

**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

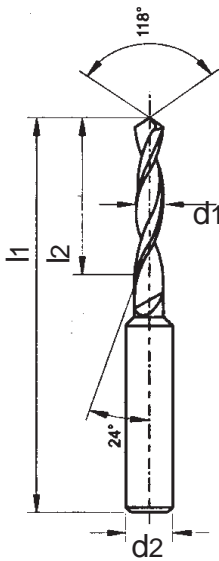
**Micro twist drill in carbide**

- 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

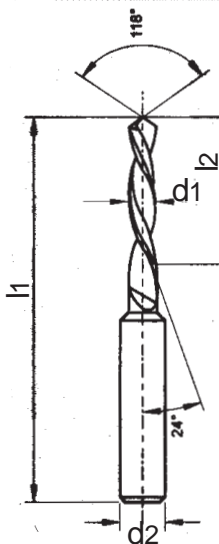


d1					d1					d1				
0					0					0				
h6					h6					h6				
-0.004					-0.004					-0.004				
0.10	1.0	30	0.7	14.25	0.65	1.0	30	5.0	8.30	1.35	1.5	30	11.2	11.60
0.11-0.14	1.0	30	0.7	13.65	0.66-0.69	1.0	30	5.6	11.80	1.36-1.39	1.5	30	11.2	12.90
0.15	1.0	30	1.0	12.05	0.70	1.0	30	5.6	8.30	1.40	1.5	30	11.2	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**

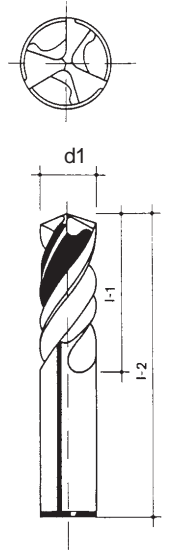
- Exécution selon DIN 1897
- coupe à droite
- queue cylindrique rectifiée d'haute précision h6
- tige et diamètre d1 identique
- nuance métal dur K10/K20 micrograin

**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")

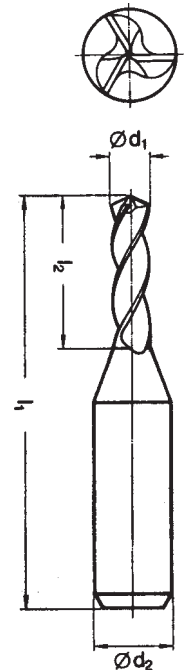
**Mèche hélicoïdale en métal dur monobloc avec 3 lèbres pour positionnement optimal, tige renforcé**

- 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 s'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

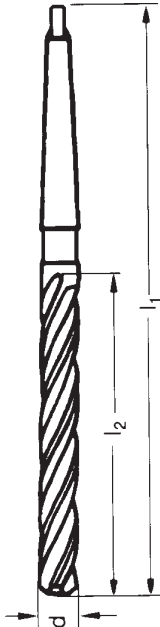
4380MK..

Aufbohrer mit 4 Schneiden

Forets - aléseurs à 4 lèvres

Rebore with 4 flutes

- HSS-Co, Typ N, mit Morsekegel, DIN 343
- 4 Schneiden, kleinster Durchmesser der Ausgangsbohrung beachten
- HSS-Co, type N, queue conique, DIN 343
- 4 lèvres, observez diam. minimal d'amorcement
- HSS-Co, type N, with morse shank according DIN 343
- 4 flutes, give attention to smallest diameter of the starting bore diam.



