

**CARBIDE
DRILLS**

PU-HPU
TA-4HTA
SUH
ALH
HRC
SUH MINI
HL
HSD
C-SD-TA

**HSS
DRILLS**

LFTA
SUTA
HSS-HSS/CO

**CARBIDE
END-MILLS**

G2
MDTA
HF VH/UP
MEF
ALU
MEX/MH
UH/MH

**HSS
END-MILLS**

TYPHOON ALH
HIGH PERFORMANCE - NON-FERROUS MATERIALS

🇩🇪 Eigens für das Bohren von nicht eisenhaltigen Materialien (ISO N) entwickelte Bohrer.

**CARBIDE
BURRS**

TYPHOON ALH

HIGH PERFORMANCE - NON-FERROUS MATERIALS

INFO

CARBIDE DRILLS

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- Self-centering geometry: highly accurate holes
- Straight cutting edge and highly positive geometry: low cutting forces to prevent welding
- Chip pocket: wide and curved to improve the chip ejection
- Back taper geometry: improves the cutting efficiency
- Chip pocket finishing: highly polished to reduce welding and improve chip ejection
- Modified oil holes: improves coolant feed
- Substrate: specifically selected for high wear resistance, long and reliable life



- Affûtage autocentré pour l'exécution de trous précis
- Profil de l'arête droit avec affûtage spécifique pour réduire l'effort de coupe
- Géométrie des goujures : arquées et larges pour faciliter l'évacuation des copeaux
- Géométrie du corps avec conicité arrière pour faciliter l'action de coupe
- Finition des goujures : polie pour réduire le problème du collage et faciliter l'évacuation des copeaux
- Trous de lubrification avec géométrie modifiée pour un apport de lubrifiant plus important
- Substrat spécifique pour garantir durée et fiabilité



- Affilatura autocentrante per l'esecuzione di fori precisi
- Profilo del tagliente diritto con affilatura specifica per ridurre lo sforzo di taglio
- Geometria delle gole: arcuate e ampie per agevolare l'evacuazione dei trucioli
- Geometria del corpo con conicità posteriore per agevolare l'azione di taglio
- Finitura gole: lappate per ridurre il problema dell'incollaggio e facilitare l'evacuazione dei trucioli
- Fori di refrigerazione con geometria modificata per un maggior apporto di refrigerante
- Substrato specifico per garantire durata e affidabilità



- Afilado autocentrante para la ejecución de agujeros precisos
- Perfil del borde recto con afilado específico para reducir el esfuerzo de corte
- Geometría de las ranuras: arqueadas y amplias para facilitar la evacuación de las virutas
- Geometría del cuerpo con conicidad posterior para facilitar la acción de corte
- Acabado ranuras: lapeadas para reducir el problema del encolado y facilitar la evacuación de las virutas
- Agujeros de refrigeración con geometría modificada para una mayor aportación de refrigerante
- Substrato específico para garantizar duración y fiabilidad



- Selbstzentrierender Schliff für die Herstellung von präzisen Bohrungen
- Gerades Schneidkantenprofil mit Spezialschliff zur Reduzierung des Schneiddrucks
- Geometrie der Nuten: gebogen und breit zur Vereinfachung der Späneabführung
- Geometrie des Körpers mit konischem hinteren Bereich zur Erleichterung des Schnitvorgangs
- Schlichtbearbeitung der Nuten: geläpft, um Probleme durch Verkleben zu reduzieren und um die Späneabführung zu erleichtern
- Kühlöffnungen mit abgeänderter Geometrie für einen verbesserten Kühlmittelzufluss
- Spezielles Trägermaterial zur Gewährleistung von Lebensdauer und Zuverlässigkeit



- Самоцентрирующаяся геометрия: высокая точность отверстий
- Прямые режущие кромки и большой передний угол: низкие силы резания
- Стружечные канавки: широкие с большим наклоном для надежной эвакуации стружки
- Геометрия с обратным конусом: увеличивает эффективность обработки
- Отполированные стружечные канавки: уменьшают вероятность приваривания стружки и облегчают ее вывод
- Большие отверстия: увеличена эффективность подвода СОЖ
- Специальное покрытие для повышения стойкости инструмента

