

**4361VS02.. Vollhartmetallbohrer mit Schaft/tiege: verstärktem Zylinderschaft**

**3.175mm  
0.05 - 0.50  
mm**

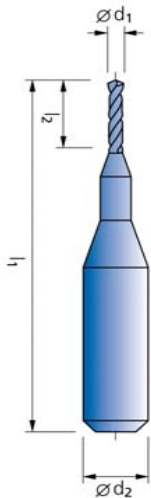
- Schaft doppelt abgesetzt zur Verstärkung der Zähigkeit, Schaft-Ø: 3.175 mm (1/8")
- Länge: 38 mm (1 1/2")
- aus neuem ULTRA-feinkörnigem Hartmetall < 0.4 Micron
- 4-Flächenanschliff
- Ausführung EL m.grösserer Schnittlänge bis 5x Dicke(pcb) lieferbar

**Mèches en métal dur mono-bloc avec queue renforcée**

- *tiege à double pas pour augmentation de la tenacité, diamètre de la queue: 3.175 mm (1/8")*
- *longueur: 38 mm (1 1/2")*
- *nuance métal dur : micrograin < 0.4 micron,*
- *Affutage 4 faces*
- *exécution EL à hélice plus longue jusqu'à 5 épaisseurs (pcb) livrable*

**Carbide twist drills with reinforced cylindrical shank**

- double stepped shank to increase toughness, shank-Ø: 3.175mm (1/8")
- length: 38 mm (1 1/2")
- from newest micro grain carbide grade < 0.4 Micron
- 4-surfaces ground
- execution EL with increased cutting length up to 5x depth (pcb) available



d1	l1	l2	d2	Best.Nr. no.cde./order no.	CHF	d1	l1	l2	d2	Best.Nr. no.cde./order no.	CHF
4.361VS0218											
0.05	38	0.8	3.175	4361VS02. 005	28.50	0.25	38	3.5	3.175	4361VS02. 027	10.85
0.06	38	0.8	3.175	4361VS02. 006	28.50	0.25	38	4.8	3.175	4361VS02. 029	14.35
0.07	38	0.8	3.175	4361VS02. 007	28.50						
0.08	38	0.8	3.175	4361VS02. 008	28.50	0.30	38	3.5	3.175	4361VS02. 030	11.20
0.09	38	1.2	3.175	4361VS02. 009	28.50	0.30	38	5.5	3.175	4361VS02. 032	11.20
						0.30	38	7.0	3.175	4361VS02. 034	11.20
0.10	38	1.2	3.175	4361VS02. 010	28.50						
0.11	38	1.2	3.175	4361VS02. 011	28.50	0.35	38	5.5	3.175	4361VS02. 035	10.80
0.12	38	1.4	3.175	4361VS02. 012	28.50	0.35	38	7.0	3.175	4361VS02. 037	10.80
0.13	38	1.4	3.175	4361VS02. 013	28.50	0.35	38	8.5	3.175	4361VS02. 039	11.60
0.14	38	1.4	3.175	4361VS02. 014	28.50						
0.15	38	2.0	3.175	4361VS02. 015	24.00	0.40	38	5.5	3.175	4361VS02. 040	10.40
0.16	38	2.0	3.175	4361VS02. 016	24.00	0.40	38	7.0	3.175	4361VS02. 042	10.40
0.17	38	2.0	3.175	4361VS02. 017	24.00	0.40	38	8.5	3.175	4361VS02. 044	10.80
0.18	38	2.0	3.175	4361VS02. 018	24.00						
0.19	38	2.0	3.175	4361VS02. 019	24.00	0.45	38	5.5	3.175	4361VS02. 045	10.40
						0.45	38	7.0	3.175	4361VS02. 047	10.40
						0.45	38	8.5	3.175	4361VS02. 049	10.40
0.20	38	2.3	3.175	4361VS02. 020	12.30						
0.20	38	3.5	3.175	4361VS02. 022	16.50	0.50	38	5.5	3.175	4361VS02. 050	9.20
0.20	38	4.8	3.175	4361VS02. 024	16.50	0.50	38	7.0	3.175	4361VS02. 052	9.20
						0.50	38	8.5	3.175	4361VS02. 054	9.20
0.25	38	2.8	3.175	4361VS02. 025	10.85						

**Mengenrabatte/Rabais/Discount Stck/pcs.: 5-9 :10%; 10-19.:20% 20-49: 30%; Höhere Stückzahlen auf Anfrage/ plus haute series sur demande/ higher volume on request**

**4361VS.. Vollhartmetallbohrer mit verstärktem Zylinderschaft**

**Schaft/tiege: mit gefügtem Stahlschaft  
3.175mm  
0.55 - 1.20  
mm**

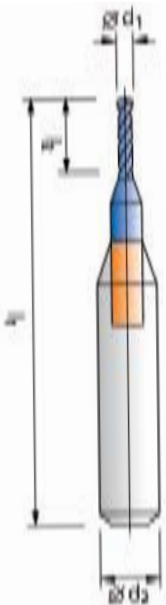
- mit gefügtem Stahlschaft
- Schaftdurchmesser: 3.175 mm (1/8") Länge/longueur: 38 mm (1 1/2")
- aus neuestem ultrafeinstkörnigem, verschleissfestem Hartmetall < 4 Micron
- 4-Flächenanschliff

**Mèches en métal dur mono-bloc avec queue renforcée**

- *tiege en acier joint*
- *diamètre de la queue: 3.175 mm (1/8") longueur: 38 mm (1 1/2")*
- *métal dur de grain ultra fin, résistant à l'usure < 4 micron*
- *affûtage 4 faces*

**Carbide twist drills with reinforced cylindrical shank**

- shank from jointed steel
- shank-Ø: 3.175mm (1/8") length: 38 mm (1 1/2")
- from newest micro grain carbide grade < 0.4 Micron
- 4-surfaces ground



d1	l2	l1	d2	Art.Nr./no.cat.	d1	l2	l1	d2	Art.Nr./no.cat.
+ 0			h6	4361VS..	+ 0			h6	4361VS..
-0.004				CHF	-0.004				CHF
0.55	7.0	38	3.175	9.20	0.85	10.5	38	3.175	9.20
0.55	8.5	38	3.175	9.20	0.90	10.5	38	3.175	9.20
0.60	7.0	38	3.175	9.20	0.95	10.5	38	3.175	9.20
0.60	8.5	38	3.175	9.20	1.00	10.5	38	3.175	9.20
0.65	7.0	38	3.175	9.20	1.05	10.5	38	3.175	9.20
0.65	8.5	38	3.175	9.20	1.10	10.5	38	3.175	9.20
0.70	10.5	38	3.175	9.20	1.15	10.5	38	3.175	9.20
0.75	10.5	38	3.175	9.20	1.20	10.5	38	3.175	9.20
0.80	10.5	38	3.175	9.20					
									4.361VS210

