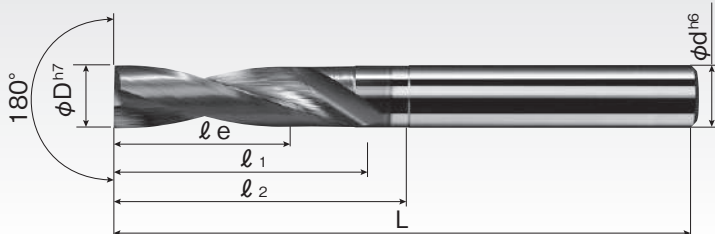


SDFA

超硬フラットドリル
Solid Carbide Flat Drills



先端角 Point Angle	表面処理 Surface Treatment	切削条件 Cutting Conditions
フラット Flat	OK-A Premium	P85

- 外部給油仕様
External Cooling
- 先端角180°フラットにより、様々な穴あけ加工が可能!
By the point angle 180 degrees (Flat), various drilling became possible!
- 広い溝形状による優れた切粉排出性能!
The superior chip ejection performance by the wide flute shape!
- 先端フラット形状により、穴出口の抜けバリを抑制!
The flat point shape inhibits the burr of exit-side!

品番 Product No.	寸法 Size						標準価格 Standard price ¥
	刃径 D	有効深さ le	溝長 l ₁	首下長 l ₂	全長 L	柄径 d	
SDFA010	1.0	3	4	4.5	45	3	4,600
SDFA011	1.1	3	4	4.5	45	3	4,600
SDFA012	1.2	3	5	5.5	45	3	4,600
SDFA013	1.3	3	5	5.5	45	3	4,600
SDFA014	1.4	4	5	5.5	45	3	4,600
SDFA015	1.5	4	6	6.5	45	3	4,600
SDFA016	1.6	4	6	6.5	45	3	4,600
SDFA017	1.7	5	7	7.5	45	3	4,600
SDFA018	1.8	5	7	7.5	45	3	4,600
SDFA019	1.9	5	8	8.5	45	3	4,600
SDFA020	2.0	6	8	8.5	45	4	4,600
SDFA021	2.1	6	9	9.5	45	4	4,600
SDFA022	2.2	6	9	9.5	45	4	4,600
SDFA023	2.3	6	9	9.5	45	4	4,600
SDFA024	2.4	7	10	10.5	45	4	4,600
SDFA025	2.5	7	10	10.5	45	4	4,600
SDFA026	2.6	7	11	11.5	45	4	4,600
SDFA027	2.7	8	11	11.5	45	4	4,600
SDFA028	2.8	8	11	11.5	45	4	4,600
SDFA029	2.9	8	12	12.5	45	4	4,600
SDFA030	3.0	9	12	13	50	6	4,600
SDFA031	3.1	9	15	16.5	57	6	4,900
SDFA032	3.2	9	15	16.5	57	6	4,900
SDFA033	3.3	9	15	16.5	57	6	4,900
SDFA034	3.4	10	15	17	57	6	4,900
SDFA035	3.5	10	15	17	57	6	4,900
SDFA036	3.6	10	18	20	60	6	5,100
SDFA037	3.7	11	18	20.5	60	6	5,100
SDFA038	3.8	11	18	20.5	60	6	5,100
SDFA039	3.9	11	18	20.5	60	6	5,100
SDFA040	4.0	12	18	21	60	6	5,100
SDFA041	4.1	12	22	24	70	6	5,400
SDFA042	4.2	12	22	24	70	6	5,400
SDFA043	4.3	13	22	24.5	70	6	5,400
SDFA044	4.4	13	22	24.5	70	6	5,400
SDFA045	4.5	13	22	24.5	70	6	5,400
SDFA046	4.6	14	22	25	70	6	5,900
SDFA047	4.7	14	22	25	70	6	5,900
SDFA048	4.8	14	22	25	70	6	5,900
SDFA049	4.9	15	22	25.5	70	6	5,900
SDFA050	5.0	15	22	25.5	70	6	5,900
SDFA051	5.1	16	25	28.5	70	6	6,100
SDFA052	5.2	16	25	29	70	6	6,100

