



**Высокоточные инструменты  
для  
авиационно-космической  
промышленности**



**Высокая точность  
Суперкачество  
NexGen покрытие  
Индивидуальные решения**



Особенности:  
Специальная геометрия стружечной канавки  
Полный контроль размеров  
Высокая спираль  
Полированная канавка

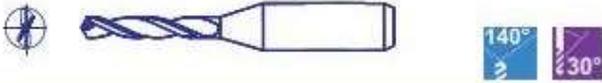


Выгоды:  
Отличный финишный результат  
Эффективная эвакуация стружки

### Обработка Алюминиевых сплавов

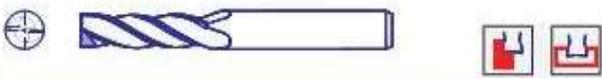
T6401 SOLID CARBIDE ALU DRILL

Dia Range 0.50 mm - 20.00 mm



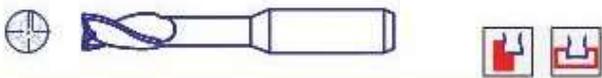
E8361 2F ENDMILL

Dia Range 0.20 mm - 12.00 mm



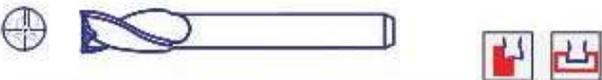
E1381 3F ENDMILL WITH UNDERCUT

Dia Range 0.20 mm - 12.00 mm



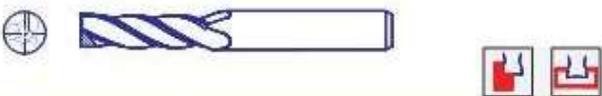
E1481 3F ENDMILL INVERSE SHANK

Dia Range 0.20 mm - 12.00 mm



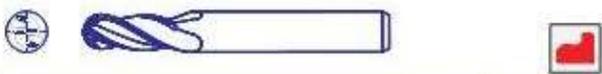
E2381 3F ENDMILL

Dia Range 2.00 mm - 12.00 mm



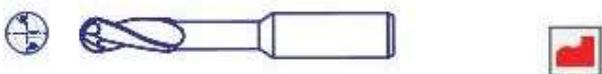
B8381 2F BALL NOSE ENDMILL

Dia Range 0.20 mm - 12.00 mm



B1381 2F BALL NOSE ENDMILL WITH UNDERCUT

Dia Range 0.20 mm - 6.00 mm

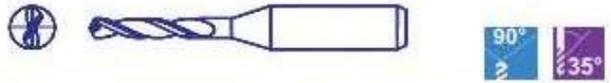


• Composite  
CFRP / CFK / GFK

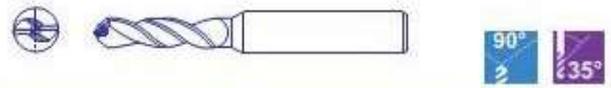
• Aluminium

### Сверление Углепластиков / Композитов / CFRP / GFK

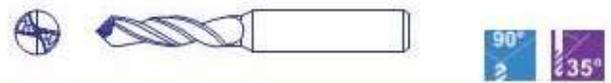
AXIS T6601 IND<sub>DRILL</sub> CFRP



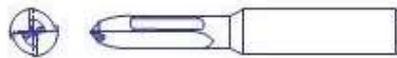
AXIS T6611 IND<sub>DRILL</sub> CFRP WITH DOUBLE POINT ANGLE



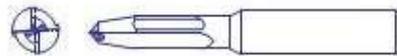
AXIS T4601 IND<sub>DRILL</sub> CFRP WITH SPECIAL POINT ANGLE



AXIS T0301 CALIBRATION DRILL WITH RADIAL CONE



AXIS T0311 CALIBRATION DRILL



QUALITY • PRECISION • CONSISTENCY



**Особенности:**

- Специально разработанные геометрии
- Специальные покрытия Hard CVD Diamond
- Острые режущие кромки с оптимизированными методами шлифования
- Микрокристаллы твердого сплава для высокой производительности



**Выгоды:**

- Снижает усилия, режет чисто без волокон, нет деламинации слоев.
- Работа без вибраций, превосходные кромки получаемых отверстий и фрезерованных поверхностей, меньше повреждений при работе.
- Увеличенный срок службы инструмента.