**Mengenrabatte/Rabais/Discount Stck/pcs.: 5-9 :10%; 10-19.:20% 20-49: 30%; Höhere Stückzahlen auf Anfrage/ plus haute series sur demande/ higher volume on request**

**Vollhartmetallbohrer mit verstärktem Zylinderschaft**

- mit gelötetem Stahlschaft
- Schaftdurchmesser: 3.175 mm (1/8") Länge 38 mm (1 1/2")
- aus neuestem feinstkörnigem, verschleissfestem Hartmet.I < 4 Micron
- 4-Flächenanschliff

**Mèches en métal dur mono-bloc avec queue renforcée**

- tige en acier brasé
- diamètre de la queue: 3.175 mm (1/8") longueur: 38 mm (1 1/2")
- métal dur de grain ultra fin, résistant à l'usure < 4 micron
- Affutage 4 faces

**Carbide twist drills with reinforced cylindrical shank**

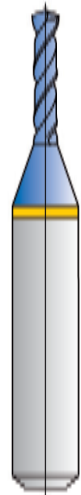
- shank from brased steel
- shank-Ø: 3.175mm (1/8") length: 38 mm (1 1/2")
- from newest micro grain carbide grade < 0.4 Micron
- 4-surfaces ground

**4361VS..**

Schaft/tige/shank: **3.175mm**  
 Ø 1.25 - 3.175 mm

d1	l2	l1	d2	Art.Nr./no.cat.	d1	l2	l1	d2	Art.Nr./no.cat.
+ 0			h6	<b>4361VS..</b>	+ 0			h6	<b>4361VS..</b>
-0.004				CHF	-0.004				CHF
1,25	10,5	38	3,175	9,60	2,10	10,5	38	3,175	9,60
1,30	10,5	38	3,175	9,60	2,20	10,5	38	3,175	9,60
1,35	10,5	38	3,175	9,60	2,30	10,5	38	3,175	9,60
1,40	10,5	38	3,175	9,60	2,40	10,5	38	3,175	9,60
1,45	10,5	38	3,175	9,60	2,50	10,5	38	3,175	9,60
1,50	10,5	38	3,175	9,60	2,60	10,5	38	3,175	9,60
1,55	10,5	38	3,175	9,60	2,70	10,5	38	3,175	9,60
1,60	10,5	38	3,175	9,60	2,80	10,5	38	3,175	9,60
1,65	10,5	38	3,175	9,60	2,90	10,5	38	3,175	9,60
1,70	10,5	38	3,175	9,60	3,00	10,5	38	3,175	9,60
1,80	10,5	38	3,175	9,60	3,10	10,5	38	3,175	9,60
1,90	10,5	38	3,175	9,60	3,175	14,0	38	3,175	9,60
2,00	10,5	38	3,175	9,60					4.361VSI118

Mengenrabatte/Rabais/Discount Stck/pcs.: 5-9: 10%; 10-19.: 20%; 20-49: 30%;  
 Höhere Stückzahlen auf Anfrage/ plus haute series sur demande/higher volume on request



**Hartmetallschneidbohrer**

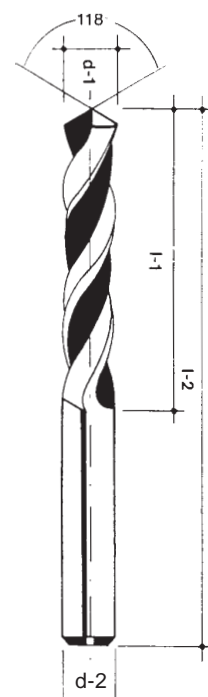
- Typ N, rechts schneidend, kurz
- Zylinderschaft h6, präzisionsgeschl.
- Mit gleichem Nenn- und Schaft-Ø
- Hartmetallsorte K10 Micrograin
- Andere Hartmetallsorten und Zwischenmasse auf Anfrage

**Mèche hélicoïdal en métal dur Carbide twist drills**

- Type N, coupe à droite, courte
- queue cylindrique rectifiée h6
- tige et diamètre d1 identique
- nuance métal dur K10 micrograin
- autres nuances et dimensions intermédiaires sur demande
- type N, right hand, short
- cylindrical shank h6, precision gr.
- drill Ø and Ø shaft are identical
- carbide grade K10 micrograin
- other grades and intermediate dimensions on request