4.380MK217													
d[mm]	I2	I1	min. d Vorbohrung d'amorcem.	Best.Nr. MK	Katalog catalogue	Aktion action	d[mm]	I2	I1	min. d Vorbohrung d'amorcem.	Best.Nr. MK	Katalog catalogue	Aktion action
				no.cde. order no.	CHF	CHF						CHF	CHF
9,80	87	168	7,0	1 4380MK. 0980	86,20	54,40	22,70	155	253	16,0	2 4380MK. 2270	263,50	166,60
10,00	87	168	7,0	1 4380MK. 1000	86,20	54,40	23,00	155	253	16,0	2 4380MK. 2300	200,80	127,00
10,75	94	175	7,7	1 4380MK. 1075	89,00	56,50	23,70	160	281	16,6	3 4380MK. 2370	215,80	136,50
11,00	94	175	7,7	1 4380MK. 1100	89,00	56,50	24,00	160	281	16,6	3 4380MK. 2400	290,90	183,80
11,75	101	182	8,4	1 4380MK. 1175	120,50	76,30	24,70	160	281	17,3	3 4380MK. 2470	310,50	196,10
12,00	101	182	8,4	1 4380MK. 1200	98,10	62,10	25,00	160	281	17,3	3 4380MK. 2500	310,50	196,10
12,75	101	182	9,1	1 4380MK. 1275	131,20	83,00	25,70	165	286	18,0	3 4380MK. 2570	246,00	155,60
13,00	101	182	9,1	1 4380MK. 1300	138,60	87,80	26,00	165	286	18,0	3 4380MK. 2600	372,20	235,10
13,75	108	189	9,8	1 4380MK. 1375	138,60	87,80	27,70	170	291	19,3	3 4380MK. 2770	387,50	244,90
14,00	108	189	9,8	1 4380MK. 1400	120,50	76,30	28,00	170	291	19,3	3 4380MK. 2800	387,50	244,90
14,75	114	212	10,5	2 4380MK. 1475	114,10	72,20	29,70	175	296	20,5	3 4380MK. 2970	365,10	230,70
15,00	114	212	10,5	2 4380MK. 1500	196,90	124,40	30,00	175	296	20,5	3 4380MK. 3000	365,10	230,70
15,75	120	218	11,2	2 4380MK. 1575	196,90	124,40	31,60	185	334	22,0	4 4380MK. 3160	578,90	365,80
16,00	120	218	11,2	2 4380MK. 1600	169,90	107,50	32,00	185	334	22,0	4 4380MK. 3200	578,90	365,80
16,75	125	223	11,9	2 4380MK. 1675	181,90	114,90	33,60	190	339	24,0	4 4380MK. 3360	764,30	483,10
17,00	125	223	11,9	2 4380MK. 1700	181,90	114,90	34,00	190	339	24,0	4 4380MK. 3400	929,90	587,80
17,75	130	228	12,6	2 4380MK. 1775	181,90	114,90	34,60	190	339	25,0	4 4380MK. 3460	445,90	281,70
18,00	130	228	12,6	2 4380MK. 1800	177,10	112,00	35,00	190	339	25,0	4 4380MK. 3500	445,90	281,70
18,75	135	233	13,3	2 4380MK. 1870	176,60	111,60	36,00	195	344	25,5	4 4380MK. 3600	961,10	607,50
19,00	135	233	13,3	2 4380MK. 1900	136,10	85,90	38,00	200	349	26,5	4 4380MK. 3800	1073,60	678,60
19,70	140	238	14,0	2 4380MK. 1970	136,10	85,90	40,00	200	349	28,0	4 4380MK. 4000	1363,50	861,80
20,00	140	238	14,0	2 4380MK. 2000	196,70	124,30	42,00	205	354	29,0	4 4380MK. 4200	1336,80	844,90
20,70	145	243	14,6	2 4380MK. 2070	211,00	133,40	45,00	210	359	31,0	4 4380MK. 4500	1550,30	980,00
21,00	145	243	14,6	2 4380MK. 2100	249,50	157,80	46,00	215	364	32,0	4 4380MK. 4600	720,20	455,20
21,70	150	248	15,3	2 4380MK. 2170	249,50	157,80	48,00	200	369	33,0	4 4380MK. 4800	767,50	485,20
22,00	150	248	15,3	2 4380MK. 2200	256,10	161,90	50,00	200	369	34,5	4 4380MK. 5000	1900,40	1201,10

4380..

Aufbohrer mit 4 Schneiden

Forets - aléseurs à 4 lèvres

Rebore with 4 flutes

- HSS-Co, Typ N, mit Zylinderschaft
- 4 Schneiden, kleinster Durchmesser der Ausgangsbohrung beachten
- HSS-Co, type N, queue cylindr.
- 4 lèvres, observez diam. minimal d'amorcement
- HSS-Co, type N, with cyl. shank
- 4 flutes, give attention to smallest diameter of the starting bore diam.



