

# SEH<sup>®</sup>

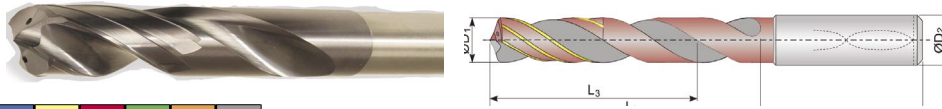
PRÄZISIONSWERKZEUGE



PUNTE VHM 6 FASI ALTO RENDIMENTO - RIVESTIMENTO SPECIALE - AFFILATURA TESTA SPECIALE

*Novità*  
*Neus*  
*News*

*D 6/2011*



○	○	○	○	○	○
P	M	K	N	S	H

d <sub>1</sub> m7 mm	SEH 612727 HSD €	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	d <sub>2</sub> h6 mm	d <sub>1</sub> m7 mm	SEH 612727 HSD €	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	d <sub>2</sub> h6 mm	d <sub>1</sub> m7 mm	SEH 612727 HSD €	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	d <sub>2</sub> h6 mm
5.00	85.22	82	44	35	6	7.30	97.18	91	53	43	8	9.60	140.53	103	61	49	10
5.10	85.22	82	44	35	6	7.40	97.18	91	53	43	8	9.70	140.53	103	61	49	10
5.20	85.22	82	44	35	6	7.50	97.18	91	53	43	8	9.80	140.53	103	61	49	10
5.30	85.22	82	44	35	6	7.60	97.18	91	53	43	8	9.90	140.53	103	61	49	10
5.40	85.22	82	44	35	6	7.70	97.18	91	53	43	8	10.00	140.53	103	61	49	10
5.50	85.22	82	44	35	6	7.80	97.18	91	53	43	8	10.20	197.34	118	71	56	12
5.60	85.22	82	44	35	6	7.90	97.18	91	53	43	8	10.50	197.34	118	71	56	12
5.70	85.22	82	44	35	6	8.00	97.18	91	53	43	8	10.80	197.34	118	71	56	12
5.80	85.22	82	44	35	6	8.10	140.53	103	61	49	10	11.00	197.34	118	71	56	12
5.90	85.22	82	44	35	6	8.20	140.53	103	61	49	10	11.50	197.34	118	71	56	12
6.00	85.22	82	44	35	6	8.30	140.53	103	61	49	10	11.80	197.34	118	71	56	12
6.10	97.18	91	53	43	8	8.40	140.53	103	61	49	10	12.00	197.34	118	71	56	12
6.20	97.18	91	53	43	8	8.50	140.53	103	61	49	10	12.50	267.61	124	77	60	14
6.30	97.18	91	53	43	8	8.60	140.53	103	61	49	10	12.80	267.61	124	77	60	14
6.40	97.18	91	53	43	8	8.70	140.53	103	61	49	10	13.00	267.61	124	77	60	14
6.50	97.18	91	53	43	8	8.80	140.53	103	61	49	10	13.50	267.61	124	77	60	14
6.60	97.18	91	53	43	8	8.90	140.53	103	61	49	10	14.00	267.61	124	77	60	14
6.70	97.18	91	53	43	8	9.00	140.53	103	61	49	10	14.50	334.88	133	83	63	16
6.80	97.18	91	53	43	8	9.10	140.53	103	61	49	10	14.80	334.88	133	83	63	16
6.90	97.18	91	53	43	8	9.20	140.53	103	61	49	10	15.00	334.88	133	83	63	16
7.00	97.18	91	53	43	8	9.30	140.53	103	61	49	10	15.50	334.88	133	83	63	16
7.10	97.18	91	53	43	8	9.40	140.53	103	61	49	10	15.80	334.88	133	83	63	16
7.20	97.18	91	53	43	8	9.50	140.53	103	61	49	10	16.00	334.88	133	83	63	16

### Anwendungsbeispiel / Application sample:

Flansch C35 / Flange 1.0501  
(8x Kernlochbohrung M12 x 40 tief /  
8x tap hole M12 x 40 deep)

Konventioneller Bohrer / conventional drill:

V<sub>c</sub> = 100 m/min

f = 0.25 mm/rev

Bearbeitungszeit komplett / Machining time total:

24.62 sec.

Punta alte prestazioni HSD

V<sub>c</sub> = 230 m/min

f = 0.25 mm/rev

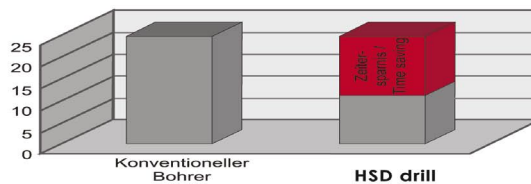
Bearbeitungszeit komplett / Machining time total:

10.7 sec.

