

>> 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, Querböhrungen u.ä.

HAND REAMERS, DIN 206 B

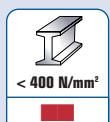

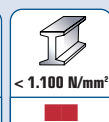
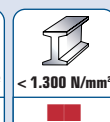
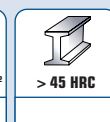
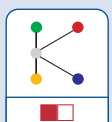
Range of application:

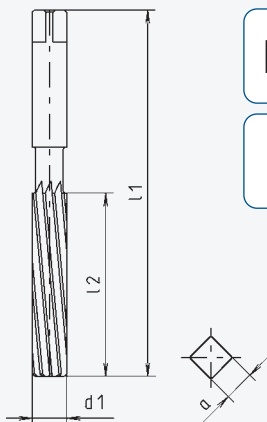
For ferrous and non-ferrous metals, synthetic materials soft and hard. Slow helix type suitable for interrupted borings, slots, cross-borings etc.

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.

 < 400 N/mm ²	 < 850 N/mm ²	 < 1.100 N/mm ²	 < 1.300 N/mm ²	 > 45 HRC	INOX < 850 N/mm ²	INOX > 850 N/mm ²	GRAUGUSS CAST IRON GHISA GRIGIA	Ti	Cu, Ms	Al	
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HSS **H7**

Form
Form
Forma
B

**DIN
206**



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d _{H7} mm	l ₁ mm	l ₂ mm	a _{H7} mm	Z	Code 3020 Art.-Nr.	€
2,00	50	25	1,60	4	0 3020002001 00	18,88
2,50	58	29	2,10	4	0 3020002501 00	20,15
3,00	62	31	2,10	6	0 3020003001 00	19,28
3,50	71	35	2,70	6	0 3020003501 00	22,15
4,00	76	38	3,00	6	0 3020004001 00	19,28
4,50	81	41	3,40	6	0 3020004501 00	21,79
5,00	87	44	3,80	6	0 3020005001 00	21,32
5,50	93	47	4,30	6	0 3020005501 00	24,57
6,00	93	47	4,30	6	0 3020006001 00	20,76
7,00	107	54	5,50	6	0 3020007001 00	22,96
8,00	115	58	6,20	6	0 3020008001 00	22,96
9,00	124	62	7,00	6	0 3020009001 00	26,25
10,00	133	66	8,00	6	0 3020010001 00	27,89
11,00	142	71	9,00	6	0 3020011001 00	32,07
12,00	152	76	10,00	6	0 3020012001 00	32,85
13,00	152	76	10,00	6	0 3020013001 00	45,92
14,00	163	81	11,00	6	0 3020014001 00	51,70
15,00	163	81	11,00	6	0 3020015001 00	54,99
16,00	175	87	12,00	6	0 3020016001 00	55,41
17,00	175	87	12,00	6	0 3020017001 00	59,04
18,00	188	93	14,50	6	0 3020018001 00	66,48
19,00	188	93	14,50	6	0 3020019001 00	71,40
20,00	201	100	16,00	6	0 3020020001 00	71,40
22,00	215	107	18,00	8	0 3020022001 00	77,12
24,00	231	115	20,00	8	0 3020024001 00	94,33

Ausführungen für andere Passungen als H7 siehe Seite VII/17.

Versions different to H7 see on page VII/20.

Esecuzioni con altre tolleranze vedi pagina VII/23.



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>> HANDREIBAHLEN, DIN 206 B

HAND REAMERS, DIN 206 B

ALESATORI A MANO, DIN 206 B

Fortsetzung von Seite VII/4 | Continued from
page VII/4 | Segue da pagina VII/4

					blank bright lucida	
d _{H7} mm	l ₁ mm	l ₂ mm	a _{H12} mm	Z	Code 3020 Art.-Nr.	€
25,00	231	115	20,00	8	□ 3020025001 00	95,98
26,00	231	115	20,00	8	□ 3020026001 00	102,60
28,00	247	124	22,00	8	□ 3020028001 00	132,10
30,00	247	124	22,00	8	□ 3020030001 00	137,80



>> NC-MASCHINENREIBAHLEN, GERADE AUSFÜHRUNG, ÄHNLICH DIN 212

Einsatzbereich:

NC-gerechte Ausführung ähnl. DIN 212 mit geradem Schaftdurchmesser für die standardisierte Aufnahme speziell in Hydro-Dehnspannfuttern oder Hochgenauigkeitsspannfuttern. Gerade Ausführung, für alle E- und NE-Metalle. Verwendung in Grund- und Durchgangsbohrungen bei Einzel- und Serienfertigung.