4.380217													
d[mm]	I2	I1	min. d Vorbohrung d'amorcem.	Best.Nr. no.cde.	Katalog catalogue	Aktion action	d[mm]	I2	I1	min. d Vorbohrung d'amorcem.	Best.Nr. no.cde.	Katalog catalogue	Aktion action
			initial bore	order no.	CHF	CHF				initial bore	order no.	CHF	CHF
4,80	52	86	3,5	4380. 0480	58,00	36,70	8,80	81	125	6,3	4380. 0880	65,60	41,60
5,00	52	86	3,5	4380. 0500	58,00	36,70	9,00	81	125	6,3	4380. 0900	72,50	45,90
5,80	57	93	4,2	4380. 0580	61,40	38,90	9,80	87	133	7,0	4380. 0980	107,40	68,00
6,00	57	93	4,2	4380. 0600	61,40	38,90	9,525	87	133	7,0	4380. 09525	72,50	45,90
6,35	57	93	4,2	4380. 0635	91,10	57,80	10,00	87	133	7,0	4380. 1000	72,50	45,90
6,80	69	109	4,9	4380. 0680	62,20	39,30	10,75	94	142	7,7	4380. 1075	74,00	46,80
7,00	69	109	4,9	4380. 0700	62,20	39,30	11,00	94	142	7,7	4380. 1100	74,00	46,80
7,80	75	117	5,6	4380. 0780	65,60	41,60	11,75	101	151	8,4	4380. 1175	81,60	51,60
8,00	75	117	5,6	4380. 0800	72,50	45,90	12,00	101	151	8,4	4380. 1200	81,60	51,60
							12,70	101	151	8,4	4380. 1270	121,10	76,70

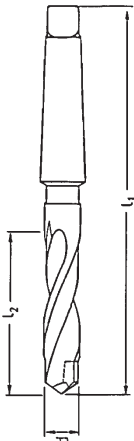
4362..

Spiralbohrer kurz HM-bestückt

Forets à plaquettes métal dur

Twist drills w. carbide edges

- Typ N, mit Morsekegel, DIN 345
- HSS, hartmetallbestückt
- Hauptanwendung: Stahl & Gusseis.
- type N, queue conique, DIN 345
- HSS, à plaquette MD brasée
- application principale: acier & fonte
- type N, shank Morse, DIN 345
- HSS, carbide edges
- main application: steel & cast iron



4.362217													
d[mm]	I2	I1	Best.Nr. MK	Best.Nr. no.cde.	Katalog catalogue	Aktion action	d[mm]	I2	I1	Best.Nr. MK	Best.Nr. no.cde.	Katalog catalogue	Aktion action
				order no.	CHF	CHF					order no.	CHF	CHF
10,00	87	168	1	4362. 1000	164,00	103,70	19,00	135	233	2	4362. 1900	373,60	236,30
11,00	94	175	1	4362. 1100	148,90	94,30	20,00	140	238	2	4362. 2000	241,35	201,10
12,00	101	182	1	4362. 1200	156,10	98,70	21,00	145	243	2	4362. 2100	430,60	272,20
13,00	101	182	1	4362. 1300	188,10	119,00	22,00	150	248	2	4362. 2200	388,20	245,40
13,50	101	182	1	4362. 1350	188,10	119,00	23,00	155	253	2	4362. 2300	528,50	334,10
14,00	108	189	1	4362. 1400	231,50	146,40	24,00	160	281	3	4362. 2400	493,10	311,50
15,00	114	212	2	4362. 1500	259,70	164,20	25,00	160	281	3	4362. 2500	503,30	318,10
16,00	120	218	2	4362. 1600	278,40	175,90	26,00	160	281	3	4362. 2600	565,50	357,40
17,00	125	223	2	4362. 1700	297,40	188,10	27,00	170	291	3	4362. 2700	593,80	375,20
17,50	125	223	2	4362. 1750	256,10	161,90	28,00	170	291	3	4362. 2800	630,40	398,40
18,00	130	228	2	4362. 1800	298,70	188,80	29,00	175	296	3	4362. 2900	713,10	450,80
							30,00	175	296	3	4362. 3000	756,50	478,10