**4361V..**

d1	l1	l2	CHF	d1	l1	l2	CHF	d1	l1	l2	CHF	d1	l1	l2	CHF
0,20 *	4	30	8,80	2,10	15	38	8,70	5,10	26	62	19,90	8,90	40	84	55,80
0,25 *	4	30	8,80	2,15	18	40	9,40	5,20	26	62	19,90	9,00	40	84	52,30
0,30	4	30	9,10	2,20	15	38	8,70	5,30	26	62	19,90	9,10	40	84	59,40
0,35	6	30	9,10	2,25	18	40	9,40	5,40	28	66	21,40	9,20	40	84	59,40
0,40	6	30	9,10	2,30	15	38	8,70	5,50	28	66	21,40	9,30	40	84	59,40
0,45	6	30	9,10	2,35	18	40	9,40	5,60	28	66	24,30	9,40	40	84	59,40
0,50	6	30	7,00	2,40	15	38	8,70	5,70	28	66	24,30	9,50	40	84	55,80
0,55 *	5	30	8,80	2,45	15	18	9,40	5,80	28	66	24,30	9,60	43	89	67,50
0,60	5	30	7,00	2,50	15	38	8,70	5,90	28	66	24,30	9,70	43	89	67,50
0,65 *	6	30	8,80	2,60	25	50	10,80	6,00	28	66	23,40	9,80	43	89	67,50
0,70	6	30	7,00	2,65	18	45	12,30	6,10	31	70	33,70	9,90	43	89	67,50
0,75 *	8	30	7,70	2,70	25	50	10,10	6,20	31	70	33,70	10,00	43	89	63,10
0,80	8	30	6,60	2,75	18	45	12,30	6,30	31	70	33,70	10,10	43	89	68,40
0,85 *	8	30	7,90	2,80	25	50	10,10	6,40	31	70	33,70	10,20	43	89	68,80
0,90	8	30	7,90	2,85	18	45	13,10	6,50	31	70	33,30	10,50	43	89	66,70
0,95 *	10	30	7,90	2,90	25	50	10,10	6,60	31	70	35,70	10,80	47	95	73,90
1,00	8	30	6,40	2,95	18	45	11,60	6,70	31	70	35,70	11,00	47	95	77,50
1,05 *	10	30	7,90	3,00	25	50	10,00	6,80	34	74	35,70	11,50	47	95	82,80
1,10	10	30	7,20	3,10	18	49	12,30	6,90	34	74	35,70	12,00	51	102	95,50
1,15 *	12	30	7,90	3,20	18	49	12,30	7,00	34	74	33,10	12,50	51	102	99,10
1,20	10	30	7,20	3,30	18	49	12,30	7,10	34	74	43,30	12,70	51	102	104,50
1,25 *	12	30	7,90	3,40	20	52	12,60	7,20	34	74	43,30	13,00	51	102	111,60
1,30	10	30	7,20	3,50	20	52	12,60	7,30	34	74	43,30	13,50	54	107	127,90
1,35 *	12	30	7,90	3,60	20	52	13,60	7,40	34	74	43,30	14,00	54	107	140,40
1,40	10	30	7,20	3,70	20	52	13,60	7,50	34	74	42,40	14,50	56	111	149,40
1,45 *	12	30	7,90	3,80	22	55	14,90	7,60	37	79	46,50	15,00	56	111	163,80
1,50	10	30	7,60	3,90	22	55	14,90	7,70	37	79	46,50	15,50	58	115	183,00
1,55	16	40	9,60	4,00	22	55	14,90	7,80	37	79	46,50	16,00	58	115	185,40
1,60	12	38	7,60	4,10	22	55	14,90	7,90	37	79	46,50	16,50	60	119	215,30
1,65	16	40	9,40	4,20	22	55	15,90	8,00	37	79	45,00	17,00	60	119	226,70
1,70	12	38	8,20	4,30	24	58	15,90	8,10	37	79	50,40	17,50	62	123	245,40
1,75	16	40	9,40	4,40	24	58	15,90	8,20	37	79	50,40	18,00	62	123	255,60
1,80	12	38	8,20	4,50	24	58	16,00	8,30	37	79	50,40	18,50	64	127	274,60
1,85	16	40	9,40	4,60	24	58	16,40	8,40	37	79	50,40	19,00	64	127	293,30
1,90	12	38	8,20	4,70	24	58	17,90	8,50	37	79	48,70	19,50	66	131	313,00
1,95	16	40	11,20	4,80	26	62	17,90	8,60	40	84	55,80	20,00	66	131	340,20
2,00	12	38	8,20	4,90	26	62	17,90	8,70	40	84	55,80	21,00	68	136	357,80
2,05	18	40	9,70	5,00	26	62	17,60	8,80	40	84	55,80	22,00	70	141	385,80



4.361\_118 \* solange Vorrat / jusqu'à épuisement du stock

**Vollhartmetall-Spiralbohrer für INOX-Stahl**

- Ausführung nach DIN 1897/ 338
- Rechts schneidend
- Zylinderschaft h6 präzisionsgeschliffen
- Mit gleichem Nenn- und Schaft-Ø
- Hartmetallsorte K10 Micrograin

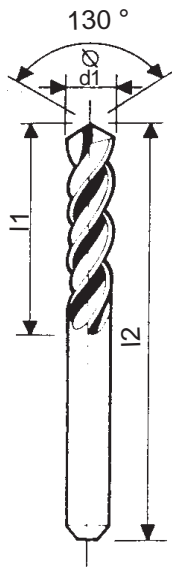
**Mèche en métal dur monobloc pour acier inoxydable**

- Exécution sel. DIN 1897 et DIN 338
- coupe à droite
- queue cylindrique rectifiée d'haute précision h6
- tige et diamètre d1 identique
- nuance métal dur K10 micrograin

**Carbide twist drills for stainless steels (INOX)**

- execution acc. DIN 1897/ 338
- right hand cutting
- cylindrical shank h6 precision ground
- drilling Ø equal shank Ø
- carbide K10 micrograin

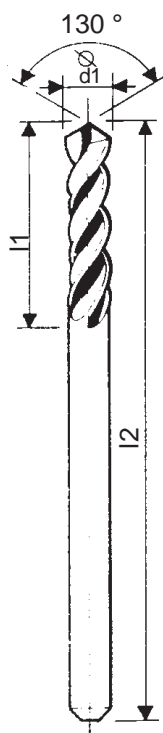
**4361V.INOX.K.  
DIN 1897**



d1	l1	l2	Fr.	d1	l1	l2	Fr.	d1	l1	l2	Fr.	d1	l1	l2	Fr.
0.50	3.0	20	6.60	3.10	18	49	12.40	5.80	26	62	24.50	8.40	37	79	52.30
0.60	3.5	21	6.60	3.20	18	49	12.40	5.90	26	62	24.50	8.50	37	79	51.10
0.70	4.5	23	6.60	3.30	18	49	12.40	6.00	28	66	24.50	8.60	40	84	56.40
0.80	5.0	24	6.50	3.40	20	52	12.80	6.10	31	70	34.10	8.70	40	84	56.40
0.90	5.5	25	6.50	3.50	20	52	12.80	6.20	31	70	34.10	8.80	40	84	56.40
1.00	6.0	26	6.50	3.60	20	52	13.60	6.30	31	70	34.10	8.90	40	84	56.40
1.10	7.0	28	6.90	3.70	20	52	13.60	6.40	31	70	34.10	9.00	40	84	56.40
1.20	8.0	30	6.90	3.80	22	55	15.00	6.50	31	70	34.10	9.10	40	84	58.30
1.30	8.0	30	6.90	3.90	22	55	15.00	6.60	31	70	36.10	9.20	40	84	60.30
1.40	9.0	32	6.90	4.00	22	55	15.00	6.70	31	70	36.10	9.30	40	84	60.30
1.50	9.0	32	7.20	4.10	22	55	15.00	6.80	34	74	36.50	9.40	40	84	60.30
1.60	10.0	34	7.20	4.20	22	55	16.00	6.90	34	74	36.70	9.50	40	84	59.00
1.70	10.0	34	7.80	4.30	24	58	16.00	7.00	34	74	36.70	9.60	43	89	68.00
1.75	11.0	36	7.90	4.40	24	58	16.00	7.10	34	74	45.00	9.70	43	89	68.00
1.80	11.0	36	7.90	4.50	24	58	16.10	7.20	34	74	45.00	9.80	43	89	68.00
1.90	11.0	36	7.90	4.60	24	58	17.10	7.30	34	74	45.20	9.90	43	89	68.00
2.00	12.0	38	7.90	4.70	24	58	18.70	7.40	34	74	45.20	10.00	43	89	68.10
2.10	12.0	38	8.90	4.80	26	62	18.70	7.50	34	74	44.50	10.20	43	89	69.50
2.20	13.0	40	8.90	4.90	26	62	18.70	7.60	37	79	48.60	10.50	43	89	68.10
2.30	13	40	8.90	4.90	26	62	18.30	7.70	37	79	48.60	11.00	47	95	78.90
2.40	14	43	8.90	5.00	26	62	18.30	7.80	37	79	48.60	11.50	47	95	86.30
2.50	14	43	8.90	5.10	26	62	20.80	7.90	37	79	48.60	12.00	51	102	98.20
2.60	14	43	10.40	5.20	26	62	20.80	8.00	37	79	47.20	13.00	51	102	118.10
2.70	16	46	10.40	5.30	26	62	20.80	8.10	37	79	52.30	14.00	54	107	142.00
2.80	16	46	10.40	5.40	26	62	22.30	8.20	37	79	52.30	15.00	56	111	166.00
2.90	16	46	10.40	5.50	26	62	22.30	8.30	37	79	52.30	16.00	58	115	187.80
3.00	16	46	10.40	5.60	26	62	24.50								
				5.70	26	62	24.50								