NC-MACHINE REAMERS, STRAIGHT FLUTE TYPE, SIMILAR TO DIN 212


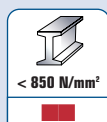

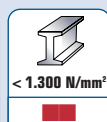

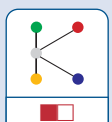
Range of application:

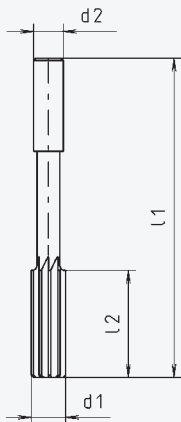
Specifically designed for CNC-operations, sim. DIN 212, with reinforced shank for shrink fit systems. For ferrous and non-ferrous metals. Straight flute type useable for blind and through hole borings. Suitable for individual and mass production.

ALESATORI A MACCHINA NC, TAGLIENTI DIRITTI, SIMILE DIN 212

Impiego:

Alesatori con taglienti diritti, simili DIN 212, codolo nominale, per mandrini idraulici e di alta precisione. Adatti per tutti i materiali ferrosi, non ferrosi. Esecuzione di fori ciechi e/o passanti, sia in lavorazioni singole che di serie.

 < 400 N/mm ²	 < 850 N/mm ²	 < 1.100 N/mm ²	 < 1.300 N/mm ²	 > 45 HRC	INOX < 850 N/mm ²	INOX > 850 N/mm ²	GRAUGUSS CAST IRON GHISA GRIGIA	Ti	Cu, Ms	Al	
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HSS-E **h6***
H7 **WN**



blank | bright | lucida

d1 _{H7} mm	d2 _{h6} mm	l1 mm	l2 mm	Z	Code 3060 Art.-Nr.	€
2,00	2,00	49	11	4	0 3060002001 00	18,40
3,00	3,00	61	15	6	0 3060003001 00	18,52
4,00	4,00	75	19	6	0 3060004001 00	15,61
5,00	5,00	86	23	6	0 3060005001 00	16,17
6,00	6,00	93	26	6	0 3060006001 00	16,64
7,00	8,00	109	31	6	0 3060007001 00	20,30
8,00	8,00	117	33	6	0 3060008001 00	20,94
9,00	10,00	125	36	6	0 3060009001 00	24,39
10,00	10,00	133	38	6	0 3060010001 00	24,92
11,00	10,00	142	41	6	0 3060011001 00	35,06
12,00	10,00	151	44	6	0 3060012001 00	36,41

* ganzzahliger Schaftdurchmesser
nominal shank
diam. codolo nominale

Ausführungen für andere Passungen als H7 siehe Seite VII/17.

Versions different to H7 see on page VII/20.

Esecuzioni con altre tolleranze vedi pagina VII/23.



>> NC-MASCHINENREIBAHLEN, LINKSSPIRALE, ÄHNLICH DIN 212

Einsatzbereich:

NC-gerechte Ausführung ähnl. DIN 212 mit geradem Schaftdurchmesser für die standardisierte Aufnahme speziell in Hydro-Dehnspannfuttern oder Hochgenauigkeitsspannfuttern. Drillgenutete Ausführung, Linksspirale, vorwiegend für Durchgangsbohrungen in allen E- und NE-Metallen geeignet, besonders für unterbrochene Schnitte wie Längsnuten, Querbohrungen usw.

NC-MACHINE REAMERS, LEFT HAND SPIRAL, SIMILAR TO DIN 212







Range of application:

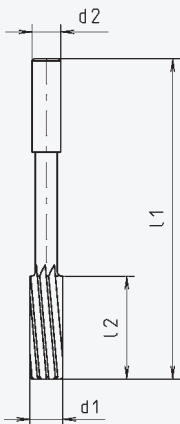
Specifically designed for CNC-operations, sim. DIN 212, with reinforced shank for shrink fit systems. For ferrous and non-ferrous metals. Slow helix type (8° left hand) useable for interrupted borings, slots, crossborings etc. Suitable for individual and mass production.

ALESATORI A MACCHINA NC, TAGLIENTI ELIC. SINISTRI, SIMILE DIN 212

Impiego:

Alesatori con taglienti elicoidali, elica sinistra simili DIN 212, codolo nominale, per mandrini idraulici e di alta precisione. Adatti per tutti i materiali ferrosi, non ferrosi. Esecuzione di fori passanti. Particolarmente adatti per lavorazioni di cave longitudinali, fori trasversali ecc.

 < 400 N/mm ²	 < 850 N/mm ²	 < 1.100 N/mm ²	 < 1.300 N/mm ²	 > 45 HRC	INOX < 850 N/mm ²	INOX > 850 N/mm ²	GRAUGUSS CAST IRON GHISA GRIGIA	Ti	Cu, Ms	Al	
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HSS-E **h6***
H7 **WN**