**Spiralbohrer kurz HM-bestückt** *Forets courts à plaquettes MD*

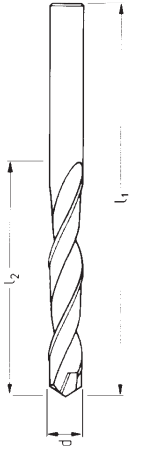
- Typ N, rechtss., Zylindersch., DIN 338
- *type N, cpe. à dr., queue cylindr., DIN 338, ∠ pointe 118°, ∠ hélice 30°HSS,*
- **hartmetallbestückt**
- *avec plaquette en MD dur brasée*
- Hauptanwendung: Stahl & Gusseisen
- *application principale: acier et fonte*

**Drills short w.brased carb. ins.**

- type N, RH, straight shank, DIN 338
- *∠ drill point 118°, ∠ helix 30°, HSS*
- **brased carbide inserts**
- main application: steel & cast iron

**4361..**

4.361217																		
Best.Nr.		Katalog		Aktion		Best.Nr.		Katalog		Aktion		Best.Nr.		Katalog		Aktion		
no.cde.		catalogue		action		no.cde.		catalogue		action		no.cde.		catalogue		action		
d[mm]	I2	I1	order no.	catalogue	oromotion	d[mm]	I2	I1	order no.	catalogue	oromotion	d[mm]	I2	I1	order no.	catalogue	oromotion	
CHF CHF																		
2,00	24	49	4361.0200	31,50	<b>26,30</b>	5,40	57	93	4361.0540	44,30	<b>28,00</b>	8,80	81	125	4361.0800	60,90	<b>38,50</b>	
2,10	24	49	4361.0210	41,40	<b>26,00</b>	5,50	57	93	4361.0550	34,20	<b>28,60</b>	8,90	81	125	4361.0890	60,90	<b>38,50</b>	
2,20	27	53	4361.0220	41,40	<b>26,00</b>	5,60	57	93	4361.0560	46,70	<b>29,60</b>	9,00	81	125	4361.0900	49,10	<b>41,00</b>	
2,30	27	53	4361.0230	41,40	<b>26,00</b>	5,70	57	93	4361.0570	46,70	<b>29,60</b>	9,10	81	125	4361.0910	66,50	<b>42,10</b>	
2,40	30	57	4361.0240	41,40	<b>26,00</b>	5,80	57	93	4361.0580	46,70	<b>29,60</b>	9,20	81	125	4361.0920	66,50	<b>42,10</b>	
2,50	30	57	4361.0250	36,30	<b>22,90</b>	5,90	57	93	4361.0590	46,70	<b>29,60</b>	9,30	81	125	4361.0930	66,50	<b>42,10</b>	
2,60	30	57	4361.0260	41,40	<b>26,00</b>	6,00	57	93	4361.0600	35,90	<b>29,90</b>	9,40	81	125	4361.0940	66,50	<b>42,10</b>	
2,70	33	61	4361.0270	41,40	<b>26,00</b>	6,10	57	93	4361.0610	53,80	<b>34,00</b>	9,50	81	125	4361.0950	53,70	<b>44,70</b>	
2,80	33	61	4361.0280	41,40	<b>26,00</b>	6,20	57	93	4361.0620	53,80	<b>34,00</b>	9,60	81	125	4361.0960	66,50	<b>42,10</b>	
2,90	33	61	4361.0290	41,40	<b>26,00</b>	6,30	57	63	4361.0630	53,80	<b>34,00</b>	9,70	81	125	4361.0970	66,50	<b>42,10</b>	
3,00	33	61	4361.0300	31,90	<b>26,60</b>	6,40	63	101	4361.0640	53,80	<b>34,00</b>	9,80	87	133	4361.0980	66,50	<b>42,10</b>	
3,10	36	65	4361.0310	41,40	<b>26,00</b>	6,50	63	101	4361.0650	43,40	<b>36,10</b>	9,90	87	133	4361.0990	66,50	<b>42,10</b>	
3,20	36	65	4361.0320	41,40	<b>26,00</b>	6,60	63	101	4361.0660	53,80	<b>34,00</b>	10,00	87	133	4361.1000	54,00	<b>44,90</b>	