**Фрезерование CFRP / Композитов / CFK / GFK**

AXIS P1011

Dia Range 2.00 mm - 12.70 mm Composite



AXIS P0111

Dia Range 2.00 mm - 12.70 mm



AXIS P0711 / P0701 / P0721

Dia Range 2.00 mm - 12.70 mm



AXIS P0811 / P0801 / P0821

Dia Range 2.00 mm - 12.70 mm



AXIS P0911 / P0901 / P0921

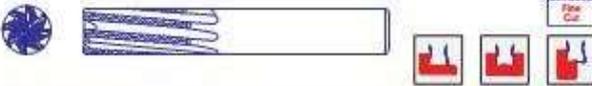
Dia Range 2.00 mm - 12.70 mm



AXIS P5431

CFRP RIGHT HELICAL ROUTER

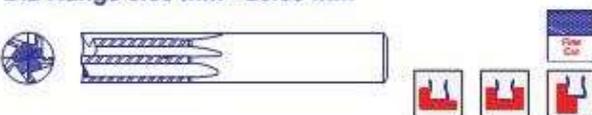
Dia Range 3.00 mm - 20.00 mm



AXIS P6411

CFRP ROUTER

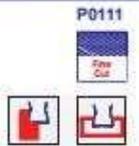
Dia Range 3.00 mm - 20.00 mm



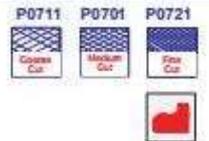
CFRP DIAMOND CUT ROUTER - BURR END



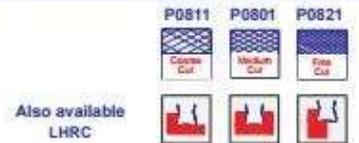
CFRP DIAMOND CUT ROUTER - FLAT END



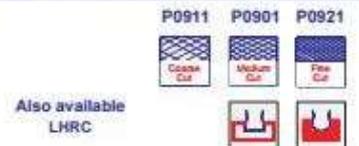
CFRP DIAMOND CUT ROUTER - BALL END



CFRP DIAMOND CUT ROUTER RHRC - SAFE END



CFRP DIAMOND CUT ROUTER - DRILL END



AXIS P5421

CFRP LEFT HELICAL ROUTER

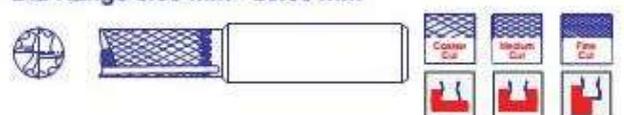
Dia Range 3.00 mm - 20.00 mm



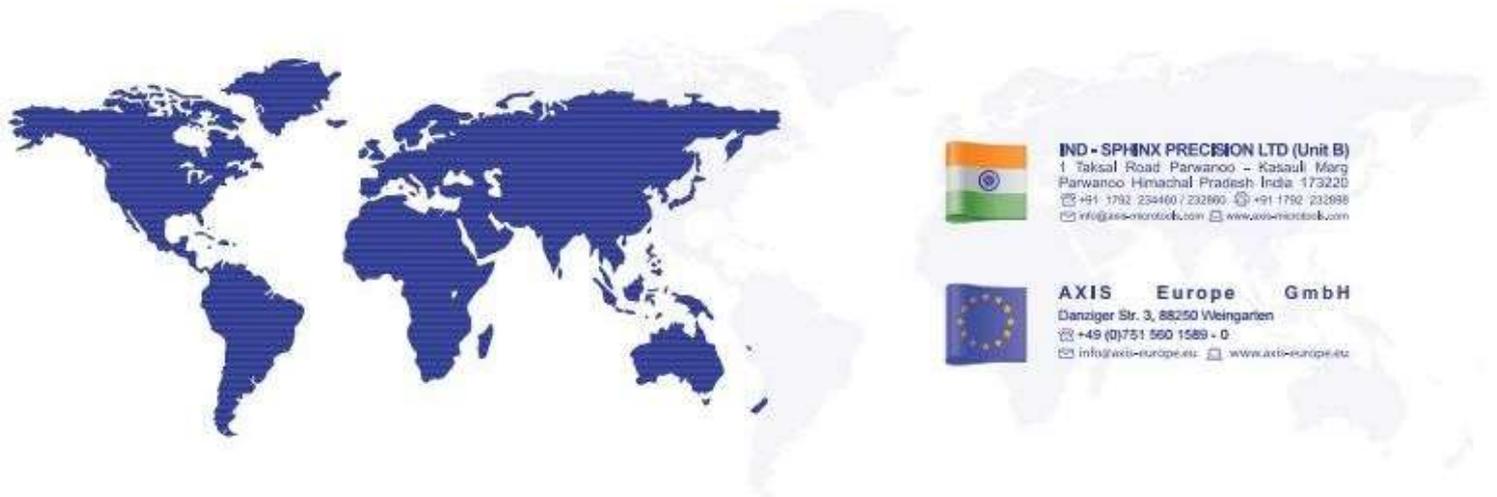
AXIS P6551

DIAMOND CUT ROUTER

Dia Range 3.00 mm - 20.00 mm



QUALITY • PRECISION • CONSISTENCY



**IND - SPHINX PRECISION LTD (Unit B)**  
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Parwanoo Himachal Pradesh India 173220  
☎ +91 1792 234400 / 232890 ☎ +91 1792 232898  
✉ info@spx-precision.com 🌐 www.spx-precision.com

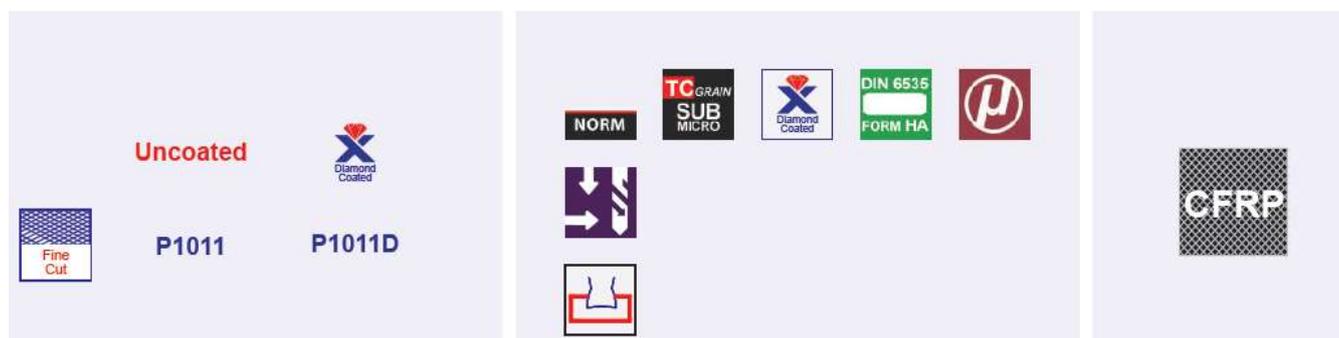
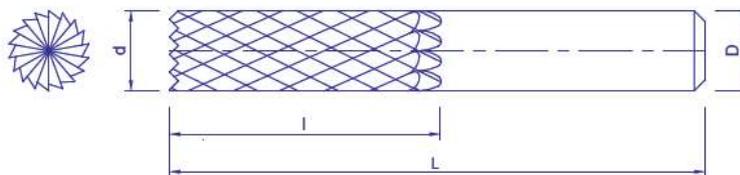


