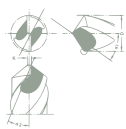


RISTA REPARATUR UND INSTANDHALTUNG

RISTA REPAIRING AND MAINTENANCE



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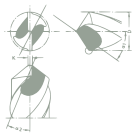


Werkzeug- und Industrietechnik



SPIRALBOHRER TWIST DRILLS

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Werkzeug- und Industrietechnik



Reparatur- und
Instandhaltung

1

SPIRALBOHRER DIN 1897 SCREW MACHINE DRILL DIN 1897

DIN 1897

HSS-Co5%

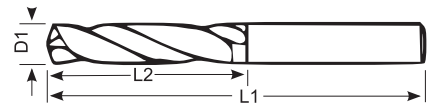
NX

130°

GESCHLIFFEN
GRINDED

- 130° Kreuzanschliff
- goldfinished
- Zylinderschaft
- extra kurze Ausführung
- für Hand- und stationäre Maschinen
- zum Einsatz in der Mischbearbeitung
- 130° splitpoint
- goldfinished
- straight shank
- extra short
- for hand- and stationary machines
- to use in multi purpose working field

INFOBOX



Art.-Nr.: 3-11101

Ø D1 mm	L1 mm	L2 mm	Art.-Nr.
1.00	26	6	3-11101
1.50	32	9	3-11101
2.00	38	12	3-11101
2.50	43	14	3-11101
3.00	46	16	3-11101
3.10	49	18	3-11101
3.20	49	18	3-11101
3.30	49	18	3-11101
3.50	52	20	3-11101
4.00	55	22	3-11101
4.10	55	22	3-11101
4.20	55	22	3-11101
4.50	58	24	3-11101
4.90	62	26	3-11101
5.00	62	26	3-11101
5.20	66	28	3-11101
5.50	66	28	3-11101

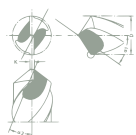
Ø D1 mm	L1 mm	L2 mm	Art.-Nr.
6.00	66	28	3-11101
6.50	70	31	3-11101
6.80	74	34	3-11101
7.00	74	34	3-11101
7.50	74	34	3-11101
8.00	79	37	3-11101
8.50	79	37	3-11101
9.00	84	40	3-11101
9.50	84	40	3-11101
10.00	89	43	3-11101
10.20	89	43	3-11101
10.50	89	43	3-11101
11.00	95	47	3-11101
11.50	95	47	3-11101
12.00	102	51	3-11101
12.50	102	51	3-11101
13.00	102	51	3-11101

Einsatzgebiete:

N, W, VA, GG (bis GG40) und hochlegierte Materialien bis 1200 N/mm²

Materials:

N, W, INOX, GG (bis GG40) and high elongated materials up to 1200 N/mm²



Werkzeug- und Industrietechnik



Risto
Reparatur- und
Instandhaltung

SPIRALBOHRER DIN 338 JOBBER LENGTH MACHINE DRILL DIN 338

DIN 338

HSS-Co5%

NX

130°

GESCHLIFFEN
GRINDED

- 130° Kreuzanschliff
- goldfinished
- Zylinderschaft
- für Hand- und stationäre Maschinen
- zum Einsatz in der Mischbearbeitung

INFOBOX

- 130° splitpoint
- goldfinished
- straight shank
- for hand- and stationary machines
- to use in multi purpose working field



Art.-Nr.: 3-11102

Ø D1 mm	L1 mm	L2 mm	Art.-Nr.
1.00	34	12	3-11102
1.10	36	14	3-11102
1.20	38	16	3-11102
1.30	38	16	3-11102
1.40	40	18	3-11102
1.50	40	18	3-11102
1.60	43	20	3-11102
1.70	43	20	3-11102
1.80	46	22	3-11102
1.90	46	22	3-11102
2.00	49	24	3-11102
2.10	49	24	3-11102
2.20	53	27	3-11102
2.30	53	27	3-11102
2.40	57	30	3-11102
2.50	57	30	3-11102
2.60	57	30	3-11102
2.70	61	33	3-11102
2.80	61	33	3-11102
2.90	61	33	3-11102
3.00	61	33	3-11102
3.10	65	36	3-11102
3.20	65	36	3-11102
3.30	65	36	3-11102
3.40	70	39	3-11102
3.50	70	39	3-11102

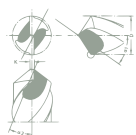
Ø D1 mm	L1 mm	L2 mm	Art.-Nr.
3.60	70	39	3-11102
3.70	70	39	3-11102
3.80	75	43	3-11102
3.90	75	43	3-11102
4.00	75	43	3-11102
4.10	75	43	3-11102
4.20	75	43	3-11102
4.30	80	47	3-11102
4.40	80	47	3-11102
4.50	80	47	3-11102
4.60	80	47	3-11102
4.70	80	47	3-11102
4.80	86	52	3-11102
4.90	86	52	3-11102
5.00	86	52	3-11102
5.10	86	52	3-11102
5.20	86	52	3-11102
5.30	86	52	3-11102
5.40	93	57	3-11102
5.50	93	57	3-11102
5.60	93	57	3-11102
5.70	93	57	3-11102
5.80	93	57	3-11102
5.90	93	57	3-11102
6.00	93	57	3-11102
6.10	101	63	3-11102

Einsatzgebiete:

N, W, VA, GG (bis GG40), und hochlegierte Materialien bis 1200 N/mm²

Materials:

N, W, INOX, GG (bis GG40), and high elongated materials up to 1200 N/mm²



Werkzeug- und Industrietechnik



SPIRALBOHRER DIN 338 JOBBER LENGTH MACHINE DRILL DIN 338

Ø D1 mm	L1 mm	L2 mm	Art.-Nr.
6.20	101	63	3-11102
6.30	101	63	3-11102
6.40	101	63	3-11102
6.50	101	63	3-11102
6.60	101	63	3-11102
6.70	101	63	3-11102
6.80	109	69	3-11102
6.90	109	69	3-11102
7.00	109	69	3-11102
7.10	109	69	3-11102
7.20	109	69	3-11102
7.30	109	69	3-11102
7.40	109	69	3-11102
7.50	109	69	3-11102
7.60	117	75	3-11102
7.70	117	75	3-11102
7.80	117	75	3-11102
7.90	117	75	3-11102
8.00	117	75	3-11102
8.10	117	75	3-11102
8.20	117	75	3-11102
8.30	117	75	3-11102
8.40	117	75	3-11102
8.50	117	75	3-11102
8.60	125	81	3-11102
8.70	125	81	3-11102

Ø D1 mm	L1 mm	L2 mm	Art.-Nr.
8.80	125	81	3-11102
8.90	125	81	3-11102
9.00	125	81	3-11102
9.10	125	81	3-11102
9.20	125	81	3-11102
9.30	125	81	3-11102
9.40	125	81	3-11102
9.50	125	81	3-11102
9.60	125	81	3-11102
9.70	133	87	3-11102
9.80	133	87	3-11102
9.90	133	87	3-11102
10.00	133	87	3-11102
10.20	133	87	3-11102
10.50	133	87	3-11102
11.00	142	94	3-11102
11.50	142	94	3-11102
12.00	151	101	3-11102
12.50	151	101	3-11102
13.00	151	101	3-11102
13.50	160	108	3-11102
14.00	160	108	3-11102
14.50	169	114	3-11102
15.00	169	114	3-11102
15.50	178	120	3-11102
16.00	170	120	3-11102

Sätze / Sets



Ø mm	Art.-Nr.
1-10.0x0.5	3-11102
1-13.0x0.5	3-11102
1-10.5x0.5	3-11102
1-5.9x0.1	3-11102
6-10.0x0.1	3-11102

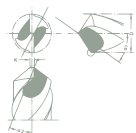
Art.-Nr.: 3-11102

Einsatzgebiete:

N, W, VA, GG (bis GG40), und hochlegierte Materialien bis 1200 N/mm²

Materials:

N, W, INOX, GG (bis GG40), and high elongated materials up to 1200 N/mm²



Werkzeug- und Industrietechnik



SPIRALBOHRER DIN 338

JOBBER LENGTH MACHINE DRILL DIN 338

DIN 338

HSS

N

118°

GEWALZT
ROLLED

- Zylinderschaft
- Kegelmantelschliff
- gewalzt

INFOBOX

- straight shank
- relieved cone
- rolled



Art.-Nr.: 3-12102

Ø D1 mm	L1 mm	L2 mm	Art.-Nr.
0.50	22	6	3-12102
0.60	24	7	3-12102
0.70	28	9	3-12102
0.75	28	9	3-12102
0.80	30	10	3-12102
0.90	32	11	3-12102
1.00	34	12	3-12102
1.10	36	14	3-12102
1.20	38	16	3-12102
1.25	38	16	3-12102
1.30	38	16	3-12102
1.40	40	18	3-12102
1.50	40	18	3-12102
1.60	43	20	3-12102
1.70	43	20	3-12102
1.75	46	22	3-12102
1.80	46	22	3-12102
1.90	46	22	3-12102
2.00	49	24	3-12102
2.10	49	24	3-12102
2.20	53	27	3-12102
2.25	53	27	3-12102
2.30	53	27	3-12102
2.40	57	30	3-12102
2.50	57	30	3-12102
2.60	57	30	3-12102
2.70	61	33	3-12102
2.75	61	33	3-12102
2.80	61	33	3-12102

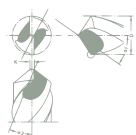
Ø D1 mm	L1 mm	L2 mm	Art.-Nr.
2.90	61	33	3-12102
3.00	61	33	3-12102
3.10	65	36	3-12102
3.20	65	36	3-12102
3.25	65	36	3-12102
3.30	65	36	3-12102
3.40	70	39	3-12102
3.50	70	39	3-12102
3.60	70	39	3-12102
3.70	70	39	3-12102
3.75	70	39	3-12102
3.80	75	43	3-12102
3.90	75	43	3-12102
4.00	75	43	3-12102
4.10	75	43	3-12102
4.20	75	43	3-12102
4.25	75	43	3-12102
4.30	80	47	3-12102
4.40	80	47	3-12102
4.50	80	47	3-12102
4.60	80	47	3-12102
4.70	80	47	3-12102
4.75	80	47	3-12102
4.80	86	52	3-12102
4.90	86	52	3-12102
5.00	86	52	3-12102
5.10	86	52	3-12102
5.20	86	52	3-12102
5.25	86	52	3-12102

Einsatzgebiete:

N und Materialien bis 700 N/mm²

Materials:

N and materials up to 700 N/mm²



Werkzeug- und Industrietechnik



SPIRALBOHRER DIN 338 JOBBER LENGTH MACHINE DRILL DIN 338

Ø D1 mm	L1 mm	L2 mm	Art.-Nr.
5.30	86	52	3-12102
5.40	93	57	3-12102
5.50	93	57	3-12102
5.60	93	57	3-12102
5.70	93	57	3-12102
5.75	93	57	3-12102
5.80	93	57	3-12102
5.90	93	57	3-12102
6.00	93	57	3-12102
6.10	101	63	3-12102
6.20	101	63	3-12102
6.25	101	63	3-12102
6.30	101	63	3-12102
6.40	101	63	3-12102
6.50	101	63	3-12102
6.60	101	63	3-12102
6.70	101	63	3-12102
6.75	109	69	3-12102
6.80	109	69	3-12102
6.90	109	69	3-12102
7.00	109	69	3-12102
7.10	109	69	3-12102
7.20	109	69	3-12102
7.25	109	69	3-12102
7.30	109	69	3-12102
7.40	109	69	3-12102
7.50	109	69	3-12102
7.60	117	75	3-12102
7.70	117	75	3-12102
7.75	117	75	3-12102
7.80	117	75	3-12102
7.90	117	75	3-12102
8.00	117	75	3-12102
8.10	117	75	3-12102
8.20	117	75	3-12102
8.25	117	75	3-12102
8.30	117	75	3-12102
8.40	117	75	3-12102
8.50	117	75	3-12102
8.60	125	81	3-12102
8.70	125	81	3-12102
8.75	125	81	3-12102

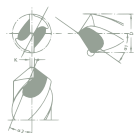
Ø D1 mm	L1 mm	L2 mm	Art.-Nr.
8.80	125	81	3-12102
8.90	125	81	3-12102
9.00	125	81	3-12102
9.10	125	81	3-12102
9.20	125	81	3-12102
9.25	125	81	3-12102
9.30	125	81	3-12102
9.40	125	81	3-12102
9.50	125	81	3-12102
9.60	133	87	3-12102
9.70	133	87	3-12102
9.75	133	87	3-12102
9.80	133	87	3-12102
9.90	133	87	3-12102
10.00	133	87	3-12102
10.10	133	87	3-12102
10.20	133	87	3-12102
10.25	133	87	3-12102
10.30	133	87	3-12102
10.40	133	87	3-12102
10.50	133	87	3-12102
10.60	142	94	3-12102
10.70	142	94	3-12102
10.75	142	94	3-12102
10.80	142	94	3-12102
10.90	142	94	3-12102
11.00	142	94	3-12102
11.10	142	94	3-12102
11.20	142	94	3-12102
11.25	142	94	3-12102
11.30	142	94	3-12102
11.40	142	94	3-12102
11.50	142	94	3-12102
11.60	142	94	3-12102
11.70	142	94	3-12102
11.75	142	94	3-12102
11.80	142	94	3-12102
11.90	151	101	3-12102
12.00	151	101	3-12102
12.10	151	101	3-12102
12.20	151	101	3-12102
12.25	151	101	3-12102

Einsatzgebiete:

N und Materialien bis 700 N/mm²

Materials:

N and materials up to 700 N/mm²



Werkzeug- und Industrietechnik



Risto
Reparatur- und
Instandhaltung

SPIRALBOHRER DIN 338 JOBBER LENGTH MACHINE DRILL DIN 338

Ø D1 mm	L1 mm	L2 mm	Art.-Nr.
12.50	151	101	3-12102
12.60	151	101	3-12102
12.70	151	101	3-12102
12.75	151	101	3-12102
12.80	151	101	3-12102
12.90	151	101	3-12102
13.00	151	101	3-12102
13.50	160	108	3-12102
14.00	160	108	3-12102
14.50	169	114	3-12102
15.00	169	114	3-12102

Ø D1 mm	L1 mm	L2 mm	Art.-Nr.
15.50	178	120	3-12102
16.00	178	120	3-12102
16.50	184	125	3-12102
17.00	184	125	3-12102
17.50	191	130	3-12102
18.00	191	130	3-12102
18.50	198	135	3-12102
19.00	198	135	3-12102
19.50	205	140	3-12102
20.00	205	140	3-12102

Sätze / Sets



Ø mm	Art.-Nr.
1-10.0x0.5	3-12102
1-13.0x0.5	3-12102
1-10.5x0.5	3-12102
1-5.9x0.1	3-12102
6-10.0x0.1	3-12102

Art.-Nr.: 3-12102

Depot

Ø mm	Art.-Nr.
1-10.0x0.5	3-12102
1-13.0x0.5	3-12102

jeweils/each
1.0-8.0 mm
je 10 Stück/pcs
8.5-13.0 mm
je 5 Stück/pcs

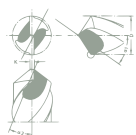


Einsatzgebiete:

N und Materialien bis 700 N/mm²

Materials:

N and materials up to 700 N/mm²



Werkzeug- und Industrietechnik



MK SPIRALBOHRER DIN 345

MORSE TAPER SHANK MACHINE DRILL DIN 345

DIN 345

HSS

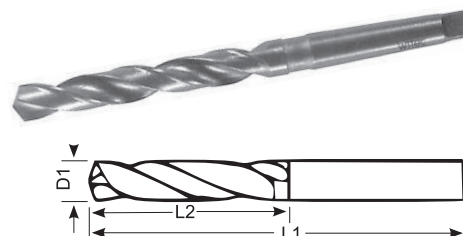
N

118°

GEWALZT
ROLLED

- Morsekonus
- Kegelmantelanschliff
- fließgepresst
- gewalzt
- morse taper shank
- relieved cone
- endpolished
- rolled

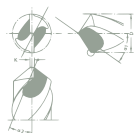
INFOBOX



Art.-Nr.: 3-12108

Ø D1 mm	L1 mm	L2 mm	MK	Art.-Nr.
4.00	156	75	1	3-12108
4.50	156	75	1	3-12108
5.00	156	75	1	3-12108
5.50	156	75	1	3-12108
6.00	156	75	1	3-12108
6.50	156	75	1	3-12108
7.00	156	75	1	3-12108
7.50	156	75	1	3-12108
8.00	156	75	1	3-12108
8.50	156	75	1	3-12108
9.00	162	81	1	3-12108
9.50	162	81	1	3-12108
10.00	168	87	1	3-12108
10.20	168	87	1	3-12108
10.25	168	87	1	3-12108
10.50	168	87	1	3-12108
10.75	175	94	1	3-12108
11.00	175	94	1	3-12108
11.25	175	94	1	3-12108
11.50	175	94	1	3-12108
11.75	175	94	1	3-12108
12.00	182	101	1	3-12108
12.25	182	101	1	3-12108
12.50	182	101	1	3-12108
12.75	182	101	1	3-12108
13.00	182	101	1	3-12108
13.25	189	108	1	3-12108
13.50	189	108	1	3-12108
13.75	189	108	1	3-12108
14.00	212	114	1	3-12108
14.25	212	114	2	3-12108
14.50	212	114	2	3-12108

Ø D1 mm	L1 mm	L2 mm	MK	Art.-Nr.
14.75	212	114	2	3-12108
15.00	212	114	2	3-12108
15.25	218	120	2	3-12108
15.50	218	120	2	3-12108
15.75	218	120	2	3-12108
16.00	218	120	2	3-12108
16.25	223	125	2	3-12108
16.50	223	125	2	3-12108
16.75	223	125	2	3-12108
17.00	223	125	2	3-12108
17.25	228	130	2	3-12108
17.50	228	130	2	3-12108
17.75	228	130	2	3-12108
18.00	228	130	2	3-12108
18.25	233	135	2	3-12108
18.50	233	135	2	3-12108
18.75	233	135	2	3-12108
19.00	233	135	2	3-12108
19.25	238	140	2	3-12108
19.50	238	140	2	3-12108
19.75	238	140	2	3-12108
20.00	238	140	2	3-12108
20.25	243	145	2	3-12108
20.50	243	145	2	3-12108
20.75	243	145	2	3-12108
21.00	243	145	2	3-12108
21.25	248	150	2	3-12108
21.50	248	150	2	3-12108
21.75	248	150	2	3-12108
22.00	248	150	2	3-12108
22.25	248	150	2	3-12108
22.50	253	155	2	3-12108



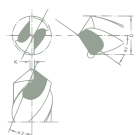
MK SPIRALBOHRER DIN 345

MORSE TAPER SHANK MACHINE DRILL DIN 345

Ø D1 mm	L1 mm	L2 mm	MK	Art.-Nr.
22.75	253	155	2	3-12108
23.00	253	155	2	3-12108
23.25	276	155	2	3-12108
23.50	276	155	3	3-12108
23.75	281	160	3	3-12108
24.00	281	160	3	3-12108
24.25	281	160	3	3-12108
24.50	281	160	3	3-12108
24.75	281	160	3	3-12108
25.00	281	160	3	3-12108
25.25	286	165	3	3-12108
25.50	286	165	3	3-12108
25.75	286	165	3	3-12108
26.00	286	165	3	3-12108
26.25	286	165	3	3-12108
26.50	291	170	3	3-12108
26.75	291	170	3	3-12108
27.00	291	170	3	3-12108
27.25	291	170	3	3-12108
27.50	291	170	3	3-12108
27.75	291	170	3	3-12108
28.00	291	170	3	3-12108
28.25	296	175	3	3-12108
28.50	296	175	3	3-12108
28.75	296	175	3	3-12108
29.00	296	175	3	3-12108
29.25	296	175	3	3-12108
29.50	296	175	3	3-12108
29.75	296	175	3	3-12108
30.00	296	175	3	3-12108
30.25	301	180	3	3-12108
30.50	301	180	3	3-12108
30.75	301	180	3	3-12108
31.00	301	180	3	3-12108
31.25	301	180	3	3-12108
31.50	301	180	3	3-12108
31.75	306	185	3	3-12108
32.00	334	185	4	3-12108
32.50	334	185	4	3-12108
33.00	334	185	4	3-12108
33.50	334	185	4	3-12108
34.00	339	190	4	3-12108

Ø D1 mm	L1 mm	L2 mm	MK	Art.-Nr.
34.50	339	190	4	3-12108
35.00	339	190	4	3-12108
35.50	339	190	4	3-12108
36.00	344	195	4	3-12108
36.50	344	195	4	3-12108
37.00	344	195	4	3-12108
37.50	344	195	4	3-12108
38.00	349	200	4	3-12108
38.50	349	200	4	3-12108
39.00	349	200	4	3-12108
39.50	349	200	4	3-12108
40.00	349	200	4	3-12108
40.50	354	205	4	3-12108
41.00	354	205	4	3-12108
41.50	354	205	4	3-12108
42.00	354	205	4	3-12108
42.50	354	205	4	3-12108
43.00	359	210	4	3-12108
43.50	359	210	4	3-12108
44.00	359	210	4	3-12108
44.50	359	210	4	3-12108
45.00	359	210	4	3-12108
45.50	364	215	4	3-12108
46.00	364	215	4	3-12108
46.50	364	215	4	3-12108
47.00	364	215	4	3-12108
47.50	364	215	4	3-12108
48.00	369	220	4	3-12108
48.50	369	220	4	3-12108
49.00	369	220	4	3-12108
49.50	369	220	4	3-12108
50.00	369	220	4	3-12108
51.00	412	295	5	3-12108
52.00	412	295	5	3-12108
53.00	412	295	5	3-12108
54.00	417	230	5	3-12108
55.00	417	230	5	3-12108
56.00	417	230	5	3-12108
57.00	422	235	5	3-12108
58.00	422	235	5	3-12108
59.00	422	235	5	3-12108
60.00	422	235	5	3-12108

Einsatzgebiete:N und Materialien bis 700 N/mm²**Materials:**N and materials up to 700 N/mm²



Werkzeug- und Industrietechnik

SPIRALBOHRER DIN 338

JOBBER LENGTH MACHINE DRILL DIN 338

DIN 338

HSS-Co5%

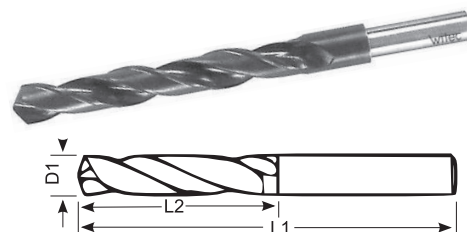
VA
INOX

130°

GESCHLIFFEN
GRINDED

- Zylinderschaft
- abgesetzter Schaft-Ø 13,0 mm
- Kreuzanschliff
- straight shank
- reduced shank-Ø 13,0 mm
- splitpoint

INFOBOX



Art.-Nr.: 3-12302

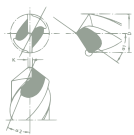
Ø D1 mm	L1 mm	L2 mm	Art.-Nr.
13.50	160	108	3-12302
14.00	160	108	3-12302
14.50	169	114	3-12302
15.00	169	114	3-12302
15.50	178	120	3-12302
16.00	178	120	3-12302
16.50	184	125	3-12302
17.00	184	125	3-12302
17.50	191	130	3-12302
18.00	191	130	3-12302
18.50	198	135	3-12302
19.00	198	135	3-12302
19.50	205	140	3-12302
20.00	205	140	3-12302

Einsatzgebiete:

legierte und unlegierte Stähle und Gussarten mit Festigkeiten über 800 N/mm²

Materials:

alloyed and unalloyed steels and castings with a tensile strength over 800 N/mm²



Werkzeug- und Industrietechnik



Risto
Reparatur- und
Instandhaltung

SPIRALBOHRER DIN 338 JOBBER LENGTH MACHINE DRILL DIN 338

DIN 338

HSS

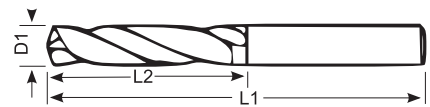
N

118°

GEWALZT
ROLLED

- abgesetzter Schaft (8, 10 und 13 mm)
- Kegelmantelschliff
- gewalzt
- straight shank (8, 10 and 13 mm)
- relieved cone
- rolled

INFOBOX



Art.-Nr.: 3-12402

Ø D1 mm	L1 mm	L2 mm	Art.-Nr.
10.50	133	87	3-12402
11.00	142	94	3-12402
11.50	142	94	3-12402
12.00	151	101	3-12402
12.50	151	101	3-12402
13.00	151	101	3-12402
13.50	160	108	3-12402
14.00	160	108	3-12402
14.50	169	114	3-12402
15.00	169	114	3-12402
15.50	178	120	3-12402
16.00	178	120	3-12402
16.50	184	125	3-12402
17.00	184	125	3-12402
17.50	191	130	3-12402
18.00	191	130	3-12402

Ø D1 mm	L1 mm	L2 mm	Art.-Nr.
18.50	198	135	3-12402
19.00	198	135	3-12402
19.50	205	140	3-12402
20.00	205	140	3-12402
20.50	225	145	3-12402
21.00	225	145	3-12402
21.50	210	150	3-12402
22.00	210	150	3-12402
23.00	215	155	3-12402
24.00	220	160	3-12402
25.00	220	160	3-12402
26.00	235	165	3-12402
27.00	235	170	3-12402
28.00	235	170	3-12402
29.00	240	175	3-12402
30.00	240	175	3-12402

Einsatzgebiete:

N und Materialien bis 700 N/mm²

Materials:

N and materials up to 700 N/mm²

SPIRALBOHRER DIN 338 JOBBER LENGTH MACHINE DRILL DIN 338

DIN 338

HSS

NX

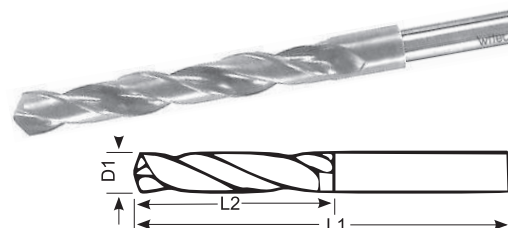
118°

GESCHLIFFEN
GRINDED

- abgesetzter Schaft
- Kreuzanschliff
- blank

INFOBOX

- straight shank
- split point
- bright finished



Art.-Nr.: 3-12602

Ø D1 mm	L1 mm	L2 mm	Art.-Nr.
10.50	133	87	3-12602
11.00	142	94	3-12602
11.50	142	94	3-12602
12.00	151	101	3-12602
12.50	151	101	3-12602
13.00	151	101	3-12602
13.50	160	108	3-12602
14.00	160	108	3-12602
14.50	169	114	3-12602
15.00	169	114	3-12602
15.50	178	120	3-12602
16.00	178	120	3-12602
16.50	184	125	3-12602
17.00	184	125	3-12602
17.50	191	130	3-12602

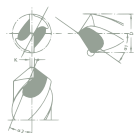
Ø D1 mm	L1 mm	L2 mm	Art.-Nr.
18.00	191	130	3-12602
18.50	198	135	3-12602
19.00	198	135	3-12602
19.50	205	140	3-12602
20.00	205	140	3-12602
20.50	225	145	3-12602
21.00	225	145	3-12602
21.50	230	150	3-12602
22.00	230	150	3-12602
22.50	230	155	3-12602
23.00	230	155	3-12602
23.50	230	155	3-12602
24.00	250	160	3-12602
24.50	250	160	3-12602
25.00	250	160	3-12602

Einsatzgebiete:

N, W, GG (bis GG40), und hochlegierte Materialien bis 900 N/mm²

Materials:

N, W, GG (bis GG40), and high elongated materials up to 900 N/mm²



Werkzeug- und Industrietechnik



DOPPELELENDBOHRER

DOUBLE ENDED BODY DRILLS

WITEC-NORM

HSS/
HSS-Co

NX

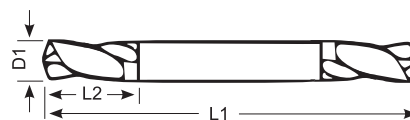
118°/130°

GESCHLIFFEN
GRINDED

- Zylinderschaft
- Kreuzanschliff
- blank

- straight shank
- split-point
- bright finished

INFOBOX



Art.-Nr.: 3-12701 / 3-12801 / 3-13001

HSS-Co, 130°

Ø D1 mm	L1 mm	L2 mm	Art.-Nr.
3.30	40	16	3-12701
4.90	50	22	3-12701
5.10	52	24	3-12701

HSS, 118°

Ø D1 mm	L1 mm	L2 mm	Art.-Nr.
2.50	43	9.5	3-12801
3.00	46	9.5	3-12801
3.10	49	9.5	3-12801
3.20	49	9.5	3-12801
3.25	49	9.5	3-12801
3.30	49	9.5	3-12801
3.40	52	13	3-12801
3.50	52	13	3-12801
4.00	55	13	3-12801
4.10	55	13	3-12801
4.20	55	13	3-12801
4.50	58	16	3-12801
4.80	62	16	3-12801
4.90	62	16	3-12801
5.00	62	16	3-12801
5.10	62	16	3-12801
5.20	62	16	3-12801
5.25	62	16	3-12801
5.50	66	16	3-12801
6.00	66	16	3-12801

HSS, 130°

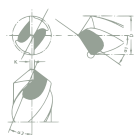
Ø D1 mm	L1 mm	L2 mm	Art.-Nr.
2.00	38	7.5	3-13001
2.50	43	9.5	3-13001
2.70	46	9.5	3-13001
3.00	46	9.5	3-13001
3.10	49	9.5	3-13001
3.20	49	9.5	3-13001
3.25	49	9.5	3-13001
3.30	49	9.5	3-13001
3.50	52	13	3-13001
3.80	55	13	3-13001
4.00	55	13	3-13001
4.10	55	13	3-13001
4.20	55	13	3-13001
4.50	58	16	3-13001
4.80	62	16	3-13001
4.90	62	16	3-13001
5.00	62	16	3-13001
5.10	62	16	3-13001
5.20	62	16	3-13001
5.50	66	16	3-13001
6.00	66	16	3-13001
6.50	70	18	3-13001
7.00	74	19	3-13001
8.00	79	20	3-13001

Einsatzgebiete:

N, W, VA, GG (bis GG40), und hochlegierte Materialien bis 1200 N/mm²

Materials:

N, W, INOX, GG (bis GG40), and high elongated materials up to 1200 N/mm²



Werkzeug- und Industrietechnik



Reparatur- und
Instandhaltung

SCHWEISSPUNKTBOHRER WELDINGSPOT DRILLS

DIN1897

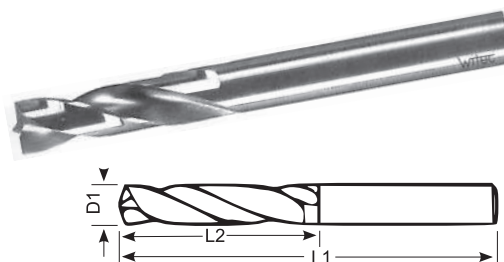
HSS-Co

SONDERSPITZE
SPECIAL POINT

GESCHLIFFEN
GRINDED

- mit Sonderspitze ähnl. DIN 1412 E
- profilgeschliffene Qualität, 90°
- with special point similar DIN 1412E
- profile ground quality, 90°

INFOBOX



Art.-Nr.: 3-13101

DIN 1897, blank / bright finished

Ø D1 mm	L1 mm	L2 mm	Art.-Nr.
6.00	66	28	3-13101
7.00	74	34	3-13101
8.00	79	37	3-13101
10.00	89	43	3-13101