3,30	36	65	4361.0330	41,40	<b>26,00</b>	6,70	63	101	4361.0670	53,80	<b>34,00</b>	10,20	87	133	4361.1020	86,40	<b>54,80</b>	
3,40	39	70	4361.0340	41,40	<b>26,00</b>	6,80	69	109	4361.0680	53,80	<b>34,00</b>	10,50	87	133	4361.1050	77,60	<b>49,40</b>	
3,50	39	70	4361.0350	36,30	<b>22,90</b>	6,90	69	109	4361.0690	53,80	<b>34,00</b>	11,00	94	142	4361.1100	68,40	<b>56,90</b>	
3,60	39	70	4361.0360	41,40	<b>30,40</b>	7,00	69	109	4361.0700	48,90	<b>30,90</b>	11,50	94	142	4361.1150	78,70	<b>65,50</b>	
3,70	39	70	4361.0370	41,40	<b>26,00</b>	7,10	69	109	4361.0710	55,80	<b>35,40</b>	12,00	101	151	4361.1200	88,40	<b>56,10</b>	
3,80	43	75	4361.0380	41,40	<b>26,00</b>	7,20	69	109	4361.0720	55,80	<b>35,40</b>	12,50	101	151	4361.1250	106,30	<b>67,40</b>	
3,90	43	75	4361.0390	41,40	<b>26,00</b>	7,30	69	109	4361.0730	54,48	<b>45,40</b>	13,00	101	151	4361.1300	105,80	<b>67,00</b>	
4,00	43	75	4361.0400	32,10	<b>26,80</b>	7,40	69	109	4361.0740	47,60	<b>39,70</b>	13,50	108	160	4361.1350	110,00	<b>69,70</b>	
4,10	43	75	4361.0410	42,40	<b>27,00</b>	7,50	69	109	4361.0750	44,20	<b>36,90</b>	14,00	108	160	4361.1400	124,30	<b>78,90</b>	
4,20	43	75	4361.0420	42,40	<b>27,00</b>	7,60	69	109	4361.0760	55,80	<b>35,40</b>	14,50	114	169	4361.1450	118,00	<b>75,00</b>	
4,30	47	80	4361.0430	42,40	<b>27,00</b>	7,70	69	109	4361.0770	55,80	<b>35,40</b>	15,00	114	169	4361.1500	142,10	<b>90,10</b>	
4,40	47	80	4361.0440	42,40	<b>27,00</b>	7,80	75	117	4361.0780	55,80	<b>35,40</b>	15,50	120	178	4361.1550	144,10	<b>91,50</b>	
4,50	47	80	4361.0450	37,20	<b>23,60</b>	7,90	75	117	4361.0790	55,80	<b>35,40</b>	16,00	120	178	4361.1600	163,00	<b>103,30</b>	
4,60	47	80	4361.0460	42,40	<b>27,00</b>	8,00	75	117	4361.0800	44,90	<b>37,40</b>	16,50	120	178	4361.1650	142,00	<b>117,00</b>	
4,70	47	80	4361.0470	42,40	<b>27,00</b>	8,10	75	117	4361.0810	60,90	<b>38,50</b>	17,00	120	178	4361.1700	173,50	<b>110,10</b>	
4,80	52	86	4361.0480	42,40	<b>27,00</b>	8,20	75	117	4361.0820	60,90	<b>38,50</b>	17,50	130	188	4361.1750	195,80	<b>124,30</b>	
4,90	52	86	4361.0490	42,40	<b>27,00</b>	8,30	75	117	4361.0830	60,90	<b>38,50</b>	18,00	130	188	4361.1800	243,40	<b>154,50</b>	
5,00	52	86	4361.0500	37,20	<b>23,60</b>	8,40	75	117	4361.0840	60,90	<b>38,50</b>	19,00	140	198	4361.1900	243,40	<b>154,50</b>	
5,10	52	86	4361.0510	44,30	<b>28,00</b>	8,50	75	117	4361.0850	49,10	<b>41,00</b>	20,00	140	198	4361.2000	277,00	<b>175,60</b>	
5,20	52	86	4361.0520	44,30	<b>28,00</b>	8,60	75	117	4361.0860	60,90	<b>38,50</b>							
5,30	52	86	4361.0530	44,30	<b>28,00</b>	8,70	75	117	4361.0870	60,90	<b>38,50</b>							