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d1 _{H7} mm	d2 _{h6} mm	l1 mm	l2 mm	Z	Code 3080 Art.-Nr.	€
1,50	2,00	40	8	3	0 3080001501 00	19,50
1,60	2,00	43	9	3	0 3080001601 00	19,50
1,70	2,00	43	9	3	0 3080001701 00	19,50
1,80	2,00	46	10	4	0 3080001801 00	19,50
1,90	2,00	46	10	4	0 3080001901 00	19,50
2,00	2,00	49	11	4	0 3080002001 00	18,40
2,10	2,00	49	11	4	0 3080002101 00	18,40
2,20	3,00	53	12	4	0 3080002201 00	18,40
2,30	3,00	53	12	4	0 3080002301 00	18,40
2,40	3,00	57	14	4	0 3080002401 00	18,40
2,50	3,00	57	14	4	0 3080002501 00	18,40
2,60	3,00	57	14	4	0 3080002601 00	18,40
2,70	3,00	61	15	6	0 3080002701 00	18,40
2,80	3,00	61	15	6	0 3080002801 00	18,40
2,90	3,00	61	15	6	0 3080002901 00	18,40
3,00	3,00	61	15	6	0 3080003001 00	18,52
3,10	4,00	65	16	6	0 3080003101 00	18,52
3,20	4,00	65	16	6	0 3080003201 00	18,52
3,30	4,00	65	16	6	0 3080003301 00	18,52
3,40	4,00	70	18	6	0 3080003401 00	18,52
3,50	4,00	70	18	6	0 3080003501 00	16,57
3,60	4,00	70	18	6	0 3080003601 00	20,76
3,70	4,00	70	18	6	0 3080003701 00	20,76
3,80	4,00	75	19	6	0 3080003801 00	20,76
3,90	4,00	75	19	6	0 3080003901 00	20,76

* ganzzahliger Schaftdurchmesser
nominal shank
diam. codolo nominale

Ausführungen für andere Passungen als H7 siehe
Seite VII/17.

Versions different to H7 see on page VII/20.

Esecuzioni con altre tolleranze vedi pagina VII/23.



>> **NC-MASCHINENREIBAHLEN,
LINKSSPIRALE,
ÄHNLICH DIN 212**

**NC-MACHINE REAMERS,
LEFT HAND SPIRAL,
SIMILAR TO DIN 212**

**ALESATORI A MACCHINA NC,
TAGLIENTI ELIC. SINISTRI,
SIMILE DIN 212**

Fortsetzung von Seite VII/7 | Continued from
page VII/7 | Segue da pagina VII/7

					blank bright lucida	
d1 _{H7} mm	d2 _{h6} mm	l1 mm	l2 mm	Z	Code 3080 Art.-Nr.	€
4,00	4,00	75	19	6	0 3080004001 00	15,53
4,10	4,00	75	19	6	0 3080004101 00	19,28
4,20	4,00	75	19	6	0 3080004201 00	19,28
4,30	5,00	80	21	6	0 3080004301 00	19,28
4,40	5,00	80	21	6	0 3080004401 00	19,28
4,50	5,00	80	21	6	0 3080004501 00	16,40
4,60	5,00	80	21	6	0 3080004601 00	21,15
4,70	5,00	80	21	6	0 3080004701 00	21,15
4,80	5,00	86	23	6	0 3080004801 00	21,15
4,90	5,00	86	23	6	0 3080004901 00	21,15
5,00	5,00	86	23	6	0 3080005001 00	16,17
5,10	5,00	86	23	6	0 3080005101 00	21,15
5,20	5,00	86	23	6	0 3080005201 00	21,15
5,30	5,00	86	23	6	0 3080005301 00	21,15
5,40	6,00	93	26	6	0 3080005401 00	21,15
5,50	6,00	93	26	6	0 3080005501 00	19,28
5,60	6,00	93	26	6	0 3080005601 00	21,15
5,70	6,00	93	26	6	0 3080005701 00	21,15
5,80	6,00	93	26	6	0 3080005801 00	21,15
5,90	6,00	93	26	6	0 3080005901 00	21,15
6,00	6,00	93	26	6	0 3080006001 00	16,64
6,10	6,00	101	28	6	0 3080006101 00	21,15
6,20	6,00	101	28	6	0 3080006201 00	21,15
6,30	6,00	101	28	6	0 3080006301 00	21,15
6,40	6,00	101	28	6	0 3080006401 00	21,15
6,50	6,00	101	28	6	0 3080006501 00	20,30
6,60	6,00	101	28	6	0 3080006601 00	21,15
6,70	6,00	101	28	6	0 3080006701 00	21,15
6,80	8,00	109	31	6	0 3080006801 00	21,32
6,90	8,00	109	31	6	0 3080006901 00	21,32
7,00	8,00	109	31	6	0 3080007001 00	20,30
7,10	8,00	109	31	6	0 3080007101 00	23,83
7,20	8,00	109	31	6	0 3080007201 00	23,83
7,30	8,00	109	31	6	0 3080007301 00	23,83
7,40	8,00	109	31	6	0 3080007401 00	23,83
7,50	8,00	109	31	6	0 3080007501 00	22,96
7,60	8,00	117	33	6	0 3080007601 00	24,57
7,70	8,00	117	33	6	0 3080007701 00	24,57
7,80	8,00	117	33	6	0 3080007801 00	24,57
7,90	8,00	117	33	6	0 3080007901 00	24,57
8,00	8,00	117	33	6	0 3080008001 00	20,94
8,10	8,00	117	33	6	0 3080008101 00	29,56
8,20	8,00	117	33	6	0 3080008201 00	29,56
8,30	8,00	117	33	6	0 3080008301 00	29,56
8,40	8,00	117	33	6	0 3080008401 00	29,56
8,50	8,00	117	33	6	0 3080008501 00	26,69
8,60	10,00	125	36	6	0 3080008601 00	27,10
8,70	10,00	125	36	6	0 3080008701 00	27,10
8,80	10,00	125	36	6	0 3080008801 00	27,10
8,90	10,00	125	36	6	0 3080008901 00	27,10
9,00	10,00	125	36	6	0 3080009001 00	24,39
9,10	10,00	125	36	6	0 3080009101 00	27,89
9,20	10,00	125	36	6	0 3080009201 00	27,89
9,30	10,00	125	36	6	0 3080009301 00	27,89