SCHWEISSPUNKTBOHRER SPOTLE/VARIO DRILLS

WITEC-NORM

HSS-Co

T 575
WS 90

GESCHLIFFEN
GRINDED

- HSS-Co Bohrer für
Spotle T 575 / Vario WS 90
- HSS-Co Drills for
Spotle T 575 / Vario WS 90



Art.-Nr.: 3-17015

Spotle T 575

Ø D1 mm	L1 mm	L2 mm	Art.-Nr.
6.00	40	-	3-17015
8.00	40	-	3-17015

Vario WS 90

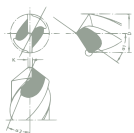
Ø D1 mm	L1 mm	L2 mm	Art.-Nr.
6.00	44	-	3-17015
8.00	44	-	3-17015

Einsatzgebiete:

N, W, VA, GG (bis GG40), und hochlegierte Materialien bis 1200 N/mm²

Materials:

N, W, INOX, GG (bis GG40), and high elongated materials up to 1200 N/mm²



Werkzeug- und Industrietechnik

Risto
Reparatur- und
Instandhaltung

FRÄSBOHRER DRILL SAW

WITEC-NORM

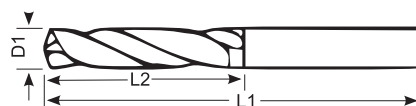
HSS

GESCHLIFFEN
GRINDED

- geschliffene Fräszähne und tiefgeschliffene Spannuten
- Fräsen, Trennen
- Raspeln und Feilen von Holz

INFOBOX

- grinded milling teeth and deep grinded chip flute
- milling, cutting
- rasping and filing of wood



Art.-Nr.: 3-18001

blank / bright finished

Ø D1 mm	L1 mm	L2 mm	Art.-Nr.
6.00	90	-	3-18001
8.00	90	-	3-18001

Einsatzgebiete:

Spanplatten, Kunststoffe, Aluminium, andere NE-Metalle, Stahlblech, Gipskarton

Materials:

chipboard, plastics, aluminium, other none iron-metals, steel sheets, plasterboard

ANBOHRER RIVET DRILLS

WITEC-NORM

HSS

NX

118°

GESCHLIFFEN
GRINDED

- Zylinderschaft
- blank

INFOBOX

- straight shank
- bright finished



Art.-Nr.: 3-18100

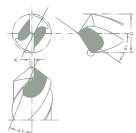
Serie NX, Kreuzanschliff / Type NX, split point

Ø D1 mm	L1 mm	L2 mm	Art.-Nr.
3.00	37	14	3-18100
3.10	37	14	3-18100
3.20	37	14	3-18100
3.25	40	16	3-18100
3.30	40	16	3-18100
3.40	40	16	3-18100
3.50	42	16	3-18100
3.60	42	16	3-18100
3.70	42	16	3-18100
3.75	42	16	3-18100
3.80	42	16	3-18100
4.00	42	16	3-18100
4.10	44	18	3-18100

Ø D1 mm	L1 mm	L2 mm	Art.-Nr.
4.20	44	18	3-18100
4.50	48	20	3-18100
4.80	48	20	3-18100
4.90	50	22	3-18100
5.00	50	22	3-18100
5.10	52	24	3-18100
5.20	52	24	3-18100
5.30	52	24	3-18100
5.50	52	24	3-18100
5.60	55	26	3-18100
5.70	55	26	3-18100
5.80	55	26	3-18100
6.00	55	26	3-18100

Einsatzgebiete: zum Bohren von dünnwandigen Materialien wie Stahl-, Messing-, Aluminiumblech, Kunststoffplatten, für den Einsatz in Handbohrmaschinen im Metall- und Karosseriebau

Materials: specially developed for use in hand drilling machines which are used for car bodies and metal works for working in thin materials such as sheet metal, brass, aluminium and plastics



SPIRALBOHRER DIN 1897 SCREW MACHINE DRILL DIN 1897

DIN 1897

HSS

NX

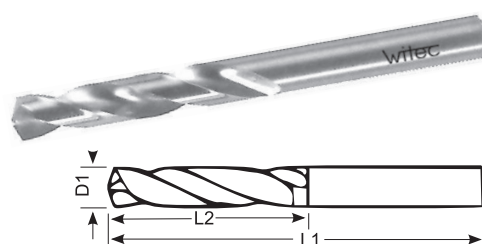
118°

GESCHLIFFEN
GRINDED

- Zylinderschaft
- extra kurze Ausführung
- Kreuzanschliff
- blank

INFOBOX

- straight shank
- extra short
- split-point
- bright finished

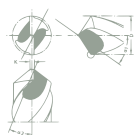


Art.-Nr.: 3-18101

Ø D1 mm	L1 mm	L2 mm	Art.-Nr.
1.00	26	6	3-18101
1.50	32	9	3-18101
2.00	38	12	3-18101
2.10	38	12	3-18101
2.20	40	13	3-18101
2.30	40	13	3-18101
2.40	43	14	3-18101
2.50	43	14	3-18101
2.60	43	14	3-18101
2.70	46	16	3-18101
2.80	46	16	3-18101
2.90	46	16	3-18101
3.00	46	16	3-18101
3.10	49	18	3-18101
3.20	49	18	3-18101
3.30	49	18	3-18101
3.40	52	20	3-18101
3.50	52	20	3-18101
3.60	52	20	3-18101
3.70	52	20	3-18101
3.80	55	22	3-18101
3.90	55	22	3-18101
4.00	55	22	3-18101
4.10	55	22	3-18101
4.20	55	22	3-18101
4.30	58	24	3-18101
4.40	58	24	3-18101
4.50	58	24	3-18101
4.60	58	24	3-18101

Ø D1 mm	L1 mm	L2 mm	Art.-Nr.
4.70	58	24	3-18101
4.80	62	26	3-18101
4.90	62	26	3-18101
5.00	62	26	3-18101
5.10	62	26	3-18101
5.20	62	26	3-18101
5.30	62	26	3-18101
5.40	66	28	3-18101
5.50	66	28	3-18101
5.60	66	28	3-18101
5.70	66	28	3-18101
5.80	66	28	3-18101
5.90	66	28	3-18101
6.00	66	28	3-18101
6.50	70	31	3-18101
6.80	74	34	3-18101
7.00	74	34	3-18101
7.20	74	34	3-18101
7.50	74	34	3-18101
7.80	79	37	3-18101
8.00	79	37	3-18101
8.50	79	37	3-18101
9.00	84	40	3-18101
9.50	84	40	3-18101
10.00	89	43	3-18101
10.20	89	43	3-18101
10.50	89	43	3-18101
11.00	95	47	3-18101
11.50	95	47	3-18101

Einsatzgebiete:N, W, GG (bis GG40), und Materialien bis 900 N/mm²**Materials:**N, W, GG (bis GG40), and materials up to 900 N/mm²



Werkzeug- und Industrietechnik



SPIRALBOHRER DIN 1897 SCREW MACHINE DRILL DIN 1897

Ø D1 mm	L1 mm	L2 mm	Art.-Nr.
12.00	102	51	3-18101
12.50	102	51	3-18101
13.00	102	51	3-18101
14.00	107	54	3-18101
15.00	111	56	3-18101
16.00	115	58	3-18101



Sätze / Sets

Ø mm	Art.-Nr.
1-10.0x0.5	3-18101
1-13.0x0.5	3-18101

Art.-Nr.: 3-18101

SPIRALBOHRER DIN 1897 SCREW MACHINE DRILL DIN 1897

DIN 1897

HSS

NX

118°

GESCHLIFFEN
GRINDED

- Zylinderschaft
- extra kurze Ausführung
- Kreuzanschliff
- TiN-Beschichtung

INFOBOX

- straight shank
- extra short
- split-point
- TiN-Coating



Art.-Nr.: 3-18101 TiN

Ø D1 mm	L1 mm	L2 mm	Art.-Nr.
1.00	26	6	3-18101TiN
1.50	32	9	3-18101TiN
2.00	38	12	3-18101TiN
2.10	38	12	3-18101TiN
2.20	40	13	3-18101TiN
2.30	40	13	3-18101TiN
2.40	43	14	3-18101TiN
2.50	43	14	3-18101TiN
2.60	43	14	3-18101TiN
2.70	46	16	3-18101TiN
2.80	46	16	3-18101TiN
2.90	46	16	3-18101TiN

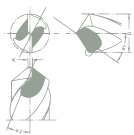
Ø D1 mm	L1 mm	L2 mm	Art.-Nr.
3.00	46	16	3-18101TiN
3.10	49	18	3-18101TiN
3.20	49	18	3-18101TiN
3.30	49	18	3-18101TiN
3.40	52	20	3-18101TiN
3.50	52	20	3-18101TiN
3.60	52	20	3-18101TiN
3.70	52	20	3-18101TiN
3.80	55	22	3-18101TiN
3.90	55	22	3-18101TiN
4.00	55	22	3-18101TiN
4.10	55	22	3-18101TiN

Einsatzgebiete:

N, W, GG (bis GG40), und Materialien bis 900 N/mm²

Materials:

N, W, GG (bis GG40), and materials up to 900 N/mm²



SPIRALBOHRER DIN 1897 SCREW MACHINE DRILL DIN 1897

Ø D1 mm	L1 mm	L2 mm	Art.-Nr.
4.20	55	22	3-18101TiN
4.30	58	24	3-18101TiN
4.40	58	24	3-18101TiN
4.50	58	24	3-18101TiN
4.60	58	24	3-18101TiN
4.70	58	24	3-18101TiN
4.80	62	26	3-18101TiN
4.90	62	26	3-18101TiN
5.80	66	28	3-18101TiN
5.90	66	28	3-18101TiN
6.00	66	28	3-18101TiN
6.50	70	31	3-18101TiN
6.80	74	34	3-18101TiN
7.00	74	34	3-18101TiN
7.20	74	34	3-18101TiN
7.50	74	34	3-18101TiN

Ø D1 mm	L1 mm	L2 mm	Art.-Nr.
7.80	79	37	3-18101TiN
8.00	79	37	3-18101TiN
8.50	79	37	3-18101TiN
9.00	84	40	3-18101TiN
9.50	84	40	3-18101TiN
10.00	89	43	3-18101TiN
10.20	89	43	3-18101TiN
10.50	89	43	3-18101TiN
11.00	95	47	3-18101TiN
11.50	95	47	3-18101TiN
12.00	102	51	3-18101TiN
12.50	102	51	3-18101TiN
13.00	102	51	3-18101TiN
14.00	107	54	3-18101TiN
15.00	111	56	3-18101TiN
16.00	115	58	3-18101TiN



Sätze / Sets

Ø mm	Art.-Nr.
1-10.0x0.5	3-18101TiN
1-13.0x0.5	3-18101TiN

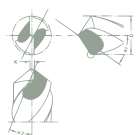
Art.-Nr.: 3-18101TiN

Einsatzgebiete:

N, W, GG (bis GG40), und Materialien bis 900 N/mm²

Materials:

N, W, GG (bis GG40), and materials up to 900 N/mm²



Werkzeug- und Industrietechnik



SPIRALBOHRER DIN 338 JOBBER LENGTH MACHINE DRILL DIN 338

DIN 338

HSS

NX

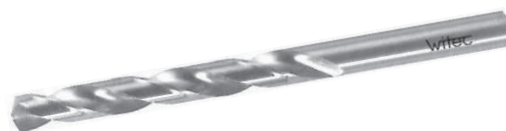
118°

GESCHLIFFEN
GRINDED

- Zylinderschaft
- Kreuzanschliff
- blank

INFOBOX

- straight shank
- split-point
- bright finished



Art.-Nr.: 3-18102

Ø D1 mm	L1 mm	L2 mm	Art.-Nr.
0.30	19	3	3-18102
0.40	20	5	3-18102
0.50	22	6	3-18102
0.60	24	7	3-18102
0.70	28	9	3-18102
0.80	30	10	3-18102
0.90	32	11	3-18102
1.00	34	12	3-18102
1.10	36	14	3-18102
1.20	36	16	3-18102
1.30	38	16	3-18102
1.40	40	18	3-18102
1.50	40	18	3-18102
1.60	43	20	3-18102
1.70	43	20	3-18102
1.80	46	22	3-18102
1.90	46	22	3-18102
2.00	49	24	3-18102
2.10	49	24	3-18102
2.20	53	27	3-18102
2.30	53	27	3-18102
2.40	57	30	3-18102
2.50	57	30	3-18102
2.60	57	30	3-18102
2.70	61	33	3-18102
2.80	61	33	3-18102
2.90	61	33	3-18102
3.00	61	33	3-18102
3.10	65	36	3-18102

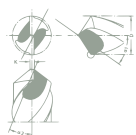
Ø D1 mm	L1 mm	L2 mm	Art.-Nr.
3.20	65	36	3-18102
3.30	65	36	3-18102
3.40	70	39	3-18102
3.50	70	39	3-18102
3.60	70	39	3-18102
3.70	70	39	3-18102
3.80	75	43	3-18102
3.90	75	43	3-18102
4.00	75	43	3-18102
4.10	75	43	3-18102
4.20	75	43	3-18102
4.30	80	47	3-18102
4.40	80	47	3-18102
4.50	80	47	3-18102
4.60	80	47	3-18102
4.70	80	47	3-18102
4.80	86	52	3-18102
4.90	86	52	3-18102
5.00	86	52	3-18102
5.10	86	52	3-18102
5.20	86	52	3-18102
5.30	86	52	3-18102
5.40	93	57	3-18102
5.50	93	57	3-18102
5.60	93	57	3-18102
5.70	93	57	3-18102
5.80	93	57	3-18102
5.90	93	57	3-18102
6.00	93	57	3-18102

Einsatzgebiete:

N, W, GG (bis GG40), und Materialien bis 900 N/mm²

Materials:

N, W, GG (bis GG40), and materials up to 900 N/mm²

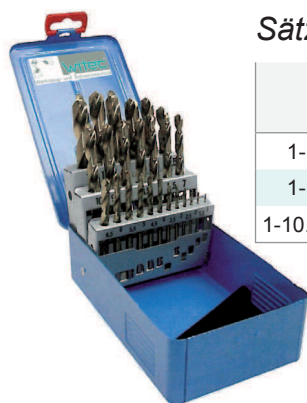


SPIRALBOHRER DIN 338

JOBBER LENGTH MACHINE DRILL DIN 338

Ø D1 mm	L1 mm	L2 mm	Art.-Nr.
6.10	101	63	3-18102
6.20	101	63	3-18102
6.30	101	63	3-18102
6.40	101	63	3-18102
6.50	101	63	3-18102
6.60	101	63	3-18102
6.70	101	63	3-18102
6.80	109	69	3-18102
6.90	109	69	3-18102
7.00	109	69	3-18102
7.10	109	69	3-18102
7.20	109	69	3-18102
7.30	109	69	3-18102
7.40	109	69	3-18102
7.50	109	69	3-18102
7.60	117	75	3-18102
7.70	117	75	3-18102
7.80	117	75	3-18102
7.90	117	75	3-18102
8.00	117	75	3-18102
8.10	117	75	3-18102
8.20	117	75	3-18102
8.30	117	75	3-18102
8.40	117	75	3-18102
8.50	117	75	3-18102
8.60	125	81	3-18102
8.70	125	81	3-18102
8.80	125	81	3-18102
8.90	125	81	3-18102

Ø D1 mm	L1 mm	L2 mm	Art.-Nr.
9.00	125	81	3-18102
9.10	125	81	3-18102
9.20	125	81	3-18102
9.30	125	81	3-18102
9.40	125	81	3-18102
9.50	125	81	3-18102
9.60	125	81	3-18102
9.70	133	87	3-18102
9.80	133	87	3-18102
9.90	133	87	3-18102
10.00	133	87	3-18102
10.10	133	87	3-18102
10.20	133	87	3-18102
10.30	133	87	3-18102
10.40	133	87	3-18102
10.50	133	87	3-18102
10.60	133	87	3-18102
10.70	133	87	3-18102
10.80	133	87	3-18102
10.90	133	87	3-18102
11.00	142	94	3-18102
11.20	142	94	3-18102
11.50	142	94	3-18102
11.80	142	94	3-18102
12.00	151	101	3-18102
12.20	151	101	3-18102
12.50	151	101	3-18102
12.80	151	101	3-18102
13.00	151	101	3-18102



Sätze / Sets

Ø mm	Art.-Nr.
1-10.0x0.5	3-18102
1-13.0x0.5	3-18102
1-10.5x0.5 + KL	3-18102

Art.-Nr.: 3-18102

Depot

Ø mm	Art.-Nr.
1-10.0x0.5	3-18102



Schrank/Display

Ø	Art.-Nr.
1-13.0x0.1/0.5	3-18102

jeweils/each
 1.0-10.0x0.1 mm
 je 10 Stück/pcs
 10.5-13.0x0.5 mm
 je 5 Stück/pcs



Einsatzgebiete:

N, W, GG (bis GG40), und
 Materialien bis 900 N/mm²

Materials:

N, W, GG (bis GG40), and
 materials up to 900 N/mm²

SPIRALBOHRER DIN 338 JOBBER LENGTH MACHINE DRILL DIN 338

DIN 338

HSS

NX

118°

GESCHLIFFEN
GRINDED

- Zylinderschaft
- Kreuzanschliff
- TiN-Beschichtung

INFOBOX

- straight shank
- split-point
- TiN-Coating



Art.-Nr.: 3-18102TiN

Ø D1 mm	L1 mm	L2 mm	Art.-Nr.
1.00	34	12	3-18102TiN
1.50	40	18	3-18102TiN
2.00	49	24	3-18102TiN
2.50	57	30	3-18102TiN
3.00	61	33	3-18102TiN
3.10	65	36	3-18102TiN
3.20	65	36	3-18102TiN
3.30	65	36	3-18102TiN
3.50	70	39	3-18102TiN
4.00	75	43	3-18102TiN
4.10	75	43	3-18102TiN
4.20	75	43	3-18102TiN
4.50	80	47	3-18102TiN
5.00	86	52	3-18102TiN
5.10	86	52	3-18102TiN
5.20	86	52	3-18102TiN
5.50	93	57	3-18102TiN

Ø D1 mm	L1 mm	L2 mm	Art.-Nr.
6.00	93	57	3-18102TiN
6.50	101	63	3-18102TiN
6.80	109	69	3-18102TiN
7.00	109	69	3-18102TiN
7.50	109	69	3-18102TiN
8.00	117	75	3-18102TiN
8.50	117	75	3-18102TiN
9.00	125	81	3-18102TiN
9.50	125	81	3-18102TiN
10.00	133	87	3-18102TiN
10.20	133	87	3-18102TiN
10.50	133	87	3-18102TiN
11.00	142	94	3-18102TiN
11.50	142	94	3-18102TiN
12.00	151	101	3-18102TiN
12.50	151	101	3-18102TiN
13.00	151	101	3-18102TiN

Sätze / Sets



Ø mm	Art.-Nr.
1-10.0x0.5	3-18102TiN
1-13.0x0.5	3-18102TiN
1-10.5x0.5 + KL	3-18102TiN
1-5.9x0.1	3-18102TiN
6-10.0x0.1	3-18102TiN

Depot

Ø mm	Art.-Nr.
1-10.0x0.5	3-18102TiN

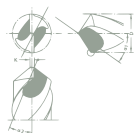


Einsatzgebiete:

N, W, GG (bis GG40), und Materialien bis 900 N/mm²

Materials:

N, W, GG (bis GG40), and materials up to 900 N/mm²



Werkzeug- und Industrietechnik

SPIRALBOHRER DIN 340 BUSHING MACHINE DRILL DIN 340

DIN 340

HSS

NX

118°

GESCHLIFFEN
GRINDED

- Zylinderschaft
- extra lange Ausführung
- Kreuzanschliff
- blank

INFOBOX

- straight shank
- extra long
- split-point
- bright finished



Art.-Nr.: 3-18103

Ø D1 mm	L1 mm	L2 mm	Art.-Nr.
1.00	56	33	3-18103
1.50	70	45	3-18103
2.00	85	56	3-18103
2.50	95	62	3-18103
2.90	100	66	3-18103
3.00	100	66	3-18103
3.10	106	69	3-18103
3.20	106	69	3-18103
3.50	112	73	3-18103
3.80	119	78	3-18103
3.90	119	78	3-18103
4.00	119	78	3-18103
4.10	119	78	3-18103
4.20	119	78	3-18103
4.30	126	82	3-18103
4.50	126	82	3-18103
4.80	132	87	3-18103
4.90	132	87	3-18103
5.00	132	87	3-18103
5.10	132	87	3-18103
5.20	132	87	3-18103
5.50	139	91	3-18103
5.80	139	91	3-18103
6.00	139	91	3-18103

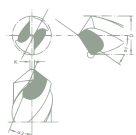
Ø D1 mm	L1 mm	L2 mm	Art.-Nr.
6.20	148	97	3-18103
6.50	148	97	3-18103
6.80	156	102	3-18103
7.00	156	102	3-18103
7.20	156	102	3-18103
7.50	156	102	3-18103
7.80	165	109	3-18103
8.00	165	109	3-18103
8.20	165	109	3-18103
8.50	165	109	3-18103
9.00	175	115	3-18103
9.50	175	115	3-18103
9.80	184	121	3-18103
10.00	184	121	3-18103
10.20	184	121	3-18103
10.50	184	121	3-18103
11.00	195	128	3-18103
11.50	195	128	3-18103
12.00	205	134	3-18103
12.50	205	134	3-18103
13.00	205	134	3-18103
14.00	214	140	3-18103
15.00	220	144	3-18103

Einsatzgebiete:

N, W, GG (bis GG40), und Materialien bis 900 N/mm²

Materials:

N, W, GG (bis GG40), and materials up to 900 N/mm²



Werkzeug- und Industrietechnik

SPIRALBOHRER DIN 338

JOBBER LENGTH MACHINE DRILL DIN 338

DIN 338

HSS

N

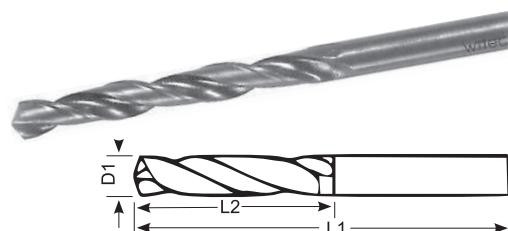
118°

GESCHLIFFEN-
GRINDED

- Zylinderschaft
- Kegelmantelanschliff
- blank

INFOBOX

- straight shank
- relieved cone
- bright finished



Art.-Nr.: 3-19102

Ø D1 mm	L1 mm	L2 mm	Art.-Nr.
0.20	19	2,5	3-19102
0.25	19	3	3-19102
0.30	19	3	3-19102
0.35	19	4	3-19102
0.38	19	4	3-19102
0.40	20	5	3-19102
0.45	20	5	3-19102
0.50	22	6	3-19102
0.52	22	6	3-19102
0.55	24	7	3-19102
0.58	24	7	3-19102
0.60	24	7	3-19102
0.65	26	8	3-19102
0.70	28	9	3-19102
0.75	28	9	3-19102
0.78	30	10	3-19102
0.80	30	10	3-19102
0.82	30	10	3-19102
0.85	30	10	3-19102
0.90	32	11	3-19102
0.95	32	11	3-19102
1.00	34	12	3-19102
1.05	34	12	3-19102
1.10	36	14	3-19102
1.15	36	14	3-19102
1.20	38	16	3-19102
1.25	38	16	3-19102
1.30	38	16	3-19102
1.35	40	18	3-19102

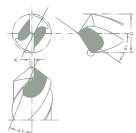
Ø D1 mm	L1 mm	L2 mm	Art.-Nr.
1.40	40	18	3-19102
1.45	40	18	3-19102
1.50	40	18	3-19102
1.55	43	20	3-19102
1.60	43	20	3-19102
1.65	43	20	3-19102
1.70	43	20	3-19102
1.75	46	22	3-19102
1.80	46	22	3-19102
1.85	46	22	3-19102
1.90	46	22	3-19102
1.95	49	24	3-19102
2.00	49	24	3-19102
2.10	49	24	3-19102
2.20	53	27	3-19102
2.25	53	27	3-19102
2.30	53	27	3-19102
2.40	57	30	3-19102
2.50	57	30	3-19102
2.60	57	30	3-19102
2.70	61	33	3-19102
2.75	61	33	3-19102
2.80	61	33	3-19102
2.90	61	33	3-19102
3.00	61	33	3-19102
3.10	65	36	3-19102
3.20	65	36	3-19102
3.25	65	36	3-19102
3.30	65	36	3-19102

Einsatzgebiete:

N und Materialien bis 700 N/mm²

Materials:

N and materials up to 700 N/mm²



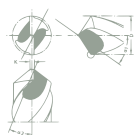
SPIRALBOHRER DIN 338

JOBBER LENGTH MACHINE DRILL DIN 338

Ø D1 mm	L1 mm	L2 mm	Art.-Nr.
3.40	70	39	3-19102
3.50	70	39	3-19102
3.60	70	39	3-19102
3.70	70	39	3-19102
3.75	70	39	3-19102
3.80	75	43	3-19102
3.90	75	43	3-19102
4.00	75	43	3-19102
4.10	75	43	3-19102
4.20	75	43	3-19102
4.25	75	43	3-19102
4.30	80	47	3-19102
4.40	80	47	3-19102
4.50	80	47	3-19102
4.60	80	47	3-19102
4.70	80	47	3-19102
4.75	80	47	3-19102
4.80	86	52	3-19102
4.90	86	52	3-19102
5.00	86	52	3-19102
5.10	86	52	3-19102
5.20	86	52	3-19102
5.25	86	52	3-19102
5.30	86	52	3-19102
5.40	93	57	3-19102
5.50	93	57	3-19102
5.60	93	57	3-19102
5.70	93	57	3-19102
5.75	93	57	3-19102
5.80	93	57	3-19102
5.90	93	57	3-19102
6.00	93	57	3-19102
6.10	101	63	3-19102
6.20	101	63	3-19102
6.25	101	63	3-19102
6.30	101	63	3-19102
6.40	101	63	3-19102
6.50	101	63	3-19102
6.60	101	63	3-19102
6.70	101	63	3-19102
6.75	109	69	3-19102
6.80	109	69	3-19102

Ø D1 mm	L1 mm	L2 mm	Art.-Nr.
6.90	109	69	3-19102
7.00	109	69	3-19102
7.10	109	69	3-19102
7.20	109	69	3-19102
7.25	109	69	3-19102
7.30	109	69	3-19102
7.40	109	69	3-19102
7.50	109	69	3-19102
7.60	117	75	3-19102
7.70	117	75	3-19102
7.75	117	75	3-19102
7.80	117	75	3-19102
7.90	117	75	3-19102
8.00	117	75	3-19102
8.10	117	75	3-19102
8.20	117	75	3-19102
8.25	117	75	3-19102
8.30	117	75	3-19102
8.40	117	75	3-19102
8.50	117	75	3-19102
8.60	125	81	3-19102
8.70	125	81	3-19102
8.75	125	81	3-19102
8.80	125	81	3-19102
8.90	125	81	3-19102
9.00	125	81	3-19102
9.10	125	81	3-19102
9.20	125	81	3-19102
9.25	125	81	3-19102
9.30	125	81	3-19102
9.40	125	81	3-19102
9.50	125	81	3-19102
9.60	125	81	3-19102
9.70	133	87	3-19102
9.75	133	87	3-19102
9.80	133	87	3-19102
9.90	133	87	3-19102
10.00	133	87	3-19102
10.10	133	87	3-19102
10.20	133	87	3-19102
10.30	133	87	3-19102
10.40	133	87	3-19102

Einsatzgebiete:N und Materialien bis 700 N/mm²**Materials:**N and materials up to 700 N/mm²



Werkzeug- und Industrietechnik

SPIRALBOHRER DIN 338 JOBBER LENGTH MACHINE DRILL DIN 338

Ø D1 mm	L1 mm	L2 mm	Art.-Nr.
10.50	133	87	3-19102
10.60	142	94	3-19102
10.70	142	94	3-19102
10.80	142	94	3-19102
10.90	142	94	3-19102
11.00	142	94	3-19102
11.20	142	94	3-19102
11.50	142	94	3-19102
11.80	142	94	3-19102
12.00	151	101	3-19102

Ø D1 mm	L1 mm	L2 mm	Art.-Nr.
12.20	151	101	3-19102
12.50	151	101	3-19102
12.80	151	101	3-19102
13.00	151	101	3-19102
13.50	160	108	3-19102
14.00	160	108	3-19102
14.50	169	114	3-19102
15.00	169	114	3-19102
15.50	178	120	3-19102
16.00	178	120	3-19102



Sätze / Sets

Ø mm	Art.-Nr.
1-10.0x0.5	3-19102
1-13.0x0.5	3-19102
1-10.5x0.5	3-19102
1-5.9x0.1	3-19102
6-10.0x0.1	3-19102

Art.-Nr.: 3-19102

Depot

Ø mm	Art.-Nr.
1-13.0x0.5	3-19102

jeweils/each
1.0-8.0 mm
je 10 Stück/pcs
8.5-13.0 mm
je 5 Stück/pcs

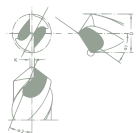


Einsatzgebiete:

N und Materialien bis 700 N/mm²

Materials:

N and materials up to 700 N/mm²



MK SPIRALBOHRER DIN 345 MORSE TAPER SHANK MACHINE DRILL DIN 345

DIN 345

HSS

N

118°

GEFRÄST
MILLED

- Morsekonus
- Kegelmantelschliff
- gefräst
- außen poliert

INFOBOX

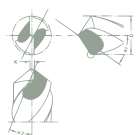
- morse taper shank
- relieved cone
- milled
- outside polished



Art.-Nr.: 3-19108

Ø D1 mm	L1 mm	L2 mm	MK	Art.-Nr.
5.00	133	52	1	3-19108
5.50	138	57	1	3-19108
6.00	138	57	1	3-19108
6.50	144	63	1	3-19108
7.00	150	69	1	3-19108
7.50	150	69	1	3-19108
8.00	156	75	1	3-19108
8.50	156	75	1	3-19108
9.00	162	81	1	3-19108
9.50	162	81	1	3-19108
10.00	168	87	1	3-19108
10.20	168	87	1	3-19108
10.25	168	87	1	3-19108
10.50	168	87	1	3-19108
10.75	175	94	1	3-19108
11.00	175	94	1	3-19108
11.25	175	94	1	3-19108
11.50	175	94	1	3-19108
11.75	175	94	1	3-19108
12.00	182	101	1	3-19108
12.25	182	101	1	3-19108
12.50	182	101	1	3-19108
12.75	182	101	1	3-19108
13.00	182	101	1	3-19108
13.25	189	108	1	3-19108
13.50	189	108	1	3-19108
13.75	189	108	1	3-19108
14.00	189	108	1	3-19108
14.25	212	114	2	3-19108
14.50	212	114	2	3-19108
14.75	212	114	2	3-19108
15.00	212	114	2	3-19108