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**AXIS**<sup>®</sup>  
Tools for **m**ICRO **m**ACHINING

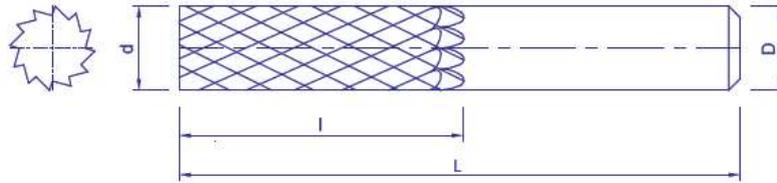
## CFRP DIAMOND CUT ROUTER - BURR END

Right Helix Right Cut



Dia d	EFL l	Total Length L	Shank Dia D
2.00	7.00	38	3.00
3.00	10.00	38	3.00
3.00	10.00	75	3.00
3.175 (1/8")	10.00	38	3.175 (1/8")
3.175 (1/8")	10.00	75	3.175 (1/8")
4.00	15.00	38	4.00
4.00	15.00	75	4.00
4.76 (3/16")	15.00	38	4.76 (3/16")
4.76 (3/16")	15.00	75	4.76 (3/16")
6.00	18.00	50	6.00
6.00	18.00	75	6.00
6.35 (1/4")	18.00	50	6.35 (1/4")
6.35 (1/4")	18.00	75	6.35 (1/4")
7.94 (5/16")	18.00	63	7.94 (5/16")
7.94 (5/16")	18.00	75	7.94 (5/16")
8.00	25.00	63	8.00
8.00	25.00	75	8.00
9.52 (3/8")	25.00	63	9.52 (3/8")
9.52 (3/8")	25.00	75	9.52 (3/8")
10.00	30.00	72	10.00
12.00	32.00	83	12.00
12.70 (1/2")	32.00	88	12.70 (1/2")

Right Helix Right Cut



Uncoated



P0111



P0111D





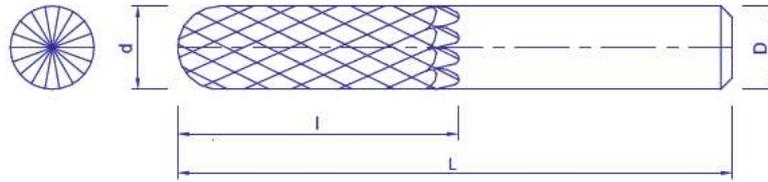







Dia d	EFL l	Total Length L	Shank Dia D
2.00	7.00	38	3.00
3.00	10.00	38	3.00
3.00	10.00	75	3.00
3.175 (1/8")	10.00	38	3.175 (1/8")
3.175 (1/8")	10.00	75	3.175 (1/8")
4.00	15.00	38	4.00
4.00	15.00	75	4.00
4.76 (3/16")	15.00	50	4.76 (3/16")
4.76 (3/16")	15.00	75	4.76 (3/16")
6.00	18.00	50	6.00
6.00	18.00	75	6.00
6.35 (1/4")	18.00	50	6.35 (1/4")
6.35 (1/4")	18.00	75	6.35 (1/4")
7.94 (5/16")	18.00	63	7.94 (5/16")
7.94 (5/16")	18.00	75	7.94 (5/16")
8.00	25.00	63	8.00
8.00	25.00	75	8.00
9.52 (3/8")	25.00	63	9.52 (3/8")
9.52 (3/8")	25.00	75	9.52 (3/8")
10.00	30.00	72	10.00
12.00	32.00	83	12.00
12.70 (1/2")	32.00	88	12.70 (1/2")

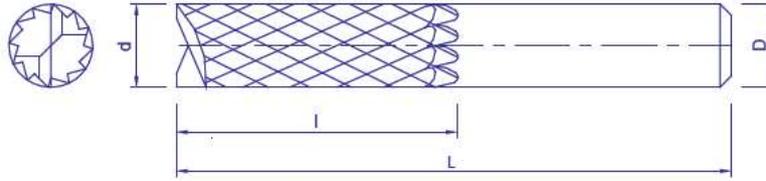
Right Helix Right Cut



<b>Uncoated</b>									
	<b>P0711</b>	<b>P0711D</b>							
	<b>P0701</b>	<b>P0701D</b>							
	<b>P0721</b>	<b>P0721D</b>							