4.361VINOXK28

**4361V.INOX.L.  
DIN 338**



d1	l1	l2	Fr.	d1	l1	l2	Fr.	d1	l1	l2	Fr.	d1	l1	l2	Fr.
0.50	6.0	22	8.40	3.20	36	65	18.30	5.90	57	93	44.30	8.60	81	125	95.70
0.60	7.0	24	8.40	3.30	36	65	18.30	6.00	57	93	42.20	8.70	81	125	95.70
0.70	9.0	28	8.40	3.40	39	70	21.00	6.10	63	101	46.00	8.80	81	125	95.70
0.80	10.0	30	8.40	3.50	39	70	20.30	6.20	63	101	46.00	8.90	81	125	95.70
0.90	11.0	32	8.40	3.60	39	70	21.60	6.30	63	101	51.10	9.00	81	125	83.70
1.00	12.0	34	8.40	3.70	39	70	21.60	6.40	63	101	51.10	9.10	81	125	102.30
1.10	14.0	36	9.90	3.80	43	75	22.60	6.50	63	101	49.70	9.20	81	125	102.30
1.20	16.0	38	9.90	3.90	43	75	22.60	6.60	63	101	56.40	9.30	81	125	102.30
1.30	16.0	38	9.90	4.00	43	75	22.10	6.70	63	101	56.40	9.40	81	125	102.30
1.40	18.0	40	9.90	4.10	43	75	24.80	6.80	69	109	67.50	9.50	81	125	97.80
1.50	18.0	40	9.90	4.20	43	75	24.80	6.90	69	109	67.50	9.60	87	133	113.60
1.60	20.0	43	10.60	4.30	47	80	26.30	7.00	69	109	59.60	9.70	87	133	113.60
1.70	20.0	43	10.60	4.40	47	80	26.30	7.10	69	109	70.70	9.80	87	133	113.60
1.80	22.0	46	11.70	4.50	47	80	26.30	7.20	69	109	70.70	9.90	87	133	113.60
1.90	22.0	46	11.70	4.60	47	80	29.50	7.30	69	109	70.70	10.00	87	133	111.40
2.00	24.0	49	11.70	4.70	47	80	29.50	7.40	69	109	70.70	10.20	87	133	125.20
2.10	24.0	49	12.50	4.80	52	86	32.70	7.50	69	109	64.10	10.50	87	133	125.60
2.20	27.0	53	14.10	4.90	52	86	32.70	7.60	75	117	78.60	11.00	94	142	142.00
2.30	27	53	14.10	5.00	52	86	31.40	7.70	75	117	78.60	11.50	94	142	158.40
2.40	30	57	14.50	5.10	52	86	34.00	7.80	75	117	78.60	12.00	101	152	181.30
2.50	30	57	13.70	5.20	52	86	34.00	7.90	75	117	78.60	12.50	101	152	198.70
2.60	30	57	15.60	5.30	52	86	34.00	8.00	75	117	70.70	13.00	101	152	217.40
2.70	33	61	15.70	5.40	57	93	40.30	8.10	75	117	82.00	13.50	108	160	137.00
2.80	33	61	16.90	5.50	57	93	39.20	8.20	75	117	82.00	14.00	108	160	250.10
2.90	33	61	16.90	5.60	57	93	42.20	8.30	75	117	82.00	14.50	114	169	276.30
3.00	33	61	15.60	5.70	57	93	42.20	8.40	75	117	82.00	15.00	114	169	286.10
3.10	36	65	18.30	5.80	57	93	44.30	8.50	75	117	77.20	15.50	120	178	299.20
												16.00	120	178	309.10

4.361VINOXL28

**Kleinstbohrer HSS-E**

- Typ N, rechts schneidend, kurz
- Zylinderschaft h6 präzisionsgeschliffen
- Mit verstärktem Schaft Ø d2
- HSS-E (Co 8%)
- in Schritten von 0.01 mm

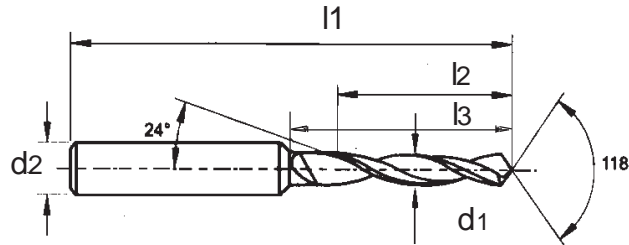
**Micro foret en HSS-E**

- Type N, coupe à droite, courte
- queue cylindrique rectifiée d'haute précision h6
- tige Ø d2 renforcée
- HSS-E (8%Co)
- dimens. en pas de 0.01mm

**Micro twist drills in HSS-E**

- type N, right hand cutting, short
- cylindrical shank h6 precision ground
- with reinforced shank Ø d2
- HSS-E (Co 8%)
- in steps of 0.01 mm