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>> **NC-MASCHINENREIBAHLEN,
LINKSSPIRALE,
ÄHNLICH DIN 212**

**NC-MACHINE REAMERS,
LEFT HAND SPIRAL,
SIMILAR TO DIN 212**

**ALESATORI A MACCHINA NC,
TAGLIENTI ELIC. SINISTRI,
SIMILE DIN 212**

Fortsetzung von Seite VII/8 | Continued from
page VII/8 | Segue da pagina VII/8

					blank bright lucida	
d1 _{H7} mm	d2 _{h6} mm	l1 mm	l2 mm	Z	Code 3080 Art.-Nr.	€
9,40	10,00	125	36	6	□ 3080009401 00	27,89
9,50	10,00	125	36	6	□ 3080009501 00	27,25
9,60	10,00	133	38	6	□ 3080009601 00	29,13
9,70	10,00	133	38	6	□ 3080009701 00	29,13
9,80	10,00	133	38	6	□ 3080009801 00	29,13
9,90	10,00	133	38	6	□ 3080009901 00	29,13
10,00	10,00	133	38	6	□ 3080010001 00	24,92
11,00	10,00	142	41	6	□ 3080011001 00	35,06
12,00	10,00	151	44	6	□ 3080012001 00	36,41
13,00	10,00	151	44	6	□ 3080013001 00	40,86
14,00	14,00	160	47	8	□ 3080014001 00	41,86
15,00	14,00	162	50	8	□ 3080015001 00	43,63
16,00	14,00	170	52	8	□ 3080016001 00	45,41
17,00	14,00	175	54	8	□ 3080017001 00	53,34
18,00	14,00	182	56	8	□ 3080018001 00	54,63
19,00	16,00	189	58	8	□ 3080019001 00	63,98
20,00	16,00	195	60	8	□ 3080020001 00	60,71



>> NC-WERKZEUGMACHER-REIBAHLEN, GANZZAHLIGER SCHAFTDURCHMESSER, ÄHNLICH 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), vorwiegend für Durchgangsbohrungen. Für den Werkzeug- und Formenbau, um Bohrungen mit Unter-/Übermaß herzustellen (andere Passungen als H7).

NC-MACHINE REAMERS WITH NOMINAL SHANK, SIMILAR TO DIN 212

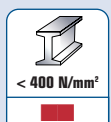
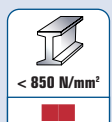



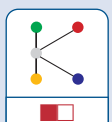
Range of application:

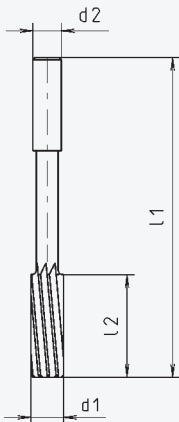
Specifically designed for CNC-operations, similar DIN 212, with nominal shank for shrink fit systems, especially for highest precision of radial runout and process-safety. Slow helix type (8° left hand), mainly suitable for through holes. Specially suitable for the tool and mold industry, to achieve undersized and oversized holes (other fits than H7).

ALESATORI A MACCHINA NC, TAGLIENTI ELICOIDALI, DIAM. CODOLO NOMINALE, SIMILE DIN 212

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° particolarmente adatti per lavorazioni in fori passanti. Per lavorazioni di utensili e di stampi di fori sotto o sopra misura tolleranze diverse da H7.

