



HSS-Handreibbahlen, Maschinenreibbahlen, Kegelreibbahlen

E HSS hand reamers, machine reamers,
taper pin reamers

I HSS alesatori a mano, alesatori a macchina,
alesatori per spine coniche



HSS-Reibbahlen
HSS reamers
HSS alesatori

D Übersicht
HSS-Reibahlen

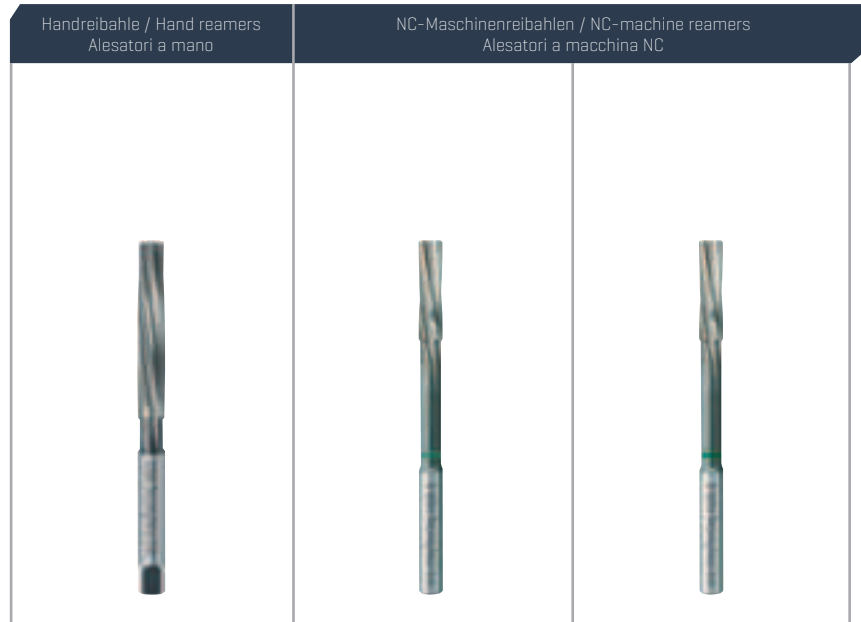
E Overview
HSS reamers

I Sommario
alesatori HSS











































D Die Schnittwerte für alle Werkzeuge entnehmen Sie bitte unserem separaten Zerspanungshandbuch.

E You will find the cutting conditions for all tools in our separate cutting manual.

I Per i parametri di lavorazione per tutti gli utensili richiedete il nostro manuale tecnico.






















Norm / Standard	DIN 206	~ DIN 212, WN	
Form / Forma	B	links / left hand / sinistra	links / left hand / sinistra
Schneidstoff / Cutting material / Acciaio punta	HSS	HSS-E	HSS-E
Ø mm	2-20	1,5-20	1-12,03
Code / Codice	3020	3080	3082
Seite / Page / Pagina	368	369	371

Geeignet für / Suitable for / Adatte per			
 Stähle < 400 N/mm² Steels < 400 N/mm² Acciai < 400 N/mm²			
 Stähle < 850 N/mm² Steels < 850 N/mm² Acciai < 850 N/mm²			
 Stähle < 1.100 N/mm² Steels < 1.100 N/mm² Acciai < 1.100 N/mm²			
 Stähle < 1.300 N/mm² Steels < 1.300 N/mm² Acciai < 1.300 N/mm²			
 Stähle > 45 HRC Steels > 45 HRC Acciai > 45 HRC			
 Rostfreie Stähle < 850 N/mm² Stainless steels < 850 N/mm² Acciai inossidabili < 850 N/mm²			
 Rostfreie Stähle > 850 N/mm² Stainless steels > 850 N/mm² Acciai inossidabili > 850 N/mm²			
 Grauguss, Tempereguss Cast iron, malleable cast iron Ghisa grigia, ghisa malleabile			
 Titan- und Titanlegierung Titanium and titanium alloys Titanio e leghe di Titanio			
 Kupfer, Messing Copper, brass Rame, ottone			
 Aluminium Aluminium Alluminio			
 Kunststoffe Plastics Materie plastiche			