HSS DRILLS

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CARBIDE END-MILLS

G2
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HSS END-MILLS

CARBIDE BURRS

353ALH

aluminium, polished flutes



P	M	K	N	S	H
			★		

★ 1st choice ☆ suitable

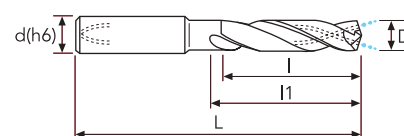
3XD

DIN
6537K

MG
POLISHED


INFO

CARBIDE
DRILLS

PU-HPU
TA-4HTA
SUH
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D(m7)	D Tol.	d(h6)	l	l1	L	EDP No.	Stock
3.00	+0.012/+0.002	6	14	20	62	353ALH0300	●
3.10	+0.016/+0.004	6	14	20	62	353ALH0310	●
3.20	+0.016/+0.004	6	14	20	62	353ALH0320	●
3.30	+0.016/+0.004	6	14	20	62	353ALH0330	●
3.40	+0.016/+0.004	6	14	20	62	353ALH0340	●
3.50	+0.016/+0.004	6	14	20	62	353ALH0350	●
3.60	+0.016/+0.004	6	14	20	62	353ALH0360	●
3.70	+0.016/+0.004	6	14	20	62	353ALH0370	●
3.80	+0.016/+0.004	6	17	24	66	353ALH0380	●
3.90	+0.016/+0.004	6	17	24	66	353ALH0390	●
4.00	+0.016/+0.004	6	17	24	66	353ALH0400	●
4.10	+0.016/+0.004	6	17	24	66	353ALH0410	●
4.20	+0.016/+0.004	6	17	24	66	353ALH0420	●
4.30	+0.016/+0.004	6	17	24	66	353ALH0430	●
4.40	+0.016/+0.004	6	17	24	66	353ALH0440	○
4.50	+0.016/+0.004	6	17	24	66	353ALH0450	●
4.60	+0.016/+0.004	6	17	24	66	353ALH0460	●
4.70	+0.016/+0.004	6	17	24	66	353ALH0470	●
4.80	+0.016/+0.004	6	20	28	66	353ALH0480	●
4.90	+0.016/+0.004	6	20	28	66	353ALH0490	○
5.00	+0.016/+0.004	6	20	28	66	353ALH0500	●
5.10	+0.016/+0.004	6	20	28	66	353ALH0510	●
5.20	+0.016/+0.004	6	20	28	66	353ALH0520	●
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5.60	+0.016/+0.004	6	20	28	66	353ALH0560	●
5.70	+0.016/+0.004	6	20	28	66	353ALH0570	●
5.80	+0.016/+0.004	6	20	28	66	353ALH0580	●
5.90	+0.016/+0.004	6	20	28	66	353ALH0590	○
6.00	+0.016/+0.004	6	20	28	66	353ALH0600	●
6.10	+0.021/+0.006	8	24	34	79	353ALH0610	●
6.20	+0.021/+0.006	8	24	34	79	353ALH0620	●
6.30	+0.021/+0.006	8	24	34	79	353ALH0630	●
6.40	+0.021/+0.006	8	24	34	79	353ALH0640	○
6.50	+0.021/+0.006	8	24	34	79	353ALH0650	●
6.60	+0.021/+0.006	8	24	34	79	353ALH0660	○
6.70	+0.021/+0.006	8	24	34	79	353ALH0670	●
6.80	+0.021/+0.006	8	24	34	79	353ALH0680	●