**4361S..  
HSS-E**



d1	d2	l1	l2	l3	CHF	d1	d2	l1	l2	l3	CHF	d1	d2	l1	l2	l3	CHF
0	h6					0	h6					0	h6				
-0.004						-0.004						-0.004					
0.05	1.0	25	0.4	0.6	14.40	0.45	1.0	25	2.7	3.6	6.40	0.85	1.5	25	5.0	6.3	6.40
0.06	1.0	25	0.4	0.6	14.40	0.46	1.0	25	2.7	3.6	6.40	0.86	1.5	25	5.7	7.1	6.40
0.07	1.0	25	0.5	0.7	14.40	0.47	1.0	25	2.7	3.6	6.40	0.87	1.5	25	5.7	7.1	6.40
0.08	1.0	25	0.5	0.7	14.40	0.48	1.0	25	2.7	3.6	6.40	0.88	1.5	25	5.7	7.1	6.40
0.09	1.0	25	0.5	0.7	14.40	0.49	1.0	25	3.2	4.0	6.40	0.89	1.5	25	5.7	7.1	6.40
0.10	1.0	25	0.5	0.7	9.60	0.50	1.0	25	3.2	4.0	6.40	0.90	1.5	25	5.7	7.1	6.40
0.11	1.0	25	0.5	0.7	9.60	0.51	1.0	25	3.2	4.0	6.40	0.91	1.5	25	5.7	7.1	6.40
0.12	1.0	25	0.5	0.7	9.60	0.52	1.0	25	3.2	4.0	6.40	0.92	1.5	25	5.7	7.1	6.40
0.13	1.0	25	0.8	1.0	9.60	0.53	1.0	25	3.2	4.0	6.40	0.93	1.5	25	5.7	7.1	6.40
0.14	1.0	25	0.8	1.0	9.60	0.54	1.0	25	3.6	4.5	6.40	0.94	1.5	25	5.7	7.1	6.40
0.15	1.0	25	0.8	1.0	9.60	0.55	1.0	25	3.6	4.5	6.40	0.95	1.5	25	5.7	7.1	6.40
0.16	1.0	25	1.1	1.4	9.60	0.56	1.0	25	3.6	4.5	6.40	0.96	1.5	25	6.5	8.0	6.40
0.17	1.0	25	1.1	1.4	9.60	0.57	1.0	25	3.6	4.5	6.40	0.97	1.5	25	6.5	8.0	6.40
0.18	1.0	25	1.1	1.4	9.60	0.58	1.0	25	3.6	4.5	6.40	0.98	1.5	25	6.5	8.0	6.40
0.19	1.0	25	1.1	1.4	9.60	0.59	1.0	25	3.6	4.5	6.40	0.99	1.5	25	6.5	8.0	6.40
0.20	1.0	25	1.5	1.8	6.40	0.60	1.0	25	3.6	4.5	6.40	1.00	1.5	25	6.5	8.0	6.40
0.21	1.0	25	1.5	1.8	6.40	0.61	1.0	25	3.9	5.0	6.40	1.05	1.5	25	6.5	8.0	6.40
0.22	1.0	25	1.5	1.8	6.40	0.62	1.0	25	3.9	5.0	6.40	1.10	1.5	25	7.3	9.0	6.40
0.23	1.0	25	1.5	1.8	6.40	0.63	1.0	25	3.9	5.0	6.40	1.15	1.5	25	7.3	9.0	6.40
0.24	1.0	25	1.5	1.8	6.40	0.64	1.0	25	3.9	5.0	6.40	1.20	1.5	25	8.2	10.0	6.40
0.25	1.0	25	1.9	2.2	6.40	0.65	1.0	25	3.9	5.0	6.40	1.25	1.5	25	8.2	10.0	6.40
0.26	1.0	25	1.9	2.2	6.40	0.66	1.0	25	3.9	5.0	6.40	1.30	1.5	25	8.2	10.0	6.40
0.27	1.0	25	1.9	2.2	6.40	0.67	1.0	25	3.9	5.0	6.40	1.35	1.5	25	9.2	11.2	6.40
0.28	1.0	25	1.9	2.2	6.40	0.68	1.0	25	4.5	5.6	6.40	1.40	1.5	25	9.2	11.2	6.40
0.29	1.0	25	1.9	2.2	6.40	0.69	1.0	25	4.5	5.6	6.40	1.45	1.5	25	9.2	11.2	6.40
0.30	1.0	25	1.9	2.2	6.40	0.70	1.0	25	4.5	5.6	6.40	1.50	2.0	38	10.9	12.9	6.40
0.31	1.0	25	2.4	2.8	6.40	0.71	1.0	25	4.5	5.6	6.40	1.55	2.0	38	11.2	13.4	8.50
0.32	1.0	25	2.4	2.8	6.40	0.72	1.0	25	4.5	5.6	6.40	1.58	2.0	38	11.2	13.4	8.50
0.33	1.0	25	2.4	2.8	6.40	0.73	1.0	25	4.5	5.6	6.40	1.60	2.0	38	11.2	13.4	8.50
0.34	1.0	25	2.4	2.8	6.40	0.74	1.0	25	4.5	5.6	6.40	1.65	2.0	38	11.2	13.4	8.50
0.35	1.0	25	2.4	2.8	6.40	0.75	1.0	25	4.5	5.6	6.40	1.70	2.0	38	11.2	13.4	8.50
0.36	1.0	25	2.4	2.8	6.40	0.76	1.0	25	5.0	6.3	6.40	1.75	2.0	38	11.2	13.4	8.50
0.37	1.0	25	2.4	2.8	6.40	0.77	1.0	25	5.0	6.3	6.40	1.80	2.0	38	11.2	13.4	8.50
0.38	1.0	25	2.4	2.8	6.40	0.78	1.0	25	5.0	6.3	6.40	1.85	2.0	38	11.2	13.4	8.50
0.39	1.0	25	2.7	3.6	6.40	0.79	1.0	25	5.0	6.3	6.40	1.90	2.0	38	11.2	13.4	8.50
0.40	1.0	25	2.7	3.6	6.40	0.80	1.5	25	5.0	6.3	6.40	1.95	2.0	38	11.2	13.4	8.50
0.41	1.0	25	2.7	3.6	6.40	0.81	1.5	25	5.0	6.3	6.40	<b>Weitere Dimensionen :</b>					
0.42	1.0	25	2.7	3.6	6.40	0.82	1.5	25	5.0	6.3	6.40	<b>Autres dimensions / other dimens.:</b>					
0.43	1.0	25	2.7	3.6	6.40	0.83	1.5	25	5.0	6.3	6.40	2,00 - 3.175 8.50					
0.44	1.0	25	2.7	3.6	6.40	0.84	1.5	25	5.0	6.3	6.40	in Schritten von/en pas de/in steps of 0.05mm					

**Kleinstbohrer in Hartmetall**

- Typ N, rechts od. links schneidend, mittel
- Zylinderschaft h6 präzisionsgeschliffen
- Mit verstärktem Schaft Ø d2
- Hartmetall Feinstkorn
- in Schritten von 0.01 mm

**Micro foret en carbure**

- Type N, coupe à droite ou à gauche, moyen
- queue cylindrique rectifiée d'haute précision h6
- tige Ø d2 renforcé
- MD monobloc Micrograin
- dimensions en pas de 0.01 mm

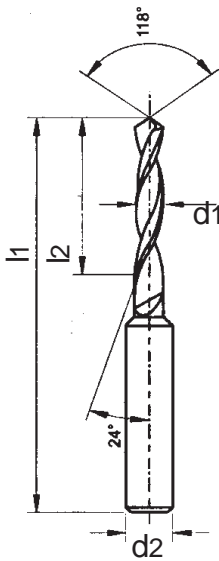
**Micro twist drill in carbide**

- type N, right or left hand cutting, medium
- cylindrical shank h6 precision ground
- with reinforced shank Ø d2
- carbide micrograin
- in steps of 0.01 mm

4361VS05..

