1.2 1.3 1.4 1.5 4.1 4.2 4.3 5.1 5.2 5.3 6.1 6.2 6.3

● 1.6 2.1 2.2 2.3 3.1 3.2 3.3 3.4 6.4 7.1 7.2 7.3 7.4 8.1 8.2

max d mm	min d	l_1 mm	MK	z	e-Code
15.0	3.2	85	1	3	**G13815.0**
16.5	3.2	85	1	3	**G13816.5**
19.0	3.5	100	2	3	**G13819.0**
20.5	3.5	100	2	3	**G13820.5**
23.0	3.8	106	2	3	**G13823.0**
25.0	3.8	106	2	3	**G13825.0**
26.0	3.8	106	2	3	**G13826.0**
28.0	4.0	112	2	3	**G13828.0**

max d mm	min d	l_1 mm	MK	z	e-Code
30.0	4.2	112	2	3	**G13830.0**
31.0	4.2	112	2	3	**G13831.0**
34.0	4.5	118	2	3	**G13834.0**
37.0	4.8	118	2	3	**G13837.0**
40.0	10.0	140	3	3	**G13840.0**
50.0	14.0	150	3	3	**G13850.0**
63.0	16.0	180	4	3	**G13863.0**
80.0	22.0	190	4	3	**G13880.0**

G338

HSS | TiN | DIN 335 D | 90°

■ 1.1 1.2 1.3 1.4 1.5 3.1 3.2 3.3 3.4 7.1 7.2 7.3 7.4

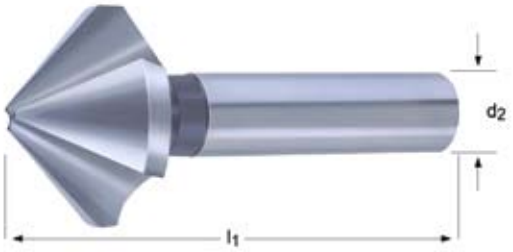
● 1.6 4.1 4.2 4.3 5.1 5.2 5.3 6.1 6.2 6.3 6.4 8.1 8.2

max d mm	min d	l_1 mm	MK	z	e-Code
25.0	3.8	106	2	3	**G33825.0**
31.0	4.2	112	2	3	**G33831.0**
37.0	4.8	118	2	3	**G33837.0**
40.0	10.0	140	3	3	**G33840.0**

max d mm	min d	l_1 mm	MK	z	e-Code
50.0	14.0	150	3	3	**G33850.0**
63.0	16.0	180	4	3	**G33863.0**

G170 / G171

- Countersink
- Fraise à ébavurer et à chanfreiner
- Kegelsenker
- Avellanadores
- Verzinkboren
- Escareador



G170

HSS | DIN 335 C | 100°

■ 1.1 1.2 1.3 1.4 1.5 4.1 4.2 4.3 5.1 5.2 5.3 6.1 6.2 6.3

● 1.6 2.1 2.2 2.3 3.1 3.2 3.3 3.4 6.4 7.1 7.2 7.3 7.4 8.1 8.2

max d mm	min d	l_1 mm	d_2 Øh9 mm	z	e-Code
6.3	1.5	44.0	5.0	3	**G1706.3**
8.3	2.0	49.0	6.0	3	**G1708.3**
10.4	2.5	49.0	6.0	3	**G17010.4**
12.4	2.8	53.0	6.0	3	**G17012.4**

max d mm	min d	l_1 mm	d_2 Øh9 mm	z	e-Code
16.5	3.2	56.0	6.0	3	**G17016.5**
20.5	3.5	61.0	10.0	3	**G17020.5**
25.0	3.8	65.0	10.0	3	**G17025.0**