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CARBIDE
BURRS

● stock standard ○ non-standard stock ▽ stock exhaustion

INFO

353ALH

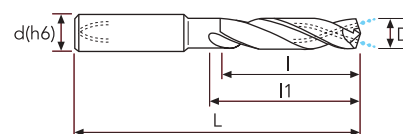
aluminium, polished flutes


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D(m7)	D Tol.	d(h6)	l	l1	L	EDP No.	Stock
6.90	+0.021/+0.006	8	24	34	79	353ALH0690	○
7.00	+0.021/+0.006	8	24	34	79	353ALH0700	●
7.10	+0.021/+0.006	8	29	41	79	353ALH0710	○
7.20	+0.021/+0.006	8	29	41	79	353ALH0720	●
7.30	+0.021/+0.006	8	29	41	79	353ALH0730	○
7.40	+0.021/+0.006	8	29	41	79	353ALH0740	○
7.50	+0.021/+0.006	8	29	41	79	353ALH0750	●
7.60	+0.021/+0.006	8	29	41	79	353ALH0760	○
7.70	+0.021/+0.006	8	29	41	79	353ALH0770	○
7.80	+0.021/+0.006	8	29	41	79	353ALH0780	●
7.90	+0.021/+0.006	8	29	41	79	353ALH0790	○
8.00	+0.021/+0.006	8	29	41	79	353ALH0800	●
8.10	+0.021/+0.006	10	35	47	89	353ALH0810	○
8.20	+0.021/+0.006	10	35	47	89	353ALH0820	●
8.30	+0.021/+0.006	10	35	47	89	353ALH0830	●
8.40	+0.021/+0.006	10	35	47	89	353ALH0840	○
8.50	+0.021/+0.006	10	35	47	89	353ALH0850	●
8.60	+0.021/+0.006	10	35	47	89	353ALH0860	●
8.70	+0.021/+0.006	10	35	47	89	353ALH0870	○
8.80	+0.021/+0.006	10	35	47	89	353ALH0880	●
8.90	+0.021/+0.006	10	35	47	89	353ALH0890	○
9.00	+0.021/+0.006	10	35	47	89	353ALH0900	●
9.10	+0.021/+0.006	10	35	47	89	353ALH0910	○
9.20	+0.021/+0.006	10	35	47	89	353ALH0920	○
9.30	+0.021/+0.006	10	35	47	89	353ALH0930	○
9.40	+0.021/+0.006	10	35	47	89	353ALH0940	○
9.50	+0.021/+0.006	10	35	47	89	353ALH0950	●
9.60	+0.021/+0.006	10	35	47	89	353ALH0960	○
9.70	+0.021/+0.006	10	35	47	89	353ALH0970	○
9.80	+0.021/+0.006	10	35	47	89	353ALH0980	○
9.90	+0.021/+0.006	10	35	47	89	353ALH0990	○
10.00	+0.021/+0.006	10	35	47	89	353ALH1000	●
10.20	+0.025/+0.007	12	40	55	102	353ALH1020	●
10.30	+0.025/+0.007	12	40	55	102	353ALH1030	●
10.50	+0.025/+0.007	12	40	55	102	353ALH1050	●
10.80	+0.025/+0.007	12	40	55	102	353ALH1080	○
11.00	+0.025/+0.007	12	40	55	102	353ALH1100	●
11.20	+0.025/+0.007	12	40	55	102	353ALH1120	○
11.30	+0.025/+0.007	12	40	55	102	353ALH1130	○

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CARBIDE
BURRS

● stock standard ○ non-standard stock ▽ stock exhaustion

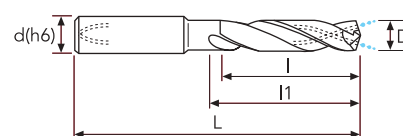
aluminium, polished flutes



INFO



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CARBIDE BURRS

[illegible]

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INFO

CUTTING PARAMETERS

353ALH

CARBIDE
DRILLS

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Material Group ISO 513	N1	N2	N3 N4	N5		
Hardness/Rm						
Vc (m/min)	260÷300	230÷270	200÷240	280÷320		
D (mm)	fn (mm/rev)	fn (mm/rev)	fn (mm/rev)	fn (mm/rev)		
3	0.160	0.152	0.136	0.176		
4	0.190	0.181	0.162	0.209		
5	0.220	0.209	0.187	0.242		
6	0.250	0.238	0.213	0.275		
7	0.280	0.266	0.238	0.308		
8	0.310	0.295	0.264	0.341		
9	0.340	0.323	0.289	0.374		
10	0.370	0.352	0.315	0.407		
11	0.400	0.380	0.340	0.440		
12	0.430	0.409	0.366	0.473		
13	0.460	0.437	0.391	0.506		
14	0.490	0.466	0.417	0.539		
15	0.520	0.494	0.442	0.572		
16	0.550	0.523	0.468	0.605		
17	0.580	0.551	0.493	0.638		
18	0.610	0.580	0.519	0.671		
19	0.640	0.608	0.544	0.704		
20	0.670	0.637	0.570	0.737		

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355ALH

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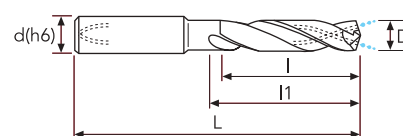
5XD