**Lange HSS Spiralbohrer**

**Forets série longue HSS**

**Long HSS twist drills**

**4355..**

- Rechtsschneidend mit Zylinderschaft
- *Coupe à droite avec queue cylindr*
- HSS, nach Norm DIN 340 / ISO 494
- *HSS, selon Norm DIN 340 / ISO 494*
- Spitzenwinkel 118°, Drallwinkel 28°
- *Angle de la pointe 118°, hélice 28°*
- Hauptanwendung: Stahl & Gusseisen
- *Application principale: acier et fonte*
- RH cutting with straight shank
- HSS, acc.DIN 340 / ISO 494
- Drill point angle 118°, helix 28°
- main application: steel & cast iron

4.355217																							
Best.Nr.		Katalog		Aktion		Best.Nr.		Katalog		Aktion		Best.Nr.		Katalog		Aktion		Best.Nr.		Katalog		Aktion	
no.cde.		catalogue		action		no.cde.		catalogue		action		no.cde.		catalogue		action		no.cde.		catalogue		action	
d[mm]	I2	I1	order no.	catalogue	promotion	d[mm]	I2	I1	order no.	catalogue	promotion	d[mm]	I2	I1	order no.	catalogue	promotion	d[mm]	I2	I1	order no.	catalogue	promotion
CHF CHF CHF CHF																							
1,00	33	56	4355.0100	6,00	<b>3,90</b>	3,75	73	112	4355.0375	12,80	<b>8,10</b>	6,40	97	148	4355.0640	19,20	<b>12,20</b>	9,10	115	175	4355.0910	39,90	<b>25,30</b>
1,10	37	60	4355.0110	4,80	<b>3,10</b>	3,80	78	119	4355.0380	9,50	<b>6,00</b>	6,50	97	148	4355.0650	18,90	<b>11,90</b>	9,20	115	175	4355.0920	40,00	<b>25,40</b>
1,20	41	65	4355.0120	4,80	<b>3,10</b>	3,90	78	119	4355.0390	10,00	<b>6,40</b>	6,60	97	148	4355.0660	18,60	<b>11,70</b>	9,25	115	175	4355.0925	30,60	<b>19,30</b>
1,30	41	65	4355.0130	4,80	<b>3,10</b>	4,00	78	119	4355.0400	9,50	<b>6,00</b>	6,70	97	148	4355.0670	19,50	<b>12,40</b>	9,30	115	175	4355.0930	23,70	<b>15,00</b>
1,40	45	70	4355.0140	4,80	<b>3,10</b>	4,10	78	119	4355.0410	10,70	<b>6,70</b>	6,75	102	156	4355.0675	19,60	<b>12,50</b>	9,40	115	175	4355.0940	23,70	<b>15,00</b>
1,50	45	70	4355.0150	4,70	<b>3,10</b>	4,20	78	119	4355.0420	10,90	<b>6,80</b>	6,80	102	156	4355.0680	22,20	<b>14,00</b>	9,50	115	175	4355.0950	31,60	<b>20,10</b>
1,60	50	76	4355.0160	4,40	<b>2,90</b>	4,25	78	119	4355.0425	17,40	<b>11,10</b>	6,90	102	156	4355.0690	22,40	<b>14,20</b>	9,60	121	184	4355.0960	38,60	<b>24,50</b>
1,70	50	76	4355.0170	4,40	<b>2,90</b>	4,30	82	126	4355.0430	11,60	<b>7,40</b>	7,00	102	156	4355.0700	22,30	<b>14,10</b>	9,70	121	184	4355.0970	40,50	<b>25,60</b>
1,75	50	76	4355.0175	11,90	<b>7,60</b>	4,40	82	126	4355.0440	11,30	<b>7,30</b>	7,10	102	156	4355.0710	27,50	<b>17,40</b>	9,75	121	184	4355.0975	32,20	<b>20,40</b>
1,80	53	80	4355.0180	4,40	<b>2,90</b>	4,50	82	126	4355.0450	11,10	<b>7,00</b>	7,20	102	156	4355.0720	20,10	<b>12,70</b>	9,80	121	184	4355.0980	41,60	<b>26,30</b>
1,90	53	80	4355.0190	4,40	<b>2,90</b>	4,60	82	126	4355.0460	11,60	<b>7,40</b>	7,25	102	156	4355.0725	20,90	<b>13,10</b>	9,90	121	184	4355.0990	37,30	<b>23,60</b>
2,00	56	85	4355.0200	4,40	<b>2,90</b>	4,70	82	126	4355.0470	10,90	<b>6,80</b>	7,30	102	156	4355.0730	25,20	<b>16,00</b>	10,00	121	184	4355.1000	27,00	<b>17,10</b>
2,10	56	85	4355.0210	4,80	<b>3,10</b>	4,75	82	126	4355.0475	14,20	<b>9,00</b>	7,40	102	156	4355.0740	25,70	<b>16,20</b>	10,25	121	184	4355.1025	49,70	<b>31,40</b>
2,20	59	90	4355.0220	5,20	<b>3,30</b>	4,80	87	132	4355.0480	12,30	<b>7,90</b>	7,50	102	156	4355.0750	23,40	<b>14,90</b>	10,50	121	184	4355		