D **Übersicht**
HSS-Reibbahlen

E **Overview**
HSS reamers

I **Sommario**
alesatori HSS

NC-Maschinenreibbahlen / NC-machine reamers Alesatori a macchina NC		Kegelreibbahlen / Taper pin reamers Alesatori per ferri di spine coniche
		
DIN 208	DIN 9	DIN 2179
B	B	
HSS-E	HSS	HSS-E
10-30	3-12	5-10
3130	3300	3320
373	374	375
		
		
		
		
		
		
		
		
		
		



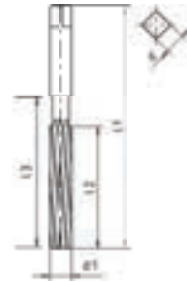
D Handreibahlen
DIN 206 B

Einsatzbereich:
Drallgenutete Ausführung für alle E- und NE-Metalle sowie Kunststoffe hart und weich. Besonders bei unterbrochenen Schnitten zu empfehlen, z. B. Keilnuten, Querbohrungen u.ä.



E Hand reamers
DIN 206 B

Range of application:
For ferrous and non-ferrous metals, synthetic materials soft and hard. Slow helix type suitable for interrupted borings, slots, cross-borings etc.



I Alesatori a mano
DIN 206 B

Impiego:
Alesatori con taglienti elicoidali adatti per tutti i materiali ferrosi, non ferrosi, plastiche dure e dolci, termoidurenti. Particolarmente adatti per lavorazioni di cave longitudinali, fori trasversali ecc.



d1 H7 mm	l1 mm	l2 mm	l3 mm	a h12 mm	Z		Code 3020 Art.-Nr.
2,00	50	25	30	1,60	4	Ø 1,90 mm	0 3020002001 00
2,50	58	29	34	2,10	4	Ø 2,40 mm	0 3020002501 00
3,00	62	31	36	2,10	6	Ø 2,90 mm	0 3020003001 00
3,50	71	35	43	2,70	6	Ø 3,40 mm	0 3020003501 00
4,00	76	38	46	3,00	6	Ø 3,90 mm	0 3020004001 00
4,50	81	41	49	3,40	6	Ø 4,40 mm	0 3020004501 00
5,00	87	44	54	3,80	6	Ø 4,90 mm	0 3020005001 00
5,50	93	47	57	4,30	6	Ø 5,30 mm	0 3020005501 00
6,00	93	47	57	4,30	6	Ø 5,80 mm	0 3020006001 00
7,00	107	54	66	5,50	6	Ø 6,80 mm	0 3020007001 00
8,00	115	58	70	6,20	6	Ø 7,80 mm	0 3020008001 00
9,00	124	62	74	7,00	6	Ø 8,80 mm	0 3020009001 00
10,00	133	66	78	8,00	6	Ø 9,80 mm	0 3020010001 00
11,00	142	71	86	9,00	6	Ø 10,80 mm	0 3020011001 00
12,00	152	76	91	10,00	6	Ø 11,80 mm	0 3020012001 00
13,00	152	76	91	10,00	6	Ø 12,80 mm	0 3020013001 00
14,00	163	81	96	11,00	6	Ø 13,80 mm	0 3020014001 00
15,00	163	81	96	11,00	6	Ø 14,80 mm	0 3020015001 00
16,00	175	87	107	12,00	6	Ø 15,80 mm	0 3020016001 00
18,00	188	93	113	14,50	6	Ø 17,80 mm	0 3020018001 00
20,00	201	100	120	16,00	6	Ø 19,80 mm	0 3020020001 00

D NC-Maschinenreibbahlen

Linksspirale, ähnlich
DIN 212

E NC-machine reamers

left hand spiral,
similar to DIN 212

I Alesatori a macchina NC

tagliante elic. sinistri,
simile DIN 212

Einsatzbereich:

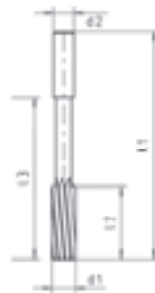
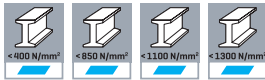
NC-gerechte Ausführung ähnl. DIN 212 mit geradem Schaftdurchmesser für die standardisierte Aufnahme speziell in Hydro-Dehnspannfuttern oder Hochgenauigkeitsspannfuttern. Drallgenutete Ausführung, Linksspirale für alle E- und NE-Metalle geeignet.