G171

HSS | TiAlN | DIN 335 C | 100°

■ 1.1 1.2 1.3 3.1 3.2 3.3 3.4 7.1 7.2 7.3 7.4

● 1.4 1.5 1.6 4.1 4.2 4.3 5.1 5.2 5.3 6.1 6.2 6.3 6.4 8.1 8.2

max d mm	min d	l_1 mm	d_2 Øh9 mm	z	e-Code
6.3	1.5	44.0	5.0	3	**G1716.3**
8.3	2.0	49.0	6.0	3	**G1718.3**
10.4	2.5	49.0	6.0	3	**G17110.4**
12.4	2.8	53.0	6.0	3	**G17112.4**

max d mm	min d	l_1 mm	d_2 Øh9 mm	z	e-Code
16.5	3.2	56.0	6.0	3	**G17116.5**
20.5	3.5	61.0	10.0	3	**G17120.5**
25.0	3.8	65.0	10.0	3	**G17125.0**

M138

- Conical Drill
- Konische Bohrer
- Getrapte plaatboren
- Forets multi-diamètres
- Broca Multi-diámetro
- Broca Cónica Multi-Diâmetros

M138

HSS | ST | D | 20°

■ 1.1 1.2 1.3 1.4 4.1 4.2 4.3 5.1 5.2 5.3 6.1 6.2 6.3 7.1 7.2 8.1 8.2

● 1.5 1.6 2.1 2.2 2.3 3.1 3.2 3.3 3.4 6.4 7.3 7.4

Nr.	max d mm	min d	l_2 mm	l_1 mm	d_2 h11 mm	e-Code
1	14	3	36	58	6	**M1381**
2	20	8	40	62	8	**M1382**
3	30	16	48	70	10	**M1383**
4	40	26	51	76	10	**M1384**

Nr.	max d mm	min d	l_2 mm	l_1 mm	d_2 h11 mm	e-Code
5	50	36	54	79	10	**M1385**
6	60	46	57	82	13	**M1386**

G314

- Conical Drill
- Konische Bohrer
- Getrapte plaatboren
- Forets multi-diamètres
- Broca Multi-diámetro
- Broca Cónica Multi-Diâmetros

G314

■ 1.1 1.2 1.3 1.4 4.1 4.2 4.3 5.1 5.2 5.3 6.1 6.2 6.3 7.1 7.2 8.1 8.2

● 1.5 1.6 2.1 2.2 2.3 3.1 3.2 3.3 3.4 6.4 7.3 7.4

Nr.	d min-max mm	l_3 mm	l_1 mm	d_3 Ø mm	e-Code
412	4.0 mm ÷ 12.0 mm x 1.0 mm	5.0	80	6.0	**G314412**
1220	12.0 mm ÷ 20.0 mm x 1.0 mm	4.0	76	9.0	**G3141220**
2030	20.0 mm ÷ 30.0 mm x 1.0 mm	4.0	88	12.0	**G3142030**
3040	30.0 mm ÷ 40.0 mm x 1.0 mm	4.0	98	13.0	**G3143040**
420	4.0 mm ÷ 20.0 mm x 2.0 mm	4.0	76	8.0	**G314420**
630	6.0 mm ÷ 30.0 mm x 2.0 mm	4.0	98	10.0	**G314630**
M	9.0 mm ÷ 36.0 mm x 3.0 mm	3.0	86	12.0	**G314M**

G125

- Counterbore
- Flachsenker
- Verzinkboren
- Fraises pour logement de tête de vis
- Refrentadores
- Broca de Caixas