HM/MD

rechts/à droite  
right

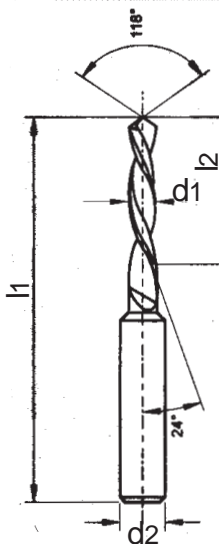


d1					d1					d1				
0					0					0				
h6					h6					h6				
-0.004					-0.004					-0.004				
0.10	1.0	30	0.7	14.25	0.65	1.0	30	5.0	8.30	1.35	1.5	30	11.2	11.60
0,11-0,14	1.0	30	0.7	13.65	0,66-0,69	1.0	30	5.6	11.80	1,36-1,39	1.5	30	11.2	12.90
0.15	1.0	30	1.0	12.05	0.70	1.0	30	5.6	8.30	1.40	1.5	30	11.2	11.00
0,16-0,19	1.0	30	1.0	13.00	0,71-0,74	1.0	30	5.6	11.80	1,41-1,44	1.5	30	11.2	12.90
0.20	1.0	30	1.0	10.00	0.75	1.0	30	5.6	7.80	1.45	1.5	30	11.2	11.60
0,21-0,23	1.0	30	1.0	11.80	0,76-0,79	1.0	30	6.3	11.80	1,46-1,49	1.5	30	11.2	12.90
0.23	1.0	30	2.2	11.80	0.80	1.5	30	6.3	7.80	1.50	2.0	38	12.0	14.20
0.24	1.0	30	1.0	11.80	0,81-0,84	1.5	30	6.3	12.80	1,51-1,54	2.0	38	12.0	15.40
0.24	1.0	30	2.2	11.80	0.85	1.5	30	6.3	7.80	1.55	2.0	38	12.0	14.20
0.25	1.0	30	1.0	10.00	0,86-0,89	1.5	30	7.1	12.80	1,56-1,59	2.0	38	12.0	15.40
0.25	1.0	30	2.2	10.00	0.90	1.5	30	7.1	7.80	1.60	2.0	38	12.0	14.20
0,26-0,29	1.0	30	1.0	11.80	0,91-0,94	1.5	30	7.1	12.80	1,61-1,64	2.0	38	12.0	15.40
0.30	1.0	30	1.0	10.10	0.95	1.5	30	7.1	7.80	1.65	2.0	38	12.0	14.20
0,31-0,32	1.0	30	1.5	11.80	0,96-0,99	1.5	30	8.0	12.80	1,66-1,69	2.0	38	12.0	15.40
0.32	1.0	30	3.0	12.25	1.00	1.5	30	9.0	11.00	1.70	2.0	38	12.0	14.20
0.33	1.0	30	1.5	11.70	1,01-1,04	1.5	30	9.0	12.90	1,71-1,74	2.0	38	12.0	15.40
0.33	1.0	30	3.0	12.25	1.05	1.5	30	9.0	11.60	1.75	2.0	38	12.0	14.20
0.34	1.0	30	1.5	11.70	1,06-1,09	1.5	30	9.0	12.90	1,76-1,79	2.0	38	12.0	15.40
0.34	1.0	30	3.0	12.25	1.10	1.5	30	9.0	11.00	1.80	2.0	38	12.0	14.20
0.35	1.0	30	1.5	9.10	1,11-1,14	1.5	30	9.0	12.90	1,81-1,84	2.0	38	12.0	15.40
0,36-0,39	1.0	30	1.5	11.80	1.15	1.5	30	9.0	11.60	1.85	2.0	38	12.0	14.20
0.40	1.0	30	2.0	9.10	1,16-1,18	1.5	30	9.0	12.90	1,86-1,89	2.0	38	12.0	15.40
0,41-0,44	1.0	30	2.0	11.80	1.19	1.5	30	10.0	12.90	1.90	2.0	38	12.0	14.20
0.45	1.0	30	3.6	8.30	1.20	1.5	30	10.0	11.00	1,91-1,94	2.0	38	12.0	15.40
0,46-0,49	1.0	30	3.6	11.80	1,21-1,24	1.5	30	10.0	12.90	1.95	2.0	38	12.0	14.20
0.50	1.0	30	4.0	10.40	1.25	1.5	30	10.0	11.60	1,96-1,99	2.0	38	12.0	15.50
0,51-0,54	1.0	30	4.0	11.80	1,26-1,29	1.5	30	10.0	12.90	2.00	2.5	43	12.0	16.30
0.55	1.0	30	4.5	8.30	1.30	1.5	30	10.0	11.00	2,01-2,04	2.5	43	12.0	18.70
0,56-0,59	1.0	30	4.5	11.80	1,31-1,32	1.5	30	10.0	12.90	2.05	2.5	43	12.0	17.35
0.60	1.0	30	4.5	8.30	1,33-1,34	1.5	30	11.2	12.90	2,10-2,45*	2.5	43	12.0	17.35
0,61-0,64	1.0	30	5.0	11.70										

Weitere Dimensionen / autres dimen./ additional dimensions: auf Anfrage/sur demande/on request \*in Stufen von/pas de/steps 0,05mm

4361VS10..