Ø D1 mm	L1 mm	L2 mm	MK	Art.-Nr.
15.25	218	120	2	3-19108
15.50	218	120	2	3-19108
15.75	218	120	2	3-19108
16.00	218	120	2	3-19108
16.25	223	125	2	3-19108
16.50	223	125	2	3-19108
16.75	223	125	2	3-19108
17.00	223	125	2	3-19108
17.25	228	130	2	3-19108
17.50	228	130	2	3-19108
17.75	228	130	2	3-19108
18.00	228	130	2	3-19108
18.25	233	135	2	3-19108
18.50	233	135	2	3-19108
18.75	233	135	2	3-19108
19.00	233	135	2	3-19108
19.25	238	140	2	3-19108
19.50	238	140	2	3-19108
19.75	238	140	2	3-19108
20.00	238	140	2	3-19108
20.25	243	145	2	3-19108
20.50	243	145	2	3-19108
20.75	243	145	2	3-19108
21.00	243	145	2	3-19108
21.25	248	150	2	3-19108
21.50	248	150	2	3-19108
21.75	248	150	2	3-19108
22.00	248	150	2	3-19108
22.25	248	150	2	3-19108
22.50	253	155	2	3-19108
22.75	253	155	2	3-19108
23.00	253	155	2	3-19108



Werkzeug- und Industrietechnik



MK SPIRALBOHRER DIN 345 MORSE TAPER SHANK MACHINE DRILL DIN 345

Ø D1 mm	L1 mm	L2 mm	MK	Art.-Nr.
23.25	276	155	3	3-19108
23.50	276	155	3	3-19108
23.75	281	160	3	3-19108
24.00	281	160	3	3-19108
24.25	281	160	3	3-19108
24.50	281	160	3	3-19108
24.75	281	160	3	3-19108
25.00	281	160	3	3-19108
25.25	281	160	3	3-19108
25.50	286	165	3	3-19108
25.75	286	165	3	3-19108
26.00	286	165	3	3-19108
26.25	286	165	3	3-19108
26.50	286	165	3	3-19108
26.75	291	170	3	3-19108
27.00	291	170	3	3-19108
27.25	291	170	3	3-19108
27.50	291	170	3	3-19108
27.75	291	170	3	3-19108
28.00	291	170	3	3-19108
28.25	296	175	3	3-19108
28.50	296	175	3	3-19108
28.75	296	175	3	3-19108
29.00	296	175	3	3-19108
29.25	296	175	3	3-19108
29.50	296	175	3	3-19108
29.75	296	175	3	3-19108
30.00	296	175	3	3-19108
30.25	301	180	3	3-19108
30.50	301	180	3	3-19108
30.75	301	180	3	3-19108
31.00	301	180	3	3-19108
31.25	301	180	3	3-19108
31.50	301	180	3	3-19108
31.75	306	185	3	3-19108
32.00	334	185	4	3-19108
32.50	334	185	4	3-19108
33.00	334	185	4	3-19108
33.50	334	185	4	3-19108
34.00	339	190	4	3-19108
34.50	339	190	4	3-19108
35.00	339	190	4	3-19108
35.50	339	190	4	3-19108

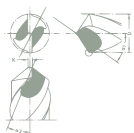
Ø D1 mm	L1 mm	L2 mm	MK	Art.-Nr.
36.00	344	195	4	3-19108
36.50	344	195	4	3-19108
37.00	344	195	4	3-19108
37.50	344	195	4	3-19108
38.00	349	200	4	3-19108
38.50	349	200	4	3-19108
39.00	349	200	4	3-19108
39.50	349	200	4	3-19108
40.00	349	200	4	3-19108
40.50	354	205	4	3-19108
41.00	354	205	4	3-19108
41.50	354	205	4	3-19108
42.00	354	205	4	3-19108
42.50	354	205	4	3-19108
43.00	359	210	4	3-19108
43.50	359	210	4	3-19108
44.00	359	210	4	3-19108
44.50	359	210	4	3-19108
45.00	359	210	4	3-19108
45.50	364	215	4	3-19108
46.00	364	215	4	3-19108
46.50	364	215	4	3-19108
47.00	364	215	4	3-19108
47.50	364	215	4	3-19108
48.00	369	220	4	3-19108
48.50	369	220	4	3-19108
49.00	369	220	4	3-19108
49.50	369	220	4	3-19108
50.00	369	220	4	3-19108
50.50	374	225	4	3-19108
51.00	412	225	5	3-19108
51.50	412	225	5	3-19108
52.00	412	225	5	3-19108
52.50	412	225	5	3-19108
53.00	412	225	5	3-19108
53.50	417	230	5	3-19108
54.00	417	230	5	3-19108
54.50	417	230	5	3-19108
55.00	417	230	5	3-19108
55.50	417	230	5	3-19108
56.00	417	230	5	3-19108
56.50	422	235	5	3-19108
57.00	422	235	5	3-19108

Einsatzgebiete:

N, W, GG (bis GG40), und Materialien bis 900 N/mm²

Materials:

N, W, GG (bis GG40), and materials up to 900 N/mm²



Werkzeug- und Industrietechnik

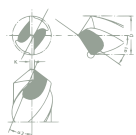


MK SPIRALBOHRER DIN 345 MORSE TAPER SHANK MACHINE DRILL DIN 345

$\varnothing D1$ mm	L1 mm	L2 mm	MK	Art.-Nr.
57.50	422	235	5	3-19108
58.00	422	235	5	3-19108
58.50	422	235	5	3-19108
59.00	422	235	5	3-19108
59.50	422	235	5	3-19108
60.00	422	235	5	3-19108
61.00	427	240	5	3-19108
62.00	427	240	5	3-19108
63.00	427	240	5	3-19108
64.00	432	245	5	3-19108
65.00	432	245	5	3-19108
66.00	432	245	5	3-19108
67.00	432	245	5	3-19108

$\varnothing D1$ mm	L1 mm	L2 mm	MK	Art.-Nr.
68.00	437	250	5	3-19108
69.00	437	250	5	3-19108
70.00	437	250	5	3-19108
71.00	437	250	5	3-19108
72.00	442	255	5	3-19108
73.00	442	255	5	3-19108
74.00	442	255	5	3-19108
75.00	442	255	5	3-19108
80.00	514	260	6	3-19108
85.00	519	265	6	3-19108
90.00	524	270	6	3-19108
95.00	529	275	6	3-19108
100.00	534	280	6	3-19108

Einsatzgebiete:N, W, GG (bis GG40), und Materialien bis 900 N/mm²**Materials:**N, W, GG (bis GG40), and materials up to 900 N/mm²



Werkzeug- und Industrietechnik

SPIRALBOHRER DIN 341 HIGH SPEED MACHINE DRILL DIN 341

DIN 341

HSS

N

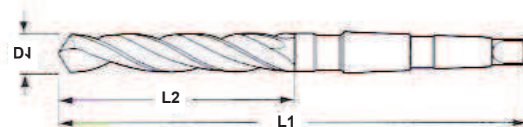
118°

GEFRÄST
MILLED

- Morsekonus
- Kegelmantelanschliff
- gefräst
- außen poliert

- morse taper shank
- relieved cone
- milled
- outside polished

INFOBOX



Art.-Nr.: 19110

Ø D1 mm	L1 mm	L2 mm	MK	Art.-Nr.
10.00	197	115	1	3-19110
10.50	197	115	1	3-19110
11.00	206	125	1	3-19110
11.50	206	125	1	3-19110
12.00	215	134	1	3-19110
12.50	215	134	1	3-19110
13.00	215	134	1	3-19110
13.50	223	142	1	3-19110
14.00	223	142	1	3-19110
14.50	245	147	2	3-19110
15.00	245	147	2	3-19110
15.50	251	153	2	3-19110
16.00	251	153	2	3-19110
16.50	257	159	2	3-19110
17.00	257	159	2	3-19110
17.50	263	165	2	3-19110
18.00	263	165	2	3-19110
18.50	269	171	2	3-19110
19.00	269	171	2	3-19110
19.50	275	177	2	3-19110
20.00	275	177	2	3-19110
20.50	282	184	2	3-19110
21.00	282	184	2	3-19110
21.50	289	191	2	3-19110
22.00	289	191	2	3-19110
22.50	296	198	2	3-19110
23.00	296	198	2	3-19110
23.50	319	198	3	3-19110
24.00	327	206	3	3-19110

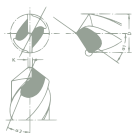
Ø D1 mm	L1 mm	L2 mm	MK	Art.-Nr.
24.50	327	206	3	3-19110
25.00	327	206	3	3-19110
25.50	335	214	3	3-19110
26.00	335	214	3	3-19110
26.50	335	214	3	3-19110
27.00	343	222	3	3-19110
27.50	343	222	3	3-19110
28.00	343	222	3	3-19110
28.50	351	230	3	3-19110
29.00	351	230	3	3-19110
29.50	351	230	3	3-19110
30.00	351	230	3	3-19110
30.50	360	239	3	3-19110
31.00	360	239	3	3-19110
31.50	360	239	3	3-19110
32.00	397	248	4	3-19110
32.50	397	248	4	3-19110
33.00	397	248	4	3-19110
33.50	397	248	4	3-19110
34.00	397	248	4	3-19110
34.50	406	257	4	3-19110
35.00	406	257	4	3-19110
35.50	406	257	4	3-19110
36.00	416	267	4	3-19110
36.50	416	267	4	3-19110
37.00	416	267	4	3-19110
37.50	426	277	4	3-19110
38.00	426	277	4	3-19110
38.50	426	277	4	3-19110

Einsatzgebiete:

N, W, GG (bis GG40), und Materialien bis 900 N/mm²

Materials:

N, W, GG (bis GG40), and materials up to 900 N/mm²



Werkzeug- und Industrietechnik

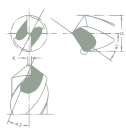


SPIRALBOHRER DIN 341

HIGH SPEED MACHINE DRILL DIN 341

$\varnothing D1$ mm	L1 mm	L2 mm	MK	Art.-Nr.
39.00	426	277	4	3-19110
39.50	426	277	4	3-19110
40.00	426	277	4	3-19110
40.50	436	287	4	3-19110
41.00	436	287	4	3-19110
41.50	436	287	4	3-19110
42.00	436	287	4	3-19110
42.50	436	287	4	3-19110
43.00	447	298	4	3-19110
44.00	447	298	4	3-19110
45.00	447	298	4	3-19110
46.00	459	310	4	3-19110
47.00	459	310	4	3-19110
48.00	470	321	4	3-19110
49.00	470	321	4	3-19110
50.00	470	321	4	3-19110

Einsatzgebiete:N, W, GG (bis GG40), und Materialien bis 900 N/mm²**Materials:**N, W, GG (bis GG40), and materials up to 900 N/mm²



Werkzeug- und Industrietechnik



KERNBOHRER CORE DRILLS

Art.-Nr.		Seite Page
3-19220	Kernbohrer, HSS-Co 8%, M42, mit Weldonschaft, kurz Core Drill, HSS-Co 8%, M42, with Weldon Shank, short	31
3-19221	Kernbohrer, HSS-Co 8%, M42, mit Weldonschaft, lang Core Drill, HSS-Co 8%, M42, with Weldon Shank, long	32
3-19222	Kernbohrer, HSS, M2, mit Weldonschaft, kurz Core Drill, HSS, M2, with Weldon Shank, short	33
3-19223	Kernbohrer, HSS, M2, mit Weldonschaft, lang Core Drill, HSS, M2, with Weldon Shank, long	34
3-19224	Kernbohrer, HSS-Co8%, M42, mit Quick-In Schaft, kurz Core Drill, HSS-Co8%, M42, with Quick-In Shank, short	35
3-19225	Kernbohrer, HM-Z, mit Weldonschaft, kurz Core Drill, HM-Z, with Weldon Shank, short	36
3-19226	Kernbohrer, HM-Z, mit Weldonschaft, lang Core Drill, HM-Z, with Weldon Shank, long	37
3-19227	Kernbohrer, HM-Z, mit Quick-In Schaft, kurz Core Drill, HM-Z, with Quick-In Shank, short	38

KERNBOHRER CORE DRILLS

WITEC-NORM

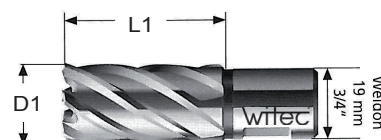
HSS-Co8%

Weldon
Schaft/Shank

KURZ
SHORT

- mit Weldonschaft
- with Weldon shank

INFOBOX



Art.-Nr.: 3-19220

Ø D1 mm	L1 mm	Art.-Nr.
12	30	3-19220
13	30	3-19220
14	30	3-19220
15	30	3-19220
16	30	3-19220
17	30	3-19220
18	30	3-19220
19	30	3-19220
20	30	3-19220
21	30	3-19220
22	30	3-19220
23	30	3-19220
24	30	3-19220
25	30	3-19220
26	30	3-19220
27	30	3-19220
28	30	3-19220
29	30	3-19220
30	30	3-19220
31	30	3-19220
32	30	3-19220
33	30	3-19220
34	30	3-19220
35	30	3-19220
36	30	3-19220
37	30	3-19220
38	30	3-19220

Aufnahmehalter für
Kernbohrer mit Weldonschaft
Tool holder for core drills
with weldon shank

Ø	Ø mm
MK 2	12 - 60
MK 3	12 - 60

Ø D1 mm	L1 mm	Art.-Nr.
39	30	3-19220
40	30	3-19220
41	30	3-19220
42	30	3-19220
43	30	3-19220
44	30	3-19220
45	30	3-19220
46	30	3-19220
47	30	3-19220
48	30	3-19220
49	30	3-19220
50	30	3-19220
51	30	3-19220
52	30	3-19220
53	30	3-19220
54	30	3-19220
55	30	3-19220
56	30	3-19220
57	30	3-19220
58	30	3-19220
59	30	3-19220
60	30	3-19220
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62	30	3-19220
63	30	3-19220
64	30	3-19220
65	30	3-19220

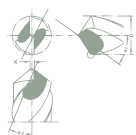
Führungstifte für
Kernbohrer mit Weldonschaft
Ejector pins for core
drills with weldon shank

Ø mm
6.35 x 79
6.35 x 107

Material	
ALU 99,5% 40	Steel 55 HRC -
ALU <10% Si 37	Steel 60 HRC -
ALU Guss / Cast •	Steel 65 HRC -
Steel <500 N 25	Inox <900 N 12
Steel <750 N 20	Inox >900 N •
Steel <900 N 15	Ti >800 N ○
Steel <1100 N 10	GG (G) Cast Iron 18
Steel 45 HRC 7	Hardox Inconel ○

Fein Quick-In
Weldon-19

Ø mm
18
19 (3/4)



Werkzeug- und Industrietechnik



Risto
Reparatur- und
Instandhaltung

KERNBOHRER CORE DRILLS

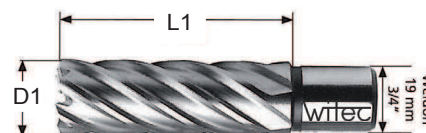
WITEC-NORM

HSS-Co8%

Weldon
Schaft/ShankLANG
LONG

- mit Weldonschaft
- with Weldon shank

INFOBOX



Art.-Nr.: 3-19221

Ø D1 mm	L1 mm	Art.-Nr.
12	55	3-19221
13	55	3-19221
14	55	3-19221
15	55	3-19221
16	55	3-19221
17	55	3-19221
18	55	3-19221
19	55	3-19221
20	55	3-19221
21	55	3-19221
22	55	3-19221
23	55	3-19221
24	55	3-19221
25	55	3-19221
26	55	3-19221
27	55	3-19221
28	55	3-19221
29	55	3-19221
30	55	3-19221
31	55	3-19221
32	55	3-19221
33	55	3-19221
34	55	3-19221
35	55	3-19221
36	55	3-19221
37	55	3-19221
38	55	3-19221

Aufnahmehalter für
Kernbohrer mit Weldonschaft
Tool holder for core drills
with weldon shank

Ø	Ø mm
MK 2	12 - 60
MK 3	12 - 60

Ø D1 mm	L1 mm	Art.-Nr.
39	55	3-19221
40	55	3-19221
41	55	3-19221
42	55	3-19221
43	55	3-19221
44	55	3-19221
45	55	3-19221
46	55	3-19221
47	55	3-19221
48	55	3-19221
49	55	3-19221
50	55	3-19221
51	55	3-19221
52	55	3-19221
53	55	3-19221
54	55	3-19221
55	55	3-19221
56	55	3-19221
57	55	3-19221
58	55	3-19221
59	55	3-19221
60	55	3-19221
61	55	3-19221
62	55	3-19221
63	55	3-19221
64	55	3-19221
65	55	3-19221

Führungstifte für
Kernbohrer mit Weldonschaft
Ejector pins for core
drills with weldon shank

Ø mm
6.35 x 103
6.35 x 125

Material	
ALU 99,5% 40	Steel 55 HRC -
ALU <10% Si 37	Steel 60 HRC -
ALU Guss / Cast •	Steel 65 HRC -
Steel <500 N 25	Inox <900 N 12
Steel <750 N 20	Inox >900 N •
Steel <900 N 15	Ti >800 N ○
Steel <1100 N 10	GG (G) Cast Iron 18
Steel 45 HRC 7	Hardox Inconel ○

Fein Quick-In
Weldon-19

Ø mm
18
19 (3/4)

KERNBOHRER CORE DRILLS

WITEC-NORM

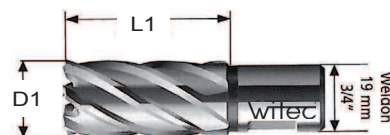
HSS

Weldon
Schaft/Shank

KURZ
SHORT

- mit Weldonschaft
- with Weldon shank

INFOBOX



Art.-Nr.: 3-19222

Ø D1 mm	L1 mm	Art.-Nr.
12	25	3-19222
13	25	3-19222
14	25	3-19222
15	25	3-19222
16	25	3-19222
17	25	3-19222
18	25	3-19222
19	25	3-19222
20	25	3-19222
21	25	3-19222
22	25	3-19222
23	25	3-19222
24	25	3-19222
25	25	3-19222
26	25	3-19222
27	25	3-19222
28	25	3-19222
29	25	3-19222
30	25	3-19222
31	25	3-19222
32	25	3-19222
33	25	3-19222
34	25	3-19222
35	25	3-19222
36	25	3-19222
37	25	3-19222
38	25	3-19222

Ø D1 mm	L1 mm	Art.-Nr.
39	25	3-19222
40	25	3-19222
41	25	3-19222
42	25	3-19222
43	25	3-19222
44	25	3-19222
45	25	3-19222
46	25	3-19222
47	25	3-19222
48	25	3-19222
49	25	3-19222
50	25	3-19222
51	25	3-19222
52	25	3-19222
53	25	3-19222
54	25	3-19222
55	25	3-19222
56	25	3-19222
57	25	3-19222
58	25	3-19222
59	25	3-19222
60	25	3-19222
61	25	3-19222
62	25	3-19222
63	25	3-19222
64	25	3-19222
65	25	3-19222

Material	
ALU 99,5% -	Steel 55 HRC -
ALU <10% Si -	Steel 60 HRC -
ALU Guss / Cast -	Steel 65 HRC -
Steel <500 N 25	Inox <900 N -
Steel <750 N 20	Inox >900 N -
Steel <900 N 15	Ti >800 N -
Steel <1100 N -	GG (G) Cast Iron -
Steel 45 HRC -	Hardox Inconel -

Aufnahmehalter für
Kernbohrer mit Weldonschaft
Tool holder for core drills
with weldon shank

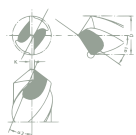
Führungstifte für
Kernbohrer mit Weldonschaft
Ejector pins for core
drills with weldon shank

Kegelsenker
Countersink

Ø	Ø mm
MK 2	18 - 80
MK 3	18 - 80

Ø mm
25
50

Ø mm
klein / small
gross / large



Werkzeug- und Industrietechnik



Risto
Reparatur- und
Instandhaltung

KERNBOHRER CORE DRILLS

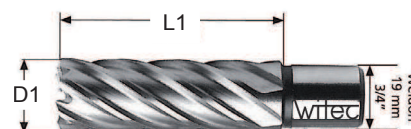
WITEC-NORM

HSS

Weldon
Schaft/ShankLANG
LONG

- mit Weldonschaft
- with Weldon shank

INFOBOX



Art.-Nr.: 3-19223

Ø D1 mm	L1 mm	Art.-Nr.
12	50	3-19223
13	50	3-19223
14	50	3-19223
15	50	3-19223
16	50	3-19223
17	50	3-19223
18	50	3-19223
19	50	3-19223
20	50	3-19223
21	50	3-19223
22	50	3-19223
23	50	3-19223
24	50	3-19223
25	50	3-19223
26	50	3-19223
27	50	3-19223
28	50	3-19223
29	50	3-19223
30	50	3-19223
31	50	3-19223
32	50	3-19223
33	50	3-19223
34	50	3-19223
35	50	3-19223
36	50	3-19223
37	50	3-19223
38	50	3-19223

Aufnahmehalter für
Kernbohrer mit Weldonschaft
Tool holder for core drills
with weldon shank

Ø	Ø mm
MK 2	18 - 80
MK 3	18 - 80

Ø D1 mm	L1 mm	Art.-Nr.
39	50	3-19223
40	50	3-19223
41	50	3-19223
42	50	3-19223
43	50	3-19223
44	50	3-19223
45	50	3-19223
46	50	3-19223
47	50	3-19223
48	50	3-19223
49	50	3-19223
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55	50	3-19223
56	50	3-19223
57	50	3-19223
58	50	3-19223
59	50	3-19223
60	50	3-19223
61	50	3-19223
62	50	3-19223
63	50	3-19223
64	50	3-19223
65	50	3-19223

Führungstifte für
Kernbohrer mit Weldonschaft
Ejector pins for core
drills with weldon shank

Ø mm
25
50

Material	
ALU 99,5% -	Steel 55 HRC -
ALU <10% Si -	Steel 60 HRC -
ALU Guss / Cast -	Steel 65 HRC -
Steel <500 N 25	Inox <900 N -
Steel <750 N 20	Inox >900 N -
Steel <900 N 15	Ti >800 N -
Steel <1100 N -	GG (G) Cast Iron -
Steel 45 HRC -	Hardox Inconel -

Kegelsenker
Countersink

Ø mm
klein / small
gross / large

KERNBOHRER CORE DRILLS

WITEC-NORM

HSS-Co8%

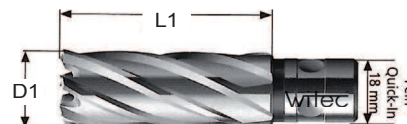
Quick-In
Schaft/Shank

KURZ
SHORT

- mit feiner Quick-In Schaft

INFOBOX

- with fein Quick-In shank



Art.-Nr.: 3-19224

Ø D1 mm	L1 mm	Art.-Nr.
12	35	3-19224
13	35	3-19224
14	35	3-19224
15	35	3-19224
16	35	3-19224
17	35	3-19224
18	35	3-19224
19	35	3-19224
20	35	3-19224
21	35	3-19224
22	35	3-19224
23	35	3-19224
24	35	3-19224
25	35	3-19224
26	35	3-19224
27	35	3-19224
28	35	3-19224
29	35	3-19224
30	35	3-19224
31	35	3-19224
32	35	3-19224
33	35	3-19224
34	35	3-19224
35	35	3-19224
36	35	3-19224
37	35	3-19224
38	35	3-19224

Ø D1 mm	L1 mm	Art.-Nr.
39	35	3-19224
40	35	3-19224
41	35	3-19224
42	35	3-19224
43	35	3-19224
44	35	3-19224
45	35	3-19224
46	35	3-19224
47	35	3-19224
48	35	3-19224
49	35	3-19224
50	35	3-19224
51	35	3-19224
52	35	3-19224
53	35	3-19224
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57	35	3-19224
58	35	3-19224
59	35	3-19224
60	35	3-19224
61	35	3-19224
62	35	3-19224
63	35	3-19224
64	35	3-19224
65	35	3-19224

Material	
ALU 99,5% 40	Steel 55 HRC -
ALU <10% Si 37	Steel 60 HRC -
ALU Guss / Cast •	Steel 65 HRC -
Steel <500 N 25	Inox <900 N 12
Steel <750 N 20	Inox >900 N •
Steel <900 N 15	Ti >800 N ○
Steel <1100 N 10	GG (G) Cast Iron 18
Steel 45 HRC 7	Hardox Inconel ○

Führungstifte für
Kernbohrer mit Weldonschaft
Ejector pins for core
drills with weldon shank

Ø mm
6.35 x 96
6.35 x 115

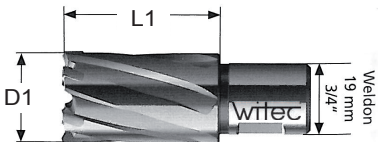
Dapter:
Weldon-19
Fein Quick-In

Ø mm
19 (3/4)
18

KERNBOHRER
CORE DRILLS

- WITEC-NORM
- HM-Z
- Weldon
Schaft/Shank
- KURZ
SHORT

- mit Weldonschaft
- with Weldon shank
- INFOBOX



Art.-Nr.: 3-19225

Ø D1 mm	L1 mm	Art.-Nr.
12	30	3-19225
13	30	3-19225
14	30	3-19225
15	30	3-19225
16	30	3-19225
17	30	3-19225
18	30	3-19225
19	30	3-19225
20	30	3-19225
21	30	3-19225
22	30	3-19225
23	30	3-19225
24	30	3-19225
25	30	3-19225
26	30	3-19225
27	30	3-19225
28	30	3-19225
29	30	3-19225
30	30	3-19225
31	30	3-19225
32	30	3-19225
33	30	3-19225
34	30	3-19225
35	30	3-19225
36	30	3-19225
37	30	3-19225
38	30	3-19225

Aufnahmehalter für
Kernbohrer mit Weldonschaft
Tool holder for core drills
with weldon shank

Ø	Ø mm
MK 2	12 - 60
MK 3	12 - 60

Ø D1 mm	L1 mm	Art.-Nr.
39	30	3-19225
40	30	3-19225
41	30	3-19225
42	30	3-19225
43	30	3-19225
44	30	3-19225
45	30	3-19225
46	30	3-19225
47	30	3-19225
48	30	3-19225
49	30	3-19225
50	30	3-19225
51	30	3-19225
52	30	3-19225
53	30	3-19225
54	30	3-19225
55	30	3-19225
56	30	3-19225
57	30	3-19225
58	30	3-19225
59	30	3-19225
60	30	3-19225
61	30	3-19225
62	30	3-19225
63	30	3-19225
64	30	3-19225
65	30	3-19225

Führungstifte für
Kernbohrer mit Weldonschaft
Ejector pins for core
drills with weldon shank

Ø mm
6.35 x 79
6.35 x 107

Material	
ALU 99,5% 40	Steel 55 HRC -
ALU <10% Si 37	Steel 60 HRC -
ALU Guss / Cast •	Steel 65 HRC -
Steel <500 N 35	Inox <900 N 20
Steel <750 N 30	Inox >900 N 20
Steel <900 N 25	Ti >800 N •
Steel <1100 N 25	GG (G) Cast Iron 20
Steel 45 HRC 20	Hardox Inconel •

Fein Quick-In
Weldon-19

Ø mm
18
19 (3/4)

KERNBOHRER CORE DRILLS

WITEC-NORM

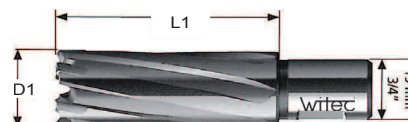
HM-Z

Weldon
Schaft/Shank

LANG
LONG

- mit Weldonschaft
- with Weldon shank

INFOBOX



Art.-Nr.: 3-19226

Ø D1 mm	L1 mm	Art.-Nr.
12	55	3-19226
13	55	3-19226
14	55	3-19226
15	55	3-19226
16	55	3-19226
17	55	3-19226
18	55	3-19226
19	55	3-19226
20	55	3-19226
21	55	3-19226
22	55	3-19226
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29	55	3-19226
30	55	3-19226
31	55	3-19226
32	55	3-19226
33	55	3-19226
34	55	3-19226
35	55	3-19226
36	55	3-19226
37	55	3-19226
38	55	3-19226

Aufnahmehalter für
Kernbohrer mit Weldonschaft
Tool holder for core drills
with weldon shank

Ø	Ø mm
MK 2	12 - 60
MK 3	12 - 60

Ø D1 mm	L1 mm	Art.-Nr.
39	55	3-19226
40	55	3-19226
41	55	3-19226
42	55	3-19226
43	55	3-19226
44	55	3-19226
45	55	3-19226
46	55	3-19226
47	55	3-19226
48	55	3-19226
49	55	3-19226
50	55	3-19226
51	55	3-19226
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59	55	3-19226
60	55	3-19226
61	55	3-19226
62	55	3-19226
63	55	3-19226
64	55	3-19226
65	55	3-19226

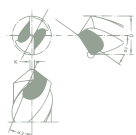
Führungstifte für
Kernbohrer mit Weldonschaft
Ejector pins for core
drills with weldon shank

Ø mm
6.35 x 103
6.35 x 125

Material	
ALU 99,5% 40	Steel 55 HRC -
ALU <10% Si 37	Steel 60 HRC -
ALU Guss / Cast •	Steel 65 HRC -
Steel <500 N 35	Inox <900 N 20
Steel <750 N 30	Inox >900 N 20
Steel <900 N 25	Ti >800 N •
Steel <1100 N 25	GG (G) Cast Iron 20
Steel 45 HRC 20	Hardox Inconel •

Fein Quick-In
Weldon-19

Ø mm
18
19 (3/4)



Werkzeug- und Industrietechnik



Risto
Reparatur- und
Instandhaltung

KERNBOHRER CORE DRILLS

WITEC-NORM

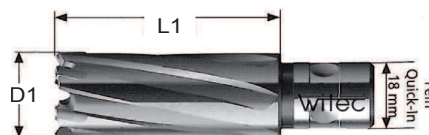
HM-Z

Quick-In
Schaft/ShankKURZ
SHORT

- mit Quick-In Schaft

INFOBOX

- with Quick-In shank



Art.-Nr.: 3-19227

Ø D1 mm	L1 mm	Art.-Nr.
12	35	3-19227
13	35	3-19227
14	35	3-19227
15	35	3-19227
16	35	3-19227
17	35	3-19227
18	35	3-19227
19	35	3-19227
20	35	3-19227
21	35	3-19227
22	35	3-19227
23	35	3-19227
24	35	3-19227
25	35	3-19227
26	35	3-19227
27	35	3-19227
28	35	3-19227
29	35	3-19227
30	35	3-19227
31	35	3-19227
32	35	3-19227
33	35	3-19227
34	35	3-19227
35	35	3-19227
36	35	3-19227
37	35	3-19227
38	35	3-19227

Ø D1 mm	L1 mm	Art.-Nr.
39	35	3-19227
40	35	3-19227
41	35	3-19227
42	35	3-19227
43	35	3-19227
44	35	3-19227
45	35	3-19227
46	35	3-19227
47	35	3-19227
48	35	3-19227
49	35	3-19227
50	35	3-19227
51	35	3-19227
52	35	3-19227
53	35	3-19227
54	35	3-19227
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56	35	3-19227
57	35	3-19227
58	35	3-19227
59	35	3-19227
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62	35	3-19227
63	35	3-19227
64	35	3-19227
65	35	3-19227

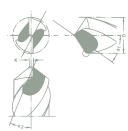
Material	
ALU 99,5% 40	Steel 55 HRC -
ALU <10% Si 37	Steel 60 HRC -
ALU Guss / Cast •	Steel 65 HRC -
Steel <500 N 35	Inox <900 N 20
Steel <750 N 30	Inox >900 N 20
Steel <900 N 25	Ti >800 N •
Steel <1100 N 25	GG (G) Cast Iron 20
Steel 45 HRC 20	Hardox Inconel •

Führungstifte für
Kernbohrer mit Weldonschaft
Ejector pins for core
drills with weldon shank

Ø mm
6.35 x 96
6.35 x 120

Dapter:
Weldon-19
Fein Quick-In

Ø mm
19 (3/4)
18

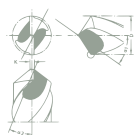


Werkzeug- und Industrietechnik



HOLZBOHRER WOOD DRILLS

Art.-Nr.		Seite Page
3-18024	Holzspiralbohrer Wood Drill Bit	39
3-18025	Schlangenbohrer Form LEWIS Auger Bit LEWIS-Pattern	40
3-18026	Forstner Bohrer Forstner Bits	41
3-18028	Flachfräsbohrer Machine Flat Bit	42
3-18830	Schalungsbohrer Auger Bit	43
3-18831	Dachdeckerbohrer, HSS, NX, 130°, schwarze Ausführung, witec-Norm Hollow Section Twist Drill, HSS, NX, 130°, blackfinished, witec-Norm	44



Werkzeug- und Industrietechnik

HOLZSPIRALBOHRER WOOD DRILL BITS

- geschliffene Zentrierspitze
- 2 Schulter schneiden
- rechtsschneidend

INFOBOX

- ground centre-tip
- 2 shouldered cutting edge
- right hand cutting



Art.-Nr.: 3-18024

Ø mm	Art.-Nr.
3.00/61	3-18024
4.00/75	3-18024
5.00/86	3-18024
6.00/93	3-18024
7.00/109	3-18024
8.00/117	3-18024
10.00/133	3-18024
12.00/151	3-18024
14.00/151	3-18024
16.00/160	3-18024
18.00/180	3-18024
20.00/200	3-18024
22.00/200	3-18024
24.00/215	3-18024
25.00/215	3-18024
26.00/215	3-18024
28.00/220	3-18024
30.00/220	3-18024

Sätze / Sets

Ø mm	Art.-Nr.
4-5-6-8-10	3-18024
3-4-5-6-7-8-9-10	3-18024

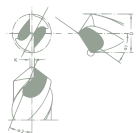


Einsatzgebiete:

für exakte Bohrungen in Holz, Sperrholz, unbeschichtete Spanplatten

Materials:

for drilling in wood, plywood, uncoated chipboard



SCHLANGENBOHRER FORM LEWIS AUGER BITS LEWIS-PATTERN

- Sechskant-Schaft
- gefräste und überschlifene Spirale
- selbststeinziehende Gewindespitze
- 1 Vorschneider
- spezieller Freischliff hinter dem Schneidkopf

INFOBOX

- hexagon-shank
- milled version
- self-threatening tip
- 1 cutting lip
- special step-tip



Art.-Nr.: 3-18025

Ø mm	Art.-Nr.
6.0 x 235	3-18025
6.0 x 460	3-18025
7.0 x 235	3-18025
7.0 x 460	3-18025
8.0 x 235	3-18025
8.0 x 460	3-18025
10.0 x 235	3-18025
10.0 x 460	3-18025
12.0 x 235	3-18025
12.0 x 460	3-18025
14.0 x 235	3-18025
14.0 x 460	3-18025
16.0 x 235	3-18025
16.0 x 460	3-18025
18.0 x 235	3-18025

Ø mm	Art.-Nr.
18.0 x 460	3-18025
20.0 x 235	3-18025
20.0 x 460	3-18025
22.0 x 235	3-18025
22.0 x 460	3-18025
24.0 x 235	3-18025
24.0 x 460	3-18025
26.0 x 235	3-18025
26.0 x 460	3-18025
28.0 x 235	3-18025
28.0 x 460	3-18025
30.0 x 235	3-18025
30.0 x 460	3-18025
32.0 x 235	3-18025
32.0 x 460	3-18025

Sätze / Sets

Ø mm	Art.-Nr.
6/8/10/12/16/20x235	3-18025
10/12/14/16/18/20x460	3-18025

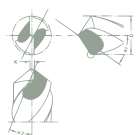


Einsatzgebiete:

Punktgenaues Bohren mit sehr guter Spanabfuhr, für Weich- und die meisten Harthölzer geeignet.
 Durch den speziellen Freischliff auch zum Bohren in feuchtem Holz geeignet.