Dia d		EFL l	Total Length L	Shank Dia D
2.00		7.00	38	3.00
2.00		6.00	38	3.00
2.00		3.00	50	3.00
3.00		12.00	38	3.00
3.00		10.00	38	3.00
3.00		4.00	50	3.00
3.00		10.00	75	3.00
3.00		15.00	60	6.00
3.175	( 1/8" )	10.00	38	3.175 ( 1/8" )
3.175	( 1/8" )	10.00	75	3.175 ( 1/8" )
4.00		15.00	38	4.00
4.00		5.00	50	4.00
4.00		16.00	50	4.00
4.00		15.00	75	4.00
4.00		12.00	60	6.00
4.76	( 3/16" )	15.00	50	4.76 ( 3/16" )
4.76	( 3/16" )	15.00	75	4.76 ( 3/16" )
6.00		18.00	50	6.00
6.00		7.00	50	6.00
6.00		19.00	60	6.00
6.00		25.00	65	6.00
6.00		18.00	75	6.00
6.00		30.00	75	6.00
6.35	( 1/4" )	18.00	50	6.35 ( 1/4" )
6.35	( 1/4" )	18.00	75	6.35 ( 1/4" )





**Uncoated**

**P0811**      **P0811D**

**P0801**      **P0801D**

**P0821**      **P0821D**

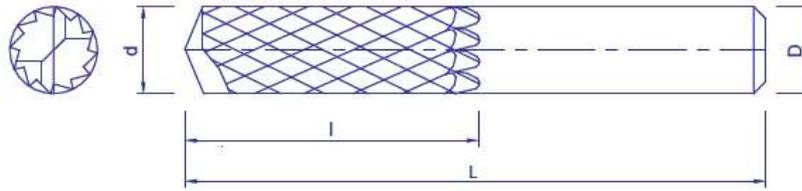
**NORM**      **TC GRAIN SUB MICRO**           **DIN 6535 FORM HA**

**CFRP**

Dia d	EFL l	Total Length L	Shank Dia D
2.00	7.00	38	3.00
2.00	6.00	38	3.00
2.00	3.00	50	3.00
3.00	12.00	38	3.00
3.00	10.00	38	3.00
3.00	4.00	50	3.00
3.00	10.00	75	3.00
3.00	15.00	60	6.00
3.175 (1/8")	10.00	38	3.175 (1/8")
3.175 (1/8")	10.00	75	3.175 (1/8")
4.00	15.00	38	4.00
4.00	5.00	50	4.00
4.00	16.00	50	4.00
4.00	15.00	75	4.00
4.00	12.00	60	6.00
4.76 (3/16")	15.00	50	4.76 (3/16")
4.76 (3/16")	15.00	75	4.76 (3/16")
6.00	18.00	50	6.00
6.00	7.00	50	6.00
6.00	19.00	60	6.00
6.00	25.00	65	6.00
6.00	18.00	75	6.00
6.00	30.00	75	6.00
6.35 (1/4")	18.00	50	6.35 (1/4")
6.35 (1/4")	18.00	75	6.35 (1/4")

P0801 D алмазным покрытием режущей части. Стоимость в долларах США с учетом НДС 20%	2	18	60	3	105.60 \$
	3	18	60	3	105.60 \$
	4	18	60	4	135.60 \$
	6	18	60	6	165.60 \$
	6	30	75	6	210.00 \$

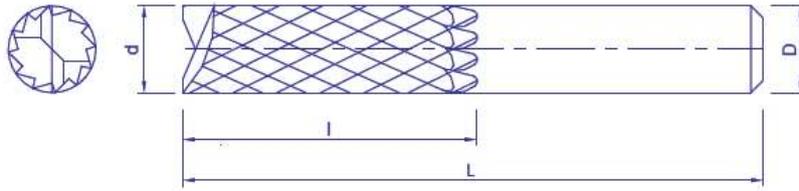




<b>Uncoated</b>						
	<b>P0911</b>	<b>P0911D</b>				
	<b>P0901</b>	<b>P0901D</b>				
	<b>P0921</b>	<b>P0921D</b>				

Dia d	EFL l	Total Length L	Shank Dia D
2.00	7.00	38	3.00
2.00	6.00	38	3.00
2.00	3.00	50	3.00
3.00	12.00	38	3.00
3.00	10.00	38	3.00
3.00	4.00	50	3.00
3.00	10.00	75	3.00
3.00	15.00	60	6.00
3.175 ( 1/8" )	10.00	38	3.175 ( 1/8" )
3.175 ( 1/8" )	10.00	75	3.175 ( 1/8" )
4.00	15.00	38	4.00
4.00	5.00	50	4.00
4.00	16.00	50	4.00
4.00	15.00	75	4.00
4.00	12.00	60	6.00
4.76 ( 3/16" )	15.00	50	4.76 ( 3/16" )
4.76 ( 3/16" )	15.00	75	4.76 ( 3/16" )
6.00	18.00	50	6.00
6.00	7.00	50	6.00
6.00	19.00	60	6.00
6.00	25.00	65	6.00
6.00	18.00	75	6.00
6.00	30.00	75	6.00
6.35 ( 1/4" )	18.00	50	6.35 ( 1/4" )
6.35 ( 1/4" )	18.00	75	6.35 ( 1/4" )

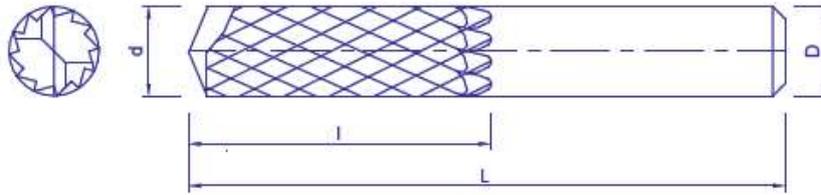




**Uncoated**

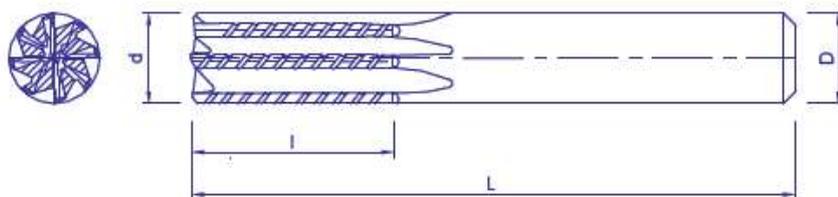
 Coarse Cut	<b>P0511</b>	<b>P0511D</b>
 Medium Cut	<b>P0501</b>	<b>P0501D</b>
 Fine Cut	<b>P0521</b>	<b>P0521D</b>