HM/MD/carbide  
links/à gauche  
left



d1					d1					d1				
0					0					0				
h6					h6					h6				
-0.004					-0.004					-0.004				
0.10	1.0	30	0.7	14.25	0.65	1.0	30	5.0	8.30	1.35	1.5	30	11.2	11.60
0,11-0,14	1.0	30	0.7	13.65	0,66-0,69	1.0	30	5.6	11.80	1,36-1,39	1.5	30	11.2	12.90
0.15	1.0	30	1.0	12.05	0.70	1.0	30	5.6	8.30	1.40	1.5	30	11.2	11.00
0,16-0,19	1.0	30	1.0	13.00	0,71-0,74	1.0	30	5.6	11.80	1,41-1,44	1.5	30	11.2	12.90
0.20	1.0	30	1.0	10.00	0.75	1.0	30	5.6	7.80	1.45	1.5	30	11.2	11.60
0,21-0,23	1.0	30	1.0	11.80	0,76-0,79	1.0	30	6.3	11.80	1,46-1,49	1.5	30	11.2	12.90
0.23	1.0	30	2.2	11.80	0.80	1.5	30	6.3	7.80	1.50	2.0	38	12.0	14.20
0.24	1.0	30	1.0	11.80	0,81-0,84	1.5	30	6.3	12.80	1,51-1,54	2.0	38	12.0	15.40
0.24	1.0	30	2.2	11.80	0.85	1.5	30	6.3	7.80	1.55	2.0	38	12.0	14.20
0.25	1.0	30	1.0	10.00	0,86-0,89	1.5	30	7.1	12.80	1,56-1,59	2.0	38	12.0	15.40
0.25	1.0	30	2.2	10.00	0.90	1.5	30	7.1	7.80	1.60	2.0	38	12.0	14.20
0,26-0,29	1.0	30	1.0	11.80	0,91-0,94	1.5	30	7.1	12.80	1,61-1,64	2.0	38	12.0	15.40
0.30	1.0	30	1.0	10.10	0.95	1.5	30	7.1	7.80	1.65	2.0	38	12.0	14.20
0,31-0,32	1.0	30	1.5	11.80	0,96-0,99	1.5	30	8.0	12.80	1,66-1,69	2.0	38	12.0	15.40
0.32	1.0	30	3.0	12.25	1.00	1.5	30	9.0	11.00	1.70	2.0	38	12.0	14.20
0.33	1.0	30	1.5	11.70	1,01-1,04	1.5	30	9.0	12.90	1,71-1,74	2.0	38	12.0	15.40
0.33	1.0	30	3.0	12.25	1.05	1.5	30	9.0	11.60	1.75	2.0	38	12.0	14.20
0.34	1.0	30	1.5	11.70	1,06-1,09	1.5	30	9.0	12.90	1,76-1,79	2.0	38	12.0	15.40
0.34	1.0	30	3.0	12.25	1.10	1.5	30	9.0	11.00	1.80	2.0	38	12.0	14.20
0.35	1.0	30	1.5	9.10	1,11-1,14	1.5	30	9.0	12.90	1,81-1,84	2.0	38	12.0	15.40
0,36-0,39	1.0	30	1.5	11.80	1.15	1.5	30	9.0	11.60	1.85	2.0	38	12.0	14.20
0.40	1.0	30	2.0	9.10	1,16-1,18	1.5	30	9.0	12.90	1,86-1,89	2.0	38	12.0	15.40
0,41-0,44	1.0	30	2.0	11.80	1.19	1.5	30	10.0	12.90	1.90	2.0	38	12.0	14.20
0.45	1.0	30	3.6	8.30	1.20	1.5	30	10.0	11.00	1,91-1,94	2.0	38	12.0	15.40
0,46-0,49	1.0	30	3.6	11.80	1,21-1,24	1.5	30	10.0	12.90	1.95	2.0	38	12.0	14.20
0.50	1.0	30	4.0	10.40	1.25	1.5	30	10.0	11.60	1,96-1,99	2.0	38	12.0	15.50
0,51-0,54	1.0	30	4.0	11.80	1,26-1,29	1.5	30	10.0	12.90	2.00	2.5	43	12.0	16.30
0.55	1.0	30	4.5	8.30	1.30	1.5	30	10.0	11.00	2,01-2,04	2.5	43	12.0	18.70
0,56-0,59	1.0	30	4.5	11.80	1,31-1,32	1.5	30	10.0	12.90	2.05	2.5	43	12.0	17.35
0.60	1.0	30	4.5	8.30	1,33-1,34	1.5	30	11.2	12.90	2,10-2,45*	2.5	43	12.0	17.35
0,61-0,64	1.0	30	5.0	11.70										

Weitere Dimensionen / autres dimen./ additional dimensions: auf Anfrage/sur demande/on request \*in Stufen von/pas de/steps 0,05mm

**Vollhartmetall-Spiralbohrer mit drei Schneiden für besonders harte Werkstoffe**

- Ausführung nach DIN 1897
- Rechts schneidend
- Zylinderschaft h6 präzisionsgeschliffen
- Mit gleichem Nenn- und Schaft-Ø
- Hartmetallsorte K10/K20 Micrograin

**Mèche en métal dur monobloc avec 3 lèbres pour des matériaux spécialement durs**

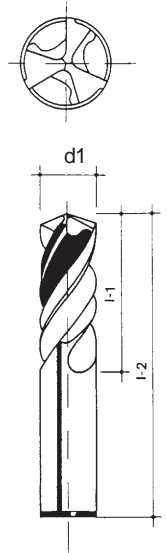
- Exécution selon DIN 1897
- coupe à droite
- queue cylindrique rectifiée d'haute précision h6
- tige et diamètre d1 identique
- nuance métal dur K10/K20 micrograin

**Carbide twist drills with 3 cutting edges for specially hard materials**

- executions according DIN 1897
- right hand cutting
- cylindrical shank h6 precision ground
- drilling Ø equal shank-Ø
- carbide K10/K20 micrograin