Range of application:

Specificly designed for CNC-operations, sim. DIN 212, with reinforced shank for shrink fit systems. For ferrous and non-ferrous metals. Slow helix type (8° left hand). Suitable for individual and mass production.

Impiego:

Alesatori con taglianti elicoidali, elica sinistra simili DIN 212, codolo nominale, per mandrini idraulici e di alta precisione. Adatti per tutti i materiali ferrosi, non ferrosi.




d1 _{H7} mm	d2 _{h6} mm	l1 mm	l2 mm	l3 mm	Z		Code 3080 Art.-Nr.
1,50	2,00	40	8	22	3	Ø 1,40 mm	0 3080001501 00
1,60	2,00	43	9	23	3	Ø 1,50 mm	0 3080001601 00
1,70	2,00	43	9	23	3	Ø 1,60 mm	0 3080001701 00
1,80	2,00	46	10	24	4	Ø 1,70 mm	0 3080001801 00
1,90	2,00	46	10	24	4	Ø 1,80 mm	0 3080001901 00
2,00	2,00	49	11	27	4	Ø 1,90 mm	0 3080002001 00
2,10	2,00	49	11	27	4	Ø 2,00 mm	0 3080002101 00
2,20	3,00	53	12	27	4	Ø 2,10 mm	0 3080002201 00
2,30	3,00	53	12	27	4	Ø 2,20 mm	0 3080002301 00
2,40	3,00	57	14	28	4	Ø 2,30 mm	0 3080002401 00
2,50	3,00	57	14	28	4	Ø 2,40 mm	0 3080002501 00
2,60	3,00	57	14	28	4	Ø 2,50 mm	0 3080002601 00
2,70	3,00	61	15	30	6	Ø 2,60 mm	0 3080002701 00
2,80	3,00	61	15	30	6	Ø 2,70 mm	0 3080002801 00
2,90	3,00	61	15	30	6	Ø 2,80 mm	0 3080002901 00
3,00	3,00	61	15	30	6	Ø 2,90 mm	0 3080003001 00
3,10	4,00	65	16	34	6	Ø 3,00 mm	0 3080003101 00
3,20	4,00	65	16	34	6	Ø 3,10 mm	0 3080003201 00
3,30	4,00	65	16	34	6	Ø 3,20 mm	0 3080003301 00
3,40	4,00	70	18	35	6	Ø 3,30 mm	0 3080003401 00
3,50	4,00	70	18	35	6	Ø 3,40 mm	0 3080003501 00
3,60	4,00	70	18	35	6	Ø 3,50 mm	0 3080003601 00
3,70	4,00	70	18	35	6	Ø 3,60 mm	0 3080003701 00
3,80	4,00	75	19	47	6	Ø 3,70 mm	0 3080003801 00
3,90	4,00	75	19	47	6	Ø 3,80 mm	0 3080003901 00
4,00	4,00	75	19	47	6	Ø 3,90 mm	0 3080004001 00
4,10	4,00	75	19	47	6	Ø 4,00 mm	0 3080004101 00
4,20	4,00	75	19	47	6	Ø 4,10 mm	0 3080004201 00
4,30	5,00	80	21	52	6	Ø 4,20 mm	0 3080004301 00
4,40	5,00	80	21	52	6	Ø 4,30 mm	0 3080004401 00
4,50	5,00	80	21	52	6	Ø 4,40 mm	0 3080004501 00
4,60	5,00	80	21	52	6	Ø 4,50 mm	0 3080004601 00
4,70	5,00	80	21	52	6	Ø 4,60 mm	0 3080004701 00
4,80	5,00	86	23	58	6	Ø 4,70 mm	0 3080004801 00