Materials:

Exact drilling with excellent chip removal in soft- and most hard-woods.
 Due to special „step-tip“ also for drilling in wet wood.



Werkzeug- und Industrietechnik

FORSTNER BOHRER FORSTNER BITS

- Zentrierspitze
- 2 Hauptschneiden
- 1 geschlossenen Umfangschneide
- Sechskant-Schaft
- rechtsschneidend
- geschmiedete Ausführung

INFOBOX

- centre-point
- 2 cutting edges
- 1 circumferential cutting blade
- hexagon shank
- right hand cutting
- forged version



Art.-Nr.: 3-18026

Ø mm	Art.-Nr.
10.00	3-18026
12.00	3-18026
15.00	3-18026
18.00	3-18026
20.00	3-18026
22.00	3-18026
25.00	3-18026
28.00	3-18026
30.00	3-18026
32.00	3-18026
35.00	3-18026
40.00	3-18026

Sätze / Sets

Ø mm	Art.-Nr.
15-20-25-30-35	3-18026

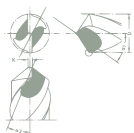


Einsatzgebiete:

zum punktgenauen und ausrißfreien Bohren von Weichholzlöchern, Leimbindern, etc.

Materials:

for exact and splinterfree holes in wood, veneered wooden boards, etc.



Werkzeug- und Industrietechnik

FLACHFRÄSBOHRER MACHINE FLAT BITS

- geschliffene Ausführung
- Zentrierspitze
- 2 Schneiden auf jeder Seite
- Sechskant-Schaft
- aus gehärtetem Werkzeugstahl
- brüniert und am Schaft blank poliert

INFOBOX

- ground version
- centre tip
- 2 cutting-edges on both sides
- hexagon-shank
- made of special steel (heat-tempered)
- burnished and partly polished



Art.-Nr.: 3-18028

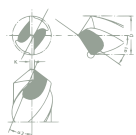
Ø D1 mm	L1 mm	Art.-Nr.
6.00	150	3-18028
6.50	150	3-18028
8.00	150	3-18028
10.00	150	3-18028
11.00	150	3-18028
12.00	150	3-18028
13.00	150	3-18028
14.00	150	3-18028
16.00	150	3-18028
18.00	150	3-18028
19.00	150	3-18028
20.00	150	3-18028
22.00	160	3-18028
24.00	160	3-18028
25.00	160	3-18028
26.00	160	3-18028
28.00	160	3-18028
30.00	160	3-18028
32.00	160	3-18028
34.00	160	3-18028
35.00	160	3-18028
36.00	160	3-18028
38.00	160	3-18028
40.00	160	3-18028
Verlängerung Extension sleeves	300	3-18028

Einsatzgebiete:

für Bohrungen in Weichholz, Balken und Spanplatten

Materials:

for drilling in soft-wood, beams and chip-boards



Werkzeug- und Industrietechnik

SCHALUNGSBOHRER AUGER BITS

- Zylinderschaft
- optimale Rundlaufgenauigkeit
- hohe Haltbarkeit
- garantierte Bruchsicherheit
- schnelle Spanabfuhr
- abgesetzter Schaft

INFOBOX

- straight shank
- perfect concentricity
- higher durability
- guaranteed break resistance
- optimal chip removal
- reduced shank



Art.-Nr.: 3-18830

Ø mm	Art.-Nr.
6 x 400	3-18830
6 x 600	3-18830
8 x 400	3-18830
8 x 600	3-18830
10 x 400	3-18830
10 x 600	3-18830
10 x 800	3-18830
12 x 400	3-18830
12 x 600	3-18830
12 x 800	3-18830
14 x 400	3-18830
14 x 600	3-18830
14 x 800	3-18830
16 x 400	3-18830
16 x 600	3-18830
16 x 800	3-18830

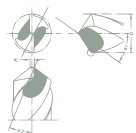
Ø mm	Art.-Nr.
18 x 400	3-18830
18 x 600	3-18830
18 x 800	3-18830
20 x 400	3-18830
20 x 600	3-18830
20 x 800	3-18830
22 x 400	3-18830
22 x 600	3-18830
24 x 400	3-18830
24 x 600	3-18830
26 x 400	3-18830
26 x 600	3-18830
28 x 400	3-18830
28 x 600	3-18830
30 x 400	3-18830
30 x 600	3-18830

Einsatzgebiete:

zum Bohren von Schalungen, Balken, Dielen, Gips- und Leichtbauplatten

Materials:

designed for drilling inner and outer covering boards in one operation, also for beams, hard-board etc.



DACHDECKERBOHRER HOLLOW SECTION TWIST DRILLS

WITEC-NORM

HSS

NX

130°

GESCHLIFFEN
GRINDED

- 130° Kreuzanschliff
- schwarze Ausführung
- Zylinderschaft
- rechts
- profilgeschliffene Qualität

INFOBOX

- 130° splitpoint
- blackfinished
- straight shank
- right Hand
- profile ground quality



Art.-Nr.: 3-18831

Ø D1 mm	L1 mm	L2 mm	Art.-Nr.
3.00	100	30	3-18831
4.90	70	30	3-18831
4.90	100	30	3-18831
4.90	120	30	3-18831
4.90	150	30	3-18831
5.00	70	30	3-18831
5.00	100	30	3-18831
5.00	120	30	3-18831
5.00	150	30	3-18831
5.00	180	30	3-18831
5.00	210	30	3-18831
5.10	70	30	3-18831
5.10	100	30	3-18831
5.10	120	30	3-18831
5.10	150	30	3-18831
5.10	180	30	3-18831
5.10	210	30	3-18831
5.30	70	30	3-18831
5.30	100	30	3-18831
5.30	120	30	3-18831
5.30	150	30	3-18831

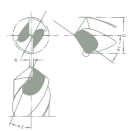
Ø D1 mm	L1 mm	L2 mm	Art.-Nr.
5.30	180	30	3-18831
5.30	210	30	3-18831
5.50	70	30	3-18831
5.50	100	30	3-18831
5.50	120	30	3-18831
5.50	150	30	3-18831
5.50	180	30	3-18831
5.50	210	30	3-18831
5.70	70	30	3-18831
5.70	100	30	3-18831
5.70	120	30	3-18831
5.70	150	30	3-18831
5.70	180	30	3-18831
5.70	210	30	3-18831
5.80	70	30	3-18831
5.80	100	30	3-18831
5.80	120	30	3-18831
5.80	150	30	3-18831
5.80	180	30	3-18831
5.80	210	30	3-18831

Einsatzgebiete:

Spezialbohrer für die Bearbeitung und Anbringung von Hohlprofilen, z.B. im Fensterbau

Materials:

special drills designed for working on Hollow-Profiles

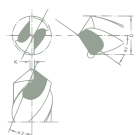


Werkzeug- und Industrietechnik



LOCHSÄGEN HOLESAWS

Art.-Nr.		Seite Page
3-18720	Bi-Metall Lochsäge HSS Bi-Metal Holesaw HSS	45
3-18721	Bi-Metall Lochsäge HSS-Co8%(M42) Bi-Metal Holesaw HSS-Co(M42)	46 - 47
3-18723	Bi-Metall HM-Z-bestückt Bi-Metal Holesaw carbide tipped	48 - 49
3-18725	HM-bestückte Lochsäge, Flachschnitt-Ausführung, Schnitttiefe 12 mm Carbide tipped Holesaw, flatcut version, cutting depth 12 mm	52 - 53
3-18726	HM-bestückte Lochsäge, Tiefschnitt-Ausführung, Schnitttiefe 35 mm Carbide tipped Holesaw, deepcut version, cutting depth 35 mm	54 - 55



Werkzeug- und Industrietechnik



BI-METALL LOCHSÄGEN HSS BI-METAL HOLESAWS HSS

- HSS-Zahnschneiden auf Körper aus Spezialstahl aufgeschweißt
- mit variabler Zahnteilung für geringe Vibration, gleichmäßigen Schnitt und geringe Wärmeentwicklung
- Schnitttiefe 38 mm

INFOBOX

- HSS-cutting teeth welded on special-steel body
- cutting teeth variable pitched for less vibration, smoother cutting and less heat production during cutting
- cutting depth 38 mm



Art.-Nr.: 3-18720

Ø mm	Art.-Nr.
14,00	3-18720
16,00	3-18720
17,00	3-18720
19,00	3-18720
20,00	3-18720
21,00	3-18720
22,00	3-18720
24,00	3-18720
25,00	3-18720
27,00	3-18720
29,00	3-18720
30,00	3-18720
32,00	3-18720
33,00	3-18720
35,00	3-18720
37,00	3-18720
38,00	3-18720
40,00	3-18720
41,00	3-18720
43,00	3-18720
44,00	3-18720
46,00	3-18720
48,00	3-18720
51,00	3-18720
52,00	3-18720
54,00	3-18720
56,00	3-18720
57,00	3-18720

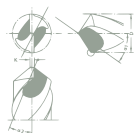
Ø mm	Art.-Nr.
59,00	3-18720
60,00	3-18720
64,00	3-18720
65,00	3-18720
67,00	3-18720
68,00	3-18720
70,00	3-18720
73,00	3-18720
76,00	3-18720
79,00	3-18720
83,00	3-18720
86,00	3-18720
89,00	3-18720
92,00	3-18720
95,00	3-18720
98,00	3-18720
102,00	3-18720
105,00	3-18720
108,00	3-18720
111,00	3-18720
114,00	3-18720
121,00	3-18720
127,00	3-18720
140,00	3-18720
146,00	3-18720
152,00	3-18720
195,00	3-18720

Einsatzgebiete:

stabile Konstruktion zum Bohren von Blech, Leichtmetall, Kunststoff, Gipskarton, Holzverkleidungen etc. mit Säulen- und Handbohrmaschinen

Materials:

solid construction for drilling sheet metal, aluminium, plastic, wood, plywood, plasticboards etc.



Werkzeug- und Industrietechnik



BI-METALL LOCHSÄGEN VARIO HSS-Co

BI-METAL HOLESAWS VARIO HSS-Co

- HSS-Co8%(M42)-Zahnschneiden auf Körper aus Spezialstahl aufgeschweißt
- mit variabler Zahnteilung für schnellen Sägefortschritt und ratterfreies Sägen
- Arbeitstiefe 5 mm, über 5 mm mit Lüftung
- HSS-Co8%(M42)-cutting teeth welded on special-steel body
- cutting teeth variable pitched for rapid sawing process and reduced vibration
- working depth 5 mm, over 5 mm with ventilation

INFOBOX

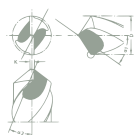


Art.-Nr.: 3-18721

Ø mm	Zoll "	Art.-Nr.
14,00	9/16	3-18721
16,00	5/8	3-18721
17,00	11/16	3-18721
19,00	3/4	3-18721
20,00	25/32	3-18721
21,00	13/16	3-18721
22,00	7/8	3-18721
24,00	15/16	3-18721
25,00	1"	3-18721
27,00	1 1/16	3-18721
29,00	1 1/8	3-18721
30,00	1 3/16	3-18721
32,00	1 1/4	3-18721
33,00	1 5/16	3-18721
35,00	1 3/8	3-18721
37,00	1 7/16	3-18721
38,00	1 1/2	3-18721
40,00	1 9/16	3-18721
41,00	1 5/8	3-18721
43,00	1 11/16	3-18721
44,00	1 3/4	3-18721
46,00	1 13/16	3-18721
48,00	1 7/8	3-18721
51,00	2"	3-18721
52,00	2 1/16	3-18721
54,00	2 1/8	3-18721
57,00	2 1/4	3-18721

Ø mm	Zoll "	Art.-Nr.
59,00	2 5/16	3-18721
60,00	2 3/8	3-18721
64,00	2 1/2	3-18721
65,00	2 9/16	3-18721
67,00	2 5/8	3-18721
68,00	2 11/16	3-18721
70,00	2 3/4	3-18721
73,00	2 7/8	3-18721
76,00	3"	3-18721
79,00	3 1/8	3-18721
83,00	3 1/4	3-18721
86,00	3 3/8	3-18721
89,00	3 1/2	3-18721
92,00	3 5/8	3-18721
95,00	3 3/4	3-18721
98,00	3 7/8	3-18721
102,00	4"	3-18721
105,00	4 1/8	3-18721
108,00	4 1/4	3-18721
111,00	4 3/8	3-18721
114,00	4 1/2	3-18721
121,00	4 3/4	3-18721
127,00	5"	3-18721
133,00	5 1/4	3-18721
140,00	5 1/2	3-18721
146,00	5 3/4	3-18721

Material	
ALU 99,5% 40	Steel 55 HRC -
ALU <10% Si 37	Steel 60 HRC -
ALU Guss / Cast -	Steel 65 HRC -
Steel <500 N 30	Inox <900 N 12
Steel <750 N 25	Inox >900 N -
Steel <900 N -	Ti >800 N -
Steel <1100 N -	GG (G) Cast -
Steel 45 HRC -	Hardox Inconel -



Werkzeug- und Industrietechnik



BI-METALL LOCHSÄGEN VARIO HSS-Co BI-METAL HOLESAWS VARIO HSS-Co

Ø mm	Zoll "	Art.-Nr.
152,00	6"	3-18721
160,00	6 19/64	3-18721
165,00	6 1/2	3-18721
168,00	6 5/8	3-18721
177,00	7"	3-18721
200,00	7 7/8	3-18721
210,00	8 1/4	3-18721
220,00	8 11/16	3-18721
225,00	8 7/8	3-18721
250,00	9 7/8	3-18721

Aufnahmehalter für Lochsäge
Tool holder for holesaws

Zentrierbohrer für Lochsäge
Pilot-drill for holesaws

Verlängerung
Extension for Arbor

Schaft/Shank	
Ø 9,5 mm	Ø 11,11 mm
14 - 30	32 - 250
14 - 30 SDS	32 - 250 SDS

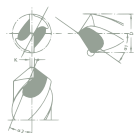
HSS	HM
Ø mm	Ø mm
6,35 - 82	6,35 - 82
6,35 - 102	6,35 - 102

Ø mm
11 x 300

Sätze HSS-Co / Sets HSS-Co

Inhalt Content	Art.-Nr.
8-teilig/pcs. Ø 22 / 29 / 35 / 44 / 51 / 65 mm Halter/Arbor A5519 Ø 14 - 30 Halter/Arbor A5545 Ø 32 - 250	3-18721
13-teilig/pcs. Ø 19 / 22 / 25 / 29 / 35 / 38 / 44 / 51 / 57 / 65 / 76 mm Halter/Arbor A5519 Ø 14 - 30 Halter/Arbor A5545 Ø 32 - 250	3-18721
15-teilig/pcs. Ø 19 / 22 / 25 / 29 / 35 / 38 / 44 / 51 / 57 / 65 / 76 / 89 / 111 mm Halter/Arbor A5519 Ø 14 - 30 Halter/Arbor A5545 Ø 32 - 250	3-18721
22-teilig/pcs. Ø 16 / 19 / 20 / 22 / 24 / 25 / 27 / 29 / 30 / 32 / 35 / 38 / 40 / 44 / 51 / 57 / 60 / 65 / 68 / 76 mm Halter/Arbor A5519 Ø 14 - 30 Halter/Arbor A5545 Ø 32 - 250	3-18721





Werkzeug- und Industrietechnik



LOCHSÄGEN HM-Z HOLESAWS HM-Z

- HM Hartmetallbestückt
- Arbeitstiefe 10 mm
- über 10 mm ist Lüften erforderlich

INFOBOX

- holesaw carbide tipped
- working depth 10 mm
- over 10 mm ventilation required

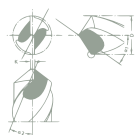


Art.-Nr.: 3-18723

Ø mm	Zoll "	Art.-Nr.
16,00	5/8	3-18723
19,00	3/4	3-18723
20,00	25/32	3-18723
22,00	7/8	3-18723
25,00	1"	3-18723
27,00	1 1/16	3-18723
28,00	1 1/8	3-18723
30,00	1 3/16	3-18723
32,00	1 1/4	3-18723
35,00	1 3/8	3-18723
38,00	1 1/2	3-18723
40,00	1 9/16	3-18723
41,00	1 5/8	3-18723
44,00	1 3/4	3-18723
48,00	1 7/8	3-18723
51,00	2"	3-18723
54,00	2 1/8	3-18723
57,00	2 1/4	3-18723
60,00	2 3/8	3-18723
64,00	2 1/2	3-18723
65,00	2 9/16	3-18723
67,00	2 5/8	3-18723
68,00	2 11/16	3-18723

Ø mm	Zoll "	Art.-Nr.
70,00	2 3/4	3-18723
73,00	2 7/8	3-18723
76,00	3"	3-18723
79,00	3 1/8	3-18723
83,00	3 1/4	3-18723
86,00	3 3/8	3-18723
89,00	3 1/2	3-18723
92,00	3 5/8	3-18723
95,00	3 3/4	3-18723
98,00	3 7/8	3-18723
102,00	4"	3-18723
105,00	4 1/8	3-18723
108,00	4 1/4	3-18723
109,00		3-18723
111,00	4 3/8	3-18723
114,00	4 1/2	3-18723
118,00		3-18723
121,00	4 3/4	3-18723
127,00	5"	3-18723
140,00	5 1/2	3-18723
152,00	6"	3-18723
159,00		3-18723

Material	
Fliesen Tile walls	Isoliermat. Insulation Material
Gibskarton Gypsum	Sperrholz Plywood
Mauerwerk Masonry	Holz Wood
Kunststoff Plastic	Hartholz Hardwood
Kohlefaser Wood fiber	Sandwich Material
Glasfaser Glass fiber	Dämm- Material
Laminate Laminate	Vibration absorbing Material



Werkzeug- und Industrietechnik



LOCHSÄGEN HM-Z HOLESAWS HM-Z

Aufnahmehalter für Lochsäge
Tool holder for holesaws

Zentrierbohrer für Lochsäge
Pilot-drill for holesaws

Verlängerung
Extension for Arbor

Schaft/Shank	
Ø 9,5 mm	Ø 11,11 mm
14 - 30	32 - 250
14 - 30 SDS	32 - 250 SDS

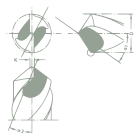
HSS	HM
Ø mm	Ø mm
6,35 - 102	6,35 - 102

Ø mm
11 x 300

Sätze HM-Z / Sets HM-Z

Inhalt Content	Art.-Nr.
17-teilig/pcs. Ø 19 / 22 / 25 / 32 / 41 / 51 / 65 / 76 / 83 mm Halter/Arbor A5519 Ø 14 - 30 Halter/Arbor A5545 Ø 32 - 159	3-18723





Werkzeug- und Industrietechnik



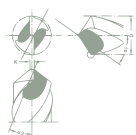
BI-METALL LOCHSÄGEN HSS-Co/HM

BI-METAL HOLESAWS HSS-Co/HM

ANWENDUNGSMATRIX

APPLICATION TABLE

Materialstärke Materialien Materials		Lochsägen M42 HSS-Co8	HM Bestückte Lochsägen
Materialstärke	< 3 mm	√	√
	3 - 8 mm	√	√
	> 8 mm	√	√
Stahl / Steel			
Stahl	Steel	√	○
Edelstahl	Inox	√	○
GG (G)	Grey Cast	√	○
ALU / NE-Metalle	Aluminium	√	○
Stein / Stone			
Fliesen bis Härte 6	Tile walls up to 6 thickness	○	√
Gips Zellenbeton	Gypsum Cellular Concrete	○	√
Mauerwerk	Masonry	○	√
Kunststoffe / Plastics			
PVC	PVC	√	√
Nylon	Nylon	○	√
Trespa	Trespa	○	√
Glasfaser	Glass fiber	○	√
Laminate	Laminate	○	√
Holz / Wood			
gepresstes Holz	Pressed Wood	○	√
Spanplatten	Chipboard	○	√
MDF	MDF	○	√
Hartholz	Hardwood	○	√
Bodenbeläge	Flooring	○	√



Werkzeug- und Industrietechnik



BI-METALL LOCHSÄGEN HSS-Co/HM

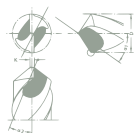
BI-METAL HOLESAWS HSS-Co/HM

VERGLEICHSTABELLE

COMPARATIVE TABLE

HRC Rockwell	HV Vickers	HB Brinell	N/mm²
68	940		
67	900		
66	865		
65	832		
64	800		
63	772		
62	746		
61	720		
60	697		
59	674		
58	653	615	
57	633	595	
56	613	577	
55	595	560	2075
54	577	543	2015
53	560	525	1950
52	544	512	1880
51	528	496	1820
50	513	481	1760
49	498	469	1695
48	484	455	1635
47	471	443	1580
46	458	432	1530
45	446	431	1480
44	436	409	1435
43	423	400	1385
42	412	390	1340
41	402	381	1295
40	392	371	1250
39	382	362	1215

HRC Rockwell	HV Vickers	HB Brinell	N/mm²
38	372	353	1180
37	363	344	1160
36	354	336	1115
35	345	327	1080
34	336	319	1055
33	327	311	1025
32	318	301	1000
31	310	294	980
30	302	286	950
29	294	279	930
28	286	271	910
27	279	264	880
26	272	258	860
25	266	253	840
24	260	247	825
23	254	243	805
22	248	237	785
21	243	231	770
20	238	226	760
(18)	230	219	730
(16)	222	212	705
(14)	213	203	675
(12)	204	194	650
(10)	196	187	620
(8)	188	179	600
(6)	180	171	580
(4)	173	165	550
(2)	166	158	530
(0)	160	152	515



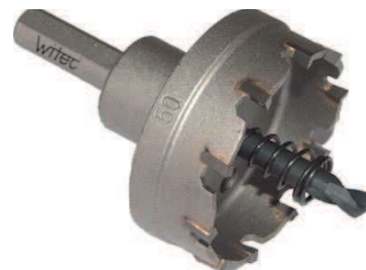
Werkzeug- und Industrietechnik



HM-BESTÜCKTE LOCHSÄGEN CARBIDE TIPPED HOLESAWS

- Flachschnitt-Ausführung für Metallbearbeitung
- Zentrierbohrer und Auswurffeder auswechselbar
- flatcut version for metal working
- centre drill and ejection spring convertible

INFOBOX



Art.-Nr.: 3-18725

Ø D1 mm	Z teeth	Schnitttiefe cutting depth	Art.-Nr.
15,00	3	12	3-18725
16,00	3	12	3-18725
17,00	3	12	3-18725
18,00	3	12	3-18725
19,00	3	12	3-18725
20,00	4	12	3-18725
21,00	4	12	3-18725
22,00	5	12	3-18725
23,00	5	12	3-18725
24,00	5	12	3-18725
25,00	5	12	3-18725
26,00	5	12	3-18725
27,00	5	12	3-18725
28,00	5	12	3-18725
29,00	6	12	3-18725
30,00	6	12	3-18725
31,00	6	12	3-18725
32,00	6	12	3-18725
33,00	7	12	3-18725
34,00	7	12	3-18725
35,00	7	12	3-18725
36,00	7	12	3-18725
37,00	8	12	3-18725
38,00	8	12	3-18725
39,00	8	12	3-18725
40,00	8	12	3-18725
41,00	8	12	3-18725
42,00	9	12	3-18725
43,00	9	12	3-18725
44,00	9	12	3-18725
45,00	9	12	3-18725
46,00	10	12	3-18725
47,00	10	12	3-18725
48,00	10	12	3-18725

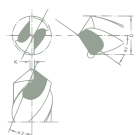
Ø D1 mm	Z teeth	Schnitttiefe cutting depth	Art.-Nr.
49,00	10	12	3-18725
50,00	11	12	3-18725
51,00	11	12	3-18725
52,00	11	12	3-18725
53,00	11	12	3-18725
54,00	11	12	3-18725
55,00	12	12	3-18725
56,00	12	12	3-18725
57,00	12	12	3-18725
58,00	12	12	3-18725
59,00	13	12	3-18725
60,00	13	12	3-18725
61,00	13	12	3-18725
62,00	13	12	3-18725
63,00	13	12	3-18725
64,00	14	12	3-18725
65,00	14	12	3-18725
66,00	14	12	3-18725
67,00	14	12	3-18725
68,00	15	12	3-18725
69,00	15	12	3-18725
70,00	15	12	3-18725
71,00	15	12	3-18725
72,00	15	12	3-18725
73,00	16	12	3-18725
74,00	16	12	3-18725
75,00	16	12	3-18725
76,00	16	12	3-18725
77,00	16	12	3-18725
78,00	16	12	3-18725
79,00	16	12	3-18725
80,00	17	12	3-18725
81,00	17	12	3-18725
82,00	17	12	3-18725

Einsatzgebiete:

unlegierte Stähle, Aluminium, NE-Metalle, Kunststoffe usw.

Materials:

unalloyed steels, Aluminium, NE-metals, plastics, etc.



Werkzeug- und Industrietechnik



HM-BESTÜCKTE LOCHSÄGEN CARBIDE TIPPED HOLESAWS

Ø D1 mm	Z teeth	Schnitttiefe cutting depth	Art.-Nr.
83,00	17	12	3-18725
84,00	17	12	3-18725
85,00	18	12	3-18725
86,00	18	12	3-18725
87,00	18	12	3-18725
88,00	18	12	3-18725
89,00	18	12	3-18725
90,00	19	12	3-18725
91,00	19	12	3-18725
92,00	19	12	3-18725
93,00	19	12	3-18725
94,00	19	12	3-18725
95,00	19	12	3-18725
96,00	20	12	3-18725

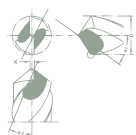
Ø D1 mm	Z teeth	Schnitttiefe cutting depth	Art.-Nr.
97,00	20	12	3-18725
98,00	20	12	3-18725
99,00	20	12	3-18725
100,00	20	12	3-18725
105,00	20	12	3-18725
110,00	20	12	3-18725
115,00	23	12	3-18725
120,00	23	12	3-18725
125,00	23	12	3-18725
130,00	23	12	3-18725
135,00	23	12	3-18725
140,00	25	12	3-18725
145,00	25	12	3-18725
150,00	25	12	3-18725

Einsatzgebiete:

unlegierte Stähle, Aluminium, NE-Metalle, Kunststoffe usw.

Materials:

unalloyed steels, Aluminium, NE-metals, plastics, etc.