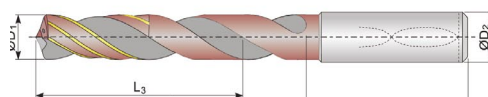
Zeiteinsparung pro Bauteil / Saving of time per part:







13.92 sec. = 56.5%

Bearbeitungszeit [sec]  
Machining time [sec]

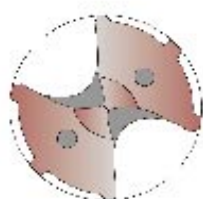
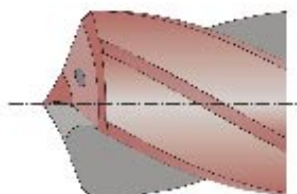


8 x D	 NEW 6 FASEN	 Double Special	WERK- NORM	HA 	Special HIGH- SPEED Beschichtung	NEW H.S.D.	H7 
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P	M	K	N	S	H

d <sub>1</sub> m7 mm	SEH 612734 HSD €	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	d <sub>2</sub> h6 mm	d <sub>1</sub> m7 mm	SEH 612734 HSD €	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	d <sub>2</sub> h6 mm	d <sub>1</sub> m7 mm	SEH 612734 HSD €	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	d <sub>2</sub> h6 mm
5.00	133.06	95	57	45	6	7.30	176.41	114	76	64	8	9.60	255.65	142	95	80	10
5.10	133.06	95	57	45	6	7.40	176.41	114	76	64	8	9.70	255.65	142	95	80	10
5.20	133.06	95	57	45	6	7.50	176.41	114	76	64	8	9.80	255.65	142	95	80	10
5.30	133.06	95	57	45	6	7.60	176.41	114	76	64	8	9.90	255.65	142	95	80	10
5.40	133.06	95	57	45	6	7.70	176.41	114	76	64	8	10.00	255.65	142	95	80	10
5.50	133.06	95	57	45	6	7.80	176.41	114	76	64	8	10.20	328.90	162	114	96	12
5.60	133.06	95	57	45	6	7.90	176.41	114	76	64	8	10.50	328.90	162	114	96	12
5.70	133.06	95	57	45	6	8.00	176.41	114	76	64	8	10.80	328.90	162	114	96	12
5.80	133.06	95	57	45	6	8.10	255.65	142	95	80	10	11.00	328.90	162	114	96	12
5.90	133.06	95	57	45	6	8.20	255.65	142	95	80	10	11.50	328.90	162	114	96	12
6.00	133.06	95	57	45	6	8.30	255.65	142	95	80	10	11.80	328.90	162	114	96	12
6.10	176.41	114	76	64	8	8.40	255.65	142	95	80	10	12.00	328.90	162	114	96	12
6.20	176.41	114	76	64	8	8.50	255.65	142	95	80	10	12.50	394.68	178	133	112	14
6.30	176.41	114	76	64	8	8.60	255.65	142	95	80	10	12.80	394.68	178	133	112	14
6.40	176.41	114	76	64	8	8.70	255.65	142	95	80	10	13.00	394.68	178	133	112	14
6.50	176.41	114	76	64	8	8.80	255.65	142	95	80	10	13.50	394.68	178	133	112	14
6.60	176.41	114	76	64	8	8.90	255.65	142	95	80	10	14.00	394.68	178	133	112	14
6.70	176.41	114	76	64	8	9.00	255.65	142	95	80	10	14.50	533.72	203	152	128	16
6.80	176.41	114	76	64	8	9.10	255.65	142	95	80	10	14.80	533.72	203	152	128	16
6.90	176.41	114	76	64	8	9.20	255.65	142	95	80	10	15.00	533.72	203	152	128	16
7.00	176.41	114	76	64	8	9.30	255.65	142	95	80	10	15.50	533.72	203	152	128	16
7.10	176.41	114	76	64	8	9.40	255.65	142	95	80	10	15.80	533.72	203	152	128	16
7.20	176.41	114	76	64	8	9.50	255.65	142	95	80	10	16.00	533.72	203	152	128	16



- ▶ **Neue**, zum Patent angemeldete Bohrergeometrie
- ▶ nuova geometria ,brevettata
- ▶ **Unschlagbare** Schnittgeschwindigkeiten bis 300 m/min
- ▶ Velocità di taglio fino a 300 m/min
- ▶ **Hohe** Vorschubswerte
- ▶ **Alti** avanzamenti
- ▶ **Höchste** Bohrungspräzision durch verbessertes Zentrierverhalten
- ▶ massima precisione del foro grazie al miglior centratura
- ▶ **Verbesserte** Bohrungsrundheit und -geradheit durch 6 Führungsfasen
- ▶ Migliorata la rotondità e linearità del foro