Dia d	EFL l	Total Length L	Shank Dia D
2.00	3.00	50	3.00
3.00	12.00	38	3.00
3.00	4.00	50	3.00
3.175 ( 1/8" )	10.00	38	3.175 ( 1/8" )
3.175 ( 1/8" )	10.00	75	3.175 ( 1/8" )
4.00	5.00	50	4.00
4.00	16.00	50	4.00
4.76 ( 3/16" )	15.00	38	4.76 ( 3/16" )
4.76 ( 3/16" )	15.00	75	4.76 ( 3/16" )
6.00	7.00	50	6.00
6.00	19.00	60	6.00
6.35 ( 1/4" )	18.00	50	6.35 ( 1/4" )
6.35 ( 1/4" )	18.00	75	6.35 ( 1/4" )
7.94 ( 5/16" )	18.00	63	7.93 ( 5/16" )
7.94 ( 5/16" )	18.00	75	7.93 ( 5/16" )
8.00	9.00	50	8.00
8.00	25.00	63	8.00
9.52 ( 3/8" )	25.00	63	9.52 ( 3/8" )
9.52 ( 3/8" )	25.00	75	9.52 ( 3/8" )
10.00	25.00	72	10.00
12.70 ( 1/2" )	32.00	88	12.70 ( 1/2" )



<b>Uncoated</b>						
	<b>P0411</b>	<b>P0411D</b>				
	<b>P0401</b>	<b>P0401D</b>				
	<b>P0421</b>	<b>P0421D</b>				

Dia d	EFL l	Total Length L	Shank Dia D
2.00	3.00	50	3.00
3.00	12.00	38	3.00
3.00	4.00	50	3.00
3.175 (1/8")	10.00	38	3.175 (1/8")
3.175 (1/8")	10.00	75	3.175 (1/8")
4.00	5.00	50	4.00
4.00	16.00	50	4.00
4.76 (3/16")	15.00	38	4.76 (3/16")
4.76 (3/16")	15.00	75	4.76 (3/16")
6.00	7.00	50	6.00
6.00	19.00	60	6.00
6.35 (1/4")	18.00	50	6.35 (1/4")
6.35 (1/4")	18.00	75	6.35 (1/4")
7.94 (5/16")	18.00	63	7.93 (5/16")
7.94 (5/16")	18.00	75	7.93 (5/16")
8.00	9.00	50	8.00
8.00	25.00	63	8.00
9.52 (3/8")	25.00	63	9.52 (3/8")
9.52 (3/8")	25.00	75	9.52 (3/8")
10.00	25.00	72	10.00
12.70 (1/2")	32.00	88	12.70 (1/2")

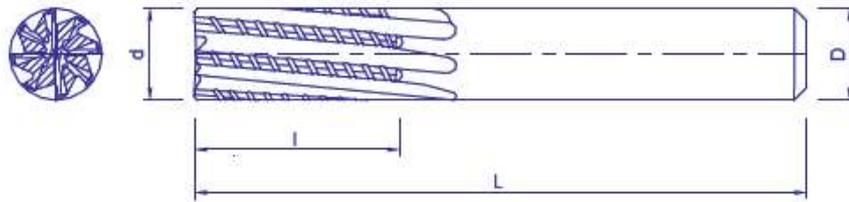


**Uncoated**

**P0661**      **P0661D**

Dia d	EFL l	Total Length L	Shank Dia D
3.00	4.0	50	6.00
3.00	10.0	60	6.00
3.175 (1/8")	4.0	50	6.35 (1/4")
3.175 (1/8")	10.0	63	6.35 (1/4")
4.00	5.0	50	6.00
4.00	16.0	60	6.00
4.76 (3/16")	5.0	50	6.35 (1/4")
4.76 (3/16")	16.0	63	6.35 (1/4")
6.00	7.0	50	6.00
6.00	20.0	60	6.00
6.00	25.0	65	6.00
6.00	28.0	75	6.00
6.35 (1/4")	7.0	63	6.35 (1/4")
6.35 (1/4")	20.0	75	6.35 (1/4")
7.94 (5/16")	9.0	63	7.94 (5/16")
7.94 (5/16")	22.0	75	7.94 (5/16")
8.00	9.0	50	8.00
8.00	22.0	63	8.00
8.00	32.0	75	8.00
9.52 (3/8")	9.0	63	9.52 (3/8")
9.52 (3/8")	22.0	75	9.52 (3/8")
10.00	15.0	72	10.00
10.00	32.0	72	10.00
12.00	32.0	83	12.00
12.70 (1/2")	32.0	88	12.70 (1/2")

P0661D с алмазным покрытием режущей части	12	40	120	12	405.60 \$ С учетом НДС 20%
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Uncoated