Werkzeug- und Industrietechnik



HM-BESTÜCKTE LOCHSÄGEN CARBIDE TIPPED HOLESAWS

- Tiefschnitt-Ausführung für Metallbearbeitung
- Zentrierbohrer und Auswurffeder auswechselbar
- deepcut version for metal working
- centre drill and ejection spring convertible

INFOBOX



Art.-Nr.: 3-18726

Ø D1 mm	Z teeth	Schnitttiefe cutting depth	Art.-Nr.
16,00	3	35	3-18726
17,00	3	35	3-18726
18,00	3	35	3-18726
19,00	3	35	3-18726
20,00	4	35	3-18726
21,00	4	35	3-18726
22,00	5	35	3-18726
23,00	5	35	3-18726
24,00	5	35	3-18726
25,00	5	35	3-18726
26,00	5	35	3-18726
27,00	5	35	3-18726
28,00	5	35	3-18726
29,00	6	35	3-18726
30,00	6	35	3-18726
31,00	6	35	3-18726
32,00	6	35	3-18726
33,00	7	35	3-18726
34,00	7	35	3-18726
35,00	7	35	3-18726
36,00	7	35	3-18726
37,00	8	35	3-18726
38,00	8	35	3-18726
39,00	8	35	3-18726
40,00	8	35	3-18726
41,00	8	35	3-18726
42,00	9	35	3-18726
43,00	9	35	3-18726
44,00	9	35	3-18726
45,00	9	35	3-18726
46,00	10	35	3-18726
47,00	10	35	3-18726
48,00	10	35	3-18726
49,00	10	35	3-18726

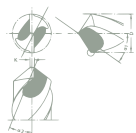
Ø D1 mm	Z teeth	Schnitttiefe cutting depth	Art.-Nr.
50,00	11	35	3-18726
51,00	11	35	3-18726
52,00	11	35	3-18726
53,00	11	35	3-18726
54,00	11	35	3-18726
55,00	12	35	3-18726
56,00	12	35	3-18726
57,00	12	35	3-18726
58,00	12	35	3-18726
59,00	13	35	3-18726
60,00	13	35	3-18726
61,00	13	60	3-18726
62,00	13	60	3-18726
63,00	13	60	3-18726
64,00	14	60	3-18726
65,00	14	60	3-18726
66,00	14	60	3-18726
67,00	14	60	3-18726
68,00	15	60	3-18726
69,00	15	60	3-18726
70,00	15	60	3-18726
71,00	15	60	3-18726
72,00	15	60	3-18726
73,00	16	60	3-18726
74,00	16	60	3-18726
75,00	16	60	3-18726
76,00	16	60	3-18726
77,00	16	60	3-18726
78,00	16	60	3-18726
79,00	16	60	3-18726
80,00	17	60	3-18726
81,00	17	60	3-18726
82,00	17	60	3-18726
83,00	17	60	3-18726

Einsatzgebiete:

unlegierte Stähle, Aluminium, NE-Metalle, Kunststoffe usw.

Materials:

unalloyed steels, Aluminium, NE-metals, plastics, etc.



Werkzeug- und Industrietechnik



HM-BESTÜCKTE LOCHSÄGEN CARBIDE TIPPED HOLESAWS

Ø D1 mm	Z teeth	Schnitttiefe cutting depth	Art.-Nr.
84,00	17	60	3-18726
85,00	18	60	3-18726
86,00	18	60	3-18726
87,00	18	60	3-18726
88,00	18	60	3-18726
89,00	18	60	3-18726
90,00	19	60	3-18726
91,00	19	60	3-18726
92,00	19	60	3-18726
93,00	19	60	3-18726
94,00	19	60	3-18726
95,00	19	60	3-18726
96,00	20	60	3-18726
97,00	20	60	3-18726

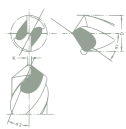
Ø D1 mm	Z teeth	Schnitttiefe cutting depth	Art.-Nr.
98,00	20	60	3-18726
99,00	20	60	3-18726
100,00	20	60	3-18726
105,00	20	60	3-18726
110,00	20	60	3-18726
115,00	23	60	3-18726
120,00	23	60	3-18726
125,00	23	60	3-18726
130,00	23	60	3-18726
135,00	23	60	3-18726
140,00	25	60	3-18726
145,00	25	60	3-18726
150,00	25	60	3-18726

Einsatzgebiete:

unlegierte Stähle, Aluminium, NE-Metalle, Kunststoffe usw.

Materials:

unalloyed steels, Aluminium, NE-metals, plastics, etc.

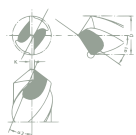


Werkzeug- und Industrietechnik



BETON- UND STEINBOHRER MASONRY AND CONCRETE DRILLS

Art.-Nr.		Seite Page
3-18020	Beton- und Steinbohrer, zylindrisch, DIN 8039 Masonry Drill, cylindrical, DIN 8039	57
3-18021	Schlagbohrer, zylindrisch Percussion Drill, cylindrical	58
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3-18322	Hammerbohrer SDS-Plus Vierschneider W2 X-Form Hammerdrill SDS-Plus 4 cutter system W2 X-Form	64
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Werkzeug- und Industrietechnik

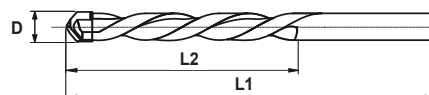


BETON- UND STEINBOHRER DIN 8039 MASONRY DRILLS DIN 8039

- mit HM-Platte
- Spitzenwinkel 130°

INFOBOX

- carbide-plate
- point angle 130°



Art.-Nr.: 3-18020

Ø D mm	Ø Zoll "	L1 mm	Art.-Nr.
3.0	1/8	60	3-18020
4.0	5/32	75	3-18020
5.0	3/16	85	3-18020
5.0	3/16	200	3-18020
6.0	15/64	100	3-18020
6.0	15/64	200	3-18020
6.0	15/64	400	3-18020
7.0	9/32	100	3-18020
8.0	5/16	120	3-18020
8.0	5/16	200	3-18020
8.0	5/16	400	3-18020
8.0	5/16	600	3-18020
9.0	11/32	120	3-18020
10.0	3/8	120	3-18020
10.0	3/8	200	3-18020
10.0	3/8	400	3-18020
10.0	3/8	600	3-18020
11.0	13/32	120	3-18020
12.0	15/32	150	3-18020
12.0	15/32	200	3-18020
12.0	15/32	400	3-18020

Ø D mm	Ø Zoll "	L1 mm	Art.-Nr.
12.0	15/32	600	3-18020
13.0	1/2	150	3-18020
14.0	9/16	150	3-18020
14.0	9/16	200	3-18020
14.0	9/16	400	3-18020
14.0	9/16	600	3-18020
15.0	19/32	150	3-18020
16.0	5/8	160	3-18020
16.0	5/8	400	3-18020
16.0	5/8	600	3-18020
17.0	21/32	160	3-18020
18.0	11/16	160	3-18020
18.0	11/16	400	3-18020
18.0	11/16	600	3-18020
19.0	23/32	160	3-18020
20.0	25/32	160	3-18020
20.0	25/32	400	3-18020
20.0	25/32	600	3-18020
22.0	27/32	160	3-18020
25.0	31/32	160	3-18020

Sätze / Sets

Ø mm	Art.-Nr.
4,0-5,0-6,0-8,0-10 mm	3-18020
3,0-4,0-5,0-6,0-7,0-8,0-9,0-10,0 mm	3-18020

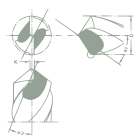


Einsatzgebiete:

für leichte Bohrarbeiten in Dreh- und Schlagbohrmaschinen, besonders für den Heimwerkerbereich

Materials:

for ordinary drilling in impact drilling-machines, mainly for DIY purpose



SCHLAGBOHRER PERCUSSION DRILLS

- mit HM-Platte
- Spitzenwinkel 130°

INFOBOX

- carbide-plate
- point angle 130°



Art.-Nr.: 3-18021

Ø D mm	Ø Zoll "	L1 mm	L2 mm	Art.-Nr.
3.0	1/8	70	40	3-18021
3.5		70	40	3-18021
4.0	5/32	75	40	3-18021
4.5		85	50	3-18021
5.0	3/16	85	50	3-18021
5.0	3/16	150	110	3-18021
5.5	7/32	85	50	3-18021
5.5	7/32	150	110	3-18021
6.0	15/64	100	60	3-18021
6.0	15/64	150	110	3-18021
6.5	1/4	100	60	3-18021
6.5	1/4	150	110	3-18021
7.0	9/32	100	60	3-18021
8.0	5/16	120	80	3-18021
8.0	5/16	200	135	3-18021
8.0	5/16	400	350	3-18021
9.0	11/32	120	80	3-18021

Ø D mm	Ø Zoll "	L1 mm	L2 mm	Art.-Nr.
10.0	3/8	120	80	3-18021
10.0	3/8	200	135	3-18021
10.0	3/8	400	350	3-18021
11.0	13/32	150	90	3-18021
12.0	15/32	150	90	3-18021
12.0	15/32	200	135	3-18021
12.0	15/32	400	350	3-18021
13.0	1/2	150	90	3-18021
14.0	9/16	150	90	3-18021
14.0	9/16	400	350	3-18021
15.0		150	90	3-18021
16.0	5/8	150	90	3-18021
16.0	5/8	400	350	3-18021
18.0	11/16	160	100	3-18021
18.0	11/16	400	350	3-18021
20.0	25/32	160	100	3-18021
20.0	25/32	400	350	3-18021

Sätze / Sets

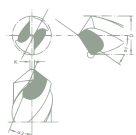
Ø mm	Art.-Nr.
4,0-5,0-6,0-8,0-10 mm	3-18021
3,0-4,0-5,0-6,0-7,0-8,0-9,0-10,0 mm	3-18021

Einsatzgebiete:

für professionelle Bohrarbeiten in Beton, Mauerwerk, Naturstein und Kunststein

Materials:

for professional drilling in concrete, masonry, natural stone, etc.



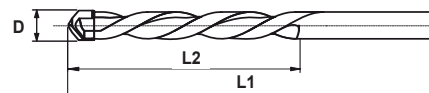
Werkzeug- und Industrietechnik

UNIVERSALBOHRER MULTIPURPOSE DRILLS

- Hartmetallplatte mit spezieller Schneidengeometrie für den universellen Einsatz

INFOBOX

- carbide-tip with special cutting edge geometry for drilling in various materials



Art.-Nr.: 3-18022

Ø D mm	Ø Zoll "	L1 mm	L2 mm	Art.-Nr.
4.0	5/32	75	40	3-18022
5.0	3/16	75	40	3-18022
6.0	15/64	85	50	3-18022
8.0	5/16	100	60	3-18022
10.0	3/8	120	80	3-18022
12.0	15/32	120	80	3-18022
14.0	9/16	150	90	3-18022



Sätze / Sets

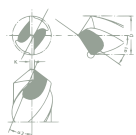
Ø mm	Art.-Nr.
5-6-8-10 mm	3-18022

Einsatzgebiete:

für moderne leichte Baustoffe wie z.B. Gasbeton, Gipskarton

Materials:

designed to drill in various modern light building materials like autoclaved aerated concrete, insulation materials, concrete, metal, wood and plastics



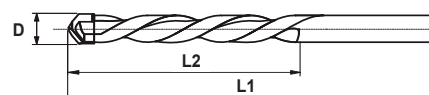
Werkzeug- und Industrietechnik

FLIESENBOHRER KERAMIK DIAMANT TILEDRLLS CERAMIC DIAMOND

- geschweißte Diamanten

INFOBOX

- welded Diamonds



Art.-Nr.: 3-18023

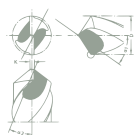
Ø D1 mm	Ø Zoll "	L1 mm	Ø D2 mm	Art.-Nr.
5.00	3/16	55	10	3-18023
6.00	15/64	55	10	3-18023
8.00	5/16	55	10	3-18023
10.00	3/8	55	10	3-18023
12.00	15/32	55	10	3-18023
15.00		55	10	3-18023
20.00	25/32	55	10	3-18023
25.00		55	10	3-18023

Einsatzgebiete:

in allen Dreh- und Schlagbohrmaschinen

Materials:

for all rotary- and percussion drilling machine



Werkzeug- und Industrietechnik



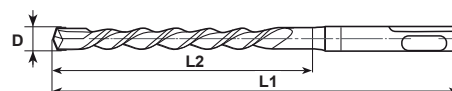
HAMMERBOHRER SDS-PLUS MS5

HAMMERDRILLS SDS-PLUS MS5

- mit besonders harter HM-Platte
- mit Zentrierspitze
- MS5 Spirale

INFOBOX

- with even harder carbide-quality
- with special centering-tip
- MS5 helix



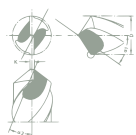
Art.-Nr.: 3-18320

Ø D mm	Ø Zoll "	L1 mm	L2 mm	Art.-Nr.
3.0	1/8	100	35	3-18320
3.5	9/64	100	35	3-18320
4.0	5/32	110	50	3-18320
4.0	5/32	160	100	3-18320
5.0	3/16	110	50	3-18320
5.0	3/16	145	80	3-18320
5.0	3/16	160	100	3-18320
5.0	3/16	210	150	3-18320
5.5	7/32	110	50	3-18320
5.5	7/32	160	100	3-18320
5.5	7/32	260	200	3-18320
6.0	15/64	110	50	3-18320
6.0	15/64	135	70	3-18320
6.0	15/64	160	100	3-18320
6.0	15/64	210	150	3-18320
6.0	15/64	260	200	3-18320
6.0	15/64	360	300	3-18320
6.0	15/64	460	400	3-18320
6.5	1/4	110	50	3-18320
6.5	1/4	160	100	3-18320
6.5	1/4	210	150	3-18320
6.5	1/4	260	200	3-18320
7.0	9/32	110	50	3-18320
7.0	9/32	160	100	3-18320
8.0	5/16	110	50	3-18320
8.0	5/16	160	100	3-18320
8.0	5/16	210	150	3-18320
8.0	5/16	260	200	3-18320
8.0	5/16	310	250	3-18320
8.0	5/16	460	400	3-18320
8.0	5/16	600	550	3-18320
9.0	11/32	160	100	3-18320
9.0	11/32	260	200	3-18320
10.0	3/8	110	50	3-18320
10.0	3/8	160	100	3-18320
10.0	3/8	210	200	3-18320

Ø D mm	Ø Zoll "	L1 mm	L2 mm	Art.-Nr.
10.0	3/8	260	200	3-18320
10.0	3/8	310	250	3-18320
10.0	3/8	360	300	3-18320
10.0	3/8	410	350	3-18320
10.0	3/8	460	400	3-18320
10.0	3/8	600	550	3-18320
10.0	3/8	950	1.000	3-18320
11.0	13/32	160	100	3-18320
11.0	13/32	260	200	3-18320
12.0	15/32	160	100	3-18320
12.0	15/32	210	150	3-18320
12.0	15/32	260	200	3-18320
12.0	15/32	310	250	3-18320
12.0	15/32	400	350	3-18320
12.0	15/32	450	400	3-18320
12.0	15/32	600	550	3-18320
12.0	15/32	1.000	950	3-18320
13.0	1/2	160	100	3-18320
13.0	1/2	260	200	3-18320
14.0	17/32	160	100	3-18320
14.0	17/32	210	150	3-18320
14.0	17/32	260	200	3-18320
14.0	17/32	310	250	3-18320
14.0	17/32	450	400	3-18320
14.0	17/32	600	550	3-18320
14.0	17/32	1.000	950	3-18320
15.0	17/32	160	100	3-18320
15.0	19/32	210	150	3-18320
15.0	19/32	260	200	3-18320
15.0	19/32	450	400	3-18320
16.0	39/64	160	100	3-18320
16.0	39/64	210	150	3-18320
16.0	39/64	260	200	3-18320
16.0	39/64	310	250	3-18320
16.0	39/64	400	350	3-18320
16.0	39/64	450	400	3-18320

Einsatzgebiete: zum Bohren in Mauerwerk, Stahlbeton, Natur- und Kunststein

Materials: for drilling of masonry, reinforced concrete, natural and artificial stone



Werkzeug- und Industrietechnik

Risto
Reparatur- und
Instandhaltung

HAMMERBOHRER SDS-PLUS MS5 HAMMERDRILLS SDS-PLUS MS5

- mit besonders harter HM-Platte
- mit Zentrierspitze
- MS5 Spirale

INFOBOX

- with even harder carbide-quality
- with special centering-tip
- MS5 helix



Art.-Nr.: 3-18320

Ø D mm	Ø Zoll "	L1 mm	L2 mm	Art.-Nr.
16.0	39/64	600	550	3-18320
16.0	39/64	800	750	3-18320
16.0	39/64	1.000	950	3-18320
17.0	21/32	210	150	3-18320
18.0	11/16	200	150	3-18320
18.0	11/16	300	250	3-18320
18.0	11/16	450	400	3-18320
18.0	11/16	600	550	3-18320
18.0	11/16	1000	950	3-18320
19.0	23/32	250	200	3-18320
19.0	23/32	450	400	3-18320
20.0	49/64	200	150	3-18320
20.0	49/64	300	250	3-18320
20.0	49/64	450	400	3-18320

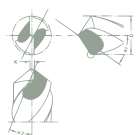
Ø D mm	Ø Zoll "	L1 mm	L2 mm	Art.-Nr.
20.0	49/64	600	550	3-18320
20.0	49/64	1000	950	3-18320
22.0	27/32	250	200	3-18320
22.0	27/32	450	400	3-18320
22.0	27/32	600	550	3-18320
22.0	27/32	1000	950	3-18320
24.0	59/64	250	200	3-18320
24.0	59/64	450	400	3-18320
25.0	31/32	250	200	3-18320
25.0	31/32	450	400	3-18320
25.0	31/32	1.000	950	3-18320
26.0	1"	160	100	3-18320
26.0	1"	250	200	3-18320
26.0	1"	450	400	3-18320

ANWENDUNGEN

ART.-NR.: 3-18320



Einsatzgebiete: zum Bohren in Mauerwerk, Stahlbeton, Natur- und Kunststein
Materials: for drilling of masonry, reinforced concrete, natural and artificial stone



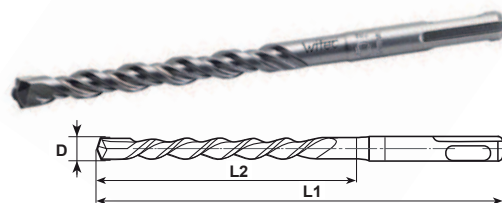
Werkzeug- und Industrietechnik



HAMMERBOHRER SDS-PLUS HAMMERDRILLS SDS-PLUS

- mit HM-Platte
- Spitzenwinkel 130°
- with carbide-plate
- point angle 130°

INFOBOX



Art.-Nr.: 3-18321

Ø D mm	Ø Zoll "	L1 mm	L2 mm	Art.-Nr.
4.0	5/32	110	50	3-18321
4.0	5/32	160	50	3-18321
5.0	3/16	110	50	3-18321
5.0	3/16	160	100	3-18321
5.0	3/16	210	150	3-18321
5.0	3/16	260	200	3-18321
5.0	3/16	310	250	3-18321
5.5	7/32	160	100	3-18321
6.0	15/64	110	50	3-18321
6.0	15/64	160	100	3-18321
6.0	15/64	210	150	3-18321
6.0	15/64	260	200	3-18321
6.0	15/64	310	250	3-18321
8.0	5/16	110	50	3-18321
8.0	5/16	160	100	3-18321
8.0	5/16	210	150	3-18321
8.0	5/16	260	200	3-18321
8.0	5/16	310	250	3-18321
8.0	5/16	400	350	3-18321
8.0	5/16	460	400	3-18321
10.0	3/8	110	50	3-18321
10.0	3/8	160	100	3-18321
10.0	3/8	210	150	3-18321
10.0	3/8	260	200	3-18321
10.0	3/8	310	250	3-18321
10.0	3/8	350	300	3-18321
10.0	3/8	450	400	3-18321
10.0	3/8	600	500	3-18321
12.0	15/32	160	100	3-18321
12.0	15/32	210	150	3-18321
12.0	15/32	260	200	3-18321
12.0	15/32	310	250	3-18321

Ø D mm	Ø Zoll "	L1 mm	L2 mm	Art.-Nr.
12.0	15/32	460	400	3-18321
12.0	15/32	600	550	3-18321
14.0	9/16	160	100	3-18321
14.0	9/16	210	150	3-18321
14.0	9/16	260	200	3-18321
14.0	9/16	310	250	3-18321
14.0	9/16	460	400	3-18321
14.0	9/16	610	550	3-18321
15.0	19/32	160	100	3-18321
15.0	19/32	260	200	3-18321
16.0	5/8	160	100	3-18321
16.0	5/8	210	150	3-18321
16.0	5/8	300	250	3-18321
16.0	5/8	450	400	3-18321
16.0	5/8	600	550	3-18321
18.0	11/16	200	150	3-18321
18.0	11/16	300	250	3-18321
18.0	11/16	450	400	3-18321
18.0	11/16	600	550	3-18321
20.0	25/32	200	150	3-18321
20.0	25/32	300	250	3-18321
20.0	25/32	450	400	3-18321
20.0	25/32	600	550	3-18321
22.0	7,8	250	200	3-18321
22.0	7,8	300	210	3-18321
22.0	7,8	450	400	3-18321
22.0	7,8	600	550	3-18321
24.0	59/64	250	200	3-18321
24.0	59/64	450	400	3-18321
25.0	31/32	250	200	3-18321
25.0	31/32	450	400	3-18321
26.0	1"	250	200	3-18321
26.0	1"	450	400	3-18321

Sätze(Kunststoff)/Sets(Plastic)

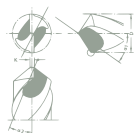
Ø D mm	Art.-Nr.
5/6x110 mm 6/8/10x160 mm	3-18321



Sätze(Metall)/Sets(Metal)

Ø D mm	Art.-Nr.
5/6/8x 110 mm 6/8/10/12x160 mm	3-18321





Werkzeug- und Industrietechnik

HAMMERBOHRER SDS-PLUS W2 X-FORM

HAMMERDRILL SDS-PLUS W2 X-FORM

- Kugelgestrahlt und zwischenstufengehärtet aus Chrom-Nickel-Molybdän-Stahl
- mit besonders harter HM-Platte
- mit Zentrierspitze
- 4 Schneiden mit W2 Spirale

INFOBOX

- shot-blasted with steel balls and hardened of chrome-nickel-molybdenum steel
- with even harder carbide plate
- with special centering-tip
- 4 cutters with W2 helix



Art.-Nr.: 3-18322

Ø D mm	Ø Zoll "	L1 mm	L2 mm	Art.-Nr.
16.0	5/8	250	200	3-18322
16.0	5/8	450	400	3-18322
18.0	11/16	250	200	3-18322
18.0	11/16	450	400	3-18322
20.0	3/4	250	200	3-18322
20.0	3/4	450	400	3-18322
22.0	7/8	450	400	3-18322
24.0	15/16	450	400	3-18322
25.0	1"	450	400	3-18322
28.0	1 1/8	450	400	3-18322
30.0	1 3/16	450	400	3-18322

ANWENDUNGEN

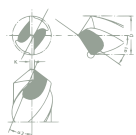
ART.-NR.: 3-18322

**Einsatzgebiete:**

für moderne leichte Baustoffe wie z.B. Gasbeton, Gipskarton

Materials:

designed to drill in various modern light building materials like autoclaved aerated concrete, insulation materials, concrete, metal, wood and plastics



Werkzeug- und Industrietechnik



HAMMERBOHRER SDS-PLUS MS5 TURBOHEAD XPRO

HAMMERDRILLS SDS-PLUS MS5 TURBOHEAD XPRO

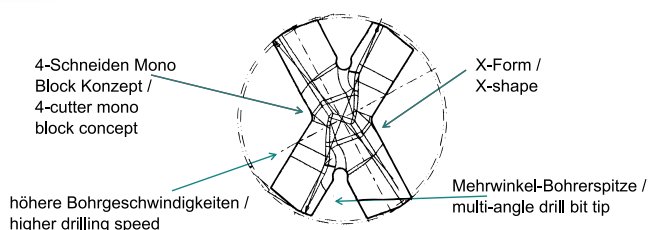
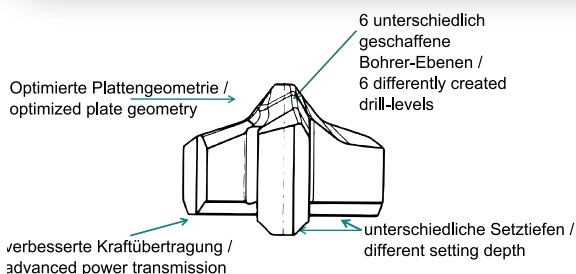
- Kugelgestrahlt und zwischenstufengehärtet aus Chrom-Nickel-Molybdän-Stahl
- MS5 Spirale mit 2 großvolumigen Wendeln und Zentrierspitze
- tiefenversetzte Vollhartmetallplatten
- Xpro Kopf mit 2x2 Schneidenkonzeption
- zylindrisches Bohrloch

INFOBOX

- shot-blasted with steel balls and hardened of chrome-nickel-molybdenum steel
- MS5 helix with 2 larger-volume flutes and centering-tip
- vertical displaced full-carbide plates
- Xpro head with 2x2 cutting-edge concept
- cylindrical drilling-hole



Art.-Nr.: 3-18323

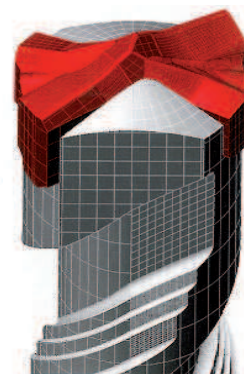


Ø D mm	Ø Zoll "	L1 mm	L2 mm	Art.-Nr.
5.0	3/16	110	50	3-18323
5.0	3/16	160	100	3-18323
5.0	3/16	210	150	3-18323
6.0	15/64	110	50	3-18323
6.0	15/64	160	100	3-18323
6.0	15/64	210	150	3-18323
6.0	15/64	260	200	3-18323
8.0	5/16	110	50	3-18323
8.0	5/16	160	100	3-18323
8.0	5/16	210	150	3-18323
8.0	5/16	260	200	3-18323
10.0	3/8	160	100	3-18323
10.0	3/8	210	150	3-18323

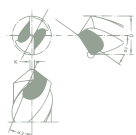
Ø D mm	Ø Zoll "	L1 mm	L2 mm	Art.-Nr.
10.0	3/8	260	200	3-18323
10.0	3/8	310	250	3-18323
10.0	3/8	460	400	3-18323
12.0	15/32	160	100	3-18323
12.0	15/32	210	150	3-18323
12.0	15/32	260	200	3-18323
12.0	15/32	310	250	3-18323
12.0	15/32	450	400	3-18323
14.0	17/32	160	100	3-18323
14.0	17/32	210	150	3-18323
14.0	17/32	260	200	3-18323
14.0	17/32	450	400	3-18323

ANWENDUNGEN

ART.-NR.: 3-18323



Einsatzgebiete: zum Bohren in Mauerwerk, Stahlbeton, Natur- und Kunststein
Materials: for drilling of masonry, reinforced concrete, natural and artificial stone



Werkzeug- und Industrietechnik

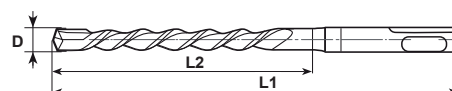
Risto
Reparatur- und
Instandhaltung

HAMMERBOHRER SDS-PLUS MS5 VARIO HAMMERDRILLS SDS-PLUS MS5 VARIO

- Kugelgestrahlt und zwischenstufengehärtet aus Chrom-Nickel-Molybdän-Stahl
- MS5 Spirale

INFOBOX

- shot-blasted with steel balls and hardened of chrome-nickel-molybdenum steel
- MS5 helix



Art.-Nr.: 18325

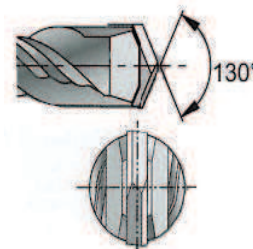
Ø D mm	Ø Zoll "	L1 mm	L2 mm	Art.-Nr.
5.0	3/16	110	50	3-18325
5.0	3/16	160	100	3-18325
6.0	15/64	110	50	3-18325
6.0	15/64	160	100	3-18325
6.0	15/64	210	150	3-18325
6.0	15/64	260	200	3-18325
8.0	5/16	110	50	3-18325
8.0	5/16	160	100	3-18325
8.0	5/16	210	150	3-18325
8.0	5/16	260	200	3-18325

Ø D mm	Ø Zoll "	L1 mm	L2 mm	Art.-Nr.
10.0	3/8	110	50	3-18325
10.0	3/8	160	100	3-18325
10.0	3/8	210	150	3-18325
10.0	3/8	260	200	3-18325
12.0	15/32	160	100	3-18325
12.0	15/32	210	150	3-18325
12.0	15/32	260	200	3-18325
14.0	17/32	160	100	3-18325
14.0	17/32	210	150	3-18325
14.0	17/32	260	200	3-18325

ANWENDUNGEN



ART.-NR.: 3-18325

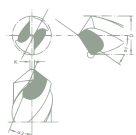


Einsatzgebiete:

für moderne leichte Baustoffe wie z.B. Gasbeton, Gipskarton

Materials:

designed to drill in various modern light building materials like autoclaved aerated concrete, insulation materials, concrete, metal, wood and plastics



Werkzeug- und Industrietechnik

HAMMERBOHRER SDS-TOP 2/4 SCHNEIDEN HAMMERDRILLS SDS-TOP 2/4 CUTTERS

- Kugelgestrahlt und zwischenstufengehärtet aus Chrom-Nickel-Molybdän-Stahl
 - mit besonders harter HM-Platte und Zentrierspitze
 - 2 Schneider mit MS5 Spirale bis 16 mm
 - 4 Schneider mit W Spirale ab 18 mm
- INFOBOX**
- shot-blasted with steel balls and hardened of chrome-nickel-molybdenum steel
 - with even harder carbide plate and centering tip
 - 2 cutter with MS5 helix up to 16 mm
 - 4 cutter with W helix from 18 mm



Art.-Nr.: 18326

Ø D mm	Ø Zoll "	L1 mm	L2 mm	Art.-Nr.
6.0	15/64	200	100	3-18326
6.0	15/64	300	200	3-18326
8.0	5/16	200	100	3-18326
8.0	5/16	300	200	3-18326
10.0	3/8	200	100	3-18326
10.0	3/8	300	200	3-18326
10.0	3/8	500	400	3-18326
12.0	15/32	300	200	3-18326
12.0	15/32	500	400	3-18326
12.0	15/32	600	500	3-18326
14.0	9/16	300	200	3-18326
14.0	9/16	500	400	3-18326
16.0	5/8	300	200	3-18326
16.0	5/8	500	400	3-18326

Ø D mm	Ø Zoll "	L1 mm	L2 mm	Art.-Nr.
18.0	11/16	300	200	3-18326
18.0	11/16	500	400	3-18326
20.0	3/4	300	200	3-18326
20.0	3/4	500	400	3-18326
22.0	7/8	300	200	3-18326
22.0	7/8	500	400	3-18326
24.0	15/16	300	200	3-18326
24.0	15/16	500	400	3-18326
25.0	1"	500	400	3-18326
28.0	1 1/8	300	200	3-18326
28.0	1 1/8	500	400	3-18326
30.0	1 3/16	550	450	3-18326
32.0	1 1/4	550	450	3-18326

ANWENDUNGEN

ART.-NR.: 3-18326

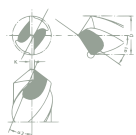


Einsatzgebiete:

für moderne leichte Baustoffe wie z.B. Gasbeton, Gipskarton

Materials:

designed to drill in various modern light building materials like autoclaved aerated concrete, insulation materials, concrete, metal, wood and plastics



Werkzeug- und Industrietechnik



HAMMERBOHRER SDS-MAX W2 X-FORM

HAMMERDRILLS SDS-MAX W2 X-FORM

- Kugelgestrahlt und zwischenstufengehärtet aus Chrom-Nickel-Molybdän-Stahl
- mit besonders harter HM-Platte und Zentrierspitze
- 2 Schneider bis 15 mm
- 4 Schneider ab 16 mm

INFOBOX

- shot-blasted with steel balls and hardened of chrome-nickel-molybdenum steel
- with even harder carbide plate and centering tip
- 2 cutter up to 15 mm
- 4 cutter from 16 mm



Art.-Nr.: 3-18820

Ø D mm	Ø Zoll "	L1 mm	L2 mm	Art.-Nr.
8.0	5/16	340	200	3-18820
10.0	3/8	340	200	3-18820
12.0	15/32	340	200	3-18820
12.0	15/32	540	400	3-18820
12.0	15/32	690	550	3-18820
14.0	9/16	340	200	3-18820
14.0	9/16	540	400	3-18820
15.0	19/32	340	200	3-18820
15.0	19/32	540	400	3-18820
16.0	5/8	340	200	3-18820
16.0	5/8	540	400	3-18820
16.0	5/8	940	800	3-18820
18.0	11/16	340	200	3-18820
18.0	11/16	540	400	3-18820
18.0	11/16	940	800	3-18820
20.0	3/4	320	200	3-18820
20.0	3/4	520	400	3-18820
20.0	3/4	920	800	3-18820
20.0	3/4	1.320	1.200	3-18820
22.0	7/8	320	200	3-18820
22.0	7/8	520	400	3-18820
22.0	7/8	920	800	3-18820
22.0	7/8	1.320	1.200	3-18820

Ø D mm	Ø Zoll "	L1 mm	L2 mm	Art.-Nr.
24.0	15/16	320	200	3-18820
24.0	15/16	520	400	3-18820
25.0	1"	320	200	3-18820
25.0	1"	520	400	3-18820
25.0	1"	920	800	3-18820
25.0	1"	1.320	1.200	3-18820
28.0	1 1/8	370	250	3-18820
28.0	1 1/8	570	450	3-18820
28.0	1 1/8	670	550	3-18820
30.0	1 3/16	370	250	3-18820
30.0	1 3/16	570	450	3-18820
32.0	1 1/4	370	250	3-18820
32.0	1 1/4	570	450	3-18820
32.0	1 1/4	920	800	3-18820
32.0	1 1/4	1.320	1.200	3-18820
35.0	1 3/8	370	250	3-18820
35.0	1 3/8	570	450	3-18820
35.0	1 3/8	670	550	3-18820
38.0	1 1/2	370	250	3-18820
38.0	1 1/2	570	450	3-18820
40.0	1 9/16	370	250	3-18820
40.0	1 9/16	570	450	3-18820
40.0	1 9/16	920	800	3-18820

ANWENDUNGEN

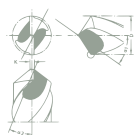
ART.-NR.: 3-18820

**Einsatzgebiete:**

zum Bohren in Mauerwerk, Stahlbeton, Natur- und Kunststein

Materials:

for drilling of masonry, reinforced concrete, natural and artificial stone



Werkzeug- und Industrietechnik

MEISSEL CHISELS

- Kugelgestrahlt und gehärtet
- aus hochwertigem Werkzeugstahl
- shot-blasted and hardened
- made of high-quality tool-steel

INFOBOX



Art.-Nr.: 3-18400

SDS-max

Meissel chisel	Länge/Breite Ø mm	Art.-Nr.
Spitzmeißel Point Chisel	280	3-18400
	400	3-18400
	600	3-18400
Flachmeißel Flat Chisel	280/25	3-18400
	400/25	3-18400
	600/25	3-18400
Spatmeißel Spade Chisel	400/50	3-18400
	300/80	3-18400
Hohlmeißel Hollow Chisel	300/26	3-18400

SDS-plus

Meissel chisel	Länge/Breite Ø mm	Art.-Nr.
Spitzmeißel Point Chisel	250	3-18400
Flachmeißel Flat Chisel	250/20	3-18400
Spatmeißel Spade Chisel	250/40	3-18400
Fliesenmeißel Hollow Chisel	200/40	3-18400
Hohlmeißel Tile Chisel	250/22	3-18400

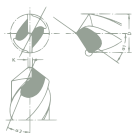
SDS-top

Meissel chisel	Länge/Breite Ø mm	Art.-Nr.
Spitzmeißel Point Chisel	270	3-18400
Flachmeißel Flat Chisel	270/20	3-18400
Spatmeißel Spade Chisel	250/40	3-18400

ANWENDUNGEN

ART.-Nr.: 3-18400





Werkzeug- und Industrietechnik



GLASBOHRER GLASS DRILL BIT

- mit spezieller nierenförmiger Hartmetallplatte
- zylindrischer Schaft
- galvanisiert

INFOBOX

- with special carbide-tip
- cylindrical shank
- galvanized



Art.-Nr.: 3-19922

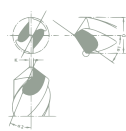
Ø D1 mm	Art.-Nr.
3.00	3-19922
4.00	3-19922
5.00	3-19922
6.00	3-19922
8.00	3-19922
10.00	3-19922
12.00	3-19922

Einsatzgebiete:

zum Bohren von Glass, Porzellan, Fliesen, Keramik, etc.