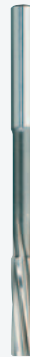
 < 400 N/mm ²	 < 850 N/mm ²	 < 1.100 N/mm ²	 < 1.300 N/mm ²	 > 45 HRC	INOX < 850 N/mm ²	INOX > 850 N/mm ²	GRAUGUSS CAST IRON GHISA GRIGIA	Ti	Cu, Ms	Al	
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HSS-E

WN

Toleranz | Tolerance | Tolleranza:
 Ø 1,00- 5,03 = 0/±0,004 mm
 Ø 5,97-11,99 = 0/±0,005 mm



blank | bright | lucida

d1 mm	d2 _{h6} mm	l1 mm	l2 mm	Z	Code 3082 Art.-Nr.	€
1,00	1,00	35	6	3	0 3082001001 00	31,22
1,01	1,00	35	6	3	0 3082001011 00	31,22
1,02	1,00	35	6	3	0 3082001021 00	31,22
1,03	1,00	35	6	3	0 3082001031 00	31,22
1,51	2,00	43	9	3	0 3082001511 00	26,15
1,52	2,00	43	9	3	0 3082001521 00	26,15
1,53	2,00	43	9	3	0 3082001531 00	26,15
1,97	2,00	49	11	4	0 3082001971 00	21,07
1,98	2,00	49	11	4	0 3082001981 00	21,07
1,99	2,00	49	11	4	0 3082001991 00	21,07
2,01	2,00	49	11	4	0 3082002011 00	21,07
2,02	2,00	49	11	4	0 3082002021 00	21,07
2,03	2,00	49	11	4	0 3082002031 00	21,07
2,47	3,00	57	14	4	0 3082002471 00	21,38
2,48	3,00	57	14	4	0 3082002481 00	21,38
2,49	3,00	57	14	4	0 3082002491 00	21,38
2,51	3,00	57	14	4	0 3082002511 00	21,38
2,52	3,00	57	14	4	0 3082002521 00	21,38
2,53	3,00	57	14	4	0 3082002531 00	21,38
2,97	3,00	61	15	6	0 3082002971 00	21,88
2,98	3,00	61	15	6	0 3082002981 00	21,88
2,99	3,00	61	15	6	0 3082002991 00	21,88
3,01	4,00	65	16	6	0 3082003011 00	21,88
3,02	4,00	65	16	6	0 3082003021 00	21,88
3,03	4,00	65	16	6	0 3082003031 00	21,88

Fortsetzung auf Seite VII/11 | Continued on page VII/11 | Segue a pagina VII/11



>> **NC-WERKZEUGMACHER-REIBAHLEN, GANZZÄHLIGER SCHAFTDURCHMESSER, ÄHNLICH DIN 212**

NC-MACHINE REAMERS WITH NOMINAL SHANK, SIMILAR TO DIN 212

ALESATORI A MACCHINA NC, TAGLIENTI ELICOIDALI, DIAM. CODOLO NOMINALE, SIMILE DIN 212

Fortsetzung von Seite VII/10 | Continued from page VII/10 | Segue da pagina VII/10

					blank bright lucida	
d1 mm	d2 _{h6} mm	l1 mm	l2 mm	Z	Code 3082 Art.-Nr.	€
3,97	4,00	75	19	6	□ 3082003971 00	23,13
3,98	4,00	75	19	6	□ 3082003981 00	23,13
3,99	4,00	75	19	6	□ 3082003991 00	23,13
4,01	4,00	75	19	6	□ 3082004011 00	23,13
4,02	4,00	75	19	6	□ 3082004021 00	23,13
4,03	4,00	75	19	6	□ 3082004031 00	23,13
4,97	5,00	86	23	6	□ 3082004971 00	23,52
4,98	5,00	86	23	6	□ 3082004981 00	23,52
4,99	5,00	86	23	6	□ 3082004991 00	23,52
5,01	5,00	86	23	6	□ 3082005011 00	23,52
5,02	5,00	86	23	6	□ 3082005021 00	23,52
5,03	5,00	86	23	6	□ 3082005031 00	23,52
5,97	6,00	93	26	6	□ 3082005971 00	27,38
5,98	6,00	93	26	6	□ 3082005981 00	27,38
5,99	6,00	93	26	6	□ 3082005991 00	27,38
6,01	6,00	101	28	6	□ 3082006011 00	27,38
6,02	6,00	101	28	6	□ 3082006021 00	27,38
6,03	6,00	101	28	6	□ 3082006031 00	27,38
7,97	8,00	117	33	6	□ 3082007971 00	30,48
7,98	8,00	117	33	6	□ 3082007981 00	30,48
7,99	8,00	117	33	6	□ 3082007991 00	30,48
8,01	8,00	117	33	6	□ 3082008011 00	32,56
8,02	8,00	117	33	6	□ 3082008021 00	32,56
8,03	8,00	117	33	6	□ 3082008031 00	32,56
9,01	10,00	125	36	6	□ 3082009011 00	32,70
9,02	10,00	125	36	6	□ 3082009021 00	32,70
9,03	10,00	125	36	6	□ 3082009031 00	32,70
9,97	10,00	133	38	6	□ 3082009971 00	33,34
9,98	10,00	133	38	6	□ 3082009981 00	33,34
9,99	10,00	133	38	6	□ 3082009991 00	33,34
10,01	10,00	133	38	6	□ 3082010011 00	33,34
10,02	10,00	133	38	6	□ 3082010021 00	33,34
10,03	10,00	133	38	6	□ 3082010031 00	33,34
11,97	10,00	151	44	6	□ 3082011971 00	37,63
11,98	10,00	151	44	6	□ 3082011981 00	37,63
11,99	10,00	151	44	6	□ 3082011991 00	37,63



>> MASCHINENREIBAHLEN MIT MORSEKEGEL, DIN 208 B

Einsatzbereich:

Drallgenutete Ausführung mit 8° Linksspirale, vorwiegend für Durchgangsbohrungen in allen E- und NE-Metallen geeignet, besonders für unterbrochene Schnitte wie Längsnuten, Querbohrungen usw.

