01

ALESATORI
REAMERS

ALESATORI
REAMERS

D.01.01

Guida alla selezione dell'utensile
Tool selection guide

Codice Utensile Tool code		Materiale utensile Tool material	DIN	Forma Form	Tolleranza foro Hole tolerance	Angolo elica Helix angle	Codolo Shank	Rivestimento Coating	Direzione taglio Cutting Direction	Gamma diametri Diameters range	P	M	K	N	S	H	Pagina utensile Tool page

▸ ALESATORI A MANO | HAND REAMERS

6301		HSS	206 DIN	A	H7	0°	DIN 10	-	↻	1 ÷ 50						-	806
6302		HSS	206 DIN	B	H7	6°	DIN 10	-	↻	0,8 ÷ 50						-	806

▸ ALESATORI A MANO | HAND REAMERS

Registrabili espansione max 1% oltre il Ø nominale | Adjustable range of expansion max 1 % over nominal size

6306		HSS	859 DIN	A	-	0°	DIN 10	-	↻	4 ÷ 30						-	808
6309		HSS	859 DIN	B	-	6°	DIN 10	-	↻	8 ÷ 30						-	808

▸ ALESATORI A MANO | HAND REAMERS

Per spine coniche - conicità 1:50 | Hand taper pin reamers, taper 1 : 50

6315		HSS	9 DIN	A	-	0°	DIN 10	-	↻	1 ÷ 30						-	831
6304		HSS	9 DIN	B	-	6°	DIN 10	-	↻	1,5 ÷ 50						-	831

▸ ALESATORI A MANO | HAND REAMERS

Per cono morse secondo DIN 228 | Taper socket reamer – finishing for taper sleeves according to DIN 228

6317		HSS	204 DIN	C	-	0°	DIN 10	-	↻	C.M. | M.T. 0 ÷ 6						-	837
6312		HSS	204 DIN	D	-	6°	DIN 10	-	↻	C.M. | M.T. 0 ÷ 6						-	837

D 01

Codice Utensile Tool code	Materiale utensile Tool material	DIN	Forma Form	Tolleranza foro Hole tolerance	Angolo elica Helix angle	Codolo Shank	Rivestimento Coating	Direzione taglio Cutting Direction	Gamma diametri Diameter range	P	M	K	N	S	H	Pagina utensile Tool page

▸ ALESATORI A MACCHINA | MACHINE CHUCKING REAMERS

Tipo corto per macchine automatiche | Short for automatic machines

6324		HSS-Co	8089 DIN	B	H7	9°		-	↻	1,5 ÷ 20					-	**809**

▸ ALESATORI A MACCHINA | MACHINE CHUCKING REAMERS

6321		HSS-Co	212 DIN	A-C	H7	0°		-	↻	1 ÷ 20					-	**810**
6333		HSS-Co	208 DIN	A	H7	0°		-	↻	5 ÷ 32					-	**822**
6361		HSS	219 DIN	A	H7	0°	-	-	↻	25 ÷ 100					-	**827**

▸ ALESATORI A MACCHINA | MACHINE CHUCKING REAMERS

Progressione centesimale di 0,01 mm | Progression of 0,01 mm

6326		HSS-Co	212 DIN	B/D	H7	9°		-	↻	1 ÷ 20					-	**810**
6326TN		HSS-Co	212 DIN	B/D	H7	9°		TiN	↻	1 ÷ 20					-	**810**
6326C		HSS-Co	212 DIN	D	-	9°		-	↻	0,95 ÷ 16,10					-	**817**
6337		HSS-Co	208 DIN	B	H7	9°		-	↻	5 ÷ 40					-	**822**
6360		HSS	219 DIN	B	H7	9°	-	-	↻	25 ÷ 100					-	**827**

▸ ALESATORI A MACCHINA | MACHINE CHUCKING REAMERS

Elicoidali 45° | 45° Helix

6325		HSS-Co	212 DIN	E	H7	45°		-	↻	1 ÷ 20					-	**810**

D 01

Codice Utensile Tool code		Materiale utensile Tool material	DIN	Forma Form	Tolleranza foro Hole tolerance	Angolo elica Helix angle	Codolo Shank	Rivestimento Coating	Direzione taglio Cutting Direction	Gamma diametri Diameters range	P	M	K	N	S	H	Pagina utensile Tool page
ALESATORI A MACCHINA | MACHINE CHUCKING REAMERS **Elicoidali 45° |** 45° Helix																	
6335		HSS-Co	208 DIN	C	H7	45°		-		5 ÷ 32						-	822
6362		HSS	219 DIN	C	H7	45°	-	-		25 ÷ 100						-	827
ALESATORI A MACCHINA | MACHINE CHUCKING REAMERS **Registrabili espansione max 0,01 mm del Ø |** Expansion reamers up to max 0,01 mm Ø																	
6307		HSS-Co	ILIX NORM DIN	-	H7	0°		-		8 ÷ 18						-	826
ALESATORI A MACCHINA | MACHINE CHUCKING REAMERS **Per spine coniche - conicità 1:50 |** Taper pin reamers - taper 1:50																	
6313		HSS-Co	2179 DIN	-	-	45°		-		1 ÷ 12						-	833
6314		HSS	2180 DIN	-	-	45°		-		4 ÷ 20						-	834
ALESATORI A MACCHINA CONICI | MACHINE TAPER REAMERS																	
6308		HSS	ILIX NORM DIN	-	-	0°	DIN 10	-		3 ÷ 45						-	836
ALESATORI A MACCHINA CONICI | MACHINE TAPER REAMERS **Per preforo NPT/NPTF |** Taper pin reamer for NPT/NPTF thread																	
6310		HSS	ILIX NORM DIN	A	-	0°	DIN 10	-		1/16" ÷ 2"						-	835
6311		HSS	ILIX NORM DIN	B	-	6°	DIN 10	-		1/16" ÷ 2"						-	835

Codice Utensile Tool code	**Materiale utensile** Tool material	**DIN**	**Forma** Form	**Tolleranza foro** Hole tolerance	**Angolo elica** Helix angle	**Codolo** Shank	**Rivestimento** Coating	**Direzione taglio** Cutting Direction	**Gamma diametri** Diameter range	P	M	K	N	S	H	**Pagina utensile** Tool page

▸ **ALESATORI A MACCHINA CONICI** | MACHINE TAPER REAMERS

per spine coniche (NF: Norme Francesi) - conicità 1:50 | Taper pin reamers (nf: French standard) – taper 1 : 50

6319		HSS	E 66-011 NF	NF	-	45°	DIN 10	-	↻	1 ÷ 4,5					-	**832**

▸ **ALESATORI A MACCHINA CONICI** | MACHINE TAPER REAMERS

con attacco conico per fori da chiodi | Bridge reamers with morse taper

6355		HSS	311 DIN	-	-	25°		-	↻	6,4 ÷ 32					-	**838**

▸ **ALESATORI A MACCHINA CONICI** | MACHINE TAPER REAMERS

per fori di coppiglie | Taper pin reamers

6303		HSS	ILIX NORM DIN	-	-	0°	DIN 10	-	↻	1,5 ÷ 20					-	**829**

▸ **MICRO ALESATORI A MACCHINA CONICI** | MACHINE TAPER MICRO REAMERS

per lavorazioni in fori poco profondi | For fast smooth reaming of shallow holes

6318		HSS	ILIX NORM DIN	-	-	12°		-	↻	1,2 ÷ 1,9					-	**830**

▸ **ALESATORI A MACCHINA CONICI** | MACHINE TAPER REAMERS

6369		M.D.I. HM	8094 DIN	A	H7	0°		-	↻	5 ÷ 20					-	**824**

▸ **ALESATORI A MACCHINA** | MACHINE REAMERS

6372		M.D.I. HM	8093 DIN	B	H7	9°		-	↻	1 ÷ 20					-	**813**
6372TN		M.D.I. HM	8093 DIN	B	H7	9°		TiN	↻	1 ÷ 20					-	**813**
6372C*		M.D.I. HM	8093 DIN	B	-	9°		-	↻	0,98 ÷ 12,05					-	**818**

* Progressione centesimale. Tolleranza del ø nominale dell'alesatore **+0,003/0**
Centesimal progression. Tolerance of the nominal ø of the reamer **+0,003/0**

Codice Utensile Tool code		Materiale utensile Tool material	DIN	Forma Form	Tolleranza foro Hole tolerance	Angolo elica Helix angle	Codolo Shank	Rivestimento Coating	Direzione taglio Cutting Direction	Gamma diametri Diameters range	P	M	K	N	S	H	Pagina utensile Tool page
ALESATORI A MACCHINA | MACHINE REAMERS																	
6370	Lubrificazione assiale Axial internal coolant	M.D.I. HM	~8093 DIN	B	H7	9°		-		4 ÷ 20						-	**815**
6371	Lubrificazione radiale Radial internal coolant	M.D.I. HM	~8093 DIN	B	H7	9°		-		4 ÷ 20						-	**816**
6376		M.D.I. HM	~8094 DIN	B	H7	9°		-		5 ÷ 20						-	**825**
6323		CERMET	~212 DIN	-	H7	12°		-		3,5 ÷ 16					-	-	**820**
6373		PKD	ILIX NORM DIN	-	H7	0°		-		12 ÷ 16	-	-	-		-	-	**821**

ALESATORI
REAMERS

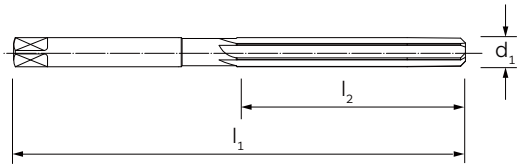
D.01.02

Gamma prodotti
Products range

DIN 206 (A/B)

Alesatori a mano per ottenere fori in tolleranza H7
Hand reamers to produce holes with H7 tolerances

206 DIN | **H7** | DIN 10



MATERIALE | MATERIAL	HSS	HSS
ANGOLO ELICA | HELIX ANGLE	0°	6°
FORMA | FORM	A	B
RIVESTIMENTO | COATING	-	-
DIREZIONE TAGLIO | CUTTING DIRECTION	↻	↻

GRUPPO MATERIALI MATERIAL GROUPS

P | **Acciai** | Steels	P	P
M | **Acciai Inossidabili** | Stainless Steels	M	M
K | **Ghise** | Cast Irons	K	K
N | **Metalli non ferrosi** | Non-ferrous metals	N	N
S | **Leghe resistenti al calore e Titanio** | HRSA and Titanium	S	S
H | **Acciai Temprati** | Hardened Steels	-	-

d_1 (H7)	l_1	l_2	Z	6301	6302
0,8	34	13	3	-	■
1,0*	34	13	3	●	●
1,1*	34	13	3	●	●
1,2*	38	16	3	●	●
1,3*	38	16	3	●	●
1,4	41	20	3	●	●
1,5	41	20	3	●	●
1,6	44	21	3	●	●
1,7	44	21	3	●	●
1,8	47	23	3	●	●
1,9	47	23	3	●	●
2,0	50	25	3	●	●
2,1	50	25	3	●	●
2,2	54	27	3	●	●
2,3	54	27	3	●	●
2,4	58	29	3	●	●
2,5	58	29	5	●	●
2,6	58	29	5	●	●
2,7	62	31	5	●	●
2,8	62	31	5	●	●
2,9	62	31	5	●	●
3,0	62	31	5	●	●
3,1	66	33	5	●	●
3,2	66	33	5	●	●
3,3	66	33	5	●	●
3,4	71	35	5	●	●
3,5	71	35	5	●	●

d_1 (H7)	l_1	l_2	Z	6301	6302
3,6	71	35	5	●	●
3,7	71	35	5	●	●
3,8	76	38	5	●	●
3,9	76	38	5	●	●
4,0	76	38	6	●	●
4,1	76	38	6	●	●
4,2	76	38	6	●	●
4,3	81	41	6	●	●
4,4	81	41	6	●	●
4,5	81	41	6	●	●
4,6	81	41	6	●	●
4,7	81	41	6	●	●
4,8	87	44	6	●	●
4,9	87	44	6	●	●
5,0	87	44	6	●	●
5,1	87	44	6	●	●
5,2	87	44	6	●	●
5,3	87	44	6	●	●
5,4	93	47	6	●	●
5,5	93	47	6	●	●
5,6	93	47	6	●	●
5,7	93	47	6	●	●
5,8	93	47	6	●	●
5,9	93	47	6	●	●
6,0	93	47	6	●	●
6,1	100	50	6	●	●
6,2	100	50	6	●	●

01/02

* ILIX NORM ■ **Fino ad esaurimento scorte** | Till stocks last

DIN 206 (A/B)

Alesatori a mano per ottenere fori in tolleranza H7
Hand reamers to produce holes with H7 tolerances

d_1 (H7)	l_1	l_2	z	6301	6302
6,3	100	50	6	●	●
6,4	100	50	6	●	●
6,5	100	50	6	●	●
6,6	100	50	6	●	●
6,7	100	50	6	●	●
6,8	107	54	6	●	●
6,9	107	54	6	●	●
7,0	107	54	6	●	●
7,1	107	54	6	●	●
7,2	107	54	6	●	●
7,3	107	54	6	●	●
7,4	107	54	6	●	●
7,5	107	54	6	●	●
7,6	115	58	6	●	●
7,7	115	58	6	●	●
7,8	115	58	6	●	●
7,9	115	58	6	●	●
8,0	115	58	6	●	●
8,1	115	58	6	●	●
8,2	115	58	6	●	●
8,3	115	58	6	●	●
8,4	115	58	6	●	●
8,5	115	58	6	●	●
8,6	124	62	6	●	●
8,7	124	62	6	●	●
8,8	124	62	6	●	●
8,9	124	62	6	●	●
9,0	124	62	6	●	●
9,1	124	62	6	●	●
9,2	124	62	6	●	●
9,3	124	62	6	●	●
9,4	124	62	6	●	●
9,5	124	62	6	●	●
9,6	133	66	6	●	●
9,7	133	66	6	●	●
9,8	133	66	6	●	●
9,9	133	66	6	●	●
10,0	133	66	6	●	●
10,1	133	66	6	●	–
10,2	133	66	6	●	–
10,3	133	66	6	●	–
10,4	133	66	6	●	–
10,5	133	66	6	●	●
10,6	133	66	6	●	–
10,7	142	71	6	●	–
10,8	142	71	6	●	–
10,9	142	71	6	●	–
11,0	142	71	6	●	●
11,1	142	71	6	●	–
11,2	142	71	6	●	–
11,3	142	71	6	●	–
11,4	142	71	6	●	–
11,5	142	71	6	●	●
11,6	142	71	6	●	–
11,7	142	71	6	●	–
11,8	142	71	6	●	–
11,9	152	76	6	●	–

d_1 (H7)	l_1	l_2	z	6301	6302
12,0	152	76	6	●	●
12,5	152	76	6	●	–
13,0	152	76	8	●	–
13,5	163	81	8	●	–
14,0	163	81	8	●	●
14,5	163	81	8	●	●
15,0	163	81	8	●	●
15,5	175	87	8	●	●
16,0	175	87	8	●	●
16,5	175	87	8	●	●
17,0	175	87	8	●	●
17,5	188	93	8	●	●
18,0	188	93	8	●	●
18,5	188	93	8	●	●
19,0	188	93	8	●	●
19,5	201	100	8	●	●
20,0	201	100	8	●	●
20,5	201	100	8	●	●
21,0	201	100	8	●	●
21,5	201	100	8	●	●
22,0	215	107	8	●	●
22,5	215	107	8	●	●
23,0	215	107	8	●	●
23,5	215	107	8	●	●
24,0	231	115	10	●	●
24,5	231	115	10	–	●
25,0	231	115	10	●	●
25,5	231	115	10	●	●
26,0	231	115	10	●	●
26,5	231	115	10	●	●
27,0	247	124	10	●	●
27,5	247	124	10	–	●
28,0	247	124	10	●	●
28,5	247	124	10	●	●
29,0	247	124	10	●	●
29,5	247	124	10	●	●
30,0	247	124	10	●	■
31,0	265	133	10	●	●
32,0	265	133	10	●	●
33,0	265	133	10	●	●
34,0	284	142	12	●	●
35,0	284	142	12	●	●
36,0	284	142	12	●	●
37,0	284	142	12	●	●
38,0	305	152	12	●	●
39,0	305	152	12	●	●
40,0	305	152	12	●	●
41,0	305	152	12	●	●
42,0	305	152	12	●	●
43,0	326	163	12	●	●
44,0	326	163	12	●	●
45,0	326	163	12	●	●
46,0	326	163	14	●	●
47,0	326	163	14	●	●
48,0	347	174	14	●	●
49,0	347	174	14	●	●
50,0	347	174	14	●	●