Materials:

special drills for glass, porcelain, tiles, ceramics, etc.

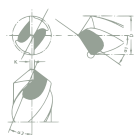


Werkzeug- und Industrietechnik



SENKWERKZEUGE COUNTERSINKING TOOLS

Art.-Nr.		Seite Page
3-18080-R	Kegel- und Engratsenker, HSS-Co5%, C, 90°, geschliffen, DIN 335 Countersink, HSS-Co5%, C, 90°, grinded, DIN 335	71
3-19080	Kegel- und Engratsenker, HSS, C, 90°, DIN 335 Countersink, HSS, C, 90°, DIN 335	72
3-19080 TiN	Kegel- und Engratsenker, HSS, C, 90°, TiN-Beschichtung, geschliffen, DIN 335 Countersink, HSS, C, 90°, TiN-Coating, grinded, DIN 335	72
3-19088	Kegel- und Engratsenker, HSS-Co5%, C, 90°, geschliffen, 4-Kant Schaft DIN 335 Countersink, HSS-Co5%, C, 90°, grinded, 4-square shank, DIN 335	73
3-19180	Stufenbohrer, HSS, witec-Norm Step Drill, HSS, witec-Norm	74
3-19180 TiN	Stufenbohrer, HSS, TiN-Beschichtung, witec-Norm Step Drill, HSS, TiN-Coating, witec-Norm	74
3-19280	Stufenblechschälbohrer, HSS-Co5%, witec-Norm Sheet Metall Step Drill, HSS-Co5%, witec-Norm	75
3-19380	Blechschälbohrer, HSS, witec-Norm Sheet Metall Drill, HSS, witec-Norm	76
3-19380 TiN	Blechschälbohrer, HSS, TiN-Beschichtung, witec-Norm Sheet Metall Drill, HSS, TiN-coating, witec-Norm	76
3-19480	Stufenblechschälbohrer, HSS-Co5%, witec-Norm Step Drill, HSS-Co5%, witec-Norm	77
3-19480 ATN	Stufenblechschälbohrer, HSS-Co5%, ATN-Beschichtung, witec-Norm Step Drill, HSS-Co5%, ATN-coating, witec-Norm	77
3-19481	Mehrbereichsblechschälbohrer mit Spirale, witec-Norm Multipurpose Sheet and Tube Drills, witec-Norm	78
3-19580	Blechschälbohrer mit Kreuzanschliff, HSS-Co, witec-Norm Sheet Metall Drill, with split point, HSS-Co, witec-Norm	79
3-19580 TiN	Kegel- und Entgratsenker mit Querloch, HSS, 90°, TiN-Beschichtung, witec-Norm Deburring Countersink with cross hole, HSS, 90°, TiN-Coating, witec-Norm	79
3-19680	Kegel- und Entgratsenker mit Querloch, HSS, 90°, witec-Norm Deburring Countersink with cross hole, HSS, 90°, witec-Norm	80



Werkzeug- und Industrietechnik



71

KEGEL- UND ENTGRATSENKER COUNTERSINKS

DIN 335

HSS-Co5%

C

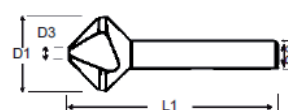
90°

GESCHLIFFEN
GRINDED

- Zylinderschaft
- 3 Schneiden
- blank

INFOBOX

- straight shank
- 3 flutes
- bright finished



Art.-Nr.: 3-18080-R

Ø D1 mm	D2 mm	D3 mm	L1 mm	Art.-Nr.
4,3	4,0	1,3	40	3-18080-R
5,0	4,0	1,3	40	3-18080-R
5,3	4,0	1,3	40	3-18080-R
5,8	5,0	1,5	45	3-18080-R
6,0	5,0	1,5	45	3-18080-R
6,3	5,0	1,5	45	3-18080-R
7,0	6,0	1,8	50	3-18080-R
7,3	6,0	1,8	50	3-18080-R
8,0	6,0	2,0	50	3-18080-R
8,3	6,0	2,0	50	3-18080-R
9,4	6,0	2,2	50	3-18080-R
10,0	6,0	2,5	50	3-18080-R
10,4	6,0	2,5	50	3-18080-R

Ø D1 mm	D2 mm	D3 mm	L1 mm	Art.-Nr.
11,5	8,0	2,8	56	3-18080-R
12,4	8,0	2,8	56	3-18080-R
13,4	8,0	2,8	56	3-18080-R
15,0	10,0	3,2	60	3-18080-R
16,5	10,0	3,2	60	3-18080-R
19,0	10,0	3,5	63	3-18080-R
20,5	10,0	3,5	63	3-18080-R
23,0	10,0	3,8	67	3-18080-R
25,0	10,0	3,8	67	3-18080-R
28,0	12,0	4,2	71	3-18080-R
30,0	12,0	4,2	71	3-18080-R
31,0	12,0	4,2	71	3-18080-R
40,0	15,0	5,0	80	3-18080-R



Sätze / Sets

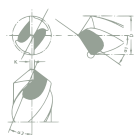
Ø mm	Art.-Nr.
6,3/8,3/10,4/ 12,4/16,5/20,5	3-19080-R

Einsatzgebiete:

in allen gängigen Industriematerialien

Materials:

for all common industrial materials



Werkzeug- und Industrietechnik



Risto
Reparatur- und
Instandhaltung

KEGEL- UND ENTGRATSENKER COUNTERSINKS

DIN 335

HSS

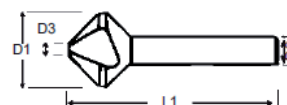
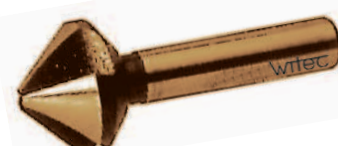
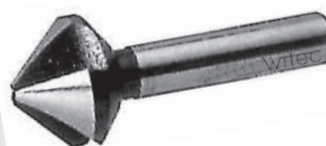
C

90°

GESCHLIFFEN
GRINDED

- Zylinderschaft
- 3 Schneiden
- blank oder TiN-Beschichtung
- straight shank
- 3 flutes
- bright finished or TiN-Coating

INFOBOX



Art.-Nr.: 19080 / 19080TiN

Ø D1 mm	D2 mm	D3 mm	L1 mm	Art.-Nr.
4,3	4,0	1,3	40	3-19080/TiN
5,0	4,0	1,3	40	3-19080/TiN
5,3	4,0	1,3	40	3-19080/TiN
5,8	5,0	1,5	45	3-19080/TiN
6,0	5,0	1,5	45	3-19080/TiN
6,3	5,0	1,5	45	3-19080/TiN
7,0	6,0	1,8	50	3-19080/TiN
7,3	6,0	1,8	50	3-19080/TiN
8,0	6,0	2,0	50	3-19080/TiN
8,3	6,0	2,0	50	3-19080/TiN
9,4	6,0	2,2	50	3-19080/TiN
10,0	6,0	2,5	50	3-19080/TiN
10,4	6,0	2,5	50	3-19080/TiN

Ø D1 mm	D2 mm	D3 mm	L1 mm	Art.-Nr.
11,5	8,0	2,8	56	3-19080/TiN
12,4	8,0	2,8	56	3-19080/TiN
13,4	8,0	2,8	56	3-19080/TiN
15,0	10,0	3,2	60	3-19080/TiN
16,5	10,0	3,2	60	3-19080/TiN
19,0	10,0	3,5	63	3-19080/TiN
20,5	10,0	3,5	63	3-19080/TiN
23,0	10,0	3,8	67	3-19080/TiN
25,0	10,0	3,8	67	3-19080/TiN
28,0	12,0	4,2	71	3-19080/TiN
30,0	12,0	4,2	71	3-19080/TiN
31,0	12,0	4,2	71	3-19080/TiN
40,0	15,0	5,0	80	3-19080/TiN



Sätze / Sets

Ø mm	Art.-Nr.
6,3/8,3/10,4/ 12,4/16,5/20,5	3-19080/TiN

Einsatzgebiete:

in allen gängigen Industriematerialien

Materials:

for all common industrial materials

KEGEL- UND ENTGRATSENKER COUNTERSINKS

DIN 335

HSS-Co5%

C

90°

GESCHLIFFEN
GRINDED

- 1/4" Sechskantaufnahme
- 3 Schneiden
- blank
- 1/4" 6-square-shank
- 3 flutes
- bright finished

INFOBOX



Art.-Nr.: 3-19088

blank / bright finished

Ø D1 mm	Ø D2 mm	Ø D3 mm	L1	Art.-Nr.
6,3	1/4"	1,5	45	3-19088
8,3	1/4"	2,0	50	3-19088
10,4	1/4"	2,5	50	3-19088
12,4	1/4"	2,8	56	3-19088
16,5	1/4"	3,2	60	3-19088
20,5	1/4"	3,5	63	3-19088
25,0	1/4"	3,8	67	3-19088
31,0	1/4"	4,2	71	3-19088

Material	
ALU 99,5% 35 E	Steel 55 HRC - -
ALU <10% Si 20 E	Steel 60 HRC - -
ALU Guss / Cast 12 E	Steel 65 HRC - -
Steel <500 N 15 E	Inox <900 N 6 Oel
Steel <750 N 12 E	Inox >900 N • Oel
Steel <900 N 10 E	Ti >800 N - -
Steel <1100 N • (E)Oel	GG (G) Cast 8 Air
Steel 45 HRC - -	Hardox Inconel - -



Sätze / Sets

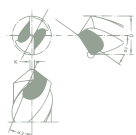
Ø mm	Art.-Nr.
6,3/8,3/10,4/ 12,4/16,5/20,5	3-19088

Einsatzgebiete:

in allen gängigen Industriematerialien

Materials:

for all common industrial materials



Werkzeug- und Industrietechnik



Risto
Reparatur- und
Instandhaltung

STUFENBOHRER STEP DRILLS

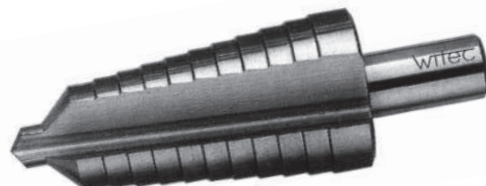
WITEC NORM

HSS

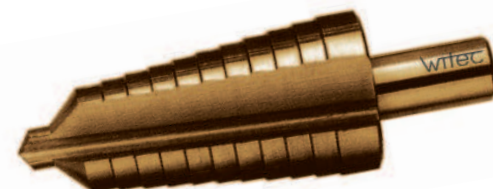
GESCHLIFFEN
GRINDED

- 2 Schneiden
- blank oder TiN Beschichtung
- double lipped
- bright finished or TiN coating

INFOBOX



Art.-Nr.: 3-19180



Art.-Nr.: 3-19180 TiN

blank / bright finished

Ø mm	Stufe step mm	Art.-Nr.
4-12	1	3-19180
4-20	2	3-19180
4-30	2	3-19180
6-30	2	3-19180
9-36	3	3-19180
12-20	1	3-19180
20-30	1	3-19180

TiN-beschichtet / TiN-coated

Ø mm	Stufe step mm	Art.-Nr.
4-12	1	3-19180TiN
4-20	2	3-19180TiN
4-30	2	3-19180TiN
6-30	2	3-19180TiN
9-36	3	3-19180TiN
12-20	1	3-19180TiN
20-30	1	3-19180TiN

Sätze / Sets

Größe size	Abm. diameter mm	Art.-Nr.
1,2,3	4-12/4-20/ 4-30	3-19180

*Sätze / Sets*

Größe size	Abm. diameter mm	Art.-Nr.
1,2,3	4-12/4-20/ 4-30	3-19180TiN

Einsatzgebiete:

zum Bohren von größeren Löchern in dünnwandigen Materialien sowie zum Aufbohren vorhandener Löcher in Stahlblech bis 2mm Dicke, NE-Metalle bis 5mm Dicke

Materials:

for drilling in thin materials like sheet-metal up to 2mm tickness

STUFENBLECHSCHÄLBOHRER STEP DRILLS DOUBLE LIPPED

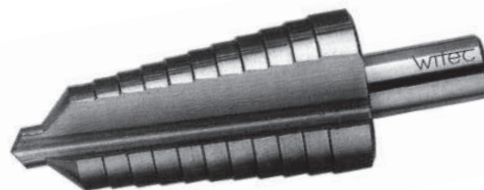
WITEC NORM

HSS-Co5%

GESCHLIFFENG
GRINDED

- 2 Schneiden
- mit Kreuzanschliff
- blank
- 2 cutters
- with split point
- bright finished

INFOBOX



Art.-Nr.: 3-19280

Ø mm	Stufe step mm	Art.-Nr.
4-12	1	3-19280
4-20	2	3-19280
6-30	2	3-19280

Sätze / Sets

Größe size	Abm. diameter mm	Art.-Nr.
1,2,3	4-12/4-20/ 4-30	3-19280

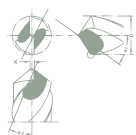


Einsatzgebiete:

zum Bohren von größeren Löchern in dünnwandigen Materialien sowie zum Aufbohren vorhandener Löcher in Stahlblech und Edelstahl bis 2mm Dicke, NE-Metalle bis 5mm Dicke

Materials:

for drilling in thin materials like sheet-metal up to 2mm tickness



Werkzeug- und Industrietechnik



Risto
Reparatur- und
Instandhaltung

BLECHSCHÄLBOHRER SHEET METALL DRILLS

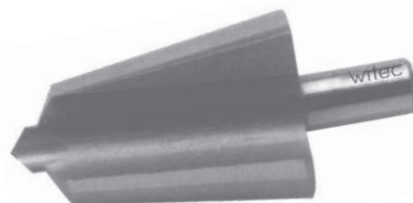
WITEC NORM

HSS

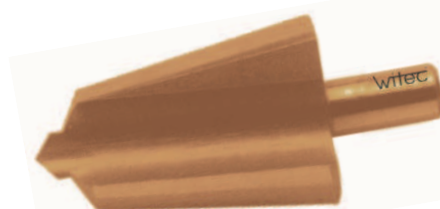
GESCHLIFFEN
GRINDED

- 2 Schneiden
- blank oder TiN Beschichtung
- double lipped
- bright finished or TiN coating

INFOBOX



Art.-Nr.: 3-19380



Art.-Nr.: 3-19380 TiN

blank / bright finished

Ø mm	Art.-Nr.
3-14	3-19380
5-20	3-19380
5-31	3-19380
16-30,5	3-19380
26-40	3-19380
36-50	3-19380
40-61	3-19380

TiN-beschichtet / TiN-coated

Ø mm	Art.-Nr.
3-14	3-19380TiN
5-20	3-19380TiN
16-30,5	3-19380TiN
6-30	3-19380TiN

Sätze / Sets

Ø mm	Art.-Nr.
3-14/5-20/16-30,5	3-19380

*Sätze / Sets*

Ø mm	Art.-Nr.
3-14/5-20/16-30,5	3-19380TiN

Einsatzgebiete:

zum Bohren von größeren Löchern in dünnwandigen Materialien wie Stahlblech, NE-Metalle etc

Materials:

for drilling in thin materials like sheet-metal, profiles, pipes etc.

STUFENBLECHSCHÄLBOHRER STEP DRILLS

WITEC NORM

HSS-Co5%

GESCHLIFFEN
GRINDED

- Spiralnuten
- Kreuzanschliff
- Entgratzone und Kantenbrecher
- blank oder ATN-Beschichtung

INFOBOX

- spiral flutes
- split-point
- edge breaker
- bright finished or ATN-coating



Art.-Nr.: 3-19480 / 3-19480 ATN



blank / bright finished

Gruppe/ Group	Ø mm	Bohrstufen drilling steps mm	L mm	Schank/ Shank mm	Art.-Nr.
1	4-12	1	80	6	3-19480/ATN
2	4-20	2	70	8	3-19480/ATN
3	6-30	2	98	10	3-19480/ATN
4	6-36	3	97	12	3-19480/ATN

Material	
ALU 99,5%	Steel 55 HRC
ALU <10% Si	Steel 60 HRC
ALU Guss / Cast	Steel 65 HRC
Steel <500 N	Inox <900 N
Steel <750 N	Inox >900 N
Steel <900 N	Ti >800 N
Steel <1100 N	GG (G) Cast
Steel 45 HRC	Hardox Inconel

Sätze / Sets

Ø mm	Art.-Nr.
4-12/4-20/6/30	3-19480/ATN

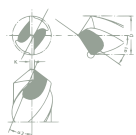


Einsatzgebiete:

für den Einsatz in Baustahl, CrNi-Stahl, NE-Metall

Materials:

to drill in structural steel, CrNi-Steel, non-ferrous metal



MEHRBEREICHSBLECHSCHÄLBOHRER SHEET AND TUBE MULTIPURPOSE DRILLS

WITEC NORM

HSS

GESCHLIFFEN
GRINDED

INFOBOX

- 2 Schneiden
- mit Spirale
- blank

- 2 cutters
- with helix
- bright finished



Art.-Nr.: 3-19481

blank / bright finished

Gruppe Group	Ø mm	L mm	Schaft/Shank mm	Art.-Nr.
1	4-14	80	6	3-19481
2	5-20	70	8	3-19481
3	5-31	98	10	3-19481

Sätze / Sets

Ø mm	Art.-Nr.
1-2-3	3-19481

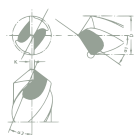
Material	
ALU 99,5% ●	Steel 55 HRC -
ALU <10% Si ●	Steel 60 HRC -
ALU Guss / Cast -	Steel 65 HRC -
Steel <500 N ●	Inox <900 N -
Steel <750 N ●	Inox >900 N -
Steel <900 N ○	Ti >800 N -
Steel <1100 N -	GG (G) Cast -
Steel 45 HRC -	Hardox Inconel -

Einsatzgebiete:

für den Einsatz in Baustahl, CrNi-Stahl, NE-Metall

Materials:

to drill in structural steel, CrNi-Steel, non-ferrous metal



Werkzeug- und Industrietechnik



KEGEL- UND ENTGRATSENKER MIT QUERLOCH DEBURRING COUNTERSINKS WITH CROSS HOLE

WITEC NORM

HSS

90°

GESCHLIFFEN
GRINDED

- Zylinderschaft
- rechtsschneidend
- blank oder TiN Beschichtung
- straight shank
- right hand cutting
- bright finished or TiN coating

INFOBOX



Art.-Nr.: 3-19580



Art.-Nr.: 3-19580 TiN

blank / bright finished

Ø mm	Ø - Ø mm	D2 mm	Art.-Nr.
5	2,0-5,0	6	3-19580
10	5,0-10,0	8	3-19580
15	10,0-15,0	10	3-19580
20	15,0-20,0	12	3-19580
25	20,0-25,0	12	3-19580
30	25,0-30,0	15	3-19580
35	30,0-35,0	15	3-19580
40	35,0-40,0	15	3-19580
50	40,0-50,0	20	3-19580

TiN-beschichtet / TiN-coated

Größe size	Ø mm	Art.-Nr.
1	2,0-5,0	3-19580TiN
2	5,0-10,0	3-19580TiN
3	10,0-15,0	3-19580TiN
4	15,0-20,0	3-19580TiN
5	20,0-25,0	3-19580TiN

Sätze / Sets

Ø mm	Ø - Ø mm	Art.-Nr.
5/10/15/20	2-5/5-10/ 10-15/15-20	3-19580

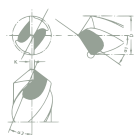


Einsatzgebiete:

zum Grat- und ratterfreien Entgraten. Ansenken und Versenken in einem Arbeitsgang.

Materials:

for countersinking free of chattering and burring.



Werkzeug- und Industrietechnik

Rista
Reparatur- und
Instandhaltung

BLECHSCHÄLBOHRER SHEET METALL DRILLS

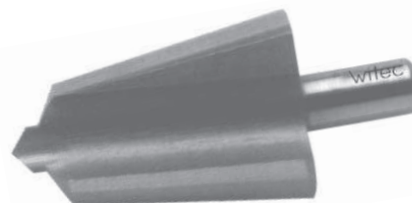
WITEC NORM

HSS-Co5%

GESCHLIFFEN
GRINDED

- 2 Schneiden
- blank
- double lipped
- bright finished

INFOBOX



Art.-Nr.: 3-19680

blank / bright finished

Ø mm	Art.-Nr.
3-14	3-19680
5-20	3-19680
5-31	3-19680
16-30,5	3-19680

Sätze / Sets

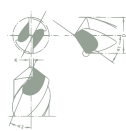
Ø mm	Art.-Nr.
3-14/5-20/16-30,5	3-19680

**Einsatzgebiete:**

für den Einsatz in Baustahl, CrNi-Stahl, NE-Metall

Materials:

to drill in structural steel, CrNi-Steel, non-ferrous metal

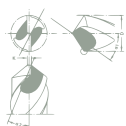


Werkzeug- und Industrietechnik

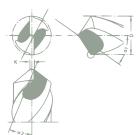


GEWINDESCHNEIDWERKZEUGE THREADING TOOLS

Art.-Nr.		Seite Page
3-20001	Gewindschneidwerkzeuge Satz, M3-M12 HSS, metrisch Threading Tools Set, M3-M12 HSS, metric	81
3-20001	Gewindschneidwerkzeuge Satz, M3-M20 HSS, metrisch Threading Tools Set, M3-M20 HSS, metric	81
3-20001	Gewindschneidwerkzeuge Satz, M3-M24 HSS, metrisch Threading Tools Set, M3-M24 HSS, metric	81
3-20002	Gewindschneidwerkzeuge Mf Satz, M3-M12 HSS, metrischfein Threading Tools Set, Mf M3-M12 HSS, metric fine	82
3-20002	Gewindschneidwerkzeuge Satz, Mf M6-M20 HSS, metrisch fein Threading Tools Set, Mf M6-M20 HSS, metric fine	82
3-20002	Gewindschneidwerkzeuge Satz, Mf M6-M24 HSS, metrischfein Threading Tools Set, Mf M6-M24 HSS, metric fine	82
3-20003	Gewindschneidwerkzeuge Satz, HSS G (BSP) Threading Tools Set, HSS G (BSP)	83
3-20003	Gewindschneidwerkzeuge Satz, HSS G (BSP) Threading Tools Set, HSS G (BSP)	83
3-20003	Gewindschneidwerkzeuge Satz, HSS G (BSP) Threading Tools Set, HSS G (BSP)	83
3-20004	Gewindschneidwerkzeuge Satz, M3-M20 HSS-Co, metrisch Threading Tools Set, M3-M20 HSS, metric	84
3-20010	Satz, M3-M12 HSS, metrisch Threading Tools Set, M3-M12 HSS, metric	84
3-20011	Gewindschneidwerkzeuge Satz, M3-M12 HSS, metrisch Threading Tools Set, M3-M12 HSS, metric	84
3-20101-R	Runde Schneideisen, HSS, metrischfein, EN 22568 B Round Solid Dies, HSS, metric fine, EN 22568 B	85
3-20102-R	Runde Schneideisen, HSS, metrisch, EN 22568 B Round Solid Dies, HSS, metric, EN 22568 B	86
3-20103-R	Runde Schneideisen, HSS G (BSP), Rohrgewinde, DIN 5158 Round Solid Dies, HSS G (BSP), Rohrgewinde, DIN 5158	87
3-20119-R	Runde Schneideisen, HSS, metrisch, EN 22568 B Round Solid Dies, HSS, metric, EN 22568 B	88
3-27001-R	Einschnittgewindebohrer, HSS, metrisch, DIN 352/B Machine Tap, HSS, metric, DIN 352/B	89
3-27002-R	Einschnittgewindebohrer, HSS-Co, metrisch, DIN 352/C 35° Machine Tap, HSS-Co, metric, DIN 352/C 35°	90
3-27003-R	Einschnittgewindebohrer, HSS G (BSP), metrisch, DIN 352/D Machine Tap, HSS G (BSP), metric, DIN 352/D	91
3-27004-R	Einschnittgewindebohrer, HSS G, metrischfein, DIN 2181/D Machine Tap, HSS G, metric fine, DIN 2181/D	92
3-21200	Handgewindebohrer, HSS, metrischfein, V/F, DIN 2181 Hand Tap, HSS, metric fine, 1/3, DIN 2181	93
3-22200	Handgewindebohrer, HSS, metrisch, V/M/F, DIN 352 Hand Tap, HSS, metric, 1/2/3, DIN 352	94



Art.-Nr.		Seite Page
3-23200	Handgewindebohrer, HSS G (BSP), Rohrgewinde, V/F, DIN 5157 Hand Tap, HSS G (BSP), Rohrgewinde, 1/3, DIN 5157	95
3-24010	Maschinengewindebohrer, HSS-Co, N, metrisch, DIN 371/B Machine Tap, HSS-Co, N, metric, DIN 371/B	96
3-24021	Maschinengewindebohrer, HSS-Co, N, metrisch, 35° RSP, DIN 371/C Machine Tap, HSS-Co, N, metric, 35° RSP, DIN 371/C	97
3-24100	Maschinengewindebohrer, HSS-Co, N, metrisch, DIN 376/B Machine Tap, HSS-Co, N, metric, DIN 376/B	98
3-24102	Maschinengewindebohrer, HSS-Co, N, metrisch, 35° RSP, DIN 376/C Machine Tap, HSS-Co, N, metric, 35° RSP, DIN 376/C	99
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3-25021	Maschinengewindebohrer, HSS, metrisch, 35° RSP, DIN 371/C Machine Tap, HSS, metric, 35° RSP, DIN 371/C	101
3-25100	Maschinengewindebohrer, HSS, metrisch, DIN 376/B Machine Tap, HSS, metric, DIN 376/B	102
3-25102	Maschinengewindebohrer, HSS, metrisch, 35° RSP, DIN 376/C Machine Tap, HSS, metric, 35° RSP, DIN 376/C	103



Werkzeug- und Industrietechnik

GEWINDESCHNEIDWERKZEUGE SÄTZE THREADING TOOLS SETS

SORTIMENTE / SETS

HSS

**METRISCH
METRIC**

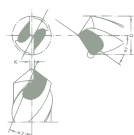
Sortiment / Set M3-M12	Art.-Nr.
Gewindeschneidwerkzeug- Sortiment in Metallkassette 2-27090 Handgewindebohrer DIN 352 HSS Satz 3-teilig M3 - M12 Schneideisen DIN 223 (DIN EN22568) 25x9 Schneideisenhalter DIN 225 verstellbares Windeisen DIN 1814 Gr. 1,5 Schraubenausdreher Threadingtool-assortment in metalbox hand taps DIN 352 HSS set in 3-pcs M3-M12 round solid dies DIN 223 (DIN EN 22568) 25x9 diestock DIN 225 adjustable wrench DIN 1814 No. 1,5, screw extractor	3-20001

Art.-Nr.: 3-20001



Sortiment / Set M3-M20	Art.-Nr.
Gewindeschneidwerkzeug- Sortiment in Stahlkassette 2-27090 handtaps DIN 352 HSS 3-teiliger Satz M3-M20 2-20102 Schneideisen DIN 223 (DIN EN 22568) verstellbare 2-90001 Windeisen DIN 1814 Nr.1+3 2-90002 Schneideisenhalter DIN 225 20x5, 20x7, 25x9, 30x11 38x14, 45x18, Ratsche Nr. 1+2 Threadingtool-assortment in metalbox hand taps DIN 352 HSS set in 3-pcs. M3-M20 round solid dies DIN 223 (DIN EN 22568) adjustable wrench DIN 1814 No. 1+3 die stock DIN 225, ratch No. 1+2	3-20001