**4361V3..**

d1	l1	l2	Fr.	d1	l1	l2	Fr.	d1	l1	l2	Fr.	d1	l1	l2	Fr.	d1	l1	l2	Fr.
1.00	8	30	13.50	2.20	13	40	16.75	4.50	24	58	27.30	6.80	34	74	46.50	9.10	40	84	73.20
1.05	8	30	15.50	2.30	13	40	16.75	4.60	24	58	30.40	6.90	34	74	46.50	9.20	40	84	73.20
1.10	10	30	14.00	2.40	14	43	18.25	4.70	24	58	30.40	7.00	34	74	45.20	9.30	40	84	73.20
1.15	10	30	15.50	2.50	14	43	16.50	4.80	26	62	30.40	7.10	34	74	52.70	9.40	40	84	73.20
1.20	10	30	14.00	2.60	14	43	19.00	4.90	26	62	30.40	7.20	34	74	52.70	9.50	40	84	73.20
1.25	10	30	15.50	2.70	16	46	20.75	5.00	26	62	29.90	7.30	34	74	52.70	9.60	43	89	82.40
1.30	10	30	14.00	2.80	16	46	20.75	5.10	26	62	34.40	7.40	34	74	52.70	9.70	43	89	82.40
1.35	10	30	15.50	2.90	16	46	20.75	5.20	26	62	34.40	7.50	34	74	52.00	9.80	43	89	82.40
1.40	10	30	14.00	3.00	16	46	20.80	5.30	26	62	34.40	7.60	37	79	56.70	9.90	43	89	82.40
1.45	10	30	15.50	3.10	18	49	23.00	5.40	26	62	34.40	7.70	37	79	56.70	10.00	43	89	81.10
1.50	10	30	14.00	3.20	18	49	23.00	5.50	26	62	33.80	7.80	37	79	56.70	10.20	43	89	92.40
1.55	12	38	16.75	3.30	18	49	23.00	5.60	26	62	36.20	7.90	37	79	56.70	10.50	43	89	96.90
1.60	12	38	15.50	3.40	20	52	23.00	5.70	26	62	36.20	8.00	37	79	55.90	11.00	47	95	105.00
1.65	12	38	16.75	3.50	20	52	22.30	5.80	26	62	36.20	8.10	37	79	62.20	11.50	47	95	115.40
1.70	12	38	15.50	3.60	20	52	24.00	5.90	26	62	36.20	8.20	37	79	62.20	12.00	51	102	125.80
1.75	12	38	16.75	3.70	20	52	24.00	6.00	28	66	35.30	8.30	37	79	62.20	12.50	51	102	142.50
1.80	12	38	15.50	3.80	22	55	24.00	6.10	31	70	40.50	8.40	37	79	62.20	13.00	51	102	148.70
1.85	12	38	16.75	3.90	22	55	24.00	6.20	31	70	40.50	8.50	37	79	61.60	13.50	51	102	175.80
1.90	12	38	15.50	4.00	22	55	23.00	6.30	31	70	40.50	8.60	40	84	68.00	14.00	54	107	175.80
1.95	12	38	16.75	4.10	22	55	27.80	6.40	31	70	40.50	8.70	40	84	68.00	14.50	54	107	195.50
2.00	12	38	15.50	4.20	22	55	27.80	6.50	31	70	39.70	8.80	40	84	68.00	15.00	56	111	195.50
2.10	12	38	16.75	4.30	24	58	27.80	6.60	31	70	46.50	8.90	40	84	68.00	15.50	58	115	228.80
4.361V328				4.40	24	58	27.80	6.70	31	70	46.50	9.00	40	84	67.20	16.00	58	115	228.80



**3 schneidige Hartmetall-Spiralbohrer für höchste Positionsgenauigkeit mit verstärktem Schaft**

- 3-schneidige Spiralbohrer bieten höhere Steifigkeit gegen seitliche Abdrängkräfte
- hohe Positionsgenauigkeit u. Rundheit der Bohrung
- sehr geringe Verschmierung an der Lochwandung (nur 20-30% gegenüber üblichen Bohrern)
- Gute Späneabfuhr, geräuscharmer Bohrprozess u. Schonung der Bohrspindel, da weniger Kraftaufwand
- Schaft-Ø: 3.175 mm (1/8"), Länge 38 mm (1 1/2")

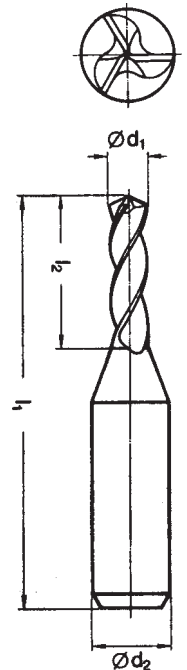
**Mèche hélicoïdale en métal dur monobloc avec 3 lèbres pour positionnement optimal, tige renforcé**

- Mèches avec 3 lèbres rendront possible une stabilité augmentée contre les forces latérales
- haute précision de positionnement et rondeur de l'alésage
- très peu de bouchage de la surface de l'alésage (20-30% comparé avec des valeurs des mèches usuels)
- bonne enlèvement de copeaux, procédé d'alésage silencieux et petite force sur l'arbre
- diamètre de la queue: 3.175 mm (1/8") longueur: 38 mm (1 1/2")

**Twist drills with 3 cutting edges for highest precision with reinforced shank**

- Twist drills with 3 cutting edges give higher toughness against sidwise forces
- high positioning accuracy and roundness of the bore
- very low smear at the hole wall (only 20-30% against normal drills)
- good chip removal, low noise of drilling process & less force on the drilling spindle
- shank-Ø: 3.175 mm (1/8"), length 38 mm (1 1/2")

**4361V3S..**



d1	l1	l2	Fr.	d1	l1	l2	Fr.	d1	l1	l2	Fr.
0.15	38	2.0	21.20	0.65	38	7.0	9.70	1.50	38	10.5	9.70
0.20	38	3.0	19.00	0.65	38	8.5	9.70	1.60	38	10.5	9.70
0.25	38	3.0	16.00	0.70	38	10.5	9.70	1.70	38	10.5	9.70
0.25	38	4.8	16.00	0.75	38	10.5	9.70	1.80	38	10.5	9.70
0.30	38	7.0	14.00	0.80	38	10.5	9.70	1.90	38	10.5	9.70
0.30	38	8.5	14.00	0.85	38	10.5	9.70	2.00	38	10.5	9.70
0.35	38	7.0	14.00	0.90	38	10.5	9.70	2.10	38	10.5	9.70
0.35	38	8.5	14.00	0.95	38	10.5	9.70	2.20	38	10.5	9.70
0.40	38	7.0	14.00	1.00	38	10.5	9.70	2.30	38	10.5	9.70
0.40	38	8.5	14.00	1.05	38	10.5	9.70	2.40	38	10.5	9.70
0.45	38	7.0	14.00	1.10	38	10.5	9.70	2.50	38	10.5	9.70
0.45	38	8.5	14.00	1.15	38	10.5	9.70	2.60	38	10.5	9.70
0.50	38	7.0	14.00	1.20	38	10.5	9.70	2.70	38	10.5	9.70
0.50	38	8.5	14.00	1.25	38	10.5	9.70	2.80	38	10.5	9.70
0.55	38	7.0	9.70	1.30	38	10.5	9.70	2.90	38	10.5	9.70
0.55	38	8.5	9.70	1.35	38	10.5	9.70	3.00	38	10.5	9.70
0.60	38	7.0	9.70	1.40	38	10.5	9.70	3.10	38	10.5	9.70
0.60	38	8.5	9.70	1.45	38	10.5	9.70	3.175	38	10.5	9.70

4.361V3S28