02/02

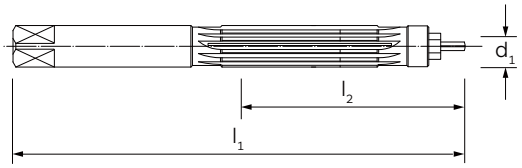
D
01

DIN 859 (A/B)

Alesatori a mano, massima espansione 1% sul diametro nominale
Adjustable hand reamers, range of expansion max 1 % over nominal diameter

859
DIN

DIN 10



MATERIALE | MATERIAL	HSS	HSS
ANGOLO ELICA | HELIX ANGLE	0°	6°
FORMA | FORM	A	B
RIVESTIMENTO | COATING	-	-
DIREZIONE TAGLIO | CUTTING DIRECTION	↻	↻

GRUPPO MATERIALI
MATERIAL GROUPS

P | **Acciai** | Steels	P	P
M | **Acciai Inossidabili** | Stainless Steels	M	M
K | **Ghise** | Cast Irons	K	K
N | **Metalli non ferrosi** | Non-ferrous metals	N	N
S | **Leghe resistenti al calore e Titanio** | HRSA and Titanium	S	S
H | **Acciai Temprati** | Hardened Steels	-	-

d_1	l_1	l_2		6306	6309
4	76	38		●	-
5	87	44		●	-
6	93	47		●	-
7	107	54		●	-
8	115	58		●	●
9	124	62		●	●
10	133	66		●	●
11	142	71		●	●
12	152	76		●	●
13	152	76		●	●
14	163	81		●	●
15	163	81		●	●
16	175	87		●	●
17	175	87		●	●
18	188	93		●	●
19	188	93		●	●
20	201	100		●	●
21	201	100		●	●
22	215	107		●	●
23	215	107		●	●
24	231	115		●	●
25	231	115		●	●
26	231	115		●	●
28	247	124		●	●
30	247	124		●	●

d_1	l_1	l_2		6306	6309

D
01

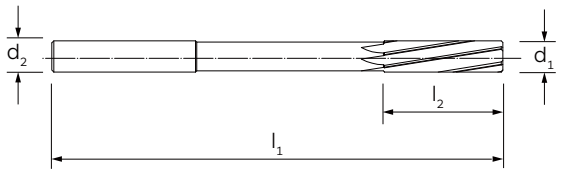
DIN 8089 (B)

Alesatori a macchina per ottenere fori in tolleranza H7 adatti per macchine automatiche
Short machine chucking reamers to produce holes with H7 tolerance, for automatic machines

8089
DIN

H7

P. 840



MATERIALE | MATERIAL	HSS-Co
ANGOLO ELICA | HELIX ANGLE	9°
FORMA | FORM	B
RIVESTIMENTO | COATING	-
DIREZIONE TAGLIO | CUTTING DIRECTION	↻

GRUPPO MATERIALI
MATERIAL GROUPS

P | **Acciai** | Steels	P
M | **Acciai Inossidabili** | Stainless Steels	M
K | **Ghise** | Cast Irons	K
N | **Metalli non ferrosi** | Non-ferrous metals	N
S | **Leghe resistenti al calore e Titanio** | HRSA and Titanium	S
H | **Acciai Temprati** | Hardened Steels	-

d_1 (H7)	l_1	l_2	d_2 (h8)		6324
1,5*	45	12	1,50		●
2,0*	50	16	2,00		●
2,5*	56	18	2,50		●
3,0*	56	18	3,00		●
3,5*	56	20	3,00		●
4,0	56	20	3,55		●
4,5	63	22	4,00		●
5,0	63	22	4,00		●
5,5	63	22	5,00		●
6,0	63	22	5,00		●
6,5	63	22	5,00		●
7,0	71	25	6,30		●
7,5	71	25	6,30		●
8,0	71	25	6,30		●
8,5	71	25	6,30		●
9,0	71	25	8,00		●
9,5	71	25	8,00		●
10,0	71	25	8,00		●
11,0	80	28	10,00		●
12,0	80	28	10,00		●
13,0	80	28	10,00		●
14,0	90	32	12,50		●
15,0	90	32	12,50		●
16,0	90	32	12,50		●
17,0	90	32	12,50		●
18,0	100	36	16,00		●
19,0	100	36	16,00		●

d_1 (H7)	l_1	l_2	d_2 (h8)		6324
20,0	100	36	16,00		●

* ILIX NORM

DIN 212 (A/C) - (B/D) - (E)

Alesatori a macchina in HSS-Co per ottenere fori in tolleranza H7
HSS-Co machine chucking reamers made to produce holes with H7 tolerance

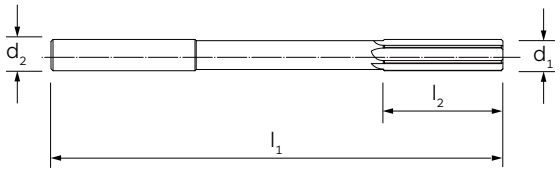
212
DIN

H7

≤ Ø2,9

≥ Ø3

P. 840



MATERIALE | MATERIAL	HSS-Co	HSS-Co	HSS-Co	HSS-Co
ANGOLO ELICA | HELIX ANGLE	0°	45°	9°	9°
FORMA | FORM	A/C	E	B/D	B/D
RIVESTIMENTO | COATING	-	-	-	TiN
DIREZIONE TAGLIO | CUTTING DIRECTION	↻	↻	↻	↻

GRUPPO MATERIALI
MATERIAL GROUPS

P | **Acciai** | Steels	P	P	P	P
M | **Acciai Inossidabili** | Stainless Steels	M	M	M	M
K | **Ghise** | Cast Irons	K	K	K	K
N | **Metalli non ferrosi** | Non-ferrous metals	N	N	N	N
S | **Leghe resistenti al calore e Titanio** | HRSA and Titanium	S	S	S	S
H | **Acciai Temprati** | Hardened Steels	-	-	-	-

d_1 (H7)	l_1	l_2	d_2 (h9)		6321	6325	6326	6326TN
1,0*	34	5,5	1,0		●	■	●	●
1,1*	36	6,5	1,1		●	-	●	●
1,2*	38	8	1,2		●	■	●	●
1,3*	38	8	1,2		●	-	●	●
1,4	40	8	1,4		●	-	●	●
1,5	40	8	1,5		●	■	●	●
1/16”	43	9	1,6		-	-	●	●
1,6	43	9	1,6		●	■	●	●
1,7	43	9	1,6		●	■	●	●
1,8	46	10	1,8		●	■	●	●
1,9	46	10	1,8		●	■	●	●
2,0	49	11	2,0		●	●	●	●
2,1	49	11	2,0		●	●	●	●
2,2	53	12	2,2		●	●	●	●
2,3	53	12	2,2		●	●	●	●
3/32”	57	14	2,5		-	-	●	●
2,4	57	14	2,5		●	●	●	●
2,5	57	14	2,5		●	●	●	●
2,6	57	14	2,5		●	●	●	●
2,7	61	15	2,8		●	●	●	●
7/64”	61	15	2,8		-	-	●	●
2,8	61	15	2,8		●	●	●	●
2,9	61	15	3,0		●	●	●	●
3,0	61	15	3,0		●	●	●	●
3,1	65	16	3,2		●	●	●	●
1/8”	65	16	3,2		-	-	●	●
3,2	65	16	3,2		●	●	●	●

01/03

* ILIX NORM

DIN 212 A/C - B/D - E

Alesatori a macchina in HSS-Co per ottenere fori in tolleranza H7
HSS-Co machine chucking reamers made to produce holes with H7 tolerance

d_1 (H7)	l_1	l_2	d_2 (h9)		6321	6325	6326	6326TN
3,3	65	18	3,2		●	●	●	●
3,4	70	18	3,5		●	●	●	●
3,5	70	18	3,5		●	●	●	●
3,6	70	18	3,5		●	●	●	●
3,7	70	18	3,5		●	●	●	●
3,8	75	19	4,0		●	●	●	●
3,9	75	19	4,0		●	●	●	●
4,0	75	19	4,0		●	●	●	●
4,1	75	19	4,0		●	●	●	●
4,2	75	19	4,0		●	●	●	●
4,3	80	21	4,5		●	●	●	●
4,4	80	21	4,5		●	●	●	●
4,5	80	21	4,5		●	●	●	●
4,6	80	21	4,5		●	●	●	●
4,7	80	21	4,5		●	●	●	●
3/16”	86	23	5,0		–	–	●	●
4,8	86	23	5,0		●	●	●	●
4,9	86	23	5,0		●	●	●	●
5,0	86	23	5,0		●	●	●	●
5,1	86	23	5,0		●	●	●	●
5,2	86	23	5,0		●	●	●	●
5,3	86	23	5,0		●	●	●	●
5,4	93	26	5,6		●	●	●	●
5,5	93	26	5,6		●	●	●	●
5,6	93	26	5,6		●	●	●	●
5,7	93	26	5,6		●	●	●	●
5,8	93	26	5,6		●	●	●	●
5,9	93	26	5,6		●	●	●	●
6,0	93	26	5,6		●	●	●	●
6,1	101	28	6,3		●	●	●	●
6,2	101	28	6,3		●	●	●	●
6,3	101	28	6,3		●	●	●	●
1/4”	101	28	6,3		–	–	●	●
6,4	101	28	6,3		●	●	●	●
6,5	101	28	6,3		●	●	●	●
6,6	101	28	6,3		●	●	●	●
6,7	101	28	6,3		●	●	●	●
6,8	109	31	7,1		●	●	●	●
6,9	109	31	7,1		●	●	●	●
7,0	109	31	7,1		●	●	●	●
7,1	109	31	7,1		●	●	●	●
7,2	109	31	7,1		●	●	●	●
7,3	109	31	7,1		●	●	●	●
7,4	109	31	7,1		●	●	●	●
7,5	109	31	7,1		●	●	●	●
7,6	117	33	8,0		●	●	●	●
7,7	117	33	8,0		●	●	●	●
7,8	117	33	8,0		●	●	●	●
7,9	117	33	8,0		●	●	●	●
5/16”	117	33	8,0		–	–	●	●
8,0	117	33	8,0		●	●	●	●
8,1	117	33	8,0		●	●	●	●
8,2	117	33	8,0		●	●	●	●
8,3	117	33	8,0		●	●	●	●
8,4	117	33	8,0		●	●	●	●
8,5	117	33	8,0		●	●	●	●

02/03

DIN 212 A/C - B/D - E

Alesatori a macchina in HSS-Co per ottenere fori in tolleranza H7
HSS-Co machine chucking reamers made to produce holes with H7 tolerance

d_1 (H7)	l_1	l_2	d_2 (h9)		6321	6325	6326	6326TN
8,6	125	36	9,0		●	●	●	●
8,7	125	36	9,0		●	●	●	●
8,8	125	36	9,0		●	●	●	●
8,9	125	36	9,0		●	●	●	●
9,0	125	36	9,0		●	●	●	●
9,1	125	36	9,0		●	●	●	●
9,2	125	36	9,0		●	●	●	●
9,3	125	36	9,0		●	●	●	●
9,4	125	36	9,0		●	●	●	●
9,5	125	36	9,0		●	●	●	●
3/8”	133	38	10,0		–	–	●	●
9,6	133	38	10,0		●	●	●	●
9,7	133	38	10,0		●	●	●	●
9,8	133	38	10,0		●	●	●	●
9,9	133	38	10,0		●	●	●	●
10,0	133	38	10,0		●	●	●	●
10,1	133	38	10,0		●	●	●	●
10,2	133	38	10,0		●	●	●	●
10,3	133	38	10,0		●	●	●	●
10,4	133	38	10,0		●	●	●	●
10,5	133	38	10,0		●	●	●	●
10,6	133	38	10,0		●	●	●	●
10,7	142	41	10,0		●	●	●	●
10,8	142	41	10,0		●	●	●	●
10,9	142	41	10,0		●	●	●	●
11,0	142	41	10,0		●	●	●	●
11,5	142	41	10,0		●	●	●	●
12,0	151	44	10,0		●	●	●	●
12,5	151	44	10,0		●	●	●	●
1/2”	151	44	10,0		–	–	●	●
13,0	151	44	10,0		●	●	●	●
13,5	160	47	12,5		●	●	●	●
14,0	160	47	12,5		●	●	●	●
14,5	162	50	12,5		●	●	●	●
15,0	162	50	12,5		●	●	●	●
15,5	170	52	12,5		●	●	●	●
5/8”	170	52	12,5		–	–	●	●
16,0	170	52	12,5		●	●	●	●
16,5	175	54	14,0		●	●	●	●
17,0	175	54	14,0		●	●	●	●
17,5	182	56	14,0		●	●	●	●
18,0	182	56	14,0		●	●	●	●
18,5	189	58	16,0		●	●	●	●
19,0	189	58	16,0		●	●	●	●
3/4”	195	60	16,0		–	–	●	●
19,5	195	60	16,0		●	●	●	●
20,0	195	60	16,0		●	●	●	●