* ganzzahliger Schaftdurchmesser / nominal shank / diam. codolo nominale



HSS-Reibbahlen
HSS reamers
HSS alesatori

d1 _{H7} mm	d2 _{h6} mm	l1 mm	l2 mm	l3 mm	Z		Code 3080 Art.-Nr.
4,90	5,00	86	23	58	6	Ø 4,80 mm	0 3080004901 00
5,00	5,00	86	23	58	6	Ø 4,90 mm	0 3080005001 00
5,10	5,00	86	23	58	6	Ø 4,90 mm	0 3080005101 00
5,20	5,00	86	23	58	6	Ø 5,00 mm	0 3080005201 00
5,30	5,00	86	23	58	6	Ø 5,10 mm	0 3080005301 00
5,40	6,00	93	26	57	6	Ø 5,20 mm	0 3080005401 00
5,50	6,00	93	26	57	6	Ø 5,30 mm	0 3080005501 00
5,60	6,00	93	26	57	6	Ø 5,40 mm	0 3080005601 00
5,70	6,00	93	26	57	6	Ø 5,50 mm	0 3080005701 00
5,80	6,00	93	26	57	6	Ø 5,60 mm	0 3080005801 00
5,90	6,00	93	26	57	6	Ø 5,70 mm	0 3080005901 00
6,00	6,00	93	26	57	6	Ø 5,80 mm	0 3080006001 00
6,10	6,00	101	28	65	6	Ø 5,90 mm	0 3080006101 00
6,20	6,00	101	28	65	6	Ø 6,00 mm	0 3080006201 00
6,30	6,00	101	28	65	6	Ø 6,10 mm	0 3080006301 00
6,40	6,00	101	28	65	6	Ø 6,20 mm	0 3080006401 00
6,50	6,00	101	28	65	6	Ø 6,30 mm	0 3080006501 00
6,60	6,00	101	28	65	6	Ø 6,40 mm	0 3080006601 00
6,70	6,00	101	28	65	6	Ø 6,50 mm	0 3080006701 00
6,80	8,00	109	31	73	6	Ø 6,60 mm	0 3080006801 00
6,90	8,00	109	31	73	6	Ø 6,70 mm	0 3080006901 00
7,00	8,00	109	31	73	6	Ø 6,80 mm	0 3080007001 00
7,10	8,00	109	31	73	6	Ø 6,90 mm	0 3080007101 00
7,20	8,00	109	31	73	6	Ø 7,00 mm	0 3080007201 00
7,30	8,00	109	31	73	6	Ø 7,10 mm	0 3080007301 00
7,40	8,00	109	31	73	6	Ø 7,20 mm	0 3080007401 00
7,50	8,00	109	31	73	6	Ø 7,30 mm	0 3080007501 00
7,60	8,00	117	33	81	6	Ø 7,40 mm	0 3080007601 00
7,70	8,00	117	33	81	6	Ø 7,50 mm	0 3080007701 00
7,80	8,00	117	33	81	6	Ø 7,60 mm	0 3080007801 00
7,90	8,00	117	33	81	6	Ø 7,70 mm	0 3080007901 00
8,00	8,00	117	33	81	6	Ø 7,80 mm	0 3080008001 00
8,10	8,00	117	33	81	6	Ø 7,90 mm	0 3080008101 00
8,20	8,00	117	33	81	6	Ø 8,00 mm	0 3080008201 00
8,30	8,00	117	33	81	6	Ø 8,10 mm	0 3080008301 00
8,40	8,00	117	33	81	6	Ø 8,20 mm	0 3080008401 00
8,50	8,00	117	33	81	6	Ø 8,30 mm	0 3080008501 00
8,60	10,00	125	36	85	6	Ø 8,40 mm	0 3080008601 00
8,70	10,00	125	36	85	6	Ø 8,50 mm	0 3080008701 00
8,80	10,00	125	36	85	6	Ø 8,60 mm	0 3080008801 00
8,90	10,00	125	36	85	6	Ø 8,70 mm	0 3080008901 00
9,00	10,00	125	36	85	6	Ø 8,80 mm	0 3080009001 00
9,10	10,00	125	36	85	6	Ø 8,90 mm	0 3080009101 00
9,20	10,00	125	36	85	6	Ø 9,00 mm	0 3080009201 00
9,30	10,00	125	36	85	6	Ø 9,10 mm	0 3080009301 00
9,40	10,00	125	36	85	6	Ø 9,20 mm	0 3080009401 00
9,50	10,00	125	36	85	6	Ø 9,30 mm	0 3080009501 00
9,60	10,00	133	38	93	6	Ø 9,40 mm	0 3080009601 00
9,70	10,00	133	38	93	6	Ø 9,50 mm	0 3080009701 00
9,80	10,00	133	38	93	6	Ø 9,60 mm	0 3080009801 00
9,90	10,00	133	38	93	6	Ø 9,70 mm	0 3080009901 00
10,00	10,00	133	38	93	6	Ø 9,80 mm	0 3080010001 00
11,00	10,00	142	41	102	6	Ø 10,80 mm	0 3080011001 00
12,00	10,00	151	44	111	6	Ø 11,80 mm	0 3080012001 00
13,00	10,00	151	44	111	6	Ø 12,80 mm	0 3080013001 00
14,00	14,00	160	47	120	8	Ø 13,80 mm	0 3080014001 00
15,00	14,00	162	50	122	8	Ø 14,80 mm	0 3080015001 00
16,00	14,00	170	52	130	8	Ø 15,80 mm	0 3080016001 00
17,00	14,00	175	54	135	8	Ø 16,80 mm	0 3080017001 00
18,00	14,00	182	56	142	8	Ø 17,80 mm	0 3080018001 00
19,00	16,00	189	58	149	8	Ø 18,80 mm	0 3080019001 00
20,00	16,00	195	60	155	8	Ø 19,80 mm	0 3080020001 00