DIN
6537L

MG
POLISHED


INFO

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DRILLS

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D(m7)	D Tol.	d(h6)	l	l1	L	EDP No.	Stock
3.00	+0.012/+0.002	6	23	28	66	355ALH0300	●
3.10	+0.016/+0.004	6	23	28	66	355ALH0310	○
3.20	+0.016/+0.004	6	23	28	66	355ALH0320	●
3.30	+0.016/+0.004	6	23	28	66	355ALH0330	●
3.40	+0.016/+0.004	6	23	28	66	355ALH0340	●
3.50	+0.016/+0.004	6	23	28	66	355ALH0350	●
3.60	+0.016/+0.004	6	23	28	66	355ALH0360	●
3.70	+0.016/+0.004	6	23	28	66	355ALH0370	●
3.80	+0.016/+0.004	6	29	36	74	355ALH0380	●
3.90	+0.016/+0.004	6	29	36	74	355ALH0390	○
4.00	+0.016/+0.004	6	29	36	74	355ALH0400	●
4.10	+0.016/+0.004	6	29	36	74	355ALH0410	○
4.20	+0.016/+0.004	6	29	36	74	355ALH0420	●
4.30	+0.016/+0.004	6	29	36	74	355ALH0430	●
4.40	+0.016/+0.004	6	29	36	74	355ALH0440	○
4.50	+0.016/+0.004	6	29	36	74	355ALH0450	●
4.60	+0.016/+0.004	6	29	36	74	355ALH0460	○
4.70	+0.016/+0.004	6	29	36	74	355ALH0470	○
4.80	+0.016/+0.004	6	35	44	82	355ALH0480	●
4.90	+0.016/+0.004	6	35	44	82	355ALH0490	○
5.00	+0.016/+0.004	6	35	44	82	355ALH0500	●
5.10	+0.016/+0.004	6	35	44	82	355ALH0510	●
5.20	+0.016/+0.004	6	35	44	82	355ALH0520	●
5.30	+0.016/+0.004	6	35	44	82	355ALH0530	○
5.40	+0.016/+0.004	6	35	44	82	355ALH0540	○
5.50	+0.016/+0.004	6	35	44	82	355ALH0550	●
5.60	+0.016/+0.004	6	35	44	82	355ALH0560	●
5.70	+0.016/+0.004	6	35	44	82	355ALH0570	○
5.80	+0.016/+0.004	6	35	44	82	355ALH0580	●
5.90	+0.016/+0.004	6	35	44	82	355ALH0590	○
6.00	+0.016/+0.004	6	35	44	82	355ALH0600	●
6.10	+0.021/+0.006	8	43	53	91	355ALH0610	○
6.20	+0.021/+0.006	8	43	53	91	355ALH0620	●
6.30	+0.021/+0.006	8	43	53	91	355ALH0630	○
6.40	+0.021/+0.006	8	43	53	91	355ALH0640	○
6.50	+0.021/+0.006	8	43	53	91	355ALH0650	●
6.60	+0.021/+0.006	8	43	53	91	355ALH0660	○
6.70	+0.021/+0.006	8	43	53	91	355ALH0670	●
6.80	+0.021/+0.006	8	43	53	91	355ALH0680	●

HSS
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CARBIDE
BURRS

● stock standard ○ non-standard stock ▽ stock exhaustion

INFO

355ALH

aluminium, polished flutes

5XD

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MG
POLISHED

CARBIDE
DRILLS

PU-HPU
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SUH

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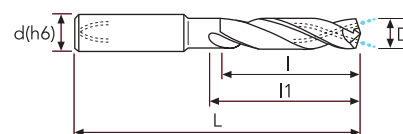
HL