03/03

Gamma diametri Diameter range	6321 **Taglienti** Flutes	6325 **Taglienti** Flutes	6326 **Taglienti** Flutes	6326TN **Taglienti** Flutes
0,6 mm - **2,4** mm	3	2	3	3
2,5 mm - **3,9** mm	5	3	5	5
4,0 mm - **13,5** mm	6	3	6	6
13,5 mm - **14,5** mm	8	3	8	8
15,0 mm - **20,0** mm	8	4	8	8

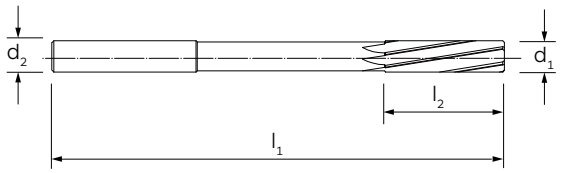
~DIN 8093

Alesatori a macchina in metallo duro integrale per ottenere fori in tolleranza H7
Solid carbide machine chucking reamers made to produce holes with H7 tolerance

~8093
DIN

H7

P. 844



MATERIALE | MATERIAL	M.D.I.-HM	M.D.I.-HM
ANGOLO ELICA | HELIX ANGLE	9°	9°
FORMA | FORM	B	B
RIVESTIMENTO | COATING	-	TiN
DIREZIONE TAGLIO | CUTTING DIRECTION	↻	↻

GRUPPO MATERIALI
MATERIAL GROUPS

P | **Acciai** | Steels	P	P
M | **Acciai Inossidabili** | Stainless Steels	M	M
K | **Ghise** | Cast Irons	K	K
N | **Metalli non ferrosi** | Non-ferrous metals	N	N
S | **Leghe resistenti al calore e Titanio** | HRSA and Titanium	-	S
H | **Acciai Temprati** | Hardened Steels	-	-

d_1 (H7)	l_1	l_2	d_2 (h6)	Z	6372	6372TN
1,0	34	6	1	3	●	●
1,1	34	6	1	3	●	●
1,2	34	6	1	3	●	●
1,3	34	6	1	3	●	●
1,4	40	8	2	3	●	●
1,5	40	8	2	3	●	●
1,6	43	9	2	3	●	●
1,7	43	9	2	4	●	●
1,8	46	10	2	4	●	●
1,9	46	10	2	4	●	●
2,0	49	11	2	4	●	●
2,1	49	11	2	4	●	●
2,2	53	12	3	4	●	●
2,3	53	12	3	4	●	●
2,4	57	14	3	4	●	●
2,5	57	14	3	4	●	●
2,6	57	14	3	4	●	●
2,7	61	15	3	4	●	●
2,8	61	15	3	6	●	●
2,9	61	15	3	6	●	●
3,0	61	15	3	6	●	●
3,1	65	16	4	6	●	●
3,2	65	16	4	6	●	●
3,3	65	16	4	6	●	●
3,4	70	18	4	6	●	●
3,5	70	18	4	6	●	●
3,6	70	18	4	6	●	●

d_1 (H7)	l_1	l_2	d_2 (h6)	Z	6372	6372TN
3,7	70	18	4	6	●	●
3,8	75	19	4	6	●	●
3,9	75	19	4	6	●	●
4,0	75	19	4	6	●	●
4,1	75	19	4	6	●	●
4,2	75	21	4	6	●	●
4,3	80	21	5	6	●	●
4,4	80	21	5	6	●	●
4,5	80	21	5	6	●	●
4,6	80	21	5	6	●	●
4,7	80	21	5	6	●	●
4,8	86	23	5	6	●	●
4,9	86	23	5	6	●	●
5,0	86	23	5	6	●	●
5,1	86	23	5	6	●	●
5,2	86	23	5	6	●	●
5,3	93	26	6	6	●	●
5,4	93	26	6	6	●	●
5,5	93	26	6	6	●	●
5,6	93	26	6	6	●	●
5,7	93	26	6	6	●	●
5,8	93	26	6	6	●	●
5,9	93	26	6	6	●	●
6,0	93	26	6	6	●	●
6,1	101	28	6	6	●	●
6,2	101	28	6	6	●	●
6,3	101	28	6	6	●	●

01/02

Fino al Ø 12 mm in metallo duro integrale, oltre con testa in metallo duro integrale
Up to Ø 12 mm made of solid carbide, onwards with solid carbide head

Alesatori a macchina per ottenere fori in tolleranza H7
Machine chucking reamers made to produce holes with H7 tolerance

d_1 (H7)	l_1	l_2	d_2 (h6)	z	6372	6372TN
6,4	101	28	6	6	●	●
6,5	101	28	6	6	●	●
6,6	101	28	6	6	●	●
6,7	109	31	6	6	●	●
6,8	109	31	8	6	●	●
6,9	109	31	8	6	●	●
7,0	109	31	8	6	●	●
7,1	109	31	8	6	●	●
7,2	109	31	8	6	●	●
7,3	109	31	8	6	●	●
7,4	109	31	8	6	●	●
7,5	109	31	8	6	●	●
7,6	117	33	8	6	●	●
7,7	117	33	8	6	●	●
7,8	117	33	8	6	●	●
7,9	117	33	8	6	●	●
8,0	117	33	8	6	●	●
8,1	117	33	8	6	●	●
8,2	117	33	8	6	●	●
8,3	117	33	8	6	●	●
8,4	117	33	8	6	●	●
8,5	117	33	8	6	●	●
8,6	125	36	10	6	●	●
8,7	125	36	10	6	●	●
8,8	125	36	10	6	●	●
8,9	125	36	10	6	●	●
9,0	125	36	10	6	●	●
9,1	125	36	10	6	●	●
9,2	125	36	10	6	●	●
9,3	125	36	10	6	●	●
9,4	125	36	10	6	●	●
9,5	125	36	10	6	●	●
9,6	133	38	10	6	●	●
9,7	133	38	10	6	●	●
9,8	133	38	10	6	●	●
9,9	133	38	10	6	●	●
10,0	133	38	10	6	●	●
10,1	133	38	10	6	●	●
10,2	133	38	10	6	●	●
10,3	133	38	10	6	●	●
10,4	133	38	10	6	●	●
10,5	133	38	10	6	●	●
10,6	133	38	10	6	●	●
10,7	142	41	10	6	●	●
10,8	142	41	10	6	●	●
10,9	142	41	10	6	●	●
11,0	142	41	10	6	●	●
11,5	142	41	10	6	●	●
12,0	151	44	10	6	●	●
12,5	151	44	10	8	●	●
13,0	151	44	10	8	●	●
13,5	160	47	14	8	●	●
14,0	160	47	14	8	●	●
14,5	162	50	14	8	●	●
15,0	162	50	14	8	●	●
15,5	170	52	14	8	●	●
16,0	170	52	14	8	●	●
16,5	175	54	14	8	●	●
17,0	175	54	14	8	●	●
17,5	182	56	14	8	●	●
18,0	182	56	14	8	●	●
18,5	189	58	16	8	●	●
19,0	189	58	16	8	●	●
19,5	195	60	16	8	●	●
20,0	195	60	16	8	●	●

02/02

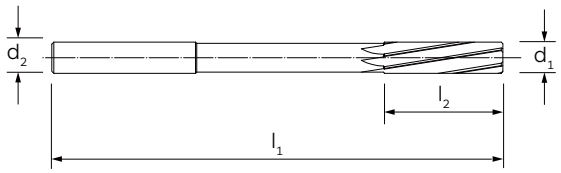
Fino al Ø 12 mm in metallo duro integrale, oltre con testa in metallo duro integrale
Up to Ø 12 mm made of solid carbide, onwards with solid carbide head

D
01

~DIN 8093

Alesatori a macchina per ottenere fori in tolleranza H7 con lubrificazione assiale
Machine chucking reamers, made to produce holes with H7 tolerance, with axial internal coolant

ILIX NORM DIN | **H7** | **A** | **P. 844**



MATERIALE | MATERIAL	M.D.I.-HM
ANGOLO ELICA | HELIX ANGLE	9°
FORMA | FORM	B
RIVESTIMENTO | COATING	-
DIREZIONE TAGLIO | CUTTING DIRECTION	↻

GRUPPO MATERIALI MATERIAL GROUPS

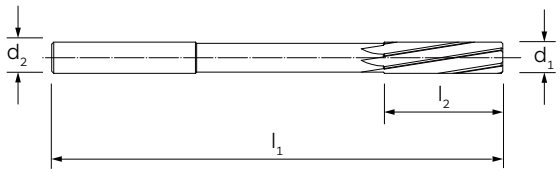
P | **Acciai** | Steels	P
M | **Acciai Inossidabili** | Stainless Steels	M
K | **Ghise** | Cast Irons	K
N | **Metalli non ferrosi** | Non-ferrous metals	N
S | **Leghe resistenti al calore e Titanio** | HRSA and Titanium	S
H | **Acciai Temprati** | Hardened Steels	-

d_1 (H7)	l_1	l_2	d_2 (h6)	z		6370
4,0	75	19	4	6		●
4,5	80	21	5	6		●
5,0	86	23	5	6		●
5,5	93	26	6	6		●
6,0	93	26	6	6		●
6,5	101	28	6	6		●
7,0	109	31	8	6		●
7,5	109	31	8	6		●
8,0	117	33	8	6		●
8,5	117	33	8	6		●
9,0	125	36	10	6		●
9,5	125	36	10	6		●
10,0	133	38	10	6		●
11,0	142	41	10	6		●
12,0	151	41	10	6		●
13,0	151	44	10	8		●
14,0	160	47	14	8		●
15,0	162	50	14	8		●
16,0	170	52	14	8		●
17,0	175	54	14	8		●
18,0	182	56	14	8		●
19,0	189	58	16	8		●
20,0	195	60	16	8		●

d_1 (H7)	l_1	l_2	d_2 (h6)	z		6370

Alesatori in M.D.I. a macchina per ottenere fori in tolleranza H7 con lubrificazione radiale
H.M. machine chucking reamers, made to produce holes with H7 tolerance, with radial internal coolant

~8093 DIN | **H7** | **R** | **P. 844**



MATERIALE | MATERIAL	M.D.I.-HM
ANGOLO ELICA | HELIX ANGLE	9°
FORMA | FORM	B
RIVESTIMENTO | COATING	-
DIREZIONE TAGLIO | CUTTING DIRECTION	↻

GRUPPO MATERIALI MATERIAL GROUPS

P | **Acciai** | Steels	P
M | **Acciai Inossidabili** | Stainless Steels	M
K | **Ghise** | Cast Irons	K
N | **Metalli non ferrosi** | Non-ferrous metals	N
S | **Leghe resistenti al calore e Titanio** | HRSA and Titanium	-
H | **Acciai Temprati** | Hardened Steels	-

d_1 (H7)	l_1	l_2	d_2 (h6)	z		6371
4,0	75	19	4	6		●
4,5	80	21	5	6		●
5,0	86	23	5	6		●
5,5	93	26	6	6		●
6,0	93	26	6	6		●
6,5	101	28	6	6		●
7,0	109	31	8	6		●
7,5	109	31	8	6		●
8,0	117	33	8	6		●
8,5	117	33	8	6		●
9,0	125	36	10	6		●
9,5	125	36	10	6		●
10,0	133	38	10	6		●
11,0	142	41	10	6		●
12,0	151	41	10	6		●
13,0	151	44	10	8		●
14,0	160	47	14	8		●
15,0	162	50	14	8		●
16,0	170	52	14	8		●
17,0	175	54	14	8		●
18,0	182	56	14	8		●
19,0	189	58	16	8		●
20,0	195	60	16	8		●

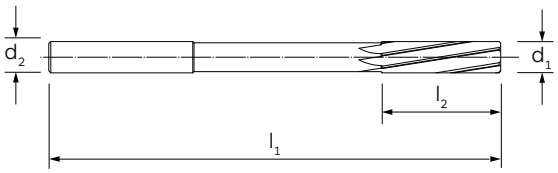
d_1 (H7)	l_1	l_2	d_2 (h6)	z		6371

DIN 212 (D)

Alesatori a macchina (progressione centesimale) HSS-Co. Toll. del ø nominale dell'alesatore **0/+0,003**
HSS-Co machine chucking reamers (centesimal progression). Tol. of the nominal ø of the reamer **0/+0,003**

212
DIN

P. 840



MATERIALE | MATERIAL	HSS-Co
ANGOLO ELICA | HELIX ANGLE	9°
FORMA | FORM	D
RIVESTIMENTO | COATING	-
DIREZIONE TAGLIO | CUTTING DIRECTION	↻

GRUPPO MATERIALI MATERIAL GROUPS

P | **Acciai** | Steels	P
M | **Acciai Inossidabili** | Stainless Steels	M
K | **Ghise** | Cast Irons	K
N | **Metalli non ferrosi** | Non-ferrous metals	N
S | **Leghe resistenti al calore e Titanio** | HRSA and Titanium	S
H | **Acciai Temprati** | Hardened Steels	-

d_1	l_1	l_2	d_2 (h9)	z	6326C
0,95 ÷ 1,06*	34	5,5	1,0	3	●
1,07 ÷ 1,17*	36	6,5	1,1	3	●
1,18*	36	6,5	1,2	3	●
1,19 ÷ 1,32*	38	8	1,2	3	●
1,33 ÷ 1,40	40	8	1,4	3	●
1,41 ÷ 1,50	40	8	1,5	3	●
1,51 ÷ 1,70	43	9	1,6	3	●
1,71 ÷ 1,90	46	10	1,8	4	●
1,91 ÷ 2,12	49	11	2,0	4	●
2,13 ÷ 2,36	53	12	2,2	4	●
2,37 ÷ 2,65	57	14	2,5	4	●
2,66 ÷ 2,79	61	15	2,8	4	●
2,80 ÷ 2,89	61	15	2,8	6	●
2,90 ÷ 3,00	61	15	3,0	6	●
3,01 ÷ 3,35	65	16	3,2	6	●
3,36 ÷ 3,75	70	18	3,5	6	●
3,76 ÷ 4,25	75	19	4,0	6	●
4,26 ÷ 4,75	80	21	4,5	6	●
4,76 ÷ 5,30	86	23	5,0	6	●
5,31 ÷ 6,00	93	26	5,6	6	●
6,01 ÷ 6,70	101	28	6,3	6	●
6,71 ÷ 7,50	109	31	7,1	6	●
7,51 ÷ 8,50	117	33	8,0	6	●
8,51 ÷ 9,50	125	36	9,0	6	●
9,51 ÷ 10,60	133	38	10,0	6	●
10,61 ÷ 11,80	142	41	10,0	6	●
11,81 ÷ 12,25	151	44	10,0	6	●

d_1	l_1	l_2	d_2 (h9)	z	6326C
12,26 ÷ 13,20	151	44	10,0	8	●
13,21 ÷ 14,00	160	47	12,5	8	●
14,01 ÷ 15,00	162	50	12,5	8	●
15,01 ÷ 16,00	170	52	12,5	8	●
16,01 ÷ 16,10	175	54	14,0	8	●