			5xD
mat	Durezza	Sigle di materiale	VC m/min
P	1.1 Acciai non legati oltre 700 N/mm <sup>2</sup>	St37-3, C22, C45, St50-2, 16CrMo4, St60-2, C55 C60, C105 W1, St70-2	220-300
	1.2 Acciai legati oltre 1200 N/mm <sup>2</sup>	100Cr6, 51CrV4, 16MnCr5, 105WCr6, 42Cr4, 50NiCr13 100Cr2, 36NiCr6, 31NiCr14, GS-45, CrMoV10 4	170-230
	1.3 Acciai altamente legati oltre 1200 N/mm <sup>2</sup>	X38CrMoV5 1, X40CrMoV5 1 S 12-1-4-5, S 10-4-3-10	100-150
M	2.1 Acciaio inox ferritico	1.4021, 1.4305, 1.4448, 1.4742, 1.4762	80-120
	2.2 Acciaio inox austenitico	1.4301, 1.4311, 1.4404, 1.4571, 1.4845	60-100
K	3.1 Ghisa grigia oltre 260 HB	GG10, GG15 GG20, GG25, GG30, GG35, GG40	180-220
	3.2 Ghisa nodulare oltre 250 HB	GGG35, GGG40, GGG50 GGG60, GGG70	140-180
	3.3 Ghisa malleabile oltre 230 HB	GTW-40, GTW-45, GTW-55, GTW-65, GTS-35, GTS-45 GTW-35, GTS-55, GTS-65, GTS70	160-200
N	4.1 Leghe di alluminio oltre 350 N/mm <sup>2</sup>	Al99.5, AlMg1 AlCuSiPb, G-AlCu5Ni1.5, AlZnMgCu0.5	
	4.2 Allu con Si ≤ 10% oltre 300 N/mm <sup>2</sup>	G-AlSi9Mg, G-AlSi10Mg, G-AlSi10Mg(Cu), G-AlSi12 G-AlCu4TiMg, G-AlSi7Mg	300-350
	4.3 Allu con Si ≥ 10% oltre 450 N/mm <sup>2</sup>	G-AlSi17Cu4, G-AlSi21CuNiMg	200-280
	4.4 Magnesio	MgMn2, CrMgAl8Zn1	
	4.5 Ottone e bronzo truciolo lungo	G-CuSn7ZnPb, G-CuPb10Sn	
	4.6 Ottone e bronzo truciolo corto	CuZn15, CuZn30, G-CuZn34Al2, CuCrZr, G-CuPb20Sn	
	4.7 Rame elettrolitico	CuAl10Ni5Fe4, G-CuAl10Ni, G-CuSn10, G-CuSn12	
	4.8 Duroplastici e termoplastici	Bakelit, Responal, Novodur, Pertinax	
	4.9 Fibre plastiche	CFK, GFK, AFK	
	5.0 Grafite	EDM	
S	6.1 Leghe di Cr-Ni oltre 950 N/mm <sup>2</sup>	Monel 400, Hastelloy C-4, Nimonic 75, Inconel 625 Inconel X-750, Hastelloy B, Inconel 751, Monel K-500, Inconel 718	
	6.2 Titanio oltre 950 N/mm <sup>2</sup>	Ti1, TiCu2, TiAl3V2.5, Ti1Pd TiAl5Sn2, TiAl6V4, TiAl6V6Sn2, TiAl4Mo4Sn2	
H	7.1 Acciai 40-48 HRC		
	7.2 Acciai 48-56 HRC		
	7.3 Acciai da 56-65 HRC		

*Per le punte 8xD Vc x 0.85*

material	1.1	1.2	1.3	2.1	2.2	3.1	3.2	3.3	4.2	4.3
<b>Fx Ø 6</b>	0.15	0.15	0.12	0.1	0.08	0.22	0.2	0.2	0.3	0.25
<b>Fx Ø 8</b>	0.2	0.2	0.16	0.14	0.1	0.28	0.25	0.25	0.38	0.3
<b>Fx Ø 10</b>	0.25	0.25	0.2	0.18	0.14	0.34	0.3	0.3	0.45	0.35
<b>Fx Ø 12</b>	0.3	0.3	0.24	0.22	0.18	0.38	0.35	0.35	0.5	0.4
<b>Fx Ø 16</b>	0.36	0.36	0.3	0.25	0.22	0.44	0.4	0.4	0.6	0.5

Parametri minimi, gli incrementi dipendono da stabilità, rigidità, staffaggio, mandrineria, pressione lubrificazione