D NC-Werkzeugmacher-reibbahlen, ganzzahliger Schaftdurchmesser, ähnlich DIN 212

E NC-machine reamers with nominal shank, similar to DIN 212

I Alesatori a macchina NC taglienti elicoidali, diam. codolo nominale, simile DIN 212

Einsatzbereich:

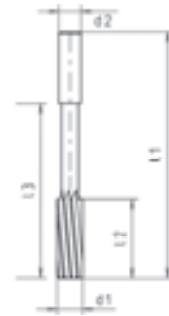
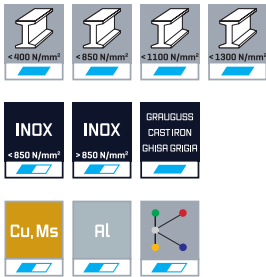
NC-gerechte Ausführung ähnl. DIN 212 mit geradem Schaftdurchmesser für die standardisierte Aufnahme speziell in Hydrodehn- oder Hochgenauigkeitsfutter für höchste Rundlaufgenauigkeit und Prozesssicherheit. Drallgenutete Ausführung (8° Linksspirale). Für den Werkzeug- und Formenbau, um Bohrungen mit Unter-/Übermaß herzustellen.

Range of application:

Specifically designed for CNC-operations, similar DIN 212, with nominal shank for shrink fit systems, especially for highest precision of radial runout and process-safety. Slow helix type (8° left hand). Specially suitable for the tool and mold industry, to achieve undersized and oversized holes.

Impiego:


Alesatori simili DIN 212 codolo nominale per mandrini idraulici e di alta precisione, per una migliore coassialità e sicurezza di processo. Elica sinistra 8°. Per lavorazioni di utensili e di stampi di fori sotto o sopra misura.