* ILIX NORM

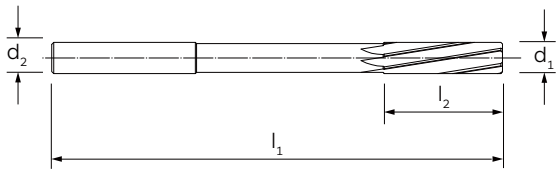
~DIN 8093

Alesatori a macchina progressione centesimale) M.D.I. Toll. del ø nominale dell'alesatore **0/+0,003**
H.M. machine chucking reamers (centesimal progression). Tol. of the nominal ø of the reamer **0/+0,003**

~8093

DIN

P. 844



MATERIALE | MATERIAL	M.D.I.-HM
ANGOLO ELICA | HELIX ANGLE	9°
FORMA | FORM	B
RIVESTIMENTO | COATING	-
DIREZIONE TAGLIO | CUTTING DIRECTION	↻

GRUPPO MATERIALI
MATERIAL GROUPS

P | **Acciai** | Steels	P
M | **Acciai Inossidabili** | Stainless Steels	M
K | **Ghise** | Cast Irons	K
N | **Metalli non ferrosi** | Non-ferrous metals	N
S | **Leghe resistenti al calore e Titanio** | HRSA and Titanium	S
H | **Acciai Temprati** | Hardened Steels	-

d_1	l_1	l_2	d_2 (h6)	z	6372C
0,98 - 1,30	34	6	1	3	●
1,31 - 1,50	40	8	2	3	●
1,51 - 1,61	43	9	2	3	●
1,62 - 1,70	43	9	2	4	●
1,71 - 1,90	46	10	2	4	●
1,91 - 2,12	49	11	2	4	●
2,13 - 2,36	53	12	3	4	●
2,37 - 2,65	57	14	3	4	●
2,66 - 2,79	61	15	3	4	●
2,80 - 3,09	61	15	3	6	●
3,10 - 3,35	65	16	4	6	●
3,36 - 3,75	70	18	4	6	●
3,76 - 4,10	75	19	4	6	●
4,11 - 4,25	75	21	4	6	●
4,26 - 4,75	80	21	5	6	●
4,76 - 5,20	86	23	5	6	●
5,21 - 6,00	93	26	6	6	●
6,01 - 6,60	101	28	6	6	●
6,61 - 6,70	109	31	6	6	●
6,71 - 7,50	109	31	8	6	●
7,51 - 8,50	117	33	8	6	●
8,51 - 9,50	125	36	10	6	●
9,51 - 10,60	133	38	10	6	●
10,61 - 11,80	142	41	10	6	●
11,81 - 12,05	151	44	10	6	●

d_1	l_1	l_2	d_2 (h6)	z	6372C

D 01

SCELTA DEI DIAMETRI DEGLI ALESATORI CENTESIMALI IN FUNZIONE DEL RAPPORTO TRA IL DIAMETRO NOMINALE ED IL CAMPO DI TOLLERANZA RICHIESTO
TOOL DIAMETER BASED ON NOMINAL DIAMETER AND TOLERANCE

ALESATORI CENTESIMALI | CENTESIMAL REAMERS

Ø	C8	C9	C10	C11	CD7	D7	D8	D9	D10	D11	D12	E7	E8	E9	EF8	F7	F8	F9	F10	G6	G7	H5
1,0	1,07	1,07	1,08	1,10	1,04	1,02	1,03	-	1,04	1,06	1,08	1,02	1,02	1,03	1,02	1,01	1,01	1,02	-	-	1,01	1,00
2,0	2,07	2,07	2,08	2,10	2,04	2,02	2,03	-	2,04	2,06	2,08	2,02	2,02	2,03	2,02	2,01	2,01	2,02	-	-	2,01	2,00
3,0	3,07	3,07	3,08	3,10	3,04	3,02	3,03	-	3,04	3,06	3,08	3,02	3,02	3,03	3,02	3,01	3,01	3,02	-	-	3,01	3,00
4,0	4,08	4,09	-	-	4,05	4,04	4,04	4,05	4,06	4,08	4,10	-	4,03	4,04	4,03	-	4,02	4,03	4,04	4,01	4,01	4,00
5,0	5,08	5,09	-	-	5,05	5,04	5,04	5,05	5,06	5,08	5,10	-	5,04	5,04	5,03	-	5,02	5,03	5,04	5,01	5,01	5,00
6,0	6,08	6,09	-	-	6,05	6,04	6,04	6,05	6,06	6,08	6,10	-	6,04	6,04	6,03	-	6,02	6,03	6,04	6,01	6,01	6,00
7,0	7,09	7,10	-	-	7,06	7,05	7,05	7,06	7,08	7,10	-	7,03	7,05	7,05	7,03	7,02	7,03	-	7,05	7,01	7,01	7,00
8,0	8,09	8,10	-	-	8,06	8,05	8,05	8,06	8,08	8,10	-	8,03	8,05	8,05	8,03	8,02	8,03	-	8,05	8,01	8,01	8,00
9,0	9,09	9,10	-	-	9,06	9,05	9,05	9,06	9,08	9,10	-	9,03	9,05	9,05	9,03	9,02	9,03	-	9,05	9,01	9,01	9,00
10,0	10,09	10,10	-	-	10,06	10,05	10,05	10,06	10,08	10,10	-	10,03	10,05	10,05	10,03	10,02	10,03	-	10,05	10,01	10,01	10,00
11,0	-	-	-	-	-	11,06		11,08	11,10	-	-	11,04	11,06	11,06	-	-	11,03	11,04	11,06	11,01	-	11,00
12,0	-	-	-	-	-	12,06		12,08	12,10	-	-	12,04	12,06	12,06	-	-	12,03	12,04	12,06	12,01	-	12,00

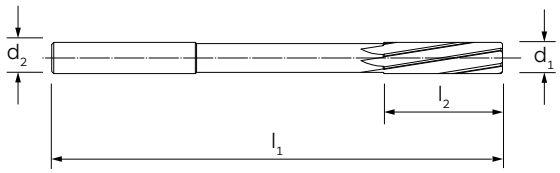
Ø	H6	H7	H8	H9	H10	H11	H12	H13	J6	J7	J8	JS7	JS8	JS9	K6	K7	K8	M6	M7	M8	N6	N7
1,0	1,00	-	1,01	-	1,02	1,04	1,06	1,09	1,00	1,00	1,00	1,00	1,00	1,00	-	-	0,99	-	-	0,99	0,99	0,99
2,0	2,00	-	2,01	-	2,02	2,04	2,06	2,09	2,00	2,00	2,00	2,00	2,00	2,00	-	-	1,99	-	-	1,99	1,99	1,99
3,0	3,00	-	3,01	-	3,02	3,04	3,06	3,09	3,00	3,00	3,00	3,00	3,00	3,00	-	-	2,99	-	-	2,99	2,99	2,99
4,0	4,00	-	4,01	4,02	4,03	4,05	4,08	-	4,00	4,00	4,00	4,00	4,00	4,00	4,00	4,00	4,00	3,99	-	3,99	3,99	3,99
5,0	5,00	-	5,01	5,02	5,03	5,05	5,08	-	5,00	5,00	5,00	5,00	5,00	5,00	5,00	5,00	5,00	4,99	-	4,99	4,99	4,99
6,0	6,00	-	6,01	6,02	6,03	6,05	6,08	-	6,00	6,00	6,00	6,00	6,00	6,00	6,00	6,00	6,00	5,99	-	5,99	5,99	5,99
7,0	7,00	7,01	7,01	7,02	7,04	7,06	7,10	-	7,00	7,00	7,00	7,00	7,00	-	-	7,00	7,00	6,99	6,99	6,99	-	6,99
8,0	8,00	8,01	8,01	8,02	8,04	8,06	8,10	-	8,00	8,00	8,00	8,00	8,00	-	-	8,00	8,00	7,99	7,99	7,99	-	7,99
9,0	9,00	9,01	9,01	9,02	9,04	9,06	9,10	-	9,00	9,00	9,00	9,00	9,00	-	-	9,00	9,00	8,99	8,99	8,99	-	8,99
10,0	10,00	10,01	10,02	10,02	10,04	10,06	10,10	-	10,00	10,00	10,00	10,00	10,00	-	-	10,00	10,00	9,99	9,99	9,99	-	9,99
11,0	-	11,01	11,02	11,03	11,05	11,07	-	-	11,00	11,00	11,00	11,00	11,00	-	-	11,00	11,00	10,99	10,99	10,99	-	10,99
12,0	-	12,01	12,02	12,03	12,05	12,07	-	-	12,00	12,00	12,00	12,00	12,00	-	-	12,00	12,00	11,99	11,99	11,99	-	11,99

Ø	N8	P6	P7	P8	R6	R7	S6	S7	U6	U7	X7	X8	X9	Z7	Z8	Z9	Z10	ZA7	ZA8	ZA9	ZB8	ZB9
1,0	0,99	0,99	0,99	0,99	-	-	0,98	0,98	0,98	0,98	-	0,97	0,97	0,97	0,97	-	0,96	0,96	-	-	0,95	0,95
2,0	1,99	1,99	1,99	1,99	-	-	1,98	1,98	1,98	1,98	-	1,97	1,97	1,97	1,97	-	1,96	1,96	-	-	1,95	1,95
3,0	2,99	2,99	2,99	2,99	-	-	2,98	2,98	2,98	2,98	-	2,97	2,97	2,97	2,97	-	2,96	2,96	-	-	2,95	2,95
4,0	3,99	-	-	3,98	-	-	3,98	3,98	-	-	3,97	-	3,96	3,96	3,96	3,95	3,95	3,96	-	-	3,94	3,94
5,0	4,99	-	-	4,98	-	-	4,98	4,98	-	-	4,97	-	4,96	4,96	4,96	4,95	4,95	4,96	-	-	4,94	4,94
6,0	5,99	-	-	5,98	-	-	5,98	5,98	-	-	5,97	-	5,96	5,96	5,96	5,95	5,95	5,96	-	-	5,94	5,94
7,0	6,99	-	-	-	6,98	6,98	-	-	6,97	6,97	-	6,96	6,95	6,96	6,95	-	6,94	6,94	6,94	-	-	6,92
8,0	7,99	-	-	-	7,98	7,98	-	-	7,97	7,97	-	7,96	7,95	7,96	7,95	-	7,94	7,94	7,94	-	-	7,92
9,0	8,99	-	-	-	8,98	8,98	-	-	8,97	8,97	-	8,96	8,95	8,96	8,95	-	8,94	8,94	8,94	-	-	8,92
10,0	9,99	-	-	-	9,98	9,98	-	-	9,97	9,97	-	9,96	9,95	9,96	9,95	-	9,94	9,94	9,94	-	-	9,92
11,0	10,99	10,98	10,98	10,97			10,97	10,97	-	-	10,96	10,95		10,95	10,94	-	10,93	-	10,93	-	10,90	10,90
12,0	11,99	11,98	11,98	11,97			11,97	11,97	-	-	11,96	11,95		11,95	11,94	-	11,93	-	11,93	-	11,90	11,90

~DIN 212

Alesatori a macchina in Cermet per ottenere fori in tolleranza H7
Machine chucking reamers made of Cermet, to produce holes with H7 tolerance

~212 DIN | H7 | P. 844



MATERIALE | MATERIAL	CERMET
ANGOLO ELICA | HELIX ANGLE	12°
FORMA | FORM	B
RIVESTIMENTO | COATING	-
DIREZIONE TAGLIO | CUTTING DIRECTION	↻

GRUPPO MATERIALI MATERIAL GROUPS

P | **Acciai** | Steels	P
M | **Acciai Inossidabili** | Stainless Steels	M
K | **Ghise** | Cast Irons	K
N | **Metalli non ferrosi** | Non-ferrous metals	N
S | **Leghe resistenti al calore e Titanio** | HRSA and Titanium	-
H | **Acciai Temprati** | Hardened Steels	-

d_1 (H7)	l_1	l_2	d_2 (h9)	z		6323
3,5	60	18	4	6		■
4,0	75	19	4	6		■
4,5	75	21	5	6		■
6,5	101	28	6	6		■
7,0	109	31	8	6		■
7,5	109	33	8	6		■
9,5	125	38	10	6		■
11,0	142	41	10	6		■
12,0	151	44	10	6		■
13,0	151	44	10	8		■
15,0	162	50	14	8		■
16,0	170	53	14	8		■

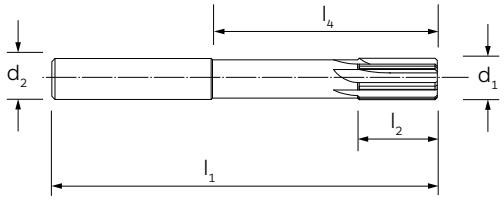
d_1 (H7)	l_1	l_2	d_2 (h9)	z		6323

■ **Fino ad esaurimento scorte** | Till stocks last

ILIX NORM

Alesatori a macchina con riporto in policristallino (PKD) con lubrificazione radiale
Machine chucking reamers with polycrystalline diamond (PKD) with radial internal coolant

ILIX NORM | **DIN** | **H7** | **R** | **P. 844**



MATERIALE | MATERIAL	PKD
ANGOLO ELICA | HELIX ANGLE	0°
FORMA | FORM	-
RIVESTIMENTO | COATING	-
DIREZIONE TAGLIO | CUTTING DIRECTION	↻

GRUPPO MATERIALI MATERIAL GROUPS

P | **Acciai** | Steels	P
M | **Acciai Inossidabili** | Stainless Steels	M
K | **Ghise** | Cast Irons	K
N | **Metalli non ferrosi** | Non-ferrous metals	N
S | **Leghe resistenti al calore e Titanio** | HRSA and Titanium	-
H | **Acciai Temprati** | Hardened Steels	-

d_1 (H7)	l_1	l_2	l_4	d_2 (h6)	z	6373
12,0	105	19	60	12	4	■
14,0	105	19	60	14	4	■
16,0	130	22	82	16	4	■