Sortiment / Set M3-M24	Art.-Nr.
Gewindeschneidwerkzeug- Sortiment in Stahlkassette 2-27090 Handgewindebohrer DIN 352 HSS 3-teiliger Satz M3-M24 2-20102 Schneideisen DIN 223 (DIN EN 22568) verstellbare 3-90001 Windeisen DIN 1814 Nr.1+3 3-90002 Schneideisenhalter DIN 225 20x5, 20x7, 25x9, 30x11 38x14, 45x18, 55x22, Threadingtool-assortment in Metalbox hand taps DIN 352 HSS set in 3-pcs. M3-M24 round solid dies DIN 223 (DIN EN 22568) adjustable wrench DIN 1814 No. 1+3 die stock DIN 225	3-20001



Werkzeug- und Industrietechnik



GEWINDESCHNEIDWERKZEUGE SÄTZE THREADING TOOLS SETS

SORTIMENTE / SETS

HSS

METRISCHFEIN
METRIC FEIN

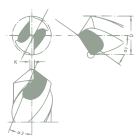
Sortiment / Set M3-M12	Art.-Nr.
2-27092 Handgewindebohrer DIN 2181 2-20101 Schneideisen DIN 223 (DIN EN 22568) Mf3x0,35-4x0,5-5x0,5-6x0,75-8x0,75, Mf 10x1-12x1,5 3-90001 verstellbare Windeisen DIN 1814 Nr. 1+2 3-90002 Schneideisenhalter DIN 225 (DIN EN 22568) 20x5-25x9-30x11-38x10 3-90003 Werkzeughalter mit Knarre rechts, links Nr. 1 Threadingtool-assortment metric fine in metalbox hand taps DIN 2181 round solid dies DIN 223 (DIN EN 22568) adjustable wrench DIN 1814 No. 1+2 die stock DIN 225 (DIN EN 22568) tap holder with wratches right/left	3-20002

Art.-Nr.: 3-20002

Sortiment / Set M6-M20	Art.-Nr.
2-27092 Handgewindebohrer DIN 2181 2-20101 Schneideisen DIN 223 (DIN EN 22568) Mf6x0,75-8x0,75-10x1-12x1-12x1,5-14x1,25 Mf 14x1,5-16x1,5-18x1,5-20x1,5 3-90001 verstellbare Windeisen DIN 1814 Nr. 1+3 3-90002 Schneideisenhalter DIN 225 (DIN EN 22568) 20x7-25x9-30x11-38x10-45x14 3-90003 Werkzeughalter mit Knarre rechts, links Nr. 1 Threadingtool-assortment metric fine in metalbox hand taps DIN 2181 round solid dies DIN 223 (DIN EN 22568) adjustable wrench DIN 1814 No. 1+2 die stock DIN 225 (DIN EN 22568) tap holder with wratches right/left	3-20002



Sortiment / Set M6-M24	Art.-Nr.
2-27092 Handgewindebohrer DIN 2181 2-20101 Schneideisen DIN 223 (DIN EN 22568) Mf6x0,75-8x0,75-8x1-10x1-12x1-12x1,5 Mf 14x1,25-14x1,5-16x1,5-18x1,5 Mf 20x1,5-24x1,5 3-90001 verstellbare Windeisen DIN 1814 Nr. 1+3 3-90002 Schneideisenhalter DIN 225 (DIN EN 22568) 20x7-25x9-30x11-38x10-45x14 3-90003 Werkzeughalter mit Knarre rechts, links Nr. 1 Threadingtool-assortment metric fine in Metalbox hand taps DIN 2181 round solid dies DIN 223 (DIN EN 22568) adjustable wrench DIN 1814 No. 1+2 die stock DIN 225 (DIN EN 22568) tap holder with wratches right/left	3-20002



Werkzeug- und Industrietechnik

GEWINDESCHNEIDWERKZEUGE SÄTZE THREADING TOOLS SETS

SORTIMENTE / SETS

HSS

G (BSP)

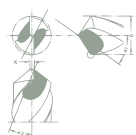
Art.-Nr.: 3-20003

<i>Sortiment / Sets G (BSP)</i>	<i>Art.-Nr.</i>
Handgewindebohrer / hand taps DIN 5157 G 1/8-1/4-3/8-1/2-3/4-1" Gewindeschneideisen / round solid dies DIN 5158 3-90001 vertellbare Windeisen / adjustable wrench DIN1814 Nr.1+3+5 3-90002 Schneideisenhalter / die stock DIN 225 30x11-38x10-45x14-55x16-65x18	3-20003

<i>Sortiment / Sets G (BSP)</i>	<i>Art.-Nr.</i>
Handgewindebohrer / hand tapsDIN 5157 G 1/8-1/4-3/8-1/2-5/8-3/4-7/8-1" Gewindeschneideisen / round solid dies DIN 5158 3-90001 vertellbare Windeisen / adjustable wrench DIN1814 Nr.1+3+5 3-90002 Schneideisenhalter / die stock DIN 225 30x11-38x10-45x14-55x16-65x18	3-20003



<i>Sortiment / Sets G (BSP)</i>	<i>Art.-Nr.</i>
Handgewindebohrer / hand taps DIN 5157 G 1/4-3/8-1/2-3/4-1"-1.1/4-1.1/2 Gewindeschneideisen / round solid dies DIN 5158 3-90001 vertellbare Windeisen / adjustable wrench DIN1814 Nr.2+4+7 3-90002 Schneideisenhalter / die stock DIN 225 38x10-45x14-55x16-65x18-75x20-90x22	3-20003



Werkzeug- und Industrietechnik

Risto
Reparatur- und
Instandhaltung

GEWINDESCHNEIDWERKZEUGE SÄTZE THREADING TOOLS SETS

SORTIMENTE / SETS

HSS / HSS-Co

METRISCH
METRIC

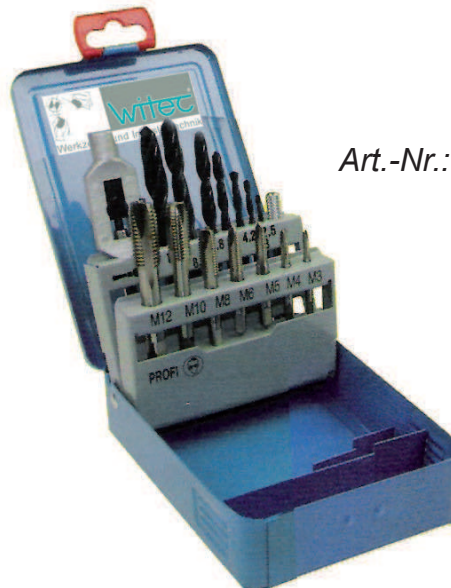
Sortiment / Set M3-M20 HSS-Co	Art.-Nr.
Gewindeschneidwerkzeug-Sortiment in Stahlkassette 2-27096 Handgewindebohrer DIN 352 HSS-E 3-teiliger Satz M3-M20 2-20110 Schneideisen DIN 223 (DIN EN 22568) 3-90001 verstellbare Windeisen DIN 1814 Nr. 1+3 3-90002 Schneideisenhalter DIN 225 20x5, 20x7, 25x9, 30x11, 38x14, 45x18 Ratsche Nr. 1+2 Threadingtool-assortment in metalbox DIN 352 HSS-E set in 3-pcs. M3-M20 round solid dies DIN 223 (DIN EN 22568) adjustable wrench DIN 1814 No. 1+3 die stock DIN 225 ratch No. 1+2	3-20004

Art.-Nr.: 3-20004



Sortiment / Set M3-M12 HSS	Art.-Nr.
Einschnittgewindebohrer in Metallkassette HSS DIN 352/B M3-M12 Kernlochspiralbohrer DIN 338 rollgewalzt verstellbares Windeisen DIN 1814 Gr 1,5 Machinetaps short in metalbox HSS DIN 352/B M3-M12 core jobber drills rolled adjustable wrench DIN 1814 No. 1,5	3-20010

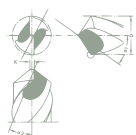
Art.-Nr.: 3-20010



Sortiment / Set M3-M12 HSS	Art.-Nr.
HSS-Handgewindebohrer DIN 352 je 1 Satz, 3tlg., M3 - M12 HSS-hand tap DIN 352 per 1 set, 3 pcs., M3 -M12	3-20011

Art.-Nr.: 3-20011





Werkzeug- und Industrietechnik

RUNDE SCHNEIDEISEN ROUND SOLID DIES

DIN 223 B

HSS

METRISCHFEIN
METRIC FEIN

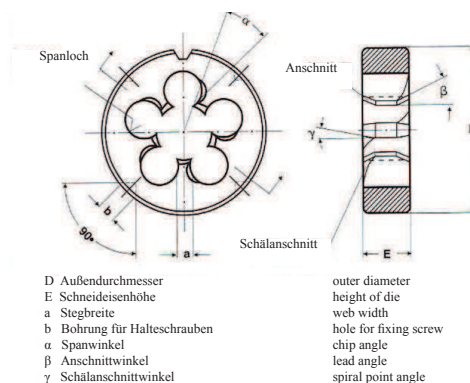
- metrisches ISO-Feingewinde DIN 13
- DIN EN 22568 (DIN 223B)
- metric ISO- fine thread DIN 13
- DIN EN 22568 (DIN 223B)

INFOBOX



Ø mm	Außen- Ø outside- Ø mm	Höhe height mm	Art.-Nr.
M6/0.75	20	7	3-20101-R
M8/0.75	25	9	3-20101-R
M8/1.00	25	9	3-20101-R
M10/1.00	30	11	3-20101-R
M10/1.25	30	11	3-20101-R
M12/1.00	38	10	3-20101-R
M12/1.25	38	10	3-20101-R
M12/1.50	38	10	3-20101-R
M14/1.00	38	10	3-20101-R
M14/1.25	38	10	3-20101-R
M14/1.50	38	10	3-20101-R
M16/1.50	45	14	3-20101-R
M18/1.50	45	14	3-20101-R
M20/1.50	45	14	3-20101-R
M22/1.50	55	16	3-20101-R
M24/1.50	55	16	3-20101-R

Art.-Nr.: 3-20101-R

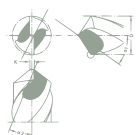


Einsatzgebiete:

für Außengewinde in Stählen bis 900 N/mm² Festigkeit, in langspanenden Werkstoffen

Materials:

for external threads in steels up to 900 N/mm² tensile strength, in longchipping materials



Werkzeug- und Industrietechnik

Risto
Reparatur- und
Instandhaltung

RUNDE SCHNEIDEISEN ROUND DIES

DIN 223

HSS

METRISCH
METRIC

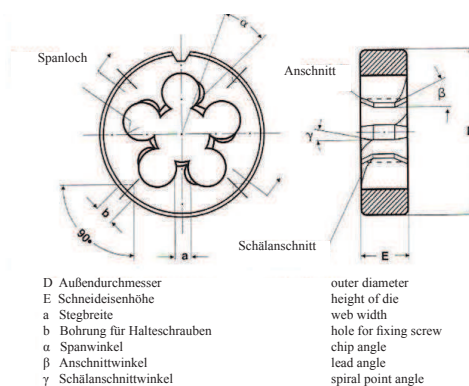
- metrisches ISO-Gewinde DIN 13
- DIN EN 22568 (DIN 223)
- metric ISO-thread DIN 13
- DIN EN 22568 (DIN 223)

INFOBOX



Art.-Nr.: 3-20102-R

Ø mm	Steigung increase mm	Außen- Ø outside- Ø mm	Höhe height mm	Art.-Nr.
M3	0,50	20	5	3-20102-R
M4	0,70	20	5	3-20102-R
M5	0,80	20	7	3-20102-R
M6	1,00	20	7	3-20102-R
M8	1,25	25	9	3-20102-R
M10	1,50	30	11	3-20102-R
M12	1,75	38	14	3-20102-R
M14	2,00	38	14	3-20102-R
M16	2,00	45	18	3-20102-R
M18	2,50	45	18	3-20102-R
M20	2,50	45	18	3-20102-R
M22	2,50	55	22	3-20102-R
M24	3,00	55	22	3-20102-R

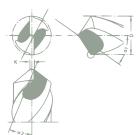


Einsatzgebiete:

für Außengewinde in Stählen bis 900 N/mm² Festigkeit, in langspanenden Werkstoffen

Materials:

for external threads in steels up to 900 N/mm² tensile strength, in longchipping materials



Werkzeug- und Industrietechnik

RUNDE SCHNEIDEISEN ROUND DIES

DIN 5158

HSS

G (BSP)

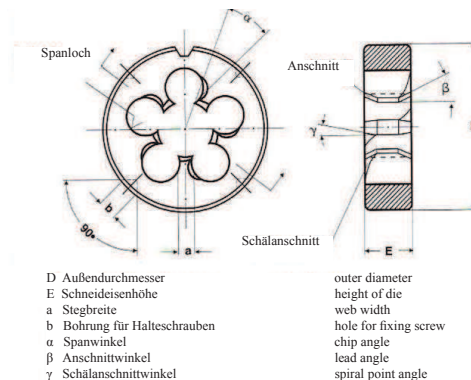
- Rohrgewinde ISO-Gewinde DIN 228
- DIN EN 24231 (DIN 5158)
- gas threads ISO-thread DIN 228
- DIN EN 24231 (DIN 5158)

INFOBOX



Art.-Nr.: 3-20103-R

Ø mm	Außen- Ø outside- Ø mm	Art.-Nr.
G 1/8x28	30x11	3-20103-R
G 1/4x19	38x10	3-20103-R
G 3/8x19	45x14	3-20103-R
G 1/2x14	45x14	3-20103-R
G 5/8x14	55x16	3-20103-R
G 3/4x14	55x16	3-20103-R
G 7/8x14	65x18	3-20103-R
G 1"x11	65x18	3-20103-R
G1 1/8x11	75x20	3-20103-R
G1 1/4x11	75x20	3-20103-R
G1 3/8x11	90x22	3-20103-R
G1 1/2x11	90x22	3-20103-R
G1 5/8x11	90x22	3-20103-R
G1 3/4x11	105x22	3-20103-R
G 2"x11	90x22	3-20103-R
G 2"x11	105x22	3-20103-R
G2 1/4x11	120x22	3-20103-R
G2 1/2x11	120x22	3-20103-R
G2 3/4x11	120x22	3-20103-R
G 3"x11	130x25	3-20103-R
G3 1/2x11	150x25	3-20103-R
G 4"x11	160x25	3-20103-R

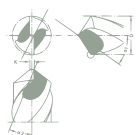


Einsatzgebiete:

für Außengewinde in Stählen bis 900 N/mm² Festigkeit, in langspanenden Werkstoffen

Materials:

for external threads in steels up to 900 N/mm² tensile strength, in longchipping materials



Werkzeug- und Industrietechnik

Risto
Reparatur- und
Instandhaltung

RUNDE SCHNEIDEISEN ROUND DIES

DIN 223

HSS

METRISCH
METRIC

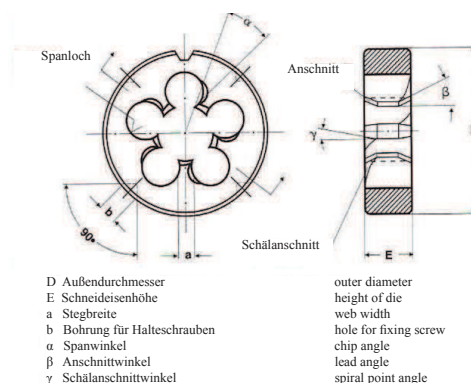
- metrisches ISO-Gewinde DIN 13
- DIN 223 (DIN EN 22568 B), Toleranz 6g
- metric ISO-thread DIN 13
- DIN 223 (DIN EN 22568 B), tolerance 6g

INFOBOX



Art.-Nr.: 3-20119-R

$\emptyset$ mm	Außen- $\emptyset$ outside- $\emptyset$ mm	Höhe height mm	Art.-Nr.
M3x0,50	25x9	5	3-20119-R
M4x0,70	25x9	5	3-20119-R
M5x0,80	25x9	7	3-20119-R
M6x1,00	25x9	7	3-20119-R
M8x1,25	25x9	9	3-20119-R
M10x1,50	25x9	11	3-20119-R
M12x1,75	25x9	22	3-20119-R

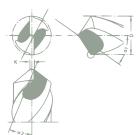


Einsatzgebiete:

für Außengewinde in gut zerspanbaren Werkstoffen bis 800 N/mm², unlegierten und niedriglegierten Stählen

Materials:

for external threads in well chipping steels up to 800 N/mm², alloyed and low alloyed steels



Werkzeug- und Industrietechnik

EINSCHNITTGEWINDEBOHRER MACHINE TAPS

DIN 352

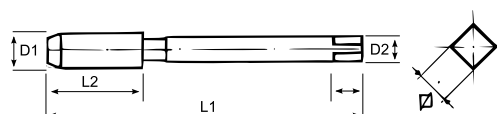
FORM B

HSS

METRISCH
METRIC

- metrisches ISO-Gewinde DIN 13
- mit Schälanschnitt Form B
- für Hand- und Maschineneinsatz
- metric ISO- fine thread DIN 13
- with spiral point form B
- for hand and machine tapping

INFOBOX



Art.-Nr.: 3-27001-R

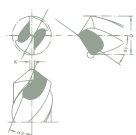
Ø D1 mm	Steigung increase mm	L1 mm	L2 mm	D2 mm	vkt. square mm	Art.-Nr.
M3	0,50	40	11	3,5	2,7	3-27001-R
M4	0,70	45	13	4,5	3,4	3-27001-R
M5	0,80	48	16	6,0	4,9	3-27001-R
M6	1,00	50	19	6,0	4,9	3-27001-R
M8	1,25	56	22	6,0	4,9	3-27001-R
M10	1,50	70	24	7,0	5,5	3-27001-R
M12	1,75	75	29	9,0	7,0	3-27001-R

Einsatzgebiete:

für Durchgangslöcher in Stählen bis 800 N/mm² Festigkeit

Materials:

for through holes in steels up to 800 N/mm² tensile strength



Werkzeug- und Industrietechnik

EINSCHNITTGEWINDEBOHRER MACHINE TAPS

DIN 352

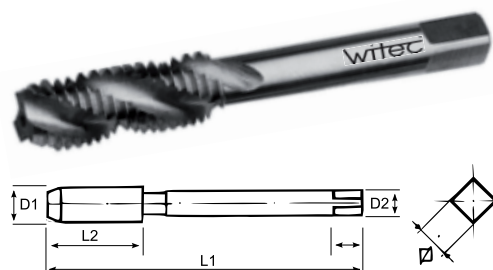
FORM C 35°

HSS-Co

METRISCH
METRIC

- metrisches ISO-Gewinde DIN 13
- Form C 35°
- für Hand- und Maschineneinsatz
- metric ISO- fine thread DIN 13
- form C 35°
- for hand and machine tapping

INFOBOX



Art.-Nr.: 3-27002-R

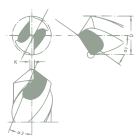
Ø D1 mm	Steigung increase mm	L1 mm	L2 mm	D2 mm	vkt. square mm	Art.-Nr.
M3	0,50	40	11	3,5	2,7	3-27002-R
M4	0,70	45	13	4,5	3,4	3-27002-R
M5	0,80	48	16	6,0	4,9	3-27002-R
M6	1,00	50	19	6,0	4,9	3-27002-R
M8	1,25	56	22	6,0	4,9	3-27002-R
M10	1,50	70	24	7,0	5,5	3-27002-R
M12	1,75	75	29	9,0	7,0	3-27002-R

Einsatzgebiete:

für Durchgangsgewinde und Sacklochgewinde in Stählen bis 800 N/mm² Festigkeit

Materials:

for through holes and blind holes in steels up to 800 N/mm² tensile strength



Werkzeug- und Industrietechnik

EINSCHNITTGEWINDEBOHRER MACHINE TAPS

DIN 5157

FORM D

HSS-G

G / (BSP)

- G / (BSP) ISO-Gewinde DIN 5157
- Form D
- für Hand- und Maschineneinsatz
- G / (BSP) ISO thread DIN 5157
- form D
- for hand and machine tapping

INFOBOX



Art.-Nr.: 3-27003-R

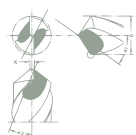
Ø D1 mm	Steigung increase mm	L1 mm	L2 mm	D2 mm	vkt. square mm	Art.-Nr.
G 1/8	28	63	20	7	5,5	3-27003-R
G 1/4	19	70	22	11	9,0	3-27003-R
G 3/8	19	70	22	12	9,0	3-27003-R
G 1/2	14	80	22	16	12,0	3-27003-R
G 3/4	14	90	22	20	16,0	3-27003-R
G 1"	11	100	25	25	20,0	3-27003-R
G1.1/4	11	125	40	32	24,0	3-27003-R
G1.1/2	11	140	40	36	29,0	3-27003-R
G1.3/4	11	140	40	40	32,0	3-27003-R
G 2"	11	160	40	45	35,0	3-27003-R
G2.1/4	11	160	40	50	39,0	3-27003-R
G2.1/2	11	160	40	50	39,0	3-27003-R
G2.3/4	11	160	40	50	39,0	3-27003-R
G 3"	11	160	40	50	39,0	3-27003-R
G3.1/2	11	180	45	56	44,0	3-27003-R
G 4"	11	180	45	56	44,0	3-27003-R

Einsatzgebiete:

für Durchgangsgewinde und Sacklochgewinde in Stählen bis 800 N/mm² Festigkeit

Materials:

for through holes and blind holes in steels up to 800 N/mm² tensile strength



Werkzeug- und Industrietechnik



Rista
Reparatur- und
Instandhaltung

EINSCHNITTGEWINDEBOHRER MACHINE TAPS

DIN 2181

FORM D

HSS-G

METRISCHFEIN
METRIC FINE

- metrisch ISO-Feingewinde DIN 13
- mit Schälanschnitt Form D
- für Hand- und Maschineneinsatz
- metric ISO- fine thread DIN 13
- with spiral point form D
- for hand and machine tapping

INFOBOX



Art.-Nr.: 3-27004-R

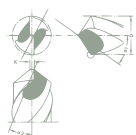
Ø D1 mm	Steigung increase mm	L1 mm	L2 mm	D2 mm	vkt. square mm	Art.-Nr.
M6	0,75	50	14	6,0	4,9	3-27004-R
M8	0,75	50	19	6,0	4,9	3-27004-R
M8	1,00	56	22	6,0	4,9	3-27004-R
M9	0,75	56	19	7,0	5,5	3-27004-R
M9	1,00	63	20	7,0	5,5	3-27004-R
M10	0,75	63	20	7,0	5,5	3-27004-R
M10	1,00	63	20	7,0	5,5	3-27004-R
M10	1,25	70	24	7,0	5,5	3-27004-R
M12	1,00	70	22	9,0	7,0	3-27004-R
M12	1,25	70	22	9,0	7,0	3-27004-R
M12	1,50	70	22	9,0	7,0	3-27004-R
M13	1,00	70	22	11,0	9,0	3-27004-R
M13	1,50	70	22	11,0	9,0	3-27004-R
M14	1,00	70	22	11,0	9,0	3-27004-R
M14	1,25	70	22	11,0	9,0	3-27004-R
M14	1,50	70	22	11,0	9,0	3-27004-R
M15	1,50	70	22	12,0	9,0	3-27004-R
M16	1,50	70	22	12,0	9,0	3-27004-R
M18	1,00	80	22	14,0	11,0	3-27004-R
M18	1,50	80	22	14,0	11,0	3-27004-R
M20	1,50	80	22	16,0	12,0	3-27004-R
M20	2,00	80	22	16,0	12,0	3-27004-R
M22	1,50	80	22	18,0	14,5	3-27004-R
M22	2,00	80	22	18,0	14,5	3-27004-R
M24	1,50	90	22	18,0	14,5	3-27004-R
M24	2,00	90	22	18,0	14,5	3-27004-R
M25	1,50	90	22	18,0	14,5	3-27004-R
M26	1,50	90	22	18,0	14,5	3-27004-R
M27	1,50	90	22	20,0	16,0	3-27004-R
M28	1,50	90	22	20,0	16,0	3-27004-R
M30	1,50	90	22	22,0	18,0	3-27004-R
M30	2,00	90	22	22,0	18,0	3-27004-R
M32	1,50	90	22	22,0	18,0	3-27004-R

Einsatzgebiete:

für Durchgangsgewinde und Sacklochgewinde in Stählen bis 800 N/mm² Festigkeit

Materials:

for through holes and blind holes in steels up to 800 N/mm² tensile strength



Werkzeug- und Industrietechnik

HANDGEWINDEBOHRER HAND TAPS

DIN 2181

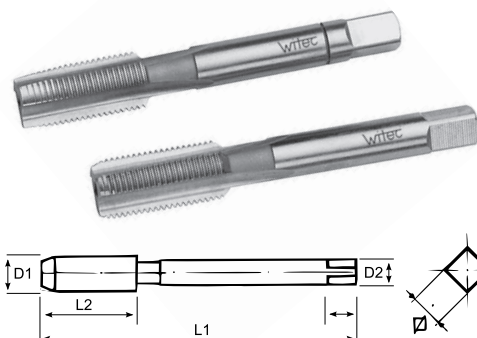
HSS

**METRISCHFEIN
METRIC FINE**

**V, F
1, 3**

- metrisches ISO-Feingewinde DIN 13
- Sätze bestehend aus:
Vor- und Fertigschneider
- metric ISO- fine thread DIN 13
- sets consisting of:
first taper tap and bottoming tap

INFOBOX



Art.-Nr.: 3-21200

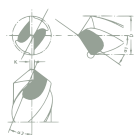
Ø D1 mm	L1 mm	L2 mm	D2 mm	vkt./square mm	Art.-Nr.
M6/0.75	50	14	6,0	4,9	3-21200
M8/0.75	50	19	6,0	4,9	3-21200
M8/1.00	56	22	6,0	4,9	3-21200
M10/1.00	63	20	7,0	5,5	3-21200
M10/1.25	70	24	7,0	5,5	3-21200
M12/1.00	70	22	8,0	7,0	3-21200
M12/1.25	70	22	9,0	7,0	3-21200
M12/1.50	70	22	9,0	7,0	3-21200
M14/1.25	70	22	11,0	9,0	3-21200
M14/1.50	70	22	11,0	9,0	3-21200
M16/1.50	70	22	12,0	9,0	3-21200
M18/1.50	80	22	14,0	11,0	3-21200
M20/1.50	80	22	16,0	12,0	3-21200
M22/1.50	80	22	18,0	14,5	3-21200
M24/1.50	90	22	18,0	14,5	3-21200

Einsatzgebiete:

für Durchgangsgewinde und Sacklochgewinde in Stählen bis 900 N/mm² Festigkeit

Materials:

for through holes and blind holes in steels up to 900 N/mm² tensile strength



Werkzeug- und Industrietechnik

Risto
Reparatur- und
Instandhaltung

HANDGEWINDEBOHRER HAND TAPS

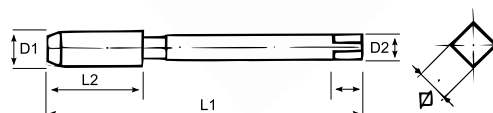
DIN 352

HSS

METRISCH
METRICV, M, F
1, 2, 3

- metrisches ISO-Gewinde DIN 13
- Sätze bestehend aus:
Vor-, Mittel- und Fertigschneider
- metric ISO- fine thread DIN 13
- sets consisting of:
first taper tap, second tap and bottoming tap

INFOBOX



Art.-Nr.: 3-22200

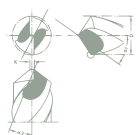
Ø D1 mm	Steigung increase mm	L1 mm	L2 mm	D2 mm	vkt. square mm	Art.-Nr.
M3	0,50	40	11	3,5	2,7	3-22200
M4	0,70	45	13	4,5	3,4	3-22200
M5	0,80	50	16	6,0	4,9	3-22200
M6	1,00	50	19	6,0	4,9	3-22200
M8	1,25	56	22	6,0	4,9	3-22200
M10	1,50	70	24	7,0	5,5	3-22200
M12	1,75	75	29	9,0	7,0	3-22200
M14	2,00	80	30	11,0	9,0	3-22200
M16	2,00	80	32	12,0	9,0	3-22200
M18	2,50	95	40	14,0	11,0	3-22200
M20	2,50	95	40	16,0	12,0	3-22200
M22	2,50	100	40	18,0	14,5	3-22200
M24	3,00	110	50	18,0	14,5	3-22200

Einsatzgebiete:

für Durchgangsgewinde und Sacklochgewinde in Stählen bis 900 N/mm² Festigkeit

Materials:

for through holes and blind holes in steels up to 900 N/mm² tensile strength



Werkzeug- und Industrietechnik

HANDGEWINDEBOHRER HAND TAPS

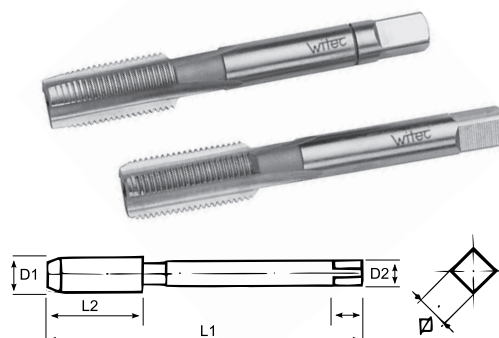
DIN 5157

HSS

G (BSP)

V, F
1, 3

- INFOBOX**
- HSS G (BSP) ISO-Gewinde DIN 228
 - Sätze bestehend aus:
Vor- und Fertigschneider for Rohrgewinde
 - HSS G (BSP) ISO- fine thread DIN 228
 - sets consisting of:
first taper tap and bottoming tap for pipe threads



Art.-Nr.: 3-23200

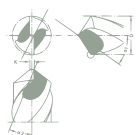
Ø D1 mm	Steigung increase mm	L1 mm	L2 mm	D2 mm	vkt. square mm	Art.-Nr.
G 1/8	28	63	20	7	5.5	3-23200
G 1/4	19	70	22	11	9.0	3-23200
G 3/8	19	70	22	12	9.0	3-23200
G 1/2	14	80	22	16	12.0	3-23200
G 5/8	14	80	22	18	14.5	3-23200
G 3/4	14	90	22	20	16.0	3-23200
G 7/8	14	90	22	22	18.0	3-23200
G 1"	11	100	25	25	20.0	3-23200
G1.1/8	11	125	40	28	22.0	3-23200
G1.1/4	11	125	40	32	24.0	3-23200
G1.3/8	11	140	40	36	29.0	3-23200
G1.1/2	11	140	40	36	29.0	3-23200
G1.5/8	11	140	40	40	32.0	3-23200
G1.3/4	11	140	40	40	32.0	3-23200
G 2"	11	160	40	45	35.0	3-23200
G2.1/4	11	160	40	50	39.0	3-23200
G2.1/2	11	160	40	50	39.0	3-23200
G2.3/4	11	160	40	50	39.0	3-23200
G 3"	11	160	40	50	39.0	3-23200
G3.1/2	11	180	45	56	44.0	3-23200
G 4"	11	180	45	56	44.0	3-23200