Überlange Spiralbohrer, UFL *Forets série extra longues UFL* Overlong twist drills, UFL

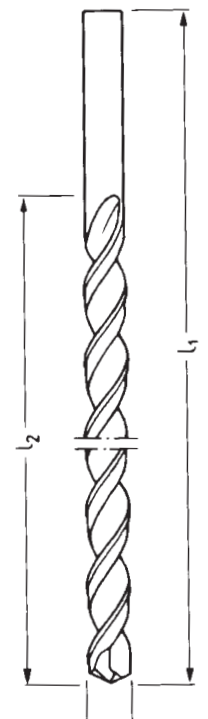
- HSS-Co, Typ UFL mit grossen Spannern, rechtsschneidend mit Zylinderschaft
- Spitzenwinkel 130°, Drallwinkel 35°
- Hauptanwendung: Stahl u. langspannende Werkstoffe wie ALU, Kupfer und rostfreie Stähle bis ca. 1000N/mm<sup>2</sup>, bei grösseren Bohrtiefen auch für kurzspannende Werkstoffe

- HSS-Co, type UFL, à grandes rainures de copeaux, coupe à droite avec queue cylindrique
- Angle de la pointe 130°, hélice 35°
- Application principale: acier et matériaux de copeaux long, comme ALU, cuivre et acier INOX, jusqu'à 1000N/mm<sup>2</sup>, épaisseurs grandes: aussi p.mater.de copeaux courtes

- HSS-Co, type UFL with big helix grooves for the chips, RH cutting with straight shank
- drill point angle 130°, helix angle 35°
- main application: steel and long chip materials like ALU, copper and stainless steels til approx. 1000N/mm<sup>2</sup>, with bigger drill depth suitable also for short chip materials