G125

HSS | DIN 373 | 180°

■ 1.1 1.2 1.3 2.1 3.1 3.2 7.1 7.2 8.1

● 1.4 1.5 1.6 2.2 3.3 3.4 4.1 4.2 4.3 5.1 5.2 5.3 6.1 6.2 6.3 7.3 7.4 8.2

d_1 $Øz_9$ mm	d_3 $Øe_8$ mm	M	l_1 mm	l_2 mm	d_2 $Øh_9$ mm	z	e-Code	
6.50	2.50	M 3 t	71	14	5.0	3	**G1256.5X2.5**	1)
6.50	3.20	M 3 f	71	14	5.0	3	**G1256.5X3.2**	2)
6.50	3.40	M 3 m	71	14	5.0	3	**G1256.5X3.4**	3)
8.00	3.30	M 4 t	71	14	5.0	3	**G1258.0X3.3**	1)
8.00	4.30	M 4 f	71	14	5.0	3	**G1258.0X4.3**	2)
8.00	4.50	M 4 m	71	14	5.0	3	**G1258.0X4.5**	3)
10.00	4.20	M 5 t	80	18	8.0	3	**G12510.0X4.2**	1)
10.00	5.30	M 5 f	80	18	8.0	3	**G12510.0X5.3**	2)
10.00	5.50	M 5 m	80	18	8.0	3	**G12510.0X5.5**	3)
11.00	5.00	M 6 t	80	18	8.0	3	**G12511.0X5.0**	1)
11.00	6.40	M 6 f	80	18	8.0	3	**G12511.0X6.4**	2)
11.00	6.60	M 6 m	80	18	8.0	3	**G12511.0X6.6**	3)
15.00	6.80	M 8 t	100	22	12.5	3	**G12515.0X6.8**	1)
15.00	8.40	M 8 f	100	22	12.5	3	**G12515.0X8.4**	2)
15.00	9.00	M 8 m	100	22	12.5	3	**G12515.0X9.0**	3)
18.00	8.50	M 10 t	100	22	12.5	3	**G12518.0X8.5**	1)
18.00	10.50	M 10 f	100	22	12.5	3	**G12518.0X10.5**	2)
18.00	11.00	M 10 m	100	22	12.5	3	**G12518.0X11.0**	3)
20.00	10.20	M 12 t	100	22	12.5	3	**G12520.0X10.2**	1)
20.00	13.00	M 12 f	100	22	12.5	3	**G12520.0X13.0**	2)
20.00	13.50	M 12 m	100	22	12.5	3	**G12520.0X13.5**	3)

[1] t= for tap hole / t = für Kernloch / t = voor kerngat / t = pour trou taraudé / t = Para agujero roscado / t = para furo de rosca
[2] f= for through hole fine / f = für Durchgangsloch fein / f = fijnpassing voor doorlopende gaten / f = pour trou de vis précis / f = Para agujero pasante fino / f = para furo passante raso
[3] m= for through hole medium / m= für Durchgangsloch mittel / m= middelpassing voor doorlopende gaten / m = pour trou de vis moyen / m= Para agujero pasante medio / m = para furo passante médio

G126

- Counterbore
- Flachsenker
- Verzinkboren
- Fraises pour logement de tête de vis
- Refrentadores
- Broca de Caixas

G126

HSS | ST | DIN 375 | 180°

■ 1.1 1.2 1.3 2.1 3.1 3.2 7.1 7.2 8.1

● 1.4 1.5 1.6 2.2 3.3 3.4 4.1 4.2 4.3 5.1 5.2 5.3 6.1 6.2 6.3 7.3 7.4 8.2

d_1 Øz$_9$ mm	l_1 mm	l_2 mm	d_2 Øh$_8$ mm	MK	z	e-Code
15.00	132	22	4	2	3	**G12615.0**
18.00	140	25	5	2	3	**G12618.0**
20.00	140	25	5	2	3	**G12620.0**
24.00	150	30	6	2	3	**G12624.0**
26.00	180	35	8	3	3	**G12626.0**
30.00	180	35	8	3	3	**G12630.0**

d_1 Øz$_9$ mm	l_1 mm	l_2 mm	d_2 Øh$_8$ mm	MK	z	e-Code
33.00	190	40	10	3	3	**G12633.0**
36.00	190	40	10	3	3	**G12636.0**
40.00	190	40	10	3	3	**G12640.0**
43.00	236	50	12	4	4	**G12643.0**
46.00	236	50	12	4	4	**G12646.0**

G127

- Detachable Pilot (G126)
- Führungszapfen (G126)
- Verwisselbare geleidepen (G126)
- Pilote (G126)
- Guía desmontable para Refrentador (G126)
- Piloto Amovivel (G126)