P0681

P0681D

NORM

TC GRAY  
SUB  
MICRO

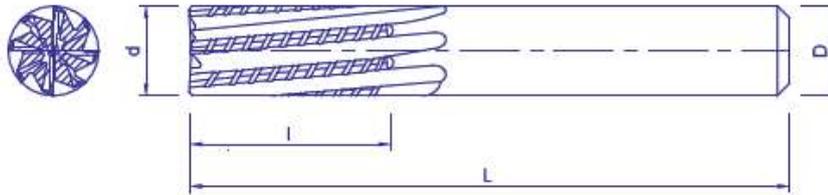


DIN 6535  
FCR8 HA



Dia d	EFL l	Total Length L	Shank Dia D
3.00	4.0	50	6.00
3.00	10.0	60	6.00
3.175 (1/8")	4.0	50	6.35 (1/4")
3.175 (1/8")	10.0	63	6.35 (1/4")
4.00	5.0	50	6.00
4.00	16.0	60	6.00
4.76 (3/16")	5.0	50	6.35 (1/4")
4.76 (3/16")	16.0	63	6.35 (1/4")
6.00	7.0	50	6.00
6.00	20.0	60	6.00
6.00	25.0	65	6.00
6.00	28.0	75	6.00
6.35 (1/4")	7.0	63	6.35 (1/4")
6.35 (1/4")	20.0	75	6.35 (1/4")
7.94 (5/16")	9.0	63	7.94 (5/16")
7.94 (5/16")	22.0	75	7.94 (5/16")
8.00	9.0	50	8.00
8.00	22.0	63	8.00
8.00	32.0	75	8.00
9.52 (3/8")	9.0	63	9.52 (3/8")
9.52 (3/8")	22.0	75	9.52 (3/8")
10.00	15.0	72	10.00
10.00	32.0	72	10.00
12.00	32.0	83	12.00
12.70 (1/2")	32.0	88	12.70 (1/2")



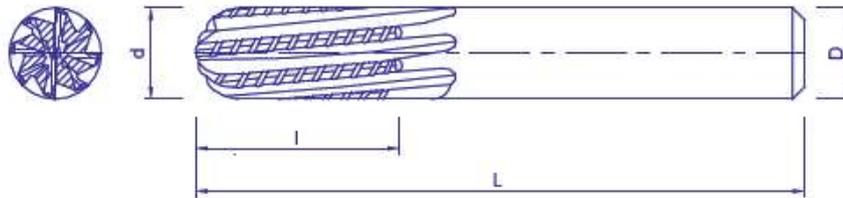


**Uncoated**

**P0671**

**P0671D**

Dia d	EFL l	Total Length L	Shank Dia D
3.00	4.0	50	6.00
3.00	10.0	60	6.00
3.175 (1/8")	4.0	50	6.35 (1/4")
3.175 (1/8")	10.0	63	6.35 (1/4")
4.00	5.0	50	6.00
4.00	16.0	60	6.00
4.76 (3/16")	5.0	50	6.35 (1/4")
4.76 (3/16")	16.0	63	6.35 (1/4")
6.00	7.0	50	6.00
6.00	20.0	60	6.00
6.00	25.0	65	6.00
6.00	28.0	75	6.00
6.35 (1/4")	7.0	63	6.35 (1/4")
6.35 (1/4")	20.0	75	6.35 (1/4")
7.94 (5/16")	9.0	63	7.94 (5/16")
7.94 (5/16")	22.0	75	7.94 (5/16")
8.00	9.0	50	8.00
8.00	22.0	63	8.00
8.00	32.0	75	8.00
9.52 (3/8")	9.0	63	9.52 (3/8")
9.52 (3/8")	22.0	75	9.52 (3/8")
10.00	15.0	72	10.00
10.00	32.0	72	10.00
12.00	32.0	83	12.00
12.70 (1/2")	32.0	88	12.70 (1/2")



Uncoated



P1671

P1671D

NORM

TC<sup>GRAN</sup>  
SUB  
MICRODIN 6535  
FORM HAZ  
6 10

Dia d	EFL l	Total Length L	Shank Dia D
3.00	4.0	50	6.00
3.00	10.0	60	6.00
3.175 (1/8")	4.0	50	6.35 (1/4")
3.175 (1/8")	10.0	63	6.35 (1/4")
4.00	5.0	50	6.00
4.00	16.0	60	6.00
4.76 (3/16")	5.0	50	6.35 (1/4")
4.76 (3/16")	16.0	63	6.35 (1/4")
6.00	7.0	50	6.00
6.00	20.0	60	6.00
6.00	25.0	65	6.00
6.00	28.0	75	6.00
6.35 (1/4")	7.0	63	6.35 (1/4")
6.35 (1/4")	20.0	75	6.35 (1/4")
7.94 (5/16")	9.0	63	7.94 (5/16")
7.94 (5/16")	22.0	75	7.94 (5/16")
8.00	9.0	50	8.00
8.00	22.0	63	8.00
8.00	32.0	75	8.00
9.52 (3/8")	9.0	63	9.52 (3/8")
9.52 (3/8")	22.0	75	9.52 (3/8")
10.00	15.0	72	10.00
10.00	32.0	72	10.00
12.00	32.0	83	12.00
12.70 (1/2")	32.0	88	12.70 (1/2")



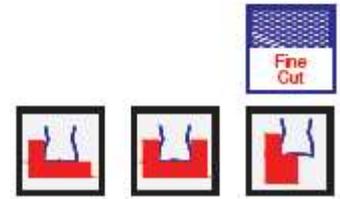
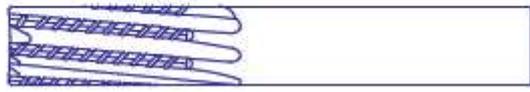