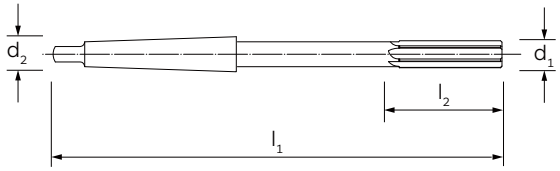
d_1 (H7)	l_1	l_2	l_4	d_2 (h6)	z	6373

■ **Fino ad esaurimento scorte** | Till stocks last

DIN 208 (A-B-C)

Alesatori a macchina in HSS-Co per ottenere fori in tolleranza H7
HSS-Co machine chucking reamers made to produce holes with H7 tolerance

208 DIN | **H7** |  | P. 840



MATERIALE | MATERIAL	HSS-Co	HSS-Co	HSS-Co
ANGOLO ELICA | HELIX ANGLE	0°	9°	45°
FORMA | FORM	A	B	C
RIVESTIMENTO | COATING	-	-	-
DIREZIONE TAGLIO | CUTTING DIRECTION	↻	↻	↻

GRUPPO MATERIALI MATERIAL GROUPS

P | **Acciai** | Steels	P	P	P
M | **Acciai Inossidabili** | Stainless Steels	M	M	M
K | **Ghise** | Cast Irons	K	K	K
N | **Metalli non ferrosi** | Non-ferrous metals	N	N	N
S | **Leghe resistenti al calore e Titanio** | HRSA and Titanium	S	S	S
H | **Acciai Temprati** | Hardened Steels	-	-	-

d_1 (H7)	l_1	l_2		z (6333)	z (6337)	z (6335)		6333	6337	6335
5,0	133	23	1	6	6	3		●	●	●
5,5	138	26	1	6	6	-		●	●	-
6,0	138	26	1	6	6	3		●	●	●
6,5	144	28	1	6	6	-		●	●	-
7,0	150	31	1	6	6	3		●	●	●
7,5	150	31	1	6	6	-		●	●	-
8,0	156	33	1	6	6	3		●	●	●
8,5	156	33	1	6	6	-		●	●	-
9,0	162	36	1	6	6	3		●	●	●
9,5	162	36	1	6	6	-		●	●	-
10,0	168	38	1	6	6	4		●	●	●
10,5	168	38	1	6	6	-		●	●	-
11,0	175	41	1	6	6	4		●	●	●
11,5	175	41	1	6	6	-		●	●	-
12,0	182	41	1	6	6	4		●	●	●
12,5	182	44	1	8	8	-		●	●	-
13,0	182	44	1	8	8	4		●	●	●
13,5	189	47	1	8	8	-		●	●	-
14,0	189	47	1	8	8	4		●	●	●
14,5	204	50	2	8	8	-		●	●	-
15,0	204	50	2	8	8	4		●	●	●
15,5	210	52	2	8	8	-		●	●	-
16,0	210	52	2	8	8	4		●	●	●
16,5	214	54	2	8	8	-		●	●	-
17,0	214	54	2	8	8	4		●	●	●
17,5	219	56	2	8	8	-		●	●	-
18,0	219	56	2	8	8	4		●	●	●

01/02

DIN 208 (A-B-C)

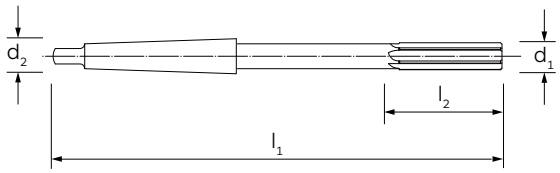
Alesatori a macchina in HSS-Co per ottenere fori in tolleranza H7
HSS-Co machine chucking reamers made to produce holes with H7 tolerance

d_1 (H7)	l_1	l_2		z (6333)	z (6337)	z (6335)		6333	6337	6335
18,5	223	58	2	8	8	-		●	●	–
19,0	223	58	2	8	8	4		●	●	●
19,5	228	60	2	8	8	-		●	●	–
20,0	228	60	2	8	8	4		●	●	●
20,5	232	62	2	8	8	-		●	●	–
21,0	232	62	2	8	8	4		●	●	●
21,5	237	64	2	8	8	-		●	●	–
22,0	237	64	2	8	8	4		●	●	●
22,5	241	66	2	8	8	-		●	●	–
23,0	241	66	2	8	8	4		●	●	●
23,5	241	66	2	8	8	-		●	●	–
24,0	268	68	3	10	10	4		●	●	●
24,5	268	68	3	10	10	-		●	●	–
25,0	268	68	3	10	10	4		●	●	●
25,5	273	70	3	10	10	-		●	●	–
26,0	273	70	3	10	10	6		●	●	●
26,5	273	70	3	10	10	-		●	●	–
27,0	277	71	3	10	10	6		●	●	●
27,5	277	71	3	10	10	-		●	●	–
28,0	277	71	3	10	10	6		●	●	●
28,5	281	73	3	10	10	-		●	●	–
29,0	281	73	3	10	10	6		●	●	●
29,5	281	73	3	10	10	-		●	●	–
30,0	281	73	3	10	10	6		●	●	●
30,5	285	75	3	10	10	-		●	●	–
31,0	285	75	3	12	12	6		●	●	●
31,5	285	75	3	12	12	-		–	●	–
32,0	317	77	4	12	12	6		●	●	●
33,0	317	77	4	12	12	-		–	●	–
34,0	321	78	4	12	12	-		–	●	–
35,0	321	78	4	12	12	-		–	●	–
36,0	325	79	4	12	12	-		–	●	–
37,0	325	79	4	12	12	-		–	●	–
38,0	329	81	4	12	12	-		–	●	–
39,0	329	81	4	12	12	-		–	●	–
40,0	329	81	4	12	12	-		–	●	–

~DIN 8094

Alesatori a macchina in **metallo duro integrale** per ottenere fori in tolleranza H7
Solid carbide machine chucking reamers made to produce holes with H7 tolerance

~8094 DIN | **H7** |  | **P. 844**



MATERIALE | MATERIAL	M.D.I.-HM
ANGOLO ELICA | HELIX ANGLE	0°
FORMA | FORM	A
RIVESTIMENTO | COATING	-
DIREZIONE TAGLIO | CUTTING DIRECTION	↻

GRUPPO MATERIALI MATERIAL GROUPS

P | **Acciai** | Steels	P
M | **Acciai Inossidabili** | Stainless Steels	M
K | **Ghise** | Cast Irons	K
N | **Metalli non ferrosi** | Non-ferrous metals	N
S | **Leghe resistenti al calore e Titanio** | HRSA and Titanium	S
H | **Acciai Temprati** | Hardened Steels	-

d_1 (H7)	l_1	l_2		z		6369
5*	133	23	1	6		●
6*	138	26	1	6		●
7*	150	31	1	6		●
8	156	33	1	6		●
9	162	36	1	6		●
10	168	38	1	6		●
11	175	41	1	6		●
12	182	44	1	6		●
13	182	44	1	8		●
14	189	47	1	8		●
15	204	50	2	8		●
16	210	52	2	8		●
17	214	54	2	8		●
18	219	56	2	8		●
19	223	58	2	8		●
20	228	60	2	8		●

d_1 (H7)	l_1	l_2		z		6369

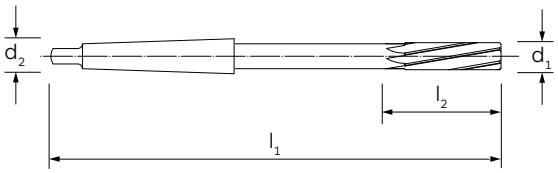
* ILIX NORM

D 01

~DIN 8094

Alesatori a macchina in **metallo duro integrale** per ottenere fori in tolleranza H7
Solid carbide machine chucking reamers made to produce holes with H7 tolerance

~8094 DIN | **H7** |  | **P. 844**



MATERIALE | MATERIAL	M.D.I.-HM
ANGOLO ELICA | HELIX ANGLE	9°
FORMA | FORM	B
RIVESTIMENTO | COATING	-
DIREZIONE TAGLIO | CUTTING DIRECTION	↻

GRUPPO MATERIALI MATERIAL GROUPS

P | **Acciai** | Steels	P
M | **Acciai Inossidabili** | Stainless Steels	M
K | **Ghise** | Cast Irons	K
N | **Metalli non ferrosi** | Non-ferrous metals	N
S | **Leghe resistenti al calore e Titanio** | HRSA and Titanium	S
H | **Acciai Temprati** | Hardened Steels	-

d_1 (H7)	l_1	l_2		z		6376
5*	133	23	1	6		●
6*	138	26	1	6		●
7*	150	31	1	6		●
8	156	33	1	6		●
9	162	36	1	6		●
10	168	38	1	6		●
11	175	41	1	6		●
12	182	44	1	6		●
13	182	44	1	8		●
14	189	47	1	8		●
15	204	50	2	8		●
16	210	52	2	8		●
17	214	54	2	8		●
18	219	56	2	8		●
19	223	58	2	8		●
20	228	60	2	8		●

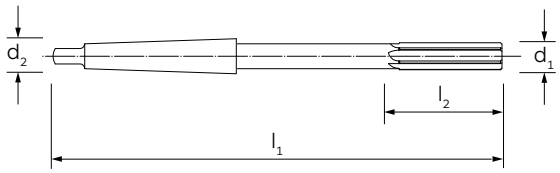
d_1 (H7)	l_1	l_2		z		6376

* ILIX NORM

D 01

Alesatori ad espansione in HSS-Co. Espansione max 0,01 mm sul diametro
HSS-Co expansion reamers. Expansion up to max 0,01 mm of the diameter

ILIX NORM | **DIN** | **H7** | **P. 842**



MATERIALE | MATERIAL	HSS-Co
ANGOLO ELICA | HELIX ANGLE	0°
FORMA | FORM	-
RIVESTIMENTO | COATING	-
DIREZIONE TAGLIO | CUTTING DIRECTION	↻

GRUPPO MATERIALI MATERIAL GROUPS

P | **Acciai** | Steels	P
M | **Acciai Inossidabili** | Stainless Steels	M
K | **Ghise** | Cast Irons	K
N | **Metalli non ferrosi** | Non-ferrous metals	N
S | **Leghe resistenti al calore e Titanio** | HRSA and Titanium	S
H | **Acciai Temprati** | Hardened Steels	-

d_1 (H7)	l_1	l_2			6307
8	156	33	1		■
11	175	41	1		■
12	182	44	1		■
14	189	44	1		■
15	204	50	2		■
16	210	52	2		■
18	219	56	2		■

d_1 (H7)	l_1	l_2			6307

■ **Fino ad esaurimento scorte** | Till stocks last

DIN 219 (A-B-C)

Alesatori a manicotto in HSS, foro attacco conico 1:30, per ottenere fori in tolleranza H7
HSS shell reamers, taper hole 1:30, to produce holes with H7 tolerance

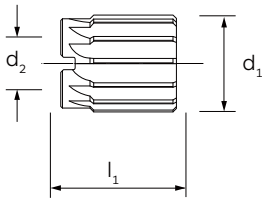
219 DIN

H7

P. 840

P. 842

6362



	6361	6360	6362
MATERIALE | MATERIAL	HSS	HSS	HSS
ANGOLO ELICA | HELIX ANGLE	0°	9°	45°
FORMA | FORM	A	B	C
RIVESTIMENTO | COATING	-	-	-
DIREZIONE TAGLIO | CUTTING DIRECTION	↻	↻	↻

GRUPPO MATERIALI MATERIAL GROUPS

	6361	6360	6362
P | **Acciai** | Steels	P	P	P
M | **Acciai Inossidabili** | Stainless Steels	M	M	M
K | **Ghise** | Cast Irons	K	K	K
N | **Metalli non ferrosi** | Non-ferrous metals	N	N	N
S | **Leghe resistenti al calore e Titanio** | HRSA and Titanium	S	S	S
H | **Acciai Temprati** | Hardened Steels	-	-	-

d_1 (H7)	l_1	d_2 **Foro interno** | Bore	Z (6361)	Z (6360)	Z (6362)	6361	6360	6362
25	45	13	8	8	6	●	●	●
26	45	13	8	8	6	●	●	●
27	45	13	8	8	6	●	●	●
28	45	13	8	8	6	●	●	●
29	45	13	8	8	6	●	●	●
30	45	13	8	8	6	●	●	●
31	50	16	10	10	6	●	●	●
32	50	16	10	10	6	●	●	●
33	50	16	10	10	6	●	●	●
34	50	16	10	10	6	●	●	●
35	50	16	10	10	6	●	●	●
36	56	19	10	10	6	●	●	●
37	56	19	10	10	6	●	●	●
38	56	19	10	10	6	●	●	●
39	56	19	10	10	6	●	●	●
40	56	19	10	10	6	●	●	●
42	56	19	10	10	6	●	●	●
44	63	22	12	12	6	●	●	●
45	63	22	12	12	6	●	●	●
46	63	22	12	12	6	●	●	●
47	63	22	12	12	8	●	●	●
48	63	22	12	12	8	●	●	●
50	63	22	12	12	8	●	●	●
52	71	27	12	12	8	●	●	●
55	71	27	12	12	8	●	●	●
58	71	27	12	12	8	●	●	●
60	71	27	12	12	8	●	●	●

01/02

DIN 219 (A-B-C)

Alesatori a manicotto in HSS, foro attacco conico 1:30, per ottenere fori in tolleranza H7
HSS shell reamers, taper hole 1:30, to produce holes with H7 tolerance

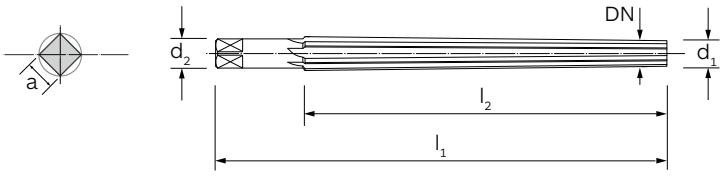
d_1 (h7)	l_1	d_2 **Foro interno** | Bore	z (6361)	z (6360)	z (6362)		6361	6360	6362
62	80	32	14	14	8		●	●	●
65	80	32	14	14	8		●	●	●
68	80	32	14	14	8		●	●	●
70	80	32	14	14	8		●	●	●
72	90	40	14	14	8		●	●	●
75	90	40	14	14	10		●	●	●
78	90	40	14	14	10		●	●	●
80	90	40	14	14	10		●	●	●
82	90	40	14	14	10		●	●	●
85	90	40	14	14	10		●	●	●
88	100	50	16	16	10		●	●	●
90	100	50	16	16	10		●	●	●
92	100	50	16	16	10		●	●	●
95	100	50	16	16	10		●	●	●
98	100	50	16	16	10		●	●	●
100	100	50	16	16	10		●	●	●