MACHINE REAMERS WITH MORSE TAPER SHANK, DIN 208 B


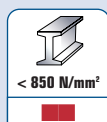

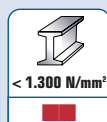

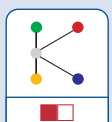
Range of application:

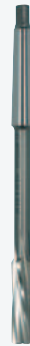
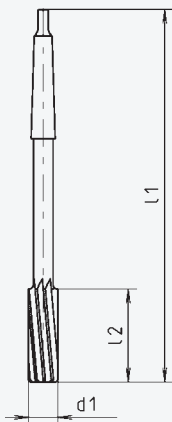
For ferrous and non-ferrous metals. Slow helix type 8° left hand spiral suitable for interrupted borings, slots and crossborings etc.

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, per fori passanti. Particolarmente adatti per lavorazioni di cave longitudinali, fori trasversali ecc.

 < 400 N/mm ²	 < 850 N/mm ²	 < 1.100 N/mm ²	 < 1.300 N/mm ²	 > 45 HRC	INOX < 850 N/mm ²	INOX > 850 N/mm ²	GRAUGUSS CAST IRON GHISA GRIGIA	Ti	Cu, Ms	Al	
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d1 _{H7} mm	l1 mm	l2 mm		Z	Code 3130 Art.-Nr.	€
8,00	156	33	1	6	0 3130008001 00	47,79
9,00	162	36	1	6	0 3130009001 00	52,89
10,00	168	38	1	6	0 3130010001 00	40,86
11,00	175	41	1	6	0 3130011001 00	44,56
12,00	182	44	1	6	0 3130012001 00	43,68
13,00	182	44	1	6	0 3130013001 00	46,42
14,00	189	47	1	8	0 3130014001 00	47,31
15,00	204	50	2	8	0 3130015001 00	57,07
16,00	210	52	2	8	0 3130016001 00	58,04
17,00	214	54	2	8	0 3130017001 00	62,15
18,00	219	56	2	8	0 3130018001 00	64,50
19,00	223	58	2	8	0 3130019001 00	68,21
20,00	228	60	2	8	0 3130020001 00	68,21
21,00	232	62	2	8	0 3130021001 00	77,00
22,00	237	64	2	8	0 3130022001 00	77,00
23,00	241	66	2	8	0 3130023001 00	89,05
24,00	268	68	3	8	0 3130024001 00	90,90
25,00	268	68	3	8	0 3130025001 00	93,72
26,00	273	70	3	8	0 3130026001 00	100,10
27,00	277	71	3	8	0 3130027001 00	111,30
28,00	277	71	3	8	0 3130028001 00	111,30
29,00	281	73	3	10	0 3130029001 00	124,30
30,00	281	73	3	10	0 3130030001 00	115,00
31,00	285	75	3	10	0 3130031001 00	148,30
32,00	317	77	4	10	0 3130032001 00	151,20

Fortsetzung auf Seite VII/13 | Continued on page VII/13 | Segue a pagina VII/13

Ausführungen für andere Passungen als H7 siehe Seite VII/17.

Versions different to H7 see on page VII/20.


Esecuzioni con altre tolleranze vedi pagina VII/23.

>> **MASCHINENREIBAHLEN
MIT MORSEKEGEL,
DIN 208 B**

**MACHINE REAMERS WITH
MORSE TAPER SHANK,
DIN 208 B**

**ALESATORI A MACCHINA,
CONO MORSE, DIN 208 B**

Fortsetzung von Seite VII/12 | Continued from page VII/12 | Segue da pagina VII/12

					blank bright lucida	
d1 _{H7} mm	l1 mm	l2 mm		Z	Code 3130 Art.-Nr.	€
33,00	317	77	4	10	□ 3130033001 00	168,80
34,00	321	78	4	10	□ 3130034001 00	168,80
35,00	321	78	4	10	□ 3130035001 00	168,80
36,00	325	79	4	10	□ 3130036001 00	183,60
37,00	325	79	4	10	□ 3130037001 00	183,60
38,00	329	81	4	10	□ 3130038001 00	201,20
40,00	329	81	4	10	□ 3130040001 00	203,10



>> KEGELREIBAHLEN, DRALLGENUTET, KEGEL 1:50, DIN 9 B

Einsatzbereich:

Drallgenutete Ausführung für E- und NE-Metalle, Kunststoffe hart und weich. Einsatz bei Einzel- und Reparaturfertigung, geeignet für unterbrochene Schnitte, Querbohrungen, Nuten usw. Höhere Vorschubkräfte erforderlich, jedoch bessere Oberflächenqualität. Zum Vorbohren werden Stiftlochbohrer 1:50 empfohlen.