P5431

CFRP RIGHT HELICAL ROUTER

Dia Range 3.00 mm - 20.00 mm

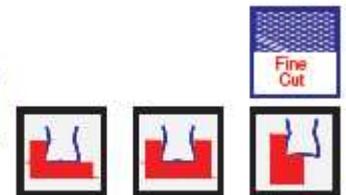
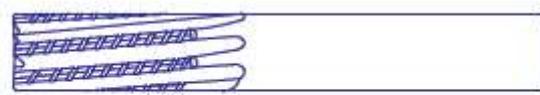


P5431 D	Рабочий диаметр d мм	Длина режущей части l мм	Общая длина L мм	Диаметр хвостовика D мм	Стоимость в долларах США с учетом НДС 20%
□ алмазным покрытием режущей части.	6	30	75	6	210.00 \$
	8	32	75	8	270.00 \$
	10	60	120	10	360.00 \$
	12	70	120	12	450.00 \$
	16	36	92	16	585.60 \$
	16	80	150	16	630.00 \$

P5421

CFRP LEFT HELICAL ROUTER

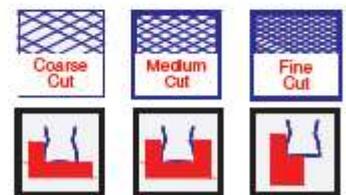
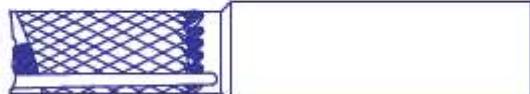
Dia Range 3.00 mm - 20.00 mm



P6551

DIAMOND CUT ROUTER

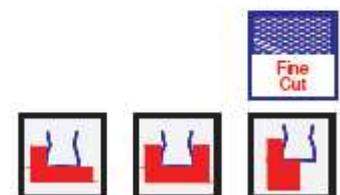
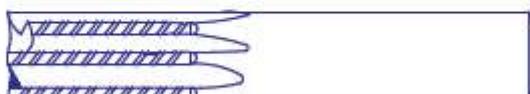
Dia Range 3.00 mm - 20.00 mm



P6411

CFRP ROUTER

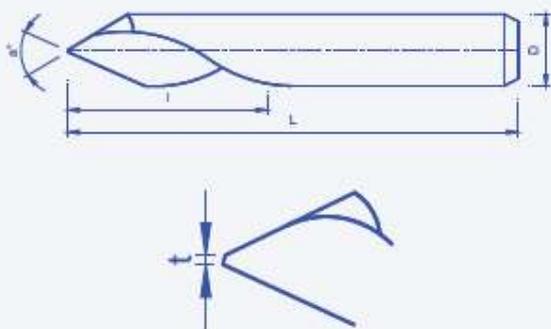
Dia Range 3.00 mm - 20.00 mm





**HELICAL ENGRAVER G8451**  
**HELICAL ENGRAVER G8451X**

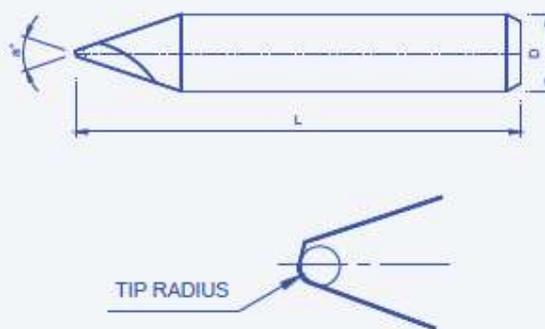
**RH**  
**COATED**



Tip Dia t	Dia D h6	Angle $\alpha$	Length l	OAL
* 0.03	3.00	60°	9.0	38
0.05	3.00	60°	9.0	38
0.10	3.00	60°	9.0	38
0.15	4.00	60°	12.0	40

**ENGRAVER G8511**  
**ENGRAVER G8511X**

**RH**  
**COATED**

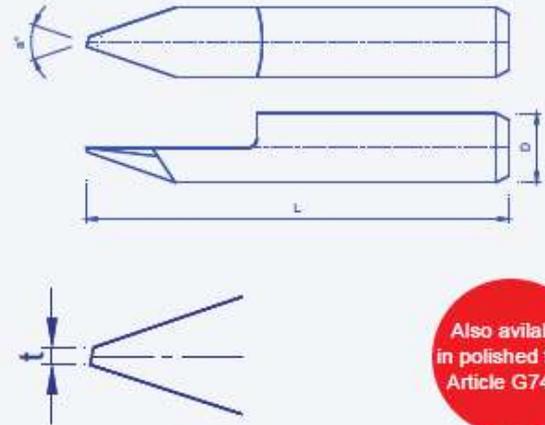


Tip Radius	Dia D h6	Angle $\alpha$	OAL
* 0.03	3.00	35°	30
0.05	3.00	35°	30
0.10	3.00	35°	30
0.15	3.00	35°	30
0.20	3.00	35°	30

**ENGRAVER G8471  
ENGRAVER G8471X**

**RH  
COATED**

Tip Dia t	Dia D h6	Angle $\alpha$					OAL
* 0.03	3.00	30°	45°	60°	90°	120°	38
0.05	3.00	30°	45°	60°	90°	120°	38
0.10	3.00	30°	45°	60°	90°	120°	38
0.15	3.00	30°	45°	60°	90°	120°	38
0.20	3.00	30°	45°	60°	90°	120°	38
* 0.03	3.175	30°	45°	60°	90°	120°	38
0.05	3.175	30°	45°	60°	90°	120°	38
0.10	3.175	30°	45°	60°	90°	120°	38
0.15	3.175	30°	45°	60°	90°	120°	38
0.20	3.175	30°	45°	60°	90°	120°	38
* 0.03	6.00	30°	45°	60°	90°	120°	50
0.05	6.00	30°	45°	60°	90°	120°	50
0.10	6.00	30°	45°	60°	90°	120°	50
0.15	6.00	30°	45°	60°	90°	120°	50
0.20	6.00	30°	45°	60°	90°	120°	50