ILIX NORM

Alesatori in HSS per fori di coppiglie, conicità 1:100, quadro DIN 10
HSS taper pin reames, taper 1:100, square acc. to DIN 10

ILIX NORM

DIN	DIN 10	P. 842



MATERIALE | MATERIAL	HSS
ANGOLO ELICA | HELIX ANGLE	0°
FORMA | FORM	-
RIVESTIMENTO | COATING	-
DIREZIONE TAGLIO | CUTTING DIRECTION	↻

GRUPPO MATERIALI MATERIAL GROUPS

P | **Acciai** | Steels	P
M | **Acciai Inossidabili** | Stainless Steels	M
K | **Ghise** | Cast Irons	K
N | **Metalli non ferrosi** | Non-ferrous metals	N
S | **Leghe resistenti al calore e Titanio** | HRSA and Titanium	S
H | **Acciai Temprati** | Hardened Steels	-

DN	d_1	l_1	l_2	d_2	a	Z		6303
1,50	1,40	62	37	1,77	1,25	4		●
1,75	1,65	68	45	2,10	1,60	4		●
2,00	1,90	73	48	2,38	1,80	4		●
2,25	2,15	77	51	2,66	2,00	4		●
2,50	2,40	80	53	2,93	2,24	4		●
3,00	2,90	91	63	3,53	2,80	6		●
3,50	3,40	96	69	4,09	3,15	6		●
4,00	3,90	100	75	5,65	3,15	6		●
4,50	4,40	108	81	5,21	4,00	6		●
5,00	4,90	115	87	5,77	4,50	6		●
5,50	5,40	133	103	6,43	5,00	6		●
6,00	5,90	150	119	7,09	5,60	6		●
7,00	6,90	164	130	8,20	6,30	6		●
8,00	7,90	177	141	9,31	7,10	6		●
9,00	8,90	190	152	10,42	8,00	6		●
10,00	9,90	205	163	11,53	9,00	8		●
11,00	10,90	216	173	12,63	10,00	8		●
12,50	12,40	234	189	14,29	11,20	8		●
14,00	13,90	257	207	15,97	12,50	8		●
16,00	15,90	290	234	18,24	12,50	8		●
18,00	17,90	325	252	20,42	14,00	8		●
20,00	19,80	340	270	22,50	16,00	8		●

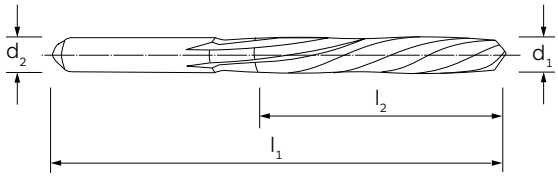
ILIX NORM

Micro alesatori in HSS a 3 taglienti per lavorazione in fori poco profondi
HSS micro reamers for fast smooth reaming of shallow holes

ILIX NORM

DIN

P. 842



MATERIALE | MATERIAL	HSS
ANGOLO ELICA | HELIX ANGLE	12°
FORMA | FORM	-
RIVESTIMENTO | COATING	-
DIREZIONE TAGLIO | CUTTING DIRECTION	↻

GRUPPO MATERIALI
MATERIAL GROUPS

P | **Acciai** | Steels	P
M | **Acciai Inossidabili** | Stainless Steels	M
K | **Ghise** | Cast Irons	K
N | **Metalli non ferrosi** | Non-ferrous metals	N
S | **Leghe resistenti al calore e Titanio** | HRSA and Titanium	S
H | **Acciai Temprati** | Hardened Steels	-

d_1	l_1	l_2	d_2		6318
1,20	58	35	1,7		■
1,90	85	55	2,5		■

d_1	l_1	l_2	d_2		6318

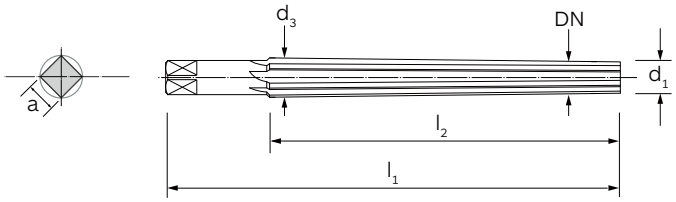
■ **Fino ad esaurimento scorte** | Till stocks last

DIN 9 (A-B)

Alesatori IN HSS per spine coniche, conicità 1:50, quadro DIN 10, per ottenere fori per spine coniche DIN 1
HSS taper pin reamers, taper 1:50, square acc. to DIN 10, to produce holes for taper pins DIN 1

ILIX NORM

DIN | **DIN 10**



MATERIALE | MATERIAL	HSS	HSS
ANGOLO ELICA | HELIX ANGLE	0°	6°
FORMA | FORM	A	B
RIVESTIMENTO | COATING	-	-
DIREZIONE TAGLIO | CUTTING DIRECTION	↻	↻

GRUPPO MATERIALI MATERIAL GROUPS

P | **Acciai** | Steels	P	P
M | **Acciai Inossidabili** | Stainless Steels	M	M
K | **Ghise** | Cast Irons	K	K
N | **Metalli non ferrosi** | Non-ferrous metals	N	N
S | **Leghe resistenti al calore e Titanio** | HRSA and Titanium	S	S
H | **Acciai Temprati** | Hardened Steels	-	-

DN	d_1	l_1	l_2	d_3	a	Z		6315	6304
1,0	0,9	46	28	1,46	2,40	3		●	-
1,2	1,1	50	32	1,74	3,15	3		■	-
1,5	1,4	57	37	2,14	2,40	3		●	●
1,6*	1,5	57	37	2,24	2,40	4		-	●
2,0	1,9	68	48	2,86	2,40	4		●	●
2,5	2,4	68	48	3,36	2,40	4		●	●
3,0	2,9	80	58	4,06	3,00	5		●	●
3,5*	3,4	87	63	4,66	3,40	5		-	●
4,0	3,9	93	68	5,26	3,80	5		●	●
4,5	4,4	95	70	5,80	4,30	5		-	●
5,0	4,9	100	73	6,36	4,90	5		●	●
5,5*	5,4	118	90	7,20	5,50	6		-	●
6,0	5,9	135	105	8,00	6,20	6		●	●
6,5*	6,4	140	110	8,60	6,20	6		-	●
7,0*	6,9	160	125	9,40	7,00	6		-	●
8,0	7,9	180	145	10,80	8,00	6		●	●
9,0*	8,9	195	160	12,10	9,00	6		-	●
10,0	9,9	215	175	13,40	10,00	6		●	●
12,0	11,8	255	210	16,00	11,00	8		●	●
13,0*	12,9	255	210	17,00	12,00	8		-	●
14,0*	13,9	255	210	18,00	12,00	8		-	●
16,0	15,8	280	230	20,40	14,50	8		●	●
20,0	19,8	310	250	24,80	18,00	10		●	●
25,0	24,7	370	300	30,70	22,00	10		●	●
30,0	29,7	400	320	36,10	24,00	12		●	●
40,0	39,7	430	340	46,50	32,00	12		-	●
50,0	49,7	460	360	56,90	39,00	14		-	●

Per spine coniche secondo DIN 1 - 258 - 7977 - 7978 | For taper pin according to DIN 1 – 258 – 7977 – 7978
*** ILIX NORM** ■ **Fino ad esaurimento scorte** | Till stocks last

D 01

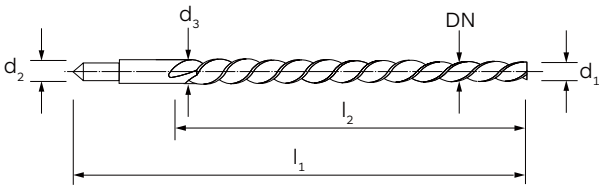
NF E 66-011 Norme francesi | French standard

Alesatori in HSS per spine coniche, conicità 1:50, quadro DIN 10 per ottenere fori per spine coniche DIN 1
HSS taper pin reamers, taper 1:50, square acc. to DIN 10, to produce holes for taper pins DIN 1

E 66-011
NF

DIN 10

P. 842



MATERIALE | MATERIAL	HSS
ANGOLO ELICA | HELIX ANGLE	45°
FORMA | FORM	-
RIVESTIMENTO | COATING	-
DIREZIONE TAGLIO | CUTTING DIRECTION	↻

GRUPPO MATERIALI MATERIAL GROUPS

P | **Acciai** | Steels	P
M | **Acciai Inossidabili** | Stainless Steels	M
K | **Ghise** | Cast Irons	K
N | **Metalli non ferrosi** | Non-ferrous metals	N
S | **Leghe resistenti al calore e Titanio** | HRSA and Titanium	S
H | **Acciai Temprati** | Hardened Steels	-

DN	d_1	l_1	l_2	d_2	d_3	z		6319
1,0	0,7	45	20	1,1	1,1	2		■
3,5	2,7	65	45	3,6	3,6	2		■
4,0	3,1	70	50	4,1	4,1	2		■
4,5	3,5	80	55	4,6	4,6	2		■

■ **Fino ad esaurimento scorte** | Till stocks last

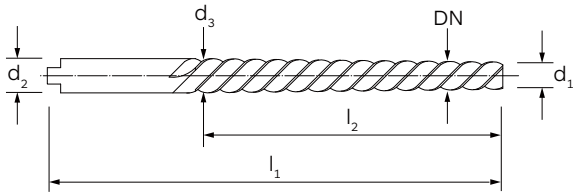
DIN 2179

Alesatori a macchina in HSS-Co forte torsione per spine coniche, conicità 1:50, per ottenere fori per spine coniche
HSS high spiral fluted taper pin reamers, taper 1:50, to produce holes for taper pins

2179

DIN

P. 842



MATERIALE | MATERIAL	HSS-Co
ANGOLO ELICA | HELIX ANGLE	45°
FORMA | FORM	-
RIVESTIMENTO | COATING	-
DIREZIONE TAGLIO | CUTTING DIRECTION	↻

GRUPPO MATERIALI MATERIAL GROUPS

P | **Acciai** | Steels	P
M | **Acciai Inossidabili** | Stainless Steels	M
K | **Ghise** | Cast Irons	K
N | **Metalli non ferrosi** | Non-ferrous metals	N
S | **Leghe resistenti al calore e Titanio** | HRSA and Titanium	S
H | **Acciai Temprati** | Hardened Steels	-

DN	d_1	l_1	l_2	d_2	d_3	Z		6313
1,00	0,80	60	33	1,40	1,52	2		■
1,50*	1,40	64	43	2,00	2,26	2		●
2,00	1,90	86	48	3,15	2,86	2		●
2,50	2,40	86	48	3,15	3,36	2		●
3,00	2,90	100	58	4,00	4,06	2		●
4,00	3,90	112	68	5,00	5,26	2		●
5,00	4,90	122	73	6,30	6,36	2		●
6,00	5,90	160	105	8,00	8,00	3		●
8,00	7,90	207	145	10,00	10,80	3		●
10,00	9,90	245	175	12,50	13,40	3		●
12,00	11,80	290	210	16,00	16,00	4		●

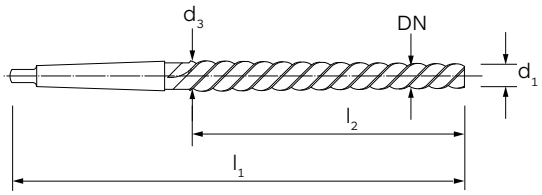
Per spine coniche secondo DIN 1 - 258 - 7977 - 7978 | For taper pin according to DIN 1 – 258 – 7977 – 7978
*** ILIX NORM** ■ **Fino ad esaurimento scorte** | Till stocks last

DIN 2180

Alesatori in HSS per spine coniche, conicità 1:50, per ottenere fori per spine coniche
HSS high spiral fluted taper pin reamers, taper 1:50, to produce holes for taper pins

2180
DIN

P. 842



MATERIALE | MATERIAL	HSS
ANGOLO ELICA | HELIX ANGLE	45°
FORMA | FORM	-
RIVESTIMENTO | COATING	-
DIREZIONE TAGLIO | CUTTING DIRECTION	↻

GRUPPO MATERIALI
MATERIAL GROUPS

P | **Acciai** | Steels	P
M | **Acciai Inossidabili** | Stainless Steels	M
K | **Ghise** | Cast Irons	K
N | **Metalli non ferrosi** | Non-ferrous metals	N
S | **Leghe resistenti al calore e Titanio** | HRSA and Titanium	S
H | **Acciai Temprati** | Hardened Steels	-

DN	d_1	l_1	l_2	d_3		Z		6314
4	4,90	170	75	5,40	1	3		■
5	4,90	155	73	6,36	1	3		●
6	5,90	187	105	8,00	1	3		●
8	7,90	227	145	10,80	1	3		●
10	9,90	257	175	13,40	1	3		●
12	11,80	315	210	16,00	2	3		●
13	12,86	300	194	16,74	2	3		■
16	15,80	335	230	20,40	2	3		●
20	19,80	377	250	24,80	3	3		●

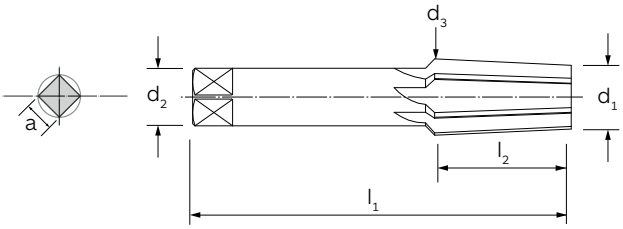
Per spine coniche secondo DIN 1 - 258 - 7977 - 7978 | For taper pin according to DIN 1 – 258 – 7977 – 7978
■ **Fino ad esaurimento scorte** | Till stocks last

ILIX NORM

Alesatori conici in HSS, conicità 1:16, per preforo NPT/NPTF
HSS taper reamers, taper 1:16, taper pin reamer for NPT/NPTF thread

ILIX NORM

DIN | **DIN 10** | **P. 842**



MATERIALE | MATERIAL	HSS	HSS
ANGOLO ELICA | HELIX ANGLE	0°	6°
FORMA | FORM	-	-
RIVESTIMENTO | COATING	-	-
DIREZIONE TAGLIO | CUTTING DIRECTION	↺	↺

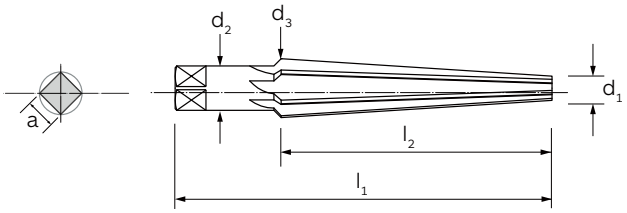
GRUPPO MATERIALI MATERIAL GROUPS

P | **Acciai** | Steels	P	P
M | **Acciai Inossidabili** | Stainless Steels	M	M
K | **Ghise** | Cast Irons	K	K
N | **Metalli non ferrosi** | Non-ferrous metals	N	N
S | **Leghe resistenti al calore e Titanio** | HRSA and Titanium	S	S
H | **Acciai Temprati** | Hardened Steels	-	-