Einsatzgebiete:

für Durchgangsgewinde und Sacklochgewinde in Stählen bis 900 N/mm² Festigkeit

Materials:

for through holes and blind holes in steels up to 900 N/mm² tensile strength



Werkzeug- und Industrietechnik

MASCHINENGEWINDEBOHRER

MACHINE TAPS

DIN 371

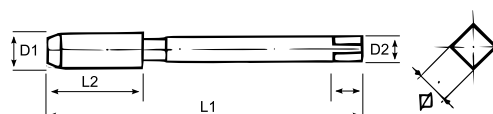
FORM B

HSS-Co

METRISCH
METRIC

- metrisches ISO-Gewinde DIN 13
- mit Schälanschnitt Form B
- mit verstärktem Schaft
- metric ISO- fine thread DIN 13
- with spiral point form B
- with reinforced shank

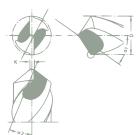
INFOBOX



Art.-Nr.: 3-24010

Ø D1 mm	Steigung increase mm	L1 mm	L2 mm	D2 mm	vkt. square mm	Art.-Nr.
M3	0,50	56	11	3,5	2,7	3-24101
M4	0,70	63	13	4,5	3,4	3-24101
M5	0,80	70	16	6,0	4,9	3-24101
M6	1,00	80	19	6,0	4,9	3-24101
M8	1,25	90	22	8,0	6,2	3-24101
M10	1,50	100	24	10,0	8,0	3-24101

Einsatzgebiete:für Durchgangslöcher in Stählen bis 900 N/mm² Festigkeit, in langspanenden Werkstoffen**Materials:**for through holes in steels up to 900 N/mm² tensile strength, in longchipping materials



Werkzeug- und Industrietechnik

MASCHINENGEWINDEBOHRER MACHINE TAPS

DIN 371

FORM C

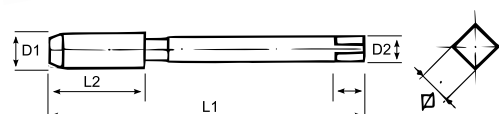
35°

HSS-Co

METRISCH
METRIC

- metrisches ISO-Gewinde DIN 13
- rechtsgenutet 35° Form C
- mit verstärktem Schaft
- metric ISO- fine thread DIN 13
- with 35° spiral flutes form C
- with reinforced shank

INFOBOX



Art.-Nr.: 3-24021

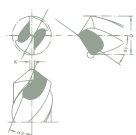
Ø D1 mm	Steigung increase mm	L1 mm	L2 mm	D2 mm	vkt. square mm	Art.-Nr.
M3	0,50	56	11	3,5	2,7	3-24021
M4	0,70	63	13	4,5	3,4	3-24021
M5	0,80	70	16	6,0	4,9	3-24021
M6	1,00	80	19	6,0	4,9	3-24021
M8	1,25	90	22	8,0	6,2	3-24021
M10	1,50	100	24	10,0	8,0	3-24021

Einsatzgebiete:

für Durchgangsgewinde und Sacklochgewinde in Stählen bis 1000 N/mm² Festigkeit, in langspanenden Werkstoffen

Materials:

for through holes and blind holes in steels up to 1000 N/mm² tensile strength, in longchipping materials



Werkzeug- und Industrietechnik

MASCHINENGEWINDEBOHRER

MACHINE TAPS

DIN 376

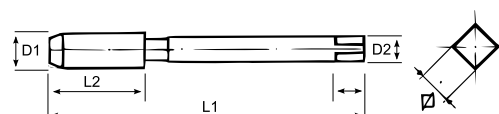
FORM B

HSS-Co

METRISCH
METRIC

- metrisches ISO-Gewinde DIN 13
- mit Schälanschnitt Form B
- metric ISO- fine thread DIN 13
- with spiral point form B

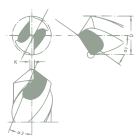
INFOBOX



Art.-Nr.: 3-24100

Ø D1 mm	Steigung increase mm	L1 mm	L2 mm	D2 mm	vkt. square mm	Art.-Nr.
M3	0,50	56	11	2,2	-	3-24100
M4	0,70	63	13	2,8	2,1	3-24100
M5	0,80	70	16	3,5	2,7	3-24100
M6	1,00	80	19	4,5	3,4	3-24100
M8	1,25	90	22	6,0	4,9	3-24100
M10	1,50	100	24	7,0	5,5	3-24100
M12	1,75	110	29	9,0	7,0	3-24100
M14	2,00	110	30	11,0	9,0	3-24100
M16	2,00	110	32	12,0	9,0	3-24100
M18	2,50	125	34	14,0	11,0	3-24100
M20	2,50	140	34	16,0	12,0	3-24100
M22	2,50	140	34	18,0	14,5	3-24100
M24	3,00	160	38	18,0	14,5	3-24100

Einsatzgebiete:für Durchgangslöcher in Stählen bis 900 N/mm² Festigkeit, in langspanenden Werkstoffen**Materials:**for through holes in steels up to 900 N/mm² tensile strength, in longchipping materials



Werkzeug- und Industrietechnik

MASCHINENGEWINDEBOHRER MACHINE TAPS

DIN 376

FORM C

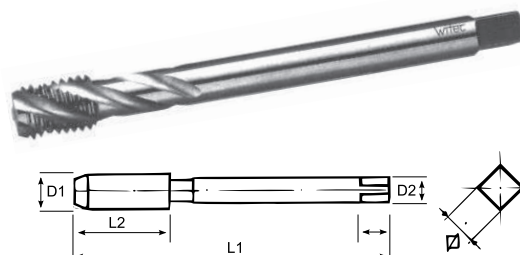
35°

HSS-Co

METRISCH
METRIC

- metrisches ISO-Gewinde DIN 13
- rechtsgenutet 35° Form C
- metric ISO- fine thread DIN 13
- with 35° spiral flutes form C

INFOBOX



Art.-Nr.: 3-24102

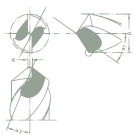
Ø D1 mm	Steigung increase mm	L1 mm	L2 mm	D2 mm	vkt. square mm	Art.-Nr.
M3	0,50	56	11	2,2	-	3-24102
M4	0,70	63	13	2,8	2,1	3-24102
M5	0,80	70	16	3,5	2,7	3-24102
M6	1,00	80	19	4,5	3,4	3-24102
M8	1,25	90	22	6,0	4,9	3-24102
M10	1,50	100	24	7,0	5,5	3-24102
M12	1,75	110	29	9,0	7,0	3-24102
M14	2,00	110	30	11,0	9,0	3-24102
M16	2,00	110	32	12,0	9,0	3-24102
M18	2,50	125	34	14,0	11,0	3-24102
M20	2,50	140	34	16,0	12,0	3-24102
M22	2,50	140	34	18,0	14,5	3-24102
M24	3,00	160	38	18,0	14,5	3-24102

Einsatzgebiete:

für Durchgangsgewinde und Sacklochgewinde in Stählen bis 1000 N/mm² Festigkeit,
in langspanenden Werkstoffen

Materials:

for through holes and blind holes in steels up to 1000 N/mm² tensile strength, in longchipping materials



Werkzeug- und Industrietechnik

MASCHINENGEWINDEBOHRER

MACHINE TAPS

DIN 371

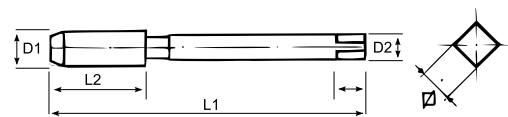
FORM B

HSS

METRISCH
METRIC

- metrisches ISO-Gewinde DIN 13
- mit Schälanschnitt Form B
- mit verstärktem Schaft
- metric ISO- fine thread DIN 13
- with spiral point form B
- with reinforced shank

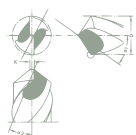
INFOBOX



Art.-Nr.: 3-25010

Ø D1 mm	Steigung increase mm	L1 mm	L2 mm	D2 mm	vkt. square mm	Art.-Nr.
M3	0,50	56	11	3,5	2,7	3-25010
M4	0,70	63	13	4,5	3,4	3-25010
M5	0,80	70	16	6,0	4,9	3-25010
M6	1,00	80	19	6,0	4,9	3-25010
M8	1,25	90	22	8,0	6,2	3-25010
M10	1,50	100	24	10,0	8,0	3-25010

Einsatzgebiete:für Durchgangslöcher in Stählen bis 800 N/mm² Festigkeit, in langspanenden Werkstoffen**Materials:**for through holes in steels up to 800 N/mm² tensile strength, in longchipping materials



Werkzeug- und Industrietechnik



MASCHINENGEWINDEBOHRER MACHINE TAPS

DIN 371

FORM C

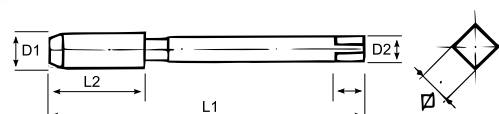
35°

HSS

METRISCH
METRIC

- metrisches ISO-Gewinde DIN 13
- rechtsgenutet 35° Form C
- mit verstärktem Schaft
- metric ISO- fine thread DIN 13
- with 35° spiral flutes form C
- with reinforced shank

INFOBOX



Art.-Nr.: 3-25021

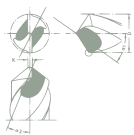
Ø D1 mm	Steigung increase mm	L1 mm	L2 mm	D2 mm	vkt. square mm	Art.-Nr.
M3	0,50	56	11	3,5	2,7	3-25021
M4	0,70	63	13	4,5	3,4	3-25021
M5	0,80	70	16	6,0	4,9	3-25021
M6	1,00	80	19	6,0	4,9	3-25021
M8	1,25	90	22	8,0	6,2	3-25021
M10	1,50	100	24	10,0	8,0	3-25021

Einsatzgebiete:

für Durchgangsgewinde und Sacklochgewinde in Stählen bis 800 N/mm² Festigkeit, in langspanenden Werkstoffen

Materials:

for through holes and blind holes in steels up to 800 N/mm² tensile strength, in longchipping materials



Werkzeug- und Industrietechnik

MASCHINENGEWINDEBOHRER MACHINE TAPS

DIN 376

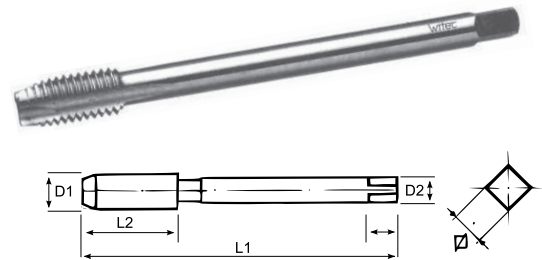
FORM B

HSS

METRISCH
METRIC

- metrisches ISO-Gewinde DIN 13
- mit Schälanschnitt Form B
- metric ISO- fine thread DIN 13
- with spiral point form B

INFOBOX



Art.-Nr.: 3-25100

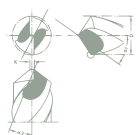
Ø D1 mm	Steigung increase mm	L1 mm	L2 mm	D2 mm	vkt. square mm	Art.-Nr.
M3	0,50	56	11	2,2	-	3-25100
M4	0,70	63	13	2,8	2,1	3-25100
M5	0,80	70	16	3,5	2,7	3-25100
M6	1,00	80	19	4,5	3,4	3-25100
M8	1,25	90	22	6,0	4,9	3-25100
M10	1,50	100	24	7,0	5,5	3-25100
M12	1,75	110	29	9,0	7,0	3-25100
M14	2,00	110	30	11,0	9,0	3-25100
M16	2,00	110	32	12,0	9,0	3-25100
M18	2,50	125	34	14,0	11,0	3-25100
M20	2,50	140	34	16,0	12,0	3-25100

Einsatzgebiete:

für Durchgangslöcher in Stählen bis 800 N/mm² Festigkeit, in langspanenden Werkstoffen

Materials:

for through holes in steels up to 800 N/mm² tensile strength, in longchipping materials



Werkzeug- und Industrietechnik



MASCHINENGEWINDEBOHRER MACHINE TAPS

DIN 376

FORM C

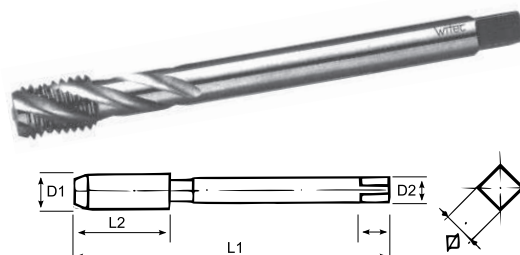
35°

HSS

METRISCH
METRIC

- metrisches ISO-Gewinde DIN 13
- rechtsgenutet 35° Form C
- metric ISO- fine thread DIN 13
- with 35° spiral flutes form C

INFOBOX



Art.-Nr.: 3-25102

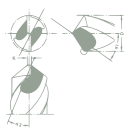
Ø D1 mm	Steigung increase mm	L1 mm	L2 mm	D2 mm	vkt. square mm	Art.-Nr.
M3	0,50	56	11	2,2	-	3-25102
M4	0,70	63	13	2,8	2,1	3-25102
M5	0,80	70	16	3,5	2,7	3-25102
M6	1,00	80	19	4,5	3,4	3-25102
M8	1,25	90	22	6,0	4,9	3-25102
M10	1,50	100	24	7,0	5,5	3-25102
M12	1,75	110	29	9,0	7,0	3-25102
M14	2,00	110	30	11,0	9,0	3-25102
M16	2,00	110	32	12,0	9,0	3-25102
M18	2,50	125	34	14,0	11,0	3-25102
M20	2,50	140	34	16,0	12,0	3-26116

Einsatzgebiete:

für Durchgangsgewinde und Sacklochgewinde in Stählen bis 800 N/mm² Festigkeit, in langspanenden Werkstoffen

Materials:

for through holes and blind holes in steels up to 800 N/mm² tensile strength, in longchipping materials

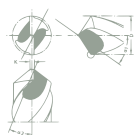


Werkzeug- und Industrietechnik



VHM ROTORFRÄSER SOLID CARBIDE ROTOR-BURS

Art.-Nr.		Seite Page
3-38101	VHM Rotorfräser, Typ ZYA, 6 mm Schaft Solid Carbide Rotor-Burs, Type ZYA, 6 mm Shank	105
3-38102	VHM Rotorfräser, Typ WRC, 6 mm Schaft Solid Carbide Rotor-Burs, Type WRC, 6 mm Shank	105
3-38103	VHM Rotorfräser, Typ KUD, 6 mm Schaft Solid Carbide Rotor-Burs, Type KUD, 6 mm Shank	106
3-38104	VHM Rotorfräser, Typ RBF, 6 mm Schaft Solid Carbide Rotor-Burs, Type RBF, 6 mm Shank	106
3-38105	VHM Rotorfräser, Typ SPG, 6 mm Schaft Solid Carbide Rotor-Burs, Type SPG, 6 mm Shank	107
3-38106	VHM Rotorfräser, Typ SKM, 6 mm Schaft Solid Carbide Rotor-Burs, Type SKM, 6 mm Shank	107
3-38198	VHM Rotorfräser Satz, 8-teilig, extra lang, 6 mm Schaft, blank Solid Carbide Rotor-Burs Set, 8 Pcs., extra long, 6 mm Shank, bright finished	108
3-38199	VHM Rotorfräser Satz, 10-teilig, extra lang, 3 mm Schaft, blank Solid Carbide Rotor-Burs Set, 10 Pcs., extra long, 3 mm Shank, bright finished	108



Werkzeug- und Industrietechnik



VHM ROTORFRÄSER SOLID CARBIDE ROTOR-BURS

ZYLINDERFORM
CYLINDER SHAPE

Z3K
ALU

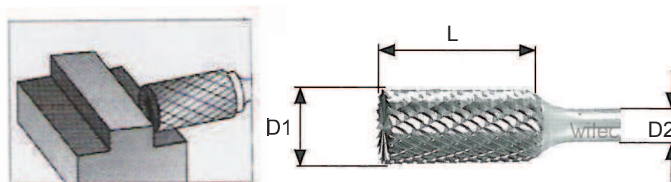
VHM
SOLID CARBIDE

Typ ZYA-S
TYPE ZYA-S

Typ Z3K - Universahlzahnung / type Z3K - universal teeth
Typ ALU / type ALU

Art.-Nr.: 3-38101

Ø D1 mm Kopf head	Ø L mm Kopf Länge head length	Ø D2 mm Schafts- hank	Zahnung teeth mm	Art.-Nr.
3,0	13	3	Z3K	3-38101
6,0	16	6	Z3K	3-38101
8,0	20	6	Z3K	3-38101
10,0	20	6	Z3K	3-38101
12,0	25	6	Z3K	3-38101
16,0	25	6	Z3K	3-38101
6,0	16	6	ALU	3-38101
12,0	25	6	ALU	3-38101



WALZENRUND FORM
BALL NOSED
CYLINDER SHAPE

Z3K
ALU

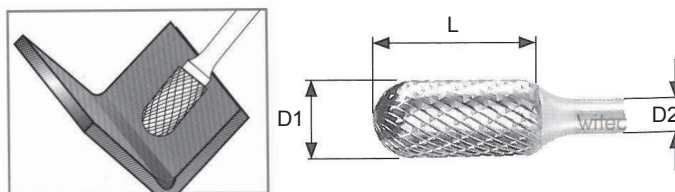
VHM
SOLID CARBIDE

Typ WRC
TYPE WRC

Typ Z3K - Universahlzahnung / type Z3K - universal teeth
Typ ALU / type ALU

Art.-Nr.: 3-38102

Ø D1 mm Kopf head	Ø L mm Kopf Länge head length	Ø D2 mm Schafts- hank	Zahnung teeth mm	Art.-Nr.
3,0	13	3	Z3K	3-38102
6,0	16	6	Z3K	3-38102
8,0	20	6	Z3K	3-38102
10,0	20	6	Z3K	3-38102
12,0	25	6	Z3K	3-38102
16,0	25	6	Z3K	3-38102
6,0	16	6	ALU	3-38102
12,0	25	6	ALU	3-38102



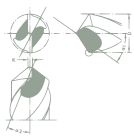
Material:		Steel 60 HRC	Steel 65 HRC	Inox <900 N	Inox >900 N	Ti >800 N	GG (G) Cast	Hardox Inconel
Z3K ALU		-	-	•	•	•	•	•
	ALU 99,5%	ALU <10% Si	ALU Guss/Cast	Steel <500 N	Steel <750 N	Steel <900 N	Steel <1100 N	Steel 45 HRC
Z3K ALU	•	•	•	•	•	•	•	•

Einsatzgebiete:

für allgemeine Arbeiten, Stahlguß, Stähle mit hoher Festigkeit, zum Entgraten, Fasen,
Kantenbrechen, saubere Oberflächen

Materials:

to work in steel cast, hard steels, for deburring, chamfering edge, breaking, clean surface



Werkzeug- und Industrietechnik



VHM ROTORFRÄSER SOLID CARBIDE ROTOR-BURS

KUGEL FORM
BALL SHAPE

Z3K
ALU

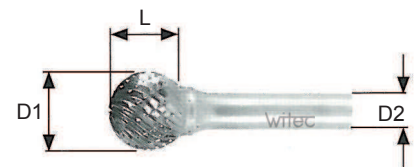
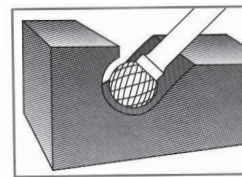
VHM
SOLID CARBIDE

TYP KUD
TYPE KUD

Typ Z3K - Universalzahnung / type Z3K - universal teeth
Typ ALU / type ALU

Art.-Nr.: 3-38103

Ø D1 mm Kopf head	Ø L mm Kopf Länge head length	Ø D2 mm Schafts- hank	Zahnung teeth mm	Art.-Nr.
3,0	2	3	Z3K	3-38103
6,0	5	6	Z3K	3-38103
8,0	7	6	Z3K	3-38103
10,0	9	6	Z3K	3-38103
12,0	10	6	Z3K	3-38103
16,0	14	6	Z3K	3-38103
6,0	7	6	ALU	3-38103
12,0	10	6	ALU	3-38103



RUNDBOGEN FORM
BALL NOSED
TREE SHAPE

Z3K
ALU

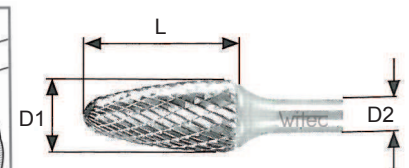
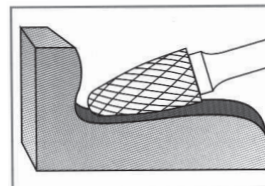
VHM
SOLID CARBIDE

TYP RBF
TYPE RBF

Typ Z3K - Universalzahnung / type Z3K - universal teeth
Typ ALU / type ALU

Art.-Nr.: 3-38104

Ø D1 mm Kopf head	Ø L mm Kopf Länge head length	Ø D2 mm Schafts- hank	Zahnung teeth mm	Art.-Nr.
3,0	7	3	Z3K	3-38104
6,0	18	6	Z3K	3-38104
8,0	20	6	Z3K	3-38104
10,0	20	6	Z3K	3-38104
12,0	25	6	Z3K	3-38104
16,0	30	6	Z3K	3-38104
6,0	18	6	ALU	3-38104
12,0	25	6	ALU	3-38104



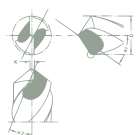
Material:		Steel 60 HRC	Steel 65 HRC	Inox <900 N	Inox >900 N	Ti >800 N	GG (G) Cast	Hardox Inconel
Z3K ALU		-	-	•	•	•	•	•
	ALU 99,5%	ALU <10% Si	ALU Guss/Cast	Steel <500 N	Steel <750 N	Steel <900 N	Steel <1100 N	Steel 45 HRC
Z3K ALU	•	•	•	•	•	•	•	•

Einsatzgebiete:

für allgemeine Arbeiten, Stahlguß, Stähle mit hoher Festigkeit, zum Entgraten, Fasen,
Kantenbrechen, saubere Oberflächen

Materials:

to work in steel cast, hard steels, for deburring, chamfering edge, breaking, clean surface



Werkzeug- und Industrietechnik



VHM ROTORFRÄSER SOLID CARBIDE ROTOR-BURS

SPITZBOGEN FORM
TREE SHAPE

Z3K
ALU

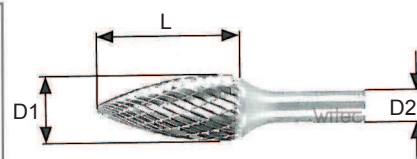
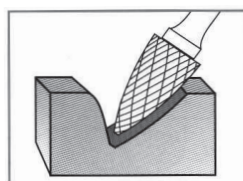
VHM
SOLID CARBIDE

TYP SPG
TYPE SPG

Typ Z3K - Universahlzahnung / type Z3K - universal teeth
Typ ALU / type ALU

Art.-Nr.: 3-38105

Ø D1 mm Kopf head	Ø L mm Kopf Länge head length	Ø D2 mm Schafts- hank	Zahnung teeth mm	Art.-Nr.
3,00	13	3	Z3K	3-38105
6,00	18	6	Z3K	3-38105
10,0	20	6	Z3K	3-38105
12,0	25	6	Z3K	3-38105
16,0	30	6	Z3K	3-38105
6,0	18	6	ALU	3-38105
12,0	25	6	ALU	3-38105



SPITZKEGEL FORM
CONE SHAPE

Z3K
ALU

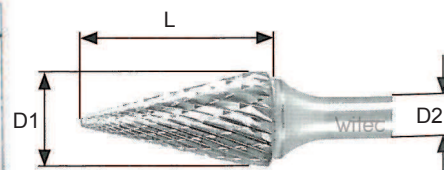
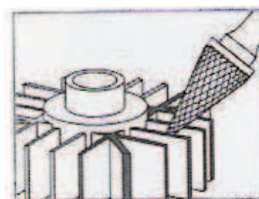
VHM
SOLID CARBIDE

TYP SKM
TYPE SKM

Typ Z3K - Universahlzahnung / type Z3K - universal teeth
Typ ALU / type ALU

Art.-Nr.: 3-38106

Ø D1 mm Kopf head	Ø L mm Kopf Länge head length	Ø D2 mm Schafts- hank	Zahnung teeth mm	Art.-Nr.
3,00	11	3	Z3K	3-38106
6,00	18	6	Z3K	3-38106
10,0	20	6	Z3K	3-38106
12,0	25	6	Z3K	3-38106
6,0	18	6	ALU	3-38106
12,0	25	6	ALU	3-38106



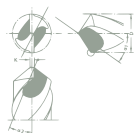
Material:		Steel 60 HRC	Steel 65 HRC	Inox <900 N	Inox >900 N	Ti >800 N	GG (G) Cast	Hardox Inconel
Z3K ALU		-	-	•	•	•	•	•
Z3K ALU	ALU 99,5%	ALU <10% Si	ALU Guss/Cast	Steel <500 N	Steel <750 N	Steel <900 N	Steel <1100 N	Steel 45 HRC
	•	•	•	•	•	•	•	•

Einsatzgebiete:

für allgemeine Arbeiten, Stahlguß, Stähle mit hoher Festigkeit, zum Entgraten, Fasen,
Kantenbrechen, saubere Oberflächen

Materials:

to work in steel cast, hard steels, for deburring, chamfering edge, breaking, clean surface



Werkzeug- und Industrietechnik



VHM ROTORFRÄSER SÄTZE SOLID CARBIDE ROTOR-BURS SETS

8-teilig im Kunststoffkoffer, 6 mm Schaft, blank
8 Pcs. in plastic case, 6 mm shank, extra long, bright finished



Art.-Nr.: 3-38198

Typ Z3 - Universalschlitzung / type Z3 - universal teeth

Typ type	Ø D1 mm Kopf head	Ø L mm Kopf head	L1 mm	D2 mm	Art.-Nr.	Typ type	Ø D1 mm Kopf head	Ø L mm Kopf head	L1 mm	D2 mm	Art.-Nr.
ZYA	10	20	64	6	38151	RBF	10	20	64	6	38104
ZYA-S	10	20	64	6	38101	SKM	6	20	51	6	38106
WRC	10	20	64	6	38102	KUD	10	10	52	6	38103
SPG	10	20	64	6	38105	KEL	10	27	71	6	38161

10-teilig im Kunststoffkoffer, 3 mm Schaft, extra lang, blank
10 Pcs. in plastic case, 3 mm shank, extra long, bright finished



Art.-Nr.: 3-38199

Typ Z3 - Universalschlitzung / type Z3 - universal teeth

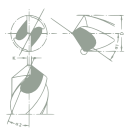
Typ type	Ø D1 mm Kopf head	Ø L mm Kopf head	L1 mm	D2 mm	Art.-Nr.	Typ type	Ø D1 mm Kopf head	Ø L mm Kopf head	L1 mm	D2 mm	Art.-Nr.
ZYA	3	13	38	3	38151	HMB	3	6	38	3	38178
WRC	3	13	38	3	38102	KEL	3	13	38	3	38181
SPG	3	8	38	3	38105	KUD	3,2	3,2	38	3	38103
RBF	3	13	38	3	38104	WKN	3	3	38	3	38183
TRE	3	6	38	3	38175	SKM	3	13	38	3	38106

Einsatzgebiete:

für allgemeine Arbeiten, Stahlguss, Stähle mit hoher Festigkeit, zum Entgraten, Fasen,
Kantenbrechen, saubere Oberflächen

Materials:

to work in steel cast, hard steels, for deburring, chamfering edge, breaking, clean surface

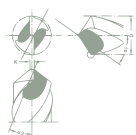


Werkzeug- und Industrietechnik



HALTEWERKZEUGE TOOL HOLDERS

Art.-Nr.		Seite Page
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Werkzeug- und Industrietechnik



VERSTELLBARE WINDEISEN DIN 1814 ADJUSTABLE TAP WRENCHES DIN 1814

Nr. No.	Abmessung size	Art.-Nr.
Gr.0	M1-8	3-90001
Gr.1	M1-M10	3-90001
Gr.1.1/2	M1-M12	3-90001
Gr. 2	M3,5-M12	3-90001
Gr. 3	M5-M20	3-90001
Gr. 4	M11-M27	3-90001
Gr. 5	M13-M32	3-90001



Art.-Nr.: 3-90001

SCHNEIDEISENHALTER DIN 225

zur direkten Aufnahme von Schneideisen nach DIN 223/5158, DIN EN 22568, DIN EN 24230, DIN EN 24231

DIE STOCKS DIN 225

for direct application of dies DIN 223 without capsule

Abmessung size mm	Art.-Nr.
16x5	3-90002
20x5	3-90002
20x7	3-90002
25x9	3-90002
30x11	3-90002
38x10	3-90002
38x14	3-90002
45x14	3-90002
45x18	3-90002
55x22	3-90002
65x18	3-90002
65x25	3-90002
75x30	3-90002
90x36	3-90002



Art.-Nr.: 3-90002

WERKZEUGHALTER MIT KNARRE

für Rechts- und Linksgang

TAP WRENCHES WITH RATCHES

for right- and left-hand turn

kurze Ausführung

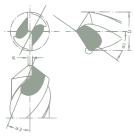
Abmessung size	Art.-Nr.
No. 1	3-90003
No. 2	3-90003

lange Ausführung

Abmessung size	Art.-Nr.
No. 10	3-90003
No. 20	3-90003



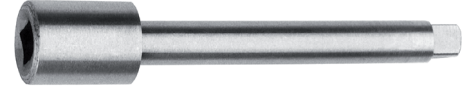
Art.-Nr.: 3-90003



Werkzeug- und Industrietechnik

Risto
Reparatur- und
Instandhaltung

GEWINDEBOHRER VERLÄNGERUNGEN DIN 377 EXTENSION SLEEVES FOR TAPS DIN 377



Art.-Nr.: 3-90004

Abmessung size	L1 mm	HGB DIN 352	Art.-Nr.
2,10	60	M1-2,6	3-90004
2,40	70		3-90004
2,70	80	M3	3-90004
3,00	90	M3,5	3-90004
3,40	95	M4	3-90004
3,80	100		3-90004
4,30	105		3-90004
4,90	110	M4,5-8	3-90004
5,50	115	M9-10	3-90004
6,20	120	M11	3-90004
7,00	125	M12	3-90004
8,00	125		3-90004
9,00	130	M14-16	3-90004

Abmessung size	L1 mm	HGB DIN 352	Art.-Nr.
10,00	140		3-90004
11,00	150	M18	3-90004
12,00	155	M20	3-90004
13,00	165		3-90004
14,50	175	M22-24	3-90004
16,00	180	M27	3-90004
18,00	200	M30	3-90004
20,00	220	M33	3-90004
22,00	220	M36	3-90004
24,00	235	M39-42	3-90004
26,00	250		3-90004
29,00	265	M45-48	3-90004
32,00	285	M52	3-90004

Abmessung size	Art.-Nr.
2x1	3-90005
3x1	3-90005
3x2	3-90005
4x1	3-90005
4x2	3-90005
4x3	3-90005
5x3	3-90005
5x4	3-90005

REDUZIERHÜLSEN DIN 2185

INNEN MK X AUSSEN MK

ADAPTOR SLEEVES DIN 2185

INSIDE-MORSETAPER X OUTSIDE-MORSETAPER



Art.-Nr.: 3-90005

Abmessung size	Ø L1 mm	Art.-Nr.
MK1	140	3-90006
MK2	140	3-90006
MK3	190	3-90006
MK4	225	3-90006
MK5	265	3-90006
MK6	265	3-90006

AUSTREIBER DIN 228

gehärtet für Werkzeugkegel DIN 228

DRILL DRIFTS DIN 228

hardened for cone chuck DIN 228



Art.-Nr.: 3-90006



NOTIZEN

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