Also available  
in polished flute  
Article G7471

This type of Engraver can be modified as per material property with desired angle & tip diameter

\* Dia 0.030mm available on request

**ALSO AVAILABLE**

- Other Shank Diameter
- With Special Angles
- With Special Dimensions

- Left Hand Cutting
- Shank Diameter h4 on request

All dimensions are in mm

**PACKING**

- Dia  $\leq$  3.175 mm : 10 Tools / Pack
- Dia  $>$  3.175 mm : 1 Tool / Pack

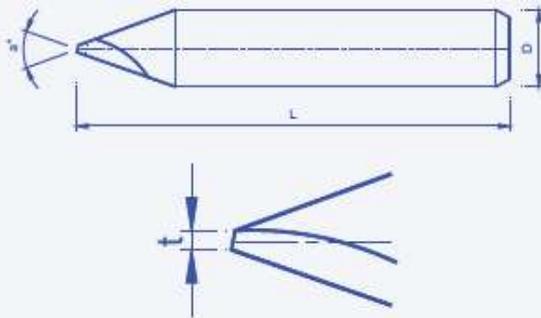
Sharp Cutting Edge

High Precision

Polished Flutes

**REINFORCED ENGRAVER G6471  
REINFORCED ENGRAVER G6471X**

**RH  
COATED**



Tip Dia t	Dia D h6	Angle $\alpha$		OAL
* 0.03	3.00	35°	40°	30
0.05	3.00	35°	40°	30
0.10	3.00	35°	40°	30
0.15	3.00	35°	40°	30
0.20	3.00	35°	40°	30

**ENGRAVER APPLICATION**

Material	G8451	G8511	G6471	G8471
Unalloyed / Low Alloyed Steel <600 N/mm	⊗	○	○	⊙
Unalloyed / Low Alloyed Steel 600 - 1500N/mm	⊗	⊙	⊙	○
High Alloyed Steel 700 - 1500N/mm	⊗	⊙	⊙	○
Grey Cast Iron <250HB	⊙	○	○	⊙
Grey Cast Iron >250HB	⊙	○	○	⊙
Heat Resisting Stainless Steel	⊗	○	○	○
Titanium Alloy	⊗	⊙	⊙	○
Copper Alloy ( easy to machine)	⊙	○	○	⊙
Copper Alloy ( difficult to machine)	⊗	⊙	⊙	○
Aluminium Alloy ( Si < 8%)	⊙	○	○	⊙
Aluminium Alloy ( Si > 8%)	⊙	○	○	⊙
Plastic	⊗	○	○	○
Gold, Silver	⊙	○	○	⊙
Legends	Perfect ⊙	Partly ○	No ⊗	

## RECOMMENDED CUTTING PARAMETERS

Material	G8471 / G8471X				G6471/ G6471X / G8511/ G851X			
	RPM Uncoated	RPM Coated	Vf (mm/min)	ap (mm)	RPM Uncoated	RPM Coated	Vf (mm/min)	ap (mm)
Unalloyed / Low Alloyed Steel <600 N/mm	25K - 40K	—	75 - 240	0.05 - 0.20	20K - 35K	—	50 - 200	0.05 - 0.15
Unalloyed / Low Alloyed Steel 600 - 1500N/mm	25K - 35K	25K - 35K	60 - 200	0.05 - 0.20	—	20K - 30K	50 - 150	0.05 - 0.10
High Alloyed Steel 700 - 1500N/mm	—	15K - 20K	50 - 160	0.05 - 0.10	15K - 28K	15K - 28K	50 - 150	0.05 - 0.10
Grey Cast Iron <250HB	25K - 35K	—	75 - 240	0.05 - 0.20	25K - 35K	25K - 35K	75 - 240	0.05 - 0.15
Grey Cast Iron >250HB	15K - 20K	15K - 20K	50 - 180	0.05 - 0.15	20K - 30K	20K - 30K	50 - 200	0.05 - 0.10
Heat Resisting Stainless Steel	10K - 15K	10K - 15K	30 - 80	0.05 - 0.10	—	—	—	—
Titanium Alloy	20K - 30K	—	75 - 200	0.05 - 0.20	20K - 35K	—	60 - 200	0.05 - 0.15
Copper Alloy ( easy to machine)	30K - 40K	—	75 - 240	0.05 - 0.20	25K - 35K	20K - 30K	50 - 300	0.05 - 0.20
Copper Alloy ( difficult to machine)	20K - 30K	—	50 - 200	0.05 - 0.15	20K - 30K	20K - 30K	50 - 150	0.05 - 0.10
Aluminium Alloy ( Si < 8%)	25K - 30K	—	75 - 240	0.05 - 0.20	20K - 35K	—	50 - 300	0.05 - 0.20
Aluminium Alloy ( Si > 8%)	20K - 30K	—	75 - 240	0.05 - 0.20	20K - 30K	—	75 - 240	0.05 - 0.15
Plastic	30K - 40K	—	100 - 240	0.05 - 0.30	20K - 35K	—	50 - 300	0.05 - 0.20
Gold, Silver	25K - 40K	—	75 - 240	0.05 - 0.20	20K - 35K	—	50 - 300	0.05 - 0.20