G127

HSS | DIN 1868

d_1 Ø mm	d_2 Øf$_7$ mm	M	e-Code	
6.80	4	M 8 t	**G1276.8X4.0**	1)
8.40	4	M 8 f	**G1278.4X4.0**	2)
9.00	4	M 8 m	**G1279.0X4.0**	3)
6.80	5	M 8 t	**G1276.8X5.0**	1)
8.40	5	M 8 f	**G1278.4X5.0**	2)
8.50	5	M 10 t	**G1278.5X5.0**	1)
9.00	5	M 8 m	**G1279.0X5.0**	3)
10.20	5	M 12 t	**G12710.2X5.0**	1)
10.50	5	M 10 f	**G12710.5X5.0**	2)
11.00	5	M 10 m	**G12711.0X5.0**	3)
13.00	5	M 12 f	**G12713.0X5.0**	2)
13.50	5	M 12 m	**G12713.5X5.0**	3)
8.50	6	M 10 t	**G1278.5X6.0**	1)
10.20	6	M 12 t	**G12710.2X6.0**	1)
10.50	6	M 10 f	**G12710.5X6.0**	2)
11.00	6	M 10 m	**G12711.0X6.0**	3)
12.00	6	M 14 t	**G12712.0X6.0**	1)
13.00	6	M 12 f	**G12713.0X6.0**	2)
13.50	6	M 12 m	**G12713.5X6.0**	3)
15.00	6	M 14 f	**G12715.0X6.0**	2)
15.50	8	M 18 t	**G12715.5X6.0**	1)
10.20	8	M 12 t	**G12710.2X8.0**	1)
12.00	8	M 14 t	**G12712.0X8.0**	1)
13.00	8	M 12 f	**G12713.0X8.0**	2)
13.50	8	M 12 m	**G12713.5X8.0**	3)
14.00	8	M 16 t	**G12714.0X8.0**	1)
15.00	8	M 14 f	**G12715.0X8.0**	2)
15.50	8	M 14 m	**G12715.5X8.0**	3)

d_1 Ø mm	d_2 Øf$_7$ mm	M	e-Code	
17.00	8	M 16 f	**G12717.0X8.0**	2)
17.50	10	M 20 t	**G12717.5X8.0**	1)
19.00	8	M 18 f	**G12719.0X8.0**	2)
20.00	8	M 18 m	**G12720.0X8.0**	3)
14.00	10	M 16 t	**G12714.0X10.0**	1)
15.50	10	M 18 t	**G12715.5X10.0**	1)
17.00	10	M 16 f	**G12717.0X10.0**	2)
17.50	10	M 16 m	**G12717.5X10.0**	3)
19.00	10	M 18 f	**G12719.0X10.0**	2)
19.50	10	M 22 t	**G12719.5X10.0**	1)
20.00	10	M 18 m	**G12720.0X10.0**	3)
21.00	10	M 24 t	**G12721.0X10.0**	1)
22.00	10	M 20 m	**G12722.0X10.0**	3)
23.00	10	M 22 f	**G12723.0X10.0**	2)
24.00	16	M 27 t	**G12724.0X10.0**	1)
25.00	10	M 24 f	**G12725.0X10.0**	2)
26.00	10	M 24 m	**G12726.0X10.0**	3)
19.50	12	M 22 t	**G12719.5X12.0**	1)
21.00	12	M 24 t	**G12721.0X12.0**	1)
23.00	12	M 22 f	**G12723.0X12.0**	2)
24.00	12	M 27 t	**G12724.0X12.0**	1)
25.00	12	M 24 f	**G12725.0X12.0**	2)
26.00	12	M 24 m	**G12726.0X12.0**	3)
26.50	12	M 30 t	**G12726.5X12.0**	1)
30.00	12	M 27 m	**G12730.0X12.0**	3)
33.00	12	M 30 m	**G12733.0X12.0**	3)

1) t= for tap hole / t = für Kernloch / t = voor kerngat / t = pour trou taraudé / t = Para agujero roscado / t = para furo de rosca
2) f= for through hole fine / f = für Durchgangsloch fein / f = fijnpassing voor doorlopende gaten / f = pour trou de vis précis / f = Para agujero pasante fino / f = para furo passante raso
3) m= for through hole medium / m= für Durchgangsloch mittel / m= middelpassing voor doorlopende gaten / m = pour trou de vis moyen / m= Para agujero pasante medio / m = para furo passante médio