品番 Product No.	寸法 Size						標準価格 Standard price ¥
	刃径 D	有効深さ le	溝長 l ₁	首下長 l ₂	全長 L	柄径 d	
SDFA053	5.3	16	25	29	70	6	6,100
SDFA054	5.4	16	25	29	70	6	6,100
SDFA055	5.5	17	25	29.5	70	6	6,100
SDFA056	5.6	17	25	29.5	70	6	6,400
SDFA057	5.7	17	25	29.5	70	6	6,400
SDFA058	5.8	17	25	30	70	6	6,400
SDFA059	5.9	18	25	30	70	6	6,400
SDFA060	6.0	18	25	30	70	6	6,400
SDFA061	6.1	18	30	32	90	8	7,200
SDFA062	6.2	19	30	32	90	8	7,200
SDFA063	6.3	19	30	32.5	90	8	7,200
SDFA064	6.4	19	30	32.5	90	8	7,200
SDFA065	6.5	20	30	32.5	90	8	7,200
SDFA066	6.6	20	30	33	90	8	7,200
SDFA067	6.7	20	30	33	90	8	7,200
SDFA068	6.8	20	30	33	90	8	7,200
SDFA069	6.9	21	30	33.5	90	8	7,200
SDFA070	7.0	21	30	33.5	90	8	7,200
SDFA071	7.1	21	35	38.5	90	8	7,600
SDFA072	7.2	22	35	39	90	8	7,600
SDFA073	7.3	22	35	39	90	8	7,600
SDFA074	7.4	22	35	39	90	8	7,600
SDFA075	7.5	23	35	39.5	90	8	7,600
SDFA076	7.6	23	35	39.5	90	8	7,600
SDFA077	7.7	23	35	39.5	90	8	7,600
SDFA078	7.8	23	35	40	90	8	7,600
SDFA079	7.9	24	35	40	90	8	7,600
SDFA080	8.0	25	35	40	90	8	7,600
SDFA081	8.1	25	40	42	93	10	9,200
SDFA082	8.2	25	40	42	93	10	9,200
SDFA083	8.3	25	40	42.5	93	10	9,200
SDFA084	8.4	26	40	42.5	93	10	9,200
SDFA085	8.5	26	40	42.5	93	10	9,200
SDFA086	8.6	26	40	43	93	10	9,200
SDFA087	8.7	26	40	43	93	10	9,200
SDFA088	8.8	27	40	43	93	10	9,200
SDFA089	8.9	27	40	43.5	93	10	9,200
SDFA090	9.0	28	40	43.5	93	10	9,200
SDFA091	9.1	28	40	43.5	93	10	9,400
SDFA092	9.2	28	40	44	93	10	9,400
SDFA093	9.3	28	40	44	93	10	9,400
SDFA094	9.4	28	40	44	93	10	9,400
SDFA095	9.5	29	40	44.5	93	10	9,400

リーマ
エンドミル
ドリル
面取り/座ぐり
メタルソー
カッター

品番 Product No.	寸法 Size						標準価格 Standard price ¥
	刃径 D	有効深さ le	溝長 l ₁	首下長 l ₂	全長 L	柄径 d	
SDFA096	9.6	29	40	44.5	93	10	9,600
SDFA097	9.7	29	40	44.5	93	10	9,600
SDFA098	9.8	30	40	45	93	10	9,600
SDFA099	9.9	30	40	45	93	10	9,600
SDFA100	10.0	30	40	45	93	10	9,600
SDFA101	10.1	30	45	50	100	10	10,700
SDFA102	10.2	31	45	50	100	10	10,700
SDFA103	10.3	31	45	50	100	10	10,700
SDFA104	10.4	31	45	50	100	10	10,700
SDFA105	10.5	32	45	50	100	10	10,700
SDFA106	10.6	32	45	50	100	10	10,700
SDFA107	10.7	32	45	50	100	10	10,700
SDFA108	10.8	33	45	50	100	10	10,700
SDFA109	10.9	33	45	50	100	10	10,700
SDFA110	11.0	33	45	50	100	10	10,700
SDFA111	11.1	33	50	53.5	110	12	11,800