D	d_1	l_1	l_2	d_2	d_3	a	Z		6310	6311
1/16”	5,935	70	17	6	6,998	4,9	6		●	●
1/8”	8,042	70	17	8	9,105	6,2	6		●	●
1/4”	10,308	80	27	11	11,996	9,0	6		●	●
3/8”	13,728	85	27	12	15,416	9,0	8		●	●
1/2”	16,938	95	35	16	19,126	12,0	8		●	●
3/4”	22,253	105	35	20	24,411	16,0	10		●	●
1”	27,996	130	43	25	30,684	20,0	10		●	●
1 1/4”	36,721	140	44	32	39,471	24,0	12		●	●
1 1/2”	42,791	150	45	36	45,604	29,0	12		●	●
2”	54,803	160	46	48	57,678	35,0	14		●	●

ILIX NORM

DIN | **DIN 10** | **P. 842**



MATERIALE | MATERIAL	HSS
ANGOLO ELICA | HELIX ANGLE	0°
FORMA | FORM	-
RIVESTIMENTO | COATING	-
DIREZIONE TAGLIO | CUTTING DIRECTION	↻

GRUPPO MATERIALI MATERIAL GROUPS

P | **Acciai** | Steels	P
M | **Acciai Inossidabili** | Stainless Steels	M
K | **Ghise** | Cast Irons	K
N | **Metalli non ferrosi** | Non-ferrous metals	N
S | **Leghe resistenti al calore e Titanio** | HRSA and Titanium	S
H | **Acciai Temprati** | Hardened Steels	-

d_1	l_1	l_2	d_2	d_3	a	z		6308
3	100	70	6,2	10	6,3	5		●
5	140	100	9,0	15	10,0	5		●
10	195	150	16,0	25	16,0	7		●
15	250	200	24,0	35	22,4	9		●
23	275	220	32,0	45	31,5	11		●
30	310	250	39,0	55	40,0	13		●
37	345	280	44,0	65	45,0	15		●
45	370	300	49,0	75	45,0	17		●

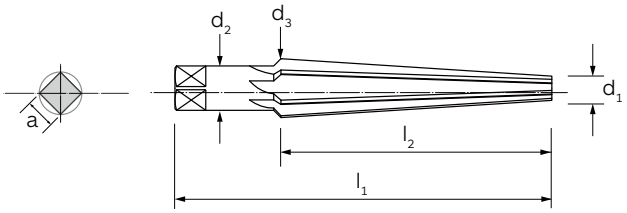
DIN 204 (C-D)

Alesatori in HSS per cono morse per finitura di attacchi cono morse secondo DIN 228
HSS morse taper socket reamers, finishing for taper sleeves according to DIN 228

204

DIN

DIN 10



MATERIALE | MATERIAL	HSS	HSS
ANGOLO ELICA | HELIX ANGLE	0°	6°
FORMA | FORM	C	D
RIVESTIMENTO | COATING	-	-
DIREZIONE TAGLIO | CUTTING DIRECTION	↺	↺

GRUPPO MATERIALI
MATERIAL GROUPS

P | **Acciai** | Steels	P	P
M | **Acciai Inossidabili** | Stainless Steels	M	M
K | **Ghise** | Cast Irons	K	K
N | **Metalli non ferrosi** | Non-ferrous metals	N	N
S | **Leghe resistenti al calore e Titanio** | HRSA and Titanium	S	S
H | **Acciai Temprati** | Hardened Steels	-	-

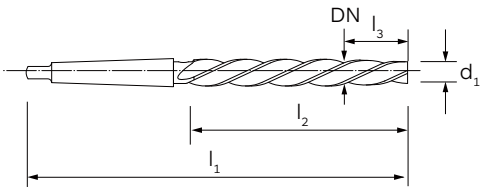
	l_1	l_2	d_3	a	z		6317	6312
MK 0	93	61	9,722	6,3	6		●	●
MK 1	102	66	12,863	8,0	8		●	●
MK 2	121	79	18,679	11,2	8		●	●
MK 3	146	96	24,829	16,0	10		●	●
MK 4	179	119	32,410	20,0	10		●	●
MK 5	222	150	45,767	25,0	12		●	●
MK 6	300	208	65,016	35,5	16		●	●

DIN 311

Alesatori elicoidali in HSS per fori da chiodi, conicità oltre 1/3 della lunghezza del tagliente
HSS fluted bridge reamers with morse taper shank, tapered over 1/3 of cutting length

311
DIN

P. 842



MATERIALE | MATERIAL	HSS
ANGOLO ELICA | HELIX ANGLE	25°
FORMA | FORM	-
RIVESTIMENTO | COATING	-
DIREZIONE TAGLIO | CUTTING DIRECTION	↻

GRUPPO MATERIALI
MATERIAL GROUPS

P | **Acciai** | Steels	P
M | **Acciai Inossidabili** | Stainless Steels	M
K | **Ghise** | Cast Irons	K
N | **Metalli non ferrosi** | Non-ferrous metals	N
S | **Leghe resistenti al calore e Titanio** | HRSA and Titanium	S
H | **Acciai Temprati** | Hardened Steels	-

D	d_1	l_1	l_2	l_3		Z		6355
6,4	4,5	151	75	19	1	3		●
7,4	5,3	156	80	22	1	3		●
8,4	6,0	161	85	25	1	3		●
9,0	6,3	166	90	27	1	4		●
9,5	6,9	166	90	27	1	4		●
10,0	7,1	171	95	30	1	4		●
11,0	7,8	176	100	33	1	4		●
12,0	8,2	199	105	39	2	5		●
13,0*	9,2	199	105	39	2	5		●
14,0	9,9	209	115	42	2	5		●
15,0	10,6	219	125	45	2	5		●
16,0	11,4	229	135	48	2	5		●
17,0*	12,1	251	135	51	3	5		●
18,0	12,4	261	145	58	3	5		●
19,0	13,4	261	145	58	3	5		●
20,0	14,0	271	155	62	3	5		●
21,0*	15,0	271	155	62	3	5		●
22,0	15,6	281	165	66	3	5		●
23,0	16,6	281	165	66	3	5		●
24,0	17,0	296	180	72	3	5		●
25,0	18,0	296	180	72	3	5		●
26,0	19,0	296	180	72	3	5		●
27,0	19,4	311	195	78	3	5		●
28,0	20,4	311	195	78	3	5		●
29,0	21,4	311	195	78	3	5		●
30,0	22,4	311	195	78	3	5		●
31,0	22,8	326	210	84	3	5		●
32,0	23,8	354	210	84	4	5		●

* ILIX NORM

ALESATORI
REAMERS

D.01.03

Parametri di taglio
Cutting data

D
01

Pagina catalogo Catalogue page	Codice utensile Tool Code		Acciaio debolmente legato Low-Alloyed Steel <800 N/mm²		Acciaio mediamente legato Medium-Alloyed Steel 700/1000 N/mm²		Acciaio fortemente legato High-Alloyed Steel 1000/1300 N/mm²		Acciaio inossidabile Martensitico/Ferritico Stainless steel Martensitic/Ferritic		Acciaio inossidabile Austenitico Stainless steel Austenitic		Ghisa grigia Grey cast iron		Ghisa sferoidale Nodular cast iron	
	Gruppo Materiali | Materials Group		P1		P2		P3		M1		M2		K1		K2	
			V_c	f	V_c	f	V_c	f	V_c	f	V_c	f	V_c	f	V_c	f
809	**6324**		**12**	**1.0**	**8**	**0.8**	**6**	**0.6**	5	0.8	3	0.6	**12**	**1.0**	**8**	**1.2**
810	**6321**		**12**	**1.0**	**8**	**0.8**	**6**	**0.6**	5	0.8	3	0.6	**12**	**1.0**	**8**	**1.2**
822	**6333**		**12**	**1.0**	**8**	**0.8**	**6**	**0.6**	5	0.8	3	0.6	**12**	**1.0**	**8**	**1.2**
827	**6361**		**10**	**1.0**	**6**	**0.8**	**4**	**0.6**	3	0.8	2	0.6	**10**	**1.0**	**6**	**1.2**
810	**6326**		**12**	**1.0**	**8**	**0.8**	**6**	**0.6**	5	0.8	3	0.6	**12**	**1.0**	**8**	**1.2**
810	**6326TN**		**12**	**1.0**	**8**	**0.8**	**6**	**0.6**	5	0.8	3	0.6	**12**	**1.0**	**8**	**1.2**
817	**6326C**		**12**	**1.0**	**8**	**0.8**	**6**	**0.6**	5	0.8	3	0.6	**12**	**1.0**	**8**	**1.2**
822	**6337**		**12**	**1.0**	**8**	**0.8**	**6**	**0.6**	5	0.8	3	0.6	**12**	**1.0**	**8**	**1.2**
827	**6360**		**10**	**1.0**	**6**	**0.8**	**4**	**0.6**	3	0.8	2	0.6	**10**	**1.0**	**6**	**1.2**
810	**6325**		**12**	**1.0**	**8**	**0.8**	**6**	**0.6**	5	0.8	3	0.6	**12**	**1.0**	**8**	**1.2**
822	**6335**		**12**	**1.0**	**8**	**0.8**	**6**	**0.6**	5	0.8	3	0.6	**12**	**1.0**	**8**	**1.2**

V_c: velocità di taglio (m/min) | cutting speed (m/min) **f: Tabella avanzamenti (mm/giro)** | Feed table (mm/rev)

Avanzamento f_n (mm/g) | Feed f_n (mm/rev)

Coefficiente di avanzamento Coefficient Number	Ø 1	Ø 1,5	Ø 2	Ø 3	Ø 4	Ø 5	Ø 6	Ø 8
0.6	0,030	0,040	0,050	0,060	0,080	0,090	0,100	0,120
0.8	0,045	0,060	0,075	0,090	0,110	0,120	0,140	0,160
1.0	0,060	0,075	0,090	0,120	0,140	0,160	0,180	0,210
1.2	0,075	0,090	0,110	0,140	0,170	0,190	0,210	0,250
1.4	0,085	0,110	0,130	0,160	0,190	0,220	0,240	0,290
1.6	0,098	0,120	0,140	0,190	0,220	0,250	0,270	0,320
1.8	0,110	0,130	0,160	0,210	0,250	0,280	0,310	0,360
2.0	0,120	0,150	0,180	0,230	0,280	0,310	0,340	0,410
2.5	0,150	0,180	0,210	0,280	0,330	0,380	0,420	0,500

Esempio della scelta dei dati di lavoro: 6324 Ø 5 | Gruppo di materiale da lavorare P1 | **V_c** = 12 m/min | **f_n= 0,160 mm/giro** (coefficiente f=1)
Cutting data example: 6324 Ø 5 | Working material group P1 | **V_c** = 12 m/min | **f_n= 0,160** mm/rev (coefficient f=1)

PARAMETRI DI TAGLIO | CUTTING DATA

Alesatori in HSS e HSS-Co | HSS and HSS-Co reamers

Alluminio e leghe di Alluminio Aluminum and Aluminum alloys	**Materiali non ferrosi** Non ferrous materials	**Titanio e leghe di Titanio** Titanium and Titanium alloys	**HRSA Leghe resistenti al calore** Heat resistant alloys	**Acciai temprati** Hardened steels **38/48 HRC**	**Acciai temprati** Hardened steels **48/58 HRC**	**Acciai temprati** Hardened steels **58/68 HRC**		**Codice utensile** Tool Code	**Pagina catalogo** Catalogue page
N1	**N2**	**S1**	**S2**	**H1**	**H2**	**H3**	**Gruppo Materiali** | Materials Group		

V_c	f	V_c	f	V_c	f	V_c	f	V_c	f	V_c	f	V_c	f			
15	**1.6**	**10**	**1.4**	**2**	**0.6**	**2**	**0.6**	-	-	-	-	-	-		**6324**	809
15	**1.6**	**10**	**1.4**	**2**	**0.6**	**2**	**0.6**	-	-	-	-	-	-		**6321**	810
15	**1.6**	**10**	**1.4**	**2**	**0.6**	**2**	**0.6**	-	-	-	-	-	-		**6333**	822
13	**1.6**	**8**	**1.4**	-	-	-	-	-	-	-	-	-	-		**6361**	827
15	**1.6**	**10**	**1.4**	**2**	**0.6**	**2**	**0.6**	-	-	-	-	-	-		**6326**	810
15	1.6	10	1.4	2	0.6	2	0.6	-	-	-	-	-	-		**6326TN**	810
15	**1.6**	**10**	**1.4**	**2**	**0.6**	**2**	**0.6**	-	-	-	-	-	-		**6326C**	817
15	**1.6**	**10**	**1.4**	**2**	**0.6**	**2**	**0.6**	-	-	-	-	-	-		**6337**	822
13	**1.6**	**8**	**1.4**	-	-	-	-	-	-	-	-	-	-		**6360**	827
15	**1.6**	**10**	**1.4**	**2**	**0.6**	**2**	**0.6**	-	-	-	-	-	-		**6325**	810
15	**1.6**	**10**	**1.4**	**2**	**0.6**	**2**	**0.6**	-	-	-	-	-	-		**6335**	822

Ø 10	**Ø 12**	**Ø 15**	**Ø 20**	**Ø 25**	**Ø 30**	**Ø 40**	**Ø 50**		
0,140	0,150	0,160	0,200	0,230	0,260	0,300	0,350	**0.6**	**Numero avanzamento** Feed Number
0,180	0,220	0,240	0,270	0,320	0,350	0,420	0,480	**0.8**	
0,240	0,270	0,300	0,350	0,400	0,450	0,520	0,600	**1.0**	
0,280	0,330	0,360	0,430	0,480	0,550	0,650	0,720	**1.2**	
0,340	0,380	0,410	0,500	0,550	0,640	0,750	0,820	**1.4**	
0,380	0,420	0,480	0,560	0,650	0,710	0,850	0,950	**1.6**	
0,420	0,480	0,530	0,620	0,720	0,800	0,950	1,100	**1.8**	
0,480	0,530	0,600	0,700	0,800	0,900	1,200	1,400	**2.0**	
0,580	0,650	0,730	0,880	1,000	1,200	1,400	1,600	**2.5**	

D 01

▶ **I parametri di taglio indicati in tabella sono da considerarsi validi in condizioni macchina/pezzo ottimali**
The cutting parameters shown in the table have to be considered valid in optimal machine/workpiece conditions