TAPER PIN REAMERS, SLOW HELIX, TAPER 1:50, DIN 9 B



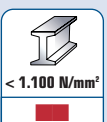
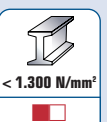
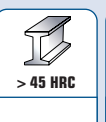
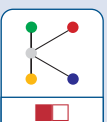
Range of application:

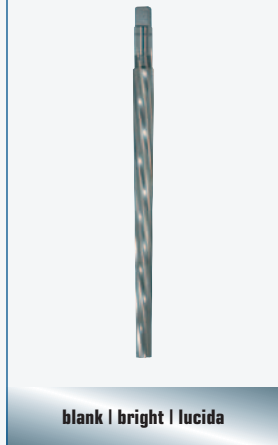
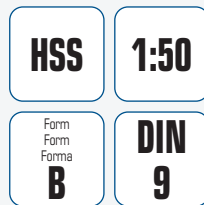
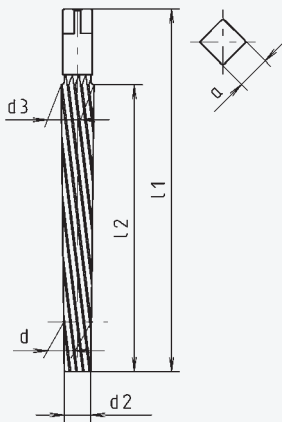
For ferrous and non-ferrous metals, synthetic materials soft and hard. Slow helix type suitable for interrupted conical borings 1:50 fitting to taper pins, slots and crossborings. Reamers demand a higher feed but achieve a better quality of surface. Suitable for individual and mass production. For preprocessing we recommend taper pin drills 1:50.

ALESATORI PER FORI DI SPINE CONICHE, TAGLIANTI ELICOIDALI, CONICITÀ 1:50, DIN 9 B

Impiego:

Alesatori con taglienti elicoidali, adatti per tutti i materiali ferrosi, non ferrosi, materie plastiche dolci, termoidurenti, in lavorazioni singole o per riparazioni. Particolarmente consigliati per lavorazioni di cave longitudinali, fori trasversali. Opportuno l'impiego di avanzamenti più elevati, per una migliore finitura della superficie. Per i prefori sono consigliate le punte per spine coniche 1:50.

 < 400 N/mm ²	 < 850 N/mm ²	 < 1.100 N/mm ²	 < 1.300 N/mm ²	 > 45 HRC	INOX < 850 N/mm ²	INOX > 850 N/mm ²	GRAUGUSS CAST IRON GHISA GRIGIA	Ti	Cu, Ms	Al	
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d mm	d2 mm	d3 mm	l1 mm	l2 mm	a _{h12} mm	Z	Code 3300 Art.-Nr.	€
3,00	2,90	4,06	80	58	3,00	3	0 3300003001 00	26,31
4,00	3,90	5,26	93	68	3,00	3	0 3300004001 00	30,12
5,00	4,90	6,36	100	73	4,90	5	0 3300005001 00	31,75
6,00	5,90	8,00	135	105	6,20	6	0 3300006001 00	38,77
6,50	6,40	8,76	148	118	6,20	6	0 3300006501 00	45,92
7,00	6,90	9,50	160	130	6,20	6	0 3300007001 00	55,40
8,00	7,90	10,80	180	145	8,00	6	0 3300008001 00	60,24
10,00	9,90	13,40	215	175	10,00	6	0 3300010001 00	85,11
12,00	11,80	16,00	255	210	11,00	8	0 3300012001 00	107,00

>> MASCHINEN-KEGEL-SCHÄLREIBAHLEN, KEGEL 1:50, DIN 2179

Einsatzbereich:

Stark spiralgenutete Ausführung (45°) für E- und NE-Metalle, Kunststoffe hart und weich. Der Schneidenteil weist eine Kegeltoleranz AT 8 nach DIN 7178 Teil 1 auf. Einsatz bei Einzel- und Serienfertigung mit hoher Zerspanungsleistung zum Reiben von Bohrungen für Kegelstifte. Zum Vorbohren werden Stiftlochbohrer 1:50 empfohlen.

MACHINE TAPER PIN REAMERS, HIGH HELIX, TAPER 1:50, DIN 2179







Range of application:

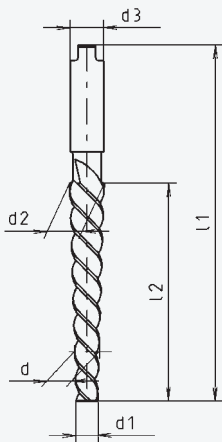
For ferrous and non-ferrous metals, synthetic materials soft and hard. Quick helix type (45°) suitable for reaming of taper pin borings (1:50). The cutting part has a taper tolerance corresponding to the Taper Angle-Tolerances Class AT 8 according to DIN 7178 Part 1. Suitable for individual and mass production with high cutting efficiency. For preprocessing we recommend taper pin drills 1:50.