HSD

C-SD-TA

P	M	K	N	S	H
			★		

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D(m7)	D Tol.	d(h6)	l	l1	L	EDP No.	Stock
6.90	+0.021/+0.006	8	43	53	91	355ALH0690	●
7.00	+0.021/+0.006	8	43	53	91	355ALH0700	●
7.10	+0.021/+0.006	8	43	53	91	355ALH0710	○
7.20	+0.021/+0.006	8	43	53	91	355ALH0720	●
7.30	+0.021/+0.006	8	43	53	91	355ALH0730	○
7.40	+0.021/+0.006	8	43	53	91	355ALH0740	○
7.50	+0.021/+0.006	8	43	53	91	355ALH0750	●
7.60	+0.021/+0.006	8	43	53	91	355ALH0760	○
7.70	+0.021/+0.006	8	43	53	91	355ALH0770	○
7.80	+0.021/+0.006	8	43	53	91	355ALH0780	●
7.90	+0.021/+0.006	8	43	53	91	355ALH0790	○
8.00	+0.021/+0.006	8	43	53	91	355ALH0800	●
8.10	+0.021/+0.006	10	49	61	103	355ALH0810	○
8.20	+0.021/+0.006	10	49	61	103	355ALH0820	●
8.30	+0.021/+0.006	10	49	61	103	355ALH0830	○
8.40	+0.021/+0.006	10	49	61	103	355ALH0840	○
8.50	+0.021/+0.006	10	49	61	103	355ALH0850	●
8.60	+0.021/+0.006	10	49	61	103	355ALH0860	○
8.70	+0.021/+0.006	10	49	61	103	355ALH0870	○
8.80	+0.021/+0.006	10	49	61	103	355ALH0880	●
8.90	+0.021/+0.006	10	49	61	103	355ALH0890	○
9.00	+0.021/+0.006	10	49	61	103	355ALH0900	●
9.10	+0.021/+0.006	10	49	61	103	355ALH0910	○
9.20	+0.021/+0.006	10	49	61	103	355ALH0920	○
9.30	+0.021/+0.006	10	49	61	103	355ALH0930	○
9.40	+0.021/+0.006	10	49	61	103	355ALH0940	○
9.50	+0.021/+0.006	10	61	61	103	355ALH0950	●
9.60	+0.021/+0.006	10	61	61	103	355ALH0960	○
9.70	+0.021/+0.006	10	61	61	103	355ALH0970	○
9.80	+0.021/+0.006	10	61	61	103	355ALH0980	○
9.90	+0.021/+0.006	10	61	61	103	355ALH0990	○
10.00	+0.021/+0.006	10	61	61	103	355ALH1000	●
10.20	+0.025/+0.007	12	71	71	118	355ALH1020	●
10.50	+0.025/+0.007	12	71	71	118	355ALH1050	●
10.80	+0.025/+0.007	12	71	71	118	355ALH1080	○
11.00	+0.025/+0.007	12	71	71	118	355ALH1100	●
11.20	+0.025/+0.007	12	71	71	118	355ALH1120	○
11.30	+0.025/+0.007	12	71	71	118	355ALH1130	○
11.50	+0.025/+0.007	12	71	71	118	355ALH1150	●

HSS
DRILLS

LFTA
SUTA
HSS-HSS/CO

CARBIDE
END-MILLS

G2
MDTA
HF VH/UP
MEF
ALU
MEX/MH
UH/MH

HSS
END-MILLS

CARBIDE
BURRS

● stock standard ○ non-standard stock ▽ stock exhaustion

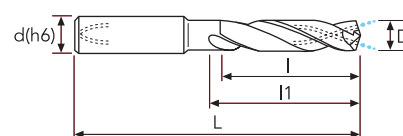
aluminium, polished flutes



INFO



★ 1st choice ☆ suitable



PU-HPU
 TA-4HTA
 SUH
ALH
 HRC
 SUH MINI
 HL
 HSD
 C-SD-TA

[illegible]

LFTA
SUTA
HSS-HSS/CO

G2
MDTA
HF VH/UP
MEF
ALU
MEX/MH
UH/MH

CARBIDE BURRS

INFO

355ALH

CARBIDE DRILLS

PU-HPU
TA-4HTA
SUH
ALH
HRC
SUH MINI
HL
HSD
C-SD-TA



HSS DRILLS

LFTA
SUTA
HSS-HSS/CO

CARBIDE END-MILLS

G2
MDTA
HF VH/UP
MEF
ALU
MEX/MH
UH/MH

HSS END-MILLS

CARBIDE BURRS

Material Group ISO 513	N1	N2	N3 N4	N5		
Hardness/Rm						
Vc (m/min)	240÷280	200÷240	180÷200	260÷300		
D (mm)	fn (mm/rev)	fn (mm/rev)	fn (mm/rev)	fn (mm/rev)		
3	0.136	0.129	0.116	0.150		
4	0.162	0.153	0.137	0.178		
5	0.187	0.178	0.159	0.206		
6	0.213	0.202	0.181	0.234		
7	0.238	0.226	0.202	0.262		
8	0.264	0.250	0.224	0.290		
9	0.289	0.275	0.246	0.318		
10	0.315	0.299	0.267	0.346		
11	0.340	0.323	0.289	0.374		
12	0.366	0.347	0.311	0.402		
13	0.391	0.371	0.332	0.430		
14	0.417	0.396	0.354	0.458		
15	0.442	0.420	0.376	0.486		
16	0.468	0.444	0.397	0.514		
17	0.493	0.468	0.419	0.542		
18	0.519	0.493	0.441	0.570		
19	0.544	0.517	0.462	0.598		
20	0.570	0.541	0.484	0.626		