Pagina catalogo Catalogue page	Codice utensile Tool Code		Acciaio debolmente legato Low-Alloyed Steel <800 N/mm²		Acciaio mediamente legato Medium-Alloyed Steel 700/1000 N/mm²		Acciaio fortemente legato High-Alloyed Steel 1000/1300 N/mm²		Acciao inossidabile Martensitico/Ferritico Stainless steel Martensitic/Ferritic		Acciao inossidabile Austenitico Stainless steel Austenitic		Ghisa grigia Grey cast iron		Ghisa sferoidale Nodular cast iron	
	Gruppo Materiali | Materials Group		P1		P2		P3		M1		M2		K1		K2	
			V_c	f	V_c	f	V_c	f	V_c	f	V_c	f	V_c	f	V_c	f
827	**6362**		**10**	**1.0**	**6**	**0.8**	**4**	**0.6**	3	0.8	2	0.6	**10**	**1.0**	**6**	**1.2**
826	**6307**		**10**	**1.0**	**6**	**0.8**	**4**	**0.6**	3	0.8	2	0.6	**10**	**1.0**	**6**	**1.2**
833	**6313**		**10**	**1.0**	**6**	**0.8**	**4**	**0.6**	3	0.8	2	0.6	**10**	**1.0**	**6**	**1.2**
834	**6314**		**10**	**1.0**	**6**	**0.8**	**4**	**0.6**	3	0.8	2	0.6	**10**	**1.0**	**6**	**1.2**
836	**6308**		**10**	**1.0**	**6**	**0.8**	**4**	**0.6**	3	0.8	2	0.6	**10**	**1.0**	**6**	**1.2**
835	**6310**		**10**	**1.0**	**6**	**0.8**	**4**	**0.6**	3	0.8	2	0.6	**10**	**1.0**	**6**	**1.2**
835	**6311**		**10**	**1.0**	**6**	**0.8**	**4**	**0.6**	3	0.8	2	0.6	**10**	**1.0**	**6**	**1.2**
832	**6319**		**10**	**1.0**	**6**	**0.8**	**4**	**0.6**	3	0.8	2	0.6	**10**	**1.0**	**6**	**1.2**
838	**6355**		**10**	**1.0**	**6**	**0.8**	**4**	**0.6**	3	0.8	2	0.6	**10**	**1.0**	**6**	**1.2**
829	**6303**		**10**	**1.0**	**6**	**0.8**	**4**	**0.6**	3	0.8	2	0.6	**10**	**1.0**	**6**	**1.2**
830	**6318**		**10**	**1.0**	**6**	**0.8**	**4**	**0.6**	3	0.8	2	0.6	**10**	**1.0**	**6**	**1.2**

V_c: velocità di taglio (m/min) | cutting speed (m/min) **f: Tabella avanzamenti (mm/giro)** | Feed table (mm/rev)

Avanzamento f_n (mm/g) | Feed f_n (mm/rev)

Coefficiente di avanzamento Coefficient Number	Ø 1	Ø 1,5	Ø 2	Ø 3	Ø 4	Ø 5	Ø 6	Ø 8
0.6	0,030	0,040	0,050	0,060	0,080	0,090	0,100	0,120
0.8	0,045	0,060	0,075	0,090	0,110	0,120	0,140	0,160
1.0	0,060	0,075	0,090	0,120	0,140	0,160	0,180	0,210
1.2	0,075	0,090	0,110	0,140	0,170	0,190	0,210	0,250
1.4	0,085	0,110	0,130	0,160	0,190	0,220	0,240	0,290
1.6	0,098	0,120	0,140	0,190	0,220	0,250	0,270	0,320
1.8	0,110	0,130	0,160	0,210	0,250	0,280	0,310	0,360
2.0	0,120	0,150	0,180	0,230	0,280	0,310	0,340	0,410
2.5	0,150	0,180	0,210	0,280	0,330	0,380	0,420	0,500

Esempio della scelta dei dati di lavoro: 6362 Ø 5 | Gruppo di materiale da lavorare P1 | **V_c** = 10 m/min | **f_n= 0,160 mm/giro** (coefficiente f=1.0)
Cutting data example: 6362 Ø 5 | Working material group P1 | **V_c** = 10 m/min | **f_n= 0,160** mm/rev (coefficient f=1.0)

PARAMETRI DI TAGLIO | CUTTING DATA

Alesatori in HSS e HSS-Co | HSS and HSS-Co reamers

Alluminio e leghe di Alluminio Aluminum and Aluminum alloys	**Materiali non ferrosi** Non ferrous materials	**Titanio e leghe di Titanio** Titanium and Titanium alloys	**HRSA Leghe resistenti al calore** Heat resistant alloys	**Acciai temprati** Hardened steels **38/48 HRC**	**Acciai temprati** Hardened steels **48/58 HRC**	**Acciai temprati** Hardened steels **58/68 HRC**		**Codice utensile** Tool Code	**Pagina catalogo** Catalogue page
N1	**N2**	**S1**	**S2**	**H1**	**H2**	**H3**	**Gruppo Materiali** | Materials Group		

V_c	f	V_c	f	V_c	f	V_c	f	V_c	f	V_c	f	V_c	f			
13	**1.6**	**8**	**1.4**	-	-	-	-	-	-	-	-	-	-		**6362**	827
13	**1.6**	**8**	**1.4**	-	-	-	-	-	-	-	-	-	-		**6307**	826
13	**1.6**	**8**	**1.4**	-	-	-	-	-	-	-	-	-	-		**6313**	833
13	**1.6**	**8**	**1.4**	-	-	-	-	-	-	-	-	-	-		**6314**	834
13	**1.6**	**8**	**1.4**	-	-	-	-	-	-	-	-	-	-		**6308**	836
13	**1.6**	**8**	**1.4**	-	-	-	-	-	-	-	-	-	-		**6310**	835
13	**1.6**	**8**	**1.4**	-	-	-	-	-	-	-	-	-	-		**6311**	835
13	**1.6**	**8**	**1.4**	-	-	-	-	-	-	-	-	-	-		**6319**	832
13	**1.6**	**8**	**1.4**	-	-	-	-	-	-	-	-	-	-		**6355**	838
13	**1.6**	**8**	**1.4**	-	-	-	-	-	-	-	-	-	-		**6303**	829
13	**1.6**	**8**	**1.4**	-	-	-	-	-	-	-	-	-	-		**6318**	830

Ø 10	**Ø 12**	**Ø 15**	**Ø 20**	**Ø 25**	**Ø 30**	**Ø 40**	**Ø 50**		
0,140	0,150	0,160	0,200	0,230	0,260	0,300	0,350	**0.6**	**Numero avanzamento** Feed Number
0,180	0,220	0,240	0,270	0,320	0,350	0,420	0,480	**0.8**	
0,240	0,270	0,300	0,350	0,400	0,450	0,520	0,600	**1.0**	
0,280	0,330	0,360	0,430	0,480	0,550	0,650	0,720	**1.2**	
0,340	0,380	0,410	0,500	0,550	0,640	0,750	0,820	**1.4**	
0,380	0,420	0,480	0,560	0,650	0,710	0,850	0,950	**1.6**	
0,420	0,480	0,530	0,620	0,720	0,800	0,950	1,100	**1.8**	
0,480	0,530	0,600	0,700	0,800	0,900	1,200	1,400	**2.0**	
0,580	0,650	0,730	0,880	1,000	1,200	1,400	1,600	**2.5**	

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▶ **I parametri di taglio indicati in tabella sono da considerarsi validi in condizioni macchina/pezzo ottimali**
The cutting parameters shown in the table have to be considered valid in optimal machine/workpiece conditions

Pagina catalogo Catalogue page	**Codice utensile** Tool Code		**Acciaio debolmente legato** Low-Alloyed Steel **<800 N/mm²**		**Acciaio mediamente legato** Medium-Alloyed Steel **700/1000 N/mm²**		**Acciaio fortemente legato** High-Alloyed Steel **1000/1300 N/mm²**		**Acciaio inossidabile Martensitico/Ferritico** Stainless steel Martensitic/Ferritic		**Acciaio inossidabile Austenitico** Stainless steel Austenitic		**Ghisa grigia** Grey cast iron		**Ghisa sferoidale** Nodular cast iron	
Gruppo Materiali | Materials Group			P1		P2		P3		M1		M2		K1		K2	
			V_c	f	V_c	f	V_c	f	V_c	f	V_c	f	V_c	f	V_c	f
824	**6369**		**20**	**1.2**	**15**	**1.0**	**10**	**0.8**	**10**	**1.0**	**7**	**0.8**	**20**	**1.4**	**15**	**1.2**
813	**6372**		**20**	**1.2**	**15**	**1.0**	**10**	**0.8**	**10**	**1.0**	**7**	**0.8**	**20**	**1.4**	**15**	**1.2**
813	**6372TN**		**20**	**1.2**	**15**	**1.0**	**10**	**0.8**	**10**	**1.0**	**7**	**0.8**	**20**	**1.4**	**15**	**1.2**
818	**6372C**		**20**	**1.2**	**15**	**1.0**	**10**	**0.8**	**10**	**1.0**	**7**	**0.8**	**20**	**1.4**	**15**	**1.2**
815	**6370**		**20**	**1.2**	**15**	**1.0**	**10**	**0.8**	**10**	**1.0**	**7**	**0.8**	**20**	**1.4**	**15**	**1.2**
816	**6371**		**20**	**1.2**	**15**	**1.0**	**10**	**0.8**	**10**	**1.0**	**7**	**0.8**	**20**	**1.4**	**15**	**1.2**
825	**6376**		**20**	**1.2**	**15**	**1.0**	**10**	**0.8**	**10**	**1.0**	**7**	**0.8**	**20**	**1.4**	**15**	**1.2**
820	**6323**		**50**	**1.2**	**40**	**1.0**	**30**	**0.8**	**20**	**1.0**	**15**	**0.8**	**80**	**1.4**	**40**	**1.2**
821	**6373**		-	-	-	-	-	-	-	-	-	-	-	-	-	-

V_c: velocità di taglio (m/min) | cutting speed (m/min) **f: Tabella avanzamenti (mm/giro)** | Feed table (mm/rev)

Avanzamento f_n (mm/g) | Feed f_n (mm/rev)

Coefficiente di avanzamento Coefficient Number	**Ø 1**	**Ø 1,5**	**Ø 2**	**Ø 3**	**Ø 4**	**Ø 5**	**Ø 6**	**Ø 8**
0.6	0,030	0,040	0,050	0,060	0,080	0,090	0,100	0,120
0.8	0,045	0,060	0,075	0,090	0,110	0,120	0,140	0,160
1.0	0,060	0,075	0,090	0,120	0,140	0,160	0,180	0,210
1.2	0,075	0,090	0,110	0,140	0,170	0,190	0,210	0,250
1.4	0,085	0,110	0,130	0,160	0,190	0,220	0,240	0,290
1.6	0,098	0,120	0,140	0,190	0,220	0,250	0,270	0,320
1.8	0,110	0,130	0,160	0,210	0,250	0,280	0,310	0,360
2.0	0,120	0,150	0,180	0,230	0,280	0,310	0,340	0,410
2.5	0,150	0,180	0,210	0,280	0,330	0,380	0,420	0,500

Esempio della scelta dei dati di lavoro: 6369 Ø 5 | Gruppo di materiale da lavorare P1 | **V_c** = 20 m/min | **f_n= 0,190 mm/giro** (coefficiente f=1.2)
Cutting data example: 6369 Ø 5 | Working material group P1 | **V_c** = 20 m/min | **f_n= 0,190** mm/rev (coefficient f=1.2)

PARAMETRI DI TAGLIO | CUTTING DATA

Alesatori in Metallo Duro Integrale, Cermet e PKD | Solid Carbide, Cermet and PKD reamers

Alluminio e leghe di Alluminio Aluminum and Aluminum alloys		**Materiali non ferrosi** Non ferrous materials		**Titanio e leghe di Titanio** Titanium and Titanium alloys		**HRSA Leghe resistenti al calore** Heat resistant alloys		**Acciai temprati** Hardened steels **38/48 HRC**		**Acciai temprati** Hardened steels **48/58 HRC**		**Acciai temprati** Hardened steels **58/68 HRC**			**Codice utensile** Tool Code	**Pagina catalogo** Catalogue page
N1		**N2**		**S1**		**S2**		**H1**		**H2**		**H3**		**Gruppo Materiali |** Materials Group		
V_c	f	V_c	f	V_c	f	V_c	f	V_c	f	V_c	f	V_c	f			
30	**1.8**	**25**	**1.6**	**5**	**0.8**	**5**	**0.8**	-	-	-	-	-	-		**6369**	824
30	**1.8**	**25**	**1.6**	**5**	**0.8**	**5**	**0.8**	-	-	-	-	-	-		**6372**	813
30	1.8	25	1.6	**5**	**0.8**	**5**	**0.8**	-	-	-	-	-	-		**6372TN**	813
30	**1.8**	**25**	**1.6**	**5**	**0.8**	**5**	**0.8**	-	-	-	-	-	-		**6372C**	818
30	**1.8**	**25**	**1.6**	**5**	**0.8**	**5**	**0.8**	-	-	-	-	-	-		**6370**	815
30	**1.8**	**25**	**1.6**	**5**	**0.8**	**5**	**0.8**	-	-	-	-	-	-		**6371**	816
30	**1.8**	**25**	**1.6**	**5**	**0.8**	**5**	**0.8**	-	-	-	-	-	-		**6376**	825
150	**1.8**	**100**	**1.6**	-	-	-	-	-	-	-	-	-	-		**6323**	820
200	**2.0**	**150**	**1.8**	-	-	-	-	-	-	-	-	-	-		**6373**	821

Ø 10	**Ø 12**	**Ø 15**	**Ø 20**	**Ø 25**	**Ø 30**	**Ø 40**	**Ø 50**		
0,140	0,150	0,160	0,200	0,230	0,260	0,300	0,350	**0.6**	**Numero avanzamento** Feed Number
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0,240	0,270	0,300	0,350	0,400	0,450	0,520	0,600	**1.0**	
0,280	0,330	0,360	0,430	0,480	0,550	0,650	0,720	**1.2**	
0,340	0,380	0,410	0,500	0,550	0,640	0,750	0,820	**1.4**	
0,380	0,420	0,480	0,560	0,650	0,710	0,850	0,950	**1.6**	
0,420	0,480	0,530	0,620	0,720	0,800	0,950	1,100	**1.8**	
0,480	0,530	0,600	0,700	0,800	0,900	1,200	1,400	**2.0**	
0,580	0,650	0,730	0,880	1,000	1,200	1,400	1,600	**2.5**	

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