d1 mm	d2 h6 mm	l1 mm	l2 mm	l3 mm	Z		Code 3082 Art.-Nr.
1,00	1,00	35	6	17	3	Ø 0,90 mm	0 3082001001 00
1,01	1,00	35	6	17	3	Ø 0,90 mm	0 3082001011 00
1,02	1,00	35	6	17	3	Ø 0,90 mm	0 3082001021 00
1,03	1,00	35	6	17	3	Ø 0,90 mm	0 3082001031 00
1,51	2,00	43	9	23	3	Ø 1,40 mm	0 3082001511 00
1,52	2,00	43	9	23	3	Ø 1,40 mm	0 3082001521 00
1,53	2,00	43	9	23	3	Ø 1,40 mm	0 3082001531 00
1,97	2,00	49	11	27	4	Ø 1,90 mm	0 3082001971 00
1,98	2,00	49	11	27	4	Ø 1,90 mm	0 3082001981 00
1,99	2,00	49	11	27	4	Ø 1,90 mm	0 3082001991 00
2,01	2,00	49	11	27	4	Ø 1,90 mm	0 3082002011 00
2,02	2,00	49	11	27	4	Ø 1,90 mm	0 3082002021 00
2,03	2,00	49	11	27	4	Ø 1,90 mm	0 3082002031 00
2,47	3,00	57	14	28	4	Ø 2,40 mm	0 3082002471 00
2,48	3,00	57	14	28	4	Ø 2,40 mm	0 3082002481 00
2,49	3,00	57	14	28	4	Ø 2,40 mm	0 3082002491 00
2,51	3,00	57	14	28	4	Ø 2,40 mm	0 3082002511 00
2,52	3,00	57	14	28	4	Ø 2,40 mm	0 3082002521 00
2,53	3,00	57	14	28	4	Ø 2,40 mm	0 3082002531 00
2,97	3,00	61	15	30	6	Ø 2,90 mm	0 3082002971 00
2,98	3,00	61	15	30	6	Ø 2,90 mm	0 3082002981 00
2,99	3,00	61	15	30	6	Ø 2,90 mm	0 3082002991 00
3,01	4,00	65	16	34	6	Ø 2,90 mm	0 3082003011 00
3,02	4,00	65	16	34	6	Ø 2,90 mm	0 3082003021 00
3,03	4,00	65	16	34	6	Ø 2,90 mm	0 3082003031 00
3,97	4,00	75	19	47	6	Ø 3,90 mm	0 3082003971 00
3,98	4,00	75	19	47	6	Ø 3,90 mm	0 3082003981 00
3,99	4,00	75	19	47	6	Ø 3,90 mm	0 3082003991 00
4,01	4,00	75	19	47	6	Ø 3,90 mm	0 3082004011 00
4,02	4,00	75	19	47	6	Ø 3,90 mm	0 3082004021 00



HSS-Reibbahlen
HSS reamers
HSS alesatori

d1 mm	d2 _{h6} mm	l1 mm	l2 mm	l3 mm	Z		Code 3082 Art.-Nr.
4,03	4,00	75	19	47	6	Ø 3,90 mm	0 3082004031 00
4,97	5,00	86	23	58	6	Ø 4,90 mm	0 3082004971 00
4,98	5,00	86	23	58	6	Ø 4,90 mm	0 3082004981 00
4,99	5,00	86	23	58	6	Ø 4,90 mm	0 3082004991 00
5,01	5,00	86	23	58	6	Ø 4,80 mm	0 3082005011 00
5,02	5,00	86	23	58	6	Ø 4,80 mm	0 3082005021 00
5,03	5,00	86	23	58	6	Ø 4,80 mm	0 3082005031 00
5,97	6,00	93	26	57	6	Ø 5,80 mm	0 3082005971 00
5,98	6,00	93	26	57	6	Ø 5,80 mm	0 3082005981 00
5,99	6,00	93	26	57	6	Ø 5,80 mm	0 3082005991 00
6,01	6,00	101	28	65	6	Ø 5,80 mm	0 3082006011 00
6,02	6,00	101	28	65	6	Ø 5,80 mm	0 3082006021 00
6,03	6,00	101	28	65	6	Ø 5,80 mm	0 3082006031 00
7,97	8,00	117	33	81	6	Ø 7,80 mm	0 3082007971 00
7,98	8,00	117	33	81	6	Ø 7,80 mm	0 3082007981 00
7,99	8,00	117	33	81	6	Ø 7,80 mm	0 3082007991 00
8,01	8,00	117	33	81	6	Ø 7,80 mm	0 3082008011 00
8,02	8,00	117	33	81	6	Ø 7,80 mm	0 3082008021 00
8,03	8,00	117	33	81	6	Ø 7,80 mm	0 3082008031 00
9,01	10,00	125	36	85	6	Ø 8,80 mm	0 3082009011 00
9,02	10,00	125	36	85	6	Ø 8,80 mm	0 3082009021 00
9,03	10,00	125	36	85	6	Ø 8,80 mm	0 3082009031 00
9,97	10,00	133	38	93	6	Ø 9,80 mm	0 3082009971 00
9,98	10,00	133	38	93	6	Ø 9,80 mm	0 3082009981 00
9,99	10,00	133	38	93	6	Ø 9,80 mm	0 3082009991 00
10,01	10,00	133	38	93	6	Ø 9,80 mm	0 3082010011 00
10,02	10,00	133	38	93	6	Ø 9,80 mm	0 3082010021 00
10,03	10,00	133	38	93	6	Ø 9,80 mm	0 3082010031 00
11,97	10,00	151	44	111	6	Ø 11,80 mm	0 3082011971 00
11,98	10,00	151	44	111	6	Ø 11,80 mm	0 3082011981 00
11,99	10,00	151	44	111	6	Ø 11,80 mm	0 3082011991 00
12,01	10,00	151	44	111	6	Ø 11,80 mm	0 3082012011 00
12,02	10,00	151	44	111	6	Ø 11,80 mm	0 3082012021 00
12,03	10,00	151	44	111	6	Ø 11,80 mm	0 3082012031 00