ALESATORI A MACCHINA PER FORI DI SPINE CONICHE, A FORTE TORSIONE, CONICITÀ 1:50, DIN 2179

Impiego:

Alesatori a forte torsione (45°), adatti per tutti i materiali ferrosi, non ferrosi, materie plastiche dolci, termoindurenti, sia per lavorazioni singole che di serie, con elevata capacità di asportazione. Alesatura di fori per spine coniche. Il tagliente ha una tolleranza di conicità AT 8 secondo DIN 7178 parte 1. Per i prefori sono consigliate le punte per spine coniche 1:50.

 < 400 N/mm ²	 < 850 N/mm ²	 < 1.100 N/mm ²	 < 1.300 N/mm ²	 > 45 HRC	INOX < 850 N/mm ²	INOX > 850 N/mm ²	GRAUGUSS CAST IRON GHISA GRIGIA	Ti	Cu, Ms	Al	
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HSS-E

DIN
2179

1:50



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d mm	d1 mm	d2 mm	d3 mm	l1 mm	l2 mm	Z	Code 3320 Art.-Nr.	€
5,00	4,90	6,36	6,30	122	73	3	0 3320005001 00	26,63
6,00	5,90	8,00	8,00	160	105	3	0 3320006001 00	29,03
6,50	6,40	8,50	8,00	160	105	3	0 3320006501 00	40,43
8,00	7,90	10,80	10,00	207	145	3	0 3320008001 00	53,24
10,00	9,90	13,40	12,50	245	175	3	0 3320010001 00	66,22



>> MASCHINEN-KEGEL-SCHÄLREIBAHLEN, KEGEL 1:50, MK-SCHAFT, DIN 2180

Einsatzbereich:

Stark spiralgenutete Ausführung (45°) für E- und NE-Metalle, Kunststoffe hart und weich. Der Schneidenteil weist eine Kegeltoleranz AT 8 nach DIN 7178 Teil 1 auf. Einsatz bei Einzel- und Serienfertigung mit hoher Zerspanungsleistung zum Reiben von Bohrungen für Kegelstifte. Zum Vorbohren werden Stiftlochbohrer 1:50 empfohlen.

MACHINE TAPER PIN REAMERS, HIGH HELIX, TAPER 1:50, MT-SHANK, DIN 2180

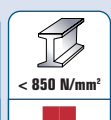


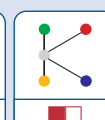
Range of application:

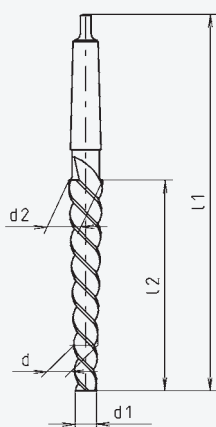
For ferrous and non-ferrous metals, synthetic materials soft and hard. Quick helix type (45°) suitable for reaming of taper pin borings (1:50). The cutting part has a taper tolerance corresponding to the Taper Angle-Tolerance Class AT 8 according to DIN 7178 Part 1. Suitable for individual and mass production with high cutting efficiency. For preprocessing we recommend taper pin drills 1:50.

ALESATORI A MACCHINA PER FORI DI SPINE CONICHE, A FORTE TORSIONE, CONICITÀ 1:50, CONO MORSE, DIN 2180

Impiego:

Alesatori a forte torsione (45°), adatti per tutti i materiali ferrosi, non ferrosi, materie plastiche dolci, termoidurenti. Il tagliente ha una tolleranza di conicità AT 8 secondo DIN 7178 parte 1. Sia per lavorazioni singole che di serie, con elevata capacità di asportazione. Alesatura di fori per spine coniche. Per i prefori sono consigliate le punte per spine coniche 1:50.

 < 400 N/mm ²	 < 850 N/mm ²	 < 1.100 N/mm ²	 < 1.300 N/mm ²	 > 45 HRC	INOX < 850 N/mm ²	INOX > 850 N/mm ²	GRAUGUSS CAST IRON GHISA GRIGIA	Ti	Cu, Ms	Al	
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HSS-E

DIN
2180

1:50



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d mm	d1 mm	d2 mm	l1 mm	l2 mm		Z	Code 3340 Art.-Nr.	€
12,00	11,80	16,00	315	210	2	3	0 3340012001 00	81,87
13,00	12,80	17,00	315	210	2	3	0 3340013001 00	87,19
14,00	13,80	18,00	315	210	2	3	0 3340014001 00	92,52
16,00	15,80	20,40	335	230	2	3	0 3340016001 00	113,20
20,00	19,80	24,80	377	250	3	3	0 3340020001 00	201,90
25,00	24,70	30,70	427	300	3	3	0 3340025001 00	311,90
30,00	29,70	36,10	475	320	4	3	0 3340030001 00	432,00