4355EL20..  
ISO 3292 N

Best.Nr./order no.					Best.Nr./order no.				
d [mm]	l <sub>2</sub>	l <sub>1</sub>	no.cde..	CHF	d [mm]	l <sub>2</sub>	l <sub>1</sub>	no.cde..	CHF
2.00	93	125	4355EL20.0200	17.00	8.00	187	250	4355EL20.0802	45.70
2.00	120	160	4355EL20.0202	19.00	8.00	235	315	4355EL20.0804	58.20
2.50	93	125	4355EL20.0250	17.00	8.00	300	400	4355EL20.0806	71.30
2.50	120	160	4355EL20.0252	19.00	8.50	150	200	4355EL20.0850	41.50
3.00	93	125	4355EL20.0300	17.60	8.50	187	250	4355EL20.0852	48.70
3.00	120	160	4355EL20.0301	19.80	8.50	235	315	4355EL20.0854	61.20
3.00	150	200	4355EL20.0302	24.30	8.50	300	400	4355EL20.0858	76.10
3.50	150	200	4355EL20.0354	25.40	9.00	150	200	4355EL20.0900	43.90
4.00	120	160	4355EL20.0400	20.50	9.00	235	315	4355EL20.0906	63.70
4.00	150	200	4355EL20.0402	25.60	10.00	150	200	4355EL20.1000	46.60
4.00	235	315	4355EL20.0406	37.00	10.00	187	250	4355EL20.1002	54.50
4.50	120	160	4355EL20.0450	21.50	10.00	235	315	4355EL20.1004	66.90
4.50	150	200	4355EL20.0452	28.20	10.00	300	400	4355EL20.1006	85.30
4.50	187	250	4355EL20.0456	32.40	10.50	187	250	4355EL20.1050	56.20
5.00	120	160	4355EL20.0500	22.00	10.50	235	315	4355EL20.1052	70.40
5.00	150	200	4355EL20.0502	27.20	10.50	300	400	4355EL20.1054	91.40
5.00	187	250	4355EL20.0504	34.10	11.00	187	250	4355EL20.1100	65.20
5.00	235	315	4355EL20.0506	42.10	11.00	235	315	4355EL20.1102	71.60
5.50	150	200	4355EL20.0552	36.00	11.00	300	400	4355EL20.1104	96.10
5.50	187	250	4355EL20.0556	36.20	11.50	187	250	4355EL20.1150	66.00
6.00	120	160	4355EL20.0600	25.50	11.50	235	315	4355EL20.1152	75.10
6.00	150	200	4355EL20.0602	30.20	12.00	187	250	4355EL20.1200	75.30
6.00	187	250	4355EL20.0604	36.70	12.00	235	315	4355EL20.1202	76.30
6.00	235	315	4355EL20.0606	48.80	12.00	300	400	4355EL20.1204	102.70
6.00	300	400	4355EL20.0610	54.90	12.50	187	250	4355EL20.1250	75.80
6.50	150	200	4355EL20.0650	32.70	12.50	235	315	4355EL20.1252	81.30
6.50	187	250	4355EL20.0652	40.60	12.50	300	400	4355EL20.1254	108.70
6.50	235	315	4355EL20.0654	51.50	13.00	187	250	4355EL20.1300	85.40
7.00	187	250	4355EL20.0702	42.70	13.00	235	315	4355EL20.1302	85.50
7.00	235	315	4355EL20.0754	56.70	13.00	300	400	4355EL20.1304	124.00
8.00	150	200	4355EL20.0800	40.40					



Hochl.-Blechschaufbohrer

*Mèches conique p. tôles*

Sheet metal conical drills

- Stufenloses gratfreies Bohren ohne Deformation des Bleches
- Nachschleifbar

- *percer continuellement sans bavure et sans déformation de la tôle*
- *réaffûtables*

- stepless burr free drilling without deformation of the sheet metal
- grindable

4RU364A..

Grösse grandeur size	Bohrbereich Gamme d'usage range [mm]	Gesamtlänge longueur totale total length [mm]	Schaft tige shank [mm]	Best.Nr. no.cde. order no.	Preis/prix price CHF
1	3 - 14.0	53	6	4RU364A.00	44.90
2	8 - 20.0	61	8	4RU364A.05	65.90
3	16 - 30.5	73	9	4RU364A.10	99.90
4	26 - 40.0	86	10	4RU364A.15	199.00
5	36 - 50.0	93	12	4RU364A.20	249.00
6	40 - 61.0	100	13	4RU364A.25	475.00



Mehrphasiger Stufenbohrer  
Zylinderschaft DIN 8376 180°

*Mèches étagée à lèvres multiples 180° DIN 8376*

Countersink 180°, for through holes, HSS long, DIN 8376

Senkwinkel 180°, für Durchgangsbohrungen, Typ N, aus HSS lang

angle d'étagé 180° p. trous traversants, type N, en HSS longue

angle 180° for through holes, type N, in HSS long

453905..  
DIN 8376

M für Gewinde p. filetage for thread	d1 [mm]	d2 [mm]	l3 [mm] Stufenlänge longueur du pas step length	l2 [mm] Nutenlänge Longuer hélix helix length	l1 [mm] Gesamtlänge longueur totale total length	Best.Nr. no.cde. order no.	Preis prix price CHF
M 3	3.4	6.000	9	57	93	453905.080	47.90
M 4	4.5	8.000	11	75	117	453905.160	53.60
M 5	5.5	10.000	13	87	133	453905.240	64.40
M 6	6.6	11.000	15	94	142	453905.340	74.40
M 8	9	15.000	19	114	169	453905.440	93.60
M10	11	18.000	23	130	191	453905.500	109.00