D Maschinenreibbahlen
mit Morsekegel,
DIN 208 B

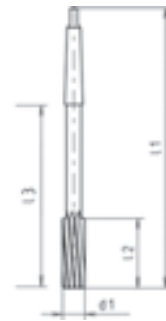
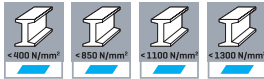
Einsatzbereich:
Drallgenutete Ausführung mit 8° Linksspirale für alle E- und NE-Metalle geeignet.

E Machine reamers
with morse taper shank,
DIN 208 B

Range of application:
For ferrous and non-ferrous metals. Slow helix type 8° left hand spiral.

I Alesatori a macchina
cono morse,
DIN 208 B

Impiego:
Alesatori con taglienti elicoidali, elica sinistra ca. 8°. Adatti per tutti i materiali ferrosi, non ferrosi.



d1 H7 mm	l1 mm	l2 mm	l3 mm	Z	Code 3130 Art.-Nr.
10,00	168	38	102,50	1 6	Ø 9,80 mm 0 3130010001 00
11,00	175	41	109,50	1 6	Ø 10,80 mm 0 3130011001 00
12,00	182	44	116,50	1 6	Ø 11,80 mm 0 3130012001 00
13,00	182	44	116,50	1 6	Ø 12,80 mm 0 3130013001 00
14,00	189	47	123,50	1 8	Ø 13,80 mm 0 3130014001 00
15,00	204	50	124,00	2 8	Ø 14,80 mm 0 3130015001 00
16,00	210	52	130,00	2 8	Ø 15,80 mm 0 3130016001 00
17,00	214	54	134,00	2 8	Ø 16,80 mm 0 3130017001 00
18,00	219	56	139,00	2 8	Ø 17,80 mm 0 3130018001 00
19,00	223	58	143,00	2 8	Ø 18,80 mm 0 3130019001 00
20,00	228	60	148,00	2 8	Ø 19,80 mm 0 3130020001 00
21,00	232	62	152,00	2 8	Ø 20,60 mm 0 3130021001 00
22,00	237	64	157,00	2 8	Ø 21,60 mm 0 3130022001 00
23,00	241	66	161,00	2 8	Ø 22,60 mm 0 3130023001 00
24,00	268	68	169,00	3 8	Ø 23,60 mm 0 3130024001 00
25,00	268	68	169,00	3 8	Ø 24,60 mm 0 3130025001 00
26,00	273	70	174,00	3 8	Ø 25,60 mm 0 3130026001 00
27,00	277	71	178,00	3 8	Ø 26,60 mm 0 3130027001 00
28,00	277	71	178,00	3 8	Ø 27,60 mm 0 3130028001 00
30,00	281	73	182,00	3 10	Ø 29,60 mm 0 3130030001 00



HSS-Reibbahlen
HSS reamers
HSS alesatori