品番 Product No.	寸法 Size						標準価格 Standard price ¥
	刃径 D	有効深さ le	溝長 l ₁	首下長 l ₂	全長 L	柄径 d	
SDFA112	11.2	34	50	54	110	12	11,800
SDFA113	11.3	34	50	54	110	12	11,800
SDFA114	11.4	34	50	54	110	12	11,800
SDFA115	11.5	35	50	54.5	110	12	11,800
SDFA116	11.6	35	50	54.5	110	12	11,800
SDFA117	11.7	35	50	54.5	110	12	11,800
SDFA118	11.8	36	50	55	110	12	11,800
SDFA119	11.9	36	50	55	110	12	11,800
SDFA120	12.0	37	50	55	110	12	11,800
SDFA130	13.0	40	55	60	110	12	13,800
SDFA140	14.0	43	58	63	110	12	16,000
SDFA150	15.0	45	60	63.5	120	16	18,200
SDFA160	16.0	48	65	70	120	16	20,600
SDFA175	17.5	52	70	75	130	16	29,500
SDFA180	18.0	52	70	75	130	16	29,500
SDFA200	20.0	60	80	85	150	20	35,200

SDFA: (平面用) 推奨切削条件 Recommended Drilling Conditions for SDFA (on Flat Surface)

被削材 Work Material	一般構造用鋼・炭素鋼・ダイス鋼・ねずみ錆鉄 Structural Steels, Carbon Steels, Cast Iron SS400,S55C,SK,SKD,FC				合金鋼・ダクタイル鋳鉄 Alloy Steels, Ductile Cast Iron (SCM,NAK,FCD)		アルミニウム合金 Aluminum Alloys (A2024,A7075)			
	~30HRC		~40HRC		~50HRC					
切削速度 Cutting Speed	75 m/min		50 m/min		30 m/min		65 m/min		110 m/min	
φD (mm)	切削条件 Cutting Condition		切削条件 Cutting Condition		切削条件 Cutting Condition		切削条件 Cutting Condition		切削条件 Cutting Condition	
	回転数 Spindle Speed (rpm)	送り Feed (mm/rev)	回転数 Spindle Speed (rpm)	送り Feed (mm/rev)	回転数 Spindle Speed (rpm)	送り Feed (mm/rev)	回転数 Spindle Speed (rpm)	送り Feed (mm/rev)	回転数 Spindle Speed (rpm)	送り Feed (mm/rev)
1	23900	0.01~0.04	15900	0.01~0.03	9500	0.01~0.02	20700	0.01~0.04	35000	0.01~0.04
2	11900	0.02~0.06	8000	0.02~0.04	4800	0.01~0.02	10300	0.02~0.06	17500	0.02~0.06
3	8,000	0.03~0.08	5,300	0.03~0.06	3,200	0.01~0.02	6,900	0.03~0.08	11,700	0.03~0.08
4	6,000	0.04~0.10	4,000	0.03~0.08	2,400	0.01~0.03	5,200	0.04~0.10	8,800	0.04~0.10
5	4,800	0.04~0.10	3,200	0.03~0.08	1,900	0.02~0.05	4,200	0.04~0.10	7,000	0.04~0.10
6	4,000	0.04~0.15	2,600	0.04~0.13	1,600	0.04~0.08	3,500	0.04~0.15	5,800	0.04~0.15
8	3,000	0.08~0.20	2,000	0.08~0.16	1,200	0.06~0.10	2,600	0.08~0.20	4,400	0.08~0.20
10	2,400	0.10~0.22	1,600	0.10~0.18	960	0.08~0.12	2,100	0.10~0.22	3,500	0.10~0.22
12	2,000	0.12~0.25	1,300	0.12~0.22	800	0.12~0.18	1,750	0.12~0.25	2,900	0.12~0.25
16	1,500	0.16~0.30	1,000	0.16~0.26	600	0.14~0.20	1,300	0.16~0.30	2,200	0.16~0.30
20	1,200	0.20~0.35	800	0.20~0.30	480	0.16~0.22	1,050	0.20~0.35	1,750	0.20~0.35

注1) 上記推奨切削条件は、平面への穴あけで、加工深さは刃径の2倍を目安としています。
Please use under the premise that the work surface is flat and drilling depth is under 2xDc.

注2) 傾斜面への穴加工は、下記の速度調整をお願いします。
As for the drilling to an inclined surface, please adjust to the following speed.

- A: 傾斜角度が 30°以下の場合、送り速度を40~60%に設定してください。
A: When the inclination angle is to or less than 30°, please set the feed speed in 40-60%.
- B: 傾斜角度が 30°を超える場合は、送り速度を20~50%に設定してください。
B: When the inclination angle is more than 30°, please set the feed speed in 20-50%.

注3) 切り粉が長くなる加工の場合はステップ加工を行なってください。
When the chips are the drilling which become long, please use step drilling.

